



Ground Operations Manual Northern Region



Revision History

The GOM has been converted into Yonder and TUI Airline decided collectively in the TUI group to restart the numbering.

New Issue and Revision has been created to align content and manual publication within TUI Airline.

Issue	Revision	Date
Issue 0	0	Nov 2022
Issue 0	1	Sep 2023
Issue 0	2	Dec 2023
Issue 0	3	Apr 2024
Issue 0	4	Oct 2024
Issue 0	5	Jan 2025
Issue 0	6	Aug 2025



Applicability

BLX-SE

Applicable to BLX AOC

End BLX-SE

TOM-UK

Applicable to TOM AOC

End TOM-UK



Transmittal Letter

Reference	PAI	R R	Description of Change	Reason for Change
Revision History	No		Issue 0, Revision 6 added	New revision
0.14 Communication Bulletins	No		Updated Bulletin information	Seasonal updates
0.15 Information Notice	No		Amended title from Instruction Notice	Seasonal updates
1.1.6.2 Cabin Baggage	No		Removal of JAF, TFL & TUI references in f. Note	Editorial
1.1.6.3 Checked Baggage	No		New content regarding actual weight of bag	GOTR25-011 Change to Maximum Permitted Checked Baggage Weight
1.1.6.12 Special Baggage	No		Amended and updated AOC and Annex references in f.1 and Note	To clarify the procedure
1.1.7.2 Passenger Boarding Process	No		New content regarding silent airport restrictions	GOTR25-006 Amendment to Boarding Announcement
4.1.4.2 Cooling/Heating Units and Preconditioned Air	No		Added authorised maintenance personnel to paragraph	Enhance safety procedure
4.1.4.2 Cooling/Heating Units and Preconditioned Air	No		Removed reference to location of ground air supply unit	Enhance safety procedure
4.3.1 Safety Cone Placement and Removal	No		Added content regarding placement of cones	Enhance safety procedure
4.3.2 Cone Placement for Wing-Mounted Twin Engine Jet Aircraft	No		Amended No. 2 regarding cones furthest point	Enhance safety procedure
4.3.2 Cone Placement for Wing-Mounted Twin Engine Jet Aircraft	No		New content regarding 3 safety cones requirement	Enhance safety procedure



Reference	PAI	R R	Description of Change	Reason for Change
4.5.1.1.1 Hold Inoperative (HOLD INOP)	No		New sub-chapter	Enhance safety procedure
4.5.1.8 Actions After Loading	No		Added point c. regarding LIR sign-off	Enhance safety procedure
4.5.1.8 Actions After Loading	No		Added Note 2 regarding electronic LIRs	Enhance safety procedure
4.5.6.4 Loading Process	No		New content regarding clearance measures	GOTR25-003 Loading Process
4.5.6.4 Loading Process	No		Removed 'operating airline'	Editorial
4.6.3.3 Pre-Departure Communication	No		New content addressing pre-departure communication	GOTR25-002 Pre-Departure Communication
4.6.6.2 Departure Communication Dialogue	No		Amended Departure Communication Dialogue table	GOTR25-008 Departure Communication Dialogue
5.2.2 Loading Instructions Report	No		New point f. regarding final actual loads on LIR	Enhance safety procedure
5.3.1 General	No		Removed reference to 5.3.3.4	Editorial
9.3.2.6 Standard Loading 737-800 (NG) & 737-8 (MAX)	No		Added word 'manual' and reference to Annex F	To clarify the procedure
9.3.2.6 Standard Loading 737-800 (NG) & 737-8 (MAX)	No		New content point b. regarding non-standard loading	Seasonal operational adjustments
10.1.1 Approval for the Transport of Dangerous Goods	No		Added reference to ICAO TIs	IAW DGR Edition 66
10.1.1 Approval for the Transport of Dangerous Goods	No		Amended TUI Group airlines to TUI Airways and TUI Fly Nordic	IAW DGR Edition 66
10.1.1 Approval for the Transport of Dangerous Goods	No		Added to point 4. Sodium ion reference	IAW DGR Edition 66
10.1.1 Approval for the Transport of Dangerous Goods	No		Moved TOM-UK tag to under Note	IAW DGR Edition 66



Reference	PAI	R R	Description of Change	Reason for Change
10.1.3.5 Data loggers and cargo tracking devices	No		New sub-chapter	IAW DGR Edition 66
10.1.5 Items that may be Carried by Passengers and Crew	No		Amended reference from 65th to 66th Edition	IAW DGR Edition 66
10.1.5 Items that may be Carried by Passengers and Crew	No		Amended point 1) Empty Air cylinders, Carry-on to No	IAW DGR Edition 66
10.1.5 Items that may be Carried by Passengers and Crew	No		Added note to 7) Electric Mobility aids (WCLB)	IAW DGR Edition 66
10.1.5 Items that may be Carried by Passengers and Crew	No		Added to point 19) 0.3g per device & 2.7 Wh per device	IAW DGR Edition 66
10.1.5 Items that may be Carried by Passengers and Crew	No		Amended point 26) Checked baggage to No	IAW DGR Edition 66
10.1.5 Items that may be Carried by Passengers and Crew	No		Amended point 35) Checked baggage to No	IAW DGR Edition 66
10.1.7 Marking and Labelling of Packages	No		Amended title to Lithium battery or sodium ion battery	IAW DGR Edition 66
10.1.7 Marking and Labelling of Packages	No		Amended title to Battery Mark	IAW DGR Edition 66
10.1.7 Marking and Labelling of Packages	No		Added 'or Sodium Ion Batteries'	IAW DGR Edition 66
10.1.7 Marking and Labelling of Packages	No		Added 'or Sodium Ion'	IAW DGR Edition 66
10.3.1 Provisions of Information to Passengers	No		Added in Note 'or Sodium Ion'	IAW DGR Edition 66



Reference	PAI	R R	Description of Change	Reason for Change
10.3.5.1 Segregation of Incompatible Dangerous Goods	No		Removed in column 9 'see 9.3.2.1.3'	IAW DGR Edition 66
10.3.5.1 Segregation of Incompatible Dangerous Goods	No		Removed in line 11 'see 9.3.2.1.3', replaced with 'refer to Note 4'	IAW DGR Edition 66
10.3.5.1 Segregation of Incompatible Dangerous Goods	No		Amended Note 4 content	IAW DGR Edition 66
10.3.5.1 Segregation of Incompatible Dangerous Goods	No		Added UN3551 to sentence	IAW DGR Edition 66
10.3.8 Loading of Radio Active Material	No		Removed 'by all TUI Group airlines	IAW DGR Edition 66
10.3.10 Carriage of Cryogenic Liquids	No		New point d.	IAW DGR Edition 66
10.3.12 Notification to Captain (NOTOC)	No		New point i.	IAW DGR Edition 66
10.3.14 Lithium and Sodium Ion Batteries	No		Added 'and Sodium Ion' to title	IAW DGR Edition 66
10.3.14.1 General	No		Added references to Sodium Ion/batteries to content	IAW DGR Edition 66
10.3.14.8 Sodium Ion Cell and Batteries (UN3551)	No		New sub-chapter	IAW DGR Edition 66
10.3.14.9 Sodium Ion Cells and Batteries packed with Equipment (UN3552)	No		New sub-chapter	IAW DGR Edition 66
10.3.14.10 Sodium Ion Cells and Batteries contained in Equipment (UN3552)	No		New sub-chapter	IAW DGR Edition 66



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Reference	PAI	R R	Description of Change	Reason for Change
12.6.2.1 B737	No		Amended table with EMA loading breakdown	To clarify the procedure
14.7 Domestic Cats & Dogs in the Cabin	No		New chapter and content	AOC alignment



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0 Administration and General Instructions

0.1 Introduction

The Ground Operations Manual (GOM) complies with the terms and conditions of the individual Air Operator Certificate (AOC) issued under EASA Regulations by the Competent Authority and the requirements contained therein as applicable within the following individual AOC's:

TOM-UK

The Ground Operations Manual (GOM) complies with the terms and conditions of the individual Air Operator Certificate (AOC) issued under UK Law and EASA Regulations by the Competent Authority and the requirements contained therein as applicable within the following individual AOC's:

End TOM-UK

TOM-UK

Airline	AOC	IATA	ICAO	NP Ground Operations	Contact
TUI Airways	GB-AOC-0294	BY	TOM	Al Pease	Al.pease@tui.co.uk

End TOM-UK

BLX-SE

Airline	AOC	IATA	ICAO	NP Ground Operations	Contact
TUIfly Nordic	SE-AOC-0004	6B	BLX	Helena Sahlin	Helena.sahlin@tui.se

End BLX-SE

- The above mentioned airlines comply with UK Regulation/EASA Regulations, and as such, we expect all handling and supervision agents to comply with such standards, as described in Commission Regulation/UK Regulation (EU) No. 965/2012 ("Air Operations") and subsequently laid down in this Ground Operations Manual (GOM).
- As a standard, all flights must be handled as described in this Ground Operations Manual. If not covered, then please follow the latest edition of the IATA Airport Handling Manual (AHM) and the newest edition of the IATA Ground Operations Manual (IGOM).
- In addition to these documents, this manual provides additional requirements and instructions for handling our flights. If there are deviations between these documents, the instructions in this manual will prevail.
- This Ground Operations Manual describes regulations, procedures, policies, and recommendations regarding passenger handling, ramp handling, communications, and logistics.
- The Applicable Nominated Person(s) Ground Operations are responsible for overall control of this manual and are the only person(s) with the authority to authorize both the content and issuance of amendments and revisions.
- Agencies assigned to represent TUI Airline and the Ground Service Providers (GSPs) rendering services to the above airlines shall adhere strictly to this manual's contents.



- g. This manual, its annexes, appendices and any other manuals and instructions are published on the TUI Airline Ground Operations Portal ([TAGO Portal](#)). Any printed copies made of the above are considered uncontrolled. The GSP should have a contingency plan in place for the event the TAGO Portal is not accessible.
- h. The manual should be accessible to all staff involved in handling TUI Airline and serves as a working document giving clear instructions in preparing procedures covering the handling for TUI Airline flights. Any amendments/revisions that are sent take immediate effect and therefore should be incorporated promptly upon receipt.
- i. This manual contains information that is the property of TUI Airline. Except for competent authorities' purposes of inspection and approval, this content may not be copied, distributed, or otherwise disclosed to third parties without TUI Airline's express written consent.

0.2 TAGO Portal

TUI Airline Ground Operations makes use of the TAGO Portal for all communications towards and with Ground Handlers and external suppliers. The TAGO Portal consists of two parts that are linked with each other.

Purpose	Website
External (Ground Handlers and External Suppliers)	https://tago.tuigroup.com/portal/
Internal (TUI Employees)	https://tago.tuigroup.com/

The TAGO Portal is used for the following:

- a. Station Handling and Contact Details
- b. Documentation and Distribution
- c. Emergency Response Planning (ERP) Details
- d. SITA Addresses
- e. Flight Schedules
- f. TUI Key Contact List
- g. Stationary Ordering
- h. Appendices

Note: Login details can be requested by emailing gomsupport@tuifly.com

0.3 Just Culture and TUI Golden Rules

TUI Airline strongly believes in a 'just culture' reporting environment, where people are encouraged to provide essential safety-related information. The primary purpose is to provide quick, detailed information to the company and the authority. The company expects all employees to understand, remember and follow our safety policy when on company business. The policy itself can be summarized as the Golden Rules as detailed below:

- a. We **COMPLY** with all applicable laws, regulations, company standards, and procedures.
- b. We **INTERVENE** whenever we observe an unsafe or non-compliant act and **REPORT** unsafe or non-compliant situations.
- c. We **LEARN** from our mistakes and **SHARE** best practices in order to improve our safety and compliance performance and that of our surroundings.



0.4 Expectations of TUI

TUI Airline has established and will maintain high safety and continuity of operations in a productive, cost-efficient, and efficient manner. For this purpose, TUI Airline has contracted services at all stations. Amongst other services pertaining to TUI Airline, operations include:

- a. Ground handling at all stations;
- b. Catering services;
- c. Fueling at all stations;
- d. Pre-flight services;
- e. Cleaning Services if applicable;

0.5 The expectation of the Ground Handling Company

In general, the contracted handling company will:

- a. Provide ramp and passenger handling;
- b. Liaise with catering suppliers, fuel suppliers, cleaning companies and airport authorities;
- c. Notify TUI OCC of the exact arrival and departure times and loading information;
- d. Notify TUI OCC of all disruptions, foreseen or actual, to planned program, such as technical problems on the ground, weather conditions, or airport congestion

0.6 Manual Applicability

- a. The GOM reflects the valid company policies and procedures based on the latest regulations, technical data, and operational experience. All relevant operations personnel are required to comply with and adhere to the instructions contained in this manual.
- b. The company will ensure that information taken from approved documents and any amendment of such approved documents is correctly reflected in the OM and that the GOM contains no information contrary to any approved documentation. This requirement does not prevent the use of more conservative data and procedures.
- c. The GOM contains confidential and copyrighted material. It must not be reproduced, distributed, or copied without the respective AOC Nominated Person's prior written consent.

0.7 Use of Language

The GOM is prepared in English, the TUI Airline common language, to ease communication and operations. All operations personnel that are in contact with the crew must be able to communicate in English. All communication related to procedures must be performed in English by all operations personnel.

0.8 Key Contact List

For the Key Contact List, refer to the [TAGO Portal](#) and click "Key Contacts" in the menu.

0.9 AOC Specifics in Italic

All company policies or specific instructions in Chapters 1 - 6 are in italic.

Italics are used in this manual to describe the following:

- a. TUI Airline policies.



- b. TUI Airline procedures.
- c. TUI Airline specific instructions.
- d. AOC specific instructions - indicated by the AOC's ICAO code before and after the instruction.

For example:

TOM

Company Specific

End TOM

0.10 Responsibilities

All manuals, instructions, and temporary revisions mentioned above must be studied and signed off. The contracted GSP shall strictly adhere to the content of these instructions. Each party is responsible for training its staff; this implies:

- a. Having a clear description of all training requirements for all job functions, including on-the-job training;
- b. Ensure that all staff, including temporary staff and sub-contractors, comply with the training requirements for their respective job functions;
- c. Ensuring the continued competence of all staff, through relevant (continuation) training and assessments;
- d. Training shall be a combination of theoretical and practical training depending on the topic being trained;
- e. Keeping training records complete and up-to-date;
- f. Have training records available for TUI Airline upon request, e.g. during audits.

0.10.1 Training

The GSP shall ensure that training is conducted as described in the IATA AHM regulations and all other applicable regulations like:

- a. TUI Airline processes and procedures as described in this manual;
- b. Security training as described in Chapter 15, Annex I: Security;
- c. SAE Global De-icing Standards
- d. In some cases, local airport regulations/rules might take priority over the procedures in the GOM.

0.11 Annexes and Appendices

The GOM contains annexes and in addition, references to appendices in numerous chapters throughout the manual.

Annexes, located in the final chapters of the GOM, detail specific processes and procedures for the TUI Group, which are not covered by the IATA IGOM. The annexes provide extra, specific instructions, such as those for Annex D Dangerous Goods & Weapons, Annex E De-icing and Anti-icing, among others.



Appendices offer supplementary content and additional information. They serve as a valuable resource for enhancing understanding and providing content such as Appendix I10 Delay Codes, Appendix I3 Ancillary Sales Charges, among others. The appendices are located within the TAGO portal, as outlined in the GOM.

0.12 Amendment and revision

TUI Airline will issue the current version in the [TAGO Portal](#). When a new issue is published on the [TAGO Portal](#), a notification email is sent to all copyholders. This notification is including a confirmation button to confirm receipt and sign off of the new issue. The copyholder must click this button within seven (7) days after publication.

Apart from the Ground Operations Manual, TUI Airline aims to have other relevant information available on the [TAGO Portal](#), such as:

- Aircraft documents;
- Forms;
- Applications;
- Notices, Temporary Revisions, and Safety Alerts;
- Lease in aircraft information;
- Logos;
- Any other relevant information.

0.12.1 Handwritten Amendments

Handwritten amendments and revisions are not permitted.

0.13 Annotation of changes

A vertical revision line will indicate any changes to previous versions.

0.14 Communication Bulletins

TUI Airline can send the following bulletins apart from the Ground Operations Manual

Header	Description
 TUI Airline Ground Operations - Information Notice Title: Information Notice Author: TUI Airline Version: 1.0 Status: Active Effective Date: 2025-01-01 Expiry Date: 2025-12-31 Language: English	Refer to Information Notice
 TUI Airline Ground Operations - Temporary Revisions Title: Temporary Revisions Author: TUI Airline Version: 1.0 Status: Active Effective Date: 2025-01-01 Expiry Date: 2025-12-31 Language: English	Refer to Temporary Revisions
 TUI Airline Ground Operations - Safety Alerts Title: Safety Alerts Author: TUI Airline Version: 1.0 Status: Active Effective Date: 2025-01-01 Expiry Date: 2025-12-31 Language: English	Refer to Safety Alerts
 TUI Airline Ground Operations - Internal Notice Title: Internal Notice Author: TUI Airline Version: 1.0 Status: Active Effective Date: 2025-01-01 Expiry Date: 2025-12-31 Language: English	For internal procedures only. Not available to read for contracted external parties.



0.15 Information Notice

Apart from GOM-TR(s), TUI Airline can send you other relevant – non-procedural - information in the form of Ground Operations Information Notices.

Information Notices can be found on the TAGO Portal under Documents / 03. Notices, TR's, Safety Alerts.

0.16 Temporary revisions

TUI Airline issues temporary revisions (GOM-TR), transmitting information between formal revisions of this manual's various parts.

- a. A Temporary Revision mentions:
 - 1. The relevant part of the manual.
- b. A Temporary Revision is valid until:
 - 1. The information is no longer applicable; or
 - 2. The information is incorporated in the next revision of the relevant part of this manual.
- c. Responsibility
 - 1. The Nominated Person Ground Operations is responsible for the timely issue and the content of the GOM-TR.

0.17 Safety Alerts

TUI Airline issues Safety Alerts to alert on safety trends that require immediate attention. Safety Alerts can be found on the TAGO Portal under Documents.

0.18 Feedback

All readers are invited to report any discovered discrepancies/errors and suggestions for improvement by emailing gomsupport@tuifly.com



1 Passenger Handling Procedures

1.1 Passenger Departure

1.1.1 Predeparture Activities

1.1.1.1 Ticket Sales Counter

If a Ticket Sales Counter is located at the airport it shall display either electronic or manual versions of:

- a. Operating airline signage.
- b. Dangerous goods notifications.
- c. Handling forms, information on passenger rights and marketing material required by the operating airline, if applicable.

Note: forms and passenger right documentation will be sent by Customer Care and are available in the TAGO Portal.

1.1.1.2 Passenger Pre-Flight Preparation

Prepare check-in for flights in accordance with operating airline policy (*see below in italic*) prior to the opening of web or airport check-in, and verify all necessary data has been transferred into the check-in system correctly.

- a. Review the booking status.
- b. For code share flights with an active blocked space agreement, check the allotment to ensure the block of seats, as agreed, is guaranteed to the partner.
- c. Review the curtain version (cabin configuration) and adjust cabin capacity if applicable.
- d. Confirm the Passenger Name List (PNL) and Additions and Deletions List (ADL) were properly transmitted and match the booking status.
- e. Block seats, if required, e.g. for security officers, crew, stretcher cases, weight and balance, and if seats are unserviceable.
- f. Confirm the seating plan is set according to the actual aircraft type and version.
- g. Review the flight remarks.
- h. Record the passenger status on Passenger Name Record (PNR) if applicable e.g. ticket issued, Frequent Flyer status, revenue/non-revenue/industry travel.
- i. Review the boarding time, departure time, and gate. Brief staff about the reason for any delays.
- j. Apply payload restrictions, if any.
- k. Review the passenger list for special service request (SSR) and all passengers requesting assistance (e.g. wheelchair (WCH) assistance, unaccompanied minors (UM), service animals, special baggage etc.) and preassign a seat as per operating airline procedure (*PNL check in accordance with Appendix 11*) and according to the aircraft type.
- l. Review notifications and included handling instructions, if pre-advised for specific passengers and/or baggage by the operating airline (*see below in italic*).
- m. Conduct a staff briefing for check-in agents.
- n. If not pre-reserved, prepare seating for families traveling with infants or children, as per operating airline procedures (*see below in italic*). Check total infants booked and order additional life vests, if needed.



- o. Where free/open seating is applied, inform the crew and passengers and ensure special category passengers have appropriate seats.

Pre-seating

The PNL's will be sent as follows:

1. -72 hrs for Secure Flight
2. - 3 hrs from home airports
3. - 6 hrs from resort airports

ADL's are sent on event basis.

The pre-seating provided by New Skies must not be changed by the Ground Handling Agent unless there is a breach of safety regulations.

Passengers not listed on the PNL, can only be accepted as NOREC after approval from the Flight Specials or Customer Care team.

If passengers are listed on the PNL but do not hold a ticket, check-in staff should contact the respective Customer Care team (see TAGO Portal KeyContacts).

Additions and Deletions List (ADL)

It's very important that check-in agents do NOT touch the pre-seating, except for ADL's received on the day of operation as described above, in order to guarantee a proper service on board or in any case the seating is not according the safety regulations.

In the rare event handling agents receive a PNL that is supposed to have seating, without seat allocation to the passengers, please contact the Customer Care team.

1.1.2 Check-In Counter Requirements

Prior to opening the check-in counters:

- a. Start and test equipment.
- b. Ensure scales are functioning and calibrated.
 1. Scales must be calibrated and checked, once a year or as required by the manufacturer of the scale or by the local authority responsible.
 - i. The local authority will issue a certificate after the calibration and deliver it to the airport authority.
 - ii. Copy of the calibration certificate is kept in each station for record.
 - iii. A sticker is placed on each scale after the calibration, if applicable.
 2. The responsible check-in agent shall check that baggage scales are operating properly prior to check-in opening by:
 - i. Checking the airport authority calibration sticker is current (if applicable).
 - ii. Checking the weight indicator at the position to ensure it shows '0.0 kg'.
 - If the weight indicator shows otherwise inform the relevant airport authority department.
 - If the scale remains out of order, another check-in counter shall be requested.
 3. The periodic check of scale accuracy used in the baggage handling process lies in the equipment owner's responsibility who is also responsible to make available to ground handling services provider (GHSP) all relevant documentation, where applicable.



- c. Stock boarding card and bag tag printers – *to order stock please use Stationary Request form in the TAGO Portal.*
- d. Ensure adequate stock of any other tags, handling forms, information on passenger rights and marketing material required by TUI Airways and TUIfly Nordic.
- e. Display signage required by the operating airline, and mark counters per class, customer status or as 'baggage drop off' if applicable.
- f. Ensure dangerous goods notifications are prominently displayed - *To be found as Appendix L2 Dangerous Goods Poster Appendix L3 Forbidden Lithium Poster A4 in the TAGO Portal*
- g. Prepare check-in queues, stanchions, carpets, baggage gauges, podiums, etc., as per operating airline procedures. *(see below in italic).*

Counter Signage:

Signage must be used for passengers to clearly identify the counter classes as indicated above. All Signage/Logos can be found in the TAGO Portal.

Minimum check-in counter requirements

TUI Airways and TUIfly Nordics set a minimum requirement regarding the allocation of check-in counters and it is expected that our ground handling agents ensure these are agreed and allocated with airport providers. It is important to note that whilst these minimum counter requirements apply, Ground Handling Agents should also note any local arrangements already agreed with TUI which may be detailed in the Service Level Agreements.

If for any reason check-in needs to remain open after the closure cut off, the TUI Airways Customer Service Officer must be contacted for authorisation. For airports using GoNow, the check-in closure time refers to the time the flight is put in to close pending status.

Counter Types

Common check-in should be provided at stations with multiple flight departures. The minimum check-in counter allocations and queue times outlined above must be adhere to. For short and mid-haul routes where a Premium cabin is offered, a TUI Premium logo should also be displayed at check-in. The Premium counter should be used to accommodate economy customers when there are no Premium customers queuing.

TOM-UK

Check-in queue times

TUI Airways measure the efficiency of check-in on the average queue times. As a result, if by adhering to the minimum counter requirements the check-in queue times exceed those listed below then additional desks should be provided. The Service Level Agreements should be referred to for agreed acceptable wait times.

End TOM-UK

1.1.3 Passenger Check-In

1.1.3.1 General

Check-in is the complete sequence of steps that involve the registration of passengers and their baggage in a Departure Control System (DCS) or manual system, the labelling of the baggage and the issuance of one or more boarding passes. Boarding passes containing the



registered passenger's name and additional unique identifying data must be issued to all passengers, either on paper or electronically.

If a passenger arrives with a Duty or Leisure Standby ticket, the handling agent team should check availability and then NOREC the passenger onto the flight if space available.

The CSO should be contacted in case of any queries.

1.1.3.2 Check-In Deadlines

Apply check-in deadlines as per operating airline policy (*see below in italic*), respecting applicable passenger rights and on-time departure requirements.

If not agreed in the SLA with your station, check-in counters for flights departing outside the UK and The Nordics are applicable. These rules are the minimum requirements. It is possible that for operational reasons, more check-in desks are requested, however agreements upon the number of check-in desks will be made on a station base in these circumstances.

# of counters	Counter type			Standard Opening hours
	Premium	Economy	Baggage Drop-off	
SH/MH	0	3	If applicable	Latest STD -02:00 till STD -00:40 ²
LH	2	2	If applicable	Latest STD -03:00 till STD -01:00

Note: If SH/MH is operated by a Wide body aircraft (B787): LH opening hours & counter numbers need to be implemented.

When no Premium passengers presenting themselves to check in, the check-in agent is supposed to take one-by-one economy passengers to check in. An empty counter and a row of passengers in economy is not accepted. For common check-in on stations please follow instructions as given per TUI group/TUI Airways and TUIfly Nordic notice and agreements.

Common check-in is only allowed after approval by the carrier.

1.1.3.3 Operating Carrier, Marketing Carrier and Wet Lease

Advise the passenger of the operating carrier no later than *boarding but preferably* at the time of check-in, if different from the one noted as the "carrier" on the ticket.



Note: It may happen that a TUI Airways and TUIfly Nordic flight is operated by another carrier. This can be a carrier from the TUI-group or another carrier. Where the identity of the operating air carrier or carriers may be not yet known at the time of reservation, the handler shall ensure that the passenger is informed of the name of the air carrier that is acting as operating air carrier on the flight concerned. Therefore, in all cases, passengers shall be informed at check-in, or before boarding where no airport check-in is required. It is the TUI OCC's responsibility to send the following flight programs:

Daily program pre-advice

This program is sent on day -2 and contains the flight numbers, allocated aircraft and the full flight schedule per station. As this is a pre-advice only, suppliers will not be informed in case of aircraft or schedule changes, additional flights etc. This is an indication which should be used for planning purposes only.

Daily program

This program is sent on flight date -1. It contains the flight numbers, allocated aircraft and the full flight schedule per station. This is the final program with confirmed A/C registrations. All operational changes to this program must be communicated by means of a 'Daily Revision'

Daily revisions

These are sent in case of changes to the daily program. Changes can be delays, aircraft swaps, diversions, extra flights, fuel stops, requests for supplementary services (e.g. ASU, quick turnaround...) etc.

The daily revisions are our suppliers' only official source of information with regards to delays, schedule changes etc. No changes to our daily program can be officially published in any airport, handler or other suppliers' systems without having received a 'Daily Revision'.

Should a supplier believe a daily program or revision is not correct, then please contact TUI OCC to check whether a revision to the daily program is required.

Note 1: *Be aware other rules may apply according to the operators instructions, such as but not limited to dangerous goods, SVAN, AVIH.*

Note 2: *The relevant manuals for the lease aircraft can be found in the TAGO Portal.*

1.1.3.4 Check-In Types

a. General

Check-in may be provided at check-in counters, via self-service methods such as web check-in, kiosk or text message, and may be performed using a DCS or manually.

b. Manual Check-In

Where no DCS is available, apply established manual check-in procedures at a staffed check-in counter.

Note: All updated seating information can be found in the AHM 560 in the TAGO Portal per operator and per aircraft type.

c. Through Check-In - *Not applicable to TUI Airways and TUIfly Nordic.*



d. Return Check-In

Return check-in means a passenger is accepted and receives boarding passes for the outbound and return flights. The check-in for the return flight is permitted if the flight is open as per operating airline procedures.

Note: Return check-in is applicable only for online check-in passengers and not for airport check-in.

e. Self-Service Check-In

Web/mobile/kiosk/text message check-in may be offered if the following conditions are met:

1. The passenger is holding an electronic ticket.
2. The passenger is departing from an airport where the operating airline's or GHSP's DCS is in use.

Note 1: *Online check in is only available on certain flights specified by TUI and does not affect the check in procedures at the airport. All passengers will be pre-seated by TUI, also those who are not checked in online.*

Note 2: *Ensure Dangerous Goods notifications are prominently displayed at self-service check-in and at baggage drop-off. Refer to Dangerous Goods Poster for Check-in Passenger Services, Check-in Desk signage.*

BLX-SE

Paxport provide pre-seating for BLX passengers.

End BLX-SE

TOM-UK

TUI Airways only seat particular groups of passengers, flights will not be 100% seated and an element of seat allocation on check-in will be required.

End TOM-UK

f. Off-site Check-In

Off-site check-in means passenger acceptance at an off-airport location, e.g. at a train station or in a hotel, and may be permitted if:

1. The passenger is holding a valid ticket.
2. The location is an approved site.
3. The passenger meets any other qualifying criteria set by the operating airline.
4. Local off-site security processes are followed.

g. Back-Up Check-In Procedures

In case of DCS and/or Baggage Handling System (BHS) failure a local back-up check-in system can be used, if available. Local back-up procedures must be established in every station and tested regularly.

1.1.3.5 Check-In Counter Opening

Conduct a staff briefing for check-in agents before the check-in counters are opened and receive and review any summarized flight information.



1.1.4 Passenger Acceptance

1.1.4.1 Requirements for Passenger Acceptance

Apply the operating airline procedures (*see below in italic*) with respect to acceptance.

When accepting a passenger observe the following:

- a. Welcome and greet the passenger
- b. Ask for an itinerary/booking confirmation and an official travel document (e.g. passport), if necessary and verify validity, refer to GOM 1.1.5
- c. Pay attention to any signs that the passenger might not be allowed to travel, e.g. unruly behavior, signs of illness. Certain categories of passengers may be refused travel at the operating airline's discretion. Apply the operating airline procedures with respect to acceptance (*see below in italic*).
- d. Identify the passenger in the check-in system, accept the passenger and assign a seat in line with the operating carrier procedures, refer to GOM 1.1.4.2
- e. The acceptance of passengers on the waitlist is based on booking status and operating airline procedures (*see below in italic*).
- f. Update passenger and baggage information and add any Special Service Requests (SSR) to the DCS if required and apply any related fees.
- g. If required, apply irregularity handling *refer to GOM 1.5.5*, e.g. "search for volunteers" in case of over-sales.
- h. Observe through check-in or return check-in, if applicable, and issue all related boarding passes
 - i. Hand over the boarding passes and give information about departure gate, boarding time and eventual flight irregularities *refer to 1.5.2 for delay handling*.
 - j. Say goodbye and show the direction to the boarding gate.

Note 1: Certain categories of passengers may be refused travel at the operating airline's discretion.

Note 2: *Refer to Chapter 15, Annex I – Security for further information.*

Note 3: *In all cases of refused pax; please fill in the Refused Pax form found in the TAGO Portal.*

1.1.4.2 Seating

Each passenger (except infants not occupying a separate seat) is assigned an individual seat number on each flight.

At the time of passenger acceptance, *depending on the airlines seating procedure the seat choice is offered at time of reservation or check-in:*

- a. Check if a seat has been allocated already
- b. If not, allocate a passenger seat observing the passenger requests and the operating airlines procedures for seating for special categories of passengers.
- c. Observe seating restrictions for the emergency exit rows, refer to 1.1.4.3



Any infant (less than 2 years old) shall be attended by an adult (minimum 18 years old). This adult shall not be a PRM/PWD, except if the PRM/PWD is a WCHR (WCHR is allowed, all other PRM/PWD are not allowed).

Note: All updated seating information can be found in the AHM 560 - This can be found in the TAGO Portal per operator and per aircraft type.

The allocation of jump/crew seats may be permitted.

TOM-UK

Priority for standby seats are as follows:

- a. P1 Duty Travel
- b. P2 Company Employee P3 Operating Crew's Companion
- c. P4 Other Airline Staff
- d. P5 Other Company Employees

Where there is more than one person on the same priority, length of service will be the deciding factor. Where there is more than one companion of the Operating Crew, then the length of service of the operating crew member will apply for the companion.

End TOM-UK

BLX-SE

All customers will be pre-seated by Paxport.

End BLX-SE

1.1.4.3 Exit Row Seating

Occupancy of emergency exit rows is restricted in accordance with operating airline procedures and host state requirements. Before assigning an exit row seat to a passenger verify that a passenger of a correct age is willing, physically and mentally able to open the emergency exit in case of an emergency evacuation and able to understand the instructions given by the crew.

Note: For safety reasons, passengers with disability, unaccompanied minors and passengers with children and/or infants are not allowed to be allocated an emergency exit row seat. Pre-assigned seats can be changed if a breach of safety regulations are identified by the Ground Handling Agent, please report this to TUI's TOCC CLO Department.

All passengers are pre-seated. In case of special circumstances and/or ad hoc tech problems then the following instructions are valid.

Emergency exit row seats and PWD seating

Emergency exits:

The following passengers shall not be allocated a seat with direct access to an emergency exit:

- a. *Passengers suffering from an obvious physical or mental handicap to the extent that they would have difficulty in moving quickly if asked to do so;*



- b. *Passengers who are either substantially blind or substantially deaf to the extent that they might not readily assimilate printed or verbal instructions given;*
- c. *Passengers who because of age or sickness are so frail that they have difficulty in moving quickly;*
- d. *Passengers who are so obese or in the latest stage of pregnancy that they would have difficulty in moving quickly or reaching and passing through the adjacent emergency exit;*
- e. *Children (person of 2 years or above, but less than 12 years of age), whether accompanied or not and infants (less than 2 years of age). This restriction is extended to the row immediately forward, behind and emergency exit. Please refer to aircraft specific seating plans for Infant / CRD (Child Restraint Device) seating;*
- f. *Deportees or prisoners in custody, and;*
- g. *Passengers with animals.*
- h. *All passengers where the check in staff / gate staff has reasonable doubt, the passenger will not be able to assist in the unlikely event of an accident.*
- i. *Whenever possible, incapacitated passengers (especially WCHS and WCHC) shall be seated on the designated seats, when provided or in the immediate vicinity of those seats or close to the toilets.*

Complementary information / instructions

At check-in or on board TUI Airways and TUIfly Nordic expects Ground Handling Agent or Crew to reseat following passengers from emergency exit row seats:

- a. *PWD's;*
- b. *Passengers who cannot understand the English language or language in use during the flight (since DCS cannot control this during pre-seating).*
- c. *Passengers who are unable to communicate information to other passengers.*
- d. *When a Young Passenger (YP) is indicated as MAAS, this YP needs to be treated like an Unaccompanied Minor (PSM must show IATA code 'MAAS'.*
- e. *Pre-booked seats will be re-seated in case of an aircraft change. If for any reason, other than safety reasons, passenger does not get the seat that is bought (e.g. in case of a last minute aircraft change), check in agent should instruct passenger to contact Customer Services Center (TUIfly Nordic: 0031 88-088 5885; TUI Airways: Visit website www.tui.be) for a possible rebate.*
- f. *Whenever possible, incapacitated passengers (especially WCHS and WCHC) shall be seated on the designated seats, when provided or in the immediate vicinity of those seats or close to the toilets.*
- g. *Final seating: When the safety related passengers are pre-seated, the rest of the passengers have to be seated according to the SSR code PNL. First the larger bookings working finally to the smallest bookings to make the best possible 'puzzle' enabling the maximum number of bookings to sit together. When operating with less than a full load, passengers should be evenly distributed throughout the cabin (in order to avoid tail-tipping).*

1.1.5 Documents required for Travel

Customers may present a confirmation letter of their flight booking and itinerary. However, customers should still be accepted for travel subject to normal passport and documentation checks even if they are not in possession of the confirmation letter but appear on the Passenger Names List (PNL). Exceptions do however apply, please see below.

Exceptions



1. *Customers traveling to Egypt, Goa and Turkey are required to present their confirmation letter or copy of their E-Ticket upon arrival.*
2. *For this reason, it is necessary for these documents to be requested at the point of check-in from the United Kingdom.*
3. *If the customer does not have either document and do not appear on the Passenger Names List (PNL), the ground handler should contact the TUI Airways Customer Service Officer for guidance.*
4. *If the customer does not have either document and does appear on the Passenger Names List (PNL), the following process should be followed:*
 1. *Departing the United Kingdom: refer customer to the Customer Service desk where a copy can be provided.*
 2. *Departing Egypt, Goa and Turkey: refer customer to the tour operator representative where a copy can be provided.*

1.1.5.1 Passenger Documents

Passenger documents consists of:

- a. Travel document (e.g., passport or national identify card, residence card).
- b. If required, residence card, visa (e.g., entry or transit visa).
- c. Health documents, if required—(e.g., vaccinations or other health-related proofs and requirements, which might be required to be presented by passenger before travel. Other additional documents, may include quarantine hotel confirmation, approval level of entry).

Note: The regulatory framework including these health proofs as well as the responsibility for an airline are provided by ICAO Annex 9 and by the World Health Organization (WHO). Staff responsible for check-in and or boarding shall verify passenger documents and ensure an improperly documented person is not allowed to travel.

Acceptable for intra-Schengen passengers

- a. *Temporary ID Card*
- b. *ID Card*
- c. *Valid resident card*
- d. *Passport*
- e. *UMs (Unaccompanied Minors) can only be accepted with valid ID card*
- f. *Expired ID card can be accepted if the expiry date is less than six months before date of travel*
- g. *Emergency passport, valid for one journey only*
- h. *Driver's license expired less than six months before date of travel*
- i. *Proof of theft of ID document (which includes a picture) issued by the police*

Acceptable for non-Schengen countries

- a. *Valid passport when necessary (refer to TIM)*
- b. *Valid ID card when necessary (refer to TIM)*
- c. *No other documents are acceptable except for those clearly described in the TIM.*



If a passenger has been denied because of incorrect travel documentation, a copy of his documents has to be taken (do it discrete) and this must be kept on file for 7 days and then be deleted in all possible ways.

Local regulations always to be applicable in case stricter than described above. When you have doubts about accepting a passenger due to his/her travel documents, you can contact local authorities. Refer to Chapter 15, Annex I – Security for specific instructions.

A Form of Indemnity must be filled out, in which passengers with missing or insufficient documents indemnify TUI Airways and TUIfly Nordic and its agents against any irregularities that may occur as a result of transport. This form can be found as in the TAGO Portal.

1.1.5.2 Verification

a. General

Verification is a process also known as document check, carried out by staff charged with responsibility of check-in and/or boarding at the point of embarkation.

Document check controls uses various technologies and can occur at various points of the passenger journey including the airline website/mobile application or at the airport through self-service check-in options up to the boarding gate. The depth of the controls will also depend on the flight destination and risk profile.

Increasingly, the use of trusted digital identities allows passengers to assert their identity earlier in the journey, reducing the need for face-to-face interaction with an airline's agent, especially when touchpoints are biometrically enabled.

However, the complexity of the entry requirements of the transit and/or destination country(ies) and depending on national legislations, the document check controls may have to be performed manually.

Note: Verification of travel documents is performed visually and manually. Documents readers and basic inspection tools may be used in higher risk environments

b. Document Checks

Prior to passenger check-in or boarding, personnel shall;

1. Determine ticket acceptability and confirm destination and or transit with passenger including the return ticket, if applicable
2. Verify the passenger's identity against the travel document presented e.g.,
 - i. Citizenship and date of birth for entry requirements
 - ii. Expiry status of the document
 - iii. Visual comparison of the photo to the passenger
 - iv. The name on the travel document matches the booked/ticketed name.

Note: Ensure every person holds a valid travel document

3. Ensure where applicable, the visa or residence permit required to enter the State of transit and/or receiving State.
4. Review visa and/or entry conditions/limitations.

Note: A number of airlines for example use Timatic services to help ensuring that their passengers comply with the entry requirements of the transit and destination country.



5. Review health documents status for destination and/or transit requirements, if required.
6. Collect or verify advance passenger information (API) data, if required.
7. Ensure irregularities are detected such as:
 - i. Expired or invalid travel document or a visa for which the maximum number of entries set has been depleted;
 - ii. Counterfeit, forged or altered;
 - iii. Documents that belongs to another person; or
 - iv. Passenger without such document.
8. When an irregularity is identified, with the passenger document/s, the supervisor will be notified;
 - i. To contact the appropriate authority for assistance to further verify documents, if applicable or
 - ii. Deny a passenger check-in at the point of departure or boarding at the transit point, to the intended final destination, when the document(s) presented by the passenger is determined to be insufficient or inappropriate, leading to an inadmissible person, refer to AHM 121/GOM 1.4.9.1.
9. Retrieve DCS record and review any special remarks.

Note 1: As per ICAO Annex 9, Contracting States have the obligation to assist in the evaluation/verification of travel documents presented by passengers, in order to deter fraud and abuse.

Note 2: Some contracting States may have liaison officers at airports in order to assist airlines to establish the validity and authenticity of the travel documents at the different touch point of the passenger journey.

Note 3: Consequently, airlines will seek mitigation of State penalties whenever fraud detection was not obvious nor evident. Refer to AHM 121 for additional information on aircraft operator's responsibility mitigation.

1.1.5.3 Advance Passenger Information (API)

Many governments require airlines to submit API data. API is made of two different datasets related to the:

- a. Flight.
- b. Identity of the passenger.

The information related to the passenger are included in the Machine Readable Zone (MRZ) of the travel document (e.g., surname/given names, date of birth, nationality, travel document number, expiry date, etc.) at specified times for inbound and sometime outbound passengers.

Information is generally collected at the time of check-in or provided from data collected during booking and verified during presentation of the travel document.

As per operating airline procedures (*see below in italic*), collect API data at the time of check-in or review and verify data already provided. Transmit API data as requested by authorities. Always protect the passenger's personal information and securely dispose of any related paperwork not kept on file.

In addition to these procedures it is important that, in the event of a DCS failure or outage that prevents the collection and transmission of customer information to UK E-Borders prior to



departure, ground handling agents immediately notify TUI Airways Customer Service Officers for guidance. Both ground handlers in the United Kingdom and those Overseas, where we collect and transmit information to UK E-Borders, are required to report any outage to the E-Borders helpdesk, with the TUI Airways Customer Service Officer in copy:

Email: carriersupport@homeoffice.gsi.gov.uk ukcsoffice@tui.co.uk

The following information will be required:

- a. *Station*
- b. *Flight affected*
- c. *Outage reason*
- d. *Expected duration of outage*

If any outage affects flights to Spain, the Spanish Ministry must be informed: Email: consultasembarque@ses.mir.es

Note: All E-Borders passport data must be transmitted to the UK Border Agencies for all passengers prior to travel. Ground Handling. Agents will be required to capture and transmit the passport details for all passengers.

1.1.6 Baggage Acceptance

1.1.6.1 General

The following section presents the baggage acceptance procedures. It should be noted that the handling of baggage may vary between airlines and therefore deviations from the processes described are possible. Always refer to and follow airline procedures where applicable.

1.1.6.2 Cabin Baggage

a. General

Each operator sets their standards for size, weight and number of pieces permitted as cabin baggage.

b. Cabin baggage types

Cabin baggage includes:

1. Baggage carried within the operator's free carry-on baggage allowance.
2. Free carry-on items permitted by the operator in addition to the standard allowance (e.g. purse, laptop, duty free item, winter coat, etc.).
3. Special items permitted by the operator that may require prior arrangement, notification and/or specialized screening or additional charges (e.g., urns containing human remains, pets, medical equipment and valuables).
4. For items of dangerous goods permitted in cabin baggage including those items that require prior approval by the operator, see IATA Dangerous Goods Regulations (DGR).

c. Cabin Baggage Acceptance

Cabin baggage can only be accepted if:



1. Is suitable for air carriage (conforms to operator's procedures for weight, size and/or nature)
 2. Can fit under the seat or be stowed in the overhead compartment.
 3. Is suitably packed.
 4. Conforms with airport security and safety procedures.
 5. Restrictions:
 - i. Certain items, because of their weight, size and/or nature are only accepted with the consent of the operator, e.g. musical instruments.
 - ii. For security reasons, many countries restrict the carriage of liquids, aerosols and gels in cabin baggage.
 - iii. Items refused by security screening shall be hold-checked as per operating airline procedures or refused from transport completely if not allowed in checked baggage *refer to Chapter 15, Annex I - Security.*
- d. Procedures at Check-In
1. Assess the size, weight and number of pieces of cabin baggage as operating airline procedures (*see below in italic*):
 - i. Weigh/measure cabin bags if they appear to exceed the specified weight/size limit set by the operator (weighing of all cabin baggage may not be systematically required unless mandated by the operator).
 - ii. Refer the passenger to the baggage gauge, if available.
 - iii. Attach an "approved cabin baggage" tag, if applicable.
 2. If the cabin baggage exceeds the free allowance size and/or weight, it shall be checked in, with applicable charges, if the free baggage allowance is exceeded.
 3. Be aware of dangerous goods that may be commonly carried but are not permitted. Ask the passenger if they have any of these items by using the Dangerous Goods displays for visualization.
 4. Items that are removed by security screening personnel may only be accepted in checked baggage, as per operating airline handling and acceptance procedures.
- e. Procedures at Boarding Gate
1. Check for items that are unacceptable, oversized and/or overweight or exceed the number of pieces as free cabin baggage, using the cabin baggage gauge if applicable.
 2. Collect any cabin baggage that cannot be accommodated on board due to these reasons or due to limited storage space.
- f. Accepting cabin baggage into the hold
1. Check with the passenger that the baggage contents comply with the IATA DGR and the operating airline procedures *refer to Chapter 10, Annex D – Dangerous Goods and Weapons*. Verify whether the passenger has removed any items specifically prohibited in hold baggage.
Mandatory question to all passengers on TUI flights: "Do you have any powerbanks, external battery packs, spare-loose batteries or e-cigarettes in your checked baggage?. If YES, please remove them now and carry them as cabin baggage."
 2. Advise the passenger to remove any personal documents or medications, valuables and sensitive or fragile objects.
 3. Collect applicable charges as per operating airline procedures.
With regard to Non-Registered Baggage with dimensions exceeding the max cabin size, TUI reserves the right to carry that piece as Registered-Baggage in the hold of the aircraft. TUI shall not charge the Passenger for such baggage piece.



4. Tag gate-checked bags in line with the through check-in procedures using a limited release tag.
5. Ensure the baggage tagged at the gate is considered for load control by adding the information in the DCS (number of pieces and weight) or use Delivery at Aircraft (DAA) labels and processes if applicable see 1.1.6.12 (c) depending of aircraft type.
6. Inform the passenger to pick up their gate-checked bags either at the baggage claim area, final destination or at the aircraft door (Delivery at Aircraft, DAA), if applicable.
7. Inform ramp staff and/or load control of the gate baggage to be loaded

Note 1: *An urn is permitted on board and can be transported as cabin baggage provided the urn is within the standard size and weight limits for cabin baggage. In addition, the following transportation requirements are applicable:*

- a. *the passenger in possession of the urn must be able to show a death certificate;*
- b. *the urn shall not be opened on board.*

Note 2: *For all bags going in the aircraft hold, customers must be clearly informed to remove ALL valuables, important documents (passport, legal papers etc.) medicines and dangerous goods such as e-cigarettes, powerbanks, loose and spare lithium batteries. These items must be carried by the customer in the cabin.*

TOM-UK

In addition to the cabin baggage allowance of 10kg. The maximum size dimensions are 55cm x 40cm x 20cm. passengers can bring one small personal item. Examples are: a handbag, a laptop bag, a briefcase or a camera bag. This must be small enough to be stored under the seat.

Note: Strollers designed as cabin baggage

Please also be aware that these types of strollers are only allowed into the cabin if they comply with our handbaggage policy.

1. 1 piece of handbaggage
2. Max weight 10 Kilos
3. Max dimensions 55 x 40 x 20 cms

If the stroller is within our handbaggage policy, it will be allowed into the cabin but no other handbaggage will be allowed for this passenger.

The strollers must be fully collapsed prior to entering the cabin and to remain collapsed until they disembark the aircraft on arrival.

These strollers must never be opened in the cabin at any time.

End TOM-UK

BLX-SE

The cabin baggage allowance is included within the passengers overall baggage allowance and cannot exceed 1 bag at 5 kilos. The maximum dimensions are 55cm x 40cm x 20cm. No additional items may be carried in the cabin.



Note: If the passenger wants to bring a stroller in to the cabin, it shall comply with the hand baggage allowance volume size and weigh max 7 kg. The stroller will replace another piece of cabin baggage.

End BLX-SE

1.1.6.3 Checked Baggage

a. General

1. Checked baggage is:
 - i. Taken custody by the operator who issues, validates or updates a baggage tag.
 - ii. Carried in the hold of the aircraft on which the passenger is travelling but remains inaccessible to the passenger during the flight.
2. The operator may refuse to carry checked baggage that is likely
 - i. To endanger the aircraft or persons/property on board the aircraft.
 - ii. Inadequately packed.
 - iii. Unsuitable for air carriage due to its weight, size and/or nature.
 - iv. Forbidden by law, regulations, security standards or safety standards of any state to be flown from, to or over.
3. Every piece of checked baggage shall have a baggage tag attached, showing the tag number, flight number, appropriate destination and the passenger's name.
4. Operating airline procedures may specify a maximum single item weight, is applicable. (*see below in italic*)

Note: Certain items, because of their weight, size and/or nature, are only accepted with the consent of the operator. For example, musical instruments such as a cello.

b. Standard baggage acceptance

The Check-in Agent should only accept checked baggage that is appropriately packaged and has a passenger identification label (*see below in italic*).

1. Ensure dangerous goods notifications are on display and verify with the passenger that the checked baggage does not contain any forbidden dangerous goods.
2. Review weight and number of pieces information for recording in the DCS and for applying appropriate fees.
3. If applicable or required according to operating airline procedures, ask the passenger security-related questions.
4. Be aware of items that, due to their nature, may contain dangerous goods. Refer to the IATA DGR and operating airline procedures. (*see below in italic*)
5. Ensure the number and weight of each piece of checked baggage has been transferred automatically or manually to the load control process. When special baggage is accepted, ensure the person in charge of the weight and balance calculation task is informed accordingly.
6. Attach an appropriate baggage tag for the journey.
7. Passengers who have used a self-service check-in facility may drop their checked baggage at a baggage drop-off:
 - i. Review the boarding pass and pull up the passenger data in the check-in system.
 - ii. Verify identity and travel document, assess carry-on baggage, and accept checked baggage.



- iii. Update baggage information and any (SSRs) in the DCS, if required, and apply any related fees.
- c. Baggage Drop-Off and Self Service Devices.
Baggage self-service drop off is becoming more prevalent. Where baggage self-service devices are in use, observe the following:
 - 1. Follow operating airline procedures or Service Level Agreements (SLA) for the number of staff undertaking assistance and supervision activities at each machine.
 - 2. Proactively guide passengers to self-service options to manage waiting times.

Additional instructions for Dangerous Goods to be found in Chapter 10, Annex D- Dangerous Goods and Weapons.

Note 1: *At check in (also self-service points) and at the boarding gate, where possible the TUI Dangerous Goods poster must be displayed (refer to Documentation/TOM-BLX/Passenger Services/Check-in Desk signage in the TAGO Portal). Use of the airport's standard Dangerous Goods signage is permissible.*

Note 2: *For all bags going in the aircraft hold, customers must be clearly informed to remove ALL valuables, important documents (passport, legal papers etc.) medicines and dangerous goods such as e-cigarettes, powerbanks, loose and spare lithium batteries. These items must be carried by the customer in the cabin.*

Note 3: *The maximum weight of any single piece of checked baggage should not exceed 32 kg (70.5 lbs.). "Heavy" tags/labels shall be placed on all pieces of baggage which exceed 23 kg, with the actual weight of the piece to be shown on the "heavy" tag/ label.*

Note 4: *The number of kilo's pre-paid for, will be visible in the DCS (for example: XBAG 20kg). Check-in agents should always look at the weight allowances indicated per passengers in the DCS*

1.1.6.4 Dangerous Goods in Baggage

- a. In principle, dangerous goods are forbidden to be carried by passengers and crew, except as otherwise provided in Table 2.3. A of the IATA DGR and in line with *Chapter 10, Annex D - Dangerous Goods and Weapons*.
Specific transport conditions are applicable to defined items that:
 - 1. Require the approval of the operator prior to the acceptance
 - 2. Are permitted in or as checked baggage
 - 3. Are permitted in or as cabin baggage
 - 4. Must be carried on one's person only
 - 5. The pilot-in-command shall be informed of the location of the mobility aid with installed batteries, removed batteries and spare batteries, to best deal with any emergencies that they may occur.

Note: A NOTOC to the pilot-in-command is not required for passenger and crew baggage

- b. All persons tasked with passenger and baggage acceptance shall:
 - 1. Be trained according to the training requirements in the IATA DGR.
 - 2. Have to verify with the passengers that they are not carrying forbidden dangerous goods during the check-in and baggage acceptance process.



3. Be aware of commonly carried items and question passengers where there is a suspicion of their carriage (e.g., camping equipment, hunters).
4. Handle and report any dangerous goods occurrences (e.g. forbidden dangerous goods identified in checked baggage).

For details refer to the IATA DGR and the operating airline handling procedures refer to *Chapter 10, Annex D – Dangerous Goods and Weapons*.

1.1.6.5 Baggage Pooling

As per IATA Resolution 746, when passengers' baggage is pooled, each passenger in a non-family group should be given their own individual baggage claim check/receipt.

Baggage may be pooled between registered groups of passengers or passengers flying together, such as families. In this situation the baggage allowances for each passenger are combined to make a group total.

For example: a registered group of 10 passengers may each have an individual baggage allowance of 1 piece weighing up to 20 kg. Pooling the allowance would allow 10 pieces weighing 20 kg each for the entire group. Therefore, if one group member has 2 bags, and another has no checked baggage, the pooled allowance allows the second bag to be carried without penalty.

Note: Where applicable the maximum single item weight restrictions shall be observed.

1.1.6.6 Bulky and Oversized Baggage

a. General

Baggage is considered bulky or oversized as defined by operating airline procedures and/or its weight exceeds regulatory limits. These items are called out of gauge items. For example, in general baggage accepted in European airports may not exceed 32 kgs in weight, although exceptions may exist e.g., check-in of wheelchairs

Passengers presenting such items should:

1. Complete the normal check-in process at the check-in counter.
2. Attach a baggage label to the OOG (out of gauge) item.

Drop the item to the OOG baggage acceptance point, if available.

b. Maximum Single Item Weight

Each operator shall determine a maximum single item weight for checked baggage that considers:

1. Local legislation or health and safety requirements.
2. Other applicable limits for transfer baggage.
3. Specific rules may apply as per operating airline procedures for certain items e.g., Animals Vivant in Hold (AVIH), wheelchairs (WCH), musical instruments, media equipment and large sports equipment.

c. Maximum Single Item Dimension

Each operator shall determine maximum single item dimensions for checked baggage that considers:

1. Local legislation or health and safety requirements.



2. Other applicable limits for transfer baggage.
3. Specific rules may apply as per operating airline procedures for certain items e.g., Animals Vivant in Hold (AVIH), wheelchairs (WCH), musical instruments, media equipment and large sporting equipment.

1.1.6.7 Checked Baggage Allowance

Passengers are entitled to a predetermined free checked baggage allowance that can vary based on the fare paid, passenger category, routing, group status or class.

Note: Some fares do not include any free checked baggage allowance.

There are two standard free checked baggage allowance concepts:

- a. Weight Concept: measured by the total weight of checked baggage, which is shown as a weight amount on the ticket (e.g., 20 kg or 45 lb.).
- b. Piece Concept: measured by the number of pieces of checked baggage (shown as PC on the ticket).

Infants (under the age of 2) have a free baggage allowance of 10kg.

Note: Some operators' procedures may combine both concepts, such as 2 pieces not weighing more than 32 kg in total or per piece.

1.1.6.8 Excess Baggage

When the free checked baggage allowance is exceeded; chargeable excess baggage handling applies as per operating airlines procedures and applicable baggage rules. Excess baggage fees (per kilogram or piece or for special items) may be prepaid, collected at the check-in, collected at a sales desk or at the boarding gate.

Prices for excess baggage refer to Appendix I9 in the TAGO Portal.

TOM-UK

A single bag must not weigh more than 25kgs. Heavy tags are recommended to be used for any bag weighing more than 23kgs.

End TOM-UK

1.1.6.9 Baggage Tagging

- a. Remove all old baggage tags, handling labels if not applicable and baggage reconciliation tags (mini or stub).
- b. Attach appropriate baggage tag for the journey.
- c. Place tags in an easily readable location and where they will not be easily torn off or damaged.
- d. Follow tag instructions and do not stick glue directly onto passenger baggage.
- e. Use limited release tags as per operating airline procedures.
 1. *Any baggage already damaged when it is presented for check-in must be labelled with a limited release label, with damage indicated on the label, signed by the passenger and marked "Received damaged"*
 2. *Late check-in (resulting in possible misrouting);*
 3. *Fragile or inadequate packing (resulting in possible damage; includes backpacks);*
 4. *Unacceptable cabin baggage (bags or security items refused in the cabin).*



- f. As per operating airline procedures, if they are not printed on the baggage tag, supplementary tags (applicable handling tags) may be attached to baggage items, such as:
1. Priority Tag—to identify priority baggage to be offloaded first and segregated as per operating airline procedures
 2. Short Connection Tag—for transfer baggage with minimum time between scheduled arrival and departure
 3. Limited Release Tag—used on fragile or unsuitably packaged items
 4. Fragile Sticker—for items that require extra care in handling
 5. Heavy Tag—placed on items that exceed regular handling limits (this varies according to local legislation).
 6. Security Tag (e.g. weapons)

Note: Transfer Baggage—Special Cases

Case	Through-labelling	Remark
Customs clearance required at the at the transfer point.	Yes	Advise passenger to pick up baggage at the transfer point. Refer to Travel Information Manual (TIM/TIMATIC) for country rules.
Passengers specifically want their baggage at a transfer point	No	Inform the passenger about the risk of missing the connecting flight.
Live animals in hold	Yes	Only permitted if the continuing carrier has confirmed acceptance. Within the permissible minimum connecting time (MCT).

Table 1.1.6.9—Special cases for transfer baggage

1.1.6.10 Types of Baggage Tags

a. Manual Baggage Tag

In case of manual baggage tag as per IATA Resolution 740:

1. Complete any hand-written portions of the manual tag, writing legibly in permanent, waterproof ink.
 2. When needed due to the number of transfer legs:
 - i. Prepare a second tag by striking out the baggage identification number
 - ii. Remove the barcode section
 - iii. Attach the transfer part of the tag below the transfer line on the initial tag
 - iv. Mark the 2nd tag as a conjunction tag
 3. Record the baggage identification number in the operating carrier's departure control system if possible.
 4. Inform the Ramp Agent when checked cabin baggage is accepted at the gate.
- b. Electronic Baggage Tag (*not applicable to TUI Airways and TUIfly Nordic*)
- c. Home Printed Baggage Tag (*not applicable to TUI Airways and TUIfly Nordic*)
- d. Fallback Baggage Tags (*not applicable to TUI Airways and TUIfly Nordic*)



1.1.6.11 Checked Baggage Destination

Follow operating airline procedures and through-label baggage to one of the following points, whichever occurs first:

- a. The first stopover point of the passenger.
- b. The point to which transportation has been confirmed (OK in ticket), requested (RQ in ticket) or listed (SA in ticket).
- c. The point where a change of airport is involved.
- d. The final destination specified in the ticket, including any tickets issued in conjunction with this ticket.
- e. In addition, observe the following:
 1. The Minimum Connecting Time (MCT) is respected.
 2. Unless subject to specific agreement between airlines, through check-in baggage on separate tickets is prohibited.
 3. If allowed by airline operating procedures, then baggage may be labelled to a transfer destination on the ticket.
Not applicable.
 4. Specific rules of the operating airline may apply for Animals Vivant In Hold (AVIH).

Note: Cuba (all stations)

Transit baggage at Cuban stations needs to be offloaded unless both points here below are met:

- a. *The transit passenger luggage must be in a different container dully identified and never unloaded from the aircraft in Cancun.*
- b. *The transit passenger luggage will never be in the bulk for any reason, please be careful on this procedure and check that the station where the aircraft operates whereas being CUBA or any other place before operating at Cancun, accomplishes such disposition, otherwise, if any of the transit luggage is in the bulk, the exception will be cancelled immediately, because customs staff will be checking at the arrival at CUN all the aircraft. Also the luggage of the passengers in transit must remain in the containers separated from the luggage with destination CUN, guaranteeing that this luggage cannot be opened, manipulated or taken out from the aircraft. This establishes the new procedure according to customs authority.*

1.1.6.12 Special Baggage

- a. Cabin Seat Baggage
 1. Cabin Seat Baggage (CBBG) is baggage not usually suitable for loading in the aircraft hold and thus requested for transport on an extra seat. Such baggage may include:
 - i. Musical instruments
 - ii. Works of art
 - iii. Electronic equipment
 - iv. Diplomatic baggage
 - v. Valuable baggage
 2. Loading and Lashing Cabin Seat Baggage
Operating airline procedures shall dictate the acceptance of CBBG. If not accepted, it can travel as hold-checked baggage providing packaging is appropriate, see instructions below in italic.



Note: Handling agents must also look actively for CBBGs at check in and ensure large CBBGs should be carried in the cabin whenever possible

Handling agents have to ensure that any large CBBG that cannot be carried in the passenger cabin (e.g. due to its size), and therefore has to be carried in checked baggage, in case of an electronic device:

- i. *Is completely switched off and effectively protected from accidental activation. To ensure the device is never powered on during its transport, any application, alarm or pre-set configuration that may activate it shall be disabled or deactivated;*
 - ii. *Is protected from the risk of accidental damage by ensuring suitable packaging or casing or by being placed in a rigid bag protected by adequate cushioning (e.g. clothing); If not suitably packed, the handling agent must refuse the luggage.*
 - iii. *Is not carried in the same baggage together with flammable material (e.g. perfumes, aerosols, etc.).*
 - iv. *Further information on the safe transportation by passengers of Lithium batteries is available in Chapter 10, Annex D - Dangerous Goods and Weapons.*
- b. Crew Baggage
- Crew baggage may be presented at check-in or airside and should be clearly identified with a crew label as well as all flight details. Handling rules are:
1. *Crew will check-in their baggage at the check-in desk assigned for their flight.*
 2. *Check that the baggage is equipped with a legible and completed crew sticker label, TUI Crew label and TUI suitcase belt.*
 3. *Keep crew baggage separate from the total baggage loaded, inform the crew of the actual baggage loaded and specify on LDM.*
 4. *For loading instruction refer to Chapter 9, Annex C - Aircraft specifics.*
 5. *Where possible; follow DAA (Delivery at aircraft) instructions.*

c. Delivery At Aircraft

1. Delivery At Aircraft (DAA) procedure may be applied for:
 - i. Fully collapsible baby strollers and pushchairs (larger baby carriages/prams shall be checked in).
 - ii. Wheelchairs and mobility aids that are not needed during the flight and cannot be stored in the cabin.
 - iii. Regular cabin baggage on small aircraft with limited stowage space in the cabin.

Note 1: Do not use the DAA procedure for valuable items (e.g., laptop computers, large video cameras, important documents) as such items should remain with the passenger.

Note 2: Observe local restrictions for DAA delivery at arrival stations and inform passengers accordingly.

Note 3: Verify with the passenger that any dangerous goods items which are only permitted in cabin baggage are removed before DAA acceptance.

2. Procedure at Boarding Gate



- i. Inform the person responsible for loading and supervision task to ensure the loading of DAA and WCH are noted on the Load Message (LDM) under SI-Remark.
 - ii. If applicable, inform the flight crew of the number of DAA bags.
 - iii. Inform the passenger to leave or hand-over the DAA-item in the designated area.
 - d. Sporting Equipment
Generally, sporting equipment will be presented as separate pieces of checked baggage. Accept sporting equipment as per operating airline procedures.
 1. Apply procedures for special handling charges, *see Appendix 13 Ancillary Sales Charges in the TAGO Portal.*
 2. Load as per operator instructions (*refer to ACFT specific loading in GOM Chapter 9 Annex C Aircraft Specifics*).
 - e. Wheelchairs and Mobility Aids (*refer to Chapter 12, Annex F - Electric Mobility Aids*)
Wheelchairs and other mobility aids are crucial to the passengers who use them. They are most often custom-designed and tailored to promote safety, comfort and independence for the user and shall be treated with care. Mobility aids such as wheelchairs, rolling walkers, Segways style mobility wheelchairs or Swiss Tracs may be operated with manual or electric power and have to be handled according to instructions provided by the passenger and according to the IATA DGR. There are specific rules and concerns when handling such aids, especially when they have batteries that also need special handling.
Passengers using a wheelchair (manual or powered) or other mobility aid should always be given the following options:
 1. Where possible, retain their personal mobility aid throughout the airport,
 2. Check it in and be provided with an airport/airline wheelchair to autonomously reach the gate, where applicable,
 3. Check it in and be accepted by a dedicated agent with an airport/airline wheelchair or electric cart to reach the gate.
 4. If the passenger mobility aid:
 - i. Is not checked-in, its usage should be permitted up to the aircraft door and the mobility aid stored in the cabin where facilities are available. Such requests will be handled on a first come first served basis (ref. IATA RS 700 5.2.3.1 (b)) and will depend on the size of the aircraft and local regulations. Although requested by the passenger, where the wheelchair or mobility aid cannot be stored on board, it shall be loaded in the aircraft hold where it is easily accessible for timely return to the passenger at the aircraft door.
 - ii. Is preferred to be or (must be) checked-in, an identification tag will be attached to it. The tag alerts the baggage handling staff on the handling process or the need to deliver the mobility aid to the aircraft door or at the baggage claim. *Refer to GOM 1.1.6.12(c).*
 - iii. When not provided at the time of booking, details of size, weight and battery type shall be validated at check-in to ensure the mobility aid is accepted and loaded on the aircraft in accordance with the IATA DGR

Note: In addition to any operating airline procedure, refer to the current IATA DGR and IATA Recommended Practice 1708 which can be found in the IATA Passenger Services Conference Resolution Manual (PSCRM).



- f. Acceptance of Pets in Cabin and Live Animals in Hold
Handling of animals is required in accordance with operating airline procedures and Live Animals Regulations (LAR). The acceptance of pets is also subject to the respective country regulations.

There are two methods of carriage:

1. Pets in Cabin (PETC)

Subject to operating airline procedures (*see below in italic*) defined animal species like cats and dogs may be accepted as pets in cabin, PETC *See GOM Annex H Live Animals, either securely leashed (only for service dogs) or in an approved container for carriage in the passenger cabin.*

Note: PETC is not allowed on TOM flights, TUI Airways only accept SVAN in the cabin.

Note: If TUI Airways aircraft are operating flights on behalf of JAF/TB, TFL/OR, TUI/X3 or BLX/6B, domestic pets are allowed in the cabin (PETC) & the hold (AVIH) as passenger baggage. For more details on conditions of carriage please see respective airline GOM/GHM).

TOM-UK

2. Animals in Hold

- i. Animals Vivant in Hold (AVIH), that is live animals, may be transported as checked baggage in the aircraft hold in accordance with IATA Live Animal Regulations and operating airline procedures. Ensure that the flight crew are informed of AVIH loading to ensure sufficient heat and airflow are maintained.
- ii. Domestic animals such as dogs, cats, and if applicable, other defined animal species by the operating airline may be carried as AVIH.

Note 1: Domestic animals of unusual size or wild animals, reptiles and rodents must be transported as cargo. *Refer to Chapter 14, Annex H – Live Animals for more information.*

Note 2: *AVIH will only be accepted as cargo.*

Note 3: If TUI Airways aircraft are operating flights on behalf of JAF/TB, TFL/OR, or TUI/X3, domestic pets are allowed in the cabin (PETC) & the hold (AVIH) as passenger baggage. For more details on conditions of carriage please see respective airline GOM/GHM.

End TOM-UK

BLX-SE

1. Animals in Hold

- i. Animals Vivant in Hold (AVIH), that is live animals, may be transported as checked baggage in the aircraft hold in accordance with IATA Live Animal Regulations and operating airline procedures. Ensure that the flight crew are informed of AVIH loading to ensure sufficient heat and airflow are maintained.
- ii. Domestic animals such as dogs, cats, and if applicable, other defined animal species by the operating airline may be carried as AVIH.

Note 1: Domestic animals of unusual size or wild animals, reptiles and rodents must be transported as cargo.



Note 2: Refer to Chapter 14, Annex H – Live Animals for more information.

Note 3: The weight of the animals and their container should be added to the baggage weight. If the free allowance is exceeded, the published excess baggage rates per kilo are applicable.

End BLX-SE

g. Service Animals

Subject to operating airline procedures and local regulations, it may be possible to accept defined animal species as task-trained service animals (SVAN) and emotional support animals (ESAN) in the passenger cabin. Refer to operating airline procedures for guidance.

Task-trained service animals (SVAN) are animals trained to perform specific tasks for people who have physical, sensory, psychiatric, intellectual, or mental disabilities. The most common type of service animal is a dog.

Emotional support animals (ESAN) are usually untrained and mainly provide support, well-being and comfort to their owners through companionship, non-judgmental positive regard and affection.

Note: Note: Emotional support animals are not globally recognized as a service animal.

1.1.6.13 Carriage of Firearms

Note: Firearms are among the articles prohibited for carriage in the aircraft cabin. The only exemption is for persons specifically authorized to carry a firearm in the cabin (e.g. air marshal).

a. Carriage of Firearms On-Board

Airline procedures are in place to ensure the pilot-in-command (PIC) is notified prior to the commencement of a commercial flight or persons(s) authorized to carry a firearm on the flight in the passenger cabin.

The notification shall include the seat number(s) of authorized armed person(s) when allowed by local regulations.

b. Carriage of Firearms in the Aircraft Hold

When a firearm and ammunition is carried in the hold, the procedures shall ensure:

1. Firearm is not loaded and there is no ammunition in the chamber and ammunition is carried separately from the firearm.
2. Firearm and ammunition are stowed in a place that is inaccessible to any unauthorized person during the flight. Firearms are not to be carried in the flight deck or retained by any crew member.
3. Carriage of firearms is permitted by all states involved (including the state of departure, transit, arrival).
4. Pilot-in-command is notified prior to a commencement of the flight.

Note 1: In the event a weapon or any item suspected to be an unauthorized weapon is discovered, follow operating airline procedures and local security regulations.

Note 2: Refer to Chapter 10, Annex D – Dangerous Goods and Weapons and Chapter 15, Annex I - Security for more information.



TOM-UK

Carriage of firearms and sporting weapons as passenger baggage is prohibited.

End TOM-UK

1.1.7 Passenger Boarding

Standard boarding times

Green Light Boarding applies at some airports where agreed locally or within individual contracts.

Where Green Light Boarding is agreed, the following procedures apply:

Departures from UK and Nordic Airports:

- a. *Aircraft Dispatchers should be available at STD-75 for all first rotation departures and from ATA-3 for all aircraft on turnaround.*
- b. *It is the Dispatcher's responsibility to coordinate all activity for the subsequent departure and ensure each service provider is working towards commencement of boarding at STD-35.*
- c. *At STD-35, pre-board customers should be positioned at the aircraft door ready to board, followed by all other passengers, unless otherwise advised by TUI Operations Control Centre, on board Crew or Engineers.*

Note: Important: flight crew & cabin crew must be on board. If crew are not expected to be ready at STD-35, they will inform the handler.

Departures from Overseas stations:

- a. *Locally agreed procedures should be followed to ensure that at STD-35, pre-board customers are positioned at the aircraft door ready to board, followed by all other passengers, unless otherwise advised by TUI Operations Control Centre or on board Crew.*

Note: Important: flight crew & cabin crew must be on board, and permission obtained from the crew before boarding the aircraft. If crew are not expected to be ready at STD-35, they will inform the handler.

1.1.7.1 Preparation for Boarding

Before boarding, ensure passengers and their cabin baggage have undergone security checks, if applicable.

- a. Start and test gate equipment or if required prepare manual boarding documentation in accordance with operating airline procedures.

Note: Follow procedures based on the DCS system in use.

- b. Check that boarding facilities and gate monitors are displaying the correct flight information.
- c. Prepare the gate room for boarding (e.g. place stanchions, carpets, baggage sizers, podiums, etc.), as per operating airline procedures.
- d. Ensure dangerous goods and prohibited articles notices are displayed at the boarding gate - *to be found as Appendix L2 Dangerous Goods Poster & Appendix L3 Forbidden Lithium Poster A4 in the TAGO Portal* (for further guidance refer to current IATA DGR).



- e. Prepare required handling material such as boarding passes, bag tags and other handling forms as per operating carrier procedures. *See 1.1.2 for check-in counter requirements.*
- f. Review the flight and check the following:
 - 1. Number of booked and accepted passengers including waitlist
 - 2. Passengers requiring special attention or pre-boarding
 - 3. Passengers who are not authorized to board and if any related action is required, e.g. feeding API- data, selectee handling
 - 4. In case of an overbooked flight assess the number of volunteers required and/or expected number of involuntarily denied boarding passengers
 - 5. Inbound connections and arrival time
 - 6. If applicable meal counts in relation to the number of passengers
- g. If applicable prepare for priority boarding (e.g. set up signage and barriers etc.)
- h. Prepare boarding announcements as required by the operating airline procedures.
 - i. Ensure the boarding route to the aircraft is safe and clearly marked where possible.
 - j. If passengers and staff need to walk on the ramp, ensure the route to the aircraft is safe and clearly marked. Passengers must be supervised on the ramp at all times *to make sure they follow the predetermined route and stay clear of all hazards and activities present on the ramp.*
- k. For boarding with a Passenger Boarding Bridge (PBB), secure the route to the aircraft and block off any unused passageways, if required. Identify passageways (e.g., by class) as per operator requirements when there is more than one passageway in use.
- l. Obtain clearance for boarding from the flight crew, according to local procedures and operating airline procedures.

Note: refer to 1.1.7 for boarding times, boarding sequence and Green light boarding.

1.1.7.2 Passenger Boarding Process

Passengers can be boarded by personnel in charge of boarding process using a boarding application or manual process, or passengers can use self-service devices for boarding, if available.

The following must be observed for the boarding process:

- a. Apply the boarding sequence as requested by the operating carrier, e.g. pre-boarding and priority boarding.

Note: refer to 1.1.7 for boarding times, boarding sequence and Green light boarding.

- b. Make boarding announcements as per operating airline procedures, *unless silent airport restrictions prevent this.*
- c. Follow operating airline procedures for passengers requiring assistance or pre-boarding.

Note: refer to 1.1.7 for boarding times, boarding sequence and Green light boarding.

- d. Verify each passenger's identity as per the requirements.
- e. Cross-check the name on the passenger identity document with the one on the boarding token/card, and visually match the passenger with the photograph, if applicable.
- f. Register each passenger boarding and make a notification in the DCS.
- g. Apply the cabin baggage procedures of the operating airline, and account for any gate tagged items:
 - 1. Collect any flight related paper revenue documents, if required



2. Clarify any boarding discrepancies, refer to 1.1.7.3.

Note: Refer to 1.1.6.2 for hand baggage acceptance

- h. Follow safety precautions when aircraft fueling is in progress, refer to 3.2.3 or as per state or local regulations
- i. For manual or non-automated boarding, check the flight number and date on the boarding card/token, register the security number.

Note: Refer to Chapter 15, Annex I – Security for information on the usage of bingo cards.

- j. If a passenger is ineligible to board (refused boarding by the system) enter passenger records to resolve the passenger boarding issue.
- k. Enforce cabin baggage procedures:
 - 1. Extra cabin baggage collected at the gate from passengers shall be tagged and the pieces/weight tag number(s), if applicable, “entered” in the DCS. Collect bags at the gate as per local procedures. Charge excess baggage if feasible. Inform load control of the additional pieces/weight if not transmitted via DCS.
 - 2. Advise ramp staff and/or load control of any gate tagged items to be loaded as per operating airline procedures.

Note: Refer to Chapter 9, Annex C - Aircraft Specifics.

- l. For Delivery At Aircraft (DAA) procedure refer to 1.1.6.12 (c).

Note: For cabin baggage acceptance at the boarding gate refer to 1.1.6.2(e).

1.1.7.3 Passenger Boarding Discrepancies

If there are passenger discrepancies (minus or plus), they must be resolved prior to closing the aircraft door.

- a. Make every attempt to locate missing passengers and obtain visual proof of boarding. Verify documents if the missing passengers are found to be already onboard the aircraft.
- b. Apply operating airline procedures (*see below in italic*) and local regulations with respect to the removal of the checked baggage of passengers who checked in but failed to board *and need to be off-loaded (see below in italic)*.
- c. When more passengers are on board than shown in the boarding count the boarding passes and identities of the passengers must be verified and the acceptance corrected and reconciled accordingly.
- d. Notify crew and load control of any last-minute changes to passenger and/or baggage load.

Note: In the event of a missing passenger offload process has to be initiated at the gate 15 minutes before STD at the latest. Physical search for the bags in the hold must start at STD -10 at the latest.

TOM-UK

Following the introduction of online check-in, the offload policy for passenger no-shows is as follows:



- a. *A passenger who has not checked in online - at check-in closure, any passenger who has not presented themselves at a checkin desk and has not checked in online must be offloaded from the flight.*
- b. *A passenger who has checked in online, but not used bag drop - any online check-in passengers who do not have associated bag tags in the system can be noted as possible no-shows and monitored during the boarding process.*
- c. *TUI Airways general offload policy - any passenger that has not presented themselves for boarding at STD-15, or equivalent during a delay, can be considered as possible no-shows. Ground handling agents should commence a search for any baggage with a physical search performed no later than STD-10. In the event the passenger does not have any checked baggage, the passenger can be offloaded from the flight.*

End TOM-UK

1.1.7.4 End of Boarding

Before flight closure ensure that all accepted passengers have boarded the aircraft.

- a. Secure the flight by matching the checked-in passengers to the boarded passengers, finish the boarding process and close the flight in the DCS.
- b. Add any additional cabin baggage tag number(s) in the DCS collected at the gate and the system used (manually or automated)
- c. Provide final passenger numbers to cabin and/or flight crew.
- d. Provide required flight documents to cabin and/or flight crew.
- e. Ensure load control are informed about final passenger and/or baggage information.

1.1.7.5 Boarding in Case of DCS Breakdown

Where no DCS is available or in case of DCS failure, apply manual boarding as per operating airline procedures (*see below in italic*). Ensure the final checked-in count matches the boarded passenger count prior to door closure. Then prepare and present a final manifest.

Note: in case of DCS and/or BHS failure, local back-up procedures must be established in every station and tested regularly.

1.1.8 Information to the Crew

1.1.8.1 General

Provide the flight crew with the required documents according to the operating airline procedures.

1.1.8.2 Passenger Information List (PIL)

The Passenger Information List (PIL) provides information to the cabin crew about passengers on board, (name, seat number, special service requirements). Provide a PIL to the senior cabin crew member before departure.



Note: The complete PIL should be printed and must be kept in the flight file for three months. The list must be sent to the below email within 1 hour after take-off with subject: routing, flight number and date.

TOM-UK

- a. *The Aircraft Information Sheet / Passenger Information list (PIL) may also be used to notify the crew of inadmissible passengers, deportees or persons in custody.*
- b. *Copy of the Electrical Mobility Aid tag in the event an Electric Mobility Aid has been loaded on to the aircraft. Please refer to chapter 12, Annex F - Electric Mobility Aids, in the TAGO Portal.*

End TOM-UK

1.1.8.3 Other Flight Documents

Other required documents may include:

- a. Final passenger manifest.
- b. Baggage tag list for double destination flights.
- c. General declarations if required.
- d. Other special information (i.e. inadmissible (INAD) passenger documents, etc.).

Note: these documents must be kept in the flight file for three months.

1.1.9 Post Flight Departure Activities

1.1.9.1 Messages

Ensure all relevant messages are dispatched to the appropriate addresses (*see below in italic*).

Messages may include:

- a. Teletype Passenger Manifest (TPM)
- b. Passenger Transfer Message (PTM)
- c. Passenger Service Message (PSM)
- d. Passenger Protection Message (PPM)
- e. Seat occupied Message (SOM)
- f. Industry Discount Message (IDM)
- g. Advance Passenger Information (API)
- h. Electronic Ticket List (ETL)
- i. *Aircraft Movement Message (MVT) for a list of delay codes, refer to Appendix I10 in the TAGO Portal.*

Note 1: *Messages shall be produced and delivered in accordance with respective AHM chapters. A flight file shall be maintained for each departing flight in a secure location according to local regulations and/or operator requirements. Post departure messaging shall be delivered within 15 minutes after off blocks.*

Note 2: *Ensure all relevant messages are dispatched to the appropriate addresses.*

BLX-SE

In the event of a triangle flight operate, the following additional information should be considered and processes followed:



- a. After check-in closure at the first departure station a final SOM must be issued at the earliest opportunity which may be prior to departure of the aircraft, to inform the second station of the actual seating.
- b. The seats indicated on the SOM are the seats occupied by the first station.
- c. Each boarding station must send a PSM distributed to each destination and transit station of the respective flight.

End BLX-SE

1.1.9.2 Flight Document Retention

Retain (electronically or paper files) flight documents *as per the table below* and for a period of no less than three months unless otherwise specified.

<i>Documents to be kept in flight file</i>	<i>Period</i>	<i>Reference to chapter</i>
<i>Hold Baggage Manifest</i>	<i>3 months</i>	<i>Chapter 15, Annex I 15.5.11</i>
<i>Dangerous goods transport document (shipper's declaration)</i>	<i>3 months</i>	<i>Chapter 10, Annex D 10.3.12</i>
<i>DG acceptance checklist</i>	<i>3 months</i>	<i>Chapter 10, Annex D 10.3.12</i>
<i>De-icing declaration form</i>	<i>3 months</i>	<i>Chapter 11, Annex E</i>
<i>Form of Indemnity</i>	<i>7 days</i>	<i>1.1.5.1</i>
<i>Fuel figures</i>	<i>3 months</i>	<i>5.7</i>
<i>Limited Release tag</i>	<i>60 days</i>	<i>1.1.6.9</i>
<i>LIR</i>	<i>3 months</i>	<i>5.7</i>
<i>LMC</i>	<i>3 months</i>	<i>5.3.2 and 5.7</i>
<i>Signed Loadsheel and trimsheet</i>	<i>3 months</i>	<i>5.7</i>
<i>NOTOC</i>	<i>3 months</i>	<i>5.7 and Chapter 10, Annex D 10.3.11</i>
<i>PIL</i>	<i>3 months</i>	<i>1.1.8.2</i>
<i>PRL</i>	<i>3 months</i>	<i>1.1.9.1</i>
<i>Refused passenger, copy of the incorrect travel documents</i>	<i>7 days</i>	<i>1.1.5.1 and 1.4.10.3</i>
<i>UM form</i>	<i>3 months</i>	<i>1.4.1.4</i>
<i>Other flight documents like Final passenger manifest, Bag tag list for double destination flights, General declarations if required. other special information i.e. INAD documents.</i>	<i>3 months</i>	<i>1.1.8.3</i>



<i>Documents to be kept in flight file</i>	<i>Period</i>	<i>Reference to chapter</i>
<i>Copy of the completed Electric Mobility Aid tag - where an EMA has been loaded</i>	<i>3 months</i>	<i>Chapter 12, Annex F, 12.5.1.</i>
<i>Triple A documentation (7 days)</i>	<i>7 days</i>	<i>N/A</i>
<i>Cargo security certificate</i>	<i>30 days minimum</i>	<i>N/A</i>
<i>Catering Delivery Note</i>	<i>3 months</i>	<i>N/A</i>
<i>Aeroplane Technical Log (ATL)</i>	<i>3 months after the date of the last entry</i>	<i>N/A</i>

1.1.9.3 Flight Close-Out

The accounting of all revenue documents for the respective flight and related services has to be ensured.

Electronic documents are transmitted automatically by appropriate flight closing activities in the check-in system as per operating carrier procedures. Paper revenue documents (e.g. flight interruption manifests (FIMs), excess baggage coupons) must be collected and forwarded to the respective Revenue Accounting as per operating carrier procedures.

1.2 Passenger Security

1.2.1 Security of Documents

1.2.1.1 Boarding Passes, Transit Passes and Baggage Tags

To enforce the security and safe disposal of boarding passes, transit cards, baggage tags and passenger information, all materials must be always kept under surveillance and removed from counters to prevent unauthorized access and use.

1.2.1.2 Printed Documents

Printed material such as boarding passes, passenger lists, and handling forms may have to be reprinted. Disposal of the original documents containing passenger data should be in according with data protection rules.

Unauthorized persons shall not be given access to printed documents containing personal data or their contents.

1.2.1.3 Counter and Area Security

- All systems, including the DCS, passenger facing counter etc. must be controlled to prevent unauthorized access. Follow airport procedures to prevent unauthorized access to and use of un-issued (blank) boarding passes.
- Before leaving the counter, remove boarding passes and baggage tags from the printers or lock them.
- Before leaving the counter, sign out, log off and lock the system.
- Adhere to regulations concerning the usage of sign-ins and passwords.



1.2.2 Passenger Suitability for Travel

Assess each passenger in terms of security risk by looking for anomalies and observing certain emotional characteristics and/or body language. Be on the lookout for overall fitness to fly, including potentially communicable diseases, medical conditions, intoxication, etc.

Further questioning may be required to assist with passenger assessment:

When you identify a potential problem;

- a. Suspend the passenger process for the identified passenger (check-in and/or boarding)
- b. Notify your supervisor or the airline representative to agree on further action(s). This should be done in accordance with the operating airline procedures (*see below*).
- c. Depending on the situation the airline representative will contact the appropriate local authority for assistance, if needed.

Note: Additional instruction to be found in Chapter 15, Annex I – Security.

1.2.3 Security of Passengers and their Baggage

It is the responsibility of supervision staff to ensure all security threats are immediately reported to the customer airline, the flight crew and applicable authorities as per local requirements and customer airline's policy (*see Chapter 15, Annex I -Security*).

Apply customer airline and/or regulatory airport authority security procedures for the handling of passengers and their baggage in the event of:

- a. A bomb threat condition.
- b. An increased security threat condition.

Note: Additional instructions to be found in Chapter 15, Annex I - Security.

1.2.4 Restricted Areas

Secure all gate and departure areas by keeping doors closed. Use appropriate barricades when directing passengers.

- a. Ensure all access doors are closed when not in use.
- b. Position staff as required to direct passengers.
- c. If passengers must walk on the apron to the aircraft, ensure passengers proceed directly to the aircraft.
- d. If transportation must be provided to passengers to move them from the terminal building to the aircraft, make sure only authorized personnel and screened passengers are allowed to board the vehicle.

1.3 Passenger Arrival, Transfer and Transit

1.3.1 Pre-Arrival

Review the pre-arrival information from DCS and/or messages.

- a. Prepare for short connections if applicable.
- b. Arrange facilitation for passengers requiring assistance as identified by the applicable SSR and/or as per operating airline procedures (*see below in italic*). Check requirements for any gate delivery mobility aids.



- c. In case of delay of arrival, check onward connections and make new reservations if required and as per operating airline policy (*see below in italic*).

Note: For additional instructions contact the Customer Care team.

1.3.2 Arrival

- a. Prepare PBB, ensuring it is free of debris and positioned as per the standard requirements, *refer to GOM 3.1.3.5*.
- b. Secure the disembarkation route for passengers and observe passengers' safety throughout the entire disembarkation process. If passengers are required to walk across the ramp, they shall be supervised.

Note 1: If passenger handling staff are trained and authorized to operate the PBB (see GOM 3.1.3.5).

Note 2: If passenger handling staff are trained and authorized to operate cabin access doors (see GOM 4.4.2).

- c. Disembark passengers in accordance with operating airline procedures (*see below in italic*).

Note: Passengers are only allowed to disembark after verbal contact has been made between the crew and the disembarkation agent. Special messages or communications (e.g. UMR on board, etc.), handing over of personal documents of deportees, etc., shall be done at that moment.

- d. Provide assistance to passengers requiring it, even if not previously identified.

1.3.3 Transfer

For passenger handling at the connecting airport If applicable, and as per operating airline procedures (*see below in Italic*):

- a. Check the inbound/outbound connections and the number of passengers affected.
- b. Check time-critical connections, and inform gate staff of onward transfer.
- c. Prepare for handling of passengers requiring assistance.
- d. Assist the transferring passengers upon arrival of the incoming aircraft.
- e. Direct passengers:
 - 1. through-checked passengers to the appropriate departure gate(s).
 - 2. non-through checked passengers to the transfer desk or gate for check-in, whichever is applicable.

1.3.4 Transit

1.3.4.1 General

Transit passengers may be allowed to disembark when scheduled ground time and local circumstances and facilities permit. Local airport requirements shall be applied regarding security of transit passengers up to and including screening requirements.

Note: Always consult with senior cabin crew member



1.3.4.2 Disembarkation Procedures

- a. Provide each passenger with a transit boarding pass or instruct passengers to retain their original boarding pass;
- b. Inform passengers about boarding time and gate and available facilities;

1.3.4.3 Transit Passengers Remain on Board

As per operating airline procedures, there may be categories of passengers that stay on board if locally permitted. In this situation check the number of passengers with the cabin crew onboard to ensure a correct boarding count when re-boarding the flight 1.3.4.4 Boarding Procedure.

Provide assistance to passengers who remain on board during the transit time.

If specific passengers staying on board simplifies the turnaround process and/or the convenience of the passenger this could be considered in good cooperation between GHS, Purser and Pilot in Command. This requires extra awareness in case a safety incident occurs.

1.3.4.4 Boarding Procedure

- a. Board transit passengers before local passengers.
- b. Re-secure the flight by checking travel documents and validating boarding status by collection of the transit card or review of the original boarding card. Validation may also be done using the flight manifest or DCS.

1.3.4.5 Missing Transit Passengers

The flight must be re-secured before door closure. If passengers are missing, apply the procedure for passenger boarding discrepancies refer to 1.1.7.3.

1.3.4.6 Aircraft Change at the Transit Station

- a. Advise cabin crew that all transit passengers must disembark with their carry-on baggage.
- b. Distribute transit boarding passes (or instruct passengers to retain their original boarding pass)
- c. Inform passengers about the boarding time and gate as well as available facilities.
- d. Provide passenger assistance as required.
- e. In case of a change of aircraft type / configuration, assign passengers new seat numbers if applicable, or apply free/open seating.

1.4 Special Categories of Passengers

1.4.1 Unaccompanied Minors

1.4.1.1 General

The procedure for unaccompanied minors is applicable to the handling of children or youth travelling alone under conditions as defined per operating carrier procedures.

BLX-SE

Tuifly Nordic accept unaccompanied minors between the ages of 5 and 12 years. The maximum accepted number of unaccompanied minors per flight is 8. In the event family



members are travelling together (e.g. brother and sister) the number of accepted unaccompanied minors may be increased but this must be agreed with the airline.

Unaccompanied minors must:

- a. *On departure, be handed over to Cabin Crew by a member of ground staff before or after boarding of other passengers*
- b. *Be in possession of the Unaccompanied Minor plastic wallet containing the handling advice, ticket or confirmation and passport.*
- c. *Be shown on the CIF which is provided to the Cabin Crew. This should include the unaccompanied minors name, age and seat number.*
- d. *On arrival, be handed over to ground staff by the Cabin Crew.*
- e. *Only be returned or reunited with person(s) named in the handling advice.*

End BLX-SE

TOM-UK

TUI Airways do not accept unaccompanied minors. The carriage of young persons aged 14 or 15 years are able to travel unaccompanied/unassisted is permitted.

It is recommended that parents or guardians of unaccompanied young persons remain in the airport until the flight has departed.

Note: Passengers aged between 5 and 13 years may only travel outside of the unaccompanied minor process if they are:

- a. Escorted by a brother or sister who are defined as a young person.
- b. Escorted by an adult who are defined as a young person.
- c. Escorted by a passenger is at least 18 years old for package holidays.

End TOM-UK

1.4.1.2 Seating

Seat UMNMR as per operating airline policies and do not assign seats in emergency exit rows. Refer to AHM 560 for seating instructions.

Note: At your airport, an unaccompanied minor can be accommodated, in zones determined by their situation in a no smoking area.

1.4.1.3 Acceptance Restrictions

Observe travel restrictions for UM as per operating airline procedures for:

- a. Connecting flights.
- b. The maximum number of UM allowed on a flight.



Note: Additional instructions in regards to restrictions on the maximum number of UM's to be found in AHM 560 in the TAGO Portal.

Transportation will never be granted to unaccompanied sick minors.

The acceptability of unaccompanied minors varies according to the age bracket into which they fall.

1.4.1.4 Procedures for Handling Unaccompanied Minors

- a. Complete the handling advice/declaration form ensuring the responsible adult has signed authorization and provided proof of identity.
- b. Distribute and keep copies as required.

Note: Upon transfer of responsibility from one person to the other, the person who is released from responsibility will receive the correct copy after signature of the person taking over the responsibility over the UM. Hand over a copy to the person seeing off on departure. The original + rest of the copies stay with the minor (in the UM-pocket). File your copy in the flight file for 3 months. The minor's travel documents shall be placed in a document holder. The purpose of the document holder is: to keep all the documents necessary for the minor's transportation together: UM folder and passenger ticket, passport or identity card, vaccination certificate and any other documents as required. This needs to be visibly positioned to make identification of unaccompanied minors easier.

- c. Ensure the correct remarks and SSR codes are in the check-in record.
- d. Apply handling fee where applicable.
- e. Inform the responsible adult to remain at the airport until the aircraft is airborne.
- f. Keep the UMNMR in safe custody and hand over to the cabin crew during boarding.
- g. Advise/release responsible adult once flight is airborne.

Note: Use form as provided. In case of low stock please order via online Stationary Request form in the TAGO Portal.

Responsibility for the unaccompanied minor remains with the person who is momentarily in charge of the child and follows automatically each transfer from one person to another.

Once accepted for carriage, the minor shall remain under supervision of company personnel only, until the delivery to an adult escort at the station of destination or to another carrier continuing the carriage and consequently taking charge of the minor.

Transfer to another carrier is only accepted when previous arrangements were made and the necessary agreement was obtained from the other carrier(s) by our booking office.

The handling agent has to inform the person who is momentarily in charge of the child that he/she has to remain at the airport until the flight is airborne.

1.4.1.5 Transfer Station Procedure

- a. Meet and assist (MAAS) UM and collect any travel documents from the cabin crew.
- b. Hand over the UM to the cabin crew of the connecting flight.
- c. In case of interline transfer, hand over UM to the onward connecting airline agent.



- d. In case of a flight disruption at the transfer station, the UM is to be accompanied at all times.

Note: In case of irregularities like diversions or delays an UM is never left alone or left behind. The station where the irregularity occurs, has to take care of the UM, except if the child is accompanied by a company escort.

1.4.1.6 Arrival Station Procedure

- Meet and assist (MAAS) UM and collect any travel documents from the cabin crew.
- Complete the handling advice/declaration form for airline staff responsible.
- Where applicable, ensure baggage of UM is collected.
- Hand over the UM only to the designated adult noted on the handling advice after verifying the identity of this person and having received his signature for receipt of the UM.

Note: Keep a copy at the station in the flight file for 3 months after handing over the UM to the designated adult.

1.4.2 Infants and Children

1.4.2.1 Infants

- a. General Restrictions:

An infant is a minor who has not yet reached his/her 2nd birthday.

Restrictions may exist regarding the number of infants permitted per adult passenger or the minimum age required to be responsible for an infant. Apply operating airline procedures (*see below in italic*).

Note 1: *1 adult can carry 1 infant on lap, subsequent infants must book a seat as a child and a car seat fitted.*

Note 2: The maximum number of infants allowed per aircraft is limited by the number of supplemental oxygen masks available on the aircraft.

- b. Seating

Passengers travelling with infants should be assigned next to seats next to areas/zones capable of fitting bassinets (e.g., bulkhead seating area). *Baby Bassinets are not accepted by TUI Airways and TUIfly Nordic. Most common is that infants will be carried on their parents lap.*

Infants travelling with car type baby seats or similar child restraint device require an individual seat suitable for the device. *See GOM 1.4.2.2.*

Infants are considered children and shall be assigned a seat when, during the journey, they reach the age of two.

- c. Aircraft Baby Bassinets (*not applicable to TUI Airways and TUIfly Nordic*)

TOM-UK

If an infant turns 2 years old on holiday they must book both outbound and return sector as a child.

End TOM-UK



d. Baby Strollers

Apply checked-in or Delivery At Aircraft (DAA) service for strollers and provide information to passengers concerning the procedure, if applicable.

- Note:**
- a. Within the first 7 days after birth, an infant may not travel by air;
 - b. Infants with health problems or prematurely born infants shall be considered as MEDA passengers;
 - c. The acceptable total number of infants on board an aircraft is limited and depends upon the quantity of individual pieces of safety equipment carried, i.e.: the number of emergency oxygen masks available and the number of children life jackets and infant (or "kangaroo") belts carried. The first element is structural and cannot be modified. The second however can be increased upon demand.
 - d. Additional detailed seating instructions to be found in AHM 560 in the TAGO Portal.

BLX-SE

One infant per seat row block may be accepted as there is only one additional oxygen mask.

End BLX-SE

TOM-UK

The maximum number of infants carried is approximately 10% of the aircraft seating capacity. It is possible to increase this number and load additional equipment to accommodate infants but this requires prior approval from the carrier. Parents and/or guardians may purchase a seat for the infant. An infant in a child restraint device (CRD) or infant seat belt cannot be located in exit rows. The restriction is extended to the row immediately forward and aft of the emergency exits. These restrictions apply also to infants traveling on the parent's and/or guardian's lap. In this situation the infant and parent and/or guardian should be allocated a seat where there is an extra oxygen mask and this will depend on aircraft registration.

Different aircraft registrations have different oxygen configurations; therefore it is essential to check carefully where infants on laps can be seated. Please always check the seat plans in Chapter 9, Annex C, for Aircraft specific information.

End TOM-UK

1.4.2.2 Children

Definition: A child is a minor between two and twelve (has reached his/her 2nd birthday, but has not reached his/her 12th birthday).

If the minor reaches his/her 2nd birthday during the journey, he/she will be considered a child as of the birthday.

Restrictions may exist regarding the minimum age of the accompanying adult passenger.

- a. Seating
Children must occupy an individual passenger seat and may not be seated in emergency exit rows.
- b. Child Restraint Device
Apply operating airline procedures (*see below in italic*) for the acceptance and use of car seats and other restraint devices. Verify their conformity as per the airline specifications.



1. Make sure the child restraint device is placed on a seat that will not hinder the evacuation of any passenger.
2. Do not assign a seat for the child restraint device in an emergency exit row or the row forward or behind an emergency exit row.
3. Respect any limitations specified by the operating airline, as not all seats may be suitable.

Note 1: *Refer to Chapter 9, Annex C – Aircraft Specific and the AHM560 in the TAGO Portal.*

Note 2: *Approved and acceptable CRDs are mentioned below.*

1. *Regulation allows the use of car seats with integrated harnesses that have a label stating that they are certified for use on aircraft. The reference ECE R44-03 is commonly used in Europe.*
2. *CRDs qualified for use in aircraft according to the German Qualification Procedure for Child Restraint Systems for Use in Aero plane, (TÜV Doc.: TÜV/958- 01/2001)*
3. *Outside EU: CRDs approved for use in aircraft only by any JAA authority, the FAA or Transport Canada (on the basis of a national technical standard) and marked accordingly.*
4. *CRDs approved for use in motor vehicles and aircraft according to Canadian CMVSS 213/213.1.*
5. *US approved CRDs manufactured that are compliant must bear the following labels in red lettering: "THIS CHILD RESTRAINT SYSTEM CONFORMS TO ALL APPLICABLE FEDERAL MOTOR VEHICLE SAFETY STANDARDS" And "THIS RESTRAINT IS CERTIFIED FOR USE IN MOTOR VEHICLES AND AIRPLANE"*

The location of the child car seat on B737 & B787 aircraft only: If more than one child is travelling as part of a family, e.g. twins, one child car seat must be fitted at a window seat, the second must be fitted at the aisle seat of the same triple-seat unit; the accompanying parent, or person responsible, must occupy the centre seat of the triple-seat unit.

1.4.3 Groups

1.4.3.1 General

The minimum number of passengers travelling together in a group (not including infants) is defined by the operating airline policy (*see below in italic*).

Note: The number of passengers traveling together in a group are identified by the reservation system and are recognised in the DCS system by the SSR code GRPS.

1.4.3.2 Check-In

- a. Check-in and accept all passengers individually.



- b. When possible assign seats together; if requested respect any special seating requirements.
- c. Issue baggage tags individually:
 - 1. each piece of baggage must bear the respective passenger's identification.
 - 2. exception: Bag tags for family members travelling together may be issued on one family name.

1.4.3.3 Non-Standard Groups

Unusual groups, passengers of size, or outside the standard set as a minimum per airline may need to be communicated to load control (i.e., sports teams with higher passenger weights).

1.4.4 Passengers with Disabilities

1.4.4.1 General Passengers with Disabilities

As of IGOM Ed. 11 (effective 2022), the term Passenger with Reduced Mobility (PRM) has been aligned with the UN Convention on the Rights of Persons with Disabilities (CRPD) and International Civil Aviation Organization (ICAO) Annex 9 Chapter 8H, using the term Person/ Passenger with disabilities (PWD) as the official terminology. Passengers with Disabilities (PWD) includes passengers with reduced mobility and passengers with non-visible disabilities which can be temporary or permanent condition

- a. The ability to provide assistance to PWDs will vary according to:
 - 1. Individual's needs.
 - 2. the aircraft type.
 - 3. the aircraft configuration.
- b. For PWD and those requiring/requesting assistance:
 - 1. Ask the passenger what assistance they require and how you can help them.
 - 2. Assign a seat in their ticketed cabin which accommodates the passengers' needs, in consultation with the passengers, and ensure that they are not allocated or occupy seats where their presence could impede the emergency evacuation. If the PWD is travelling with a Personal Care Attendant and/or Safety Assistant, they shall be given seats immediately adjacent to or across the aisle from the passenger they are assisting, see GOM 1.4.4.3.
 - 3. Advise the passenger of what services and assistance are available based on their needs.
 - 4. Advise the passenger of available operating airline equipment (i.e., on board wheelchairs, braille or tactile markings, accessible lavatories, etc.).
 - 5. Provide information to the passenger in alternate accessible communication formats upon request (e.g. braille, captioning, large print, etc.).
 - 6. Ensure accurate SSR codes and any other relevant information are recorded in the DCS and PNR.
 - 7. Acceptance of PWDs and other passengers with disabilities will be *as described throughout this GOM*.
 - 8. PWDs should be allowed to pre-board.
 - 9. Wherever feasible, PWD's using a wheelchair (manual or powered) or other mobility aid, should be permitted to use their personal mobility aid throughout the airport until they reach the aircraft and receive it back near the aircraft upon arrival. When in transit, if time permits between flights, the airline should offer to return to PWDs their personal mobility aid and allow PWDs to retain them until they need to be



stored again for carriage. Inform the stations of transfer/arrival accordingly to allow the handling of the aid.

1.4.4.2 Assistance Codes for Passengers with Disabilities

PWDs may require services and assistance to facilitate their travel experience. SSR codes are used to communicate passenger preferences, procedural items, medical cases and assistance required by passengers. These are identified in airline messages by IATA Reservations Interline Procedures (AIRIMP) codes.

- a. Codes to identify a type of disability;
 - 1. BLND (Blind Passenger)—specify if accompanied by service animal.
 - 2. DEAF (Deaf Passenger)—specify if accompanied by service animal.
 - 3. DPNA (Disabled Passenger Needing Assistance)—passenger with cognitive or invisible disabilities needing assistance (specify details)
- b. Codes to identify assistive services provided to the passenger
 - 1. MAAS—Meet and Assist (specify details)
 - 2. WCHR (Wheelchair—R for Ramp)—passenger can ascend/descend steps and make own way to/from cabin seat but requires wheelchair for distance to/from aircraft, i.e., across ramp, finger dock or to mobile lounge as applicable. When service animal is accompanying passenger, specify the type of animal in free text of SSR Item
 - 3. WCHS (Wheelchair—S for Steps)—passenger cannot ascend/descend steps, but is able to make own way to/from cabin seat; requires wheelchair for distance to/from aircraft or mobile lounge and must be carried up/down steps. When service animal is accompanying passenger, specify the type of animal in free text of SSR Item.
 - 4. WCHC (Wheelchair—C for Cabin Seat)—passenger completely immobile; requires wheelchair to/from aircraft/mobile lounge and must be carried up/down steps and to/from cabin seat. When service animal is accompanying passenger, specify the type of animal in free text of SSR Item.

Note: Specify if the passenger is travelling with own wheelchair and use one the following applicable SSR codes which describe the wheelchair

- 1. WCBD—Dry or Gel battery operated wheelchair/mobility aid (non-spillable wet/dry cell battery)
- 2. WCMP—Manual power wheelchair/mobility aid
- 3. WCLB—Lithium battery operated wheelchair/mobility aid
- 4. WCBW—Spillable wet cell battery wheelchair/mobility aid. TUI Airlines do not accept Electric Mobility Aids with spillable batteries.

If the passenger is requesting a wheelchair on board use SSR code WCOB

- c. Codes to identify animals accompanying a passenger with disabilities
 - 1. When service animal is accompanying passenger, specify the type of animal in free text of SSR Item.
 - 2. ESAN—for passengers travelling with an emotional support/psychiatric assistance animal in cabin (specify details)—(by bilateral agreement). Subject to government regulations.
 - 3. SVAN—for passengers travelling with a service animal in cabin (specify details)—(by bilateral agreement).
- d. Codes to identify equipment accompanying the passenger



1. OXYG (Oxygen)—for passengers travelling either seated or on a stretcher, needing oxygen during the flight (only to be used in conjunction with SSR Code MEDA).
2. STCR (Stretcher Passenger)
3. AOXY (Airline Supplied Oxygen)—for passengers travelling either seated or on a stretcher, needing oxygen during the flight (only to be used in conjunction with SSR code MEDA) (by bilateral agreement).
4. POXY (Passenger Own Oxygen)—for passengers travelling either seated or on a stretcher, needing oxygen during the flight (only to be used in conjunction with SSR code MEDA). Subject to airline and/or government regulations (by bilateral agreement).
5. PPOC (Personal Portable Oxygen Concentrator)—(by bilateral agreement).
6. WCOB (Wheelchair—O for Onboard)—provided by airline (by bilateral agreement) 48 hours' notice recommended but not required.

Note 1: For medical cases (MEDA). Refer to 1.4.5 for specific handling details related to MEDA passengers.

Note 2: *Additional detailed seating instructions for passengers with disabilities to be found in AHM 560 in the TAGO Portal.*

ESAN, STCR, AOXY are not available.

1.4.4.3 Seat Assignment

- a. PWDs, as well as their personal care attendant and/or safety assistant shall be assigned specific seats which will facilitate boarding and disembarkation and will minimize inconvenience to the passenger and maximize the scope for cabin crew assistance.
- b. As a rule, ensure that PWDs are not allocated, neither occupy, seats where their presence could:
 1. Impede the emergency evacuation of the airplane;
 2. Impede crews in their duties;
 3. Obstruct access to emergency equipment.
- c. Personal care attendants and/or safety assistants shall be given seats immediately adjacent to the passenger they are attending to.
- d. The assignment of seats may also be subject to medical requirements.
- e. When assigning seats, observe the following criteria:
 1. PWDs travelling with specially trained dogs should be assigned seats which allow space for the dog, near a floor level exit but which do not impede access to it.
 2. PWDs should, be seated so as not to impede rapid evacuation of the aircraft.
 3. If crutches, canes and similar walking aids are stored in a special location in the cabin, the users of such aids should be assigned seats nearby, to permit quick access to the aids when needed.
 4. Passengers with stiff legs, fractured legs in plaster, paraplegics, etc. should be accommodated in seats allowing the maximum space for their comfort, or space for leg support devices with the least possible disturbance to passengers in the adjacent seats. Limbs in plaster casts should not obstruct the aisle or emergency exits.
 5. Passengers with disability affecting only one side of their body (hemiplegics, artificial limb, arm or leg in cast, splint or brace, etc.) should be seated in an aisle seat with the unaffected side of their body towards the aisle; this will facilitate their mobility in cases of emergency.



Note 1: Wherever possible, groups of PWD shall be seated in subgroups in order to enable a rapid flow of other passengers during an evacuation.

Note 2: Travel by groups of PWD shall always be subject to applicable regulatory and operating airline procedures.

1.4.4.4 Maximum Number of PWDs and Assistance Requirement

- a. In circumstances where the number of PWDs forms a significant proportion of the total number of passengers carried on board, the number of PWDs should not exceed the number of able-bodied persons capable of assisting during an emergency (or as per local regulation).
- b. For personal care attendants and/or safety assistants' requirements, refer to operating airline procedures.

Note: Refer to the AHM560 for detailed seating instructions.

1.4.5 Passenger Requiring Medical Clearance

1.4.5.1 General

- a. No medical clearance or special forms are required for passengers who only require special assistance in the airport, or in embarking/disembarking.
- b. Medical clearance is required by the airline if the passengers:
 1. Have any disease which is believed to be actively contagious and communicable;
 2. Are considered to be a potential risk to the safety or punctuality of the flight including the possibility of diversion of the flight or an unscheduled landing;
 3. Are incapable of caring for himself and requires special assistance;
 4. Have a medical condition which may be adversely affected by the flight environment.

Note: Passengers not falling into these categories normally do not need medical clearance, however, if in doubt, the airline should be advised so it can decide whether a medical clearance is required or not.

- c. Passengers with medical cases (if applicable)
 1. LEGL (Leg in cast)–for passengers with a left leg in a full cast or fused knee, (only to be used in conjunction with SSR code MEDA).
 2. LEGR (Leg in cast)–for passengers with a right leg in a full cast or fused knee, (only to be used in conjunction with SSR code MEDA).
 3. LEGB (Leg in cast)–for passengers with both legs in a full cast, (only to be used in conjunction with SSR code MEDA).
 4. MEDA (Medical Case)–company medical clearance may be required. Not to be used for passengers with disabilities or reduced mobility who only require assistance or handling and who do not require a medical clearance. Refer to IATA Resolution 700 and AIRIMP 3.7.6 for guidance.
 5. OXYG (Oxygen)–for passengers travelling either seated or on a stretcher, needing oxygen during the flight.
 6. AOXY (Airline Supplied Oxygen)–for passengers travelling either seated or on a stretcher, needing oxygen during the flight (only to be used in conjunction with SSR code MEDA) (by bilateral agreement).
 7. STCR (Stretcher Passenger).



Note 1: *Passengers showing signs of communicable diseases must be referred to airport medical assistance to obtain a fit-to-fly certification.*

AOXY, STCR are not available.

Adult passengers travelling with a cast(s) (i.e. waist and/or full leg plaster), can be asked to purchase two or more seats in total, per Flight, to travel as required to accommodate their height comfortably. This will enable the limbs to be elevated during the Flight and reduce swelling.

The number of seats required should be determined so as to accommodate the Passenger's height comfortably.

When passenger boards with plaster cast, please follow these instructions:

- a. *Does the passenger have a fit to fly from a doctor? If yes, he can fly.
If no: see b*
- b. *Has the plaster been fitted for at least 48 hours before the flight If yes, customer is allowed to fly
If no: see c*
- c. *Has the passenger signed an indemnity form?
If yes, he can fly if signed If no passenger has to be denied boarding*

Pregnant passengers

- a. *During the first 28 weeks of pregnancy: Woman expecting one or multiple children can travel without a medical certificate.*

Single pregnancy:

- a. *From the beginning of the 29th week to the end of the 36th week, expectant mothers will need a medical certificate.*
- b. *From the beginning of the 37th week onwards, expectant mothers will not be accepted for travel.*

Multiple pregnancy:

- a. *From the beginning of the 29th week to the end of the 32nd week, expectant mothers will need a medical certificate.*
- b. *From the beginning of the 33rd week onwards, expectant mothers will not be accepted for travel.*

Medical certificate guidelines:

- a. *Issued and signed by a doctor or attending midwife.*
- b. *Issued within 14 days of the date of travel.*
- c. *State if the pregnancy is single or multiple.*
- d. *State the number of weeks of pregnancy and the Expected Date of Delivery (EDD).*
- e. *State that you are fit to fly.*

1.4.5.2 Medical Information Form

Each airline can use the IATA Medical Form MEDIF.



1.4.5.3 Frequent Traveler's Medical Card (FREMEC)

Not applicable to TUI Airways and TUIfly Nordic.

1.4.5.4 Advance Notification

Passengers are asked to advise the airline of their needs at the time of reservation.

Advance notification is required for the following, subject to airline acceptance and approval:

- a. Passengers traveling on a stretcher.
- b. Passengers requiring personal portable oxygen concentrator, ventilator or respirator onboard.
- c. The carriage of an incubator.

Note 1: Information on the type of mobility aid as well as its weight, dimensions, battery type, special information (i.e., free wheel mode, removeable parts, Internet of Things (IoT) devices, seating systems, reclining mechanisms etc.) should be made available, to enable determine how to safely handle, secure and load the mobility aid. *Refer to Chapter 12, Annex F – Electric Mobility Aids for more information.*

Note 2: The types of mobility aids are diverse, and each type of mobility aid has specific locations on the frame for tie downs and disassembly and assembly, care shall be observed when handling and loading/unloading.

Note 3: *Refer to Chapter 12, Annex F - Electric Mobility Aids*

1.4.5.5 Seating

Medical case (MEDA) passengers are entitled to the most appropriate seating according to their needs, including the stowage of on board medical devices or equipment.

- a. Appropriate seating, as per operating airline (*see below in italic*) –procedures MEDA and passenger needs,
- b. Provide adjacent seating, as applicable, for:
 1. A personal care attendant
 2. A safety assistant
 3. A reader/interpreter in case of a vision or hearing impairment
- c. PWD/MEDA passengers may not be seated in emergency exits. Refer to Recommended Practice 1700c for more details.

Note: Additional detailed seating instructions to be found in AHM 560 in the TAGO Portal.

1.4.5.6 Request for Assistance without Advanced Notice

If a passenger's needs were not communicated at the time of booking, or a passenger is identified as a PWD or potential MEDA case upon departure, make all reasonable efforts to accommodate the passenger without delaying the flight. Ask appropriate questions and record required codes in the DCS.



1.4.6 Handling of PWDs not Requiring Medical Clearance

1.4.6.1 Processing

Check that additional needs have been communicated via the respective SSR codes and entered into the DCS and PNR, and verify if escort requirements are fulfilled, if applicable.

Note: The number and categories of SCP's shall not exceed the number of passengers able to assist them in case of an emergency.

1.4.6.2 Right of Refusal of PWD's and/or MEDA Cases

a. General

Refusing a PWD/MEDA passenger requires a legitimate reason. A PWD and/or MEDA case may be refused based on the operating airline's General Conditions of Carriage (Right to Refuse Carriage).

b. Reasons for Refusal

Do not refuse a PWD/MEDA passenger unless one of the following reasons is applicable, and in accordance with operating airline procedures (*see below in italic*).

1. The person has such a degree of physical infirmity that the trip would likely result in complications or death, leading to a diversion.
2. The person requires individual nursing or care during the flight and is not accompanied by a suitable escort.
3. The person, because of their physical or medical condition, poses a direct threat to the health or safety of other passengers, their property, the aircraft or crew. And, the threat cannot be eliminated by providing additional aid or services or by other means (e.g., face masks, separate seating).
4. The person fails or refuses to submit themselves to the specific conditions of carriage required by the operating airline (*see below in italic*).
5. Information is required about the passenger's medical condition (diagnosis) where the passenger's own physician refuses to disclose such information to the Authorized Medical Service.
6. The person has a communicable disease and still is in the infectious period (or does not have proper medical clearance).
7. Stretchers may be refused as per aircraft type.

c. Handling of PWD/MEDA Refusals

In case of refusal of a PWD and/or MEDA case, inform the passenger and explain the reason for refusal with reference to the General Conditions of Carriage.

Apply operating airline procedures (*see below*) with respect to rebooking to a later date and/or making all efforts to accommodate the passenger on the next possible flight, if applicable, or refunding the ticket.

1. Enter all relevant information about the reason for refusal into the PNR or in the operating airline report (e.g., passenger refused [flight/date] d/t lack of safety assistant [SITA address/agent name]).
2. Forward the PNR or report to the appropriate airline department. Document all details of the incident and submit as specified by the operating airline (*see below*).



Note 1: *PWD's should be reported beforehand via a SSR. If the passenger is identified as a PWD or potential MEDA case at check-in and does not have prior approval, the Customer Care team must be consulted.*

Note 2: *For every refused passenger the handling agent must fill out the Refused Pax Form. Form can be found in the TAGO Portal.*

Note 3: *In case of an intended refusal of PWD/MEDA always contact airlines customer care team.*

1.4.7 Stretcher Transport

If accepted by the operating airline, transport on a stretcher can be arranged provided advance notification is given for passenger(s) to be transported in a lying-down position.

- a. If stretcher transport has been confirmed at the time of booking, accept the passenger as per operating airline procedures. Once stretcher transport is confirmed seats should be blocked in the check-in system (if check-in system is open), *see below in italic.*
- b. Verify STCR codes
- c. Update status details in the check-in record.
- d. The acceptance of stretcher cases is linked to:
 1. Acceptance conditions of PWD/MEDA cases.
 2. Provision for stretcher installation on board the aircraft (i.e., time permitting for removable of seats).

Note: Not applicable as TUI does not accept STCR.

1.4.8 Oxygen for medical use

- a. Arrange pre-boarding for the passenger
- b. Verify or add SSR codes for assistance.
 1. Airline supplied oxygen during a flight (AOXY).
 2. Portable Oxygen Concentrator (PPOC).
- c. Seat the passenger as per operating airline policy allowing for stowage of equipment.

AOXY not available.

Note 2: *For seating instructions see AHM 560 in the TAGO Portal.*

1.4.9 Inadmissible Persons and Deportees

Notification

The Pilot-in-Command of the flight shall be informed, at least 40 minutes before STD, that an INAD or DEPO will travel on board of his flight. This notification shall be done by means of a completed form in duplicate, which has been approved by the CAA.

This notification form gives the Pilot-in-Command sufficient information to decide whether the INAD/DEPO can be accepted on board. The Pilot-in-Command has to sign the notification form for receipt.

The notification form should contain the following information:

- a. *Full identity of the INAD/DEP*



- b. *The possibility of being escorted*
- c. *An evaluation of the possibility to have the flight secured by the security department of the company filling out of the arrangements regarding the seating in the aircraft envelope*
- d. *A detailed description of the security measures on board*
- e. *The documents accompanying the INAD/DEPO.*

In case the Pilot-in-Command decides to refuse the INAD/DEPO on board of his aircraft, he shall motivate his decision in written on the notification form.

Boarding and seating procedure

- a. *INAD's and DEPO's, the boarding sequence is to the commander's and/or local authority' discretion.*
- b. *They will be preferably seated at the rear of the aircraft, unless otherwise decided in agreement with the Pilot-in-Command.*
- c. *INAD's/DEPO's should not be seated next to any exit door or in any aisle seat.*
- d. *INAD's/DEPO's and their escorts will not receive hot nor alcoholic beverages.*
- e. *Also no metallic cutlery or glass crockery may be given to these passengers.*

Handcuffs and methods of Coercion

In no case, a person will be handcuffed to the aircraft or any other fixed object. Except in the cases foreseen within the Tokyo Convention of September 14, 1963, the use of any method of coercion that could endanger the safety of the aircraft, the crew or the passengers, including the INAD/DEPO, is prohibited; especially:

- a. *The complete or partial cut off of the breathing*
- b. *Administer sedatives or any other medicine aiming to suppress a person against its own will*

Particular cases

In case more than four INAD's/DEPA's are on board of the same flight, they will be accompanied by a doctor or an observer, active in the field of Human Rights. In case of incidents on the ground with either inadmissible passengers, deportees or persons in custody, the person in question will either be refused boarding or disembarked (depending on whether the incident occurs before or after the boarding) and his/her baggage shall be off-loaded.

Inadmissible passengers

Absorption of expenses

The inadmissible passenger shall be responsible for any expenses, such as food, hotel accommodation, guarding fees, etc. incurred for him and this from the time he is refused admission until the time he starts the outbound carriage.

When the Company is the inbound carrier, this basic IATA rule shall be strictly adhered to, unless:

- a. *Its application is contrary to the applicable laws or regulations;*
- b. *Or the local station manager decides, for humanitarian reasons, to absorb essential expenses if these cannot be collected from the INAD.*



Carrier's responsibility

The responsibility to return an INAD to his country of origin lies completely with the airline that transported the passenger to the point where he is inadmissible. With due consideration to the Company's responsibility for the safety and security of the other passengers, the station manager (the passenger handling manager) or the Pilot-in-Command of the concerned flight may insist on the inadmissible passenger being escorted, becoming thus an ANAD.

Deportees Carrier's responsibility

With due consideration to the Company's responsibility for the safety and security of the other passengers, the station manager (or the passenger handling manager) at the point of departure of a deportee or the Pilot-in-Command of the concerned flight may insist on the deportee being escorted by at least one delegate of the departing country.

However, the provision of facilities and staff for escort and/or detention purposes is the sole responsibility of the departing authorities, who are also responsible for any signaling action to the immigration authorities at the transit station and at the station of destination.

Unescorted deportees: DEPU's

- a. *If the deportee is to travel unescorted, the departing authority shall provide a document stating:*
 1. *that the authorities of the country of destination have been advised;*
 2. *that all administrative formalities have been complied with;*
 3. *that the presence of the deportee is not likely to create a hazard;*
 4. *that the deportee is not opposed to his repatriation.*
- b. *It should be noted that the carrier is not obliged to assume responsibility for a deportee to reach the destination specified by the departing authorities.*
- c. *No document involving Company's responsibility in this matter shall ever be signed.*
- d. *The departing authorities may however request that the deportee's passport and travel documents be handed over to the crew or the Pilot-in-Command of the aircraft. When this occurs, the documents will in fact be entrusted to the SCCM, who, unless otherwise instructed, shall hand them back to the deportee after landing at the latter's final or transfer destination (but not at intermediate stops).*

1.4.9.1 Inadmissible Persons (INAD)

- a. An INAD is an inadmissible passenger who is refused admission into a state by its authorities.
- b. An INAD should depart on the first available flight.
- c. The operating carrier (*see below in italic*) should be advised by the responsible authority (local) about the conditions and the state of the INAD. This should be done well in advance of the boarding.
- d. Advise the crew and pilot-in-command of INAD passengers with judicial proceedings.
- e. All stations en route shall be advised of the INAD on board.

Note: In general, Inadmissible passengers, INADs, travel without being accompanied.

- f. If assessed by the responsible authority, INADs may be accompanied if:
 1. The INAD physically resists carriage.
 2. The INAD has already been denied transportation by another airline.
 3. There is any sign the INAD might endanger the safety of the flight or passengers.



For the above reasons, unaccompanied INADs may also be refused at any stage.

Note: For additional instructions see Chapter 15, Annex I - Security.

1.4.9.2 Deportees

- a. A deportee (DEPO) is someone who:
 - 1. Has been formally ordered by the authorities to leave that state.
 - 2. Is under arrest.
 - 3. Has to be transported to another state for legal reasons.
 - 4. Has applied for asylum and is transferred to the state responsible for the application.
 - 5. Is described by the term in the "Dublin Convention" as the reason for transportation.
- b. DEPA–deportee accompanied: a deportee who is escorted by security personnel during flight.
- c. DEPU–deportee unaccompanied: a deportee who is not escorted by security personnel during flight.

Note 1: The responsibility for deportees lies fully with the state(s) concerned.

Note 2: Deportees will be accepted for carriage only on the request of an Authority and on operating airline approval (*see below in italic*)

- d. If a DEPO resists transportation or gives rise to the assumption that he/she will be the source of annoyance to other passengers or crew members, only accept him/her according to the procedures for a deportee who is escorted by authorized personnel during the removal (DEPA).
- e. Refuse the carriage of deportees or inadmissible passengers if they are likely to:
 - 1. Involve any risk to the safety of the flight.
 - 2. Involve any hazard or risk to themselves, other passengers or crew members.
 - 3. Cause discomfort or make themselves objectionable to other passengers.
 - 4. Require special assistance from ground or in-flight staff.
- f. Advise the crew and pilot-in-command of DEPO passengers with judicial proceedings. As a starting point the Pilot in command should always be informed of INAD and/or DEPO transportation whether they are with judicial proceedings or not.
- g. All stations en-route shall be advised of the DEPO on board.

Note: See Chapter 15, Annex I - Security, for approval policies.

1.4.9.3 Seating of Inadmissible Persons and Deportees

Assign inadmissible passengers, deportees and their escorts seats in the rear of the cabin, but not directly adjacent to exits, in accordance with operating airline policy (*see below in italic*).

Note 1: *Additional instructions for maximum number of INAD, DEPO and persons in lawful custody to be found in Chapter 15, Annex I - Security.*

Note 2: *Additional detailed seating instructions to be found in Chapter 15, Annex I - Security, 15.5.5.2.*



1.4.9.4 Travel Documents of Inadmissible Persons and Deportees

Hand the travel documents to the crew if required by the local authorities, local regulations or operating airline procedure.

Note: Additional instructions are found in Chapter 15, Annex I - Security.

1.4.10 Unruly Passengers

1.4.10.1 General Conditions of Passenger Carriage

For flight safety reasons carriers may refuse carriage or onward carriage of any unruly passengers and/or those who appear by manner or physical indications, to be under the influence of alcohol or drugs. This includes prevention of any violation of applicable laws, regulations or orders of any state or country to be flown from, into or over.

1.4.10.2 Handling Unruly Passengers During Check-In or Boarding

Report to the supervisor any unruly passenger behavior you observe at check-in, in the lounge, or at the boarding gate, and put baggage of such passengers on standby.

1.4.10.3 Unruly Passenger Denied Carriage

If an unruly passenger is denied carriage:

- a. Offload the passenger in the DCS and offload their baggage from the aircraft.
- b. Document the case in the airport or airline report, with details of the passenger's condition (e.g. intoxication, general abuse).

1.4.10.4 Unruly Passenger is Accepted for Travel

If an unruly passenger is accepted for travel:

- a. Inform the PIC and the senior cabin crew member.
- b. Document the case in the airport or airline report with details of the passenger's condition (e.g. intoxication, general abuse).
- c. Report the incident to the applicable departments and the onward airport.

Note: Additional instructions are in Chapter 15, Annex I - Security.

1.5 Passenger Disruptions

1.5.1 Information and Communication to Passengers

In general, provide immediate and accurate information at regular intervals:

- a. Ensure staff are briefed for consistent delivery of information.
- b. Brief staff on the estimated time of departure, estimated time of arrival, and any provisions being offered.
- c. Provide passengers written information about their rights according to applicable regulations, upon request or as required.
- d. Provide information in alternate formats to passengers with disabilities.



1.5.2 Delays

The handling agent has to ensure that at all time available information is provided to passengers and to meters/greeters, following the DTR-principle:

- a. *Dedication: All staff has to make all efforts to handle the delay with dedication towards to the procedures and Customer experience;*
- b. *Truth: reflect the true delay/disruption reason as provided by TUI OCC (do not 'invent' reasons);*
- c. *Regularly: passengers must be advised as soon as possible and kept regularly informed thereafter.*

Note: The EU261_2004 Notice (including instructions how to claim) will be available at check-in.

It is TUI Airways and TUIfly Nordic policy that passengers, who are accommodated overnight in hotels as the result of a delay, should always be accompanied to the hotel by their checked baggage.

Telephone calls

Every passenger has the right to two 2- minute phone calls upon his or her request. This is practically not feasible to offer, so passengers have to be asked to use his/her own mobile and re-invoice to TUI Airways and TUIfly Nordic Customer Care team.

Long Tarmac Delays

In US stations it is the responsibility of the handler to ensure airport authorities, Customs and Border Protection and the Transport Security Administration are involved at each of our US stations and at nominated potential diversion stations as appropriate.

We will not permit an aircraft to remain on the tarmac (stands, taxiways) for more than four hours without the opportunity for passengers to disembark. This applies to both departing and to arriving aircraft. However, the pilot-in-command may decide there is a safety or security-related reason to stop this from happening. If Air Traffic Control advised us that remaining on, or returning to the gate, or permitting anyone to disembark elsewhere would significantly disrupt airport operations then we would also not be allowed to do this.

If the aircraft remains on the tarmac no longer than two hours after leaving the gate for a departure, or touches down after an arrival, water /snacks (following welfare policy) has to be provided

Whilst the aircraft remains on the tarmac the lavatory facilities will function, and adequate medical attention if needed, will be available for the passengers.

1.5.2.1 Disruptions Prior to or During Check-In

- a. Update revised times in the DCS.
- b. *Rebooking any connecting flights is not applicable.*
- c. Check the passenger and baggage through on the rebooked flight.
- d. Update airport FIDS.



- e. Arrange the needed amenities, e.g. meals, hotel accommodation (HOTAC), transportation(s), passenger assistance, lounge access, etc., according to nature of the disruption.

1.5.2.2 Disruptions Known Prior/During Boarding

- a. Reconfirm the departure gate/time and update the revised information in the DCS.
- b. Advise passengers accordingly and at regular intervals.
- c. Apply airline specific procedures for certain categories of passengers.
- d. Update airport FIDS.
- e. Arrange the needed amenities, e.g. meals, HOTAC, transportation(s), passenger assistance, lounge access, etc., according to nature of the disruption.

Note 1: *Use iCoupon at your airport with regard to flight delay voucher distribution. iCoupon will be used to digitally load the voucher on the bar code of the boarding pass, enabling passengers to spend the voucher at retailers that are active on the iCoupon platform. For applicable airports, please refer to Appendix I9, in the TAGO Portal.*

Retailers available

This list of retailers can be found by browsing to the following link (with the IATA Airport code at the end – see example for LGW below):

<https://www.icouponworldwide.com/airport/LGW>

List of Stations where iCoupon is used to manage delay vouchers for TUI, refer to Appendix I9 in the TAGO Portal.

Procedure

In case of delay vouchers, TUI's TOCC CLO Department will activate iCoupon for customers on the delayed flight and will inform:

- a. *The Ground Handler via a phone call (+ mail will be sent).*
- b. *The customer policy & care department (for TOM flights) and Nordic Duty Office (for BLX flights). These departments will inform the passengers via a SMS (see example attached). Note that we are not able to inform everyone as we do not possess all the contact numbers of all our passengers. That is why information at the gate is essential by the gate agent.*

The Ground Handling Agent should:

- a. *Inform passengers by making the following announcement as below at the gate. The specific message in yellow is essential to make sure all customers are aware of the voucher on their boarding pass.*
- b. *Make sure a QR code (see TAGO Portal "Documents" – 10. iCoupon Flight Delay Voucher) is made available at the gate for customers to scan. By scanning the QR code customers will see the overview of all iCoupon retailers available at the airport.*



Backup

In the unforeseen circumstance of an iCoupon outage, the Ground Handling Agent is requested to use the back-up plan:

- a. *The customer policy & care department (for TOM flights) and Nordic Duty Office (for BLX flights) will inform customers of the flight delay and the voucher they will receive.*
- b. *TUI's TOCC CLO Department will contact the Ground Handler via mail to distribute paper vouchers for the respective, delayed flight. The mail will contain all required information to do so.*

Gate Call Announcements

English

Dear Passenger,

This is a general announcement regarding the departing flight TOM/BLX XXXX with destination XXX. On behalf of TUI we would like to inform you that unfortunately your flight has been delayed.

- Option 1: the new departure time is scheduled for XX:XX. You are expected back at gate X at XX:XX for boarding.
- Option 2: we are not yet able to inform you of a new departure time, but we will be happy to meet you at gate X at XX:XX in the hope of informing you further.

!!! From delays of more than 2 hours!!!

On behalf of TUI, we apologise for any inconvenience caused by this delay. If you have any further questions, please do not hesitate to contact us. We will remain at your disposal at the gate.



SMS Example to customer

English	<u>TOM - Delay whilst airside;</u> <i>Dear passenger,</i> <i>We apologise for the delay to your flight TOM xxxxx from xxxx to xxx, scheduled to depart at xxxxx on. Your flight has been rescheduled to depart at xxxx, the reason for your delay is xxxxxx.</i> <i>You will receive £ XXX, this credit will be loaded on your boarding pass and can be spent at the following retailers at only one time: https://www.icouponworldwide.com/airport/XXX for refreshments while you wait at the airport.</i> <i>Our apologies and have a good flight. Best Regards, TUI</i> <u>TOM - Delay before passengers are due to check in;</u> <i>Dear passenger,</i> <i>We apologise for the delay to your flight TOM xxxxx from xxxx to xxx, scheduled to depart at xxxxx on. Your flight has been rescheduled to depart at xxxx, the reason for your delay is xxxxxx. Please make sure that you are checked in at least 3 hours before the new departure time.</i> <i>You will receive £ XXX, this credit will be loaded on your boarding pass and can be spent at the following retailer at only one time: https://www.icouponworldwide.com/airport/XXX for refreshments while you wait at the airport</i> <i>Our apologies and have a good flight. Best Regards, TUI</i>

1.5.2.3 Disruption Upon Arrival

In case of the delayed arrival of a Flight:

- The mis-connecting passenger and baggage shall be rebooked and re-flighted accordingly.
- Update airport FIDS.
- Arrange the needed amenities, e.g. meals, HOTAC, transportation(s), passenger assistance, loungeaccess, etc., according to nature of the disruption.

1.5.3 Misconnections/Cancellations/Diversions

Specific instructions on how to handle misconnections, cancellations and diversions will be provided either by the TUI OCC or the Customer Care team.

In general:

- Misconnections and diversions: Contact the Customer Care team*
- Cancellations: In principle every flight, even if delayed by a day or longer will operate. Therefore, handling agents should never announce a flight cancelled and make sure the airport doesn't communicate otherwise.*



In the very rare event of a cancelled flight, the passenger is entitled to receive information on request.

1.5.4 Involuntary Change of Class

Specific instructions on how to handle involuntary changes of class will be provided by the Customer Care team.

1.5.5 Denied Boarding due to Unavailability of Seats

- a. Passengers holding a confirmed reservation may be denied boarding due to irregularity reasons, for example:
 1. overbooking of the flight.
 2. reduced aircraft seating capacity due to unserviceable equipment (cabin doors, slides, etc.).
 3. reduced weight/seat capacity due to a payload restriction.
 4. change of aircraft or version.
- b. Apply operating airline policy (*see below in italic*) for denied boarding:
 1. if applicable, solicit volunteers and offer compensation and/or reProtection as per the operating airline policy (*see below in italic*).
 2. provide written notice as per government regulations.
 3. apply airline's involuntary denied boarding policy if no volunteers are solicited.

Denied boarding forms must be completed and sent to the addresses mentioned in the forms. The forms for TUI Airways and TUIfly Nordic are provided in the TAGO Portal. In such events always liaise with the TUI Tour Operator representative and the Customer Care teams who will provide instructions in line with regulation 'EC No 261/2004' and the TUI fly customer service policy.

1.5.6 Mishandled or Unclaimed Baggage

1.5.6.1 General

- a. Mishandled or unclaimed baggage include one or more of the following baggage disruption incidents:
 1. Delay of checked baggage
 2. Loss of checked baggage
 3. Damage or partial loss of checked baggage
 4. Pilferage of baggage or items from baggage
- b. Enter mishandled or unclaimed found baggage details into the tracing system as defined by the operating airlines procedures.
- c. Legal time limits apply to the reporting of loss, delay, damage or pilferage of baggage, see operating airline policy and applicable conventions.

1.5.6.2 Storage of Mishandled Baggage

Store mishandled baggage in a safe and secure area where access is controlled. Where required, make sure such baggage is subject to security controls before being loaded into an aircraft in line with the security requirements of the forwarding carrier, receiving carrier and relevant authorities.

Enter mishandled or unclaimed found baggage details into the tracing system. Hold such baggage in a safe and secure area where access is controlled. Where required, make sure



such baggage is subject to security controls before being loaded into an aircraft. These controls could include a combination of:

1. *Manual search.*
2. *X-ray.*
3. *Simulation chamber.*
4. *Vapor or trace analysis.*
5. *Delayed onward dispatch for 24 hours or more.*

Note: Follow the security requirements of the forwarding carrier.

1.5.6.3 Handling of Mishandled Baggage

- a. Mishandled baggage shall be forwarded without any charge by the fastest possible means using the services of any IATA member airline, to the airport nearest to the passenger's address
- b. Ensure that the number of unaccompanied bags is included in the baggage counts for load control
- c. Use a "RUSH" indicator (manual and/or electronic), when applicable

1.5.6.4 Delivery of Mishandled Baggage

Previously mishandled baggage shall be delivered in the most appropriate and fastest way and in line with the operating airlines procedures.

1.5.6.5 On-Hand Baggage

On-hand baggage or unclaimed found baggage is baggage that has missed the flight upon which it was intended to travel. The station/handling agents that created the on-hand file are responsible for the tracing for the first 5 days. Then it is sent to secondary/central tracing for further actions.

1.5.6.6 Delayed Checked Baggage/Missing Baggage

Delayed baggage is checked baggage not available to the passenger when they present the baggage identification tag at the point of stopover or destination. For the first five days the station that created the tracing file is responsible for primary tracing and information to the passenger about the status of the file. The maximum tracing period should be 21 days (as per the Montreal Convention) but may be longer based upon the operating airline procedures.

Baggage that has missed the flight upon which it was intended to travel should be considered to be on-hand.

1.5.6.7 Secondary Tracing

Secondary tracing is the process of taking over the responsibility and further actions for open mishandled baggage tracing files by the department as defined by the operating airlines procedures.

1.5.6.8 Mishandled Mobility Aids

Damaged, delayed or missing mobility aids should be handled as a priority:

- a. Provide a suitable equivalent loaned item or replacement.



- b. Make all efforts to provide a suitable equivalent loaned item or replacement.
- c. Arrange for the repair or replacement of the item, if needed.

Note: *Please contact TUI OCC Customer care Team if an Electric Mobility Aid is damaged, mishandled or delayed.*

1.5.6.9 Mishandled Live Animals

Delay of or injury to an AVIH should be handled as a priority.



2 Baggage Handling Procedures

2.1 The Baggage Journey

This chapter presents the flow of baggage handling from the planning and preparation of activities, through execution and monitoring of the processes. Baggage check-in procedures are addressed in Chapter 1 of this manual.

The chapter covers standard baggage handling procedures that can be implemented. Since airlines and airports are different, deviations from these procedures are possible.

Baggage tracking is part of the IATA End to End baggage program that aims to improve baggage handling efficiencies through information sharing.

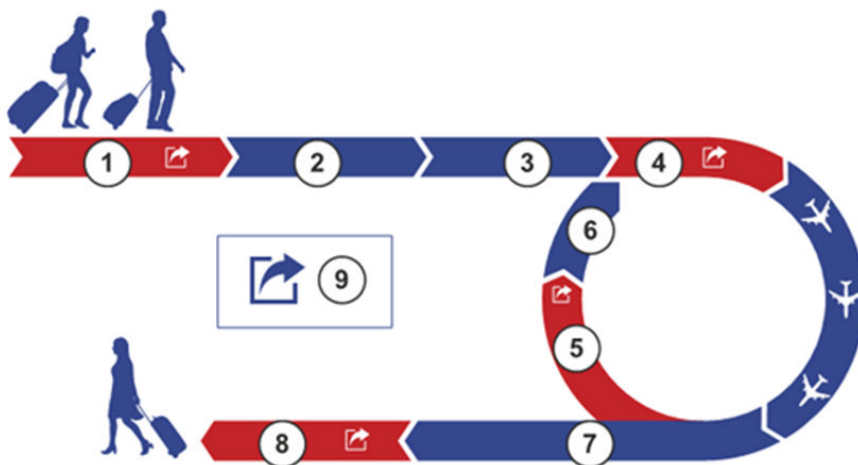
As per Resolution 753, IATA members shall maintain an accurate inventory of baggage by monitoring the acquisition and delivery of baggage.

Members shall be able to:

- Demonstrate delivery, of baggage when custody changes
- Demonstrate acquisition, of baggage when custody change
- Provide an inventory of bags, upon departure of a flight
- Exchange the above information with other airlines as needed

The provisions of Resolution 753 have been from 1 June 2018.

The diagram shows the generic flow of checked baggage, from acceptance of the bag through to the return of the baggage to the passenger. In some cases, and upon specific arrangements which recognize security measures between airports of origin, transfer and arrival, transfer screening may become non-mandatory.





Number	Description
1	Departing Bags
2	Security
3	Sort
4	Baggage Build (<i>for loading see chapter 4 of the GOM</i>)
5	Transfer Bags
6	Security
7	Unload
8	Arrival
9	Information sharing

Note 1: *Transfer: Not applicable to TUIfly Nordic and TUI Airways as there are no Interline agreements.*

Note 2: Information Sharing: *TUI Airline shares tracking information with interline partners.*

2.2 Baggage Activities

2.2.1 Introduction

There are several baggage activities that take place in an airport. These can be broadly classified as:

- Passenger Baggage Acceptance–See GOM 1.1.6;
- Baggage Handling–This Chapter;
- Aircraft Loading–See GOM 4.5.

Note: Passenger Baggage is baggage that remains with the passenger during their journey and travels in the hold of the same aircraft as the passenger. This may include cabin baggage retrieved due to various reasons and may need to be checked in. Refer to GOM 1.1.6.

2.2.2 Personnel Roles

Throughout this chapter reference is made to tasks that are performed in order to execute baggage operations. These tasks may be undertaken by different types and groups of personnel depending upon the operation size and structure at the airport. Typical roles include:

- Management staff member: Responsible for overseeing the performance of the operation, making decisions on how to operate based upon feedback from the operational personnel.
- Support staff member: Responsible for planning baggage operations and collecting metrics, including rerouting misconnection to ensure a smooth baggage operation.



- c. Baggage personnel: Operational personnel who are responsible for the movement and monitoring of baggage through the dedicated baggage makeup areas, (including immediate reporting of any unauthorized persons in the baggage make-up area) reconciling baggage and collecting/delivering baggage from/to the aircraft.
- d. Ramp loading personnel: Operational personnel who are responsible for ramp activities including loading and/or offloading and immediate reporting of any unauthorized persons on the ramp (without airport badge in a visible place).

2.3 Safe Baggage Handling

It is important that all personnel members are aware of all risks associated with baggage handling, and that they are properly trained, and follow the guidance below as a minimum to ensure their health and safety:

- a. Handling techniques
 - 1. Baggage handling operations require personnel to manually handle equipment and baggage such as pushing and pulling non-motorized GSE (e.g. baggage carts), loading heavy bags, ULDs, etc.
 - 2. Baggage personnel should be aware of best lifting techniques to be utilized at all times to reduce the risk of injury whilst handling baggage.
 - 3. Refer to AHM 462 4.5.3 for handling techniques and principles of manual handling.
- b. Baggage personnel should not lift more than their physical capabilities to avoid injuries.
- c. Ensure appropriate care is taken regarding health and safety to ensure personnel do not sustain injuries while handling baggage. Where available, make use of assistive devices for moving heavy loads.
- d. Ensure appropriate personal protective equipment (PPE) is available and used.
- e. Ensure that baggage is handled in an appropriate manner, e.g. positioned rather than thrown onto the belts.
- f. When using baggage carts or dollies use the safety precautions in GOM 3.1.3.3.
- g. Verify the coupling/uncoupling of the baggage carts, dollies/trailers and ensure nobody is working between or nearby prior to moving.

Danger: Be extra careful of your hands, fingers, and feet when moving and connecting baggage carts or dollies to the tractor or another GSE. Always use the handle and never the tow ring. Seek assistance, if required.

2.4 Departure Baggage Handling (including Special Baggage)

2.4.1 Planning

Depending on the size of operation at a station it is important that for each departing flight, a pre-planning process is put in place to include:

- a. Review all types of expected checked items for each departing flight and plan for:
 - 1. The number of checked items and their categories (i.e., transferring or terminating baggage).
 - 2. The required number of carts and ULDs.
 - 3. Handling of any special baggage (*refer to GOM 1.1.6.12*) items that are planned for departure.
 - 4. Staff assigned to deliver baggage to/from the aircraft/staging area, (*refer to GOM 4.5.6.2.*)
- b. Review the arrival of transfer baggage for the departing flight:



1. Determine which arrival flights have transfer bags for the departure flight.
 2. Monitor these flights for the transfer baggage to ensure that the transfer bags can make their connections.
 3. Plan for short-connection baggage to the baggage sorting system or on a tail-to-tail basis for as needed.
- c. Review of the departure flight parking stand location to plan for on-time delivery of baggage.
1. Determine the driving time to the departure stand.
 2. Determine any special conditions for the use of the stand, such as supervision of baggage awaiting loading or additional security measures in place for the flight.
 3. Consider adverse weather conditions and protection from extreme temperatures.
- d. Plan for any special handling equipment that will be used and brief baggage personnel on their use, as needed. This may include processes and procedures for handling mobility aids, weapons, live animals, etc.

2.4.2 Preparation for Departing Baggage

- a. Verify the build location that has been allocated for the departure flight:
There may be more than one build location for the flight, such as:
1. Specific segregations being built in different areas.
 2. Specific build location for out-of-gauge (OOG) items, (e.g., sporting equipment)
- b. Ensure that the baggage personnel working at the out-of-gauge baggage point are aware of the build and/or allocated stand for delivery of items that arrive at the out-of-gauge point.
- c. Ensure that the signage for the flight departures is up to date (stand information is appropriately displayed).
- d. Ensure that the ground personnel handling the flight are aware of any special baggage item processing, especially mobility devices.

2.4.3 Execution of Departing Baggage

- a. Ensure that the baggage build location (e.g. baggage chute/carousel/lateral) and segregation for the departing flight is correct by validating against the baggage sortation plan:
If baggage is destined for another build area arrives at the build output:
1. Notify the baggage handling system (BHS) team.
 2. Move these bags to the correct build output/pass to baggage handlers.
- b. Ensure that the ULD for the baggage to be loaded is serviceable *refer to GOM 4.5.9.3*.
- c. Ensure that any baggage carts being used are serviceable *refer to GOM 3.1.3.3*.
- d. Ensure all mandatory screening and securing of baggage is performed as required.
- e. Produce ULD cards showing the correct flight and segregation of baggage for that ULD/ baggage cart.
- f. To identify containers and baggage carts, and to allocate the appropriate segregation and flights, it is necessary to produce ULD cards (electronically or manually). These cards are often produced in the baggage reconciliation system and show a barcode that can be scanned to identify the allocation of the container or cart to the baggage reconciliation/ tracking system. These are known as ULD cards. Apply sorting and loading procedures for containers and carts with respect to checked items tagged as:
1. Priority baggage
 2. Heavy baggage
 3. Connection baggage



4. Late baggage
 5. Fragile baggage
 6. Sporting equipment
 7. Mobility aids or devices
 8. Live Animals (AVIH)
 9. Crew baggage
 10. Baby Strollers/Push chairs
 11. Gate Delivery Items
 12. Items containing dangerous goods (i.e., dry ice)
 13. Standby baggage
 14. Items with a limited release tag.
- g. All baggage handling systems are subject to errors. This means that occasionally baggage will be directed to either a default output point or arrive at the wrong output point. Without human action, these bags will miss their intended flight. Therefore, based on the local provider and/or airport authority, and subject to airline and ground handler's agreement, it is advised to have baggage teams that can take these bags from the incorrect output location to their intended location or flight.
- h. Where baggage is being palletized ensure that pallet is structurally safe and that the net attachments are in place *refer to GOM 4.5.7*.
- i. Where tracking/reconciliation is performed in the baggage make-up area:
1. Scan the ULD/baggage cart card for the designated appropriate category.
 2. Scan the barcode of the baggage tag.
 3. Verify the load has been confirmed as being on the correct flight (obtain a "Positive" Passenger Bag Match, by visually inspecting that the baggage tag and electronically through scanning by ensuring a confirmed load response is received from the scanner).
 4. Place tagged baggage in the appropriate ULD/baggage cart, ensure that baggage is handled in an appropriate manner, e.g. positioned rather than thrown into the ULD/baggage cart.
 5. In case the baggage is identified as not being a "Positive" passenger bag matched or loaded to the incorrect flight/destination then place the baggage to one side for resolution.
 6. Compare expected baggage count and received baggage count to achieve a zero-baggage missed rate.
- j. Where reconciliation is performed manually in the baggage make-up area:
1. Visually inspect the baggage tag to check the flight number and destination.
 2. Detach one of the removable tabs and apply to the ULD/baggage 'Bingo' card.
 3. Load in numbered sequence (in loading order) to assist during offloading if applicable.
 4. Place tagged baggage in the appropriate ULD/baggage cart. Ensure baggage is handled in an appropriate manner (e.g., positioned rather than thrown into the ULD/baggage cart).
 5. Compare expected baggage count and received baggage to achieve a zero-baggage missed rate.
- k. When the ULD/baggage cart is filled and an appropriate number of ULDs/baggage carts are available for delivery, the build is complete or at a specified time before departure:
1. Close and seal the ULDs and/or cover baggage carts, as appropriate.



2. Arrange delivery of the ULDs/baggage carts to the aircraft for loading. If applicable, coordinate with the ramp staff member responsible for aircraft loading.
- l. Wheelchairs and Mobility aids delivered for carriage in the check-in area:
 1. Ensure that the mobility aid is collected from the check-in area and taken to the baggage build area via the allocated out of gauge (OOG) baggage route, as defined by local airport regulations. At some locations the OOG baggage route will necessitate the mobility aid being walked through a security checkpoint to reach the baggage build area.
 2. Handle all mobility aids in accordance with the IATA DGR.
 3. Ensure that the person responsible for the planning and loading the aircraft is advised of the number and types of mobility aids processed for carriage. Typically, this information is disseminated to the next station via a LDM or container pallet message (CPM).
- m. Where tracking/reconciliation is performed at the aircraft side:
 1. Unload the baggage from the baggage cart directly onto the loading conveyor for the appropriate aircraft hold into which the baggage will be loaded.
 2. Scan the baggage tag barcode or baggage license plate number for the baggage to be loaded.
 3. Verify the load has been confirmed as being on the correct flight (i.e., Positive passenger bag match has succeeded for the baggage).
 4. In case the baggage is identified as not cleared to load then place the baggage to one side for resolution.
 5. When baggage is loaded and a passenger does not board the flight or is removed from on board the aircraft, follow the procedures *as described in GOM 1.1.7.3* for treating the baggage (i.e., off-loading or transporting the baggage as unaccompanied), according to the risk assessment and locally applicable regulations.
- n. At the completion of the baggage build process, the baggage personnel should make a cross-check that the baggage has been built according to the load plan for the departing flight with load control. Discrepancies and variations need to be communicated to the load control, as soon as possible.

2.4.4 Handling Gate Delivery Items

- a. The passenger team will identify and label any baggage that is taken from a passenger at the gate due to size and/or weight restrictions.
- b. Record the baggage tag for tracking and/or reconciliation *as per GOM 1.1.6.9 baggage tagging*.
- c. Ensure the item is collected from the gate area to the aircraft for loading.
- d. Where a passenger wishes to continue to use their own mobility aid until they have boarded the aircraft ensure that:
 1. The mobility aid is collected after the passenger has boarded the aircraft.
 2. The mobility aid is handled in accordance with the IATA DGR.
 3. Ensure that the persons responsible for the planning and loading of the aircraft is advised of the number and types of mobility aids processed for carriage. Typically, this information is disseminated to the next station via the LDM or CPM.
- e. To ensure gate delivery items required to be made available at the aircraft door (i.e., Wheelchairs, Mobility aids and/or Strollers):
 1. Ensure a DAA flag/exception code is updated in the BSM and/or BPM



2. Ensure a DAA tag is applied to readily identify the item in the aircraft hold.
3. Scan the DAA's baggage tag.

Note: Refer to 1.1.6.12 for Delivery At Aircraft procedures.

2.4.5 Monitoring the Departing Baggage Operation

Baggage performance monitoring is a key element of an airline and baggage handling operations. There are a number of metrics that can be captured and applied to key performance indicators. The actual metrics used to monitor the operation depend upon the ground handling services providers and airlines involved. Metrics that may be useful include:

- a. Number of bags left behind
- b. Numbers of bags accepted late from check-in/baggage system.
- c. Number of bags received without tags
- d. First Bag Loaded.
- e. Last Bag Loaded.
- f. Number of gate bags.
- g. Number of bags delivered to the incorrect system output.

2.5 Transfer Baggage

Not applicable to TUI Airways and TUIfly Nordic.

2.6 Terminating Baggage

2.6.1 Planning

- a. Review relevant messages (e.g., baggage manifest message (BMM), container pallet message (CPM), load distribution message (LDM)) for the arriving flight to determine the number and location of terminating and transfer baggage, including special baggage.
- b. Review the arrival flight parking stand details.
- c. Plan personnel to meet the aircraft and determine the arrival activities, including the time at which they should be present at the stand.
- d. Plan any special handling equipment and briefing needed to meet the incoming aircraft.

2.6.2 Preparation for Terminating Baggage

- a. Allocate or/confirm a reclaim point for the arrival flight based on the number of terminating items expected. Local airport regulations or airline procedures may apply. *Contact Customer Care team before terminating baggage.*
- b. Allocate or/confirm the terminating baggage inject point.
- c. Verify all the GSE allocated is in good working order.
- d. Ensure the baggage team is aware of the delivery locations for terminating baggage including special baggage.
- e. Ensure the arrivals ground personnel meeting the aircraft are aware of any special items processing, especially mobility aids.
- f. Ensure the signage for the arrival flight is up-to-date and appropriately displayed.



2.6.3 Execution for Terminating Baggage

2.6.3.1 Collection

- a. Liaise with the ramp team for the collection of baggage according to the unload plan namely CPM, LDM, etc.
- b. Verify that the load collected is the appropriate load as per the unload plan/labelling of ULDs and/or baggage labelling.
- c. Sign for the handover as appropriate.

2.6.3.2 Delivery

- a. Deliver the baggage to the designated location for terminating baggage
 1. Observe the priority plan for the offload. Typically, the priority plan is to place commercially important baggage (e.g., first class, business class) onto the reclaim first, then to place economy baggage onto the reclaim.
 2. Observe such government required screening and securing of baggage as appropriate.
 3. First Bag/Last Bag Time Recording: These times are often key metrics for monitoring baggage performance. Some systems can record this time automatically when a bag is scanned by an Automatic Tag Reader (ATR), whilst others require manual action such as pushing a button.
 - i. Where a system is provided that requires a manual operation to indicate the delivery of the first bag then use this when the first bag is delivered.
 - ii. If no system exists then record the flight number and time of first bag delivery manually if this is required by local procedures.
 - iii. Once baggage delivery is complete, record the time of the last bag either manually or using a system if such a system is provided.
 - iv. Where required, indicate that the last bag has been delivered by placing a baggage tub on the reclaim marked as "Last Bag Delivered" or alternatively by tagging the last bag injected to the reclaim with a "last bag" tag.
- b. Ensure that there is good communication between the ramp and baggage operations teams and the passenger team regarding the process of the unload, especially in the event of issues or delays.
- c. If a bag is visibly damaged, then the bag should be secured *as per local requirements*.
- d. Baggage that has been delivered to the arrival hall must be rescreened before being loaded onto another aircraft.
- e. Transfer baggage that is accidentally delivered to the arrival hall should be stored securely until processing for transfer.

2.6.3.3 In the Arrivals Hall

- a. If the reclaim belt is overloaded with bags, then bags should be removed from the belt and set aside in a secure manner (i.e. can be observed) in an area that does not present a safety risk for passenger.
- b. Once all bags have been delivered to the reclaim and passengers have progressed away from the reclaim area then a sweep of the baggage belt should be undertaken to remove RUSH bags and any unclaimed/remaining bags to the lost and found office or other designated area for further processing.



2.6.4 Monitoring of Terminating Baggage Processes

The operational performance indicators that are needed will vary according to the airline and handling companies that are involved in the delivery of the terminating baggage. No targets for these measures are shown here, although the following measures may be useful:

- a. First Passenger to First Bag
This is the time between the first passenger from an arrival flight arriving at the baggage carousel and the first bag from the same flight being delivered to the carousel. This is a measure from the Airport Design Reference Manual.
- b. Last Passenger to Last Bag
 1. This is the time between the last passenger from an arrival flight arriving at the baggage carousel and the last bag from the same flight being delivered to the baggage carousel. This is a measure from the Airport Design Reference Manual.

Note: Note that both the above measures are difficult to record, as it is not always evident when the first and last passengers arrive at a reclaim carousel, especially if that carousel is allocated to several flights.

- c. First Bag Delivery Time
This is the time of delivery of the first bag to the baggage reclaim belt.
- d. Last Bag Delivery Time
This is the time of delivery of the last bag to the baggage reclaim belt.
- e. Baggage Delivery Duration
This is the duration of the delivery of baggage for an arrival flight, measured from the first bag delivery time to the last bag delivery time. It is also possible to record the delivery time for specific baggage types, such as all priority baggage.
- f. Bags damaged on arrival
This is a count of the number of bags delivered to the baggage reclaim belt that have been damaged during their journey. This damage can occur at any point in the journey, or the passenger may have used a bag that was damaged before their journey started. It is useful to record this as it allows the number of damaged bags on different flights to be compared
- g. Bags delivered out of plan
This is a count of the number of bags that have been delivered out of the intended delivery plan. This can include priority baggage delivered after economy baggage or special baggage delivered to the regular reclaim area, etc.

2.7 Special Baggage

AVIH is only carried as cargo and not passenger baggage.

If TUI Airways aircraft are operating flights on behalf of JAF/TB, TFL/OR, or TUI/X3, AVIH is booked as passenger baggage. For more details on conditions of carriage please see respective airline GOM/GHM

2.7.1 General

The following needs to apply when handling special baggage:

- a. Ensure special baggage to be accepted meets the dimension requirements (e.g., size, weight, volume) *see GOM 1.1.6.3 Note 3.*



- b. Ensure any special baggage accepted for carriage that has not been pre-declared has the required documentation, *see GOM 1.1.6.9*. This normally applies to Mobility aids, Firearms and AVIH.
- c. Ensure all special baggage items are packed in a manner that is suitable for transport and cannot jeopardize the safety of the aircraft, personnel, and its contents.

TOM-UK

AVIH is only carried as cargo and not passenger baggage.

End TOM-UK

2.7.2 Planning for Departing Special Baggage

Refer to GOM 2.4.1 for preparation of terminating baggage

2.7.3 Special Baggage Handling

- a. Handling of Wheelchairs and Mobility aids are to be carried out in accordance with operating airlines procedures, with the acceptance of electric mobility aids subject to the IATA Dangerous Goods Regulations (DGR) Table 2.3A; Refer to GOM 1.1.6.12(e).
- b. Handling of Crew Baggage—see GOM 1.1.6.12(b)
- c. Handling of Firearms—see GOM 1.1.6.13
- d. Handling of Sporting Equipment (see GOM 1.1.6.12(d))
- e. Handling of baggage Delivery At Aircraft (DAA) (see GOM 1.1.6.12(c))

2.7.4 Handling Live Animals

- a. Handling of Live Animals in Hold (AVIH) is required in accordance with *Chapter 14, Annex H - Live Animals* and IATA Live Animals Regulations (LAR). The acceptance of AVIHs also subject to respective country regulations. See GOM 1.1.6.12(f)
- b. For AVIH delivered for carriage in the check-in area:
 - 1. Ensure that the AVIH is collected from the check-in area and taken to the baggage build area via the allocated out of gauge (OOG) baggage route, as defined by local airport regulations. At some locations the OOG baggage route will necessitate the AVIH being walked through a security checkpoint to reach the baggage build area.
 - 2. Ensure the specific container requirements comply in accordance with the IATA LAR.
 - 3. The animal shall be kept in an appropriate area airside until loading. Depending on the environmental conditions, this area may be enclosed, heated, etc. so the animal does not suffer discomfort.
 - 4. Deliver the animal to the aircraft loading team.

Note 1: Domestic animals of unusual size, strong bred or wild animals, reptiles and rodents must be transported as cargo.

Note 2: *Refer to Chapter 9, Annex C – Aircraft Specifics and Chapter 14, Annex H – Live Animals.*

BLX-SE

AVIH are accepted as passenger baggage.

End BLX-SE



2.7.5 Planning Terminating Special Baggage

- a. Review the incoming flight load for the numbers of special baggage items and their type (transfer or terminating).
- b. Review the incoming flight parking details.
- c. Plan any special handling equipment and briefings needed to meet the incoming aircraft.
- d. Determine the duration of activities so that later activities can be planned.

2.7.6 Preparation for Terminating Special Baggage

- a. Verify the reclaim allocated for the arriving flight (see GOM 2.6.2).
- b. Verify any GSE allocated are in good working order.
- c. Ensure that the arrivals ground personnel meeting the aircraft are aware of any special items processing, especially mobility devices.

2.8 Disruptions

2.8.1 Introduction

When planning for disruption, review any known disruptions planned for the operation and the contingency measures planned for the day

- a. Anticipate any likely disruption scenarios
- b. Plan any equipment that is needed to cope with the anticipated disruptions
- c. Where planned software maintenance is taking place, ensure that there are manual processes available in case the systems being modified fail to restart

2.8.2 Dealing with Specific Outages

2.8.2.1 Baggage Reconciliation System (BRS) Outages

The BHS typically records the loading of the baggage into a container or aircraft hold. BRS failure can severely disrupt an operation, as the manual replacement processes are time consuming. A BRS can fail gracefully where the most recent data remains available in the system and baggage can be reconciled against this data with changes highlighted when connectivity is restored. Training and guidance for such systems should be followed when disruption occurs. When no graceful degradation is possible, manual processes should be adopted using bingo cards and baggage reconciliation stubs.

2.8.2.2 Baggage Handling System Outages

Most major airports have a BHS to move baggage from the check-in area to the build area. These systems vary in complexity, often having fallback modes and graceful degradation modes before the system fails totally.

When the BHS fails there are 2 issues that need to be dealt with.

- a. Bags that are trapped in the BHS and need to be removed.
- b. Bags that are waiting to be checked in.

Local procedures will vary for when the BHS fails, as the system design will determine the state of the bags when there is a failure.

While the key stages of baggage processing (i.e. cleared as safe for transport, storage build) can be completed without a BHS the capacity of the airport will be reduced.



2.8.2.3 Equipment Issues

Where equipment is found to be un-usable, damaged or non-functional during the planning phases of the operation then this equipment should be flagged as un-usable and moved to a location where it can be collected for repair or repaired.

2.8.2.4 Staffing Issues

It is possible to have a large percentage of personnel off work at the same time, and when this happens then there is a risk that the operation will be short-handed, leading to delays. Where possible, have a prepared list of staff on call that may be contacted to fill in roster gaps.

2.8.2.5 Diversions

When a flight is diverted to a station:

- a. Review the flight documentation/messages (e.g., Baggage Manifest Message, Cargo Pallet Message, Load Distribution Message) for mobility aids, AVIH and other items requiring special processing. Ensure the guidance under special baggage handling is followed, if available.
- b. Ensure there is a plan to unload the baggage from the flight in line with the intention for the passenger movements:
 1. If the aircraft is being replaced, transfer the baggage to the new aircraft.
 2. If passengers are being transferred to other flights, either move the baggage to the next flight or allocate a reclaim carousel for the flight so passengers can collect their bags before continuing with their journey.
 3. If passengers will be moved using ground transport, ensure a reclaim carousel is allocated to the baggage and deliver the baggage to that reclaim carousel.

2.8.2.6 Cancelled Flights

When a flight is cancelled then either:

- a. Deliver baggage to the alternative provided flight or;
- b. Deliver bags to a reclaim allocated to the original flight so that the passengers' can collect their bags.

2.9 Mishandled Baggage

2.9.1 Introduction

Despite the best efforts of airlines and ground handling service providers, mishandling might occur. When mishandling does occur, the following procedures should be followed:

2.9.2 Predeparture Mishandling

Predeparture baggage can have two possible issues needing to run the bag to the correct build location:

- a. Baggage without tags where the baggage tag has become detached from the bag.
 1. Take the bag to the lost and found baggage office.

Note: A specific handler should have been nominated for tagless bags, as the actual intended flight is not known.



2. Create an On-Hand Report (OHD) for the bag in the tracing system.
- b. Bags with tags in the wrong location that have been delivered to the wrong build location or the default baggage system output.

2.9.3 Departure Mishandling

Baggage arriving for the flight post departure

- a. RUSH the bag onto the next available flight to the same destination, regardless of carrier (as per IATA Resolution 780)
- b. Send a Forward (FWD) message for the bag to the lost and found office of the destination and any connection stations.
- c. Send a Baggage Transfer Message (BTM) for the reflighting (if not done automatically)
- d. Follow any additional screening requirements as per local regulations

2.9.4 Tail to Tail Baggage

If possible, and where permitted by local regulations and airline procedures, coordinate with ground control to ensure flights with connecting tail-to-tail baggage are parked close together in order to minimize the chance of mishandling.

2.9.5 Missing Baggage

Missing baggage is baggage that was anticipated for a departing flight but has not been received by the operating carrier.

- a. Create appropriate tracing files in the baggage tracing system,
- b. Create an On-Hand (OHD) and Forward (FWD) messages for the baggage once it is received.

2.10 Baggage Systems

2.10.1 Introduction

This section presents a brief overview of the baggage systems that are typically used. Not all airports and airlines will make use of all the systems, and sometimes systems will have different names depending upon where they are being used.

2.10.2 Baggage Reconciliation Systems

- a. Baggage reconciliation ensures that only accompanied or authorized unaccompanied checked baggage is loaded and transported.
- b. Baggage reconciliation procedures, either manually or automated, shall be in place where required by local regulations and operating airline procedures. Baggage reconciliation systems automate the process of recording where bags are loaded onto the aircraft and matching baggage details to passengers.

Note: Refer to Chapter 15, Annex I – Security

- c. In the event that the passenger is not onboard at departure then the bag may be located and removed, if this aligns to airline policy. *Refer to Chapter 15, Annex I - Security*



- d. A baggage reconciliation system will typically maintain passenger/baggage reconciliation as required, including:
 - 1. Standby passengers
 - 2. Off-airport and group check-in passengers
 - 3. Voluntary or involuntary deplaning
 - 4. Transit passengers
- e. Checked baggage of any passenger who is withdrawn from the flight or didn't board (no-show) is to be considered unaccompanied and handled in accordance with airline procedures and local regulations, which may include off-loading and additional security controls
- f. The Baggage Handling System (BRS) is not the only component in reconciliation and once a flight has been closed for check-in, the baggage room flight lead, or the baggage supervisor will:
 - 1. Review total pieces for each ULD.
 - 2. Pass on all baggage ULD figures, including baggage counts for each container and total ULD numbers, so that the total load summary can be prepared.
 - 3. Conduct a baggage room sweep to ensure there are no left-behind bags.
- g. If baggage is left behind, report this to Baggage Services. Appropriate messages shall be sent to the downline station and arrangements made to expedite the return of the bag to the passenger.

2.10.3 Baggage Handling Systems

A baggage handling system is used to move baggage through the airport. The system will also often be responsible for key aspects of ensuring baggage security, as the baggage screening machines are integrated into the system. Baggage handling systems often have many outputs that allow baggage to be built for an individual flight or segregations for a single flight. Other baggage handling systems output bags to carousels where several flights may be being built at the same time.

2.10.4 Baggage Messaging Systems

Baggage messaging underpins all the movement and processing of baggage. Baggage messages are defined in Recommended Practice 1745 and Recommended Practice 1755—for type B and Modern Baggage Messaging respectively. Messages are sent to the airport from the airline either via a direct connection or through a message distribution provider such as SITA or ARINC.

2.10.5 Baggage Management Systems

A baggage management system combines baggage source messages and baggage process messages to provide a real time picture of the movement of baggage through an airport, often combining information from other systems (such as security, handling, reconciliation, flight data, etc.) in order to provide a complete picture for the check-in, handling and loading of aircraft. The system may also allow tasks to be allocated to different teams in order to handle the baggage. The Baggage Management System is often a component of an overall airport management system.



2.10.6 Baggage Re-flighting Systems

A baggage re-flighting system is used to allocate baggage to a new flight when mishandling occurs. The system will typically have a complete flight schedule for the airport and be capable of generating baggage messages and labels to support the new baggage movement. Some baggage handling systems incorporate baggage re-flighting, allowing bags to be allocated to a new flight automatically and sent directly to the build for that flight.



3 Aircraft General Safety and Servicing Operations

3.1 Ramp Safety in Aircraft Handling

3.1.1 Introduction

Ramp safety rules and procedures promote safe ground handling. Therefore, the minimum safety rules and procedures defined in this section shall always be applied and understood by all personnel working on the ramp. Aircraft damage can endanger passengers, personnel and aircraft. Disruptions may also negatively impact safe airline operations.

Even a slight scratch or dent on an aircraft may result in a serious accident.

Any aircraft damage discovered or caused shall be reported. Refer to operating airline procedures regarding reporting of aircraft damage and the local authority.

It is not permitted to smoke or to use lighters/matches/e-cigarettes airside unless in a designated area defined by the local airport operator/regulator.

First notification of ground damage must be sent to TOCC within 30 minutes of the incident, using SITA or e-mail, and the Pilot-in-Command (if available) or maintenance organization (if present). The first notification must include:

- a. *Aircraft registration*
- b. *Flight number*
- c. *Airport where incident occurred*
- d. *Brief description of damage (with photos)*



Follow up on instructions from TUI Airways and TUIfly Nordic TUI OCC. If damage caused at your station; you should fill out a Ground Operations Safety Report. Refer to the TAGO portal home page for IQSMS instructions.

ACCIDENT / SERIOUS INCIDENT NOTIFICATION

OPERATIONS DUTY MANAGERS

Emergency Hotline: +44(0)1582 419569

Mobile: +44(0)7779 134729

SITA: LTNOOBY

Email: odm@tui.co.uk

All safety incident reports must be sent within 12 hours of the occurrence of the incident.

TABLE

Investigation Reports/Forms/ IQSMS	Timescales	Contact
Damage to Aircraft First notification of ground damage must be sent to TOCC to include the following 1. Airport 2. Date 3. Time of Occurrence 4. Area / Stand 5. A/C Registration 6. Flight Number 7. STD 8. Area of Damage	Within 30 minutes of the incident and before departure	operationsflightwatch@tui.co.uk ODM@tui.co.uk Hotline: +44 (0) 1582 419569 or Mobile: +44 (0) 7779 134729 or SITA: LTNOOBY tago.regulations-standards@tui.co.uk
Witness Statements IQSMS Ground Ops Safety Report	Max. 48 hours after Event	tago.regulations-standards@tui.co.uk
Ground Occurrence Report - Injury to staff/passengers IQSMS Ground Ops Safety Report	Max. 4 hours after Event	tago.regulations-standards@tui.co.uk



Investigation Reports/Forms/ IQSMS	Timescales	Contact
Ground Occurrence Report - All other ramp safety incidents IQSMS Ground Ops Safety Report	Max. 24 hours after Event	tago.regulations-standards@tui.co.uk
Occurrence Closure Response Form TUI Occurrence Closure Response Form	Max. 30 days after Event	TUI Station Account Manager (or) tago.regulations-standards@tui.co.uk
Damage to Aircraft - Initial Report	Max. 48 hours after Event	tago.regulations-standards@tui.co.uk
Damage to Aircraft - Final Report	Max. 21 days after Event	tago.regulations-standards@tui.co.uk

Completing the forms in good time and conducting investigations will ensure that the facts and circumstances of the incident are accurately recorded, investigated to avoid future occurrences. Contact Ground Ops Compliance if you have any queries:

Tel: +44 (0) 1582 648153

Email: groundops2@tui.co.uk

TOM-UK

Acceptance checks conducted in the United Kingdom must only be conducted by a person who has successfully completed training applicable to this role from a UK CAA Approved Dangerous Goods Training Organisation.

End TOM-UK

BLX-SE

Persons conducting dangerous goods acceptance checks must have received dangerous goods training commensurate with this responsibility.

End BLX-SE

3.1.2 General Ramp Safety

3.1.2.1 Engine Danger Areas

There is a particular risk of injury or damage in areas affected by aircraft engine intakes, exhausts and propellers. The risk is further increased if for any reason an aircraft stops and then applies the additional thrust required to “break away” and continue the maneuver.

- a. Vehicles and personnel must remain clear of aircraft danger areas when aircraft engines are running and/or the anti-collision lights are on.
- b. To prevent incidents and accidents caused by aircraft engines, *you must never position yourself* for equipment in the following critical areas before or during aircraft departure and arrival:
 1. Engine intake area;
 2. Engine blast area;
 3. Propeller rotation area (where applicable).



- c. Ensure the engine intake/propeller rotation area is clear at all times when engines are running or the engine start is about to start;
- d. It is forbidden to pass through the blast area while the engines are running.

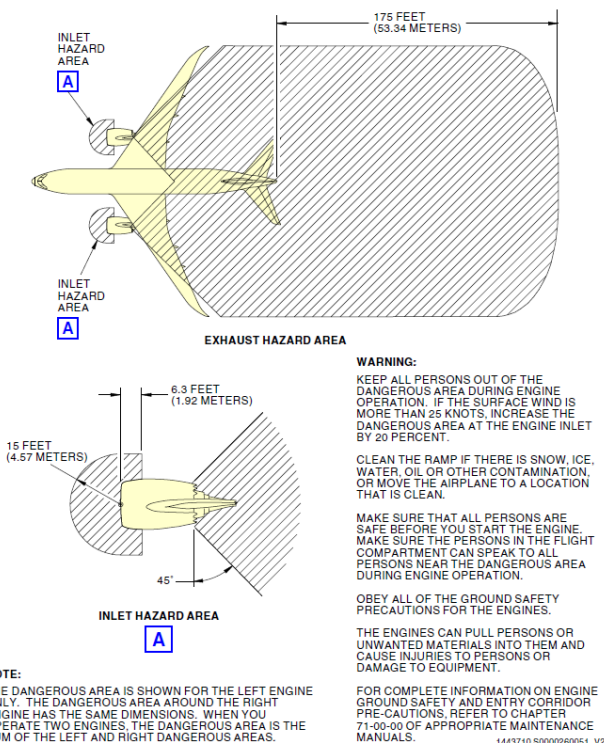
Ground personnel and/or loose equipment must stay clear of the intake and blast areas.

3.1.2.2 Engine Danger Area Diagrams



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Figure 71-11 ENGINE INLET HAZARD AREA - ENGINE IDLE (GEnx-1B AND TRENT1000 ENGINES).



NOTE:
THE DANGEROUS AREA IS SHOWN FOR THE LEFT ENGINE ONLY. THE DANGEROUS AREA AROUND THE RIGHT ENGINE HAS THE SAME DIMENSIONS. WHEN YOU OPERATE TWO ENGINES, THE DANGEROUS AREA IS THE SUM OF THE LEFT AND RIGHT DANGEROUS AREAS.

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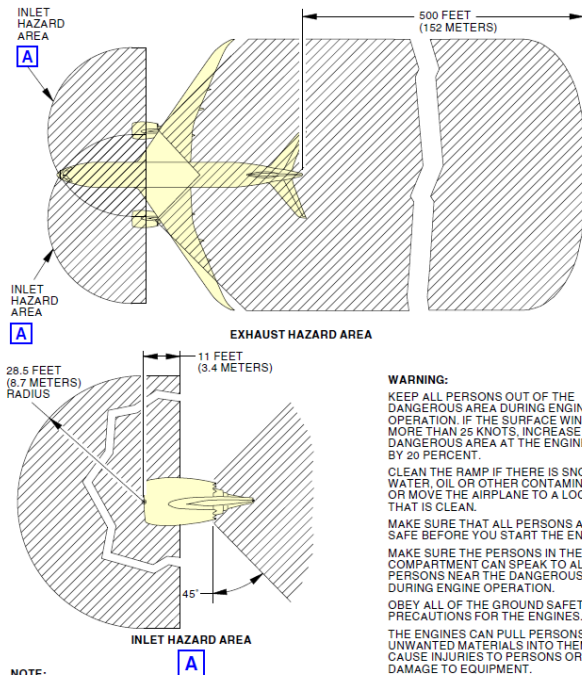
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MAINTENANCE FACILITY AND EQUIPMENT PLANNING DOCUMENT

Figure 71-12 ENGINE INLET HAZARD AREA - BREAKAWAY THRUST (GENx-1B AND TRENT1000 ENGINES).



WARNING:

KEEP ALL PERSONS OUT OF THE DANGEROUS AREA DURING ENGINE OPERATION. IF THE SURFACE WIND IS MORE THAN 25 KNOTS, INCREASE THE DANGEROUS AREA AT THE ENGINE INLET BY 20 PERCENT.

CLEAN THE RAMP IF THERE IS SNOW, ICE, WATER, OIL OR OTHER CONTAMINATION, OR MOVE THE AIRPLANE TO A LOCATION THAT IS CLEAN.

MAKE SURE THAT ALL PERSONS ARE SAFE BEFORE YOU START THE ENGINE.

MAKE SURE THE PERSONS IN THE FLIGHT COMPARTMENT CAN SPEAK TO ALL PERSONS NEAR THE DANGEROUS AREA DURING ENGINE OPERATION.

OBEY ALL OF THE GROUND SAFETY PRECAUTIONS FOR THE ENGINES.

THE ENGINES CAN PULL PERSONS OR UNWANTED MATERIALS INTO THEM AND CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

FOR COMPLETE INFORMATION ON ENGINE GROUND SAFETY AND ENTRY CORRIDOR PRE-CAUTIONS, REFER TO CHAPTER 71-00-00 OF APPROPRIATE MAINTENANCE MANUALS.

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NOTE:

THE DANGEROUS AREA IS SHOWN FOR THE LEFT ENGINE ONLY. THE DANGEROUS AREA AROUND THE RIGHT ENGINE HAS THE SAME DIMENSIONS. WHEN YOU OPERATE TWO ENGINES, THE DANGEROUS AREA IS THE SUM OF THE LEFT AND RIGHT DANGEROUS AREAS.

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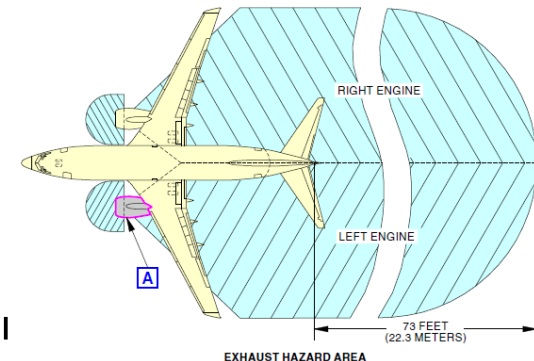
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Figure 71-8 ENGINE INLET HAZARD AREAS (CFM56-7) - IDLE/ABOVE IDLE POWER, FORWARD THRUST



EXHAUST HAZARD AREA

WARNING:

KEEP ALL PERSONS OUT OF THE DANGEROUS AREA DURING ENGINE OPERATION. IF THE SURFACE WIND IS MORE THAN 25 KNOTS, INCREASE THE DANGEROUS AREA AT THE ENGINE INLET BY 20 PERCENT.

CLEAN THE RAMP IF THERE IS SNOW, ICE, WATER, OIL OR OTHER CONTAMINATION, OR MOVE THE AIRPLANE TO A LOCATION THAT IS CLEAN.

MAKE SURE THAT ALL PERSONS ARE SAFE BEFORE YOU START THE ENGINE.

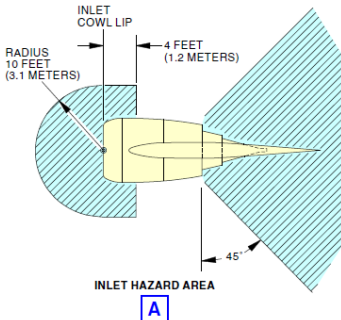
MAKE SURE THE PERSONS IN THE FLIGHT COMPARTMENT CAN SPEAK TO ALL PERSONS NEAR THE DANGEROUS AREA DURING ENGINE OPERATION.

OBEY ALL OF THE GROUND SAFETY PRECAUTIONS FOR THE ENGINES.

THE ENGINES CAN PULL PERSONS OR UNWANTED MATERIALS INTO THEM AND CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

NOTE:

THE DANGEROUS AREA IS SHOWN FOR THE LEFT ENGINE ONLY. THE DANGEROUS AREA AROUND THE RIGHT ENGINE HAS THE SAME DIMENSIONS. WHEN YOU OPERATE TWO ENGINES, THE DANGEROUS AREA IS THE SUM OF THE LEFT AND RIGHT DANGEROUS AREAS.



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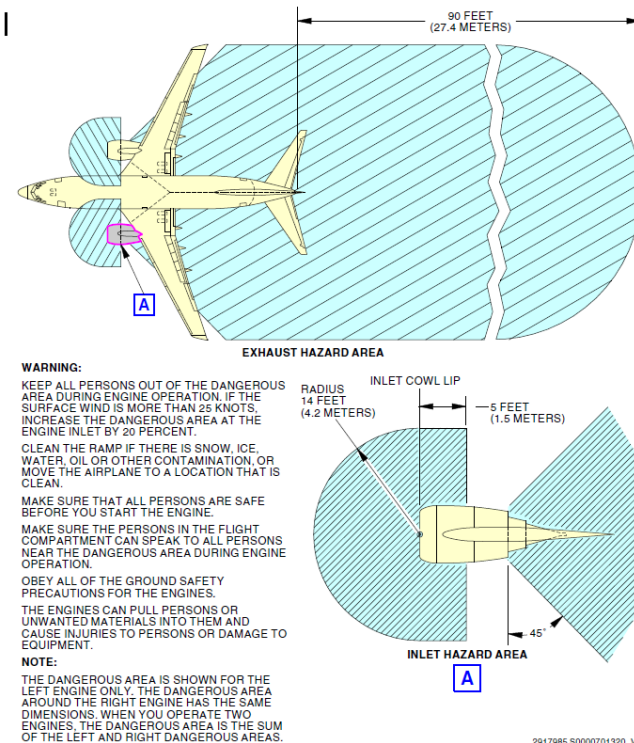
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Figure 71-9 ENGINE INLET HAZARD AREAS (CFM56-7) - BREAKAWAY/ABOVE IDLE POWER, FORWARD THRUST



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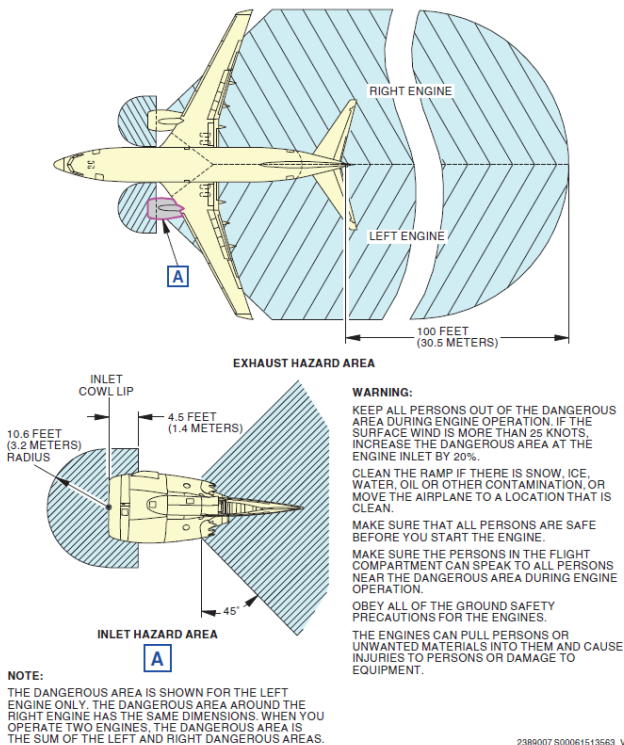


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Figure 71-13 ENGINE HAZARD AREAS, GROUND IDLE POWER, COWLS CLOSED (LEAP-1B)



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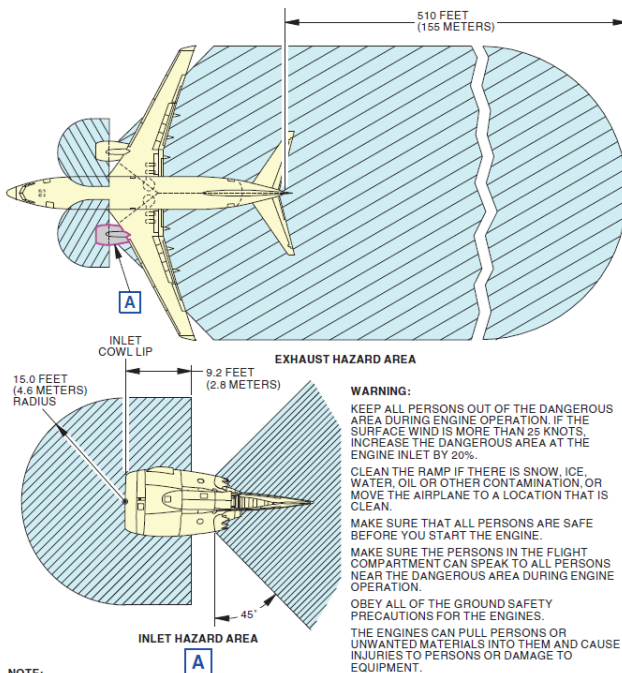


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Figure 71-15 BREAKAWAY THRUST - POWER HAZARD AREA



NOTE:

THE DANGEROUS AREA IS SHOWN FOR THE LEFT ENGINE ONLY. THE DANGEROUS AREA AROUND THE RIGHT ENGINE HAS THE SAME DIMENSIONS. WHEN YOU OPERATE TWO ENGINES, THE DANGEROUS AREA IS THE SUM OF THE LEFT AND RIGHT DANGEROUS AREAS.

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Note: The extent of these areas vary for each aircraft type as well as whether the engines are at IDLE or BREAKAWAY thrust. Refer to Chapter 9, Annex C Aircraft specifics for applicable distances.

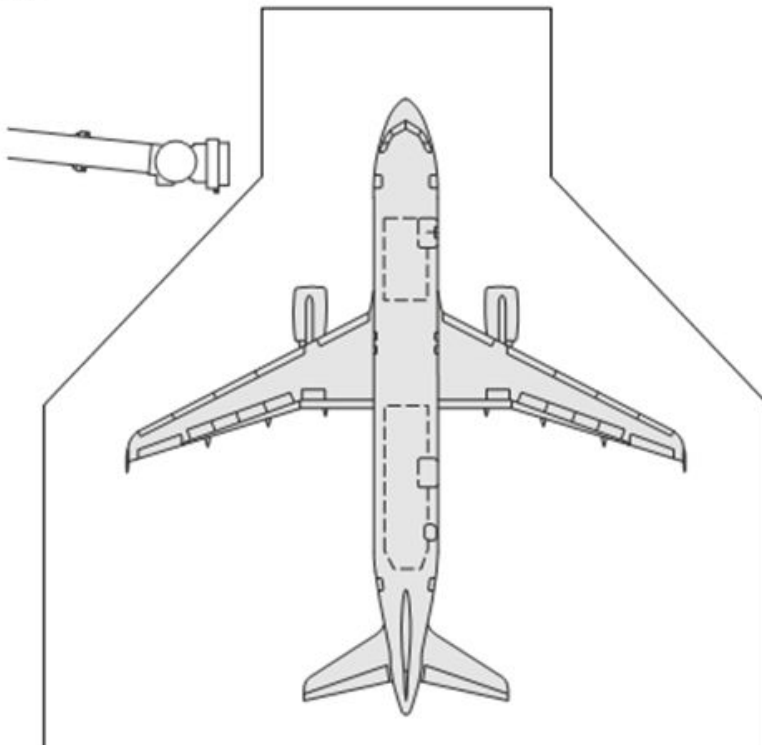
Engine intake area.

- a. *at arrival, until the engines have been switched off and are spooling down;*
- b. *at departure or just before pushback;*
- c. *at all times while engines are running.*

It is forbidden to pass through the blast area while the engines are running.

3.1.2.3 Equipment Restraint Area and Equipment Restraint Line

- a. The Equipment Restraint Area (ERA) is defined as the area of the apron in which an aircraft is parked during ground operations. It may be indicated by a painted line. If no markings exist, local procedures must establish safe parking areas, etc. The illustration below provides an example of the markings used at some locations.
- b. The ERA shall be free of personnel not involved in the aircraft arrival, obstructions, equipment (see exemption GOM 4.1.4.1) and Foreign Object Debris (FOD) before and during aircraft arrival and departure.



CAUTION! For safety reasons, spillage should be cleaned immediately to reduce the risk of personnel falling or risk of fire, in case of flammable substance spillage.

3.1.2.4 Foreign Object Debris

- Foreign Object Debris (FOD) *is a general term that* applies to all loose objects that are a danger to the safety and integrity of an aircraft or personnel. FOD, therefore, shall not be left in any area where it would pose a hazard.
- All personnel have a responsibility to ensure that the risk of damage to aircraft from FOD is minimized. All waste material *must* be properly disposed of such that it does not become FOD and all FOD must be removed and properly disposed of as soon as it is discovered.
- Proper management of waste and debris is critical, as, if not disposed of correctly, it may become FOD. FOD can also move into airside locations during high winds.

Examples of FOD:

Plastic and paper: bags, sheets and towels.

Metal: nuts and bolts, empty oil and hydraulic fluid cans, tools and equipment.



Natural objects: rocks, pebbles and wood,
Other debris: burst ballast bags, luggage handles and wheels.



CAUTION! FOD can:

1. Be sucked or ingested into aircraft engines causing damage leading to engine failure.
 2. Cause damage to tires, the undercarriage, control systems and other parts of the airframe which can lead to in-flight failures.
 3. Become a trip hazard for personnel working on or around aircraft.
-

- d. The following FOD checks *must* be conducted prior to any aircraft movement and after servicing operations:
1. Check ground equipment staging and parking areas in proximity to area of operation.
 2. Do routine checks of ground servicing equipment (including floors of enclosed cabins) to ensure that everything is secure and operational and not about to fall off and become FOD.
 3. In ramp areas ensure that anything carried in or on a vehicle is secured.
 4. Before aircraft arrival, conduct a FOD walk-around of the aircraft parking stand, removing all FOD found.
 5. *Pick-up and* dispose all FOD in designated garbage bins, where provided or as per local arrangements, FOD bins should be enclosed, to avoid FOD being blown out by wind.

Note: Refer to AHM 465 for FOD Prevention Program.

3.1.2.5 Personnel Protective Equipment (PPE)

All personnel shall be issued with and wear appropriate PPE as required for their role and as per local regulations to include:

- a. Safety footwear
- b. Hearing protection
- c. High visibility clothing
- d. Gloves
- e. Any other specified PPE as per local requirements

Note: Neckties or other loose hanging accessories which may pose risk shall be of the quick release type (clip).



3.1.3 Safety Instructions for Operating and Working with Ground Support Equipment on the Ramp

3.1.3.1 General Safety Instructions

Apply these procedures whenever operating GSE on the ramp.

- a. Personnel shall only drive or operate GSE if trained and authorized for that specific equipment type.
- b. GSE shall not be moved or driven across the path of:
 1. Taxing aircraft or aircraft under tow/pushback
 2. Embarking and disembarking passengers on the ramp
 3. Emergency vehicles.
- c. When operating any GSE, check the aircraft for possible damage in the equipment contact zone before positioning and after removal of GSE to/from the aircraft.
- d. Immediately report any damage found, or where contact has taken place or suspected to have taken place, especially for composite aircraft.
- e. Where damage has been found or where contact has taken place or is suspected to have taken place, do not move any GSE to/from the aircraft in the area where damage has been found until inspection is completed, and clearance given to proceed.
- f. Personnel working with and around vehicles and equipment must protect themselves from loose clothing, long hair, and/or hanging accessories/jewelry from becoming a hazard, e.g., caught or trapped in equipment.

3.1.3.2 Basic Operating Requirements for Ground Support Equipment

- a. Securely stow GSE cables and hoses, where fitted, prior to transportation and when not in use.
- b. GSE shall not impede the accomplishment of other aircraft handling operations in progress unless there is an important reason to do so.
- c. Check that all areas of GSE are free of contamination, FOD and safe for use prior to and throughout the operation.
- d. Operators shall check the GSE assigned to them prior to initial use, particularly the parking brakes, rubber protective bumpers, and safety systems. If found to be defective, the GSE shall be reported, tagged as "Out of Service" and removed from operations, when applicable.
- e. All safety rails shall be fully retracted/lowered prior to positioning, where possible.
- f. Extra personnel shall not be carried on moving GSE without an approved seat (i.e., apply the no seat–no ride principle).
- g. Seat belts shall be worn, where fitted, except where repositioning equipment is within the same operational area, e.g., within the parking stand or baggage makeup area
- h. Before moving any GSE/Vehicle ensure all its doors are closed, where fitted.
- i. GSE shall not be operated while using handheld Portable Electronic Devices (PEDs), including cellphones, portable music players, portable game units or earpiece or headset.
- j. GSE shall only be used for its intended purpose, including for specific aircraft types.
- k. Prior to movement of any GSE/Vehicles, the intended travel path shall be checked and confirmed clear of personnel, equipment or other obstacles.
- l. GSE with lifting devices shall not be driven or towed in the raised position, except for final positioning onto the aircraft.
- m. The GSE platform shall not be operated while in motion.



- n. Use a guide person when vision is restricted. The guide person shall be able to accurately judge clearances and communicate signals to the driver/operator. Stop immediately if visual contact with the guide person is lost. Movement shall not continue until visual contact is re-established.
- o. Once motorized GSE is in its servicing position at or near the aircraft:
 - 1. Apply the parking brake with the gear selector in park or neutral (if no selection for park)
 - 2. Turn off the engine, unless required when in operating/servicing mode.
 - 3. Install GSE wheel chocks, where equipped.
 - 4. If equipped with stabilizers, ensure they are deployed before the GSE is used for servicing. Deploy other safety devices (e.g., active proximity sensors, safety rails), if fitted.
 - 5. When motorized GSE is in operating/servicing mode, remain in a position whereby the emergency controls can be promptly accessed. This includes the immediate vicinity of the controls or an immediately adjacent and accessible location; for example, the cargo hold in the case of a ULD loader, where required to operate the aircraft cargo loading system (CLS), restraints and/or nets.
 - 6. If motorized GSE is not fitted with external emergency controls, the operator shall remain in the operating position and in control of the equipment when in operating/servicing mode.

Note: As an exception for pushback tractor, the engines may need to be left running unattended:

- 1. While conducting a single person pushback operation
- 2. To avoid specific restart by maintenance function.

If unattended apply the parking brake and place the gear selector in park or neutral, if no selection for park.

- p. When GSE is chocked:
 - 1. Place one chock at the front and one chock at the rear of the same wheel.
 - 2. Chocks shall be centered on and in contact with the wheel.
- q. When unattended motorized GSE/vehicle is positioned in or adjacent to the ERA, other than as described in GOM 3.1.3.2 (o):
 - 1. Turn off the engine. In extreme cold weather conditions where local procedures permit engines running unattended, the motorized GSE shall be chocked.
 - 2. Apply the parking brake with the gear selector in part or neutral, (if no selection for park) and, where equipped, install wheel chocks.
- r. The ground power unit (GPU) and preconditioned air (PCA) may be left running unattended when connected to the aircraft, provided the serviceability and fuel levels are checked periodically.
- s. A No-Touch policy (i.e., GSE/PBB shall not touch the aircraft) shall be employed for all GSE/PBB types that are not equipped with self levelling sensors. The equipment shall be positioned in a way that ensures:
 - i. The protective rubber bumpers do not touch the aircraft fuselage.
 - ii. The gap between GSE/PBB and aircraft shall not allow a person or large piece of equipment to fall through. As a guideline, a gap of 5 cm (2 in.) or two fingers should be maintained between the device and the aircraft.
 - iii. Check that throughout the turnaround process a clearance is maintained between the GSE and the fuselage to allow vertical movement.



- t. Check that throughout the turnaround process a clearance is maintained between the GSE and the fuselage to allow vertical movement.
- u. After positioning equipment on the aircraft, raise or extend all safety rails on conveyor belts, loaders, and other elevated devices, except where restricted by the aircraft type
- v. GSE shall be parked in the designated airside equipment parking areas when not in use.
- w. Access to firefighting equipment or the fuel hydrant emergency stop switch shall not be obstructed.

Note: For GSE operations during adverse weather refer to GOM 3.3 Adverse Weather Conditions.

3.1.3.3 Non-Motorized Ground Support Equipment

The following precautions must be taken when operating non-motorized GSE:

- a. When parked and/or when not connected to motorized vehicles, all non-motorized GSE shall have brakes set or chocks in place. Dollies/carts shall be connected as a chain, where possible.
Exception: Aircraft towbars.
- b. ULDs shall be secured on dollies (or trailers/trucks) using the appropriate restraints.
- c. Pallet and container dollies may only be towed with turntables in the locked position (straight ahead).
- d. The number of carts and dollies allowed is usually limited by the local airport authority or ground handling service provider, however, in critical conditions (e.g., slippery surface conditions, congested facilities, low visibility) the number should be reevaluated and might be reduced to ensure safe operations on the ramp.
- e. Know the dolly types as some dollies are not compatible with others. Follow the recommended towing combinations when transferring dollies from one place to another. Do not tow more units than the recommended sets or combinations.
- f. When connecting or disconnecting dollies/carts to/from the tow bar, hold only the tow bar handle and tow pin of the dollies/carts. Do not hold the tow eye when connecting or disconnecting.
- g. Position oneself beside the tow bar when connecting or disconnecting dollies/trolleys ensuring the tow-pin is properly inserted before towing and use the tow bar handle to connect and or disconnect dollies/trolleys.
- h. During transportation with carts and dollies, the load shall be properly secured using appropriate locks, stops, rails, curtains and straps.
 - i. The overall height of loads shall permit safe lifting of each piece of the load during loading and offloading of carts by personnel standing on the ground.
 - j. Light packages shall not be wedged between heavier items.
- k. When using tarpaulins, all straps shall be securely fastened to the baggage cart.
 - l. If equipped with stabilizers, ensure they are deployed before the GSE is used for servicing or access. Deploy other safety devices (e.g., active proximity sensors, handrails), if fitted.
- m. If using maintenance stairs e.g., to open and close cargo hold doors:
 - 1. The stairs shall be fitted with safety rails to prevent falls.
 - 2. Maintenance stairs should be facing towards the panel which is being accessed. Retractable/extendable safety rails shall be lowered or retracted during positioning.
 - 3. Raise or extend retractable/extendable safety rails prior to any personnel accessing the stairs.
 - 4. Moving or repositioning the stairs is not permitted while a personnel is on the stairs.



- n. Towable air start units (ASU), PCA and GPU shall not be connected to the tow vehicle and aircraft at the same time, if possible. Before towing the unit away, the operator shall ensure the unit is disconnected from the aircraft.

Danger: While the movement of carts and dollies by hand is very simple, it can result in injuries. Therefore, additional care must be taken.

3.1.3.4 Safety Driving and Parking Ground Support Equipment Inside the Equipment Restraint Area

To verify serviceability of GSE and to test the apron surfaces, operators shall apply the following precautions when driving or parking GSE within the Equipment Restraint Area (ERA):

- a. Make one complete stop with all motorized vehicles/equipment prior to entering the ERA or at 5 m from the aircraft. This action must be carried out even if there is no Equipment Restraint Line marked on the apron.
- b. GSE shall not be driven faster 5 km/h or 3 mph (walking speed).
- c. Manoeuvre GSE carefully to prevent personal injury and/or aircraft damage.
- d. Avoid performing any sharp turns near the aircraft, particularly when towing equipment.
- e. When GSE/PBB is being moved near the aircraft or positioned to the aircraft, and when the vision of the operator is or might be restricted, the operator shall be:
 - 1. Guided by a guide person using standard IATA signals. If visual contact with the guide person(s) is lost, the GSE operator shall stop movement of the GSE/PBB immediately. Movement shall not restart until visual contact is re-established.
When moving a Tractor/EBT near the belt loader, the movement must be guided by a guide person using standard IATA signals.
 - 2. Assisted by means of appropriate proximity sensing and warning systems and/or visual aids such as cameras and mirrors.
- f. GSE that are not directly involved in the handling or servicing of the aircraft shall not be driven through or parked within the ERA.
- g. Any GSE (e.g., tractors, pallet transporters, carts and dollies) shall not be driven or positioned under the aircraft fuselage unless specifically required e.g., lavatory servicing, aircraft maintenance, towbarless tractor etc.
- h. Driving or parking under the aircraft wings not permitted, see exception.

Exception:

Due to aircraft type or local restrictions, exceptions may apply. Prior operator approval shall be given.

3.1.3.5 Passenger Boarding Bridge (PBB)

The operator of the Passenger Boarding Bridge (PBB) shall:

- a. Be trained and authorized to operate the PBB.
- b. Check that the PBB is serviceable before use.
- c. Report any malfunction of the PBB to the appropriate person/authority.
- d. Check that the walking surfaces are free of FOD, obstacles and safe for use.
- e. Ensure only personnel required for the PBB operation are in the PBB while it is moving.

Danger:

There is a risk fall from height and distraction to operator.



- f. Ensure the PBB is fully retracted or parked in its safe designated parking position prior to aircraft arrival and departure.
- g. Ensure the safety barrier shall be in place whenever the PBB is not at the aircraft.
- h. Ensure that the movement path is clear of personnel, equipment/vehicles and all other obstacles before moving the PBB.
- i. When positioning the PBB at the cabin access door and driver/operator vision is restricted, use a guide person.
- j. Prior to positioning/removal, ensure that all safety rails/canopies on the PBB are fully retracted.
- k. Move the PBB slowly toward the aircraft, avoiding any aircraft sensors or protrusions.
 - 1. Where the PBB is equipped with self levelling device, continue movement until either the protective bumpers just touch the aircraft or the PBB's proximity sensors stop the movement.
 - 2. When not equipped with self levelling device, maintain a gap in accordance with No-Touch policy. *Refer to GOM 3.1.3.2 (s).*
- l. Ensure the PBB does not contact the wing root leading edge fairing that extends under certain cabin access doors or any other sensors or fairings.
- m. Once the equipment is positioned, ensure any safety rails and canopies on the PBB are fully extended.
- n. When positioning/removal is complete, secure/isolate the PBB controls to prevent movement by non-authorized persons.
- o. Maintain adequate clearance between the PBB and the underside of the cabin access door, or as directed by the cabin door markings to prevent damage. This reduces the possibility that the aircraft door will rest on the PBB as the aircraft settles during loading and unloading.
- p. Engage any safety systems (e.g., safety shoe) and auto-leveler features, if applicable. If the PBB is not equipped with an auto-leveler, the PBB shall be attended by an operator whenever it is positioned at an aircraft.
- q. Ensure the cabin access door is closed before removing the PBB.
- r. Where integrated with the PBB, ensure ground power cables and PCA hoses are disconnected from the aircraft prior to moving the PBB, unless required for operational purposes.

Note: A guide person is not required if the PBB is fitted with systems (e.g. sensors) that enable the operator to accurately judge clearances and properly position it to and from the aircraft.

Narrow bodied aircraft: *If a suitable PBB is available, passenger (de)boarding will be via L1.*

Wide bodied aircraft:

- a. *Passenger (de)boarding will be via door L2 (B787) when a suitable PBB is available.*
- b. *Where no PBB is available, requires 2 sets of steps, front stairs on door L2 (B787).*

Note: If due to local regulations only one set of steps is available, door L2 must be used for boarding and disembarking on the B787.

3.1.3.6 Passenger Stairs

The following precautions shall also be taken when operating passenger stairs:

- a. Check that the walking surfaces are free of contamination and safe for use.



- b. Ensure the movement path is clear of personnel, equipment/vehicles and all other obstacles before moving the passenger stairs.
- c. If passenger stairs are towed, disconnect them from the tractor and manually position them at the aircraft. Ensure brakes are engaged once stairs are positioned to the aircraft.
- d. Ensure safety rails and canopies, if any, on the passenger stair platform are fully retracted prior to positioning.
- e. Move the passenger stairs slowly toward the aircraft, avoiding any aircraft sensors or protrusions, until either:
 - 1. Where the passenger stairs are equipped with self levelling device, continue movement until the protective bumpers just touch the aircraft or the passenger stair proximity sensors stop the movement.
 - 2. When not equipped with self levelling device, maintain a gap in accordance with No-Touch policy. Refer to GOM 3.1.3.2 (s).
- f. The controls shall only be operated from inside the driver's cabin of the passenger stairs except where equipped with external controls.
- g. Maintain adequate clearance between the passenger stairs and the underside of the cabin access door, or as directed by the cabin access door markings, to prevent damage.
- h. Engage any safety systems and auto-leveler features, if applicable. If the passenger stairs are not equipped with an auto-leveler, the level of the passenger stairs shall be monitored and adjusted, as required.
- i. Deploy stabilizers, if fitted. Do not allow anyone (except the operator) to use the stairs until the stabilizers are deployed.
- j. Ensure passenger stairs are positioned so that the cabin access door can be used as an unobstructed escape route in case of emergency.
- k. Passenger stairs shall not be removed from the aircraft unless the cabin access door is closed or a fall prevention device is in place across the door. Refer to GOM 4.4.2.1 (b).
- l. After the cabin access door has been closed, confirm there is no personnel on the stairs prior to retracting stabilizers.
- m. If passenger stairs are towed when removed from the aircraft, manually position them clear of the aircraft to a suitable position before connecting them to the tractor.

3.1.3.7 Belt Loader

The following precautions must be taken when operating a belt loader:

- a. Do not operate the conveyor belt or raise or lower the boom when personnel are on the belt.
- b. Do not stand or walk on the conveyor belt when the safety rails are lowered/*retracted*.
- c. Do not sit or stand on a conveyor belt while it is in operation, nor while the boom is raised or lowered.
- d. Belt loaders shall not be used to transport baggage, cargo or other items across the ramp.



- e. The boom of the belt loader shall never be positioned inside the cargo hold of any aircraft.

Exception:

The rule does not apply to specially designed belt loaders which require the equipment to be extended/positioned inside the cargo holds.

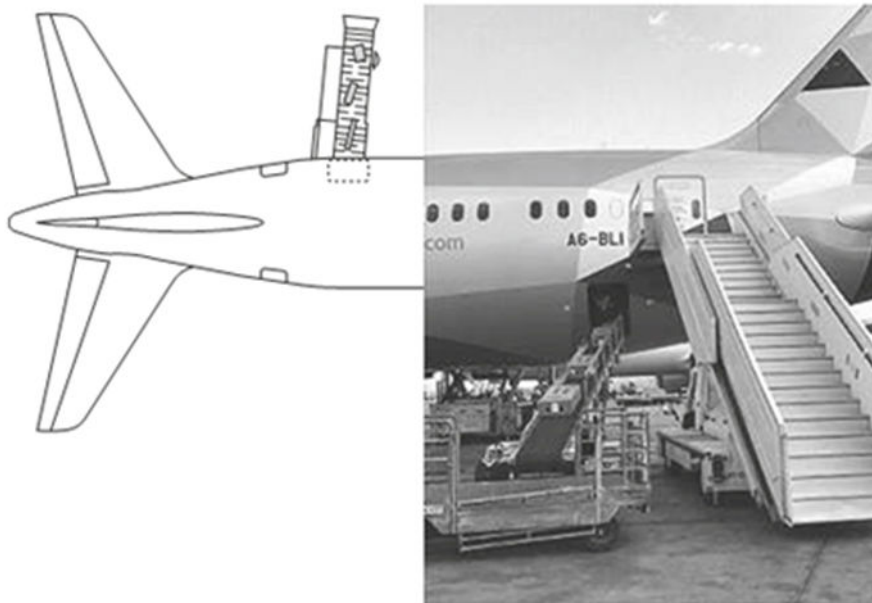
- f. Position and remove a belt loader to/from the aircraft in a straight line.
- g. Position the boom at an angle to the cargo hold doorsill that will:
 - 1. Allow tractors/trailers to access the belt loader without impeding slide deployment areas and passenger evacuation routes.
 - 2. Prevent items and personnel from falling between the boom and doorsill.
- h. Once the belt loader is positioned ensure the wheels are left in straight ahead position.

CAUTION! Speeding up operation of the conveyor belt using the accelerator pedal is not permitted.

- i. Where clearance allows, always raise the side safety rail as soon as the belt loader is positioned. Ensure it does not touch the aircraft fuselage.

CAUTION! Care shall always be taken when working around a moving belt. Personnel shall remain vigilant to trap hazards while raising/lowering the safety rails. Keep hands/fingers away from the edges/ends of the belt where they may become trapped. Belt movement shall be stopped before any attempt to clear any obstructions.

- j. The safety rail shall also be deployed when a belt loader is used to gain access to aircraft cargo holds or cargo hold access door controls.
- k. Ensure proper separation between articles and appropriate belt speed to avoid jamming.
- l. When unloading or loading items onto a belt loader, ensure they are stable, and correctly positioned on the conveyor belt to avoid items falling off.
- m. When unloading or loading items between the belt and aircraft cargo hold, ensure items do not come into contact with aircraft fuselage/cargo hold door.
- n. Adjust and control the back of the conveyor belt correctly to avoid dropping goods from the belt.
- o. The safety rail may be lowered to accommodate large items during loading and unloading.
- p. Ensure the boom is clear of the aircraft or other obstacles before making a turn.



3.1.3.8 Unit Load Device Loader

The following precautions shall also be taken when operating a ULD loader:

- a. Lower both platforms prior to maneuvering the ULD loader.
- b. Only personnel required for the ULD Loader operation shall be on the platform while maneuvering.
- c. Ensure that the ULD guide rails are in the proper position before positioning the ULD loader at the aircraft. Use ULD loader platform guide rails, as required, to ensure alignment when loading or unloading
- d. Move the ULD loader slowly toward the aircraft, avoiding any aircraft sensors or wing fairings.
- e. When approaching the aircraft and visibility is limited or the aircraft type has limited clearance with the ULD loader, a guide person shall be used.
- f. Ensure the ULD loader is level with the height and angle of the cargo compartment floor.
- g. Do not open/close cargo hold access doors while standing on a ULD loader. Use maintenance stairs in accordance with *GOM 3.1.3.3 (m)* or a belt loader in accordance with *GOM 3.1.3.7*.

Note: Not applicable to main deck cargo access doors, which shall be operated from inside (on applicable aircraft types) or from a Main Deck ULD Loader.

- h. Engage any safety systems and auto-leveler features, if applicable. If the ULD loader is not equipped with an auto-leveler, the level of the ULD loader shall be constantly



monitored and adjusted as required (e.g., edge of cargo hold opening, cargo hold access door, control panel doors, fairings on fuselage and wings).

- i. The ULD loader front platform shall be fully lowered prior to personnel ascending or descending the equipment stairs and the platform shall not be raised or lowered when personnel are using the stairs. Always check the surrounding area and ensure its clear to raise/lower the ULD loader platform.
- j. Ensure no one stands between the ULD loader and dollies during ULD movement and during dolly positioning.
- k. Align dollies correctly to the ULD loader. Use a guide person, if required.
- l. ULD loaders should not be used to transport ULDs across the ramp unless specifically designed for this purpose.
- m. Move ULDs only when personnel are clear of all hazards.
- n. The vehicle (dolly or other) shall be positioned close to the ULD loader platform periphery and shall be at the same height before the transfer takes place.
- o. The use of external mechanical force to move ULDs should not be necessary, except with very heavy ULDs that may not move by manual force alone. Any such process shall be carried out with approved equipment and procedures.
- p. Whilst maneuvering ULD when it is on the ULD loader, ensure:
 - 1. The platform(s) is clear of all personnel.
 - 2. All stoppers are raised to prevent ULD from falling.
 - 3. Immediate area around the ULD loader is clear of all personnel and equipment.
 - 4. ULD is only rotated on the rear platform and when in the fully lowered position.
 - 5. Only one ULD is rotated at a time.
- q. All personnel shall keep clear of the elevating platform when it is being raised or lowered.
- r. Before removal or repositioning of a ULD loader ensure any load positioned in the doorway is secured against roll out.
- s. For main deck loading/unloading operations, prior to removing the ULD loader the equipment operator shall inform personnel inside the main deck and receive confirmation from them that it is safe to remove the equipment. On board safety devices (e.g., safety barrier net) shall be installed at the cargo hold access door prior to ULD loader removal.
- t. Whenever possible, reverse in a straight line at a walking pace, monitoring all sides for clearance.
- u. Ensure the path of the ULD loader is clear of all obstructions prior to initiating turns.

Note 1: The ULD loader shall be positioned at a 90-degree angle to the cargo doorsill.

Danger: Do not enter or place any part of the body inside the 'scissor' area beneath the ULD loader.

Note 2: *Additional instructions for ULD to be found in Supplier Manuals in the TAGO Portal.*

Additional instructions for ULD can be found in Chapter 17, Annex L - ULD.

3.1.3.9 Elevating Equipment

The following precautions shall also be taken when operating elevating equipment:

- a. For elevating equipment with a rear access platform, ensure all safety barriers/rails are secured in place prior to vertical movement of the platform.
- b. Ensure the load is properly secured (e.g., cart brakes, stretchers, wheelchairs) and all access doors and shutters are closed prior to raising or lowering the vehicle.



- c. Any elevating equipment doors not being used for servicing at the aircraft shall be closed and latched.
- d. The positioning of the elevating equipment shall allow the loading platform to be perpendicular and at the same level to the aircraft doorsill.
- e. The final position of the elevating equipment shall allow for a safe working area and minimize the length of the walking surface between the aircraft and the elevating equipment while in the raised position.
- f. Before accessing the platform at the front or the rear of the elevating equipment, ensure the platform is at the same level as the equipment cabin.
- g. Carefully place the portable ramp/bridge on the doorsill from the platform side, as necessary.
- h. Equipment (e.g. catering cart) and passengers in wheelchairs shall be pushed on and off the aircraft. Always ensure a hand-to-hand exchange. No elevating equipment is to be staged on the platform, and no loose items are to be transported on top of carts (e.g., catering equipment).
- i. Continually observe and be aware of the clearance between the aircraft door and the elevating equipment platform.
- j. When the servicing is finished, carefully remove the portable ramp/bridge from the platform side and stow securely and close the aircraft door as per 4.4.2.7.
- k. The passengers and/or the load shall be secured properly inside the elevating equipment. Passengers shall be seated and wearing seat belts. Passengers seated in wheelchairs shall have the wheelchair secured during elevating equipment movement.
- l. Visually check for any obstructions over both sides of the elevating equipment before lowering.
- m. Lower the truck body into the fully lowered position.
- n. Close and secure all the doors of the elevating equipment when the servicing is finished.
- o. Perform a walk-around to check for FOD and clearance around elevating equipment stabilisers.
- p. All elevating equipment shall cease operating when the wind speed reaches 40 knots (gusting).

Note: Do not let any doors or hatches open at windspeeds (and gusts) above 40 knots to prevent damage.

Danger: Do not enter or place any part of the body inside the 'scissor' area beneath the elevating equipment.

3.1.3.10 Tractor / Electric Baggage Tug

The following precautions shall also be taken when operating a tractor or electric baggage tug (EBT) and towing dollies/baggage carts:

- a. Take care to avoid sudden sharp turns, jerks and stops.
- b. Prior to moving with towed load, ensure there are no personnel between or near the towed load.
- c. Baggage, cargo and other items shall only be transported on the tractor/EBT where the design of the equipment incorporates a designated location for the carry of such items.
- d. Use the remote push button control (inching operation) to connect dollies, carts, or towed load, where fitted.
- e. When Tractor/EBT is near the belt loader during aircraft handling, a gap of at least 1 m (3 ft.) shall be maintained.



Note: Where necessary to position carts/dollies within 1 m (3 ft.) of the belt loader, adjust the position of the carts/dollies by hand.

- f. When removing carts during the loading on or unloading from smaller aircraft or aircraft with low wings, the tractor shall be positioned pointing away from the aircraft wing and the cart maneuvered by hand to the tractor, as required.
- g. The appropriate type of dolly shall be used according to the ULD type to transport the load.
- h. Keep an appropriate distance between dolly and ULD loader during loading and unloading process. To avoid ULD falls, realign the dolly if the distance between ULD loader and dolly is unsafe.
- i. Ensure ULD is fully transferred onto the ULD loader before moving the Tractor/EBT.
- j. Ensure all the ULDs are secured on the dollies and flaps, or curtains are closed before transporting.

3.1.3.11 ULD Transporter

The following precautions shall also be taken when operating ULD transporters:

- a. No personnel are allowed to sit or stand on the roller bed.
- b. No personnel are allowed to walk or stand between the ULD transporter and ULD loader/dollies.
- c. Position the ULD transporter at a 90-degree angle to the ULD loader/dolly to ensure safe transfer of load.
- d. If fitted with an elevating platform (narrow body ULD Loader):
 - 1. Transportation of ULDs across the ramp with the platform in the raised position is not permitted.
 - 2. Raise the platform only when finally positioned at the aircraft.

Note: For combined ULD transporter/loader devices, refer to GOM 3.1.3.8 for further precautions

3.1.4 Fire

3.1.4.1 Fire Prevention and Protection

Personnel must always be vigilant for fire hazards and potential sources of fires in their areas of operation and try to mitigate or eliminate them during the operations (e.g., fueling and defueling operations, open wires, dangerous goods handling, GPU connections and use of electrical equipment). To eliminate conditions that may lead to fire:

- 1. Personnel must never smoke airside except in a designated smoking area.
- 2. All personnel shall be familiar with the location and use of firefighting equipment, fire alarms, fuel hydrant emergency shut-off valve, etc.
- 3. All personnel must be familiar with assembly points.
- 4. Emergency exits must be kept clear/unobstructed at all times.
- 5. Exercise good housekeeping in the airside areas to eliminate the risk of fire.
- 6. Dispose of garbage into the designated waste bin and do not allow garbage to accumulate.
- 7. All fuel/oil leakages must be contained as soon as possible, and the area cordoned off. (e.g., using safety cones, caution tape).
- 8. Smoke from GSEs/vehicles must be reported immediately.



9. Do not refuel any GSE/equipment while the engine is running any GSE/equipment while the engine is running or while using electronic devices.
10. GSEs/vehicles should only be parked as follows:
 1. Within the defined equipment parking areas;
 2. In a manner that does not obstruct access to firefighting equipment and the fuel hydrant emergency shut-off valve.

3.1.4.2 Actions in The Event Of a Fire

- a. In the event of a fire, carry out the immediate actions specified in GOM 6.5.2
- b. In event of GSE/vehicle fire, additionally, carry out an assessment and only if considered safe to do so:
 1. Fight the fire using available fire extinguishers.
 2. Move affected GSEs/vehicles away from the aircraft and operational area to the extent practical.
 3. In case the affected GSEs/vehicles cannot be moved, move adjacent GSEs/vehicles away to avoid spreading the fire.

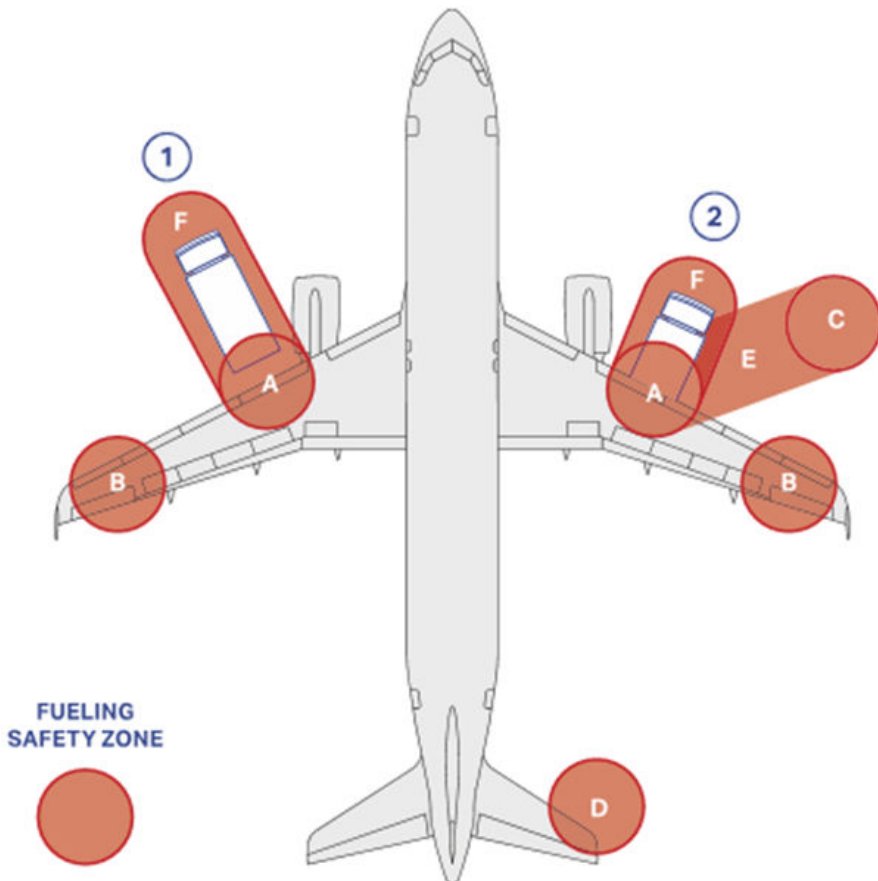
3.2 Safety During Fueling/Defueling

3.2.1 Fueling Safety Zone

The Fueling Safety Zone (FSZ) is defined as an area of at least 3 m (10 ft) in any direction from the centre point of all fuel vent exits, refueling plugs, aircraft refueling ports, fuel hydrants, fuel hoses and fueling vehicles. This distance may be further increased as required by local airport or civil aviation regulations.



Example of fueling Safety zone for Jet Aircraft



Reference	Description
A	Aircraft refuelling port/plug
B	Fuel vent exit
C	Fuel hydrant pit
D	Fuel vent exit (according to the aircraft type)
E	Hoses
F	Fuel truck or hydrant dispenser



Reference	Description
1	Fuel truck
2	Hydrant dispenser

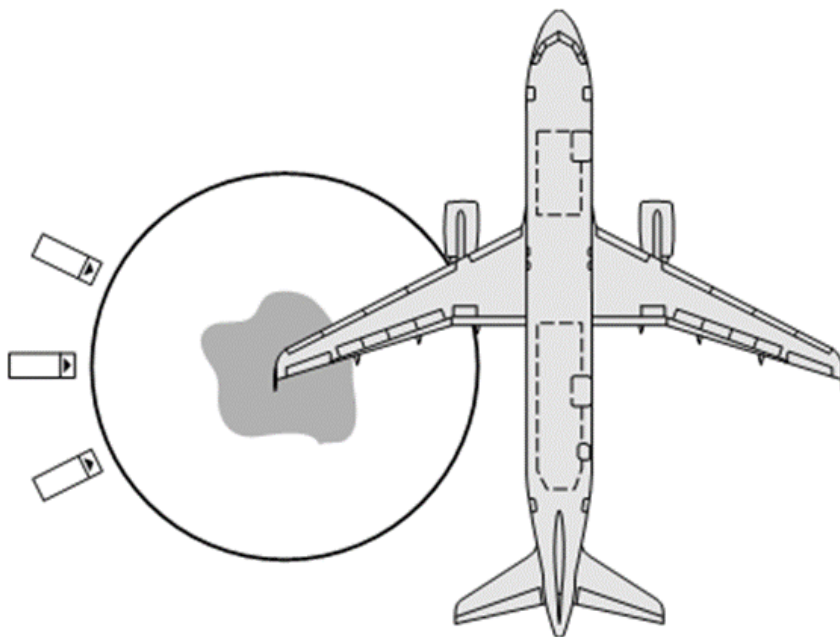
Within the FSZ, all personnel must ensure that they:

- a. Do not smoke.
- b. Do not use any handheld portable electronic devices (PEDs) including cell phones, portable music player, portable game units or earpiece or headset.
- c. Enter the FSZ only when required by your present job task responsibility.
- d. Assume that fueling is taking place anytime a fuel vehicle is on the stand during aircraft servicing and fuel hoses connected.
- e. Do not leave vehicle engines running unnecessarily.
- f. Position all GSE and vehicles so they do not obstruct the fueling vehicles' escape route, this is not a mandatory requirement for hydrant type fueling vehicles but every effort should be made to ensure a clear exit pathway.
- g. Do not allow any passengers to enter the FSZ.
- h. Avoid the use of motorized GSE within the FSZ.
- i. Do not park any equipment in the FSZ.
- j. Ensure fuel hoses are protected and all ground equipment is kept a minimum of 1 m (3 ft) away from any fuel hose on the stand that is connected between a fuel truck and an aircraft.

3.2.2 Fuel Spillage

Take the following safety measures whenever a fuel spill occurs:

- a. Activate the emergency shut-off valve where installed.
- b. Alert the person in charge of fueling and/or the Pilot-in-Command of the spillage.
- c. Contact the local fire service if not already done.
- d. Verify with authorities/supervisor whether to stop all activity around the aircraft.
- e. As far as possible, restrict all activities inside and outside the spill area to prevent access and to reduce the risk of ignition.
- f. Ensure that the aircraft parking stand, particularly the ERA, is sufficiently free of ice, snow, etc. to provide a safe working area during all ramp handling activities, including the aircraft arrival or departure operations.
- g. Remove snow and ice from equipment and work surfaces prior to the start of operations.



In case of a fuel spillage secure the area a minimum of 15 metres from the contaminated area.

3.2.3 Fueling/Defueling with Passengers on Board

The Pilot-in-Command of the flight will decide and instruct the GSP whether to let the passengers embark, stay onboard or disembark during re/defueling operations. The GSP agent shall provide local restriction information, including the need of fire services, equipment, etc., to the Pilot-in-Command.

When fueling/defueling with passengers on board and /or during their boarding or disembarking you must:

- a. Keep designated escape exits clear. An escape exit may either be a bridge into a terminal building, a cabin access door or a passenger stair truck positioned on an open cabin access door.
- b. Ensure that all areas on stand below designated escape exits are kept free of any equipment and vehicles which would impede the deployment of an escape slide.
- c. Do not hinder escape routes of passengers on board by ensuring that passenger stairs and bridges are clear of FOD.
- d. *Ask crew for authorization to start fueling*



Note: Refer to operating airline policies (see above and below in *italic*) regarding fueling as well as local airport and regulatory requirements. The above is applicable as a minimum standard.

In addition to the minimum standard instruction:

- e. *ground servicing activities and work inside the aircraft, such as catering and cleaning, shall be conducted in such a manner that they do not create a hazard that would restrict an emergency evacuation to take place through those aisles and exits intended for emergency evacuation;*
- f. *a two– way communication must be established and must remain available by the aircraft interphone system or other suitable means as decided by the Commander between the person supervising (Flight Crew or Ground Crew) the re/ defueling and the Flight Crew Member on board the aircraft and the involved personnel shall remain within easy reach of the system of communication;*
- g. *all personnel involved with the operation shall be aware of the fire protection emergency procedures, including the alerting of personnel on board (2 way communication), the procedure for summoning of the Airport Fire Service and action to be taken in the event of a fuel spillage or kerosene contamination.*
- h. *if a hazard arises during re/defueling, ensure that fueling is stopped immediately and the Flight Crew Member on board is informed;*
- i. *at least one passenger stair or air bridge must be available at a fully opened LH door situated forward of the wing;*
- j. *when re/defueling is complete, inform the Flight Crew Member and (if applicable) return the company headset to the flight deck.*

Fueling operations with one engine running is not allowed.

Additional Ground Equipment precautions

- k. *the connection or disconnection of any aircraft electrical equipment, including GPUs, batteries and battery chargers, is not permitted within 6 m of the filling and venting points on the aircraft, and fueling vehicle;*
- l. *any mobile equipment shall not be positioned within an area with a radius of at least 3 m or as specified by local regulations, from filling and venting points on the aircraft, fueling vehicle and within the hydrant pits;*
- m. *a mobile GPU shall be started before or after fueling operations;*

Note: Passenger boarding must not commence whilst more than one servicing task is taking place. Passenger's may board the aeroplane whilst it is being catered or fueled/defueled but not a combination of all three.

The fueling supervisor will not allow the fueling hose to be pressurized until all personnel are clear of the fueling panel.

3.3 Adverse Weather Conditions

3.3.1 General

Airside operational staff should follow these procedures during adverse or poor weather conditions which may have a negative impact on aircraft handling activities and ground safety. In the event that additional information is required, refer to supervisory staff.



3.3.2 Winter or Slippery Apron Conditions

Winter weather brings extra hazards, which require awareness and more care on the part of personnel working on the apron to prevent accidents. The following precautions to reduce accident risk must be taken:

- a. Plan additional time for all ramp activities and take extra care when walking across apron surfaces, which can be slippery.
- b. Take extra care when driving, especially when approaching the aircraft. Remember that GSE require greater distances to stop safely on slippery surfaces.
- c. Operators of potable water tankers and toilet servicing units must be vigilant that there is no spillage or leakage that can lead to subsequent freezing. Care must be taken to keep spillage and overflow to a minimum.
- d. If apron conditions are hazardous, contact the competent authority to mitigate the hazard. In the event the hazard cannot be mitigated, suspend the affected operations.
- e. Close all entrance and cargo hold doors as soon as possible and keep them closed to avoid precipitation entry into the aircraft.
- f. Ensure that the aircraft parking stand, particularly the ERA, is sufficiently free of ice, snow, etc. to provide a safe working area during all ramp handling activities, including the aircraft arrival or departure operations.
- g. Remove snow and ice from equipment and work surfaces prior to the start of operations.

Caution: Reduce speeds on slippery roads in slippery apron conditions. Adjust all activities and operations on the ramp to suit the conditions at the time.

3.3.3 Thunderstorms and Lightning

3.3.3.1 Work Instructions During Thunderstorms and Lightning

On receipt of an ALERT:

- a. Make preparations for the STOP phase.
 1. Suspend non-essential activities in open areas and ensure any personnel using or about to use headsets are informed of the alert.
 2. Fuelling operations can continue, however the proximity of the thunderstorm/lightning should be continually monitored.
 3. Avoid using highly conductive equipment.
- b. On receipt of STOP order:
 1. Stop fuelling and detach hoses from aircraft. Fuelling hoses cannot be left attached to the aircraft during any thunderstorm/lightning event
 2. Discontinue aircraft communication by head set.
 3. Stop all ramp activity and clear ramp.
 4. Personnel should seek shelter inside buildings or inside metal bodied vehicles. No one should seek shelter under any part of the aircraft, loading bridge, near light poles, fences, under trees.
 5. In accordance with local procedures, the aircraft may come on stand but the aircraft doors should remain closed and ground servicing suspended.

Danger: Failure to follow procedures could result in a fatal accident.



Levels	Action
Amber-ALERT Lightning activity is detected at a distance in excess of 8 km (5 miles) from your operation.	Disseminate lightning warning to airside operating staff so they can prepare and plan their activities to be ready in case of a Red Alert in accordance with local regulatory requirements.
Red-STOP/SUSPEND Lightnin activity is detected within 5 km (3 miles) of your operation.	Disseminate the order to stop all airside activities and seek shelter to all airside operating staff.
Green-ALL CLEAR Lightning activity has moved beyond 5 km (3 miles) and is heading away from your operation.	Disseminate the order to resume normal activities to all airside operating staff.

Note 1: The distances referred to above may vary depending on local climatic parameters.

Note 2: *Local Airport regulations must be adhered to. Thunderstorm communication may be implemented in alert phases and the following represents a minimum standard.*

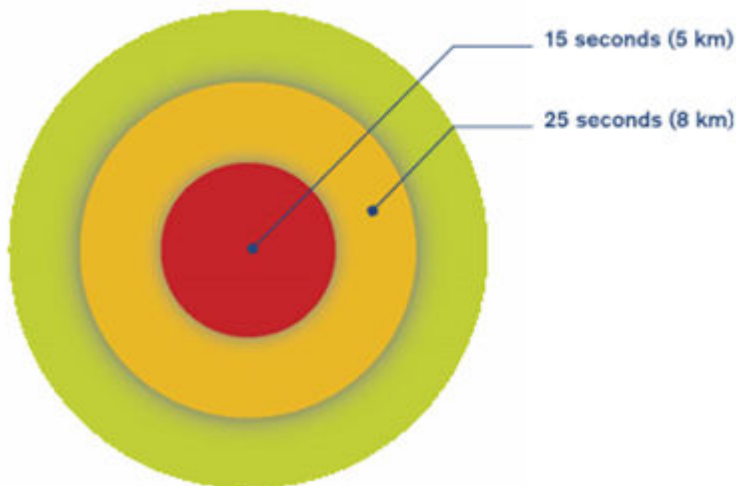
3.3.3.2 Lightning Alert Callout

In the absence of an integrated airport notification system, all airside operating staff shall be aware of the following procedures:

- Use the counting method to detect/predict lightning activity. Determine the corresponding level based on the counting method diagram, see 3.3.3.3.
- The responsible person notifies all airside operating staff of the lightning alert level. If the person responsible is not available, the counting method should be used by all airside operating staff for self-protection.
- In case of a Red Alert, proceed to a designated shelter.

3.3.3.3 Counting Method

The counting method is used when an integrated airport notification system is absent. It is used to estimate the level of lightning activity. Counting Method Chart:



Note 1: The time indicated is the time between the lightning and the sound of thunder.

Note 2: If the counted time is less than 15 seconds, the lightning activity is less than 5 km from the airport.

Note 3: If the counted time is between 15 seconds and 25 seconds, the lightning activity is between 5 and 8 km from the airport.

3.3.4 High Wind Conditions

High winds pose a great risk of damage and the following minimum precautions should be taken:

- a. Ensure the safety of the aircraft by installing additional chocks and removing all equipment from around the aircraft.
- b. Take extreme care when opening or closing any aircraft doors.
- c. Make sure parking brakes are set on all parked GSE.
- d. Set parking brakes and secure by additional means, if necessary, all non-motorized ramp equipment (i.e., baggage carts and ULD dollies).

3.3.5 High Winds Activity Table

The following actions shall be taken when sustained winds and/or gusts of wind 25 knots or greater are predicted however it is the actual wind speed at the aircraft parking position, which constitutes the risk for injuries and damages.



Staff Actions	25 to 39 kt (46 to 72 km/h)	40 to 59 kt (73 to 110 km/h)	Above 60 kt (Above 111 km/h)
Chock aircraft landing gear as per Aircraft Out of Service/Night Stop/High Wind; see GOM 4.2.2.	✓	✓	✓
Remove safety cones	✓	✓	✓
Secure PCA hoses	✓	✓	✓
Remove FOD	✓	✓	✓
Secure ULDs	✓	✓	✓
Secure rolling stock	✓	✓	✓
Strap all propellers on propeller aircraft	✓	✓	✓
Secure PBB and position to minimize surface exposed to the direct force of the wind		✓	✓
Close cargo hold, passenger doors and access panels		✓	✓
Do not initiate the elevation of high-lift equipment and stairs		✓	✓
Park GSE closely together, and adjacent to a building, if possible			✓
Retract PBB			✓

Danger: High winds pose a great risk of damage and injury

Note: At the moment when sustained wind and/or gusts of wind is below 25 knots place cones as per 4.3.

3.3.6 Sandstorms and Low Visibility

The following minimum precautions should be taken:

- Issue appropriate Personal Protective Equipment (PPE) such as goggles, masks, covered clothing.
- Ensure the provision of shelter, as required.

3.3.7 Intense Heat

The following minimum precautions should be taken:

- Issue appropriate PPE (i.e., covered clothing);
- Ensure the provision of rehydration for staff;
- Ensure the provision of a temperature-controlled environment during rest breaks.



3.4 Hand Signals

3.4.1 Introduction

To standardize ground-to-ground personnel communication and/or ground personnel to flight crew communication and/or flight crew to ground personnel communication, the following hand signals are defined:

- a. **Guide Person Hand Signals**—to be used by a specific guide person in direct liaison with the equipment operator to facilitate movements of any type of GSE.
- b. **Marshalling Hand Signals**—to be used by ground personnel, to assist the flight crew during maneuvering of the aircraft and engine starting.
- c. **Technical/Servicing Hand Signals**—to be used by ground personnel to communicate technical/servicing information to flight crew, and by flight crew to communicate technical/servicing information to ground personnel.

Note 1: Only use hand signals when verbal communication is not possible

Note 2: Make sure acknowledgement of all signals is received from flight crew

- d. **Aircraft Movement Hand Signals**—to be used during the tractor/tow bar, towberless connection/disconnection process, as well as at the start and end of the aircraft ground movement operation.

3.4.2 General Conditions for Using Hand Signals

The person giving the hand signals must:

- a. Use only approved hand signals.
- b. Wear a high visibility vest.
- c. Maintain the same role throughout the procedure.
- d. Keep in constant, visual contact with the other ground staff and flight crew throughout the manoeuvre. If visual contact is lost, the operation must stop and not re-commence until visual contact is re-established.
- e. Remain clear of the intended pathway of the vehicle/aircraft where possible.

3.4.3 Specific Requirements for Using Marshalling Hand Signals

- a. Perform aircraft marshaling only if permitted by the local airport authority and personnel have been trained and authorised.
- b. Give marshaling hand signals from a position forward of the aircraft while facing and within view of the flight crew.
- c. Wear a high-visibility vest
- d. Use illuminated flashlights/wands to improve the visibility of the hand signals in the following situation:
 - 1. Insufficient apron lighting
 - 2. Poor visibility
 - 3. Night conditions
 - 4. When required by local airport authorities or regulations

CAUTION! To avoid any possible confusion by the flight crew, do not use guide person hand signals for equipment until all aircraft marshaling has been completed.



Note 1: The hand signals printed on the following pages are illustrated with the use of wands. The meaning of the signals remains the same when bats, gloves or illuminated flashlights are used

Note 2: It is not possible to give signals for engaging/releasing parking brakes with the use of bats or illuminated flashlights



3.4.4 Guide Person Hand Signals for Ground Support Equipment

3.4.4.1 To Attract the Operator's Attention and Take Command



Arms held above head in vertical position with palms, facing forward.

Meaning: I am in charge of this maneuver. You will take orders only from me.



3.4.4.2 Forward Movement



Arms held above the head with elbows a little bent and palms facing backward; repeatedly move arms upward and backward, beckoning onward.

Meaning: Move towards the guide person.



3.4.4.3 Backward Movement:



Arms by sides, palms facing forward, swept forward and upwards repeatedly.

Meaning: Move directly away from the guide person.



3.4.4.4 Turn Right (from the driver's point of view)



Left arm pointed downward, hand extended; right arm repeatedly moved upwards towards the guide person's left. Speed of arm movement indicates rate of turn.



3.4.4.5 Turn Left (from the driver's point of view)



Right arm pointed downward, hand extended; left arm repeatedly moved upward and downward toward the guide person's right. Speed of arm movement indicates rate of turn.



3.4.4.6 Lift



Stretch both arms toward load and/or equipment, palms up; hand movement in upward direction.



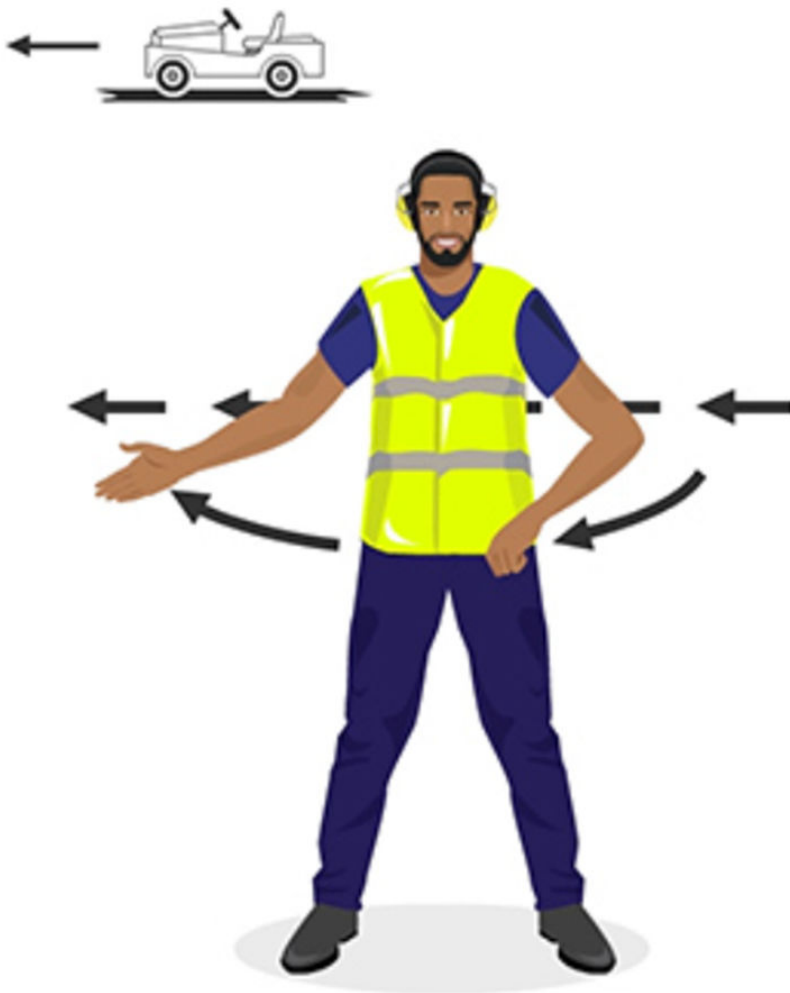
3.4.4.7 Lower



Stretch both arms toward load or equipment, palms down; hand movement in downward direction.



3.4.4.8 Accompanied Movement



Come with load or equipment. Maintain eye-to-eye contact with operator or driver. Swing down opposite arm.



3.4.4.9 Indicate Distance



Raise arms above head, palms facing inward. Distance shown between hands must correspond exactly with actual margin.



3.4.4.10 Stop



Arms raised and crossed over head, palm forward.

Immediate stop: Hands cross over head with clenched fists.



3.4.4.11 OK



Lift right arm above head, hand closed, thumb raised.

Meaning: All is clear or continue on your own or drive away.



3.4.4.12 Chocks Inserted; Stabilizers On



Arms down, hands closed, palms facing backward, thumbs extended; move arms in towards sides.



3.4.4.13 Chocks Removed; Stabilizers Off



Arms down, hands closed, palms facing forward, thumbs extended; move arms out away from sides.



3.4.4.14 To Interrupt Power Source (electricity, fuel, air)



Right arm and hand level with shoulder, palm downward; swing extended arm horizontally toward throat by bending elbow.



3.4.4.15 Stop Engine



Right arm and hand level with shoulder, palm downwards, hand on throat making horizontal move to the right, passing hand across throat.



3.4.4.16 To Connect or Disconnect



Raise left arm and hand in front of body, fingers extended horizontally, palm down.

Connect: Right hand with clenched fist moving upward to contact left palm

Disconnect: Right hand with clenched fist leaving left palm downward.



3.4.4.17 Brakes On/Off

Release



Engage



Right arm and hand raised horizontally in front of body.

Release brakes: With fist clenched, extend fingers, palm inward.

Engage brakes: With extended fingers, clench fist, palm inward.



3.4.5 Aircraft Movement Hand Signals–Headset Operator to Tractor Driver

3.4.5.1 Vehicle Brakes Off



Raise right hand just above shoulder height with closed fist and ensuring eye contact with tractor driver open palm toward driver.



3.4.5.2 Clear to Push



Hold arm straight out at a 90° angle from shoulder and display hand with thumb up.

Meaning: Indicates to tractor driver that all equipment is clear of aircraft, chocks have been removed, the aircraft brakes are off and flight crew has given clearance to commence pushback.



3.4.5.3 Negative/Hold



Hold arm straight out at 90° angle from shoulder and display hand with thumb down.

Meaning: Indicates to tractor driver that aircraft is not ready for pushback and to hold position.



3.4.5.4 Vehicle Brakes On/Stop



Raise hand just above shoulder height with open palm and ensuring **eye contact with tractor driver**, close into a fist. At the end of the pushback, also indicates to tractor driver that aircraft brakes have been set. Tractor driver should return signal to the headset operator to confirm vehicle brakes set.



3.4.5.5 Slow Down



With hand at a 45° angle downward to the side, make a “patting” motion.



3.4.5.6 Change of Pushback Direction



Touch nose with finger with arm at a 90° angle to the shoulder, extend arm to point in the direction that aircraft needs to be turned to.



3.4.6 Aircraft Movement Hand Signals–Wing Walker to Headset Operator, Tractor Driver, Marshaller, Flight Crew (as applicable)

3.4.6.1 Clear to Move Aircraft



Raise right arm fully extended above head with wand held straight and left arm and wand at a 45° angle downward to the side.



3.4.6.2 Stop Movement of Aircraft



Fully extend arms and wands horizontally 90° at shoulder level; raise arms and wands to cross above head.



3.4.6.3 Hold Movement of Aircraft



Fully extend arms and wands downwards at a 45° angle to the sides. Hold this position until it is clear for the aircraft to move.



3.4.7 Marshalling Hand Signals for Aircraft

3.4.7.1 Identify Gate/Stand



Raise fully extended arms forward at shoulder level; raise straight above head with wands pointing up, move hands forward and backward to keep from blending into background.



3.4.7.2 Continue to Taxi Straight Ahead



Holding arms extended to the side; bend arms at elbows; move arms and wands up and down from waist to head.



3.4.7.3 Slow Down



Arms held at sides and slightly bent at elbows, move arms downward in a patting gesture, moving wands up and down from waist to knees.



3.4.7.4 Turn Right (from the pilot's point of view)



With left arm and wand extended at a 90° angle to the body, right hand makes the come ahead signal. The rate of signal motion indicates to the pilot the rate of aircraft movement desired.



3.4.7.5 Turn Left (from the pilot's point of view)



With right arm and wand extended at a 90° angle to the body, left hand makes the come ahead signal. The rate of signal motion indicates to the pilot the rate of aircraft movement desired.



3.4.7.6 Stop



Fully extend arms and wands horizontally 90° at shoulder level; raise arms and wands to cross above head.



3.4.7.7 Hold Position/Stand-by



Fully extend arms and wands downwards at a 45° angle to the sides. Hold the position until the aircraft is clear for the next maneuver.



3.4.7.8 Proceed to Next marshaller or as Directed by Tower/Ground Control



Point both arms upward, move and extend arms outward to side of body and point with wands to direction of next marshaller or taxi area.



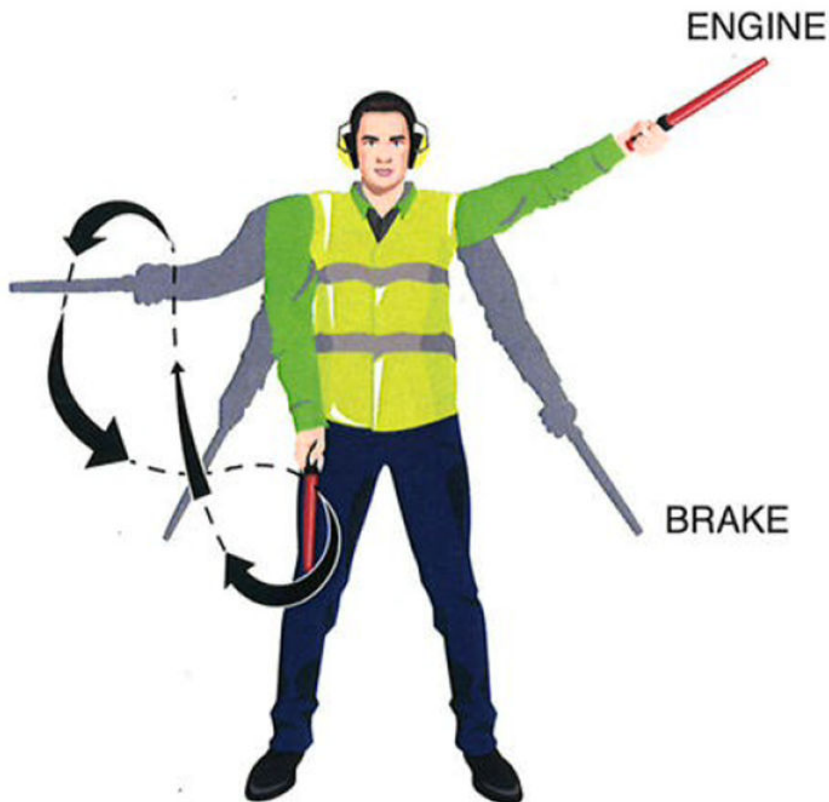
3.4.7.9 Dispatch Aircraft



Perform a standard military salute with right hand and/or wand to dispatch the aircraft. Maintain eye contact with the flight crew until the aircraft has begun to taxi.



3.4.7.10 Fire



Holding right arm straight, move right hand in an exaggerated figure eight (8), or a fanning-type motion, from the shoulder to the knee, while at the same time pointing with the left-hand wand to the area of the fire.

At night use same process with wands.



3.4.7.11 Set Brakes



Raise right hand just above shoulder height with open palm facing forward. Ensuring eye contact with flight crew, close hand into a fist. DO NOT move until receipt of thumbs up acknowledgment from flight crew.



3.4.7.12 Release Brakes



Raise hand just above shoulder height with hand closed in a fist. Ensuring eye contact with flight crew, open palm facing forward. **DO NOT** move until receipt of thumbs up acknowledgment from flight crew.



3.4.7.13 Chocks Inserted



With arms and wands fully extended above head, move wands inward in a “jabbing” motion until wands touch.
Ensure acknowledgement is received from flight crew.



3.4.7.14 Chocks Removed



With arms and wands fully extended above head, move wands outward in a “jabbing” motion.
DO NOT remove chocks until authorized to do so by flight crew.



3.4.7.15 Start Engines



Raise right arm to head level with wand pointing up and start a circular motion with hand; at the same time, with the left arm raised above head level, point to engine to be started.



3.4.7.16 Emergency Engine Shut Down/Cut engines



Extend right arm with wand forward of body at shoulder level, move hand and wand to top of left shoulder and draw wand to top of right shoulder in a slicing motion across throat. Hold left arm above head with closed fist.



3.4.8 Technical/Servicing Hand Signals–Ground Staff to Flight Crew

3.4.8.1 Connect Towbar



Bring arms above the head and grasp forearm with opposite hand.



3.4.8.2 Air Up



Wave arms up and down from thigh to waist with palms up.

Meaning: Supply pressurised air for engine start



3.4.8.3 Connect/Disconnect Ground Power



To connect ground power:

Hold arms fully extended above head; open left hand horizontally and move finger tips of right hand up to touch the open palm of left hand (forming a "T"). At night, illuminated wands can also be used to form the "T" above the head.



To disconnect ground power:

Hold arms fully extended above head with finger tips of right hand touching the open horizontal palm of the left hand (forming a "T"); lower right hand away from the left. **DO NOT** disconnect power until authorized by the flight crew. At night, illuminated wands can also be used to open the "T" above the head.



3.4.8.4 Affirmative/All Clear



Raise right arm to head level with wand pointing up or display right hand with thumbs up; left arm remains at side by knee.



3.4.8.5 Negative



Hold right arm straight out at 90° from shoulder and point wand down to ground or display right hand with thumbs down; left hand remains at side by knee.



3.4.8.6 Interphone



Extend both arms at 90° from body and move hands to cup both ears.



3.4.8.7 Do not Touch Controls



Raise right hand above head level and close fist or hold wand in horizontal position; left arm remains at side by knee.



3.4.8.8 Open/Close Stairs



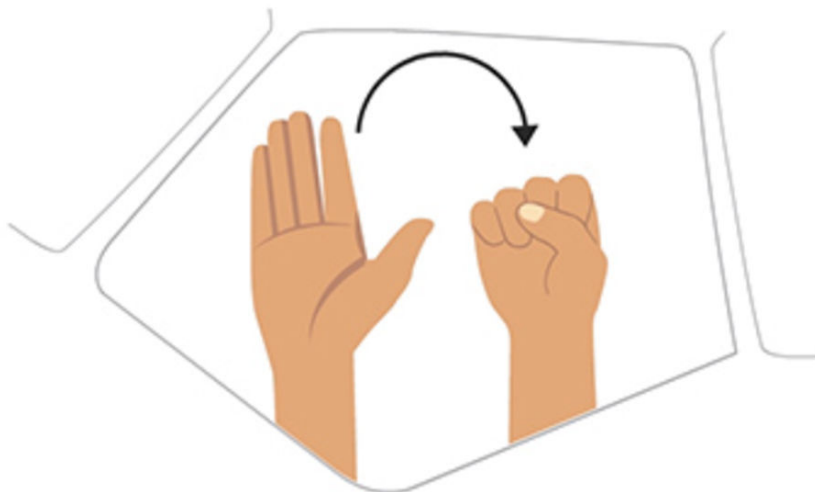
With right arm at side and left arm raised above head at a 45° angle, move right arm in sweeping motion towards top of left shoulder.

Note: This signal is intended mainly for aircraft with a set of integral stairs at the front.



3.4.9 Technical/Servicing Hand Signals-Flight Crew to Ground Staff

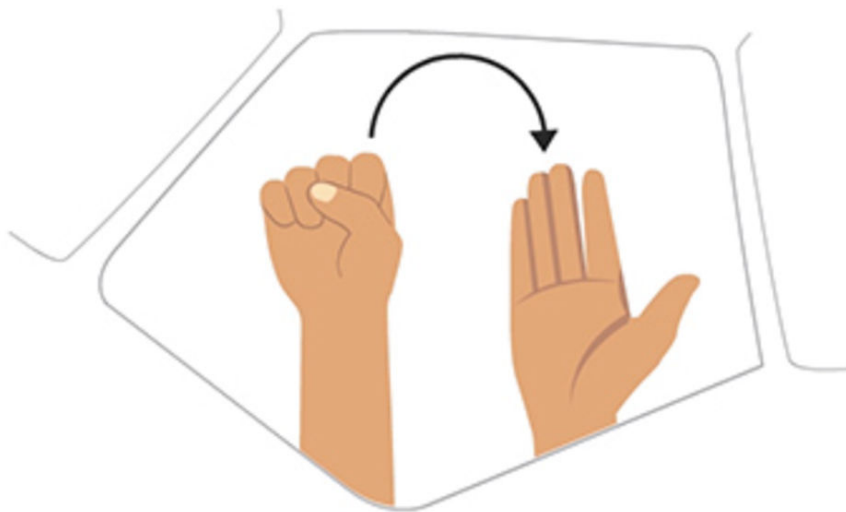
3.4.9.1 Brakes Engaged



Raised arm and hand with palm facing forward and fingers extended in front of face, close hand into a fist.



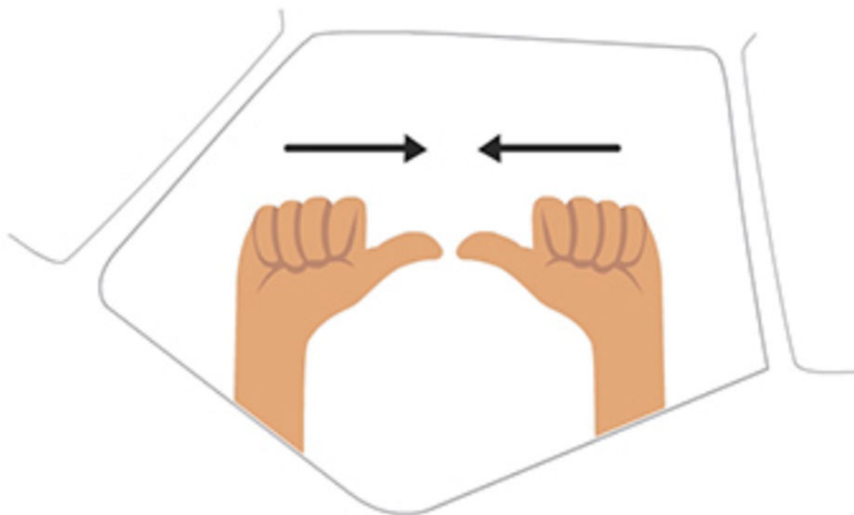
3.4.9.2 Brakes Released



Raised arm with fist clenched in front of face; extend fingers to open palm facing forward.

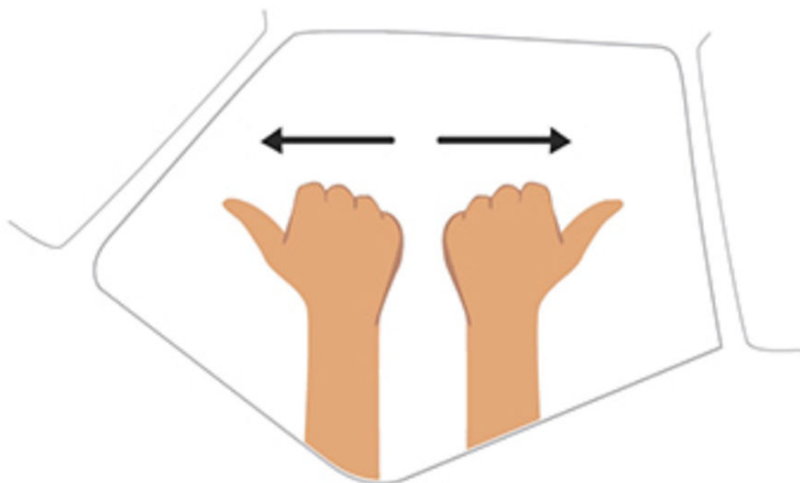


3.4.9.3 Insert Wheel Chocks



Hands held in front of face, palms facing forward with fingers closed and thumbs extended; move hand inward.

3.4.9.4 Remove Wheel Chocks





Hands held in front of face, palms facing backward with fingers closed and thumbs extended; move hands outward.

3.4.9.5 Ready to Start Engine(s)



One hand raised with the appropriate number of fingers outstretched to indicate the number of the engine to be started.



3.4.9.6 All clear



One hand raised with closed fingers and thumb extended. Acknowledgement of all ground actions.

3.5 Toilet Servicing

3.5.1 Introduction

The complete procedure for servicing the aircraft toilet waste tank consists of the following 3 steps:

- a. Draining of the waste tank(s);
- b. Flushing of the waste tank(s);
- c. Adding an amount of pre-charge and/or a concentrated deodorant pre-charge product—as applicable.

Caution:

1. Toilet fluids are corrosive.
2. Prior to servicing, inspect the toilet servicing panel on the aircraft for signs of leakage.
3. If any horizontal blue streaks are observed, the blue streak must be cleaned prior to servicing.
4. After cleaning, look again for signs of leakage.
5. Blue ice build-up in higher altitudes may influence airworthiness. In case of a possible leak, immediately inform the airline representative, ground engineer, or advise the flight crew.



3.5.2 Hygiene Precautions

- a. Wear heavy rubber gloves, full face protection and protective clothing against harmful wastes when performing toilet servicing.
- b. Do not park the toilet service unit in the same area as the water service unit nor at the water filling point.
- c. *The distance between Toilet/Lavatory servicing vehicles and Potable Water servicing vehicles shall always be at least 30 m.*

CAUTION! Once an agent has performed toilet servicing on an aircraft, the same agent cannot perform water servicing during the same task.

3.5.3 Toilet Servicing Procedure

3.5.3.1 General

Each aircraft type has specific requirements for toilet servicing and the amount of pre-charge and/or concentrated deodorant pre-charge product.

- a. Prior to opening a toilet service panel, check for stains around the panel.
- b. While opening the service panel, stay clear and watch for signs of leakage.
- c. Stay clear of the drain fitting cap while opening, and watch for signs of leakage.
- d. Make sure the drain hose Y-fitting coupling is connected correctly, before a drain valve handle is pulled.
- e. Empty the waste tank(s).
- f. Flush the waste tank(s).

Note: Flush the waste tanks twice

- g. Pre-charge the tank(s) with the correct quantity of water and disinfectant—as applicable.
- h. Fill the waste tank(s) with the correct amount of water and concentrated deodorant pre-charge packets or pre-mixed fluid as applicable. For aircraft equipped with a conventional toilet system, fill the waste tank(s) with the correct amount of water and pre-charge, or concentrated deodorant pre-charge.
- i. After servicing ensure that there are no leaks at the drain fitting cap and the end of the drain hose Y-fitting coupling.
- j. Close the nozzle tightly in order to prevent the accumulation of ice during flight and wipe off residual water and disinfectant.
- k. Check for possible leakage.
- l. After servicing close and latch the fitting caps and service panel door.

Note:

- 1. Inform aircraft maintenance or flight crew, if:
 - i. Fluid leakage is observed.
 - ii. The drain valve will not open or the waste tank cannot be drained.
- 2. Report any spillage of waste to the supervisor.

Additional instructions for Aircraft specifics to be found in Chapter 9, Annex C – Aircraft specifics.

3.5.3.2 Draining

- a. Drain the aircraft waste system into the waste tank of a Toilet Service Unit.



- b. Observe the waste drain hose during draining to confirm that the waste tank is completely emptied. The hose will also vibrate for a few seconds as the contents of the waste tank pass into the waste tank of a Toilet Service Unit.

Note: Drain the waste tanks one at a time for optimal results.

3.5.3.3 Servicing During Freezing Conditions

Take the following measures to prevent freezing of the fluid in the aircraft toilet tanks and lines during freezing conditions:

- a. Drain the waste tanks if the aircraft is parked in the open for several hours without electrical power supply and the temperature is, or is expected to be, below the freezing point. *Refer to Chapter 9, Annex C - Aircraft Specifics.*
- b. Fill the aircraft toilet system only after electrical power supply has been restored, and as close to flight departure time as possible.
- c. Ensure the fill line is fully drained before closing the cap to prevent freezing of fluid in the fill line.

CAUTION! Do not attempt to remove the frozen substance in the fill lines or connections or on the service panels. Contact maintenance immediately.

3.5.3.4 Inoperative Toilet Systems

If defects of the toilet system prevent regular servicing, ask qualified technical staff—if available—for assistance (e.g. removal of panels, etc.).

If no technical staff is available, inform the Flight Crew or an airline representative.

3.6 Potable Water Servicing

3.6.1 General

- a. The water used for uplift shall fully meet the hygiene and testing requirements detailed in AHM 440 7.5; 8.11.1 and 9.1 and those detailed in section 3.6.3.
- b. Equipment used shall fully comply with the specifications detailed in AHM 970 for water servicing vehicles, or AHM 981 for towed service carts.
- c. All equipment shall be serviced according to the manufacturer's recommendations. Records shall be kept of all servicing, cleaning, disinfection and maintenance tasks performed.
- d. All equipment and facilities used shall be maintained to the highest possible hygienic standard.
- e. Only uplift water to aircraft if authorized or requested. Any deviation shall be reported to the supervisor or airline representative.
- f. Replenish the aircraft tank.

Note: refer to AHM440 – Potable Water.

- g. Airline representatives shall be informed of any issue that may affect (or may have affected) the standard of water uplifted to their aircraft, including contamination incidents, maintenance findings and test failures.



3.6.2 Potable Water Servicing Procedures

3.6.2.1 Filling Aircraft Water Tanks

- a. Before connecting the aircraft filling hose to the aircraft, flush the hose.

Note: The hose needs to be flushed in a basket or waste container before connecting the hose to the aircraft filling port. (Not required on consecutive servicing).

- b. Do not place hose ends on the ground
- c. On immediate turnaround sequence, water service shall always be performed before toilet service.
- d. The aircraft filling port shall be cleaned/wiped dry with antiseptic wipes before the hose is connected to the aircraft adaptor.

Note: Cleaning may be carried out either by wiping with a towelette or equivalent soaked with a disinfecting solution or wiping with a disinfectant pre-soaked "towelettes". The spray-and-wipe procedure is accepted if sprayed directly on the towelette. However they should not spray directly into the aircraft coupling.

- e. Fill the water tank(s) to the required level.
- f. Each aircraft type has specific requirements for filling and draining.

Note: Refer to Chapter 9, Annex C – Aircraft Specifics.

- g. When not in use, hose-ends shall be:
 1. Kept capped or;
 2. Attached to a dummy connector or;
 3. Kept in a container filled with disinfectant solution.

3.6.2.2 Water Servicing During Freezing Conditions

The following actions shall be followed to prevent freezing of the water in the aircraft water tanks and lines during freezing conditions:

- a. Drain the aircraft water tanks if instructed by the operating airline, as per the operating airline procedures. Dispose of water in accordance with airport operator requirements.
- b. Ensure the fill line is fully drained before closing the cap to prevent freezing of fluid inside.

Caution: Keep aircraft cargo doors closed to prevent water lines from freezing when the cargo compartments are not being loaded or unloaded. Do not attempt to remove the frozen substance in the fill lines or connections or on the service panels. Contact maintenance immediately.

3.6.3 Potable Water Hygiene Requirements

3.6.3.1 Fill Points and Water Cabinets

- a. Daily, weekly and monthly tasks shall be conducted and recorded as per AHM 440 7.5 and 9.1.
- b. Hoses, connectors and water quality shall meet AHM 440 specifications and hygiene requirements.



- c. The water shall only be used as potable water for aircraft.
- d. The area around the fill point/water cabinet shall be kept clean and free from waste.
- e. When not in use, all fill point hoses shall be secured and locked in a metal pest proof enclosure. Fill points without attached hoses shall be capped.
- f. When not in use, hose-ends shall be:
 - 1. Kept capped or;
 - 2. Attached to a dummy connector or;
 - 3. Kept in a container filled with disinfectant solution.
- g. Do not place hose ends on the ground

3.6.3.2 Water Service Vehicles & Towed Service Carts

The water service vehicles and towed service carts shall:

- a. Daily, weekly and monthly tasks shall be conducted and recorded as per AHM 440 8.11.1.
- b. Only be filled at a designated potable water fill point using approved hoses and couplings.
- c. Only be used to fill aircraft potable water tanks.
- d. Be parked in a clean and secure area, away from toilet servicing vehicles.
- e. *The distance between Toilet/Lavatory servicing vehicles and Potable Water servicing vehicles shall always be at least 30 m.*
- f. Not be positioned close to toilet servicing units at any time, particularly when toilet servicing or toilet waste disposal is taking place.

Note 1: The water service vehicles and towed service carts should be parked in a shaded area during hot sunny weather, particularly if filled.

Note 2: The tank shall be drained completely at least once per calendar day.

3.6.3.3 Water Servicing Personnel

The water servicing personnel shall:

- a. Be dressed in clean working clothes in accordance with the World Health Organization (WHO) Drinking Water Quality Standard and shall be assigned to the drinking water servicing.
- b. For hygiene reasons, if operators conduct both toilet and water servicing functions during the course of their shift, the operators must service potable water before servicing aircraft toilets.

Caution: Should the operator be reassigned to perform water servicing after he/she has performed toilet servicing, the operator shall shower and change into clean external clothes/overalls and PPE.
- c. The operator should wear single use or disposable gloves during the drinking water servicing. See: AHM 440 10.9.

3.6.3.4 Water Treatment Chemicals (Sanitiser)

Water uplifted to aircraft potable water tanks shall contain a low concentration of disinfectant chemical (sanitiser), of a type suitable for potable water. The most common sanitisers are based on chlorine or hydrogen peroxide. Refer to AHM 440 for details.



3.6.3.5 Water Service Vehicle Cleaning and Disinfection

Water service vehicles, towed service cart tanks and hoses shall be checked every day, disinfected at least once per week and 'deep' cleaned at least once per month. Refer to AHM 440 for details.

3.6.3.6 Fill Point and Water Cabinet Cleaning and Disinfection

- a. Fill points, hose cabinets and their surroundings shall be checked daily for general cleanliness.
- b. Fill points and hoses shall be disinfected at least once a week. Refer to AHM 440 for details.

3.7 Aircraft Cleaning and Disinfection

Refer to Appendix I18 Cabin Presentation & Cleaning Guidelines in the TAGO Portal.

3.8 Safety During Aircraft De-icing/Anti-icing Operations

3.8.1 General

No aircraft shall attempt takeoff when frozen or freezing contamination is present on or adhering to the wings, propellers, control surfaces or other critical surfaces. This is known as the ICAO 'Clean Aircraft Concept'.

Compliance with this requirement can be achieved by appropriate use of anti-icing or de-icing procedures, or where necessary a combination of both.

Detailed procedures and requirements for de-icing and anti-icing can be found in SAE AS 6285 "Aircraft Ground De-icing/Anti-Icing Processes" and other relevant SAE documents. This section provides general guidelines for safe ground de-icing/anti-icing operations.

The term de-icing will be used throughout this section, but should also be considered to refer to the anti-icing process.

De-icing operations must be performed with extreme caution to prevent injury to personnel and damage to aircraft and equipment. De-icing is not permitted during the fueling process.

Note: For specific instructions see Chapter 11, Annex E - De-icing and anti-icing.

3.8.2 Personnel Safety

The safety factors given below are designed to ensure that safety is not compromised for personnel performing aircraft de-icing tasks:

- a. Appropriate PPE should be checked for serviceability and worn by all personnel engaged in de-icing operations.
- b. Cones should be removed as necessary to allow access to the aircraft surfaces. Replace the cones on completion of the de-icing operation, if the aircraft is not departing.
- c. To prevent injury, caution must be taken when filling de-icing vehicles with hot fluid.
 1. When handling de-icing fluids, personnel should understand and follow the precautions contained in the fluid manufacturer's Safety Data Sheets.
 2. Before de-icing operations start, de-icing should be coordinated between the de-icing and ground handling personnel.



3. De-icing/anti-icing fluids may be very hot; 60°C/140°F or even warmer. To prevent injuries, ground personnel, passengers and flight crew shall be prevented from walking near an aircraft that is being de-iced.
4. Slippery conditions can exist on the ground and on the equipment surfaces during and following the de-icing processes. Caution should be exercised, particularly in low humidity or non-precipitating weather conditions, due to increased slipperiness following the use of glycol that is not diluted by the weather element.
5. When de-icing on a stand, all ramp equipment, including steps, should be clear of the area to be sprayed to avoid contamination by fluid.
6. Care should be taken to prevent the transfer of fluid by foot onto GSE (e.g., steps, jet bridges), interiors of aircraft and aircraft cargo holds.

Refer to 3.3.2 for detailed safety precautions for ramp operations in winter conditions.

3.8.3 Open Basket Operations

The following minimum precautions should be taken *when de-icing from an open basket*:

- a. Ensure that the fall restraint device is securely anchored and the safety harness is always worn when de-icing from an open basket.
- b. Ensure that the basket door or safety chain is securely latched.
- c. Caution should be taken to avoid exposure to a running Auxiliary Power Unit (APU).

3.8.4 Closed Basket Operations

The following minimum precautions should be taken:

- a. Ensure the seat belt is always worn.
- b. Ensure the windows of the cabin are clean. Check wiper(s) for condition and check window washer fluid level.
- c. Ensure the cabin access door is securely closed.
- d. Ensure there are no obstructions to the cabin heater/ventilation system



4 Aircraft Turn-Around

4.1 Aircraft Arrival

4.1.1 Actions Prior to Aircraft Arrival

- a. Ensure all persons involved with the aircraft arrival and post-arrival handling/servicing are briefed on safety and operational requirements relevant to their functions, e.g., aircraft defects that may affect ground handling operations, specific unloading, equipment positioning and operating requirements.
- b. Conduct a foreign object debris (FOD) check of the entire stand, removing all debris just prior to aircraft arrival.
- c. Make sure the stand surface condition is sufficiently free of ice, snow, etc. to ensure safe aircraft movement.
- d. Make sure all required ground support equipment (GSE), chocks and safety cones are available and serviceable, and are positioned well clear of the aircraft path, outside the equipment restraint area (ERA).
- e. Make sure the aircraft guidance docking system is activated, where applicable, or a marshaller is in position. Where an aircraft docking guidance system is in use, ensure it is operative and only activated when it is confirmed that conditions are safe to accept the aircraft. See 4.1.2(b) for Wing Walker positioning for Aircraft Arrival.
- f. Make sure required ground personnel are present including any additional personnel (i.e., wing walker), if applicable. See GOM 4.1.2 (b) for wing walker positioning during aircraft arrival
- g. All personnel shall remain well clear of the arriving aircraft and its maneuvering path, outside the ERA, other than those whose functions require them to be inside the ERA during aircraft arrival, e.g., marshaller(s) and/or wing walker(s). See GOM 4.1.3 for requirements/clearance for personnel to approach the aircraft

Note: Prior to the arrival of the aircraft, the following equipment must be serviceable and available on the stand:

- a. Chocks (as required by aircraft type)
- b. Safety Cones (as required by aircraft type)
- c. Ground power (as required)
- d. Preconditioned air (as required)
- e. Headset interphone (if applicable)
- f. Day or night wands (whichever is applicable)

4.1.2 Actions during Aircraft Arrival

- a. For a standard arrival at a stand without an automated guide-in system or at an open ramp:
 1. As the aircraft approaches the stand area, the marshaller points to the guide-in line on the ramp to be followed by the aircraft by standing at the top of the guide-in line and giving the "Identify Gate/Stand" signal, (see 3.4.7.1). Wing walkers, if required, will be positioned approximately 1 m (3 ft) outside the path of the wingtips. Wingwalkers shall maintain visual contact with the marshaller until the aircraft has



come to a complete stop. See diagram in GOM 4.1.2 for positioning of wing walker during aircraft arrival on stand.

2. While the aircraft taxis along the guide-in line, the marshaller gives the "Continue to Taxi Straight Ahead" signal with marshalling wands, (see 3.4.7.2).
 3. The nose wheel should follow the guide-in line all the way to the appropriate stop point. Use the "Turn Left (from the flight crew's point of view)" or "Turn Right (from the flight crew's point of view)" signals to correct the track of the aircraft as required, (see 3.4.7.4 and 3.4.7.5).
 4. If at any time during the aircraft movement the marshaller is unsure or identifies an imminent danger, signal the aircraft to STOP, (see 3.4.7.6).
 5. If at any time during the aircraft movement, the wingwalkers are unsure or identify an imminent danger, signal the marshaller with the "STOP" signal, (see 3.4.7.6).
 6. As the aircraft approaches the stop position, use the "Slow Down" signal if required (see 3.4.7.3). As the nose wheel reaches the stop point slowly cross the wands in the "Stop" signal (see 3.4.7.6).
- b. For a standard arrival at a stand with an automated guide-in system:
1. The ground personnel responsible for aircraft arrival operations shall verify that the correct aircraft has been selected for the arrival and the equipment is operational.
 2. The agent responsible for staffing the emergency stop button shall be positioned with an unobstructed view of the arriving aircraft and within reach of the system to stop the aircraft in the event it is needed. It is essential to maintain a continuous unobstructed view between the agent responsible for staffing the emergency stop button and the ground personnel ensuring clearance (e.g. wing walker).
 3. If the emergency stop is activated, and only after verification by the ground personnel operating the guidance system that the risk is no longer there, the aircraft docking guidance system can be reactivated. If not standard aircraft arrival procedures shall be used.
 4. Wing walkers, if required, will be positioned approximately 1 m (3 ft) outside the path of the wingtips. Wingwalkers shall maintain visual contact with the agent responsible for the aircraft arrival operations until the aircraft has come to a complete stop. See diagram in Figure 4.1.2 for positioning of wing walker during aircraft arrival on stand.

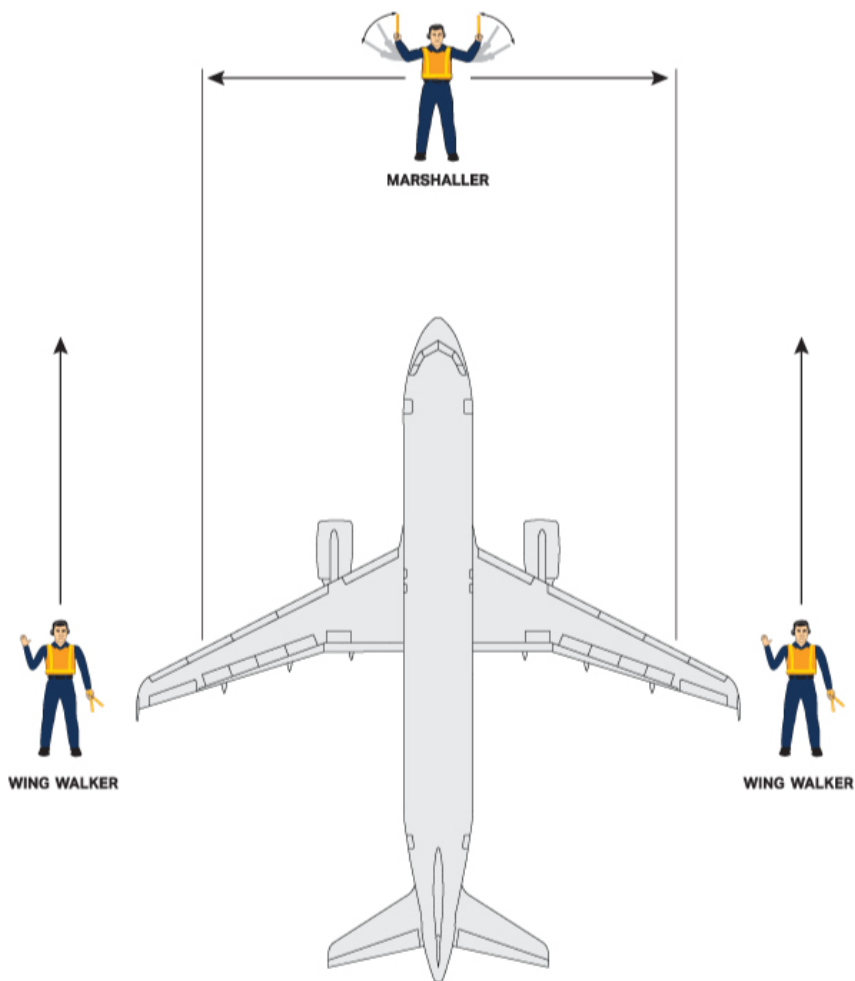


Figure 4.1.2 - Wing Walker Positioning for Aircraft Arrival

4.1.3 Actions After Aircraft Arrival

- a. Upon aircraft stopping:
 1. Position wheel chocks at the nose landing gear (NLG) wheels as per *GOM 4.2.1*.
 2. Position and connect the ground power unit (GPU) or fixed power unit (FPU), if required, before engine shut down in accordance with *GOM 4.1.3.1 and 4.1.4.1*.
- b. After the engines have been shut down, are spooling down, and anti-collision lights have been switched off:



1. The person responsible for arrival operations shall give clearance for placement of the remaining wheel chocks and safety cones.
2. Remaining wheel chocks shall be placed in accordance with *GOM 4.2.1* and verbal/visual confirmation shall be given to the flight crew.
3. If applicable, the passenger boarding bridge (PBB), shall be positioned onto the aircraft after an inspection has been carried out to confirm there is no damage to the cabin access door and surrounding area.
4. Safety cones shall be placed in accordance with *GOM 4.3.1*. After placement, GSE may enter the ERA to approach the aircraft.

Note 1: Positioning of GSE at its final servicing position shall only take place after inspection of the door/service panel and surrounding area where the GSE shall position and clearance given.

Note 2: Spooling down of an engine can be identified as follows: reduced engine noise, visible fan or propeller speed reduction, lack of exhaust heat or thrust plume.

- c. Before positioning GSE, conduct an arrival walkaround to inspect for damage to the following parts of the aircraft:
 1. All cargo access doors
 2. All access panels and servicing access points
 3. Aircraft fuselage
 4. Aircraft engine cowlings/propellers
 5. All cabin access doors, including service doors.
- d. Give clearance for GSE to position to the aircraft.

Note: If any damage is found, report it immediately to a supervisor and do not approach the aircraft with any GSE in the area where the damage has been found.

Danger: If notified of a brake overheat, do not approach the main gear.

CAUTION! If an aircraft arrives with an unserviceable anti-collision light, do not approach the aircraft until headset communication has been established with the flight crew.

4.1.3.1 Actions After Aircraft Arrival with APU INOP / APU NOT STARTED

Aircraft has pulled on to stand and come to a complete stop. If an engine is still running (the Anti Collision Beacon (ACB) will remain illuminated) with no indication that the engine will be shutting down as per the normal expected shutdown process, visual contact must be made with the captain from a safe distance who will then indicate, via IATA standard hand signals, their requirement for a GPU / FEGP.

The arrival station should have been pre-advised of the requirement for a GPU/ASU due to an APU INOP via the MVMT message if known prior to departure. In the case of an APU failure after departure no message will have been sent. If the APU has failed after landing, either engine may have been shut down for Single Engine Taxi In (SETI).

- a. **B737-800/MAX8/700.** If the APU is known to be INOP, the aircraft will normally taxi onto stand on a single engine after shutting down the right-hand engine (number 2) if the taxi time permits before turning onto stand.



1. The ACB will remain on until all engines have been shut down.
2. Unless the left-hand engine (number 1) has been shut down during SETI (see Caution below) the right-hand engine (engine number 2) will be shut down to allow for the connection of the GPU on the forward right-hand side of the aircraft.
3. If possible (see Caution below), wait until the right-hand engine (number 2) has been shut down and is fully spooled down before approaching the aircraft from approximately a 2 o'clock position to allow for safe GSE / mobile units movement with a GPU / FEGP.

CAUTION! If the left-hand engine (number 1) has been shut down for SETI, the right-hand engine (number 2) will remain running while the FEGP is connected. This caution also relates to when allocated an airbridge with attached FEGP as the airbridge must be connected first before the FEGP can be connected.

REMEMBER: STOP, LOOK, LISTEN

4. Connect the GPU / FEGP plug into the socket on the right-hand side of the aircraft.
 5. Once connected and ground power has been started with the indication lights illuminated on the aircraft GPU panel, retreat following the same path to the safe area in front of the aircraft, then maintain visual contact with the flight crew. Inform the crew using the standard GPU connected hand signals from the front of the aircraft that the GPU / FEGP is connected.
 6. Once power is confirmed as working in the aircraft, the flight crew will shut down the remaining engine. Look out for further hand signals as another GPU might be required if the GPU/FEGP is not working.
 7. After the second engine has been shut down, and spooled down, the ACB will be switched off. **Do NOT** approach the aircraft until these actions has been completed.
 8. Once the ACBs have been switched off and the engines have fully spooled down, its only then deemed safe to approach the aircraft as normal following approval from the ramp supervisor.
- b. **B787-8/9.** The B787 will normally taxi onto stand using both engines if the APU is INOP.
1. The ACB will remain on until all engines have been shut down.
 2. Wait until the left-hand engine (number 1) has been shut down and has fully spooled down before approaching the aircraft from approximately a 10 o'clock position to allow for safe GSE / mobile units movement towards the aircraft with dual cable GPU / FEGP.

REMEMBER: STOP, LOOK, LISTEN

3. Connect the two cables of the GPU / FEGP plugs into the sockets located forward left-hand side of the aircraft.
4. Once connected and ground power has been started with the indication lights illuminated on the aircraft GPU panel, retreat following the same path to the safe area in front of the aircraft, then maintain visual contact with the flight crew. Inform the crew using the standard GPU connected hand signals from the front of the aircraft that the GPU / FEGP is connected.
5. Once power is confirmed as working in the aircraft, the flight crew will shut down the right-hand engine (number 2). Look out for further hand signals as another GPU might be required if the GPU/FEGP is not working.
6. After the right-hand engine (number 2) has been shut down, and spooled down, the ACB will be switched off. **Do NOT** approach the aircraft until these actions has been completed.



7. Once the ACBs have been switched off and the engines have fully spooled down, its only then deemed safe to approach the aircraft as normal following approval from the ramp supervisor.

4.1.4 Ground Support Equipment for Arriving Aircraft

4.1.4.1 Ground Power Unit (GPU) and Fixed Power Unit

- a. It is permitted to pre-position a Ground Power Unit (GPU) inside the ERA provided there is a marked GPU parking position.
- b. Position the GPU on the appropriate side of the aircraft as shown in Figure 4.1.4.1 (example of GPU positioning).
- c. Set parking brake/chock for the GPU.
- d. Ensure the GPU, while in operation, is positioned a minimum of 3 m (10 ft) from any fueling vehicles and aircraft fuel vent exits.
- e. Fixed Power Units (FPU) and leads shall be fully stowed/retracted during aircraft arrival as per the system design.
- f. Only connect GPU(s)/FPU(s) if required/requested by the operating airline.
- g. Before connecting to the aircraft, check the aircraft receptacles, lead(s) and plug(s) are clean and undamaged with no sign of excessive wear or electrical burning to the contacts.
- h. Do not energise the GPU/FPU power output until the unit is connected to the aircraft.
- i. Connect the external power sources according to the operating airline manual, including number of supplies, required output, sockets to be used, etc. Advise the flight crew of any discrepancies.
- j. Attach the power lead lanyards to the aircraft attachment point (where fitted).
- k. Request approval from flight deck before turning off and disconnecting the GPU/FPU cables.
- l. Turn off the GPU/FPU power output before disconnecting the cable(s).
- m. Always disconnect and stow the GPU power cables BEFORE connecting a tow tractor to the GPU.

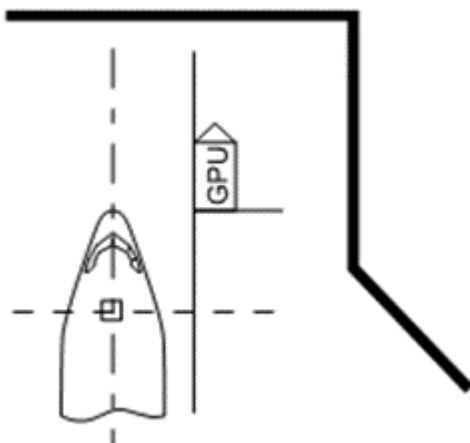




Figure 4.1.4.1 - Sample GPU positioning

Additional instructions for Aircraft specific to be found in Chapter 9, Annex C - Aircraft specifics.

4.1.4.2 Cooling/Heating Units and Preconditioned Air

Danger: Before supplying air by external source *notify flight crew / authorised maintenance personnel as the aircraft would need to be configured for Pre-Conditioned Air intake (PACKS off, outflow valve(s) open), otherwise damage to aircraft equipment will occur.*

Note: *On the B737 it is not required to leave a (Cabin Entry) Door open when the aircraft is configured to Outflow Valve(s) configured in open position.*

As part of the fuel conservation programs of most airlines, pre-conditioned air is required at all airports that provide on-stand pre-conditioned air.

Refer to chapter 9, Annex C - Aircraft Specific for the specific aircraft type for the location of the PCA access panel on the specific aircraft type.

Note: Make sure there is no blockage of the PCA hose.

- a. To connect PCA:
 1. Open access panel.
 2. Connect ground pre-conditioned air unit to aircraft.
 3. Start up ground pre-conditioned air unit.
 4. On the ground pre-conditioned air unit, select the desired cooling or heating settings (air temperature and flow rate) or position the selector in the appropriate position.
- b. To disconnect PCA:
 1. Shut down ground pre-conditioned air unit.
 2. Disconnect ground pre-conditioned air unit from aircraft.
 3. Close the access panel.
 4. Retract the PCA hose to the fully stowed and secured position

4.2 Aircraft Chocking

4.2.1 Wheel Chock Placement

- a. Make sure the required number of serviceable chocks are available considering the aircraft type and/or weather conditions.
- b. Chocks must be kept clear of the guide-in line and in a safe area away from arriving aircraft and engine danger areas.
- c. Wait for aircraft to come to a complete stop before approaching the aircraft to position chocks.
- d. One designated ground personnel will immediately places chocks forward and aft of the nose gear, if aircraft type allows and according to options listed in, 4.2.2. This is the first action to take place around the arriving aircraft and shall be completed before any other activity takes place.
- e. Before approaching the main gear, wait until:



1. Engines have been shut down and are spooling down (or propellers completely stopped).
 2. Anti-collision lights are switched off.
 3. Clearance to approach the aircraft has been given by the personnel responsible for the arrival operation.
- f. Walk towards the main gear in a path parallel to the fuselage, avoiding engine intake areas.
- g. Place chocks forward and aft of the main gear in accordance with the applicable normal operation chock placement diagram. See 4.2.2.

Note: Spooling down of an engine can be identified as follows: reduced engine noise, visible fan or propeller speed reduction, lack of exhaust heat or thrust plume.

- h. Notify the flight crew that the chocks are inserted.

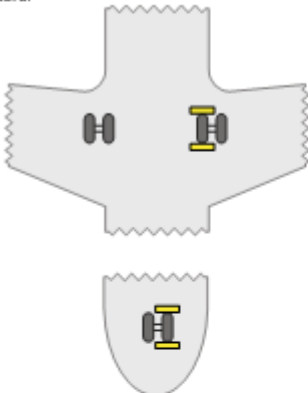
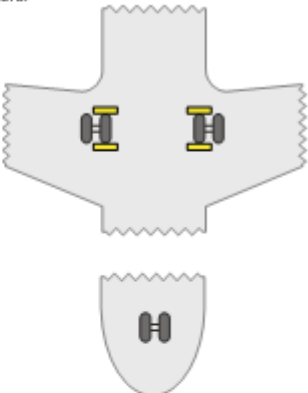
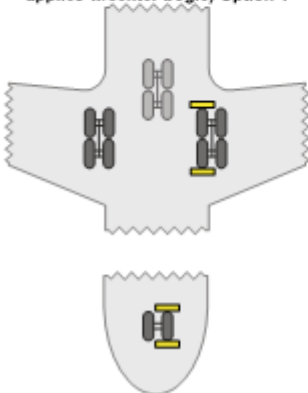
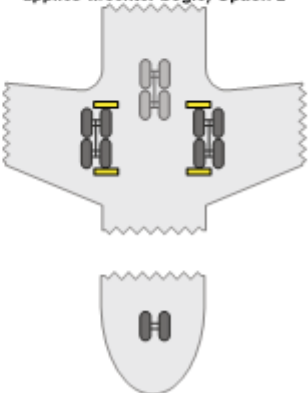
Note: When the aircraft is parked on a slope, the chock on the down-slope side should just touch the wheels and the chock on the up-slope should not touch the wheels.

Danger:

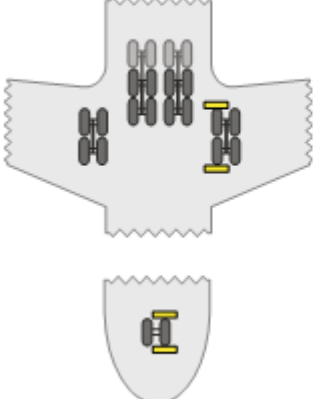
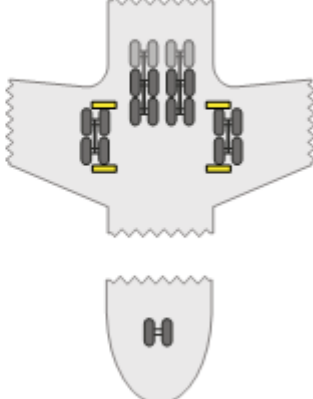
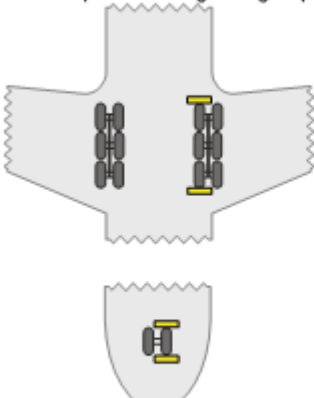
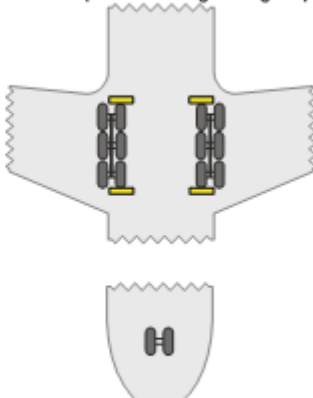
For propeller aircraft with a nose-engine, the nose gear cannot be chocked until the engine has been shut down and the propellers have come to a complete stop.



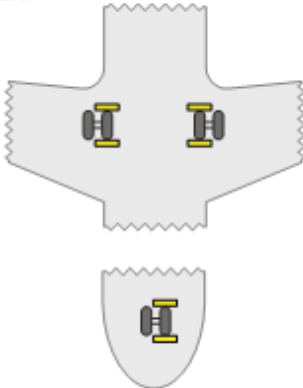
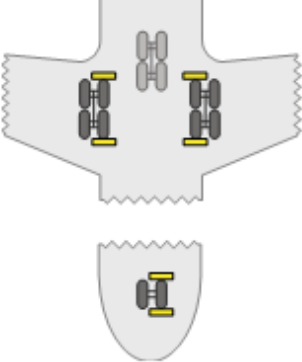
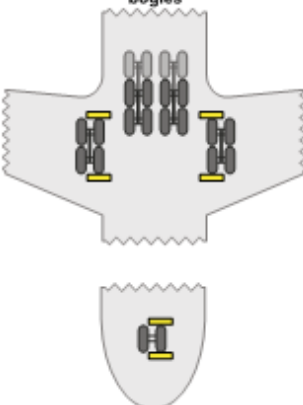
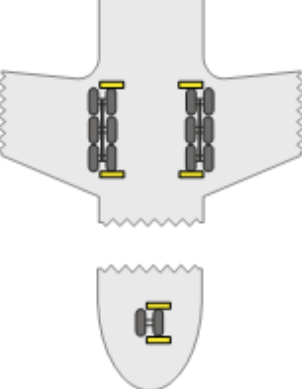
4.2.2 Chock Placement Diagrams

Normal Operation	
Aircraft with single axle main-gear bogie Option 1 Note: No nose gear chocks on aircraft with spray deflectors.  Note: Inside or outside main gear chocks are acceptable	Aircraft with single axle main-gear bogie Option 2 Note: No nose gear chocks on aircraft with spray deflectors.  Note: Inside or outside main gear chocks are acceptable
Aircraft with double axle main-gear bogie (also applies w/center bogie) Option 1  Note: Inside or outside main gear chocks are acceptable	Aircraft with double axle main-gear bogie (also applies w/center bogie) Option 2  Note: Inside or outside main gear chocks are acceptable



Normal Operation	
Aircraft with triple axle center and body-gear bogies Option 1  Note: Inside or outside main gear chocks are acceptable	Aircraft with triple axle center and body-gear bogies Option 2  Note: Inside or outside main gear chocks are acceptable
Aircraft with triple axle main-gear bogie Option 1  Note: Inside or outside main gear chocks are acceptable	Aircraft with triple axle main-gear bogie Option 2  Note: Inside or outside main gear chocks are acceptable



Parking Aircraft Out of Service/Night-Stop/High Winds	
Aircraft with single axle main-gear bogie Note: No nose gear chocks on aircraft with spray deflectors.  Note: Inside or outside main gear chocks are acceptable	Aircraft with double axle main-gear bogie (also applies w/center bogie)  Note: Inside or outside main gear chocks are acceptable
Aircraft with triple axle center and body-gear bogies  Note: Inside or outside main gear chocks are acceptable	Aircraft with triple axle main-gear bogie  Note: Inside or outside main gear chocks are acceptable



Refer to GOM 3.3.4 a. and GOM 4.6.2, Note 2.

4.2.3 Regional Aircraft Chocking

Not applicable to TUIfly Nordic and TUI Airways.

4.3 Aircraft Coning

4.3.1 Safety Cone Placement and Removal

Safety cones are a caution sign for drivers to maintain required safety clearances. Cones protect parts of the aircraft against collision by GSE.

- a. Prior to arrival of the aircraft, make sure there are sufficient serviceable safety cones to protect the aircraft type to be handled.
- b. Approach the aircraft to position cones only when all the following criteria are met:
 1. Aircraft has come to a complete stop
 2. Engines have been shut down and are spooling down
 3. Anti-collision lights are switched off
 4. Aircraft has been chocked

Note: "Spooling down" of an engine can be identified as follows:

1. reduced engine noise,
2. visible fan speed reduction
3. lack of exhaust heat/thrust plume.

- c. Place safety cones on the ground in accordance with the diagrams, see 4.3.2. *Ensure all wingtip cones are placed outboard of the wingtip furthest point, and within a maximum of 1m (3 ft) radius outward from the point of the aircraft being protected. Cones must not be placed in high wind conditions. Refer to Chapter 3.3.5, High Winds Activity Table, for more information.*
- d. Additional safety cones may be needed as per operational requirements (see GOM 4.3.2) or local regulations.
- e. GSE must not approach the aircraft until all safety cones have been placed (not applicable for the PBB or GPU, if required).
- f. All required safety cones shall remain in place until GSE and vehicle activities around the aircraft have ceased prior to departure of the aircraft.

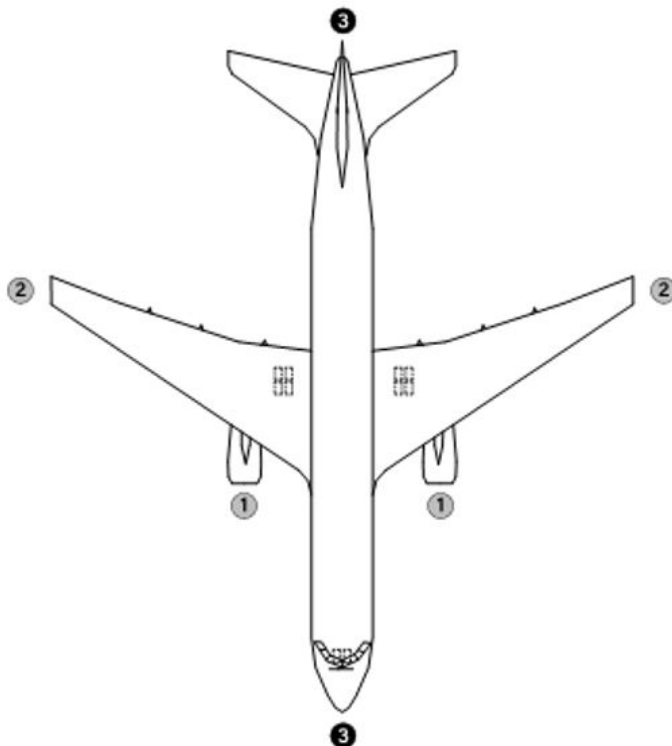
Note:

1. In some situations it may be necessary to re-position cones to allow GSE to be positioned. In such cases, reposition the cones to their original position when the GSE is removed.
2. Cones must not be placed under engines.

- g. Ensure all vehicles have been removed from the ERA, except GSE required for the departure operation, e.g., ASU, GPU/FPU and pushback tractor, as applicable.
- h. Remove the safety cones from around the aircraft.
- i. When not in use, place the safety cones in the designated storage area.



4.3.2 Cone Placement for Wing-Mounted Twin Engine Jet Aircraft



CONE NUMBER	DESCRIPTION
①	Cones max. 1 m (3 ft) in front of engines.
②	Cones outboard of the wingtip furthest point - MAX 1 m (3ft) from wingtips
③	Additional cones to be placed at the applicable end(s) of the aircraft where immediately adjacent to a service road.

TUI Airways and TUIfly Nordic require for the B737 equipped with split scimitar wingtips to use 3 safety cones. Ensure all wingtip cones are placed outboard of the wingtip furthest point and placed a maximum 1 m (3 ft) away in order to protect the wingtips and it is recommended for all other wing-mounted twin engine jet aircraft.



A Passenger Intergrated Guidance System (PIGS) may replace the cones on the passenger (left hand) side of the aircraft.

4.3.3 Cone Placement for Fuselage-Mounted Twin engine Jet Aircraft

Not applicable for TUIfly Nordic and TUI Airways

4.3.4 Cone placement for Wing-Mounted Twin Propeller Aircraft

Not applicable for TUIfly Nordic and TUI Airways.

4.3.5 Cone placement for wing-mounted four engine jet aircraft

Not applicable for TUIfly Nordic and TUI Airways.

4.4 Aircraft Access Doors

4.4.1 General Safety Requirements

This section provides generic precautions and does not constitute training on opening/closing of aircraft access doors.

- a. Ground personnel shall not operate any aircraft access doors unless they have been trained and authorized to do so as documented in AHM11.
- b. Aircraft access door operation shall be performed in accordance with operating airline procedures for the applicable aircraft type and, where applicable, the markings labelled on the door.
- c. Seek assistance from maintenance personnel if any difficulty is experienced during normal door operation.
- d. If damage or irregularity is discovered, immediately report it to the supervisor, aircraft maintenance personnel and if available, flight crew.

CAUTION! Do not operate or leave doors open in winds exceeding those indicated in the manufacturer's limitations.

Note: For door operations during severe weather, refer to GOM 3.3 Adverse Weather Conditions.

4.4.2 Cabin Access Doors

4.4.2.1 General

- a. There may be differences between airlines regarding responsibility for operating cabin access doors. The operating airline determines whether ground personnel or cabin crew are authorized to operate cabin access doors. All ground personnel shall follow these procedures:



Note: Cabin access doors may only be operated by TUI trained employees such as flight crew, cabin crew, maintenance staff and GSP Personnel trained by TUI or trained in accordance with a TUI approved trainings syllabus.

- b. Cabin access doors shall only be operated or left in the open position if there is a GSE or a PBB with platform at its final height positioned at the door or if an appropriate fall prevention device is placed across the door.

Note:

1. An appropriate fall prevention device consists of equipment or material, or a combination of both, that is designed to stop or prevent the fall of a person from an open door (e.g., an industrial safety net, catch platform or safety harness system) see Figure 4.4.2.1.
2. Refer to operating airline instructions for installation procedures. Not applicable for TUI Airline.
3. The cabin door strap installed in aircraft doors is not considered an appropriate fall prevention device.

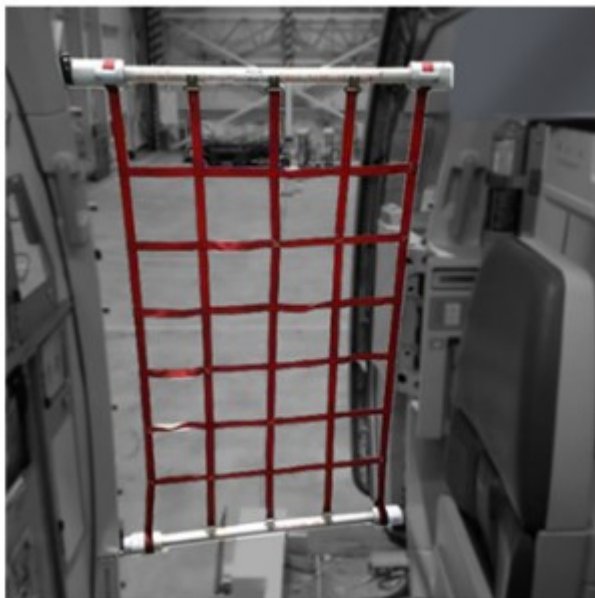


Figure 4.4.2.1—Fall Prevention Device

Danger:

There is a risk of falling while operating cabin access doors

- c. GSE or PBB shall be removed after the cabin access door is closed and acknowledged by cabin crew or by other authorized person.



Danger:

Slide deployments can be fatal. If an armed door begins to open, do not attempt to hold the door from outside, to prevent risk of serious injury or death.

- d. If a cabin access door is found open without a GSE or PBB positioned at the door you must immediately notify a supervisor or the airline representative.
- e. Before allowing passenger/crew embarkation or disembarkation via a cabin access door, ensure the boarding device is properly positioned at the door. If stairs or integral airstairs are to be used, ensure both guard rails are extended, if applicable.

Exception:

Cabin access doors shall only be open without GSE or PBB in position when the height of the door from the ground is such that GSE is not required to be positioned to perform servicing/loading operations.

Danger:

Personnel shall remain aware of increased risk of a fall from a height while retracting stair platform and safety rails.

4.4.2.2 Opening Cabin Access Doors from Inside by Crew

The responsible ground personnel shall:

- a. Knock twice on the door, to indicate that a GSE or PBB is properly positioned, and the door swing area is free from obstruction. Provide a conventional “thumbs up” signal through the door window to the crew if required.
- b. Stand clear or retreat to a safe position before the door is opened by crew.
- c. Assist cabin crew (when required), with moving the door to the fully opened position and engaging the gust lock.

Note: The section above provides generic safety precautions and does not substitute training on opening/closing of a/c doors.

4.4.2.3 Opening of Cabin Access Doors from Inside by Authorized and Trained Ground Staff

- a. Check that the door is disarmed.
- b. Check that all indicators show that it is safe to open the door.
- c. Check visually that a boarding device is positioned at the door.
- d. The door shall be fully opened and the gust lock engaged.

4.4.2.4 Opening Cabin Access Doors from Outside with Crew/Ground Staff on Board

When TUI Airlines Cabin Crew is guarding an aircraft door on the inside of the aircraft, opening and closing of the door is cabin crews responsibility.

Where there is a requirement for ground personnel to open door from outside with crew/ground personnel on board:

- a. Visually inspect the cabin access door and the surrounding fuselage for signs of damage.
- b. Check all indications as per aircraft type that the door is disarmed and safe to open, e.g., residual pressure warning lights or flags



- c. Knock twice on the door to indicate that the door is ready to be opened. Receive a “thumbs up” acknowledgement from the crew/ground personnel on board.
- d. If there is no “thumbs up” or indication from the cabin that the door is disarmed, knock twice again.
- e. If there is still no “thumbs up” or indication from the cabin crew/ground personnel onboard, contact the flight deck via an open cockpit window or the aircraft interphone system to seek confirmation that it is safe to open the cabin doors.

CAUTION! If there is no confirmation that the door is disarmed or safe to open, do not open the door.

- f. Once it is confirmed that the cabin access door is disarmed and safe to open, open the door in accordance with the instructions and markings labeled on the door, and the specific instructions for the aircraft type
- g. Move the cabin access door to the fully opened position and engage the gust lock.
- h. If integral airstairs are to be used (other than those permanently affixed to a boarding door), fully extend the airstairs prior to opening the door.
- i. If using integral airstairs permanently affixed to a boarding door, stand clear of the door and slowly open the door until the airstairs are fully extended

4.4.2.5 Opening Cabin Access Doors from Outside with no Crew/Ground Staff on Board

- a. Visually inspect the cabin access door and the surrounding fuselage for signs of damage.
- b. Check all indications as per aircraft type that the door is disarmed and safe to be opened. e.g., residual pressure warning lights or flags.

CAUTION! If there is no indication that the door is disarmed or safe to open, do not open the door.

- c. Once it is confirmed that the door is disarmed and safe to open, open the door in accordance with the instructions and markings labeled on the door, and the specific instructions for the aircraft type.
- d. Move the door to the fully opened position and engage the gust lock.
- e. If integral airstairs are to be used (other than those permanently affixed to a boarding door), fully extend the airstairs prior to opening the door.
- f. If using integral airstairs permanently affixed to a boarding door, stand clear of the door and slowly open the door until the airstairs are fully extended.

4.4.2.6 Closing of Cabin Access Doors from Inside by Crew

Prior to removing or repositioning GSE or PBB, the responsible ground personnel shall:

- a. Notify crew that equipment needs to be removed or repositioned (as applicable) and that the cabin access door needs to be closed.
- b. Receive confirmation from the crew that the cabin access door will be closed.
- c. Visually inspect the exterior of cabin access door and surrounding areas for signs of damage, debris, or obstructions.
- d. Retract equipment safety rails and canopy (where fitted) where necessary to close the door.
- e. Assist cabin crew when required, with moving the door to the fully closed position.



- f. Where using passenger stairs or PBB, remain on the platform until the door is fully closed.
- g. Where using elevating equipment (e.g., catering truck or medical loader) retreat from the platform prior to the door being closed.
- h. Check that the cabin access door is closed and that the door and handle are flush with the surrounding fuselage.
- i. Descend passenger stairs before they are moved.

4.4.2.7 Closing of Cabin Access Doors from Inside by Authorized and Trained Ground Personnel

- a. Coordination between applicable ground personnel inside and outside the aircraft to confirm that the cabin access door will be closed shall take place prior to closing the door.
- b. The trained ground personnel onboard shall:
 - 1. Visually inspect the cabin access door and inside surrounding areas for signs of damage, debris or obstructions.
 - 2. Move the door to the fully closed and locked position in accordance with the instructions and markings labeled on the door, and the specific instructions for the aircraft type.
- c. The GSE/PBB operator shall follow the same steps as documented in 4.4.2.6 b-i and additionally:
 - 1. Where using elevating equipment (e.g., catering truck or medical loader) personnel shall retreat from the platform prior to the door being closed.
 - 2. Retract equipment stabilizers after the door is closed and personnel are clear of the equipment.
 - 3. Remove GSE or PBB from the door.

4.4.2.8 Closing of Cabin Access Doors from Outside with Crew/Ground Personnel on Board

- a. Coordination between applicable ground personnel inside and outside the aircraft to confirm that the cabin access door will be closed, shall take place prior to closing the door.
- b. Prior to closing the cabin access door from outside, the person responsible for closing the door shall:

When TUI Airlines Cabin Crew is guarding an aircraft door on the inside of the aircraft, opening and closing of the door is cabin crews responsibility.

- 1. Visually inspect the exterior of cabin access door and surrounding areas for signs of damage, debris or obstructions.
 - 2. Retract equipment safety rails and canopy (where fitted) where necessary to close the door.
 - 3. Release the gust lock and move the door to the fully closed and locked position in accordance with the instructions and markings labeled on the door, and the specific instructions for the aircraft type.
 - 4. After the door is closed, check that the door and handle are flush with the surrounding fuselage.
 - 5. Where closing the door from passenger stairs, descend the stairs before they are moved.
- c. The GSE/PBB operator shall:



1. Retract equipment stabilizers after the door is closed and personnel are clear of the equipment.
2. Remove GSE or PBB from the door.
- d. If integral airstairs are used (other than those permanently affixed to a boarding door), fully retract and stow the airstairs.

4.4.2.9 Closing Cabin Access Doors from Outside with No Crew/Ground Personnel on Board

Prior to closing the cabin access door from outside, the person responsible for closing the door shall follow the same steps as documented in 4.4.2.8(b-c).

4.4.2.10 Re-Opening Cabin Access Doors

In situations where a cabin access door needs to be reopened and reclosed after initial closing (e.g., not closed properly, additional delivery of catering and/or supplies, requirement to reconnect boarding device), the following shall apply:

- a. Where flight crew or other qualified personnel are in the cockpit, but they did not initiate the request to reopen the cabin access door:
 1. Seek authorization from the flight crew or other qualified personnel in the cockpit for the cabin access door to be reopened via an open cockpit window (if applicable) or use the flight interphone system.
 2. Await clearance to re-open the cabin access door. If authorization to reopen the door is not granted, do not attempt to reopen the door.
- b. Follow the applicable actions/steps in the Opening Cabin Access Doors sections (see GOM 4.4.2.1 to 4.4.2.5, as applicable).

4.4.3 Cargo Hold Access Doors

4.4.3.1 General

- a. Manual operation of an electrically or hydraulically operated cargo hold access door may only be performed by trained personnel.
- b. To access the cargo access door control panel where it is out of reach from the ground, use maintenance stairs in accordance with GOM 3.1.3.3 or a belt loader in accordance with GOM 3.1.3.7.

Note: Not applicable to main deck cargo doors.

- c. Allow adequate space for door clearance to avoid equipment obstructing the free passage of the door during opening/closing.
- d. The cargo access door control panel, where applicable, shall be closed when not opening/closing the cargo hold access door.

4.4.3.2 Opening Cargo Hold Access Doors

- a. Before positioning GSE and/or opening, perform a visual check for any signs of damage to the doors or surrounding areas.
- b. Where applicable, check cargo hold access door control indicators, residual pressure warning lights or flags to ensure it is safe to operate the door or open the cargo access door vent flap.
- c. Open the cargo hold access door in accordance with the specific instructions for the aircraft type.



- d. For main deck cargo hold access door. See 4.4.3.5.

4.4.3.3 Closing Cargo Hold Access Doors

- a. Before closing the cargo hold access door, ensure:
1. The anti-roll-out system (door sill guards/latches) if installed, is in the raised position.

Note: At each cargo compartment door sill, there are two types of latches.

1. The overridable lateral latch, which stops the accidental roll-out of a unit. This latch is overridden in the loading direction and is lowered for unloading.
 2. The other type of latch is an upward latch and locks the unit at the doorsill.
2. Load restraint and door protection nets are properly fitted, if applicable.
3. Door area, including the door sill and frame, are free of debris and other obstructions.
4. Door and surrounding area show no visible signs of damage.
- b. Close the cargo hold access door in accordance with the specific instructions for the aircraft type.
- c. After closing the cargo hold access door, ensure:
1. The lock indicators are engaged/properly set, as applicable, and that the door is properly locked, handles are properly stowed, and panels are properly closed.
 2. A visual check is performed for any signs of damage to the doors and surrounding areas.
 3. The vent flaps are also closed, if required.

4.4.3.4 Reopening of Cargo Access Hold Doors

- a. If a cargo hold access door is not closed properly, it shall be reopened and reclosed.
- b. Once the predeparture walkaround has taken place in accordance with 4.6.3.1, do not attempt to reopen any aircraft cargo hold access door without clearance from the flight crew or the trained ground personnel in the cockpit.
- c. If a door needs to be reopened, the ground personnel responsible for the departure shall notify the flight crew via the use of the flight interphone system or where practical use the cockpit open window.

4.4.3.5 Main Deck Cargo Access Door Operations

Observe the following additional requirements for opening and closing main deck cargo access doors:

- a. The main deck ULD loader shall remain clear of the main deck cargo access door trajectory during opening and closing.
- b. Where required to unlock/lock the main deck cargo access door from the outside, use main deck ULD loader in accordance with GOM 3.1.3.8
- c. Fall prevention device shall always be installed whenever the main deck cargo access door is open, and the main deck loader is not in position. Remove the fall prevention device once the main deck loader is in position and reinstall the fall prevention device before removing the main deck loader.



Danger:

Risk of falling from height. Any personnel present in the main deck cargo compartment shall remain clear of the door opening area when it is open without a main deck ULD loader in position.

- d. Where applicable, check main deck cargo access door control indicators, residual pressure warning lights and flags to ensure it is safe to operate the door.
- e. Check to ensure there are no obstructions outside the main deck cargo access door before opening/closing.
- f. For main deck specific loading operations, see 4.5.3.3.

4.5 Aircraft Loading and Unloading

4.5.1 Supervision of Aircraft Loading and Unloading

4.5.1.1 Supervision Responsibility

- a. The person performing the aircraft loading and unloading supervision task is responsible for the safe and efficient handling of the aircraft as well as the protection of the loads carried.
- b. The responsibility will ensure the aircraft is:
 - 1. Unloaded in accordance with LDM/CPM/OIR or any other incoming messages
 - 2. Loaded in accordance with the corresponding loading instruction report (LIR) (see 5.4.1.2).

Note: Any aircraft loading/unloading operation shall only start in the presence of the person responsible for the aircraft supervision task.

4.5.1.1.1 Hold Inoperative (HOLD INOP)

If a cargo hold is inoperative, the following actions must be taken to ensure safe and efficient aircraft loading and ground handling. (All Aircraft Types).

- a. *Coordination between the TRC (Turn around coordinator) / dispatcher with the FCM (Flight Crew Member) and CLC (Central Load Control) is mandatory to determine how the aircraft will be loaded safely due to the inoperative hold.*
- b. *To prevent exceeding the permitted NLG OLEO extension range, a review of the passenger boarding process should be discussed if the FWD hold is INOP (B737 Type ONLY) and boarding rows 1-14 first via door L1 only.*
- c. *Ensure the HOLD INOP status is clearly reflected in the Load Distribution Message (LDM) and/or other operational messages.*
- d. *Handling agents at the next station must be informed in advance and be fully prepared to accommodate the inoperative hold upon the aircraft's arrival.*

4.5.1.2 Communication

When Verbal communication is used it is critical that combination of letters and numbers are pronounced and understood by those who transmit and receive voice messages by radio or telephone, regardless of their native language. The ICAO phonetic alphabet and numbering system shall be used by all parties when involved in aircraft turn-around.



Table 4.5.1.2A – ICAO Phonetic Alphabet and Numbering System

ICAO Phonetic Alphabet and Numbers	
Alphabet	
A	Alfa
B	Bravo
C	Charlie
D	Delta
E	Echo
F	Foxtrot
G	Golf
H	Hotel
I	India
J	Juliet
K	Kilo
L	Lima
M	Mike
N	November
O	Oscar
P	Papa
Q	Quebec
R	Romeo
S	Sierra
T	Tango
U	Uniform
V	Victor
W	Whiskey
X	X-Ray
Y	Yankee
Z	Zulu



ICAO Phonetic Alphabet and Numbers

Numbers - (Pronunciation)

0	ZE-RO
1	WUN
2	TOO
3	TREE
4	FOW er
5	FIFE
6	SIX
7	SEV en
8	Ait
9	NIN er
Decimal	DAY SEE MAL
Hundred	HUN DRED
Thousand	THOU SAND

Note: Numbers shall be reported as single figures

To ensure all load is accounted for accurately prior to departure, the parties responsible for loading and load planning shall clearly communicate and confirm:

- Flight Number
- Aircraft registration
- Flight leg (Destination), as applicable
- LIR edition number
- Load by position/in compartment, including NIL-Position/Compartment(s)
- Return load (stand-by load which is not loaded)
- All commodities and sub-commodities

When communicating load figures using verbal communication between the person reporting the load and the person responsible for load planning task, the person responsible for load planning task shall always read back the information given according to the same guidelines above.

Note 1: The same principle will apply when the person responsible for the load planning task is verbally communicating information to the person responsible for the loading supervision task, and when loading information is verbally communicated between loading team members and loading team supervisor.



Note 2: To further prevent miscommunication during the aircraft turnaround handling and close out reconciliation process, implementation of standard verbiage for load discrepancy communication (SEE TABLE 4.5.1.1) should be used between the person responsible for the loading supervision task and person responsible for load planning task and between the person responsible for loading supervisor task and loading team members.

Note 3: Efficient communication devices (e.g. headsets, high performance radio, phones etc.) should be provided to relevant team members for verbal communication to avoid misunderstanding in a noisy environment.

Discrepancy	Description
Offload	Planned load removed from aircraft for any reason (e.g., missing passenger, damaged cargo)
Position Change	Change of position within the cargo compartment or change of cargo compartment
Missing	Load not received for any reason, but planned on LIR
Weight	Difference between deadload weight as shown on LIR and actual weight of load
Incorrect Load	Mismatch of received load for flight (e.g., incorrect ULD number, wrong flight number, incorrectly documented special load)
Restraints	Missing, damaged or malfunctioning floor locks, load restraints and/or nets
Technical	Compartment technical issues (e.g., faulty locks, unserviceable stanchions, broken/missing divider nets, other defects)
Not Planned	Any deadload not included in LIR

Table 4.5.1.1–Load discrepancy communication

4.5.1.3 Actions Prior To Unloading

Prior to unloading, the person responsible for the aircraft loading supervision task shall:

- Brief the unloading team members on safety and unloading requirements in accordance with the CPM/LDM/OIR (as applicable) including any special requirements, e.g., unloading sequence, special load items, restraint requirements, aircraft defect. Check to ensure the briefing and unloading instructions are understood by the persons responsible for aircraft unloading.

Note:

- The offloading instructions report (OIR), which is a systematic plan for unloading, should be issued prior to aircraft arrival.
- For transit flights, an OIR, as defined in 5.4.1.3, may be issued.

- Verify the arriving aircraft registration with the registration on the CPM/LDM/OIR.
- Ensure the necessary equipment for unloading is available on the aircraft parking stand (see 4.1.1 (c)).



4.5.1.4 Actions During Unloading

During unloading, the person responsible for the aircraft loading supervision task shall:

- a. Cross-check the ULD/load against the CPM/LDM/OIR as the unloading progresses to ensure the correct sequence of unloading takes place in accordance with the specified timelines.
- b. For ULD unloading:
 1. Carry out visually detectable damage checks during unloading in accordance with 4.5.9.3.
 2. Check ULD placards have been properly filled out with the correct information in accordance with 4.5.9.2.
 3. Perform a cross-check against CPM/LDM/OIR to ensure the following details correspond with each other:
 - i. ULD number shown on the ULD identification tag
 - ii. ULD identification number printed or stamped on the ULD
 - iii. Confirm ULD unload information codes (e.g., X = empty ULD)
 4. Ensure that there are no signs of leakage from ULDs.
- c. For bulk unloading:
 1. Perform a visual inspection of all items during unloading to ensure no damage/leakage.
 2. Ensure the load distribution is in accordance with the LDM.
- d. Ensure special equipment (e.g., tie-down straps, load spreaders, plastic sheeting for wet cargo) is unloaded, as required.
- e. Log any irregularities in the unload sequence noted during unloading and report as per operating airline procedures (see 4.5.1.5 (e)).
- f. Ensure, where applicable, transit loads are not offloaded or over-stowed.
- g. If required, Delivery at the Aircraft (DAA) bags/items shall be delivered as per operating airline requirement.
- h. If possible, organize immediate transportation of arriving ULDs and/or carts containing baggage, cargo and/or mail (see 4.5.6.2 and as per specified timelines).

4.5.1.5 Actions After Unloading

After unloading has been completed, the person responsible for the aircraft loading supervision task shall:

- a. Carry out a hold inspection, in accordance with 4.5.5.1 and action issues accordingly.
- b. Ensure the nets and straps are properly stowed and cargo access door checks are performed in accordance with 4.4.3 in case the cargo access doors need to be closed.
- c. Sign the OIR if applicable, (See AHM 514 and AHM 515) and in doing so confirm that:
 1. Aircraft has been unloaded in accordance with LIR
 2. Load was unloaded in a manner that prevents damage or spillage
- d. Close the cargo access doors if the aircraft is to be left unattended (see 4.4.3.3).
- e. If irregularities are reported during the unload sequence report in accordance with operating airline procedures.

4.5.1.6 Actions Prior to Loading

Prior to loading, the person responsible for the aircraft loading supervision task shall:



- a. Brief the loading team members on safety and loading requirements in accordance with the LIR, including any special requirements, e.g., loading sequence, special load items, restraint requirements, aircraft defect.

Note: Check to ensure the briefing and loading instructions are understood by the persons responsible for aircraft loading.

- b. Verify the aircraft registration with the registration on the LIR.
- c. Carry out a hold inspection prior to commencing loading, in accordance with the requirements detailed in GOM 4.5.5.1, and action issues accordingly.
- d. Assemble and check loads against the LIR to ensure compliance with:
 1. Special handling codes and related information.
 2. Destination airport. (Confirm destination of the loads)
 3. Confirm preliminary Notification to Captain (NOTOC) as per AHM 381, where applicable.
 4. Special load requirements, e.g., live animals, perishable, valuables, DG, temperature sensitive products etc.
- e. Ensure all loads are protected from adverse weather, and particular attention shall be given to special loads (e.g., live animals, perishables, time and temperature-sensitive cargo).
- f. Allow no contamination (e.g., snow, ice, water, wood, plastic) on the ULD or bulk load/ loose load pieces.
- g. Ensure special equipment is available (e.g., tie-down straps, load spreaders, plastic sheeting for wet cargo), as required.
- h. Where possible, organize and position the ULDs and/or carts containing baggage, cargo and/or mail in hold and load order.
- i. For ULD loading:
 1. Carry out a visually detectable damage check prior to loading in accordance with GOM 4.5.9.3.

Note: Ensure all loaded ULDs are serviceable. Do not load damaged ULDs.

2. Ensure ULD placards are properly filled out with the correct information as detailed in GOM 4.5.9.2.
3. Perform a cross-check to ensure the following identification numbers correspond with each other:
 - i. ULD number shown on the LIR
 - ii. ULD number shown on the ULD identification tag
 - iii. ULD identification number printed or stamped on the ULD
4. Cross-check ULD gross weights.
5. Confirm ULD load information codes (e.g., X = empty ULD).
6. Ensure no signs of leakage from ULDs.
7. All ULDs are safe to move and will not shift, roll, or topple while maneuvering/ loading onto the aircraft.
- j. For bulk loading, confirm:
 1. Cart identification labels are correctly filled in where applicable.
 2. Loose pieces/weight information is correct, where applicable.
 3. A visual inspection of all items of bulk load is performed prior to loading to ensure there are no signs of damage or leakage that may damage or contaminate the aircraft.



4.5.1.7 Actions During Loading

During loading, the person responsible for the aircraft loading supervision task shall:

- a. Crosscheck the ULD/bulk load against the LIR, as the loading progresses to ensure the correct sequence of loading takes place in accordance with the specified timelines. (e.g., where applicable, transit loads are not over-stowed for transit stations).
- b. Regularly check whether loading personnel who are physically loading the aircraft encounter any loading issues and attend to any issues raised concerning loading.

Note:

1. Stop/suspend loading operations where an irregularity is discovered e.g., aircraft/cargo hold/ULD damage, damage to or leakage from load items, cargo loading system malfunction
2. Log any irregularities in the load sequence noted during loading and report as per operating airline procedures (see 4.5.1.8).

- c. Liaise with the person responsible for the weight and balance calculation task and receive authorization for any deviations, including any last-minute changes to the LIR, as documented in 5.3.2. The person responsible for the weight and balance calculation task shall check the deviation and confirm whether possible or give an alternative solution.

Note: Any load information change between the LIR and actual loading (e.g., changes in transfer bag figures, cargo figures) shall be communicated to the person responsible for the weight and balance calculation task as soon as known to avoid unnecessary reloads, weight and balance issues, and last-minute pressure.

- d. If an authorized change of load order occurs, provide confirmation of change to the persons responsible for the aircraft loading task prior to recommencing loading in the hold.
- e. Protect all loads from adverse weather. Special attention shall be given to live animals and/or perishables.
- f. Ensure special loads are handled and loaded as per instructions provided.
- g. Where applicable remove any loose plastic or any other material used to protect load from bad weather.
- h. Visually inspect all loads requiring special handling to ensure they are secured against shifting. Ensure all necessary nets have been closed. See 4.5.7
- i. If required, Delivery At the Aircraft (DAA) bags/items shall be loaded as per operating airline and local authority requirement. See 2.4.4
- j. For tracking/reconciliation during loading see 2.4.3

4.5.1.8 Actions After Loading

After loading has been completed, the person responsible for the aircraft loading supervision task shall:

- a. At the completion of loading, receive confirmation of the following from the persons performing the aircraft loading task:
 1. Loading status of the aircraft is in compliance with the latest edition of the LIR.
 2. Loads are secured and that all locks, stops, nets, net stanchions, fire blankets are raised, closed, locked or installed and that load securing is correctly applied (see 4.5.7)



- b. Where the operating airline requires additional signature fields to be completed on the LIR (e.g., by the person performing the loading of each hold), ensure the applicable person(s) have signed the required fields in accordance with operating airline requirements.

Note 1: The person responsible for the aircraft loading supervision task still maintains overall responsibility for the loading of the aircraft.

Note 2: *In replacement for printed LIRs, electronic LIRs are permitted in handheld systems as long as all requirements for communication of loading instructions, being in possession during loading, confirmation of actual load, dual signature requirements and file storage are complied with.*

- c. *In all cases (manual or computerised LIR), the final actual load (cargo, mail and bags) must be written in each section of the LIR by the person responsible for loading. Sign the LIR, and in doing so confirm that:*
1. Aircraft has been loaded in accordance with the final edition of the LIR including any authorized changes.
 2. Load is secured (in a manner that prevents movement or spillage during flight) and locks, stops, nets, fire blankets are correctly installed, raised, locked.

Note: For each LIRF, two signatures are needed from different individuals: one from the Loading Supervisor and one from the Ramp Agent. However, if the same person is both supervising the loading and performing other aircraft ramp duties (or TRC functions), they can provide a single signature and sign both parts of the LIRF.

- d. If applicable, sign a NOTOC to confirm or otherwise state that:
1. There was no evidence of leakage from the package(s) or any leakage from the ULDs loaded on the aircraft.
 2. The package or ULD is loaded in the designated position and secured.

Note: The LIR and the NOTOC shall be retained in accordance with applicable regulations (see 5.7)

- e. If irregularities are reported during the load sequence report in accordance with operating airline procedures (see 4.5.6.4 b)
- f. Ensure cargo hold access door checks are performed in accordance with 4.4.3.3

4.5.2 Aircraft Ground Stability

Operating airline ground stability requirements, where applicable, shall be adhered to.

Unloading or loading may cause the aircraft to become unstable or could cause tipping. For some aircraft types, a tail stand or nose tether is available.

The unloading sequence may be reported in the OIR/CPM/LDM and loading sequence in the LIR. When detailed information about the unloading and loading sequence is not available, as a general principle for cargo aircraft and passenger aircraft sensitive to tail tipping, ensure the sequence below is adhered to:

- a. Unload the aft hold first.



- b. Unload the main deck in sequence to always have more load in front of the wing box than aft of the wing box.
- c. Unload the forward hold last.
- d. Load the forward hold first.
- e. Load the main deck in sequence to always have more load in the front of the wing box than aft of the wing box.
- f. Load the aft hold and bulk last.

Note: If this sequence cannot be followed, check with the operator for instructions about the correct offloading/loading sequence.

Some of the major factors affecting the aircraft tail tipping and stability limits will include, but are not limited to the following items: Aircraft Empty Weight, Aircraft Attitude, Fuel Loading, Passenger Loading, Cargo Loading, Ramp Slope, Runway Surface Condition, Snow Loads, Wind

The absolute tail tipping limit for the B737-800 is at 50.8% MAC, considerably aft of the ground stability limit.

Note: For additional instructions refer to Chapter 9, Annex C – Aircraft Specifics.

4.5.3 Safety Requirements Specific to Aircraft Loading and Unloading

4.5.3.1 General

- a. Holds and compartments shall only be entered or exited by using the appropriate loading equipment, which shall be positioned and secured at the aircraft cargo access door.

Exception: For smaller aircraft see 4.5.3.4

- b. Loading equipment shall remain in position while personnel are still in the cargo hold.
- c. Equipment operators shall ensure other personnel are not entrapped by movement of loads, pallets and/or containers, either in the aircraft or on the loading equipment.
- d. Carts shall not be used to gain access to cargo holds.
- e. Personnel shall walk around chains of carts and dollies to access required areas. Do not walk or stand between carts and dollies even when they are stationary on the ramp.
- f. Hinged side gates of loaded carts shall be lowered carefully in case loads fall out and cause injury.
- g. Take care when pulling or pushing carts, especially when ramp conditions are slippery. When necessary, obtain assistance.
- h. Use correct manual handling techniques and practices when handling heavy items. Obtain assistance when moving heavy articles.

4.5.3.2 Unit Load Device Loading and Unloading

- a. For ULD loader operations, see 3.1.3.8.
- b. Inspect all ULDs before loading/unloading so that no nets, straps, protective materials can drag or get jammed in rollers, ball mats or wheels of Power Drive Units (PDU's).
- c. Push (do not pull) containers on and off dollies and loaders.
- d. ULDs on dollies or transporters shall be secured to prevent movement using locks, stops, rails or straps, except when the load is being transferred to/from the equipment.

CAUTION! Do not place ULD's directly on the ramp surface.



Danger:

During loading/unloading operations;

1. To avoid personnel injuries (e.g., slips, trips and falls) when walking inside the cargo holds, do not step on cargo loading system components (e.g., restraints, PDUs, roller tray(s)) or sloped side walls except where dedicated step positions are provided.
2. Personnel shall remain clear of the ULD movement path at all times.
3. Moving ULDs may cause injuries to personnel.
4. Only raise locks once the ULD comes to a complete stop.

For Cargo Loading Systems (CLS) equipped with PDUs:

1. When ULDs become stuck, staff may assist with the dislodging of the unit after coordinating with CLS equipment operator. In such cases, all staff shall be aware of sudden ULD movements.
2. The CLS equipment operator shall always be aware of where loading personnel are positioned.

Note: Certain ULDs can tip during movement as the base is smaller than the top, causing a high center of gravity.

4.5.3.3 Main Deck Loading of Freighter Aircraft

Not applicable to TUI Airways and TUIfly Nordic

4.5.3.4 Bulk Loading and Unloading

- a. Where a belt loader is used, position items on/off the belt loader *see GOM 3.1.3.7*.
- b. Where possible avoid placing loads directly on the ramp, especially if the ramp is contaminated.
- c. When loading/unloading aircraft directly from the ramp without the use of equipment:
 1. Position carts/dollies to/from the aircraft in a parallel direction to the fuselage, maintaining a gap of at least 1m (3 ft.) from the fuselage.
 2. Always turn tractors and carts/dollies away from the aircraft.

Note: For any load items that cannot be safely loaded directly from the ramp, appropriate loading equipment (e.g., belt loader) should be used to avoid injury or damage.

- d. Ground personnel carrying out bulk loading task shall:
 1. Use the right lifting techniques to reduce on the risk of injury
 2. Be accounted for once inside the aircraft hold and after completion of loading for safety reasons

Danger:

There is a risk of suffocation due to poor ventilation in the holds.

4.5.3.5 Shipments Requiring Special Handling

- a. General
 1. All shipments requiring special handling will be identified on the Load Message (LDM) or Container Pallet Message (CPM) for an arrival flight or under a NOTOC for departing flights.



2. Comply with any special handling requirements. Be alert for special load and/or dangerous goods shipments.
 3. Always follow the orientation markings and/or special handling instructions as applicable while handling.
 4. Make sure that packages with directional handling labels are kept in the correct orientation (e.g. THIS WAY UP).
 5. Always observe the specific instruction labels and markings (i.e., Cargo Aircraft Only (CAO), FRAGILE, TOP, THIS SIDE UP).
 6. Ensure shipments labeled "Cargo Aircraft Only" are not loaded into a passenger aircraft.
 7. Always handle fragile items with care.
- b. Dangerous Goods
1. Transportation shall be in accordance with the IATA DGR. *Refer to Chapter 10, Annex D - Dangerous Goods and Weapons.*
 2. Ensure dangerous goods are handled and secured or stowed in a manner that:
 - i. Prevents damage to packages and containers during aircraft loading and unloading.
 - ii. Provides for separation and segregation of packages on the aircraft to prevent interaction in the event of leakage.
 - iii. Prevents movement that could change the orientation of packages on the aircraft.
 - iv. Is in accordance with the information provided on the notification to captain (NOTOC).
 3. In case dangerous goods package or shipment appears to be damaged or leaking, to ensure:
 - i. Such package or shipment is prevented from being loaded into an aircraft.
 - ii. In the case of leakage, conduct an evaluation to identify and prevent from transport any other cargo, baggage or transport devices that have become contaminated by the leakage of dangerous goods, and the removal of the hazardous contamination.
 - iii. If already loaded, the package or shipment is removed from the aircraft.
 - iv. Immediate notification of the customer airline and relevant authority.
- c. Live Animals
1. Transportation shall be in accordance with the IATA Live Animals Regulation (LAR). *Refer to Chapter 14, Annex H - Live Animals.*
 2. During handling of live animals, ensure that they are:
 - i. Loaded and secured into suitable aircraft compartments as directed by the LIR
 - ii. Separated from foods, dangerous goods or other AVI that are natural enemies
 - iii. Handled with care and in a manner which minimizes the waiting period and is in compliance with the shipper's specific handling instructions, if required
 - iv. Not exposed to adverse weather or environmental conditions during transportation, loading and unloading
- Note:** See AHM 332 on Handling and stowage of live Animals
- d. Wet Cargo
- The following types of cargo, if not subject to the IATA DGR, shall be considered as wet cargo
1. Liquids in watertight containers;

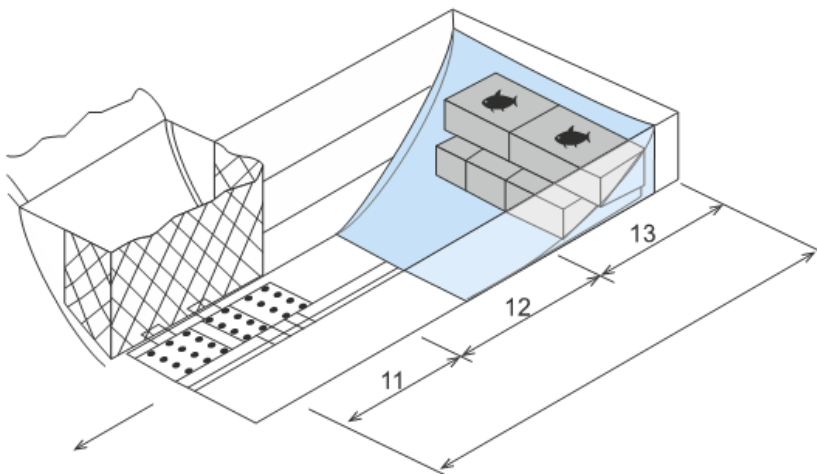


2. Wet materials not packed in watertight containers (e.g. fish packed in wet ice, fresh or frozen meat, casings (fresh animal guts), wet hides, skins)
3. Goods that by their nature may produce liquid (e.g. larger live animals (usually mammals) where presence of faeces and urine is likely)
4. Fruits/vegetables with high moisture, (e.g. berries)

Note: Live animals such as birds, reptiles, insects and certain mollusks (terrestrial) in appropriate animal containers do not pose a higher risk for corrosion than normal baggage/cargo and are, therefore, exempted. Refer to IATA LAR.

CAUTION! Spillage or leakage during carriage by air could lead to corrosion or other damage to the aircraft structure or its components, or damage to other loads. In case of spillage or leakage, inform responsible ground staff, maintenance and flight crew if on board.

5. The person responsible for the aircraft loading supervision task shall ensure the wet cargo is properly packed and free of leakage. Do not load damaged or leaking packages.
6. Loading precautions:
 - i. Spread plastic sheets or tarpaulins to protect the aircraft floor and walls by catching any spillage or leakage. Use absorbent material as required by *TUI Airline*.
 - ii. For wet cargo in containers which are not watertight: follow the instructions of the operating airline. Refer to Chapter 10, Annex D – *Dangerous Goods and Weapons*.



Note 1: When wet or damp, the strength of some packaging can be considerably reduced. Special attention shall be given to avoid the crushing of packages when stacking to several levels.



Note 2: For reference regarding packing of wet cargo and temperature sensitive packaging refer to IATA Perishable Cargo Regulations (PCR) and IATA Temperature Control Regulations (TCR).

e. Perishable and temperature-sensitive healthcare products

During transportation, loading and unloading of perishable and temperature-sensitive healthcare products, ensure that they are:

1. Handled in a manner to minimize the waiting period
2. Not exposed to adverse environmental conditions

Note:

1. Perishables must be moved into storage (e.g., cooler, freezer) appropriate for the type, in accordance with the Perishable Cargo Regulations (PCR).
2. Pharmaceuticals must be moved into storage (e.g., cooler, freezer) appropriate for the type, in accordance with the Temperature Control Regulations (TCR).

f. Dry Ice

Dry ice (solid carbon dioxide) is used as a refrigerant for temperature sensitive health care products e.g., vaccines and other life sciences products to ensure that they are maintained at the required temperature throughout the supply chain.

1. Where dry ice is present in the cargo being loaded or unloaded the ramp, staff must be aware of the precautions required to ensure that there is no risk of suffocation from elevated CO2 levels from sublimating dry ice.
2. Verify the documentation for the presence of dry ice as a refrigerant (code ICE) and instruct the personnel that the cargo compartment shall be allowed to vent after the cargo access door is opened and before entering the cargo compartment
3. Open the cargo compartment door and stand back. No person shall enter the hold. Cargo compartment where dry ice is present must be allowed to vent after cargo compartment door is opened.
4. Cargo access doors shall remain open to clear dry ice vapors before you enter the hold or compartment.

Danger:

1. There is a risk of suffocation when entering a compartment containing dry ice.
2. Anyone entering a cargo compartment before the dry ice vapor has dispersed may be overcome with dizziness and shortage of breath due to lack of oxygen. In such circumstances the person should be removed immediately to fresh air and, if his breathing is seriously affected, call a doctor

4.5.4 Unloading

4.5.4.1 Scaling Process

If the flight crew experiences a handling issue on takeoff, they may request the scaling of all loaded baggage and cargo at the arrival station.

Contact the airline representative for details.

4.5.4.2 Safety Precautions for Unloading

- a. Before positioning GSE and/or opening cargo hold access doors, perform a visual check for any signs of damage to the doors or surrounding areas (see 4.4.3).
- b. Check to ensure the aircraft hold load has not shifted during the flight.



1. Verify the contour of the cargo loads passing through the doorway to ensure sufficient space between the doorway depressor seals and the cargo load is assured.
2. Contact the person responsible for the aircraft loading supervision task if the shifted load will not safely exit the door.
- c. Check for incorrectly loaded ULDs (i.e., locks not raised, locks or safety rails overridden).
- d. Check loads/ULDs during unload for damage, leakage and load stability.
- e. Check for damage to the aircraft hold as the unload progresses and also after completion of unloading (see 4.4.3).

Note: Immediately report any irregularities (e.g., spills, unusual fumes or smells) prior to or during the unloading process to the person responsible for the aircraft loading supervision task or as required by the operator or authority.

4.5.5 Cargo Hold Inspection

4.5.5.1 General

- a. A cargo hold inspection shall be performed:
 1. After aircraft unload is complete
 2. Prior to loading if this does not follow immediately after unloading is complete
 3. In case the aircraft was unattended between unloading and loading; or
 4. There was a change of persons responsible for the aircraft loading and supervision task.
- b. The person undertaking the cargo hold inspection shall perform a visual check of all cargo holds to ensure:
 1. No damage of compartment floors, walls, ceiling, door frames, panels, door.
 2. No missing, damaged or malfunctioning floor locks, load restraints or nets.
 3. No spills.
 4. No Loads other than transit loads have been left on-board the aircraft.
 5. Any other items that should not be present in the hold have been unloaded.
- c. Prior to commencing the loading of the aircraft, the person responsible for undertaking the cargo hold inspection shall provide positive confirmation to the person responsible for the aircraft loading supervision task that the inspection has been carried out to the person responsible for the aircraft loading supervision task that the inspection has been carried out, if appropriate.
- d. Any damage or discrepancies observed shall be reported to the person responsible for the aircraft loading supervision task or to the person responsible for the weight and balance calculation task as a minimum.

Note: A check shall be conducted in a hold even if on arrival the hold was reported as being empty.

- e. Any items that should not be present in the hold shall be removed.

4.5.5.2 Cargo Hold Damage

Any damage to compartment liners (i.e. holes, tears, detachment) may reduce their effectiveness, permitting air to enter the compartment and fire suppression agent to escape, thereby reducing the capability to handle a fire event that may lead to specific loading limitations; therefore:



- a. Any technical malfunction, damage or irregularity discovered shall be immediately reported to the supervisor, aircraft maintenance personnel and if available, the pilot-in-command (PIC). See 4.4.1.
- b. Adhere to any resulting load limitations according to the operating airline procedures.
- c. Inform the onward stations of the load limitations according to the instructions of the airline representative, if the defect cannot be rectified before departure.

Note: Damage must always be reported! Also when found upon arrival of the aircraft. See 3.1 for more information.

4.5.5.3 Spills in Cargo Hold

- a. Spills can occur in cargo holds during unloading and/or loading and in flight due to:
 1. Improper packaging
 2. Damage due to mishandling prior to loading
 3. Improper loading in the compartment
- b. Spills can be from liquids, gels, or material in a powdered or granulated form.
- c. Spills can be hazardous, corrosive, flammable, explosive, toxic, poisonous, etc. Even water can cause serious damage to electrical components and systems.
- d. Spills can be corrosive to the aircraft structure. Mercury spills are particularly corrosive to the extent that the affected aircraft structure may have to be completely replaced if the spill is not cleaned up quickly.
- e. It is essential that any spill is reported immediately so that corrective action can be taken.
- f. Initiate the local spill response plan for spill events.
- g. Request information from the respective Cargo Terminal Operator about the nature of what has leaked as well as the Safety Data Sheet, if applicable.

Note: Incidents with Dangerous Goods and or spills must always be reported. Use the Ground Operations Safety Report in IQSMS.

4.5.6 Loading

Weight determination:

The exact weight of the cargo shall be determined or checked by weighing before loading. This actual weight shall be used when completing the load sheet.

When the weight of a load of numerous identical pieces is checked, at least ten of these pieces shall be weighed together, for better averaging.

When the load is placed on pallets, each pallet shall have a pallet identification tag, showing the weight of the load plus pallet or of the load only.

Refusal of cargo:

It is the responsibility of the Ground Handling Agent to exclude cargo from carriage if:

- a. *it is not properly packed;*
- b. *it may damage or contaminate the aircraft or other load;*
- c. *special handling instructions / equipment cannot be observed / supplied;*
- d. *for reasons of safety;*
- e. *the aircraft maximum weights and / or Centre of Gravity is exceeded;*
- f. *the document required by the relevant authorities cannot be presented.*



Special loads and classification of load compartments

Human remains

Whenever human remains are carried by aircraft the body shall be in a soldered container of lead or zinc, packed in a wooden outer container. If the body is not embalmed, decomposition plus altitude may produce enough pressure to burst any but well soldered joints. Special note shall be taken of the place of stowing of human remains, so that after arrival at the aerodrome of destination the ground personnel can immediately be informed of its location.

Live animals must not be loaded near incompatible loads that may have negative effects on their welfare (including human remains).

Perishable cargo

For Boeing 787 aircraft only.

Cargo is normally carried in the forward hold.

If the weight of the cargo exceeds the weight of the baggage, then it may be necessary to load the cargo in the aft holds with the baggage in the front.

Cargo should not be loaded in front of passenger's baggage, as this will delay the delivery of baggage on arrival at the destination aerodrome.

Temperature sensitive cargo (e.g. vegetables), should be carried in the front hold as the forward cargo hold is air conditioned. Carriage of temperature sensitive cargo in the front hold with the Forward Cargo Airconditioning (FCAC) system inoperative is permitted. Certain perishable cargo, as decided by the Handling Agent (in consultation with Cargo Operations), may be carried in the aft hold.

Consideration must be given to the temperature of the hold.

Supporting Information: In order to maximize the carriage of perishable freight, it has been agreed with TCE that it is acceptable to carry temperature sensitive cargo in the forward hold even when the FCAC is inoperative and, additionally, in the aft hold although there is no temperature control.

4.5.6.1 Load Handover

The handover process between cargo handling (cargo warehouse), baggage handling (baggage make-up area) and ground handling (ramp) departments shall be done systematically to ensure a safe departure.

Depending on the airport infrastructure and/or local agreements, the handover of cargo, mail and baggage to the ramp should be done at a dedicated handover point.

4.5.6.2 Load Transportation

Prior to transporting cargo and/or mail from the cargo warehouse or baggage from the baggage make-up area, the equipment operator shall ensure that:

- a. The GSE used for transportation is serviceable. For GSE operations see 3.1.3.
- b. A visual inspection of all loads is carried out to ensure:
 1. The cargo, mail and/or baggage for transport is the correct load for the departing/arriving flight(s).



2. No nets, ropes, straps, protective materials, can drag on the ground or get jammed in rollers, ball-mats or wheels.
3. All built-up cargo/mail/baggage is safe to move and will not shift, roll or topple
4. There is no damage to the load.
- c. All loads are protected from adverse weather via use of tarpaulins or covered carts. Special attention shall be given to live animals and/or perishables. When using tarpaulins, all straps shall be securely fastened to the cart.

4.5.6.3 Load Delivery for Departure

Depending on the location of the handover point the person responsible for aircraft loading supervision task or the person responsible for receiving the load shall:

- a. Receive all documentation, pouches and special instructions for the specific flight, if applicable
- b. Carry out an inspection of all the load to ensure that:
 1. The load is correct for the departing flight(s).
 2. No damage has occurred during the transport process.
 3. There is no evidence of tampering with the load (e.g cuts, tears to plastic foil etc.)
 4. No nets, ropes, straps, protective materials, etc. should drag on the ground or get jammed in rollers, ball-mats or wheels whilst maneuvering or whilst being loaded onto aircraft.
 5. All dollies are serviceable, and all restraints are engaged to secure the ULD on the dollies prior to the ULD being loaded onto the aircraft.
- c. Immediately report any damage to the load/s, whether it discovered when the load arrives on stand or occurs during loading.
 1. Report torn or missing baggage tags and cargo labels.
 2. Do not load unless discrepancies are corrected.

Note: Immediately report any discrepancies e.g. spills, unusual fumes or smells, etc. prior to or during the loading to the person responsible for aircraft loading supervision task or the weight and balance calculation task or flight crew or local authorities as required.

4.5.6.4 Loading Process

- a. Loading shall not commence if there is no LIR (electronic or hard copy), unless otherwise specified by operating airline procedures.
- b. Report any loading issues, errors, changes or other loading matters to the person responsible for the aircraft loading supervision task immediately.
- c. Any signs of hold damage must be reported immediately.
- d. While loading ULDs into position in the compartment the equipment operator shall ensure:
 1. When ULDs are loaded, raise/lock the ULD restraints in accordance with LIR.
 2. While loading ULDs: The edges are either guided by the side rails or fit under the stops/locks/guides.
 - i. The height of the pallet allows for sufficient clearance in the door opening.
 - ii. Control the speed at which ULDs are moved within the aircraft, slowing the ULD prior to reaching its allocated position to prevent crashing.
 - iii. They have no protrusions or overhangs that will damage the aircraft cargo access door opening or the interior of the aircraft cargo hold.



- iv. A tactile check shall be performed by checking the security of each lock to ensure serviceability. A systematic double-check of the restraint system and of special loads (e.g., heavy (HEA), AVIH, human remains (HUM), etc.) *must be completed* before departure.

Note 2: All ULD restraints shall be raised when ULDs are loaded.

Note 3: ULD restraints have to be raised in cargo holds that are completely empty, door and other protection nets should be properly fitted.

Note 4: If applicable, ensure fire barriers are installed as the hold is loaded.

Note 5: *This action requires a signature on the LIRF. 2 signatures per LIRF required by separate people (Loading Supervisor & Ramp Agent)*

- e. While loading into bulk holds the person carrying out the loading of baggage/cargo/mail shall:

1. Load in accordance with LIR requirements.
2. Cross check cart labels to ensure that the load is correct.
3. Check cargo, mail and baggage labels to ensure correct destination/flight number.
4. Ensure any leaking or damaged loads are not loaded and the supervisor is informed immediately. Any contaminated load is kept separately.
5. Ensure applicable special load items are tied down (see 4.5.7) or otherwise secured in accordance with operating airline requirements.
6. Install/close/secure compartment/bay divider nets, barrier nets, fire curtains, door nets and stanchions, as applicable.
7. Ensure light packages are not loaded or wedged between heavier items.
8. Ensure the necessary clearance of 2" / 5cm minimum between the load and aircraft hold ceiling is achieved to avoid any obstruction or damage to aircraft smoke detector/fire suppression system. *Refer to Chapter 9, Annex C – Aircraft Specifics.*
9. Loads shall be correctly stacked to achieve maximum volume.
10. Confirm the final loading status to the person responsible for the aircraft loading supervision task.

Note 1: *Any load information change between LIR and actual (e.g. changes in transfer bag figures, cargo figures) shall be communicated to weight and balance calculation task as soon as known to avoid unnecessary re-loads, weight and balance issues and last-minute pressure.*

Note 2: Between unload and onload, compartment nets shall be secured inside aircraft compartments and not left hanging outside to avoid clips and attachment points striking the fuselage, especially during adverse weather.

Note 3: Ensure the ramp area is clear of all wooden and/or plastic pallets and other load related material after completion of loading or unloading.



4.5.7 Securing of Load

4.5.7.1 General Rules

When transporting a load in an aircraft, it shall be secured such that it shall not:

- a. Move during the flight, which could dangerously affect the weight and balance of the aircraft.
- b. Cause damage to the aircraft structure or other important parts of the aircraft.
- c. Cause damage to another load or become damaged itself.
- d. Cause injury to passengers and crew in case of an emergency landing.
- e. Cause injury to ground handling personnel during loading and unloading.

4.5.7.2 Bulk Compartments

- a. The load in bulk compartments is generally secured by door nets and sector divider nets. Ensure the following items are always secured:
 1. Barrels or drums filled with liquids
 2. Cages or boxes with live animals (AVIH)
 3. Heavy pieces (HEA) weighing 150 kg (330 lb.) or more
 4. Coffins with human remains (HUM)

CAUTION! Do not load baggage or other shipments on top of the coffin.

5. Dangerous Goods (see 4.5.7.7)
6. Powered mobility aids
7. Loads that need spreading
8. Fragile loads
- b. Following loads shall not move vertically upward or horizontally during flight. If the available volume of the compartment or net section is not volumetrically filled (three quarters of the height) with load, additional securing is necessary for:
 1. Loads that are sensitive against shocks or tilting.
 2. Wet cargo.
 3. High-density packages.
 4. Pipes, tubes, bars, beams, planks, poles or other objects of a penetrating nature
- c. If long pieces do not fit into one net section and the divider net cannot be closed correctly, check with the operator's manual for load restrictions (*see Chapter 9, Annex C – Aircraft specifics*) for further requirements.
- d. For battery-powered wheelchair and mobility devices ensure:
 1. It is loaded/unloaded in such a manner that prevent unintentional activation during transport and the battery terminals shall be protected from short circuits (refer to IATA DGR).
 2. The battery is either adequately protected against damage by the design of the mobility aid and securely attached to the device with the electrical circuits being isolated following the manufacturer's instructions, or
 3. Removed from the mobility aid following the manufacturer's instructions

Note: Battery-powered wheelchairs or mobility devices for use by passengers are classified in three main categories based on the battery type that powers the device as defined in DGR Manual 2.3.2.2-2.3.2.4



4. It does not roll when moving up the loading belt in an upright position. If tilting is necessary ensure the passenger has consented, and can only be done on the side without the device controls
5. It shall be secured against movement in the cargo compartment, by use of straps, tie-downs or other restraint devices.
6. The mobility aid, including batteries, electrical cabling and controls shall be protected from damage, including damage caused by the movement of baggage, mail and cargo.
7. Any battery-powered mobility aid shall not be stowed together with loose loaded (bulk) items within a unit load device (ULD) or other loads loaded on top.

Note 1: When securing use tie-down points, keep the mobility aid in an upright position where possible, secure the mobility aid using the base frame, avoid unnecessary tilting of the mobility aid, ensure adequate clearance when loading/unloading, avoid over-tightening tie-down straps or other securing devices, load last when possible.

Note 2: The pilot-in-command shall be informed of the location of the mobility aid with installed batteries, removed batteries and spare batteries.

4.5.7.3 Securing of ULDs

- a. ULD should be secured by a ULD restraint system on the compartment floor (see chapter 9, Annex C –Aircraft specifics) for relevant information on applicable ULD configuration, loading and restraint system for aircraft type. Observe the handling instructions of the operator in case of missing or unserviceable restraints.
- b. In special cases the ULD can be tied down as a floating pallet with straps to tie-down points on the aircraft structure, as per Operator instructions.

See GOM chapter 9 Annex C Aircraft Specifics.

4.5.7.4 Tie-Down Loads

Definition of forces

Properly tie down the loads on board the aircraft to withstand the following types of forces during takeoff, flight and landing.

Force	Definition
Forward	Horizontal forces effective during landing and steep angles of descent.
Backward	Horizontal forces effective during takeoff and steep angles of climb.
Sideward	Horizontal forces effective during rough landing, turbulence and close turns.
Upward	Vertical forces effective during landing and heavy turbulence in flight.

Depending on the flight situation, the forces can be stronger than normal gravity force of 1 g.



Secure all loads against the different forces according to the gravity factor (g-factor).

In general, the pallet build-up is done with a net which restraints the load against all forces.

Tie-down of load with straps or ropes

If the primary restraint of the load is done by straps, tie-down must be carried out according to AHM 311 or ULDR (OS 6/07).

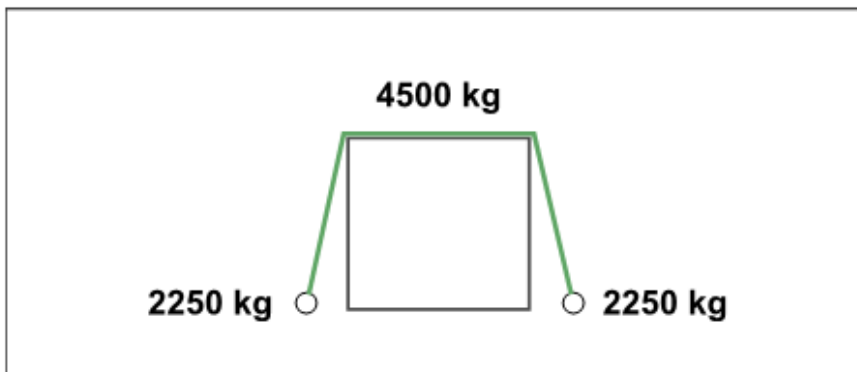
The usage of tie-down material with different capacities is not allowed.

There are two ways to secure a package with tie-down ropes or tie-down straps:

a. Lashing across or around a package (embraced lashing)

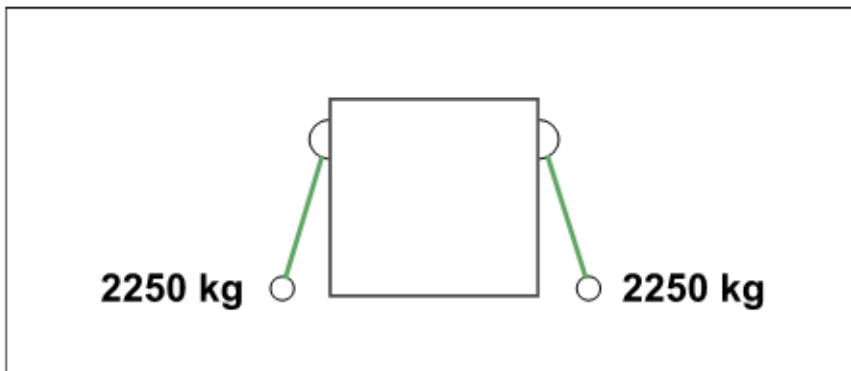
The embraced lashing method with tie-down straps or tie-down ropes is to fasten the strap or rope from one tie-down fitting across or around the load to a second tie-down fitting on the opposite side.

A strap attached to the fittings on opposite sides of the load is rated for twice its ultimate load capacity, e.g. an ETSO/TSO-C172 strap with 2,250 kg (5000 lb.) rated restraint capacity will provide up to maximum 4,500 kg (10,000 lb.) ultimate load for standard lashing.



b. Lashing directly fastened to the package (direct lashing)

If a tie-down strap is directly fastened to the load with one tie-down fitting, the ultimate restraint capacity of the strap (e.g., an ETSO/TSO-C172 strap with 2,250 kg (5000 lb.) ultimate load) will apply.



4.5.7.5 Use of Tie-Down Material

Make sure that tie-down material is in a serviceable condition.

a. Tie-Down ropes

1. Fix tie-down ropes to the aircraft floor tracks or tie-down fittings.
2. Make sure that the overlapping ends of the tie-down ropes are long enough and will not loosen in the case of sudden stress.
3. Fix the tie-down ropes to the tie-down rings in a way that they may be easily loosened for unloading.
4. Do not fix tie-down ropes to other parts of the aircraft.
5. Do not use the same attachment points for lashing, which are used to secure the net sector divider nets.

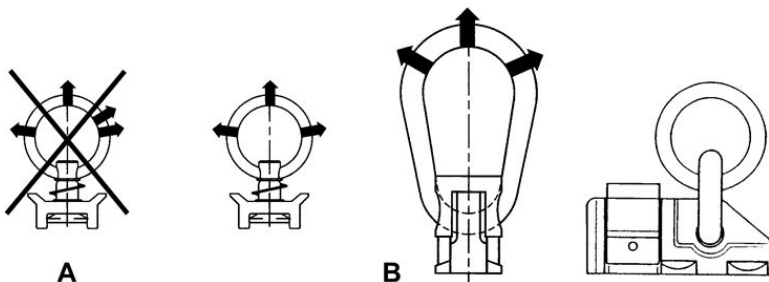


b. Tie-Down fittings

A single tie-down fitting may receive up to three straps/ropes in three different restraint directions (one up and two opposite horizontal directions). Forces generated by the load



can never act in more than one direction at the same time; thus, the fitting will never be pulled by more than one strap/rope at the same time. Therefore, never attach more than three straps/ropes to the same fitting and never more than one strap/rope in the same direction.



Alpha-Numeric	DESCRIPTION
A	Forbidden
B	Allowed

Fix tie-down rings to the aircraft floor only at tie-down points or tie-down tracks
Distribute the attachment points of the tie-down rings evenly (nearly equal distances) over the length of the piece.

Example of tie down attachment points on outboard side lock and side guide

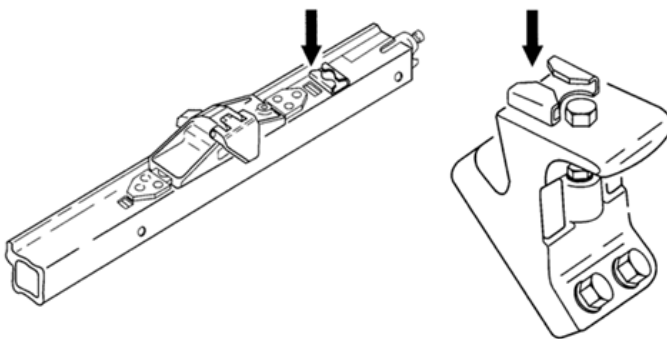




Figure 4.5.7.5a - Example of tie-down attachment points on outboard side lock and side guide

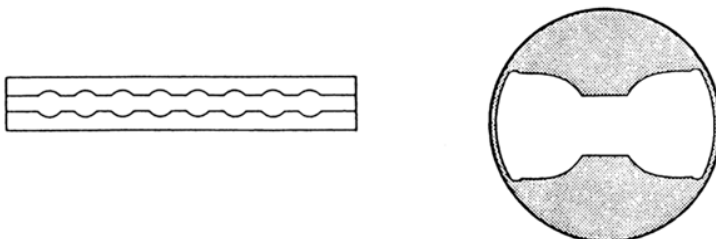


Figure 4.5.7.5b—Example of tie-down attachment points on track and anchor plate

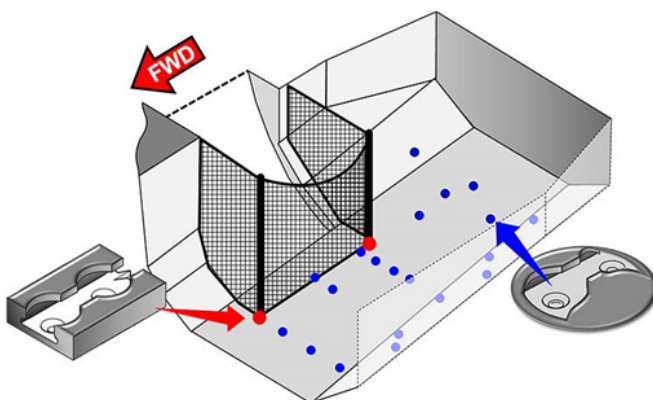


Figure 4.5.7.5c—Example of tie-down attachment points in the bulk compartment

CAUTION! Tie-down is forbidden on any part of the aircraft structure, other than those described in Figure 4.5.7.5c, even if equipped with rings or tie-down points.

c. Tie-down straps

Use only certified ETSO/TSO C172 tie-down straps

Fix tie-down straps to the aircraft with their fixed tie-down rings only at dedicated tie-down points or tie-down tracks.



Figure 4.5.7.5d—Example of tie-down straps

d. Tightening

1. Tighten the lashing strongly, but not so strong that load or tie-down material is damaged
2. Make sure that all tie-down ropes or tie-down straps used for lashing the same piece have the same tension
3. To protect fragile or sensitive cargo or dangerous goods, use cloth, cardboard or similar material for edge protection

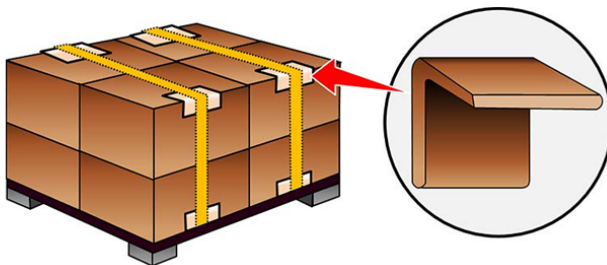


Figure 4.5.7.5e—Protect the edges of fragile or sensitive cargo

e. Sharp Edges

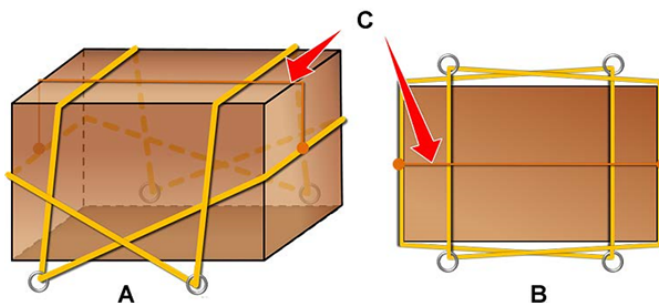
To avoid cutting or grinding of tie-down ropes or tie-down straps, smoothen sharp edges with a piece of soft materials (e.g. cloth, cardboard, plank or similar).

4.5.7.6 Standard Lashing

For standard lashing use:

- a. Four tie-down rings
- b. Four tie-down ropes/straps and one safety rope
 - i. Two against upward forces
 - ii. One against forward forces
 - iii. One against backward forces
 - iv. One safety rope

The safety rope prevents the tie-down ropes/straps used against forward and backward forces from sliding down.



Alpha - Numeric	DESCRIPTION
A	Isometric view
B	Top View
C	Safety Rope

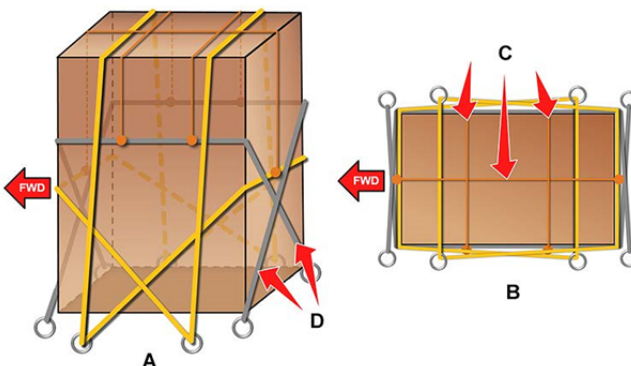
Sideward forces

Sideward forces are normally covered by the standard lashing for upward, forward and aft forces. The rope/straps must be close to the pieces.

Exception

If a piece is more than twice as high as wide:

1. Tie-down against sideward forces additionally to the standard lashing
2. Place this additional lashing between half and two-thirds of the height
3. Secure this lashing by two safety ropes to prevent them from sliding down.





Alpha - Numeric	DESCRIPTION
A	Isometric View
B	Top View
C	Safety Rope
D	Additional Lashing

Barrels

Barrels are difficult to lash because of their round shape and mostly sharp rims. Use supporting planks for a safe lashing.

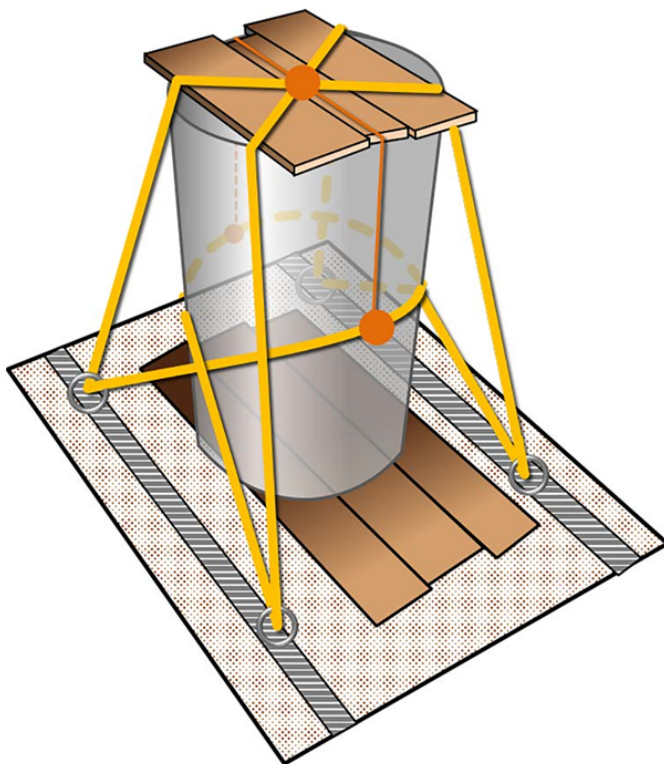


Figure 4.5.7.6—Lash barrels with protective planks

4.5.7.7 Securing of Dangerous Goods

- Handle dangerous goods with utmost care to prevent any damage to persons or goods.



- b. Strictly observe all special handling instructions, labels or imprints (e.g. THIS WAY UP) or arrows showing the proper orientation of the package).
- c. On a pallet, securing by tie-down is not necessary if all load on the pallet including the dangerous goods package, is secured by the pallet net.
- d. In a bulk compartment or a container, securing by tie-down is not necessary if the package cannot move horizontally or vertically. The net section or container must be volumetrically full (three-quarters of the height), and the entire floor area must be covered.

Observe the securing requirements as shown below:

Note: When the net sector in the bulk compartment or a lower deck aircraft container is volumetrically full or filled completely with other load on the entire floor area securing by tie-down is not necessary.

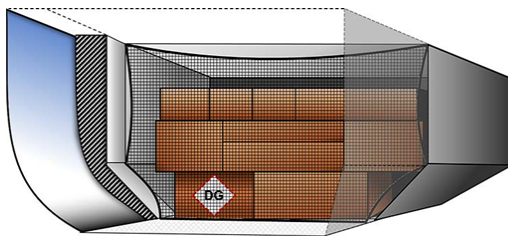


Figure 4.5.7.7a—Example 1

If the entire floor area of a container or lower deck aircraft container is not filled completely with another load, tie down the dangerous goods package to prevent any movement.

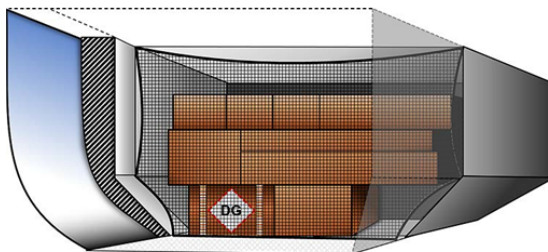


Figure 4.5.7.7b—Example 2

If the net-sector in the bulk compartment or container, which is not volumetrically full, tie-down the dangerous goods package to prevent any movement.

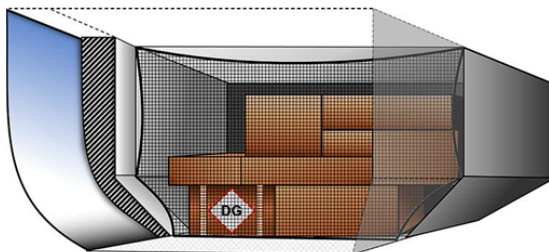


Figure 4.5.7.7c—Example 3

Securing small dangerous goods packages

If securing by tie-down in a net sector or container is not possible because of the small size of the package:

Fill the net sector or container as shown above (see Figure 4.5.7.7a—Example 1), or put planks on top of the package (see Figure 4.5.7.7d—Example 4) to make securing by tie-down possible.

If neither is possible, do not load the package.

If the net sector in the bulk compartment or container is not volumetrically filled, tie-down of all items is required.

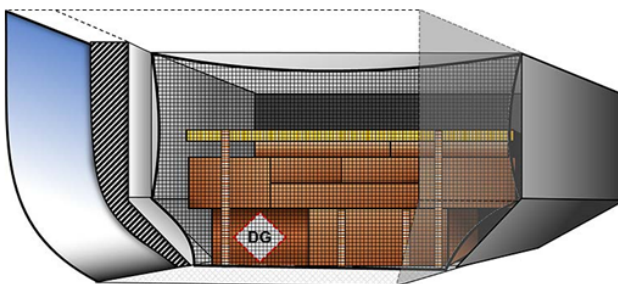


Figure 4.5.7.7d—Example 4

4.5.8 Load Spreading

When the weight of item(s) to be loaded exceeds the maximum floor load per square meter or the maximum floor load per running meter of a compartment, the weight must be spread to prevent damage to the compartment floor. This applies to HEA loads, but may also apply to smaller items weighing less than 150 kg (330 lb.). The item must be fully restrained (see figure 4.5.8) and can be spread by making use of wooden boards or beams.

CAUTION! Overloading can cause damage to aircraft frames and ribs and consequently can have serious implications for the safety of the aircraft.

The weight should be spread by making use of wooden boards or beams, in which case:



- a. The surface to support the weight will be enlarged, or
- b. The length will be enlarged.

The load spreading instructions shall be in accordance with operating airline requirements. The information will be included on the LIR.

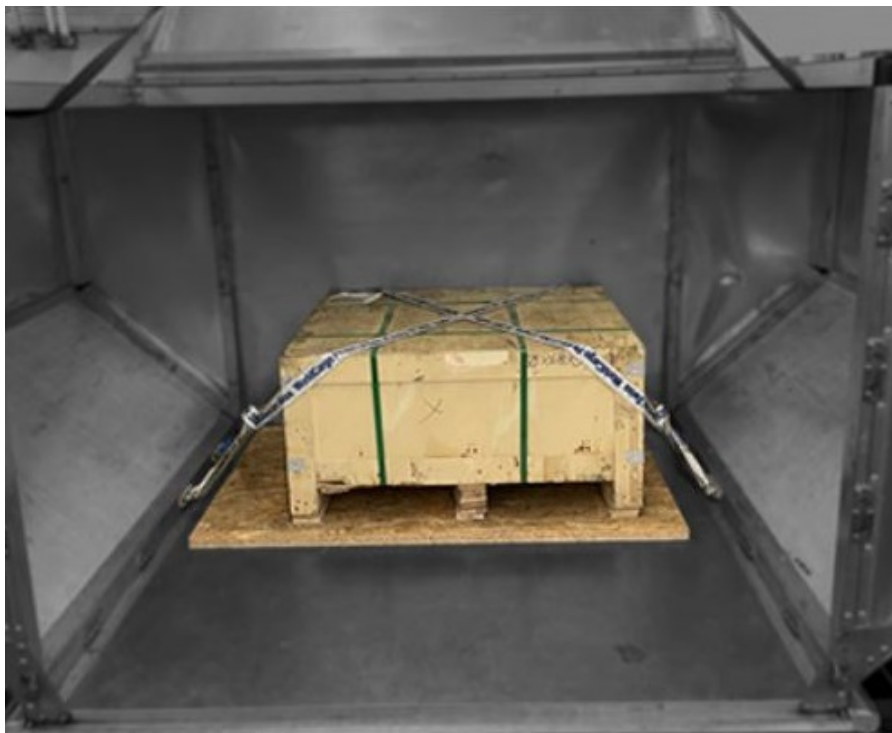


Figure 4.5.8

4.5.9 Aircraft Unit Load Devices

4.5.9.1 General

ULDs can be divided into two groups:

- a. Aircraft Containers
- b. Aircraft Pallets and Aircraft Pallet Net combination.

ULD can be directly restrained onto the aircraft structure by the Cargo Loading System (CLS) and each ULD shall meet minimum technical specifications to ensure safe restraint of the load. These specifications are published in the IATA Unit Load Device Regulations (ULDR).



4.5.9.2 Identification/Labelling of Unit Load Devices

Identification

ULD shall be marked in accordance with the standard IATA ULD ID Code format (see ULDR SS 40/1), which consists of ULD Type Code, ULD Serial Number, and ULD Owner Code. The standard IATA ULD ID Code format is illustrated in Table 4.5.9.2

ULD ID Code Composition	ULD Type Code			ULD Serial Number					ULD Owner Code	
ULD ID Code Positions	1	2	3	4	5	6	7	8	9	10
ULD ID Code Format	a	m	m	m	n	n	n	(n)	m	m

Symbol	Description
a	Represents a single alphabetic character (characters A through Z)
n	Represents a single numeric character (numerals 0 through 9)
m	Represents a single character of mixed alpha-numeric
()	Represents an optional character position

Table 4.5.9.2—IATA ULD Code format

All ULDs shall be identified with ULD tags (refer to AHM 420) when loaded.

The preprinted letters (in boxes) indicate the specific application of the ULD tag.

- Each ULD tag shall be fully completed.
- One ULD tag shall be placed in the tag holder of a container.
- A cross-check shall be performed during the loading of the ULDs. The following identification numbers must always be checked to ensure they correspond with each other:
 - ULD ID Code shown on the LIR
 - ULD ID Code shown on the ULD identification tag
 - ULD ID Code marked on the ULD

4.5.9.3 Checking ULD Conditions on the Ramp

- Visually Detectable Damage Check
 - Visual checks for any detectable damage to ULD components should be performed during ramp operations in order to continuously monitor and verify the serviceability of a ULD to ensure that: only serviceable ULD is loaded aboard aircraft.

Note: Unserviceable ULD may be loaded onto an aircraft only when expressly allowed with empty or limited load and/or other restrictions (e.g. additional tie-down) in accordance with ULD manufacturer's documentation such as the Component Maintenance Manual (CMM) and the Operator's instructions.

- Unserviceable ULD shall be identified and removed from service immediately Failure to identify and remove unserviceable ULDs from service could:



- i. Cause injury to personnel
 - ii. Damage the aircraft structure
 - iii. Impact on-time Performance
 - iv. Damage ULD contents (baggage, cargo or mail)
 - v. Affect flight safety
3. If the visually detectable damage to a ULD component is identified during the visual check, refer to that ULD component's corresponding damage limit on the ULD Operational Damage Limits Notice (ODLN) and follow the instructions below:
 - i. If damage to a ULD component is within the allowable damage limit, the ULD is still serviceable
 - ii. If damage to a ULD component exceeds the allowable damage limit, the ULD is deemed to be unserviceable
4. The following list includes but not limited to some typical stages during ramp operations when visually detectable damage check on ULD should be performed. An airline or a Ground Handling Service Provider,(GHSP) may choose to add or reduce occasion(s) to perform ULD visual checks during ramp operations based on its own safety risk assessment and mitigation strategies:
 - i. Prior to dispatch to an aircraft
 - ii. Prior to loading aboard an aircraft
 - iii. When unloading from an aircraft
 - iv. Whenever loaded ULD is interlined, interchanged, or otherwise transferred between parties prior to acceptance, including ULD handover between cargo warehouse personnel and ramp personnel

CAUTION! Neither ULD serviceability check nor visually detectable damage check shall discharge airline responsibility to maintain ULD airworthiness inspection and ensure only airworthy ULD aboard an aircraft.

- b. In addition to the visually detectable damage check, the following ULD conditions should also be checked during ramp operations:
 1. Check if the container curtain door(s) and pallet nets are closed and latched properly;
 2. Check for each of the following defects:
 - i. Accumulations of snow, water, ice;
 - ii. Evidence of spills or leaks from load;
 - iii. Evidence of damage to the load;
 - iv. Evidence of tampering (cuts, tears of plastic foil, etc.) to the load.
 3. At the ULD loader and in the aircraft:
 - i. Identify the presence of any protective plastic sheet put over the top of a pallet net or container, that is not approved by the airlines' operations manuals;
 - ii. Check for any visible evidence that the load may have moved out of the build contour during transportation.
 4. Check if nets and straps are properly tightened without any slack or excess.
- c. Unserviceable ULDs;
 1. An Unserviceable ULD tag (see AHM 420 Attachment E) must be completed and attached to the unserviceable ULD.
 2. DO NOT load unserviceable ULDs on board any aircraft.
 3. Inform the operator/owner and return the unserviceable ULD to the cargo warehouse.
- d. For other Defects



1. Close and secure the container curtain door(s) and pallet net by appropriately trained and qualified personnel in ULD build-up
2. Remove accumulations of snow, water, ice
3. Defects such as spill/leak from load, damage to the load, or tampering should only be fixed and resolved by the appropriately trained and qualified personnel. In cases where the defect cannot be fixed/resolved on the ramp, the Cargo Handling Agent at the cargo warehouse should be contacted.

Danger:

- Do not touch the spill/leak from dangerous goods and immediately inform the personnel responsible for safety before moving the cargo
 - In cases where tampering evidence is identified, the personnel responsible for security should be informed
4. Remove any dispose protective plastic sheet put over the top of a pallet net or container before loading the ULD into the aircraft
 5. Improper ULD contour or overhang/indent size should only be fixed and resolved by the appropriately trained and qualified personnel in ULD build-up
 6. For net and strap tension concerns due to the existence of slack or excess, any appropriately trained and qualified personnel in ULD build-up can make appropriate adjustments to nets and straps to secure the load at any point along the ULD operational procedures
 7. For all other defects identified, contact appropriately trained and qualified personnel to assist in proper resolution in accordance with the requirements of the airlines

Note: Training Requirements as per AHM chapter 1100.

4.5.10 Transport of Cargo and Mail in Passenger Cabin

Passenger aircraft are not certified to carry cargo on passenger seats or ULDs (pallets or containers) in the passenger cabin secured to the seat tracks.

Before starting such operations, a safety risk assessment shall be performed involving all relevant operational departments (i.e., ground, cargo, cabin, flight, engineering). If required, this type of operation shall be approved by the local authority.

For further guidance on the use of aircraft configured for the carriage of passengers to safely transport cargo in the passenger cabin, refer to IATA Guidance for the Transport of Cargo and Mail on Aircraft Configured for the Carriage of Passengers.

For training, refer to (<https://www.iata.org/contentassets/094560b4bd9844fda520e9058a0fbc2e/guidance-safe-transportation-cargo-passenger-cabin.pdf>).

4.6 Aircraft Departure

4.6.1 Introduction

A departure is normally conducted with a dialogue between flight crew and ground personnel member in charge of the departure operation via an interphone. This procedure ensures the highest level of safety during departures based on a precise exchange of information. The ground staff member in charge of the departure operation shall maintain continuous contact



with the flight crew and is responsible for the ground maneuver. The scope of this departure procedure is limited to conventional towbar and towbarless pushback operation.

Note: The term “headset” also applies whether a wired or wireless interphone system is used.

Other personnel are also involved in the departure process. The number of other staff and their functions/responsibilities can change depending on the:

1. Operating airline procedures
2. Aircraft type
3. Ground Support Equipment (GSE) used for the maneuver
4. Airport infrastructure
5. Stand configuration

Section 4.6.2 describes the responsibilities for the main functions involved in the pushback maneuver.

4.6.2 Ground Staff Member Responsibilities

4.6.2.1 Ground Staff Member Responsible for Departure

The responsible ground staff member is defined as the person performing the communications with the flight crew. A responsible ground staff member shall be in charge of each aircraft pushback. This function can be performed by different agents in different roles and positions.

The ground staff member responsible for the departure shall:

- a. Be in charge of the entire pushback, once clearance to begin pushback has been given by the flight crew.
- b. Ensure the pushback tractor and/or towbar/towbarless (TWL) tractor is suitable for the specific aircraft type.
- c. Conduct briefings with all persons involved in the aircraft movement to review and confirm how the aircraft will be maneuvered.
- d. Have ultimate responsibility to review pushback procedures based on conditions observed and advise flight crew of any anticipated changes to pushback procedures.

4.6.2.2 Push-back Tractor Driver

The pushback tractor driver shall:

- a. Ensure the pushback tractor and towbar/TWL tractor is suitable for the specific aircraft type.
- b. Stand by for clearance-to-push communication from the flight crew or responsible ground staff member or brake operator in case of towing.

Note: When a single person pushback is conducted, the pushback tractor driver shall also carry out the function of the for departure as defined in GOM 4.6.2.1



4.6.2.3 Wing Walker

TUIfly Nordic and TUI Airways establishes requirements for wing walkers. The presence of such personnel may also be controlled or restricted by Civil Aviation Authorities or local Airport Authorities

Where applicable, the wing walker or other assist personnel shall:

- a. Be under the direction of the responsible ground staff member at all times.
- b. Use two marshalling wands, either day wands or illuminated wands for low-visibility operations.
- c. Be positioned before and during movement of the aircraft as follows, where applicable and/or permitted:
 1. Approximately 1 m (3 ft) outboard of the wingtip, clearance and any potential hazards.
 2. In line with the rearmost main gear wheel
 3. Able to maintain visual contact with the person responsible for pushback/towing.
 4. At a safe distance from the moving aircraft/pushback tractor during the entire pushback
 5. Maintain situational awareness to avoid personal injury hazards e.g., moving equipment and vehicles, aircraft, slip, trip and fall hazards such as chocks, cones, GSE, uneven ground, spillages, etc.

Note: See diagrams below for positioning of wing walkers during aircraft arrival on stand and during pushback.

- d. Ensure the aircraft movement path is clear of any obstructions (i.e., other aircraft, vehicles).
- e. Provide "Clear to Move Aircraft" clearance signals at all times to the person responsible for pushback by using a distinct pendulum arm motion. Refer to GOM 3.4.6.1.
- f. Continue to monitor the aircraft path until the aircraft is stopped at the departure point.
- g. If at any time during aircraft movement, the wing walkers are unsure or identify an imminent danger, signal the person responsible for pushback with the "STOP" signal (refer to GOM 3.4.7.6).
- h. When the aircraft is stopped at the departure point, position themselves either at the 11 o'clock or 1 o'clock position in clear visibility of the flight crew on the terminal side at a safe distance away from the aircraft.
- i. Give the "Hold Movement of Aircraft" signal to the flight crew when the visual "Brakes Engaged" signal has been received from the person responsible for pushback. Refer to GOM 3.4.6.3 and 3.4.9.1.
- j. Remain in position until the responsible ground staff member takes over the marshalling clearance of the aircraft.
- k. Return to the terminal once marshalling duty has been transferred.

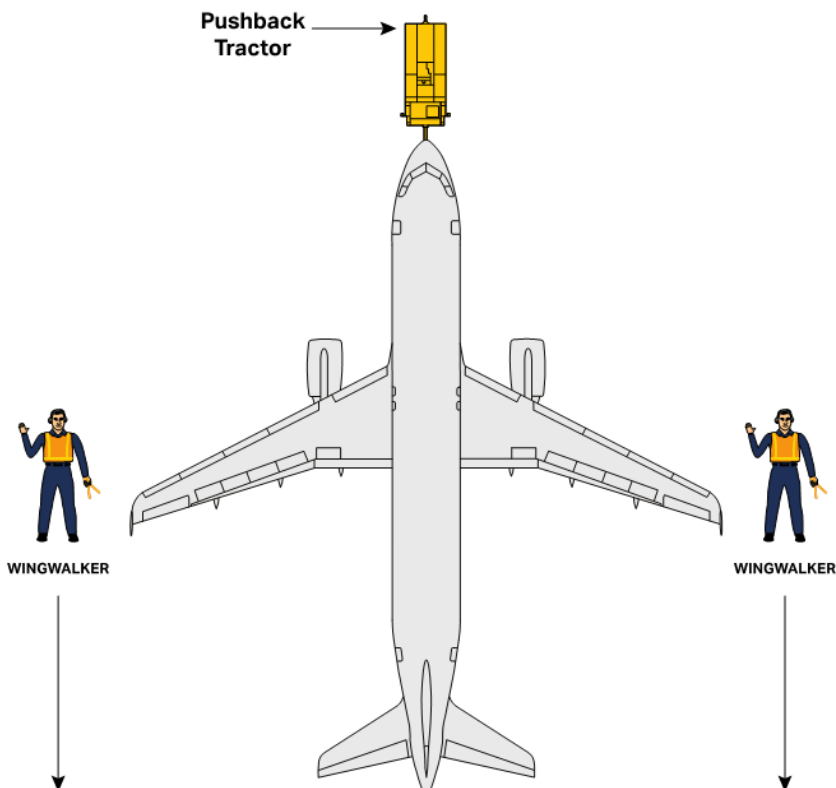


Figure 4.6.2.3—Wing Walker

4.6.3 Pre Departure Activities

4.6.3.1 Pre Departure Walk Around Check

The walk around should start as soon as possible after all ground servicing activities have been completed.

Walk around the entire aircraft at a normal walking pace. The check shall start as close as possible to departure time. If any part of the aircraft still has GSE engaged at the time of the check, or if GSE re-engages with the aircraft after the check, the applicable area(s) must be re-inspected.

The pre-departure walk around check shall include the following:

- a. The apron is clear of all FOD items that may cause aircraft damage or pose a risk.
- b. All GSE including passenger boarding devices are detached.
- c. The stand area is clear of obstructions.



- d. GSE and vehicles are positioned clear of the aircraft path.
- e. Adequate clearance exists between the aircraft and facilities or fixed obstacles along the aircraft movement path.
- f. All aircraft servicing panels and/or hatches are closed and secured

Exception:

External power and headset panels.

- g. Cabin and cargo access doors are closed and:
 - 1. Handles are flush with the fuselage and, where applicable, all other visible indicators confirm that doors are correctly locked.
 - 2. There is no visible damage on the aircraft, particularly around cabin and cargo doors.
- h. Any observed abnormalities on the aircraft observed (e.g. obvious damage, fluid leakage, unremoved pitot covers) are immediately brought to the attention of flight crew, maintenance personnel and the person responsible for supervision..
- i. Items such as propeller straps and tail stands are removed.
- j. Landing gear safety pins are removed.
- k. There are no obvious signs of unmarked dents or other skin panel damage

Note 1: In the event of the aircraft returning to stand, the pre departure walk around check must be repeated.

Note 2: It is essential to have adequate lighting when doing the walk around check. If the lighting is insufficient, use a torch.

CAUTION! If any of the above conditions or actions are not met, inform your supervisor, maintenance and the Pilot-in-Command. This may affect the safety of the intended flight.

4.6.3.2 Pre-Departure Table

General

Prior to aircraft movement, the responsible ground staff (headset operator) must ascertain that the following requirements are met:

Legend: **TWT**-towbar tractor **TWL**-towbarless tractor

ACTION	APPLICABLE TO				
	PUSHBACK		TOWING		TAXI OUT
	TWT	TWL	TWT	TWL	
The required pre departure servicing checks are completed.	✓	✓	✓	✓	✓
Fire protection devices are available and correctly positioned (as per local rules).	✓	✓	✓	✓	✓



ACTION	APPLICABLE TO				
	PUSHBACK		TOWING		TAXI OUT
	TWT	TWL	TWT	TWL	
The tractor and towbar combination, if applicable, are suitable for the operation, considering the aircraft type and weight, weather and surface conditions.	✓	✓	✓	✓	
The steering bypass pin is installed correctly or the nose gear steering torque links are disconnected, if applicable, or ensure the nose gear steering mechanisms are set as required for pushback (as applicable to aircraft type).	✓	✓	✓	✓	
Communication with flight crew/brake operator and ground staff member is established via interphone system.	✓	✓	✓	✓	✓
Aircraft Main Landing Gear (MLG) chocks are installed and nose gear chocks are removed, if applicable.	✓	✓	✓	✓	
Aircraft nose gear chocks are installed and MLG chocks removed, if applicable.					
Additional staff, such as wing walkers, are present, if applicable/required.	✓	✓	✓	✓	
If an Air Start Unit (ASU) is required, check the equipment is correctly positioned and suitable for the operation.	✓	✓			✓
If an ASU engine start is undertaken, communicate to confirm ASU position and engine start sequence with the flight crew.	✓	✓			✓



ACTION	APPLICABLE TO				
	PUSHBACK		TOWING		TAXI OUT
	TWT	TWL	TWT	TWL	
All persons not involved in the aircraft departure operation are clear of the departing aircraft, outside the ERA, and remain clear of the aircraft and pushback equipment throughout the pushback maneuver.	✓	✓	✓	✓	✓
The GSE is parked in designated locations outside the ERA, and the intended path of the aircraft remains clear of equipment and other obstacles throughout the pushback maneuver.	✓	✓	✓	✓	✓
The Passenger Boarding Bridge (PBB) is fully retracted and parked in its designated parking location, if applicable.	✓	✓	✓	✓	✓
The ERA and the path/area that the aircraft will move toward is clear of FOD, and remains so throughout the pushback maneuver, ensuring safe aircraft movement.	✓	✓	✓	✓	✓
The stand surface condition is sufficiently free of ice, snow, etc., to ensure safe aircraft movement.	✓	✓	✓	✓	✓
The ramp area is free of objects/obstacles that may be impacted by the aircraft or may endanger others due to jet blast effects.	✓	✓	✓	✓	✓
The air intake and blast areas of the aircraft engines are clear of persons and obstacles, such as GSE.	✓	✓			✓



ACTION	APPLICABLE TO				
	PUSHBACK		TOWING		TAXI OUT
	TWT	TWL	TWT	TWL	
All persons involved in the aircraft movement stay well clear of the danger areas around the tractor landing gear and aircraft engines.	✓	✓	✓	✓	
Flight crew/brake operator confirm that the aircraft parking brake is set.	✓	✓	✓	✓	
Completion of the pre-departure table is indicated to the flight crew.	✓	✓	✓	✓	
A qualified brake operator is in the cockpit, where required by an operator procedure.			✓	✓	
Cross-reference with GOM section:	4.6.4.2	4.6.4.3			

Note: Where a remote-controlled pushback tractor connected to the nose gear is used, TWL predeparture activities shall apply.

Danger: It is critical that the responsible ground staff member (headset operator) establishes verbal communication with the flight crew via the aircraft interphone system, as departures using marshalling hand signals without headset communication shall only be conducted in exceptional cases.

4.6.3.3 Pre-Departure Communication

An aircraft departure shall always be conducted using interphone communications. If the interphone becomes/is unserviceable, use standard hand signals (refer to GOM 3.4.7 and 3.4.8 for the departure).

Headset interphone connection points.



B787-8/9. Location rear of NLG



B737- 8 MAX, 2 options available.

Right hand side within the NLG bay.



Right hand side service panel. NOTE; this is 2.5m above ground level.





B737- 800 NG

Right hand side service panel.





- a. Connect the Interphone and:
 1. Verify the communication system is functional
 2. Update flight crew on the progress of the ramp operation
- b. Prior to departure, conduct a briefing with the flight crew and the ground staff member responsible for the departure, to: Review departure specifics (e.g., direction of movement, ASU requirement, final positioning, taxi out direction).
 1. Review standard hand signals to be used, including emergency signals.
 2. Repeat all given instructions or acknowledge them in a manner clearly indicating that they have been understood and will be complied with.

CAUTION! Repeat all given instructions or acknowledge them in a manner clearly indicating that they have been understood and will be complied with.



- c. Request permission to disconnect ground power, if applicable.
- d. Disconnect GPU/FPU after approval is received from flight crew.

Note: The ground staff responsible for departure should be in continuous communication with flight crew by interphone.

4.6.4 Connecting the Pushback Vehicle

4.6.4.1 General

- a. Prior to connecting the tractor to the aircraft, as per Table 4.6.3.2, the tractor may be parked in front of the aircraft or outside of the ERA, but never behind the wings.
- b. Ensure the nose gear steering bypass pin is correctly installed prior to towbar/TWL connection to the aircraft and/or ensure the nose gear steering mechanisms are set as required for pushback (as applicable to the aircraft type). The steering bypass pin shall be:
 - 1. Labeled with the specific aircraft type(s) for which it can be used.
 - 2. Identified with a "Remove Before Flight" streamer.
 - 3. Checked regularly for proper technical condition, or as per manufacturer instructions.

Note: Each aircraft type has specific requirements for the bypass of the nose gear steering mechanism. Refer to Annex C, chapter 9 - Aircraft specifics for nose gear steering bypass pin details.

- c. Ensure the steering hydraulic system is depressurized or the nose gear steering torque links are disconnected, as applicable for aircraft not fitted with a nose gear steering bypass system. Coordination with the flight deck would be required to ensure a safe depressurization and repressurization of the aircraft hydraulic system.
- d. If using chocking option 1 (see GOM 4.2.2 Chock Placement Diagrams) and where required by the aircraft type, prior to connecting the towbar/TWL, confirm that the aircraft parking brake is set.
- e. A guide person shall be used to assist in the final approach to the towbar/nose gear when a tractor and towbar is used for the pushback process. When a TWL tractor is used, a guide person shall be used when the vision of the tractor driver is/might be restricted.

4.6.4.2 Connecting Pushback Tractor and Towbar

- a. Where applicable, remove the chocks from the nose gear and reposition at the main gear (in accordance with *GOM 4.2.2 Chock Placement Diagrams option 2*).

Note: Nose gear wheel chocks may be removed without notification, provided the Main Landing Gear wheel chocks are still positioned.

- b. Connect the towbar to the nose gear first.
- c. Ensure the towbar connection is secured and a locking pin is in place.
- d. Ensure the tractor and towbar are aligned with the centerline of the aircraft while connecting.
- e. Raise the towbar so its head is at the same height as the tractor connection.
- f. Approach the towbar slowly until the connection aligns with the pushback tractor.
- g. Ensure the front wheels of the tractor remain straight and the tractor is in line with the centerline of the aircraft.



- h. The pushback tractor shall only be connected to the aircraft once all GSE is detached from the aircraft.

Note: Revised sentence regarding GSE detachment

- i. Raise the towbar wheels by releasing pressure on the hydraulic pump.
- j. Select the Park or Neutral gear (if no selection for Park) and set the parking brake of the pushback tractor.
- k. To minimize the possibility of injury, Ground handling personnel shall:
 - 1. Face the tractor when connecting the towbar to the tractor.
 - 2. Stand with both legs on the same side of the towbar during the connection/disconnection procedure (i.e. do not stand astride/over the towbar).

4.6.4.3 Connecting Towbarless Tractor

- a. Ensure the correct aircraft type is selected on the TWL control panel, where applicable and in accordance with TWL operating procedures.
- b. On final approach to the aircraft, the tractor shall be properly aligned and correctly positioned.
- c. Ensure the aircraft nose wheels are safely locked into the tractor cradle by the tractor locking mechanism.
- d. Position the TWL tractor to standby for lifting.
- e. Select the Park or Neutral gear (if no selection for park) and set the parking brake of the pushback tractor.
- f. Ensure aircraft is not lifted while any GSE or PBB are connected to the aircraft.

Note: If using chocking option 1 (see GOM 4.2.2 Chock Placement Diagrams), prior to final positioning of the TWL, confirm that the aircraft parking brake is set.

4.6.4.4 Connecting Remote Controlled Tractor to Nose Gear

- a. Ensure the remote control unit's battery is sufficiently charged.
- b. Ensure the tractor is sufficiently charged for the task/pushback maneuver.
- c. Switch on the remote control unit and ensure it connects to the tractor.

Note: See GOM 4.6.4.3 for other points related to connecting TWL

4.6.5 Wheel Chock Removal

Prior to removal of chocks the responsible ground staff member (headset operator) shall:

- a. Via the interphone or hand signals, confirm the aircraft parking brake is set.
- b. Check all GSE have been disconnected from the aircraft, except for Ground Power Unit (GPU) and Air Start Unit (ASU) when air start is required.
- c. Check the passenger boarding devices have been retracted from the aircraft, if applicable.
- d. Check the pushback tractor and towbar are fully secured to the nose gear and the parking brake is set on the tractor.
- e. For TWL tractor operation, check that equipment is fully secured to the nose landing gear (NLG) and the parking brake is set on the tractor,
- f. Give clearance to ground staff member to remove chocks. After removal, chocks shall be placed in their designated location.



Note 1: If a chock is stuck and cannot be removed manually, the stuck chock can be removed by moving the aircraft after the aircraft brakes have been released, with precautions and in coordination with the responsible ground staff member for the departure.

Note 2: Once high-wind or icy conditions have passed, any additional chocks that were added to the aircraft may be removed so that chock placement reverts to that for normal conditions.

Note 3: If hand signals are used (i.e., the aircraft interphone system is inoperative), the responsible ground personnel shall seek confirmation that the aircraft parking brake is set prior to removal of the chocks. Refer to GOM 3.4.7 Marshaling Hand Signals for Aircraft and GOM 3.4.9 Technical/Service Hand Signals-Flight Crew to Ground Staff

4.6.6 Departure Communications

4.6.6.1 General

Departure communications procedures outlined in this section are a basic standard for both pushback and open ramp (taxi out) departures. Certain operators may have specific requirements in their departure communications that may vary. This communication standard shall apply. The specific dialogue contained herein does not forbid the exchange of additional important information between flight crew and ground staff member using non-standard phraseology (e.g., request for authorization to disconnect ground support units).

- Note:**
1. If the pushback needs to be stopped, the following call shall be made: "Stop Pushback"
 2. Where applicable, use "pull out" instead of "pushback".

4.6.6.2 Departure Communication Dialogue

The following dialogue is to be used for a departure.

Note: In the case of an aircraft taxi-out, "Pushback" and "Pushback Completed" phases are not applicable.

PUSHBACK STAND, INITIAL COMMUNICATION	
Flight Crew	Ground Crew
"FLIGHT DECK TO GROUND"	
	"FLIGHT DECK, GO AHEAD"
"CONFIRM BYPASS PIN IS INSTALLED AND ALL DOORS AND HATCHES ARE CLOSED"	
	"BYPASS PIN IS INSTALLED AND ALL DOORS AND HATCHES ARE CLOSED"



SELF MANOUEVERING STAND, INITIAL COMMUNICATION	
Flight Crew	Ground Crew
"FLIGHT DECK TO GROUND"	
	"FLIGHT DECK, GO AHEAD"
"CONFIRM ALL DOORS AND HATCHES ARE CLOSED"	
	"ALL DOORS AND HATCHES ARE CLOSED"
AFTER COMPLETION OF BEFORE START PROCEDURE, BEFORE START CHECKLIST, AND PUSHBACK CLEARANCE OBTAINED	
Flight Crew	Ground Crew
"READY FOR PUSHBACK (mention airplane nose direction, start-up point, pull forward, etc.), PARKING BRAKE SET"	
	"CONFIRM PARKING BRAKE RELEASED"
"PARKING BRAKE RELEASED"	
	"COMMENCING PUSHBACK"
AFTER COMPLETION OF BEFORE START PROCEDURE, BEFORE START CHECKLIST, AND START-UP CLEARANCE OBTAINED	
Engine Start (1 engine at a time)	
Flight Crew	Ground Crew
"REQUEST TO START NUMBER 2"	
	"CLEAR TO START NUMBER 2"
"STARTING NUMBER 2"	
Repeat for the other engine.	
Engine start (both engines simultaneously)	
Flight Crew	Ground Crew
"REQUEST TO START NUMBER 2 AND 1"	
	"CLEAR TO START NUMBER 2 AND 1"
"STARTING NUMBER 2 AND 1"	
WHEN PUSHBACK IS COMPLETE *	
Flight Crew	Ground Crew



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	"PUSHBACK COMPLETED, SET PARKING BRAKE"
"PARKING BRAKES SET"	
Ground Crew disconnect tow bar and removes bypass pin	
WHEN THERE IS NO NEED FOR FURTHER ASSISTANCE	
Flight Crew	Ground Crew
"DISCONNECT, SHOW ME HAND SIGNAL"	
	"DISCONNECTING, HOLD POSITION AND WAIT FOR HAND SIGNAL ON YOUR LEFT/ FRONT/RIGHT"
"HOLDING POSITION AND STANDING BY FOR HAND SIGNAL ON THE LEFT/FRONT/ RIGHT"	
Ground Crew disconnects the headset	

This exchange is followed by a hand signal to the FCM to indicate that disconnect is complete and all is clear for taxiing. Prior to commencing taxi from any stand / pushback configuration, a confirmation shall be received that the airplane is clear.

4.6.6.3 Items to be Communicated between Responsible Ground Staff Member and Flight Crew

Phase	Task	Responsible Ground Staff Member Action
Departure preparation	GPU removal	When instructed by flight crew, remove GPU.
	Towbar/TWL tractor connection	a. Get confirmation that aircraft parking brake is set. b. Get confirmation that the nose wheel steering is depressurized or advise flight crew that the steering bypass pin is inserted, if applicable. c. Connect the towbar. d. Connect the TWL tractor.
	Chock removal	a. Get confirmation from flight crew that aircraft parking brake is set. b. Remove chocks.
	Predeparture check	Advise flight crew that the predeparture check has been completed or communicate any discrepancies.



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Phase	Task	Responsible Ground Staff Member Action
Engine start	Starting engines	When requested by the flight crew, advise when the engines may be started and the start sequence.
	ASU	When requested by the flight crew, signal to the ASU operator to supply the required pressure.
Pushback and engine start	Brakes	Get confirmation that the aircraft parking brake has been released.
	Movement of the aircraft (pushback/pull out)	Get permission from flight crew to commence pushback.
	Direction of push/nose	If applicable, ask in which direction the aircraft must be pushed or in which direction the nose should point after pushback.
	Engine start	When requested by the flight crew, advise when the engines may be started.
Pushback completed	Towbar/TWL tractor disconnect	a. Get confirmation that the aircraft parking brake is set. b. Disconnect. c. Remove the steering bypass pin, if applicable.
	Headset removal	a. Get permission from the flight crew to disconnect the headset. b. Advise the flight crew to hold position and wait for visual signal at left/front/right of the aircraft.
Departure	"All Clear" signal	a. Verify steering bypass pin removal has been completed, if applicable. b. Give the "All Clear" signal when the path of the aircraft is clear of all obstacles. c. Get acknowledgement from the flight crew of the "All Clear" signal.

4.6.6.4 Departure Communication without Interphone

An aircraft departure shall always be conducted using interphone communications. Only if the interphone becomes unserviceable or under extreme circumstances where the interphone is not available, shall the responsible ground staff member and flight crew use conventional hand signals. Refer to GOM 3.4.7 and 3.4.8 for the Marshaling Hand Signals for Aircraft and Technical/Servicing Hand Signals-Ground Staff to Flight Crew and technical hand signals flight.

4.6.6.5 Interphone Communication Failure

Aircraft pushback requires a communication interphone. If the interphone becomes unserviceable or communications is lost, the following procedure shall be followed:



- a. In the case of a single person operation and if no other means of communication are available, stop the movement and immediately request assistance to continue the movement (depending on local situations and regulations).
- b. In the case of a multiple person operation, communication with the flight crew will be established using hand signals (See GOM 3.4.7 and 3.4.8). The tractor driver shall be able to receive the visual signals as relayed from the flight crew. Once hand signal communication has been established, the pushback can resume.
- c. Notify air traffic control (ATC), if radio available, and continue the movement in cooperation with ATC, depending on local regulations.

4.6.7 Pushback Maneuver

4.6.7.1 Anti-Collision Lights

During departure, the flight crew establishes contact with the ground crew for pre-departure checks, flight crew then commences the before start procedure and following this the ACB can then be switched on. The flight crew will then contact ATC for push back and / or engine start clearance.

CAUTION! Anti-collision lights that are switched on are a visual indication to ground staff of imminent engine start-up or aircraft movement. Vehicle traffic shall stop until the aircraft has departed from the area.

CAUTION! If the anti-collision lights are switched on unexpectedly (other than in preparation for the departure or towing operation), ground personnel shall move away and remain outside the ERA. The ground staff member shall check with the flight deck before resuming ground handling activities.

CAUTION! In case of the lower anti-collision light failure, the flight crew shall inform the personnel responsible for the departure operation to inform personnel involved in the operations about the imminent engine startup or aircraft movement.

4.6.7.2 Pushback Requirements

- a. Prior to the aircraft movement, make sure the parking brake is released and the anti-collision lights are switched on, in accordance with local airport regulations.
- b. Headset operator shall signal "Clear to Push" to the pushback tractor driver and wing walkers (if applicable) once the flight crew advises that the aircraft brakes have been released and approval for pushback is given by the flight crew.

Note: In case of single person pushback operation, the pushback operator performs headset functions.

- c. Select the appropriate gear on the tractor and slowly begin movement. Start the pushback operation in a straight line.
- d. Carry out the pushback maneuver at a pace no greater than 5 km/h or 3 mph (walking speed) and where required, apply the vehicle brakes gently.
- e. During the maneuver, the pushback tractor driver shall ensure the taxiway (including other movement areas in the intended aircraft path) is free of other aircraft/equipment/obstacles. If an obstacle is identified, the pushback shall stop immediately until the obstacle is clear.



- f. During pushback, ensure the steering turn limits are not exceeded and advise the flight crew if any are exceeded. Damage may occur to the nose gear. Refer to the operating airline's GOM for the specific limits and how they are marked on the aircraft.

CAUTION! The flight crew shall be notified immediately in the event any connection between the tractor and the aircraft is lost during aircraft movement.

- g. At the end of the maneuver, the aircraft/pushback tractor shall be correctly aligned with the taxiway centerline.
- h. When the pushback maneuver is complete, headset operator will receive the "Vehicle Brakes On/Stop" signal (see GOM 3.4.5.4) from the tractor driver to confirm that the tractor parking brake is set. Prior to the disconnection of the tow bar or towbarless tractor from the aircraft nose gear, headset operator:
1. Request flight crew to set the aircraft parking brake and hold the existing position until final clearance signal to taxi.
 2. When confirmation that the aircraft brakes have been set is received from the flight crew:
 - i. Give the "Vehicle Brakes On/Stop" signal as per GOM 3.4.5.4 to the tractor driver and wing walkers, if applicable. Tractor driver releases the tractor parking brake and puts the gear in neutral to release any pressure on the towbar.
 - ii. Give authority to disconnect pushback equipment.

4.6.7.3 Staff Safety During Pushback Maneuver

- a. Tow Bar/TWL Tractor Operations
1. Throughout the pushback operation, all staff walking on the ramp (including the headset operator when the aircraft is moving) shall remain clear of:
 - i. The area on the ground directly under any part of the aircraft (including, but not limited to, the fuselage, wings, stabilizer, engines, nose gear).
 - ii. The aircraft's path.
 - iii. The tractor's path.
 - iv. Engine danger areas.
 2. The headset operator shall:
 - i. Be in visual contact with the tractor driver throughout the pushback.
 - ii. Avoid walking backwards and maintain situational awareness to reduce the possibility of tripping.
 - iii. Use a headset cable long enough to operate safely and be allowed freedom of movement while not posing a trip or tangle hazard (not applicable when a wireless headset is used).
 - iv. Ensure the headset cable remains clear of aircraft/pushback wheels.
 3. If the responsible ground staff member is too close to the nose gear or pushback equipment, the tractor driver shall stop the pushback and review the required safety clearance conducted.
- b. Remote-Controlled Pushback Operations
- When pushback operations are undertaken using remote-controlled pushback equipment connected to either the nose or NLG, the responsible ground staff member shall:
1. Stand forward of the aircraft.
 2. Follow its movements and always be in sight of the flight crew.



3. Stay outside the engine's intake/suction area and wheel path of the aircraft during the entire pushback maneuver.
4. Maintain sufficient clearance between the equipment and themselves throughout the pushback maneuver, where the pushback equipment is connected to the nose landing gear.
5. Be in continuous communication with the flight crew via the interphone system.

4.6.7.4 Pushback and Pull Forward

When a pull forward maneuver is performed after a pushback maneuver, particular attention must be paid to the end of the pushback maneuver and during the whole pull forward maneuver. To prevent the aircraft from overtaking/pushing the pushback vehicle during the pull forward phase, the following precautions shall be applied:

- a. The aircraft engines shall be at idle thrust during all of the pushback/pull forward maneuver.

Note: If the requirement to pull forward is known in advance, consider not starting the engines until the pull forward maneuver is completed.

- b. The pull forward maneuver shall be performed with the pushback vehicle in the lowest gear available.
- c. Braking shall be performed smoothly and without jerks.
- d. The flight crew shall be alerted immediately to stop the aircraft using gentle braking if aircraft control cannot be ensured/maintained from the pushback vehicle.

Note: The following factors increase the risk that the aircraft will overtake/push the pushback vehicle and shall be, therefore, taken into account:

1. Aircraft type and number of engines started/running.
2. Slope of the parking stand and taxiway.
3. Use of a tractor and towbar to undertake the pushback/pull forward maneuver.
4. Adverse weather conditions.

CAUTION! Care shall be taken to avoid a 'jackknife' situation between the aircraft and the pushback vehicle due to asymmetric thrust from the aircraft (one engine running) during the transition from push to pull or vice versa. Do not exceed the manufacturer's maximum tow angles.

Danger: If the aircraft overtakes/pushes the pushback vehicle, the ground staff member shall ensure they stay well clear of the path of the pushback vehicle and the aircraft nose landing gear wheels.

CAUTION! Flight crew and aircraft maintenance personnel must be informed if the aircraft overtakes/pushes the pushback vehicle, as both the pushback vehicle and the aircraft nose landing gear may be damaged by the incident.
To relieve torsional stresses applied to the landing gear components and tires, move the aircraft in a straight line for a few meters to ensure the nose wheels are in the straight-ahead position when completing the pushback maneuver.



To relieve torsional stresses applied to the landing gear components and tires, move the aircraft in a straight line for a few meters to ensure the nose wheels are in the straight-ahead position when completing the pushback maneuver.

Danger: If the nose wheels are not in the centered position, they can turn quickly to their centered position when the steering bypass pin is removed. This can result in personnel injury and aircraft damage.

4.6.7.5 Maneuvering During Wintery Slippery Conditions

During adverse weather conditions (e.g., fog, rain) visibility and traction will be affected. The tractor driver shall reduce and adapt vehicle speed as required by the current conditions. When maneuvering the aircraft on slippery apron surfaces, extreme caution is required to avoid losing control of the tractor due to skidding, which may also lead to jackknifing (where the tractor is pushed around by the aircraft in an uncontrolled movement). Many elements can contribute to the hazards involved (i.e., strong winds, slippery road surfaces, pavement slopes). Therefore, the following minimum precautions must be observed:

- a. Avoid sudden turns, deceleration or acceleration.
- b. Except when using an ASU, do not start aircraft engines unless:
 1. The condition of the pavement is such that reasonable traction is ensured.
 2. The aircraft parking brake is set.
 3. The aircraft is disconnected from the tow tractor/TWL tractor.

4.6.7.6 Maneuvering During Low Visibility Conditions

- a. Airport operators are responsible for developing low visibility procedures that are relevant for the airport.
- b. Ground handling personnel shall be trained/authorized, as appropriate, prior to undertaking low visibility aircraft ground movement operations.
- c. Ground handling personnel shall observe the movement limitations and other regulations applicable to the airport's low visibility procedures at all times.
- d. Pushback tractors should be equipped with an airfield map, where this is available.
- e. If there is any doubt as to the exact position of the pushback tractor/aircraft, the tractor driver shall stop the tractor/aircraft and inform air traffic controller (ATC) immediately.

CAUTION! The responsible for the departure (headset operator) should be positioned outside the tractor at safety distance (refer to GOM 4.6.7.3) during:
Low-visibility conditions (heavy rain, fog, bad lighting)
Lack of sufficiently visible markings
Obstructions behind the pushback (e.g., GSE, light post)

4.6.8 Engine Start

4.6.8.1 Communication During Engine Start

Coordinate the engine starting sequence with the flight crew by conducting a pre-departure briefing.

- a. During the engine start, communicate with the flight crew only if you observe circumstances that require immediate notification and action by the flight crew.
- b. When starting up with an ASU, supply the pressure at the request of the flight crew.



- c. If ramp conditions are below standard for a normal pushback (e.g., hazards, obstacles, slippery, icy), the in charge of pushback will inform the flight crew that engine start clearances will not be given until either:
 - 1. The aircraft is moving over an area of the ramp where the conditions are safe for an engine start, or
 - 2. The pushback has been completed, the aircraft has come to a complete stop and the parking brake has been set.

Note: From the flight crew seat facing forward, the engine on his/her left is referenced as engine number one.

4.6.8.2 Engine Start Using an Air Start Unit

- a. Only personnel and equipment involved in engine starting or aircraft pushback are permitted within the ERA during engine start.
- b. Personnel and equipment involved in the engine start shall remain clear of engine danger areas.
- c. Establish communications with the flight crew and confirm the total number of engines to be started, the engine start sequence to be used and number of ASUs being used.
- d. Advise the engine start sequence to the ASU operator(s) and any other ground personnel.
- e. Where possible, the ASU should be positioned on the opposite side of the aircraft to the engine being started.
- f. The ASU shall be positioned in accordance with the following to prevent damage to the aircraft and personal injury.
 - 1. It will not hamper other ramp operations, such as loading and fuelling.
 - 2. It is parked outside the engine danger areas (if possible).
 - 3. It is parked at least 2 metres from the aircraft.
 - 4. The towbar is directed away from the aircraft and coupled to the tractor to simplify its removal after engine start-up (towed ASU).
 - 5. It could be easily removed after engine start-up, avoiding the engine danger areas.
 - 6. The exhaust pipe of the unit is directed away from the aircraft fuselage and wing.
- g. When connecting the air supply hose to the aircraft, ensure that:
 - 1. The air supply hose is laid in such a way as to avoid any twists that could affect the air flow.
 - 2. The aircraft receptacle is free from FOD or any fluid.
 - 3. Ensure that the air supply hose coupling is firmly attached to the aircraft connector and pressurize the ASU after consulting the flight crew.

CAUTION! If the ASU is positioned within an engine danger area, ensure that this engine will only be started after disconnection/removal of the ASU.

- h. If the aircraft is to be pushed back, connect the pushback tractor and set the tractor's parking brake, where this is possible without disconnecting ground electrical power.
- i. If a pushback tractor is not connected, position a chock in front of the nose wheel.
- j. Confirm with the flight crew that the aircraft parking brake is set, then remove main gear chocks.
- k. The ASU operator shall ensure the unit is ready to supply air pressure.
- l. The headset operator shall inform the flight crew that the ground crew are ready for engine start.



- m. Prepare for engine(s) start. Refer to section 4.6.6.2, Departure Communication Dialogue and Signals, for communications requirements.
- n. When engine start is complete, the headset operator shall signal the ASU and ground power operator(s) to disconnect the ASU and remove ground power.
- o. Disconnect the ASU hose(s).
- p. Close and latch external air start and electrical panels.

Note: Some aircraft types may require other equipment such as GPU to start engine in case of APU failure. Refer to operating airline procedures.

Danger: When connecting and disconnecting ASU hose(s), walk directly underneath the fuselage, or close alongside it, keeping clear of engine danger areas

4.6.8.3 Engine start using cross-bleed

Engine start using cross-bleed can only be performed once the pushback has been completed, the aircraft brakes have been engaged, and the area around the aircraft is clear.

CAUTION! With engine(s) above idle thrust, blast and suction effects are greater

4.6.8.4 Communication During Fire

a. **Engine Fire**

The flight crew normally detects an engine or APU fire and will take action using the engine/APU fire extinguishing system. However, the ground staff member shall alert the flight crew immediately via the headset if flames are noticed from the engine or engine pylon. If a headset is not available, the appropriate "Fire" hand signal must be used. Refer to 3.4.7.10.

b. **Engine Tailpipe/Exhaust Fire**

If flames from the engine tailpipe are noticed during engine starting, the ground staff member shall alert the flight crew immediately, as such a fire might not be detectable via temperature sensors and/or fire warning systems in the aircraft.

CAUTION! Do not fight engine fires with fire extinguishers on the ground when the flight crew is in the flight deck. The flight crew will take all necessary action.

4.6.9 Pushback Disconnection

4.6.9.1 Pushback Tractor and Towbar Disconnection

- a. The responsible ground staff member shall remove the tow pin securing the towbar to the pushback tractor
- b. The pushback driver/operator shall check that other staff are clear of the intended travel path and slowly drive the pushback tractor to a position in the aircraft's path and be visible to the flight crew, if possible, ready for the towbar to be reconnected.
- c. The responsible ground staff member shall disconnect the towbar from the nose landing gear and reconnect to the pushback tractor and move clear of the pushback tractor, in view of the driver/operator.
- d. The responsible ground staff member shall give an 'OK' signal to the pushback driver to confirm that the towbar is reconnected and it is clear to drive away.



- e. The pushback driver/operator shall check that other staff are clear of the intended travel path and slowly drive the pushback tractor to a position visible to the flight crew until the responsible ground staff member on the interphone has disconnected and is in view of the flight crew.

Note: Ensure the towbar is disconnected from the tractor before disconnecting from the aircraft (except where the towbar is specifically designed to be disconnected from the aircraft first).

4.6.9.2 Tow Barless Tractor/Remote Controlled Tractor Disconnection

- a. The pushback driver/operator shall ensure that the tractor wheels are centralized and lower the aircraft nose-wheel and open the tractor cradle.
- b. The pushback driver/operator shall check that other staff are clear of the intended travel path and slowly drive the pushback tractor to a position in the aircraft's path and be visible to the flight crew, ensuring that the wheel cradle is completely clear of the aircraft nose landing gear before commencing a turn.
- c. The pushback driver/operator shall rotate the driver's seat to the 'drive away' direction if applicable.
- d. The pushback driver/operator shall remain in a position visible to the flight crew until the responsible ground staff member on the interphone has disconnected and is in view of the flight crew.

4.6.10 Pushback Completion

Pushback completion includes repositioning the pushback tractor, removing the nose gear steering bypass pin and displaying the steering bypass pin to flight crew, if equipped:

- a. Remove the nose gear steering bypass pin and/or ensure the nose gear steering mechanisms are set to normal conditions for taxiing (as applicable to the aircraft type).
- b. If previously disconnected, reconnect the torque link and inform flight crew.
- c. Complete the headset communication and, after receiving flight crew approval, disconnect the headset and close the access panel (if applicable to the aircraft type).
- d. Move clear of the aircraft to a safe position visible to the flight crew and away from its intended path.
- e. Display the steering bypass pin to the flight crew (if applicable to aircraft type).
- f. Give the "All Clear" signal (see GOM 3.4.9.6) once eye contact has been made with the flight crew and they are expecting the signal. In low-light conditions, the flight crew will turn on the interior lights of the flight deck.
- g. Remain in position until an acknowledgement from the flight crew is received.
- h. Drive the tractor back to the terminal, the appropriate holding position, or to the next task.

Danger:

If the nose wheels are not in the centered position, they can turn quickly to their centered position when the steering bypass pin is removed. Personnel injury and/or aircraft damage could result.

Do not disconnect the interphone communication cable until the towbar or TWL tractor has been disconnected from the nose gear.

Danger:

After disconnection of the headset, no attempt shall be made to approach the aircraft unless cleared by the flight crew to do so via hand signals.



4.6.11 Incidents During Pushback

4.6.11.1 Incidents During Pushback Involving Pushback Tractor / Towbar or Towbarless Tractor

The list of incidents below outlines the recommended actions to be undertaken immediately by flight crew and/or tractor drivers in the event of an incident during the pushback operation. The list of incidents is not exhaustive and the recommended actions should only be applied if they are deemed the safest course of action given the exact circumstances of the incident. If airport and/or operator procedures differ from the recommended actions below, those shall be followed.

Flight crew	Tractor Driver
Tractor Failure	
(a) Inform ATC. (b) Apply the aircraft parking brake. (c) Listen to VHF and wait for assistance. (d) Relay information from ATC to headset operator	(a) Stop aircraft/tractor set. (b) Apply tractor parking brake. (c) Inform the flight crew. (d) Contact supervision and equipment maintenance to advise of the situation, as required. (e) Follow instructions received from headset operator, as applicable. (f) If the TWL/towbar connection with the tractor needs to be reset (i.e., removed and reconnected), the aircraft shall be chocked while the tractor is being replaced.



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Flight crew	Tractor Driver
Tractor/Aircraft Separation	
(a) Apply the aircraft brakes. (b) As soon as the aircraft is at a standstill, apply the aircraft parking brake before releasing the pedal. (c) Inform ATC. (d) Relay information received from ATC to headset operator, if applicable.	(a) Do not apply tractor brakes. (b) Inform the flight crew of separation. (c) Follow the aircraft path attentively and stop the tractor according to the aircraft position. (d) Apply the tractor parking brake. (e) Confirm the aircraft parking brake is set then chock the aircraft. (f) Assess the reason for the separation. (g) Contact supervision, equipment maintenance and aircraft maintenance to advise of the situation, as required. (h) Follow instructions and/or complete pushback maneuver, as applicable.
Towbar/Shear Pin Failure (remains attached to the aircraft)	
(a) Apply the aircraft parking brake. (b) Inform ATC. (c) Relay information received from ATC to headset operator, if applicable.	(a) Stop aircraft/tractor set. (b) Apply the tractor parking brake. (c) Inform the flight crew of the towbar/shear pin failure. (d) Contact supervision, equipment maintenance and aircraft maintenance to advise of the situation, as required. (e) Chock the aircraft and replace the towbar. (f) Complete the pushback maneuver.
Pushback Tractor Fire	
(a) Inform ATC and headset operator. (b) Apply the aircraft parking brake. (c) Determine the need for aircraft emergency evacuation and confirm to ATC and headset operator.	(a) Inform the flight crew. (b) Stop aircraft/tractor set immediately. (c) Conduct an assessment of the situation and consider tackling the fire with the onboard tractor firefighting equipment only if it is deemed safe to do so. (d) Consider disconnecting and moving the tractor to a safe distance from the aircraft, if deemed safe and appropriate to do so. (e) Contact supervision, equipment maintenance and emergency services to advise of the situation, as required. (f) If flight crew confirm emergency evacuation, assist in the evacuation as far as is possible/practical by directing passengers/crew toward a safe location.



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Flight crew	Tractor Driver
Aircraft Fire	
(a) Inform ATC and headset operator. (b) Apply the aircraft parking brake. (c) Execute onboard emergency procedures.	(a) Stop aircraft/tractor set immediately. (b) Inform the flight crew. (c) If safe to do so, disconnect and move the tractor to a safe distance from the aircraft, where possible. (d) If safe to do so, headset operator should maintain communication with the flight crew and follow instructions. (e) Contact supervision and emergency services to advise of the situation, as required. (f) If flight crew confirm emergency evacuation, assist in the evacuation as far as is possible/practical by directing passengers/crew toward a safe location.
Accident with Other Aircraft or Vehicle	
(a) Contact ATC stating position and nature of the accident. (b) Listen to VHF and wait for assistance. (c) Relay information received from ATC to headset operator, if applicable.	(a) Stop aircraft/tractor set immediately. (b) Apply tractor parking brake. (c) Inform the flight crew. (d) Contact supervision, aircraft maintenance, equipment maintenance and emergency services to advise of the situation, as required. (e) Follow instructions received from the headset operator and/or wait for assistance. (f) Do not disconnect the tractor unless specifically instructed to do so by the headset operator and/or ATC. (g) If disconnecting the tractor, the aircraft must be chocked.
Interphone Communication Failure	
If during the pushback operation the interphone fails, the aircraft must be immediately stopped and an alternate means of communication established before continuing. If this is not possible, assistance must be requested.	
Visual Contact with the Wing Walkers Is Lost (if used)	
In the event that the tractor driver is unable to establish visual contact with one or both of the wing walkers, when used, the pushback shall be stopped and not recommence until visual contact is re-established.	

4.6.12 Re-establishing Communication After Departure

4.6.12.1 Introduction

The following procedure is to be used when the ground staff member or flight crew need to re-establish interphone communication after it has been disconnected.

4.6.12.2 Initiated from the Flight Deck

The flight crew sets the parking brake and reestablishes communication with the ground staff member via a company channel or ATC. If visual communication with the ground staff member is still established, visual signals may be used.



4.6.12.3 Initiated from the Ground

If the ground staff member needs to reestablish communication with the aircraft after dispatch, do not approach the aircraft. If communication cannot be established using hand signals, make contact via a company channel or ATC.

When preparing to re-establish communication with the aircraft, the ground staff member shall take the following precautions:

- a. Make sure the ground staff member has been seen by the flight crew and the intention to approach the aircraft to re-establish interphone communication is understood.
- b. Approach the aircraft from the direction where visual contact with the flight crew is maintained for as long as possible.
- c. Only the person establishing the interphone communication shall approach the aircraft.
- d. Stay outside the aircraft's engine danger area when approaching the aircraft.
- e. If possible, position the pushback tractor in front of the aircraft in clear view of the flight crew to act as a safety barrier and prevent premature movement of the aircraft.

CAUTION! For safety reasons, the interphone communication system cannot be used when there is thunderstorm activity over the airport as there is a risk of electrical discharges between the aircraft and the interphone system. Under these conditions, communication headsets cannot be worn.

4.7 Open Ramp Departure

An open ramp is a taxi-in and taxi-out operation area. In some locations, the aircraft may be towed from an open ramp to a taxiway, prior to engine start.

- a. Complete all pre-departure checks.
- b. Refer to departure communication (See [GOM 4.6.6.2](#)) section and follow required phases of dialogue.
- c. Ensure all staff and equipment is clear of the aircraft behind the ERA.
- d. Position for marshalling in an area behind the ERA while being in clear view of the flight crew on either side of the aircraft (depending on facility)

4.8 Aircraft Powerback Operations

4.9 Aircraft Towing

4.9.1 Introduction

Aircraft towing may be carried out for three reasons:

- a. Maintenance Towing

Towing an aircraft without passengers, without cargo and with minimum fuel on board.

- b. Operational/Dispatch Towing

Towing an aircraft loaded with passengers and/or fuel and/or cargo to/from the terminal gate or parking area to/from a remote location. Operational Towing is not allowed on certain aircraft type.

Note: Operational Towing is not allowed on certain aircraft type.



c. Repositioning Towing

Movement of an aircraft to/from a remote parking area with/without cargo or fuel.

4.9.2 Ground Staff Member Responsibilities

4.9.2.1 Responsible Ground Staff Member for Towing

The responsible ground staff member is defined as the person who has overall responsibility for the towing maneuver and is normally the pushback tractor driver, although the function may be performed by different ground staff members in different roles.

The responsible ground staff member in charge of each towing maneuver shall check to ensure all requirements for the towing operation are met prior to commencing towing operations.

See GOM 4.6.2.2 Pushback Tractor Driver for responsibilities.

See GOM 4.6.2.3 Wing Walker for responsibilities.

4.9.2.2 Brake Operator

Where applicable, in accordance with local procedures, the brake operator shall:

- a. Be responsible for communication with ATC.
- b. Complete a flight deck checklist for towing (refer to the operating airline's GOM).
- c. Ensure all aircraft doors are closed by authorized personnel.
- d. During towing, the brake operator must be seated with the seat belt fastened.
- e. Apply the "Brakes On" and "Brakes Off" procedures in coordination with the headset operator.
- f. Switch on and switch off the external anti-collision lights of the aircraft.
- g. Position the seat in such a way that the brakes can be easily applied when required.
- h. Inform the headset operator immediately if potential contact with any object(s) is detected.
- i. Only apply the brakes during the tow when instructed by the headset operator/tractor operator or when it is clear the aircraft has become separated from the tractor.

Note:

1. For procedures related to incidents during towing (see GOM 4.9.5).
2. Presence on board of staff, other than the brake operator, is forbidden throughout the maintenance or repositioning towing operations, except for flight crew, service providers and maintenance staff. The brake operator must inform them that they must be seated with the seat belt fastened and must follow his safety orders if necessary.

4.9.2.3 Headset Operator

The headset operator is responsible for communications with the brake operator and/or VHF operator.

4.9.2.4 VHF Operator

The VHF operator is responsible for communications with ATC and/or GMC.



Note: The VHF operator may be positioned in the pushback tractor or on the flight deck depending on the ground staff member functions carrying out the towing maneuver.

4.9.3 Pre-Towing Activities

4.9.3.1 General

The following requirements shall be met to perform an aircraft tow:

- a. Carry out a pre-departure walk around in accordance with Section 4.6.3.1.
- b. Carry out the requirements, as identified in the pre-departure table in Section 4.6.3.2, that are relevant to the towing maneuver.
- c. Make sure the flight crew or a qualified brake operator (VHF operator where required) is in the flight deck, if applicable.
- d. Communication shall be established between the headset operator and the flight crew, brake operator (VHF operator, where required), if applicable.
- e. Responsible ground staff member shall conduct a briefing with all persons involved in the aircraft movement to review and confirm how the aircraft will be maneuvered.
- f. Ensure the hydraulic system pressure for aircraft braking and/or the brake accumulator is within the required pressure range. *Refer to chapter 9, Annex C at each aircraft type for details.*
- g. Ensure any required electrical systems for towing are energized.
- h. Ensure all landing gear safety pins are installed. After the tow, ensure all pins are removed and stowed. *Refer to chapter 9, Annex C regarding landing gear safety pin responsibilities and requirements.*
- i. Connect the pushback tractor/equipment in accordance with the relevant instructions contained in Section 4.6.4.
- j. Remove the wheel chocks once ready to do so in accordance with Section 4.6.5 above.

CAUTION! Inform the brake/VHF operator, headset operator and/or maintenance department for technical inspection if anyone:

1. Observes any type of excessive fluid leakage.
2. Notices any signs of unmarked aircraft damage.
3. Observes any fault, failure, malfunction or defect that may affect the safe operation of the aircraft for the intended flight.

4.9.3.2 Pre-Towing Preparation

The following checklist is to be used in preparation for an aircraft tow:

Action	Performed by	
	Brake Operator	Tractor Driver
Apply the flight deck checklist for towing. Refer to GOM Annex C, Chapter 9 - Aircraft Specifics for details.	✓	✓
Test the means of communication between the tractor and flight crew.	✓	✓
Insert the steering bypass pin and deactivate steering.	✓	✓



Give permission to connect the towbar and tractor or TWL tractor after applying the aircraft parking brake.	✓	
Install the landing gear safety pins. Refer to GOM Annex C, Chapter 9 - Aircraft Specifics for details.	✓	✓
Connect the towbar, first to the aircraft, then to the tractor and set the parking brake.		✓
Before connecting the TWL tractor, ensure the aircraft MLG are symmetrically chocked		✓
Connect the TWL tractor and set the parking brake.		✓
Once all GSE has been cleared away from the aircraft, remove or check removal of aircraft chocks.		✓
Ensure the aircraft is clearly visible to other parties according to local regulations, especially after dark (e.g., switch on external anti-collision lights).	✓	
Contact the ATC for clearance to start moving the aircraft (depending on local regulations).	✓	✓
After receiving clearance, release the aircraft parking brake.	✓	
Give clearance and instruction to the tractor driver to start moving the aircraft.	✓	
Request confirmation from the brake operator that the aircraft parking brake has been released.		✓
Conduct tow.		✓

4.9.3.3 Towing Communications

An aircraft towing maneuver shall always be conducted using interphone communications when the brake/VHF operator is present. Certain airlines may have specific requirements for their towing communications that may vary from those described below. This communication standard shall apply. The specific dialogue contained herein does not forbid the exchange of additional important information between the brake/VHF operator and ground staff using non-standard phraseology (e.g., request for authorization to disconnect ground support units). Additionally, two-way radio communication shall be maintained between aircraft/tractor set and ATC, except when under escort by an airport operations or emergency vehicle. Always follow local airport regulations for communication and aircraft movement operations.



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Dialogue between Ground Staff and Brake/VHF Operator		
Phase	Ground Staff	Brake/VHF Operator
Predeparture check	Call: CONFIRM PARKING BRAKE SET	Reply: PARKING BRAKE SET Call: CONFIRM STEERING BYPASS PIN INSERTED/NOSE WHEEL STEERING DEACTIVATED/ LANDING GEAR SAFETY PINS(if applicable)
	Reply: STEERING BYPASS PIN INSTALLED/NOSE WHEEL STEERING DEACTIVATED/ LANDING GEAR SAFETY PINS (if applicable)	Call: CONFIRM CLEAR TO PRESSURIZE (if applicable)
	Reply: CLEAR TO PRESSURIZE (if required)	Call: CLEAR TO CONNECT (towbar and tractor or TWL tractor)
	Call: Request permission to connect the towbar and tractor or TWL tractor)	
	Call: CONNECTING	
After completion of the predeparture check	Call: PREDEPARTURE CHECKS COMPLETED ¹	Reply: ROGER check
	Call: ELEVATING AIRCRAFT (TWL tractor)	Reply: STANDBY
	Call: READY FOR TOWING	
Towing	Call: REQUEST TOW (company name, aircraft type) FROM (location) TO (location) ²	



Dialogue between Ground Staff and Brake/VHF Operator		
Phase	Ground Staff	Brake/VHF Operator
	Call: CONFIRM PARKING BRAKE RELEASED Call: COMMENCING TOWING (mention specific routing to be followed)	Call: TOW APPROVED VIA (mention specific routing to be followed). Reply: PARKING BRAKE RELEASED
Towing completed	Call: TOWING COMPLETED, SET PARKING BRAKE	Reply: PARKING BRAKE SET
Disconnecting	Call: AIRCRAFT CHOCKED Reply: DISCONNECTING Call: TOWBAR/TRACTOR DISCONNECTED	Call: CLEAR TO DISCONNECT

1. Carry out check in accordance with specifications in the pre-departure table in Section 4.6.3.2 that are relevant to the towing maneuver.
2. Transmission from ground staff member depends on local regulations.

CAUTION! All given instructions must be read back or acknowledged in a manner clearly indicating that they have been understood and will be complied with.

CAUTION! When interphone communication is not possible, standard hand signals must be used for communication between the tractor driver and brake operator. Such communication may occur only when the aircraft has stopped.

4.9.4 Towing Maneuver

4.9.4.1 General

See GOM 4.6.7 for pushback phase of the towing maneuver.

- a. Use relevant apron lines as guidance during maneuvering to ensure safe obstacle clearances. Be aware of the size of the towed aircraft.
- b. Keep a minimum safety distance between vehicles to allow sufficient space to stop. Where required, apply the pushback tug brakes gently.
- c. Stop 50 m (55 yd.) before a taxiway intersection if a stop is required.



- d. Relieve torsional stresses applied to the landing gear components and tires by moving the aircraft in a straight line for a few meters to ensure the nose wheels are in the straight-ahead position when arriving at the allocated/relevant parking position.

4.9.4.2 Towing Speeds

Aircraft weight, tractor performance and airfield topography can affect the towing speeds. Towing speeds shall be kept to a minimum and shall not exceed the towing speed limit as regulated by the towing equipment, aircraft and airport.

If requested by ATC/GMS to 'Expedite' due to a live runway crossing, ATC must be informed if this is not possible. ATC/GMC shall also be informed if towing speeds are restricted when towing on live taxiways, as this can lead to congestion on the airfield.

4.9.4.3 Towing Limits

Fuel and other loads can affect an aircraft's balance. To avoid "tail tipping" during towing, ensure that the actual center of gravity of the aircraft is forward of the critical center of gravity. If you are unable to determine this, the responsible ground staff member must request assistance from a qualified weight and balance personnel of the operating airline.

Note: For information relating to requirements and precautions that shall be taken when aircraft towing maneuvering takes place during adverse conditions, refer to the following sections above, as applicable:

- Wintery or Slippery Conditions, refer to GOM 4.6.7.5
- Low-Visibility Conditions, refer to GOM 4.6.7.6

4.9.4.4 Towing onto Parking Stand

Immediately prior to the aircraft being towed onto the stand or gate, the responsible ground staff member shall check and confirm that the area is 'ready' (e.g., clear of obstacles, equipment, FOD, wing walkers, if required).

4.9.4.5 Movement Into/Out of Hangars

- a. Only those personnel trained and qualified in the movement of aircraft into/out of hangars shall perform this operation and a person in charge of the operation must be designated.
- b. Sufficient personnel (wing/tail walkers) shall be assigned to the operation to ensure clearances between the aircraft and objects in the hangar are maintained.
- c. The method of communication between the personnel involved in the aircraft movement into/out of the hangar shall be agreed upon before any movement is started by means of a briefing conducted by the person in charge of the operation.
- d. Floor markings and stop signs shall be in accordance with the aircraft type operating into/out of the hangars.



4.9.5 Incidents During Towing

Brake/ VHF Operator	Tractor Driver
VHF Communication Failure	
a. Set the aircraft parking brake. b. Communicate the issue to ATC. c. Relay appropriate information received from ATC to the headset operator d. Continue to monitor the ATC frequency and maintain communications with the headset operator/tractor driver. e. Release the parking brake prior to recommencement of the towing maneuver.	a. Stop aircraft/tractor set as soon as it is safe to do so. It is not safe to stop on an active runway. b. Apply tractor parking brake. c. Communicate the issue to the brake/VHF operator. d. Attempt to contact ATC via alternative frequency/means. e. Await assistance (e.g., from "Follow Me" vehicle) before completing the towing maneuver. f. After completion of the towing maneuver, report VHF failure to equipment maintenance and follow instructions accordingly.
Tractor Failure	
a. Inform ATC. b. Set the aircraft parking brake. c. Listen to VHF and wait for assistance. d. Relay information from ATC to headset operator/tractor	a. Stop aircraft/tractor set. b. Apply tractor parking brake. c. Inform the brake/VHF operator. d. Inform ATC (TWL towing with one-person operation) driver. e. Contact supervision and equipment maintenance to advise of the situation, as required. f. Follow instructions received from headset/brake operator, as applicable. g. Listen to VHF (TWL towing with one-person operation). h. If the TWL/towbar connection with the tractor needs to be reset (i.e., removed and reconnected), the aircraft shall be chocked while the tractor is being replaced.
Tractor/Aircraft Separation	



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Brake/ VHF Operator	Tractor Driver
a. Apply the aircraft brakes. b. As soon as the aircraft is at a standstill, apply the aircraft parking brake before releasing the pedal. c. Inform ATC. d. Relay information received from ATC to the headset operator/tractor driver, if applicable.	a. Do not apply tractor brakes. b. Inform the brake/VHF operator of the separation. c. Follow the aircraft path attentively and stop the tractor according to the aircraft position. d. Apply the tractor parking brake. e. Confirm the aircraft parking brake is set, then chock the aircraft. f. Assess the reason for the disconnection. g. Contact supervision, equipment maintenance and aircraft maintenance to advise of the situation, as required h. Follow instructions to complete the towing maneuver, as applicable.
Towbar/Shear Pin Failure (remains attached to the aircraft)	
a. Apply the aircraft parking brake. b. Inform ATC. c. Relay information received from ATC to the headset operator/tractor driver, if applicable.	a. Stop the aircraft/tractor set. b. Apply the tractor parking brake. c. Inform the brake/VHF operator of the towbar/shear pin failure. d. Contact supervision, equipment maintenance and aircraft maintenance to advise of the situation, as required. e. Chock the aircraft and replace the towbar. f. Follow instructions to complete the towing maneuver.
Pushback Tractor Fire	



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Brake/ VHF Operator	Tractor Driver
a. Inform ATC and headset operator/ tractor driver. b. Apply the aircraft parking brake. c. Determine the need for aircraft emergency evacuation and confirm to ATC/headset operator/tractor driver	a. Inform the brake/VHF operator. b. Stop the aircraft/tractor set immediately. c. Conduct an assessment of the situation and consider tackling the fire with the onboard tractor firefighting equipment only if it is deemed safe to do so. d. Consider disconnecting and moving the tractor a safe distance from the aircraft, if deemed safe and appropriate to do so. e. Contact supervision, equipment maintenance and emergency services to advise of the situation, as required. f. If the brake/VHF operator confirms emergency evacuation, assist in the evacuation as far as is possible/ required.
Aircraft Fire	
a. Inform ATC and the headset operator/ tractor driver. b. Apply the aircraft parking brake. c. Fight the fire with the onboard extinguisher, where possible. d. Evacuate the aircraft using onboard means, if required.	a. Stop the aircraft/tractor set immediately. b. Inform the brake/VHF operator. c. If safe to do so, disconnect and move the tractor to a safe distance from the aircraft, where possible. d. If deemed safe to do so, the headset operator/tractor driver should maintain communication with the brake/VHF operator and follow instructions. e. Contact supervision and emergency services to advise of the situation, as required. f. If brake/VHF operator confirms emergency evacuation, assist in the evacuation as far as is possible/ required.
Accident with Other Aircraft or Vehicle	



Brake/ VHF Operator	Tractor Driver
a. Contact ATC stating position and nature of the accident. b. Listen to VHF and wait for assistance. c. Relay information received from ATC to headset operator/tractor driver, if applicable.	a. Stop the aircraft/tractor set immediately. b. Apply tractor parking brake. c. Inform the brake/VHF operator. d. Contact supervision, aircraft maintenance, equipment emergency services to advise of the situation, as required. e. Follow instructions received from the headset/brake operator and/or wait for assistance. f. Do not responsible ground staff member the tractor unless specifically instructed to do so by the operator and/or ATC. g. If disconnecting the tractor, the aircraft must be chocked.
Interphone Communication Failure	
If during the towing operation the interphone fails, the aircraft must be immediately stopped and an alternate means of communication established before continuing. If this is not possible, assistance must be requested.	
Visual Contact with Wing Walkers and/or Marshaller Is Lost (if used)	
In the event that the tractor driver is unable to establish visual contact with one or both of the wing walkers or the marshaller, when required, the towing maneuver shall be stopped and not recommenced until visual contact is reestablished.	

CAUTION! A standard communication procedure for abnormal pushback/towing situations (e.g. towbar shear pin failure) cannot consider every possibility that may arise. Therefore, the tractor driver and brake operator shall keep each other informed. Actions should be taken using common sense, taking into account the circumstances of a particular situation.

4.9.6 Towing Completion

The following checklist is to be used at the end of an aircraft tow.

ACTION	Performed by	
	Brake Operator	Tractor Driver
Set tractor parking brake.		✓
Request the brake operator to set the aircraft parking brake.		✓



ACTION	Performed by	
	Brake Operator	Tractor Driver
Inform ATC that towing is completed, and the frequency will be left, depending on local regulations,	✓	✓
Set the aircraft parking brake and check the pressure. Inform the tractor driver: <i>"Parking Brake Set, Pressure Checked"</i> .	✓	
Chock the aircraft MLG.		✓
Switch off the external anti-collision lights of the aircraft.	✓	
Inform the brake operator: <i>"Aircraft chocked"</i> .		✓
Give permission to disconnect the towbar or TWL tractor.	✓	
Disconnect the tractor ground power, where applicable.		✓
Disconnect the towbar (disconnecting from the pushback tractor first, then the aircraft) or TWL tractor.		✓
Remove the steering bypass pin and activate steering.		✓
Place additional chocks, where applicable.		✓
Inform the brake operator: <i>"Towbar/Tractor Disconnected"</i> .	✓	
Release the aircraft parking brake and inform the tractor operator: <i>"Parking Brake Off"</i> (where applicable).		✓
Install and connect a GPU/FPU.	✓	
If installed, remove and stow gear safety pins in the dedicated location.		✓

4.10 Long-Term Parking for Aircraft

4.10.1 Introduction

Successful execution of the long-term parking operation, as well as the recovery and reintroduction of the aircraft back into service after long-term parking, requires close coordination and cooperation between all of the relevant airside and aviation stakeholders, including (but not limited to) the aircraft operator, airport authority, ground handling provider, and maintenance provider.

In anticipation of the possible long-term parking of multiple aircraft, ground service providers shall proactively engage with the relevant stakeholders to develop a long-term parking plan. This plan shall be regularly reviewed (minimum once per year) to ensure the plan is still valid. The plan will require ad hoc review in response to changes to the airside environment, such as changes to operators, aircraft types and numbers, airport layout, ground handling service providers and manufacturers' Aircraft Maintenance Manual (AMM). Depending on each



airport's emergency plan, the airport may require the aircraft to proceed to a designated bay, possibly a remote bay, according to its plans and requirements.

The long-term parking plan shall ensure:

- a. Spacing between adjacent aircraft.
- b. When not parked at a bay (e.g., taxiway), aircraft are parked facing into the prevailing wind.
- c. Anchor points are available for high-wind conditions.
- d. Processes to monitor and adjust for severe weather conditions.

CAUTION! In regions with hot climates, it is preferable to park aircraft on hard surfaces such as concrete or high module asphaltic material rather than on flexible surfaces such as bituminous asphalt. This will avoid indenting those areas during long parking periods.

4.10.2 Aircraft Movement

Based on the airport parking plan, once resumption of operations begins it is important to ensure there is a well-coordinated aircraft movement plan to ensure there is no damage to the aircraft.

Note 1: Ensure all procedures during aircraft ground movement are adhered to as documented in Sections 4.6 to 4.9 of GOM

Note 2: Ensure during any non-normal operations, a robust safety risk assessment is performed, and implementation of the mitigation plan is followed.

Note 3: Ensure timely consultation with the airport operator regarding the aircraft movement.

Note 4: If any surface damage is observed, liaise with the airport management team as per the airport's directives.

CAUTION! After long-term parking, anticipate extra pull or push force required for aircraft wheels to exit any indentations in the pavement and/or to overcome the aircraft tires being out of round. This is to avoid shear pin breakage and/or sudden movement in direction of travel. Refer to the pushback and pull forward procedure in section 4.6.7.4.

Long-term parking of aircraft requires a variety of specific measures to be in place to ensure the continued safety, security and general airworthiness of the aircraft. These measures are both manufacturer and aircraft type specific and are detailed in the operator's manuals and manufacturer's AMM. These documents must be complied with.



5 Load Control

5.1 Load Control Principles

Load control is a process that ensures the production of all applicable documentation complying with operator and regulatory authority requirements, for the safe and secure handling of an individual flight, so that the aircraft is within operational limits, considering both its weight and center of gravity parameters. This includes planning, supervising, reporting, recording of the loading of the aircraft, and weight and balance calculation.

The load control process comprises the following tasks:

- a. Load planning
 - 1. Checking, calculating and communicating of load planning information and data.
 - 2. Ensuring information about dangerous goods and other special loads is taken into account.
 - 3. Planning of the loading and producing a loading instruction report (LIR).
- b. Supervision of aircraft loading and unloading
 - 1. Verification and recording of aircraft loading.
 - 2. Ensuring the aircraft is loaded in accordance with the loading instructions.
 - 3. Load Control Information Exchange including reporting of final loading figures.
- c. Weight and balance calculation
 - 1. Ensuring aircraft weight and balance conditions are correct and within limits.
 - 2. Production of the loadsheet in accordance with the confirmed aircraft loading.
 - 3. The loadsheet reflects the actual loading of the aircraft, including last minute changes (LMCs).
 - 4. Production of other loading documents, such as Notification to Captain (NOTOC), if applicable.
- d. Post-departure messages
 - 1. Producing and transmitting required messages.
 - 2. Document retention, as applicable

Documented communication is required to provide an audit trail and accurate weight and balance calculations for the pilot-in-command (PIC) prior to the aircraft's departure.

Load Control shall be performed by qualified personnel, using the operator's aircraft data and in accordance with the operator's and with local regulatory processes, procedures and forms, all of which shall be provided by the operator.

5.2 Load Planning

5.2.1 General

The person charged with the load planning task shall ensure loads are safely planned and distributed in the aircraft compartments and/or holds considering all aircraft limits.

The load planner shall:



- a. Check aircraft basic weight/index (BW/BI).
- b. Check all items to be included in the dry operating weight/index (DOW/DOI).
- c. Check operational messages from the previous flight or leg, including any special loads, if applicable.
- d. Check aircraft operational limitations or any other restrictions that may limit load planning.
- e. Calculate expected traffic load.
- f. Check any other dangerous goods and special loads (DGSL) that require special handling and segregation.
- g. Plan unit load devices (ULDs), taking into consideration the expected loading figures, the aircraft configuration and operating airline's procedures.
- h. Allocate loading positions for all traffic loads and special loads, if applicable, taking into consideration all flight legs.
 - i. Calculate the estimated zero fuel weight (EZFW) and transmit it to flight dispatch, as applicable, for flight planning purposes.
 - j. Communicate the EZFW every time there is a significant difference from the previous calculation, as per operating airline procedures.
 - k. Check fuel load and distribution.
 - l. Perform a pre-calculation of the aircraft weight and balance to ensure the aircraft operational limits are not exceeded.
- m. Consider aircraft ground stability to avoid tail tipping, as per operating airline procedures and aircraft specifications. Particular attention must be paid to the distribution of the transit load on multi-sector flights. The distribution of the load remaining in the compartments at the next station should be planned, such that it meets the above condition. When this condition cannot be met, the offloading/loading sequence at the transit station shall be planned to ensure aircraft ground stability is maintained. Methods to ensure ground stability include use of tables or graphs to determine the weight required in forward compartments to counteract the weight to be loaded in aft compartments, or calculation of center of gravity for comparison against the applicable tipping and/or towing limit:

Method 1—a scale or table determining the distribution of the loads weight-wise, showing the weight required in the forward compartments to secure ground stability, and the load to be placed in the aft compartments.

Method 2—calculation of the dead load index/% mean aerodynamic cord (MAC), which shall be forward of the dead load index limit on the balance chart and transmitted on the load message (LDM).

Method 3—dynamic calculation of aircraft ground stability using a software application that takes every movement of load into account.
- n. Produce an LIR.

All applicable data is published by TUI Airlines by the publication of an AHM 560 in the TAGO Portal. Any exceptions based on route for passenger or baggage weight will be show here also.

For standard ULD and container standard weights additional instructions to be found in AHM540/DOW/DOI in the TAGO Portal.

Note: *All ULD weights are published in the Unilode Manual which can be found in the TAGO Portal.*



Weight values for crew members;

Weight of crew and its cabin baggage is included in DOWDOI tables in the TAGO Portal.

Crew checked baggage

the procedure is to use actual weights for checked crew baggage. If actual weights are not available use 17 kg as standard weights for checked crew baggage.

Co-mail

Company mail must be accounted for on the weight & balance documentation.

5.2.2 Loading Instruction Report

- a. A LIR shall be issued for each departing flight, to ensure all safety parameters specific to each flight are adhered to.
- b. Complete load distribution for the departing flight, using provisional data and adhering to the segregation policy, as per AHM 514 to AHM 515 and operator requirements.
- c. Indicate all information that could affect loading in the Supplementary Information (SI) section.
- d. Refer to AHM 514 for Electronic Data Processing (EDP) LIR and AHM 515 for Manual LIR.
- e. LIR revisions shall be immediately communicated via appropriate means to loading staff.
- f. *In all cases (manual or computerised LIR), the final actual load (cargo, mail and bags) must be written in each section of the LIR by the person responsible for loading*

In case of system outages manual LIR's per aircraft type are available on the TAGO portal.

5.2.3 Offloading Instructions

- a. Off-Loading instructions may be issued prior to aircraft arrival.
- b. For transit flights, produce offloading instructions as per AHM 514 to AHM 515, where transit load, off-load and all positions are reported.
- c. Consideration shall be given to ensure aircraft stability during the offloading process and passenger disembarkation process.

5.2.4 Notification to the Captain

The Notification to the Captain (NOTOC) is used to inform the PIC of DGSL carried as cargo or mail.

The cargo department is responsible for providing DGSL information in legible written, printed or digital form and transmitting it to the person charged with load planning task. The Load Planner shall produce LIR taking into consideration DGSL information, their compatibility and segregation criteria.

The information contained in the NOTOC shall be made available to the person charged with aircraft loading and supervision task. The person shall:

- a. Verify that DGSL are not damaged or leaking.
- b. Ensure the correct positioning of DGSL as per the LIR and NOTOC.
- c. Report actual loading position.
- d. Signs the NOTOC.
- e. Deliver the signed NOTOC to PIC for signature.



The NOTOC must be issued in adequate number of copies, in order to provide information to all concerned and for file retention.

DGSL information shall be made available to the next downline airport before the flight arrives.

For NOTOC, refer to the current IATA Dangerous Goods Regulations (DGR).

Note: Refer to Chapter 10, Annex D – Dangerous Goods and Weapons, 10.3.1.2. for more information regarding the NOTOC.

5.3 Weight and Balance Calculation

5.3.1 General

a. The objective of the weight and balance calculation task is to ensure that a final and accurate loadsheet is issued and this has been crosschecked with:

1. Final LIR from the person in charge of the Loading Supervision task.
2. Final passenger close-out data.
3. Final fuel figures.
4. All aircraft operational and structural limitations for the appropriate aircraft registration.

Note 1: If a preliminary loadsheet is produced, one or more criteria may not have been finalized.

Note 2: The person designated with the weight and balance calculation task shall ensure all data is finalized or confirmed for manual or electronic loadsheet production.

b. A loadsheet accuracy check will continuously be performed prior to production or transmission of the final loadsheet:

1. Correct flight number and date (flight identifier).
2. Correct aircraft registration.
3. Correct DOW/DOI used according to aircraft type, registration, version, number of crew and pantry.
4. Underload (total traffic load not exceeding allowed traffic load).
5. Correct entry of final fuel figures.
6. Correct entry of transit load data from incoming load-message/load sheet.
7. Correct passenger close out data.
8. ULD tare weight for containerized aircraft.
9. Hold baggage weight and gate delivery items shall be added.
10. Actual loading positions of DGSL indicated on the NOTOC, if applicable.
11. Balance calculation and conditions of loaded aircraft, including LMCs, are within prescribed limits.
12. The loadsheet must be checked against the final LIR and other information related to the actual load.
13. Any operator-specific requirements are adhered to, if applicable.
after the passengers have boarded and the aircraft has been loaded, the Ground Handling Staff must inform the Pilot-in-Command about:
 - i. The number of embarked passengers per type (adult / child / infant) and per cabin section;
 - ii. The actual weight of the checked baggage and cargo loaded per cargo compartment (Hold 1, 2, etc.) and position (P1, P2, etc.);



iii. Any special cargo (e.g. live animals).

14. All specified documents shall be signed by means of manual or electronical identifiers.

The mass and balance documentation shall contain the name of the commander and the name of the person who prepared the document.

c. Loadsheets format and contents shall meet the minimum criteria set in AHM 516, AHM 517, AHM 518.

d. The signed loadsheet shall then be delivered to PIC, either as a manual or digital hard copy or in Aircraft Communication Addressing and Reporting System (ACARS) format.

e. Any changes occurring after the final loadsheet has been produced must be accounted for by either producing a new edition of loadsheet or via documented Last Minute Change process as per the operator's requirement.

f. Any discrepancy in weight and balance documentation shall be reported to the person responsible for the weight and balance calculations and to the customer operating airline agreed reporting methods as required by customer airline procedures.

g. If a discrepancy is discovered after the final loadsheet has been issued, the PIC shall be informed via the available channels without delay and provided with relevant and requested information to prevent unsafe takeoff and/ or landing.

As soon as the final loadsheet cross check has been completed and that the edition number has been noted as being the final loadsheet, then a final verbal confirmation with the flight crew must be made by the TRC / Dispatcher advising the flight crew that they are in possession of the same corresponding edition number and that the cross check with the signed LIR and loadsheet edition number has been completed. This verbal confirmation can be made on the flight deck or via the aircraft intercom system if the aircraft doors have been closed.

If an error has been identified after the aircraft has pushed back, and during taxi, the standard handling procedure would be to inform local ATC who will then contact the aircraft to advise the crew via VHF. The final cross check will consist of :

a) Edition number to confirm with the crew

b) Cross check passenger numbers / TOB

c) Cross check baggage count & cargo

d) Cross check final loading positions, Appendix I17 is available in the TAGO portal.

At some stations a computerized loadsheet is prepared by a Centralised Load Control (CLC).

Further information regarding eloadsheet (ELS) can be found in the TAGO Portal, Documents, 08. TUI OneDCS Training, eLoadsheets.

For stations not approved for producing computerized loadsheets, a manual produced loadsheet will be produced by the Flight Crew. For an example of the manual loadsheet, that Flight Crew will produce, refer to Forms in the TAGO Portal. Flight Crew requests the handler to deliver required details 15 minutes before STD by filling in required details in box 2 'Payload



information from Ground Handling' of the form and confirm by filling in the box 'Prepared by' with name and signature of the platform supervisor.

ORDER OF OFF-LOAD

- a. Should it be necessary to off-load cargo or stores, it is essential that low priority items be taken off first. The order in which items should be off-loaded is shown in the table below, starting with item 1.

Order	Item
1	Company mail
2	Company stores (non essential)
3	Empty ULDs (positioning equipment)
4	Commercial cargo -non perishable}
5	Commercial cargo -perishable}
6	Company stores -must go
7	Charterers excess baggage (bicycles, sports equipment etc.)
8	AOG spares

Note: The cargo sales agent, should also be warned when it is known in advance that this is likely.

ORDER OF OFF-LOAD – Ski Flights ex UK or Ireland (outbound from UK)

Order	Item
1	50% of potable water
2	Standby passengers
3	Bar, (or part of)
4	Cabin Crew in excess of the regulatory minimum
5	Skis
6	Snowboards
7	Boot bags
8	Bags

- b. **ORDER OF OFF-LOAD**– Ski Flights ex Resort (inbound to UK)



Order	Item
1	50% of potable water
2	Standby passengers
3	Bar, (or part of)
4	Cabin Crew in excess of the regulatory minimum
5	Skis
6	Snowboards
7	Boot bags
8	Bags

5.3.2 Last Minute Changes

Last Minute Change (LMC) are late changes / amendments to the aircraft load which do not require the preparation of a new load sheet.

The LMC procedure may be followed provided that the airplane is not close to a weight or envelope limit. In these circumstances a verification of the updated weights and CG should be accomplished.

- Standard procedure: The load sheet presented to the PIC must include all LMCs. These will be shown as entries in the LMC box and, if required, as corrections to gross weights, fuel figures and balance conditions.
- Alternative procedure: Operators may allow the load sheet to be handed over to the PIC before any last minute adjustments are made.

Note: Where local regulations require LMCs to be included in the load sheet, it may be possible for operators to seek the consent of their authorities for use of the alternative procedure.

- If LMCs are conveyed to the PIC separately, this may be done by the responsible person, either verbally or in writing, in accordance with operating airline procedures. For each flight where no procedure has been determined, the method to be employed must be agreed upon beforehand with the PIC. Employing both methods for the same flight must be avoided as this can lead to confusion and time lost for clarification. In cases where changes do not have to be reported, the responsible person must confirm to the PIC that the data recorded on the loadsheets copy already handed over remains unchanged.
- LMCs are to be communicated to the PIC only after the responsible person has entered all changes and corrections on the load sheet copies retained on the ground, and after he/she has carried out the checks.
- If the PIC is informed verbally of LMCs, either directly or by using the internal communication facilities of the aircraft (interphone, intercommunication system, ACARS), or by radio communication, the following details must be recorded in writing:
 - Name of responsible person
 - Time of transmission
 - Confirmation that the flight crew has acknowledged the changes



- f. To inform the PIC about LMCs, either verbally or in writing, when the responsible person is not including the LMCs on the loadsheet, a special LMC slip should be used. The information to be recorded on this form may be limited to the following:
1. Total weight of all LMCs
 2. Total number of LMC passengers
 3. Corrected balance conditions—even if it is not allowed by the operator (e.g., "BAL not corrected").

This record shall be kept in the flight file.

Aircraft type	LMC limit	Description
<i>B737/ B737 MAX 8</i>	<i>The maximum LMC weight (traffic load and fuel) is 500 kg.</i>	<i>The sum of the weights irrespective of the sign + (loaded) or - (offloaded) shall be maximum 500 kg. When part of the total traffic load is relocated, the weight should be considered to be offloaded and then re-loaded.</i>
<i>B787</i>	<i>The maximum LMC weight is 1500 kg excluding fuel, 2000 kg including fuel.</i>	<i>If an ULD is moved from one position to another, a new load sheet must be completed. An ULD can be moved within the same hold.</i>

Prior to completion of the LMC entries on the load sheet, the responsible person must check that:

- a. The maximum gross weight (ZFW, TOW, LDW) applicable for the flight are not exceeded;*
- b. The maximum weight limitation of each compartment or ULD position and, if applicable, the limitations for combined load, cumulative load and asymmetrical load are not exceeded;*
- c. The calculated center of gravity at TOW and, if applicable, at ZFW and LDW is within the allowed limits.*

5.3.3 Information Exchange

5.3.3.1 General

All data pertaining to aircraft weight and balance calculations shall be communicated to the person charged with the load planning task; this information shall be documented and filed using one of the following methods:

1. Digitally
2. Written via documentation
3. Verbal communication; in this case, the person receiving the information must assure that one of the following is applied:
 1. Read back all information received by radio or telephone or other electronic means to guarantee accuracy of the data.
 2. Record all verbal transmissions in written format (manually or digitally) to be able to clarify all discrepancies before the final load sheet is transmitted.
 3. Digitally record all verbal communications.
4. A written transmission is always the recommended method. If it is necessary to use verbal communication, ensure that the following details are recorded:



1. Name of the responsible person
2. Time of transmission
3. Confirmation that the receiving party has acknowledged the changes.
This record must form part of the flight file *for 3 months* for retention.

5.3.3.2 Communication of Aircraft Loading to Load Control

Where the communication of aircraft loading, including loading changes and discrepancies, is not carried out by the Loading Supervisor for the flight, but by a designated person, the following requirements apply:

- a. Person responsible for communication of aircraft loading shall be trained in accordance with AHM 1110 RMP 18 Turnaround Coordination
- b. Direct communication with the person charged with the supervision of aircraft loading and unloading task shall be established.
- c. A direct communication means shall be established with the person charged with the load planning and weight and balance calculation task.
- d. Communication protocol, as described in GOM 4.5.1.2 Communication, shall be used.
- e. Written communication methods are recommended, as per GOM 5.3.3.1.
- f. When verbal communication is used, a readback of all weight and balance load control information received shall be carried out.

Note: For the task of supervision of aircraft loading and unloading, refer to GOM 4.5.1.

5.3.3.3 Remote Load Control

Remote Load Control is a process of performing the load planning task and/or weight and balance calculation task for a departing flight in a location away from the departure station.

- a. The key roles of remote Load Control are:
 1. To perform the load planning task.
 2. To compute the weight and balance calculation task in liaison with the departure station.
- b. The key roles of the departure station are:
 1. To supervise aircraft loading and unloading as defined in GOM 4.5.1.
 2. To communicate to remote Load Control any discrepancies and/or deviations during the loading/onloading process.
 3. To report final loading of the aircraft to the remote Load Control.

Information exchange is essential for a safe remote Load Control process. Data shall be transmitted between remote Load Control, departure station and cockpit crew either directly or indirectly, using predetermined means of communication as established by the operator.

CLC stations must follow the instruction in the TAGO Portal.

Before accepting an electronically processed load and trim sheet the Pilot-in-Command must verify that the data are within the operational limits and applicable for the flight to be performed.

Nevertheless input errors are always possible therefore the following items have to be checked by the Handling Agent:

- a. *Dry Operating Weight is correct for the current configuration.*



- b. *The number of Crew Members and passengers stated are equal to those on board.*
- c. *The weight of a given load in the respective compartment does not exceed the maximum limit.*
- d. *The fuel quantity on board is in accordance with the load sheet.*

5.4 Post-departure Messages

All post-departure messages and any other relevant messages pertaining to flight handling shall be sent to the defined stations as per operator requirements. Such messages may include, but are not limited to (*see also chapter 1.1.9*):

- a. Load Departure Message (LDM): *the number and position of loaded wheelchairs and strollers must be specified on the LDM as SI remark*
- b. Container Palet Message (CPM)
- c. ULD Control Message (UCM)
- d. Statistical Load Summary (SLS)
- e. *Aircraft Movement Message (MVT)*

Note: *For a list of delay codes, refer to Appendix I10 in the TAGO Portal.*

Messages shall be produced and delivered in accordance with respective AHM chapters.

A flight file for each departing flight shall be maintained for each departing flight in a secure location according to local regulations and/or operating airline procedures.

Defined stations and departments (see our contact details in the TAGO Portal: TUI Group Operations Center (GOC)).

All operational messages must be sent to TUI OCC and Group Operations Center (GOC) for every flight.

Post departure messaging shall be delivered within 15 minutes after off blocks.

All wide-body aircraft movements must send a copy of the CPM & UCM message to our ULD supplier Unilode: sita.HDQUPXD@unitpool.com

5.5 Load Control Task Responsibility

Responsibilities of persons performing the Load Control task may vary depending on the organizational set-up. It is recommended that:

- a. The load planning task and weight and balance calculation task may be performed by the same person.
The person performing these two tasks should not combine the responsibilities with those for the aircraft loading and unloading supervision task.
- b. The aircraft loading and unloading supervision task, the weight and balance calculation task and the post-departure message task may all be performed by the same person.
However the person performing these three tasks should not include the responsibility for the load planning task as well.
- c. At a station where ACARS is used, finalization of the weight and balance calculation task actions may differ.
- d. When Load Control processes are centralized, the person performing aircraft loading and the supervision task is charged with transmitting all final data to the remote control center.



5.6 Qualification Requirements

Personnel performing Load Control tasks shall be duly qualified. Training must be in accordance with AHM 1110.

Training for the Load Control task shall be performed by a qualified instructor authorized by the operator.

Load Control licensing, training and documentation shall be in compliance with regulations and operator's policies.

5.7 Documentation

The operator is responsible for providing all relevant documentation for load planning and weight and balance calculations. The operator shall define the data content and terminology for documents reports and messages.

The person issuing the load sheet shall accurately reflect all received data on documents, reports and messages produced for each flight, as per AHM 590.

Relevant documents shall be manually or electronically issued and signed as per operator and regulatory requirements.

Specified documents shall be retained for a period in accordance with applicable local regulations and/or operator requirements, but not less than three months.

As a minimum, the documentation for each departing flight shall include:

1. Final LIR signed by the responsible person. *We require 2 different staff members to sign the LIR, a ramp loading agent and the responsible loading supervisor both assigned to this flight.*
2. NOTOC (when applicable).
3. Fuel figures confirmation (when applicable).
4. Final loadsheet and trim sheet, including LMC, signed by PIC.

Disposal of documents may also be subject to regulation.

When everything is checked and the loadsheet is signed by the Pilot-in-Command, copies are distributed. This distribution procedure is a legal requirement.

Distribution of the pages of the computerized, manual or ACARS load sheet:

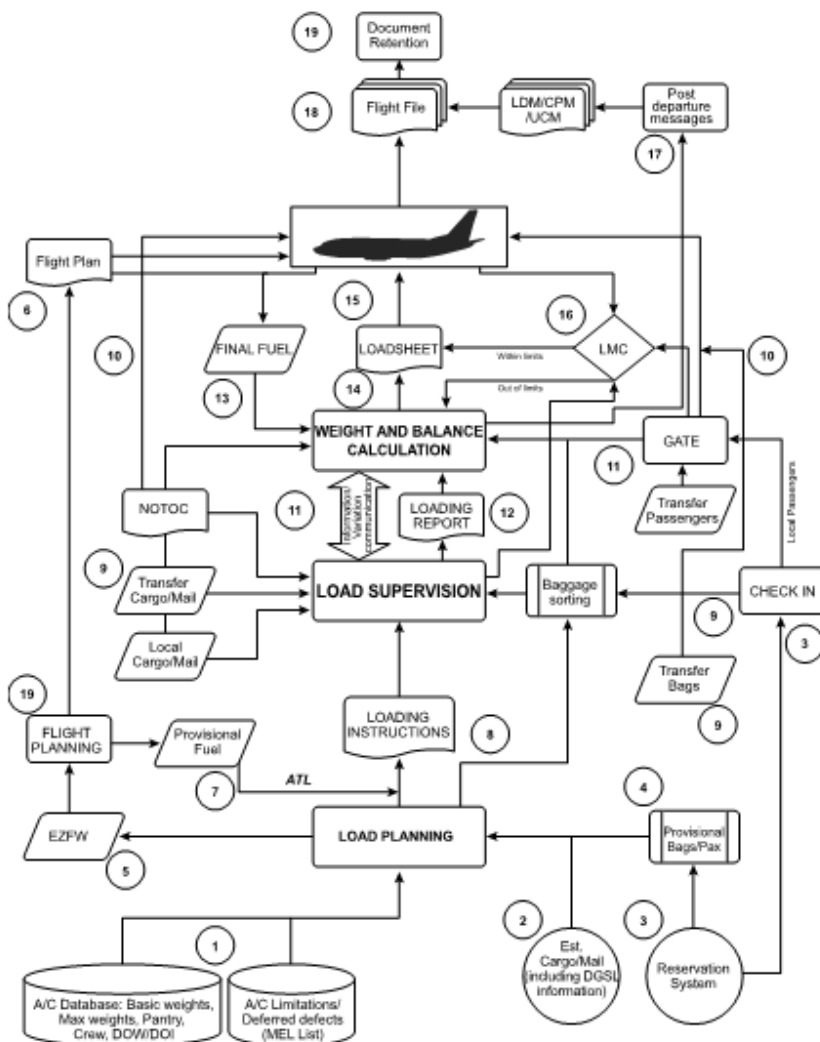
1. Original: shall be handed over to the Pilot-in-Command;
2. First copy: give to the Purser;
3. Second copy: shall be left behind at the departure station. The Ground Handling Agent must ensure that this copy is stored for at least 3 months

Acceptance of an ACARS loadsheet: If available, an ACARS loadsheet may be accepted with an electronic signature.



5.8 Load Control Process Flow

5.8.1 Load Control Process Flow Schema





5.8.2 Load Control Process Flow Legend

CIRCLE #	ACTION
1	Aircraft designation: access to permanent and semi-permanent data as per AHM 565 and maintenance data related to limitations that could affect loading and weight and balance.
2	Estimated/Provisional cargo and mail data, including DGSL information, to load planning.
3	Data from reservation system to capacity calculation (passenger and baggage counts) and check-in (SSR).
4	Provisional passengers sorted by class and provisional baggage according to operating airline procedures to load planning.
5	Provide EZFW to flight planning system.
6	Operational flight plan to PIC.
7	Provisional fuel to calculate the allowed traffic load and verify that load planning is within limits.
8	LIR to load supervision and loading team. Segregation plan to sorting area.
9	Actual data flowing from check-in (e.g., passenger number, baggage pieces and weight, special load information), cargo and mail warehouse (special load information), transfer load.
10	Load to aircraft.
11	Load information and variation communication between load control and load supervision: discrepancies between planned and real load weight, nature and distribution.
12	Final data confirmation from loading supervision and gate (gate-collected items).
13	Final fuel figures communication from the flight planning system or PIC.
14	Loadsheel verification and release.
15	Loadsheel to aircraft.
16	Last minute changes.
17	Post-departure load messages and DGSL information to station of arrival.
18	Signed documents verification and collection.
19	File archiving and retention.



6 Operational Oversight Purpose

6.1 Introduction

Oversight is applied at both a managerial level as well as at an operational level.

Managerial oversight ensures a company has in place a management system that sets up the policies, processes, performance indicators and other mechanisms, outlines accountabilities throughout the company as well as ensures there are necessary resources available to conduct operations.

It is important that management continuously reviews its operations to ensure the on-going suitability, adequacy and effectiveness of the management and control of ground operations. A review shall include assessing opportunities for improvement and the need for changes to the system, including, but not limited to, the organizational structure, reporting lines, authorities, responsibilities, policies, processes, procedures and allocation of resources.

An effective operational oversight structure and process helps to ensure that day-to-day operations do not deviate from the agreed policies, procedures and company goals, while simultaneously acting as a mechanism to identify and investigate occasions when deviations occur.

A company is also subject to external oversight performed a regulatory body (e.g., Civil Aviation Authority) and, in case of ground handling service providers (GHSP), by the contracted airlines or via an industry body (e.g., IATA) on their behalf.

This chapter provides guidance on what needs to be in place for effective operational oversight and gives practical examples of how oversight may be conducted via supervisory functions.

Accident prevention

Accidents and serious incidents always have a strong impact on the company in any possible way. Most obvious is the public reputation which will deteriorate immediately, followed by loss of resources, both human and hardware. Most serious and long-lasting is the effect on staff morale. Public, customers and employees will ask: 'Did we all do everything possible to avoid this accident from happening?'.

Safety is the primary corporate objective of TUI Airways and TUIfly Nordic and should be delivered as such to all employees, company suppliers and customers.

Safety is not the responsibility of pilots only, or of the people working in flight operations, but every single person working in or for TUI Airways and TUIfly Nordic should strive to produce the highest possible quality of work. This will lead to the highest quality product delivered by TUI Airways and TUIfly Nordic, hence highest degree of safety.

The permanent goal should be: zero accidents and zero incidents. Anything less than that would eventually lead to a disaster.

Always remember: Safety is everybody's business!

This means for daily practice:

- a. *compliance with all regulations and instructions for work;*



- b. *awareness for situations which can lead to safety hazards;*
- c. *awareness for safety weaknesses;*
- d. *reporting of above mentioned situations to superiors and/or authorities.*

6.2 Operational Oversight Purpose

The purpose of operational oversight is to ensure:

- a. Continuous conformance with all documented standards, procedures and working practices covering all aspects of ground operations including, but not limited to, occupational health and safety, operational safety, security and quality.
- b. Compliance with regulatory requirements and applicable laws.
- c. Measurement of performance against indicators and achievement of company goals.
- d. Identification of opportunities to improve performance.
- e. Occurrences, findings and opportunities are addressed.

To ensure compliance with all applicable laws and conformance to documented standards and procedures, all station activities, including, those outsourced to a third-party GHSP and/or its subcontractors, shall be conducted under the direct oversight of suitably trained and qualified operational personnel. Operational oversight is a hierarchical process that ensures continuous compliance, conformance and improvement through a variety of monitoring processes. Examples of oversight mechanisms include:

- a. Operational Management (ongoing/daily operation)
 - 1. Direct Supervision—provides specific instructions and frequently reviews work for completeness and accuracy.
 - 2. General Supervision—generally oversees what is to be done and sets limitations, deadlines, and priorities.
- b. Monitoring Programme (Quality Management System (QMS)), Safety Management System (SMS), Occupational Health and Safety (OHS) and Corporate Risk Management include specified quotas per month or number of turnarounds/operations as well as audit plans based on other risk factors such as quality or safety performance.
 - 1. Quality Control—checks and inspections often referred to as Safety Inspections, Frontline Inspections, Line Checks, Line Evaluations, etc.
 - 2. Measuring—testing the output of a process to determine compliance with technical, performance and/or quality standards such as measuring KPIs as part of a Service Level Agreement (SLA).
 - 3. Internal Audit—a structured, independent, and objective assessment conducted by an organization on its own functions or activities that determines the level of conformity with specific standards, regulations, or other requirements.
 - 4. External Audits—Regulatory or accreditation audits conducted under a regulatory or accreditation program to ensure continuing conformity with industry standards.

See AHM 610 SMS and AHM 615 Monitoring Programme for further details.

6.3 Supervision

6.3.1 Functions

During any operation, different persons may perform supervisory functions to ensure tasks are completed safely, according to relevant procedures and as per contracted SLAs.



A 'Supervisor' can commonly be described as a person who supervises activities and/or other persons performing tasks within a process as defined in GOM 6.3.2. It should be noted that, while some organizations have a dedicated 'Supervisor' as part of an operations team, certain supervisory responsibilities may be delegated to any individual within a process regardless of their job title.

- Note:**
1. Airline approaches to supervision may vary by airline and location.
 2. Details of the contracted services will be specific to each contract and will be agreed between the two parties.
 3. Airlines may contract a dedicated person from the contracted GHSP or
 4. A third party to oversee/supervise and/or coordinate specific airline requirements as contracted to ensure they are met or the person can be contracted to cover all turnaround activities, including administrative tasks, or the scope can be limited to a specific part of the airline's operations.

6.3.2 Scope and Responsibilities

Supervision scope of ground handling and related activities will include, but is not limited to, the following activities:

- a. Passenger handling
- b. Baggage handling
- c. Ramp handling
- d. Load control

Generally, the responsibilities of an individual with supervisory functions include:

- a. Setting goals for operational performance and deadlines in ways that comply with the company's structure, plans and vision.
- b. Organizing workflows and ensuring employees understand their duties or delegated tasks.
- c. Monitoring employee activity and providing constructive feedback and coaching.
- d. Providing oversight and guidance to personnel conducting operational functions.
- e. Reporting any accidents, incidents and/or noncompliance as per the organization's procedures.

Supervision personnel shall be trained and qualified to perform the assigned functions (see AHM Ch.1110).

Crew Briefing Package (CBP)

TUI GOC in HAJ will send CBP (Flight Plan, NOTAM, WX reports) to the stations where crew changes occur. If additional info is needed, please contact the GOC (operations@go-centre.com), with copy to Operationsflightwatch@tui.co.uk, for any flight plan related matters. If not available or if additional info is needed, please contact the GOC (operations@go-centre.com).

6.3.3 Turnaround Coordination

The turnaround coordination is performed by a Turnaround Coordinator whose primary goal is to oversee and coordinate processes for both above and below the wing activities during a flight turnaround.

The Turnaround Coordinator may be described as a person who:



- a. Provides a focal point of coordination for all ground activities and operational teams, including flight crew.
- b. Ensures adherence to the station's Precision Time Schedule (PTS).
- c. Ensures safe, secure and punctual performance.
- d. Stops any turnaround activities that are not in compliance with safety, security and operational procedures and processes.

Note: This function may be performed remotely.

As the organizational structure may differ from company to company or due to local setup, it is important to make a distinction between a Supervisor and a Turnaround Coordinator. In some situations, the Turnaround Coordinator will also assume supervisory responsibilities, while in others the roles are split and assigned to specific individuals. A Turnaround Coordinator may be responsible for more than one aircraft turnaround/stand simultaneously.

6.4 Oversight Checklists

6.4.1 Passenger Handling Checklists

NO	ACTION	GOM REF	CHEC K-IN	BOAR DING	TRAN SFER S	ARRI VALS	REMA RKS
1	Preparation activities are completed (e.g., flight editing, review aircraft configuration, passenger name list/status, special service requests (SSRs), special passengers, inbound/outbound connections, passenger numbers and connection times, stand allocations).	1.1.1	✓	✓	✓	✓	
2	Preparation activities are completed (e.g., flight editing, review aircraft configuration, passenger name list/status, special service requests (SSRs), special passengers, inbound/outbound connections, passenger numbers and connection times, stand allocations).	1.1.1. 2	✓	✓	✓	✓	
3	Personnel are briefed before performing tasks.	1.1.1. 2 1.1.3. 5	✓	✓	✓	✓	
4	Personnel are wearing the required personal protective equipment (PPE) and uniform in line with the company's standards (see AHM 462).	3.1.2. 5	✓	✓	✓	✓	
5	Personnel are wearing the required personal protective equipment (PPE) and uniform in line with the company's standards (see AHM 462).	1.1.2	✓	✓	✓	✓	



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NO	ACTION	GOM REF	CHEC K-IN	BOAR DING	TRAN SFER S	ARRI VALS	REMA RKS
6	All relevant desks and airport information boards display the correct flight information.	1.1.2 1.1.7.1	✓	✓	✓	✓	
7	Stock boarding pass/bag tag printers with boarding passes/bag tags while ensuring adequate stock of any other tags required by the airline for handling.	1.1.2 1.1.7.1	✓	✓	✓	✓	
8	Prominently display dangerous goods and any other notifications, either electronically or in print versions.	1/1/1 1.1.7.1	✓	✓	✓		
9	Weighing scales are functioning correctly.	1.1.2	✓			✓	
10	Passengers are welcomed, greeted, and assisted in a professional manner.	1.1.4.1	✓	✓	✓	✓	
11	Carry out verification and acceptance of passenger documents, as applicable.	1.1.5.2	✓	✓	✓		
12	Pay attention to any signs the passenger might not be allowed to travel (e.g., unruly, overall fitness to fly, including potentially communicable diseases, medical conditions, intoxication) and monitor the watchlist.	1.1.4.1	✓	✓	✓		
13	Check with the passenger whether they have any SSRs, prioritize these as required and provide assistance, if applicable.	1.4	✓	✓	✓	✓	
14	Seats are assigned and distributed in line with the operating carrier's procedures.	1.1.4.2 1.1.4.3	✓	✓	✓		
15	Cabin baggage is assessed to ensure it conforms to the carrier's allowable size and weight dimensions, where applicable.	1.1.6.2	✓	✓			



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NO	ACTION	GOM REF	CHEC K-IN	BOAR DING	TRAN SFER S	ARRI VALS	REMA RKS
16	Verify with the passenger whether they are carrying items of dangerous goods or other prohibited articles that are not permitted either as personal belongings, cabin baggage or checked baggage as per DGR 2.3A.	1.1.6. 2 1.1.6. 3 1.1.6. 4	✓	✓			
17	Checked baggage is assessed, weighed and recorded in the departure control system (DCS) in line with the operating airline's procedures and excess baggage charges are applied, where necessary.	1.1.6. 3	✓				
18	Ensure all bags, including special baggage (e.g., oversize baggage, sporting equipment, live animals (AVIH), firearms and weapons, deliver at aircraft (DAA)) are labeled, tagged and handled correctly.	1.1.6	✓	✓			
19	Hand boarding passes, baggage receipts, and other travel documents to the passenger and direct or guide them on to the next steps.	1.1.4	✓	✓			
20	Communicate any relevant information, including disruptions and/or delays, to passengers immediately and at regular intervals.	1.1.4. 1 1.5	✓	✓	✓	✓	
21	Passengers are directed according to the flight gate and/or local immigration requirements, as applicable.	1.1.4. 1	✓	✓	✓	✓	
22	Boarding/disembarkation routes to/from aircraft and/or passenger buses and/or passenger boarding bridges (PBB) are safe and clearly marked, where possible. Note: Passengers must be supervised on the ramp at all times.	1.1.7. 1 1.3.1		✓		✓	
23	All gate areas and access doors are secured to prevent unauthorized access when not in use.	1.2.4		✓		✓	
24	Preboarding and priority boarding is applied in line with the operating airline's procedures.	1.1.7. 1		✓			
25	Once clearance is received, board/disembark passengers as per the airline boarding sequence.	1.1.7. 2		✓		✓	



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NO	ACTION	GOM REF	CHEC K-IN	BOAR DING	TRAN SFER S	ARRI VALS	REMA RKS
26	During the boarding process, boarding passes, travel documents are checked as required and each passenger is reconciled against the DCS.	1.1.7. 2 1.1.5		✓			
27	Accept all standby passengers (revenue, non-revenue) and standby bags as per the airline's priority listing.	1.1.7. 4	✓	✓			
28	Register all last-minute changes in the DCS and inform load control about the final passenger and/or baggage information, as per operating airline procedures.	1.1.7. 3 1.1.7. 4	✓	✓			
29	Before gate closure, ensure all accepted passengers have boarded the aircraft. Secure the flight by matching the checked-in passengers to the boarded passengers. All discrepancies must be resolved prior to closing the aircraft access door.	1.1.7. 4		✓			
30	Provide final passenger numbers and departure documents to cabin and/or flight crew, as required.	1.1.7. 3 1.1.8		✓			
31	Cabin access doors are closed before removal of passenger boarding devices.	4.4.2		✓			
32	All relevant messages are dispatched to the appropriate addresses, as per operating airline procedures.	1.1.9	✓	✓	✓	✓	
33	All stationary and passenger information is kept under surveillance and removed from counters to prevent unauthorized access and use, whenever possible.	1.2	✓	✓	✓	✓	
34	The DCS and other systems are locked when not in use to prevent unauthorized access.	1.2	✓	✓	✓	✓	



6.4.2 Baggage Handling Checklist

NO	ACTION	GOM REF	ARRIVAL-TERMINATING	ARRIVAL-TRANSFER	DEPARTURE-JOINING	DEPARTURE-TRANSFER	COMMENTS
1	Planning activities are completed for requirements for expected baggage for arriving/	2.4.1	✓	✓	✓	✓	
	departing flights, including:	2.5.1					
	Parking stands for on-time delivery of bags	2.6.1					
	Allocation of sufficient build/delivery locations and injection/transfer points						
	Planning for applicable categories (e.g., priority versus economy bags, long versus short transfer, international versus domestic).						
	Staff and equipment allocation and positioning (e.g., unit load devices (ULDs)/ baggage carts).						
2	All staff correctly wearing appropriate PPE (see AHM 462).	2.3	✓	✓	✓	✓	
		3.1.2.5					
3	Staff aware of storage locations for bags that will arrive before opening of corresponding departure flights.	2.5.1		✓			
		2.5.2					



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NO	ACTION	GOM REF	ARRIVAL-TERMINATING	ARRIVAL-TRANSFER	DEPARTURE-JOINING	DEPARTURE-TRANSFER	COMMENTS
4	Staff briefing conducted and staff aware of any baggage requiring special handling (e.g., firearms, mobility aids, strollers, oversized items).	2.4.1	✓	✓	✓	✓	
		2.4.2					
5	Equipment (e.g., ULDs, dollies, baggage carts) available and serviceable upon collection prior to use.	2.4.3	✓	✓	✓	✓	
		2.8.2.3					
6	Systems and hardware available and usable (e.g., baggage reconciliation system (BRS) serviceable and logged in, scanners charged) and assigned to correct flight.	2.6.3.2	✓ (if applicable)	✓ (if applicable)	✓	✓	
		2.1					
7	Required documentation available (e.g., ULD cards, bingo cards) and marked up for correct flight.	2.4.3		✓ (if applicable)	✓	✓	
8	Working areas and equipment clear of obstacles and refuse that can cause foreign object damage (FOD), old baggage labels.	3.1.2.3	✓	✓	✓	✓	
		3.1.2.4					



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NO	ACTION	GOM REF	ARRIVAL- TERMINATING	ARRIVAL- TRANSFER	DEPARTURE- JOINING	DEPARTURE- TRANSFER	COMMENTS
9	ULD/dollies/ baggage carts checked for serviceability and set up to accept baggage. Brakes engaged on dollies/ baggage carts. ULDs secured using restraints.						
10	Unserviceable equipment reported and removed from service.						
11	Baggage build area organized for planned baggage category segregation.						
12	Baggage sent to correct injection/ transfer/arrival points.						
13	Bags injected/ delivered/ transferred in accordance with segregation requirements (e.g., priority bags before economy, short transfer bags before long transfer)						
14	Staff follow manual handling requirements and, where applicable, use lifting aids						



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NO	ACTION	GOM REF	ARRIVAL- TERMINATING	ARRIVAL- TRANSFER	DEPARTURE- JOINING	DEPARTURE- TRANSFER	COMMENTS
15	Flight details visually checked on all bag tags (flight number, date, destination)						
16	Verify the bag has been confirmed as being on the correct flight (positive passenger-bag match) by visually inspecting the baggage tag and electronically through-scanning by ensuring a confirmed load response is received from the scanner. When the baggage is identified positive passenger-matched bag or loaded onto the incorrect flight/ destination, place the baggage to one side for resolution.						
17	Bag tag peel-off portions placed only on bingo cards, where manual reconciliation used.						
18	Baggage is handled in an appropriate manner (e.g., positioned and not thrown).						
19	Each bag processed individually (i.e., no scanning or removal of tags from multiple bags before loading into ULD/baggage cart)						



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NO	ACTION	GOM REF	ARRIVAL-TERMINATING	ARRIVAL-TRANSFER	DEPARTURE-JOINING	DEPARTURE-TRANSFER	COMMENTS
20	ULDs/baggage carts correctly utilized (e.g., proper use of available volume, larger/heavier items nearer to the base).						
21	Correct departure baggage category segregation						
22	Correct handling/loading of fragile, heavy, large and/or oversized items. Handling labels followed and items handled carefully to avoid damage to baggage and injury to personnel.	2.3	✓	✓	✓	✓	
		2.4.3					
23	Special baggage handled/	2.4	✓	✓	✓	✓	
	transferred/delivered in accordance with local procedures and customer airline requirements (e.g., firearms, mobility aids, strollers, oversized items) and in a manner to prevent damage (e.g., no other items placed on top).	2.7					
24	Final checked-in bag figure reconciled against bags received.	2.4.3			✓	✓	



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NO	ACTION	GOM REF	ARRIVAL-TERMINATING	ARRIVAL-TRANSFER	DEPARTURE-JOINING	DEPARTURE-TRANSFER	COMMENTS
25	Number of ULDs used reconciled against the baggage plan/flight summary before being released to the aircraft.	2.10.2	✓		✓	✓	
26	Loads secured prior to transportation using appropriate locks, stops, rails, curtains and straps.	2.4.3	✓	✓	✓	✓	
27	Canopies/covers secured before baggage carts dispatched in wet weather.	2.4.1	✓	✓	✓	✓	
		2.10.4					
28	ULD cards and bulk load cards secured to each ULD/ baggage cart before leaving baggage build up area.	2.4.3			✓	✓	
		2.10.3					
29	Unloaded ULDs/ baggage carts checked to ensure no remaining items inside.	n/a	✓	✓			
30	First/last bag times recorded in accordance with local procedures and customer airline requirements.	2.6.3.2	✓	✓			
		2.6.4					
31	Arrival carousel deactivated and secured upon completion of baggage delivery.	n/a	✓	✓			



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NO	ACTION	GOM REF	ARRIVAL-TERMINATING	ARRIVAL-TRANSFER	DEPARTURE-JOINING	DEPARTURE-TRANSFER	COMMENTS
32	Any damaged baggage segregated, and supervisory personnel notified.	2.6.3.2	✓	✓	✓	✓	

6.4.3 Ramp Handling Checklist

NO	ACTION	GOM	ARRIVAL	DEPARTURE	REMARKS
1	Preflight briefing conducted regarding flight requirement(s) and services, as needed.		✓		
2	Pre-arrival and pre-departure checks ensuring that the parking position and intended path of aircraft are free of FOD and/or obstacles.	4.1.1 4.6.3.1	✓	✓	
3	Personnel are available and wearing PPE (see AHM 462	4.1.1 3.1.2.5	✓	✓	
4	Position all ground support equipment (GSE) and personnel (undertaking the departure process) outside the equipment restraint area (ERA) prior to aircraft arrival and departure, unless specifically required by the arrival/departure procedure (e.g., pre-positioned ground power unit (GPU)).	4.1.1 4.1.4.1 4.6.3.1	✓	✓	
5	Personnel shall check the GSE assigned prior to initial use.	3.1.3.2	✓	✓	
6	Aircraft guidance system is activated and/or marshaller(s)/ wing walkers correctly positioned, as applicable.	4.1.1 4.6.3.1	✓	✓	
7	Personnel shall remain outside the ERA while the aircraft anti-collision lights are switched on unless specifically required by the arrival/departure procedure.	4.1.1 4.6..7.1	✓	✓	
8	Aircraft chocked and coned as per requirements.	4.1.2.2 4.6.3.1	✓	✓	
9	An external walkaround check prior to approach of any GSE is performed and as soon as possible after all GSE activities have been completed prior to aircraft departure.	4.1.2.2 4.6.3.1	✓	✓	
10	GSE is correctly positioned to/removed from the aircraft (e.g., use of guide person, safety rails lowered/retracted, no touch policy, platforms lowered, approach/removal speed.	3.1.3.2	✓	✓	
11	PBB and passenger steps are correctly positioned to/ removed from the aircraft (e.g., sliding safety rails and canopies retracted, vertical clearance maintained between platform and passenger cabin access door when in position).	3.1.3.5 3.1.3.6	✓	✓	



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NO	ACTION	GOM	ARRIVAL	DEPARTURE	REMARKS
12	GSE is correctly configured and operated during aircraft handling and servicing (e.g., speed within the ERA, safety rails raised/extended when in position at aircraft, use of parking brake, seat belts, no seat-no ride, vertical clearance maintained between equipment and aircraft/doors).	3.1.3.2	✓	✓	
13	All personnel follow ramp safety procedures (e.g., fuel safety zone, do not walk between ULD or connected equipment, correct manual handling techniques used).	3.1 3.2 4.5	✓	✓	
14	All cargo holds are inspected to check condition and security of loads prior to unloading/after loading (e.g., locks raised, nets secured, no leakage, no loads shifted). Note: All holds shall be opened and inspected even if empty.	4.5.5	✓	✓	
15	Cargo holds are unloaded/loaded in the correct sequence in accordance with the loading instruction report (LIR) and commodities correctly handled as required (e.g., dangerous goods and special loads are correctly handled, segregated, secured and stowed).	4.5.4 4.5.6	✓	✓	
	ACTION	GOM	ARRIVAL	DEPARTURE	REMARKS
16	Cargo holds are inspected after unloading/prior to loading to check for damage and ensure empty other than documented transit load items. Note: If cargo hold will not be loaded as part of the departure onload, locks/nets shall be raised/secured in accordance with airline requirements.	4.5.5 4.5.6.4	✓	✓	
17	Check ULDs and bulk loads for condition (e.g., damage, leakage) prior to/after transportation and prior to loading.	4.5.4 4.5.6	✓	✓	
18	Aircraft cabin access door operation is performed by an authorized and qualified person.	4.4.2	✓	✓	
19	Passenger walkways are clear of obstacles and free of undesired contaminated substances.	1.1.7.1	✓	✓	
20	Passenger movement is supervised when passengers walk on the ramp (e.g., between aircraft and bus/terminal).	1.1.7.1	✓	✓	
21	Fueling vehicle is correctly positioned and escape route is not obstructed when fuel tanker/bowser is used.	3.2		✓	
22	Fuel safety zone procedures/restrictions are followed.	3.2.1		✓	
23	Safety precautions for fueling with passengers on board or boarding are adhered to, as applicable.	3.2.3		✓	



NO	ACTION	GOM	ARRIVAL	DEPARTURE	REMARKS
24	Person responsible for the loading supervision task is in possession of the latest edition of the LIR prior to commencement of loading.	4.5.6.4			
25	Final load information is communicated/confirmed to load control with all deviations noted.	4.5.6.4			
26	Final load information (e.g., Loadsheets/Notice to Captain–NOTOC) is provided to flight crew, as required.	5.7			
27	Aircraft ground movement preparation activities correctly carried out (e.g., connection of pushback/towing equipment, communication with flight crew established).	4.6			
28	Departure sequences conducted as required (e.g., GPU, air start unit (ASU), pushback, engine start, personnel/ equipment positioning).	4.6.6.2			
29	Post-departure activities are conducted as required with appropriate document retention.				

Note 1: *The numbering of the process does not depict sequence of action.*

Note 2: *The checklists are examples of elements that require supervision by individuals assigned to oversee ground handling operations. The primary task is to stop all unsafe acts.*

6.5 Incident Notification and Immediate Actions

6.5.1 General

In the event of a serious incident or accident, the work must stop, the scene must be frozen and isolated and the event shall be immediately reported to the line management airline representative and, as required, to local authorities. In general: During ground operations, there is a risk of incident, accident or other emergency situations, such as, but not limited to:

- Fuel and oil spills
- Dangerous goods events
- GSE collisions/accidents
- Situation requiring an aircraft evacuation without passengers
- Personnel injuries
- Severe weather emergencies
- Illicit acts (e.g., security breach)

Depending on the severity and magnitude of the event, the airline and/or airport emergency response procedures might be activated (see AHM 620 for Crisis and Emergency Response at the Airport).

Note: Some occurrences might be managed locally within the company's emergency response procedures.



Any person carrying out a supervisory function must be familiar with:

1. The emergency response procedures and/or reporting protocol of:
 - a. Their own company or operating airline
 - b. The airport at which they are operating
 - c. Regulatory authorities (e.g., dangerous goods)
2. Immediate actions per type of event, including aircraft evacuation (see 6.5.2 and 6.5.3)
 - a. *Complete the Ground Operations Safety Report in IQSMS to collect all relevant information regarding the event.*

Note: Additional instructions to be found section 3.1 on procedures regarding incident, accident and damage reporting.

6.5.2 Immediate Actions

In the event of an incident or accident, all frontline personnel shall understand and be familiar with the immediate response, which includes, but is not limited to the following actions:

- a. Stop the activity/process, if applicable to the type of event (e.g., switch off engine/ activate emergency stop button).
- b. Ensure all passengers and personnel are moved away from the incident (unless they are involved in mitigating actions).
- c. Immediately notify the relevant parties and any personnel directly involved or impacted by the nature of the incident (e.g., flight crew).
- d. Report the event to the supervisor/line manager and emergency services, if deemed necessary, who will then assume responsibility to initiate the local response plan:
 1. Secure the area of the event.
 2. Ensure compliance with all instructions from emergency services, if applicable.
 3. Report to the airline representative and, as required, to local authorities and be in constant communication. (see below in italic).
 4. *Complete a Ground Operations Safety Report in IQSMS as described in chapter 3.1*
 5. Support any post-incident investigation, analysis and/or review.

Note: Investigation shall be carried out in accordance with AHM 652 and/or company Procedures.

Stations should hold a current copy of the local Airport Authority Emergency Plan/Order to ensure that the specific requirements with regard to the emergency response are incorporated in the TUI Airways and TUIfly Nordic SERP. TUI Airline Auditors checklist consists of questions related to the station emergency response and preparation. This is to ensure the emergency preparedness requirements are in place and that Handling Agent's staff are properly advised and assisted when deficiencies are identified.

Please follow the Emergency Response Plan specifics as per ERP Manual – Latest version, available in the TAGO Portal under Documents - Emergency Response.

6.5.3 Aircraft Evacuation

Aircraft evacuation without flight crew and passengers on board:

- a. Roles and responsibilities for the evacuation.
- b. Procedures and different methods of evacuation from the aircraft (e.g., mobile stairs, PBB). Escape slides are not intended as the primary means of exit.



- c. Means of communicating the evacuation (e.g., radios, audible warnings).

Note: Personnel should be trained in the evacuation procedures, including periodic evacuation drills/practices.

6.5.4 Dangerous Goods

Whenever a suspected damage or leakage involving dangerous goods occurs, the following actions shall be taken (refer to DGR and *Chapter 10, Annex D - Dangerous Goods and Weapons, 10.7* for further guidance):

- a. Identify the nature, source and associated hazard of the contamination.
- b. Stop the handling activities or reduce them to a minimum in the vicinity of the hazard.
- c. Prevent access by unauthorized personnel.
- d. Do not walk through, touch, sniff or taste any substance or spilled material.
- e. Notify the relevant parties, including crew and any personnel in the vicinity.
- f. Restrict/block access to the damaged item using any suitable means.
- g. Contact and report the event immediately to the supervisor/line manager and emergency services, if deemed necessary, who will then assume responsibility to initiate the local response plan.
- h. Coordinate the response in conjunction with Dangerous Goods Regulations (DGR) experts or emergency services, for example:
 - 1. Use the NOTOC (review emergency code as provided) or Load Messages–LDM (e.g., Offloading Instruction, container pallet message (CPM), LIR or similar) to identify the substance.
 - 2. Follow emergency response procedures as per the DGR category in Section 9.
 - 3. Verify the ground connection of electrical equipment (e.g., GPU) and remove all possible sources of ignition, if deemed necessary.
 - 4. Isolate all staff suspected of being contaminated and refer for treatment.
 - 5. Seek confirmation from emergency services that the area is safe to re-enter.
- i. Identify and prevent from transport any other cargo, baggage or transport devices that have become contaminated by the leakage of dangerous goods.

6.6 Adverse Weather Oversight Procedures

Oversight of an aircraft arrival/departure during adverse weather includes, but is not limited to, the activities listed below. Some examples of adverse weather include snowstorms, thunderstorms/lightning, sandstorms, high winds, hurricanes/typhoons, tornadoes and intense heat (see AHM 462 and GOM 3.3).



ACTION	✓	REMARKS
Received notification of adverse weather a. Thunderstorm, lightning b. Low visibility c. Snow/ice conditions d. High/strong winds, gusts e. Heavy rains, flooding f. Sandstorms g. Extreme temperature (hot/cold) h. Other		
Acknowledge notification of adverse weather		
Identify the threat and actions for the following: a. Personnel and passengers, including PWD/PRM b. Arriving aircraft c. Parked aircraft, vehicles and GSE d. Baggage handling e. Cabin equipment f. Catering and ramp handling g. Departure h. Exterior cleaning i. Interior cleaning j. Load control and flight operations k. Marshaling l. Moving of aircraft m. Passenger services n. Ramp fueling/defueling operations o. Ramp services p. Ramp to flight deck communications q. Toilet services r. Towing cargo and baggage s. ULDs and bulk loading/unloading of baggage and cargo		
Activate the Severe Weather Plan a. Communicate to all affected parties b. Meet with ground handling personnel, GSE and maintenance personnel c. Outline forecast, actions and review resources d. Notify dispatch, passenger services and planning groups that operations might be interrupted e. Continue to monitor and communicate the weather situation		
Take actions according to established procedures		
Check staff conduct, behavior and operational practices (e.g., PPE)		
Ensure compliance with local regulations		



Table 6.6 - Adverse weather actions

6.7 Airside Safety Investigation Procedure

6.7.1 General

The investigation process will be conducted in a logical way by collecting and analysing facts to identify root causes as well as contributing and human factors.

6.7.2 Factual Information

In general:

- a. *Gather factual information including photographs, testimonials, reports, sketches, video footage, maps and any other relevant information.*
- b. *Determine the level of investigation:*
 1. *Basic investigation—an informal inquiry to identify the key elements that led to the event.*
 2. *Formal investigation—a formal inquiry with all parties involved, including legally required internal and external parties.*

6.7.3 Investigation Procedure

In general:

- a. *Gather all information available about the event:*
 1. *Identify the circumstances leading up to the event.*
 2. *Review all reports pertaining to the event.*
 3. *Collect all available data (e.g., CCTV and other video footage, photographs, objects, testimonials, sketches, maps).*
 4. *Identify the people involved and any witnesses.*
 5. *Gather all relevant information concerning the people involved (e.g., roster, training records, medical information, employee records, assigned task, all reports, any other).*
 6. *Gather all relevant information concerning the technical, environmental and infra structural conditions.*
- b. *Conduct interviews with all individuals involved and any witnesses.*
- c. *Conduct a confirmation site visit if possible.*
- d. *Confirm whether a Standard Operating Procedures (SOP) are published and available for the task being performed.*
- e. *Identify human factors:*
 1. *Communication*
 2. *Stress and timing*
 3. *Fatigue*
 4. *Loss of situational awareness*
 5. *Health condition*
 6. *Use of available resources*
 7. *Staff feedback related to the SOP*
 8. *Teamwork*
 9. *Knowledge retention and competence.*
- f. *Technical factors:*
 1. *Use of a GSE*



2. *Preventive and corrective maintenance records*
3. *Current technical condition*
4. *Suitability for the task*

6.7.4 Analysis

Analyze the event by:

- a. *Describing the sequence of events as they occurred for each person/element involved.*
- b. *Identifying any failures in the tasks performed in relation to written instructions.*
- c. *Identifying any causal links between events.*
- d. *Documenting a chronological sequence of events that led to the incident/accident as supported by facts.*
- e. *Determining which failures contributed to the accident based on factual evidence in relation to the sequence of events.*
- f. *Identifying pre-existing and/or new hazards that contributed to the event.*

6.7.5 Conclusion and Causes

Specify:

- a. *Root causes*
- b. *Contributing factors*
- c. *Human factors*

6.7.6 Investigation Follow-up

Follow-up the investigation by:

- a. *Establishing the following for each root cause:*
 1. *Corrective action requests.*
 2. *Preventive actions requests.*
- b. *Making safety recommendations that:*
 1. *Address the root causes as well as the contributing and human factors identified as a part of the investigation.*
 2. *Ensure corrective and preventive action requests will be issued to line management.*
 3. *Provide line management with corrective action plans to address the root causes as well as, contributing and human factors for approval.*
 4. *Ensure that an Action plan implementation is confirmed through a monitoring/audit process.*
 5. *Ensure that the human factors information in the Airside Safety Investigations form is completed.*

Note: refer to TAGO, Forms: Occurrence Closure Response. This report must be used to close safety investigations.

6.7.7 Occurrence Closure

In order to facilitate the follow-up and closure of investigations, the "Occurrence Closure Response Form" has been developed and includes guidance for all the required information to be delivered and steps to be taken in order to close the occurrence/findings. The form will be



sent together with the initial report and can also be found in the TAGO Portal. This form is to be sent for review to the respective TUI Airline Grounds Operations contact for the station.

6.8 Monitoring Procedures

Safety performance monitoring is important to enable management to identify trends that could have a negative effect on safety. The following checklists should be used to monitor safety performance in the operations.

STATION:		COMPLIANCE			
DATE:					
FLIGHTS:		Y	N	R A	REMARKS
EVALUATED BY					
A. AIRCRAFT ARRIVAL/OFFLOAD					
1	1 Proper hearing protection is used by all employees.				
2	2 Proper safety footwear is worn by all employees.				
3	3 High visibility /reflective clothing is worn				
4	4 An FOD inspection has been made, FOD removed and properly disposed.				
5	5 All equipment is positioned outside aircraft clearance lines.				
6	6 The gate area is clear				
7	7 The bridge is fully retracted. If driveable type it is parked within its "Ramp Box".				
8	8 The bridge operator makes a visual check for clearance and the area beneath and within the travel of the boarding bridge is clear.				
9	9 The gate and bridge areas are ready for arrival.				
10	10 The bridge operator uses hearing protection.				
11	11 There are not any obstructions present in the bridge.				



STATION:		COMPLIANCE			
DATE:					
FLIGHTS:		Y	N	R	REMARKS
EVALUATED BY				A	
12	Fall protection devices (doors/barriers) are utilized on the bridge.				
13	The proper hand signals are used by marshaller, if marshaller is used.				
14	Wands are used for marshalling and all signalling (illuminated in low visibility).				
15	Aircraft chocks are properly installed according to airline procedures.				
16	The grounding cable is connected to grounding point on Nose Leg (where available).				
17	Personnel wait until the aircraft has stopped, is chocked, anti-collision light off, engines shut down and "all clear" given by marshaller before approaching.				
18	Wingtip/engine cones are properly positioned according to airline procedures.				
19	The bridge operator is alert to devices on the fuselage.				



7 Annex A Glossary

ACARS	Aircraft Communications Addressing and Reporting System—a digital datalink system for transmission of short, relatively simple messages between aircraft and ground stations.
<i>Access Aids</i>	<i>Access aids equals steps, stairs, air bridges or any high lift devices.</i>
Accident (Aircraft)	An occurrence associated with the operation of an aircraft that takes place between the time any person boards the aircraft with the intention of flight until such time as all such persons have disembarked in which a person is fatally or seriously injured, the aircraft sustains substantial damage, or the aircraft is missing or is completely inaccessible. Equivalent Terms: Aircraft Accident, Hull Loss.
Adult	A person of the age of 12 years old and above.
Aircraft	Any machine that can derive support in the atmosphere from the actions of the air. Equivalent terms: Airplane, Aeroplane.
Aircraft Access Doors	Doors that provide access to the passenger cabin or lower compartment(s), which may be actuated manually or by electrical, hydraulic or pneumatic means.
Aircraft Ground Movement	Operations associated with moving of an aircraft on the ground, to include aircraft taxi-in, aircraft pushback, aircraft taxi-out, aircraft powerback, aircraft towing. See Aircraft Pushback, Aircraft Powerback, Aircraft Taxi-in, Aircraft Taxi-out, Aircraft Towing.
Aircraft Handling	Activities associated with servicing of an aircraft on the ground, including aircraft access, equipment attachment and removal, and operation of vehicles and equipment in the immediate vicinity of the aircraft.
Aircraft Maintenance Manual (AMM)	A manual produced and continuously updated by the aircraft manufacturer that contains procedures relating to the maintenance of aircraft, engines and components.
Aircraft Marshalling	The detailed direction of an aircraft ground movement from outside by a marshaller who is in a position to see the aircraft exterior as well as areas on and adjacent to the path over which the aircraft is moving.
Aircraft Operations	All activities associated with the operation of an aircraft on the ground and in the air.



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Aircraft Pallet	A flat platform with flat undersurface of standard dimensions, on which cargo, baggage or mail is grouped and restrained by a compatible aircraft pallet net before being loaded as one unit onto the aircraft, and which is designed to be directly restrained by the aircraft Cargo Loading System (CLS). See Cargo Loading System, Unit Load Device.
Aircraft Pallet Net	Webbing or rope net used for restraining load onto an aircraft pallet. Note: See Unit Load Device and Cargo Restraint System.
Aircraft Powerback	Rearward moving of an aircraft from a parking position to a taxi position by use of the aircraft engines.
Aircraft Pushback	Rearward moving of an aircraft from a parking position to a taxi position by use of specialized ground support equipment (GSE) • Nose gear-controlled pushback includes either the towbar method, where the rearward movement and steering of the aircraft is controlled by a tractor and towbar attached to the nose gear, or the towbarless method, where a tractor is attached directly to the nose gear. • Main gear-controlled pushback utilizes a tractor that grasps the aircraft main gear tires to provide rearward movement, and directional control is provided from the flight deck through use of the nose wheel steering system. Equivalent Term: Pushback
<i>Aircraft service panels and hatches</i>	<i>Aircraft external access points and compartments that have external handles or external clip-down panels and are routinely used for providing aircraft ground handling services.</i>
Aircraft Stand	A designated area on an apron intended for parking an aircraft. Equivalent Terms: Stand, Parking Stand.
Aircraft Taxi-in	Forward moving of an aircraft into a parking position by use of the aircraft engines.
Aircraft Taxi-out	Forward moving of an aircraft from a parking position by use of the aircraft engines.
Aircraft Towing	1. Maintenance towing. Towing an aircraft without passengers or cargo and with minimum fuel on board. 2. Operational/Dispatch towing. Towing an aircraft, loaded with passengers and/or fuel, and/or cargo, to/from the terminal gate or parking area, to/from a remote location. 3. Repositioning towing is the towing of an aircraft to/from remote parking purposes. An aircraft can be loaded with cargo or fuel.
Aircraft Type	All aircraft of the same basic design, including all modifications except those modifications which result in a change of handling, flight characteristics or flight crew complement.



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Airport Handling Manual (AHM)	A manual published by IATA that defines industry standards in the following areas relevant to airline ground operations: passenger handling; baggage handling; cargo and mail handling; load control; aircraft handling and loading; aircraft movement control; airside management and safety; airport handling specifications for GSE; environmental specifications for ground handling operations; ground handling agreements.
Airside	The movement area of an airport, adjacent terrain and building or portions thereof, access to which is controlled.
Airside Safety	To ensure an acceptable level of safety by personnel in the performance of duties in the Airside areas of an airport.
Airworthiness	The status of an aircraft, engine, propeller or part when it conforms to its approved design and is in a condition for safe operation.
Anti-Icing	A precautionary procedure which provides protection against the formation of frost or ice and accumulation of snow or slush on treated surfaces of the aircraft for a limited period of time (holdover time).
Apron	A defined area on an airport intended to accommodate aircraft for loading or unloading of passengers or cargo, or for fueling, parking or maintenance. Equivalent Term: Ramp.
Arrivals Hall	The area of the airport where passengers collect their baggage on arrival. Exiting this area may involve passing through customs for international journeys.
Assessment	The process by which an Assessor determines how well a trainee's performance fulfils the required course competences. The process may include a demonstration of knowledge, proficiency and/or competence as required and appropriate. The assessment can be conducted using a range of methods, e.g. written, digital and/or practical, however it shall be conducted against a defined set of criteria. All assessments shall be documented accordingly.
Authorised person	<i>Is a passenger holding a valid boarding pass for the related flight or is a person holding valid airport badge and has an operational need to be at the aircraft.</i>
Authority (Regularity)	A government agency or other administrative body that exercises regulatory or oversight control over operations or activities within a defined jurisdiction.
Authority	The delegated power or right to: • Command or direct; • Make specific decisions; • Grant permission and/or provide approval; • Control or modify a process.



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Automatic boarding	<i>Boarding allowed without acceptance of crew.</i>
Baggage	The personal property or other articles of a passenger or crew member that is transported on an aircraft. Equivalent Term: Luggage.
Baggage Build	The allocated output for baggage from the Baggage Handling System (BHS). Baggage will be loaded into ULDs at this point and, generally, baggage will be reconciled here.
Baggage Reconciliation	A security process that matches a passenger with his or her checked baggage, and ensures the passenger and baggage travel together on the same aircraft.
Behavior	The way a person responds, either overtly or covertly, to a specific set of conditions, which is capable of being measured.
Best Practice	A strategy, process, approach, method, tool or technique that is generally recognized as being effective in helping an operator to achieve operational objectives.
Block off	<i>The moment that an aeroplane first moving for the purpose of taking off.</i>
Block on	<i>Aircraft coming to a rest on the designated parking position or when all engines are stopped.</i>
Block time	<i>The time between an aircraft first moving from its parking place for the purpose of taking off until it comes to rest on the designated parking position and all engines are stopped.</i>
Cabin Access Door	A door in the aircraft fuselage utilized for gaining entry and exiting the passenger cabin. Equivalent Term: Cabin Entry Door.
Cabin Baggage	Baggage that is, or is intended to be, brought onto an aircraft in the custody of a passenger or crew member for stowage in the cabin. Operators set their own standards for size, weight and number of pieces permitted as cabin baggage. Equivalent Terms: Hand Baggage, Unchecked Baggage, Carry-on Baggage.
Cabin Crew	Crew members, other than flight deck crew.
Calibration	The application of specifically known and accurately measured input to ensure an item will produce specifically known output which is accurately measured or indicated. Calibration includes adjustment or recording of corrections, as appropriate.
Captain	A person qualified to be the pilot-in-command of an aircraft. See Pilot-in-Command. Equivalent Term: Commander.



Cargo	Any property carried or to be carried in an aircraft, other than mail or other property carried under the terms of an international postal convention, baggage or property of the carrier; provided that baggage moving under an air waybill or a shipment record. Equivalent terms: Goods, Freight, See COMAT (Company Material). - Revenue cargo is transported on an aircraft for commercial purposes; generates revenue for the operator. - Non-revenue cargo is transported on an aircraft for non-commercial purposes; does not generate revenue for the operator. Note 1: COMAT (Company Material) is non-revenue cargo. Note 2: In the GOM, non-revenue cargo and revenue cargo are identically addressed, for the purposes of handling, loading, securing and transporting. Note 3: In the GOM 'mail' is considered to be an item of 'cargo'; therefore, any reference to cargo also includes mail.
Cargo Aircraft	An aircraft, other than a passenger aircraft, that is carrying cargo. Cargo aircraft may be of different types, as given below: - AC: All-cargo aircraft are configured to carry only cargo, and such configuration - QC: Quick Change airplanes, designed to carry passengers OR cargo, but not a combination, on the main deck. When operated in the Cargo configuration, the standards applicable to 'all cargo' operations will apply. - Combi: Aircraft that can accommodate both passengers AND cargo in different proportions on the main deck. See Cargo, Passenger Aircraft.
Cargo Compartment	The area of an aircraft that may be utilized for the transport of cargo, and/or baggage. There are different classifications of cargo compartments and, depending on aircraft type and/or configuration, some cargo compartments are accessible by the crew in flight, while others are not. Equivalent Terms: Cargo Hold, Cargo Area, Baggage Hold, Baggage Compartment.



Cargo Compartment Fire Suppression System	A portable or built-in method for fire suppression that does not cause dangerous contamination of the air within the aircraft, and provides a means to contain, or to detect and extinguish, fires that might occur in such a way that no additional danger to the aircraft is caused. Such systems cannot affect the ability of the flight crew to maintain controlled flight and may also take into account a sudden and extensive fire such as could be caused by an explosive or incendiary device or dangerous goods. In aircraft with cargo compartments accessible to the flight crew or from the passenger compartment (combi aircraft), a crewmember with access to a fire extinguisher, approved or accepted for the purpose by the State of the Operator, can satisfy the means for fire suppression. Such crew member action when used in combination with fixed fire detection systems and fire resistance materials, in the applicable areas, as approved or accepted by the State, meets the definition of a fire suppression system.
Cargo Loading System (CLS)	A conveyor system installed on the floor of an aircraft that allows loading and unloading of unit load devices (ULDs) into the aircraft; incorporates a suitable restraint system to secure ULDs in the parked position. See Unit Load Device (ULD). Equivalent Term: In-plane Loading System.
Cargo Restraint System	A system in the aircraft designed to keep cargo from moving within the aircraft as a result of loads exerted during normal and emergency aircraft ground and flight maneuvers; includes nets, seat tracks, pallet locks, side restraints, and roller trays; may also include a 9G cargo net or 9G rigid barrier/bulkhead (i.e. a net or barrier that is stress tested for a load of nine Gs of force) when cargo is carried on the same deck as the flight deck and/or passengers or supernumeraries). Equivalent Term: 9G system See: Aircraft Pallet Net
Centre of Gravity (CG)	(C of G). Point at which an aircraft would balance if it were possible to suspend it at that point.
Checked Baggage	Passenger baggage that has been taken into custody by the Operator, and for which a baggage claim check has been issued to the passenger; includes cabin baggage that has been taken from a passenger and loaded into the hold (e.g. due to physical size/weight restrictions, lack of cabin stowage space). Equivalent Terms: Hold Baggage, Registered Baggage, Registered Luggage.
Code share	<i>An arrangement under which an operator places its designator code on a flight operated by another operator; and sells and issues tickets for that flight.</i>
COMAT (Company Material)	Any non-revenue cargo that is owned by or is for use by the operator, and is transported on the operator's aircraft. See Cargo. Equivalent Term: Company Supplies.



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Commander	<i>The Captain designated by the operator to be in command of the aircraft and responsible for the safe operation of the aircraft.</i>
Compliance	The state of being in accordance with rules or requirements specified in standards or regulations.
Connecting Baggage	Baggage that is connecting between flights during the baggage journey. Equivalent terms: Transfer Baggage, Transit Baggage.
Conformity	Fulfilment of specifications contained in standards or recommended practices; under IOSA/ISSA/ISAGO Conformity means specifications are documented and/or implemented by the Operator/GHSP.
Crew Baggage	Baggage that is the property of operating crew or supernumerary, which is separately identified.
Countries recognized as applying equivalent security standards	<i>Canada Faroe Islands, in regard to Vagar airport Greenland, in regard to Kangerlussuaq airport Guernsey Isle of Man Jersey Montenegro Republic of Singapore, in regard to Singapore Changi Airport United States of America.</i>
Crew Member	A member of either the flight crew or the cabin crew; when used in the plural (i.e. crew members), refers to flight and cabin crew members collectively. Equivalent Terms: Flight Crew Member, Cabin Crew Member.
Curtain Version	Cabin configuration.
Customer Airline	An air operator that has entered into a contractual agreement with an external services provider for the conduct of specified operational functions for the airline. Equivalent Term: Client Airline.
Customer Care Team	<i>24/7 available for passenger related issues.</i>
Dangerous Goods (DG)	Articles or substances that are capable of posing a risk to health, safety, property or the environment, and that are shown in the list of dangerous goods in the ICAO Technical Instructions for the Safe Transport of Dangerous Goods by Air or IATA Dangerous Goods Regulations (DGR), or are classified according to those Instructions or Regulations. Equivalent Term: Hazardous Materials (HAZMAT)
Dangerous Goods Accident	<i>An occurrence associated with and related to the transport of dangerous goods by air which results in fatal or serious injury to a person or major property or environmental damage.</i>



Dangerous Goods Incident	<i>An occurrence other than a dangerous goods accident associated with and related to the transport of dangerous goods by air, not necessarily occurring on board an aircraft, which results in injury to a person, property or environmental damage, fire, breakage, spillage, leakage of fluid or radiation or other evidence that the integrity of the packaging has not been maintained. Any occurrence relating to the transport of dangerous goods which seriously jeopardizes an aircraft or its occupants is also deemed to be a dangerous goods incident.</i>
Dangerous Goods Regulations (DGR)	A document (manual) published by IATA in order to provide procedures for the shipper, operator and the GHSP, by which articles and substances classified as dangerous goods can be safely transported by air on commercial flights. Information in the DGR is derived from the ICAO Technical Instructions for the Safe Transport of Dangerous Goods by Air (ICAO Technical Instructions).
Database	Any structured collection of information, records or data that are specifically organized in a system for rapid search and retrieval. • Electronic Database—A database whereby information is accessed and managed electronically through use of a computer.
De-icing/Anti-icing	A process that combines both de-icing and anti-icing, which can be performed in one or two steps.
Defect	Any confirmed abnormal condition associated with an aircraft, aircraft engine or aircraft component. • Major Defect—a defect in that could affect the safety of the aircraft or cause the aircraft to become a danger to person or property.
Departure Control System (DCS)	An automated method of performing check-in, capacity and load control, and dispatch of flights.
Deportee	A person who had legally been admitted to a state by its authorities or who had entered a state illegally, who later is formally ordered by the competent authorities to leave that state. • DEPA is a deportee accompanied by an escort • DEPU is a deportee unaccompanied by an escort The deporting State is responsible for the transportation of deportees.
Disruptive Passenger	A passenger who fails to respect the rules of conduct at an airport or on board an aircraft or to follow the instructions of the airport staff or crew members and thereby disturbing the good order and discipline at an airport or on board the aircraft. Equivalent Term: Unruly passenger.



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Dry Operating Weight / Mass (DOW/DOM)	Basic weight of an aircraft plus operational items, such as crew, crew baggage, flight equipment and pantry as per company specifications. The total weight of the aircraft ready for a specific type of operation excluding all usable fuel and traffic load. This weight includes items such as, crew members and their cabin baggage; catering and removable passenger service equipment; and potable water and lavatory chemicals.
<i>Domestic flight.</i>	<i>A flight with origin and destination within the borders of one State.</i>
Electronic Data Processing System (EDP)	Electronic data processing system (computer).
Emergency Exit	A door, window exit, or any other type of exit (e.g. hatch, tail cone exit) used as an egress portal to allow maximum opportunity for cabin and flight crew evacuation within an appropriate time period.
Engine (Aircraft)	The basic aircraft engine assembly plus its essential accessories as supplied by the engine manufacturer.
Equipment Restraint Area (ERA)	The area of the apron bordered by a red line known as the Equipment Restraint Line, or otherwise indicated, in which an aircraft is parked during ground operations. Equivalent Term: Equipment Safety Area.
Family member	A parent, sibling, child, spouse, grandparent, or grandchild.
Fatigue	A physiological state of reduced mental or physical performance capability resulting from sleep loss, extended wakefulness, circadian phase, and/or workload (mental and/or physical activity) that can impair a person's alertness and ability to perform safety-related operational duties.
Flight Crew	Crew members whose duties require them to be on the flight deck.
<i>Flight plan (operational)</i>	<i>The operator's plan for the safe conduct of the flight based on considerations of aircraft performance, other operating limitations and relevant expected conditions on the route to be followed and at the aerodromes concerned.</i>
<i>Flight Specials Team</i>	<i>Handle all procedures around seating, final seating and reseating.</i>
Fragile Baggage	Baggage that is declared as fragile by the passenger and must be labelled to notify handlers.



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Fuel (Flight Planning)	The following terms refer to fuel values used during the flight planning process. • Taxi Fuel–The fuel required from engine start to the start of take-off roll. • Trip Fuel–The amount of fuel planned to be consumed from take-off to the station of first intended landing including alternate Fuel, Holding Fuel, Contingency Fuel, Reserve Fuel, Additional Fuel and/or Tanker Fuel. • Takeoff Alternative Fuel–The amount of fuel on board less the fuel consumed before the take-off run.
Fueling Safety Zone	An area with associated restrictions that is established on the ramp around the aircraft fueling receptacles, tank vents, and around the fueling equipment during aircraft fueling operations. Equivalent Term: Refueling Safety Zone.
Gate Delivery Items	Items that are carried by the passenger to the gate and then placed in the hold for the flight.
Group Operations Centre (GOC)	<i>Responsible for the dispatch of aircraft, ATC co-ordination, overall Operational control.</i>
GOSHO or GO-SHOW	<i>Passenger that is not holding any reservation or ticket (and therefore not mentioned on the passenger list) and is accepted for check-in after payment.</i>
Ground Handling	The ground services necessary for the arrival and departure of an aircraft at an airport, other than air traffic services.
Ground Operations	The conduct of activities associated with the ground services that comprise ground handling. See Ground Handling.
Ground Handling Service Provider (GHSP)	A provider acting as the handling agent for one or more customer airlines, providing one or more of the ground services as defined in SGHA. See Provider.
Ground Support Equipment (GSE)	Any piece of mobile equipment, whether or not powered or self-propelled, purpose designed, built and used for ground handling, servicing or field maintenance of aircraft on the ramp area of an airport.
Hazard	A condition, situation or object with the potential of causing unsafe aircraft operations, injuries to personnel, damage to equipment or structures, loss of material, or reduction of ability to perform a prescribed function.
Heavy Baggage	Baggage that exceeds 23KG in weight and must be labelled to notify handlers.



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Hold	See Cargo Compartment.
Hold Baggage	Any baggage that is carried in the hold of passenger aircraft. See Checked Baggage.
Human Factors	Principles applied to aeronautical design, certification, training, operations and maintenance to ensure equipment, systems, processes and procedures take into account human capabilities and limitations, as well as the safe interface between the human and system components, for the purpose of optimizing human performance and reducing human error.
IATA	The abbreviation and acronym for the International Air Transport Association.
IATA Cargo Handling Manual (ICHM)	An IATA manual that contains the latest procedures and recommended practices for the safe and efficient handling of cargo.
<i>IATA Ground Damage Database (GDDDB)</i>	<i>An IATA repository of structured data, submitted by industry participants, that is subjected to expert statistical analysis for the purpose of identifying the trends and causes of aircraft ground damages, and for supporting a performance-based approach to ground operations management.</i>
IATA Ground Operations Manual (IGOM)	An IATA manual that is the source for the latest industry-approved standards harmonizing ground handling processes and procedures for frontline personnel. See Airport Handling Manual (AHM).
IATA Incident Data Exchange (IDX)	An IATA repository of structured data, submitted by industry participants, that is subjected to expert statistical analysis for the purpose of identifying the trends and causes of aircraft ground damages, and for supporting a performance-based approach to ground operations management.
ICAO	The abbreviation and acronym for the International Civil Aviation Organization.
ICAO Annexes	Additional sections to the ICAO Convention, which are guidelines, provided for the various national aviation authorities for use in developing the civil aviation rules and regulations that govern flight operations in their respective states. Equivalent Term: Annexes.
<i>Ice</i>	<i>Water that has frozen or compacted snow that has transitioned into ice, in cold and dry conditions.</i>
Implemented (Operations)	The state of an operational specification as being established, activated, integrated, incorporated, deployed, installed, maintained and/or made available as part of the operational system, and monitored and evaluated as necessary for continued effectiveness.



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Improperly Documented Person	<i>A person who travels, or attempts to travel:</i> <i>with an expired travel document or an invalid visa;</i> <i>with a counterfeit, forged or altered travel document or visa;</i> <i>with someone else's travel document or visa;</i> <i>without a travel document;</i> <i>without a visa, if required.</i>
Inadmissible Passenger (Person) INAD	A person who is refused admission by its authorities. As per IATA RESO 701 A passenger who is refused admission to a country by authorities of such country, or who is refused onward carriage by a Member or government authority at a point of transfer, e.g. due to lack of a visa, expired passport, etc. <i>and who are being transported back to their country of departure;</i> <i>ANAD is an inadmissible passenger accompanied by an escort.</i> <i>UNAD is an inadmissible passenger unaccompanied by an escort. UNAD voluntarily return to their destination and pose no risk to the airline.</i> <i>The airline is responsible for the transportation of and is financial liable for inadmissible passengers.</i>
Incident	An occurrence (i.e. aircraft damage, injury, equipment damage, loading event/irregularities, aircraft servicing issues) other than an accident associated with the handling of the aircraft.
Incompatible (Dangerous Goods)	Description of dangerous goods which, if mixed, would be liable to cause a dangerous evolution of heat or gas or produce a corrosive substance.
Infant	A child that, for the purpose of identification as a passenger, is typically defined as being less than two years of age.
Integral Airstairs	Stairway contained within or built into the aircraft fuselage, which may be deployed on the ground to provide a means for persons to enter or exit the aircraft. Equivalent Term: Integral Stairway.
Intercontinental flight	<i>Flights beyond the European region with origin and destination in different continents.</i>
IOSA	The abbreviation and acronym for the IATA Operational Safety Audit.
ISAGO	The abbreviation and acronym for the IATA Safety Audit for Ground Operations.
ISSA	The abbreviation and acronym for the IATA Standard Safety Assessment.
Items with a Limited Release Tag	Items that are carried by the airline without accepting liability for damage or loss due to a pre-existing condition (i.e. baggage noticed as being damaged upon acceptance, baggage arriving to check-in late), etc.
Job Card	See Task Card. Equivalent Term: Work Card.



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Jump Seat	A seat located at the rear of the flight deck and/or in the cabin or cargo compartment for use by crew members, supernumeraries, cargo attendants, observers or other approved persons.
LAGs	<i>Liquids, Aerosols and Gels (LAGs) shall include pastes, lotions, liquid/ solid mixtures and the contents of pressurised containers, such as toothpaste, hair gel, drinks, soups, syrups, perfume, shaving foam and other items with similar consistencies.</i>
Landing Gear Safety Pin	Prevents gear retraction. Equivalent Terms: Downlock Equipment–NLG & MLG.
Landside	<i>Everything outside the airport boundary e.g. passenger check-in and public areas.</i>
Lashing	Lashing secures a load with maximum restraint capacity, in the aircraft to prevent it from moving and reduce risk of aircraft damage and/ or personal/ passenger injury: 1. Embrace lashing fastens the rope/ strap from one tie-down fitting, across/ over/ around the load, fastening to another tie-down fitting. 2. Direct lashing fastens the rope/ strap from tie-down fittings to the load.
Late Baggage	Baggage that has arrived late for a flight or late at the reclaim carousel.
Lavatory	A compartment or closet installed on an aircraft, with a toilet and typically washing facilities inside, which has structural walls and a door that, when closed, creates a fully enclosed and isolated interior space not visible from outside the compartment. Equivalent Term: Toilet.
Live Animals in Hold (AVIH)	Live animals that are carried in the pressured and heated aircraft hold. Must be reserved in advance. Equivalent terms: Animals Vivant in Hold, Live Animals.
Live Animals Regulations (LAR)	A document (manual) published by IATA in order to provide procedures for shippers, freight forwarders, Operators and animal care professionals for the transport of animals by air in a safe, humane and cost- effective manner, and in compliance with airline regulations and animal welfare standards.
Load	Everything, including persons and items, but not including fuel, that is carried in an aircraft and is not included in the basic operating weight of the aircraft.
Load Control	Process that ensures that an aircraft is safely and economically loaded for flight.
Load Planning	The part of the load control process that ensures a load is planned for safe transportation onboard the aircraft.
Loading Instruction	Instructions for loading of the aircraft produced by Load Control for the person responsible for aircraft loading.



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Loading Instruction Report (LIR)	The Loading Instruction, signed by the person responsible for aircraft loading reflects any deviations that occurred during loading and requiring action by Load Control.
Loadsheet	A legal document that states the weight data and the balance condition of the loaded aircraft for each individual flight. The term loadsheet includes provisional loadsheet, final loadsheet, ACARS loadsheet or any other approved transmission. The loadsheet includes the weight of the aircraft, crew, pantry, fuel, passengers, baggage, cargo and mail, as well as the details of the distribution of the load in the aircraft.
MAAS; Meet and Assist	<i>Service at the airport where a passenger is escorted to or from a gate or aircraft by designated staff.</i>
Mail	Dispatches of correspondence and other items tendered by and intended for delivery to postal services in Accordance with the rules of the Universal Postal Union (UPU).
Mass	<i>May be used instead of "weight"; they are deemed to have the same meaning.</i>
Maximum Landing Weight (MLW)	Maximum allowed weight of the aircraft at landing.
Maximum Take-off Weight (MTOW)	Maximum allowed weight of the aircraft at take-off.
Maximum Zero Fuel Weight (MZFW)	Maximum allowed weight of the aircraft excluding fuel
Mean aerodynamic Chord (MAC)	The average length of the chord (Width) of the aircraft wing.
Medium Haul	<i>A medium haul flight is a flight with at least one sector more than 2 hours but less than 7 hours.</i>
Mishandled Baggage	Checked baggage that has been involuntarily or inadvertently separated from passengers or crew members.
Mobility Aids	Aids used by passengers to assist in their journey.
Monitoring	The process of observing, checking, measuring and/or assessing the performance of operations or operational functions for the purpose of determining if, or verifying that, operational requirements are being fulfilled. See Also Operational Function (Aircraft Operations).
Movement Area	That part of an airport to be used for the take-off, landing and taxiing of aircraft, consisting of the manoeuvring area and the apron(s).



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National Aviation Authority (NAA)	The regulatory authority that governs civil aviation within a state. See Regulatory Authority. Equivalent Term: Civil Aviation Authority (CAA) Examples: CAA, FAA, DGAC, CASA Note: In the GOM, use of the term Authority has the same meaning as the National Aviation Authority of the State of the Operator.
Non suspicious objects	<i>Any object, not being a prohibited item, which can be visually or physically reasonable verified to be safe to handle and to relocate.</i>
Nose gear steering bypass pin	Deactivates the steering function. Equivalent Term: Nose Wheel Steering deactivation pin, Lock pin–Nose Gear Towing Lever, Steering Bypass Pin.
NOREC	<i>A NOREC can occur when seats are sold after closure of the PNL: These seats are mostly NOML and always have to be booked at the last rows. If no seats are available it is allowed to book them on the front rows. A handling agent can never NOREC any person without the authorization by the CLO.</i>
NOSHO or NO-SHOW	<i>A passenger whose name appears on the passenger list of flight with a confirmed status, but has not reported at check-in.</i>
NOTOC (Notification to Captain)	Accurate and legible written or printed information provided to the pilot-in-command concerning dangerous goods shipments or other special cargo that is to be carried onboard the aircraft. Equivalent Terms: NOTAC (Notification to Aircraft Commander), NOPIC (Notification to Pilot-in-Command).
TUI OCC (Operations Control Center)	<i>TUI operations control center (TUI OCC), for all TUI Airlines</i>
Occurrence	<i>Any safety-related event which endangers or which, if not corrected or addressed, could endanger an aeroplane, its occupants or any other person and includes in particular an accident or serious incident.</i>
Operations	The recurring activities of an organization directed toward delivering a product or service.
Operator	An organization that holds an Air Operator Certificate (AOC) and engages in commercial passenger and/or cargo air transport operations. Equivalent Terms: Air Operator, Airline.
Outsourcing	The business practice whereby one party (e.g. an operator or provider) voluntarily transfers, usually under the terms of a contract or binding agreement, the conduct of an operational function to a second party. Under outsourcing, the first party retains responsibility for the output or results of the operational function even though it is conducted by the second party.



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Passenger	Person that is transported on board an aircraft by an operator, mostly for commercial purposes. A passenger is not an operating crew member or a supernumerary. Note: Nonoperating crew members, company employees and employee dependents occupying passenger seats on passenger flights are considered passengers.
Passenger Aircraft	An aircraft that carries passengers.
Passenger Boarding Bridge	A telescoping corridor that extends from an airport terminal to an aircraft for the boarding and disembarkation of passengers. Equivalent Terms: Jetway, Air Bridge, Boarding Bridge, Loading Bridge, Loading gate, Boarding Gate.
Passenger Flight	A flight that carries passengers. See Passenger.
Passenger with Disability (PWD)	Passengers with disabilities (PWD) includes passengers with reduced mobility and passengers with non-visible disabilities which can be temporary or permanent conditions. Reduced mobility is due to physical disability (locomotor or sensory) intellectual impairment, age, illness or any other cause of disability and who need some degree of special accommodation or assistance over and above that provided to other passengers.
Personal Electronic Device (PED)	A Personal Electronic Device (PED) is an item of electrically powered equipment that uses internally or externally supplied electrical power and is of a size that enables it to be portable. This includes devices that may be brought on board aircraft by passengers, such as: 1. laptop computers and mobile phones; 2. devices that are provided to the passengers by the aircraft crew, e.g. Digital Versatile Disc (DVD) players for on-board entertainment; and 3. devices that may be used by the aircraft crew when performing their duties, e.g. duty free point of sale equipment.
Personal Protective Equipment (PPE)	Equipment or clothing worn by personnel to protect against operational injury and health hazards.
Persons in lawful custody	<i>Persons either under arrest or convicted by courts of law who have to be transported to another State for legal reasons. The competent authority shall ensure that persons in lawful custody are always escorted.</i>
Pilot-in-Command (PIC)	The pilot designated by an operator as being in command of the aircraft and charged with responsibility for the operational control and safe conduct of a flight. Equivalent Terms: Aircraft Commander, Captain, Commander.



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Plan	The formulation of action or series of actions designed to achieve a defined end result.
Policy	The stated intentions and direction of an organization.
Policy and Procedure Manual (PPM)	Policies and Procedures Manual (PPM) is a generic name; an equivalent manual with a different name is an acceptable alternative (e.g. Ground Operations Manual, Ramp Handling Manual, Passenger Handling Manual, as applicable to the operations).
Portable Electronic Device (PED)	Any electronic device that can be moved and contains its own power source. PEDs include laptop and tablet smartphones, handheld GPS devices and navigation devices that can be detached from an aircraft.
Priority Baggage	Baggage belonging to commercially important passengers.
Procedure	An organized series of actions accomplished in a prescribed or step-by-step manner to achieve a defined result.
Process	One or more actions or procedures implemented in a coordinated manner to achieve a goal, a defined result or to satisfy a requirement.
Program	An organized set of processes directed toward a common purpose, goal or objective.
Provider	An organization that delivers services (e.g., maintenance, ground handling, training) to an air operator on a contractual basis. See Ground Handling Services Provider (GHSP). Equivalent terms: Service Provider, Service Vendor.
Ramp	See Apron.
Ramp Operations	All aircraft activities that occur on an airport ramp area. Equivalent Term: Tarmac Operations.
Regulatory Authority	An organization designated or otherwise recognized by the government of a state for regulatory purposes, which issues rules and regulations in connection with protection and safety.
Requirement	A specification that is considered an operational necessity; compliance is typically mandatory.
Responsibility	An obligation to execute or perform assigned functions, duties, tasks or actions; typically includes an appropriate level of delegated authority; implies holding a specific office, title, or position of trust. See Authority.
<i>Reunion</i>	<i>Reunion for survivors with friends and family.</i>
Risk	See Safety Risk.
Root Cause Analysis	A method of analysis that focuses on identifying the root cause(s) of an undesirable situation or condition.



RUSH Baggage	Baggage that has missed the flight for which it was intended and will now travel without the passenger for the remainder of the journey.
Safety Action Group (SAG)	A high level tactical committee within a Safety Management System (SMS) that comprises designated line managers and representatives of front line personnel; takes strategic direction from the Safety Review Board (SRB) and addresses the implementation and effectiveness of risk control actions in operations. See Safety Management System (SMS) and Safety Review Board (SRB).
Safety Assurance	The component of a safety management system that comprises processes for: • Safety performance monitoring and measurement; • The management of change; • Continual improvement of the SMS. See Safety Management System (SMS).
Safety Audit	An independent and documented examination of activities, records, systems, programs, processes, procedures, resources and/or other elements of operations to verify an operator's/provider's safety performance and validate the effectiveness of existing risk controls.
Safety Culture	The extent to which an organization actively seeks improvements, vigilantly remains aware of hazards, and utilizes systems and tools for continuous monitoring, analysis, and investigation; includes a shared commitment by personnel and management to personal safety responsibilities, confidence in the safety system, and a documented set of rules and policies. The ultimate responsibility for the establishment and adherence to sound safety practices rests with the management of the organization.
Safety Data	A defined set of facts or set of safety values collected from various aviation-related sources, which is used to maintain or improve safety. Safety data is typically collected from proactive or reactive safety-related activities, such as: • Accident or incident investigations • Safety reporting • Continuing airworthiness reporting • Operational performance monitoring • Inspections, audits, surveys, and/or • Safety studies and reviews.
Safety Harness	A seat harness consisting of a seat belt and shoulder straps that, when fastened, retains a person's torso secure in the seat. To provide greater upper body movement, the seat belt may be used independently with, the shoulder straps unfastened.
Safety Information	Safety data that is processed, organized or analyzed in a given context so as to make it useful for safety management purposes. See Also Safety Data.



Safety Management System (SMS)	A systematic approach to managing safety within an organization, including the necessary organizational structures, accountabilities, policies and procedures. As a minimum, an SMS: • Identifies safety hazards; • Ensures that remedial action necessary to maintain an acceptable level of safety is implemented; • Provides for continuous monitoring and regular assessment of the safety level achieved; and • Aims to make continuous improvement to the overall level of safety.
Safety (Operational)	The state in which the possibility of harm to persons or of property damage is reduced to and maintained at or below an acceptable level through a continuing process of hazard identification and safety risk management. See Aircraft Operations. Note 1: The term Safety used in the IOSA Standards Manual (ISM) and the ISSA Standards Manual (ISSM) refers to the management of safety and/or security risks that have the potential to affect aircraft operations. Note 2: The term Safety used in the ISAGO Standards Manual (GOSM) refers to the management of safety and/or security risks that have the potential to affect aircraft or ground operations.
Safety Performance Indicator	A data-based safety parameter used for monitoring and assessing safety performance.
Safety Promotion	The component of an SMS that provides support for the processes associated with safety risk management and safety assurance, and defines: • Training and education; • Safety communication. See Safety Assurance, Safety Management System (SMS) and Safety Risk Management.
Safety Review Board (SRB)	A strategic committee within an SMS that comprises senior management officials; addresses high level safety issues associated with an operator's policies, resource allocation organizational performance monitoring. See Safety Management System (SMS) and Safety Action Group (SAG).
Safety Risk	The projected severity and likelihood of occurrence of an adverse consequence or outcome from an existing hazard. A projected outcome could be an accident, but an intermediate unsafe event or consequence might be identified as the most credible outcome. See Safety Risk Assessment (SRA).



Safety Risk Assessment (SRA)	A formal process used to determine safety risk by assessing the potential severity and likelihood of occurrence of an adverse consequence or outcome from an existing hazard. See Safety Risk, Safety Risk Management.
Safety Risk Management	The component of a safety management system that includes the organization-wide implementation of hazard identification and safety risk assessment processes to ensure safety risks are mitigated or controlled to an acceptable level. See Safety Management System (SMS), Safety Risk Assessment (SRA).
Safety Risk Mitigation	The development and implementation of action(s) or measures designed to reduce a safety risk to, and maintain such risk at or below, an acceptable level in accordance with an organization's safety risk tolerability. Equivalent terms: Safety Risk Control, Safety Risk Reduction, Safety Risk Tolerability See Safety Risk, Safety Risk Management, Safety Risk Tolerability.
Safety Risk Tolerability	The level of safety risk that is acceptable (or unacceptable) to an organization based on the risk acceptance criteria of that organization. See Also Safety Risk, Safety Risk Management.
Security Restricted Areas (SRA)	Security Restricted Areas (SRA) <i>The following applies for EU aerodromes. SRA means that area of airside where, in addition to access being restricted, other aviation security standards are applied.</i>
Security Restricted Areas – critical parts (SRA-CP)	<i>The following applies for EU aerodromes. SRA-CP means that all parts of an aerodrome to which screened;</i> <i>• departing passengers and all their belongings</i> <i>• crew and all their belongings</i> <i>• ground personnel and their supplies</i> <i>• vehicles</i> <i>• cargo and mail</i> <i>have access.</i> <i>Within the UK:</i> <i>• all parts of an aerodrome designated for the loading and unloading of passengers and baggage.</i> <i>A part of an aerodrome shall be regarded as a critical part at least for the period of time that the activities referred to are taking place.</i> <i>All parking positions within the EU are within the SRA-CP, unless informed otherwise by the company or local aerodrome authority, or other contracted service providers.</i>
Security Items	Items (e.g. weapons): that for security reasons must be removed from hand baggage and must be loaded in aircraft hold. Must be labelled to notify handlers.



Service Level Agreement (SLA)	A formal agreement, usually as part of a contract, between an operator and an external services provider, or in some cases, and internal services provider, that: • Specifies, in measurable terms, the services the external provider is expected to perform; • Becomes the basis for monitoring of the performance of the external services provider by the operator.
Short Connection Transfer Baggage	Baggage that has a short connection time and may need assistance to make the intended connection. Equivalent Term: Hot Transfer Baggage.
Short Haul	<i>A short haul flight is in general a flight with sectors less than 2 hours.</i>
Slush	<i>Snow that is so water-saturated that water will drain from it when a handful is picked up or will splatter if stepped on forcefully.</i>
Special Category Passengers	<i>Passengers that require special attention, specific guidelines to be followed and appropriate security procedures. Persons requiring special conditions, assistance and/or devices when carried on a flight shall be considered as SCP's including at least PWD's, infants, unaccompanied children, deportees, inadmissible passengers, and prisoners in custody.</i>
Special Load	<i>A load that requires special attention and treatment during the process of acceptance, storage, transportation, loading and unloading.</i>
Sporting Equipment	<i>Any item of sports equipment that is not carried packed as normal baggage, such as skis, bicycles, etc.</i>
Special Service Request (SSR)	<i>It is a message to communicate the passenger preferences or special services needed. They are indicated by a specific SSR code.</i>
Standard	A provision that specifies a system, policy, program, process, procedure, plan, set of measures, facility, component, type of equipment, or any other aspect of operations that is considered to be an operational necessity and with which conformity is required by an operator, as defined in the applicable IATA industry-developed audits, such as IOSA, ISSA or ISAGO.
Standby Baggage	Baggage that is carried by passengers travelling on a standby or space available basis.
State Safety Program (SSP)	An integrated set of regulations and activities established by a State aimed at managing civil aviation safety.
Station	An airport where a ground handling services provider conducts ground operations for one or more customer airlines.
Station Audit	The Audit, under ISAGO, which assesses conformity with the applicable GOSARPs for the GSP's implementation of corporate and locally managed processes and procedures for the ground operations performed that are within the scope of ISAGO.



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Sterile Area	That area between any passenger inspection or screening station and the aircraft, into which access is strictly controlled. Note: In some states, sterile areas and security restricted areas are the same; in others states different levels of security exist. Equivalent Term: Security Restricted Area.
Sub-Contracting	See Outsourcing.
Supplier	An organization that sells products or services for use by the air transport industry. The products may include maintenance, spare parts and information.
<i>Suspicious object</i>	<i>Anything which is out of place and cannot be accounted for, or any item suspected of being an explosive or incendiary device.</i>
<i>Tailing</i>	<i>Movement of an aircraft on the surface of an airport under its own power, excluding take-off and landing area on the airport where aircraft park.</i>
Task	An activity accomplished when following a procedure.
Task Card	A document or other medium that specifies all maintenance or workshop tasks or actions approved by an Instrument of Appointment Authorized Person as part of the System of Maintenance. Task Cards are computer or manually produced Sign-Off Sheets or Cards and include but are not limited to; Travelers; Tasks in Check Sheets; Survey Sheets; Maintenance Routines; Job Cards; Work Orders; Modification Cards; Scheduled Rectification Cards; Approved Repair Schemes; Operation Sheets. They may detail all requirements or may refer to Amplification details in a particular manual or document. They are used to issue technical instructions and require certification for the accomplishment of that task. Task Cards are either Permanent or Inspection tasks and may be produced in either base, workshop or line maintenance locations for inspections, modifications or component changes. Equivalent Terms: Job Card, Work Card.
<i>Taxiing</i>	<i>Movement of an aircraft on the surface of an airport under its own power, excluding take-off and landing area on the airport where aircraft park.</i>
Technical Instructions	The Technical Instructions for the Safe Transport of Dangerous Goods by Air (Doc 9284) approved and issued periodically in accordance with the procedure established by the ICAO Council.
<i>Third Country</i>	<i>Third countries are countries that are not part of the EU, except airports in Switzerland, Norway, Liechtenstein and Iceland (the airports of those four countries are treated like EU country airports) and countries not recognized as applying equivalent security standards.</i>



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Traffic load	<i>Means the total mass of passengers, baggage, cargo and carry-on specialist equipment, including any ballast.</i>
Transfer Cargo and Mail	Cargo and Mail shipments departing on an aircraft other than that on which it arrived.
Transfer Baggage	Baggage that has been transported on a flight to a certain location, and then is offloaded and transferred to another flight within a defined time period for transportation to another location.
Transit Flight	An aircraft making a landing for commercial reasons where a partial change of loads, passenger and/or crew occurs. It should be noted that a change in flight number of the same aircraft does not change the status of the flight.
Transportation Index (TI)	Applicable to radioactive material only; a single number assigned to a package, overpack or freight container to provide control over radiation exposure.
Travel Document	A travel document is a passport or other official document of identity issued by a State or organization, which may be used by the rightful holder for international travel.
TUI Airways	TUI Airways, UK AOC
TUI Airline	Referring in this GOM to TUIfly Nordic and TUI Airways
ULD Regulations (ULDR)	A document (manual) published by IATA in order to provide technical and operational standard specifications, regulatory requirements and airline requirements applicable to overall ULD operations. See Unit Load Device (ULD).
UN number	<i>The four-digit number assigned by the United Nations Committee of experts on the transport of dangerous goods to identify a substance or a particular group of substances.</i>
Unaccompanied Baggage	Checked baggage that has been loaded into an aircraft that does not have the owner/passenger also onboard.
Unaccompanied Minor	A child, usually under twelve years of age, traveling without a parent or guardian.
Unclaimed Baggage	Baggage that arrives at an airport on a flight and is not picked up or claimed by a passenger or crew member.
Unidentified Baggage	Baggage at an airport, with or without a baggage tag, which has not been picked up by or identified with a passenger or crew member.
Unit Load Device (Aircraft ULD)	A device for grouping and restraining cargo, mail and baggage for air transport. It is either an aircraft container or a combination of an aircraft pallet and an aircraft pallet net. Aircraft ULD is designed to be directly restrained by the aircraft Cargo Loading System (CLS). <i>Equivalent terms: Freight Container, Aircraft Container.</i>



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United Kingdom	<i>The United Kingdom consists of four countries: England, Northern Ireland, Scotland and Wales.</i>
Unruly Passenger	See Disruptive Passenger.
Unserviceable	The state of an aircraft, engine, component, or any piece of equipment as being in a condition that does not permit usage in operations. Equivalent Term: Inoperative.
Valuable Cargo	A cargo shipment that contains one or more valuable articles (specified in the IATA Cargo Services Conference Resolutions Manual, Resolution 012.
Vendor	See Supplier.
Weapon	An instrument or device that is capable of and intended for being used to inflict damage or harm to living beings, structures, or systems; normally prohibited from being carried on board an aircraft by a passenger.
Weight	<i>May be used instead of "Mass"; in this manual they are deemed to have the same meaning.</i>
Weight and Balance Manual (W&BM)	A manual published for each aircraft type by its manufacturer, which is approved by the airworthiness authority as part of the aircraft type's certification, and which defines the set of weight and balance limits not to be exceeded by the operator when loading the aircraft.
Wing Walker	A member of the ground crew whose primary job function is to walk alongside an aircraft's wing tip during aircraft ground movement (e.g. pushback, towing) to ensure the aircraft does not collide with any objects.
Workplace Safety	Process and procedures in place with an operator or services provider that protect people and aircraft from inadvertent injury or damage (i.e. safety of maintenance operations, environment, fire prevention or protection, identification of Safety First Equipment, safety guarding of machinery, FOD protection, housekeeping and proper identification of "maintenance vital" greases and fluids). Equivalent Term: Protection Systems.
XRAY	An electromagnetic wave of high energy and very short wavelength, which is able to pass through many materials opaque to light.
Young Passenger	<i>A child from 12 up to and including 17 years of age.</i>



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<i>A/C</i>	<i>Aircraft</i>
<i>ACARS</i>	<i>ACARS Aircraft Communications Addressing and Reporting System</i>
<i>ACC3</i>	<i>Air cargo and mail carrier operating into the European Union from a Third Country Airport</i>
<i>ACT</i>	<i>Active Temperature Controlled System</i>
<i>ACU</i>	<i>Air Conditioning Unit</i>
<i>ADL</i>	<i>Addition and deletion list</i>
<i>AGM</i>	<i>Aircraft Ground Movement (ISAGO)</i>
<i>AHL</i>	<i>Missing Baggage Report</i>
<i>AHM</i>	<i>IATA Airport Handling Manual</i>
<i>AIRIMP</i>	<i>A4A IATA Reservations Interline Procedure</i>
<i>AMM</i>	<i>Aircraft Maintenance Manual</i>
<i>ANAD</i>	<i>Is an inadmissible passenger accompanied by an escort. Refer to Chapter 7, Annex A - Inadmissible Passenger (Person)</i>
<i>AOC</i>	<i>Air Operator Certificate</i>
<i>AOG</i>	<i>Aircraft on Ground</i>
<i>AOXY</i>	<i>Airline Supplied Oxygen during a flight</i>
<i>API</i>	<i>Advanced Passenger Information</i>
<i>APU</i>	<i>Auxiliary Power Unit</i>
<i>ASAP</i>	<i>As soon as possible</i>
<i>ASU</i>	<i>Air Start Unit</i>
<i>ATA</i>	<i>Actual Time of Arrival</i>
<i>ATC</i>	<i>Air Traffic Control</i>
<i>ATD</i>	<i>Actual Time of Departure</i>
<i>ATR</i>	<i>Automatic Tag Reader</i>
<i>ATT</i>	<i>Goods Attached To Air Waybill</i>
<i>AVI</i>	<i>Live animal</i>
<i>AVIH</i>	<i>Animal Vivant in Hold (Live Animal in hold)</i>



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<i>AWB</i>	<i>Air Waybill</i>
<i>BAL</i>	<i>Balance</i>
<i>BHS</i>	<i>Baggage Handling System</i>
<i>BI</i>	<i>Basic Index</i>
<i>BIG</i>	<i>Outsized cargo</i>
<i>BLND</i>	<i>Blind passenger (specify if accompanied by seeing eye dog)</i>
<i>BRM</i>	<i>(IATA) Baggage Reference Manual</i>
<i>BRS</i>	<i>Baggage Reconciliation System</i>
<i>BUP</i>	<i>Bulk Unitization Programme, Shipper/Consignee DGR Handled Unit</i>
<i>BW</i>	<i>Basic Weight</i>
<i>CAA</i>	<i>Civil Aviation Authority</i>
<i>CAO</i>	<i>Cargo Aircraft Only</i>
<i>CAT</i>	<i>Cargo Attendant Accompanying Shipment</i>
<i>CBBG</i>	<i>Cabin Seat Baggage</i>
<i>CBP</i>	<i>Crew Briefing Package</i>
<i>CCM</i>	<i>Cabin Crew Member</i>
<i>CCT</i>	<i>Customer Care Team</i>
<i>CCTV</i>	<i>Closed Circuit Television</i>
<i>CFSS</i>	<i>Cargo Fire Suppression System</i>
<i>CG</i>	<i>Center of Gravity</i>
<i>CGM</i>	<i>Cargo and Mail Handling (ISAGO)</i>
<i>CGO</i>	<i>Cargo Operations (IOSA)</i>
<i>CIF</i>	<i>Crew Information File</i>
<i>CLC</i>	<i>Centralized Load Control</i>
<i>CLS</i>	<i>Cargo Loading System/Cargo Loading Control panels</i>
<i>CMM</i>	<i>Component Maintenance Manual</i>
<i>COL</i>	<i>Cool Goods</i>
<i>COM and C OMAIL</i>	<i>Company Mail</i>
<i>COMAT</i>	<i>Company Material</i>



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<i>CPM</i>	<i>Container Pallet Message</i>
<i>CRC</i>	<i>Crew Reception Centre</i>
<i>CRD</i>	<i>Child Restraint Device</i>
<i>CRS</i>	<i>Computerized Reservations System</i>
<i>CUTE</i>	<i>Common Use Terminal Equipment</i>
<i>DAA</i>	<i>Delivery at Aircraft</i>
<i>DAIC</i>	<i>De/Anti-icing (ground) Crews, performing the DAIOPS</i>
<i>DAIOPS</i>	<i>De/Anti-icing Operations</i>
<i>DAIP</i>	<i>De/Anti-icing Providers</i>
<i>DCS</i>	<i>Departure Control System</i>
<i>DEAF</i>	<i>Deaf passenger (specify if accompanied by service animal)</i>
<i>DEPA</i>	<i>Accompanied Deportee</i>
<i>DEPO</i>	<i>Deportee</i>
<i>DEPU</i>	<i>Unaccompanied deportee</i>
<i>DG</i>	<i>Dangerous Goods</i>
<i>DGD</i>	<i>Shipper's Declaration for Dangerous Goods</i>
<i>DGR</i>	<i>(IATA) Dangerous Goods Regulations</i>
<i>DGSL</i>	<i>Dangerous Goods and Special Loads</i>
<i>DIP</i>	<i>Diplomatic Cargo</i>
<i>DIV</i>	<i>Aircraft Diversion Message</i>
<i>DLW</i>	<i>Dead Load Weight</i>
<i>DM</i>	<i>Duty Manager</i>
<i>DOI</i>	<i>Dry Operating Index</i>
<i>DOW</i>	<i>Dry Operating Weight</i>
<i>DPNA</i>	<i>Disabled passenger with intellectual or developmental disability needing assistance</i>
<i>EAP</i>	<i>E-freight Consignment with No Accompanying RDS Biological Substance, Category B (UN 3373) Paper Documents</i>
<i>EASA</i>	<i>European Aviation Safety Agency</i>
<i>EAT</i>	<i>Foodstuff</i>



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<i>EAP</i>	<i>e-freight Consignment with no accompanying paper documents</i>
<i>EBT</i>	<i>Evidence Based Training</i>
<i>EBT</i>	<i>Electronic Baggage Tag or Electric Baggage Tag</i>
<i>ECC</i>	<i>Consignment established with an electronically concluded cargo contract ECC with no accompanying paper Air Waybill</i>
<i>ECC</i>	<i>Emergency Call Centre</i>
<i>EDP</i>	<i>Electronic Data Processing</i>
<i>EF</i>	<i>Flowers</i>
<i>EFB</i>	<i>Electronic Flight Bag</i>
<i>EIC</i>	<i>Equipment in Compartment</i>
<i>ELI</i>	<i>Lithium Ion Batteries otherwise excepted from the IATA DGR</i>
<i>ELM</i>	<i>Lithium Metal Batteries otherwise excepted from the IATA DGR</i>
<i>E&M</i>	<i>Engineering and Maintenance</i>
<i>EMA</i>	<i>Electric Mobility Aid</i>
<i>EOBT</i>	<i>Estimated off block time</i>
<i>EOC</i>	<i>Emergency Operations Centre (Airport)</i>
<i>ERA</i>	<i>Equipment Restraint Area</i>
<i>ERC</i>	<i>Emergency Response Centre, also known as a Crisis Management Centre</i>
<i>ERP</i>	<i>Emergency Response Plan</i>
<i>ESAN</i>	<i>Emotional Support Animal. Passenger with emotional support animal in cabin</i>
<i>ETA</i>	<i>Estimated/Expected Time of Arrival</i>
<i>ETL</i>	<i>Electronic Ticket List</i>
<i>EU</i>	<i>European Union</i>
<i>EZFW</i>	<i>Estimated Zero Fuel Weight</i>
<i>FAC</i>	<i>Family Assistance Centre</i>
<i>FCAC</i>	<i>Forward Cargo Air Conditioning</i>
<i>FCM</i>	<i>Flight Crew Member</i>
<i>FIDS</i>	<i>Flight Information Display System</i>



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<i>FIL</i>	<i>Undeveloped/Unexposed film</i>
<i>FIM</i>	<i>Flight Interruption Manifest</i>
<i>FOD</i>	<i>Foreign Object Debris</i>
<i>FPU</i>	<i>Fixed Power Unit</i>
<i>FRC</i>	<i>Friends and Relatives Reception Centre</i>
<i>FREMEC</i>	<i>Frequent Traveler's Medical card</i>
<i>FRI</i>	<i>Frozen goods subject to veterinary/phytosanitary inspections</i>
<i>FRO</i>	<i>Frozen goods</i>
<i>FSZ</i>	<i>Fueling Safety Zone</i>
<i>GADM</i>	<i>Global Aviation Data Management</i>
<i>GHA</i>	<i>Ground Handling Agent</i>
<i>GHSP</i>	<i>Ground Handling Services Provider</i>
<i>GMC</i>	<i>Ground Movement Control</i>
<i>GOC</i>	<i>Group Operations Centre, responsible for dispatch of the aeroplane, ATC co-ordination, overall Operational control.</i>
<i>GOG</i>	<i>Hanging garments</i>
<i>GOG</i>	<i>Ground Operations Group (IATA ground operations advisory body)</i>
<i>GOM</i>	<i>Ground Operations Manual</i>
<i>GOS</i>	<i>Ground Operations Standards (IATA ground operations working group)</i>
<i>GOSARP</i>	<i>ISAGO Standards and Recommended Practices</i>
<i>GOSM</i>	<i>ISAGO Standards Manual</i>
<i>GPS</i>	<i>Global Positioning System</i>
<i>GPU</i>	<i>Ground Power Unit</i>
<i>GSE</i>	<i>Ground Support Equipment</i>
<i>GSP</i>	<i>Ground Service Provider</i>
<i>HEA</i>	<i>Heavy items/loads – over 150kg</i>
<i>HEG</i>	<i>Hatching eggs</i>
<i>HEPA</i>	<i>High-Efficiency Particulate Air (HEPA) filters</i>
<i>HOTAC</i>	<i>Hotel Accommodation</i>



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<i>HPBT</i>	<i>Home-Printed Baggage Tag</i>
<i>HUM</i>	<i>Human Remains</i>
<i>IATA</i>	<i>International Air Transport Association</i>
<i>IAW</i>	<i>In accordance with</i>
<i>ICAO</i>	<i>International Civil Aviation Organization</i>
<i>ICAO CART</i>	<i>The International Civil Aviation Organization (ICAO) Council Aviation Recovery Taskforce</i>
<i>ICE</i>	<i>Carbon dioxide, solid (Dry ice)</i>
<i>ICHM</i>	<i>IATA Cargo Handling Manual</i>
<i>IDQP</i>	<i>IATA Drinking-water Quality Pool</i>
<i>IDX</i>	<i>IATA Incident Data Exchange</i>
<i>IFE</i>	<i>Inflight Entertainment</i>
<i>IFQP</i>	<i>IATA Fuel Quality Pool</i>
<i>IGOM</i>	<i>IATA Ground Operations Manual</i>
<i>IMP</i>	<i>International Massage Procedure</i>
<i>INAD</i>	<i>Inadmissable Passenger (Person)</i>
<i>IOSA</i>	<i>IATA Operational Safety Audit</i>
<i>IoT</i>	<i>Internet of Things</i>
<i>IPA</i>	<i>Isopropyl Alcohol solution</i>
<i>IPM</i>	<i>IOSA Program Manual</i>
<i>IRM</i>	<i>IATA Reference Manual for Audit</i>
<i>ISAGO</i>	<i>IATA Safety Audit for Ground Operations</i>
<i>ISARPs</i>	<i>IOSA Standards and Recommended Practices</i>
<i>ISM</i>	<i>IOSA Standards Manual</i>
<i>ISO</i>	<i>International Organization for Standardization</i>
<i>ISSA</i>	<i>IATA Standard Safety Assessment</i>
<i>kg/KG/Kg</i>	<i>Kilogram(s)</i>
<i>KPI</i>	<i>Key Performance Indicator(s)</i>
<i>LACC</i>	<i>Local Accident Control Centre</i>
<i>LAGs</i>	<i>Liquid, Aerosols and Gels</i>



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<i>LAR</i>	<i>(IATA) Live Animal Regulations</i>
<i>LAW</i>	<i>Landing Weight</i>
<i>LDM</i>	<i>Load Message or Load Departure Message</i>
<i>LEGB</i>	<i>Legs in cast—for passengers with both legs in a full cast, (only to be used in conjunction with SSR code MEDA).</i>
<i>LEGL</i>	<i>Leg in cast—for passengers with a left leg in a full cast or fused knee, (only to be used in conjunction with SSR code MEDA).</i>
<i>LEGR</i>	<i>Leg in cast—for passengers with a right leg in a full cast or fused knee, (only to be used in conjunction with SSR code MEDA).</i>
<i>LEP</i>	<i>List of Effective Pages</i>
<i>LH</i>	<i>Long Haul: Flight time >7hrs</i>
<i>LHO</i>	<i>Living human organs/blood</i>
<i>LI</i>	<i>Lithium - ION (battery)</i>
<i>LIC</i>	<i>License required</i>
<i>LIR</i>	<i>(Aircraft) Loading Instruction Report</i>
<i>LIRF</i>	<i>Loading Instruction Report Form</i>
<i>LMC</i>	<i>Last Minute Changes</i>
<i>LOD</i>	<i>Load Control (ISAGO)</i>
<i>MAAS</i>	<i>Meet and Assist</i>
<i>MAC</i>	<i>Mean Aerodynamic Chord</i>
<i>MAG</i>	<i>Magnetized material</i>
<i>MAL</i>	<i>Mail</i>
<i>MCT</i>	<i>Minimum Connecting Time</i>
<i>MEDA</i>	<i>Passenger Requiring Medical Assistance (airline medical clearance may be required)</i>
<i>MEDIF</i>	<i>IATA Medical Information Form</i>
<i>MH</i>	<i>Medium-Haul. Flight time between 4<6 hrs</i>
<i>MLG</i>	<i>Main Landing Gear</i>
<i>MLW</i>	<i>Maximum Landing Weight</i>
<i>MRZ</i>	<i>Machine Readable Zone</i>



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<i>MTOW</i>	<i>Maximum Takeoff Weight</i>
<i>MUW</i>	<i>Munitions of War</i>
<i>MVT</i>	<i>Aircraft Movement Message</i>
<i>MZFW</i>	<i>Maximum Zero Fuel Weight</i>
<i>NAA</i>	<i>National Aviation Authority</i>
<i>NLG</i>	<i>Nose Landing Gear</i>
<i>NOREC</i>	<i>NO RECOrd</i>
<i>NOSHO</i>	<i>No Show</i>
<i>NOTOC</i>	<i>Notification to Captain/Pilot-in-Command</i>
<i>NSC</i>	<i>Cargo has not been secured yet for Passenger or RRY Radioactive material, Categories II and III-Yellow All-Cargo Aircraft</i>
<i>NWP</i>	<i>Newspapers, magazines</i>
<i>OAT</i>	<i>Outside Air Temperature</i>
<i>OBX</i>	<i>Obnoxious cargo</i>
<i>OCC</i>	<i>Operations Control Centre is operated by TUI OCC or TOCC</i>
<i>ODLN</i>	<i>ULD Operational Damage Limits Notice</i>
<i>OEM</i>	<i>Original Equipment Manufacturer</i>
<i>OHG</i>	<i>Overhang item</i>
<i>OIR</i>	<i>Offloading Instruction Report</i>
<i>OOG</i>	<i>Out-of-Gauge (oversized baggage)</i>
<i>OPC</i>	<i>IATA Operations Committee – now known as Safety, Flight and Ground Operations Advisory Council (SFGOAC)</i>
<i>OPT</i>	<i>On-Board Performance Tool</i>
<i>PAB</i>	<i>Passenger and Baggage Handling (ISAGO)</i>
<i>PAC</i>	<i>Passenger and Cargo</i>
<i>PAL</i>	<i>Passenger Assistance List</i>
<i>PAP</i>	<i>Passenger</i>
<i>PBB</i>	<i>Passenger Boarding Bridge</i>
<i>PBD</i>	<i>Passenger Boarding Device</i>
<i>PC</i>	<i>Piece Concept</i>



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<i>PCA</i>	<i>Pre-conditioned Air</i>
<i>PCR</i>	<i>(IATA) Perishable Cargo Regulations</i>
<i>PDU</i>	<i>Power Drive Unit</i>
<i>PEA</i>	<i>Hunting trophies, skin, hide, and all articles made from or containing parts of species listed in the CITES (Convention on International Trade in Endangered Species) appendices.</i>
<i>PED</i>	<i>Portable/Personal Electronic Device</i>
<i>PEF</i>	<i>Flowers</i>
<i>PEM</i>	<i>Meat</i>
<i>PEP</i>	<i>Fruits And Vegetables</i>
<i>PER</i>	<i>Perishable cargo</i>
<i>PES</i>	<i>Fish/Seafood</i>
<i>PETC</i>	<i>Pet in Cabin</i>
<i>PIC</i>	<i>Pilot-in-Command</i>
<i>PIGS</i>	<i>Passenger Integrated Guidance System. Passenger guidance in the form of, for example, a ribbon that at the same time functions as a barrier for GSE.</i>
<i>PIL</i>	<i>Pharmaceuticals</i>
<i>PIL</i>	<i>Passenger Information list</i>
<i>PIR</i>	<i>Property Irregularity Report</i>
<i>PNL</i>	<i>Passenger Name List</i>
<i>PNR</i>	<i>Passenger Name Record</i>
<i>PPOC</i>	<i>Portable Oxygen Concentrator</i>
<i>PPE</i>	<i>Personal Protective Equipment</i>
<i>PPM</i>	<i>Passenger Protection Message or Policy and Procedure Manual</i>
<i>PPU</i>	<i>Powered Push Unit</i>
<i>PRC</i>	<i>Passenger Reception Centre also known as a Survivor Reception Centre</i>
<i>PRM</i>	<i>Passenger with Reduced Mobility</i>
<i>PSCM</i>	<i>IATA Passenger Standards Conference Manual</i>
<i>PSM</i>	<i>Passenger Service Message</i>



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<i>PTL</i>	<i>Passenger Transfer List</i>
<i>PTM</i>	<i>Passenger Transfer Message</i>
<i>PTS</i>	<i>Precision Time Schedule</i>
<i>PWD</i>	<i>Passenger With Disabilities</i>
<i>QA</i>	<i>Quality Assurance</i>
<i>QC</i>	<i>Quality Control</i>
<i>QMS</i>	<i>Quality Management System</i>
<i>QRT</i>	<i>Quick Ramp Transfer</i>
<i>RAC</i>	<i>Reserved Air Cargo</i>
<i>RCA</i>	<i>Root Cause Analysis</i>
<i>RCL</i>	<i>Cryogenic liquids</i>
<i>RCM</i>	<i>Corrosive</i>
<i>RCX</i>	<i>Explosives 1.3C</i>
<i>RDS</i>	<i>Diagnostic Specimen/ Biological Substance, Category B (UN 3373)</i>
<i>REQ</i>	<i>Excepted Quantities of Dangerous Goods</i>
<i>REX</i>	<i>To be reserved for normally forbidden explosives-Divisions 1.1, 1.2, 1.3, 1.4F, 1.5 and 1.6</i>
<i>RFG</i>	<i>Flammable gas</i>
<i>RFL</i>	<i>Flammable liquid</i>
<i>RFS</i>	<i>Flammable solid</i>
<i>RFW</i>	<i>Dangerous when wet</i>
<i>RGX</i>	<i>Explosives 1.3G</i>
<i>RIS</i>	<i>Infectious substance</i>
<i>RLI</i>	<i>Fully Regulated Lithium Ion Batteries (Class 9)</i>
<i>RLM</i>	<i>Fully Regulated Lithium Metal Batteries (Class 9)</i>
<i>RMD</i>	<i>Miscellaneous dangerous goods</i>
<i>RNG</i>	<i>Non-flammable non-toxic gas</i>
<i>ROP</i>	<i>Organic peroxide</i>
<i>ROX</i>	<i>Oxidizer</i>
<i>RPB</i>	<i>Toxic substance</i>



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<i>RPG</i>	<i>Toxic gas</i>
<i>RRE</i>	<i>Excepted Quantities/Packages of Radioactive Material</i>
<i>RRW</i>	<i>Radioactive material, Category I-white</i>
<i>RRY</i>	<i>Radioactive material, Categories II and III-Yellow</i>
<i>RSB</i>	<i>Polymeric beads</i>
<i>RSC</i>	<i>Spontaneously combustible</i>
<i>RXB</i>	<i>Explosives 1.4 B</i>
<i>RXC</i>	<i>Explosives 1.4 C</i>
<i>RXD</i>	<i>Explosives 1.4 D</i>
<i>RXE</i>	<i>Explosives 1.4 E</i>
<i>RXG</i>	<i>Explosives 1.4 G</i>
<i>RXS</i>	<i>Explosives 1.4 S</i>
<i>SAG</i>	<i>Safety Action Group</i>
<i>SARP</i>	<i>Standards and Recommended Practices</i>
<i>SCCM</i>	<i>Senior Cabin Crew Member</i>
<i>SCO</i>	<i>Cargo Secure for All-Cargo Aircraft only</i>
<i>SCP</i>	<i>Special Category of Passenger</i>
<i>SCPA</i>	<i>A Security Critical Part of the Airport(SCPA).</i>
<i>SDS</i>	<i>Safety Data Sheet</i>
<i>SeMS</i>	<i>IATA Security Management System Manual</i>
<i>SFGOAC</i>	<i>IATA Safety, Flight and Ground Operations Advisory Council (formerly the IATA Operations Committee)</i>
<i>SGHA</i>	<i>Standard Ground Handling Agreement</i>
<i>SH</i>	<i>Short Haul: Flight time <4hrs</i>
<i>SHL</i>	<i>Save Human Life</i>
<i>SI</i>	<i>Supplementary Information</i>
<i>SLA</i>	<i>Service Level Agreement</i>
<i>SLS</i>	<i>Statistical Load Summary</i>
<i>SME</i>	<i>Subject Matter Expert</i>
<i>SMS</i>	<i>Safety Management System</i>



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<i>SOM</i>	<i>Seats Occupied Message</i>
<i>SOP</i>	<i>Standard Operating Procedure</i>
<i>SP</i>	<i>Special Meal</i>
<i>SPF</i>	<i>Laboratory Animals</i>
<i>SPX</i>	<i>Cargo Secure for Passenger and All-Cargo Aircraft</i>
<i>SRA</i>	<i>Safety Risk Assessment</i>
<i>SRA</i>	<i>Security Restricted Area</i>
<i>SRA-CP</i>	<i>Security Restricted Area – Critical Part</i>
<i>SRB</i>	<i>Safety Review Board</i>
<i>SSP</i>	<i>State Safety Program</i>
<i>SSR</i>	<i>Special Service Request</i>
<i>STCR</i>	<i>Stretcher Passenger</i>
<i>SUR</i>	<i>Surface Transportation</i>
<i>SVAN</i>	<i>Service animals. Passenger with Service animal in cabin.</i>
<i>SWP</i>	<i>Sporting Weapons</i>
<i>TACT</i>	<i>(IATA) Air Cargo Tariff and Rules</i>
<i>TAGO Portal</i>	<i>TUI Airline Ground Operations Portal</i>
<i>TAS</i>	<i>TUI Airline Services</i>
<i>TCR</i>	<i>IATA Temperature Control Regulations</i>
<i>TG</i>	<i>Technical Group</i>
<i>TI</i>	<i>Transportation Index</i>
<i>TIM</i>	<i>Travel Information Manual</i>
<i>TIMATIC</i>	<i>Travel Information Manual Automatic. (IATA) world's leading source for information on air travel (entry) requirements in regards to visa, passports, airport tax, Customs, currency and health information.</i>
<i>TM</i>	<i>Training Manual</i>
<i>TOR</i>	<i>Terms Of Reference</i>
<i>TOW</i>	<i>Take-off Weight</i>
<i>TR</i>	<i>Temporary Revision</i>



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<i>TUI E&M</i>	<i>TUI Engineering and Maintenance</i>
<i>TWL</i>	<i>Towbarless Tractor</i>
<i>TWT</i>	<i>Towbar Tractor</i>
<i>UCM</i>	<i>ULD Control Message</i>
<i>ULD</i>	<i>Unit Load Device</i>
<i>ULDR</i>	<i>(IATA) Unit Load Devices Regulations</i>
<i>UM</i>	<i>Unaccompanied Minor</i>
<i>UNAD</i>	<i>Is an inadmissible passenger unaccompanied by an escort.</i>
<i>UPU</i>	<i>Universal Postal Union</i>
<i>UTM</i>	<i>(IATA) Unit Load Devices Technical Manual</i>
<i>VAL</i>	<i>Valuable Cargo</i>
<i>VFR</i>	<i>Passengers visiting friends and relatives.</i>
<i>VHF</i>	<i>Very High Frequency</i>
<i>VOL</i>	<i>Volume</i>
<i>VUN</i>	<i>Vulnerable Cargo</i>
<i>W&B</i>	<i>Weight and Balance</i>
<i>WCBD</i>	<i>Wheelchair (non-spillable battery)</i>
<i>WCBW</i>	<i>Wheelchair (spillable battery)</i>
<i>WCH</i>	<i>Wheelchair</i>
<i>WCHC</i>	<i>Wheelchair (C for Cabin Seat)</i>
<i>WCHR</i>	<i>Wheelchair (R for Ramp)</i>
<i>WCHS</i>	<i>Wheelchair (S for Steps)</i>
<i>WCLB</i>	<i>Wheelchair Lithium ion Battery</i>
<i>WCMP</i>	<i>Wheelchair (manual power)</i>
<i>WCOB</i>	<i>Wheelchair-Requesting wheelchair on board</i>
<i>WET</i>	<i>Shipments of wet material not packed in watertight containers</i>
<i>WHO</i>	<i>World Health Organization</i>
<i>XPS</i>	<i>Priority small package</i>
<i>YP</i>	<i>Young Person</i>



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YPTA	<i>Young Person Traveling Alone</i>
ZFW	Zero Fuel Weight



9 Annex C Aircraft Specifics B737-800 – B737-8 MAX

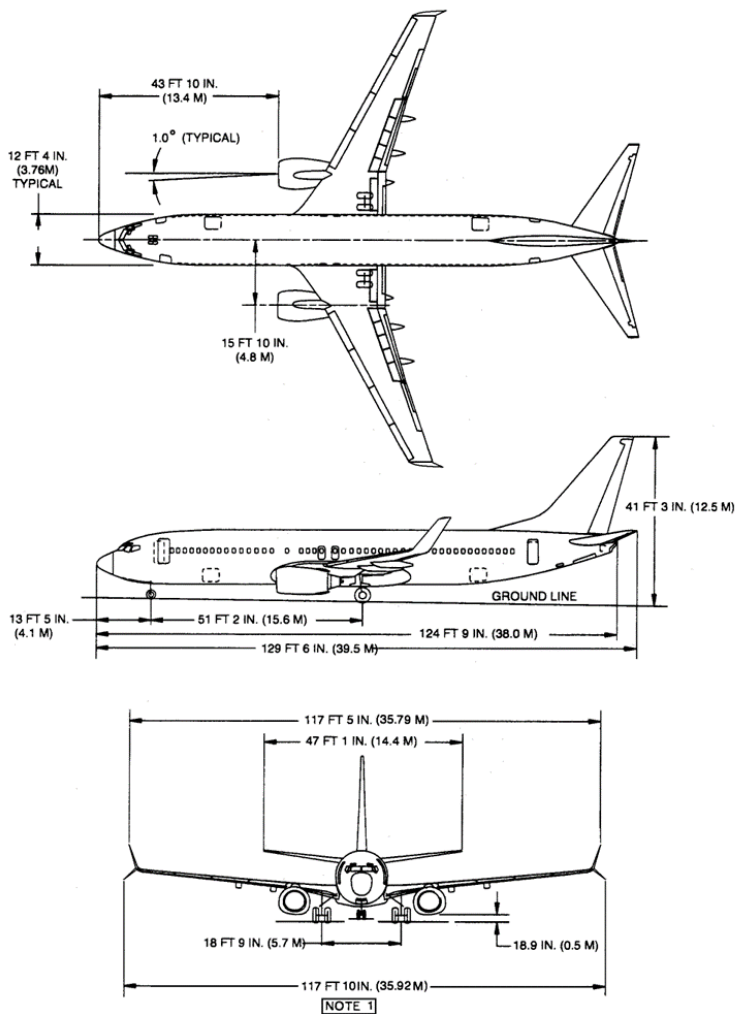
9.1 General

This section gives information on the Boeing B737-800 (NG) and B737-8 (MAX) series aircraft operated by TUI Airways and TUI fly Nordic.



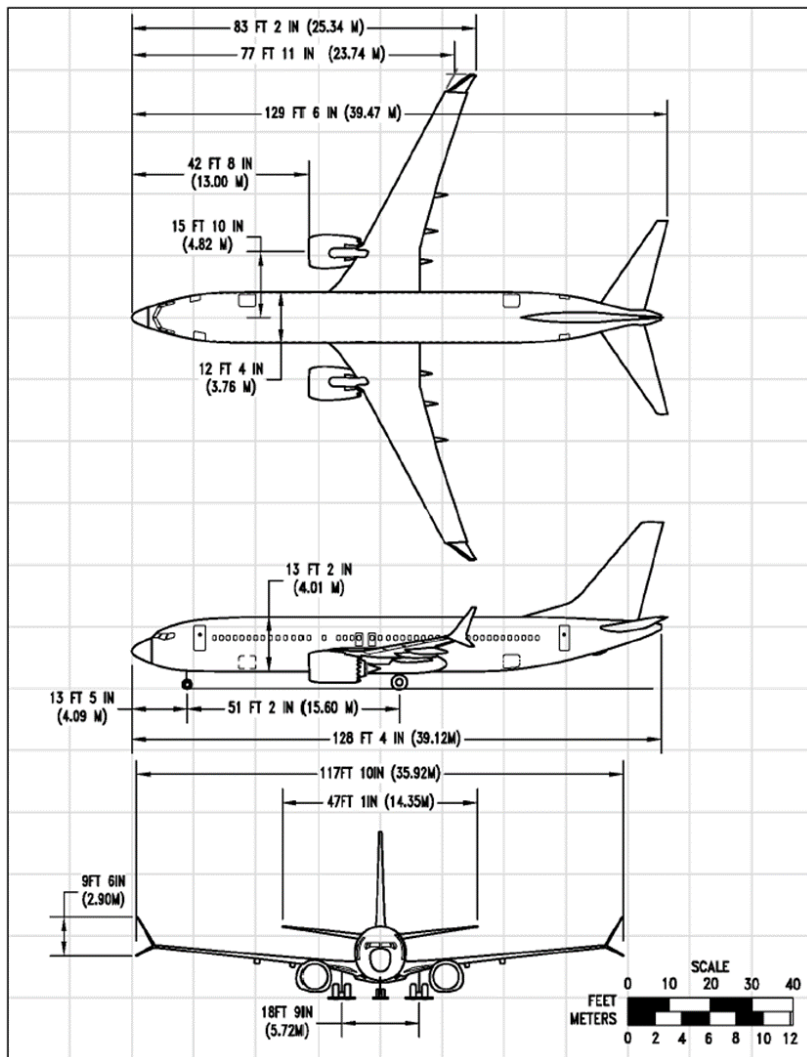
9.1.1 Dimensions

9.1.1.1 Principal Dimensions B737-800



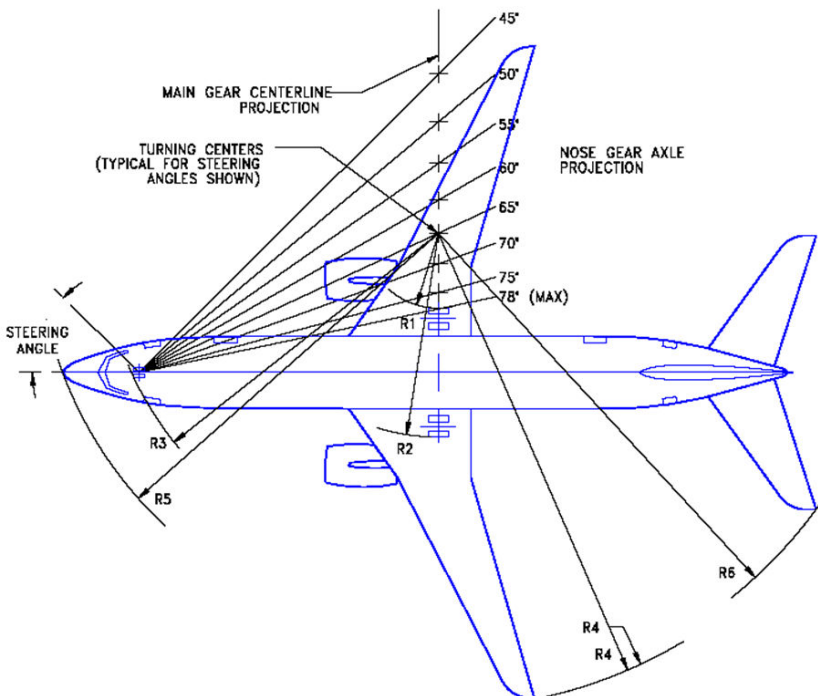


9.1.1.2 Principal Dimensions B737-8 MAX





9.1.1.3 Turning Radii B737-800



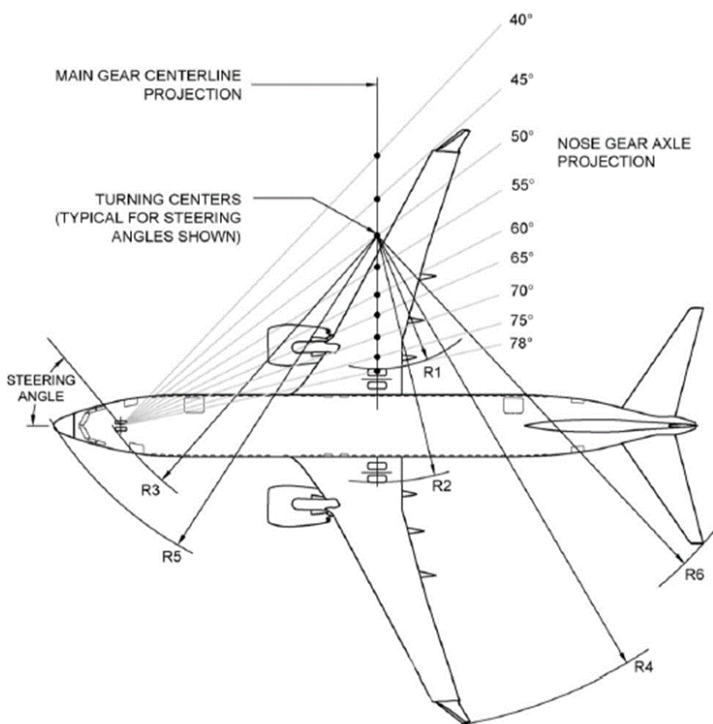
Steering Angle (Degrees)	R1		R2		R3		R4		R4	
	INNER GEAR		OUTER GEAR		NOSE GEAR		WING TIP		WING TIP*	
	ft	m	ft	m	ft	m	ft	m	ft	m
30	77.5	23.6	100.6	30.7	103.7	31.6	145.8	44.4	149.1	45.4
35	61.9	18.9	85	25.9	90.6	27.6	130.4	39.7	133.6	40.7
40	49.7	15.2	72.8	22.2	80.9	24.7	118.5	36.1	121.6	37.1
45	39.8	12.1	62.9	19.2	73.6	22.4	108.8	33.2	111.9	24.1
50	31.6	9.6	54.7	16.7	68	20.7	100.7	30.7	103.8	31.6
55	24.4	7.4	47.5	14.5	63.7	19.43	93.7	28.6	96.8	29.5
60	18.1	5.5	41.2	12.6	60.3	18.4	87.5	26.7	90.6	27.6
65	12.4	3.8	35.8	10.8	57.7	17.6	82	25	85.1	25.9



Steering Angle (Degrees)	R1		R2		R3		R4		R4	
	INNER GEAR		OUTER GEAR		NOSE GEAR		WING TIP		WING TIP*	
	ft	m	ft	m	ft	m	ft	m	ft	m
70	7.2	2.2	30.3	9.2	55.6	17	76.9	23.4	80	24.4
78 (max)	-0.6	-0.2	22.5	6.9	53.5	16.3	69.4	21.1	72.5	22.1

Note: * with Winglets

9.1.1.4 Turning Radii B737-8 MAX





STEERING ANGLE (DEGREES)	R1		R2		R3		R3		R5		R6	
	INNER GEAR		OUTER GEAR		NOSE GEAR		WING TIP		NOSE		TAIL	
	FT	M	FT	M	FT	M	FT	M	FT	M	FT	M
30	78	23.8	101	30.8	104	31.7	149	45.4	110	33.5	130	39.6
35	62	18.9	85	25.9	91	27.7	134	40.8	98	29.9	117	35.7
40	50	15.2	73	22.3	81	24.7	122	37.2	89	27.1	107	32.6
45	40	12.2	63	19.2	74	22.6	112	34.1	83	25.3	99	30.2
50	32	9.8	55	16.8	68	20.7	104	31.7	78	23.8	93	28.3
55	25	7.6	48	14.6	64	19.5	97	29.6	74	22.6	88	26.8
60	19	5.8	42	12.8	61	18.6	91	27.7	72	21.9	84	25.6
65	13	4.0	36	11.0	58	17.7	85	25.9	69	21.0	81	24.7
70	8	2.4	31	9.4	56	17.1	80	24.4	68	20.7	78	23.8
75	3	0.9	26	7.9	54	16.5	75	22.9	67	20.4	75	22.9
78 (MAX)	-1	-0.3	23	7.0	54	16.5	73	22.3	66	20.1	74	22.6

9.1.1.5 Package Size Dimensions

- a. These tables show maximum package size dimensions which will pass through the cargo door openings. Individual tables are presented for upright and tilted loading through the forward and aft hold cargo doors.
- b. Upright loading refers to large or heavy packages with assistance of a fork truck or other loading device and manoeuvred through the door in an upright position.
- c. Tilted loading refers to lightweight cargo which can be hand manoeuvred through the door by tilting to avoid obstructions.
- d. Package heights are measured from upper surface to the floor.



B737-800 (NG)/ B737-8 (MAX) - Forward Cargo Compartment Aft Of The Door Package

Heavy Packages - Lift Assisted										
Height - In	Width - In									
	5	10	15	20	25	30	35	40	45	48
	Length - In									
34	124	114	104	94	84	74	64	54	50	45
30	124	114	104	94	84	74	64	54	50	45
26	124	114	104	94	84	74	64	54	50	45
22	124	114	104	94	84	74	64	54	50	45
18	125	114	104	94	84	74	64	54	50	45
14	127	114	104	94	84	74	64	54	50	45
10	131	116	104	94	84	74	64	54	50	45
5	156	120	105	94	84	74	64	54	50	45

Heavy Packages - Lift Assisted										
Height - Cm	Width - cm									
	13	25	38	51	64	76	89	102	114	122
	Length - cm									
86	315	290	264	239	213	188	163	137	127	114
76	315	290	264	239	213	188	163	137	127	114
66	315	290	264	239	213	188	163	137	127	114
56	315	290	264	239	213	188	163	137	127	114
46	318	290	264	239	213	188	163	137	127	114
36	323	290	264	239	213	188	163	137	127	114
25	333	295	264	239	213	188	163	137	127	114
13	396	305	267	239	213	188	163	137	127	114

B737-800 (NG) / B737-MAX - Aft Cargo Compartment Forward Of The Door Package



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Annex C Aircraft Specifics B737-800 – B737-8 MAX

Heavy Packages - Lift Assisted										
Height - In	Width - In									
	5	10	15	20	25	30	35	40	45	48
	Length - In									
34	70	60								
32	99	89	79	70	60	49				
31	122	112	102	92	82	72	62	52	43	43
26	122	112	102	92	82	72	62	52	43	43
22	122	112	102	92	82	72	62	52	43	43
18	124	112	102	92	82	72	62	52	43	43
14	127	112	102	92	82	72	62	52	43	43
10	138	117	103	92	82	72	62	52	43	43
5	164	130	108	92	82	72	62	52	43	43

Heavy Packages - Lift Assisted										
Height - Cm	Width - cm									
	13	25	38	51	64	76	89	102	114	122
	Length - cm									
86	178	152								
81	252	226	201	178	152	125				
79	310	285	259	234	208	183	158	132	109	109
76	310	285	259	234	208	183	158	132	109	109
66	310	285	259	234	208	183	158	132	109	109
56	310	285	259	234	208	183	158	132	109	109
46	315	285	259	234	208	183	158	132	109	109
36	323	285	259	234	208	183	158	132	109	109
25	351	297	261	234	208	183	158	132	109	109
13	417	330	274	234	208	183	158	132	109	109

B737-800 (NG)- B737-8 (MAX) Aft Cargo Compartment Forward Of The Door Package



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Annex C Aircraft Specifics B737-800 – B737-8 MAX

Light packages - hand manoeuvred										
Height - In	Width - In									
	5	10	15	20	25	30	35	40	45	48
	Length - In									
34	89	77	66	58	52	[b]	[b]	[b]	[b]	[b]
30	160	140	123	110	99	89	81	75	70	67
26	201	171	148	130	116	104	94	86	80	76
22	247	206	177	152	134	120	108	99	92	88
18	338*	242	206	176	155	135	122	111	102	97
14	340*	293*	238	201	174	153	134	121	111	104
10	343*	339*	273	226	190	166	148	133	122	110
5	345*	340*	337*	268	221	188	163	144	131	120

* Package length is limited to a maximum of 277 in when transverse cargo nets are installed.

[b] Any length package will require tilting to clear compartment taper.

Light packages - hand manoeuvred										
Height - Cm	Width - cm									
	13	25	38	51	64	76	89	102	114	122
	Length - cm									
86	226	196	168	147	132	[b]	[b]	[b]	[b]	[b]
76	406	356	312	279	252	226	206	191	178	170
66	511	434	376	330	295	264	239	218	203	193
56	627	523	450	386	340	305	274	252	234	224
46	859*	615	523	447	394	343	310	282	259	246
36	864*	744*	605	511	442	389	340	307	282	264
26	871*	861*	693	574	483	422	376	338	310	279
13	876*	864*	856*	681	561	478	414	366	333	305

* Package length is limited to a maximum of 703 cm when transverse cargo nets are installed.

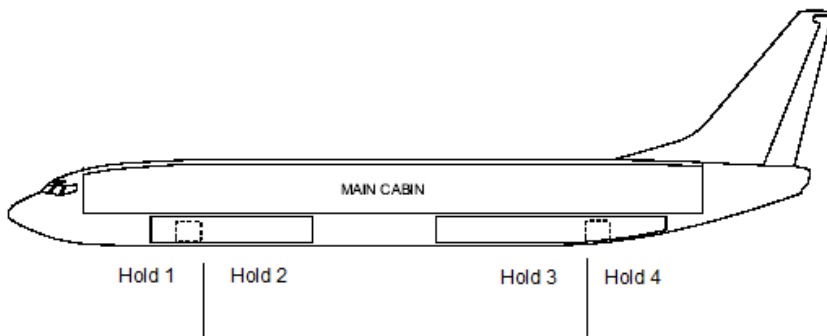
[b] Any length package will require tilting to clear compartment taper.



Conversion factor in > cm: 1in = 2.54cm

9.1.2 Loading Limits

9.1.2.1 B737-800 (NG)



Lower Deck Floor Loading Limits And Restrictions

Limitation		Forward		Aft	
		Hold 1	Hold 2	Hold 3	Hold 4
Running Load per Inch	KG <i>LB</i>	12.0 <i>26.5</i>	12.0 <i>26.5</i>	13.8 <i>30.5</i>	3.6 <i>8</i>
Max Distributed Load Intensity per Sq. Foot	KG <i>LB</i>	68 <i>150</i>	68 <i>150</i>	68 <i>150</i>	68 <i>150</i>
Max per Hold	KG <i>LB</i>	815 <i>1797</i>	2440 <i>5379</i>	3777 <i>8327</i>	667 <i>1470</i>
Maximum Total Load	KG <i>LB</i>	3255 <i>7177</i>		4444 <i>9799</i>	
Hold Volume	M³ <i>FT³</i>	19.03 <i>672</i>		25 <i>883</i>	

The restraint nets must be erected prior to closing the hold door.

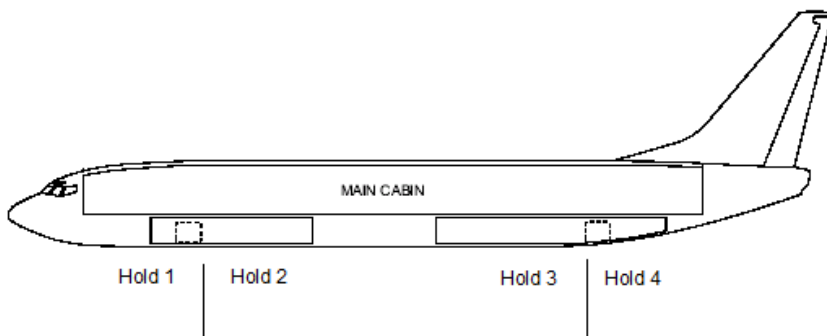


Lower Deck Floor Loading Limits And Restrictions G-TAWZ

Limitation		Forward		Aft	
		Hold 1	Hold 2	Hold 3	Hold 4
Running Load per Inch	KG <i>LB</i>	10.8 <i>24</i>	10.8 <i>24</i>	12.7 <i>28</i>	3.1 <i>7</i>
Max Distributed Load Intensity per Sq. Foot	KG <i>LB</i>	68 <i>150</i>	68 <i>150</i>	68 <i>150</i>	68 <i>150</i>
Max per Hold	KG <i>LB</i>	741 <i>1635</i>	2209 <i>4872</i>	3467 <i>7644</i>	570 <i>1250</i>
Maximum Total Load	KG <i>LB</i>	2950 <i>6507</i>		4037 <i>8904</i>	
Hold Volume	M³ <i>FT³</i>	18.6 <i>657</i>		24.6 <i>869</i>	

The restraint nets must be erected prior to closing the hold door.

9.1.2.2 B737-8 MAX



B737-8 (MAX) - Lower Deck Floor Loading Limits And Restrictions

Limitation		Forward		Aft	
		Hold 1	Hold 2	Hold 3	Hold 4
Running Load per Inch	KG <i>LB</i>	13.1 <i>29.0</i>	13.1 <i>29.0</i>	14.9 <i>33.0</i>	4.0 <i>9.0</i>
Max Distributed Load Intensity per Sq. Foot	KG <i>LB</i>	68 <i>150</i>	68 <i>150</i>	68 <i>150</i>	68 <i>150</i>

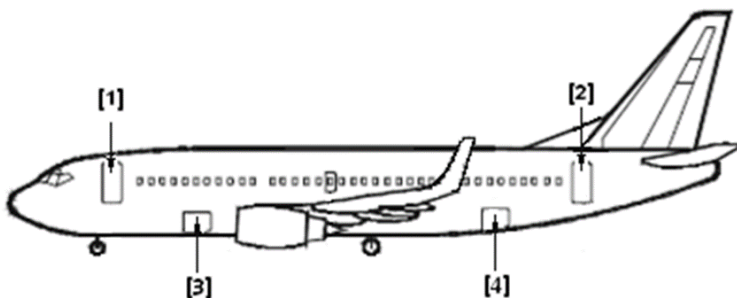


Limitation		Forward		Aft	
		Hold 1	Hold 2	Hold 3	Hold 4
Max per Hold	KG LB	809 1635	2670 5887	4086 9009	763 1685
Maximum Total Load	KG LB	3479 7672		4849 10694	
Hold Volume	M ³ FT ³	18.60 657		24.29 858	

The restraint nets must be erected prior to closing the hold door.

9.1.3 Door Locations and Sill Heights

9.1.3.1 B737-800 (NG)



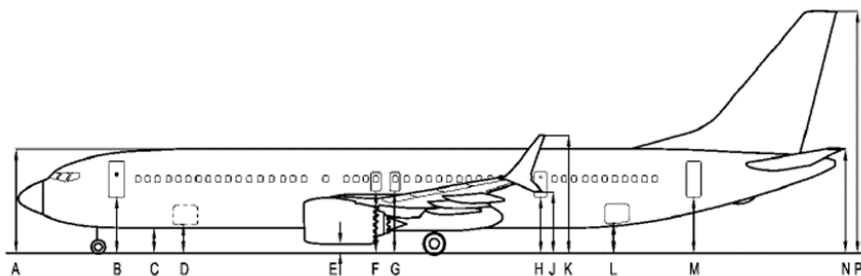
Loc	Door	Size H X W Inches (cm)	Ground Clearance Inches (cm)	
			Min	Max
1	Fwd Entry Door (LH)	72 in (183cm) X 34 in (86cm)	102 in (259cm)	108 in (274cm)
2	Aft Entry Door (LH)	72 in (183cm) X 30 in (76cm)	117 in (297cm)	123 in (312cm)
3	Fwd Hold Door	51 in (130cm) X 48 in (122cm)	51 in (130cm)	57 in (145cm)
4	Aft Hold Door	48 in (122cm) X 48 in (122cm)	65 in (165cm)	71 in (180cm)



**Ground Operations Manual Northern Region
Annex C Aircraft Specifics B737-800 – B737-8 MAX**

Lo c	Door	Size H X W Inches (cm)	Ground Clearance Inches (cm)	
			Min	Max
1	Ewd Service Door (RH)	65 in (165cm) X 30 in (76cm)		
2	Aft Service Door (RH)	65 in (165cm) X 30 in (76cm)		

9.1.3.2 B737-8 MAX



Clearances shown are nominal. Add plus or minus 3 inches to account for any variations in loading, oleo and tire pressures, center of gravity, etc. During Routine servicing, the airplane remains relatively stable, pitch and elevation changes occurring slowly.

Mid exit door only equipped on B737-8-200.

DESCRIPTION		737-8/-8-200 /BBJ8[1]			
		MINIMUM		MAXIMUM	
		FT - IN	M	FT - IN	M
A	FUSELAGE TOP	16-8	5.08	18-1	5.51
B	FORWARD DOOR, LEFT & RIGHT	9-1	2.77	10-1	3.07
C	FUSELAGE - BOTTOM	4-2	1.27	5-1	1.55
D	FORWARD CARGO DOOR	4-8	1.42	5-6	1.68
E	ENGINE	1-5	0.43	1-10	0.56
F	FORWARD OVERWING EXIT DOOR, LEFT & RIGHT	10-2	3.10	10-5	3.18
G	AFT OVERWING EXIT, LEFT & RIGHT	10-2	3.10	10-5	3.18

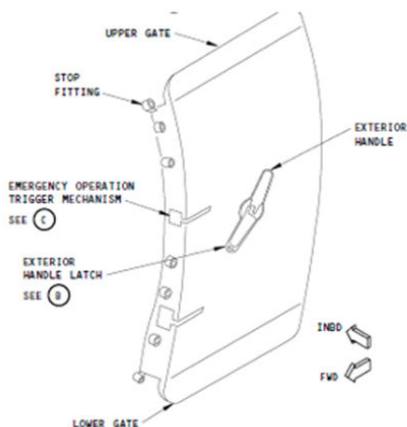


DESCRIPTION		737-8/-8-200 /BBJ8[1]			
		MINIMUM		MAXIMUM	
		FT - IN	M	FT - IN	M
H	MID EXIT DOOR, LEFT & RIGHT *[2]	8-8	2.64	9-5	2.87
J	WINGLET BLADE, LOWER	9-2	2.79	10-4	3.15
K	WINGLET BLADE, UPPER	15-8	4.78	19-11	6.07
L	AFT CARGO DOOR	4-4	1.32	5-4	1.63
M	AFT PASSENGER DOOR LEFT & RIGHT	8-2	2.49	9-3	2.82
N	HORIZONTAL STABILIZER	18-9	5.72	17-6	5.33
P	VERTICAL STABILIZER	38-11	11.86	40-8	12.40

9.1.4 Aircraft Doors

- Passenger and galley service doors are outward opening. All doors are manually operated. To assist cabin crew, ground staff should release the door catch and move the door towards the closed position from outside the aircraft, before removing steps / jetty.
- The overwing exits are for emergency use only.

To open the door from the outside:



- Ensure that the slide warning strap is not visible across the viewing window;
- Using both hands, pull the door operating handle fully outward from the recess and rotate 180° in the direction of the arrow. The door falls in on one side.
- Using the door operating handle, and assist handle open the door until the gust lock engages
- Re-stow handle into door recess

9.1.5 Cabin Configuration

The seating of infants-on-lap is restricted by the available emergency oxygen supply.

Retractable armrests

Configuration 189Y:

- Row 2C To 14C
- Row 17C to 31C

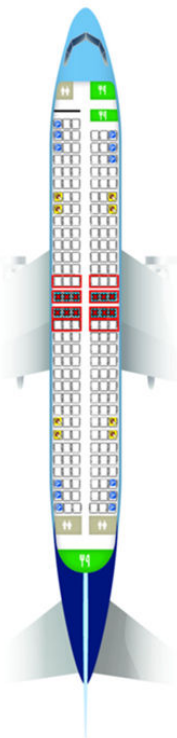
Note: Groups of 12 or more disabled passengers should normally be seated in the forward section of the cabin.



Ground Operations Manual Northern Region

Annex C Aircraft Specifics B737-800 – B737-8 MAX

9.1.5.1 B737-800 / 8 MAX Seating Configuration – 189Y



Restrictions

15 ABC DEF
16 ABC DEF
No children
No obese
No deportees / persons in custody
No PWDs
No infants
No elderly / frail
No sick
Additional restrictions for CRD such as
infant car seats and infants on lap:
1 ABC
2 DEF
14 ABC DEF
17 ABC DEF

Extra Space Seats

15 ABC DEF
16 ABC DEF

Extra Legroom Seats

3 ABC DEF
4 ABC DEF
5 ABC DEF

Infant Seating

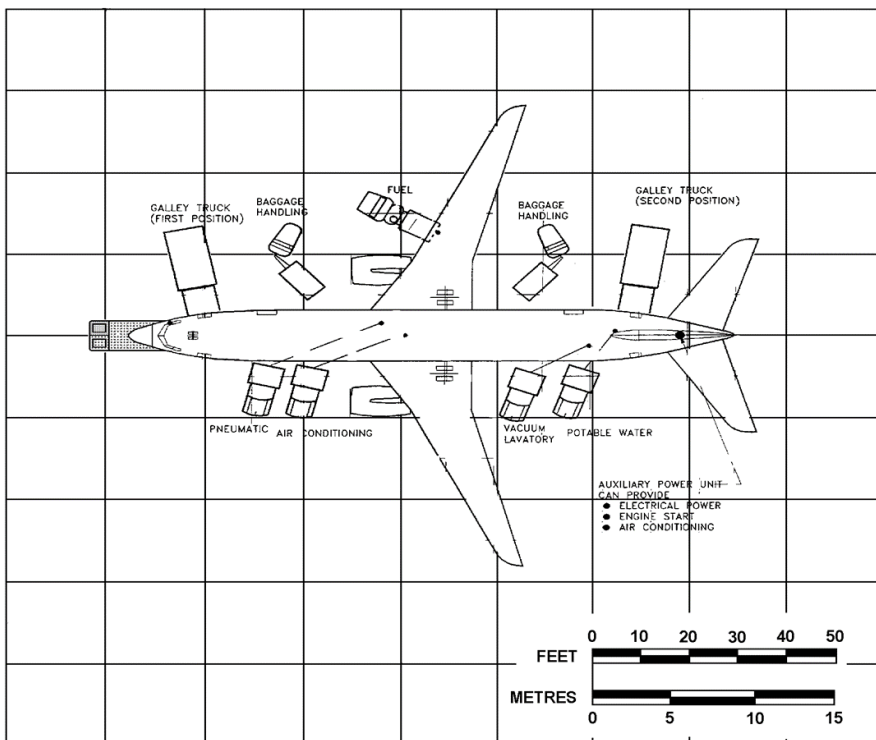
1 in ABC
1 in DEF

Passenger Seating Restrictions	
 No CRDs/SCPs (including children under the age of 12 years)	Not allowed on seat rows: With direct access to emergency exit
 No CRDs	Not allowed on seat rows: 1) With direct access to emergency exit 2) Immediately in front or after an emergency exit row
 WCHC	Preferred to be seated at a window seat Not allowed on seat rows: With direct access to emergency exit
 Infants	Maximum 1 infant per seat row Not allowed on seat rows: 1) With direct access to emergency exit 2) Immediately in front or after an emergency exit row

Note: Extra Leg room only available to UK&I passengers.



9.2 Ground Servicing Equipment



9.2.1 System Servicing Specifications

B737-800 and B737-8 MAX

System	Requirements			Notes
Electrical	Type	DC	115V AC	Tolerances +/- 5V AC 400Hz +/- 20 Hz excluding galley loads
	Power Requirement	amp	90 kVA	
Air Conditioning	Maximum Flow Rate	150 ppm	68 kg/min	At maximum pressure Out. Temp 39.5°C (103°F) Inlet temp.9°C (49°F)
	Maximum output pressure	22.5 psi	1.58 kg/cm ²	



Ground Operations Manual Northern Region
Annex C Aircraft Specifics B737-800 – B737-8 MAX

System	Requirements			Notes
	Cooling capacity	225 lb/min	102.1 kg/min	@ 10" H ₂ O nominal (25.4cm)
	Heating capacity		200,000-300,000 Btu	Approximate values
Pneumatic	Minimum capacity	150 ppm	68 kg/min	nominal
	Maximum pressure	45 psi	3.16 kg/cm ²	
	Minimum pressure	psi	kg/cm ²	
Potable Water	Total Capacity	50 US gal	189 L	Nominal 25 psi (1.7 kg/cm ²)
	Maximum pressure	35 psi	2.5 kg/cm ²	
	Recommended flow rate	30gpm 114 L/min	25 psi 1.76 kg/cm ²	
Lavatory	Total waste capacity	60 US gal	228 L	
	Total rinse capacity	24 US gal	90 L	
	Total precharge	12 US gal	60 L	
	Maximum delivery pressure	50 psi	3.5 kg/cm ²	
	Recommended flow rate	10 gpm 38 L/min	30 psi 2.7 kg/cm ²	

9.2.2 Ground Air Start Unit

The 737-8 (MAX) will require approximately 35% more airflow and 3% more air pressure to be delivered from ground air carts compared to the 737-800 NG for successful GSE ground cart engine starts

ASU must have following Airflow (lb/min):

- a. 0°C = 140 lb/min & 44 PSIA
- b. 15°C = 135 lb/min & 42 PSIA
- c. 30°C = 135 lb/min & 42 PSIA



Example Airfield elevation: Sea Level	B737NG-800 (CFM56-7)		B737MAX-8 (LEAP-1B)		
	Ambient Temperature	Airflow (lb/min)	Pressure (PSIA)	Airflow (lb/min)	Pressure (PSIA)
	0°c	95	43	140	44
	15°c	90	41	135	42
	30°c	90	41	135	42



9.2.3 Ramp Equipment Specifications / Requirements

Forward passenger door (1L) is the preferred door when boarding through an airbridge / PBB (passenger boarding bridge). Due to some airport safety regulations, rear steps may be positioned at 4L door but these are not generally used for any passenger embarkation/ disembarkation at the same time. Steps at 4L door can be used for service providers (cleaning, catering, engineers etc) once disembarkation is complete. At some approved airports where risk assessments have been completed, disembarkation and boarding via rear steps when connected to an airbridge is permitted as a mixed passenger model. This process will already be an established process at that airport and known to the handling company and by the TUI local ground OPS teams.

Front and rear steps should be used when parked remote or when a PBB is not used or available. Both 1L & 4L doors are used. However, when parked remote and a PBB is not used, the absence of steps at the rear door does not prohibit boarding or disembarking.

Forward hold - one mobile conveyor unit for the off-load / on-load of baggage. Conveyor to remain in position until passenger boarding is complete to allow for loading of LMC baggage. (Note 1)

Aft hold - one mobile conveyor unit for the off-load / on-load of baggage.

The cabin crew will assist to ensure passengers disembark simultaneously. Front steps only – If only one set of steps is available, the height of the steps must be monitored and adjusted as required during disembarkation.

9.2.4 Fuel Uplift

- APU or external electrical power required.
- Under-wing pressure system to all tanks.
- Total usable capacity: 26024 litres
- Control of total fuel input, (tank selection / quantity auto shut-off etc.), is available at the wing control panel.



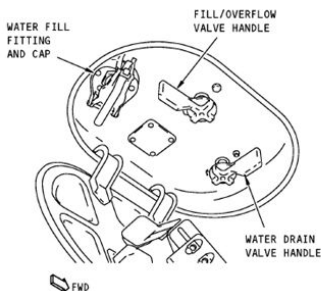
- e. The fuelling operator should make use of a Fuel Chit provided by either TUI Airways / TUIfly Nordic or the fueling provider.

9.2.5 GPU Connection

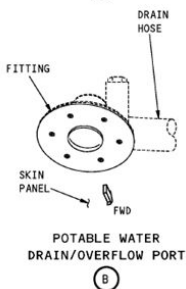
When connecting ground power to TUI Airways and TUI fly Nordic 737 aircraft please do not use this extra support hook as there is no specific point in which to connect it to. Please do not hook this to any part of the panel door or latches as they are not designed for this purpose.

9.2.6 Potable Water Servicing

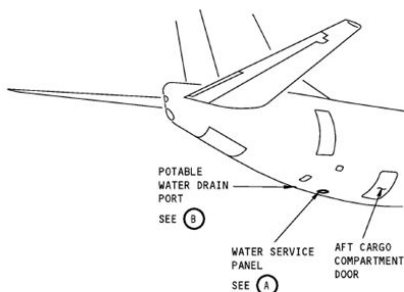
- a. Open the door to the potable water service panel.
- b. Open the cap on the water fill connection.
- c. Connect the water supply hose to the water fill connection.
- d. Pull/turn the handle on the water tank fill valve to open.
- e. Fill the potable water tank with water until water flows from the overflow port on the service panel. (Use water at a pressure of 25psi. DO NOT use water pressure of more than 55psi)
- f. Stop the supply of water to the potable water tank.
- g. Push/turn the handle for the water tank fill valve to close.
- h. Disconnect the water supply hose from the water fill connection and let the fill line drain.
- i. Close the cap on the water fill connection.
- j. Close the door on the service panel.
- k. The water system will have to be drained if the aircraft is on a night stop in freezing conditions. This must be drained from the aft drain system location:



WATER SERVICE PANEL
(A)



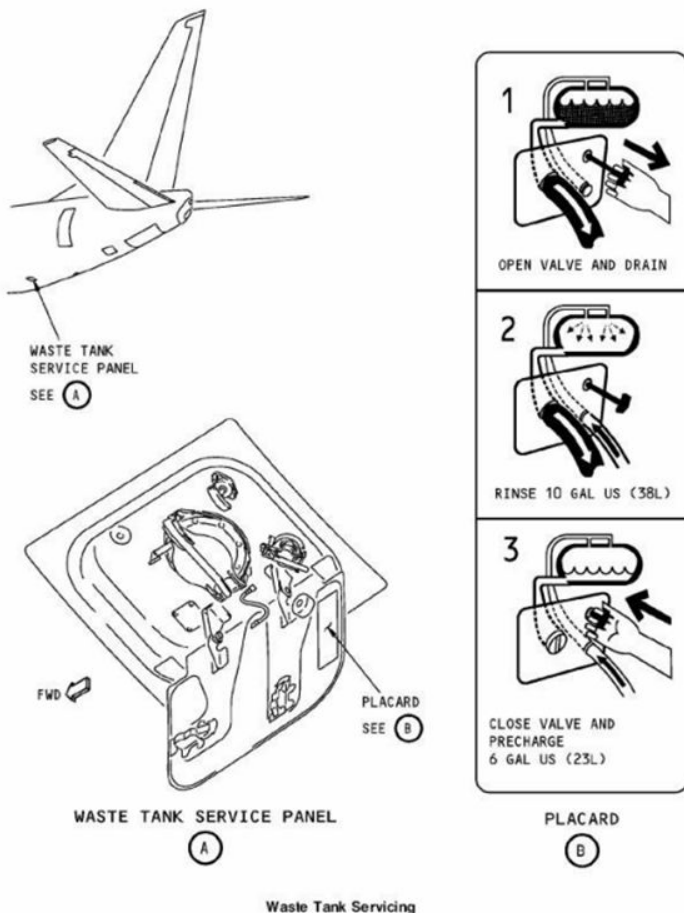
POTABLE WATER
DRAIN/OVERFLOW PORT
(B)





9.2.7 Waste Servicing

There is one toilet drain fitting in the aft lower fuselage. The toilet drain consists of an integral drain cap and "flap" valve, (see figure in this section). Service should be done by different truck than the water servicing truck. The drain fitting is manually opened by first opening the drain cap and connecting the ground coupling and service cart. Then rotate the "Open" lever in the direction of the arrow. This unlatches the flapper valve and allows it to open. The valve is closed by rotating the "Close" lever in the opposite direction from the "Open" arrow. The filler point is located in the service panel, (see figure in this section).



B737-700, B737-800 and B737-MAX 8 – Toilet Service Panel

9.3 Handling

9.3.1 Passenger Boarding

- a. When connected to an airbridge / PBB (passenger boarding bridge) embarkation/ disembarkation of passengers will normally take place through the 1L door. Due to some airport safety regulations, rear steps may be positioned at 4L door but these are generally



not used for any passenger embarkation/disembarkation at the same time. Steps at 4L door can be used for service providers (cleaning, catering, engineers etc) once disembarkation is complete. At some approved airports where risk assessments have been completed, disembarkation and boarding via rear steps when connected to a PBB is permitted as a mixed passenger model. This process will already be an established process at that airport and will be known to the handling company and by the TUI local ground OPS teams.

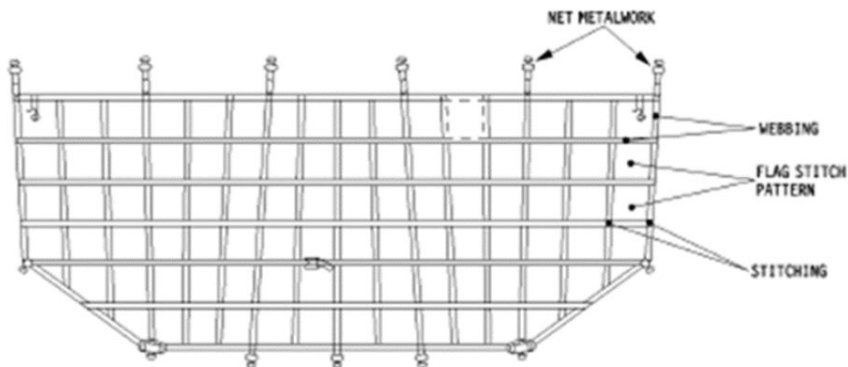
- b. Where a PBB is not available or used and the aircraft is parked on a remote stand, ensure two sets of steps are used at both 1L and 4L doors; passengers must not commence disembarkation until both sets of steps are in position.
- c. Passenger boarding through the forward door may take place while forward galley servicing continues – At discretion of the crew.
- d. Passenger boarding through the aft door may not commence until rear galley servicing is completed. Ground crew will need to liaise with the cabin manager.
- e. When passenger boarding takes place at the aft door, care must be taken to direct passengers around the wing. The use of PIGS or other guidance aids are to be used to ensure passenger safety.
- f. When passenger boarding is through two passenger entry doors, passengers should be directed to the appropriate door by reference to the seat number.
- g. The Boeing 737 is within ground stability limits with the aft passenger cabin full, forward passenger cabin empty and total passenger baggage loaded in holds 3 and 4.) The dispatcher must coordinate embarkation/disembarkation of passengers to monitor and adjust the height of the forward and especially the rear steps as required to prevent damage to the aircraft doors. If steps require repositioning or the height adjusted, the crew must be notified, and embarkation/disembarkation suspended until the adjustments have been made. You must ensure that doors are closed before any steps or other GSE is removed. Once re positioned or adjusted knock on the aircraft door to allow for the crew to re-open the door.
- h. The dispatcher must coordinate embarkation/disembarkation of passengers to monitor and adjust the height of the forward and especially the rear steps as required to prevent damage to the aircraft doors. If steps require repositioning or the height adjusted, the crew must be notified, and embarkation/disembarkation suspended until the adjustments have been made. You must ensure that doors are closed before any steps or other GSE is removed. Once re positioned or adjusted knock on the aircraft door to allow for the crew to re-open the door.

Note: Do not operate the doors in wind greater than 40 knots. Do not allow the door to remain open in winds greater than 65 knots. Injuries to persons, and or damage to equipment and aircraft can occur.



9.3.2 Baggage / Cargo Handling

9.3.2.1 Net Serviceability



Where there is damage to a net or metalwork, any of the following will make the net unserviceable:

- a. More than one ceiling fitting missing
- b. Any severed vertical web
- c. Fraying of two non-adjacent vertical webs
- d. Fraying or three non-adjacent horizontal webs

9.3.2.2 Offload and onload procedure

1. Off-load rear hold first. This is especially important to avoid tipping. Then offload forward hold.
2. Ramp / Loading Agent check of all compartments to ensure that they are empty before loading and do not contain any unauthorized or suspicious items.
3. Load according to the standard load distribution unless other instructions have been received. Load forward hold first to avoid tipping the aircraft.
4. Heavy or large items may be loaded and secured (in the forward hold doorway, if to move the item further into the hold would cause health and safety difficulties. Such items must be securely attached to the aircraft floor using ropes or straps to prevent movement in flight.
5. Once loading is complete the ramp/loading agent must correctly secure the hold net assembly ensuring that the floor anchor points are clear of debris/dirt, anchor floor clips are serviceable including the spring, all net clips are secured and correctly tensioned.

Note: This action is requires a signature on the LIRF, two signatures per LIRF required by separate people (Loading Supervisor & Ramp Agent).

6. Report any unserviceable nets to the Captain or Engineer. Ensure hold doors are shut and locked.



7. Once the Loading Supervisor is satisfied that the above actions have been carried out, he/she will sign the LIRF to confirm the aircraft has been loaded in accordance with the LIRF instructions (including changes) and TUI procedures.

9.3.2.3 AVIH

Refer to Annex – AVIH

9.3.2.4 EMA

Refer to Annex - EMA

9.3.2.5 Risk of Tail-Tipping

Loading sequence placards are located in both holds detailing the correct loading and unloading sequence. It is essential that the forward hold is loaded before and unloaded after, the rear hold to ensure that the aircraft balance does not reach the critical tipping point. This is especially critical when standard passenger seating (passengers evenly spread throughout the cabin) is not used.

The absolute tipping limit for the 737-800 (NG) & 737-8 (MAX) airplanes is at 50.8% MAC, considerably aft of the ground stability limit. Some of the major factors affecting the airplane tipping and stability limits will include, but are not limited to the following items:

- a. Airplane Empty Weight
- b. Airplane Attitude
- c. Fuel Loading
- d. Passenger Loading
- e. Cargo Loading
- f. Ramp Slope
- g. Runway Surface Condition
- h. Snow Loads
- i. Wind Loads

The ground stability limit takes into account the effects of the following:

- a. 3% Ramp slope
- b. Towing forces
- c. 40 knot headwind

9.3.2.6 Standard Loading 737-800 (NG) & 737-8 (MAX)

a. Standard loading sequence

1. First load cargo, if any, in hold 2
2. Load crew baggage, if any, in hold 1
3. Load 35 pieces into hold 2
4. Before starting to load the AFT hold keep minimum 15 pieces aside and start to load hold 3
5. When hold 3 is loaded put those 15 remaining pieces in hold 4 until full.
6. Load hold 3 to full capacity, where VIP priority labelled baggage must be loaded last;



7. Load oversized hand baggage, if any, in hold 3
8. Load any remaining baggage in hold 2
9. Manual wheelchairs and buggies in doorway of hold 3 and 4.
10. It is imperative to start offloading from hold 4 first then hold 3 and finally hold 2.

Note: Always load the forward hold first to minimize the risk of the aircraft tipping.

Note: For Electric Mobility Aids- EMA loading refer to Annex F 12.6.2.1.

b. Non-standard loading

For low load flights at the start of and end of season, load controllers will plan the hold and baggage / cargo load distribution using the most optimum trim where possible. This is due to the least favoured action of moving passengers who have paid for a seat and service. TUI generally do not reseat passengers except for safety reasons.

*The standard loading sequence remains the same as in section a above, but with the probability of not utilising H4. Use non-standard load distribution to compensate for cargo and for out of trim passenger seating. In all non-standard loading cases, **the flight crew must be advised of the plan to follow non-standard loading and its with the approval of the FCM / commander.***

A comment must also be added to the LDM (SI line) to inform the receiving station that the flight has been dispatched using not standard loading so that the next station can prepare and be ready to unload the aircraft quickly.

Use non-standard load distribution to compensate for cargo and for out of trim passenger seating. In this case the flight crew must be advised.

When using non-standard load distribution, load planners should use the table below as a guide to achieving ideal trim at Zero Fuel Weight.

It is recommended that manual wheelchairs, buggies/ pushchairs and over-sized cabin baggage is loaded in the rear hold to ensure an early off-load and to allow the correct unloading sequence to be observed.

Use non-standard load distribution to compensate for cargo and for out of trim passenger seating. In this case the flight crew must be advised.

When using non-standard load distribution, load planners should use the table below as a guide to achieving ideal trim at Zero Fuel Weight.

Weight	737-800(NG) MAC Value	Comment
40000	21	
45000	22	
50000	23	
55000	23	



Weight	737-800(NG) MAC Value	Comment
60000	24	
61688	24	MZFW winglet

9.3.2.6.1 Flights from UK to CMF, FNC, INN, SZG and JSI

Due to the runway lengths at CMF, FNC, INN, SZG and JSI it is often necessary to use heavy braking on landing. This causes the load in Hold 2 to move forward, pressing against the nets and blocking the inward door opening arc. Successful trials have demonstrated that spreading the load across the hold floor substantially reduces movement as there is no empty space to gather momentum.

Spread the load across the hold floor – typically ‘two bags deep’ rather than stacking the load floor to ceiling against the (FLA) bulkhead.

Note 1: This procedure is for hold 2 only on the B737-800 for flights departing from the UK to the above destinations therefore other holds, aircraft types and routes are unaffected.

Note 2: For flights departing JSI, JMK and JTR only, load a third in hold 2 and two thirds in hold 3. Should either hold bulk out put the remaining bags in hold 4.

9.3.2.6.2 Non-standard Distribution When the takeoff runway is 30 m wide

the following non-standard loading distribution should be used:

- Load hold 2 with 1/3 of bags
- Load hold 3 with 2/3 of bags
- Load hold 4 with any remaining bags.

9.3.2.6.3 Standard Loading - Ski Flights

Standard suitcases, skis, boots and snowboards are recommended to be loaded follows:

1. First load 35 pieces/600kgs - in Hold 2.

Note: If standard suitcases are delivered to the aircraft first please load 35 pieces in H2 to avoid any loading delays or tail tipping issues. The objective is to load 600kgs of load in H2 first regardless of the type of baggage presented. If SKI equipment arrives at the aircraft first please start to load in H2 upwards to 600kgs. H2 may have to be topped up with standard suitcases to reach 600kgs limit.

2. Before starting to load the AFT hold keep minimum 15 pieces aside and start to load hold 3
3. Then hold 3 is loaded put those 15 remaining pieces in hold 4 until full (transfer 15 pieces from hold 3 to hold 4)
4. It is imperative to start **offloading** from hold 4 first then hold 3 and finally hold 2



Note: Some stations may have been asked to use a slightly different loading instruction with prior approval by TUI Airways Ground Operations. This is mainly due to short runway lengths causing baggage to shift.

Non-standard loading Ski Flights.

When loading ski flights for INN, CMF & SZG recommended loading is as follows:

- a. Only load standard bags in Hold 2
- b. Load all Ski equipment and bulk items in Holds 3 & 4
- c. Do not load Ski equipment and bulk items in Hold 2.

9.3.3 Hold Temperatures

B737 holds will normally stabilise at between 5-10°C (40-50°F)

9.3.4 Last Minute Changes

If any last minute change occurs after the completion of the loadsheets, (mass and balance documentation), this must be brought to the attention of the commander and the last minute change must be entered on the loadsheet (mass and balance documentation).

If the total LMC exceeds the values shown in this table below, a new mass and balance document must be prepared.

Aircraft Type	LMC Exceeds
B737	500 kg (Including fuel)



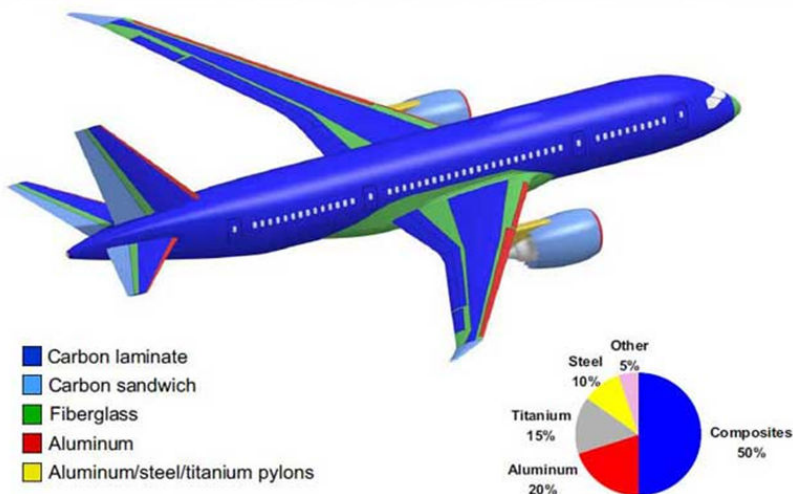
9 Annex C Aircraft Specifics B787-8 – B787-9

9.1 General

The Boeing 787 is almost entirely built using carbon fiber material. It will not react in the same way as an aluminum airplane when impacted by ground servicing equipment. In almost all cases it will look as if no damage has been caused. Any contact with the airplane by ground equipment must be reported.

In most cases there will be no visible damage. Do not take this as no damage has occurred;

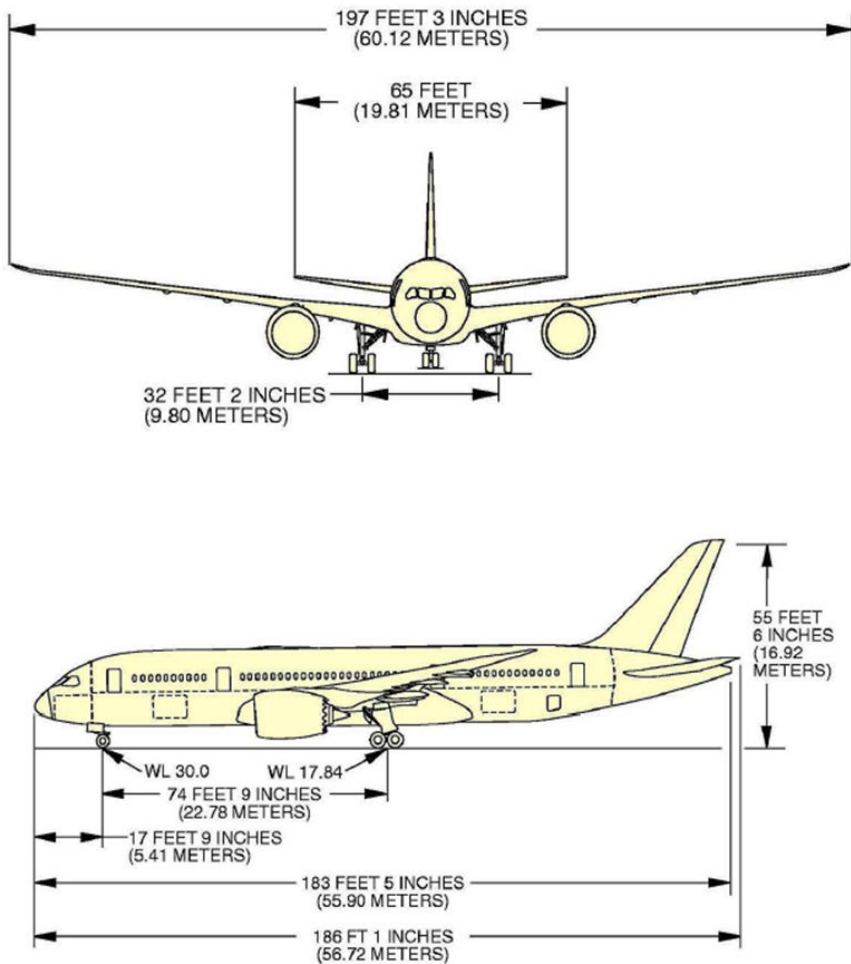
- a. look closely at the area of impact;
- b. look for small indentation marks, paint chips;
- c. if light is not good, shine a torch on the area of impact to see if mark can be seen;
- d. report the damage.





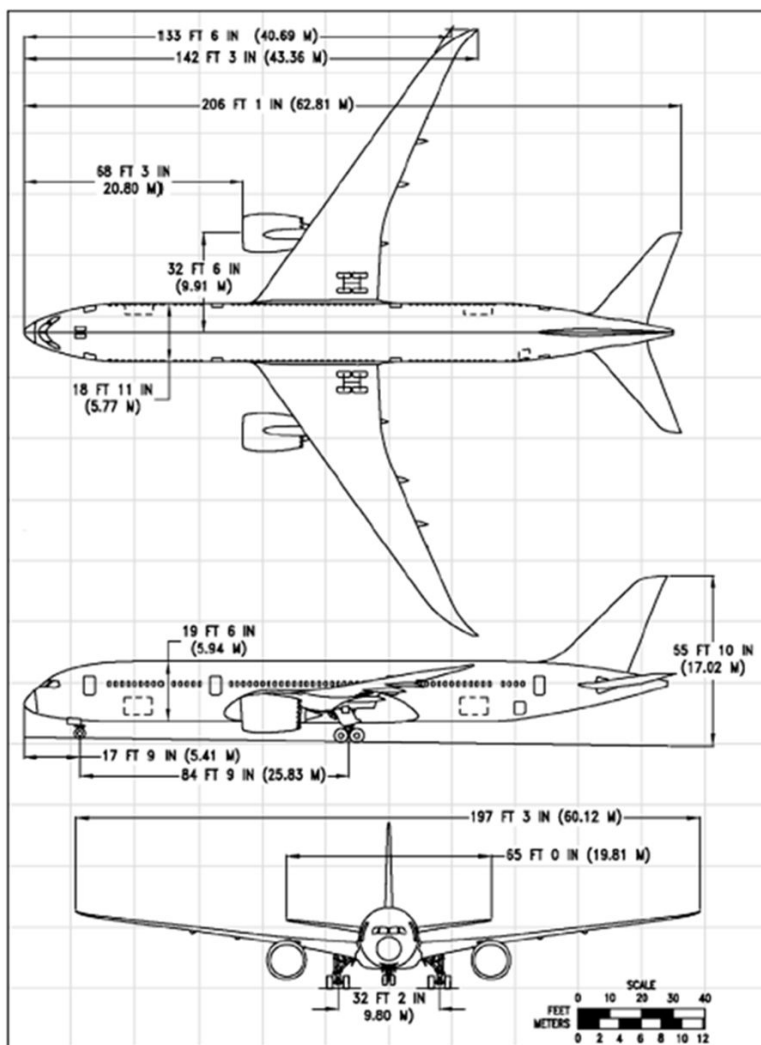
9.1.1 Dimensions

9.1.1.1 Principal Dimensions B787-8



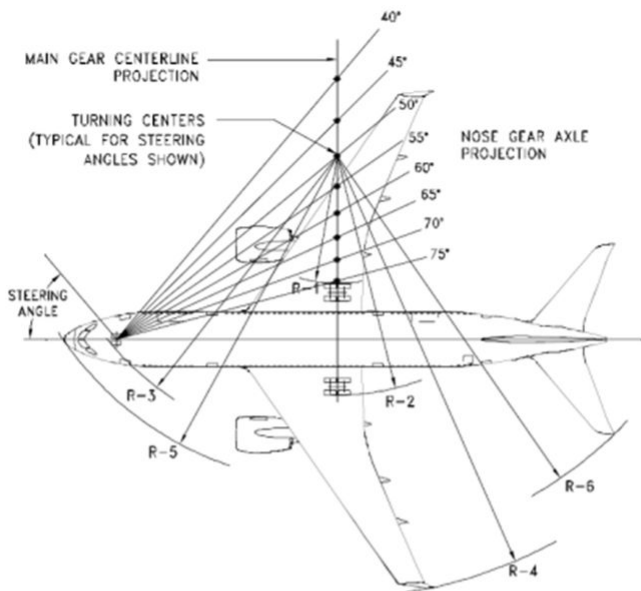


9.1.1.2 Principal Dimensions B787-9





9.1.1.3 Turning Radii B787-8

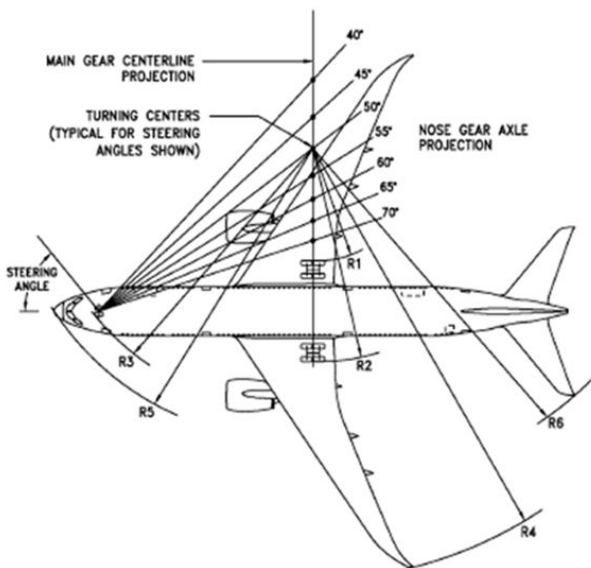


NOTES: * ACTUAL OPERATING TURNING RADIUS MAY BE GREATER THAN SHOWN.
* CONSULT WITH AIRLINE FOR SPECIFIC OPERATING PROCEDURE

STEERING ANGLE (DEG)	R-1		R-2		R-3		R-4		R-5		R-6	
	INNER GEAR		OUTER GEAR		NOSE GEAR		WING TIP		NOSE		TAIL	
	FT	M	FT	M	FT	M	FT	M	FT	M	FT	M
30	110.5	33.7	148.6	45.3	151.4	46.2	231.6	70.6	160.1	48.5	187.1	57.0
35	87.7	26.7	125.8	38.4	132.2	40.3	209.2	63.8	142.0	43.1	167.8	51.1
40	70.1	21.4	108.2	33.0	118.2	36.0	191.9	58.5	129.0	39.1	153.4	46.8
45	55.7	17.0	93.8	28.6	107.6	32.8	177.9	54.2	119.4	36.3	142.3	43.4
50	43.7	13.3	81.8	24.9	99.5	30.3	166.2	50.7	112.1	34.1	133.5	40.7
55	33.3	10.2	71.4	21.8	93.2	28.4	156.1	47.6	106.5	32.4	126.3	38.5
60	24.1	7.4	62.2	19.0	88.2	26.9	147.3	44.9	102.2	31.1	120.3	36.7
65	15.8	4.8	53.9	16.4	84.4	25.7	139.3	42.5	99.0	30.1	115.3	35.1
70	8.2	2.5	46.3	14.1	81.5	24.8	132.0	40.2	96.5	29.4	111.0	33.8



9.1.1.4 Turning Radii B787-9



NOTES: * ACTUAL OPERATING TURNING RADIi MAY BE GREATER THAN SHOWN.
* CONSULT WITH AIRLINE FOR SPECIFIC OPERATING PROCEDURE

STEERING ANGLE (DEG)	R1 INNER GEAR		R2 OUTER GEAR		R3 NOSE GEAR		R4 WING TIP		R5 NOSE		R6 TAIL	
	FT	M	FT	M	FT	M	FT	M	FT	M	FT	M
30	128	39.0	166	50.6	170	51.8	249	75.9	179	54.6	207	63.1
35	102	31.1	141	43.0	150	45.7	223	68.0	159	48.5	185	56.4
40	82	25.0	121	36.9	134	40.8	204	62.2	144	43.9	169	51.5
45	65	19.8	104	31.7	122	37.2	188	57.3	133	40.5	157	47.9
50	52	15.8	91	27.7	113	34.4	175	53.3	125	38.1	147	44.8
55	40	12.2	79	24.1	105	32.0	163	49.7	119	36.3	139	42.4
60	30	9.1	69	21.0	100	30.5	153	46.6	114	34.7	132	40.2
65	20	6.1	59	18.0	95	29.0	144	43.9	110	33.5	126	38.4
70	12	3.7	51	15.5	92	28.0	136	41.5	107	32.6	122	37.2



9.1.1.5 Package Size Dimensions

9.1.2 Loading Limits

9.1.2.1 Missing Or Inoperative Restraints

- a. Maximum ULD weights shown assume all equipment is installed and operable. When equipment is missing or inoperative, allowable weight may be reduced. Certain instances of missing or inoperative equipment reduce the allowable weight to zero.
- b. The following equipment malfunctions do not constitute a weight limit restriction, except when specifically noted:
 1. Jammed or missing sill rollers
 2. Jammed or missing doorsill rollout stop guide heads
 3. Jammed or missing balls in a ball mat
 4. Jammed or missing conveyance rollers
 5. Jammed or missing doorway centre guides
 6. Jammed or missing doorway entrance guide rollers
 7. Jammed or missing braking rollers or PDUs
 8. Cracked side guide rail, except as noted in Maximum Allowable Weight tables below

9.1.2.2 Maximum Allowable Load With Missing / Inoperative Restraints – AKE / ZKE (Kg) Fwd Hold - B787-8

Restraint		Container position								
Direction	Number operable	11L/R	12L/R	13L	13R	14L/R	21L/R	22L/R	23L/R	24L/R
Maximum weight / side		1587	1587	1587	1587	1587	1587	1587	1587	1587
Vertical*	10		1587			1587				
	9	1587	1587			1165		1587		1587
	8	1152	1115			966	1587	1065	1587	929
	7	1043	1075			0	898	957	1152	839
	6	0	0			0	789	0	993	0
	5	0	0	1587		0	0	0	0	0
	4	0	0	0	1587	0	0	0	0	0
	3	0	0	0	0	0	0	0	0	0



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Restraint		Container position								
Direction	Number operable	11L/R	12L/R	13L	13R	14L/R	21L/R	22L/R	23L/R	24L/R
Forward	3			1587	1587	1587				
	2	1587	1587	1587	1587	1587	1587	1587	1587	1587
	1	1474	1474	1587	1587	1587	1587	1587	1587	1587
Aft	3		1587	1587	1587					
	2	1587	1587	1587	1587	1587	1587	1587	1587	1587
	1	1587	1587	1587	1587	1587	1587	1587	1587	1587
Left	2	1587	1587	1587	1587	1587	1587	1587	1587	1587
	1	879	1587	1587	1587	1587	943	1174	1242	875
Right	2	1587	1587	1587	1587	1587	1587	1587	1587	1587
	1	879	1587	1587	1587	1587	943	1174	1242	875

9.1.2.3 Maximum Allowable Load With Missing / Inoperative Restraints – PMC (Kg) FWD Hold - B787-8

Restraint		Container position				
Direction	Number operable	11P	12P	13P	21P	22P
Maximum weight / side		5102	5102	5102	5102	5669
Vertical*	19	5102	5102			
	18	4440	4145	5102	5102	5669
	17	4014	3746	4145	4309	4336
	16	0	0	3746	3823	3850
	15	0	0	0	0	0
Forward	5	5102	5102	5102	5102	5669



Restraint		Container position				
Direction	Number operable	11P	12P	13P	21P	22P
	4	4758	5102	2830	2830	3769
	3	3733	4018	2599	2599	2957
	2	0	0	0	0	0
Aft	5	5102	5102	5102	5102	5669
	4	2576	2576	3769	3701	3701
	3	2195	2195	2957	2957	3397
	2	0	0	0	0	0
Left	5		5102			
	4	5102	0	5102	5102	5102
	3	0	0	0	0	0
	2	0	0	0	0	0
Right	5	5102				
	4	0	5102	5102	5102	5102
	3	0	5102	0	0	0
	2	0	4708	0	0	0
	1	0	0	0	0	0

9.1.2.4 Maximum allowable load with missing / inoperative restrains – AKE / ZKE (kg) AFT Hold - B787-8

Restraint		Container position							
Direction	Number operable	31L/ R	32L/ R	33L/ R	41L	41R	42L/ R	43L	43R
Maximum weight / side		1587	1587	1587	1587	1587	1587	1587	1587
Vertical*	9	1587		1587			1587	1587	1587
	8	1202	1587	1129			1043	1197	1152
	7	566	1070	521			621	566	566
	6	0	594	0			0	0	0
	5	0	0	0	1587		0	0	0



Restraint		Container position							
Direction	Number operable	31L/ R	32L/ R	33L/ R	41L	41R	42L/ R	43L	43R
	4	0	0	0	0	1587	0	0	0
	3	0	0	0	0	0	0	0	0
Forward	3				1587	1587	1587		
	2	1587	1587	1587	1587	1587	1587	1587	1587
	1	1587	1587	1587	1587	1587	1587	1587	1263
Aft	3			1587	1587	1587	1587		
	2	1587	1587	1587	1587	1587	1587	1587	1587
	1	1587	1587	1587	1587	1587	1587	1587	1587
Left	2	1587	1587	1587	1587	1587	1587	1587	1587
	1	784	1369	1587	1587	1587	1587	857	857
Right	2	1587	1587	1587	1587	1587	1587	1587	1587
	1	784	1369	1587	1587	1587	1587	857	857

9.1.2.5 Maximum allowable load with missing / inoperative restraints – PMC (kg) AFT Hold – B787-8

Restraint		Container position		
Direction	Number operable	31P	32P	42P
Maximum weight		5669	5102	5102
Vertical*	20		5102	
	19		4458	5102
	18	5669	4036	4286
	17	4744	0	4018
	16	4232	0	0
	15	0	0	0
Forward	5	5669	5102	5102
	4	3701	3701	3029
	3	3397	2957	2717



Restraint		Container position		
Direction	Number operable	31P	32P	42P
	2	0	0	0
Aft	6		5102	
	5	5669	2662	5102
	4	3769	2426	2662
	3	2957	0	2426
	2	0	0	0
Left	5			
	4	5669	5102	5102*
	3	0	0	0
	2	0	0	0
Right	5		5102	5102*
	4	5669	5102	0
	3	0	0	0
	2	0	0	0

Note: *For position 42P the allowable weight is 4009kg with a crack in the left or right side rail.

9.1.2.6 Maximum allowable load with missing / inoperative restraints – Size Code K (kg) FWD Hold – B787-9

Restraint		ULD Position											
Direction	Number Operable	11	12	13L	13R	14L	14R	15	21	22	23	24	25
Maximum Weight / Side		158 7	158 7	158 7	158 7	158 7	158 7	158 7	158 7	158 7	158 7	15 87	158 7
Vertical	10		158 7			158 7	158 7						
	9	158 7	152 8			140 6	133 8		158 7		158 7		158 7
	8	120 2	101 6			100 2	112 4	158 7	117 4	158 7	111 5	15 87	111 1



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Restraint		ULD Position											
Direction	Number Operable	11	12	13L	13R	14L	14R	15	21	22	23	24	25
	7	948	0			0	0	102 0	961	104 3	875	10 70	889
	6	0	0			0	0	866	0	898	0	90 7	0
	5	0	0	158 7		0	0	0	0	0	0	0	0
	4	0	0	0	158 7	0	0	0	0	0	0	0	0
	3	0	0	0	0	0	0	0	0	0	0	0	0
Forward	3			158 7	158 7	158 7	158 7						
	2	158 7	158 7	156 0	156 0	156 0	156 0	158 7	158 7	158 7	158 7	15 87	158 7
	1	120 6	120 6	156 0	156 0	156 0	156 0	158 7	158 7	118 8	118 8	15 87	158 7
Aft	3		158 7	158 7	158 7								
	2	158 7	158 7	158 7	158 7	158 7	158 7	158 7	158 7	158 7	158 7	15 87	158 7
	1	158 7	158 7	158 7	158 7	158 7	158 7	158 7	118 8	118 8	125 6	12 56	125 6
Left	3												
	2	158 7	158 7	158 7	158 7	158 7	158 7	158 7	158 7	158 7	158 7	15 87	158 7
	1	875	158 7	158 7	158 7	147 4	147 4	852	526	107 0	102 9	11 97	902
Right	3		158 7	158 7	158 7								
	2	158 7	158 7	158 7	158 7	158 7	158 7	158 7	158 7	158 7	158 7	15 87	158 7
	1	875	158 7	158 7	158 7	147 4	147 4	852	526	107 0	102 9	11 97	902



Note: [a] For size code K ULDs on the right side, do not count the end stops and container locks located in the RBL 3.32 trays when determining the number of vertical restraints

**9.1.2.7 Maximum allowable load with missing / inoperative restraints - Size Code A (kg)
FWD Hold – B787-9**

Restraint		ULD Position					
Direction	Number Operable	11P	12P	13P	21P	22P	23P
Maximum Weight		4676	4676	4676	4676	4676	5102
Vertical[a]	18	4676	4676	4676	4676	3560	5102
	17	4123	3814	3043	3043	3193	3637
	16	3696	3460	2712	2712	0	3302
	15	0	0	0	0	0	0
Fwd	5	4676	4676	4676	4676	4676	5102
	4	3510	4581	2803	2803	3261	3261
	3	2952	3855	2358	2358	2881	2884
	2	0	0	0	0	0	0
Aft	5	4676	4676	4676	4676	4676	5102
	4	2789	2789	3746	3547	2680	2925
	3	2426	2426	3152	2984	2258	2381
	2	0	0	0	0	0	0
Left	4	4676		4676	4676	4676	5102
	3	0	4676	0	0	0	0
	2	0	0	0	0	0	0
	1	0	0	0	0	0	0
Right	4	4676		4676	4676	4676	5102
	3	0	4676	0	0	0	0
	2	0	3873	0	0	0	0
	1	0	3873	0	0	0	0



9.1.2.8 Maximum allowable load with missing / inoperative restraints - Size Code M (kg)
FWD Hold – B787-9

Restraint		ULD Position					
Direction	Number Operable	11P	12P	13P	21P	22P	23P
Maximum Weight		5102	5102	5102	5102	5102	5669
Vertical	19		5102				
	18	5102	3760	5102	5102	5102	5669
	17	4368	2984	3538	3547	3560	3583
	16	3905	0	3147	3157	3170	3202
	15	0	0	0	0	0	0
Fwd	5	5102	5102	5102	5102	5102	5669
	4	3510	4581	2803	2803	3261	3261
	3	2952	3855	2358	2358	2884	2884
	2	0	0	0	0	0	0
Aft	5	5102	5102	5102	5102	5102	5669
	4	1964	1964	3270	3347	2658	2952
	3	1855	1855	2912	2984	2236	2485
	2	0	0	0	0	0	0
Left	4	5102		5102	5102	5102	5669
	3	0	5102	0	0	0	0
	2	0	0	0	0	0	0
Right	4	5102	5102	5102	5102	5102	5669
	3	0	5030	0	0	0	0
	2	0	4463	0	0	0	0
	1	0	0	0	0	0	0



9.1.2.9 Maximum allowable load with missing / inoperative restraints - Size Code K (kg) AFT Hold – B787-9

Restraint		ULD Position										
Direct ion	Number Operable	31	32	33	34	41	42L	42R	43L	43R	44L	44R
Maximum Weight / Side		158 7	158 7	158 7	158 7	158 7	158 7	158 7	158 7	158 7	158 7	158 7
Vertical	10					158 7				158 7		
	9	158 7		158 7		120 2			158 7	158 7	158 7	158 7
	8	119 2	158 7	111 5	158 7	100 6			158 7	114 7	125 1	101 6
	7	911	105 6	884	107 5	0			132 4	0	101 1	784
	6	0	902	0	830	0			0	0	0	0
	5	0	0	0	0	0	158 7		0	0	0	0
	4	0	0	0	0	0	0	158 7	0	0	0	0
	3	0	0	0	0	0	0	0	0	0	0	0
Forward	3						158 7	158 7	158 7	158 7		
	2	158 7	158 7	158 7	158 7	158 7	158 7	126 0	158 7	126 0	158 7	158 7
	1	125 6	125 6	125 6	158 7	158 7	158 7	126 0	158 7	126 0	158 7	889
Aft	3					158 7	158 7	158 7				
	2	158 7	158 7	158 7	158 7	141 0	141 0	141 0	158 7	158 7	158 7	158 7
	1	158 7	158 7	158 7	158 7	141 0	141 0	141 0	141 0	141 0	141 0	141 0
Left	2	158 7	158 7	158 7	158 7	158 7	158 7	158 7	158 7	158 7	158 7	158 7

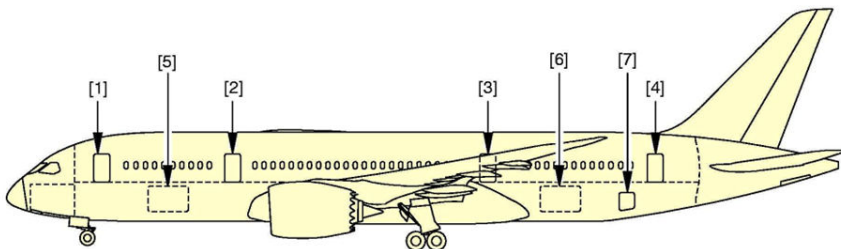


Restraint		ULD Position											
Direction	Number Operable	31	32	33	34	41	42L	42R	43L	43R	44L	44R	
	1	775	907	102 9	100 2	121 5	158 7	158 7	158 7	158 7	907	852	
Right	2	158 7	158 7	158 7	158 7	158 7	158 7	158 7	158 7	158 7	158 7	158 7	
	1	775	907	102 9	100 2	121 5	158 7	158 7	158 7	158 7	907	852	

Note: [a] For size code K ULDs on the right side, do not count the end stops and container locks located in the RBL 3.32 trays when determining the number of vertical restraints

9.1.3 Door Locations and Sill Heights

Although both aircraft are different in size and dimensions the door locations and their respective dimensions are equal.



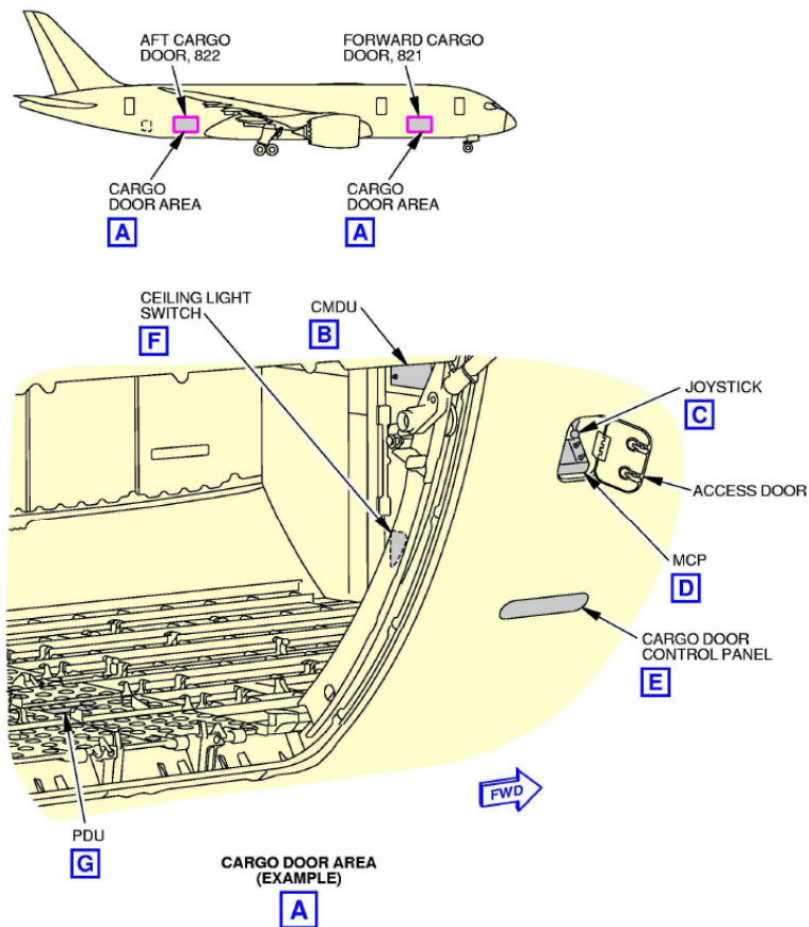
Loc	Door	Size H x W Inches (cm)
1	Pass Entry Door 1	74 in (188cm) x 42 in (107cm)
2	Pass Entry Door 2	74 in (188cm) x 42 in (107cm)
3	Pass Entry Door 3	74 in (188cm) x 42 in (107cm)
4	Pass Entry Door 4	74 in (188cm) x 42 in (107cm)
5	Fwd Cargo Door	67 in (170cm) x 106 in (269cm)
6	Aft Cargo Door	67 in (170cm) x 106 in (269cm)
7	Bulk Cargo Door	45 in (114cm) x 40 in (102cm)

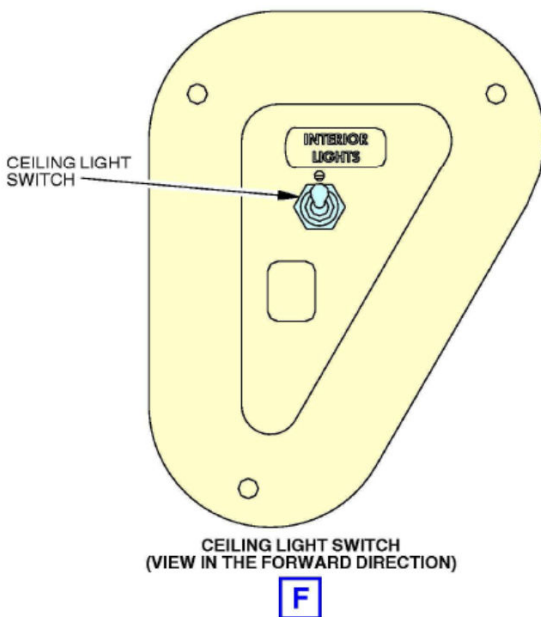
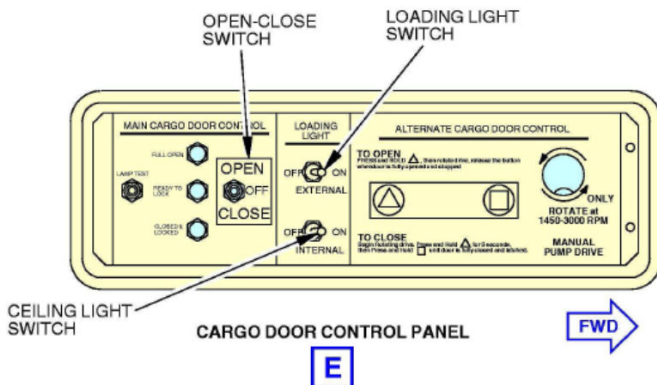


9.1.3.1 Cargo Hold Information

- a. The main cargo doors situated on the right hand side of the aircraft are power operated opening outward and upward.
- b. Both the forward and aft cargo doors have the same dimensions of 67 in (170cm) x 106 in (269cm).
- c. The heights of the hold doors above ground can change in relation to the aircraft's weight and centre of gravity however, the following can be used as a guide:

	Height above the Ground	
	Aft Cargo Hold Door	Fwd Cargo Hold Door
Minimum	105 in / 267 cm	93 in / 236 cm
Maximum	114 in / 290 cm	108 in / 275 cm





9.1.3.2 Hold Door Operation - Opening

Do not operate the doors in wind greater than 40 knots. Do not allow the door to remain open in winds greater than 65 knots. Injuries to persons, and or damage to equipment and aircraft can occur.

- To open the hold door, access to the Main Cargo Door Control Panel (MCDC)
- Once open, the "closed and locked" green indication light should be illuminated.



- c. Unlock the cargo door by using the cargo door unlock handle, situated to the right on each cargo hold door. Move the handle to the open position and a vent on the left side of the cargo door opens to make the internal pressure equal with the ambient pressure. If the internal pressure is too high, the vent will not open, and the lock handle will not move to the open position.
- d. In normal operation, when the lock handle moves to the open position, the cargo door controls are enabled and the “ready to Lock” light is illuminated on the Main Cargo Door Control Panel (MCDCC).
- e. On the Main Cargo Door Control Panel (MCDCC), the cargo door control switch should be pulled and held upwards in the open position to open the cargo door. When the cargo door begins to open, the “Ready to Lock” light goes off.
- f. When the cargo door is open fully, the “Full Open” light is illuminated on the Main Cargo Door Control Panel (MCDCC) and the cargo door control switch can be released and put back into the neutral position.
- g. Internal and external lights can be switched on as required on the Main Cargo Door Control Panel (MCDCC)

9.1.3.3 Hold Door Operation – Closing

- a. Ensure all external and internal lights are switched off on the Main Cargo Door Control Panel.
- b. The “Full Open Light” on the Main Cargo Door Control Panel (MCDCC) should be illuminated, push and hold the cargo door control switch downwards to the close position. The cargo door now begins to close.
- c. Once the cargo door has stopped moving, release the pressure on the Cargo Door Control Switch and the “Ready to Lock” light on the Main Cargo Door Control Panel (MCDCC) will be illuminated. Ensure the Cargo Door Control switch is returned to the neutral position.
- d. On the right hand side of the Cargo Door, push down the cargo locking handle, so that it is flush with the fuselage. During the process of pushing down the locking handle, the vent at the top left of the Cargo Door will close.
- e. Once the Cargo Door is closed, handle flush and vent closed, the “closed and locked” light will be illuminated green on the Main Cargo Door Control Panel (MCDCC). This indicates that the Cargo door has been closed and is locked.
- f. Ensure the Main Cargo Door Control Panel (MCDCC) is closed after use.

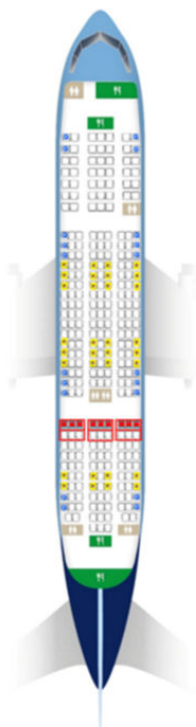
9.1.4 Aircraft Doors

- a. Do not operate the door in winds of more than 40 knots, and do not allow the door to remain in the open position in winds greater than 65 knots. Injuries to person and aircraft can occur.
- b. The height above the grounds of each door changes in relation to the aircrafts weight and Centre of gravity. Table 15.06.A gives some guidance on heights whilst on the ground.
- c. To open a passenger entry door externally when it is in the closed position, select the red button to release the handle on the PED. This disarms the internal escape slide system.
- d. Follow the arrow on the PED and turn the external handle in the direction of the arrow. As the external handle turns, a vent opens on the PED to make the cabin pressure equal with the ambient pressure. If cabin pressure is too high, the vent will not open and the external handle will not turn
- e. In normal operation, the external handle continues to turn and lifts the door.
- f. When the handle is in the fully turned position, the PED can be opened. In the full open position a gust lock latches to hold the PED open.



9.1.5 Cabin Configuration

9.1.5.1 B787-8 Seating Configuration – 300Y



PWD

11 ABC DEF GHJ
12 ABC DEF GHJ
13 ABC DEF GHJ

Restrictions

30 ABC DEF GHJ
No children
No obese
No deportees / persons in custody
No PWDs
No elderly / frail
No sick
Additional restrictions for CRD such as infant car seats and infants on lap:
30 ABC DEF GHJ
31 ABC DEF GHJ

Extra Space Seats

10 ABC DEF GHJ
30 BC GH

Extra Legroom Seats

Rows 31 - 36
37 DEF

Infant Seating

1 in ABC
1 in DEF
1 in GHJ

Premium Seating

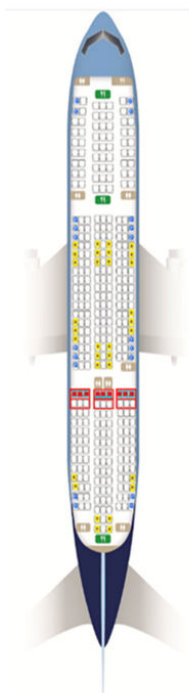
Rows 1 to 7

Passenger Seating Restrictions	
 No CRDs/SCPs (including children under the age of 12 years)	Not allowed on seat rows: 30 ABC DEF GHJ With direct access to emergency exit
 No CRDs	Not allowed on seat rows: 31 ABC DEF GHJ
 WCHC	Preferred to be seated at a window seat Not allowed on seat rows: With direct access to emergency exit
 Infants	Maximum 4 infant per seat row (1 inf ABC, 2 inf DEF, 1 inf GHJ) Not allowed on seat rows: 1) With direct access to emergency exit 2) Immediately in front or after an emergency exit row

Note: Extra Leg room only available to UK&I passengers.



9.1.5.2 B787-9 Seating Configuration – 345Y



PWD

13 GHJ

14 GHJ

Restrictions

32 ABC DEF GHJ

No children

No obese

No deportees / persons in custody

No PWDs

No infants

No elderly / frail

No sick

Additional restrictions for CRD such as
infant car seats and infants on lap:

32 ABC DEF GHJ

33 ABC DEF GHJ

Extra Space Seats

12 ABC DEF GHJ

32 BC GH

Extra Legroom Seats

13 ABC DEF

14 ABC DEF

15 ABC

33 ABC GHJ

34 ABC GHJ

35 ABC GHJ

36 ABC GHJ

Infant Seating

1 in ABC

1 in DEF

1 in GHJ

Premium Seating

Rows 1 to 9

Passenger Seating Restrictions	
 No CRDs/SCPs (including children under the age of 12 years)	Not allowed on seat rows: 32 ABC DEF GHJ With direct access to emergency exit
 No CRDs	Not allowed on seat rows: 33 ABC DEF GHJ
 WCHC	Preferred to be seated at a window seat Not allowed on seat rows: With direct access to emergency exit
 Infants	Maximum 4 infant per seat row (1 inf ABC, 2 inf DEF, 1 inf GHJ) Not allowed on seat rows: 1) With direct access to emergency exit 2) Immediately in front or after an emergency exit row

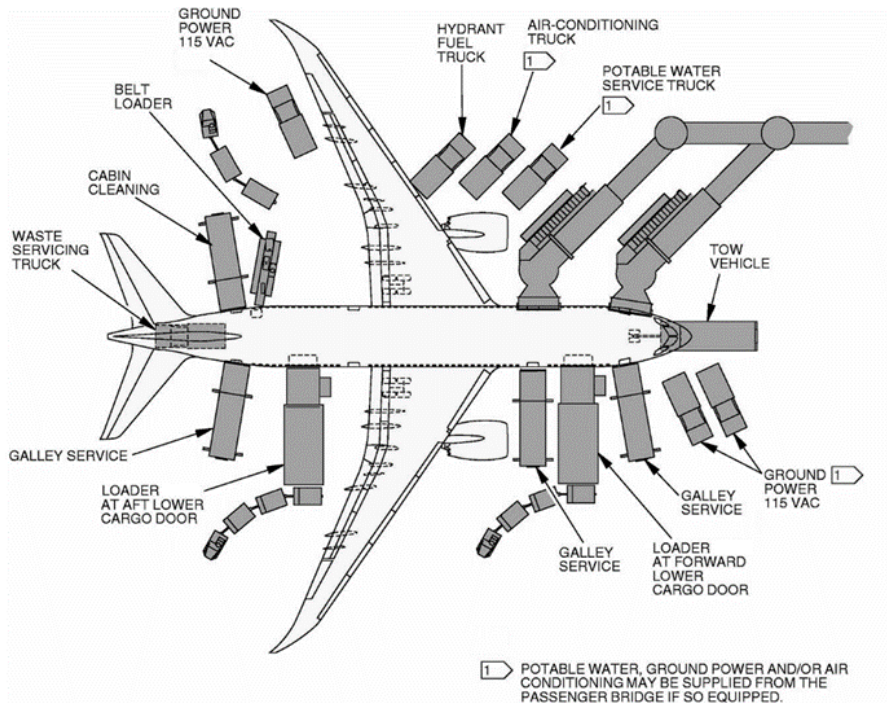
Note: Extra Leg room only available to UK&I passengers.



9.2 Ground Servicing Equipment

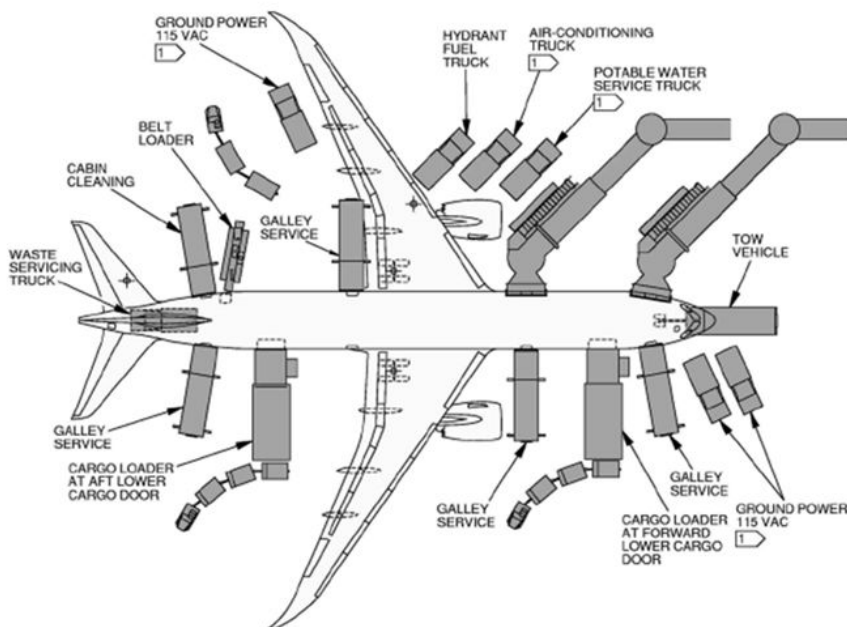
9.2.1 Summary of all GSE

B787-8





B787-9



9.2.2 Ramp Equipment Specifications / Requirements

- B787-9** - the **centre passenger door** (L2) is the preferred door when boarding through an airbridge, otherwise a set of mobile steps is required.
If door 1L has to be used, care must be taken when positioning the airbridge to the aircraft. This is because the probes on the B787 are located extremely close to the bottom left of that door.
- Aft passenger door** (L4) should be provided with a set of mobile steps to cater for passenger boarding and / or to permit access for cleaning and other staff involved in the providing of services during the aircraft turnaround. However the absence of steps at the rear door does not prohibit boarding or disembarking.
- Forward hold**
One hi-loader (*note 1*) with AKE handling capability, or PMC (pallet) capability when cargo is carried.
- Aft hold**
One hi-loader (*note 1*) with AKE handling capability, or PMC (pallet) capability when cargo is carried for weight and balance purposes. Hi-loader to remain in position during turnaround.
- One mobile conveyor for bulk hold 5, if bulk loaded items are carried.

Note: High loaders with ULD side shift capability on the front platform (bridge) for container/pallet alignment.

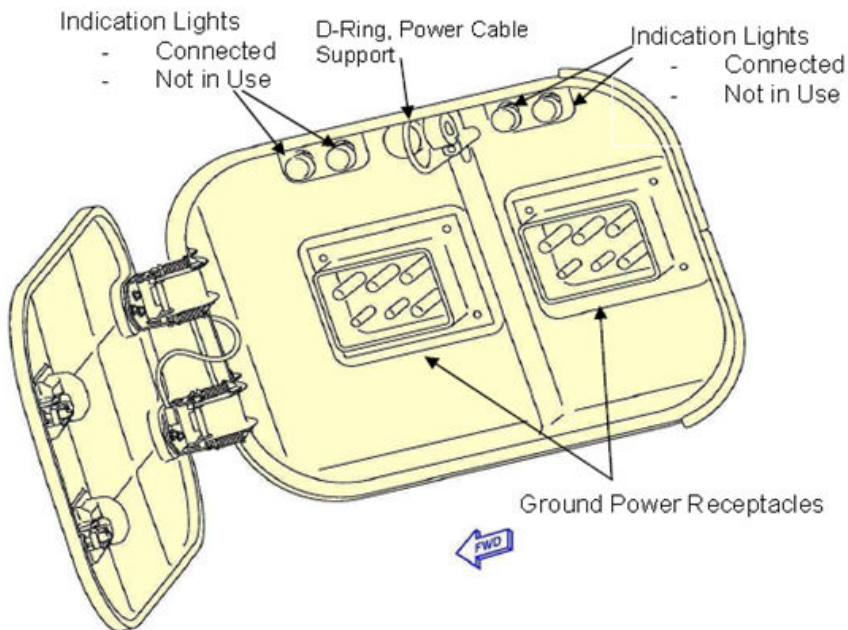


9.2.3 Fuel Uplift

The fuelling operator should be in possession of the Fuel Chit which not only provides the location of the Pilot Call button to locate him/her of an incident but also will provide scenario information regarding the positioning of passengers during said incident.

9.2.4 GPU Connection

- a. The 787 airplane utilizes two (2) forward ground power receptacles and one (1) mid-aft ground power receptacle. Each receptacle is rated at 90 kVA, as is standard on all Boeing current production widebody airplanes. By design each receptacle can support continuous 90 kVA and a peak power consumption of 115 kVA for up to five (5) minutes regardless of the output capacity of the Ground Power Unit (GPU). For continuous supply, the airplane will draw less than 90 kVA from any receptacle.
For Ground Handling Functions, a minimum of 2 Ground Power Sources are required, each at 90 KVA, 115 Vac, 400 Hz.
- b. The forward external power panel has 2 power receptacles for normal ground power. This panel is approximately 108 in (273cm) above the ground.
- c. There is a third receptacle for Ground Power aft left side, forward of the L3 door.
- d. Ground Power can be achieved by a mixture of 1 FEGP connection and 1 GPU connection providing a minimum of 90 KVA is delivered from each source.
- e. Solid State GPU's must not be used.
- f. To connect the Ground Power, ensure the GPU/FEGP power source is turned off prior to connecting the GPU/FEGP plugs into the aircrafts receptacles.
- g. When connecting GPU/FEP to the forward receptacles always connect the left hand receptacle first.
- h. Once the GPU/FEGP are connected into the forward receptacles, the power source can be turned on.
When the electrical power is supplied from the GPU/FEGP, the CONNECTED and NOT IN USE lights come on. The NOT IN USE lights show that external power is not selected on the flight deck, but ground handling loads now have power.
- i. To disconnect the Ground Power, ensure a positive signal is received from the Captain to confirm ok to disconnect. Should the aircraft be unattended, an engineer must be contacted to request permission to remove ground power.
- j. Once the positive signal has been received, ensure the power is turned off at the source, that is the GPU or FEGP are turned off.
- k. Once the power source has been turned off, the CONNECTED and NOT IN USE lights will turn off. At this point, the plugs can be removed from the aircraft's receptacles safely, and the hatch securely closed.
- l. On aircraft arrival, it is important that Ground Power is supplied to the aircraft for a minimum of 22 minutes after aircraft engine shutdown. This is to allow for the adequate cooling of the aircraft's electrical systems.



If applicable, always make use of the hook on the ground power cables to attach to the aircraft to release the stress from the weight of the cables pulling at the ground power receptacle of the aircraft.





9.2.4.1 APU Emergency Shutdown

- a. In the event of an APU Emergency, such as a fire affecting the APU, the aircraft is fitted with an emergency function that shuts down the APU and discharges the bottle automatically.
- b. If the APU needs to be shut down in the event of an emergency such as a fire, ground staff will hear a horn sound, and a red light illuminate on the P40 panel located on the nose landing gear (figure 7.5.11.A)
- c. The “Fire Bottle Armed” indication light will illuminate, and the shutdown of the APU and the discharge of the fire bottle occurs automatically.
- d. On the P40 panel are two manual switches, placarded “APU Bottle Discharge” and “APU Fire Shutdown” which supply a manual backup should the automatic system not function.



9.2.5 Potable Water Servicing

Engineers/Crew will be responsible for selecting the correct uplift on the Potable Water Quantity Panel. The correct uplift will then be confirmed by the SSCM as per the SEP manual.

	787-8 (Ltrs)		787-9 (Ltrs)	
	Out	In	Out	In
SH	455	-	570	-
MH	570	-	680	-
MH Exceptions	680	-	N/A	N/A
AQJ/SID	795	-	795	-



LH	680	680	795	795
LH Exceptions	795	795	910	910
LH Cargo Only	340	-	340	-

B787-8 Exception:

MH: LCA, LPA, PFO, TFS

LH: BKK, CMB, COK, CUN, GOI, HKT, KBV, LGK, LIR, MBJ, MRU, PQC, PVR, SJD

B787-9 Exception:

LH: BKK, CMB, COK, CUN, GOI, HKT, KBV, LGK, LIR, MBJ, MRU, PQC, PVR, SJD

BLX-SE

Engineers/Crew will be responsible for selecting the correct uplift on the Potable Water Quantity Panel. The correct uplift will then be confirmed by the SSCM as per the SEP manual.

	787-8 (Ltrs)		787-9 (Ltrs)	
	Out	In	Out	In
SH	455	-	570	-
MH	570	-	680	-
MH Exceptions	680	-	N/A	N/A
AQJ/SID	795	-	795	-
LH	680	680	795	795
LH Exceptions	795	795	795	795
LH Cargo Only	340	-	340	-

B787-8 Exception:

All BLX LH Routes

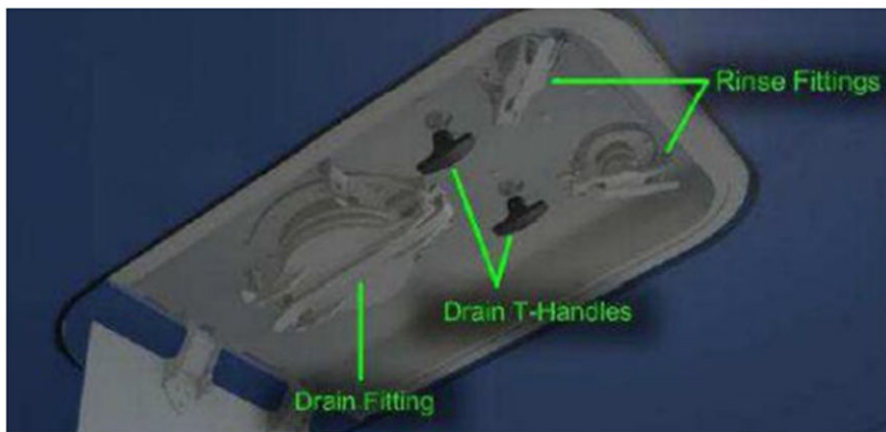
B787-9 Exception:

All BLX LH Routes

End BLX-SE

9.2.6 Waste Servicing

The waste servicing panel is located under the tail of the aircraft and has a standard rinse line, and drain hose fittings for waste tank servicing. Each T-Handle opens a valve and drains 1 of the 2 waste tanks.



Waste servicing – draining

Attach draining hose to the Drain Fitting as shown in the figure above and select the lever adjacent to the drain hose to open the drain valve.

The appropriate Drain T-Handle can then be selected to drain the required waste tank. As the tank drains, feel the hose to monitor the flow until it stops.

Select the remaining Drain T-Handle to drain the other waste tank and feel the hose to monitor the flow until it stops.

Waste servicing – tank rinse

Select the right Rinse Fitting and connect the rinse line.

Start the drain fluid and feel the hose to make sure the fluid flows out. Rinse Pressure: 30 " 50 psid (207 " 345 kPa), 80 psid (552 kPa) maximum.

Rinse Volume: 10 to 50 gal (38 to 189 liters).

After the rinse fluid is stopped, make sure all the fluid flows out.

Select the left Rinse Fitting and start the drain fluid and feel the hose to make sure the fluid flows out. Rinse Pressure: 30 " 50 psid (207 " 345 kPa), 80 psid (552 kPa) maximum. Rinse Volume: 10 to 50 gal (38 to 189 liters).

After the rinse fluid is stopped, make sure all the fluid flows out.

Waste servicing – precharge

Ensure all chemicals used are approved for use on the B787 Aircraft as non-approved chemicals can cause damage to the tank.

In the event of the outside air temperature being within freezing limits, ensure chemical precharge is not added until close to departure time as the precharge can freeze causing damage to the aircraft tanks.



Ensure the T-Handles are pushed in and add 10 gallons (38 liters) of precharge through the left rinse fitting. Remove the rinse line, however ensure the fitting cap remains open.

Add a further 10 gallons (38 liters) of precharge through the right rinse fitting. Remove the rinse line, however ensure the fitting cap remains open.

Keep the fitting caps open for a further few minutes to let the liquid drain out through the fittings.

Ensure the fitting caps are closed after use, select the adjacent lever to the drain hose to close the drain valve, and then remove the drain hose. Ensure there is no leakage from the panel.

After servicing, clean the area as necessary and close the drain cap and access panel.

9.3 Handling

9.3.1 Passenger Boarding

- a. The Boeing 787-8 and 787-9 are within ground stability limits with the aft passenger cabin full, forward passenger cabin empty and total passenger baggage loaded in holds 3 and 4.
- b. Boarding will be via door L2 when a suitable airbridge is available, and through door L1 if the airbridge will not reach door L2. If door L1 is to be used, care must be taken when positioning the airbridge to the aircraft. This is because the probes on the 787 aircraft are located extremely close to the bottom left of that door.
- c. Where no airbridge is available, the B787-8 and B787-9 will require steps at doors L2 and L4 as a minimum requirement.
- d. Passenger boarding through the forward door may take place while forward galley servicing continues - if so required.
- e. Passenger boarding through the aft door may not commence until rear galley servicing is completed.
- f. When passenger boarding takes place at the aft door, care must be taken to direct passengers around the wing (and fuelling location).
- g. When passenger boarding is restricted to the forward door only (e.g. airbridge operation or inclement weather conditions), passengers for the rear cabin should be called forward and boarded first. The appropriate row numbers should be used in such an announcement.
- h. When passenger boarding is through two or more passenger entry doors, passengers should be directed to the appropriate door by reference to the seat number.
- i. All disabled passengers should be pre-boarded whenever possible.

9.3.2 Baggage / Cargo Handling

See also Annex - ULD

- a. Baggage must be loaded in AKE containers.
- b. Cargo will be carried on PMC, PAJ, PAG pallet(s) or a mix of PMC, PAJ, PAG and AKE.
- c. The 787 may be loaded with the Fly Away Kit (FKT). The weight of the FKT must be added to the loadsheets.
 1. **B787-8:** 551Kg
 2. **B787-9:** 430Kg



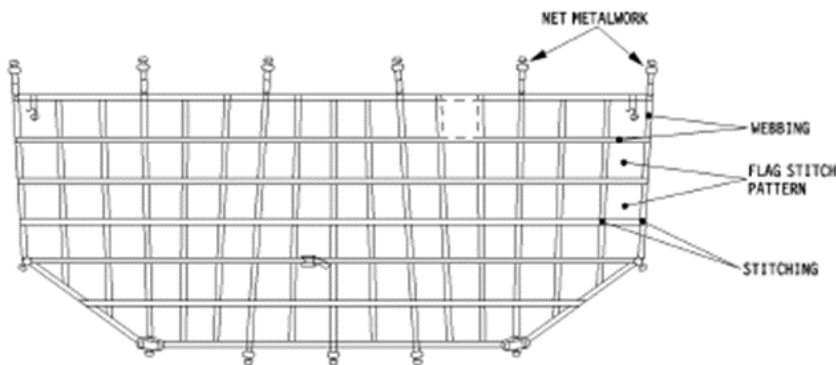
Note: The FKT will only be loaded on flights specified by TUI Airways Engineering for the B787-8 and B787-9.

- d. The extra weight for the FKT may or may not be included in the catering codes, this will be communicated by Ground Operations to the stations seasonally as an information notice.
- e. The kit will be in hold 4 at position 4.3L (B787-8) or 4.4L (B787-9).

9.3.2.1 Net Serviceability

The barrier net separates the aft cargo hold from the bulk cargo hold. The barrier net's straps are used to restrain cargo between the two holds. An appreciable cut or damage to a trap, strap attachment fitting, or fitting stitching results in the following load restriction:

- a. One vertical strap with a 0.3 inch or deeper cut, or other appreciable attachment fitting or fitting stitching cut or damaged, either:
 - 1. Limit the aft hold weight to 17,463kg; or,
 - 2. Tiedown all non-certified ULDs and bulk cargo loaded in the aft hold.
- b. Two or more vertical straps with a 0.3 inch or deeper cut, or other appreciable attachment fittings or fitting stitching cuts or damage, then:
 - 1. All non-certified ULDs and bulk cargo must be tied down; and,
 - 2. All cargo in the bulk cargo hold must be tied down
- c. Two or more adjacent horizontal straps, that are between any two adjacent vertical straps, with 0.3 inch or deeper cuts, then:
 - 1. All cargo in the bulk cargo hold must be tied down



9.3.2.2 Offload and onload procedure

Unload holds in the following order:

- a. All ULDs must be serviceable. Any damage must be within limits laid down, or the ULD must be withdrawn from service.
- b. All doors/sides or containers must be closed and properly secured prior to the container being loaded onto the aircraft.



- c. The ramp/loading agent must check all compartments to ensure that they are empty before loading and do not contain any unauthorized or suspicious items.
- d. Power Drive Units (PDUs) provide the force for container movement. Power-driven rubber rollers protrude above the cargo supporting structure to make contact with the underside of the containers. The PDUs are controlled by switches on the cargo control panels.
- e. The Powered Drives switches must be used to shut off selected PDUs to prevent the rubber rollers from scrubbing on the underside of the containers.
- f. The 6 lateral guides in both hold doorways must always be in the raised position prior to closing the cargo door.
- g. When loading of ULDs leave no-fit positions, ALL pallet locks / intermediate load stops should be raised to restrain the forward or aft movement of ULDs loaded adjacent to no-fit position if applicable.
- h. Once loading is complete the ramp/loading agent must correctly secure all ULD and built loads (see note 1).
- i. Once the loading Supervisor is satisfied that the above actions have been carried out, he/she will sign the LIRF to confirm the aircraft has been loaded according to the LIRF instructions including changes TUI procedures (see note 1).

Note 1: This action requires a signature on the LIRF. 2 signatures per LIRF required by separate people (Loading Supervisor & Ramp Agent).

Note 2: Unload the holds in the following order: Hold 5, Holds 4 – 3 – 2 and 1.

9.3.2.3 Risk of Tail-Tipping

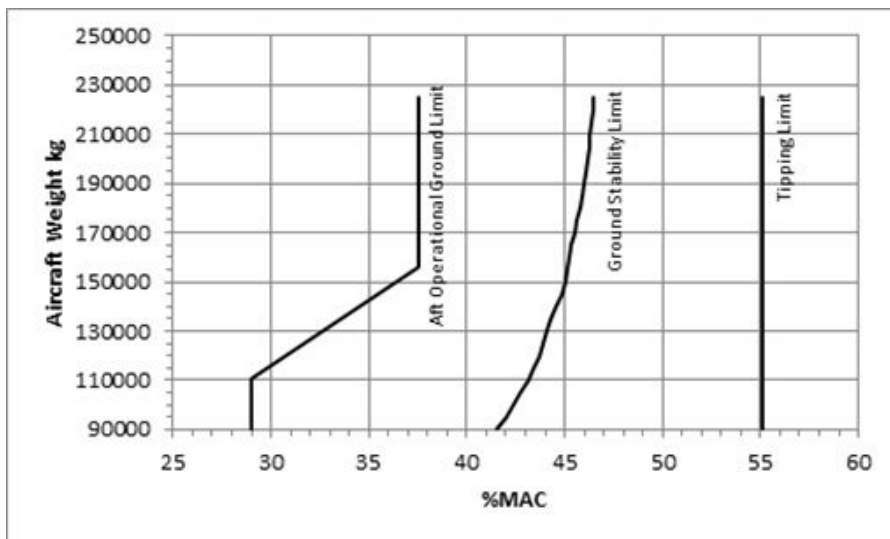
Tipping is generally not a concern for 787-9 aircraft if good judgement is exercised in maintaining aircraft stability during ground operations. Effects of towing and ground operations on the aircraft centre of gravity must be taken into account. The absolute tipping limit for the 787-9 is at 55.1% MAC, considerably aft of the ground stability limit. Some of the major factors affecting aircraft tipping and stability limits will include, but are not limited to the following items:

- a. Aircraft empty weight
- b. Aircraft attitude
- c. Fuel loading
- d. Passenger loading
- e. Cargo loading
- f. Ramp slope
- g. Runway surface condition
- h. Snow loads
- i. Wind loads

The ground stability limit takes into account the effects of the following:

- a. 3% ramp slope
- b. Towing forces
- c. 35 knot winds

By ensuring that the aircraft centre of gravity during towing is more forward than the ground stability limit, a tipping situation will be avoided.



Boarding and Disembarking Tipping Precautions: It should be noted that tipping might occur under the accumulation of the most adverse conditions such as:

- Extremely light aircraft combined with aft centre of gravity
- Very low fuel load or full main tanks with empty centre tank
- Passengers detained in the aft half of the aircraft with the forward half empty during disembarking
- Aft lower cargo holds full and forward lower cargo hold empty
- External condition such as inclined ramps and weather conditions

Tipping during boarding and disembarking can be avoided when the forward and aft cargo holds are loaded and unloaded simultaneously or when the forward cargo hold is loaded first and unloaded last.

9.3.2.4 Standard Loading

- In normal operations baggage will be carried in holds 3 and 4, and cargo will be loaded in holds 1 and 2.
- However, load planners should always be trying to achieve an aft CG to aid fuel economy, therefore if the gross weight of cargo exceeds the weight of baggage, cargo may be loaded in the aft hold, and baggage in the forward hold, subject to weight and volume restrictions.
- Do not move the Catering Service Units (CSUs).
- When operating with a nil passenger load and/or ferry flight, a standard fit of containers, must be carried for all containerised aircraft.
- When completing the Load Instruction Report, team leaders have been provided space within the report to countersign after securing and double checking the nets within the holds.



9.3.2.4.1 Standard Loading 787-8

The diagram below shows the positions (numbered and in white) where AKE/DPE's can be loaded and secured.

HOLD 5	43L FKT	CARGO 42L LD3	41L LD3	33L LD3	32L LD3	31L LD3	24L CSU	CARGO 21P PHC/PAG	CARGO 13P PHC/PAG	CARGO 12P PHC/PAG	CARGO 11P PHC/PAG
	43R	CARGO 42R LD3	41R LD3	33R LD3	32R LD3	31R LD3					

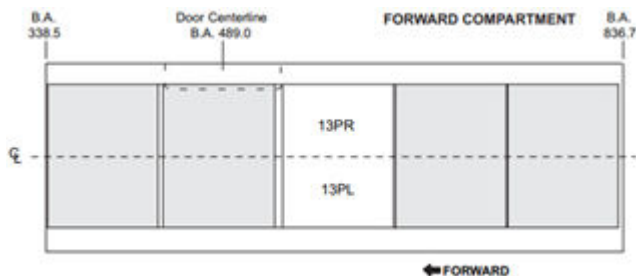
9.3.2.4.2 DQF Loading B787-8

On occasions, the carriage of DQF's (DQF's) maybe required on the B787 either empty for ULD positioning or loaded with passenger baggage or cargo. The following hold positions **MUST** be used to accommodate DQF's as they ensure the correct availability of securing locks.

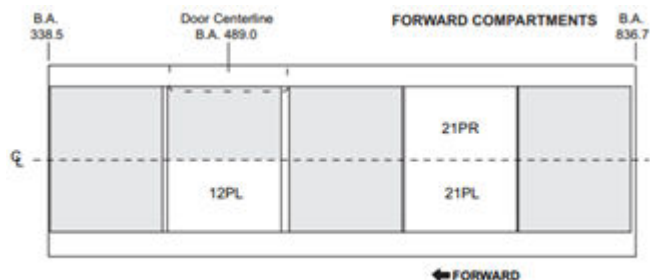
There are two configurations for loading DQFs in the forward hold as follows depending on how many DQF's you want to load:

Forward Hold Configuration Options:

2 DQF's

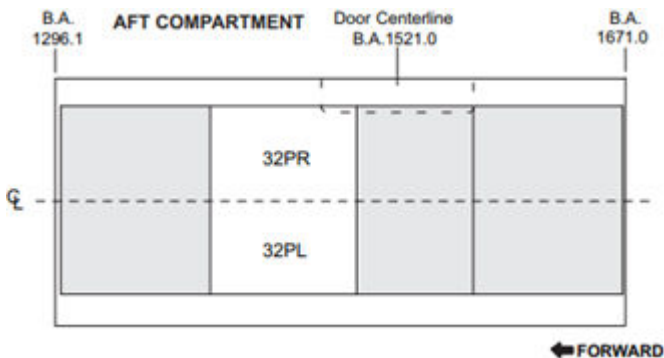


3 DQF's





Rear Hold Configuration only allows 2 DQF's:



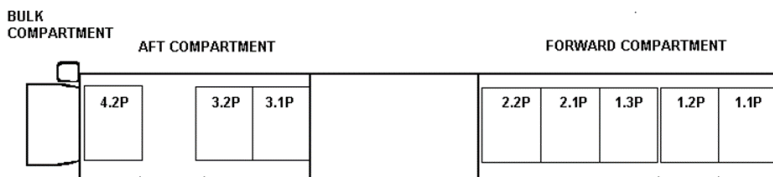
9.3.2.4.3 B787-8 - Cargo Hold Arrangement

- The forward and aft compartments, (holds 1, 2, 3, and 4), are configured to allow a combination of PMC or PAJ size pallets and AKE (AKE) containers.
- The bulk hold (hold 5, see page 34 of this section) has a usable volume of 402 cubic feet (11.3 cubic metres)

9.3.2.4.4 B787-8 Cargo Holds, Uld Positions

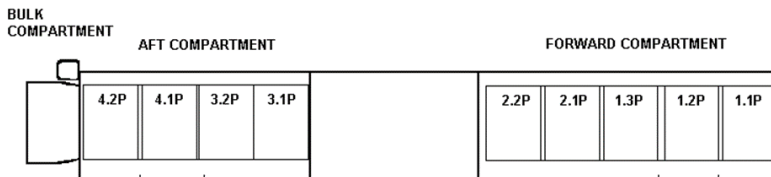
- Maximum capacity aft hold: 3 PMCs and 2 AKEs, or 2 PMCs and 4 AKEs, or 1 PMC and 8 AKEs, or 12 AKEs .
- Maximum capacity forward hold: 5 PMCs, or 4 PMCs and 2 AKEs, or 3 PMCs and 6 AKEs, or 2 PMCs and 8 AKEs, or 1 M-Size pallets and 12 AKEs, or 16 AKEs.

9.3.2.4.5 B787-8 Pmc Loading Positions

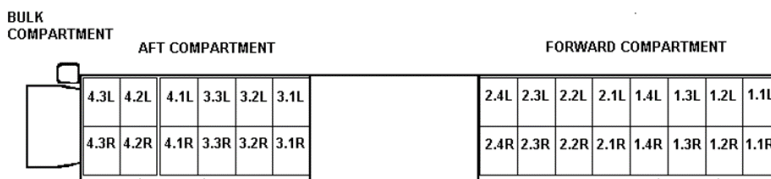




9.3.2.4.6 B787-8 PAG/PAJ Loading Positions



9.3.2.4.7 B787-8 AKE/DPE Loading Positions



9.3.2.4.8 B787-8 Hold Positions With/Without Catering

- Flight with Hold Catering**
- Fwd. Hold - 5PMC and 2 CSU
- Rear Hold - FKT, CSU (if three required – TBC), 4 AKE Cargo or one PMC, 8 AKE for baggage and 2 AKE for EMA's as required.
-
- Flights without Hold Catering**
- Fwd. Hold - 6PMC
- Rear Hold - FKT, 4 AKE Cargo or one PMC, 8 AKE for baggage and 2 AKE for EMA's as required.

9.3.2.4.9 Standard Loading 787-9

HOLD 5	FKT 44L LD3	43L	42L	41L	BAGS 34L LD3	BAGS 33L LD3	BAGS 32L LD3	BAGS 31L LD3		CARGO 23P PHC/PAG	CARGO 22P PHC/PAG	CARGO 21P PHC/PAG	CARGO 13P PHC/PAG	CARGO 12P PHC/PAG	CARGO 11P PHC/PAG
	44R	43R	42R	41R	BAGS 34R LD3	BAGS 33R LD3	BAGS 32R LD3	BAGS 31R LD3							

9.3.2.4.10 Alternative Standard Loading 787-9

HOLD 5	FKT 44L LD3	(43L)	CARGO 41P PHC/PAG	(41L)	BAGS 34L LD3	BAGS 33L LD3	BAGS 32L LD3	BAGS 31L LD3		25L CSU		CARGO 22P PHC/PAG	CARGO 21P PHC/PAG	CARGO 13P PHC/PAG	CARGO 12P PHC/PAG	CARGO 11P PHC/PAG
	44R	(43R)		(41R)	BAGS 34R LD3	BAGS 33R LD3	BAGS 32R LD3	BAGS 31R LD3		25R CSU						



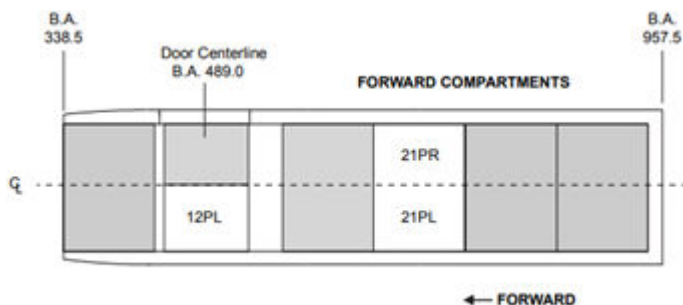
On occasions, the carriage of DQF's (DQF's) maybe required on the B787, either empty for ULD positioning or loaded with passenger baggage or cargo. The following hold positions MUST be used to accommodate DQF's as they ensure the correct availability of securing locks. The diagram below shows the positions (numbered and in white) where DQF's can be loaded and secured.

9.3.2.4.11 DQF Loading Positions B787-9

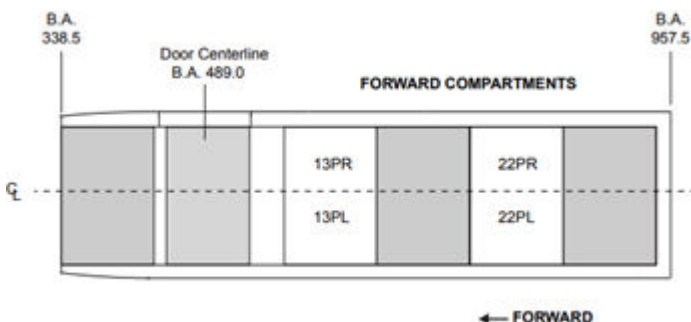
There are two configurations for loading DQFs in the forward & aft hold as follows depending on how many DQF's you want to load:

Forward Hold Configuration Options:

3 DQF's

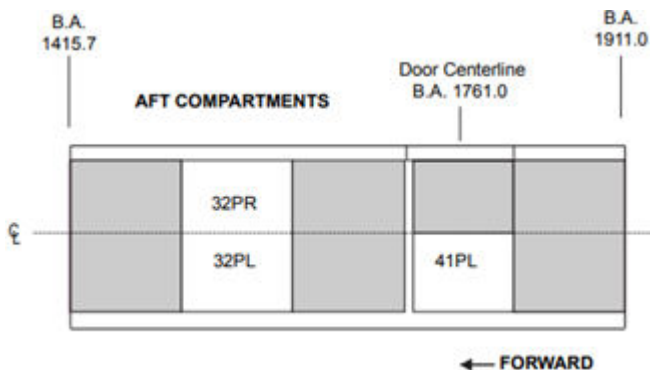


4 DQF's

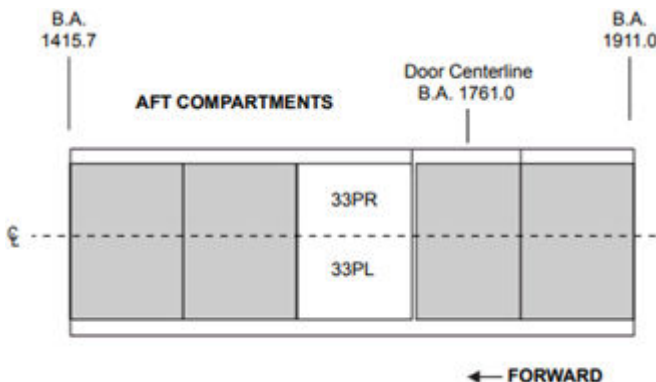


Aft Hold Configuration Options:

3 DQF's



2 DQF's



Note: The positions forward and aft of each DQF must be left empty to provide space for the protruding ULD.

9.3.2.4.12 B787-9 CARGO HOLD ARRANGEMENT

- The forward and aft compartments, (holds 1, 2, 3, and 4), are configured to allow a combination of PMC or PAJ size pallets and AKE (AKE) containers.
- The bulk hold (hold 5, see page xx of this section) has a usable volume of 402 cubic feet (11.3 cubic metres).

9.3.2.4.13 B787-9 Cargo Holds, ULD Positions

Maximum capacity aft hold: 5 PMC/PAG/PAJ; or 4 PMC/PAG/PAJ and 2 AKE; or 3 PMC/PAG/PAJ and 6 AKE; or 2 PMC/PAG/PAJ and 8 AKE; or 1 PMC/PAG/PAJ and 12 AKE, or 16 AKE.



Maximum capacity forward hold: 6 PMC/PAG/PAJ; or 5 PMC/PAG/PAJ and 2 AKEs, or 4 PMC/PAG/PAJ and 6 AKEs, or 3 PMC/PAG/PAJ and 10 AKEs, or 1 PMC/PAG/PAJ and 16 AKEs, or 20 AKEs.

Note: DPE cannot be loaded in positions 13L/R or 42L/R.

9.3.2.4.14 B787-9 Pallet Loading Positions

HOLD 5	CARGO 42P PMC/PAG	CARGO 41P PMC/PAG	CARGO 33P PMC/PAG	CARGO 32P PMC/PAG	CARGO 31P PMC/PAG		CARGO 23P PMC/PAG	CARGO 22P PMC/PAG	CARGO 21P PMC/PAG	CARGO 13P PMC/PAG	CARGO 12P PMC/PAG	CARGO 11P PMC/PAG

9.3.2.4.15 B787-9 AKE LOADING POSITIONS

HOLD 5	44L LD3	43L LD3	42L LD3	41L LD3	34L LD3	33L LD3	32L LD3	31L LD3		25L LD3	24L LD3	23L LD3	22L LD3	21L LD3	15L LD3	14L LD3	13L LD3	12L LD3	11L LD3
	44R LD3	43R LD3	42R LD3	41R LD3	34R LD3	33R LD3	32R LD3	31R LD3		25R LD3	24R LD3	23R LD3	22R LD3	21R LD3	15R LD3	14R LD3	13R LD3	12R LD3	11R LD3

9.3.2.4.16 B787-9 Hold Positions With/Without Catering

Flight with Hold Catering

Fwd. Hold - 5PMC and 2 CSU

Rear Hold - FKT, CSU (if three required – TBC), 4 AKE Cargo or one PMC, 8 AKE for baggage and 2 AKE for EMA's as required.

Flights without Hold Catering

Fwd. Hold - 6PMC

Rear Hold - FKT, 4 AKE Cargo or one PMC, 8 AKE for baggage and 2 AKE for EMA's as required.

9.3.2.4.17 Intermediate Load Stops

When loading of ULDs leaves no-fit positions, ALL pallet locks / intermediate load stops should be raised to prevent the inadvertent movement of cargo loaded adjacent to no-fit positions.

9.3.2.5 Hold Temperatures

Forward Hold (holds 1 and 2) - Temperature may be varied between 4°C and 27°C

Aft Hold (holds 3 and 4) - No temperature control

Bulk Hold (hold 5) - Temperature control targets 21°C

9.3.2.6 Last Minute Changes

9.3.2.7 Lateral Imbalance

- Cargo lateral imbalance occurs when the Centre of Gravity of the cargo loaded is offset from the airplane centre line:



1. Filled ULDs are loaded on one side of the compartment and the opposite side is empty.
 2. Payload is carried in multiple ULDs that when loaded have a lateral cg offset and cannot be loaded laterally in pairs.
 3. Heaviest ULDs are loaded along one side of the compartment and lighter ones along the opposite side.
- b. Handlers should load payload symmetrically about the aircraft centreline to minimise the effect of lateral imbalance:
1. Load a similar number of ULDs on each side of the aircraft.
 2. Load heavy and light ULDs on both sides of the aircraft.
- c. Lateral imbalance may have the effect of reducing the MTOW:
1. **B787-8:** When the takeoff weight is greater than 209000kg, load planners should check for lateral imbalance restrictions
 2. **B787-9:** When the takeoff weight is greater than 248000kg, load planners should check for lateral imbalance restrictions.

9.3.3 Interior Cleaning

Refer to the Cleaning and Presentation manual in the TAGO portal.



10 Annex D Dangerous Goods and Weapons

10.1 Policy on the Transport of Dangerous Goods and Weapons

It is the policy of all TUI Group airlines to follow the instructions and requirements contained in this chapter, to ensure that dangerous goods are safely carried either as passenger/crew baggage and/or cargo. Any dangerous goods incident or accident must be reported in accordance with the instructions stated in Annex D - 10.7.2.

1. Dangerous goods are articles or substances which are capable of posing a hazard to health, safety, property, or the environment and which are classified according to the ICAO Technical Instructions and further defined by the IATA Dangerous Goods Regulations (DGR).
2. Addendum to IATA Dangerous Goods Regulations. Copy holders of the IATA Dangerous Goods Regulations must ensure that they receive and action any Addenda published by IATA.

10.1.1 Approval for the Transport of Dangerous Goods

Dangerous goods can only be carried according to the International Civil Aviation Organization's Technical Instructions for the Safe Transport of Dangerous Goods by Air (Technical Instructions), and IATA Dangerous Goods Regulations, irrespective of whether the flight is wholly or partly within or wholly outside the territory of a State.

ICAO TIs are the regulatory framework and as such take precedence over the IATA DGRs.

An approval must be granted by the State of the Operator before dangerous goods can be carried on an aeroplane, except as identified in Annex D - 10.1.3 & 10.1.5 below. An additional approval or an exemption may be required to permit the transport of some dangerous goods - see 10.1.2 below:

The following TUI Group airlines hold an approval for the transport of dangerous goods by air::

- TUI Fly Nordic - Transportstyrelsen (**Swedish CAA**)
- TUI Airways Limited - **UK Civil Aviation Authority (UK CAA)**

The following restrictions apply:

TUI Airways and TUI Fly Nordic prohibit the carriage of:

1. Small lithium battery powered personal transportation devices including hover boards (excluding electric mobility aids).
2. Class 7 Radioactive Materials
3. Class 1 Explosives (except 1.4S)
4. Lithium-ion batteries (UN3480), Lithium metal batteries (UN3090) and Sodium ion batteries (UN3551)
5. Disabling Devices. Disabling devices, such as mace, pepper spray, containing an irritant or incapacitating substance, are prohibited on the person and in checked or carry-on baggage
6. Electro shock weapons (e.g. Tasers)

Note 1: Magnetized material (class 9) will only be accepted when loaded in aft compartment (hold 3 and 4 for the B737 and hold 2, 3, 4 and 5 for the B787.



Note 2: Unilode Bluetooth tracking devices installed in ULD's (Incl Pallets) contain a small lithium-ion battery. TUI have satisfactorily conducted a safety case assessment for the use of these items on B787 aircraft, therefore these units are acceptable for carriage without a dangerous goods approval.

TOM-UK

TUI Airways prohibits the carriage of:

- *Sporting weapons are prohibited for passenger carriage. Sporting Weapons will only be accepted as cargo.*
- *Dangerous goods in classes 5 and 8 on B787 aeroplanes with a net quantity in excess of 1L or 5 kg per package*

End TOM-UK

TOM-UK

Note: This restriction does not apply to B737 aeroplanes where carriage of classes 5 & 8 are allowed in accordance with these Regulations. (Ref IATA DGR 2.8.4 List of Operator Variations BY-01)

End TOM-UK

The NP Ground Operations is assigned responsibility for the approval held.

For Dangerous Goods queries, contact the TOCC.

10.1.2 Forbidden Dangerous Goods

Any article or substance which, as presented for transport, is liable to explode, dangerously react, produce a flame or dangerous evolution of heat or dangerous emission of toxic, corrosive or flammable gases or vapours under conditions normally encountered in transport must not be carried on an aeroplane under any circumstance.

Certain dangerous goods, which are normally forbidden, may be specifically approved for air transport by the State of Origin and the State of the Operator:

1. to transport dangerous goods forbidden on passenger and/or cargo aeroplane where Special Provision A1/A2 applies; or
2. for other purposes as specified in ICAO Technical Instructions and IATA Dangerous Goods Regulations;

provided that in such instances an overall level of safety in transport which is at least equivalent to the level of safety provided for in the Technical Instructions and/or IATA DGR regulations is achieved.

In instances of extreme urgency or when other forms of transport are inappropriate or full compliance with the prescribed requirements is contrary to public interest, the States concerned may grant an exemption from the provisions of the Instructions provided that in such instances an overall level of safety in transport which is at least equivalent to the level of safety provided for in these Instructions is achieved. For the purposes of exemptions, "States concerned" are the States of Origin, Operator, transit, overflight and destination. For the State of overflight, if none of the criteria for granting an exemption are relevant, an exemption may be granted based solely on whether it is believed that an equivalent level of safety in air transport has been achieved.



Additionally, since controls exist for the quantities of some explosives which may be carried to or from specific airfields, operators must seek advice from the local Civil Aviation Authority as to the suitability of the intended airfield of loading and unloading when Class 1 dangerous goods are being carried under an A2 approval.

Note: Application for forbidden dangerous goods approvals shall be submitted to the Competent Authority's Dangerous Goods Office at least 10 working days prior to the proposed flight date.

Dangerous goods carried in accordance with an exemption or approval must comply with the conditions on the exemption or approval, as well as those on the permanent approval unless these have been varied by the exemption or further approval. Under these circumstances a copy of the exemption will be carried on-board the aeroplane.

10.1.3 General Exceptions

10.1.3.1 Airworthiness and Operational Items

An approval is not required for Dangerous Goods which are required to be aboard the aeroplane as:

1. Items for airworthiness or operating reasons or for the health of passengers or crew, such as batteries, fire extinguishers, first-aid kits, insecticides, air fresheners, life rafts, escape slides, life-saving appliances, portable oxygen supplies, tritium signs, smoke hoods, passenger service units;
2. Aerosols, alcoholic beverages, perfumes, colognes, liquefied gas lighters and portable electronic devices containing lithium metal or lithium-ion cells or batteries provided that the batteries meet the provisions applicable when carried by passengers and crew) carried aboard an aeroplane by the operator for use or sale on the aeroplane during the flight or series of flights, but excluding non-refillable gas lighters and those lighters liable to leak when exposed to reduced pressure;
3. Dry ice intended for use in food and beverage service aboard the aeroplane;
4. Electronic devices such as electronic flight bags, personal entertainment devices, credit card readers, containing lithium metal or lithium ion cells or batteries and spare lithium batteries for such devices carried aboard an aeroplane by the operator for use on the aeroplane during the flight or series of flights, provided that the batteries meet the provisions applicable to the carriage of portable electronic devices containing lithium or lithium ion cells or batteries by passengers (see the entries for 'batteries' in the table produced at Annex D1.5). Spare lithium batteries must be individually protected so as to prevent short circuits when not in use.
5. Hygiene products – Alcohol-based hand sanitizers and alcohol-based cleaning products carried aboard an aircraft by the operator for use on the aircraft during the flight or series of flights for the purposes for passenger and crew hygiene.
6. Unilode Bluetooth tracking devices installed in ULD's (Incl Pallets) contain a small lithium-ion battery. TUI have satisfactorily conducted a safety case assessment for the use of these items on B787 therefore these units are acceptable for carriage.

Note: Dangerous goods intended as replacements for those referred to in 1.3.1 a, b and c (operator's stores/COMAT) above may not be carried without the approval referred to in Annex D - 10.1.1 and unless consigned and accepted for transport in accordance with the ICAO Technical Instructions & IATA Dangerous Goods Regulations.



10.1.3.2 Veterinary Aid

Not applicable to TUI Group Airlines.

10.1.3.3 Medical Aid for a Patient

An approval is not required for dangerous goods carried by an aeroplane where the dangerous goods are to provide, during flight, medical aid to a patient or to preserve organs intended for use in transplantation when those dangerous goods:

1. Have been placed on board an aeroplane with the approval of the operator; or
2. Form part of the permanent equipment of the aeroplane when it has been adapted for specialised use, providing that
 - a. the gas cylinders have been manufactured specifically for the purpose of containing and transporting that particular gas;
 - b. the drugs and medicines and other medical matter are under the control of trained personnel during the time when they are in use;
 - c. equipment containing wet cell batteries is kept and, when necessary secured, in an upright position to prevent spillage of the electrolyte; and
 - d. proper provision is made to stow and secure all the equipment during take-off and landing and at all other times when deemed necessary by the commander in the interests of safety; and
 - e. Lithium metal or lithium-ion cells or batteries meet the provisions in IATA-DGR 3.2.6.1. and spare lithium batteries, when not in use, shall be individually protected as to prevent short circuits.

These dangerous goods may also be carried on a flight made by the same aeroplane to collect a patient or after that patient has been delivered (e.g. training flights and positioning flights prior to or after maintenance), when it is impracticable to load or unload the goods at the time of the flight on which the patient is carried.

Note: The dangerous goods carried may differ from those identified above due to the needs of the patient. These provisions apply to temporarily modified aeroplanes. Dangerous goods that passengers are permitted to carry as medical aids are described in Annex D - 10.1.5.

10.1.3.4 Excess Baggage Being Sent as Cargo

An approval is not required for dangerous goods contained within items of excess baggage being sent as cargo provided that:

- the excess baggage has been consigned as cargo by or on behalf of a passenger;
- the dangerous goods may only be those that are permitted by and in accordance with GOM Table 1.5 to be carried in checked baggage; and
- the excess baggage is marked with the words "Excess baggage consigned as cargo".

With the aim of preventing dangerous goods, which a passenger is not permitted to have, from being taken aboard an aeroplane in excess baggage consigned as cargo, any organization or enterprise accepting excess baggage consigned as cargo should seek confirmation from the passenger, or a person acting on behalf of the passenger, that the excess baggage does not contain dangerous goods that are not permitted and seek further confirmation about the contents of any item where there are suspicions that it may contain dangerous goods that are not permitted.



10.1.3.5 Data loggers and cargo tracking device

Data loggers and cargo tracking devices with installed lithium batteries, attached to or placed in packages, overpacks or unit load devices are not subject to any provisions of the IATA Dangerous Goods Regulations provided the following conditions are met:

- a. the data loggers/cargo tracking devices must be in use or intended for use during transport;
- b. each cell or battery must meet the provisions of IATA DGR 3.9.2.6(a), (e), (f) (if applicable) and (g);
- c. for a lithium ion cell or battery, a Watt-hour rating not exceeding 20 Wh;
- d. for a lithium metal cell, a lithium content not exceeding 1 g;
- e. for a lithium metal battery, an aggregate lithium content not exceeding 1 g;
- f. the number of data loggers/cargo tracking devices in or on any package or overpack must be no more than the number required to track or to collect data for the specific consignment;
- g. the data loggers/cargo tracking devices must be capable of withstanding the shocks and loadings normally encountered during transport;
- h. the devices must not be capable of generating a dangerous evolution of heat;
- i. the devices must meet defined standards for electromagnetic radiation to ensure that the operation of the device does not interfere with aircraft systems.

Note: This exception does not apply where the data loggers or cargo tracking devices are offered for transport as a consignment in accordance with Packing Instruction 967, 970 or 978.

10.1.4 Instructions on the Carriage of Employees of the Operator

There is no restriction of the carriage of employees on an aeroplane carrying dangerous goods which are permitted on a passenger aeroplane, providing the requirements of the ICAO Technical Instructions and/or IATA Dangerous Goods Regulations are complied with.

10.1.5 Items that may be Carried by Passengers and Crew

Passengers or crew are forbidden to carry dangerous goods either as or in carry-on baggage, checked baggage or on their person unless the dangerous goods are permitted in accordance with the table below and.

1. Carried by passengers or crew for personal use only;
2. Contained in baggage that has been separated from its owner during transit (e.g. lost baggage or improperly routed baggage); or
3. Contained within items of excess baggage sent as cargo

Baggage separated from its owner, may be carried forward by the airline as checked or carry-on baggage according to the provisions in the table.

Where the approval of the airline is required

1. When a written approval confirmation is issued, the passenger must carry a copy for the respective flight for the entire flight. This approval shall be requested by the passenger well in advance by sending a request to the Tour Operator's Call Centre. The Tour



Operator's Call Centre staff (Dangerous Goods trained only) are permitted to give approval on behalf of TUI Airways for items used for medical or mobility purposes (e.g. oxygen, POCs and Electric Mobility Aids). If other items need approval, the Tour Operator's Call Centre shall forward the request to TUI Airline Services Ground Operations Network Team who are appropriately trained and are approved to give this approval on behalf of TUI Airways. All details and restrictions of the approval must be fulfilled.

2. Missing approval may be verbally granted by TUI Airline Services Ground operations Network Team.
3. The commander may verbally grant a missing approval only in unforeseen circumstances for handicapped passengers travelling with their own electrical mobility aid. All requirements and restrictions according to table below must be fulfilled.

Dangerous goods carried by passengers or crew shall be verified according to the Technical Instructions, and/or IATA DGR. The IATA DGR Table 2.3A may be referred to but must be used in conjunction with this table at all times.

Note 1: Baggage intended to be carried in the cabin that is placed in the hold must only contain Dangerous Goods permitted in checked baggage. It is necessary for cabin crew to verify that for example spare lithium batteries & heat producing articles are removed. This also means that if any Portable Electronic Devices are carried in checked baggage, measures must be taken to prevent unintentional activation and to protect the devices from damage; and the devices must be completely switched off (not in sleep or hibernation mode). See table 10.1.5 for further details.

Note 2: Radiopharmaceuticals contained within the body of a person as a result of medical treatment are not subject to these regulations.

Note 3: Energy efficient lamps when in retail packaging intended for personal or home use are not subject to these regulations.

Note 4: Any item or article that contains more than one item of dangerous goods must meet the provisions of all applicable entries. For example, an avalanche rescue back pack containing lithium batteries and gas cartridges must meet the applicable individual provisions.

Note: The following table is based on IATA Dangerous Goods Regulation 66th Edition.

Dangerous goods must not be carried in or as passenger or crew, checked or carry-on baggage, except as otherwise provided below.

Dangerous goods permitted in carry-on baggage are also permitted "on one's person", except where otherwise specified.



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<i>Items or articles</i>		<i>Location</i>			<i>Operator Approval is required</i>	<i>Commander must be informed</i>	<i>Restrictions</i>
		<i>Checked baggage</i>	<i>Carry-on baggage</i>	<i>On the person</i>			
1)	Small gaseous oxygen or air cylinders required for medical use	Yes	Yes	Yes	Yes	Yes	a. No more than 5 kg gross mass per cylinder; b. Cylinders, valves and regulators, where fitted, must be protected from damage which could cause inadvertent release of the contents; and c. The commander must be informed of the number of oxygen or air cylinders loaded on board the aeroplane and their loading location(s). d. Not allowed on flights to/from USA
	Devices containing liquid oxygen	Forbidden					Devices containing liquid oxygen are forbidden in carry-on baggage, checked baggage or on the person.
	Empty Air cylinders for other purposes, such as scuba diving	Yes	No	n/a	No	No	May only be carried if at a pressure less than 200 k Pa at 20° (2 Bar or 29 PSI) empty
2)	Cylinders of a non-flammable, non-toxic gas worn for the operation of mechanical limbs (Division 2.2)	Yes	Yes	Yes	No	No	Spare cylinders of a similar size are also allowed, if required, to ensure an adequate supply for the duration of the journey.



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<i>Items or articles</i>		<i>Location</i>			<i>Operator Approval is required</i>	<i>Commander must be informed</i>	<i>Restrictions</i>
		<i>Checked baggage</i>	<i>Carry-on baggage</i>	<i>On the person</i>			
3)	Non-radioactive medicinal articles (including aerosols)	Yes	Yes	Yes	No	No	a. no more than 0.5 kg or 0.5 L total net quantity per single article; b. release valves on aerosols must be protected by a cap or other suitable means to prevent inadvertent release of the contents; and c. no more than 2 kg or 2 L total net quantity of all articles mentioned in 3) and 10) (e.g. four aerosol cans of 500 mL each) per person.
4)	Radioisotopic cardiac pacemakers or other medical devices, including those powered by lithium batteries	n/a	n/a	Yes	No	No	Must be implanted into a person or fitted externally as the result of medical treatment.
	Radio-pharmaceuticals contained within the body of a person	n/a	n/a	Yes	No	No	Must be as the result of medical treatment.



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<i>Items or articles</i>		<i>Location</i>			<i>Operator Approval is required</i>	<i>Commander must be informed</i>	<i>Restrictions</i>
		<i>Checked baggage</i>	<i>Carry-on baggage</i>	<i>On the person</i>			
5)	Electric Mobility aids (WCBD) wheelchairs powered by non-spillable wet batteries or batteries which comply with Special Provision A123 or A199. Includes nickel-metal hydride battery or dry battery For use by passengers whose mobility is restricted by either a disability, their health or age, or a temporary mobility problem (e.g. broken leg)	Yes	No	No	Yes	Yes	a. non-spillable wet batteries must comply with Special Provision A67, A199 & A123 b. the operator must verify that where the battery is securely attached to the mobility aid following the instructions of the device manufacturer : ◦ the battery terminals are protected from short circuits (e.g. by being enclosed within a battery container); and ◦ electrical circuits have been isolated; <i>To do this, place the device into drive mode (i.e. not freewheel mode), see if the mobility aid will power up and if so whether use of the joystick results in the mobility aid moving. It must also be verified that the circuits of supplemental motorised systems such as seating systems have been inhibited to prevent inadvertent operation, e.g. by the separation of cable connectors. If an electric mobility aid has not been made safe for carriage, it must not be loaded.</i> c. mobility aids must be carried in a manner such that they are protected from being damaged by the movement of baggage, mail, stores or other cargo;



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<i>Items or articles</i>		<i>Location</i>			<i>Operator Approval is required</i>	<i>Commander must be informed</i>	<i>Restrictions</i>
		<i>Checked baggage</i>	<i>Carry-on baggage</i>	<i>On the person</i>			
							d. the operator must secure, by use of straps, tie downs or other restraint devices, a battery powered mobility aid with installed batteries. The mobility aid, the batteries, electrical cabling and controls must be protected from damage including by the movement of baggage, mail or cargo. e. where the mobility aid is specifically designed to allow its battery(ies) to be removed by the user: ◦ the battery(ies) must be removed; the mobility aid may then be carried as checked baggage without restriction; ◦ the removed battery(ies) must be carried in strong, rigid packaging which must be stowed in the cargo compartment ◦ the battery(ies) must be protected from short circuit. ◦ Removal of the battery must be performed following the instructions of the manufacturer or device owner f. Two spare nickel-metal hydride battery allowed in the cargo



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<i>Items or articles</i>		<i>Location</i>			<i>Operator Approval is required</i>	<i>Commander must be informed</i>	<i>Restrictions</i>
		<i>Checked baggage</i>	<i>Carry-on baggage</i>	<i>On the person</i>			
							compartment or one spare wet, non spillable battery. g. the commander must be formed of the location of the packed battery (ies) (installed, removed & spare batteries) h. it is recommended that passengers make advance arrangements with each operator.
6)	Electric Mobility aids (WCBW) Wheelchairs powered by spillable batteries, for use by passengers whose mobility is restricted by either a disability, their health or age, or temporary mobility problem (e.g. broken leg)	No	No	No	No	No	Forbidden on TUI Airlines



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<i>Items or articles</i>		<i>Location</i>			<i>Operator Approval is required</i>	<i>Commander must be informed</i>	<i>Restrictions</i>
		<i>Checked baggage</i>	<i>Carry-on baggage</i>	<i>On the person</i>			
7)	Electric Mobility aids (WCLB) wheelchairs powered by lithium ion batteries, for use by passengers whose mobility is restricted by either a disability, their health or age, or a temporary mobility problem (e.g. broken leg) Calculation used to determine watt hours is: Volts x ampere hour (Ah) = watt hours	Yes	Yes (see 6 e)	No	Yes	Yes	a. the batteries must be of a type which meets the requirements of each test in the UN <i>Manual of Tests and Criteria</i>, Part III, subsection 38.3; b. the operator must secure, by use of straps, tie downs or other restraint devices, a battery powered mobility aid with installed batteries. The mobility aid, the batteries, electrical cabling and controls must be protected from damage including by the movement of baggage, mail or cargo. c. The operator must verify that the battery terminals are protected from short circuits (e.g. by being enclosed within a battery container); and the battery (ies) are adequately protected from damage by the design of the mobility aid and securely attached to the wheelchair or mobility aid The electrical circuits must be isolated following the manufacturers instructions. <i>To do this, place the device into drive mode (i.e. not freewheel mode), see if the mobility aid will power up and if so whether use of the joystick results in the mobility aid moving. It must also be</i>



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Items or articles		Location			Operator Approval is required	Commander must be informed	Restrictions
		Checked baggage	Carry-on baggage	On the person			
							<i>verified that the circuits of supplemental motorised systems such as seating systems have been inhibited to prevent inadvertent operation, e.g. by the separation of cable connectors. If an electric mobility aid has not been made safe for carriage, it must not be loaded.</i> d. mobility aids must be carried in a manner such that they are protected from being damaged by the movement of baggage, mail, stores or other cargo; e. where the mobility air is specifically designed to allow its battery(ies) to be removed by the user: ◦ the battery(ies) must be removed and carried in the passenger cabin; ◦ the battery terminals must be protected from short circuit (by insulating the terminals, e.g. by taping over exposed terminals); ◦ the battery must be protected from damage (e.g. by placing each battery in a protective pouch); ◦ removal of the battery from the mobility aid must be performed by



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Items or articles		Location			Operator Approval is required	Commander must be informed	Restrictions
		Checked baggage	Carry-on baggage	On the person			
							following the instructions of the manufacturer or device owner; ◦ the battery must not exceed 300 Wh; or 2 batteries at 160 each. f. a maximum of one spare battery not exceeding 300 Wh or two spares not exceeding 160 Wh each may be carried g. the commander must be informed of the location of the lithium ion battery(ies); (installed, removed and spare battery(ies)) h. it is recommended that passengers make advance arrangements with each operator. Note: Lithium-ion batteries remaining attached to the electric mobility aid in the hold are subject to a TUI Airline policy that is more restrictive than IATA DGR.



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<i>Items or articles</i>		<i>Location</i>			<i>Operator Approval is required</i>	<i>Commander must be informed</i>	<i>Restrictions</i>
		<i>Checked baggage</i>	<i>Carry-on baggage</i>	<i>On the person</i>			
8)	Portable medical electronic devices (PMED) automated external defibrillators (AED), nebulizer, continuous positive airway pressure (CPAP), etc.) containing lithium metal or lithium ion cells or batteries	Yes	Yes	Yes	Yes	No	
	Portable medical electronic devices (PMED) containing lithium metal cells or batteries not exceeding 2 grams or lithium ion cells or batteries not exceeding 100 Wh	Yes	Yes	Yes	No	No	a. carried by passengers for medical use; and b. batteries or cells must be of a type which meets the requirements of each test in the UN Manual of Tests and Criteria, Part III, subsection 38.3; c. Each person is limited to a maximum of 15 devices without operator approval.



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<i>Items or articles</i>		<i>Location</i>			<i>Operator Approval is required</i>	<i>Commander must be informed</i>	<i>Restrictions</i>
		<i>Checked baggage</i>	<i>Carry-on baggage</i>	<i>On the person</i>			
	Spare batteries for portable medical electronic devices (PMED) containing lithium metal cells or batteries not exceeding 2 grams or lithium ion cells or batteries not exceeding 100 Wh	No	Yes	Yes	No	No	a. carried by passengers for medical use; b. batteries or cells must be of a type which meets the requirements of each test in the UN Manual of Tests and Criteria, Part III, subsection 38.3; and c. must be individually protected so as to prevent short circuits (by placement in original retail packaging or by otherwise insulating terminals, e.g. by taping over exposed terminals or placing each battery in a separate plastic bag or protective pouch). d. Each person is limited to a maximum of 10 spare batteries without approval.



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<i>Items or articles</i>		<i>Location</i>			<i>Operator Approval is required</i>	<i>Commander must be informed</i>	<i>Restrictions</i>
		<i>Checked baggage</i>	<i>Carry-on baggage</i>	<i>On the person</i>			
	Portable medical electronic devices (PMED) containing lithium metal batteries exceeding 2 grams but not exceeding 8 grams or lithium ion batteries exceeding 100 Wh but not exceeding 160 Wh	Yes	Yes	Yes	Yes	No	a. carried by passengers for medical use; and b. batteries or cells must be of a type which meets the requirements of each test in the UN Manual of Tests and Criteria, Part III, subsection 38.3; c. No quantity restriction on PMED



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<i>Items or articles</i>		<i>Location</i>			<i>Operator Approval is required</i>	<i>Commander must be informed</i>	<i>Restrictions</i>
		<i>Checked baggage</i>	<i>Carry-on baggage</i>	<i>On the person</i>			
	Spare batteries for portable medical electronic devices (PMED) containing lithium metal batteries exceeding 2 grams but not exceeding 8 grams or lithium ion batteries exceeding 100 Wh but not exceeding 160 Wh	No	Yes	Yes	Yes	No	a. carried by passengers for medical use; b. batteries or cells must be of a type which meets the requirements of each test in the UN Manual of Tests and Criteria, Part III, subsection 38.3; and c. must be individually protected so as to prevent short circuits (by placement in original retail packaging or by otherwise insulating terminals, e.g. by taping over exposed terminals or placing each battery in a separate plastic bag or protective pouch); and d. no more than two spare batteries exceeding 2 grams lithium content for lithium metal or a watt-hour rating of 100 Wh for lithium ion may be carried
9)	Small medical or clinical thermometer which contains mercury	Yes	No	No	No	No	a. no more than one per person; b. must be for personal use; and c. must be in its protective case.
Articles used in dressing or grooming							



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<i>Items or articles</i>		<i>Location</i>			<i>Operator Approval is required</i>	<i>Commander must be informed</i>	<i>Restrictions</i>
		<i>Checked baggage</i>	<i>Carry-on baggage</i>	<i>On the person</i>			
10)	Non-Radioactive Medicinal or Toiletry articles (including aerosols) Non-Flammable, non-toxic (Division 2.2) aerosols with no subsidiary risk, for sporting or home use.	Yes	Yes	Yes	No	No	a. the term "toiletry articles (including aerosols)" is intended to include such items as hair sprays, perfumes and colognes; b. no more than 0.5 kg or 0.5 L total net quantity per single article; c. release valves on aerosols must be protected by a cap or other suitable means to prevent inadvertent release of the contents; and d. no more than 2 kg or 2 L total net quantity of all articles mentioned in 3), 10) (e.g. four aerosol cans of 500 mL each) per person.
11)	Hair curlers containing hydrocarbon gas	Yes	Yes	Yes	No	No	a. no more than one per person; b. the safety cover must be securely fitted over the heating element; and c. gas refills for such curlers must not be carried.
Consumer articles							



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<i>Items or articles</i>		<i>Location</i>			<i>Operator Approval is required</i>	<i>Commander must be informed</i>	<i>Restrictions</i>
		<i>Checked baggage</i>	<i>Carry-on baggage</i>	<i>On the person</i>			
12)	Alcoholic beverages containing more than 24 per cent but not more than 70 per cent alcohol by volume	Yes	Yes	Yes	No	No	a. must be in retail packaging; b. no more than 5 L per individual receptacle; and c. no more than 5 L total net quantity per person for such beverages. Note: – Alcoholic beverages containing not more than 24 per cent alcohol by volume are not subject to any restrictions.
13)	Securely packaged Ammunition in Division 1.4S (UN 0012 or UN 0014 only);	Yes	No	No	Yes	No	a. no more than 5 kg gross mass per person for that person's own use; b. must not include ammunition with explosive or incendiary projectiles; and c. allowances for more than one person must not be combined into one or more packages.
14)	Small packet of safety matches	No	No	Yes	No	No	a. no more than one per person; and b. intended for use by an individual.
	"Strike anywhere" matches	Forbidden					



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<i>Items or articles</i>		<i>Location</i>			<i>Operator Approval is required</i>	<i>Commander must be informed</i>	<i>Restrictions</i>
		<i>Checked baggage</i>	<i>Carry-on baggage</i>	<i>On the person</i>			
	Small cigarette lighter	No	No	Yes	No	No	a. no more than one per person; b. intended for use by an individual; and c. does not contain unabsorbed liquid fuel (other than liquefied gas).
	Lighter fuel and lighter refills	Forbidden					
	Premixing burner lighter (e.g. lighters producing a blue flame) with a means of protection against unintentional activation	No	No	Yes	No	No	a. no more than one per person; b. intended for use by an individual; and c. does not contain unabsorbed liquid fuel (other than liquefied gas).



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		<i>Checked baggage</i>	<i>Carry-on baggage</i>	<i>On the person</i>			
Premixing burner lighter (e.g. lighters producing a blue flame) <u>without</u> a means of protection against unintentional activation		Forbidden					
This includes lithium-ion or lithium metal battery lighters without a safety cap or means of protection against unintentional activation							



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		<i>Checked baggage</i>	<i>Carry-on baggage</i>	<i>On the person</i>			
15)	Battery-powered equipment capable of generating extreme heat, which could cause a fire if activated (e.g. underwater high intensity lamps)	Yes	Yes	No	Yes	No	a. the heat-producing component and the battery are isolated from each other by the removal of the heat-producing component, the battery or another component (e.g. fuse); and b. any battery which has been removed must be protected against short circuit (by placement in original retail packaging or by otherwise insulating terminals, e.g. by taping over exposed terminals or placing each battery in a separate plastic bag or protective pouch).
16)	Avalanche rescue backpack containing a cylinder of compressed gas of Division 2.2 without subsidiary hazard	Yes	Yes	No	Yes	No	a. no more than one per person; b. may contain a pyrotechnic trigger mechanism which must not contain more than 200 mg net of Division 1.4S; c. the backpack must be packed in such a manner that it cannot be accidentally activated; and d. the airbags within the backpack must be fitted with pressure relief valves.



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		<i>Checked baggage</i>	<i>Carry-on baggage</i>	<i>On the person</i>			
17)	Small cartridges fitted into a self-inflating personal safety device such as a life-jacket or vest	Yes	Yes	Yes	Yes	No	a. no more than two personal safety device per person; b. the personal safety device must be packed in such a manner that it cannot be accidentally activated; c. limited to carbon dioxide or another suitable gas in Division 2.2; d. must be for inflation purposes; e. the device must be fitted with no more than two small cartridges; and f. no more than two spare cartridges.
	Small cartridges for other devices	Yes	Yes	Yes	Yes	No	a. no more than four cartridges of carbon dioxide or other suitable gas in Division 2.2 without subsidiary hazard, per person; and b. the water capacity of each cartridge must not exceed 50 mL. Note: — For carbon dioxide, a gas cartridge with a water capacity of 50 mL is equivalent to a 28 g cartridge.



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		<i>Checked baggage</i>	<i>Carry-on baggage</i>	<i>On the person</i>			
18)	Battery-powered portable electronic smoking devices (e.g. e-cigarettes, e-cigs, e-cigars, e-pipes, personal vaporizers, electronic nicotine delivery systems)	No	Yes	Yes	No	No	a. carried by passengers or crew for personal use; b. spare batteries must be individually protected so as to prevent short circuits (by placement in original retail packaging or by otherwise insulating terminals, e.g. by taping over exposed terminals or placing each battery in a separate plastic bag or protective pouch); c. each battery must not exceed the following: ◦ for lithium metal batteries, a lithium content of 2 grams; or ◦ for lithium-ion batteries, a Watt-hour rating of 100Wh; d. each lithium battery must be of a type which meets the requirements of each test in the UN <i>Manual of Tests and Criteria</i>, Part III, subsection 38.3; and e. recharging of the devices and/or batteries on board the aeroplane is not permitted. f. Customers travelling to Thailand cannot take vaporisers, e.g. e-cigarettes, e-baraku, or refills. These items are likely to be confiscated, and you could be fined or sent to prison for up to



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<i>Items or articles</i>		<i>Location</i>			<i>Operator Approval is required</i>	<i>Commander must be informed</i>	<i>Restrictions</i>
		<i>Checked baggage</i>	<i>Carry-on baggage</i>	<i>On the person</i>			
							10 years if convicted. The sale or supply of e-cigarettes and similar devices is also banned and you could face a heavy fine or up to 5 years imprisonment if found guilty. g. Customers travelling to Mexico cannot take any portable electronic smoking devices such as e-cigarettes, e-cigars, e-pipes & vaporizers. This is forbidden by Mexican authorities.



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		<i>Checked baggage</i>	<i>Carry-on baggage</i>	<i>On the person</i>			
19)	Portable electronic devices (PED) (such as watches, calculating machines, cameras, cellular phones, laptop computers, camcorders) These devices also include electrically operated gears, such as those used in racing and leisure bicycles Lithium-ion or lithium metal cells/batteries contained in the device. Each battery must not exceed; Lithium-ion up to 100 watt hour	Yes	Yes	Yes	No See e	No	a. each battery must be of a type which meets the requirements of each test in the UN manual tests and criteria, Part III, subsection 38.3 b. carried by passengers or crew for personal use; c. should be carried as carry-on baggage; d. if devices are carried in checked baggage: ◦ measures must be taken to prevent unintentional activation and to protect the devices from damage; and ◦ the devices must be completely switched off (not in sleep or hibernation mode), unless the device contains only lithium batteries not exceeding: - for lithium metal batteries, a lithium content of 0.3g per device or: - for lithium ion batteries, a watt hour rating of 2.7 Wh per device ◦ batteries and heating elements must be isolated in portable electronic devices capable of generating extreme heat, which could cause a fire if activated, by removal



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	<i>Checked baggage</i>	<i>Carry-on baggage</i>	<i>On the person</i>			
Lithium metal up to 2 grams For power banks or batteries which the primary purpose is to provide power to another device must be carried as spare/loose batteries in accordance with these restrictions below.						of the heating element, battery or other components. e. each person is limited to a maximum of 15 Personal Electronic Devices; however, the operator may approve the carriage of more than 15 Personal Electronic Devices without operator approval (contact DG Coordinator or Deputy). f. Baggage equipment (smart bags) designed to charge other devices with a lithium battery that cannot be removed must contain no more than 0.3g lithium metal or 2.7 wh for lithium-ion. g. if the smart bag is designed with a non removable lithium-ion battery and this exceeds 0.3 g /2.7 WH the item is <u>forbidden</u> h. If the smart bags are designed with a removable lithium-ion battery this must be removed and travel in the cabin as a spare/loose (see conditions below). i. lithium-ion batteries powered personal transportation devices included hover boards are <u>forbidden</u> from carriage in checked and carry-on baggage



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<i>Items or articles</i>		<i>Location</i>			<i>Operator Approval is required</i>	<i>Commander must be informed</i>	<i>Restrictions</i>
		<i>Checked baggage</i>	<i>Carry-on baggage</i>	<i>On the person</i>			
	Spare or loose batteries for portable electronic devices (PED) containing lithium metal or lithium ion cells or batteries For power banks or batteries which the primary purpose is to provide power to another device must be carried as spare/loose batteries Each battery must not exceed: - <u>SPARE/ LOOSE</u> - Lithium-ion up to 100 watt hour Lithium metal up to 2 grams	No	Yes	Yes	No See d	No	a. carried by passengers or crew for personal use; b. must be individually protected so as to prevent short circuits (by placement in original retail packaging or by otherwise insulating terminals, e.g. by taping over exposed terminals or placing each battery in a separate plastic bag or protective pouch); c. batteries and cells must be of a type which meets the requirements of each test in the UN <i>Manual of Tests and Criteria</i>, Part III, subsection 38.3. d. each person is limited to a maximum of 20 spare/ loose batteries without operator approval (contact DG Co-ordinator or Deputy). ◦ spare batteries for lithium battery powered personal transportation devices including hover boards are <u>forbidden</u>.



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		<i>Checked baggage</i>	<i>Carry-on baggage</i>	<i>On the person</i>			
	Portable electronic devices (PED) (such as watches, calculating machines, cameras, cellular phones, laptop computers, camcorders) Lithium-ion or lithium metal cells/batteries contained in the device Each battery must not exceed; Lithium-ion exceeding 100 wh but not exceeding 160 wh. Lithium metal exceeding 2 grams but not exceeding 8 grams	Yes	Yes	Yes	Yes	No	a. each battery must be of a type which meets the requirements of each test in the UN manual tests and criteria, Part III, subsection 38.3 b. carried by passengers or crew for personal use; c. Should be carried as carry-on baggage d. if devices are carried in checked baggage: • measures must be taken to prevent unintentional activation and to protect the devices from damage; and • the devices must be completely switched off (not in sleep or hibernation mode); and • batteries and heating elements must be isolated in portable electronic devices capable of generating extreme heat, which could cause a fire if activated, by removal of the heating element, battery or other components. e. Baggage equipment (smart bags) designed to charge other devices with a lithium battery that cannot be removed must contain no more than 0.3g lithium metal or 2.7 wh for lithium-ion



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<i>Items or articles</i>		<i>Location</i>			<i>Operator Approval is required</i>	<i>Commander must be informed</i>	<i>Restrictions</i>
		<i>Checked baggage</i>	<i>Carry-on baggage</i>	<i>On the person</i>			
	For power banks or batteries which the primary purpose is to provide power to another device must be carried as spare/loose batteries in accordance with these restrictions below.						f. If the smart bag is designed with a non removable lithium-ion battery and this exceeds 0.3 g /2.7 WH the item is <u>forbidden</u> g. If the smart bags is designed with a removable lithium-ion battery this must be removed and travel in the cabin as a spare/loose (see conditions below). h. lithium battery powered personal transportation devices including hover boards are <u>forbidden</u> from carriage in checked and carry-on baggage



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<i>Items or articles</i>		<i>Location</i>			<i>Operator Approval is required</i>	<i>Commander must be informed</i>	<i>Restrictions</i>
		<i>Checked baggage</i>	<i>Carry-on baggage</i>	<i>On the person</i>			
	Spare or loose batteries for portable electronic devices (PED) containing lithium metal or lithium ion cells or batteries For power banks or batteries which the primary purpose is to provide power to another device must be carried as spare/loose batteries Each spare battery must not exceed: - <u>SPARE/ LOOSE</u> - Lithium-ion exceeding 100 wh but not exceeding 160 wh. Lithium metal	No	Yes	Yes	Yes	No	a. carried by passengers or crew for personal use; b. must be individually protected so as to prevent short circuits (by placement in original retail packaging or by otherwise insulating terminals, e.g. by taping over exposed terminals or placing each battery in a separate plastic bag or protective pouch); and c. batteries and cells must be of a type which meets the requirements of each test in the UN <i>Manual of Tests and Criteria</i>, Part III, subsection 38.3. d. no more than two individually protected spare batteries per person; • spare batteries for small lithium battery powered personal transportation devices including hover boards are <u>forbidden</u>.



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<i>Items or articles</i>		<i>Location</i>			<i>Operator Approval is required</i>	<i>Commander must be informed</i>	<i>Restrictions</i>
		<i>Checked baggage</i>	<i>Carry-on baggage</i>	<i>On the person</i>			
	exceeding 2 grams but not exceeding 8 grams						
20)	Fuel cells used to power portable electronic devices (for example, cameras, cellular phones, laptop computers and camcorders)	No	Yes	Yes	No	No	a. fuel cell cartridges may only contain flammable liquids, corrosive substances, liquefied flammable gas, water reactive substances or hydrogen in metal hydride; b. refuelling of fuel cells on board an aeroplane is not permitted except that the installation of a spare cartridge is allowed; c. the maximum quantity of fuel in any fuel cell or fuel cell cartridge must not exceed: • for liquids 200 mL; • for solids 200 grams; • for liquefied gases, 120 mL for non-metallic fuel cell cartridges or 200 mL for metal fuel cell or fuel cell cartridges; and • for hydrogen in metal hydride, the fuel cell or fuel cell cartridges must have a water capacity of 120 mL or less; d. each fuel cell and each fuel cell cartridge must conform to



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		<i>Checked baggage</i>	<i>Carry-on baggage</i>	<i>On the person</i>			
	Spare fuel cell cartridges	Yes	Yes	Yes	No	No	IEC 62282-6-100 Ed. 1, including Amendment 1, and must be marked with a manufacturer's certification that it conforms to the specification. In addition, each fuel cell cartridge must be marked with the maximum quantity and type of fuel in the cartridge; e. fuel cell cartridges containing hydrogen in metal hydride must comply with the requirements in Special Provision A162; f. no more than two spare fuel cell cartridges may be carried by a passenger; g. fuel cells containing fuel are permitted in carry-on baggage only; h. interaction between fuel cells and integrated batteries in a device must conform to IEC 62282-6-100 Ed. 1 including Amendment 1, Fuel cells whose sole function is to charge a battery in the device are not permitted i. fuel cells must be of a type that will not charge batteries when the portable electronic device is not in use and must be durably marked by the manufacturer: "APPROVED FOR



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		<i>Checked baggage</i>	<i>Carry-on baggage</i>	<i>On the person</i>			
							CARRIAGE IN AEROPLANE CABIN ONLY" to so indicate; and j. in addition to the languages which may be required by the State of Origin for the markings specified above, English should be used.;
21)	Dry ice	Yes	Yes	No	Yes	No	a. no more than 2.5 kg per person; b. used to pack perishables that are not subject to these Instructions; c. the package must permit the release of carbon dioxide gas; and d. when carried in checked baggage, each package must be marked: • "DRY ICE" or "CARBON DIOXIDE, SOLID"; and • the net weight of dry ice or an indication that the net weight is 2.5 kg or less.



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		<i>Checked baggage</i>	<i>Carry-on baggage</i>	<i>On the person</i>			
22)	A mercurial barometer or mercurial thermometer	No	Yes	No	Yes	Yes	a. must be carried by a representative of a government weather bureau or similar official agency; and b. must be packed in a strong outer packaging, having a sealed inner liner or a bag of strong leakproof and puncture-resistant material impervious to mercury, which will prevent the escape of mercury from the package irrespective of its position.
23)	Instruments containing radioactive material (i.e. chemical agent monitor (CAM) and/or rapid alarm and identification device monitor (RAID-M))	Yes	Yes	No	Yes	No	a. the instruments must not exceed the activity limits specified in Table 2-15 of these Instructions; b. must be securely packed and without lithium batteries; and c. must be carried by staff members of the Organization for the Prohibition of Chemical Weapons (OPCW) on official travel.
24)	Energy efficient lamps	Yes	Yes	Yes	No	No	a. when in retail packaging; and b. intended for personal or home use.
25)	Permeation devices for calibrating air quality monitoring equipment	Yes	No	No	No	No	Must comply with Special Provision A41.



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		<i>Checked baggage</i>	<i>Carry-on baggage</i>	<i>On the person</i>			
26)	Portable electronic equipment containing a non-spillable battery meeting the requirements of Special Provision A67	Yes	Yes	No	No	No	a. the battery must not have a voltage greater than 12 volts and a Watt-hour rating of not greater than 100 Wh; and b. the equipment must be either protected from inadvertent activation, or the battery disconnected and exposed terminals insulated. c. Battery must not contain any free or unabsorbed liquid
	Spare non-spillable batteries meeting the requirements of Special Provision A67	No	Yes	No	No	No	a. the battery must not have a voltage greater than 12 volts and a Watt-hour rating of not greater than 100 Wh; b. the battery must be protected from short circuit by the effective insulation of exposed terminals; and c. no more than two individually protected batteries per person.
27)	Internal combustion engines or fuel cell engines	Yes	No	No	No	No	Must comply with Special Provision A70.
28)	Non-infectious specimens with small quantities of flammable liquids	Yes	Yes	No	No	No	Must comply with Special Provision A180.



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		<i>Checked baggage</i>	<i>Carry-on baggage</i>	<i>On the person</i>			
29)	Insulated packagings containing refrigerated liquid nitrogen	Yes	Yes	No	No	No	Must comply with Special Provision A152.



Security-type equipment							
30)	Security-type equipment, such as attaché cases, cash boxes, cash bags, etc., incorporating dangerous goods as part of this equipment, for example, lithium batteries or pyrotechnic material	Yes	No	No	Yes	No	a. the equipment must be equipped with an effective means of preventing accidental activation; b. if the equipment contains an explosive or pyrotechnic substance or an explosive article, this article or substance must be excluded from Class 1 by the appropriate national authority of the State of Manufacture in compliance with Part 2;1.5.2.1; c. if the equipment contains lithium cells or batteries, these cells or batteries must comply with the following restrictions: • for a lithium metal cell, the lithium content is not more than 1 g; • for a lithium metal battery, the aggregate lithium content is not more than 2 g; • for lithium ion cells, the Watt-hour rating (see the Glossary of Terms in Attachment 2) is not more than 20 Wh; • for lithium ion batteries, the Watt-hour rating is not more than 100 Wh; • each cell or battery is of the type proven to meet the requirements of each test in the UN <i>Manual of Tests and</i>



							<i>Criteria</i>, Part III, subsection 38.3; d. if the equipment contains gases to expel dye or ink: • only gas cartridges and receptacles, small, containing gas with a capacity not exceeding 50 mL, containing no constituents subject to these Instructions other than a Division 2.2 gas, are allowed; • the release of gas must not cause extreme annoyance or discomfort to crew members so as to prevent the correct performance of assigned duties; and • in case of accidental activation, all hazardous effects must be confined within the equipment and must not produce extreme noise; and e. security type equipment that is defective or that has been damaged is forbidden for transport.
Additional articles (from IATA DGR Table 2.3.A and additional internal company policy)							



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31)	Camping Stoves and fuel containers that have contained a flammable liquid	Yes	No	No	Yes	No	a. Must be drained of all liquid fuel; and b. the empty tank and/or container must be allowed to drain for at least 1 hour; and c. the fuel tank/container must be left uncapped for at least 6 hours to allow for any residual fuel to evaporate. Alternative methods, such as adding cooking oil to the fuel tank/ container to elevate the flash point of flammable liquid and then emptying the tank/container are equally acceptable; and d. the fuel tank/container shall then have the cap securely fastened and be wrapped in absorbent material such as a paper towel and placed in a polyethylene or equivalent bag; and the top of the bag shall then be sealed or gathered with an elastic band or twine.
32)	Christmas Crackers	Yes	Yes	No	No	No	a. Must be carried in their original retail packaging b. No more than two boxes per person



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33)	Sporting Laser Target Pistols, Bows, Crossbows and arrows Sling Shots and Catapults, Harpoon guns and Spear Guns	Yes	No	No	No	No	a. Not classified as firearms or ammunition. Must inaccessible to passengers and crew



34)	Drones A drone or 'unmanned aerial vehicle' (UAV)	Yes	Yes	No	See f	See h	a. can be safely carried on TUI Airways flights under the following conditions b. If lithium-ion or lithium polymer batteries are used and fitted within the device, the drone can be carried as hand baggage or hold baggage, as long as the drone is, and can be protected from being accidentally activated. c. The size and weight limits of hand or hold baggage are not exceeded. d. The drone or UAV will form part of the customer's baggage allowance and must be included as such in whatever capacity (hand or hold baggage) the drone or UAV is being taken. e. Spare batteries must be protected from short circuit and damage, (carried within the packaging they are supplied with, away from any other electrical source – including each other) and can be carried in hand baggage only. f. For drones powered by batteries up to 100Wh, prior approval by TUI Airways is not required. For drones with batteries exceeding 100Wh but not exceeding 160Wh, prior approval by TUI Airways is required by contacting the Contact Centre. g. Drones with and batteries, or their spare batteries, exceeding



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							160Wh are forbidden from carriage h. See table above covering lithium batteries depending on the battery strength. <i>A number of countries have strict guidelines on the use of drones, where some countries do not allow drones to be used at all. It is entirely up to the users of such devices to ensure they are observing all country specific rules / regulations before attempting to take into one of these countries a drone or fly it. e.g Egypt</i>

BLX-SE

35)	Sporting Weapons	Yes	No	No	Yes	Yes	a. Must be carried in their original retail packaging b. No more than two boxes per person

End BLX-SE

TOM-UK

35)	Sporting Weapons	No	No	No	No	No	<i>Sporting weapons FORBIDDEN on TUI Airways</i>

End TOM-UK

36)	Disabling Devices	Forbidden	
37)	Electro Shock Weapons (e.g. Tasers)	Forbidden	
38)	Party Poppers	Forbidden	

10.1.6 Provision of Information to Passengers

The TUI Group Airlines ensure that information on the types of dangerous goods which a passenger is forbidden to transport aboard an aeroplane is presented at the point of ticket purchase (via agents or on-line company website) and/or boarding pass issuance.



The TUI Group Airlines or the appointed handling agent along with the airport operators must ensure that information on the types of dangerous goods which they are forbidden to transport aboard an aeroplane is communicated effectively to passengers. This information must be presented at each of the places where tickets are issued, passengers are checked in, boarding passes are issued, passenger baggage is dropped off, and boarding areas.

These notices must include both written and pictorial details of dangerous goods forbidden from transport by aeroplane.

The TUI group airlines provides information to passengers on those dangerous goods which are permitted to be carried by passengers, either on their person or in hand or hold baggage prior to the check-in process, on their websites.

When provision is made for the check-in process and boarding pass issuance to be completed remotely (e.g. via the Internet), the TUI group airlines ensure s that information on the types of dangerous goods which a passenger is forbidden to transport is presented to passengers. *Information is in text or pictorial form and is such that the check-in process cannot be completed until the passenger, has positively indicated that they have understood the restrictions.*

When provision is made for the check-in process and boarding pass issuance to be completed at an airport by a passenger without the involvement of any other person (e.g. automated check-in facility), the TUI Group Airlines or the airport operators ensure that information on the types of dangerous goods which a passenger is forbidden to transport is presented to passengers. *Information is in pictorial form and is such that the check-in process cannot be completed until the passenger, has positively indicated that they have understood the restrictions* on dangerous goods in baggage.

TUI Group Airlines and tour operators use multiple ticket sales channels, including web-based ticket-sales. Check-in is completed either web-based, automated check-in facility or at the departure airports. In all situations, information on the types of dangerous goods which a passenger is forbidden to transport must be presented.

Check-in staff operating on behalf of TUI Group Airlines shall be adequately trained and sufficiently competent to identify and detect dangerous goods carried by passengers.

All passengers checking in must be asked the Dangerous Goods questions, or be directed to a sign on the check-in desk / area which contains the Dangerous Goods signage.

10.1.6.1 Provision of Information at Cargo Acceptance Areas

Handling agents shall ensure that sufficient notices, prominently displayed, are provided at cargo acceptance points, giving information about the transport of dangerous goods. These notices must contain visual examples including batteries.

10.1.7 Marking and Labelling of Packages

Articles and substances meeting the dangerous goods classification criteria are assigned a 'UN Number' under the United Nations classification system. This consists of a four-digit number preceded by the capital letters 'UN'. Packages of dangerous goods must be marked with the UN Number(s) applicable to their contents.

Packages containing dangerous goods can also be identified by labels indicating the hazard of the goods by their class or division or by the presence of certain handling labels/markings.



Note: When dangerous goods marking or labels are seen on items not declared as dangerous goods it is often an indication that they do contain such goods. Undeclared dangerous goods must not be loaded on an aeroplane and reporting procedures must be implemented.

During the course of air transport, including storage, dangerous goods marking and labels must not be covered or obscured by any part of or attachment to the packaging or any other label or marking.

If it is discovered that any marks or labels for packages of dangerous goods have become lost, detached or illegible they must be replaced with appropriate marks or labels in accordance with the information provided on the dangerous goods transport document or other transport document, such as an air waybill, when applicable.

CLASS 1 – EXPLOSIVE

Class 1 – Explosive

Class 1—Explosive (Divisions 1.1, 1.2, 1.3)



* Place for Division and Compatibility Group, for example "1.1C".

Name: Explosive
Cargo IMP Code: REX, REX, RXG, as applicable
Minimum dimensions: 100 × 100 mm
Symbol (exploding bomb): Black
Background: Orange (Pantone Colour No. 151U)

Note:

Packages with label marked Division 1.1 or 1.2 are normally forbidden for air transport.

Class 1—Explosive (Division 1.5)



* Place for Compatibility Group. The numerals "1.5" printed on the label must be about 30 mm in height and about 5 mm wide.
Name: Explosive
Cargo IMP Code: REX
Minimum dimensions: 100 × 100 mm
Figures: Orange (Pantone Colour No. 151U)

Class 1—Explosive (Division 1.4) including Compatibility Group S



* Place for Compatibility Group. The numerals "1.4" printed on the label must be about 30 mm in height and about 5 mm wide.

Name: Explosive
Cargo IMP Code: REX, REX, RXG, REX, RXG, RXG, as applicable
Minimum dimensions: 100 × 100 mm
Figures: Black
Background: Orange (Pantone Colour No. 151U)

Class 1—Explosive (Division 1.6)



* Place for Compatibility Group. The numerals "1.6" printed on the label must be about 30 mm in height and about 5 mm wide.

Name: Explosive
Cargo IMP Code: REX
Minimum dimensions: 100 × 100 mm
Figures: Black
Background: Orange (Pantone Colour No. 151U)

Note:

Packages with this label are normally forbidden for air transport.



CLASS 2 – GASES

Class 2 – Gases

Class 2—Gases: Flammable (Division 2.1)



Name: Flammable Gas
Cargo IMP Code: R2G
Minimum dimensions: 100 × 100 mm
Symbol (flame): Black or White
Background: Red (Pantone Colour No. 186U)

Class 2—Gases: Non-flammable, non-toxic (Division 2.2)



Name: Non-flammable, non-toxic Gas
Cargo IMP Code: RNC or RCL for Cryogenic liquids
Minimum dimensions: 100 × 100 mm
Symbol (gas cylinder): Black or White
Background: Green (Pantone Colour No. 335U)

Class 2—Gases: Toxic (Division 2.3)



Name: Toxic Gas
Cargo IMP Code: R2G
Minimum dimensions: 100 × 100 mm
Symbol (skull and crossbones): Black
Background: White

CLASS 3 – FLAMMABLE LIQUID

Class 3 – Flammable Liquids

Class 3—Flammable Liquids



Name: Flammable Liquids
Cargo IMP Code: RFL
Minimum dimensions: 100 × 100 mm
Symbol (flame): Black or White
Background: Red (Pantone Colour No. 186U)

Note:
This label may also be printed with symbol (flame), text, numbers and borderline shown in black on red background



**CLASS 4 – FLAMMABLE SOLIDS; SUBSTANCES LIABLE TO SPONTANEOUS COMBUSTION;
SUBSTANCES WHICH, IN CONTACT WITH WATER, EMIT FLAMMABLE GASES**

Class 4 – Flammable Solids: Substances liable to spontaneous combustion, in contact with water emit flammable gases

Class 4—Flammable Solid (Division 4.1)



Name: Flammable Solid
Cargo IMP Code: RFS
Minimum dimensions: 100 × 100 mm
Symbol (flame): Black
Background: White with seven vertical red stripes (Pantone Colour No. 186U)

Class 4—Substances Liable to Spontaneous Combustion (Division 4.2)



Name: Spontaneously Combustible
Cargo IMP Code: RSC
Minimum dimensions: 100 × 100 mm
Symbol (flame): Black
Background: Upper half White, lower half Red (Pantone Colour No. 186U)

Class 4—Substances which in Contact with Water Emit Flammable Gases (Division 4.3)



Name: Dangerous When Wet
Cargo IMP Code: RFW
Minimum dimensions: 100 × 100 mm
Symbol (flame): Black or White
Background: Blue (Pantone Colour No. 285U)



CLASS 5 – OXIDISING SUBSTANCES & ORGANIC PEROXIDES

Class 5 – Oxidising Substances and Organic Peroxides

Class 5—Oxidizing Substances (Division 5.1)



Name: Oxidizer
Cargo IMP Code: ROX
Minimum dimensions: 100 × 100 mm
Symbol (flame over circle): Black
Background: Yellow (Pantone Colour No. 109U)

Class 5—Organic Peroxides (Division 5.2)



Name: Organic Peroxides
Cargo IMP Code: ROP
Minimum dimensions: 100 × 100 mm
Symbol (flame): Black or White
Background: Upper half Red (Pantone Colour No. 186U), lower half Yellow (Pantone Colour No. 109U)

CLASS 6 – TOXIC AND INFECTIOUS SUBSTANCES

Class 6 – Toxic and Infectious Substances

Class 6—Toxic Substances (Division 6.1)



Name: Toxic
Cargo IMP Code: RPB
Minimum dimensions: 100 × 100 mm
Symbol (skull and crossbones): Black
Background: White

Class 6—Infectious Substances (Division 6.2)



The lower part of the label should bear the inscription:
INFECTIOUS SUBSTANCE
In case of Damage or Leakage
Immediately Notify
Public Health
Authority
Name: Infectious Substance
Cargo IMP Code: RIS
Minimum dimensions: 100 × 100 mm
For small packages the dimensions may be 50 × 50 mm
Symbol (three crescents superimposed on a circle) and inscription: Black
Background: White



CLASS 7 – RADIOACTIVE MATERIAL

Class 7 – Radioactive Material

Category I-White



Name: Radioactive
Cargo Imp Code: RRW
Minimum dimensions: 100 × 100 mm
Symbol (trefoil): Black
Background: White

Category II–Yellow



Name: Radioactive
Cargo Imp Code: RRY
Minimum dimensions: 100 × 100 mm
Symbol (trefoil): Black
Background: Top half Yellow (Pantone Colour No. 109U) with White border, bottom half White

Category III–Yellow



Name: Radioactive
Cargo Imp Code: RRY
Minimum dimensions: 100 × 100 mm
Symbol (trefoil): Black
Background: Top half Yellow (Pantone Colour No. 109U) with White border, bottom half White

Criticality Safety Index Label

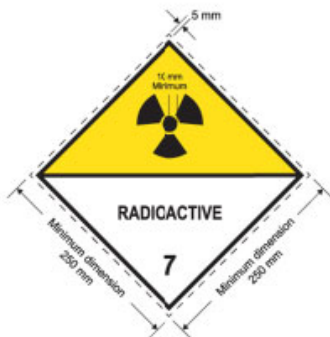


Minimum dimensions: 100 × 100 mm
Text (mandatory): "FISSILE" in black on white in upper half of label



CLASS 7 – RADIOACTIVE MATERIAL

Placard for Class 7—Radioactive Materials



Dimensions: The dimensions shown are minimum, where larger dimensions are used, the proportions must be maintained. The figure "7" must be 25 mm or larger.

Note:

The word "Radioactive" in the bottom half of the placard is optional.

CLASS 8 – CORROSIVE

Class 8 – Corrosives

Class 8—Corrosives



Name: Corrosive

Cargo IMP Code: RCM

Minimum dimensions: 100 × 100 mm

Symbol (liquids spilling from two glass vessels and attacking a hand and a metal): Black

Background: Upper half White, lower half Black with White border



CLASS 9 - MISCELLANEOUS

Class 9 – Miscellaneous Dangerous Goods

Class 9—Miscellaneous Dangerous Goods



Name: Miscellaneous
Cargo IMP Code: RMD or ICE, RSB (polymeric beads and plastics moulding compound subject to [Packing Instruction 957](#)), as applicable
Minimum dimensions: 100 × 100 mm
Symbol (seven vertical stripes in upper half): Black
Background: White

Class 9—Lithium Batteries or Sodium Ion Batteries



Name: Lithium Batteries or Sodium Ion Batteries

Cargo IMP Code: RBI, RBM, RLI and RLM

Minimum dimensions: 100 × 100 mm

Symbol (seven vertical black stripes in upper half; battery group, one broken and emitting flame in lower half): Black

Background: White

HANDLING LABELS

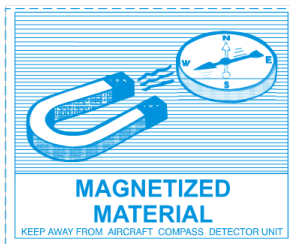
Packages of dangerous goods may also bear labels providing handling information; these are:

Magnetized material

Cargo aeroplane only



HANDLING LABELS



Cryogenic liquid label



Package orientation



Keep away from heat



(red or black)



HANDLING LABELS

Radioactive Material—Excepted Package



Name: Radioactive Material— Excepted Package

Cargo BMP Code: RNE

Colour: The border of the label must have red diagonal hatching (Pantone Colour No. 186U). The label may be printed in black and red on white paper or it may be printed in red only on white paper.

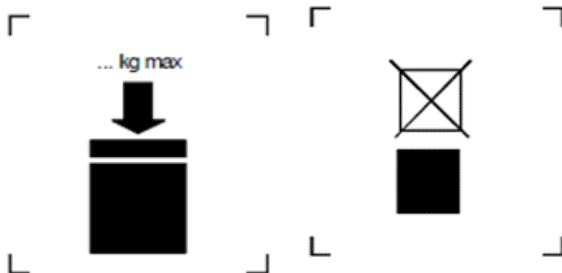
Note:

The text "The information for this package need not appear on the Notification to Captain (NOTOC)" is optional and does not have to appear on the label.

Note: For instructions regarding the carriage of cryogenic liquids, contact the TUI OCC.

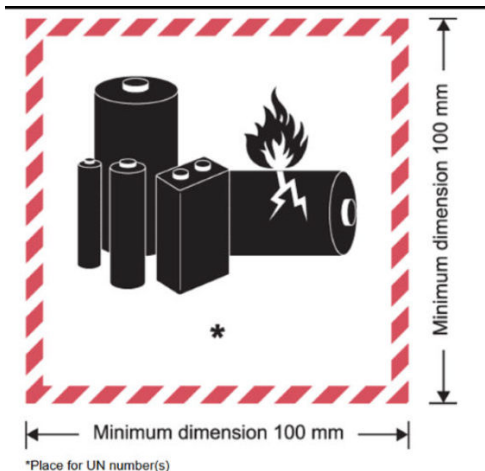
Intermediate Bulk Containers (IBCs) are only permitted for the transport of UN 3077 Environmentally hazardous substance, solid, n.o.s. The maximum permitted stacking load applicable when the IBC is in use must be displayed on a symbol as follows:

IBCs capable of being stacked **IBCs NOT capable of being stacked**





Lithium battery or sodium ion battery



Application of the battery mark to a consignment of lithium batteries (of any type) or Sodium Ion Batteries indicates that a Shipper has determined specific requirements have been met.

Consignments bearing this label without a Class 9 label do not need to be accompanied by a dangerous goods transport document (Shipper's Declaration) and no acceptance check is required.

The mark must be in the form of a rectangle or square with hatched edging. The symbol (group of batteries, one damaged and emitting flame, above the UN number for lithium ion, lithium metal or Sodium Ion batteries or cells) must be black on white or suitable contrasting background. The hatching must be red.

The mark must be a minimum dimension of 100 mm wide x 100 mm high and the minimum width of the hatching must be 5 mm. If the size of the package so requires, the dimensions may be reduced to not less than 100 mm wide x 70 mm high. Where dimensions are not specified, all features must be in approximate proportion to those shown on the full-size mark.

Packages containing lithium batteries that meet the requirements of Section IB of Packing Instructions 965 and 968 must bear both the lithium battery mark and the lithium battery Class 9 hazard label.

Note: With the removal of the telephone number requirement on the Lithium Battery mark label there will be a transition period until 31st December 2026 during which time the existing mark may continue to be used (included 2 *s to indicate the insertion of the telephone number).



EXCEPTED QUANTITIES MARK

Packages containing excepted quantities of dangerous goods can be identified from the following:



Hatching and symbol of the same colour, black or red, on white or suitable contrasting background.

* Place for class or, when assigned, the division number(s).

** Place for name of shipper or consignee, if not shown elsewhere on the package.

Minimum dimensions 100 mm x 100 mm



LIMITED QUANTITIES MARK

Packages containing limited quantities of dangerous goods can be identified from the following:



Many dangerous goods when in reasonably limited quantities present a reduced hazard during transport and can safely be carried in good quality packaging that have not been tested and marked as is required for UN Specification packaging's required for larger quantities of dangerous goods. Packages containing limited quantities of dangerous goods must be marked with a diamond shaped mark. When presented for carriage by air, the mark must additionally include a "Y" which indicates compliance with the provisions of the ICAO Technical Instructions, some of which are more stringent than those of the UN Model Regulations and of other modes of transport.

Note: The mark depicted here but without the 'Y' indicates that the package contains dangerous goods in limited quantities as permitted by surface transport regulations (ADR/IMDG) which may not be acceptable for air transport. A package so marked and offered for transport in the absence of a dangerous goods transport document must be reported to the appropriate authority where the goods are discovered as a discovery of undeclared dangerous goods (the CAA if discovered within the UK).

Minimum dimensions 100 mm x 100 mm

Environmentally Hazardous Substance Mark



Packages containing environmentally hazardous substances (UN Nos. 3077 and 3082) must be durably marked with the environmentally hazardous substance mark with the exception of packages containing a net quantity per single or inner packagings of 5 L or less for liquids; or having a net mass per single inner packaging of 5 kg or less for solids.



10.2 Duties of all Personnel Involved

10.2.1 Detailed Assignments of Responsibilities

Key responsibilities and duties associated with the carriage of dangerous goods include:

Nominated Person Ground Operations	Ensuring that TUI remains in compliance with the applicable dangerous goods requirements Ensuring all necessary permissions, approvals and exemptions are held and maintained. Management and supervision of the carriage of dangerous goods
Person responsible for the supervision and maintenance of the dangerous goods approval:	Oversight and control of the carriage of dangerous goods. Generation (or acceptance) of relevant procedures. Responding to queries regarding the carriage of dangerous goods.
Cargo Department and/or sales agents-	Arrangement of the carriage of dangerous goods only in accordance with the operators stated policies. Recognition of undeclared dangerous goods.
Persons receiving or handling general cargo, mail and stores (suitably qualified ground handling agent personnel)	Recognition of undeclared dangerous goods. Dealing with dangerous goods that are found damaged or leaking during processing for transport. If there is a dangerous goods incident or accident, or if undeclared dangerous goods are detected a report is made to the appropriate Authority, and a copy is provided to TUI.



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Persons receiving or handling dangerous goods (suitably qualified ground handling agent personnel)	Acceptance procedures for dangerous goods are carried out as required by the Technical Instructions/ IATA Dangerous Goods Regulations. Inspection procedures during the processing of dangerous goods for transport are carried out as required by the Technical Instructions/ IATA Dangerous Goods Regulations. Dealing with dangerous goods that are found damaged or leaking during processing for transport. Dangerous goods are loaded, segregated, stowed and secured on an aeroplane in accordance with the Technical Instructions/ IATA Dangerous Goods Regulations. Generation of written information to the commander (NOTOC). Provision of written information about dangerous goods loaded on board to the commander for signature. Retention of documentation on the ground. A scanned copy of NOTOC to be sent to TUI OCC: operationsflightwatch@tui.co.uk & ODM@tui.co.uk Recognition of undeclared and mis-declared dangerous goods. If there is a dangerous goods incident or accident, or if undeclared and mis-declared dangerous goods are detected, a report is made to the appropriate Authority, and a copy is provided to TUI DG responsible person.
Reservations and Call centres	Ensuring that information is provided with the passenger ticket or in another manner such that prior to or during the check-in process the passenger receives the information Considering passenger requests for approval of TUI for items of dangerous goods requiring such approval.
Persons handling passengers (suitably qualified ground handling agent personnel)	Ensuring that the provisions concerning passengers and dangerous goods are complied with. Ensuring that notices are displayed in sufficient number and prominence at each of the places at an airport where tickets are issued, passengers checked in and aeroplane boarding areas maintained, and at any other location where passengers are checked in. With the aim of preventing dangerous goods which passengers are not permitted to have from being taken on board an aeroplane in their baggage, seeking confirmation from a passenger that they are not carrying dangerous goods that are not permitted, and seek further confirmation about the contents of any item where there are suspicions that it may contain dangerous goods. When baggage intended as carry-on is taken by the operator and placed in the cargo compartment for carriage, seeking confirmation from the passenger that dangerous goods which are only permitted in carry-on baggage (e.g. lithium batteries, including power banks) have been removed. Ensuring that the discovery of prohibited dangerous goods (after a passenger has checked in) is reported to the operator in the first instance, who will advise the appropriate authority.



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Cabin Crew	Ensuring that the provisions concerning passengers and dangerous goods are complied with. When baggage intended as carry-on is taken by the operator and placed in the cargo compartment for carriage, seeking confirmation from the passenger that dangerous goods which are only permitted in carry-on baggage (e.g. lithium batteries, including power banks) have been removed Responding to a dangerous goods incident or accident in the cabin. Ensuring that a dangerous goods incident or accident in the cabin, or the discovery of prohibited dangerous goods (after a passenger has boarded) is reported to the appropriate authority.
Operations Personnel	If there is an aeroplane incident or accident, information is passed to emergency services and state Authorities as required by the Technical Instructions/ IATA Dangerous Goods Regulation If there is a dangerous goods incident or accident, or if undeclared and mis-declared dangerous goods are detected, a report is made to the appropriate Authority
Flight Crew	Understanding of undeclared dangerous goods Signature of NOTOC to indicate receipt of information. If an in-flight emergency occurs, as soon as the situation permits, respond to the emergency situation related to transport of dangerous goods in accordance with the Emergency Response Guidance, and pass-details of dangerous goods on board to the appropriate Air Traffic Services Unit. Responding to a dangerous goods incident or accident in the cabin (if operations doesn't have cabin crew) If there is a dangerous goods incident or accident, or if undeclared dangerous goods are detected a report is made to the appropriate authority
Trainers	Provision of initial and recurrent dangerous goods training commensurate with the responsibilities of the personnel concerned (training records are kept for a minimum of 36 months).
Compliance Monitoring Manager and auditors	Ensuring that activities are monitored for compliance with dangerous goods requirements and that these activities are carried out properly under the supervision of the relevant head of functional area.
Safety Manager	Ensuring the inclusion of the transport of dangerous goods, including lithium batteries and cells as cargo, in the scope of the: • Safety Management System (SMS); and • Specific safety risk assessment on the transport of items in the cargo compartment. Ensuring the initiation and follow-up of internal occurrence/ accident investigations

TUI group airlines utilizes suitably qualified personnel of contracted cargo agents and ground handling agents at the various aerodromes of the operation. Instruction is provided to these



agencies via this Ground Operations Manual which is distributed throughout the worldwide network of agents by TUI group airlines.

Contracted airport handling agents must provide an oversight and functional role in the process of loading and un-loading cargo shipments on and off aeroplane. Instruction is provided to these via this Ground Operations Manual.

10.3 Guidance on the Requirements for Acceptance, Handling and Stowage

10.3.1 Acceptance Check

Before a consignment consisting of a package or overpack containing dangerous goods, a freight container containing radioactive material or a unit load device containing dangerous goods is first accepted for carriage by air, the operator must, by use of a checklist, verify the following:

1. the documentation or, when provided, the electronic data, is compliant with the applicable requirements. The number of documents varies by the type of shipment.
2. the quantity of dangerous goods stated on the dangerous goods transport document is within the limits per package.
3. the, overpack or freight container marks accords with the details stated on the accompanying dangerous goods transport document and are clearly visible;
4. where required, the letter in the packaging specification marking designating the packing group for which the design type has been successfully tested is appropriate for the dangerous goods contained within. This does not apply to overpacks where the specification marking is not visible;
5. proper shipping names, UN numbers, labels, and special handling instructions appearing on the interior package(s) are clearly visible or reproduced on the outside of an overpack;
6. the labelling of the package, overpack or freight container is as required for the consignment
7. the outer packaging of a combination package or the single packaging is permitted by the applicable packing instruction, and when visible is of the type stated on the accompanying Shippers Declaration
8. the package or overpack does not contain different dangerous goods which require segregation from each other;
9. the package, overpack, freight container or unit load device (ULD) is not leaking and there is no indication that its integrity has been compromised;

The operator must be able to identify the person who performed the acceptance check.

Note 1: An acceptance check is not required for dangerous goods in excepted quantities and radioactive material in excepted packages and lithium or Sodium Ion batteries consigned in accordance with Section II of the applicable packing instruction.

BLX-SE

Note 2: Persons conducting dangerous goods acceptance checks must have received dangerous goods training commensurate with this responsibility.

End BLX-SE



TOM-UK

Note 2: *Persons conducting dangerous goods acceptance checks must have received dangerous goods training commensurate with this responsibility Acceptance checks conducted in the United Kingdom must only be conducted by a person who has successfully completed training applicable to this role from a UK CAA Approved Dangerous Goods Training Organisation.*

End TOM-UK

Note 3: Own parts/stores (COMAT) which is classed as dangerous goods, is shipped as cargo. Dangerous goods cargo handling procedures are followed, including issue of all required documentation. The acceptance check is carried out by the cargo handling agents.

10.3.1.1 Shippers

TUI Group Airline utilise contracted Cargo agents at most airports for the handling of cargo. Instruction is provided to these agencies within the TUI "Ground Operations Manual" which is distributed throughout this worldwide network of agents by each individual Group Airline.

Contracted Airport handling agents also provide an oversight and functional role in the process of loading and un-loading cargo shipments on and off the aeroplane. Instruction is provided to these too via the TUI Ground Operations Manual.

10.3.1.2 Shippers Responsibility

A shipper must comply fully with the IATA Dangerous Goods Regulations when offering a consignment of dangerous goods. In addition, shippers must comply with any applicable regulations set forth by the States of origin, transit and destination.

The shipper must ensure that the articles or substances are not prohibited for transport by air.

The articles or substances must be properly identified, classified, packed, marked, labelled and documented in accordance with the Regulations.

Infectious Substance - before offering any infectious substances for carriage, the shipper must have made advance arrangements with the consignee; received confirmation that the substance may be legally imported without delay in delivery; made advance arrangements with the operator to ensure expeditious carriage; and notified the consignee of all shipping details.

A Shipper's Declaration for Dangerous Goods is required; this must be completed in accordance with the Regulations.

10.3.2 Inspection for Damage or Leakage

A package or overpack containing dangerous goods must not be loaded onto an aeroplane or into a unit load device unless it has been inspected immediately prior to loading and found free from evidence of leakage or damage. A unit load device must not be loaded aboard an aeroplane unless the device has been inspected and found free from any evidence of leakage from or damage to any dangerous goods contained therein. Packages or overpacks containing dangerous goods must be inspected for signs of damage or leakage upon unloading from the aeroplane or ULD.



10.3.3 Prohibition on the Carriage of Dangerous Goods within a Cabin Occupied by Passengers

Dangerous goods must not be carried in the cabin of an aeroplane occupied by passengers or in the flight crew compartment, except as provided for in the Technical Instructions and IATA Dangerous Goods Regulations.

10.3.4 Prohibition on the Carriage of Passengers with Cargo Aeroplane Only Dangerous Goods

Dangerous goods identified as suitable for transport only on a cargo aeroplane must not be carried on an aeroplane on which passengers are being carried.

In this context “passenger” excludes a crew member, an operator’s employee, an authorised representative of an Authority and a person with duties in respect of a particular shipment of dangerous goods or other cargo on board.

10.3.5 Segregation and Separation

Dangerous goods must be loaded, stowed and secured on an aeroplane as required by the Technical Instructions and IATA DGR. This includes segregating packages from each other when they contain incompatible dangerous goods, the separation of explosives of different division numbers and compatibility groups (when required), and securing packages in a manner that will prevent any movement. Dangerous goods must also be protected so they cannot be damaged by the movement of baggage, mail, stores or other cargo.

Operators holding approval for the carriage of dangerous goods should determine how such goods shall be secured to prevent movement in flight, to protect from damage by the movement of other items and to achieve adequate segregation whilst maintaining accessibility (if required), taking into account the types of aircraft operated, whether ULD’s are used, etc. Additionally, it is appropriate to amend the following tables to reflect the operator’s policy towards the separation of dangerous goods from other cargo (e.g dry ice and animals).

Any ULD containing dangerous goods, which require a hazard label, must have a dangerous goods tag attached clearly showing the primary and secondary hazard classes. The tag must be removed from the ULD immediately after the dangerous goods have been unloaded.

10.3.5.1 Segregation of incompatible Dangerous Goods

Hazard Label		Class or Division										
		1 exc el 1.4S	2.1	2.2, 2.3	3	4.1	4.2	4.3	5.1	5.2	8	9
1 exc el 1.4S	BLX	Note 1	x	x	Note 2	x	Note 2	Note 2	Note 2	Note 2	Note 2	Note 2
	TOM											
2.1	BLX	Note 2										x



Hazard Label		Class or Division										
		1 except 1.4S	2.1	2.2, 2.3	3	4.1	4.2	4.3	5.1	5.2	8	9
	TOM	x										
2.2, 2.3	BLX	x										
	TOM											
3	BLX	Note 2										x
	TOM	x										
4.1	BLX	x										x
	TOM											
4.2	BLX	Note 2							x			
	TOM	x										
4.3	BLX	Note 2									x	
	TOM	x										
5.1	BLX	Note 2			x		x					x
	TOM	x										
5.2	BLX	Note 2										
	TOM	x										
8	BLX	Note 2						x				
	TOM	x										
9	BLX	x	x		x	x			x			
	TOM											

An "x" at the intersection of a row and a column indicates that packages containing these classes/divisions of dangerous goods must be segregated. A "—" at the intersection of a row and a column indicates that packages containing these classes/divisions of dangerous goods do not require segregation.

Note 1: Only Division 1.4S is permitted for carriage on passenger aeroplanes.



BLX-SE

Note 2: Explosives of Division 1.4B must not be loaded with other explosives except for Division 1.4S. When loaded on the same aeroplane with explosives other than Division 1.4S, Division 1.4B explosives must be loaded into separate unit load devices and when stowed aboard the aircraft, the unit load devices must be separated by other cargo with a minimum separation distance of 2 m. When not loaded in a unit load device Division 1.4B and other explosives must be loaded into different, non-adjacent loading positions and separated by other cargo with a minimum separation distance of 2 m.

End BLX-SE

Note 3: *UN 3528, Engines, internal combustion, flammable liquid powered, Engines, fuel cell, flammable liquid powered, Machinery internal combustion, flammable liquid powered and Machinery, fuel cell, flammable liquid powered need not be segregated from packages containing dangerous goods in Division 5.1.*

Note 4: Packages and overpacks containing UN 3480 - lithium ion batteries prepared in accordance with Section IA or Section IB of PI 965, packages and overpacks containing UN 3090 - lithium metal batteries prepared in accordance with Section IA or Section IB of PI 968 and packages and overpacks containing UN 3551 – sodium ion batteries in accordance with PI 976 must not be stowed on an aircraft next to, or in a position that would allow interaction in the event of damage/fire with packages or overpacks containing dangerous goods which bear a Class 1, other than Division 1.4S, Division 2.1, Class 3, Division 4.1 or Division 5.1 hazard label. To maintain acceptable segregation between packages and overpacks, the segregation requirements shown in Table 9.3.A must be observed. The segregation requirements apply based on all hazard labels applied on the package or overpack, irrespective of whether the hazard is the primary or subsidiary hazard.

WITH REFERENCE TO 1.1, UN3480, UN3090 and UN3551 are prohibited from carriage on all TUI Group aircraft.

Note 5: *Packages containing dangerous goods with multiple hazards in the class or divisions which require segregation in accordance with the above table need not be segregated from other packages bearing the same UN number.*

10.3.6 Loading of Dry Ice

Dry ice (Carbon dioxide, solid; UN1845) may be carried onboard an aeroplane to keep food (galley or cargo) and medicine or biological materials (as cargo) in a frozen or chilled condition. Carbon dioxide gas produced by the sublimation of dry ice is an asphyxiant and will reduce the amount of available oxygen to breathe. Dry ice sublimation producing excess CO₂ gas may be dangerous in confined spaces where there is an absence of ventilation or ventilation rates are low. The signs and symptoms of CO₂ poisoning are similar to those that precede lack of oxygen, namely headache, dizziness, muscular weakness, drowsiness, and ringing in the ears. CO₂ poisoning does have a greater effect on breathing than simple lack of oxygen, causing a significant increase in the rate and depth of breathing as an early symptom. 10% carbon dioxide in air can be endured for only a few minutes whereas 12% to 15% would cause unconsciousness.



Dry ice when shipped by itself or when used as a refrigerant for other commodities may be carried provided the operator has made suitable arrangements dependent on the aeroplane type, the aeroplane ventilation rates, the method of packing and stowing, whether animals will be carried on the same flight and other factors. To prevent the incapacitation of ground and aircrew, aeroplane operators must specify maximum safe quantities of dry ice per compartment of the various aeroplane types operated in accordance with the above criterion and information published by the applicable aeroplane manufacturer(s).

Ground staff must be informed that dry ice is being loaded or is onboard the aeroplane.

10.3.6.1 Maximum Quantity of Dry Ice per Aeroplane

DRY Ice max quantity when we are operating a normal passenger flight is 75kgs per aircraft.

If we are operating a special cargo charter maximum quantity of Dry Ice per package (as per IATA Dangerous Goods Regulations). on all fleet types: 200 kg per package.

CAUTION! When the total load of dry ice exceeds 75 Kg per aeroplane e.g. when used as a refrigerant, main cabin occupants must not exceed 15 and AVIs shall not be carried. The maximum amount of dry ice to be carried depends on the aeroplane type and the sublimation rate of the package.

Ground Operations is responsible for determining the maximum weight of dry ice to be carried per flight.

The shipper is responsible for supplying the sublimation rate to TUI Ground Operations who must ensure that proper sublimation rates are used to determine the maximum quantity of dry ice that can be carried safely. The sublimation rate is provided on the NOTOC

The Dispatcher is responsible for informing all ground personnel involved in the loading or dispatch of the aircraft that dry ice is being loaded or is on board the aircraft.

Aeroplane holds must be given 2 minutes to ventilate after hold door opening and prior to unloading.

The maximum amount is the total amount of dry ice in all compartments.

Note 1: When packages with different sublimation rates are carried on the same flight, the highest sublimation rate shall be used to calculate the maximum weight of dry ice to be carried.

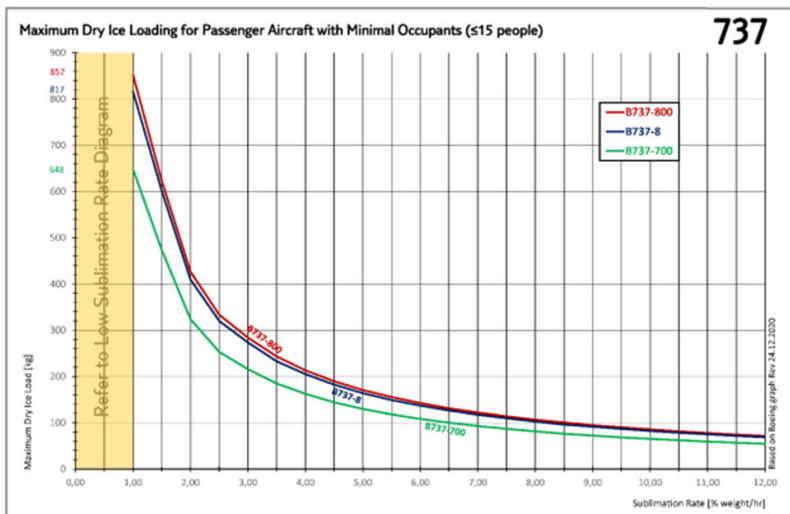
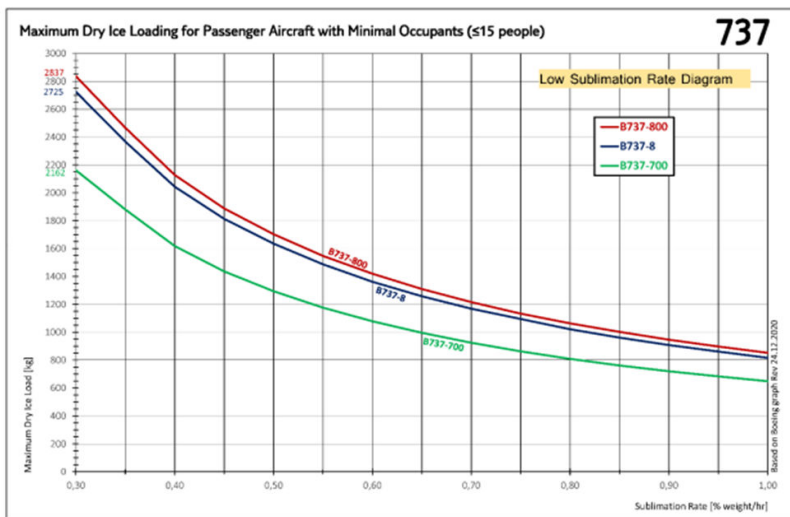
Note 2: In addition, for carriage of dry ice in excess of 75 kgs, the following is required: A carry on CO2 detector shall be used by an FCM in accordance with a special briefing, as part of a monitoring program to ensure CO2 levels remain below 0.25% for each type of cargo load & Passengers shall not be carried.

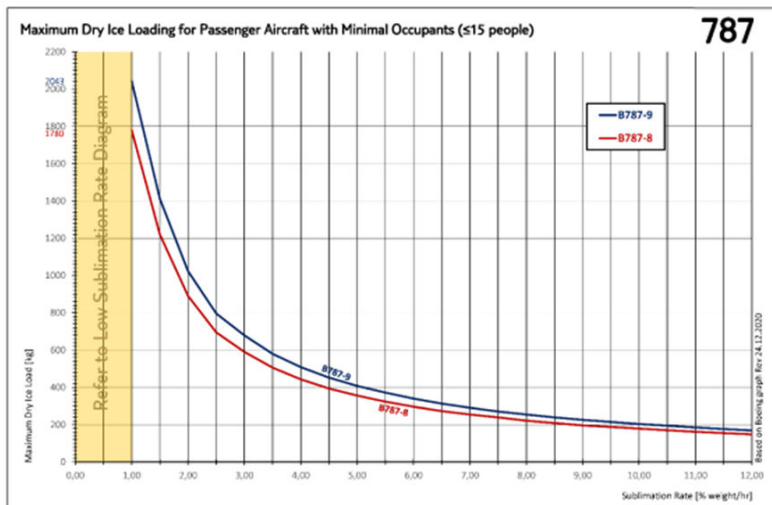
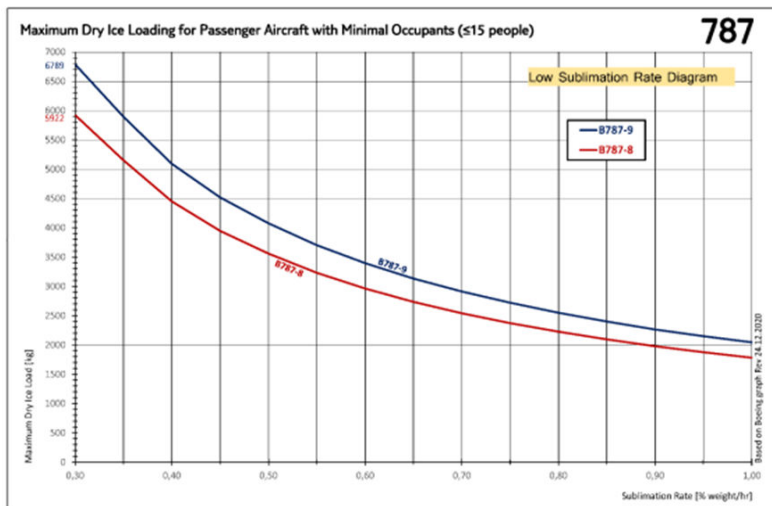
The maximum dry ice load is the total amount of dry ice in all holds and other compartments as stated in the graphs below. To calculate the maximum load of dry ice (weight in kgs), refer to the graphs and use the relevant sublimation rate (supplied by the shipper) and read across to the relevant column.

Copy of sublimation rate tables for B737/B787 15 and above passenger tables



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10.3.7 Loading of Magnetized Material

Packing Instruction 953 allows the carriage of such material when the magnetic field strength at a distance of 4.6 m causes a compass deflection of not more than 2 degrees (equivalent to 0.418 A/m or 0.00525 Gauss measured at a distance of 4.6 m). Material with a magnetic field strength exceeding these limits may only be carried with the prior approval of the State of Origin and the State of the Operator.



Magnetised material must be loaded so headings of aeroplane compasses are maintained within the tolerances prescribed by the applicable aeroplane airworthiness requirements and, where practical, in locations minimising possible effects on compasses.

Note 1: Masses of ferromagnetic metals such as automobiles, automobile parts, metal fencing, piping and metal construction material, even if not meeting the definition of magnetised materials, may affect aeroplane compasses. As may packages or items of material which individually do not meet the definition of magnetised material, but cumulatively may have a magnetic field strength of a magnetized material.

Note 2: Magnetised material (class 9) will only be accepted when loaded in aft compartment hold 3 and 4 for the B737 and hold 2, 3, 4 and 5 for the B787.

10.3.8 Loading of Radio Active Material

Not Applicable – Carriage of Class 7 Radioactive Materials is prohibited.

10.3.9 Repatriation of Activated Escape Slide / Rafts on Company Aeroplanes

- a. Escape slides/ rafts which have been activated cannot be shipped without adherence to the IATA Dangerous Goods Regulations. IATA DGR packing instruction 955 allows for this.
- b. There are two options:

BLX-SE

1. Consign the spent escape slide / raft in its entirety as UN2990 in accordance with IATA DGR and Packing Instruction 955 having been marked and labelled as such and accompanied by a shipper's declaration.
2. Remove any remaining batteries, flares, first aid kits, repair kits, etc. ensuring these are packed and shipped in accordance with IATA DGR and consign the remainder of the activated slide as general cargo.

End BLX-SE

TOM-UK

1. Consign the spent escape slide / raft in its entirety as UN2990 in accordance with IATA DGR Packing Instruction 955 having been marked and labelled as such and accompanied by a shipper's declaration.
2. Remove any remaining batteries, flares, first aid kits, repair kits, etc. ensuring these are packed and shipped in accordance with IATA DGR Packing Instruction 955 and consign the remainder of the activated slide as general cargo.

End TOM-UK

Note: Where the slide / raft is unserviceable but has not been activated or has been incompletely activated (squib, bottle or both remain intact) then only option 1 should be followed. If the slide/ raft is fully serviceable then only option 1 should be followed.

10.3.10 Carriage of Cryogenic Liquids

Cryogenic Liquids will only be carried in accordance with the IATA Dangerous Goods Regulations.



- a. Containers must be loaded in the rear or bulk cargo compartments, and must not be loaded in the same compartment as AVI.
- b. Cryogenic packages must be secured so that they do not move during flight.
- c. Before entering a cargo compartment containing dry ice or non-toxic liquefied gases, ventilate the compartment after opening the cargo door.
- d. Care should be taken when handling liquefied refrigerated gases. Keep upright at all times as tipping or toppling of the receptacles during loading and unloading can cause spillage of the cryogenic liquid, which may result in cold burn injuries.

10.3.11 Handling of Self-Reactive Substances and Organic Peroxides

During the course of transport, packages or unit load devices containing self-reactive substances of Division 5.2 must be shaded from direct sunlight, stored away from all sources of heat in a well-ventilated area.

10.3.12 Notification to Captain (NOTOC)

As early as practicable before departure of the aeroplane but in no case later than when the aeroplane moves under its own power, the operator of an aeroplane in which dangerous goods are to be carried must:

1. provide the commander with accurate and legible written or printed information concerning dangerous goods that are to be carried as cargo; and
2. provide personnel with responsibilities for operational control of the aeroplane (TUI Operations Duty Manager) with the same information that is required to be provided to the commander (e.g. a copy of the written information provided to the commander. This is to facilitate notifying emergency services and authorities of the dangerous goods on board in the event of an aeroplane accident or incident. All contracted Ground Handling Agents, including Ground Handling Agents used for ad-hoc charter flights, will forward a copy of a NOTOC to the TUI OCC by email to: operationsflightwatch@tui.co.uk

Note: This includes information about dangerous goods loaded at a previous departure point and which are to be carried on the subsequent flight.

This information must include the following:

- a. Date of the flight
- b. the air waybill number (when issued)
- c. the proper shipping name (the technical name(s) shown on the dangerous goods transport document is not required) and UN Number or ID number When chemical oxygen generators contained in Protective Breathing Equipment (PBE) are being transported under Special Provision A144, the proper shipping name of "Oxygen generator, chemical" must be supplemented with the statement "Air crew Protective Breathing Equipment (smoke hood) in accordance with Special Provision A144"; and
- d. the class or division, and subsidiary hazard(s) corresponding to the subsidiary hazard label(s) applied, by numerals, and (in the case of Class 1) the compatibility group.
- e. the packing group shown on the shippers declaration; and
- f. the number of packages and their exact loading location; and



- g. For non-radioactive material, the number of packages, the net quantity, or gross weight if applicable, including the units of measurement, or each package, except that this does not apply to dangerous goods where the net quantity or gross weight is not required on the shippers declaration for dangerous goods, or, when applicable, alternative written documentation and their exact loading location.
 - 1. For a consignment consisting of multiple packages containing dangerous goods bearing the same proper shipping name and UN number or ID number, only the total quantity and an indication of the largest and smallest package at each loading location need to be provided. For consumer commodities, the information provided may be either the gross weight of each package or the average gross weight of the packages as shown on the Shipper's Declaration;
 - 2. The number of overpacks and an indication of which dangerous goods packages are contained in each overpack;
 - 3. The number of all packed in one packages and an indication of which dangerous goods are contained in the package(s)
- h. not applicable – radioactive material is not carried by TUI Group airlines except TFL.
- i. whether the package must be carried on cargo aeroplane only.
- j. the aerodrome at which the package(s) is to be unloaded.
- k. where applicable, an indication that the dangerous goods are being carried under a State exemption.
- l. signed confirmation, or some other indication, from the person responsible for loading the aeroplane that there was no evidence of any damage to or leakage from the packages or any leakage from the unit load devices loaded on the aeroplane.

Note 1: For UN 1845 Carbon dioxide, solid (dry ice), the information detailed above may be replaced by the UN number, proper shipping name, class, total quantity in each cargo compartment on the aeroplane and the aerodrome at which the package(s) is to be unloaded.

Note 2: For consumer commodities, the information provided may be either the gross mass of each package or the average gross mass of the packages as shown on the dangerous goods transport document.

Note 3: For UN 3480 (Lithium ion batteries) and UN 3090 (Lithium metal batteries), the information detailed above may be replaced by the UN number, proper shipping name, class, total quantity at each specific loading location, and whether the package must be carried on cargo aircraft only. A full NOTOC is required when such batteries are carried under a State exemption.

UN3480 and UN3090 are prohibited from carriage on TUI Group aircraft.

The following dangerous goods need not appear on the NOTOC:

- a. Dangerous goods packed in excepted quantities
- b. Biological substance, Category B (UN 3373)
- c. Genetically modified micro-organisms (UN 3245)
- d. Genetically modified organisms (UN 3245)
- e. Lithium ion batteries contained in equipment UN 3481; and Lithium ion batteries packed **with** equipment when meeting the Section II requirements of the applicable Packing Instruction.



- f. Lithium metal batteries contained **in** equipment UN 3091 and Lithium metal batteries packed **with** equipment when meeting the Section II requirements of the applicable Packing Instruction.
- g. Magnetized material; and with field strengths causing a compass deflection of not more than 2 degrees at a distance of 4.6 m (UN 2807)
- h. Radioactive material, excepted package (UN 2908, UN 2909, UN 2910, UN 2911)
- i. UN 3552 Sodium ion batteries contained in equipment with organic electrolyte, and Sodium ion batteries packed with equipment with electrolyte, in compliance with Section II of the applicable Packing Instruction.

10.3.12.1 Availability of NOTOC on the ground for the duration of flight

The commander shall sign a legible copy of the NOTOC which shall be retained on the ground. This copy must have an indication on it, or with it, that the commander has received the information.

It must be ensured that a copy of the information to the pilot-in-command/ commander is retained on the ground and that this copy, or the information contained in it, is readily accessible to the aerodromes of last departure and next scheduled arrival and to the TOCC, until after the arrival of the flight to which the information refers.

10.3.13 Retention of Documents

At least one copy of the documents appropriate to the transport by air of a consignment of dangerous goods (including consignments that fail their acceptance check) must be retained for a minimum period of three months, or such other period as specified by the States concerned, after the flight on which the dangerous goods were transported. As a minimum, the documents which must be retained are:

- a. air waybill
- b. dangerous goods shipper's declaration
- c. dangerous goods check list (including identification of the person who completed it)
- d. dangerous goods Notification to Captain (NOTOC)

TUI Group airlines retain the documents appropriate to the transport by air of a consignment of dangerous goods within a flight file, or within the files of a handling agent(s). If this to be carried out by a handling agent, procedures need to be in place, particularly for adhoc charters 3 copies of the NOTOC must be made

- a. Copy 1 is retained by the cargo handler
- b. Copies 2 and 3 go with the shipment to the aeroplane
- c. On completion of loading the person responsible for the loading will sign both copies of the NOTOC. The two signed copies must be presented to the commander for his signature.
- d. Copy 2 will be retained by the commander.
- e. Copy 3 will be retained by the dispatcher/Load Control and held on the flight file, after the information has been emailed to the TUI OCC

Note: For UN 1845 Carbon dioxide, solid (dry ice), only the UN number, proper shipping name, class, total quantity in each hold on the aeroplane and the aerodrome at which the package(s) is to be unloaded need to be provided.



10.3.13.1 Adhoc Charters

Where an Ad-hoc charter flight is required to carry cargo including dangerous goods the TUI Group Airline's Cargo department will contact the TUI Group Airline's Resort Airports Acct Manager responsible for the ad-hoc flight set up to advise that cargo maybe carried on the ad-hoc flight. The TUI Group airline will arrange for the NOTOC to be faxed or e- mailed to the TUI Group Airline's Operations department. In the first instance TUI Group Airline's Cargo department will arrange for this to happen via the contracted cargo agent.

Where an ad-hoc charter flight is required to carry cargo including dangerous goods from a resort airport where no cargo contract exist, the TUI Group Airline's Cargo department will contact the TUI Group Airline's Resort Airports Acct Manager responsible for ad-hoc flight set up and request IATA SGHA section 5 inclusion of the ad-hoc flight contract. The TUI Group airline will arrange for the NOTOC to be faxed or e-mailed to the TUI OCC.

Note: Where an ad-hoc flight is taken on at short notice and is solely managed by the TUI OCC, the Operations Duty Manager will ascertain either through the flight broker or the airline we are operating for, that the TUI Group airline will be carrying cargo. The TUI Group airline will arrange for the NOTOC to be emailed to TUI OCC.

10.3.14 Lithium and Sodium Ion Batteries

10.3.14.1 General

Damaged, defective or recalled lithium and Sodium Ion batteries and devices are forbidden for transport. Lithium batteries, Sodium Ion batteries and their respective devices which are subject to a recall program can overheat and pose a safety risk.

Cells and batteries must be protected so as to prevent short circuits. This includes protection against contact with conductive materials with the same packaging that could lead to a short circuit.

This section does not apply to lithium batteries, and lithium battery powered equipment, carried by passengers and crew. These are referred to in section 10.1.5.

10.3.14.2 Lithium Ion or Polymer Cells and Batteries (UN3480)

Forbidden.

10.3.14.3 Lithium Ion or Polymer Cells and Batteries Packed with Equipment (UN3481)

Equipment means the device for which the lithium cells or batteries will provide electrical power for its operation. The equipment must be secured against movement and must be equipped with an effective means of preventing accidental activation. Net quantity per package is 5 kg.

When transporting Lithium ion cells less than or equal to 20 Wh or Lithium ion batteries less than or equal to 100 Wh (IATA DGR Packing Instruction 966 Section II):

- It must be mentioned that lithium cells or batteries are transported. This is done on alternative documents such as cargo and air waybill documents. The words "lithium-ion batteries in compliance with PI966 Section II" must be included on the air waybill (this indicates the 5kg limit has been adhered to). A telephone number for additional information must be mentioned;



- A Shipper's Declaration for Dangerous Goods is not required; and
- A NOTOC is not required.

Note: Lithium ion cells > 20 Wh or Lithium ion batteries > 100 Wh, packed with equipment, must be shipped in compliance with the full requirements for Dangerous Goods shipments in compliance with Class 9. In this case all normal Dangerous Goods documentation must be provided, such as a NOTOC and Shipper's Declaration (IATA DGR Packing Instruction 966 Section I).

10.3.14.4 Lithium Ion or Polymer Cells and Batteries Contained in Equipment (UN3481)

Equipment means the device for which the lithium cells or batteries will provide electrical power for its operation. The equipment must be secured against movement and must be equipped with an effective means of preventing accidental activation. Net quantity per package is 5 kg.

When transporting Lithium ion cells less than or equal to 20 Wh or Lithium ion batteries less than or equal to 100 Wh (IATA DGR Packing Instruction 967 Section II):

- It must be mentioned that lithium cells or batteries are transported. This is done on alternative documents such as cargo and air waybill documents. The words "lithium-ion batteries in compliance with Section II of PI967" must be included on the air way bill (this indicates the 5kg limit has been adhered to). A telephone number for additional information must be mentioned;
- A Shipper's Declaration for Dangerous Goods is not required; and
- A NOTOC is not required.

Note: Lithium ion cells > 20 Wh or Lithium ion batteries > 100 Wh, contained in equipment, must be shipped in compliance with the full requirements for Dangerous Goods shipments in compliance with Class 9. In this case all normal Dangerous Goods documentation must be provided, such as a Notoc and Shipper's Declaration (IATA DGR Packing Instruction 967 Section I).

10.3.14.5 Lithium Metal or Lithium Alloy Batteries (UN3090)

Forbidden.

10.3.14.6 Lithium Metal or Lithium Alloy Batteries Packed with Equipment (UN3091)

Equipment means the device for which the lithium cells or batteries will provide power for its operation. The equipment must be secured against movement and must be equipped with an effective means of preventing accidental activation. Net quantity per package is 5 kg.

Lithium metal cells with a lithium content not exceeding 1 g or lithium metal batteries with a lithium metal content not exceeding 2 g (IATA DGR Packing Instruction 969 Section II):

- It must be mentioned that lithium metal batteries are transported. This is done on alternative documents such as cargo and air waybill documents.

The words "lithium-metal batteries in compliance with PI969 Section II" must be included on the air waybill (this indicates the 5kg limit has been adhered to). A telephone number for additional information must be mentioned.

- A Shipper's Declaration for Dangerous Goods is not required.
- A NOTOC is not required.



Note: Lithium metal cells with a lithium content in excess of 1 g or lithium metal batteries with a lithium metal content in excess of 2 g, packed with equipment, must be shipped in compliance with the full requirements for Dangerous Goods shipments in compliance with Class 9. In the case all normal Dangerous Goods documentation must be provided, such as a NOTOC and Shipper's Declaration (IATA DGR Packing Instruction 969 Section I).

10.3.14.7 Lithium Metal or Lithium Alloy Batteries Contained in Equipment (UN3091)

Equipment means the device for which the lithium cells or batteries will provide power for its operation. The equipment must be secured against movement and must be equipped with an effective means of preventing accidental activation. Net quantity per package is 5 kg.

Lithium metal cells with a lithium content not exceeding 1 g or lithium metal batteries with a lithium metal content not exceeding 2 g (IATA DGR Packing Instruction 970 Section II):

- It must be mentioned that lithium metal batteries are transported. This is done on alternative documents such as cargo and air waybill documents.
- The words "lithium-metal batteries in compliance with Section II of PI970" must be included on the air waybill (this indicates the 5kg limit has been adhered to). A telephone number for additional information must be mentioned.
- A Shipper's Declaration for Dangerous Goods is not required.
- A NOTOC is not required.

Note: Lithium metal cells with a lithium content in excess of 1 g or lithium metal batteries with a lithium metal content in excess of 2 g, packed with equipment, must be shipped in compliance with the full requirements for Dangerous Goods shipments in compliance with Class 9. In the case all normal Dangerous Goods documentation must be provided, such as a NOTOC and Shipper's Declaration (IATA DGR Packing Instruction 970 Section I).

10.3.14.8 Sodium Ion Cell and Batteries (UN3551)

Forbidden.

10.3.14.9 Sodium Ion Cells and Batteries packed with Equipment (UN3552)

Equipment means the device for which the sodium ion cells or batteries will provide electrical power for its operation. The equipment must be secured against movement and must be equipped with an effective means of preventing accidental activation. Net quantity per package is 5kg.

When transporting Sodium ion cells less than or equal to 20Wh or Sodium ion batteries less than or equal to 100Wh (IATA DGR packing Instruction 977 Section II):

1. It must be mentioned that sodium ion cells or batteries are transported. This is done on alternative documents such as cargo and air waybill documents. The words "Sodium ion batteries in compliance with Section II of PI 977" must be included on the air waybill (this indicates the 5kg limit has been adhered to). A telephone number for additional information must be mentioned;
2. A Shipper's Declaration for Dangerous Goods is not required; and
3. A NOTOC is not required.



Note: Sodium ion cells >20 Wh or Sodium ion batteries >100 Wh, packed with equipment, must be shipped in compliance with the full requirements for Dangerous Goods shipments in compliance with Class 9. In this case all normal Dangerous Goods documentation must be provided, such as a NOTOC and Shipper's Declaration (IATA DGR Packing Instruction 977 Section I).

10.3.14.10 Sodium Ion Cells and Batteries contained in Equipment (UN3552)

Equipment means the device for which the sodium ion cells or batteries will provide electrical power for its operation. The equipment must be secured against movement and must be equipped with an effective means of preventing accidental activation. Net quantity per package is 5kg.

When transporting Sodium ion cells less than or equal to 20Wh or Sodium ion batteries less than or equal to 100Wh (IATA DGR packing Instruction 978 Section II):

1. It must be mentioned that sodium ion cells or batteries are transported. This is done on alternative documents such as cargo and air waybill documents. The words "Sodium ion batteries in compliance with Section II of PI 978" must be included on the air waybill (this indicates the 5kg limit has been adhered to). A telephone number for additional information must be mentioned;
2. A Shipper's Declaration for Dangerous Goods is not required; and
3. A NOTOC is not required.

Note: Sodium ion cells >20 Wh or Sodium ion batteries >100 Wh, contained in equipment, must be shipped in compliance with the full requirements for Dangerous Goods shipments in compliance with Class 9. In this case all normal Dangerous Goods documentation must be provided, such as a NOTOC and Shipper's Declaration (IATA DGR Packing Instruction 978 Section I).

10.4 Recognition of Undeclared / Hidden Dangerous Goods

10.4.1 Hidden Dangerous Goods

Personnel must be alert to indications that undeclared dangerous goods are present within cargo, mail or stores. Personnel interfacing with passengers must be alert to indications that prohibited dangerous goods are carried by passengers or within their baggage.

Note: THE DISCOVERY OF UNDECLARED OR MIS-DECLARED DANGEROUS GOODS OR THE DISCOVERY OF DANGEROUS GOODS FORBIDDEN FOR CARRIAGE BY PASSENGERS (DISCOVERED AFTER THE CHECK-IN PROCESS) MUST BE REPORTED, WITH DETAILED INFORMATION, TO TUI AIRLINES AND THE LOCAL CAA .

The following is a list of general descriptions that are often used for items in cargo or in passengers' baggage and the types of dangerous goods that may be included in any item bearing that description.

- **Aeroplane on ground (AOG) spares** — may contain explosives flares or other pyrotechnics), chemical oxygen generators, unserviceable tire assemblies, cylinders of compressed gas (oxygen, carbon dioxide or fire extinguishers), fuel in equipment, wet or lithium batteries, matches



- **Automobile parts/supplies (car, motor, motorcycle)** – may include engines (including fuel cell engines), carburettors or fuel tanks that contain or have contained fuel, wet or lithium batteries, compressed gases in tyre inflation devices and fire extinguishers, air bags, flammable adhesives, paints, sealants and solvents etc.
- **Battery-powered devices/equipment** – may contain wet or lithium batteries.
- **Breathing apparatus** – may indicate cylinders of compressed air or oxygen, chemical oxygen generators or refrigerated liquefied oxygen
- **Camping equipment** - May contain flammable gases (butane, propane, etc.), flammable liquids (kerosene, gasoline, etc.) or flammable solids (hexamine, matches, etc.)
- **Cars, car parts** – see automobile parts, etc.
- **Chemicals** - May contain items meeting any of the criteria for dangerous goods, particularly flammable liquids, flammable solids, oxidisers, organic peroxides, toxic or corrosive substances
- **Comat (COMPANY MATERIALS)** – such as aircraft parts, may contain dangerous goods as an integral part, e.g. chemical oxygen generators in a passenger service unit (PSU), various compressed gases such as oxygen, carbon dioxide and nitrogen, gas lighters, aerosols, fire extinguishers, flammable liquids such as fuels, paints and adhesives and corrosive material such as batteries. Other item such as flares, first aid kits, life-saving appliances, matches, magnetized material etc.
- **Consolidated consignments (groupages)** – may contain any of the defined classes of dangerous goods
- **Cryogenic (liquid)** – indicates refrigerated liquefied gases such as argon, helium, neon, nitrogen, etc.
- **Cylinders** – may contain compressed or liquefied gas
- **Dental apparatus** – may contain flammable resins or solvents, compressed or liquefied gas, mercury and radioactive material
- **Diagnostic specimens** – may contain infectious substances
- **Diving equipment** – may contain cylinders of compressed gas (e.g. air or oxygen). May also contain high intensity diving lamps that can generate extreme heat when operated in air. In order to be carried safely, the bulb or battery should be disconnected
- **Drilling and mining equipment** – may contain explosive(s) and/or other dangerous goods
- **Dry shipper (vapour shipper)** – may contain free liquid nitrogen. Dry shippers are only not subject to these Instructions when they do not permit the release of any free liquid nitrogen irrespective of the orientation of the packaging
- **Electrical/electronic equipment** – may contain magnetized materials, mercury in switch gear, electron tubes or wet or lithium batteries or fuel cell cartridges that contain or have contained fuel
- **Electrically powered apparatus (wheelchairs, lawn mowers, golf carts, etc.)** – may contain wet or lithium batteries or fuel cells or fuel cell cartridges that contain or have contained fuel
- **Expeditionary equipment** – may contain explosives (flares), flammable liquids asoline), flammable gas (camping gas) or other dangerous goods
- **Film crew and media equipment** – may contain explosive pyrotechnic devices, generators incorporating internal combustion engines, wet or lithium batteries, fuel, heat-producing items, etc.
- **Frozen embryos** – may be packed in refrigerated liquefied gas or dry ice
- **Frozen fruit, vegetables, etc.** – may be packed in dry ice (solid carbon dioxide)
- **Fuel control units** – may contain flammable liquids
- **Hot-air balloon** – may contain cylinders with flammable gas, fire extinguishers, engines internal combustion, batteries, etc.



- **Household goods** – may contain items meeting any of the criteria for dangerous goods. Examples include flammable liquids such as solvent-based paint, adhesives, polishes, aerosols (for passengers, those not permitted under ICAO Dangerous Goods Regulations 8;1.1.2), bleach, corrosive oven or drain cleaners, ammunition, matches, etc.
- **Laboratory/testing equipment** – may contain items meeting any of the criteria for dangerous goods, particularly flammable liquids, flammable solids, oxidizers, organic peroxides, toxic or corrosive substances, lithium batteries, cylinders of compressed gas, etc.
- **Instruments** – may conceal barometers, manometers, mercury switches, rectifier tubes, thermometers, etc. containing mercury
- **Laboratory/testing equipment** – may contain items meeting any of the criteria for dangerous goods, particularly flammable liquids, flammable solids, oxidizers, organic peroxides, toxic or corrosive substances, lithium batteries, cylinders of compressed gas, etc.
- **Machinery parts** – may contain flammable adhesives, paints, sealants and solvents, wet and lithium batteries, mercury, cylinders of compressed or liquefied gas, etc.
- **Magnets and other items of similar material** – may individually or cumulatively meet the definition of magnetized material
- **Medical supplies/equipment** – may contain items meeting any of the criteria for dangerous goods, particularly flammable liquids, flammable solids, oxidizers, organic peroxides, toxic or corrosive substances, lithium batteries
- **Metal construction material** – may contain ferro-magnetic material which may be subject to special stowage requirements due to the possibility of affecting aeroplane instruments
- **Metal fencing** – may contain ferro-magnetic material which may be subject to special stowage requirements due to the possibility of affecting aeroplane instruments
- **Metal piping** – may contain ferro-magnetic material which may be subject to special stowage requirements due to the possibility of affecting aeroplane instruments.
- **Passengers' baggage** – may contain items meeting any of the criteria for dangerous goods not permitted under the Table 8.7A
- **Pharmaceuticals** – may contain items meeting any of the criteria for dangerous goods, particularly radioactive material flammable liquids, flammable solids, oxidizers, organic peroxides, toxic or corrosive substances
- **Photographic supplies/equipment** – may contain items meeting any of the criteria for dangerous goods, particularly heat-producing devices, flammable liquids, flammable solids, oxidizers, organic peroxides, toxic or corrosive substances, lithium batteries
- **Racing car or motorcycle team equipment** – may contain engines (including fuel cell engines), carburetors or fuel tanks that contain fuel or residual fuel, wet and lithium batteries, flammable aerosols, nitromethane or other gasoline additives, cylinders of compressed gases, etc
- **Refrigerators** – may contain liquefied gases or an ammonia solution
- **Repair kits** – may contain organic peroxides and flammable adhesives, solvent-based paints, resins, etc.
- **Samples for testing** – may contain items meeting any of the criteria for dangerous goods, particularly infectious substances, flammable liquids, flammable solids, oxidizers, organic peroxides, toxic or corrosive substances
- **Semen** – may be packed with dry ice or refrigerated liquefied gas (see also dry shipper)
- **Ships' spares** - may contain explosives (flares), cylinders of compressed gas (life rafts), paint, lithium batteries (emergency locator transmitters), etc



- **Sporting goods/sports team equipment** – may contain cylinders of compressed or liquefied gas (air, carbon dioxide, etc.), lithium batteries, propane torches, first aid kits, flammable adhesives, aerosols, etc.
- **Swimming pool chemicals** – may contain oxidizing or corrosive substances
- **Switches in electrical equipment or instruments** – may contain mercury
- **Tool boxes** – may contain explosives (power rivets), compressed gases or aerosols, flammable gases (Butane cylinders or torches), flammable adhesives or paints, corrosive liquids, lithium batteries etc.
- **Torches** – micro torches and utility lighters may contain flammable gas and be equipped with an electronic starter. Larger torches may consist of a torch head (often with a selfigniting switch) attached to a container or cylinder of flammable gas.
- **Unaccompanied passengers' baggage/personal effects** – may contain items meeting any of the criteria for dangerous goods not permitted for carriage by passengers and crew.

Note: Excess baggage carried as cargo may contain certain dangerous goods.

Note: Vaccines – May be packed in dry ice.

10.4.1.1 Identification of Dangerous Goods through X-Ray Screening

Persons conducting security screening of cargo should be alert to the presence of dangerous goods within packages that are not marked and labelled as dangerous goods and/or not accompanied by a Shipper's Declaration. In particular, items such as aerosols, ammunition, gas cylinders (camping gas, cylinders attached to life-jackets, etc.), cigarette lighters and wet acid batteries can be readily identified from x-ray images. Information provided on an air waybill or marked on a package often indicates that a consignment contains no dangerous goods. In the absence of such annotation by the shipper, should suspicions be raised by the size and shape of the contents of a package, consideration should be given to opening and hand-searching the consignment to verify that no undeclared dangerous goods are present.

Consignments of dangerous goods that have been properly marked, labelled and declared to the operator (where approved for carriage) are commonly processed separately from general freight. Should consignments bearing UN numbers, proper shipping names or hazard labels be discovered within general freight, when separate arrangements exist, this should be queried. It may be that no shipper's declaration accompanies the consignment; as such the consignment of dangerous goods would be considered 'undeclared'.

Note: The discovery of undeclared or mis-declared dangerous goods must be reported to TUI Airways and or TUIfly Nordic.

10.4.1.2 Safety Data Sheet

REACH (Registration, Evaluation, Authorisation & restriction of **CH**emicals) is a European Union regulation controlling chemicals in Europe which has been adopted into UK Regulation and referred to as UK REACH for control in the UK. REACH requires for many substances and mixtures, a Safety Data Sheet (SDS) to be provided either before or at the time of first delivery. Section 14 of the EU & UK format SDS provides basic classification information, i.e. UN number, proper shipping name, Class/Division and Packing Group.



10.4.1.3 GHS/ Consumer Labeling (Overview)

Some everyday household items bear consumer warning labels which may or may not indicate they are classified as dangerous goods in air transport. All over the world there are different laws on how to identify the hazardous properties of chemicals (called 'classification') and how information about these hazards is then passed to users (through consumer supply labels and safety data sheets for workers). This can be confusing because the same chemical can have different hazard descriptions in different countries. For example, a chemical could be labelled for supply as 'toxic' in one country, but not in another. For this reason, the UN brought together experts from different countries to create the Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

The GHS has been implemented within Europe by, the Regulation on Classification, Labelling and Packaging of Substances and Mixtures (known as the CLP Regulation).

10.4.1.4 GHS Labels

Products bearing the following GHS labels ARE classified as dangerous goods:



Note: A product bearing the GHS corrosive label (depicted far right above) is NOT classified as dangerous goods if the signal word 'Danger' and hazard statement 'causes serious eye damage' applies.

Products bearing the following GHS labels are NOT classified as dangerous goods:



10.5 Emergency Situations

10.5.1 Provision of Information for use in Responding to in Flight Emergencies

For those dangerous goods for which a dangerous goods transport document (Shipper's Declaration) is required, the commander of an aeroplane carrying such goods must be provided with information which can be used on board to assist in planning the response to an emergency arising in-flight involving the dangerous goods.

This information is provided by the "Emergency Response Guidance for Aeroplane Incidents Involving Dangerous Goods" (Doc 9481) which is published by ICAO, and is made available to flight crew on-board the aeroplane (via the EFB/pilot company issued PED).



10.5.2 Information to be Provided by the Pilot in Command in the event of an Inflight Emergency

If an in-flight emergency occurs and the situation permits the commander must inform the appropriate Air Traffic Services Unit of any dangerous goods on board. This information should include the proper shipping name, class/division, identified subsidiary hazard(s), compatibility group for explosives, quantity and location on board.

10.5.3 Information by the Operator in the event of an Aeroplane accident or serious incident where dangerous goods carried as cargo may be involved

If an aeroplane carrying dangerous goods as cargo is involved in an accident or serious incident where the dangerous goods may be involved, the operator must provide information, without delay, to emergency services responding to the accident or serious incident about the dangerous goods on board, as shown on the copy of the information to the pilot-in-command (NOTOC). The information must be sufficient to enable any hazards created by the dangerous goods to be minimised and include the proper shipping name, UN number, class/division, any identified subsidiary hazard, the compatibility group for explosives, the quantity and the location on board the aeroplane. As soon as possible, the operator must also provide this information to the Dangerous Goods Office and the appropriate authority of the State in which the accident or serious incident occurred. In the first instance, the Dangerous Goods Office should be alerted to the incident or accident by phone using the following contacts:

UK CAA Telephone +44 (0) +44 (0) 330 022 1915 // out of hours: +44 (0) 330 022 1500

Swedish Transport Agency- Transportstyrelsen asr@transportstyrelsen.se

TUI OCC - Telephone: +44(0) 203 451 2874 and or e-mail: operations@tui.co.uk and odm@tui.co.uk

10.5.4 Information by the operator in the event of an aeroplane incident

In the event of an aeroplane incident, the operator of an aeroplane carrying dangerous goods as cargo must, if requested to do so, provide information without delay to the emergency services responding to the incident and to the appropriate authority of the State in which the incident occurred, about the dangerous goods on board, as shown on the copy of the information to the pilot-in-command (NOTOC).

10.5.5 Removal of contamination

In the event of a spillage or leakage of dangerous goods within an aeroplane, the position where the dangerous goods or unit load device was stowed on the aeroplane must be inspected for damage or contamination and any hazardous contamination removed. The hazard of the dangerous goods within packages concerned may be established by checking the entry on the NOTOC for that loading position or from hazard labels applied to the packages. The hazard classes and divisions of dangerous goods within an ULD may also be identified from the NOTOC or otherwise, should package labels not be visible, from the ULD tag bearing red hatchings applied to the outside of the ULD. Persons responding in the event of damage to or leakage of dangerous goods from packages must:

- a. inform the commander or an engineer who will check the aeroplane for any contamination and advise TUI UK Customer Operations.
- b. Identify the hazards and wear appropriate protective clothing; and
- c. avoid handling the package or keep handling to a minimum; and



- d. inspect adjacent packages for contamination and put aside any that may have been contaminated; and
- e. arrange for decontamination of the aeroplane and equipment; and
- f. in the case of infectious material, inform the appropriate public health authority or veterinary authority, and provide information to any other countries of transit where persons may have been exposed to danger; and
- g. to notify the shipper and/or the consignee.

If it is evident that a package containing radioactive material is damaged or leaking, or if it is suspected that the package may have leaked or been damaged, access to the package must be restricted and a qualified person must, as soon as possible, assess the extent of contamination and the resultant radiation level of the package.

The scope of the assessment must include the package, the aeroplane, the adjacent loading and unloading areas and, if necessary, all other material which has been carried in the aeroplane. When necessary, additional steps for the protection of persons, property and the environment, must be taken in accordance with provisions established by the relevant competent authority, to overcome and minimise the consequences of such leakage or damage.

An aeroplane which has been contaminated by radioactive materials must be immediately taken out of service and not returned until the radiation level at any accessible surface and the non-fixed contamination are not more than the values specified in the Technical Instructions. In the event of non-compliance with any limit in the Technical Instructions- applicable to radiation level or contamination, the operator must ensure the shipper is informed if the non-compliance is identified during transport; take immediate steps to mitigate the consequences of the non-compliance; communicate the non-compliance to the shipper and relevant competent Authority(ies), respectively, as soon as practicable and immediately whenever an emergency situation has developed or is developing.

10.6 Conditions Under Which Weapons, Munitions Of War And Sporting Weapons May Be Carried

10.6.1 Need For Approval To Transport Munitions Of War

Weapons of war and munitions of war can only be carried provided an approval to do so has been granted by all the States concerned before a flight. They must be carried in the aeroplane in a place which is inaccessible to passengers during flight and, in the case of firearms, unloaded, except as specified below.

BLX-SE

Tuifly Nordic does not hold CAA approval for the transportation of "MOW" Munitions of war by air. The carriage of weapons of war and munitions of war is forbidden, except with the express exemption of the national authority and of the overflown country authorities.

End BLX-SE

TOM-UK

TUI Airways currently holds UK CAA approval for the transportation of "MOW" Munitions of war by air.

End TOM-UK



10.6.2 Stowage Requirements For Munitions Of War

In exceptional circumstances weapons of war and munitions of war may be carried other than in an inaccessible place on the aeroplane and may be loaded, provided an approval to do so has been granted by all the States concerned before a flight. These exceptional circumstances are intended primarily to permit the carriage of law enforcement officers, protection officers, etc.

TOM-UK

UK Police Protection Officers hold an exemption from the Air Navigation Order that enables them to carry their weapons on their person when accompanying specific named VIPs. A condition on the exemption requires the police to provide the operator with a copy of the relevant exemption in advance of the flight to demonstrate that the exemption applies to them and the person they are accompanying. Official Record Series 4 approves the carriage of weapons by operators in accordance with the exemption issued to UK Police Protection Officers. Should an operator be asked to carry protection officers bearing weapons on their person and the Police do not/cannot provide a copy of the relevant exemptions (preferably when booking the flight), then their weapons must be stowed in a location that is inaccessible during flight. When the police officer is not accompanying any of the persons referred to in the exemption, the unloaded arms and ammunition shall be stowed in a location which is inaccessible to passengers on the aeroplane. The exemption issued to UK Police Protection Officers and the Official Record Series 4 document each contain additional conditions with which operators must comply.

There are some limited occasions when the UK CAA may grant one-off exemptions for persons not on the two exemptions held by the Police, such as visiting Heads of State, but these will generally only be when accompanied by UK Protection Officers. In such circumstances, or in the event of a request for non-UK protection officers to carry weapons in the cabin, the operator must apply to the UK CAA Dangerous Goods Office.

End TOM-UK

10.6.3 Notifying Commander Of The Carriage Of Munitions Of War

The commander must be notified before a flight if weapons of war or munitions of war are to be carried on the aeroplane.

10.6.4 Carriage Of Sporting Weapons When Inaccessible To Passengers During Flight

TOM-UK

Sporting weapons are forbidden for passenger carriage on board TUI Airways aeroplanes, they can be carried as cargo only. Although air rifles/Pistols are not classified as firearms, TUI Airways will not accept them as passenger checked baggage.

End TOM-UK



BLX-SE

Sporting weapons are permitted on board. Although air rifles are classified as firearms, TUI fly Nordic will accept them for carriage as baggage.

Sporting weapons must be booked in advance. Permission must be granted by BLX GH.

The weapon's and the vital part's (such as the bolt, slide, barrel etc.) shall be suitably packed in separate pieces of checked baggage.

Sporting weapons may be carried without an approval from an Authority, provided:

- a. *The ammunition is subject to the conditions set out in table 1.5*
- b. *The passenger and operator (or his agent) must observe all regulations applicable to the export, import and transit of weapons applicable in the country of departure, transit and destination;*
- c. *Restrictions exist in most countries and passengers must be advised to check requirements with the appropriate Government Representative;*
- d. *They are stowed in a place on the aircraft which is inaccessible to passengers during flight.*
- e. *In the case of firearms must be unloaded.*
- f. *Firearms must be declared to Customs authorities.*

End BLX-SE

10.6.5 Carriage Of Sporting Ammunition When Inaccessible To Passengers During Flight

Ammunition may be carried without an approval from an Authority, provided:

- a. The ammunition is subject to the conditions set out in table 1.5.
- b. The passenger and operator (or his agent) must observe all regulations applicable to the export, import and transit of ammunition, applicable in the country of departure, transit and destination.
- c. Restrictions exist in most countries and passengers must be advised to check requirements with the appropriate Government Representative,
- d. They are stowed in a place on the aircraft which is inaccessible to passengers during flight.
- e. Cartridges for sporting purposes only may be carried. *The contents must be packed so as to prevent movement within the boxes.*
- f. The boxes must then be placed inside the passenger's baggage, in the centre of the suitcase or bag, surrounded by other contents, and stowed in a part of the aeroplane inaccessible in flight. The maximum amount which is permitted is 5 kg gross weight per passenger. Allowances for more than one passenger must not be combined into one or more packages.

BLX-SE

*At point of destination the weapon has to be handed out to passenger in a way that an attack of aviation security is excluded. This means that the weapon **may only be handed out in the public area** of the airport.*

End BLX-SE



10.7 Dangerous Goods Accidents & Incidents

10.7.1 Dangerous Goods Accident and Incident Reports

- a. Definition of dangerous goods accident: An occurrence associated with and related to the transport of dangerous goods by air which results in fatal or serious injury to a person or major property or environmental damage.
- b. Definition of dangerous goods incident: An occurrence other than a dangerous goods accident associated with and related to the transport of dangerous goods by air, not necessarily occurring on board an aeroplane, which results in injury to a person, property or environmental damage, fire, breakage, spillage, leakage of fluid or radiation or other evidence that the integrity of the packaging has not been maintained. Any occurrence relating to the transport of dangerous goods which seriously jeopardizes an aeroplane or its occupants is also deemed to be a dangerous goods incident.

Note: A dangerous goods accident or incident may also constitute an aircraft accident or incident as specified in ICAO Annex 13 – Aircraft Accident and Incident Investigation.

An operator must report dangerous goods accidents and incidents to the appropriate authorities of the State of the Operator and the State in which the accident or incident occurred in accordance with the reporting requirements of those appropriate authorities.

Note: This includes incidents involving dangerous goods that are not subject to all or part of the ICAO Technical Instructions through the application of an exception or of a special provision (e.g. an incident involving the short circuiting of a dry cell battery that is required to meet short-circuit prevention conditions in a special provision of 3;3).

An operator must report to the State of the Operator and the State of Origin any occasion when:

- a. dangerous goods are discovered to have been carried when not correctly loaded, segregated, separated or secured.
- b. dangerous goods are discovered to have been carried without information having been provided to the pilot-in command (when required) or the information is inadequate.

An operator must report any occasion when undeclared or mis-declared dangerous goods are discovered in cargo or mail. Such a report must be made to the appropriate authorities of the State of the Operator and the State in which this occurred.

An operator must report any occasion when dangerous goods that are not permitted are discovered by the operator (or the operator is advised by the entity that discovers the dangerous goods) either in the baggage or on the person of passengers (after check-in) or crew members. Such a report must be made to the appropriate authority of the State in which this occurred.

In addition to the requirements of the ICAO Technical Instructions for the reporting of dangerous goods occurrences, ORO.GEN.160 requires that **any incident** which endangers or which, if not corrected, would endanger an aeroplane, its occupants or any other person is reported to UK CAA. Safety Data. Dangerous goods occurrences reportable under the Mandatory Occurrence Reporting Scheme include:



- a. Dangerous goods found not to have been secured to prevent movement
- b. Damage to packages of dangerous goods
- c. NOTOC errors where dangerous goods have not been stowed in accordance with loading instructions
- d. Failure to prepare electric wheelchairs in order to prevent accidental activation
- e. Electric wheelchairs found not to have been stowed and secured correctly
- f. Leakage of dangerous goods from passenger baggage

Note: Dangerous goods occurrences meeting the criteria of ORO.GEN.160 also meet the definition of a dangerous goods accident or incident (above), reportable in accordance with CAT.GEN.MPA.200(e). Accordingly, the report must be made to CAA Safety Data within 72 hours (rather than 96), unless exceptional circumstances prevent this.

TOM-UK

*A dangerous goods accident or dangerous goods incident **not** meeting the criteria of ORO.GEN.160 must be reported to the UK CAA Dangerous Goods Office within 72 hours, unless exceptional circumstances prevent this. If necessary, a subsequent report shall be made as soon as possible giving all the details that were not known at the time the first report was sent. If a report has been made verbally, written confirmation shall be sent as soon as possible. Any type of accident or incident must be reported irrespective of whether the dangerous goods are in cargo, mail, stores, passengers' baggage or crew baggage.*

Report forms are available via the Publications section at www.caa.co.uk

*Dangerous goods occurrences **not** meeting the criteria of ORO.GEN.160 are to be reported to dgo@caa.co.uk using the following forms:*

CAA Form [SRG 2808](#) may be used to report a dangerous goods occurrence involving cargo or unaccompanied baggage.

CAA Form [SRG 2809](#) may be used to report a dangerous goods occurrence involving a passenger/crew member or their baggage.

End TOM-UK

BLX-SE

Tuifly Nordic must report dangerous goods accidents and incidents to the appropriate authorities of the State of Tuifly Nordic (Swedish Transport Agency, Transportstyrelsen) and to the State in which the accident or incident occurred in accordance with the reporting requirements of those appropriate authorities. E-mail address to Swedish Transport Agency: asr@transportstyrelsen.se

Note: This includes incidents involving dangerous goods that are not subject to all or part of these Instructions through the application of an exception or of a special provision (e.g. an incident involving the short circuiting of a dry cell battery that is required to meet short-circuit prevention conditions in a special provision of 3;3).

End BLX-SE

Note: If safe to do so, the dangerous goods involved in the accident or incident should be held pending caa investigation.



10.7.2 Reporting

The first and any subsequent report shall be as precise as possible and contain such of the following data that are relevant:

- a. Date of the incident or accident or the finding of undeclared or mis-declared dangerous goods;
- b. Location, the flight number and flight date;
- c. Description of the goods and the reference number of the air waybill, pouch, baggage tag, ticket, etc;
- d. Proper shipping name (including the technical name, if appropriate) and UN/ID number, when known;
- e. Class or division and any subsidiary hazard
- f. Type of packaging, and the packaging specification marking on it;
- g. Quantity of dangerous goods;
- h. Name and address of the shipper, passenger, etc;
- i. Any other relevant details;
- j. Suspected cause of the incident or accident;
- k. Action taken;
- l. Any other reporting action taken; and
- m. Name, title, address and telephone number of the person making the report.

Copies of relevant documents and any photographs taken should be attached to a report.

The handling agent responsible for the station at which a dangerous goods accident or incident occurs must send a report to TUI Ground Operations within 24 hours of the accident / incident.

E-mail groundops2@tui.co.uk

With a copy to GroundOpsDG@tuifly.com

Any type of dangerous goods accident or incident must be reported, irrespective of whether the dangerous goods are contained in cargo, mail, passengers' baggage or crew baggage.



TOM-UK

10.7.3 Dangerous Goods Occurrence Report Form

Handling agents may use the forms on the following pages. One form is used for reporting passenger/ crew occurrences and the other for cargo related occurrences.

UK Civil Aviation Authority

PASSENGER/CREW DANGEROUS GOODS OCCURRENCE REPORT

UK Regulations require occurrences to be reported to the CAA within 72 hours of the occurrence becoming known to the reporter (see Note 5)



1. Aircraft operator:		2. Date of occurrence:		3. Local time of occurrence:	
4. Flight date:	5. Flight number:		6. Aircraft type:		7. Aircraft registration:
8. Location of occurrence:		9. Departure airport:		10. Destination airport:	
11. Origin of Passenger:					
12. Product name:			13. Proper shipping name (including the technical name):		
14. UN/ID no:	15. Class/division:		16. Subsidiary risk(s):		17. Packing group:
18. Type of packaging:		19. Packaging specification marking:		20. Number of pieces:	
21. Quantity per piece:					
22. Passenger(s) ticket number(s):					
23. Name and address of passenger(s) involved:					
24. Description of occurrence: (if necessary, continue on additional page)					
25. Details of action taken against passenger (by operator/handling agent/security/police etc):					
26. Goods are being held: Yes/No (See Note 8)		27. Location of where goods are held:		28. Photographs are available: Yes/No	
29. Name/title of person reporting:		30. Tel:		31. Reporter's reference/ASR number:	
32. Company and address:		33. Fax:		34. Date of report:	
		35. Email:		36. Signature:	



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UK Civil Aviation Authority

CARGO DANGEROUS GOODS OCCURRENCE REPORT - PART 1

UK Regulations require occurrences to be reported to the CAA within 72 hours of the occurrence becoming known to the reporter (see Note 6)

Please ensure that both parts 1 and 2 of this form are completed



1. Aircraft operator:		2. Date of occurrence:		3. Local time of occurrence:	
4. Flight date:	5. Flight number:	6. Aircraft type:	7. Aircraft registration:		
8. Location of occurrence:	9. Origin of goods:	10. Departure airport:	11. Destination airport:		
12. AWB number:	13. House AWB:	14. Consignment number:	15. Total No. of pieces:		
16. Shipper name and address:		17. Consignee name and address:			
18. Names and addresses of all other companies involved (courier company/freight forwarder):					
19. Description of occurrence: (if necessary, continue on additional page)					
20. Consignment is being held: Yes/No (See Note 9)		21. Location consignment is held:		22. Photographs are available: Yes/No	
23. Name/title of person reporting:		24. Tel:		25. Reporter's reference/ASR number:	
26. Company and address:		27. Fax:		28. Date of report:	
		29. E-mail:		30. Signature:	

End TOM-UK



10.8 Training & Competency

10.8.1 Establishment and Maintenance

The employer of personnel that perform functions aimed at ensuring that dangerous goods are transported in accordance with the regulations shall establish and maintain a dangerous goods training program.

Note: A training program includes elements such as design methodology, assessment, initial and recurrent training, instructor qualifications and competencies, training records and evaluation of the effectiveness of training.

10.8.2 Objective of Dangerous Goods Training

TUI are responsible to ensure personnel are trained and competent to perform any function for which they are responsible prior to performing any of these functions. This must be achieved through training and assessment commensurate with the function for which they are responsible. Such training must include:

- General familiarization training – personnel must be trained to be familiar with the general provisions;
- Function specific training – personnel must be trained to competently perform the function for which they are responsible; and
- Safety training – personnel must be trained on how to recognise the hazards presented by dangerous goods, on the safe handling of dangerous goods and on emergency response procedures.

Note: Personnel who have received training but who are assigned to new functions must be assessed to determine their competence in respect of their new function. If competency is not demonstrated, appropriate additional training must be provided.

10.8.3 Recurrent Training Assessment

Personnel must receive recurrent training and assessment within 24 months of previous training and assessment to ensure that competency has been maintained. However, if recurrent training and assessment is completed within the final three months of validity of the previous training and assessment, the period of validity extends from the month on which the recurrent training and assessment was completed until 24 months from the expiry month of that previous training and assessment. For example, a person attends an initial course finishing on 14 April 2019; their training validity therefore expires 30 April 2021. They may attend recurrent training any time between 1 February and 30 April 2021 and their next recurrent training date will remain 30 April 2023. If, however they complete recurrent training in January 2021, then as this is more than 3 months prior to the end of April then their training expiry date becomes 31 January 2023.

10.8.4 Training & Assessment Records

The record of training and assessment must be maintained, which must include:

- The individual's name;
- The most recent training and assessment completion month;
- A description, copy or reference to training and assessment materials used to meet the training and assessment requirements;



- The name and address of the organization providing the training and assessment; and
- Evidence which shows that personnel have been assessed as competent to perform any function for which they are responsible.

Note: TUI shall retain the training and assessment records for a minimum period of 36 months from the most recent training and assessment completion month and must be made available upon request to the employee or appropriate national authority.

10.8.5 Review & Approval of Training Programs

TUI Dangerous goods training programs shall be approved by the appropriate authority of the State of the operator in accordance with the provisions of ICAO Annex 6 – Operation of Aircraft.

10.8.6 Instructor Qualifications & Competencies

Instructors of initial and recurrent dangerous goods training programs must demonstrate or be assessed as competent in instruction and the function(s) that they will instruct prior to delivering such a dangerous goods training program. Instructors delivering initial and recurrent dangerous goods training programs must deliver such a course at least every 24 months, or in the absence of this attend recurrent training. TUI shall ensure that the instructor receives updates to the Regulations and training material on an annual basis with the issuance of each edition of the DGR or as the Regulations are modified. Instructors must receive and understand updates to dangerous goods information and be made familiar with those changes by training or other means on an annual basis or as the Regulations are modified.

10.8.7 Adequate Instructions for Shipping Lithium Batteries

Not applicable to TUI operations.



11 Annex E De-icing & Anti-icing

11.1 General

Any deposit of frost, ice, snow, or slush on the external surfaces of an aircraft may drastically affect its flying qualities because of reduced aerodynamic lift, increased drag, modified stability, and control characteristics. Furthermore, freezing deposits may cause moving parts, such as elevators, ailerons, flap actuating mechanisms etc. to jam and create a potentially hazardous condition. Engine and APU systems performance may deteriorate due to the presence of frozen contaminants to blades, intakes, and components. Also, engine operation may be seriously affected by the ingestion of snow or ice, thereby causing engine stall or compressor damage. In addition, ice or frost may form on certain external surfaces (e.g. upper and lower wing surfaces) due to the effects of cold fuel / structures, even in ambient temperatures well above 0°C.

Procedures for de-icing /anti-icing are intended to ensure that the aircraft is clear of contamination so that degradation of aerodynamic characteristics or mechanical interference will not occur and, following anti-icing, to maintain the airframe in that condition during the appropriate holdover time which are known to the flight crew.

Under certain meteorological conditions, de-icing and/or anti-icing procedures may be ineffective in providing sufficient protection for continued operations. Examples of these conditions are freezing rain, ice pellets and hail, heavy snow, high wind velocity, fast dropping OAT or any time when freezing precipitation with high water content is present. No Hold over Time guidelines exists for these conditions.

11.1.1 Requirements

EASA require that operators establish procedures to be followed when ground de-icing and anti-icing and related inspections of aircraft are necessary. It also requires that the aircraft commander shall only commence take-off if the aircraft is clear of any deposit that might adversely affect the performance or controllability of the aircraft, except as permitted under the airline procedures.

This Annex E is in accordance with EASA-OPS, ICAO Doc. 9640, latest version of applicable SAE documents and Boeing AMM 12-33-01

11.2 Terminology

Active Frost:

Condition when frost is forming. Active frost occurs when (1) the aircraft surface temperature is at or below the frost point, or (2) there is water in liquid form (e.g., dew) on the aircraft surface and the surface falls to/or below 0 °C (frozen dew).

Anti-icing:

The procedure that provides protection against the formation of frost or ice and accumulation of snow or slush on treated surfaces of an aircraft for a limited period of time (holdover time).



Anti-icing fluid:

1. Mixture of water and Type I fluid;
2. Premix Type I fluid;
3. Type II fluid, Type III fluid, or Type IV fluid;
4. Mixture of water and Type II fluid, Type III fluid, or Type IV fluid.

Note: For de-/anti-icing purposes in a one-step procedure, fluids in a, b and d shall be heated to ensure a temperature of 60° C (140° F) minimum at the nozzle.

Anti-icing Code:

Report given to the flightcrew that deicing/anti-icing has been carried out and the details of the anti-icing procedure that was applied. Also known as post-deicing/anti-icing report.

Buffer (Freeze Point Buffer):

The difference between the Outside Air Temperature (OAT) and the freezing point of the fluid used.

Brix (degrees Brix or °Brix):

Unit of measurement of refraction. See also refraction and refractometer.

Certificate of Analysis:

A document, issued by a manufacturer, attesting that a lot or batch of a product fulfills the manufacturer's sales specification requirements, listing the tests, the test requirements, the test results on that lot or batch, the lot or batch number and a date.

Certificate of conformance:

A document declaring that a product fulfills the requirements of a standard. Also known as certificate of conformity.

Check :

The examination of an aircraft item against a relevant standard by a trained and qualified person to ascertain satisfactory condition.

Chemical Contamination:

Condition when substances (chemicals) are present where they should not be or are at concentrations higher than they should be.

Clear Ice:

Ice difficult to detect visually. It is normally formed in the area of the wing fuel tanks, caused by cold-soaking. Clear ice may break loose during or after takeoff, and poses a hazard particularly to aircraft with rear mounted engines.

Cold Soaking:

Ice can form even when the outside air temperature (OAT) is well above 0 °C (32 °F). An aircraft equipped with wing fuel tanks may have fuel that is at a sufficiently low temperature such that it lowers the wing skin temperature to below the freezing point of water. If an aircraft has been at a high altitude, where cold temperature prevails, for a period of time the aircraft's major structural components such as the wing, tail, and fuselage will assume the lower



temperature, which will often be below the freezing point. This phenomenon is known as cold soaking. While on the ground, the cold soaked aircraft will cause ice to form when liquid water, either as condensation from the atmosphere or as rain, comes in contact with cold soaked surfaces.

Conditions conducive to aircraft icing on the ground:

Freezing fog , freezing precipitation , frost , rain , or high humidity (on cold soaked wings) , mixed rain and snow, and snow.

Contamination:

Contamination in this context is understood as all forms of frozen or semi-frozen deposits such as frost, snow, slush, or ice (also known as frozen contamination).

Contamination check:

Check of the aircraft surfaces and components for contamination to establish the need for de-icing.

De-icing:

The procedure by which frost, ice, snow, or slush is removed from an aircraft in order to provide clean surfaces and components

De-icing / anti-icing:

Combination of or referring to both of the procedures “de-icing” and “anti-icing”. It may be performed in one or two steps

De-icing Fluid:

1. Heated water
2. Heated mixture of water and Type I fluid
3. Heated premix Type I fluid
4. Heated Type II, III, or IV fluids
5. Heated mixture of water and Type II, III, or IV fluids

Note: Unheated fluids are ineffective to de-ice.

De-icing Personnel:

Groundcrew personnel with roles and responsibilities associated with aircraft ground icing operations.

De-icing Service Provider:

The company responsible for the aircraft de-icing/anti-icing operations on an airfield.

Dewpoint:

Temperature at which unsaturated air must be cooled to cause saturation with respect to liquid water. The moisture condenses to liquid water either on surfaces as dew or as tiny liquid droplets suspended in air.



Freezing Drizzle:

Fairly uniform precipitation composed exclusively of fine drops (diameter less than 0.5 mm (0.02 in)) very close together which freezes upon impact with the ground or other exposed objects.

Freezing Fog:

A suspension of numerous very small water droplets which freezes upon impact with ground or other exposed objects, generally reducing the horizontal visibility at the earth's surface to less than 1 km (5/8 mile).

Frost/Hoar Frost:

Tiny ice crystal formed on a surface at or below the frost point. Frost generally occurs with clear skies at temperatures below freezing point. Frost can also occur from the freezing of dew.

Frost, Local:

The limited formation of frost in localized wing areas cooled by cold fuel or large masses of cold metal in the wing structure; this type of frost does not cover the entire wing.

Freezing point:

Temperature at which a liquid becomes a solid.

Freezing Point Buffer:

The difference between the outside air temperature (OAT) and the freezing point of the fluid used.

Freezing Point Buffer, Negative:

Conditions when the freezing point of a de-/anti-icing fluid is above the OAT.

Freezing Rain (light) :

Precipitation of liquid water particles which freezes upon impact with the ground or other exposed objects, either in the form of drops of more than 0.5 mm (0.02 inch) or smaller drops which, in contrast to drizzle, are widely separated. Measured intensity of liquid water particles is up to 2.5 mm/hour (0.10 inch/hour) or 25 grams/dm²/hour with a maximum of 0.25 mm (0.01 inch) in 6 minutes.

Freezing Rain (moderate):

Precipitation of liquid water particles which freezes upon impact with the ground or other exposed objects. Moderate freezing rain may appear in the form of large drops or can appear to fall in sheets where individual drops are not identifiable. Moderate freezing rain has a measured intensity of between 2.5 mm/hour to 7.5 mm/hour (0.10 to 0.30 in/h).

Freezing Rain (heavy):

Precipitation of liquid water particles which freezes upon impact with the ground or other exposed objects. Heavy freezing rain can seem to fall in sheets and individual drops may not be identifiable. Heavy freezing rains has a measured intensity of more than 7.5 mm/hour (0.30 in/h).

**Frost Point:**

Temperature, at or below 0 °C, at which air undersaturated with moisture must be cooled (at constant pressure) to cause saturation with respect to ice. The moisture directly deposits, without going through the liquid phase, as frost on exposed surfaces providing nucleation sites. The frost point is higher (warmer) than the dewpoint by about 10% at a given humidity level in air. Air temperature readings given by a thermometer are applicable to the height above ground of the thermometer itself. Because cool air sinks and the ground often cools very quickly, especially on clear nights, the ground temperature on clear, still nights is invariably lower than the temperature only a few feet higher. Thus, frost can form even when a thermometer gives a reading above freezing. The same happens with aircraft—frost can form on aircraft when the thermometer air temperature reading is above 0 °C.

Fuel Frost:

Frost, normally in the area of the wing fuel tanks, caused by cold-soaking. Also known as non-environmental frost or cold-soaked fuel frost.

Groundcrew:

Personnel with responsibilities for the handling, maintenance and servicing of an aircraft while on the ground, as well as the coordination of these activities.

Hail:

Precipitation of small balls or pieces of ice with a diameter ranging from 5 to >50 mm (0.2 to >2.0 in.) falling either separately or agglomerated.

Highest on-wing Viscosity (HOWV):

Highest viscosity of a thickened de-/anti-icing fluid which is still aerodynamically acceptable.

Hoarfrost:

A synonym for frost. See frost/hoarfrost.

Holdover time:

Estimated time for which an anti-icing fluid will prevent the formation of frost or ice and the accumulation of snow on the treated surfaces of an aircraft

Ice Pellets:

Precipitation of transparent (grains of ice), or translucent (small hail) pellets of ice, which are spherical or irregular, and which have a diameter of 5 mm (0.2 in.) or less. The pellets of ice usually bounce when hitting hard ground.

Lowest on-wing viscosity (LOWV):

Lowest viscosity of a thickened de-/anti-icing fluid for which the applicable holdover timetable can still be used.

Lowest Operational Use Temperature (LOUT) The LOUT is the higher (warmer) of:

1. The lowest temperature at which the fluid meets the aerodynamic acceptance test (according to SAE AS5900) for a given type (high speed or low speed) of aircraft, or,
2. The freezing point of the fluid plus the buffer of 10 °C (18 °F) for Type I fluid and 7 °C (13 °F) for Type II, III, or IV



Post De-icing check:

A check by qualified ground personnel to ensure that all critical surfaces are free of adhering contamination after the deicing procedure has been completed.

Post De-/Anti-icing check:

A check by qualified ground personnel to ensure that all critical surfaces are free of adhering contamination after the de-/anti-icing has been completed.

Post De-icing/Anti-icing report:

Report given to the flightcrew confirming that deicing/anti-icing has been carried out and the details of the deicing/anti-icing procedure that was applied.

Pre De-icing Process:

A process to remove large quantities of frozen contamination prior to the regular de-/anti-icing process with the objective of reducing the quantity of deicing fluid to be used.

Pre Flight contamination check:

A check performed by the flight crew or ground crew prior to departure to verify the presence of adhering contamination to establish the need for de-/antiicing. It may be part of the flight crew walk around before the flight.

Pre Takeoff check:

A check by flight crew prior to takeoff and within holdover time. This check is normally conducted from inside the cockpit. It is normally accomplished by a continuous assessment of the conditions that affect holdover time and includes an assessment and adjustment of holdover time.

Pre-takeoff Contamination Check:

A check of the critical surfaces for adhering contamination. This is accomplished after the holdover time has been exceeded and must be completed within 5 minutes prior to the beginning of takeoff.

Proximity Sensor:

A proximity sensor is a safety feature on some models of de-icing equipment, that upon activation disengages relevant systems, preventing equipment movement and damage from occurring due to physical contact between equipment components (e.g., spray nozzle, forced air nozzle, operator basket, etc.) and aircraft surfaces. As a safety mechanism, the proximity sensor is designed to prevent damage from occurring to aircraft surfaces, normally while the equipment chassis is in a stationary position (not maneuvering). Where equipped, the type of sensor used may vary by design, and may activate either by physical contact (e.g., a proximity switch with contact mechanism), or by non-physical activation (e.g., infrared, radar, etc.).

Qualified Staff:

Trained staff who have passed theoretical and practical training tests and have been certified for performing this type of job.

Quality Assurance:



Is process-oriented, and it focuses on preventing quality issues. It is a proactive approach. An audit is done to validate QA processes, the quality procedures to be followed (e.g., "documented")'

Quality Control:

Is product-oriented and focused on identifying quality issues in manufactured products and performance of service. It is a reactive approach. Inspections/checks/tests are done as part of the QC procedure, to verify the quality of the available procedures and operations. (e.g., "implemented").

Refraction:

he bending of light as it passes from one transparent substance into another. For solutions, the refraction will vary upon the concentration of the solute in the solvent. Using a calibration curve, it is possible to determine the concentration of the solute in the solvent. For example, for aqueous glycol solutions, it is possible to determine the concentration of the glycol in water by measuring refraction with a refractometer and comparing the result to the calibration curve. Refraction can be expressed as a dimensionless number (index of refraction) or as a scale of concentration, e.g., degrees Brix (°Brix), or freezing point (°C or °F). See also refractometer.

Refractive Index:

Unit of measurement of refraction expressed in the form of a dimensionless number. See also refraction and refractometer.

Refractometer:

An instrument to measure refraction. Result of measurement with a refractometer can be expressed as a dimensionless number (index of refraction) or as a scale of concentration, e.g., degrees Brix (°Brix), or freezing point (°C or °F).

Residue/Gel :

A build-up of dried out thickened fluids typically found in aerodynamically quiet areas of the aircraft.

Rime Ice:

Small frozen water droplets , spherical opaque/ milky granular appearance looking similar to frost in a freezer. Typically rime ice has low adhesion to the surface and its surrounding ice particles.

Slush:

Slush is snow or ice that has been combined with water.

Snow:

Precipitation of ice crystals, most of which are branched, star-shaped or mixed with unbranched crystals. At temperatures higher than -5°C (23°F), the crystals are generally agglomerated into snowflakes.

**Snow Grains:**

Precipitation of very small white and opaque particles of ice that are fairly flat or elongated with a diameter of less than 1 mm (0.04 in.). When snow grains hit hard ground, they do not bounce or shatter.

Snow Pellets :

Precipitation of white, opaque particles of ice; the particles are round or sometimes conical; their diameters range from approximately 2 to 5 mm (0.08 to 0.2 inch); they are brittle and easily crushed; they do bounce and may break upon contact with hard ground.

Storage Tank:

A vessel for holding fluid that can be fixed, or mobile; includes rolling tanks (ISO tanks), totes, trailers, or drums.

Tactile Check :

A tactile check requires a person to touch specific aircraft surfaces. Tactile checks, under certain circumstances, may be the only way of confirming the critical surfaces of an aircraft are not contaminated. For some aircraft, tactile checks are mandatory as part of the de-icing/anti-icing check process to ensure the critical surfaces are free of frozen contaminants.

Thickened fluid:

A fluid that contains polymeric thickeners. AMS 1428 Type II, III and IV fluids are thickened fluids; AMS 1424 Type I fluids are not thickened.

11.3 De-icing and Anti-icing Fluids

Type I fluid: Due to its properties, type I fluid forms a thin, liquid-wetting film on surfaces to which it is applied which, under certain weather conditions, gives a very limited holdover time. With this type of fluid, increasing the concentration of fluid in the fluid / water mix does not provide any extension in holdover time.

Type II and type IV fluids: contain thickeners which enable the fluid to form a thicker liquid-wetting film on surfaces to which it is applied. Generally this fluid provides a longer holdover time than type I fluids in similar conditions. With this type of fluid, the holdover time can be increased by increasing the ratio of fluid in the fluid / water mix.

Type III fluid: A thickened fluid intended especially for use on aircraft with low rotation speeds.

Fluids used for de-icing and/or anti-icing should be acceptable to the operator and the aircraft manufacturer. These fluids normally conform to specifications such as SAE AMS1424, SAE AMS1428 or equivalent. Use of non-conforming fluids is not recommended due to their characteristics being unknown. The anti-icing and aerodynamic properties of thickened fluids may be seriously degraded by, for example, inappropriate storage, treatment, application, application equipment and age.

11.3.1 Safety Precautions

After swallowing – seek immediate medical advice

After inhalation – supply fresh air; consult doctor in case of complaints.



After skin contact – generally product does not irritate skin.

After eye contact – rinse open eye for several minutes under running water.

11.4 Communications

11.4.1 Procedures

Persons communicating with the flight crew shall have a basic knowledge of the English language (operational level or equivalent according to the current version of the Training Document SAE AS6286). For local flights involving local flight and ground crews, local language may be used (see the current version of training document SAE AS6286); otherwise, English is the preferred language of communication.

Communication between the flight crew and the groundcrew will usually be achieved using a combination of documentation, visual and/or verbal communication. For treatments carried out with flightcrew onboard, the use of flight interphone (headset) or VHF radio will usually be required. Message boards (electronic/written) may also be used at designated de-icing facilities (DDF) and other de-icing locations to enhance communications. Use of hand signals is not recommended except for the final 'all clear' signal.

Note: In circumstances where an aircraft is deiced or anti-iced overnight and/or where flightcrew members are not onboard, the subsequent flightcrew communication procedures do not apply. In these circumstances, the air operator should be advised the treatment details, and where applicable, the anti-icing code elements where anti-icing was performed. (in line with SAE).

11.4.2 Communication Prior to Starting De-Icing / Anti-Icing Treatment

- Before starting treatment, the flight crew shall be requested to confirm the treatment required (i.e., surfaces and components to be de-iced, anti-icing requirements, plus any special de-icing procedures).
- Before treatment starts, the flight crew shall be requested to configure the aircraft for de-icing/anti-icing (surfaces, controls, and systems as per aircraft type requirements or recommended procedures). The de-icing personnel shall wait for confirmation that this has been completed before commencing the treatment.
- For treatments conducted without the flight crew present, suitably Qualified Staff shall be nominated by the aircraft operator to confirm the treatment required (when applicable) and to confirm the correct configuration of the aircraft.

Follow the suggested phraseology in the table under 11.4.8.1

11.4.3 Post De-icing/Anti-Icing Communication

Communication During Deicing/Anti-Icing Procedures (Flightcrew Onboard). During engines-on deicing/anti-icing operations, a constant two-way verbal communication shall be maintained between deicing personnel and flightcrew, and a visual positive hold control method shall be utilized during the deicing/anti-icing procedure. During engines-off deicing/anti-icing operations, where constant two-way verbal communication is not possible, deicing personnel shall inform the flightcrew that communications will be disconnected and re-established on completion of the deicing/anti-icing process. In the event of abnormal operations associated



with the aircraft, flightcrew shall follow air operator procedures for re-establishing communications (i.e., flashing of landing and/or taxi lights).

An aircraft shall not be dispatched for departure after treatment until the flight crew has been notified of the type of treatment performed and all the relevant information. The post-deicing/anti-icing communication shall be provided by Qualified Staff upon completion of the treatment, indicating that the checked surfaces are free of frost, snow, slush, or ice; that de-icing/anti-icing is complete, that equipment is cleared from the area; and in addition, providing the necessary information for the flight crew to estimate the appropriate holdover time for the prevailing weather conditions when anti-icing fluid has been used.

A deicing/anti-icing procedure should be continuous and as short as possible.

If a treatment is interrupted (for example, a truck running out of fluid), the flightcrew shall be immediately informed, stating:

- a. The reason for the interruption.
- b. Actions to be taken (in consultation with the flightcrew).
- c. Expected time of delay.

Before continuing the treatment:

- a. Inform the flightcrew
- b. Establish, in consultation with the flightcrew, the further treatment to be carried out, including any surfaces requiring re-treatment in relation to holdover time.

Carry out the treatment as agreed.

11.4.4 The Anti-icing Code

The following elements comprising the Anti-icing Code shall be recorded and be communicated to the flight crew by referring to the anti-icing treatment. The elements below shall be provided:

Note: This information shall not be communicated in circumstances where anti-icing holdover times do not apply, e.g., local frost prevention in cold-soaked wing areas, symmetrical local area de-icing, or de-icing of specific surfaces only (such as leading edges for removal of impact ice), etc. See 11.4.5 and 11.4.8.1 for more information.

- a. The fluid type (i.e., Type I, II, III, or IV);
- b. The fluid name (manufacturer and brand/trade name) of the Type II, III, or IV anti-icing fluid.

Note: Communication of this element is not required for Type I fluid.

- c. The concentration of fluid (dilution) within the undiluted fluid/water mixture, expressed as a percentage by volume for Type II, III, or IV (i.e., 100% ("undiluted") = 100% fluid, 75% = 75% fluid and 25% water, 50% = 50% fluid and 50% water);

Note: Communication of this element is not required for Type I fluid.

- d. The local time (hours and minutes - hh:mm), either:
 - i. For a one-step de-icing/anti-icing operation: at the start of the final treatment; or



- ii. For a two-step de-icing/anti-icing operation: at the start of the second step (anti-icing);
- e. The date in the following format: day, month, year (DDMMYY (e.g., 28JAN19 = January 28, 2019))

Note: This element is required for record keeping and is optional for flight crew notification.

- f. The statement, “Post de-icing/anti-icing check completed.”

Note 1: For specific aircraft types, additional requirements exist, e.g., tactile checks for clear ice on wing surfaces. Additional confirmation for these checks may be required.

Note 2: An alternative means of visual communication of the anti-icing code to the flightcrew can be used (e.g., written on paper, MBs, ACARS, EFBs, etc.).

Note 3: Aircraft onboard systems, available to assist flightcrew to determine holdover time, require a good coordination between service providers and aircraft operators to provide fluid information in advance or to inform the customers of any change of fluids prior the de/anti-icing operation.

11.4.5 Post-Deicing Report (Deicing Treatments Only; Anti-Icing Holdover Times Do Not Apply)

After the completion of a deicing only procedure, where no anti-icing holdvertime is applicable, the company responsible for conducting the post-deicing check shall also provide the flightcrew with the post-deicing communication. The following elements shall be recorded and be communicated to the flightcrew as part of the post-deicing communication:

- a. Deicing fluid type (i.e., Types I, II, III, or IV).
- b. Statement that anti-icing holdover times do not apply.
- c. The date in the following format: day, month, year (DDMMYY format) (e.g., 28JAN15 = January 28, 2015).

Note: This element is required for record keeping and is optional for flightcrew notification.

- d. The statement “post-deicing check completed.”

Follow the suggested phraseology in Table in 11.4.8.1

11.4.6 Post De-icing/Anti-icing Check and Transmission of the Post De-icing/Anti-icing Report to the flight Crew

It shall be clearly defined by the aircraft operator which company is responsible for conducting the post de-icing/anti-icing check and providing the flight crew with the post de-icing/anti-icing report including the anti-icing code, when applicable. If two different companies are involved in the de-icing/anti-icing treatment and post-de-icing/anti-icing check, it must be ensured that the post de-icing/anti-icing communication is not given before the post de-icing/anti-icing check has been completed.



The company conducting the de-icing/anti-icing treatment shall be responsible for the treatment and transmit all information about the treatment to the company conducting the post de-icing/anti-icing check. The company conducting the post de-icing/anti-icing check shall have overall responsibility for the performance of the company conducting the de-icing/anti-icing treatment.

11.4.7 All Clear Signal

The flight crew shall receive a confirmation from the ground crew that all de-icing/anti-icing operations are complete and that all personnel and equipment have been removed from the area before reconfiguring or moving the aircraft.

11.4.8 Phraseology and communication process for Ground Crew and Flight Crew during De-/Anti Icing Operations

Use of the following phraseology is recommended during deicing/anti-icing operations and are intended as guidelines for establishing clear, concise standardized communication and phraseology between flightcrew and groundcrew during an aircraft deicing/anti-icing operation. It is very important that both parties understand fully about communication requirements, aircraft configuration, de/anti-icing treatment needed, and post-deicing reporting requirements.

In locations/operations with unique or specific operating requirements and/or technologies, supplemental phraseology or modifications to the phraseology in this document may be required. This may include but is not limited to specific aircraft configuration requirements or specialized checks (i.e., tactile check), locations/operations where approved alternate means of communications are utilized (i.e., MBs, EFB applications, etc.), or other regulatory or air operator requirements exist. This is permitted, pending the required communication elements (i.e., anti-icing code or post-deicing report) are maintained and provided to the flightcrew in the respective circumstance.

Off-Gate Communications During deicing/anti-icing, a two-way communication between the flightcrew and the deicing/anti-icing operator/supervisor must be established prior to the deicing/anti-icing procedure. This may be done either by interphone or by VHF radio. Alternate means of communication may be the use of ACARS, EFBs, and MBs. In the event of conflict, verbal communication shall take precedence. During treatment, all necessary information must be transmitted to the flightcrew, including the beginning of treatment, treatment of the sections requiring de-activation of aircraft systems, etc. (using standardized deicing/anti-icing phraseology). Communication contact with the flightcrew may be concluded after transmission of the post-deicing/anti-icing communication and readiness for taxi-out has been announced.

- a. During deicing/anti-icing operations with engines-on, both verbal and visual communications shall be utilized, and positive control maintained during the deicing/anti-icing operation in accordance with ARP5660. General instructions: The deicing/anti-icing operator and/or airport authority must ensure that all necessary information regarding operation of the off-gate/CDF/DDF site is published and available to flight crews. This information shall be included within the deicing/anti-icing operator's and/or airport authority's local procedures documentation and be made available to air operators and flight crews (e.g., it can be included as part of flight release documentation, etc.). This information should also be published in applicable state



aeronautical navigation documents/publications. This information shall include, at a minimum:

- i. The location of and standard taxi routing to, within, and from the deicing/anti-icing site.
 - ii. How to coordinate the deicing/anti-icing operation.
 - iii. How to communicate before, during, and after the deicing/anti-icing operation.
 - iv. How taxi-and-stop guidance is provided to the flightcrew (e.g., VHF, MBs, etc.).
 - v. Any unique requirements or procedural differences affecting the flightcrew and/or flightcrew/groundcrew interface.
- b. Responsibilities: The responsibility to conduct a contamination check before dispatch rests with trained and qualified personnel. If the contamination check was performed by a person different than the flightcrew, the results of the contamination check must be provided to the flightcrew via verbal or visual (written or electronic) means. Subsequently, the flightcrew is responsible for acquiring the proper treatment. After treatment, the treated surfaces and components must be checked by a trained and qualified staff (see Section 11) and the post-deicing/anti-icing report must be given to the flightcrew (see 8.4). Subsequently, the flightcrew is responsible for the airworthiness of the aircraft.
- c. Emergency procedures: Whether conducting deicing/anti-icing operations at a remote location or at a centralized deicing/anti-icing facility, local procedures shall be established to ensure that both aircraft and ground emergencies are handled safely, expeditiously, and are coordinated with the local emergency plan.

11.4.8.1 Normal Operations with Running Engines

Circumstances	Crew	Phraseologies
1. Prior to de-icing/anti-icing, groundcrew will contact the flightcrew to advise:	a. Groundcrew	a. (aircraft identification or call sign) CONFIRM BRAKES SET, AIRCRAFT CONFIGURED AND TREATMENT REQUIRED
	b. Flightcrew	b. [AFFIRM] BRAKES SET, AIRCRAFT CONFIGURED, REQUEST (specify treatment requirements including surfaces to be treated, fluid type(s), de-icing only, manual de-icing methods (i.e., forced air (where available and use is authorized), anti-icing only or de-icing/anti-icing (two-step ("HOLDOVER REQUIRED")), etc.)
	c. Groundcrew	c. HOLD POSITION, DE-ICING STARTS NOW, [MONITOR THE (visual positive hold control method)] ¹ Note: ¹ Required for engines-on de-icing only where visual positive hold control is utilized.



Circumstances	Crew	Phraseologies
	d. Flightcrew	d. HOLD POSITION, [MONITOR THE (visual positive hold control method))]¹ Note: ¹Required for engines-on de-icing only where visual positive hold control is utilized.



Circumstances	Crew	Phraseologies
2. On completion of the de-icing/anti-icing procedure , groundcrew will contact the flightcrew to advise:	a. Groundcrew	a. <i>(aircraft identification or call sign)</i> DE-ICING COMPLETE, <i>(name of final fluid type applied)</i>¹ Note: ¹ Omit fluid type information if de-icing was solely performed using a manual method. b. <i>(fluid manufacturer, brand/trade name), mixture ration (in percent)</i>² Note: ² These components are required for anti-icing with Type II, III and IV fluids only. Omit if one-step de-icing procedure was performed or if de-icing was solely performed using a manual method. c. ANTI-ICING BEGAN AT <i>(HH:MM (local time))</i>³, POST-DE-ICING CHECK COMPLETED, DE-ICING⁴ PERSONNEL AND EQUIPMENT ARE SAFELY AWAY. Note: ³ Where a de-icing only procedure was performed, replace this element with: "HOLD OVER TIMES DO NOT APPLY". Note: ⁴ In locations where deicing takes place exclusively at designated deicing facilities (i.e., CDFs, DDFs, etc.), "DEICING" can be omitted from this element where no other groundcrew personnel or ground support equipment are within the equipment restraint area (ERA) or within the aircraft footprint or expected to be within these areas. d. HOLD POSITION AND CONTACT <i>(departure control/advisory position (i.e. ATC) or groundcrew (as applicable))</i> FOR <i>(departure method, i.e., taxi, pushback, etc.)</i>



Circumstances	Crew	Phraseologies
		<u>DEICING ONLY PROCEDURE - MANUAL METHOD phraseology example:</u> <i>"AIRLINE 123, DEICING COMPLETE, HOLDOVER TIMES DO NOT APPLY, POST-DE-ICING CHECK COMPLETED, DE-ICING PERSONNEL AND EQUIPMENT ARE SAFELY AWAY, HOLD POSITION AND CONTACT PAD CONTROL ON 131.17 FOR TAXI."</i> <u>DEICING ONLY PROCEDURE - ADF METHOD phraseology example:</u> <i>"AIRLINE 123, DE-ICING COMPLETE, TYPE I, HOLDOVER TIMES DO NOT APPLY, POST-DE-ICING CHECK COMPLETED, DE-ICING PERSONNEL AND EQUIPMENT ARE SAFELY AWAY, HOLD POSITION AND CONTACT GROUND CREW FOR PUSH AND START."</i> <u>DEICING/ANTI-ICING or ANTI-ICING ONLY PROCEDURE phraseology example:</u> <i>"AIRLINE 123, DE-ICING COMPLETE, TYPE IV, ACME CLEAN GREEN 75%, ANTI-ICING BEGAN AT 14:35, POST DE-ICING CHECK COMPLETED, DE-ICING PERSONNEL AND EQUIPMENT ARE SAFELY AWAY, HOLD POSITION AND CONTACT GROUND ON 121.9 FOR TAXI".</i>
	b. Flightcrew	<i>HOLD POSITION AND CONTACT (departure control/advisory position (i.e ATC) or groundcrew (as applicable) FOR (departure method, i.e. taxi, pushback, etc.)</i>



11.4.8.2 Abnormal Occurrences

Circumstances	Crew	Phraseologies
1. For a declared emergency, mayday or pan pan Note: When an urgency, distress, or other emergency call has been received or declared by an aircraft or de-icing equipment during de-icing operations (transmitted to all stations by the groundcrew), Further guidance to be provided after these transmissions have taken place.	a. Groundcrew	For aircraft (transmitted by groundcrew): a. EMERGENCY, EMERGENCY, EMERGENCY, ALL AIRCRAFT STOP, HOLD POSITION For de-icing equipment (transmitted by groundcrew): b. EMERGENCY, EMERGENCY, EMERGENCY, ALL TRUCKS STOP DE-ICING, PROCEED TO THE <i>(identify location based on local operation (i.e. safety zone, predetermined safety area, equipment staging area, etc.))</i> AND STANDBY FOR FURTHER
2. For de-icing equipment proximity sensor activation (physical)	a. Groundcrew	a. A SAFETY PROXIMITY SENSOR <i>(identify location on the de-icing equipment)</i> HAS BEEN ACTIVATED ON THE <i>(specify specific location on the aircraft)</i>, CONDUCTING INITIAL CHECK, STANDBY FOR FURTHER INFORMATION
	b. Flightcrew	b. ROGER, STANDING BY FOR FURTHER INFORMATION
	c. Groundcrew	c. <i>(title of individual (role) that performed check (other than the de-icing operator that made contact)</i> HAS PERFORMED A VISUAL CHECK ON THE AFFECTED AREA <i>(provide results of the check (e.g. there is no visual damage detected or damage is suspected or present))</i>, ADVISE YOUR INTENTIONS.



Circumstances	Crew	Phraseologies
3. Engine inlet contamination has been detected/observed after de-icing/anti-icing has commenced Note: Applicable to locations where engines-on de-icing/anti-icing is performed.	a. Groundcrew	a. CONTAMINATION HAS BEEN DETECTED IN YOUR ENGINE INLET(S), <i>indicate both or specific engine number(s) and describe contamination details</i>, GROUNDCREW CAN REMOVE THIS CONTAMINATION ONSITE WITH ENGINE SHUTDOWN USING (<i>advise specific removal method (s)</i>), ADVISE YOUR INTENTIONS
4. Contamination observed after completion of de-icing/anti-icing and release of aircraft Note: If unable to contact the flightcrew, contact must be made to Air Traffic Control (ATC) (i.e. ground, tower, etc) or on the maneuvering frequency (in the absence of ATC services).	a. Groundcrew	a. CONTAMINATION WAS OBSERVED (<i>describe area (i.e., within the flaps tracks)</i>), RECOMMEND YOU RETURN TO (<i>specify location (i.e. the CDF, de-icing pad/bay, stand/gate, etc.)</i>) FOR RETREATMENT
	b. Flightcrew	b. ROGER WILL RETURN TO (<i>location specified</i>) FOR RETREATMENT

11.4.8.3 Interrupted Operations

A deicing/anti-icing treatment should be continuous and as short as possible. If a treatment is interrupted or flightcrew troubleshooting, (for example, a truck runs out of fluid), parties involved in the operations shall be immediately informed by stating:

- The reason for interruption
- The actions to be taken (in consultation with other party flightcrew/groundcrew)
- The expected time of delay, and
- Statement that deicing/anti-icing is incomplete and to standby



Circumstances	Crew	Phraesologies
1.a. Interrupted operations (groundcrew related) Note: the de-icing operation has stopped and is incomplete	a. Groundcrew	a. <i>(reason for interruption (i.e. truck inoperative, low in fluid, etc.))</i> b. <i>(actions to be taken to resolve (in consultation with the flightcrew))</i> c. <i>(expected time of delay)</i> d. DE-ICING IS INCOMELETE, STANDBY FOR FURTHER TREATMENT
1.b. Before continuing treatment	b. Groundcrew	e. <i>(confirm the treatment to be carried out including any surfaces requiring retreatment), CONFIRM BRAKES SET ANS AIRCRAFT CONFIGURED</i>
	c. Flightcrew	f. BRAKES SET, AIRCRAFT CONFIRGURED, <i>(specify any deviation from treatment requirements previously requested or any new or supplemental requests)</i>
	d. Groundcrew	g. HOLD POSITION, DE-ICING STARTS NOW, (MONITOR THE <i>(visual positive hold control method)</i>)¹ Note: ¹ Required for engines-on de-icing only wherevisual positive hold control is utilized.
	e. Flightcrew	h. HOLD POSITION, (MONITOR THE <i>(visual positive hold control method)</i>)¹ Note: ¹ Required for engines-on de-icing only where visual positive hold control is utilized.



Circumstances	Crew	Phraesologies
2.a. Interrupted or cancelled operations (flightcrew related)	a. Flightcrew	a. STOP DE-ICING, (<i>specify reason</i>), (<i>specific intentions (including if relocating elsewhere on the airfield)</i>), ADVISE WHEN DE-ICING¹ PERSONNEL AND EQUIPMENT ARE SAFELY AWAY FROM THE AIRCRAFT Note: ¹ In locations where de-icing takes place exclusively at designated de-icing facilities (i.e. CDF's, DDFs, etc.), "DE-ICING" can be omitted from this element where no other groundcrew personnel or GSE are within the ERA, within the aircraft footprint, or expected to be within these areas.
	b. Groundcrew	b. ROGER, STOP DE-ICING, HOLD POSITION AND STANDBY, EQUIPMENT IS PROCEEDING TO THE (<i>identify location based on local operation (i.e. safe zone, predetermined safety area, equipment staging area, etc.)</i>)



Circumstances	Crew	Phraesologies
	c. Groundcrew	c. DE-ICING IS INCOMPLETE, <i>(advise de-icing status)</i>, DE-ICING¹ PERSONNEL AND EQUIPMENT ARE SAFELY AWAY, HOLD POSITION AND CONTACT <i>(departure control/advisory position (i.e., ATC) or groundcrew (as applicable) FOR (departure method (i.e., taxi, pushback, etc.))</i>² Note: ¹ In locations where de-icing takes place exclusively at designated de-icing facilities (i.e. CDFs, DDFs, etc.), DE-ICING can be omitted from this element where no other groundcrew personnel or GSE are within the ERA or within the aircraft footprint or expected to be within these areas. ² Omit departure method element if aircraft is remaining in position and not maneuvering elsewhere on the airfield.
	d. Flightcrew	d. ROGER, DE-ICING IS INCOMPLETE, HOLD POSITION AND CONTACT <i>(departure control/advisory position (i.e. ATC) or groundcrew (as applicable)) FOR (departure method(i.e. taxi, pushback, etc.))</i>¹ Note: ¹ Omit departure method element if aircraft is remaining in position and not maneuvering elsewhere on the airfield.

11.5 General Aircraft Requirements After De-Icing/Anti-Icing

Following the de-icing/anti-icing procedures and prior to take-off, the critical aircraft surfaces shall be free of all frost, snow, slush, or ice accumulations in accordance with the following requirements.

11.5.1 Wings, Tails, and Control Surfaces

Wings, tails, and control surfaces shall be free of frost, snow, slush, or ice unless the aircraft manufacturer and state regulatory authority permits that a coating of frost may be present on



wing lower surfaces in areas cold soaked by fuel between forward and aft spars; and/or on upper wing surfaces within defined areas, in accordance with the aircraft manufacturer's published documentation.

Note: Except for frost due to cold-soaked fuel as mentioned above, and unless otherwise specified in the Aircraft Flight Manual or other aircraft manufacturer's documentation, contamination is not acceptable on: the upper or lower surfaces of the horizontal stabilizer and elevator/tab; strakes; inboard, outboard, upper, and lower surfaces of the wing and wing tip devices; and either side of the vertical stabilizer and rudder.

11.5.2 Pitot Tubes, Static Ports, and All Other Air Data Sensing Devices

Pitot tubes, static ports, angle of attack sensors and other air data sensing devices shall be free of frost, snow, slush, ice, and fluid.

Note: Ice ridges can form on different areas of the aircraft, especially on the nose of the fuselage while on ground. These ridges will disrupt air flow into the air data sensing devices and which can result in false measurements. All contamination shall be removed from these areas.

11.5.3 Engines

Engine inlets (including the leading edge), exhaust thrust reversers, cooling intakes, control system probes, vortex dissipators and ports shall be free of frost, snow, slush, or ice. Engine fan blades, propellers (as appropriate), and spinner cones shall be free of frost, snow, slush, or ice, and shall be free to rotate.

11.5.4 Air Conditioning Inlets and Outlets

Air inlets, outlets, pressure-release valves, and outflow valves shall be free of frost, snow, slush, or ice, and shall be unobstructed.

11.5.5 Landing Gear and Landing Gear Doors

Landing gear and landing gear doors shall be unobstructed and free of frost, snow, slush, or ice. Do not spray de-icing/anti-icing fluids directly onto wiring harnesses and electrical components (receptacles, junction boxes, etc.,) brakes and wheel components.

11.5.6 Fuel Tank Vents

Fuel tank vents shall be free of frost, snow, slush, or ice.

11.5.7 Fuselage

The fuselage shall be free of ice, slush, and snow. In accordance with the aircraft manufacturer's documentation, frost may be present on the fuselage for take-off within specified amounts provided that no other forms of contamination are present, and inlets, outlets, and other devices (as identified by the aircraft manufacturer) are free of contamination.



11.5.8 Flight Deck Windows and Nose or Radome Area

Any significant deposits of frost, snow, slush, or ice on the flightdeck windows or on areas forward of the flightdeck windows shall be removed prior to departure. Heated flightdeck windows will not normally require de-icing. Any forward area from which fluid may flow back onto flightdeck windows during taxi or subsequent take-off shall be free of fluid prior to departure.

If SAE Type II, III, or IV fluid has been used, all traces of the fluid on flight deck windows shall be removed prior to departure, with particular attention paid to windows fitted with wipers. Thickened-fluid (SAE Type II, III, or IV) can be removed by using a diluted Type I mixture, water (where it has been determined that refreezing will not occur), a manual method (ensuring that windscreen heat is turned off), or another cleaner as approved by the aircraft manufacturer.

Note: During falling precipitation, heated windows may cause liquid effluent to freeze near sensors, requiring de-icing.

11.5.9 Dried Thickened Fluid Residues When the Aircraft Has Not Been Flown After Anti-Icing

Dried thickened-fluid (SAE Type II, III, or IV) residues can occur when surfaces have been de-iced/anti-iced but the aircraft has not imminently been flown and has not been subject to precipitation. The fluid may then have dried on the surfaces. In such situations, the aircraft must be checked for dried residues from thickened fluids and cleaned as necessary.

11.5.10 Special Maintenance Considerations

Proper account should be taken of the possible side-effects of fluid use. Such effects may include, but are not necessarily limited to, dried and/or rehydrated residues and the removal of lubricants.

11.6 Checks

The decision whether de-icing/anti-icing is required may be determined when one or more of the following circumstances is applicable:

- a. An aircraft is parked overnight and subjected to ice or snow conditions
- b. When ice has accumulated in flight (inflight ice accretion)
- c. During taxi to the gate occurring in icing and/or snow conditions
- d. Following an inspection or check by the flight crew at a gate
- e. As indicated by a check by a qualified de-icing/anti-icing person
- f. Active frozen or freezing falling precipitation is occurring
- g. When cold soaked fuel has created ice or frost on critical surfaces or components
- h. When aircraft has been de-iced/anti-iced some time prior to flight crew arrival

11.6.1 Contamination Check to Establish the Need for De-icing

Contamination Check shall include all areas mentioned in 11.5.1 through 11.5.8 and any other surfaces and components of the aircraft as indicated by the aircraft manufacturer and shall be performed from points offering sufficient visibility of these parts (e.g., from the de-icing/anti-icing vehicle, a ladder or any other suitable means of access as necessary). Any contamination found on the surfaces or components of the aircraft that are critical to safe



flight shall be removed by a de-icing treatment; this shall be followed by anti-icing treatment when required

Where an aircraft has been de-iced and/or anti-iced some time prior to the arrival of the flight crew, an additional 'Contamination Check' shall be carried out prior to departure, in order to establish whether further treatment is required. Requests for de-icing/anti-icing shall specify the parts of the aeroplane requiring treatment.

Note 1: For specific aeroplane types additional requirements exist e.g., special clear ice checks, such as tactile checks on wings. These special checks are not covered by the contamination check. Aeroplane operators shall make arrangements for suitably qualified personnel to meet these requirements.

Note 2: See contract for details.

11.6.2 Tactile Check

The need for a tactile check shall be determined by the aircraft manufacturer, air operator and/or local regulator.

11.6.3 Post De-icing/Anti-Icing Check

An aircraft shall not be dispatched after a de-icing/anti-icing treatment until the aircraft has received the following visual check by Qualified Staff. This check shall include wings, horizontal stabilizers (both lower and upper surfaces), vertical stabilizer, and fuselage, including pitot heads, static ports temperature sensors and angle of attack sensors. This check shall also include any other parts of the aircraft on which a de-icing/anti-icing treatment was performed according to the requirements identified during the contamination check.

The post de-icing/anti-icing check shall be performed from points offering sufficient visibility of all treated surfaces (e.g., from a de-icing/anti-icing vehicle, ladder, or other suitable means of access). Any contamination found shall be removed by further de-icing/anti-icing treatment, and the post de-icing/anti-icing check shall be repeated. Before take-off, the flight crew must ensure that they have received confirmation that this post de-icing/anti-icing check has been accomplished.

Note 1: For specific aircraft types, additional requirements exist, e.g., special clear-ice checks, such as tactile checks on wings. These special checks are not covered by the Post De-icing/Anti-icing Check. Aircraft operators shall make arrangements for suitably Qualified Staff to meet any special check requirements.

Note 2: During engine(s)-on deicing operations, the access/view to certain aircraft components is restricted and cannot be checked (e.g., Inboard underwings between the running wing mounted engines and the fuselage). These areas should be inspected during the pre-flight contamination check and if treatment is required, advise the deicing personnel for further coordination and removal.

Note 3: See contract for details.

When the de-icing/anti-icing service provider performs the de-icing/anti-icing treatment as well as the Post De-icing/Anti-icing Check, it may either be performed as a separate check or



incorporated into the de-icing/anti-icing operation as specified below. The de-icing/anti-icing service provider shall specify the method used in his winter procedures, where necessary:

- a. As the de-icing/anti-icing treatment progresses, the de-icing/anti-icing sprayer will closely monitor the surfaces receiving treatment in order to ensure that all forms of frost, snow, slush, or ice (with the exception of cold-soaked fuel frost on the lower surface of wings and light frost on the fuselage, which may be allowed per the aircraft manufacturer and state regulatory authority) are removed and that upon completion of anti-icing treatment, these surfaces are fully covered with an adequate layer of anti-icing fluid.
- b. When the request for de-icing/anti-icing did not specify the fuselage, a visual check of the fuselage shall be performed at this time, in order to confirm that it has remained free of contamination (with the possible exception of light frost, which may be allowed as per the aircraft manufacturer and state regulatory authority). If contaminated, advise flightcrew to consider its removal.
- c. Any evidence of contamination that is outside the defined limits shall be reported to the flight crew immediately and be removed by further de-icing/ anti-icing treatment. Then the post de-icing/anti-icing check shall be repeated.
- d. Once the treatment has been completed, the De-icing Operator will conduct a close visual check of the surface where the treatment commenced, in order to ensure that it has remained free of contamination.

11.6.4 Pre Take-off Check

The flight crew shall continually monitor the weather conditions after the de-icing/anti-icing treatment. Prior to take-off a flight crew member shall assess whether the applied holdover time is still appropriate and/or if untreated surfaces may have become contaminated. This check is normally performed from inside the flight deck.

11.6.5 Pre Take-off Contamination Check

This is a check of the critical surfaces for contamination. This check shall be performed when the condition of the critical surfaces of the aircraft cannot be effectively assessed by a pre take-off check or when the holdover time has been exceeded. This check is normally performed outside of the aircraft. The alternate means of compliance for a pre take-off contamination check is to perform a complete de-icing/anti-icing re-treatment of the aircraft.

11.6.6 Flight Control Check

A functional flight control check using an external observer may be required after de-icing/anti-icing depending upon aeroplane type (see relevant manuals). This is particularly important in the case of an aeroplane that has been subjected to an extreme ice or snow covering.

11.7 Aircraft Ground De-icing/Anti-icing Methods

11.7.1 General Comments

These procedures specify the methods for de-icing and anti-icing of aircraft on the ground to provide safe take-off. When aircraft surfaces are contaminated by frozen moisture, they shall be de-iced prior to dispatch with fluids, mechanical methods, alternative technologies, or combinations thereof. When freezing precipitation exists and the precipitation is adhering to



the surfaces at the time of dispatch, aircraft surfaces shall be de-iced/anti-iced with fluids. If both de-icing and anti-icing are required, the procedure may be performed in one or two steps. The selection of a one- or two-step process depends upon weather conditions, available equipment, available methods (generally the use of de-icing and anti-icing fluids), and the holdover time needed. If a one-step procedure is used, then both 11.7.4 and 11.7.5 apply for guidance regarding fluid limitations.

CAUTION! Slippery conditions can exist on the ground or equipment following the de-icing/anti-icing treatment.

11.7.2 Pre De-icing Process to Be Done Prior to De-icing/Anti-Icing

Companies may employ a pre de-icing process prior to the main de-icing process, in order to remove large amounts of frozen contamination (e.g., snow, slush, or ice), in order to reduce the quantity of glycol-based de-icing fluid that is needed. This pre de-icing process may be performed with various means (e.g., infrared technology, brooms, forced air, fluid injected into forced air, heat, heated water, heated fluids with negative buffer). If the pre de-icing procedure is used, make sure that the subsequent de-icing process removes all frozen contamination including the contamination that may have formed on surfaces and/or in cavities due to the pre de-icing procedure.

11.7.3 De-icing by fluids

Frost, snow, slush, or ice may be removed from aircraft surfaces by the use of de-icing fluids. It is the responsibility of the De-icing Service Provider to ensure that all frozen deposits (with the possible exception of frost, which may be allowed as described in section 11.5) are removed from the specified surfaces during the de-icing process.

CAUTION! Consult aircraft maintenance manuals for limitations for the maximum application pressure, temperature, and the use of glycol versus non-glycol fluids.

11.7.4 Removal of Contaminants

For maximum effect, fluids shall be applied close to the surface to minimise heat loss. Fluid temperature and pressure should not exceed aircraft maintenance manual requirements. The heat in the fluid effectively melts any frost, as well as light deposits of snow, slush, and ice. Heavier accumulations require the heat to break the bond between the frozen deposits and the structure; the hydraulic force of the fluid spray is then used to flush off the contamination. The de-icing fluid will prevent re-freezing for a period of time depending on aircraft skin and OAT, the fluid used, the mixture strength, and the weather.

11.7.4.1 Removal of Frost and Light Ice

A general procedure consisting of a nozzle setting that gives a solid cone (fan) spray should be used. This ensures the largest droplet pattern available, thus retaining the maximum heat in the fluid. Providing the hot fluid is applied close to the aircraft skin, a minimal amount of fluid will be required to melt the deposit.



11.7.4.2 Removal of Snow

A nozzle setting sufficient to flush off deposits and minimise foam production is recommended. Foam could be confused as snow. The method adopted will depend on the equipment available and the depth and type of snow; i.e., light and dry or wet and heavy. In general, the heavier the deposits of snow or ice, the heavier the fluid flow that will be required to remove it effectively and efficiently from the aircraft surfaces. For light deposits of both wet and dry snow, similar procedures as for frost removal may be adopted. Wet snow is more difficult to remove than dry snow and unless deposits are relatively light, the selection of a high fluid flow will be found to be more effective. Under certain conditions it will be possible to use the heat, combined with the hydraulic force of the fluid spray, to melt and subsequently flush off frozen deposits. However, where snow has bonded to the aircraft skin, the procedures detailed in 11.7.5.3 should be utilized. Heavy accumulation of snow will always be difficult to remove from aircraft surfaces and vast quantities of fluid will invariably be consumed in the attempt. Under these conditions, serious consideration should be given to removing the majority of the snow using a pre-step process before attempting a normal pre-deicing procedure.

11.7.4.3 Removal of Ice

Heated fluid shall be used to break the ice bond. The high thermal conductivity of metal skin is utilized when a stream of hot fluid is directed at close range onto one spot, until the surface is just exposed. This will then transmit the heat laterally in all directions raising the temperature above the freeze point and thereby breaking the adhesion of the frozen mass with the aircraft surface. Non-metallic surfaces (e.g., composites) have a lower heat transfer than metallic surfaces. De-icing may take longer and more fluid may be needed. By repeating this procedure a number of times the adhesion of a large area of frozen snow or glazed ice can be broken. The deposits can then be flushed off with either a low or high flow, depending on the amount of the deposit.

11.7.4.4 Cold Dry Snow or Ice Crystals

Cold dry snow or ice crystals, in very cold conditions [generally below -10 °C (14°F)], may not adhere to a cold dry aircraft nor its critical surfaces. Under these conditions, it may swirl as it blows across the surfaces, making it evident it is not adhering. Therefore, the critical surfaces remain free of adhering contaminants.

However, if frozen contamination has accumulated on critical surfaces, it must be adequately removed. It cannot be assumed that these accumulations will blow off during takeoff.

During cold dry conditions, the air operators will need take into consideration the following elements:

1. Refueling with fuel warmer than the wing skin temperature may create a condition whereby previously non-adhering precipitation may adhere to the wing surfaces.
2. The use of heated deicing fluids may increase the risk of cold dry snow or ice crystals to adhere to critical surfaces post application. Under such operational conditions, an anti-icing treatment might need to be considered.

CAUTION! A close monitoring of de/anti-icing fluid's LOUT is required to ensure a safe operation.



3. Monitor the location of heat-releasing equipment such as ground power units or bridges that may create conditions for non-adhering precipitation to start adhering to aircraft surfaces.
4. The location where the aircraft is parked might increase the risk for non-adhering precipitation to start adhering (e.g., one wing in the sun, a building obstructing the wind, etc.).
5. Operations in close proximity to other aircraft may cause snow, ice particles, or moisture to be blown onto critical aircraft components; or can cause dry snow/ice crystals to melt and refreeze on aircraft critical surfaces.

If it cannot be adequately demonstrated that cold dry snow or ice crystals is not adhering or accumulating, then it must be removed before takeoff.

CAUTION! Aircraft with rear mounted engines are more susceptible to ingest frozen accumulation that might cause damage or engine failure.

11.8 Removal Of Local Area Contamination

When no precipitation is falling or expected, and when there is no active frost a “local area” de-icing may be carried out under the below mentioned or similar conditions. In some cases a full or complete de-icing is not necessary. When the presence of frost and/or ice is limited to localised areas on the surfaces of the aircraft and no holdover time is applicable, only the contaminated areas will require treatment.

This type of contamination will generally be found on the wing and/or stabilizer leading edges or in patches on the wing and/or stabilizer upper surfaces. Spray the affected area(s) with a heated fluid/water mixture suitable for a one-step procedure. Both sides of the wing and/or stabilizer upper surfaces shall receive the same amount and type of fluid at the same concentration; the same area in the same location on each wing/stabilizer shall be sprayed including when conditions would not indicate the need for treatment of both wings/stabilizers.

It is the responsibility of the De-icing Service Provider to ensure that the treatment is performed symmetrically and that on completion all frozen deposits have been removed. After this check has confirmed that the areas are clean the following statement shall be given to the flight crew: “Local area de-icing only. Holdover times do not apply”

11.8.1 General De-icing Fluid Application Strategy

For effective removal of snow and ice the following techniques should be adopted. Aircraft may require unique procedures to accommodate design differences, aircraft manufacturer's instructions should be consulted. Ice, snow, or frost dilutes the fluid. Apply enough hot de-icing fluid to ensure that refreezing does not occur and all contaminated fluid is driven off. The application of de-icing fluid must be done in a pattern that ensures all contaminants on the aircraft are removed. The preferred method is to spray the aircraft from top to bottom

11.8.1.1 Wings, Horizontal Stabilizers, and Elevators

The direction of the spray shall be from the leading edge to the trailing edge. Caution must be used to ensure fluids is not sprayed directly into any vertical tail or control surface openings.



CAUTION! Wing surface temperatures can be considerably below ambient temperature due to contact with cold fuel and/or proximity to large masses of cold-soaked metal. Use a fluid/water mixture with a higher concentration of glycol than is usually required by the OAT to prevent refreezing.

11.8.1.2 Lower Wing Surface (under side of wing) De-icing Procedures

Treatments must be symmetrical and may include flaps and lower surfaces. Spray the affected areas with a heated fluid/water mixture suitable for a onestep procedure as required, (see Caution below), and then spray the same areas under the other wing. Both wings must be treated identically (same areas, same amount and type of fluid, same mixture strength), even if the frozen contamination is only present under one wing. Holdover times do not apply to underwing treatments.

It is the responsibility of the De-icing Service Provider to ensure that the treatment is performed symmetrically and that on completion all frozen deposits (with the possible exception of frost, which may be allowed), have been removed. When it is confirmed that the treated areas are clean, the following statement shall be given to the flight crew: "Underwing de-icing only, holdover times do not apply"

CAUTION! Underwing frost and ice are usually caused by very cold fuel in the wing tanks. Use a fluid/water mixture with a higher concentration of glycol than is usually required by the OAT to prevent re-freezing.

11.8.1.3 Vertical Surfaces

Start at the top and work down to the base of any vertical surfaces, spraying from forward to aft in the vicinity of control surfaces.

11.8.1.4 Fuselage

Spray the fluid along the top centreline and then towards the outboard of the fuselage. Ensure that it is clear of ice, snow, and slush in accordance with the aircraft manufacturers' manuals. Hoarfrost may be allowed in accordance with the aircraft manufacturers' manuals.

11.8.1.5 Nose/Radome Area and Flight Deck windows

Type I fluid/water mixture or manual methods of removal (such as squeegees or brushes) are recommended.

When thickened fluids are used, avoid spraying near the flightdeck windows, as fluid can cause a severe loss of visibility. Any thickened fluid remaining on the nose areas where it could blow back onto the flightdeck windows should be removed prior to departure, using a diluted type I fluid, squeegees or equivalent. If flight deck windows are contaminated with thickened fluids use water or an approved windshield cleaner (use of a low windscreen washing fluid is recommended when OAT is at or below 0 °C (32 °F)).

CAUTION! Prior to cleaning of the flight deck windows ensure that the window heating system is switched off.



11.8.1.6 Landing Gear and Wheel Bays

Do not spray de-icing fluid directly onto wheels and brakes. Remove all ice and snow from the landing gear; paying particular attention to uplocks, downlocks, sensors, door mechanisms, gravel deflectors and steering systems.

Note: It may be possible to mechanically remove accumulations such as blown snow, however, where deposits have bonded to surfaces they can be removed by the application of hot air.

11.8.1.7 Engines

Deposits of snow should be mechanically removed from engines prior to departure. Any frozen deposits that may have bonded to either the lower surface of the intake or the fan blades including the rear side, or propellers, may be removed by hot air or other means recommended by the engine manufacturer. If use of de-icing fluid is permitted, do not spray directly into the engine core.

11.8.1.8 B737-800 Tail Cone Department

When spraying de-icing fluid on the tail cone area of B737 aircraft (fin, stabiliser), it is important to avoid excessive fluid entering the tail cone compartment. Excessive de-icing fluid in the tail cone compartment can cause flying controls to freeze in flight. When de-icing the tail area, avoid spraying fluid towards the cut out in the fuselage skin that allows up / down movement of the stabiliser

11.9 Anti-Icing

11.9.1 Anti-Icing by Fluids

Frost, snow, slush, or ice will, for a period of time, be prevented from adhering to or accumulating on aircraft surfaces by the application of anti-icing fluids.

This section provides procedures for the use of anti-icing fluids.

- a. Required Usage: Anti-icing fluid shall be applied to the aircraft surfaces when freezing rain, snow, or other freezing precipitation may adhere to the aircraft at the time of dispatch.
- b. Optional Usage: Anti-icing fluid may be applied to clean aircraft surfaces at the time of arrival (preferably before unloading begins) on short turnarounds during freezing precipitation, and on overnight aircraft. This will minimize ice accumulation prior to departure and often makes subsequent de-icing easier.

CAUTION! This practice has the potential to build up dried residues. A Work Order will be issued to aircraft that have over 20 de-icings within a 3 month period. The requisite specific areas of the aircraft are checked and if residue is found is must be cleaned out and the areas lubricated.

In anticipation of weather conditions that require de-icing, anti-icing fluid may be applied to clean aircraft surfaces prior to aircraft being exposed to the freezing precipitation. This will minimize the possibility of snow and ice bonding or reduce the accumulation of frozen precipitation on aircraft surfaces and facilitate subsequent de-icing.



Prior to flight, the aircraft must be de-iced, unless the integrity of the fluid can be ensured. Deice in accordance with 11.15; whenever possible, to reduce the potential for dried residue build up (second caution of 11.13.1).

Note: Dehydration water evaporation of Type II, III, and IV fluid can negatively impact the fluid performance.

For effective anti-icing an even layer of sufficient thickness of fluid is required over the prescribed aircraft surfaces which are free of frozen deposits. For maximum anti-icing protection, undiluted SAE Type II, III, or IV fluid should be used. The high fluid flow pressure and flow rates normally associated with deicing are not required. When possible, pump speeds and nozzle spray patterns should be adjusted accordingly.

Note: SAE Type I fluids provide limited holdover effectiveness when used for anti-icing purposes.

CAUTION! acetate- or formate-based fluids when used for deicing:

- May significantly shorten the holdover times of Type II, III, and IV fluids when used in combination with these fluids.
 - May cause corrosion on aircraft materials.
-

Refer to aircraft manufacturers documentation, fluid manufacturer recommendations and SAE publications for more information.

At certain airports, anti-icing procedures exist, whereby, if snow, freezing drizzle, or light freezing rain is forecast, clean aircraft may be sprayed with cold, undiluted anti-icing fluid in order to prevent snow or ice build-up on the airframe.

The de-icing supervisor will contact the TUI Line Engineer. Permission to apply this procedure will come under the responsibility of the TUI Line Engineers when the following criteria are met:

- a. Planned departure is less than 8 hours
- b. Temperature is forecast to remain between 0°C and -25°C
- c. Snow, freezing drizzle, or light freezing rain is forecast. No other precipitation or freezing fog forecast
- d. Aircraft is free from frost/ice/snow contamination
- e. Airport expected to be operational at STD

The anti-icing fluid will degrade after approximately 8 hours, by which time the aircraft will need to be de-iced, unless the ice or snow has melted.

11.10 Early De-Icing

At certain airports, and where certain conditions prevail, early de-icing of the aircraft may take place before crew report time in order to reduce congestion and permit on time departures. Before early de-icing takes place, the de-icing supervisor should call the local TUI line engineers to ensure that the aircraft is serviceable, and that it is expected to operate as planned.

The Early De-Icing Procedure is as follows:



- a. On receipt of a weather forecast indicating frost, snow, ice, freezing fog, or freezing rain the service provider should contact the local engineering line
- b. station to advise them of the weather warning, duration and expected temperature range.
- c. Before early de-icing an aircraft, the service provider must make contact the local engineering line station to advise them of their intention to de-ice.
- d. It is the responsibility of the line managers to;
 1. Provide permission to the service provider that de-icing can take place.
 2. Ensure that the aircraft is configured for de-icing

If engineers cannot be contacted, then early de-icing may take place providing the following criteria are met:

- a. Ice or frost is on the wings or airframe
- b. The current weather is frost only
- c. There is no precipitation forecast between now and the flight STD
- d. The calculated holdover time will still be current at STD
- e. The airport is operational
- f. The aircraft is configured for de-icing

If the ambient conditions are outside any of these parameters, or there is no suitably qualified personnel to configure the aircraft, no action will be taken by the handling agent until requested by the crew.

It is important that TUI line engineering are contacted prior to early de-icing to confirm that the aircraft is configured for de-icing (737), and that no engineering work is planned or currently being carried out on the aircraft intended for early de-icing.

If the ambient conditions are outside any of these parameters, no action will be taken by the handling agent until requested by the crew.

After early de-icing has been completed, the de-icing supervisor will leave a de-icing declaration form on the flight deck, or with the dispatcher with details of the times and mixture used. The commander will sign the certification and hand a copy to the agent.

Note: When crew are on board, service provider must contact crew to advise them of their intentions to de-ice.

11.10.1 Early De-icing Checklist

- a. Ice or frost is on the wings or airframe
- b. The current weather is frost only
- c. There is no precipitation forecast between now and the flight STD
- d. The calculated holdover time will still be current at STD
- e. The airfield is operational
- f. The aircraft is configured for de-icing i.e. B737 engineers must be contacted to ensure stabilisers have been correctly set for de-icing.
- g. You have made contact with local TUI engineers

It is Important that TUI line engineering are contacted prior to early de-icing to confirm that the aircraft is configured for de-icing (737), and that no engineering work is planned or currently being carried out on the aircraft intended for early de-icing.



11.11 Optional Anti-Icing

11.11.1 Anti-icing Checklist

Anti-icing checklist

1. Is snow, freezing drizzle, or light freezing rain forecast?
2. Is the aircraft “clean”?
3. Have local TUI engineers/ representative given approval for anti-icing?
4. Is the aircraft in a condition / configured to be anti-iced?
5. If the answer to all questions is YES, then the aircraft may be anti-iced

11.11.2 Anti-Icing Fluid Application Strategy

The spraying procedure should be continuous and as short as possible. Anti-icing should be carried out as near to the departure time as possible in order to utilize available holdover time. The anti-icing fluid shall be distributed uniformly and with sufficient thickness over all surfaces to which it is applied. In order to control the uniformity, all aircraft surfaces shall be visually checked during application of the fluid. Spray from the leading edge to the trailing edge on wings, horizontal, and vertical stabilizers.

To use Type I holdover times guidelines in all conditions, including active frost, an additional minimum of 1 L/m² (~2 gallons/100 ft²) of heated Type I fluid/water mixture must be applied to the surfaces after all frozen contamination is removed. This application is necessary to heat the surfaces, as heat contributes significantly to the Type I fluid holdover times. The Type I/ water mixture used for anti-icing must be selected so that the freezing point of the mixture is at least 10 °C below the OAT and heated so the nozzle temperature is at least 60 °C (140 °F).

For Type II, III, or IV fluids (non-Newtonian fluids), a sufficient amount is indicated by fluid just beginning to run off of the leading and trailing edges of horizontal surfaces. Apply sufficient fluid to achieve an even, uniform layer, typically achieved by using 1 to 3 L/m² (~2 to 6 gallons/100 ft²), depending on the type of non-Newtonian anti-icing fluid used.

Consult the fluid manufacturer for any applicable fluid specific application guidance.

Refer to local regulatory documents, such as the FAA Holdover Time Guidelines: Winter 20xx-20yy (annual publication) or to Transport Canada Holdover Time Guidelines: Winter 20xx-20yy (annual publication).

The following surfaces shall be treated as specified by the aircraft manufacturer's documentation:

- a. Wing upper surfaces including leading edges and upper control surfaces.
- b. Wing tip devices.
- c. Both sides of vertical stabilizer and rudder to receive anti-ice protection when freezing precipitation conditions exist. See 11.12 for more information about holdover time limitations when anti-icing with non-Newtonian fluids on vertical surfaces.
- d. Horizontal stabilizer upper surfaces including leading edges and elevator upper surfaces.
- e. When necessary, fuselage upper surfaces, dependent upon the amount and type of freezing precipitation (this is especially important on center-line engine aircraft).



CAUTION! Anti-icing fluids may not flow evenly over wing leading edges, horizontal, and vertical stabilizers. These surfaces should be checked to ensure that they are properly coated with fluid.

It is the responsibility of the deicing service provider to ensure that the surfaces mentioned above are free of frost, snow, slush, or ice prior to the start of the anti-icing treatment, and that on completion of the treatment, these surfaces are fully covered with an adequate layer of anti-icing fluid.

Note: SAE Type II, III, and IV fluids used for anti-icing purposes are normally applied unheated on clean aircraft surfaces, but they may be applied heated and diluted for a one-step procedure. Refer to the fluid manufacturer's recommendation.

11.12 Holdover Time

Holdover time is obtained by anti-icing fluids remaining on the aircraft surfaces. With a one-step procedure the holdover time begins at the start of the treatment and with a two-step procedure at the start of the second step (anti-icing). Holdover time will have effectively run out when frozen deposits start to form/accumulate on treated aircraft surfaces. Due to their properties, Type I heat transfer and the thin liquid wetting film, provides limited holdover time, especially in conditions of freezing precipitation. With this type of fluid no additional holdover time would be provided by increasing the concentration of the fluid in the fluid/water mixture. Type II, III, and IV fluids contain a thickening agent, which enables the fluid to form a thicker liquid wetting film on external aircraft surfaces. This film provides a longer holdover time especially in conditions of freezing precipitation. With this type of fluid, additional holdover time will be provided by increasing the concentration of the fluid/water mixture, with a maximum holdover time available typically from undiluted fluid.

Holdover time guidelines give an indication as to the time frame of protection that could reasonably be expected under conditions of precipitation. However, due to the many variables that can influence holdover time, these times should not be considered as minima or maxima as the actual time of protection may be extended or reduced, depending upon the particular conditions existing at the time, such as strong winds, jet blast, etc. Aircraft surfaces with steeper angles (e.g., vertical stabilizer, deployed flaps, etc.) might also have an effect on holdover times that needs to be considered. Holdover time guidelines are established and published by the FAA and TC. The responsibility for the application of this data remains with the user.

CAUTION! Heavy precipitation rates or high moisture content, high wind velocity, or jet blast may reduce holdover time below the lowest time stated in the range. Holdover time may also be reduced when aircraft skin temperature is lower than OAT. Therefore, the indicated times should be used only in conjunction with a pre take-off check.



CAUTION! Surface coatings including but not limited to waxes, are currently available that may be identified as ice phobic or hydrophobic, enhance the appearance of aircraft external surfaces and/or lead to fuel savings. Since these coatings may affect the fluid wetting capability and the resulting fluid thickness of de-icing/anti-icing fluids they have the potential to affect holdover time and aerodynamics. Test all surface coatings against AIR6232 to ensure they do not interfere with the performance of deicing/anti-icing fluids. For more information, consult the fluid and aircraft manufacturers.

11.13 Limits And Precautions

Applied fluids:

The freezing point depressant concentration of applied fluid must not exceed the highest freezing point depressant concentration (as measured by refractive index) at which the fluid met the aerodynamic acceptance test. For applicable values, refer to the fluid manufacturer's documentation.

Frost, snow, slush, or ice dilutes the fluid. Apply enough hot deicing fluid to ensure that refreezing does not occur, and all contaminated fluid is driven off.

Temperature Limits (see appropriate tables):

When performing two-step de-icing/anti-icing, the freezing point (FP) of the fluid used for the first step shall be at or below the OAT.

SAE Type I Fluids: The FP of the SAE Type I fluid mixture used for either one-step procedure or as a second step in the two-step operation shall be at least 10 °C (18 °F) below the OAT. In no case shall this temperature be lower than the LOU.T.

CAUTION! All Type I fluids supplied as concentrates for dilution with water prior to use shall not be used undiluted. For exceptions refer to fluid manufacturer's documentation.

CAUTION! All Type I fluids have a maximum concentration mix related to the aerodynamic acceptability. Refer to fluid manufacturer's documentation.

SAE Type II, III, and IV Fluids: The freeze point of SAE Type II, III, IV fluids used for either one-step de-icing/anti-icing or as the second step in a two-step treatment shall be at least 7 °C (13 °F) below OAT and not lower than the aerodynamic acceptability lower limit of the fluid.

Note: Type II, III, and IV fluids do not have a published holdover times below -25 °C (-13 °F) in active frost conditions. Refer to local regulatory documents, such as the FAA Holdover Time Guidelines: Winter 20xx-20yy (annual publication) or to Transport Canada Holdover Time Guidelines: Winter 20xx-20yy (annual publication) for more information.

11.13.1 Fluid Application Limits

Under no circumstances shall an aircraft that has been anti-iced receive a further coating of anti-icing fluid directly on top of the contaminated film. If an additional treatment is required before flight, a complete de-icing/ anti-icing shall be performed (see 11.15 & 11.16). Ensure



that any remaining fluid from any previous treatment is flushed off. Anti-icing only is not permitted.

CAUTION! The application of Type II, III, and IV fluid, especially when used in a one-step process or in the first step of a two-step process, may cause fluid to collect in aerodynamically quiet areas, cavities, and gaps which can dry out and leave dried residues. Dried residues may rehydrate and freeze following a period of high humidity and/or rain conditions. This may cause flight control problems. These dried residues may require removal. Consult the aircraft manufacturer with regard to inspection methods and frequency, related maintenance requirements and aircraft washing recommendations.

CAUTION! The application of hot water or heated Type I fluid in the first step of a two-step process will minimize the formation of residues. Dried residues may rehydrate and freeze under certain temperature, high humidity and/or rain conditions and may block or impede critical flight control systems. If a Type II, III, or IV fluid is used in a one-step process or in the first step of a two-step process, a Work Order will be issued to aircraft that have over 20 de-icings within a 3 month period. The requisite specific areas of the aircraft are checked and if residue is found it must be cleaned out and the areas lubricated. Whenever suitable, de-ice and anti-ice with only Type I to help avoid these residue issues.

Flight control problems associated with frozen or unfrozen residues have been observed to be particularly prevalent when thickened fluids are used to remove frost during a period of dry weather followed by hydration of the dried residues by water from rain, condensation, cleaning, or wet snow in flight.

Note 1: In order to detect dried residues, it may help to spray a water mist onto the affected surfaces. This causes the dried residues to rehydrate and swell into a gel.

Note 2: If removal of contamination is required on the lower side of the wings and the horizontal stabilizer and elevator, de-icing/anti-icing fluid shall be applied sparingly to minimise fluid flow into drain holes. Whenever possible, use Type I only. Consult the aircraft manufacturer's documentation.

11.13.2 Aircraft Related Limits

The application of de-icing/anti-icing fluid shall be in accordance with the requirements of the airframe/engine manufacturers and local procedures.

11.13.3 Procedure Precautions

11.13.4 One-Step De-icing/Anti-Icing

This is performed using heated de-icing/anti-icing fluids. The correct fluid concentration is chosen with regard to desired holdover time, dictated by OAT and weather conditions (see application Tables 1 and 2). The fluid used to de-ice the aircraft remains on the aircraft surfaces to provide limited anti-ice capability.



CAUTION! Wing skin temperature may differ and in some cases may be lower than OAT. A mix with higher glycol concentration can be used under the latter condition to ensure a sufficient buffer.

CAUTION! The application of Type II, III, or IV fluid, especially when used in a one-step process, may cause fluid to collect in aerodynamically quiet areas, cavities and gaps which can dry out and leave dried residues. Dried residues may rehydrate and freeze following a period of high humidity and/or rain conditions. This may impede flight control systems. These dried residues may require removal. Consult the aircraft manufacturer with regard to inspection methods and frequency, related maintenance requirements and aircraft washing recommendations.

Note 1: If a Type II, III, or IV fluid is used in a one-step process or in the first step of a two-step process, a Work Order will be issued to aircraft that have over 20 de-icings within a 3 month period. The requisite specific areas of the aircraft are checked and if residue is found it must be cleaned out and the areas lubricated. Whenever suitable, de-ice and anti-ice with only Type I.

Note 2: In order to detect dried residues, it may help to spray a water mist onto the affected surfaces. This causes the dried residues to rehydrate and swell into a gel.

Note 3: If removal of contamination is required on the lower side of the wings and the horizontal stabilizer and elevator, de-icing/anti-icing fluid shall be applied sparingly to minimise fluid flow into drain holes. Whenever possible, use Type I only. Consult the aircraft manufacturer's documentation.

11.13.5 Two-Step Procedure when the First Step is Performed with De-icing Fluid

The correct fluid(s) shall be chosen with regard to OAT. The second step is performed with anti-icing fluid to protect the surfaces. This fluid and its concentration are chosen with regard to desired holdover time, which is dictated by OAT and weather conditions (see application Table 2). The second step shall be performed before the first step fluid freezes if necessary area by area. When treating composite surfaces, freezing may happen quickly. It is the responsibility of the de-icing Service Provider to ensure that all frozen deposits have been removed from the treated surfaces, before applying the second step fluid.

Use a second step spraying technique to cover completely the first step fluid with a sufficient amount of second step fluid. For guidance on the amount of fluid refer to AS6286 and/or the fluid manufacturer's documentation. Service providers shall ensure the first step fluid and the second step fluid used on aircraft are compatible. This can be accomplished by contacting the respective fluid manufacturer(s).

Where re-freezing occurs following the initial treatment, both the first and second step must be repeated.

CAUTION! Wing skin temperature may differ and in some cases may be lower than OAT. A mix with higher glycol concentration can be used under these conditions to ensure a sufficient buffer.



CAUTION! The application of Type II, III, or IV fluid, especially when used in a one-step process or in the first step of a two-step process, may cause fluid to collect in aerodynamically quiet areas, cavities, and gaps, which can dry out and leave dried residues. Dried residues may rehydrate and freeze following a period of high humidity and/or rain conditions. This may impede flight control systems. These dried residues may require removal. Consult the aircraft manufacturer with regard to inspection methods and frequency, related maintenance requirements and aircraft washing recommendations. The use of hot water or heated mixture of Type I fluid/water for the first step of a two-step de-icing/anti-icing process will minimise the formation of dried residues.

Note 1: If a Type II, III, or IV fluid is used in the first step of a two-step process, a Work Order will be issued to aircraft that have over 20 de-icings within a 3 month period. The requisite specific areas of the aircraft are checked and if residue is found is must be cleaned out and the areas lubricated. Whenever suitable, de-ice and anti-ice with only Type I.

Note 2: In order to detect dried residues, it may help to spray a water mist onto the affected surfaces. This causes the dried residues to rehydrate and swell into a gel.

Note 3: Anti-icing of the lower side of the wings and/or horizontal stabilizer and elevator is normally not foreseen. However, if these surfaces must be de-iced, the deicing fluid freezing point must be low enough to prevent refreezing.

- a. With regard to holdover time provided by the applied fluid, the objective is that it is equal to or greater than the estimated time from the start of antiicing to the start of take-off based on existing weather conditions.
- b. Aircraft shall be treated symmetrically, that is, left hand and right hand side shall receive the same and complete treatment, even when only one side of the aircraft needs treatment. Anti-icing treatments shall always cover the entire wing, the entire vertical stabilizer/rudder and horizontal stabilizer/elevator on both sides of the aircraft. Procedures in 11.11.3 shall be followed if an anti-icing treatment is to be performed on the aircraft.

WARNING! This is a regulatory requirement. The aircraft is considered UNSAFE if this requirement is not met.

- c. During anti-icing and de-icing, the moveable surfaces shall be in a position as specified by the aircraft manufacturer.
- d. Engines shall remain running at idle or can be shut down during de-icing/anti-icing operations. Air conditioning and/or APU bleed air shall be selected OFF, or as recommended by the airframe and engine manufacturer. Avoid spraying de-icing/anti-icing fluid directly into the engine inlet core.
- e. Do not spray de-icing/anti-icing fluids directly onto wiring harnesses and electrical components (receptacles, junction boxes, etc.) brakes, wheels, exhausts, or thrust reversers, cavities, or other sensitive devices.
- f. De-icing/anti-icing fluid spray shall not be directed into the orifices of pitot tubes (heads), static ports/vents, or directly onto air stream direction detectors probes/angle of attack airflow sensors. This includes all openings.



- g. All reasonable precautions shall be taken to minimize fluid entry into engines, APU, other intakes/outlets, and control surface cavities. Refer to manufacturer documentation. De-icing/anti-icing fluid spray shall not be directed into engine core or directly onto engine probes/sensors.
- h. Do not direct fluid spray onto the flight deck or cabin windows as this can cause crazing of the acrylic or penetration of the window seals. Fluid spray may be directed above these surfaces and allowed to flow over. Do not spray deicing/anti-icing fluids directly onto windows, doors, and emergency exits/hatches to prevent any fluid infiltration
- i. If SAE Type II, III, or IV fluids are used, all traces of the fluid on flight deck windows shall be removed prior to departure, with particular attention being paid to windows fitted with wipers. Any forward area from which fluid may blow back onto flightdeck windows during taxi or subsequent take-off shall be free of fluid prior to departure. Failure to do so may result in obscured visibility.

Note: 1. De-icing/anti-icing fluid can be removed by rinsing with an approved cleaner and a soft cloth or flushing with Type I fluid.

- j. Landing gear and wheel bays shall be kept free from the build-up of slush, ice, or accumulations of blown snow.
- k. When removing ice, snow, or slush from aircraft surfaces care shall be taken to prevent it entering and accumulating in auxiliary intakes and control surface balance bays, gaps, or hinge areas.
- l. Contamination build up on and within aircraft lift devices and other critical surfaces can form in flight or when on the ground. During icing conditions, when flaps and slats are retracted, contamination may not be visible. Conditions where this can occur may include but are not limited to the accumulation of ice in flight; the splash up of slush onto the underwing and flaps during ground maneuvering; and flap track contamination where snow and/or other contaminants may blow and compact within these openings. As the possibility exists that this could remain undetected, it is important that when these conditions are present or suspected, these areas be inspected and any frozen deposits removed prior to departure.
- m. Under the conditions of freezing fog, or other freezing precipitation conditions, it is necessary for the front and rear side on the fan blades to be checked for ice build-up prior to start-up. Any deposits discovered are to be removed by directing air from a low flow hot air source, such as a cabin heater, onto the affected areas or other means recommended by the aircraft operator based on information from the aircraft and engine manufacturers.
- n. After frequent applications of de-icing/anti-icing fluids it is advisable to inspect aerodynamically quiet areas and cavities for dried residues of thickened de-icing/anti-icing fluid. For these inspections it may be necessary to open access panels. Consult airframe manufacturers for inspection and cleaning details and procedures.
- o. A de-icing/anti-icing treatment should be continuous and as short as possible. If a treatment is interrupted (for example a truck running out of fluid), the flightcrew shall be immediately informed stating:
 - a. The reason for the interruption;
 - b. Actions to be taken (in consultation with the flightcrew);
 - c. Expected time of delay.
 - d. Before continuing the treatment:
 - e. Inform the flightcrew;



- f. Establish in consultation with the flightcrew, the further treatment to be carried out, including any surfaces requiring re-treatment in relation to holdover time.
- g. Carry out the treatment as agreed.

11.14 Clear Ice Precautions

Clear ice can form on aircraft surfaces below a layer of snow or slush. It is therefore important that surfaces are closely examined following each de-icing procedure, in order to ensure that all deposits have been removed. Significant deposits of clear ice can form in the vicinity of the fuel tanks, on wing upper surfaces as well as underwing. Aircraft are most vulnerable with regard to this type of build-up when one or more of the following conditions exist:

- a. Wing temperatures remain well below 0 °C (32 °F) during the turnaround/transit.
- b. Ambient humidity is high and/or Precipitation occurs while the aircraft is on the ground.
- c. When frost or ice is present on lower surface of either wing.
- d. Ambient temperatures between -2 °C (28 °F) and +15 °C (59 °F) are experienced, although clear ice may form at other temperatures if the other three conditions listed above exist.

Clear ice formation is extremely difficult to detect. Therefore, when the above conditions prevail, or when there is otherwise any doubt that clear ice may have formed, a close examination shall be made visually and/or physically prior to departure, in order to ensure that surfaces are free of clear ice. If clear ice is believed to be present, de-icing is required.

Note: Low wing temperatures associated with this type of build-up normally occur when large quantities of cold fuel remain in wing tanks during the turnaround/transit and any subsequent refuelling is insufficient to cause a significant increase in fuel temperature.

11.15 Table 1 – Guidelines for the Application of Type I fluid / Water mixtures

*Table 1 - Guidelines for the application of Type I fluid/water mixtures
(minimum concentrations) as a function of OAT*

OAT	One-Step Procedure	Two-Step Procedure	
	Deicing/Anti-icing	First step: Deicing	Second step: Anti-icing ⁽¹⁾
0 °C (32 °F) and above	Heated fluid/water mixture with a freezing point of at least 10 °C (18 °F) below OAT	Heated water or a heated fluid/water mixture	Heated fluid/water mixture with a freezing point of at least 10 °C (18 °F) below OAT
below 0 °C (32 °F) down to LOUT		Heated fluid/water mixture with a freezing point at OAT or below	
⁽¹⁾ To be applied before first step fluid freezes.			
NOTE 1: Temperature of water or fluid/water mixtures shall be at least 60 °C (140 °F) at the nozzle. Upper temperature limit shall not exceed fluid and aircraft manufacturer's recommendations.			
NOTE 2: This table is applicable for the use of Type I Holdover Time Guidelines. If holdover times are not required, a temperature of 60 °C (140 °F) at the nozzle is desirable.			
NOTE 3: To use Type I Holdover Time Guidelines, at least 1 litre/m ² (approximately 2 Gals/100ft ²) must be applied to the de-iced surfaces.			
CAUTION: Wing skin temperatures may be lower than OAT. If this condition is identified, a stronger mixture (more glycol) may need to be used to ensure a sufficient buffer.			



11.16 Table 2 -Guidelines for the application of Type II and Type IV fluid/water mixtures

OAT (1)	Concentration of neat fluid/water mixture in vol%/vol%		
	One-Step Procedure	Two-Step Procedure	
	de-icing/ Anti-icing	First step: De-icing	Second step: Anti-icing (2)
0 °C (32 °F) and above	50/50 Heated (3) Type II or IV fluid/water mixture	Heated water or a heated Type I, II or IV fluid/water mixture	50/50 Heated/ unheated Type II or IV fluid/water mixture
below 0 °C (32 °F) to -3 °C (27 °F)	50/50 Heated (3) Type II or IV fluid/water mixture	Heated Type I, II or IV fluid/ water mixture with a freezing point at OAT or below	50/50 Heated/ unheated Type II or IV fluid/water mixture
below -3 °C (27 °F) to -14 °C (7 °F)	75/25 (3) Heated Type II or IV fluid/water mixture	Heated Type I, II or IV fluid/ water mixture with a freezing point at OAT or below	75/25 Heated/ unheated Type II or IV fluid/water mixture
below -14 °C (7 °F) to -23 °C (- 9 °F)	100/0 Heated (3) Type II or IV	Heated Type I, II or IV fluid/ water mixture with a freezing point at OAT or below	100/0 Heated/unheated Type II or IV
below -23 °C (- 9 °F)	Type II /Type IV fluid may be used below -23 °C (-9 °F) provided that the of the fluid is at least 7 °C (13 °F) below OAT and that aerodynamic acceptance criteria are met (LOUT). Note: Type II/Type IV fluid may not be used below -25°C (-13°F) in active frost conditions. Consider the use of Type I fluid/water mixture when Type II or IV fluid cannot be used (see Table 1).		
1. Fluids must only be used at temperatures above their LOU.T. 2. To be applied before first step fluid freezes. 3. Clean aeroplanes may be anti-iced with unheated fluid.			

Note 1: For heated fluid and fluid mixtures, a temperature not less than 60 °C (140 °F) at the nozzle is desirable. When the first step is performed using a fluid/water mixture with a freezing point at OAT, the temperature at the nozzle shall be at least 60 °C (140 °F) and at least 1 litre/m2 (~2 Gals/100 ft2) must be applied to the surfaces to be de-iced. Upper temperature limit shall not exceed fluid and aircraft manufacturer's recommendations.



- Note 2:** Wing skin temperatures may be lower than OAT. If this condition is identified, it shall be verified if a stronger mixture (more glycol) may need to be used to ensure a sufficient buffer. As fluid freezing may occur, 50/50 Type II, III, or IV fluid shall not be used for the anti-icing step of a cold soaked wing as indicated by frost or ice on the lower surface of the wing in the area of the fuel tank.
- Note 3:** An insufficient amount of anti-icing fluid, especially in the second step of a two-step procedure, may cause a substantial loss of holdover time. This is particularly true when using a Type I fluid mixture for the first step (de-icing).
- Note 4:** Some fluids shall only be used undiluted. For some fluids the LOUT may differ. For details refer to fluid manufacturer's documentation.
- Note 5:** Type III fluid has been removed from this table since the application of the current Type III fluids is fluid specific and does not fit this table.

11.17 Fluid Application Guidelines

The fluid application guidelines are part of local regulatory documents, such as the FAA Holdover Time Guidelines: Winter 20xx-20yy (annual publication) or to Transport Canada Holdover Time Guidelines: Winter 20xx-20yy (annual publication).

CAUTION! Failure to follow proper fluid application guidance may result in reduced protection of uncertain duration.

11.18 Critical Areas

Use the diagrams on the following pages to identify the location of critical areas referenced below. Pitot Probes, Static Ports, and Total Air Temperatures (TAT) probes

- Note:** be careful when working around probes. If you are not careful you could damage them.

Look for ice that is attached to the surface 4 feet or less from the pitot inlets, static port, and TAT probe inlets. Remove all the ice in these areas.

- Do not point a spray or de-icing/anti-icing fluid directly at or into the pitot inlets, static ports, or the TAT tubes.
- If ice causes a blockage of the static openings, carefully apply warm air until the ice melts.
- If you applied too much fluid to the fuselage near the static ports, examine the nearest in-line drain, and remove the water if it is collected here.

11.18.1 Angle-of-Attack Sensors

Make sure that no ice and/or snow is on the sensors. Make sure the sensors are free to move. Apply de-icing fluid if necessary.

No-spray Areas

Do not apply fluid directly on:

- The APU intake



- b. The ram air inlets
- c. Brake system and wheels or the landing gear
- d. Landing gear doors
- e. Engine cowls and air intakes
- f. Outflow valve air outlet

Note: do not apply anti-icing/de-icing fluid on the cockpit or cabin windows. It can cause cracks on the window. The fluid can also go into the window seal.

11.18.2 Wing and Tail Surfaces

Note: be careful when removing ice and snow from the wing and tail surfaces near the vortex generator. If you are not careful you could damage them.

The wing, including winglets (if fitted) and horizontal tail surfaces must have no ice, snow, or frost on them.

Note 1: a layer of frost 3mm (1/8-inch) thick or less on the lower wing surfaces is permitted if it is caused by very cold fuel. But all of these areas must have no ice, snow or frost on them:

1. Leading edge devices
2. Control surfaces, including upper and lower surfaces of the horizontal stabilizer
3. Tab surfaces
4. The top wing surface

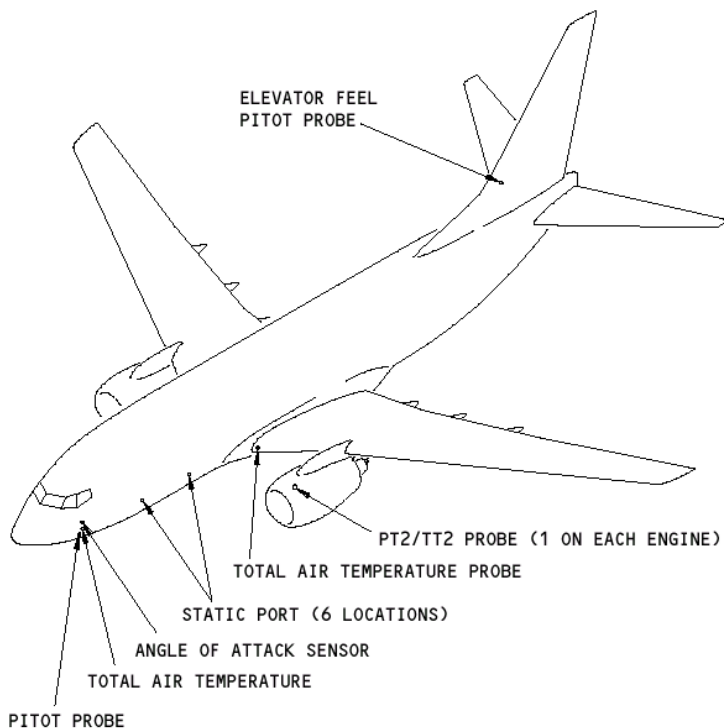
Note 2: stabilizer trim – De-Icers should liaise with local TUI Engineers to ascertain if the aircrafts stabilisers is in the correct position prior to early de-icing.

A stabilizer trim setting in the take-off green band adequately prevents de-icing fluid and slush run-off from entering the stabilizer balance panel cavity. When spraying de-icing fluid on the tail cone area of B737 aircraft (fin, stabiliser), it is important to avoid excessive fluid entering the tail cone compartment. Excessive de-icing fluid in the tail cone compartment can cause flying controls to freeze in flight.

When de-icing the tail area, avoid spraying fluid towards the cut out in the fuselage skin that allows up / down movement of the stabiliser.



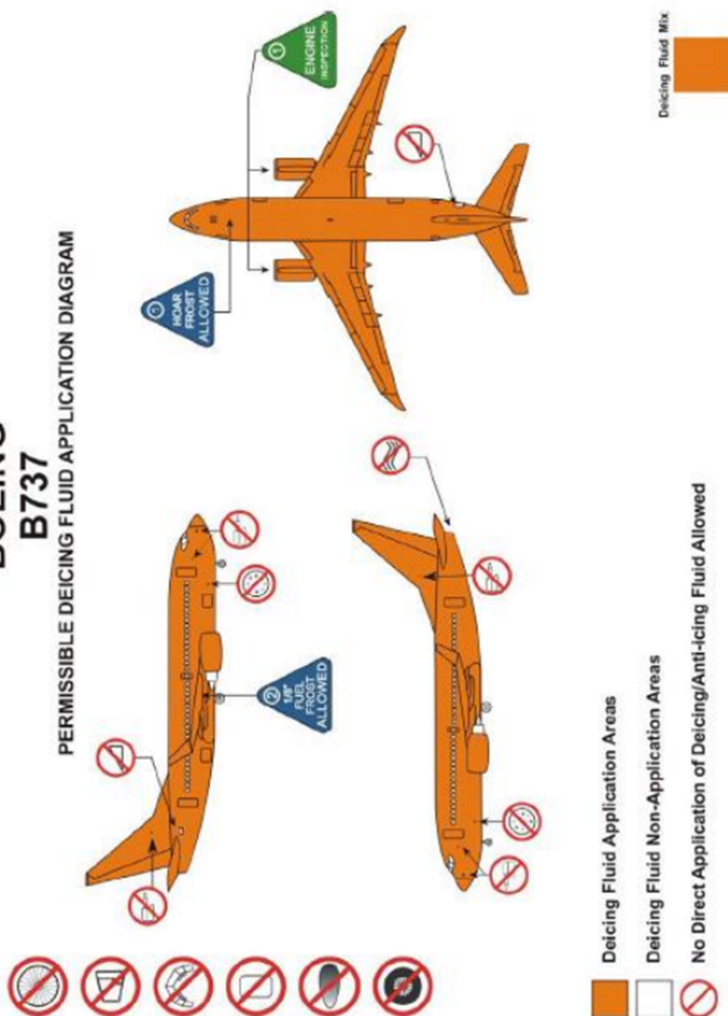
11.18.3 B737-800 Critical Areas



(LEFT SIDE IS SHOWN, RIGHT SIDE IS OPPOSITE)



PERMISSIBLE DEICING FLUID APPLICATION DIAGRAM

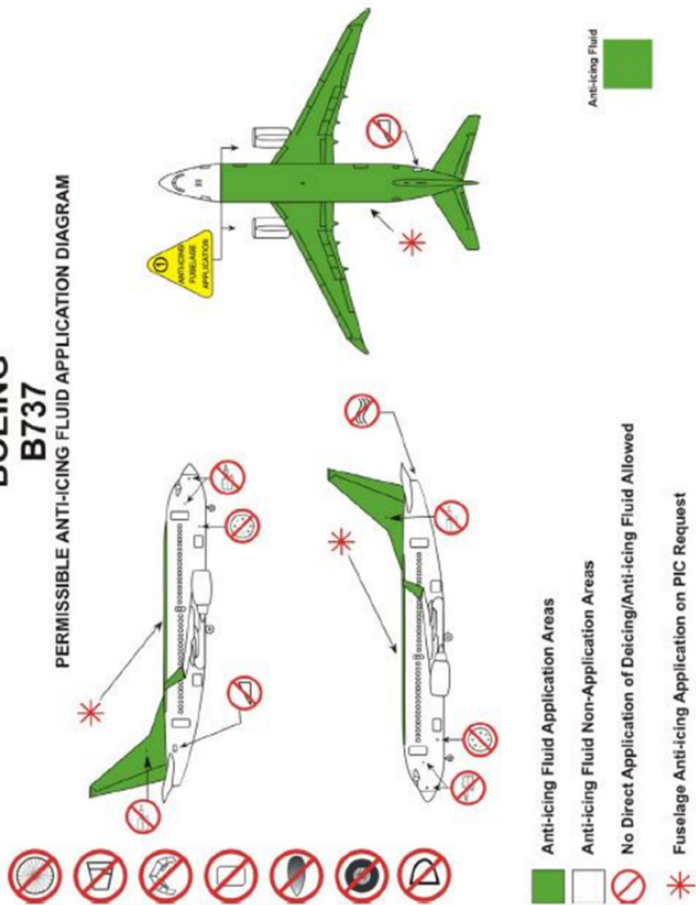




BOEING

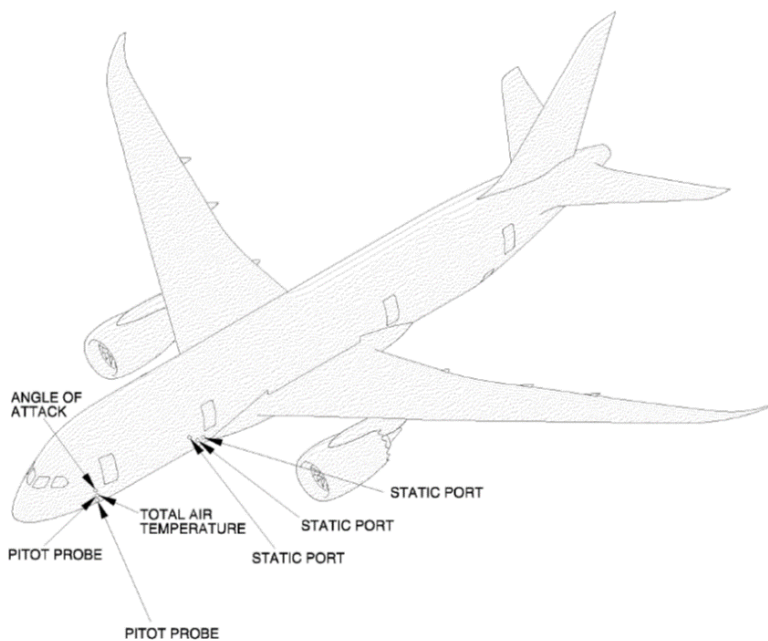
B737

PERMISSIBLE ANTI-ICING FLUID APPLICATION DIAGRAM

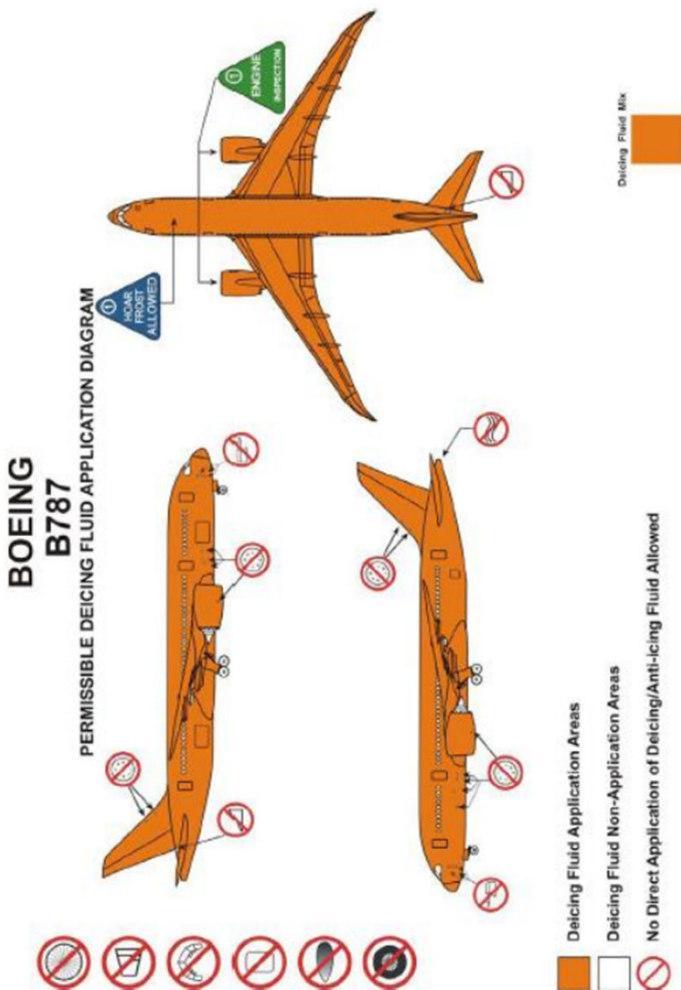


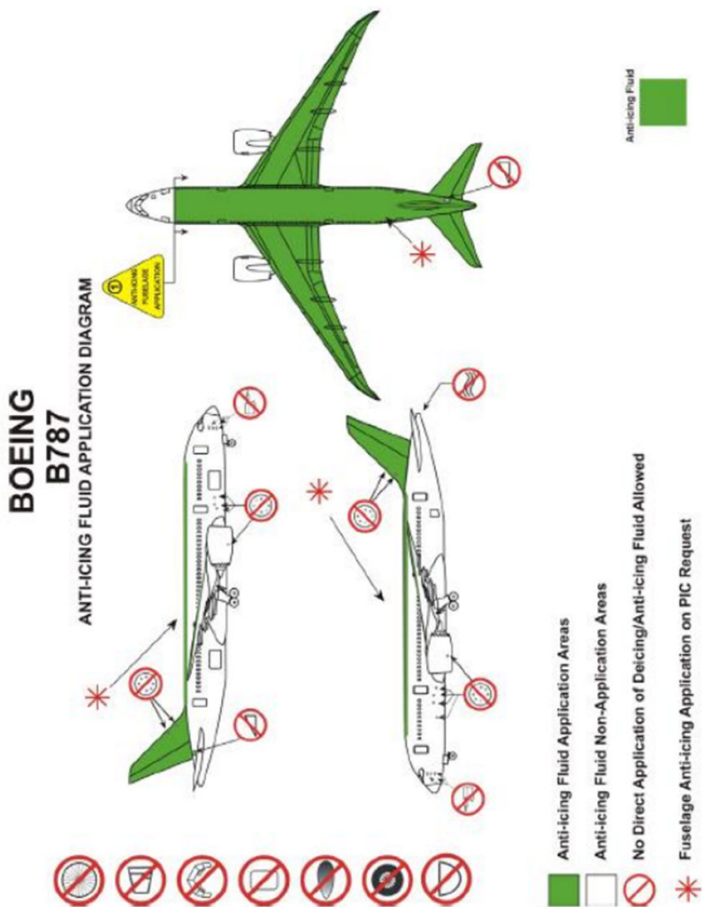


11.18.4 B787 Critical Areas



(LEFT SIDE IS SHOWN, RIGHT SIDE IS OPPOSITE)





11.19 Training And Qualification

De-icing/anti-icing procedures must be carried out exclusively by personnel trained and qualified on this subject. Companies providing de-icing/anti-icing services should have both a Qualification Programme and a Quality Assurance Programme to monitor and maintain an acceptable level of competence.

Both initial and yearly recurrent training for flight crews and ground crews shall be conducted to ensure that all such crews obtain and retain a thorough knowledge of aircraft de-icing/anti-icing policies and procedures, including new procedures and lessons learned.



Training success shall be proven by an examination/assessment. It is recommended that the theoretical examination is in accordance with SAE AS 6286 or any equivalent requirements. The pass mark should be 75% and only persons passing this examination can be qualified.

11.19.1 Theoretical Training - Examination Process

The examination process contains a theoretical exam, for which a minimum passing score of 75% shall be required. The practical part (where applicable) only contains a pass/fail determination. Since 75% is a passing score for the theoretical part, this means that up to 25% may still be misunderstood. This "gap" shall be noted and wrong answers corrected with the trainee such that 100% understanding is achieved in order to secure a safe deicing operation. The written exam can be performed as an open-book exam so that pertinent Holdover Time tables and other data sources such as refractive index tables can be referenced. Normal deicing procedures should be basic knowledge, so there should not be any material available during the test explaining these subjects.

The examination for any particular course should be built so that all relevant subjects are covered by the questions. The level of difficulty per question should reflect the level of qualification and the relevance of the subject for that particular qualification. As a rule of thumb, a minimum of one question per subject relating to the qualification level should be included in the written exam. The minimum number of questions shall reflect the qualification level and may vary accordingly; however, this minimum amount should not be less than 15 questions (starting with the least demanding level of qualification/training hours). The theoretical examination shall be in accordance with national requirements and/or local regulations. The questions should be multiple choice containing a minimum of three possible answers per question. If there are differing procedures from normal deicing operations, then written answers can be used to explain this. The exam questions shall be periodically reviewed and updated to cover all current standards and regulations.

The Head of Deicing Training shall include these elements in the training program:

- The questions should always be based on facts and not perceptions.
- The question should not be misleading and should be clearly written such that it is not possible for it to be incorrectly interpreted.
- Misinterpretations may lead to remembering the subject in an incorrect way.
- The question series should cover all aspects of operation and include the local arrangements (if any).
- Evaluation should include oral quizzing where practical items are covered (e.g., reading Holdover Time tables and/or refractive index limits, etc.).

11.19.2 Practical Training (initial)

For personnel performing the actual de-icing/anti-icing treatment on aircraft for the first time, practical training with the de-icing/anti-icing equipment and an aircraft shall be included.

An aeroplane is required in order to familiarise trainees with the relevant typical aeroplane surfaces/components and identification of no spray areas.

Prior to receiving final qualification, personnel performing de-icing/anti-icing operations (driving and/or spraying) shall demonstrate competence in removing frozen contamination under operational conditions, to a qualified trainer or supervisor. Details of this assessment shall be recorded.



11.19.3 Practical Training (Annual/Recurrent)

For personnel performing the actual de-icing/anti-icing treatment on aircraft, the practical evaluation and demonstration of skills for normal equipment and operational methods is expected. The practical training and demonstration of knowledge or skills where new equipment or operational methods are utilized is required.

Training subjects shall include but are not limited to the following (when applicable):

- a. Effects of frost, ice, snow, slush and fluids on aircraft performance.
- b. Basic characteristics of aircraft de-icing/anti-icing fluids, including causes and consequences of fluid degradation, fluid remaining on surfaces, and dried and / or rehydrated residues.
- c. General techniques for removing deposits of frost, ice, slush, and snow from aircraft surfaces and for anti-icing.
- d. De-icing/anti-icing procedures in general and specific measures to be performed on different aircraft types.
- e. Types of checks required.
- f. De-icing/anti-icing equipment and facilities operating procedures including actual operation.
- g. Safety precautions.
- h. Emergency procedures.
 - i. Fluid application and limitations of holdover time tables.
 - j. De-icing/anti-icing codes and communication procedures.
- k. Special provisions and procedures for contact de-icing/anti-icing (if applicable).
 - l. Environmental considerations, e.g. where to de-ice, spill reporting, hazardous waste control.
- m. New procedures and development, lessons learned from previous winters.
- n. Conditions which can lead to the formation of ice on the aircraft.

11.19.4 Training System and Records

All training should be performed according to a pre-established training program. This program should include all levels of training and their relevant requirements. The theoretical part should be categorized according to the qualification, thus dividing the training sessions from each other. This training program will easily identify what course is leading to which qualification. This numbering system presented here does not need to be the same for every company but is a logical sequence to follow if desired. To remain qualified to perform certain deicing duties, annual recurrent training is required. An annual recurrent course should be presented as a training session that renews previous qualifications. This recurrent training does not have to be performed exactly or before the date of the previous qualification. A prior year's qualification remains valid for the beginning of the next deicing season but must be renewed before the year's end.

Records shall be kept of all tests and scores, for both the theoretical exam and the practical assessment. A test record shall indicate the trainee, the qualification being sought, the date of the test, the evaluating instructor, and the score. A failed examination can be retaken, and this must be noted in the record. The evaluation process must lead to a qualification before the trainee shall be allowed to carry out the required role. Any restriction to a qualification shall be documented. A certificate should be given to the person to verify all training and qualifications. A copy of the certificate should be kept. All documentation for the current season should be kept easily at hand for verification by approved deicing staff. Records shall be retained in



accordance with applicable timelines established by local regulatory, air operator, or organisational record retention requirements.

11.19.5 Responsibilities

- a. The company responsible for the de-icing /anti-icing operation (further called de-icing company) shall maintain vehicles/equipment , fluids , training and procedures in accordance with the latest edition of the relevant ISO specifications or SAE recommendations on de-icing
- b. Personnel carrying out the de-icing /anti-icing operation are responsible for ensuring the task is performed in accordance with the requirements detailed in the latest edition of the aircraft Maintenance Manual or SAE recommendations on de-icing
- c. The person responsible for final release/dispatch of the aeroplane is responsible for ensuring that the aeroplane has been de-iced/anti-iced in accordance with the requirements detailed in the latest edition of the aircraft Maintenance Manual or SAE recommendations on de-icing ensuring that relevant surfaces are free of frost , ice, slush and snow at the time of dispatch
- d. After receiving the Anti-ice Code , the Commander (pilot in command) is responsible for ensuring that the relevant surfaces remain free of frost , ice, slush and snow until take off.

11.20 Fluid Handling

De-icing/anti-icing fluid is a chemical product with environmental impact. During fluid handling, avoid any unnecessary spillage and comply with local environmental and health laws and the manufacturer's safety data sheet. Different products shall not be commingled (blended) without additional qualification testing. Consult with the fluid manufacturers. Slippery conditions may exist on the ground or equipment following the deicing/anti-icing procedure. Caution should be exercised, particularly under low humidity or non-precipitation weather conditions.

11.20.1 Storage

Tanks shall be dedicated to the storage of the deicing and/or anti-icing fluid to avoid contamination with other fluids.

Storage tanks shall be of a material of construction compatible with the de-icing/anti-icing fluid, as specified by the fluid manufacturer (corrosions resistant steel, plastic, etc.). Care should be taken to avoid using dissimilar metals in contact with each other, as galvanic couples may form and degrade thickened fluids.

Tanks shall be conspicuously labelled to avoid contamination.

As a minimum the following information shall be identified:

- a. Type of fluid (Type I, II, III or IV)
- b. Fluid product name
- c. Fluid concentration or mixture

Tanks shall be inspected annually for corrosion, contamination and / or leaks. If corrosion or contamination is evident, tanks shall be repaired or replaced. To prevent corrosion at the liquid/vapour interface and in the vapour space, a high liquid level in the tanks is recommended. If the quality of the fluids is checked in accordance with SAE regulations, the



inspection interval may be longer than one year. The storage temperature limits shall comply with the manufacturer's guidelines. The stored fluid shall be checked routinely to ensure that no degradation/contamination has occurred.

11.20.2 Fluid Transfer Systems

The performance characteristics of Type II, III, and IV deicing/anti-icing fluids may be degraded by excessive mechanical shearing or chemical contamination. Therefore, only compatible pumps, control valves, piping, hoses, and application devices (nozzles) shall be used. The design of fluid transfer systems shall be in accordance with the fluid manufacturer's recommendations. Fluid transfer systems shall be dedicated to the specific fluid being handled to prevent inadvertently mixing fluids of different Types or manufacturers. All fill ports and discharge points shall be clearly labeled to prevent inadvertent product mixing. All fill ports must be protected to prevent foreign contamination.

11.20.3 Heating

De-icing/anti-icing fluids shall be heated according to the fluid manufacturer's guidelines, and the heated fluids shall be checked periodically.

For Type I fluids, water loss may cause undesirable aerodynamic effects.

For Type II / III / IV fluids thermal exposure and/or water loss may cause degradation making them not usable.

The fluids shall be checked periodically.

CAUTION! Avoid unnecessary heating of fluid in vehicle tanks. Prolonged or repeated heating of fluids (directly or indirectly) may result in loss of water or oxidation which can lead to performance degradation of the fluid and may cause viscosity degradation in Types II, III and IV fluids leading to shorter hold over times.

Any of the following situations or a combination of them can accelerate the fluid performance degradation:

- low fluid usage (turnover)
- trucks being in standby mode with heating system on for extended periods of time
- high temperatures in fluid tanks
- high temperatures in water tanks which are in direct contact with the fluid tanks (no insulation between tanks)

The integrity of the fluid following heating shall be checked periodically. Factors like heating rate, time, and temperature cycling should be considered in determining the frequency of fluid inspections. Refer to the fluid manufacturer's recommendations.

11.20.4 Application Equipment (De-Icing Rigs)

Application equipment shall be cleaned thoroughly before being initially filled with de-icing/anti-icing fluid in order to prevent fluid contamination. De-icing/anti-icing fluid in trucks shall not be heated in confined or poorly ventilated areas. The integrity of the fluid at the spray nozzle shall be checked periodically.



12 Annex F Electric Mobility Aids - EMA

12.1 DG Regulation

Dangerous Goods are articles or substances which are capable of posing a risk to health, safety, property, or the environment and which are classified according to the ICAO Technical Instructions & IATA Dangerous Goods Regulations (DGR) IATA DGR Table 2.3.A. are items that may be carried by Passengers and Crew. Please use this table in conjunction with our GOM DG Section Table as this may be more restrictive and have airline variations between TUI Airways & TUI Fly Nordic.

12.1.1 Battery Types & Codes

When an EMA is booked the following SSR codes must be used.

IATA SSR Code	Description	Common Names
WCBD	Non-Spillable Batteries	AGM (Absorbed Glass Mat) Dry / Dry Cell Gel Cell SLA (Sealed Lead Acid) Nickel – metal hydride
WCLB	Lithium Batteries*	Lithium – ION (re-chargeable) Lithium Metal (not re-chargeable) Lithium polymer Lithium Alloy

Spillable wet cell batteries are forbidden on TUI Aircraft.

Note: *Lithium battery refers to a family of batteries with different chemistries, comprising of many types of cathodes and electrolytes. They are separated into: Lithium Metal and Lithium Ion (also known as Li-ion and includes Lithium Polymer batteries).

Lithium ion batteries pose a risk, as they can overheat if they are overcharged, and when not properly packed, spare batteries could short circuit in passengers' luggage, causing fires.

Lithium ion batteries are regulated, and manufacturers have to include a "watt-hour" rating on the battery. Depending on the watt hour rating, will depend on whether we need to approve it, and whether we can carry it at all.

Lithium batteries have to be tested in line with the criteria set out in Part III of the UN Manual of Tests and Criteria. This manual lists all the required tests that must be done on lithium batteries, and that the Shipper or manufacturer of battery products must make sure that the lithium batteries safe before being transported.



12.1.2 Battery Restrictions

BATTERY TYPE Attached to the EMA	WATT HOUR (Wh); QTY RESTRICTION	SSR Code
Non Spillable	N/A	WCBD
1 Lithium ION battery	300Wh	WCLB
2 Lithium ION batteries	160Wh each	WCLB

12.1.3 Spare Battery Restrictions

SPARE BATTERY Loose/ Not in Device	WATT HOUR (Wh) & QTY RESTRICTION	SSR Code
Non Spillable	N/A	WCBD
1 Lithium ION battery - CABIN	1 spare battery not exceeding 300Wh	WCLB
2 Lithium ION batteries - CABIN	2 spare batteries not exceeding 160 Wh each	WCLB

12.1.4 How to calculate Watt Hour Rating for a Lithium-ion battery

If the passenger is taking an item powered by a Lithium-ION battery you must ask them for the Wh rating.

All Lithium-ion batteries manufacturer after 2011 must show the Wh rating on the battery.

If the passenger is not sure you can calculate this yourself but you need the Volts and the Ampere of the battery, see the calculation below:

Volts (V) x Ampere (Ah) = Watt Hour (Wh)

Example: 5V x 25Ah = 125Wh

To convert milliamp hour (mAh) to Ah you divide by 1000. 1Ah = 1000mAh

Example: 25000mAh ÷ 1000mAh = 25Ah

12.2 Conditions of Carriage (ICAO Technical Instructions / IATA DGR 01Jan2019)

Once the battery restrictions have been verified you need to establish and communicate the conditions which **MUST** be met in order for the item to be approved. The approval is only upheld once the airport staff can verify and inspect the item before loading it onto the aircraft.

If any pre declared information is inaccurate, the acceptance process must be carried out again once the passenger arrives at the check-in desk.



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Annex F Electric Mobility Aids - EMA

BATTERY TYPE	RESTRICTION	CABIN	HOLD
Non Spillable DRY (WCBD) Attached to EMA	The operator must secure, by use of straps, tiedowns or other restraint devices, a battery powered mobility aid with installed batteries. The mobility aid, the batteries, electrical cabling and controls must be protected from damage including by the movement of baggage, mail or cargo the operator must verify that: the passenger has confirmed that the battery is a non Spillable wet battery. the battery terminals are protected from short circuits (e.g. by being enclosed within a battery container); and securely attached to the wheelchair or mobility aid and the electrical circuits are isolated following the manufacturers instruction; The operator must inform the pilot-in-command of the location of mobility aids with installed batteries, removed batteries and spare batteries	x	✓
Non Spillable DRY (WCBD) Removed from EMA	Where the mobility aid is specifically designed to allow its battery(ies) to be removed by the user the battery(ies) must be removed following the manufacturers instructions; the mobility aid may then be carried as checked baggage without restriction; The operator must ensure that any battery(ies) removed from the mobility aid or spare batteries are carried in strong, rigid packagings which must be carried in the cargo compartment the battery(ies) must be protected from short circuit; and the commander must be informed of the location of the packed battery; The operator must inform the pilot-in-command of the location of mobility aids with installed batteries, removed batteries and spare batteries	x	✓



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Annex F Electric Mobility Aids - EMA

BATTERY TYPE	RESTRICTION	CABIN	HOLD
Lithium ION (WCLB) Attached to EMA	The operator must secure, by use of straps, tiedowns or other restraint devices, a battery powered mobility aid with installed batteries. The mobility aid, the batteries, electrical cabling and controls must be protected from damage including by the movement of baggage, mail or cargo the operator must verify that: the battery terminals are protected from short circuits (e.g. by being enclosed within a battery container); and the battery either: securely attached to the wheelchair or mobility aid and the electrical circuits are isolated following the manufacturers instruction; The battery must not exceed 300 wh or for mobility aids fitted with two batteries, each battery must not exceed 160 wh. The operator must inform the pilot-in-command of the location of mobility aids with installed batteries, removed batteries and spare batteries It is recommended that passengers make advance arrangements with each operator	x	✓
Lithium ION (WCLB) Removed from EMA **preferred**	If the mobility aid is specifically designed to allow the battery (ies) to be removed following the manufacturers instructions. The battery removed from the mobility aid must not exceed 300 wh or for mobility aids fitted with two batteries, each battery must not exceed 160 wh, The operator must ensure that any battery(ies) removed from the mobility aid or spare batteries are carried in the passenger cabin. The removed or spare batteries must be protected from damage (e.g. by placing each battery in a protective pouch) The operator must inform the pilot-in-command of the location of mobility aids with installed batteries, removed batteries and spare batteries It is recommended that passengers make advance arrangements with each operator	✓	x
Lithium ION (WCLB) SPARE	A passenger may carry a maximum of one spare battery lithium-ion battery not exceeding 300 wh or two spare batteries each not exceeding 160 wh. The operator must inform the pilot-in-command of the location of the spare battery(ies)	✓	x



12.3 Approval Process

12.3.1 Acceptance for Travel

The passenger can contact the appropriate Contact Centre to advise them that they intend to take an Electric Mobility Aid by following the information contained within the appropriate brochure, or information on the appropriate website. This can also be done by the passenger visiting their Travel Agent whom they booked with who will liaise with the contact centre on their behalf. If the EMA has not been pre-booked and the passenger presents themselves at the check-in desk, the approval process should be carried out by trained Handling Agents staff.

Once in receipt of the request, the Passenger Contact Centre will evaluate whether or not the EMA can travel safely by air,

TOM-UK

With the assistance of the BHTA log contained on the following website link or following IATA DGR table 2.3A <http://bhta.com/air-transport-advice/>

If the EMA is not listed on the BHTA log, the agents must establish the battery type

End TOM-UK

This can be obtained from the passenger's EMA user guide in the first instance. In the event that the user guide does not give clear instructions on how to make the EMA safe for carriage by air, the passenger must be requested to seek this information from the device's manufacturer.

Once evaluated, should the EMA be deemed safe for carriage, the passenger will be advised accordingly,

TOM-UK

and issued with a letter advising the conditions of carriage for this battery type

End TOM-UK

The appropriate SSR code will be added to the booking along with

- a. device make & model
- b. weight
- c. height x width x depth dimensions.

This will also appear on PNL/ADL/PAL & CAL messages.

An automatic inventory is set up for the number of EMA's we can accept, see Annex EMA – Table 3.5.

Should the EMA be deemed not suitable for travel by air, the passenger will be advised and the reasons provided. Notes reflecting this should be added to the passenger booking.

For all advance notifications and approved EMA's, this information will be communicated via PAL message to our Handling Agents and /or PWD Provider STD -36 hours as per EU Legislation. CAL messages will be sent with any changes up to STD minus 6 hours.

12.3.2 Dimensions

It is important you are checking which aircraft type the passenger is travelling on to ensure their EMA will fit through the door and be loaded with enough roof clearance as not to cause



damage to the hold roof. To make it easier for passenger facing staff we have published a table giving what we believe to be the maximum height, width & depth of an EMA to fit, this takes into consideration any door clearance issues on the B737 aircraft where the hold door opens inwards.

Maximum EMA Dimensions	Height x Width x Depth CMS
B737 – 800	H86cm x W119cm x D119cm
B737 – 8 MAX	H86cm x W119cm x D119cm
B787 – 800 (Wide-bodied)	H150cm x W150cm x D119cm
B787 – 9 (Wide-bodied)	H150cm x W150cm x D119cm

No EMA should be tilted when being loaded in the hold. It must be secured using lashing material in an upright position, and be protected to prevent unintentional activation or damage by the movement of other baggage, company mail, company stores or other cargo.

12.3.3 Weight

As a company we do not restrict PRM/PWD's equipment based on weight, if the EMA exceeds 150 Kilos you must advise Ground Operations Support GroundopsDG@tui.com as the EMA may have to be loaded onto spreader boards and then loaded onto the aircraft. The spreader is like a wooden platform and it distributes the weight across the platform and not directly onto the floor of the hold.

12.3.4 BHTA Website (British Healthcare Trades Association)

The approvers and other Handling Agent staff are advised to check the British Healthcare Traders Association (BHTA) website using the EMA Make & Model, to determine if the EMA is safe for carriage by air.

The website lists dimensions of EMA's/Scooters, battery types and weights based on the make & the model. If the EMA is not listed, please follow manual processes to ensure the EMA will be safe for Air Travel. (end TOM)

<http://www.bhta.com/air-transport-advice/>

12.3.5 Inventory

The inventory for WCLB/WCBD are linked/grouped together in the reservation system. No more than 3 of these codes combined will be available to pre-book.

Airline	Flight No Prefix	Inventory per flight
TUI Airways	BY - TOM	3
TUI Fly Nordic	6B - BLX	3

The inventory can be increased with approval by Ground Operations Support GroundopsDG@tui.com. If the increase is requested outside of office hours or on the day of departure the Handling Agent, Captain or local TUI OCC can authorise an increase. Any



increase must consider all other loads & available space on the aircraft. This must be communicated to Loadcontrol locally.

If the inventory is increased on the day please advise Ground Operations Support so we can add this to any other sectors related to this passenger booking GroundopsDG@tuifly.com

Every possible effort must be made to accept the EMA without compromise to safety and DGR.

12.4 Check in Procedure

On presenting themselves at the check-in desk, the agent must check if the item has been pre-booked, these bookings take priority over non pre-booked EMA's. Pre-booked EMA batteries will need to be verified in person by the check-in agent as well as loading heights.

Any new booking will need to be approved by the check-in agent on behalf of the operator. The agent must be at least Category 9 Dangerous Goods Trained.

When pre-booked the appropriate SSR code relating to the battery type will show on the PNL. The agent is responsible for establishing & documenting how the EMA can be made safe for air travel. Refer to section/table of this annex for IATA SSR battery codes.

Free text against the SSR code will show Make & Model of the EMA, weight, dimensions and any special instructions e.g. not designed to be collapsed. The SSR code must also be verified as being correct. These details MUST be verified at the check in desk.

If an EMA is presented in a hard case the passenger may need to open the case for the battery type to be verified.

The method which will be used to inhibit the electrical supply to the EMA must be established at the check in desk and noted on the EMA tag (making it safe for air travel).

TOM-UK

If the EMA is listed on the BHTA website these details will be available using the link shown above.

End TOM-UK

They can be noted on the EMA tag in advance of check-in opening. If this information is not available, the passenger must be asked how to inhibit their device and this documented on the tag.

The EMA can either be made safe for carriage at the check-in counter or at the departure gate.

TOM-UK

As soon as this is complete, the EMA Tag must be signed by the responsible person (see EMA Tag section to see responsible persons).

End TOM-UK

The agent should ensure that the Load Control department are informed if an EMA has been accepted for the flight, this must include the SSR code, weight & dimensions of the EMA and any special loading instructions e.g. Lithium battery in the cabin or do not collapse. On pre-booked EMA's these details are already showing in the DCS under the appropriate SSR code.

If the lithium-ion battery is designed to be removed it will be loaded in the cabin. This also applies to any spare lithium-ion batteries. Pilot in command needs to be advised of this.



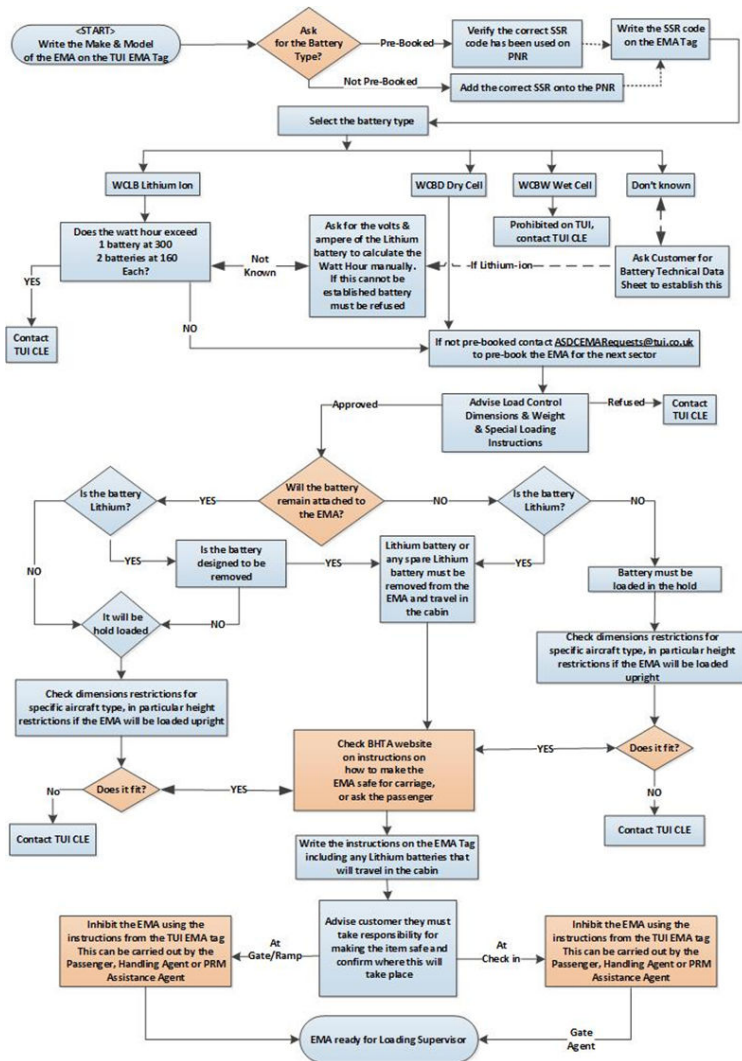
The dimensions of an EMA are needed in order for it to fit through the aircraft door and in the hold. Please refer to table Annex F – 3.2. If the dimensions exceed the limits the EMA must be refused. The dimensions of the EMA should reflect what state it is presented for loading e.g. upright or collapsed.

If the EMA has not been pre-booked, please ensure the appropriate SSR code relating to the battery type is added to the PNR.

Note: With the exception of hover boards and balance-wheels the airline has an obligation to carry electronic transportation vehicles when a passenger determines that they are required to assist their mobility. Only a passenger may determine if the vehicle is required as an EMA, the airline cannot dispute this determination. The airline can only refuse carriage of the EMA if the device cannot be safely carried in accordance with the IATA DGR.



12.4.1 Flow Diagram - Checking In an EMA



12.5 Departure Gate

If passengers are using the EMA up to the boarding gate, please ensure they arrive at the gate as soon as it opens. This allows us enough time to inhibit electrical circuits and load the EMA. Late arrival of the EMA to the boarding gate could cause a flight delay.



12.5.1 EMA Tag

The check-in agent will issue an EMA Tag which must be filled in and attached to the EMA. The EMA Tag serves many purposes and displays the following information:

1. Make, model & weight of EMA, pap & flight details
2. Identification of Battery type SSR, Watt hour rating and spare battery info
3. How has the item been made safe for travel
4. Special Loading Instructions for the loading team
5. Signature proof that the EMA has been made safe for air travel
6. Loading supervisor signature proof of de-activation, loading position of the batter(ies) & that TUI procedures have been followed.

Front Image	Back Image

The EMA tag is carbonated, please distribute copies to:

- a. Flight Deck
- b. Flight File
- c. Attach to EMA

The Person responsible for making the EMA safe for carriage can be:

- A. Appointed Ground Handling Agent
- B. PRM/PWD Service Provider
- C. The Passenger

Supplies of this tag can be requested from TAGO.



Check in Responsible

Example of relevant Section 1, 2, 3, & 4

		ELECTRIC MOBILITY AID TAG TOP COPY FLIGHT DECK / COPY FLIGHT FILE / COPY ATTACH TO DEVICE COPY MUST BE ATTACHED TO ELECTRIC MOBILITY AID	
Make/Model: _____		Flight Number: _____ 1	
Weight: _____		Date: _____	
Customer Name: _____		Destination: _____	
Battery Type ☐ WCLB Watt Hour Rating WCBD ☐ SPARE/ADDITIONAL ☐ 2			
Which one method has been used to inhibit the electrical circuits of the vehicle? 3 (Obtain information from BHTA log or manufacturer's written instructions). ☐ Power switched off with key removed and given to customer ☐ Detach cable from battery/controller/connectors and protect against short circuit ☐ Inserted inhibiting plug (e.g. airtsafe™ plug) ☐ Lithium battery removed, taken in to cabin and protect against short circuit ☐ Other (please state in the box below) 			
Special Loading Instructions: (e.g. Do not collapse). 4 			

Check-in or Departure Gate Responsible – Passenger Signature Required

Example of relevant Section 5

Person responsible for making the Electric Mobility Aid safe for carriage 5 I confirm that I have protected the device from short circuits and have inhibited the electrical circuits as indicated above. Name: _____ Signature _____

Ramp Responsible

Example of Section 6



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Annex F Electric Mobility Aids - EMA

Confirm that the following loading instructions have been completed:		6
Electric mobility aid is loaded upright/collapsed into a separate netted compartment or ULD, segregated from any other loose baggage items and correctly secured using appropriate restraints. (Netting rings are NOT to be used).		
Electric Mobility Aid loaded in Hold and/or ULD position:		Battery in hold Battery in cabin
		If Battery in cabin* *Seat number
Loading Supervisor/ Team leader / Head loader		
I confirm that the Electric Mobility Aid is loaded and secured in accordance with current TUI instructions and have checked the Electric Mobility Aid does not operate.		
Name: _____		Signature: _____

Dispatcher Responsible

Copy to Flight deck & copy for flight file.

Examples of completed tag





ELECTRIC MOBILITY AID TAG
TOP COPY FLIGHT DECK / COPY FLIGHT FUEL / COPY ATTACH TO DEVICE
COPY MUST BE ATTACHED TO ELECTRIC MOBILITY AID



Make/Model: BEEPOKE MODELFlight Number: TOM923

Weight: 70 KGSDate: 01 MAY 2024

Customer Name: GPT KANUNIAZDestination: PALMA

Battery Type: WCLB Watt Hour Rating: 300 WH WCLB: ☐ SPARE/ADDITIONAL: ☐

Which one method has been used to inhibit the electrical circuits of the vehicle?
(Obtain information from BHTA log or manufacturer's written instructions).

☐ Power switched off with key removed and given to customer

☐ Detach cable from battery/controller/connectors and protect against short circuit

☐ Inserted inhibiting plug (e.g. ainsafe™ plug)

☒ Lithium Battery removed, taken in to cabin and protect against short circuit.

☐ Other (please state in the box below)

Special Loading Instructions: (e.g. Do not collapse).

**BATTERY TO BE LOADED IN CABIN
DO NOT COLLAPSE WHEELCHAIR**

Person responsible for making the Electric Mobility Aid safe for carriage

I confirm that I have protected the device from short circuits and have inhibited the electrical circuits as indicated above.

Name: MR A. SMITHSignature: A. SMITH

Confirm that the following loading instructions have been completed:

Electric mobility aid is loaded up/right/collapsed into a separate netted compartment or ULD, segregated from any other loose baggage items and correctly secured using appropriate restraints. (Netting rings are NOT to be used).

Electric Mobility Aid loaded in Hold and/or ULD position:

HOLD 2

Battery in hold: ☐ Battery in cabin: ☒

If Battery in cabin* *Seat number:

2A

Loading Supervisor/ Team leader / Head loader

I confirm that the Electric Mobility Aid is loaded and secured in accordance with current TUI instructions and have checked the Electric Mobility Aid does not operate.

Name: John BorwnSignature: J. BORWN

©2042

DO NOT DISMANTLE EMA WITHOUT PASSENGER AUTHORISATION

12.6 Load Control

12.6.1 Procedure

The load controller will be automatically notified via PNL/DCS system that they have an EMA's travelling. The IATA SSR codes are used. The EMA should show on the LIRF so the loading team are made aware of this immediately. Weights, dimensions & special loading instructions should be available from the PNR or direct from check-in agents on the day.



The dispatcher must ensure that the loadsheet accurately reflects the loading position of the EMA and the correct weight.

Post aircraft departure, the LDM/CPM must clearly state the location of the EMA and be sent to the arrival station.

12.6.2 Loading Instructions

12.6.2.1 B737

Where possible do not mix baggage with EMA's, this is in order to minimize the risk of baggage moving inflight and inadvertently activating the EMA.

Here are some example deviations to loading instructions if we have multiple EMA's booked

Recommended Loading Procedure for 1 EMA (FWD hold minimum 600kg)	
Hold 1	1 EMA
Hold 2	Standard bags

Recommended Loading Procedure for up to 2 EMA's (FWD hold minimum 600kg)	
Hold 1	1 EMA (or 2 small EMA's)
Hold 2	1 EMA (standard bags)

Recommended Loading Procedure for up to 3 EMA's (FWD hold minimum 600kg)	
Hold 1	1 EMA (or 2 small EMA's)
Hold 2	2 EMA's (standard bags)

Recommended Loading Procedure for up to 4 EMA's (FWD hold minimum 600kg)	
Hold 1	1 EMA (or 2 small EMA's)
Hold 2	3 EMA's (standard bags)

Note 1: If Hold 1 is not available, load EMA's in Hold 2. Where possible only load EMA's in forward holds (Hold1 & Hold 2).

Note 2: If it is not possible to achieve 600kg in the forward holds (hold 1 & hold 2) using EMA only, add standard baggage as needed to reach the 600kg target.

12.6.2.2 B787

See Annex C Aircraft Specifics for standard loading instructions.



Aircraft	Preferred Hold	Comments
B787	3 / 4 ULD 5 Bulk	1 per ULD ULD loading preferred as accommodates higher devices. H5 doorway is restrictive and often contains other items so ULD loading is preferred

12.7 Immobilising the EMA

12.7.1 Making Safe

An EMA can be immobilised at check-in, at the boarding gate, at the aircraft side. This will depend on the infrastructure and facilities available at the departure airport and the passenger convenience. The preferred method of inhibiting the electrical supply will be on the EMA tag. This can be carried out by the passenger, the Handling Agent or the PWD assistance company. This will vary at each airport. The person who takes this responsibility must sign the EMA tag. Removal of the battery should not be necessary in most instances; this is in accordance with the regulation. If the EMA is lithium-ion powered and the battery is designed to be removed it must travel in the cabin. There are various ways to inhibit the electrical supply, this is a requirement to prevent the risk of inadvertent operation where electrical short circuits could occur. This can be achieved by placing the device into drive mode (i.e. not freewheel mode), seeing if the mobility aid will power up, and if so whether use of the joystick results in the mobility aid moving. A check should also be made that batteries are securely attached to the mobility aid and battery terminals are protected from short circuit. If it is evident that an EMA has not been made safe, it must not be loaded and the loading supervisor must: follow the instructions on the EMA Tag to ensure that all steps have been followed contact the person who was responsible for making the device safe for carriage for them to investigate further on how the device can be made safe for carriage.

A. Power switched off and remove the key

Removed key must be given to passenger. Most power chairs are switched on and off with a push button which could be reactivated in flight by inadvertent movement of baggage or cargo.

B. Detach Cable from battery/controller's/& connectors and protect against short circuit

Further steps may be required depending on the device to inhibit the circuits like disconnecting electric cable plugs or connectors.

C. Insert Inhibiting plug (Air Safe Plug)

If compatible this method is very quick as it simply plugs into the standard charging socket and immobilizes electrically operated hand controls. No need to disassemble the equipment & reduces risk of damage to passenger equipment. This method sometimes activates all the lights on the control panel as if it were being charge, providing the plug is in the EMA is immobilized.

Note: Always check & validate that the EMA does not operate, this will be checked again just before loading onto the aircraft.

12.8 Loading Supervisor

At the aircraft side:



The Loading Supervisor must ensure that there is an appropriate signature on the tag by the person responsible for making the device safe for transport. The loading supervisor must ensure all measures have been taken to deactivate the EMA, or to follow the instructions on the EMA Tag to inhibit the electrical circuits.

This involves a test of the EMA prior to loading to check that inadvertent operation of the device has been prevented. This can be achieved by placing the device into drive mode (i.e. not freewheel mode), seeing if the EMA will power up, and if so whether use of the joystick results in the mobility aid moving.

A check should also be made that batteries are securely attached to the mobility aid and battery terminals are protected from short circuit.

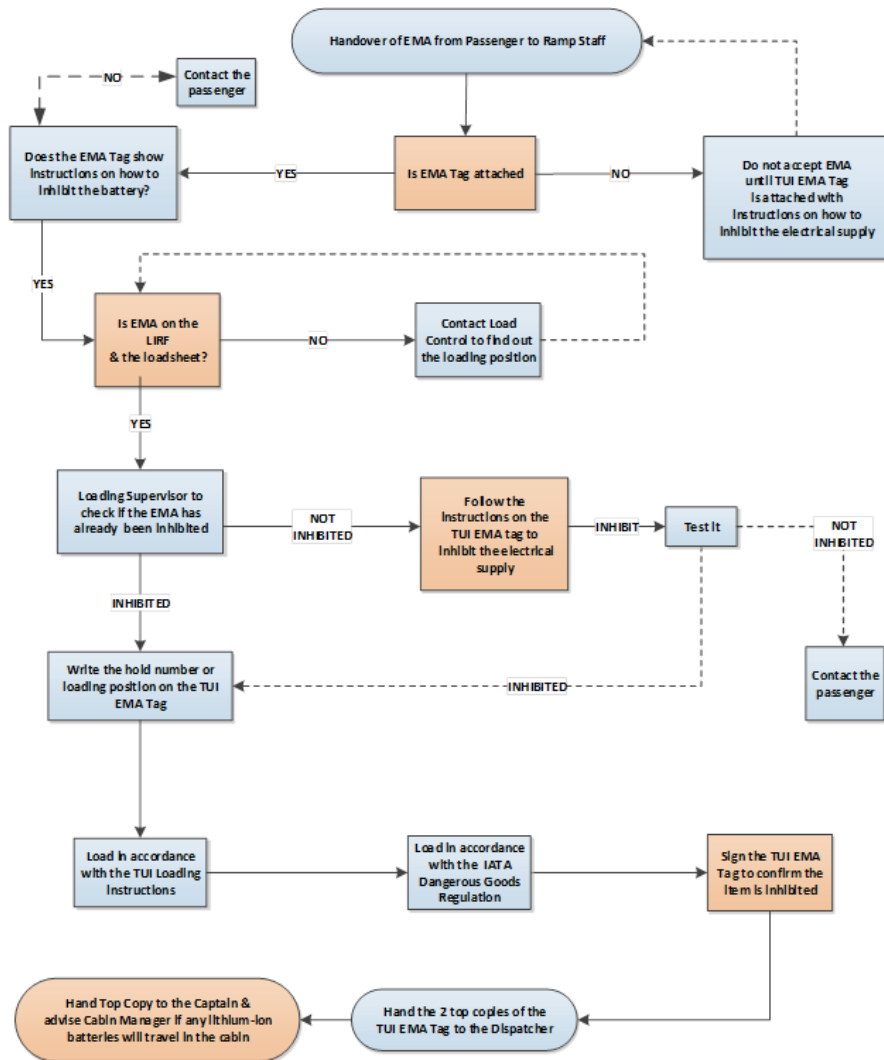
If there is no signature or it is evident that the EMA has not been made safe, it must not be loaded. The loading supervisor must contact the person who was responsible for making the device safe for carriage for them to immobilize the power supply.

Once the device is de-activated and deemed safe, the Loading Supervisor must sign the EMA tag to confirm that he/she has tested the device.

2 Copies of the EMA tag must be handed to the Dispatcher for the Flight Crew, and the flight file. This will leave 1 copy attached to the EMA. Any key used to turn the device to the off position must be removed and handed to the passenger.



Flow Diagram – Inhibiting Power supply & EMA Tag process at aircraft side



12.9 Dismantling

Where possible EMA's should be handled and loaded without dismantling in order to reduce the risk of damage. EMA's should only be collapsed where they are specifically designed to allow this.



It may be necessary to remove accessories such as headrests in order to minimise the height, please do this with the passenger's permission. Do not dismantle an EMA, consult the passenger first.

12.10 Loading & Securing

12.10.1 Loading

The EMA must arrive at the aircraft side for loading in sufficient time to ensure that it can be safely loaded. The EMA loading location must be clearly marked on the LIRF and note this on the EMA Tag. Any deviation from the planned LIRF must be clearly annotated, and the dispatcher advised. Where possible the EMA is to be loaded in an empty netted compartment to avoid inadvertent operation caused by loose baggage or other items. Multiple EMA's can be loaded in the same netted compartment however they must be secured separately.

Appropriate adjustments should be made to the standard loading procedure as required in order to ensure these requirements are met. Supervisor must confirm by signing the LIRF that the EMA has been loaded in the correct position. The Loading Supervisor must ensure that there is an appropriate signature on the tag by the person responsible for making the device safe for carriage. The Loading Supervisor must inspect the EMA to ensure that all measures have been taken to deactivate it and make the device safe for carriage by air. The Loading Supervisor must advise the Dispatcher as soon as possible if there are any issues with the EMA fitting through the aircraft hold door. ALL non collapsible EMA's must be loaded upright and cannot be loaded at any other angle. Where a lithium-ion battery has been removed and will travel in the cabin, the EMA must still be loaded in accordance with these procedures. At the end of Loading the supervisor must sign the tag, and remove the top 2 copies of the tag and hand to the Dispatcher. Top copy to the pilot and second copy for the flight file. If the planned aircraft is containerised, plan for the mobility aid to be loaded in a dedicated ULD which will be required to be loaded next to the hold door. In the event that the aircraft hold is a bulk loaded, plan the EMA to be loaded with adequate room for it to be secured, close to tie down points. Where possible, the EMA should be loaded and secured in a separate compartment.

12.10.2 Load Spreading

We recommend that if an EMA is being bulk loaded and weighs over 150kgs a spreader board should be used.

The gross weight of the EMA and any spreading material must be included for load planning processes.

12.10.3 Securing the load

When loading into the aircraft hold, care must be taken not to cause damage to the EMA or aircraft, and be loaded and securely tied down using lashing material over four anchor points.

Only anchor points on the floor should be used and the EMA's anchor point should not be shared with compartment nets.

Preferred to be loaded in an upright position to ensure the restraint is symmetrical in accordance with recognised methodologies, and be protected to prevent unintentional activation or damage by the movement of baggage, mail, stores or other cargo.



Any removable items, such as seat cushions or arm rests must be removed and securely stored in a clear plastic bag/sack to prevent damage.

The item must be secured to prevent movement during flight in any direction.

Loading Supervisor must ensure that all relevant materials required for the safe loading of the EMA are available.

The above also applies for ULD loading.

12.11 Notification to PIC

EMA'S do not appear on a NOTOC but the DG regulation requires that the PIC needs to be aware of any EMA's loaded and the loading position of the battery.

The EMA SSR codes and loading position will show on the loadsheet which acts as a notification.

The EMA Tag top copy is the notification to the PIC in addition to the loadsheet.

If the lithium-ion battery is designed to be removed it will be loaded in the cabin. This also applies to any spare lithium-ion batteries. Pilot in command needs to be advised of this.

12.12 Refusal of an EMA

In the event that the EMA is refused on safety grounds, the Passenger Liaison Executive (CLE) within TUI OCC must be contacted.

12.13 Damage to EMA's

In the event that an EMA has been damaged you must notify the Passenger Liaison Executive (CLE) within TUI OCC must be contacted.

12.14 Baggage offload process

In the event that there is a space/weight issue involving EMA carriage the following offload process must be followed. Number 1 being the first to be offloaded. Please refer to GOM Chapter 5 Load Control, 05.22.2.a for this table

1. Company mail
2. Company stores (non-essential)
3. Empty ULDs (positioning equipment)
4. Commercial cargo – non-perishable
5. Commercial cargo - perishable
6. Company stores - must go
7. Charterers excess baggage (bicycles, sports equipment etc.)

12.15 Aircraft Arrival

On arrival, the Loading Supervisor must ensure that the EMA has arrived secured.

When offloading the EMA, care must be taken not to cause damage to the EMA or aircraft.

Any removable items that have been removed from the EMA and have been stored in a clear plastic sack/bag must also be offloaded.



The appointed Ground Handling Agent is to return the EMA and any removed items to the passenger and assist the passenger in re-activating the device for use. This location of activation may vary depending on the infrastructure of your airport. This should be done by carrying out the steps that were done at the departure airport to de-activate the EMA but in reverse, using the EMA Tag for guidance.



13 Annex G Emergency Response Plan

13.0 General

Purpose

This document is intended to serve as an operational plan for use by airport personnel responding to an aircraft accident involving TUI Airways and TUIfly Nordic.

Distribution & Storage

External

- GHA Station Office;
- Supervisory Agent (where applicable)
- Airport Authorities

Integrated Emergency Response

This document is intended to be read in conjunction with the Airport Authority's Emergency Response Plan, the Ground Handling Agent's Station Emergency Response Plan and any other locally enforceable plan held by an interested party.

13.0.1 Regulation and Reference Documents

CAA (CAP168) – Licensing of Aerodromes

EU 996-2010

ICAO Annex 13 – Accident / Incident Investigation

ICAO Doc 9137 – Airport Services Manual (Pt.5 – Removal of Disabled Aircraft)

ICAO Doc 9137 – Airport Services Manual (Pt.7 – Airport Emergency Planning)

ICAO Doc 9973 – Manual on Assistance to Aircraft Accident Victims and their Families

IATA – Emergency Response Plan Guidance Material

US Foreign Air Carrier Family Support Act

TUI Airways and TUIfly Nordic – Ground Handling Manual

TUI Group Airlines – Basic Emergency Response Planning Manual



13.0.2 Emergency Airline Contact Sheet

INCIDENT NOTIFICATION AIRLINE CONTACTS EMERGENCY USE ONLY - DO NOT DISCLOSE	
TUI fly Netherlands (TFL/OR) Tel: +44 7779 134 729 (ODM mobile) Office: +44 203 451 2874 Fax: N.A. SITA: LTNOOBY Email: odm@tui.co.uk « On Site manager in ERC Rijswijk NL » Tel: +31 70 307 7687	TUIfly (TUI/X3) Tel: +49 511 9727 797/870 *Duty Manager* Fax: +49 511 9727 269 SITA: HAJOWX3 Email: dutymanager@go-centre.com
TUI fly Belgium (JAF/TB) Tel: +44 7779 134 729 (ODM mobile) Office: +44 203 451 2874 Fax: N.A. SITA: LTNOOBY Email: odm@tui.co.uk « On Site manager in ERC Brussels BE » Tel: +32 2 717 9425	TUIfly Nordic (BLX/6B) Tel: +44 1582 419569 *Emergency Only* Mob: +44 7779 134729 SITA: LTNOOBY Email: odm@tui.co.uk
TUI Airways (TOM/BY) Tel: +44 1582 419569 *Emergency Only* Mob: +44 7779 134729 SITA: LTNOOBY Email: odm@tui.co.uk	

13.1 Emergency Response Planning

The response to an aircraft accident will involve multiple agencies, often with competing interests and some with a role which is legally defined. It is essential that roles and responsibilities are clearly defined prior to an incident / accident.

Plans need to be relevant, practical, user friendly and ensure all users are familiar with their own roles and the wider plan.

The Airline, Ground Handling Agent and Airport Authority should have their own plan. Each should ensure a person is assigned responsibility for the maintaining the plans.

A copy of the Ground Handling and Airport Authority Plan should be obtained. A paper copy should be stored on station, with an electronic copy made available for storage by TUI Group Airlines.

Where possible, a working relationship should be established with the following agencies:

- Emergency Services;
- Health Services;



- Customs and Immigration;
- Social Services;
- Local Authorities;
- Local Embassies.

In addition to multiagency planning meetings, regular multiagency training and exercising of the plans will help identify deficiencies in any plans and provide the opportunity to take corrective action before a real event.

13.2 GHA/Airline Crisis Management Structure (AIRPORT)

The provision of assistance to those people directly affected is the primary concern in the aftermath of an aircraft accident.

The Ground Handling Agent (GHA) is the Airline's primary representative on station. As such, the GHA must immediately provide all possible assistance. Airline or other Airline representatives will be dispatched to provide support.

Due to the relationship between the charterer and the other members of the TUI Group, local representatives may also be present to offer assistance with the immediate welfare of those affected.

A tour operator's customers on board a TUI Group Airlines flight must be treated as passengers of the affected Airline.

The Ground Handling Agent is responsible for providing assistance as per the checklists.

13.2.1 Passenger Manifest Verification

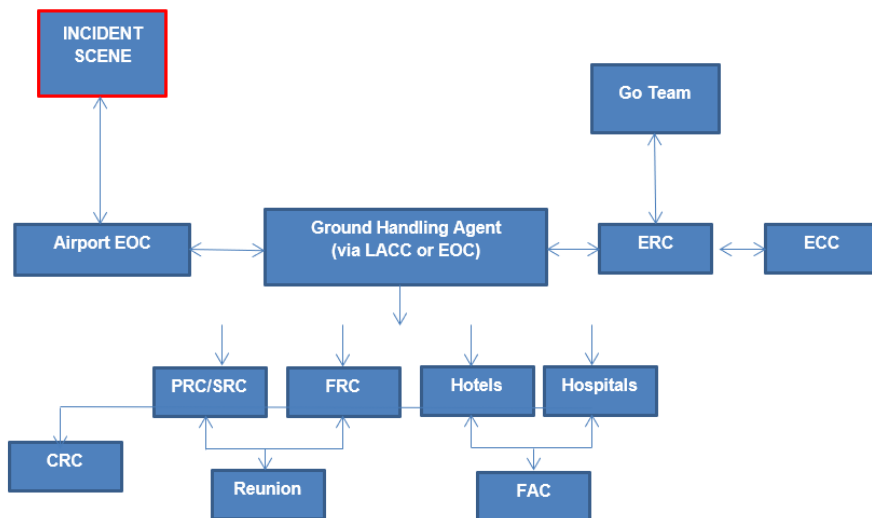
In accordance with international regulations (EU996-2010, US Foreign Air Carrier Support Act, ICAO Doc 9998), a verified passenger manifest must be made available to the authorities as soon as possible, without exceeding 2 hours (EU) or 3 hours (US). Where an 'All Boarded manifest' can be produced, this is to be treated as the validated manifest as described in EU996-2010.

Care must be taken to ensure that the names on the manifest are accurate e.g. where the number of characters limits the full spelling of the passengers name on the manifest. To support this process, electronically stored passport information collected for immigration purposes i.e. E-Borders or APIS may be used.

Any person who has concern over the accuracy of the 'All Boarded Manifest' must inform the affected Airline immediately.

13.2.2 Communication Flow Chart

Clear channels of communication must be established. Therefore, communication from the Ground Handling Agent to the Airline must be via the affected Airline's Operations Duty Manager or Operations Centre and then via the established single point of contact.



Where SAT or other TUI staff are deployed within airport reception centres, then updated operational communications must be made via the LACC / EOC through to the CMC.

Until the CMC is opened, communications should be passed directly to the TUI OCC.

13.2.3 Local Accident Control Centre (LACC)

The purpose of the LACC is to provide a facility from which the Airlines' local response can be coordinated. It can also isolate the incident from 'normal' operations. This is to be set up by the Ground Handling Agent. The LACC is different to the Airport Emergency Operations Centre. However, it is recognised that at some airports staffing numbers will not allow coverage in both the Airport's EOC and a separate LACC. In this case representation at the Airports EOC should take priority.

13.2.4 TUI Group Airlines Airport Staff

The plan assumes that there will be no TUI Group Airlines staff at the airport. As such, the airline will be represented by the Ground Handling Agent during the immediate response.

Where there is a TUI Group Airlines staff presence, i.e. manager or crew base, then consideration must be given at a local level with regards to additional planning for staff and their involvement in an response.

13.2.5 Security

At all bases additional security should be provided to protect employees, passengers, family members and company property.



13.3 Humanitarian Assistance (Welfare for Victims)

Survivors and Family Members should be provided with all possible assistance including the provision of locksmiths, medication, onward travel and purchase of clothing for immediate use. This list is not exhaustive.

The Ground Handling Agent will be the primary representative for TUI Group Airlines and is expected to respond on the Airline's behalf. At resort airports, immediate support may also be expected (though not solely relied upon) from TUI Destination Experiences and other TUI Group employees. Temporary IDs may be required for Airside Access for some non-airport workers.

AUTHORISATION TO PROVIDE THIS ASSISTANCE TO THOSE DIRECTLY AFFECTED IS NOT REQUIRED WHEN THIS PLAN IS INVOKED.

13.3.1 Reception Centres

13.3.1.1 Passenger Reception Centre (PRC) / Survivors Reception Centre (SRC)

A place where all victims who do not require hospital treatment are taken to be cared and accounted for. At the airport, this is typically a gate room or baggage hall in an airside area. Essentially, the PRC / SRC should have adequate facilities to hold up to 300 + uninjured survivors, with security, catering, toilets, telephones, airline amenity kits, blankets, emergency clothing and footwear etc. This should ideally be supplied, however local infrastructure will dictate accordingly.

13.3.1.2 Friends and Relatives Reception Centre (FRRC)

Friends and Relatives waiting for the affected flight should be identified by the Airline/GHA/ Airport/Other etc. staff and segregated. The airport and airline should include in their respective emergency response plans clear procedures for how the above is to be accomplished.

The FRRC is a facility established at the airport in the event of an emergency to care for the relatives and friends as they are awaiting information about passengers involved in the accident. The FRRC should ideally have adequate facilities to hold up to 600 + persons i.e. privacy, seating, toilets, telephones, catering etc.

13.3.1.3 Crew Reception Centre (CRC)

It is TUI Group Airlines preference to segregate the Pilots and Cabin Crew from the passengers once in the reception centre. As such, a separate Reception Centre should be provided for the Crew. Circumstances and individual preference will need to be considered at the time of an incident.

13.3.1.4 Temporary Mortuary / Body Holding Area

A storage facility, out of sight of the media, for bodies and human remains which ensures the deceased are treated with dignity, care and respect.

Temporary mortuary facilities, where possible, should be refrigerated. Likely locations include external airside areas, disused terminal buildings etc.



Hangars should be avoided where possible due to issues associated with personnel returning to work post incident.

13.3.1.5 Family Assistance Centre (FAC)

The Family Assistance Centre will be established within a few hours of the incident occurring. It is the place where survivors, their family members and families of the deceased will be accommodated once the Airport's reception centres at the airport have closed. A suitable hotel should be identified close to your airport which may be used for this purpose. Ideally, the hotel should have conference facilities and suitable levels of accommodation e.g. 3 or 4 star.

13.3.1.6 Reunion Centre (RC)

A separate designated area where survivors are reunited with friends and relatives once all identity is confirmed on both sides in the separate centres.

13.3.2 Special Assistance Team (SAT)

Following an aircraft accident, as part of our longer term humanitarian response, the Special Assistance Team (SAT) will be deployed as part of the 'Go Team' to assist with the provision of welfare to all victims of the incident. Depending on the location and accessibility to your airport, their arrival may take several hours.

13.3.3 Hotels

It is beneficial to identify local hotels close to the airport which can be used by members of the Go Team and for use as a Family Assistance Centre.

Hotels will also be required close to airports for family members and Go Team members waiting for flights / transportation to/from the UK.

It is imperative that as many hotel rooms as is possible are secured in the immediate aftermath of an incident / accident.

13.4 Aircraft Recovery

In accordance with ICAO Annex 14, Doc 9137 Pt. 5 – *Removal of Disabled Aircraft*, an aircraft recovery plan is in place.

In summary:

- Plans for the recovery of a disabled aircraft will be implemented immediately by our 24/7 operational team.
- As full members of the International Airlines Technical Pool (IATP), we have full access to the IATP recovery kits located globally. As appropriate, ad-hoc contracts with local 'experts' (i.e. crane operators) may be required.
- Action to recover a disabled aircraft is expected to commence well within 48 hours, although it is accepted that unforeseen factors may delay the response or ability to deploy kits.
- Each Airline has a 'Go Team' on standby 24/7 for dispatch to serious incidents/accidents, which includes technical support for aircraft recovery.



- Once approval is granted from the investigating authorities, any recovery of a disabled aircraft must be in liaison with the affected Airline's Safety Manager, Insurance Representatives, Engineers and Aircraft Manufacturers.

Note: (this list is not exhaustive)

The affected Airline will be responsible for the engagement of / contracting necessary contractors at a local and international level. This will be based on discussions with our insurers and no third party should be contracted without obtaining approval from the affected Airline.

The recovery kit will be flown in from the storage locations, closest to the incident/accident site. This can take approximately 20hours to arrive, assuming the closest airport remains operational.

13.5 Media Relations

Ideally, media communications should be coordinated by all interested parties to avoid contradictory information being released and to ensure coordination from a timing perspective.

Each airline is responsible for its own communications.

13.5.1 Guidance for Ground Handling Agents, Ground Staff and Company Employees

Survivors, Friends and Families should be protected from unwanted intrusion by the media. However, they must not be prevented from speaking with the media if they wish.

All media communications on behalf of the affected airline will be directed and authorised via their respective Head Office. This will be delivered by official press statements or delivered by authorised spokespersons. These communications will be authorised by the respective Airline's Crisis Management Teams.



Ground Handling Agent or Airline Employees are not authorised to make statements on behalf of the Airline.

All media enquiries should be directed to the affected Airline.

13.6 ERP forms and reports

13.6.1 Incident/Accident initial situation report

** COMPLETE IMMEDIATELY **	
INCIDENT/ACCIDENT INITIAL SITUATION REPORT	
COMPILER'S DETAILS	
Today's Date and Time (GMT):	(i.e. 25JUL15/0837z)
Name of person receiving notification:	
NOTIFICATION DETAILS	
Name of person notifying:	
Company:	
Location:	
Method of notification:	
Contact details:	
FLIGHT DETAILS	
Flight No:	Route:
A/C Registration:	Last Point of Departure:
A/C Type:	Next Destination:
Pax Numbers TOB: (Unverified)	Operating Crew Numbers: (FC / CC / Jump Seat) / /
Dangerous Goods on Board?	Dangerous Goods Details (Type):
Last ATC Contact (UTC) if known:	Last Radar Contact (UTC) if known:
Was this flight operating on behalf of another company? (e.g. wet leased): If so, who?:	
INCIDENT DETAILS	
Date of Incident (LOCAL) // Time of Incident (UTC)	
Incident Location // DARKNESS or LIGHT	
INCIDENT LOCATION	NATURE OF INCIDENT
(Inc. WX at time of incident, who is responding on site, description of the incident site)	(Inc. condition of pax, crew, extent of damage to aircraft / property / ground casualties etc.)
NOTIFY THE AFFECTED AIRLINE IMMEDIATELY REGARDLESS IF ALL DETAILS ARE KNOWN (SEE AIRLINE CONTACTS PAGE)	
ACTIVATE YOUR EMERGENCY RESPONSE PLAN	



13.6.2 GROUND HANDLING AGENT – CHECKLIST 1

TUI GROUP AIRLINES AIRCRAFT SERIOUS INCIDENT/ACCIDENT IMMEDIATE RESPONSE CHECKLIST – GROUND HANDLING AGENT			
		COMPLETED	
		Time	Initials
1	NOTIFY the affected Airline's Operations Centre via telephone, follow up with fax/ email of Initial Situation Report - (REFER TO CONTACTS PAGE)		
IF YOU ARE THE ACCIDENT STATION			
2a	NOTIFY Air Traffic Control, Fire Service and any other appropriate authority as required of: • Crew and Passenger Numbers and • Amount and type of cargo including Dangerous Goods on board. <i>Only the above information can be released.</i> <i>No further information can be released without authorisation from the Airline.</i>		
2b	ENSURE Passenger Information Screens have been changed to "Contact Airline" or "Proceed to Info Desk". <i>Note: This step should only be completed once staff are in place to answer questions.</i>		
2c	DISPATCH representatives to the Passenger Reception Centre (PRC) / Survivors Reception Centre (SRC)		
IF YOU ARE THE DEPARTURE STATION			
3a	COLLECT and securely store all flight paperwork. SEND copies of Flight Paperwork to the affected airline by email and/or fax. Refer to contact details.		
3b	LOCKDOWN DCS Check-in System.		
3c	Commence VALIDATED PASSENGER / CREW MANIFEST REVIEW Ground Handling Agent Checklist - Number 2 – NEXT PAGE		
ALL AFFECTED STATIONS			
4	ENSURE a representative is sent to the Airport Emergency Operations Centre or ESTABLISH CONTACT with a senior manager from the Airport Authority.		
5	DISPATCH representatives to the Friends and Relatives Reception Centre (FRC).		
6	PROVIDE welfare and support to all persons directly affected.		
7	CONTINUOUS LIAISON – Maintain a single point of contact. Assign an individual to provide updates to the affected Airline. For example: passenger status, location etc.		
8	Any requests for additional information should be relayed to the affected Airlines Head Office.		
END OF CHECKLIST			



13.6.3 GROUND HANDLING AGENT - CHECKLIST 2 (DEPARTURE STATION ONLY)

VALIDATED PASSENGER/CREW MANIFEST CHECKLIST			
TO BE COMPLETED IN A SECURE LOCATION			
TO BE PROVIDED WITHIN 2 HOURS OF INCIDENT			
CAUTION! - Passenger Manifest information must be treated with extreme care; ONLY the affected Airline's Head Office is authorised to distribute manifests			
		Time	Initials
1	COLLECT AND SAFELY STORE any boarding cards or manual manifests for the flight.		
2	PRINT 1) 'All Boarded Passenger Manifest' – 1xAlphabetical and 1xGroup (Annotate "COPY 1") 2) Special Service Request information (SSR) 3) APIS Report/ E-Borders information (if available) <i>Note: For stations using the Airline's DCS, this task will be completed by the Airline.</i>		
3	OBTAIN the Crew Manifest e.g. Crew list / GENDEC.		
4a	CONFIRM with the Gate Team if any Last Minute Changes were made prior to departure. If yes, ENSURE last minute changes are reflected in the manifest.		
5	SEND Corrected 'All Boarded Passenger Manifest', SSR list, APIS / E-Borders and Crew lists printed in step 2 to the affected Airline. <i>Note: For stations using the Airline's DCS, this task will be completed by the Airline.</i>		
6a	MANUAL MANIFEST VERIFICATION - (for use on manual check-in flights) SEND a check-in manifest marked 'UNVERIFIED' to the affected Airline.		
6b	CROSS CHECK the 'checked in passenger manifest' against the boarding cards. Mark the cross-checked manifest as 'VERIFIED'.		
6c	SEND the 'VERIFIED' manifest and the gate boarding log to the affected Airline. ENSURE inconsistencies or concerns are reported immediately to the Airline point of contact.		
7	PASSPORT INFORMATION E-Borders / APIS Information – where additional passenger information is stored or is available, this information should be sent via the point of contact to the affected Airline. <i>Note: For stations using the Airline's DCS, this task will be completed by the Airline.</i>		
8	COLLECT AND SECURELY STORE the passenger / crew manifest with flight paperwork. Preferably within a TUI Group Airlines office if appropriate and available.		
IF IN DOUBT CALL THE AFFECTED AIRLINE			
END OF CHECKLIST			



**Ground Operations Manual Northern Region
Annex G Emergency Response Plan**

ERP Annex A Passenger Enquiry Card

MUST	Flight Number / Date		Date/Time of from completion		Station Forwarding Form	
	Name of agent competing form					
ENQUIRER DETAILS						
MUST	Last/Family Name				First/Middle Name	
	Relationship to passenger					
	Address					
	Telephone number (incl. country and area code)				Relationship to passenger	
PASSENGER DETAILS						
MUST	Last/Family Name				First/Middle Name	
	Male/Female/Child /Infant		Nationality		Approximate Age	
	Traveling to/from					
CAN	Address				Telephone number (incl. country and area code)	
	Passenger Traveling with (if known)	Last/Family Name		First/Other Name(s)		Relationship to Passenger
NEXT OF KIN (if known)						
CAN	Full Name				Relationship	
	Address				Telephone number (incl. country and area code)	
Remarks (Continue on separate sheet if necessary)						



**Ground Operations Manual Northern Region
Annex G Emergency Response Plan**

ERP Annex B Passenger Information Card

MUST	Flight Number / Date		Date/Time of from completion		Station Forwarding Form	
	Name of agent competing form					
PASSENGER DETAILS						
MUST	Last/Family Name				First/Middle Name	
	Relationship to passenger					
	Address					
	Telephone number (incl. country and area code)				Relationship to passenger	
	Nationality				Passport Country of Issue (if different)	
	Language				Passport Number	
FAMILY AND FRIENDS (Person to be contacted)						
MUST	Last/Family Name				First/Middle Name	
	Relationship to passenger				Telephone number (incl. country and area code)	
	Anyone meeting passenger at airport?	YES	NO	If YES, Name of Meeter		Relationship to passenger
PASSENGER'S REQUIREMENTS						
MUST	Any Special Requirements (transport, accommodation, clothing, medications etc.)					
PASSENGER'S STATUS						
MUST	Location of passenger				Time	
	If passenger injured?		YES	NO	If YES, nature of injuries (Brief)	



14 Annex H Live Animals

14.1 Pet Travel Scheme

14.1.1 General

As an EU national, you can freely travel with your cat or dog if it has a European Pet Passport. You can find the legal information about travelling with your pets within the EU at Regulation (EU) No 576/2013. This includes Recognised Guide dogs and other assistance dogs.

TOM-UK

Flights operating from southern Island remain part of the EU Pet Travel Scheme.

End TOM-UK

TOM-UK

https://ec.europa.eu/food/animals/pet-movement/eu-legislation_en

End TOM-UK

TOM-UK

From 1 January 2021, Great Britain is no longer a member of the EU Pet Travel Scheme, European Pet Passport is no longer valid. Under the Northern Ireland Protocol, from 1 January 2021, Northern Ireland remains part of the EU Pet Travel Scheme. Great Britain (GB) has become a Third Country (Part II Listed). For the purposes of pet travel this will mean there will be additional documentary requirements, health preparations and checks <https://www.gov.uk/taking-your-pet-abroad> <https://www.gov.uk/bring-pet-to-great-britain>

End TOM-UK

TUI defines pet animals as:

- A. cats
- B. dogs

This scheme covers pet cats & dogs travelling in both the cabin and the hold of our aircraft.

EU member state 'country specific' information can be found using the following link. This covers Identification, vaccinations, traveling from & to member states/territories and travelling from third party countries.

Link: https://ec.europa.eu/food/animals/pet-movement/ms-websites_en <https://www.gov.uk/bring-pet-to-great-britain/listed-and-unlisted-countries>

Pets can enter or re-enter GB & NI from any country in the world without quarantine provided they meet the rules of the scheme, which will be different depending on the country or territory the pet is coming from.

All domestic cats and dogs must undergo a qualifying period in quarantine on arrival into GB & NI (unless being carried under the Pet Travel Scheme) Animals will only be accepted for carriage when the shipper has obtained an import licence from the GB & NI government. Normally the quarantine premises will prepare and submit an application for a licence on behalf of the shipper.

Animal containers must show a red Rabies Control label (issued with the import licence) clearly identifying the container as holding an animal subject to quarantine.



Handling agents should supply crews with a copy of the DEFRA Boarding Document to show that all preparations for import to the GB & NI have been made. If the Boarding Document is not available, crews should contact Cargo Operations before accepting the shipment:

14.2 Qualifying EU/NON EU Countries

14.2.1 EU Countries (Member States)

A list of EU Member States which includes NI for Pet travel.

<https://www.gov.uk/eu-eea>

https://ec.europa.eu/food/animals/movement-pets/eu-countries-specific-information_en

14.2.2 Travelling from/to GB to an EU Member States (including NI)

A list of part 2 listed countries (Article 13/2) which now including GB to an EU Member State (including NI):

- a. <https://www.gov.uk/bring-pet-to-great-britain/listed-and-unlisted-countries>
- b. https://ec.europa.eu/food/animals/movement-pets/eu-legislation/listing-territories-and-third-countries_en

14.2.2.1 Travelling to an EU country from GB

You can no longer use a pet passport issued in Great Britain (England, Wales and Scotland) for travel to an EU country or Northern Ireland. You can still use a pet passport issued in an EU country or Northern Ireland.

When travelling to an EU country or Northern Ireland, your pet needs:

- a. a [microchip](#)
- b. a valid [rabies vaccination](#)
- c. an [animal health certificate](#) unless you have a pet passport issued in an EU country or Northern Ireland
- d. [tapeworm treatment](#) for dogs if you're travelling directly to Finland, Ireland, Northern Ireland, Norway or Malta

These requirements also apply to assistance dogs.

Check the rules of the country you're travelling to for any additional restrictions or requirements before you travel.

14.2.2.2 Travelling to GB from an EU country

These rules apply to Great Britain (England, Wales and Scotland). [Check the rules on pet travel into Northern Ireland.](#)

You can enter or return to Great Britain with your pet cat, dog or ferret if it:

- a. has been microchipped
- b. has a pet passport or health certificate
- c. has been vaccinated against rabies - it will also need a blood test if you're travelling from a country that is not 'listed'
- d. Dogs must also usually have a tapeworm treatment.



Your pet may be [put into quarantine](#) for up to 4 months if you do not follow these rules - or refused entry if you travelled by sea. You're responsible for any fees or charges.

14.2.3 Travelling from/to a part 1 listed country to an EU Member States (including NI)

A list of part 1 listed countries (Article 13/1)

- a. <https://www.gov.uk/bring-pet-to-great-britain/listed-and-unlisted-countries>
- b. https://ec.europa.eu/food/animals/movement-pets/eu-legislation/listing-territories-and-third-countries_en

14.2.4 Travelling from/to a country that is not listed

If your country is not listed, you'll need a Great Britain pet health certificate. Your pet will also have to follow specific [rules on rabies, vaccinations and blood tests](#).

- a. <https://www.gov.uk/bring-pet-to-great-britain/listed-and-unlisted-countries>
- b. https://ec.europa.eu/food/animals/movement-pets/eu-legislation/entry-union_en

14.3 Country Regulations & EU Airport Entry Points

The following website links will provide all information on travelling with your pet cat or dog. This covers all the acceptance criteria if travelling to and from an EU/Non-EU country.

Pets entering EU airports are subject to documentary/identity checks by the competent authorities. This can only be carried out at specific airports, see specific country entry points for more details.

Country	Regulation Link Airport Entry Point Link
GB*	https://www.gov.uk/taking-your-pet-abroad https://www.gov.uk/bring-pet-to-great-britain
Northern Ireland (NI)	https://www.gov.uk/taking-your-pet-abroad/travelling-to-an-eu-country-or-northern-ireland
Ireland	https://www.gov.ie/en/publication/21d40-pet-travel/
Sweden	https://djur.jordbruksverket.se https://ec.europa.eu/food/sites/food/files/animals/docs/pm_non-com_entry_swe.pdf
Denmark	https://www.foedevarestyrelsen.dk/english/ImportExport/travelling_with_pet_animals/Pages/default.aspx
Finland**	https://www.ruokavirasto.fi/yritykset/tuonti-ja-vienti/
Norway	https://www.mattilsynet.no/language/english/animals/travelling_with_pets/ https://ec.europa.eu/food/sites/food/files/animals/docs/pm_non-com_entry_nor.pdf

The Canary Islands for customs purposes are outside of the EU.



Note: **There are no quarantine facilities in Finland. Pets not meeting requirements will need to arrange for quarantine in official quarantine facilities in other EU Member States.

14.4 Quarantine

14.5 Country Variations

14.6 Domestic Cats & Dogs in the hold (excludes Service Animals)

TOM-UK

14.6.1 UK Bookings

Pre-booking this service can be done directly via our appointed cargo sales agent.

Live animals will only be accepted on flights as Animal in Hold (AVIH)

Domestic Pet Bookings

Globe Air Cargo Ltd

Tel: +44 (0) 208 757 4732

Hours: Mon - Fri 0900 - 1730

pets@ecsgroup.aero

End TOM-UK

BLX-SE

14.6.2 Nordic Bookings

Pre-booking this service can be done directly via the TUI Nordic Website. The booking may also be done during check-in at any airport.

Live animals will only be accepted on flights as Animal in Hold (AVIH).

Animals are only accepted for countries within EU. The carriage of AVIH is not permitted on any flight outside of the EU.

End BLX-SE

14.6.3 FBL Messaging

TOM-UK

At normal cargo pre-alert time the AVIs **MUST** be sent to the carrier Operations centre.

The pre-alert **MUST** be sent to the cargo handler at the departure and arrival stations.

The pre-alert **MUST** give the **following**:

- flight number
- routing
- date of flight
- air waybill number
- pieces & weight
- number of animals
- shippers name and telephone number
- consignee's name and telephone number (for UK import it may be the Kennel)
- state whether the owner is on the same flight as the animal(s)



- state if animal is travelling under the Pet Travel scheme (Pet Passport scheme)

Example of FBL:

FBL/3

1/BY2620/09FEB/MAN

ALC

612-90010325MANALC/T1K9MC0.20/1 LIVE DOG - BE/AVI

DIM/K0/CMT71-52-54/1

/PETSCASH

SSR/LIVE ANIMAL CERTIFICATE ATTACHED

/SSR3 EMERGENCY TEL 07403884892

OSI/BREED JACK RUSSELL CROSS CHIHUAHUA

LAST

General

Domestic pets (Cats & Dogs only) are carried as cargo under the pet travel scheme.

The following air waybill must be used: **(TB) TUI Fly Belgium 612 PREFIX.**

Pets can travel unaccompanied

End TOM-UK

BLX-SE

AVIH's are carried as passenger baggage under the pet travel scheme, Pets must be accompanied by a passenger.

Pets carried in the hold of BLX aircraft are coded as AVIH on the PNL.

End BLX-SE

14.6.4 Charge

The weight of pet & box is added to baggage weight. If free allowance is exceeded the published excess baggage rates per kg are applicable.

14.6.5 Restrictions

A. Snub-Nosed Breeds

Snub- Nosed Dogs (Snub-Nosed dogs (or any cross between two snub-nosed breeds) which includes the following breeds:

- American Bulldog
- Boston Terrier Boxer
- Brussels Griffin



- Bulldog (all breeds)
- Bull Mastiff
- Bull Terrier
- Chinese Pug
- Chow
- Dutch Pug
- English Bulldog
- English Toy Spaniel
- French Bulldog
- Lhasa Apso
- Japanese Boxer
- Japanese Pug
- Japanese Spaniel (Chin)
- Mastiff (all breeds)
- Pekinese
- Pug
- Shar Pei
- Shih Tzu
- Tibetan Spaniel

Same will apply for snub-nosed cats, for example Persian flat-nosed cats.

- British shorthair
- Exotic Shorthair
- Himalaya
- Persian flat-nosed
- Schottish fold

B. Following breeds are not allowed to be transported on board of any TUI airlines flight: **Dangerous breeds** (or any cross with a dangerous breed):

- Pitbull Terrier,
- Dogo Argentino
- Japanese Toso
- Brazilian Fila

The owner ensures that the dog can travel to the other country (the dog may be on the dangerous/prohibited breeds list at destination country).

C. AVIH's are only allowed for carriage on flights within the EU.

TOM-UK

Note: When a customer books a snub-nosed dog/cat via the cargo agent they will be requested to complete an AVI fit to fly assessment form. The completed form will be reviewed by the cargo agent before a booking is made, a copy of this form is available (Appendix F20). Once the AVI has been delivered for departure the form must be presented & verified by the cargo agent, if this hasn't been completed transport will be refused. Please refer to the TCE Cargo Operations Manual for the booking process.

End TOM-UK



14.6.6 Inventory

Aircraft	QTY	Remarks
B737 all Types	4 TOM	Limitation by TUI Aviation Ground Operations
	3 BLX	
B787-8	4	Limitation by TUI Aviation Ground Operations
B787-9	4	Limitation by TUI Aviation Ground Operations

Note 1: In certain circumstances TUI Aviation Ground Operations may give permission to exceed these figures.

BLX-SE

Note 2: When puppies or kittens are transported, the double QTY of pets is allowed. In addition it is possible to transport 2 animals in one box, if the box offers enough space for both animals.

End BLX-SE

14.7 Domestic Cats & Dogs in the Cabin

TOM-UK

Carriage of domestic dogs and cats in the cabin (PETC) is not permitted. TUI Airways only accept SVAN in the cabin.

Note: If TUI Airways aircraft are operating flights on behalf of JAF/TB, TFL/OR, TUI/X3 or BLX/6B, domestic pets are allowed in the cabin (PETC) & the hold (AVIH) as passenger baggage. For more details on conditions of carriage please see respective airline GOM/GHM).

End TOM-UK

BLX-SE

14.7.1 Booking Procedures

Booking of this service is currently not available for TUI Fly Nordic flights.

End BLX-SE

BLX-SE

14.7.2 General

- They are carried as passenger hand baggage under the Pet Travel Scheme.
- Pets to be accompanied by the passenger.
- Pets carried in the cabin of our aircraft are coded as PETC.
- Cats & Dogs only.

End BLX-SE

BLX-SE

14.7.3 Charge

PETC service is currently not available on TUI Fly Nordic flights.

End BLX-SE



BLX-SE

14.7.4 Restrictions

- a. The pet is at least 3 months old
- b. Not allowed on long haul flights (>7 hours).
- c. Cats and dogs weighing not more than 8 kg are allowed in the cabin provided that they are carried in a suitable ("nose and paw" proof) container (a solid bag can be acceptable) which must be supplied by the passenger.
- d. Passengers travelling with more PETC booked under the same booking number can be seated next to one another.
- e. No animals are allowed on the flight crew compartment.
- f. Pregnant animals or animals in heat will not be accepted.
- g. Tranquilized/sedated animals will not be accepted.
- h. If from the same family, 3 cats/dogs in one suitable ("nose and paw" proof) container are allowed under the condition that they have enough space.

End BLX-SE

BLX-SE

14.7.5 Inventory

Maximum allowed per aircraft cabin are:

- a. B737: 3 and 5 on double drop flight (e.g. Double drop between 2 destinations)
- b. B787: 5

End BLX-SE

BLX-SE

14.7.6 Pet Travel Carrier Bag / Container

- a. The pet shall remain in a sealed bag / container for the duration of the flight;
- b. Must be a nose and paw proof, closed and waterproof soft bag designed specifically for such transport;
- c. Maximum dimensions: 50x35x30cm;
- d. The animal needs to be able to stand up freely in the bag/container.

End BLX-SE

BLX-SE

14.7.7 Documentation

Passengers are responsible to keep up to date with the European regulations for the Pet Passport scheme, this includes identification, vaccination or specific Country requirements.

Rabies vaccination is always required before cats/dogs can be accepted on board TUI flights.

The owner should retain the original documents.

End BLX-SE

BLX-SE

14.7.8 Seating

- a. Must not be seated in an emergency exit seat.
- b. Must be seated at a window seat for safety reasons.
- c. Pets have to be equally divided throughout the cabin to avoid the animals interacting with one another.
- d. Must not be seated on first row.
- e. The bag/container has to be placed under the seat in front.



End BLX-SE

BLX-SE

14.7.9 Handling Procedures

14.7.9.1 Acceptance

Live animals should be handled with great care at all times. Exposure to extremes of heat, cold or noise should always be avoided.

To assist passengers, agents, and operators in preparing pets for air carriage in compliance with IATA Live Animals Regulations, a Live Animal Acceptance Checklist must be completed for each PETC, SVAN and AVIH travelling as passenger baggage. The handling agent checking the animal must verify all requirements from the checklist have been met and the passenger needs to sign in acknowledgement. If not all fields of the checklist are complied with then the animal must not be accepted for transport. One copy of the fully completed checklist will be provided to the passenger and another is to be retained at the station.

Appendix F23 Live Animal Acceptance Checklist can be found on the TAGO Portal.

14.7.9.2 Diversions & Incidents

Should an aircraft be diverted the TUI OCC Duty Manager must be informed immediately and local rules and regulation for admission of animals must be followed.

In the event of an incident or accident, including death, injury, sickness, and mishandling of live animals, the event shall be immediately reported to the airline representative, the TUI OCC Duty Manager and, as required, to local authorities.

14.7.9.3 NOTOC

Not required for PETC.

14.7.9.4 Messaging

If PETC have been booked as passenger hand baggage the GHA will receive a PNL showing this SSR booked.

End BLX-SE

14.8 Documentation

All original documents i.e. Health certificate, Pet Passport, must be presented both at the airport of origin and airport of destination.

When the animal is being carried as cargo than a copy of the AWB should be placed in a sealed envelope marked "Original Documents" and firmly attached/secured to the top of the container. This envelope with the original documents must remain attached to the box.

Attach photocopies of the Health certificate and Pet Passport to the AWB for inspection by the staff member completing the Live Animal check at the Handling company.



TOM-UK

When Owner or representative is travelling with the animal they must obtain a photocopy of the Health certificate, Pet Passport, and with copy 5 of the AWB place in a sealed envelope marked COPY DOCUMENTS and firmly attach to the top of the container. This envelope with the copy documents must remain attached to the box. They should also attach photocopies of the Health Certificate and Pet Passport to the AWB for inspection by the staff member completing the Live Animal check at the handling Company.

End TOM-UK

The owner should retain the original documents.

The handling agent will supply a NOTOC for all AVI shipments. If a passenger is on the flight accompanying the animal, then this will be noted on the NOTOC.

Rabies vaccination is always required before cats/dogs can be accepted on board TUI flights.

To assist passengers, agents, and operators in preparing pets for air carriage in compliance with IATA Live Animals Regulations, a Live Animal Acceptance Checklist must be completed for each SVAN (BLX, TOM) and AVIH (BLX) travelling as passenger baggage. The handling agent checking the animal must verify all requirements from the checklist have been met and the passenger needs to sign in acknowledgement. If not all fields of the checklist are complied with then the animal must not be accepted for transport. One copy of the fully completed checklist will be provided to the passenger and another is to be retained at the station. Appendix F23 Live Animal Acceptance Checklist can be found on the TAGO Portal.

14.9 Handling Procedures

14.9.1 General

TOM-UK

All live animal bookings must hold a confirmed booking from our cargo agent.

End TOM-UK

Transportation must be in accordance with the current IATA Live Animals Regulation (LAR). Please refer to aircraft specific chapters for loading.

It is our responsibility to ensure that the shipper has complied with the regulations before accepting the booking. A further in-depth physical check must be undertaken by the cargo handler at acceptance time.

It is the responsibility of the shipper or his agent to offer live animals for air transportation in full compliance with all applicable Legal and Carrier regulations.

14.9.2 Acceptance

- A. Live animals should be handled with great care at all times.
- B. We will only accept animals which appear to be in good health and condition.
- C. Special attention must be focussed on documentation including shipper's certification and documents required at destination, kennel conformity, marking and labelling, reservation & routing.
- D. A maximum of 2 adult pets of comparable size up to 14 kgs each, that are compatible, may be shipped in the same kennel. Animals over that weight must travel individually.



Animals up to 6 months old from the same litter up to 14 kgs each, up to a quantity of 3 may be shipped in the same kennel.

Adequate ventilation must be provided and protection from inclement weather conditions such as excessive sunlight, heat, noise and drafts.

- E. We will NOT accept pregnant live animals or animals on heat.
- F. Sedated or tranquillised animals will not be accepted for carriage as the use of sedatives on an animal is not recommended (air pressure in the hold in flight acts as a mild sedative so may have an effect on the breathing of the animal).
- G. To assist shippers, agents and airlines prepare shipments a basic Live Animal Checklist has been developed. The IATA LAR live animal checklist must be used and copies kept on file (LAR Chapter 10.1.1.). If the form indicates the consignment doesn't comply it must be .

14.9.3 AVI Export from UK

The following information is required from the shipper:

- A. flight routing
- B. date of flight
- C. flight number
- D. Airway Bill number
- E. Total Shipping weight
- F. Number of animals
- G. Number of boxes/crates
- H. Age of pet
- I. Box dimensions
- J. Name / address / Telephone number of shipper
- K. Name / address / Telephone number of consignee
- L. confirmation that the consignee will meet the flight and collect on arrival
- M. confirmation that the regulations of the destination country have been complied with

The following checks / actions will be made by the carrier / cargo sales agent (CSA) before accepting the reservation:

- A. destination station will accept AVI and will be open to accept at flight arrival time. AVI can only be booked on a flight when the cargo shed at the arrival station is open at flight arrival time
- B. check the booking status of other AVI on the requested flight to ensure no overbooking in line with our AVI procedures
- C. check no other incompatible cargo is loaded in the same hold as planned for the animal (HUM & Incompatible perishables, primarily /PEM (meat)/EAT (food)/PES (fish).
- D. check the box dimensions fit the aircraft type on the route, *boxes may not be tilted to fit into aircraft hold*
- E. compliance with IATA Live Animal Regulations and TACT Rules.
- F. advise the shipper of delivery point and time of delivery.

Note: We will only accept an AVI at the export cargo handling station just before, or at, cargo close-out time. This is to minimise the time that the animal is in the care of the carrier.



Sedated animals will not be accepted for carriage as the use of sedatives on an animal is not recommended (air pressure in the hold in flight acts as a mild sedative so may have an effect on the breathing of the animal).

14.9.4 Import into the UK

Domestic pets are liable to the UK rabies legislation and requiring quarantine may only be imported through

Specific airports. See UK Entry points link above for specific airports.

The following information is required from the shipper:

- flight routing
- date of flight
- flight number
- Airway Bill number
- Total Shipping weight
- Number of animals
- Number of boxes/crates
- Age of pet
- Box dimensions
- Name / address / Telephone number of shipper
- Name / address / Telephone number of consignee
- name / address / telephone number of UK government approved quarantine kennels
- name / address / telephone number of UK government approved "carrying agent" if different from the kennels
- UK import licence number (starts IDY)
- seek confirmation that the import licence has been obtained and kennels booked

The following checks / actions must will be made by the carrier / cargo sales agent (CSA) before accepting the reservation:

- advise the shipper that the captain of the aircraft (via the cargo handler) **MUST** be given a copy of the "Boarding Document" which is supplied to the person who applied for the UK import licence from DEFRA. *(This confirms that the shipper has an import licence. Without this the animal MUST be denied boarding)*
- check UK destination airport is on the list of approved airport and open to accept inbound AVI at flight arrival time
- check the booking status of other AVI on the requested flight to ensure no overbooking in line with the AVI procedure
- check no other incompatible cargo is booked on the same flight (in the same hold as planned for the animal)
- check that the box dimensions fit the aircraft type planned for the route, *box may not be tilted to fit into aircraft hold*
- advise shipper that delivery of animal must be before close out time at airport of departure i.e. STD minus 3 hours
- advise the shipper of collection point in the UK and time AVI available for collection
- call the UK Government approved quarantine kennels to confirm that the animal is booked in from the date of flight arrival



14.9.5 Containers/Cages/Kennels

The containers are to be supplied by the passenger and or shipper

- A. Fibreglass, metal, rigid plastic, weld metal mesh, solid wood & plywood containers are accepted for air transport.
- B. Water container must be present within the container with outside access for filling. Food containers must be present also.
- C. When receiving the containers from the passenger and or shipper, please check they are in good and safe condition.
- D. Containers must be in line with the instructions published by IATA in the Live Animals Regulations Manual.
- E. Each pet in the container must have enough space to turn about normally while standing, to stand, to sit erect and to lie in a natural position.
- F. The container **must** be clearly labelled 'LIVE ANIMALS' and 'THIS WAY UP' label.
- G. The name and address of the shipper, consignee or owner and a 24hr contact should be marked on the outside of the container.

BLX-SE

The kennels for transport have to be provided by the passenger. Only kennels in good condition with strong locks will be accepted.

End BLX-SE

14.9.6 Aircraft Hold Positions

- A. Position must be heated and ventilated (acclimatized and pressurised)
- B. Should not be loaded in the same hold as HUM (Human Remains), PEM (meat), EAT (food) or PES (fish)
- C. Pets which are natural enemies may be loaded in the same hold* providing they are not within sight of one another.

Aircraft	Hold*	Remarks
B737 all types	Hold 1 and 2 ONLY	EU Flights Only (BLX) Hold 2 preferred
B787-8/9	Holds 1, 2 and 5	When loading AVI into Hold 5, care must be taken to ensure that the animal container is secured using suitable lashing materials, and ensuring that the air flow to the animal is not restricted/compromised. On certain longhaul routes from the UK, two Catering Service Units (CSU's) are loaded into hold 2, AVI's must be loaded into hold 5. Domestic Pets (AVI) are NOT be loaded with the following Perishable Cargo: PEM (meat), EAT (food) or PES (fish). They can however be loaded with PEF (Flowers, Vegetables & fruit). AVI must be loaded in Hold 5 due to hold heating and perishable cargo loaded in hold 1 and/or 2..

Note: * Hold = A hold is within a compartment. On B737 hold 1 & 2 are in the forward compartment. This is sometimes referred to as the forward hold. compartment is made up of multiple hold numbers.



14.9.7 NOTOC

- A. The commander must always be advised when live animals are being carried in the hold. They are noted under special cargo/load section of the NOTOC.
- B. Service/Assistance dogs do not travel as manifested cargo and do not appear on the NOTOC.
- C. The commander must be informed about transport of live animals on the Loadsheets.

14.9.8 Loading & Securing

- A. Live animals should be handled with great care at all times.
- B. Exposure to extremes of heat, cold or noise should always be avoided.
- C. Do not load directly underneath or in front of air ventilation outlets, ventilation apertures shall be left unblocked.
- D. Containers should be loaded on a level surface and properly restrained in the hold to prevent movement during flight.
- E. Precautions must be taken to prevent other load from shifting and falling or leaning onto the animal container.
- F. Live animals should not be loaded in the same compartment as human remains (HUM).
- G. Should not be loaded in close proximity to foodstuffs or catering equipment unless hermetically sealed. One pallet width is accepted as a reasonable separation distance.
- H. Shall be loaded upright and never on top of baggage
 - I. The animal container is either labelled or imprinted on three sides with 'this way up' and on one side with 'Live Animal' label.
- J. Should be loaded last and unloaded first, storage period on the ramp to be kept to a minimum.
- K. Care must be taken to ensure that the animal container is secured using suitable lashing materials, and ensuring that the air flow to the animal is not restricted/compromised. Care shall be taken to leave sufficient space around cages.
- L. As they are carried in the lower compartments it is advisable to open the doors at en-route stations.
- M. Must not be loaded into a Unit Load Device.
- N. Should not be loaded in the same hold as HUM (human remains), PEM (meat), EAT (food), PES (fish).
- O. Pets which are natural enemies may be loaded in the same hold providing they are not within sight of one another
- P. Acceptable Ambient Temperature ranges for Cats & Dogs

	MIN °C	MIN °F	MAX °C	MAX °F
Cat	7	45	24	75
Dog	10	50	27	80

14.9.9 Dangerous Goods Segregation

Please see Dangerous Goods chapter for restrictions for loading AVI with Dangerous Goods and refer to (LAR, chapter 10 10.3.4).



14.9.10 Diversions & Incidents

Should an aircraft which is carrying AVI be diverted then Operations Duty Manager must be called immediately.

In these circumstances, the animal(s) should only be removed from the aircraft with the prior permission of the local authority animal health inspector.

All incidents, including death, injury, sickness, and mishandling of live animals, must be reported to Ground Operations team by e-mail: groundops2@tui.co.uk

In case of extended delays, re-routing of flights and cancellations the shipper or the consignee must be notified as soon as possible.

14.9.11 Messaging

BLX-SE

If AVIH have been booked as passenger baggage the GHA will receive a PNL showing this SSR booked.

End BLX-SE

AVI to show on LDM this includes multi sector flights also which confirm the applicable sector.

BLX-SE

AVI to show on PSM.

End BLX-SE

TOM-UK

If AVIH have been booked this will be recorded in the Cargo reservation system and sent to TUI GOC as an FBL message (Freight Booked List). Local Cargo agents will advise Handling Agents of any cargo consignments.

End TOM-UK

14.9.12 Other Live Animal Carriage in the Hold

All other live animals (not being domestic animals) are booked & carried as cargo via our contracted cargo sales provider.

14.9.12.1 UK Booking agent

Globe Air Cargo Ltd

Tel: +44 (0) 208 757 4730

Hours: Mon - Fri 0900 - 1730

ukreservations@ecsgroup.aero

14.9.12.2 Nordic Booking agent

info@nordicgsa.aero

14.9.13 FBL Messaging

These bookings will be notified directly to GOC/TUI OCC & GHA by the Cargo Supplier.

At normal cargo pre-alert time the AVIs MUST be sent to the carrier Operations centre in the form of an FBL message (Freight Booking List).



The pre-alert **MUST** be sent to the cargo handler at the departure and arrival stations.



15 Annex I Aviation Security

15.0 General

Note: This document is not a replacement or alternative for the Northern Region Security Management System (SeMS). Both TOM and BLX Security Operations are bound in full by the contents of the shared SeMS, and any procedural variations or exemptions must be agreed, in writing, with the document owner.

This document does not supersede the authority of the Northern Region SeMS or any Operational Aviation Security Annex contained therein.

15.0.1 SCOPE

This section gives information and general guidance on security measures to be applied for:

- a. Northern Region Airlines (NRA) Key Contacts
- b. Airport Specific Variations
- c. Airline Specific Variations and Exemptions
- d. Notification of Threats And Events
- e. Passenger Screening & Security
- f. Baggage Security
- g. Aircraft Protection
- h. Form A - Hold Baggage Manifest Declaration Form
- i. Form B - Unaccompanied Hold Baggage - Certificate Of Security Measures

15.0.2 KEY CONTACTS

Airline	Subject / Function	Contact
TOM	On matters relating to policy in connection with the implementation of security	Guy Murray guy.murray@tui.co.uk
TOM	On matters relating to procedures in connection with the implementation of security for flights	Guy Murray guy.murray@tui.co.uk
TOM TOM & BLX	TUI UK NP Aviation Security Deputy NP Aviation Security	Tel +4407460 094146 Stuart McLauchlan Stuart.McLauchlan@tui.co.uk Tel: +44 (0)7401 27020
BLX	On matters relating to policy in connection with the implementation of security	Guy Murray guy.murray@tui.co.uk
BLX	On matters relating to procedures in connection with the implementation of security for flights	Guy Murray guy.murray@tui.co.uk
TOM & BLX	On matters relating to day to day operations, the principal contact is	Airport Operations Manager



Airline	Subject / Function	Contact
TOM & BLX	UK Operations Duty Manager	Tel: +44 203 451 2874 Fax: +44 (0)8702 438315

15.0.3 AIRPORT SPECIFIC VARIATIONS

There are a number of variations to the instructions in this manual which have been approved by the relevant Nominated Person Aviation Security.. The variations are approved on an annual basis unless changes to aviation security or country security threat level require a change.. Variations are approved specific to each airport. The list of variations is recorded in the Northern Region SeMS and by Airport Service Delivery & Compliance.

15.0.4 NORTHERN REGION SECURITY MANAGEMENT STRUCTURE

Whilst TUI Airways and TUIfly Nordic operate under their own AOCs, it should be recognised that both airlines function as part of the wider Northern Region structure. This alignment is further detailed under the Northern Region Security Management System (SeMS).

Under SLA Agreement, TOM NP Aviation Security is responsible for all decisions related to the operational security of BLX Aviation Security. TOM NP Aviation Security may approve any and all Aviation Security requirements for BLX.

15.1 Notification Of Threats And Events

The following events must be notified immediately to UK Operations Duty Manager, (LTNOOBY)

- Any bomb threat or other threat to aircraft or other TUI asset.,
- Any unlawful interference with an aircraft, or interference with anything that may be loaded onto an aircraft,
- Any industrial action at the airport,
- Any demonstration or terrorist activity that may affect the airport,
- Any military action or threat of military action at origin or destination airports, or within planned airspace,
- Any breaches of security, whether airport security or provisions within this manual.

15.1.1 BOMB AND OTHER SECURITY THREATS AND OTHER TERRORIST ACTION

- Any threat, or other terrorist action which may relate to Northern Region aircraft, must be notified **immediately** to UK Operations Duty Manager (ODM) as per the requirements of the Northern region SeMS
- The initial call to the ODM should be by the fastest means (usually telephone), but should be supported by written communication as soon as practicable: **Tel: +44 (0) 203 451 2874**
- If the ODM is uncontactable, then the relevant Aviation Security NP or appointed deputy must be contacted.**

TOM-UK

The TUI UK Aviation Security NP must also be immediately notified via text or phone. **Tel +44 07460 094146**

End TOM-UK



BLX-SE

The TUIfly Nordic Aviation Safety and Security Manager must also be immediately notified via text or phone. **Tel +46 8 7207200**

End BLX-SE

- a. Having informed the UK Operations Duty Manager, the person receiving any such call should complete the "Threat Report Form" and fax the form to the below fax number.
UK Operations Duty Manager Fax: +44 (0)8702 438315

15.1.2 BOMB AND OTHER THREAT – ACTIONS

- a. Bomb threats against TUI Northern Region will be assessed by the UK Operations Duty Manager, and the UK Aviation Security Nominated Person. After assessment, the threat will be categorised and appropriate actions will be initiated by the UK Operations Duty Manager in consultation with the UK Aviation Security NP or appointed deputy.
The Threat will be categorized as:
 1. **RED** - A credible and specific threat requiring immediate protective measures, e.g. diversion or evacuation.
 2. **AMBER** - A threat of doubtful credibility, but where it is prudent to consider taking additional protective measures, e.g. augmented security checks.
 3. **GREEN** - A threat assessed as non-credible. No immediate action is required
- b. When the threat is assessed as Green, the Aircraft Commander will not routinely be advised that a threat was made unless determined by the UK Aviation Security Nominated Person or nominated deputy.
In the event that the UK Aviation Security NP or appointed deputy is unavailable, their nominated deputy may be contacted as per the guidelines listed in the NR SeMS
- c. The procedures outlined on the following pages should be considered and where appropriate implemented on direction from the UK Operations Duty Manager, or an airline threat assessor. Any local circumstances or conditions that need to be considered must be brought to the attention of the UK Operations Duty Manager, or an airline threat assessor.

15.2 Action To Be Taken Immediately On Receipt Of A Threat

- a. Advise the following:
 1. UK Operations Duty Manager
 2. TUI UK Aviation Security NP or appointed deputy and/or TUIfly Nordic Aviation Safety and Security Manager
 3. Local Airport Security Control Room
 4. Local Police
 5. Airline Station Representative
 6. Company (or contracted) Duty Engineer
- b. Inform UK Operations Duty Manager and relevant AOC Aviation Security NP or appointed deputy of any local concerns or rumours about failure of airport security, including:
 1. Airport Perimeter Security



2. Staff or Passenger Search
 3. Hold Baggage Screening
 4. Cargo Screening
 5. Staff Vehicle Access Points
- c. Establish if there are any VIP's/potential 'targets' at the airport or possible travelling on a TUI Northern Region aircraft.

15.2.1 THREAT RECEIVED BEFORE CHECK-IN

- a. Contact Operations Duty Manager and after consultation with UK Operations Duty Manager, if the threat is assessed as Amber or Red, the following measures should be implemented:
 1. Inform airport security of the threat.
 2. Check-in agents should closely scrutinize passengers' passports, and look for alterations to tickets.
 3. Ensure the passenger screening area and baggage screening facility is aware a threat has been made.
 4. Delay the departure until authorized to proceed by the UK Operations Duty Manager and the relevant TUI Aviation Security NP or appointed deputy.

15.2.2 AIRCRAFT STILL ON RAMP

After consultation with UK Operations Duty Manager, if the threat is assessed as Amber or Red, the following measures can be implemented:

- a. disembark passengers and crew, with all cabin baggage, by steps or jetties. (Escape slides will only be used on extreme emergencies) or when directed by Aviation Security NP.
- b. remove the aircraft to a remote location.
- c. any hold baggage already loaded must be removed and identified by the passengers.
- d. passengers should be asked to search their own cabin baggage once disembarked from the aircraft.
- e. any items not identified must be placed under the control of the airport security staff.

Departure to only then be authorized by UK Operations Duty Manager and relevant Aviation Security NP or appointed deputy.

15.2.3 AIRCRAFT TAXIING UNDER OWN POWER

- a. For Red or Amber threats, it is anticipated that the aircraft will be directed to a remote stand by the airport authority.
- b. Passenger steps and coaches should be provided as required.
- c. Where possible, passengers should wait in an airside secure gate room
- d. Passengers must not be allowed to mix with other departing passengers.

15.3 Aircraft Search

- a. The UK Operations Duty Manager in consultation with the relevant Aviation Security NP or appointed deputy will determine what areas will be searched.



- b. The resources of local airport security / police should be used where available.
- c. The areas to be searched may include:

Location	Possibly done by
Aircraft Cabin	Cabin Crew
Holds	Baggage Handlers
Catering	Cabin Crew
Engineering Spaces	Engineer

Cargo may need to be off-loaded and re-screened.

Hold baggage may need to be off-loaded and re-screened to full HBS standards where possible and full Passenger ID completed with matching against the approved manifest.

- a. The depth of this search should be decided by the UK Operations Duty Manager in consultation with the local authorities aircraft commander, and TUI Northern Regions Airlines Aviation Security NP or appointed deputy.
- b. Duty-free bars should **not** be opened unless a Customs officer is present or under the direction of a Police Officer. Bars may be removed to an isolation area for Customs to check at their convenience.

Note: Only a properly qualified bomb disposal expert or technician should handle any suspect items.

15.3.1 AIRCRAFT IN FLIGHT

Full details should be passed to the UK Operations Duty Manager who will ensure a threat assessment is undertaken in conjunction with the UK Aviation Security NP or appointed deputy in line with DfT standards. Note this applies to all threats received for Northern Region Aircraft.

The threat must only be relayed to the aircraft commander on the authority of UK Operations Duty Manager and relevant Aviation Security NP or appointed deputy.

TOM-UK

The UK Aviation Security NP retains final authority for the decision to release information to the commander of a G-Reg aircraft.

End TOM-UK

15.3.2 INFORMATION TO PASSENGERS

- a. Discretion should always be used when informing passengers of such an incident or threat.
- b. Care must be taken not to unduly alarm passengers, particularly when their co-operation is required.
- c. If it doubt, the relevant Northern Region Aviation Security NP or appointed deputy must be contacted for advice.



15.4 Boarding Card Issue

Prior to issuing a boarding card the following checks must be completed.

- a. Passengers must have a valid ticket before they are allowed to travel.
- b. Passenger boarding cards will only be issued on production of a passport or Government issued photo travel document.
- c. The name on the passport must be checked against the name of the passenger on the ticket to ensure the names are an exact match
- d. The Photo on the passport must be checked against the passenger.
- e. The passport must be checked to ensure that the passenger is eligible for entry in the destination country and where required, have other relevant documentation.
- f. If there is any doubt that the passenger is not identical to the passport, a supervisor must be called before a boarding card is issued. If the supervisor is satisfied the person matches the passport, they are to annotate the boarding card.
- g. NB; Additional local procedures apply to all US departures and US overflight departures. These are detailed within the relevant US Operational Annex to the SeMS.

15.4.1 PRE BOARDING AIRCRAFT

Prior to permitting a passenger to board an aircraft the following checks must be completed.

- a. There is one boarding card for each passenger entering the aircraft (including infants)
- b. Each boarding card is valid for the flight and states the correct flight number, date and destination.
- c. Each boarding card must be visually inspected for the correct information, and no reliance should be placed solely on any automated system that may be in place.
- d. Any passenger entering an aircraft must be in possession of a valid identification.
- e. The name on the passport must be checked against the name of the passenger on the boarding card to ensure the names are an exact match. (obvious spelling errors may be accepted up to three characters)
- f. The Photo on the passport must be checked against the passenger.
- g. If there is any doubt that the passenger is not identical to the ID and has not been previously assessed by a supervisor, a supervisor must be called before the passenger is allowed to board the aircraft.
- h. NB; Additional local procedures apply to all US departures and US overflight departures. These are detailed within the relevant US Operational Annex to the SeMS.

15.4.2 PRIOR TO DEPARTURE

1. All passengers, and their cabin baggage, must be security screened prior to boarding by the airport authority. Any prohibited articles must be placed in the passengers hold luggage, or suitable disposed of by airport security.
2. Passengers, once screened, must be kept in a sterile area. If a passenger leaves that area, for any reason, that passenger must be subject to a further search before re-entering the sterile area.
3. Prior to aircraft departure, a check on the number of passengers must be made to ensure that the number of passengers boarded agrees with the number checked-in. Any missing passengers must be reported to the aircraft commander. They must both be located and boarded, or their bags off-loaded; to achieve this may require full baggage identification.
4. All documents such as tickets, boarding cards, and baggage labels must be kept in a secure place at all times, and never left unattended when in use. Tickets, boarding cards



and baggage labels must not be left unattended in a printer unless they are in a secure area or locked. Where a bar code or QR code is generated on the boarding card and the code is read by central search and pre-boarding, the relevant NRA Aviation Security Manager may be able to give dispensation to keep the blank boarding cards secure. All printed and unused tickets, boarding cards and baggage labels must be destroyed immediately if they are no longer required. All unused tickets, boarding cards and baggage labels not destroyed must be accounted for prior to push back.

- a. NB; Additional local procedures apply to all US departures and US overflight departures. These are detailed within the relevant US Operational Annex to the SeMS.

TOM-UK

1. **UK Departure** - Passengers will be required to disembark at every transit point unless they have been searched at a UK airport. Exceptions:
2. Disabled passengers on stretchers may remain on board with their cabin baggage within their sight.
3. Where passengers have been previously searched at a UK airport, they may remain on board, but must identify their baggage and place it on their laps. The cabin crew must carry out a full security search of the cabin and overhead lockers.
4. **Non UK Departure** - Passengers will not normally be required to disembark at every transit point. The cabin crew must carry out a full security search of the cabin and overhead lockers, after passengers have identified their baggage and placed it on their laps.
5. For all UK departures, all passengers must have been screened at a UK airport before departure unless the UK Operations Duty Manager has obtained an alleviation from the UK Department Of Transport, or has risk assessed with the Aviation Security NP or appointed deputy in the case of an unexpected divert into a UK airport.
6. **UK Arrivals** – Where a 'double drop; flight has been approved by the DfT and UKBF, then passengers are not required to disembark the aircraft for rescreening at the first arrival airport in the UK. The Double Drop must be subject to prior approval from the Operations Duty Manager in line with UK regulations.

End TOM-UK

15.5 Baggage Security

15.5.1 MINIMUM REQUIREMENTS

TUI Northern Region requires the following measures to be in place for all departures:

- a. all baggage tags to have unique identifier
- b. baggage manifest to be raised for all flights, (Form A)
- c. signed declaration by the Appointed Person who is an approved signatory must sign that all bags loaded on the aircraft have been accounted for and screened in accordance with the host nation requirements.
- d. the handling agent is to hold a list of all approved signatories (Normally those authorised as Flight Dispatchers)
- e. When a flight is sub-chartered to another operator, TUI Northern Region procedures and policies for baggage reconciliation will apply unless an alternate procedure is approved, in advance and in writing, by the relevant Aviation Security NP or appointed deputy.

Certain flights and destinations may have variations to the security requirements.



- a. A variation to the standard requirements for baggage reconciliation for flights operating must be approved, in writing, by the relevant Aviation Security Manager.
- b. The variations are approved on an annual basis unless changes to aviation security or Country security threat level require a change within a year.
- c. Variations are approved at an Airport level with a list of Approved Airports being held in the Northern Region SEMS and Airport Service Delivery & Compliance.

15.5.2 BAGGAGE RECONCILIATION

- a. All Passengers must show a valid form of photographic ID at Check In and the Boarding Gate.
- b. When a passenger surrenders a bag to be carried in the hold, a bag tag must be generated in combination with the boarding card and the bag registered against that flight. The bag tag must show the Passenger Name, Destination, and Date. The tag must be applied to the bag and a receipt taken from the tag and placed on the passenger boarding card. This receipt contains a serial number that refers to that bag; should the bag be lost or damaged.
- c. The Passenger Service Agent (PSA) must make a visual check to ensure the bag tag is completed correctly.
- d. The bag proceeds to the baggage sorting area where each bag is reconciled to the specific flight.
- e. For each individual flight, baggage reconciliation "Bingo Cards" is raised.
- f. Bingo Cards must have details of the flight number, date, and destination. Each bag that is registered and tagged for that flight will have the receipt section of the bag tag removed and placed onto the main section of the bingo card.
- g. At the aircraft or loading of the ULD, the load team must complete a visual check of each bag tag during the loading process to ensure the details are correct and the bag is intended for their aircraft.
- h. Once loading is complete, the bingo card documentation must be passed to the Flight Dispatcher.
- i. The Dispatcher will complete an examination of each receipt on the bingo card to satisfy that each entry relates to the relevant flight and indicate on each tag that this has been completed.
- j. The attached tags must be counted and the figure compared to the number of items of hold baggage accepted for the flight from the DCS, crew bags and gate bags. Once satisfied the dispatcher must complete the baggage manifest form.
- k. Under **no circumstances** shall bags belonging to passengers who have failed to meet the aircraft for departure (or who have been offloaded from the flight for reasons other than those outside of their control, be permitted to travel).
- l. Bags shall not, under any circumstances, be relabelled or realllocated to passengers in the same group who are remaining on the flight.

15.5.3 AUTOMATED SYSTEMS (WHERE PRESENT)

An automated system or bar code reader may be used as an alternative to bingo cards. The process of identification, and the production of a hold baggage manifest, may be achieved by either manual or automated means, but must include:

- a. The date and flight number
- b. Accompanied Bag
UK Airports must include



- a. The number of accompanied hold bags authorised for carriage by automated means
- b. The number of accompanied hold bags authorised for carriage by manual means
- c. The number of unaccompanied bags
- d. Crew hold baggage
- e. Gate / other hold baggage
- f. Company Mail/Materials
- g. Transfer hold baggage
- h. A declaration confirming all reasonable steps have been taken to ensure that hold baggage has been appropriately identified and recorded on the hold baggage manifest and that unaccompanied baggage has been appropriately screened.

15.5.4 DUTIES AND RESPONSIBILITIES OF THE DISPATCHER

The authorised flight dispatcher shall

- a. The baggage reconciliation procedure is the responsibility of the person appointed and trained by the handling agent to authorize all baggage for carriage by air.
- b. There should only be one Appointed Person (Dispatcher) per flight. All relevant staff involved in the process should be aware of who the Appointed Person is for each specific flight.
- c. An up to date list of Appointed Person(s) must be retained at each station, the list must contain an example of each Appointed Person's signature.
- d. All Appointed Person(s) must receive initial baggage reconciliation training and refresher training at least every 13 months.

15.5.5 PROCEDURE FOR FULL PASSENGER IDENTIFICATION

- a. All bags must be off loaded onto a safe and suitable area of the ramp
- b. Passengers must be escorted in manageable groups to the area where the bags are located.
- c. Passengers must identify their bag/s
- d. Once identified, a bag should be reloaded onto the aircraft/ULD or moved to a designated area.
- e. Any bags remaining after the bag ID is complete must be offloaded and returned to airport security.

15.5.6 PROTECTION OF HOLD BAGGAGE

Once hold baggage has been screened, on arrival in the baggage make up area, it must be promptly placed in a ULD or onto a baggage trolley.

- a. The ULD or baggage trolley must be:
 - 1. Placed in a locked and secure area that can be sealed or
 - 2. Guarded by a named individual or
 - 3. Any person approaching the baggage must be challenged to safeguard the bags from unlawful interference.
- b. If the baggage is left unattended, the baggage must be re-screened.



TOM-UK

All Aircraft which are operating under the TOM AOC must be subject to the Hold Security Search (HSS) prior to departure. This search must include:

- a. *a visual inspection of the aircraft hold for signs of tamper or concealment of any prohibited or suspect items before loading commences.*
- b. *The search must include all access panels and hatches within the hold that can be opened without the use of a specific tool or key.*
- c. *This search is in addition to the mandatory search of access panels and service hatches for aircraft that arrive into the UK from any Third Country*
- d. *Individuals performing this search must be in receipt of specific training to enable them to identify IED and IID, and must hold a valid CTC.*
- e. *The exact requirements for the HSS are provided in Chapter 3-A of the UK Single Consolidated Directive*

End TOM-UK

15.5.7 RUSH OR UNACCOMPANIED BAGS

- a. Only when the following conditions are met can unaccompanied bags be permitted to travel:
 1. It must be established why the bag has become unaccompanied and if the passenger has travelled on their original flight.
 2. The bag must be processed as “Unaccompanied” and a “RUSH” bag tag generated.
 3. An Unaccompanied Baggage Manifest Certificate must be raised
 4. The bag is taken to the screening facility and identified as unaccompanied. The bag will then be subject to additional security screening.
- b. Acceptable additional security screening measures are:
 1. Hand Search
 2. X-Ray from at least TWO separate angles by the same X-Ray Operator at the same X-Ray location
 3. X-Ray using EDS (Explosive Detection System) with the image assessed by an approved operator or certified EDS equipment
- c. Once screening is complete, the responsible screener must sign the Unaccompanied Baggage Manifest Certificate and the bag sent to the baggage sorting area and allocated to its specific flight. The Unaccompanied Baggage Manifest Certificate is given to the Dispatcher to form part of the completed Hold Baggage Manifest.
- d. The Dispatcher must complete a check to ensure the unaccompanied bag has been loaded onto the aircraft.
- e. The Dispatcher must inform the Aircraft Commander that an item of unaccompanied baggage is being carried and must present the Unaccompanied Baggage Manifest Certificate which both the Aircraft Commander and Dispatcher must sign.
- f. If the process above has not been completed in full, the Aircraft Commander will refuse carriage of the bag/s.
- g. Where the reason for the bag being unaccompanied is suspicious or a reasonable explanation cannot be established, the bag must not be carried.
- h. Bags may only be considered for ‘Rush’ procedures if the baggage has not travelled with the passenger for **reasons outside of the passengers control.**
- i. Any circumstances that could have been reasonably engineered by the passenger shall result in that bag being refused for rush carriage.



15.5.7.1 Digital and Electronic Processing

- a. Only when the following conditions are met can unaccompanied bags be permitted to travel:
 1. It must be established why the bag has become unaccompanied and if the passenger has travelled on their original flight.
 2. The bag must be processed as "Unaccompanied" and a "RUSH" bag tag generated.
 3. A digital Unaccompanied Baggage Manifest Certificate must be raised.
 4. The bag is taken to the screening facility and identified as unaccompanied. The bag will then be subject to additional security screening.
- b. Acceptable additional security screening measures are:
 1. Hand Search
 2. X-Ray from at least TWO separate angles by the same X-Ray Operator at the same X-Ray location
 3. X-Ray using EDS (Explosive Detection System) with the image assessed by an approved operator or certified EDS equipment.
- c. Once screening is complete, the responsible screener will annotate the rush bag tag as having been security screened, scan into BRS and the bag will be sent to the baggage sorting area and allocated to its specific flight. The digital Unaccompanied Baggage Manifest Certificate is digitally updated throughout the process.
- d. The Dispatcher must complete a check to ensure the unaccompanied bag has been loaded onto the aircraft.
- e. The bag tag generated will be included in the BRS bag count and highlighted and identified as a "RUSH BAG".
- f. The rush bag detail and confirmation of the security search will be generated and retained digitally. The commander will not require a signed copy of the digital certificate as its retained within BRS. The commander is informed of the carriage of the rush bags/s via delivery of the loadsheets and any LMCs.

15.5.8 TRANSFER BAGGAGE MANIFEST

Transfer baggage will not be accepted unless by prior arrangement. However, a transfer baggage manifest will be raised for every flight.

15.5.9 CREW BAGGAGE

- a. The crew baggage manifest must be produced separately and attached to the accompanied baggage manifest.
- b. The crew baggage manifest must indicate the number and location of the crew bags within the aircraft holds.
- c. A member of the operating crew must sign the crew baggage manifest.
- d. The Appointed Person must account for the pieces of baggage declared, and countersign the crew baggage manifest.
- e. Crew bags which have not been screened to Cabin Baggage Standards may not, under any circumstance, be placed or transferred into the cabin environment from the Hold.



15.5.10 GATE BAGS

When removing cabin baggage from customers at the boarding gate or onboard the aircraft to place in the hold, the following steps must be taken:

- a. Details of each bag must be recorded on the gate bag manifest form or DCS.
- b. Each bag must be tagged.
- c. The passenger name and flight number must be recorded for each bag on both the bag tag and manifest.
- d. Passengers must be advised to remove passport and any critical medication. Passenger should verify the bag does not contain any spare lithium batteries.
- e. Bags which are 'gate checked', and are not tagged, must be recorded on the Gate Bag Manifest (GBM) form.
- f. Any bag or item which has been tagged by check in agents (such as a pushchair) must not be recorded on the GBM as it will already be recorded on the HBM.

Passengers Who Fail To Board & Pooled Baggage

- a. Where a passenger fails to appear for boarding, a cross check of the check in system must be completed. If a bag is identified as being checked in to a NO SHOW passenger, the load team must be directed to locate the bag and off load.
- b. The bag must be visually identified by the Dispatcher to cross check the details on the tag with those from the checked in baggage list, before the bag leaves the side of the aircraft. If it is not possible to locate the bag, full passenger reconciliation must be completed.
- c. If a passenger fails to travel, any bags that contain elements of that passenger's belongings must be considered as unaccompanied baggage, even if other (travelling) passengers share those bags.
- d. Other bags, even if checked in as part of the same group, do not need to be considered as unaccompanied if they do not contain any of that passenger's belongings.
- e. Under **no circumstances** shall any bag be re-allocated or re-labelled to a passenger in the same travelling group.

Example 1: Where a school ski party checks in all bags together, and each child has their own bag, if one child fails to travel, only that child's bag must be offloaded.

Example 2: Where a family of four checks in and their possessions are shared between three bags, if one parent fails to travel, all bags must be offloaded and screened as unaccompanied baggage.

15.5.11 HOLD BAGGAGE MANIFEST DECLARATION FORM (FORM A)

- a. Only when the Appointed Person is satisfied that the hold baggage has been accounted for fully and that each passenger (and crew member) who is recorded as having placed hold baggage onboard is on the aircraft can he/she sign the hold baggage manifest formally authorizing the baggage for carriage.
- b. It is a requirement for the "Appointed Person" to complete and sign a Hold Baggage Manifest. The signing of the hold baggage manifest cannot be delegated. The Hold Baggage Manifest must not be signed unless the number of bags checked in matches the number of bags loaded onto the aircraft.



- c. Any discrepancies must be resolved (positive or negative) before the Hold Baggage Manifest is signed. The Hold Baggage Manifest **MUST** be signed before the aircraft takes off.
- d. The actual number of accompanied and unaccompanied bags recorded on this form must be the actual number loaded. Where none have been loaded the word NIL must be written.
- e. No item of hold baggage must be placed on board the aircraft after the hold baggage manifest has been signed without the authority of the Appointed Person. In such cases the Appointed Person must ensure the details of the bag are recorded on the Manifest and the Declaration Form amended.
- f. Signing the Hold Baggage Declaration form confirms that the Appointed Person has taken all reasonable steps to satisfy themselves that the correct bag reconciliation procedures have been followed.
- g. **Accompanied Hold Baggage:** The actual items which have been surrendered at check in and loaded onto the flight. This figure should be taken from the complete Bingo Cards.
- h. **Transfer Hold Baggage:** Hold baggage which is moved from one aircraft to another aircraft. As a point to point carrier TUI Northern Region do not ordinarily transport transfer bags, however should a fully loaded flight go tech or a flight be diverted into your base and the passengers be transferred onto another TUI NRA Airways airlines aircraft this may occur.
- i. In the EU, transfer hold bags which arrive from a domestic airport can be transferred onto another aircraft without rescreening providing the bags remain in the Critical Part and are escorted at all times by a TUI NRA Airlines representative and are protected from any form of unauthorized access. Transfer bags arriving from outside of the EU must be rescreened and new reconciliation process created.
- j. Baggage transferring from any international flight operated on a G-Reg aircraft, or within the UK, must be subject to rescreening.
- k. If a baggage transfer occurs, the bingo cards used for the original loading must be sourced prior to the reloading process commencing on the new aircraft. It is then necessary to cross check the tag on each bag as it is loaded to verify it is on the bingo card – An indication that the bag has been loaded must be made on the bingo card with either a tick or cross next to the corresponding tag receipt.
- l. If an unaccompanied bag is being loaded onto the transfer flight, a copy of the unaccompanied baggage paperwork must be sourced from the original point of departure as evidence of the screening requirements having been met.
- m. A copy of the Hold Baggage Manifest must be handed to the aircraft commander and another copy kept on file.

15.5.12 AIRCRAFT CABIN

Under no circumstances can any luggage which has been accepted for carriage in the hold be then accepted or stored in the aircraft cabin or flight deck. This includes any crew bags which are screened and designated as Hold Baggage. This includes all Ferry Flights, Positioning Sectors, Domestic or other non-rev. flights.

Baggage may not, under any circumstances, be transferred from the Hold to the Cabin under the request of the aircraft commander or cabin crew. In the event that a bag was to be required to be removed from the hold and transferred to the cabin of the aircraft, then that bag must be offloaded from the HBM and rescreened to Cabin Baggage standards by airport security. This includes any crew bags.



All cabin baggage screened must not contain any items listed in EC2015/1998 Attachment 4A (Prohibited articles restricted within Aircraft Cabin environment). Refer to the NR SEMS for full detail, or contact the relevant airline Aviation Security NP or appointed deputy.

15.5.13 COMPANY MAIL OR MATERIALS

- a. Company or Tour Operator mail accepted for carriage will be treated in the same manner as rush baggage and be listed on the Hold Baggage Manifest (Form A). Provided there are no prohibited items, Company Mail or Materials may be carried in the cabin.
- b. Company Mail or Materials must be clearly marked as such items with contact details of the recipient (name or department) as well as the originator within the company.
- c. Where crew carry Company Mail or Materials onto the aircraft, they are responsible for informing the aircraft commander and making a manuscript entry on the Hold Baggage Manifest.

15.5.14 CARRIAGE OF WEAPONS OR SPORTING GOODS

Refer to Chapter 10, Annex D - Dangerous Goods & Weapons

NB – TUI Airways (TOM) does not permit the carriage of weapons or munitions without the written permission of the Aviation Security NP or appointed deputy and Accountable Manager.

15.5.15 DIVERSIONS / AIRCRAFT CHANGES

- a. In the event that a flight is required to operate from an airport other than that intended, these procedures will be completed at, and the records held at, the airport of actual departure.
- b. When it is necessary to move passengers by surface transport to another airport, baggage must be presented to check-in at the airport of actual departure and, if necessary, retagged in order that the hold baggage manifest may be completed.
- c. In the event that a flight planned to operate on a single aircraft is changed to operate on two or more aircraft, then:
 1. If the aircraft change is known prior to check-in, each flight will be treated separately.
 2. If the aircraft change is not known prior to check-in, a full baggage identification will take place prior to the loading of baggage on-board each aircraft.
- d. When a flight is planned to uplift passengers from two or more airports for a destination outside the country of origin, each departure will be treated as a separate flight for the purposes of baggage reconciliation. All airports prior to the last airport of departure must maintain on hand, for quick transmission to subsequent stations if requested, all details of the hold baggage manifest.

15.5.16 TECH AIRCRAFT OFF LOAD TO ANOTHER BASE

If passengers are offloaded from a fully loaded aircraft and have to go to another base for onward travel all hold bags must be off loaded as a standard off load and collected by passengers for transport. At the new point of departure passengers are required to complete the full check in process.



15.5.17 AIRCRAFT COMMANDERS AUTHORITY

- a. The Aircraft Commander should NEVER depart before the Appointed Person is satisfied that all items of baggage are accounted for and has signed the Hold Baggage Manifest.
- b. If an Aircraft Commander chooses to depart before the baggage is fully reconciled the Appointed Person must ensure the following measures are undertaken:
 1. Ensure the Aircraft Commander is aware and understands the discrepancy – provide facts and evidence.
 2. Advise the Aircraft Commander that he/she is in breach of statutory requirements.
 3. Wherever possible refuse to remove the air bridge or to push the aircraft back until the discrepancy is resolved.
 4. If the aircraft does push & start in such circumstances, the Operations Duty Manager and relevant NRA Aviation Security NP or appointed deputy must be contacted immediately.

15.5.18 FILING OF PAPERWORK

- a. At the end of the flight, the Dispatcher must ensure that he/she files all paperwork relating to the flight correctly. This must include:
 1. A fully completed HBM (even if NIL recorded)
 2. A fully completed Crew Baggage Manifest (even if NIL recorded)
 3. A fully completed Gate Baggage Manifest (even if NIL recorded)
 4. A fully completed Unaccompanied Hold Baggage Manifest, signed by the PiC and the Appointed person.
 5. All Bingo Cards for the flight (if used) or Electronic version with the top section completed in full.
 6. A complete copy of the checked in bag list.
- b. All Manifests must be:
 1. Completed in full
 2. Legible
 3. Signed
 4. Kept on file for at least 3 months (refer to table 1.1.9.2 for documentation duration periods)
 5. Made available to the Appropriate Authorities upon request
- c. In the event of an irregularity (listed below), the Appointed Person for that flight shall be responsible for ensuring that the CSLand ODM is advised through the TUI OCC:
 1. delays in excess of 30 minutes,
 2. delays where the aircraft is required to return to stand,
 3. the intentional dispatch of a flight where baggage has been short-shipped.
- d. We will closely monitor reports of missing / delayed baggage reported through the Worldtracer baggage management system.
 1. The Dispatcher must not sign the manifest but record full details of the incident and sign against the date and time.

15.5.19 SUSPECT ITEMS

- a. If at any point during the reconciliation or loading process suspicions are raised concerning a specific item of baggage – for example unusual noises, evidence of leaking liquids etc. - then the following process must be adhered to
- b. Under no circumstances shall the suspect item be loaded onto the aircraft
- c. If safety possible, remove the bag/item to a safe distance from the aircraft and contact the relevant airport security department.



- d. Follow all instructions provided by airport or control authorities in relation to the item.
- e. Contact the Operations Duty Manager (ODM) and relevant Aviation Security NP or appointed deputy immediately.
- f. Only once the suspect item has been fully resolved and cleared by the relevant control authority shall it be cleared to be loaded into the aircraft.

15.5.20 UNCLAIMED BAGS

Bags/items which are left onboard the aircraft or unclaimed at baggage reclaim must be checked to ensure they do not pose a threat. If a bag shows any suspicious characteristics (such as unusual smells, noises, weight/balance etc) or the circumstances in which it has been left are suspicious the bag must be screened and explosive detection tested by airport security.

15.5.21 PROTECTION OF BAGGAGE LOADED ONTO AIRCRAFT

- a. Aircraft holds must be checked before loading to ensure that all items have been removed. Any unauthorized items for the flight must be removed prior to loading. Any suspicious items must be left in place and reported to airport security/police.
- b. Within the EU - Where the aircraft is parked in a critical part on an EU airport, there is no requirement for the baggage, cargo and catering to be kept under supervision.
- c. Non-EU - Baggage, cargo, and catering must be kept under supervision (under visual observation) and must not be left unattended at any time unless left in sealed secure area. Anyone approaching baggage, cargo, or catering on the ramp must be challenged and their ID checked. Anything suspicious must be reported to Airport Security, the Operations Duty Manager, and – where possible – the relevant Aviation Security NP or appointed deputy.

15.5.22 EXCLUSION OF DIPLOMATIC BAGS AND/OR POUCHES

In the event that a Diplomatic Bag or Diplomatic Pouch is carried onboard the aircraft, either as hold or cabin luggage, then these may be excluded from all security checks and searches otherwise detailed in this manual.

Diplomatic Bags/Pouches may only be excluded from screening and search if the following conditions are met;

- 1. The article must be officially designated as a 'Diplomatic Bag' (DB) or 'Diplomatic Pouch (DP)' and;
- 2. The article must not be, under any circumstances, the personal property, or contain the personal possessions of the designated carrier, and;
- 3. The article designated as DB or DP must be marked as such (for example with stamps, certificates, or other overt messaging) to indicate that it is DB or DP, and;
- 4. That the articles designated as DB or DP are matched to any official paperwork carried by the courier. The carrier must ensure that it is able to verify the identity of the courier and verify their diplomatic status before the acceptance of any material designated as DB or DP.

NB; All DB or DP which is designated as hold luggage shall not be excluded from the requirement to include this in any AAA declaration.



DB and DP shall not be tampered with, opened, or otherwise inspected other than a visual inspection of the exterior.

15.6 Cargo

- a. Cargo loaded must agree with manifests.
- b. Except Company Mail, TUI Northern Region will not carry courier items or mail.
- c. Where any member of staff becomes aware of a possible security weakness or non-compliance:
 1. It must be drawn to the attention of their line manager and Security department
 2. The line manager must assess.
 3. Where there is an immediate threat, take appropriate remedial action.
 4. Contact must also be made with the relevant Airline Aviation Security NP or appointed deputy.

The Management of cargo to be loaded onto TOM or BLX aircraft shall be the responsibility of ECS (TCE) Ltd, who act as the cargo management company appointed on behalf of the TUI Group.

15.7 Aircraft Protection

15.7.1 OPERATIONAL ACCESS TO AIRCRAFT

- a. Only identifiable, authorized, personnel should be permitted near, or on, an aircraft.
- b. All persons requiring access to the aircraft must be in possession of a valid airport ID.
- c. An accurate record must be kept of all persons who have accessed that aircraft.
- d. The aircraft shall be protected against unauthorised access by ensuring that persons seeking to gain unauthorised access are challenged promptly and prevented from gaining access. These steps are not required where it is already known that the person is an authorised person who has legitimate reason for access.
- e. Any person who is unable to prove his identity or is not authorised to be in that location must be asked to leave the aircraft and airport security/police informed.
- f. Such persons must be escorted until they can be spoken to by airport security or the police. If a member of staff is alone, or unsure, they must as far as reasonably practical keep the person under observation until the arrival of the authorities.
- g. If the authorised person is believed to be a UK Department of Transport or CAA Inspector, TSA Security Inspector, TS representative, or other nation regulatory authority inspector, such as EU, a challenge must always be made.

15.7.2 PROTECTION OF UNATTENDED AIRCRAFT

Where an aircraft is to be left in an unattended state, the following must be completed by the last person/entity to have Attendance Oversight duties;

- a. Aircraft in a Critical Part
 1. Close all external doors, **or**;
 2. Remove all access aids and place them sufficiently far from the aircraft as to reasonably prevent access.
- b. Aircraft Not in a Critical Part
 1. Close all external doors, **and**;
 2. Remove all access aids and place them sufficiently far away from the aircraft as to reasonably prevent access; **and**



3. Seal all accessible doors and hatches with tamper evident seals.
- c. Other
Provided the crew or authorized handling agent remains with the aircraft to act as attendance overseer, there is no requirement to secure the aircraft.
If the crew or handling agent is unable to remain with the aircraft until the next operating crew arrives, the aircraft **must be secured by:**
- d. Following the procedures as above.
- e. Catering staff are authorized to service an otherwise unattended, secure aircraft without an attendance overseer being present, provided they use hi-lift equipment to access the aircraft from the outside using service doors and not passenger doors.
- f. An aircraft parked in a hangar that is locked or otherwise protected from unauthorized access does not need to have the doors closed or sealed. Aircraft to be parked for more than 36 hours are to be sealed by the engineers.
- g. The above procedures apply at all airports within the UK, EU, US and Canada.
- h. Aircraft at all other airports shall have doors closed and seals applied under all circumstances when the aircraft is left in an unattended state.

The final accountability for ensuring that the procedures detailed above is that of the last attendance overseer to leave the aircraft.

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SE-Reg Aircraft which are transitioning or positioning through an EU country, and remaining in the CPSRA, are not subject to Security Search.

End BLX-SE

Attendance Overseer

- a. An attendance overseer is the person who has responsibility for the safety and security of the aircraft and has a duty to promptly challenge any person seeking access to any part of the aircraft.
- b. Any TUI Northern Region aircrew, other TUI Northern Region staff holding an airside pass, TUI Northern Region or contract engineer, handling agent staff or other staff approved by Aviation Security Management, in writing, may act as an attendance overseer. An Attendance Overseer must be able to challenge those persons attempting to access the aircraft and check their IDs.
- c. Catering staff may **not** act as attendance overseer. Catering staff are authorised to service an otherwise unattended, secure aircraft without an attendance overseer being present, provided they use hi-lift equipment to access the aircraft from the outside using service doors and not passenger doors.
- d. Cleaning staff authorised, in writing, by the relevant Northern Region Aviation Security NP may act as attendance overseer. Catering staff are authorised to service an otherwise unattended, secure aircraft without an attendance overseer being present, provided they use hi-lift equipment to access the aircraft from the outside using service doors and not passenger doors.
- e. From when an aircraft first has a hatch or door opened, it must be attended until such time as it departs, or is again made secure. When the attendance overseer leaves the aircraft for any reason, he/she must positively (verbally) hand over the role to another authorised attendance overseer.
- f. When an aircraft is opened by a handling agent to prepare for the first rotation of the day, the agent becomes the attendance overseer. When the cabin crew arrive at the aircraft, the agent can hand over the attendance overseer role to the Cabin Manager. The Cabin Manager would normally remain as the attendance overseer until door closure and



departure of the aircraft, although the role may be delegated to another authorised attendance overseer.

- g. On arrival, the handling agents are contracted to provide a ramp agent to meet the aircraft. When the crew is ready to leave the aircraft, the Cabin Manager should hand over the attendance overseer role to the ramp agent.
- h. Should the crew be ready to leave the aircraft but no other person able to accept the attendance overseer role have arrived, the aircraft may be left provided it is secured in accordance with the instructions concerning protection of the aircraft.
- i. If unable to secure the aircraft in accordance with these instructions, then one crew member must remain with the aircraft until the agent/engineer arrives.
- j. During turnarounds an attendance overseer must remain with the aircraft during periods of inactivity unless the aircraft has been secured in accordance with the instructions concerning protection of the aircraft. The ramp dispatcher should ensure that once all services are completed, the aircraft is secured or positively handed over to another Attendance Overseer.
- k. **If under any circumstances the aircraft becomes unattended, then the requirements of section 7.2 must be applied.**

15.7.3 SEALING OF AIRCRAFT

- a. In the event of a TUI Northern Region pilot sealing the aircraft at an unmanned origin airport or overseas, the ad hoc seal log is used. This is located in the Tech Log on the Flight Deck.
- b. Where the pilots have already left the aircraft and it is necessary to seal the aircraft, the engineer is to seal the aircraft either in accordance with the base protocols or using a temporary seal log located in the Tech Log on the Flight Deck.

15.7.3.1 Tampered Or Broken Seal

- a. In the event that a seal is found to have been tampered with, or is missing where a seal would have been required, this must be raised as a security incident and a threat assessment undertaken. It must be assumed there has been unlawful access to the aircraft until a satisfactory explanation can be established.
- b. The handling agent must be asked to commence an investigation and consider informing the local authorities.
- c. In the event that a seal is found to have been tampered with, or is missing where a seal would have been required, a thorough search of the aircraft must be carried out before operation. The search may be undertaken by cabin crew, and must include 100% of all life jackets.
- d. If a suspect item is discovered during a search, local law enforcement must be contacted for advice

15.8 Reporting of Incidents

All incidents, irrespective of severity, must be reported to the relevant airline via the locally agreed procedure.

Northern Region encourages the proactive reporting of all incidents so that trends can be identified and remedial actions can be taken.

All incidents will be subject to root cause investigation by TUI Aviation Ground Operations, supported by the relevant department within TUI Airways or TUIfly Nordic.



15.9 US Operations (MSP and ACISP Licences)

All operations to and from the USA (Passenger and Cargo Ops) are subject to the additional measures outlined in the following documents;

1. Northern Region SeMS.
2. Annex 1 (US Cargo Operations)
3. Annex 2 (US Passenger Operations)
4. All regulated requirements as detailed in the Model Security Programme (MSP) and any Emergency Amendments (EA)

These annexes are under the control of the UK Aviation Security NP and appointed deputy and are only released to US Ops Stations.

All requirements for US operations shall be considered **in addition** to all security requirements detailed previously, and shall not be performed in lieu of local or national requirements.

15.10 Hold Baggage Manifest Declaration Form – Form A

This form can be found in the TAGO Portal, Forms, Hold Baggage Manifest Declaration Form.



Ground Operations Manual Northern Region Annex I Aviation Security

HOLD BAGGAGE MANIFEST DECLARATION FORM Form A		
FLIGHT Date A/C Reg		
TOTAL ITEMS OF HOLD BAGGAGE ACCOUNTED FOR & AUTHORISED FOR CARRIAGE		
	Checked In	Loaded
Accompanied Bags		
Crew hold baggage		
Gate / other hold baggage	N/A	
Unaccompanied Bags		
Company Mail/Materials		
Transfer hold baggage		
Total		
Comments		
Appointed Person's Declaration		
I am satisfied that all reasonable steps have been taken to ensure that:		
• All hold baggage loaded is appropriate to the flight and has been accounted for on the manifest; • All hold baggage loaded has been identified as accompanied or unaccompanied as appropriate and recorded as such on the manifest; • All checked-in passengers have boarded the aircraft (or, where they have not, the associated hold baggage has been removed from the aircraft); • Each item of unaccompanied hold baggage has been subjected to the appropriate standard of searching / screening. Evidence of this has been seen and confirmation is included on the manifest; and • Where no items of unaccompanied hold baggage are being carried, this fact has been recorded on the manifest. • That all 'Gate Checked Bags' have been loaded and verified independently of any checked in bags. • I am authorised as an appointed person		
Signature Name		

15.11 Unaccompanied Hold Baggage – Form B

This form can be found in the TAGO Portal, Forms, Unaccompanied Hold Baggage - Certificate of Security Measures Form.



Ground Operations Manual Northern Region Annex I Aviation Security

Unaccompanied Hold Baggage Manifest – Certificate of Security Measures

The baggage detailed below have been subjected to AT LEAST ONE of the following security controls at:

Searching Facility: _____ and cleared for carriage.

Method 1: Searched by hand

Method 2: Screened by an x-ray from at least two separate bag orientations in succession by the same x-ray operator, at the same location

Method 3: Screened by x-ray using a "Certified" explosives detection system (EDS), operated in the indicative mode, with the x-ray image assessed by an operator

Flight No. : _____ Date: _____ Dest: _____

Passenger Name / Original Tag No. / EXP Tag No.	Route	Method	Time	Secured/Witnessed By: (Name / Signature)
Name				Name:
Orig Tag No.				Signature:
Exp Tag No.				
Passenger Name / Original Tag No. / EXP Tag No.	Route	Method	Time	Secured/Witnessed By: (Name / Signature)
Name				Name:
Orig Tag No.				Signature:
Exp Tag No.				
Passenger Name / Original Tag No. / EXP Tag No.	Route	Method	Time	Secured/Witnessed By: (Name / Signature)
Name				Name:
Orig Tag No.				Signature:
Exp Tag No.				
Passenger Name / Original Tag No. / EXP Tag No.	Route	Method	Time	Secured/Witnessed By: (Name / Signature)
Name				Name:
Orig Tag No.				Signature:
Exp Tag No.				
Passenger Name / Original Tag No. / EXP Tag No.	Route	Method	Time	Secured/Witnessed By: (Name / Signature)
Name				Name:
Orig Tag No.				Signature:
Exp Tag No.				
Passenger Name / Original Tag No. / EXP Tag No.	Route	Method	Time	Secured/Witnessed By: (Name / Signature)
Name				Name:
Orig Tag No.				Signature:
Exp Tag No.				

Prepared By : _____ Signed: _____

Agent: _____



BLX-SE

16 Annex K Pre-Pack

16.0 General

Pre-pack stands for pre-ordered duty free. This service is for both the outbound and inbound flight.

Pre-pack is loaded on flights from the Nordic region for the 'round trip'. The outbound pre-pack is placed on passengers' seats. If the total amount of outbound prepack do not fit in the cabin some boxes might be loaded in the hold, these boxes are always Grey and should be uplifted to the cabin ASAP for distribution to passengers before disembarking (only valid on EU flights). Homebound pre-pack is loaded on B737 in the forward hold in specially designed sealed blue bags/boxes.

Homebound pre-pack is loaded in ULD-s on B787.

In case of double-drop flight, the prepack labelled to the first destination must always be loaded closest to the compartment door.

16.0.1 Advance notification

In order to provide weight & balance information, and to assist service providers at destination airports to allocate adequate staffing levels to pre-pack flights, info regarding weight and number of pre-pack bags/baskets must be added to the LDM.

16.0.2 Load Control

The hold loaded Pre-pack weight is not included in the aircraft weights and requires to be added to the Loadsheel as a separate item. Information must also be included in the LDM.

16.0.3 Hold location of pre-pack

See Annex – Aircraft specific.

16.0.4 Breakages

The contents of the PP bags/boxes are **very fragile**, and therefore all bags/boxes should be handled with extreme care.

Should any individual pre-pack bags/boxes be found to contain broken items and product is leaking the bag must NOT be put onto the passenger's seat. The Service Provider must notify the cabin crew immediately and try to avoid further damage to other pre-pack by removing the individual PP bag from the large container bag/box.

16.1 Operational Changes

The following section includes information on various ad hoc procedures or actions that may be taken in the event of operational problems. The information will not cover all eventualities.



16.1.1 Substitution of B737 and B787

Handling agents should not change seating. Pre-pack should be placed on seats that exist and passengers boarded as normal. Any pre-pack not on a seat will be distributed by the crew when boarding is completed.

16.1.2 Re-routed Aircraft

Every effort should be made to deliver the pre-pack to the aircraft.

16.1.3 Aircraft Changes at Destination Airports

Aircraft changes must be carefully monitored. In addition to the normal catering changes, the following must also be considered.

16.1.3.1 EU flight to EU flight, or non-EU flight to non-EU flight

- a. Both aircraft on the ground at the same time.
The agreed service provider must change the pre-pack bags and the homebound pre-pack paperwork between the two aircraft.
The bar set and cash must stay with the aircraft. Cash must be secured.
- b. Aircraft not on the ground at the same time.
Agreed service provider must complete the following:
First aircraft – offload pre-pack and paperwork to wait for the second aircraft. Inform the passengers via the BLX representative that the homebound pre-pack orders will not be on board, and that passengers should buy items at the local airport.
- c. Second aircraft – leave pre-pack in the hold, distribute offloaded pre-pack from the first aircraft. Send a telex to the relevant Nordic caterer to instruct them to offload the pre-pack on arrival.

16.1.3.2 EU to non-EU flights and vice versa

If an aircraft change occurs between EU and non-EU flights, prepack and 2 atlas boxes from the Galley require to be swapped. Cabin Crew will inform which boxes.

16.2 Delay Reporting

In order to record delay reasons accurately, all delays related to pre-pack must be shown under delay code 10, regardless of which service provider is responsible for the distribution. When this code is used, an accurate delay reason must be specified under the SI section of the movement signal. Handling agents transmitting the signal should liaise with the pre-pack service provider to ensure accuracy.

Example:

```
MVT
BLX833/05.SEDUK.CFU
AD1300/1310 EA1525 ARN
DL10/0010
PX224
S.I. LATE OFFLOAD OF PRE-PACK DUE TO LOADED IN INCORRECT POSITION EX ARN
```



16.2.1 Delay code breakdown for pre-pack

Handling agents which send a weekly delay report to TUIfly Nordic, and should include a description of the 10 delay code, using the table below for Pre-Pack issues.

BLX Code	Delay description
10A	Incorrectly loaded ex Nordic
10B	Incorrect labelling
10C	A/c change
10D	Lack of loading equipment
10E	Lack of staff
10F	Late staff to a/c
10G	Breakages
10H	Crew checking pre-pack
10J	Crew rest

End BLX-SE



17.2 ULD Types

17.2.1 Container Specifications

	AKE/ZKE (LD3)	DQF (LD8)	DPE (LD2)
Construction	Aluminium/or composite with fabric doors	Aluminium with fabric doors	Aluminium with fabric doors
Max gross weight	1587.5 kg/2500 lbs	2267 kg/	1255 kg/2700 lbs
Tare weight	65 kg	138 kg	72 kg
Side Door Opening	58in x 60in (147cm x 152cm)	94in x 60in (238cm x 152cm)	41in x 60in (104cm x 152cm)
Volume capacity	150cu feet (4.24 cubic metres)	245cu feet (6.9 cubic metres)	120cu feet (3.4 cubic metres)
Overall Dimensions	79in wide-roof(200cm) 61.5in wide-base(156cm) 64in high(162cm) 60.4in depth(153cm)	125in wide-roof(317cm) 96in wide-base(244cm) 64in high(162cm) 60in depth(152cm)	61.5in wide-roof(156cm) 47in wide-base(119cm) 64in high(162cm) 60in depth(152cm)

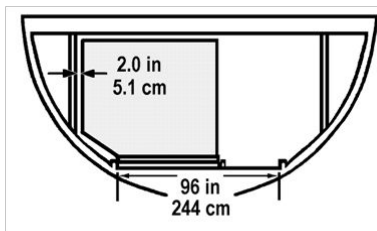
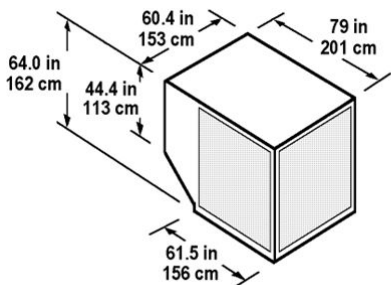
AKE/ZKE/DQF/DPE

- A placard holder for destination card or adjacent blackboard are fitted.
- Each container has an individual serial number.
- Unilode our Unit Load Device (ULD) service partner have implemented a Bluetooth tracking device on their ULD's (this includes containers and pallets). The purpose of the device is to optimize ULD utilisation & stock control of their equipment in a more efficient way.
- The TUI Groups has now completed a safety risk assessment and therefore will now accept this type of ULD on board our B787 aircraft. They will be used for both passenger baggage and cargo.

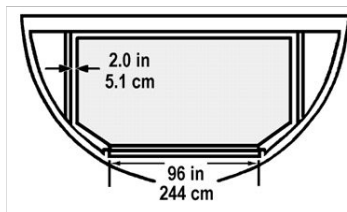
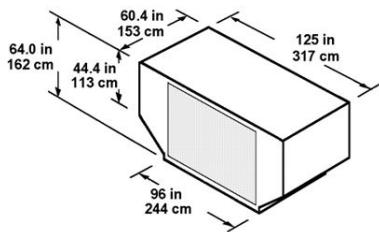
The walkway created on the starboard side of hold 3/4 by single line LD3 containers is 44 in wide from LD3 to vertical side wall and 34 in at hold floor level.

17.2.2 ULD Container Illustrations

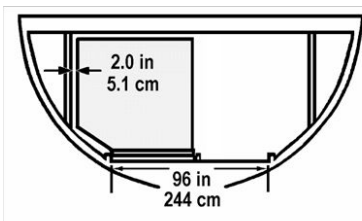
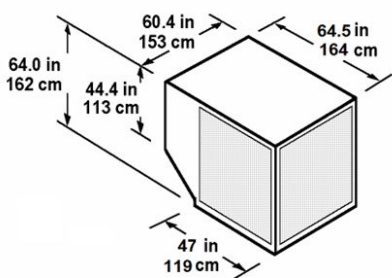
ULD TYPE AKE (LD3)



ULD TYPE DQF (LD8)



ULD TYPE DPE (LD2)





Identification	Picture
Bluetooth logo	
Sentinel 100 – DQF/AKE ULD's mounted inside each container	

17.2.3 Pallet Specification

	FQA	PMC	PAG/PAJ
Construction	Aluminium	Aluminium	Aluminium
Max gross weight	2267 kg/5000 lbs	4717 kg/10400 lbs	4717 kg/10400 lbs



	FQA	PMC	PAG/PAJ
Tare weight	56 kg Including nets & straps	118 kg Including nets	114 kg Including nets
Dimensions	96in x 60.4 in (244cm x 153cm)	125in x 96in (317cm x 244cm)	125in x 88in (317cm x 223cm)
Volume capacity	220cu feet (6 cubic metres)	440cu feet (12 cubic metres)	407cu feet (11.4 cubic metres)
Loading Profile	96 x 60.4 x 64 high (Inches) 244 x 153 x 162 high (cms)	125 x 96 x 64 high (Inches) 317 x 244 x 162 high (cms)	125 x 88 x 64 high (Inches) 317 x 223 x 162 high (cms)

Note: Unilode our Unit Load Device (ULD) service partner have implemented a Bluetooth tracking device on their ULD's (this includes containers and pallets). The purpose of the device is to optimize ULD utilisation & stock control of their equipment in a more efficient way.
The TUI Groups has now completed a safety risk assessment and therefore will now accept this type of ULD on board our B787 aircraft. They will be used for both passenger baggage and cargo.

FQA

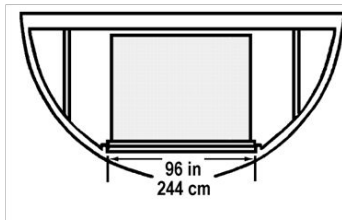
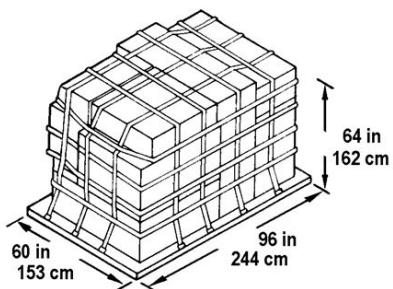
- The FQA pallet is the same size as the base of the DQF (LD8) and is used with a cargo net:
- Maximum possible width of load is 125 in (317 cm) when raised up off the pallet by at least 17 in (43 cm) to suit the maximum profile of the aircraft hold.

PMC

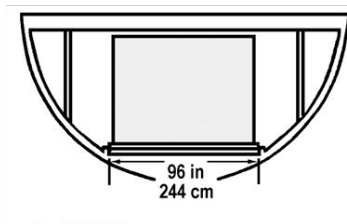
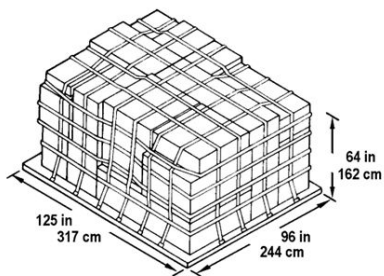
- The PMC pallet is twice the size of the FQA half pallet and is used in conjunction with a cargo net and / or 9G straps.
- Maximum possible width of load is 125 in (317 cm) when raised off the pallet by at least 17 in (43 cm) to suit the maximum profile of the aircraft hold (it is the longer (125 in / 317 cm) side of the pallet that should be allowed to overhang because the pallet is loaded with the shorter side (96 in / 244 cm) facing forward / aft in the forward hold).

17.2.4 ULD Pallet Illustration

ULD TYPE - FQA



ULD TYPE - PMC





Identification	Picture
Sentinel 100P – Pallets	

17.3 Passenger Baggage

The assumed capacity of AKE (LD3) and DQF (LD8) containers is:

AKE (LD3) - up to 45 pieces

DQF (LD8) - up to 90 pieces

17.3.1 Pre-Pack

Pre-pack is loaded on flights from the Nordic region for the 'round trip'. The outbound pre-pack is placed on passengers' seats. If the total amount of outbound prepack do not fit in the cabin some boxes might be loaded in the hold, these boxes are always Grey and should be uplifted to the cabin ASAP for distribution to passengers before disembarking (only valid on EU flights). Homebound pre-pack is loaded in ULD-s on B787. In case of double-drop flight, the prepack labelled to the first destination must always be loaded closest to the compartment door Pre-pack must be loaded last to prevent being blocked by baggage or cargo.

Aircraft Type	Short haul	Long haul
787-8		
Pre Pack	Position 2.3LR	Position 2.3LR
CSU	-	Position 2.4LR
787-9		
Pre Pack	Position 2.4LR	Position 2.4LR



Aircraft Type	Short haul	Long haul
CSU	-	Position 2.5LR

17.3.2 Catering

We have retained ownership of several DQF containers for Catering use only where round trip catering is carried e.g. AUA and VRA. These containers should be recorded on UCM and SCM messages as they are tracked by Unilode.

In addition, DQFs or ZKEs marked up as catering or engineering containers have been retained for specific use on TUI aircraft, the R7 or R9 code has been replaced with 'TUI'.

17.3.3 AVI

See Chapter 14, Annex H - Live Animals

17.3.4 EMA's

See Chapter 12, Annex F - Electric Mobility Aids - EMA

17.3.5 Cargo

17.3.5.1 787-8

Baggage may be loaded in AKE & DQF's containers. AKE is the preferred standard but DQF's maybe used if AKE's are not available. DQF's can be used for ULD positioning, passenger baggage or cargo.

Standard AKE Fit / Longhaul

HOLD 5	43L PKT	CARGO 42L LD3	41L LD3	33L LD3	32L LD3	31L LD3	24L CSU	CARGO 21P PMC/PAG	CARGO 13P PMC/PAG	CARGO 12P PMC/PAG	CARGO 11P PMC/PAG
	43R	CARGO 42R LD3	41R LD3	33R LD3	32R LD3	31R LD3					

The correct hold positions MUST be used to accommodate DQF's as they ensure the correct availability of securing locks. The diagram below shows the positions where DQF's can be loaded and secured.

There are two configurations for loading DQF's in the forward hold as follows depending on how many DQF's you want to load:

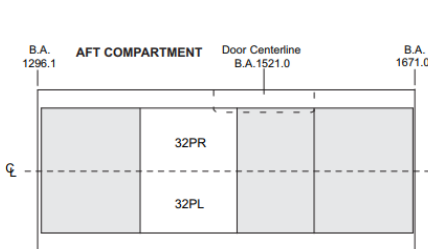


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Annex L ULD

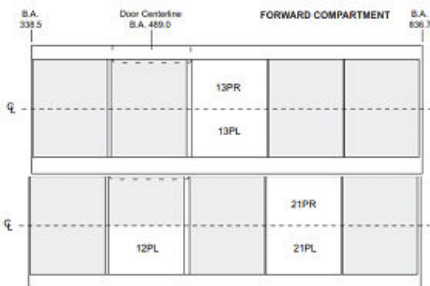
AFT Hold Configuration:

AFT



Forward Hold Configuration Options:

FORWARD



Note: The positions forward and aft of each DQF must be left empty to provide space for the protruding ULD.
When operating with a nil passenger load and/or ferry flight, a standard fit of containers, must be carried for all containerised aircraft.

17.3.5.2 787-9

Baggage may be loaded in AKE & DQF's containers. AKE is the preferred standard but DQF's maybe used if AKE's are not available. DQF's can be used for ULD positioning, passenger baggage or cargo.

standard ULD Fit / Longhaul (AKE)

HOLD 5	FKT 44L LD3	43L	42L	41L	BAGS 34L LD3	BAGS 33L LD3	BAGS 32L LD3	BAGS 31L LD3		CARGO 23P PHCPAG	CARGO 22P PHCPAG	CARGO 21P PHCPAG	CARGO 13P PHCPAG	CARGO 12P PHCPAG	CARGO 11P PHCPAG
	44R	43R	42R	41R	BAGS 34R LD3	BAGS 33R LD3	BAGS 32R LD3	BAGS 31R LD3							

Flights without Hold Catering:

FWD Hold - 6PMC

AFT Hold - FKT, 4 AKE Cargo or 1 PMC, 8 AKE for baggage & 2 AKE for Electric Mobility Aid's as required.

Alternative standard ULD Fit / Longhaul (AKE)

HOLD 5	FKT 44L LD3	(43L)	CARGO 41P PHCPAG	(41L)	BAGS 34L LD3	BAGS 33L LD3	BAGS 32L LD3	BAGS 31L LD3		25L CSU		CARGO 22P PHCPAG	CARGO 21P PHCPAG	CARGO 13P PHCPAG	CARGO 12P PHCPAG	CARGO 11P PHCPAG
	44R	(43R)		(41R)	BAGS 34R LD3	BAGS 33R LD3	BAGS 32R LD3	BAGS 31R LD3		25R CSU						



Flight with Hold Catering:

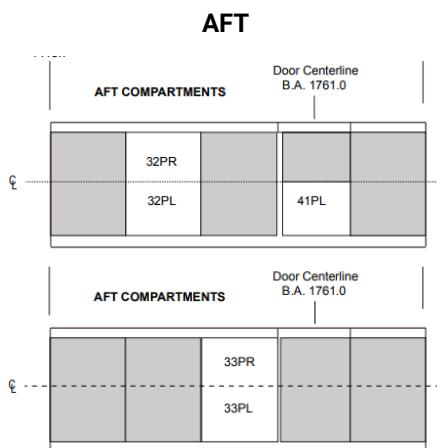
FWD Hold - 5PMC and 2 CSU

AFT Hold - FKT, CSU, 4 AKE Cargo or 1 PMC, 8 AKE for baggage & 2 AKE for Electric Mobility Aid's as required.

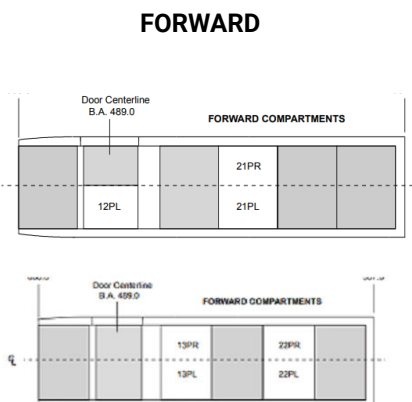
The correct hold positions MUST be used to accommodate DQF's as they ensure the correct availability of securing locks. The diagram below shows the positions where DQF's can be loaded and secured.

There are two configurations for loading DQF's in the forward & AFT hold. This depends on how many DQF's you want to load:

AFT Hold Configuration:



Forward Hold Configuration Options:



The forward and aft compartments, (holds 1, 2, 3, and 4), are configured to allow a combination of PMC or PAJ size pallets and LD3 (AKE) containers.

Maximum capacity aft hold: 5 PMC/PAG/PAJ; or 4 PMC/PAG/PAJ and 2 AKE; or 3 PMC/PAG/PAJ and 6 AKE; or 2 PMC/PAG/PAJ and 8 AKE; or 1 PMC/PAG/PAJ and 12 AKE, or 16 AKE.

Maximum capacity forward hold: 6 PMC/PAG/PAJ; or 5 PMC/PAG/PAJ and 2 LD3s, or 4 PMC/PAG/PAJ and 6 LD3s, or 3 PMC/PAG/PAJ and 10 LD3s, or 1 PMC/PAG/PAJ and 16 LD3s, or 20 LD3s.

Note: DPE cannot be loaded in positions 13L/R or 42L/R

PALLET LOADING POSITIONS



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HOLD 5	CARGO 42P PMC/PAG	CARGO 41P PMC/PAG	CARGO 33P PMC/PAG	CARGO 32P PMC/PAG	CARGO 31P PMC/PAG		CARGO 23P PMC/PAG	CARGO 22P PMC/PAG	CARGO 21P PMC/PAG	CARGO 13P PMC/PAG	CARGO 12P PMC/PAG	CARGO 11P PMC/PAG

AKE LOADING POSITIONS

	44L LD3	43L LD3	42L LD3	41L LD3	34L LD3	33L LD3	32L LD3	31L LD3		25L LD3	24L LD3	23L LD3	22L LD3	21L LD3	15L LD3	14L LD3	13L LD3	12L LD3	11L LD3
HOLD 5	44R LD3	43R LD3	42R LD3	41R LD3	34R LD3	33R LD3	32R LD3	31R LD3		25R LD3	24R LD3	23R LD3	22R LD3	21R LD3	15R LD3	14R LD3	13R LD3	12R LD3	11R LD3

17.3.6 ULD Identification Cards

These should be placed in the clear plastic pocket of each ULD loaded, and are designed to aid in the correct identification of individual ULD's and remove the chance of:

Incorrect positioning of ULD.

ULD being loaded onto wrong flight.

ULD being removed in error at transit stations

When ULD's are loaded empty a visual check must be completed to ensure there is no baggage or cargo inside.

17.4 ULD Control

17.4.1 General

Stations with planned operations on the B787 will be allocated a stock of ULDs. The stock will normally consist of one or more ship-sets baggage containers. Stations with large ski programmes, cruise operations, pre-paid duty free offering (pre-pack) and / or stations with regular cargo carriage may be allocated additional containers or pallets & nets in addition to normal stock levels.

On all ferry or positioning flights it is mandatory to have a standard fit of ULDs loaded on the aircraft, unless otherwise notified by Unilode.

Stations should closely monitor their ULD stock levels on a regular basis and advise Unilode as soon as it becomes apparent that stocks have not been replaced or are in excess of planned allocations.

Stations are fully expected to follow ULD disposition messages to return empty ULDs as per Unilode instructions. The ULD disposition message is normally sent to the stations 8-24 hours in advance. In the event that the instruction cannot be followed, the stations should advise Unilode as soon as possible.

In the event that the Disposition message instruction **CANNOT** be followed, the stations should advise Unilode as soon as possible.



All stations holding ULD stock for baggage & cargo must send a ULD Stock Check Message (SCM) at 1200 UTC each TUESDAY. The signal must be sent to

SITA: HDQUPXD

E mail: sita.hdqupxd@unitpool.com

Standard ULD fit per Aircraft Type

	TUI Airways	TUIfly Nordic
B787-8	8 AKE	10 AKE
B787-9	9 AKE	10 AKE
FERRY FLIGHTS	Standard Fit	Standard Fit
POSITIONING FLIGHTS	Standard Fit	Standard Fit

Any ULD's for Cargo are not included in this table.

Standard ULD fit per Aircraft Type – Ski Flights

	TUI Airways	TUIfly Nordic
B787-8	7 AKE & 3 DQF (Ski Equipment)	7 AKE & 3 DQF (Ski Equipment)
B787-9	8 AKE & 3 DQF (Ski Equipment)	8 AKE & DQF (Ski Equipment)

17.4.2 Messaging

In order for Unilode to track their ULD's we rely on the Handling Agents and cargo agents to identify the ULD numbers being used. Certain messages produced by the Handling Agents are mandatory and must be in IATA format.

SCM signals must be sent each week (Tuesday) to enable ULD stock levels to be maintained.

17.4.2.1 Message Builder

UNICODE provides a free platform to generate syntactically correct IATA type messages to capture ULD movements and stock takes. This platform allows ground handlers and agents to capture data using standardised data entry forms and directly feeds UNICODE's tracking software automatically. Whereas data entry is the main purpose of the system, Message Builder provides the user with additional benefits over SITA or regular email messaging.

A variety of other options, namely data import and export as well as ULD search, allows the user to efficiently create and re-use entered information.

For more information visit <https://msgbuilder.Unilode.com/public/>



17.4.2.2 SCM

All stations holding ULD stock for baggage & cargo must send a ULD Stock Check Message (SCM) at 1200 UTC each TUESDAY. Unserviceable ULDs must be included in SCM signal under SI section. The signal must be sent to

SITA: HDQUPXD

E mail: sita.hdqupxd@unitpool.com

Message format shall comply with IATA AHM 423

Date and time on SCM must be reported in the local date/time at the station when the stock check physically conducted [and not the time of sending the message].

SCM

TFS.15SEP/0945(*Local Time*)

.DQF.8234TOM/8370BY/8498BY/8001TUB/8041TOM/8145BY.T6(*max 6 per line*)

.DQF.8132TOM/8201TOM/8198BY.T3

SI

.DQF8132TOM – DMG. REQUEST PLT TO RETURN DMG ULD

17.4.2.3 UCM IN (Arrivals)

UCM in signals must be sent for every arrival no later than one hour after arrival where ULDs have been offloaded. This is vital to ensure accurate tracking of ULD stock, and ensuring sufficient supply at stations. If any ULD is received in non-airworthy or damaged condition, this must also be included in the UCM In signal

SITA: HDQUPXD

E mail: sita.hdqupxd@unitpool.com

Message format shall comply with IATA AHM 424.

UCM

TOM2498/01.GOJMR.CUN

IN



.DQF1717R7.DQF0862LX.DQF8012TOM.DQF0849R7
.DQF1777R7.DQF8486TOM
SI DQF1717R7 RCV DMG

17.4.2.4 UCM OUT (Departures)

UCM Out signals must be sent for every departure no later than one hour after departure where ULDs have been loaded. This is vital to ensure accurate tracking of ULD stock, and ensuring sufficient supply at stations. If any ULD is loaded in a non-airworthy or damage condition, this must also be included in the UCM out signal

Commodity codes should also be recorded along side the ULD number to identify what type of load is within each ULD. Please use the following codes.

B= baggage
C = general cargo
E= catering equipment
M= mail
U = unserviceable
ULD X= empty ULD

SITA: HDQUPXD

E mail: sita.hdqupxd@unitpool.com

Message format shall comply with IATA AHM 424

UCM

TOM2498/01.GOJMR.LGW

OUT

.DQF8206TOM/MIA/B.DQF1708R7/MIA/B.CAT8649TOM/MIA/E

.DQF1717R7/CUN/B.DQF0862LX/CUN/B.DQF8012TOM/CUN/B

.DQF0849R7/CUN/B.DQF1777R7/CUN/C.DQF8486TOM/CUN/X

.PMC30806R7/CUN/C.PMC30008LX/MIA/C

17.4.2.5 UCM (Combined in & Out)

You can also combine the UCM in/out on the same message. See example of format below:

UCM

TOM2498/2499/01FEB.GOJMR.CUN

IN



.DQF1717R7.DQF0862LX.DQF8012TOM.DQF0849R7

.DQF1777R7.DQF8486TOM

OUT

.DQF8206TOM/MIA/B.DQF1708R7/MIA/B.CAT8649TOM/MIA/E

.DQF1717R7/CUN/B.DQF0862LX/CUN/B.DQF8012TOM/CUN/B

.DQF0849R7/CUN/B.DQF1777R7/CUN/C.DQF8486TOM/CUN/X

.PMC30806R7/CUN/C.PMC30008LX/MIA/C

17.4.2.6 UCM (when no ULD are transported)

When a flight departs or arrives without (empty) ULD's, still a NIL (.N) UCM IN or OUT must be sent.

UCM IN

Message Example:

UCM

TOM2498/01FEB.GOJMR.CUN

IN

N

UCM OUT

Message Example:

UCM

TOM2498/01FEB.GOJMR.CUN

OUT

N

17.4.3 UCR Form & LUC Message

When ULD is transferred to a third party, a ULD control receipt (UCR) must be completed and LUC signal must be sent to UNILODE. It is also important to receive a signature of the receiving carrier/third party on the UCR to confirm receipt of UNILODE ULD.

LUC is not required when ULDs are transferred to other UNILODE customers.

LUC

PMC308069R7/12NOV/1200/DHLLHR/TOM/MAN/000-12111200*/LHR/SER

SI LOAD W/ CARGO

Note: *Format of serial number when using the attached online LUC form is 000-ddmmhhmm



Unilode UCR (UNILODE Control Receipt) Document must be completed and distributed as follows:

GREEN PART	Hand over to receiving airline
PINK PART	Keep on station file
YELLOW PART	Email to sita.hdqupxd@unitpool.com

17.5 ULD Storage

ULDs must not be stored on the ground, but whenever possible must be stored under cover and on a suitable base support system e.g. dolly, roller bed.

ULDs which cannot be stored under cover must be adequately secured against high winds, jet blast or any other adverse weather conditions

Doors of containers must be securely closed to prevent damage.

Nets must not be removed from pallets.

ULDs must not be handled by forklifts, unless specially designed for this purpose.

ULDs must not be stacked on top of one another, except pallets, which must never be stored on their sides unless in a specially designed vertical pallet stowage.

Pallets shall be stacked in pallet racks (with exception of 16ft and 20ft pallets). In case pallet racks are not available, the pallets may be stacked in a dedicated spot on appropriate dunnage.

Unilode and pool member pallets must be well separated from other non-pool carriers and equipment.

Loaded ULDs shall **ONLY** be stored on heavy duty racks or dollies, storage on the ground and the use of forklift is not allowed under any circumstances.

17.5.1 ULD Serviceability Check

ULD's are classified as removable aircraft parts and are therefore subject to certification requirements established by regulatory authorities. A damaged ULD, especially with sharp protrusions, creates a risk of damage to aircraft interiors, loading equipment, cargo and mail, as well as the people handling the ULD.

A ULD should be checked for damages prior to use and immediately upon arrival. If damages are found, please refer to the serviceability check list.

A basic check should cover the following:

- Examine all panels including the base, for sharp protrusions cracks, holes, damaged posts, edge rails and missing or loose rivets and corners.
- Examine the door fabric for rips and frayed ends. Inspect the net assembly for cuts or frayed webbing.
- Check the buckles, hooks for proper operation.
- Check all joints, gussets and brackets for loose or missing fasteners.



- Check the exterior and the interior surfaces of the container for cleanliness and legible ULD-markings and TSO-plate.
- If damages are found, please refer to the Serviceability Check list to determine the airworthiness of the ULD.

See Operational Damage Limits (ODL) section on the customer portal homepage for copies of serviceability charts and and /or damage charts; visit <https://www.unilode.com/portal-login//>.

The manufacturer's name of the ULD concerned will need to be identified this is shown on the TSO plate on the ULD.

Alternatively, to order Unilode serviceability charts please contact repair@unilode.com



17.5.1.1 OnAsset Sentinel BLE Tracking Devices

A ULD should be checked for damage prior to use and immediately upon arrival.

To avoid damage to BLE sensor tag and possible injury to the user, please observe the following:

- a. Handle all the BLE sensor tag with care
- b. Do not attempt to open or disassemble the BLE sensor tag. BLE sensor tag are not user-serviceable devices.
- c. Do not modify the BLE sensor tag. Unauthorised modifications may damage the device and violate regulations governing radio devices.
- d. Do not use BLE sensor tag with significant deformation, crack or leakage.
- e. Always return used electronic products, batteries, and packaging materials to dedicated Unilode MRO or contact Unilode ULD Operations Team.
- f. This product does not elicit toxicological properties during routine handling and use
- g. If the primary lithium battery are opened through misuse or damage, discard immediately.
- h. If Unilode ULD or BLE sensor tag do not meet the serviceability criteria. The ULD must be attached with "DO NOT USE" stickers and report immediately to Repair@Unilode.com and/or contact Unilode ULD Operations Team



17.5.2 Tagging ULDs as Unserviceable

The following procedure should be carried out in case of a Non-Airworthy “Unserviceable” ULD

The airline contracted handling agent must immediately tag the ULD as Unserviceable (UNS) by placing a UNILODE Damage “DO NOT USE” sticker over the documents pouch and for pallets by placing 1 sticker on each long side of the pallet on the base sheet close to the edge rail.

The airline handling agent shall notify UNILODE immediately should they receive damage units from cargo agents

Only airworthy ULD's can be used on aircraft.

The airline contracted handling agent must immediately report unserviceable ULDs with its identifier to UNILODE operations team.

Check the ULD for serviceability, please use the supplied Unilode Serviceability chart as a guideline only and if the ULD does not pass the guidelines it must be classified as “Unserviceable”.

If any ULD is recognised as being 'Unserviceable' or does not meet the serviceability condition check as described in the checklist you must clearly mark the ULD with a Damage label and/or Defective Tape.

Example of Damage Label

If you receive damaged ULDs at your station you must report them as damaged to Unilode who will give further instructions. Please supply Photographic evidence of the damage if possible.

HDQUPXD or sita.hdqupxd@unitpool.com

Also inform TUI Airline Safety by submitting a Ground Operations Safety Report in IQSMS. Please include flight number, routing, ULD number and a detailed report of the damage. Please supply Photographic evidence of the damage if possible.

Store the ULD in a segregated area away from serviceable ULDs. They must not be used until they have been repaired. This damage procedure applies to ULDs used for engineering and catering, as well as cargo and baggage.

To order Unilode damage labels please contact repair@unilode.com



17.5.3 ULD Repair Process

UNILODE has appointed certified repair stations worldwide. All ULD repairs are only authorised to be carried out by a UNILODE approved and certified repair facility. All ULD repairs must be carried out according to its component maintenance manual (CMM) and according to industry standards TSO and ETSO standards and FAA/EASA Part 145 requirements.

The following procedure for damaged Non-Airworthy ULDs should be followed

- a. Non-Airworthy "Unserviceable" ULDs should be towed and stored at an agreed designated secure area whilst awaiting collection for repair.
- b. UNILODE must be contacted and informed of Non-Airworthy "Unserviceable" ULDs.
- c. UNILODE arranges for the damaged ULDs to be collected and repaired by its certified contracted repair partners.



- d. Where the repair partner does not have airside access to the ramp to collect ULDs directly, the airline handling agent shall ensure that the ULDs are delivered to the Repair partner as per the Airline Handling agreement and Standard Ground Handling Agreement.

In locations where UNILODE does not operate a repair station

- e. Where possible and practical the ULD should be forwarded to the nearest repair station within the network.
- f. For a list of Approved UNILODE ULD Repair centres please refer to the UNILODE UPG (ULD POOLING GUIDE).

Note: Refer to Unilode UPG documentation, available on JIL Handling.

- g. Damaged ULDs may ONLY be repaired by a certified repair company contracted by UNILODE in order to comply with the relevant serviceability requirements.
- h. All ULD repairs are repaired to TSO and ETSO (FAA/EASA) regulations according to the ULDs CMM from the ULD manufacturer.
- i. ULD repairs are not authorized to be carried out by non-approved UNILODE repair partners.
- j. UNILODE hold copies of all approved repair certificates.

17.5.4 Transporting Damaged ULDs by Air

Damaged/Non-Airworthy ULDs must not be loaded on any aircraft, unless properly loaded and/or secured for carriage on pallets for transport to a nominated ULD repair location as specified by UNILODE. For transport by Air the following criteria must be met;

1. The ULD is clearly marked as damaged with a UNILODE damage label on each side of the container or pallet.
2. There are no sharp or protruding edges. **
3. The container contour will fit inside the aircraft **
4. The base plate can be locked in to position **
5. ULDs must be loaded on the aircraft empty

Note: ** If this cannot be met the ULD must be transported on a pallet. However please ensure the transporting load is safe and can fit inside the aircraft

Note: Do not load any ULD that shows BLE sensor tag with significant deformation, crack or leakage. Do not load if the primary lithium battery are opened through misuse or damage.