GROUND OPERATIONS MANUAL
Edition V

Revision: 3
26 April 2025

Carpatair

GROUND OPERATIONS MANUAL
Edition V
Revision 3

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Revision No. 3

Explanation:

… Exchange
ADD Add
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…	4	Aircraft Safety and Servicing Operations	5, 10, 13, 15, 19-21, 34, 39, 46, 101, 102	26.04.25

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1. Introduction

1.1. Preface

This **Ground Operations Manual** hereinafter referred to as **GOM** contains all policies, procedures and provisions valid for every aircraft type operated by Carpatair. To simplify the contents of the GOM, only the term “Carpatair” is used and applicable in lieu of “Carpatair S.A.”.
Carpatair GOM contains clear and legible regulations and procedures for the ground operations in respect with aircraft handling, load control, passenger service, baggage, cargo, and safety measures, as well as standard communications.

The Ground Operations Manual defines ground handling standards for Carpatair and ground service providers to ensure ground operations activities are safely, efficiently, and consistently accomplished. Procedures reflect the minimum standards as identified by the aviation industry.

1.2. Applicability

The GOM is to be used by Carpatair and ground service providers as a core set of ground operations procedures in the conduct of ground handling functions. It also applies to staff entering the aircraft for purposes such as catering, cleaning or supervision, but specifically excludes aircraft maintenance, fueling or de-icing tasks. While all relevant factors have been taken into consideration and these procedures constitute best practice, some additional information may be required:
Carpatair Ground Operations Nominated Person is responsible for the contents and issuance of this Manual.

Suggestions and contributions towards the improvement of the manual are welcome. Any discrepancy found in it should be reported immediately to:
Carpatair S.A.
Ground Operations Department
E-mail: ground.admin@carpatair.com
Timisoara
300668, Timisoara, Romania
Tel. +40 256 300 900; 306 933

Each holder of the Carpatair GOM shall be conversant with its contents and shall take a continuous effort to remain up-to-date. Where the holder is in doubt whether he/she fully understands part or all of an instruction, he/she shall ask his/her superior at once for clarification.
Nothing contained in this manual shall preclude ground operation personnel from acting in their own best judgment during any irregularities for which no provisions may have been made or in case of emergency. In such cases the personnel shall contact immediately the Carpatair Ground Operations Department or Carpatair Flight Dispatch Office at:

E-mail: flight.dispatch@carpatair.com
Telephone number ONLY FOR EMERGENCY:
Tel: +40 722 579 046

1.3. Management and Control of Documentation

The Carpatair GOM is divided as follows:
Introduction
Chapter 1: Passenger Handling Procedures
Chapter 2: Baggage Handling Procedures
Chapter 3: Aircraft Safety and Servicing Operations
Chapter 3: Cargo/Mail Handling Procedures
Chapter 4: Aircraft Handling Turnaround Procedures
Chapter 5: Load Control
Chapter 6: Airside Safety Operational Oversight

1.3.1. Revision and Amendment

It is the responsibility of the Ground Operations Nominated Person in cooperation with the coordinating staff in the various ground operations areas (passenger handling, weight and balance, ramp handling, de-/anti-icing etc.) to amend and update the company ground operational procedures and documentation.
Revisions are made to the manuals whenever new information, regulations, requirements or standards are issued by the competent authorities, or new standards are established by law, or changes to the current internal procedures are necessary.
The edition is depicted on the cover page of the manual and at the bottom of each individual page.
The issue date and effective date of each edition is indicated in the record of revisions section.
If a revision affects only one side of the sheet, the revision number will be changed on the affected side only.
Any revision within a chapter requiring additional pages will necessitate chapter revision and renumbering.
A “Revision Letter” containing the revision number, the action taken, as well as the chapter number and title, the page number, and the effective date accompanies each revision.
The common company reference for the management and control of documentation is Carpatair Documentation Centre Procedure KRP PR - 008.

Keep Carpatair GOM up-to-date:
- by keeping only the last revision of the manuals

Wording

When used in the GOM, the following terms have the meaning explained below:

- **May/need not/not necessary/not required:** indicates that compliance is optional.
- **Should/if possible/whenever possible:** indicates that compliance is considered optional, but desirable.
- **Shall/must/necessary/need/required:** indicates that compliance is considered mandatory.
- **Shall not/must not/may not:** indicates that something is not allowed / permitted, or is forbidden.

1.3.2. Distribution Process

The current edition of the Carpatair GOM is distributed to ensure that it is readily available in a usable format at each location where ground handling operations are conducted, to all personnel concerned with the procedures of ground handling.
As a supplementary part of Carpatair GOM, Passenger Handling Manual (PHM) and De-icing / Anti-icing Manual (DAM) is subject to the same rules regarding the revision, distribution and control.
The Carpatair GOM, De-icing / Anti-icing Manual (DAM), the Passenger Handling Manual (PHM) and all the other necessary manuals and/or procedures connected to ground operations shall be distributed to all Carpatair handling agents, ACMI partners and to any other service providers.
The distribution is made according to the Decision of Distribution indicated by the Ground Operations Department.

Global eDocs is a cloud type solution which offers on line access for the entire Carpatair documentation.

The access to GlobaleDocs is possible at the following address: https://company.globaledocs.com/.
Every Carpatair employee has a username and password for accessing GlobaleDocs. On GlobaleDocs the documents distributions is controlled.
Access to handling agents /ACMI partners to Carpatair ground operations manuals and procedures is granted using below details:
https://company.globaledocs.com
username: *carpatair.ground.manuals@carpatair.com*
password: *is communicated by Ground Operations Department via e-mail*

Handling agents and ACMI partners have to confirm in writing that access to ground operational manuals and procedures has been granted.

Every time a document is updated a notification and read receipt message is send to all employees on the company email. After receiving this message the employee has to sign in on GlobaleDocs in order to confirm by clicking the “Sign” button. The site may generate upon the administrator request the “Read and sign” report.

All the company manuals and procedures can be found also on intranet at the following address: carpatair.com/DOCS/Documents.

1.3.3. Identification and Assignment

Copy Identification
Each manual is registered at the Carpatair Documentation Center, as this department has full control and responsibility on the masters of all Carpatair operational manuals and documents, as well as on the copies being issued based on the originals (Masters).
The copy control number written/stamped on the front cover of any manual identifies that particular copy of the Carpatair Ground Operations Manual.

Consignee
The Documentation Centre maintains an updated distribution list with the consignee of the electronic copy and the number stamped on the first page.
In case of the assignment of this copy to a department, the responsible person of that department is automatically identified as the consignee.

Updating and Disposal / Deleting
Older electronic versions must be deleted.

Property of the Copy
Although this copy is assigned to a precise consignee, it remains the full property of the Carpatair.

Control of the Condition of this Copy
The Ground Operations Department and Documents Control Centre have the right to check any time the condition and the updating of the present copy.

Restriction on Reproduction
It is strictly forbidden to make a replica of this copy, unless otherwise allowed by the Carpatair's rules.

1.3.4. Approval

The Carpatair Ground Operations Manual has been prepared by the Ground Operations Nominated Person in coordination with the Flight Operations Nominated Person and the Maintenance Nominated Person in full compliance with international requirements, and the Romanian Civil Aeronautical Authority (RCAA) requirements, as well as other international laws and standards such as IATA AHM, IATA Dangerous Goods Regulations, Aircraft Maintenance Manuals.
Carpatair Ground Operations Manual has been issued under the control of the Compliance Director and approved by the Accountable Manager.
Carpatair Ground Operations Manual contains information and data extracted or referenced from various manuals, such as Carpatair OMA, Compliance Monitoring Manual, CSPM, Security Program, Safety Management System Manual, for which the respective company post holders are accountable or the manuals require the competent Authority approval.

Approval from CAA
The contents of this Carpatair Ground Operations Manual do not require the approval of the Romanian Civil Aviation Authority, as its parts are already approved by the competent authority (CAA or other), in the manuals requiring this approval.

1.3.5. Documentation from External Sources

Documents from external sources, such as IATA Dangerous Goods Regulations or Airport Handling Manual, are registered at Documentation Center and administered by Ground Handling Department.

The Carpatair Ground Operations Manual is written in English in accordance with IATA policy.
All standard communication between Carpatair flight crew or Carpatair cabin crew and the ground staff shall be in English unless a clear and unambiguous exchange can be conducted in a common language.

References
Within the Carpatair GOM, reference may be made to any of the following manuals published by IATA:

- The IATA Airport Handling Manual (AHM)
- The IATA Dangerous Goods Regulations (DGR)
- The IATA Live Animals Regulations (LAR)
- The IATA Reference Manual for Audit Programs (IRM)

It is possible that there are procedures or instructions in the GOM that do not align with certain local practices, or situations. In such cases, common sense and safety shall prevail.

1.3.6. Management and Control of Ground Operations Records

The registration, content and retention of the Ground Operations Department records are in accordance with the requirements of the Authority, as applicable, subject to a standardized process. This process is defined and described in Carpatair Documentation Centre Procedure KRP PR-008.

1.3.6.1. Storage, Protection and Security

The special records and evidence circulating within Ground Operations Department and between Carpatair Ground department and third parties are carefully stored in offices where access is restricted to authorized personnel only. When stored in the archives, which is a special facility, the documents are properly identified and easily retrievable by the system that imposes that each box bears the general name of the contained documents written on them, the department that issued them, as well as the date if issue (year and month).

All ground operations records mentioned in the table below are to be stored by the nominated responsible persons/department, according to the period of time established by various regulators (IATA) and according to Carpatair archiving procedure 417 / 15.12.2008.

Document	Storage period	Legibility
Mass & Balance documentation	3 months	Statistics
Shipper's Declaration	3 months	Cargo
DGR Acceptance Checklist	3 months	Cargo
DGR Incident Occurrence Report	3 months	Safety Office
Ground Handling Incident or Accident Occurrence Report	3 months	Safety Office
All documents concerning passenger service (e.g. forms for UMNR, PRM, PETC or AVIH, etc.)	1 year	Statistics
Passenger manifest (including passengers' names, number of baggage, seat no., etc.)	1 year	Statistics
PIR, AHL reports	1 year	Ground Ops
Ground handling training records	3 years	Ground Ops

The documents above are stored by the appropriate personnel in secured places, according to their degree of confidentiality. They will be made available to authorized personnel only and/or regulatory authority.

1.3.6.2. Disposal and Deletion

After passing the storage period, the stored documents will be destroyed or securely disposed. This operation takes place under the coordination of the team responsible with the destruction of documents appointed by the Documentation Centre according to Carpatair Documentation Centre Procedure KRP PR - 008.

Old versions of the electronic documents must be deleted.

1.4. Communication System within Ground Operation Department

The relevant notifications, changes of procedures, introduction of new procedures, charter briefings, or other exchanges of information related to operations conducted (including those related to safety and security) are communicated within the Ground Operations Department using various methods.

1. E-mail messages are the most commonly used method of communication both within headquarter and with service providers (ground handling service providers, ACMI partners etc.)
2. Telephone communication, besides e-mail messages, is most frequently used for urgent matters
3. operational meetings whenever necessary
4. MEMOs or ground and/ or safety bulletins
5. AIMS;
6. Briefings delivered via e-mail before each flight to own staff, handling agents and ACMI partners;
7. Risk Assessments
8. Publishing on company Intranet (GlobaleDocs).

1.5. Duties and Responsibilities

1.5.1. Duties and Responsibilities of the Ground Operations Nominated Person

The Ground Operations Nominated Person has the authority and is responsible for the management and supervision of functions and activities within the scope of ground handling operations. He is accountable to senior management for ensuring the safety and security of ground handling operations.
The Ground Operations Nominated Person is primarily responsible for the safe and efficient management of the ground operations. In particular, his responsibilities are:

- to ensure that ground handling operations are conducted in accordance with the applicable regulations and Carpatair standards;
- to make sure that health and safety performance of all ground operations employees are well cared for, by ensuring proper training and risk prevention actions;
- liaison in all aspects of the dispatch of the aircraft with the Company's ground handling agents;
- overseeing the completion of the actions and requirements listed in the Ground Operations the preparation, publication and amendment of the Carpatair Ground Operations Manual;
- inspecting handling agents where Carpatair operates as necessary to check on the effectiveness of standards regarding the load, weight and balance, and ramp procedures, check-in procedures etc.
- ensuring all Ground Safety and Security procedures are effectively implemented and continuously updated and controls ramp safety;

- investigating all reports of deviation from standard procedures and taking the necessary actions (i.e. Voyage Reports);
- establishing policy and associated standards for passenger and airport handling performance and maintenance;
- supervising the load control procedures in respect of carriage of special load, i.e. live animals, wheelchairs, etc.;
- taking all reasonable measures and maintain supervision to ensure that no person offers or accepts dangerous goods for transport by air unless the person has been trained and the goods are properly identified, classified, documented, packaged, marked, labeled and in a fit condition for transport as required by the ICAO Technical Instructions or IATA DGR.
    - o To supervise ground handling activities and aircraft servicing
    - o To establish and maintain an efficient relationship with the airport authorities and other representative authorities at the airport
    - o To ensure proper surveillance of the aircraft on ground and during night stop is performed according to the internal procedures, national and international regulations
    - o To ensure that the station personnel observe the security procedures set by the airport authority
    - o To report any incident or accident that occurs on their station, to the Carpatair Safety department

Further tasks, powers and authority of the Ground Operations Nominated Person are described in OMA, chapter 1 and in job description.

1.5.2. Duties and Responsibilities of the Passenger Services Manager

- To ensure ground handling operations related to passenger services are conducted in accordance with applicable regulations and standards of Carpatair
- To supervise the passenger handling services provided to passengers of Carpatair and the other airlines served
- To standardize the work methods and service delivery regarding passenger services
- To monitor and update the information regarding legislation on entry, transit, exit of passengers in/from the countries where Carpatair operates
- To ensure implementation of specific passenger handling procedures where Carpatair operates
- To maintain contact and communication with handling agents where Carpatair operates regarding passenger services
- To ensure that the safety and security measures specific to the working area (in the airport terminal) are observed.
- To take over the duties and responsibilities of the nominated Person Ground Operation in his absence or his deputies' absence, according to the leadership succession mentioned herein
- This position is to be nominated

1.5.3. Responsibilities of the Handling Agent

The responsibilities of external service providers as well as the scope and extent of services to be provided are subject to an agreement (SGHA or Service *Provider's Selection and Handling Request Form/KRP 186*) between the service provider and Carpatair.
The respective station manager will be responsible to ensure implementation of the agreement as well as compliance with Carpatair procedures and will authorize his station personnel according to qualification and ability.

Responsibilities
The handling agent shall report to Carpatair ground operation office and be responsible for:

- adherence to Carpatair company regulations and close cooperation with dispatch / movement control,
- organization of passenger handling (check-in, boarding, delay and irregularity handling), baggage handling (check-in, lost and found, loading and un-loading), cargo and mail handling (loading and unloading), aircraft handling and loading (arrival and departure handling, servicing and cabin cleaning, loading and unloading), catering uplift/ exchange and cabin supplies, load control, if not performed by Carpatair crew members, airside safety and security,
- preparing pre-flight operational information,
- organizing a proper and timely aircraft and passenger handling,
- timely initiation of all messages pertinent to the flight progress,
- keeping all Carpatair manuals complete and up-to-date and informing ground operations department, if deviations have been found,
- organizing and supervising ramp handling services
- ensuring that a designated turnaround coordinator is available during the complete ground time to coordinate and supervise all activities concerning the aircraft, crew, passengers, baggage, cargo and ramp handling. Only duly authorized staff, wearing proper identification shall be allowed at and/or in the aircraft.
  The turnaround coordinator is responsible as well for:

- stand allocation
- collection of inbound flight information
- check the serviceability of ground support equipment
- stand inspection for FOD
- check that GSE are clear of stand

1.5.4. Duties and Responsibilities of Passenger Handling Staff

Check-in and Boarding staff is responsible for:

- passenger check-in including LMC check-in, either manually or by DCS
- acceptance of baggage
- check travel documents for correct data
- issue of boarding pass and baggage tag including passenger information
- boarding control
- issue and transmission of all relevant data for load control
- issue and transmission of all relevant passenger data to Carpatair crew.
- giving information to passengers in case of flight irregularities /delays
- organization of transportation or HOTAC in case of diversion or misrouting in coordination with Carpatair and possible local tour operator representative, if service is requested by Carpatair
- dealing with missing and damaged baggage
- handling of paperwork in connection with lost bags
- keeping close contact to Carpatair

1.5.5. Duties and Responsibilities of Ramp Handling Staff

Ramp Handling Staff shall:

- ensure that ground support equipment (GSE) is well maintained and operated only by trained and qualified staff
- check that all required equipment for ramp handling, loading, disembarking is available
- and arrange for necessary equipment
- strictly comply with ramp safety measures for the positioning of GSE
- position and remove GSE

- position and remove wheel chocks and give information to the flight deck
- position and remove marker cones
- tow-in and push-back, if required
- securing assemble, deliver and distribute load as per loading instruction and check that all loads for destination is offloaded and, prior to reloading verify that all holds do not contain any prohibited articles or "foreign objects",
- inform the commander about any special load (dangerous goods etc.)
- check aircraft for signs of exterior damage upon arrival and inform the flight crew and on line maintenance and Carpatair ground operations office in case of damage
- secure and close cargo doors when loading is completed and ensure that all doors and access panels are closed prior to departure
- perform a visual ground to cockpit clearance

1.5.6. Duties and Responsibilities of Fueling Staff

Fueling staff shall be responsible for refueling/defueling of aircraft in accordance with aircraft manufacturer requirements (valid aircraft manufacturers AMM procedures), with standard industry operating procedures and in coordination with crew, maintenance or other authorized supervision.

The individual refuel procedure for each aircraft type can be found in GOM and Carpatair Fuel Manual.

1.5.7. Duties and Responsibilities of De- and Anti-Icing Staff

See KRP-DAM current edition

1.6. Carpatair Organization Charts

1.6.1. General

See OM-A, chapter 1.1 Organizational Structures

1.6.2. Ground Operations Department Delegation of Duties

The delegation of duties is documented in the job description files of the employees involved. Every time the head of the department is out of the office, he will be replaced by Flight Documents Manager.
The “Out of office reply” activated in the email messages will also specify the deputy (or deputies) to replace the head of department, together with an e-mail address and/ or a telephone number for urgent matters.

1.7. Quality System Applied to Service Providers

Ground handling services are performed by external handling agents for all flights operated by Carpatair. The agreements (SGHA, Service Provider Selection and Handling Request Form/KRP 186– e-mail) with the third party service suppliers include constant monitoring of performance and quality assurance either by audits performed at regular intervals or inspections, questionnaires, periodical reports or other forms of monitoring, that will help completing the process of safety evaluation and risk assessment process.

Carpatair will check the conformity of the service providers with the requirements of the regulatory organizations and standards, as well as the compliance with the company

procedures. The auditing system for service providers is detailed in Compliance Monitoring Manual.
Evaluating the implementation of corrective actions will be checked through audits, inspections, periodical reports (daily, weekly or monthly) or, whenever necessary, function of the gravity of the non-conformity or observation, respecting the time limits set in the audit report.

If the service providers are ISAGO certified, the company will acknowledge the quality of standards of those handling agents based on the ISAGO certificate.

Since Carpatair operates ad-hoc charter flights and ACMI flights that may appear from day to day frequency, the conformity with safety and security standard by means of SLA cannot be monitored.

Nevertheless, the conformity is monitored trough flight reports delivered via e-mail by the on duty crew members for each leg operated and/or trough KRP-198 Ground Handling Checklist form that must be filled in and sent to loadsheets@carpatair.com by the on duty crew members.

1.7.1. Selection of Outsourced Service Providers

Selection of ground handling service providers is performed in accordance with CMM ch.2.7.

The ultimate responsibility for the service provided by the handling agent (the term 'supplier' will be further used for: contractor, subcontractor, etc.) always remains with Carpatair.

Considering Carpatair's type of operation, the conclusion of SGHA is not possible for each stations. In such cases, ground handling requirements and procedures to be applied on Carpatair flights are ensured trough punctual handling arrangements, staff involved being properly informed trough ground handling briefings sent via e-mail prior to flight operation.

An agreement (SGHA or the handling request sent via e-mail) will be concluded between Carpatair and the sub-contractor clearly defining the safety related services and quality to be provided. The IATA Standard Ground Handling or handling request sent via e-mail if no SGHA is in force for passenger, ramp, operations, cargo, safety and security services concluded between Carpatair and handling service providers lays down the duties and responsibilities of contracted personnel.
Each service provider shall be appointed to conduct ground operational functions considering below selection criteria:

1. The Service provider (ground handling agent, catering and/or cargo agent) has a corporate SMS implemented in the organization that clearly defines accountabilities and responsibilities within organization;
2. The Service provider (ground handling agent, catering and/or cargo agent) has a corporate Safety Policy and SMS implemented in the organization;
3. The Service provider (ground handling agent, catering and/or cargo agent) has necessary ground support equipment to perform required services;
4. Ground handling personnel is trained according to IATA AHM 1110;
5. Positions within the organization (ground handling agent, catering and/or cargo agent) are filled by personnel who possess appropriate knowledge, skills, training and experience.

Handling agreements may be concluded for an indefinite or definite time period. Additional services may be contracted by means of a Side Letter.

The sub-contractor's safety related activities relevant to the agreement will be included in the Carpatair's Compliance Monitoring Program.

Administrative Requirements
The handling agent shall have an organization and management system, including definition of responsibilities and authority, for the management of all ground handling functions associated with ramp operations, passenger services, baggage services, cabin services, weight and balance control, ground support equipment, fuel services.

The handling agent should have a safety management system that includes: policy, purpose, applicability, responsibilities, training, operating procedures, risk management, audits, inspections, performance monitoring, emergency response, non-punitive system for reporting of incidents and occurrences, risk assessment and hazard/mishap evaluation.
The handling agent shall have a system for the management of personnel assigned to its ground handling operations, to include assurance of competence, training, education, skills and experience.
This procedure describes the method in which a supplier of the outsourced service or product which could affect the quality, safety and security of operation and/or maintenance and the airworthiness of Carpatair's aircrafts is selected, evaluated, approved and monitored.

Considering Carpatair's type of operation (ad-hoc charter flights and ACMI flights) Carpatair will apply procedure KRP-PR-109 remote evaluation for service providers.

Sub-contractors
All ground handling agreements between Carpatair and handling agents are based on the IATA ''Standard Ground Handling Agreement'' or punctual handling request sent via e-mail.
The handling request shall contain information related to aircraft type, MTOW, maximum seating capacity, UTC operating timings, estimated no of passengers, safety and security requirements if different that the standard ones, handling confirmation requirement.

It is mandatory that the handling agent fully complies with contracted agreements and follows the Carpatair procedures and standards. All services must be performed by qualified personnel only.

Carpatair must ensure that the sub-contractor has the necessary authorization /approval when required and commands the resources and competence to undertake the task. If Carpatair requires the sub-contractor to conduct an activity which exceeds the sub-contractor's authorization/approval, Carpatair is responsible for ensuring that the sub-contractor's quality assurance takes account of such additional requirements.

1.7.2. Assessment and Review

The results of audits, inspections, spot checks, reports and other forms of monitoring the activity of a handling agent will be centralized and subjected to an analysis by the Nominated Person Ground Operations together with the Compliance Monitoring Office. The form is filled in electronic version (for each leg) by flight crew members and delivered to ground department. Then the conclusion will be formulated in terms of quality and safety of operation for that particular station and the services performed (ground handling services – passenger handling, load control, ramp handling, de-icing, fueling, etc.).

1.7.3. Training Requirements for Service Providers

Carpatair will periodically audit the contracting handling agents. The checklists used will include questions to cover the aspect of initial and recurrent training, with the issues of safety and security included.

In its audit programs, Carpatair includes checking of training of the ground handling personnel in order to ensure the highest standards of performance possible, including the safety and security aspects. Therefore, all personnel working in the special aviation operational field must hold a valid license in accordance with the regulatory bodies (IATA, ICAO, EASA, etc.). It is essential that they receive initial training before they start to perform specific operational duties. Training must provide sufficiently detailed instructions to ensure a safe completion of the tasks assigned. The functional areas included in ground handling operations are passenger handling, baggage handling, cargo handling, load control, aircraft handling, aircraft loading, safety and security related issues etc.

Recurrent training will be checked as well, with an emphasis on the frequency with which each recurrent course must be completed according to the regulatory authorities.
The training files will be checked through the audits, with respect to the examination methods (written, oral or practical evaluations), the pass rates, the period of validity, the course syllabus, a description or a reference to the training materials used to meet the training requirements, the name of the organization providing the training, etc. These personnel files must be periodically updated.

The training shall cover the areas described in AHM 1110.

1.8. Training of Ground Operational Personnel

The training of ground operations personnel is structured in accordance with the duties and responsibilities of each position of the ground operations department organization chart, as well as with the level of knowledge acquired.

2. Baggage Handling Procedure

This chapter is detailed in Carpatair Passenger Handling Manual

3. Cargo / Mail handling Procedures

This chapter is detailed in Carpatair Cargo Manual

Content

4.1 Ramp Safety in Aircraft Handling

4.1.1 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, employees and aircraft. Disruptions may also negatively impact safe airline operations.
Even a slight scratch on an aircraft may result in a serious accident.

If you see or cause any aircraft damage, you must report it. All ramp incidents and accidents, including damage to aircraft shall be reported to Carpatair as follows:

1. Immediately inform the commander of the flight; and
2. inform Carpatair flight dispatch office at: +40 722 579 046

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

4.1.2 General Ramp Safety

Airport pavement markings and signs provide information that is useful to a pilot during takeoff, landing, and taxiing.

4.1.2.1 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 additional thrust required to break away and continue its maneuver.

a. Vehicles and personnel shall 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, personnel shall never position themselves or equipment in the following critical areas before/during aircraft departure and arrival:

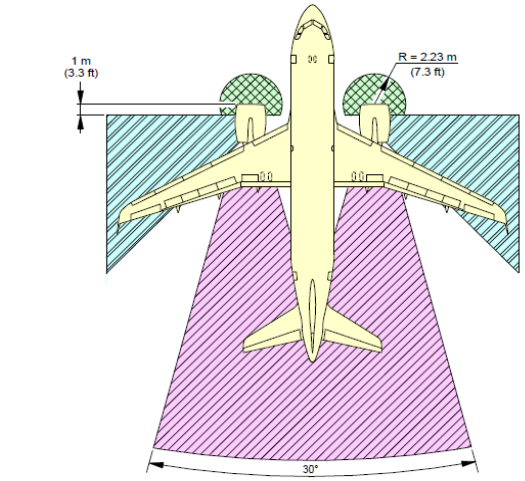
1. Engine Intake Area;
2. Engine Blast Area;

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

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

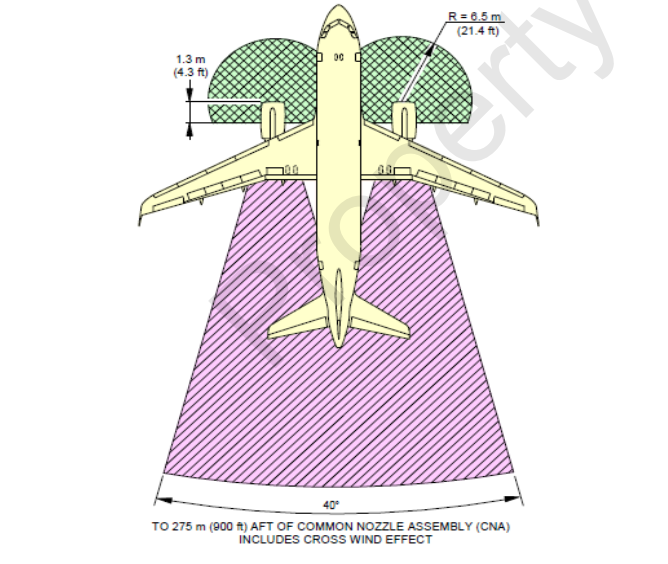
Airbus A320 Family Danger Areas of Engines, Exhausts Velocities:

Max Take off power



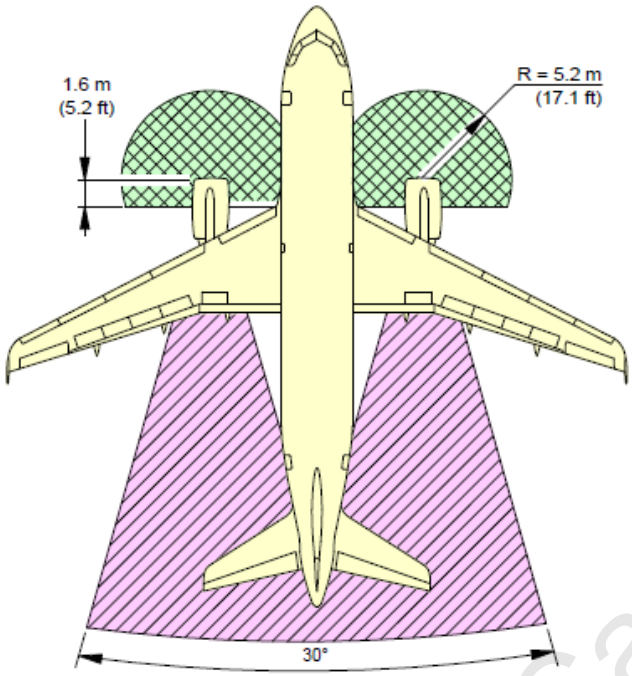
Danger Areas of the Engines
CFM56 Series Engine
FIGURE-6-3-1-991-003-A01

Ground Idle Power



Danger Areas of the Engines
CFM56 Series Engine
FIGURE-6-3-3-991-003-A01

Breakaway Power



TO 74.7m (245 ft) AFT OF COMMON NOZZLE ASSEMBLY (CNA) INCLUDES CROSS WIND EFFECT

NOTE:

INTAKE SUCTION DANGER AREA MAX. TAKEOFF POWER

EXHAUST WAKE DANGER AREA

N_AC_060302_1_0030101_01_03

Danger Areas of the Engines
CFM56 Series Engine
FIGURE-6-3-2-991-003-A01

Engine suction

In the safety area, the safety distance to the engine admission will be observed in order to avoid absorption. Even with the engine running slow, its absorption is powerful enough to absorb the human body. The engine absorption may also suck in foreign objects, causing foreign object destruction (FOD).

The evacuation jet is as dangerous as the absorption. The evacuation jet may be considered enhanced in case of unfavorable weather (unsuitable condition and inclination of the platform, snow, ice, etc.). The evacuation areas are specified in the aircraft guide.

Engine Intake Area

Make sure the engine intake area is clear:

1. At arrival, until the engines have been switched off and are spooling down;
2. At departure or just before pushback;
3. At all times while engines are running.

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

Ram air inlet threat

During ground handling operations, different accessories as: caps, gloves, ties and scarfs, raincoat hoods, can be absorbed into the aircraft ram air inlet.
These are hazard sections due to high air velocity, and high depression created.
As consequences:

- The respective pack becomes inoperative.
- Aircraft becomes AOG.
- Extra maintenance and material costs are generated.

ATTENTION:
All handling operators will be instructed about the threat created by ram air inlet

- Report any event to the commander;
- Know the proper hazard areas as stated in the manual;
- Secure loose items on person or remove them;
- Treat carefully guard against tripping or stumbling;
- Do not wear loose clothing;
- Do not attempt to retrieve items in hazard area;
- Do not gesture with arms near the ram air inlet;
- Keep a safe distance of at least 30 cm of these ram air inlets;
- Loose clothes will be avoided because they may be caught by moving mechanical parts of the equipment, or absorbed into air inlets.

Antennas and other Protuberances

In order to prevent injuries by protuberances as aerials, drainage pipes or air turbines, walking under the fuselage must be avoided.
The drainage pipes are heated during the flight, being very hot at arrival.
Attention must be paid to the pulled flaps, the trap-doors of the landing gear and the system for emptying and supplying with the water, which service the aircraft.

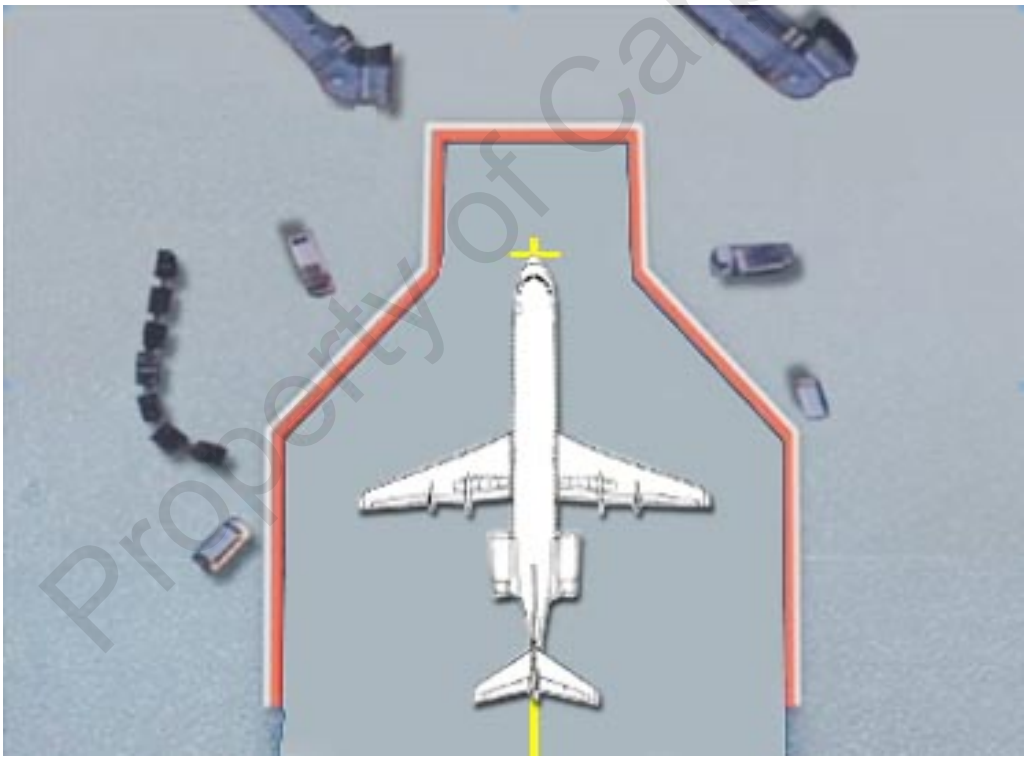
Ventilation Area

Is a spherical area located around the tank valves, where fuel vapors may appear during fueling.
The safety area is of 4 meters in case of kerosene tank valves and 8 meters in case of fuel “wide-cut” or a mixture of kerosene and “wide-cut”.

4.1.2.2. Equipment Restraint Area & Equipment Restraint Line

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.
The ERA shall be free of personnel not involved in the aircraft arrival, obstructions, equipment 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.



4.1.2.3 FOD–Foreign Object Debris

Foreign Object Debris (FOD) is a general term which applies to all loose objects which are a danger to the safety and integrity of an aircraft and which, therefore, must not be left in any area where they would constitute a hazard.

a. FOD applies to all loose objects that are a danger to the safety and integrity of aircraft or personnel. FOD, therefore, shall not be left in any area where it would pose a hazard.
b. All personnel have a responsibility to ensure the risk of damage to aircraft from FOD is minimized. All waste material shall be properly disposed of such that it does not become FOD and all FOD shall be removed and properly disposed of as soon as it is discovered.
c. 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.

FOD may result from:

(1) Failure to properly clean areas and account for removed objects, nuts, bolts, paper, plastic, bags, sheets, towels, drink containers/cups/cans, rags, pavement fragments, baggage components/tags, aircraft waste, catering equipment.

(2) Inadequate housekeeping.

(3) Clean-up operations after severe weather.

(4) Failure to account for tools and parts.

(5) Failure to maintain ground support equipment, i.e. parts break off or fall off.

(6) Apron works in progress/construction sites.

(7) Natural objects: rocks, pebbles and wood

(8) 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 shall be conducted to any aircraft movement and after servicing operations:

1. Check ground equipment staging and parking areas in proximity to area of operation;
2. Ensure routine checks are made of ground equipment (including floors of enclosed cabins) to ensure that everything is secure and operational, and not about to fall 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. Perform FOD inspection of the parking stand immediately before start of engines to avoid any FOD remained after handling of aircraft is not sucked into engine;
6. 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;

4.1.2.4 Fire Prevention and Extinction

The responsibility for securing and quality of fire prevention and extinction services on the platform is an attribution of the airport, corresponding to the national legal norms and to the regulations in the field.

- During fueling operations, the installing or removing of storage batteries, as well as the GPU plugging in are prohibited.
- In order for an aircraft to be fueled with passengers on board, boarding or disembarking, trained staff that may perform the procedures for the passengers' protection and evacuation must be present.
- In addition, the following prevention measures shall apply:
  - The itinerary of passengers must avoid the areas with risk of emitting of fuel vapors; the embarking/debarking operations will be watched;
  - During this operation, bilateral communication between the crew on ground responsible for these operations and the crew on board of the aircraft must be granted via the aircraft communication system or by any other suitable means.
- Any time the aircraft commanding crew is present on board an agreement with them regarding the fueling starting time must be concluded in order to provide the taking of the necessary measures on board. If the crew is not present on board, the mechanic will provide the necessary measures, according to the relevant norms.
- The beginning of fueling is considered the moment when the supply hoses connected at A/C are put under pressure. The ending of fueling is considered the moment when all supply hoses have been disconnected from A/C.

The fueling and defueling are supervised by the flight crew

Although, in certain cases, the airport trained staff may pursue the observing of the following rules:

- In case of storm close to the airport, the flight crew will decide if the fueling, as well as the other handling services will be carried out or not.
- The fuel stains fallen on the ground will be removed or dried out immediately, in the presence of the firemen and before the embarking of the passengers in A/C.

- The hoses will be spread as directly as possible towards the filling orifices; anyway, a sufficient distance (of at least 1 m) must be kept from the wheels brakes and from the APU air plugs.
- Before the hoses connecting, between the self-supplier and the A/C will be established an equipment connection, for the discharge of the static electricity.

4.1.3 Aircraft parking safety

Safety should be a prime requirement in all activities connected with handling of an aircraft.
In respect to a safe aircraft parking, the handling agent will appoint a Ramp Coordinator that twill check and ensure the strict considerations of following safety requirements:

a) The apron equipment is to be positioned behind the ERA with the parking brakes applied prior to the arrival of the aircraft at the parking position.
b) FOD checks or parking position are done before aircraft parking and before aircraft engines start up, to ensure there is no any FOD present on the surface of parking stand;
c) The marshaling for correct aircraft parking within the established marks and signs that enssures the safety of the aircraft while on ground;
d) The securing of aircraft by means of wheel chocks placed according to Carpatair instructions;
e) Prior to every removal of the chocks the cockpit crew must be requested to set the parking brake;
f) The safety installing of suitable ground stairs (boarding bridge);
g) The GSE equipment shall be blocked with own braking system, outriggers, for the equipment which do not have own braking system or outriggers chocks will be used mandatory. The same requirements must be applicable when equipment is in position at aircraft to avoid uncontrolled movements. Chocks may be applied depending on local weather conditions, GSE's manufacturer requirements, local authority requirements;
h) GSE equipment shall only be directed to the aircraft after it has come to a complete stop, chocks in position, engines shut down, anti-collision lights turned off, walk around is done and clearance is received to approach aircraft, and if applicable, ground/flight deck intercom contact established;
i) GSE placed at a distance from the aircraft shall have "brakes-on", (or chokes as applicable), to avoid rolling of equipment caused by the blast of the engines;
j) GSE shall be in operational condition and shall meet required technical specification prior being utilised. Visual check of GSE to be done by operators prior installing at aircraft;
k) Safety cones around the aircraft shall be placed according to Carrier instruction in order to prevent aircraft damage.
l) Safety strip belts are recommended to be used in order to secure and protect the engines area;
m) Loading/unloading devices or the ones destined for services will not be handled under the wings of the aircraft.
n) Ground equipment should be manoeuvred in the aircraft vicinity at low speed with accuracy and care.
o) Motorized equipment must make a full stop as a brake check before entering the equipment restraint area and again before reaching the aircraft fuselage.
p) Equipment should never move across the path of taxiing aircraft or embarking and disembarking passengers. Aircraft and pedestrians should always have the "right-of-way"/ priority.
q) When service has been completed, remove all ground equipment to a safe distance;
r) A visual check of aircraft for damage is to be conducted upon arrival, before service equipment is positioned and prior to departure, after service equipment is removed from aircraft. Should even the slightest scratch or dent in the aircraft skin occur or be noticed, it is imperative that this fact be reported immediately to commander before departure and via e-mail to Carpatair at fight.dispatch@carpatair.com and ground.admin@carpatair.com. Remember that even minor deformations, apart from detracting from performance, could be the direct cause of serious accidents
s) A guide person and standard hand signals must be used to guide ground support equipment to/from aircraft;

t) The guide person must be positioned so that clearances can be accurately judged and be visible/able to communicate the signals to the vehicle operator at all times. If visual contact with the guide person is lost, the driver will stop immediately;

u) For electrical or motorized GSE positioned at or near the aircraft, being utilized in the operating mode, the operator must keep within easy reach of the emergency controls. If the equipment is not fitted with external emergency controls, the operator must remain in the operating position and in control of the equipment.

v) Motorised equipment must have an operator in attendance when its engine is running;

w) Protective rubber bumpers on GSE to be positioned by the cabin access door, e.g., passenger steps, catering trucks, ambulifts will just touch the aircraft fuselage, in order to prevent aircraft damage and to allow for aircraft settling during servicing, but as well fall down of the passengers and staff;

x) Protective rubber bumpers of Other GSE designed for aircraft servicing e.g conveyer belts, must never touch the aircraft. Maintain clearance between the belt loader and the aircraft at all times;

y) Before removing ground support equipment from any aircraft cabin access door, the operator must advise cabin crew. Ground support equipment must not be removed unless a safety device has been put across the door opening or the door is being closed;

z) Equipment with elevating devices is not driven in the elevated position, except for final positioning at the aircraft.

aa) Personnel must not operate motor vehicles or equipment whilst using hand held portable electronic devices.

bb) Carts/dollies tend to “drift in” or shorten the turning radius on corners. Therefore, drivers should avoid turning prior to, or immediately after, passing an obstacle.

cc) When the GSE is positioned at aircraft cabin access doors, the side handrails and platforms, must be extended correctly to fuselage, in order to prevent fall down of the passengers and staff;

dd) In the event of a fire occurring either on or in the vicinity of the aircraft (15m) STOP IMMEDIATELY THE FUELLING AND OTHER OPERATIONS, alarm the personnel on board the aircraft for immediate evacuation! Alarm the airport’s Dispatch to activate emergency situation according to local procedures!

ee) Always when a GSE is positioned at aircraft, it must be positioned in such manner as to not:

- Obstruct the evacuation of persons from the aircraft in an emergency case;
- Prevent or obstruct the movement of a fueling vehicle away from the aircraft;
- Unnecessarily impede the accomplishment of other aircraft handling operations in progress;

4.1.4 Safety Instructions for Operating Ground Support Equipment (GSE) on the Ramp

4.1.3.1 General Safety Instructions

The following precautions shall be taken in order to achieve the highest safety standard possible.

a. Only adequately trained, qualified and authorised personnel should be permitted to operate GSE equipment.

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 is 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/jewellery from becoming a hazard, e.g., caught or trapped in equipment

When operating equipment, check the equipment contact zone for possible aircraft damage and immediately report any damage found. Should even the slightest scratch or dent in the aircraft skin occur or be noticed, it is imperative that this fact be reported immediately via e-mail to Carpatair at fight.dispatch@carpatair.com and ground.admin@carpatair.com or to the commander if present at the aircraft. Remember that even minor deformations, apart from detracting from performance, could be the direct cause of serious accidents.

Before removing ground support equipment from any aircraft cabin access door, the operator must advise the cabin crew. Ground support equipment must not be removed unless a safety device has been put across the door opening or the door is being closed.

4.1.3.2 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, safety systems and in-life service date of onboard firefighting equipment's. 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 and removal, 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 selector 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 4.1.4.2 (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 park or neutral, (if no selection for park) and, when 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” 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:

1. The protective rubber bumpers do not touch the aircraft fuselage.
2. 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 or two fingers should be maintained between the device and the aircraft.
3. Check that throughout the turnaround process a clearance is maintained between the GSE and the fuselage to allow vertical movement.

t. For GSE and PBB equipped with self-levelling sensors. Continue movement until the protective rubber bumpers just touch the aircraft (but shall not be compressed against the fuselage) or the proximity sensors stop the 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 3.3 Adverse Weather Conditions

4.1.3.3 Non-Motorized Ground Support Equipment

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 (not applicable to flights operated by Carpatair)

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 are 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.

4.1.3.4 Passenger Boarding Bridge

The operator of the 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 of entanglement 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 a 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 a self levelling device, maintain a gap in accordance with No-Touch policy. Refer to IGOM 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 access 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.

4.1.3.5 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 the 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 a 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 a self levelling device, maintain a gap in accordance with No-Touch policy. Refer to IGOM 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 access door. Refer to IGOM 4.4.2.1 (b).
l) After the cabin access door has been closed, confirm there are 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.

C. Catering Equipment

The passenger doors are only to be opened from the inside by Carpatair crew members when the platform of the catering truck is at the same level with the cabin floor or the catering truck is not in front of the door.

When catering trolleys are loaded in the cabin, they shall always be secured by being stood on "mushrooms" in a braked position. The same is true for the hold load. Even when "mushrooms" are available, the trolleys shall still be in a braked position.

4.1.3.6. Belt Loader

The following precautions must be taken when operating a belt loader:
a) Stop operating 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 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: specially designed belt loaders (e.g. Ramp Snake or Powerstow), that 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 doors 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.

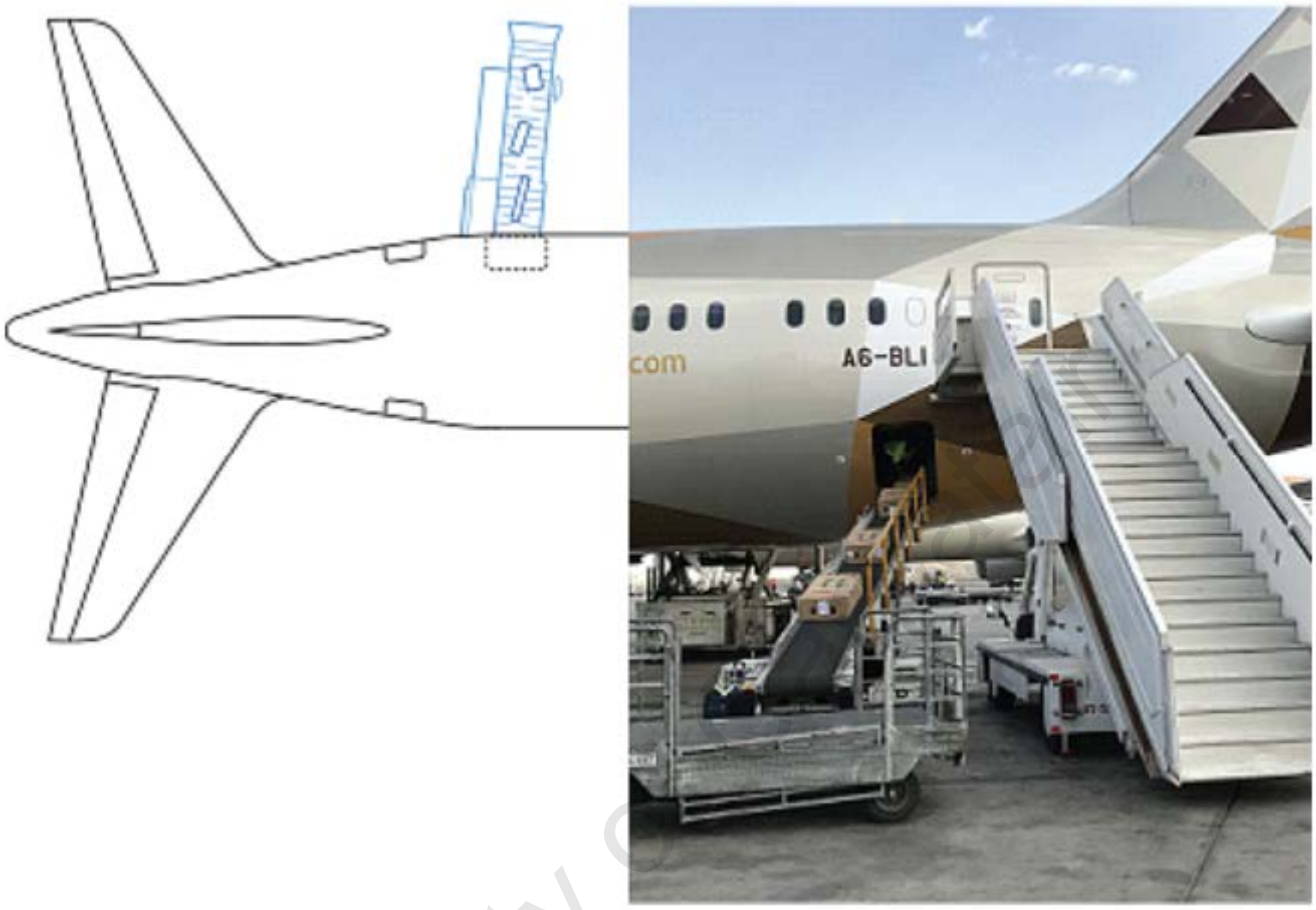
h) Once the belt loader is positioned ensure the wheels are left in straight ahead position.

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 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 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 out.
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 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.



4.1.3.7 Safely Driving and Parking Ground Support Equipment inside E R A

Apply the following precautions when driving or parking Ground Support Equipment (GSE) within the ERA:

a) Make one complete stop with all motorized GSE prior to entering the ERA or at 5 m from the aircraft. This action shall be carried out even if there is no equipment restraint line marked on the apron.
b) GSE shall not be driven faster than 5 km/h or 3 mph (walking speed).
c) Maneuver GSE carefully to prevent personnel injury and/or aircraft damage.
d) Avoid performing 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:
    4. 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, or
    5. Assisted by means of appropriate proximity sensing and warning systems and/or visual aids such as cameras and mirrors.
f) GSE that is 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: Vehicles needed for aircraft servicing (aircraft refueling truck (under the wing), water servicing truck, toilet servicing truck (under the fuselage)

Baggage trolleys

It is strictly prohibited to drive with baggage vehicle closer than 3 m from the aircraft fuselage and movement of baggage trolleys must be done by human power, but not closer than 1.5 m from the aircraft.

4.1.5 Maintenance Program for Ground Support Equipment

The function qualities of pull and transport equipment is changing as time and use increase, so that during their operation the effective power of the engine diminishes, the fuel and lubricants consumption, as well as the friction power in mechanisms increase, etc. as a result, the dynamic and pull qualities of vehicles worsen, the consumption decreases and their productivity is reduced, as well as their technical safety.

All these are due to the increase of the pieces' friction surfaces. In order to maintain the vehicle in good working condition, control operations must be performed first, such as washing, cleaning, greasing etc.

The intervals at which maintenance operations must be performed are as follows:

- daily control and maintenance – regardless of circuit (daily);
- general washing and cleaning – regardless of circuit
- greasing – seasonally (summer/winter);
- each specification to be found in the respective equipment maintenance instructions must be complied with.

All these maintenance checks of ground support equipment will be recorded in the maintenance log of the equipment according to technical specifications of each equipment.

The maintenance of equipment used by the external handling agents will be checked through periodical audits (on site or remote) verifying that there is a preventive maintenance plan for each type of equipment, maintenance completed is recorded and the equipment remains serviceable and in good mechanical conditions.

4.2 Potable Water Servicing

All water for drinking and other use made available to passengers and crew, must be free from chemical substances and micro-organisms which might cause illness in any form to its consumers.
Water service must not be performed by staff that has already performed toilet servicing during the same shift, until the staff shall mandatory wash the hands with water and soap, change his wear and preferably make a shower.

(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 - Potable Water Hygiene Requirements**
(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 by operating airline.
(f) Replenish the aircraft tank according to the operating airline instructions. Any deviation shall be reported to the supervisor or airline representative.
(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.

Replenish the aircraft tank according to **Airbus A320 Family Potable Water Servicing** described below. Any deviation must be reported to the supervisor or to the commander and to flight.dispatch@carpatair.com and ground.admin@carpatair.com.

In order to avoid potable water contamination, the involved staff must:

a) Be dressed with clean working clothes in accordance with the World Health Organization (WHO) Drinking Water Quality Standard to be assigned to 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 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 drinking water servicing; see AHM 440 10.9.

4.2.2 Potable Water Units Servicing Procedure

4.2.2.1 Filling Aircraft Water Tanks

- **a)** Fill the aircraft water system as close to the departure time of the aircraft as possible.
- **b)** 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)
- **c)** Do not place hose ends on the ground.
- **d)** On immediate turnaround sequence, water service shall always be performed before toilet service. During the handling of the aircraft, the same person cannot perform the potable water service, if previously she performed toilet service. If required to do both operations by same person, the potable water supply will be performed first

e) 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 cupling.
f) Fill the water tank(s) to the required level.
g) When not in use, hose-ends shall be:
1) Kept carped or;
2) Attached to a dummy connector or;
3) Kept in a container filled with disinfectant solution or;
4) Treated with disinfectant before use.

Regular monitoring of each parameter is necessary to ensure that safe water quality is maintained, as each step in the water transfer chain provides an opportunity for contamination.
Regular analysis shall be done every 3 months for microbial parameters and for physico-chemical parameters. The sampling and analysis frequencies may be increased if the need arises.
The water analysis certificate with the parameter values and parameter limits shall be displayed or available.
Should an analysis fail, water servicing must be interrupted immediately and corrective action done accordingly. Water servicing shall be resumed after subsequent analysis has shown acceptable results for the involved parameters.
Records shall be maintained at least for three years.

PROCEDURE:

NOTE: If possible, park the aircraft where a drain facility is available. When this is not possible, use containers to collect the drained water.

Airbus A320 Family Potable Water Servicing

Potable water is stored in a 200 l water tank located in the aft cargo compartment, in the wall on the left side.
On ground, the water system is pressurized by the air from the service panel pressure port (or the air-supply boost system). In flight, the water system is pressurized by the bleed air.
Potable water is piped to the galleys and lavatories. Manual shutoff valves isolate wet galleys, the FWD lavatory (or the MID lavatory) and the aft lavatory from the water system. Manual shutoff valves are located under the washbasins or toilet bowls. The position of each valve is indicated by OPEN and SHUT legend.
The system can be filled or drained from the service panel at the bottom of the fuselage. The indication of the water quantity in the water tank is displayed on the FAP and the aft service panel.

The waste/water (from galleys and lavatories) drains overboard through two heated drain masts.
The forward mast drains the waste/water from the forward cabin. The aft mast drains the waste/water from the aft cabin.

Filling of the Potable Water Tank System (Aircraft Electrical Power Available):
CAUTION: Make sure that the water pressure is not more than 50.0 PSI. If the water pressure is more than 50.0 PSI, damage to equipment can occur.
Connect the fill hose of the cart servicing, water, potable or water source-ground to the potable water fill and drain port.

On the service panel:
- Turn the *FILL*/OVERFLOW/DRAIN handle to the PULL TO FILL position.
- Then pull it out to the mechanical stop.

Operate the water service vehicle and fill the potable water tank until the quantity indicator shows the necessary quantity.

NOTE: If the filling level is to be less than full, push in the Fill/OVERFLOW/ DRAIN handle and turn it to the NORMAL position. The Quantity Indicator shows the filling level
Push in the FILL/OVERFLOW/DRAIN handle and turn it to the NORMAL position.

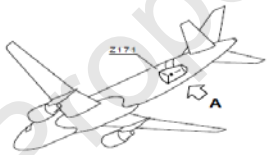
NOTE: The FILL/OVERFLOW/DRAIN handle will automatically go back to the NORMAL position when the TANK FULL light comes on.

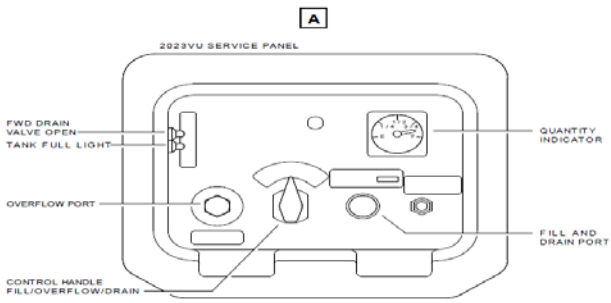
NOTE: If there is too much water in the tank, water will flow from the "POTABLE WATER OVERFLOW" port.
(a) Stop the water service vehicle.
(b) Disconnect the hose from the POTABLE WATER FILL AND DRAIN port.
(c) Clean and dry the service panel and the adjacent area.
(d) Visually examine the connections for leaks.
If there are leaks, please inform Carpatair crew.
(e) Put the cap on the POTABLE WATER FILL AND DRAIN port.

NOTE: If you do the servicing in cold weather conditions, the POTABLE WATER FILL AND DRAIN port must stay open as long as possible. This is to drain the residual water from the fill and drain line.

NOTE: Make sure that the latches are correctly locked and that the door makes a continuous surface with the skin of the aircraft.
De-energize the ground service network

Filling of the Potable Water Tank System (Aircraft Electrical Power Available):





Filling of the Potable Water Tank System (Aircraft Electrical Power not Available):

CAUTION: Make sure that the water pressure is not more than 50.0 PSI. If the water pressure is more than 50.0 PSI, damage to equipment can occur.
Connect the fill hose of the cart servicing, water, potable or water source-ground to the potable water fill and drain port.

Connect the fill hose of the CART - SERVICING, WATER, POTABLE or WATER SOURCE - GROUND to the
(1) POTABLE WATER FILL AND DRAIN port.
(2) On the service panel 2023VU:
- Turn the FILL/OVERFLOW/DRAIN handle to the PULL TO FILL position.
- Then pull it out to the mechanical stop.

(3) Operate the water service vehicle and fill the potable water tank until water comes from the POTABLE WATER OVERFLOW port.
(4) Stop the water service vehicle.
(5) Push in and then turn the FILL/OVERFLOW/DRAIN handle to the NORMAL position.
(6) Disconnect the hose of the water service vehicle from the fill and drain port.
(7) Clean and dry the service panel and the adjacent area.
(8) Visually examine the connections for leaks. Leaks are not permitted.
(9) Close the fill and drain port on the service panel.

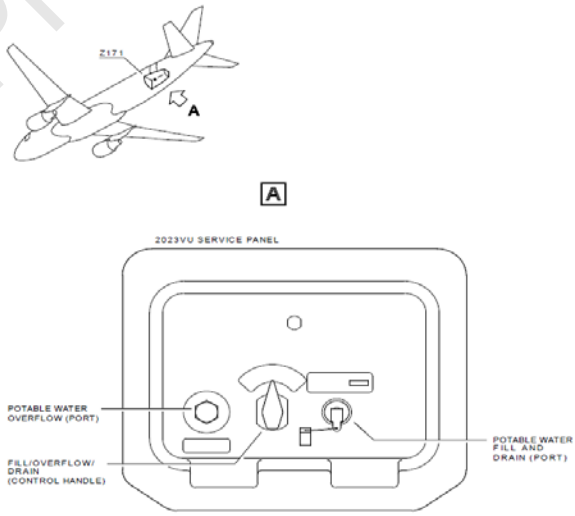
NOTE:
If you do the servicing in cold weather conditions, the FILL AND DRAIN port must stay open as long as possible to drain the residual water from the fill and drain line

Close Access

(1)Make sure that the work area is clean and clear of tools and other items.
(2)Close access panel 171AL:
(a)Remove the SUPPORT WS PANEL DOOR from the access panel.

NOTE: Make sure that the latches are correctly locked and that the door makes a continuous surface with the skin of the aircraft.

Filling of the Potable Water Tank System (Aircraft Electrical Power not Available)



Draining of the Potable Water System (with Electrical Power)

CAUTION: Make sure that the drain valves stay in the drain position after you drain the potable water system if:
- the bleed air system is "off" and
- the outside air temperature is below 0° C.

This will prevent damage to the potable water system.

1. Energize the aircraft electrical circuits
2. Put the ACCESS PLATFORM 2M in position
3. Make sure that the potable water shutoff-valve in each lavatory is open.
4. Make sure that the potable water shutoff-valve in each wet galley is open.
5. Make sure that the potable water-mixing timer control-knob in each lavatory is set to the center position (between the RED and BLUE band).
6. Make sure that the potable water shutoff-valve in each galley is open
7. Open the access panels 8. Remove the cap from the fill and drain port on the service panel
9. Connect the HOSE - DRAIN to:
   - The fill and drain port on potable water service panel
   - The drain port on the forward drain panel.

NOTE: Drain-valve control light 2MP comes on.

NOTE: The water drains from:
- The fill and drain port
- The drain port on the forward drain panel.

11. In the lavatories, push the toilet flush button to drain the remaining water from the toilet system.
12. Operate the water faucet(s), the coffee makers and the water heater in the galley(s) (if installed) to drain them.

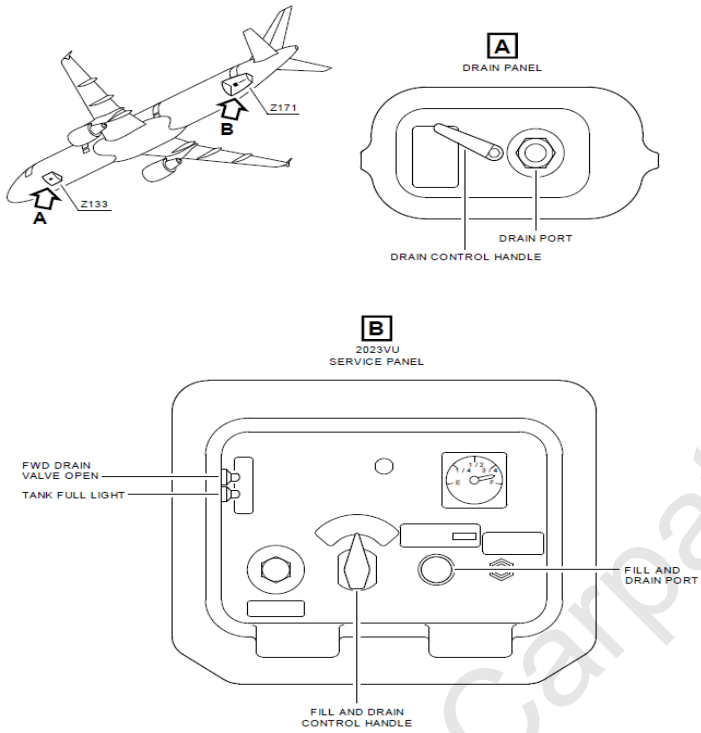
NOTE: To drain the water from the galley(s) it is necessary to repeat step 12 several times. After the potable water system has been drained:
- It can take at least 15 minutes to drain the water from the galley(s).

The position of the aircraft effects the time it takes to drain the water from the galley(s).

NOTE: If the draining is done in cold weather the caps and access panels should be left open.

18. De-energize the ground service network.

Draining of the Potable Water System (with Electrical Power)



Draining of the Potable Water System (without Electrical Power)

CAUTION: Make sure that the drain valves stay in the drain position after you drain the potable water system if:
- the bleed air system is "off" and
- the outside air temperature is below 0° C.

This will prevent damage to the potable water system

1. Put the ACCESS PLATFORM 2M in position
2. Make sure that the potable water shutoff valve in each lavatory is open.
3. Make sure that the potable water-mixing timer control-knob in each lavatory is set to the center position (between the RED and BLUE band).
4. Make sure that the potable water shutoff valve in each galley is open
5. Open the access panels
6. Remove the cap from the fill and drain port on the service panel

CAUTION: Make sure that the drain valves are in the closed position if the bleed air system is "on". You must do this less than 10 min after the flow of water from the drain ports of the potable water system stops. This will prevent damage to the potable water system.

7. Connect the drain hoses to:
   - the fill and drain port on the service panel
   - the drain port on the forward drain panel
8. On the potable water service-panel turn the fill and drain control handle 3254MM to the PULL TO DRAIN position. Then pull it out to the mechanical stop.
9. On the forward drain panel turn the drain control handle to the OPEN position.

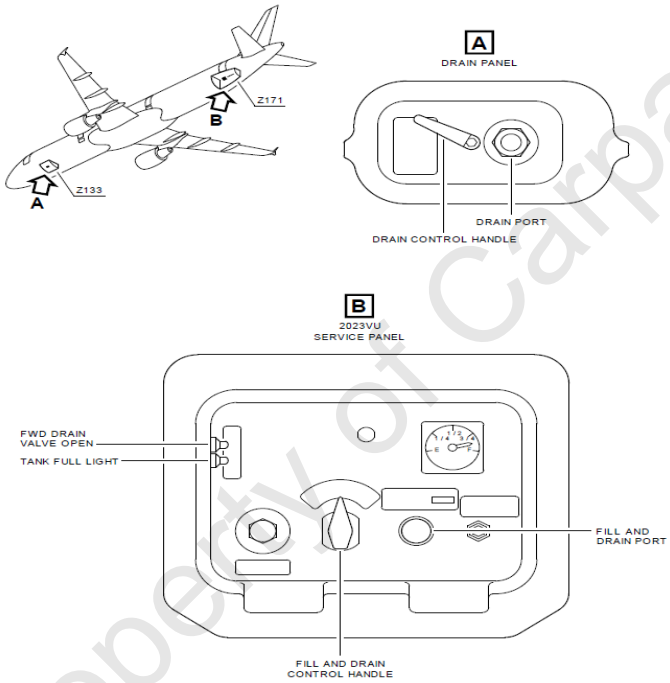
NOTE: Water will drain from:
- the fill and drain port on the service panel
- the drain port on the forward drain panel.

NOTE: Water will remain in the supply lines to the toilet units.

10. When the system is drained:
- push in and then turn the fill and drain control handle to the NORMAL position.
- turn the drain control handle on the forward drain panel to the CLOSED position.

11. Disconnect the drain hose(s) from the drain port(s).
12. Install the cap on the fill and drain port of the service panel
13. Remove the access platform.

Draining of the Potable Water System (without Electrical Power)



4.2.2.1 Water Servicing During Freezing Conditions

The following actions must be followed to prevent freezing of the water in the aircraft water tanks and lines during freezing conditions:

(a) Drain the aircraft water tanks. The water tanks shall be drained upon the request of the Carpatair crew members (flight deck personnel or the technician)

(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 offloaded.
Do not attempt to remove the frozen substance in the fill lines or connections or on the service panels. Contact maintenance immediately.

4.3 Toilet Servicing

4.3.1 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:
Toilet fluids are corrosive.
Prior to servicing, Carpatair handling agent shall inspect the toilet servicing panel on the aircraft for signs of leakage. If any horizontal blue streaks are observed, the blue streak must be cleaned prior to servicing. After cleaning, Carpatair handling agent shall look again for signs of leakage.
Blue ice build-up in higher altitudes may influence airworthiness. In case of a possible leak, immediately inform the commander and/or Carpatair headquarter via e-mail at flight.dispatch@carpatair.com and ground.admin@carpatair.com

4.3.2 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.

Caution:
Once an agent has performed toilet servicing on an aircraft, the same agent cannot perform water servicing during the same shift, until he has washed the hands with water and soap and changed his uniform

4.3.3 Toilet Servicing Procedure

4.3.3.1 General

(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) twice and empty them again;
(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: Inform aircraft maintenance or flight crew, if:

1. Fluid leakage is observed.
2. The drain valve will not open or the waste tank cannot be drained. Report any spillage of waste to the supervisor

Report any spillage of waste to the supervisor.

Airbus A320 Family Toilet Servicing

Differential pressure forces the waste from the toilet bowls into the waste tank. The waste tank has a usable capacity of 170 l.
Clean water from the potable water system flushes toilets.
Ground personnel services the waste tank via a service panel, located under the fuselage.
A manual shutoff valve isolates an inoperative toilet. In the case of an electrical failure of flush valve, the manual flush control can be used. The manual flush control is located under each toilet bowl.

Draining of the toilet system

CAUTION: Make sure that the vacuum pressure is not more than 6 PSI maximum, if you use a vacuum operated toilet service vehicle. A higher vacuum pressure can cause damage to the vacuum toilet system.

1. Open the caps of the toilet drain connection and the fill and rinse connection.
2. Connect the hose adapter of the toilet service vehicle and the 4-inch diameter drain hose to the toilet drain connection.
3. Push the PUSH TO OPEN lever
4. Pull drain valve control-handle from the NORMAL to the DRAIN position.

NOTE: The waste will drain.

Flushing of the toilet system

1. Connect the fill hose (1-inch diameter) of the toilet service vehicle to the fill and rinse connection.
2. Operate the toilet service vehicle.
3. Flush the waste tank with a maximum of 57 l of water with a maximum pressure of 3.45 bar (50.0380 psi).

NOTE: The maximum pressure of 3.45 bar is shown on the toilet service panel.

NOTE: This flushing procedure will be completed after approximately 90 s.

NOTE: The drain valve must stay in the OPEN position

4. Stop the toilet service vehicle.
5. Push drain valve control-handle to the NORMAL position.
6. Disconnect the drain hose and the hose adapter.
7. Make sure that the waste tank rinse-line is empty.

NOTE: This prevents damage to the waste tank rinse-line in cold weather conditions.

8. Close the drain cap

NOTE: When you close the drain cap, the inner flap will close and lock automatically.

9. Disconnect the flush/fill hose.
10. Close the cap of the toilet fill and rinse connection.

4.3.3.2 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. The waste tanks shall be drained upon the request of Carpatair commander or technician.
(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. Please inform the commander or the technician.

4.3.3.4 Checking Procedure for the Prevention of Blue Ice Formation

The lack of fittings or the improper installation of the servicing door on the servicing point from the toilet panel may determine the formation of ice during the flight of an airplane.
On board an aircraft, a blue disinfectant is used for the toilet system. This is the reason why this phenomenon is named “blue ice”. The same phenomenon without the blue color is relevant for the potable water system.
As a first result, these phenomena may damage the panel, but they also have subsequent effects during the flight. A great quantity of ice and a great speed is likely to destroy an engine, objects on ground and even kill people or animals.
The purpose of this procedure is to eliminate leaks / droppings after emptying the toilet tanks, potable water tanks as a result of defective sealing system (leaky).
The procedure applies every time the aircraft are supplied with potable water or the potable water or toilet tanks are emptied.
Before the flight, the leakage systems from the toilet panel and the potable water will be checked so that no leaks or drainage should appear. The same checks are performed in winter as the low temperatures at high altitudes (below minus -75°C) may lead to critical situations in which large quantities of ice accumulate.
The toilet water and the potable water are performed by the contracting parties (handling agents). They do not undertake any responsibility for the correct closure of servicing doors and a careful check of liquid leakage. Therefore, a careful check will be performed before the flight to the potable and toilet water installations from the toilet panel.
After emptying, the mechanic or the service supplier shall wipe the servicing door and check the sealing packing. He shall not close the servicing door before having previously checked that there are no leakages. The phenomenon is reported to the flight crew.

4.3.3.5 Inoperative Toilet Systems

If defects of the toilet system prevent regular servicing, ask –Carpatair technician for assistance
If no technical staff is available, inform the flight crew.

4.4 Fueling and Defueling Operations

During preliminary fuel ordering phase for each ad-hoc charter flight, Carpatair Fuel Manager will check and ensure that into plane fueling agent is able to deliver and load onto aircraft fuel of the correct grade and specification for Carpatair aircraft type. Upon receiving the information about fuel availability on the respective station the Fuel Manager will check and ensure the fuel type and/or standard corresponds to approved fuels according to current edition of KRP Fuel Manual, Chapter 2.

In order to ensure the fuel to be loaded onto aircraft is free from contamination, the flight crew will require fueling operator coming to refuel the aircraft to perform a water free contamination check.

The crew will make appropriate records in the Form KRP 186 Service Provider's Selection&Handling Checklist about results of the performed check. In case if contamination is found, commander will contact company OCC for new refueling arrangements.

In case of ACMI/wet lease out operation, the compliance will be checked via Lessee' compliance monitoring system.

The following shall be observed for any refueling or defueling:

Before refueling:

(1) Provide fire extinguisher in nearby
(2) Connect bonding connection
(3) Install and lock fuel connections
(4) Ensure that the specified aviation fuel is going to be fueled
(5) Ensure that the aircraft fuel will not be contaminated during refueling

After refueling:

(1) Close the refueling shut off valves
(2) Disconnect refueling connections
(3) Install and lock filler caps
(4) Disconnect bonding connections accordingly
(5) Safely remove spilled aviation fuel immediately in accordance with local regulations or completely cover the spilled fuel with sand, sawdust or any suitable material and dispose of it as soon as possible.
(6) Complete fueling order or make entry in the Technical Log Book (TLB).

The commander is responsible that sufficient fuel is ordered and on board for the completion of the planned flight. This must be ensured by comparing the figures of the completed fueling order, OFP and the fuel gauges on the flight deck.

Carpatair flight deck staff is only to ensure supervision of fueling, as Carpatair does not perform fueling with its own personnel.
Checks that the personnel have been properly instructed and that training is up-to-date will be done through remote audits performed at each fuel supplier.

4.4.1 Fueling Safety Zone

The Fueling Safety Zone (FSZ) is defined as an area of at least 3 meters/10 feet in any direction from the center-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.

a) a)The Handling staff must be instructed to strictly observe the following safety precautions established for the Fuelling Safety Zone (IGOM and IATA-AHM462), while perform their job tasks during aircraft fuelling: SMOKING IS FORBIDEN (aplicable also to electronic cigarettes)!
b) Only use company-issued and approved radios, radio telephones, flashlights/torches, lamps and lighting systems. Battery chargers must not be operated.
c) During pressure refueling electrical and/or electronic systems may only be operated as far as required for pre-flight activities, except WX-radar and HF-Transmitter.
d) No refueling / de-fueling is permitted during thunderstorms in the aerodrome area.
e) Enter the FSZ only when required by your current job task/responsibility.
f) Assume that fuelling is taking place anytime a fuel vehicle is on the stand during aircraft servicing and fuel hoses are connected.
g) Do not leave vehicle engines running unnecessarily.
h) Position all GSE and vehicles so they do not obstruct the fueling vehicles' escape route; this is not a mandatory requirement for hydrant type fuelling vehicles but every effort should be made to ensure a clear exit pathway.
i) Do not allow any passengers to enter the FSZ.
j) Avoid the use of motorized GSE within the FSZ.
k) Do not park any equipment in the FSZ.
l) Bonding connections from the fuel truck (or fuel pump vehicle) shall be established for discharging any static electricity before fuel hoses are connected.
m) Fuel hoses shall be laid by the shortest distance from the fuel truck (or fuel pump vehicle) to the refueling inlets, however a sufficient clearance from wheel brakes (at least 1 m) and from APU air intakes, where applicable, shall be observed.
n) Ensure fuel hoses are protected and all equipment is kept a minimum of 1 m away from any fuel hose on the stand that is connected between a fuel truck and an aircraft;
o) The connection or disconnection of any aircraft electrical equipment, including GPUs, batteries and battery chargers, is not permitted.
p) APU or prop brake units shall be switched ON or OFF before starting the fueling/de-fueling.
q) No APU / engine starting is permitted during fueling. Likewise no electrical switch on the airplane or on the APU shall be operated whilst any over-wing fueling is in progress - except those switches necessary for fueling.
r) Only tail mounted APU may be started during refuelling if the start is an initial start or a restart after normal shutdown.
s) If the APU exhaust discharges cross the upper surface of the aircraft wing, overwing fuelling must not be carried out while the APU is running.
t) If the APU exhaust discharges to the side or rear of the aircraft, fuelling vehicles should be positioned to avoid any risk of coming in the path of the exhaust stream i.e. the APU exhaust must discharge outside the fuelling zone.
u) Do not attempt to start the APU during fuelling if the APU had an automatic shutdown or a failed start attempt. Make sure the fuelling operation is complete and the hose disconnected before another APU start is attempted.
v) The APU may be shutdown (manual or automatic) during the refuelling operation.
w) The engines of unattended GSE should be switched off.

x) **GSE MUST NOT** be parked/used under the aircraft wingtip fuel vents, except fuel truck if needed there.

y) Equipment must be positioned so that the fuelling vehicle has a clear exit route and can be moved away from the aircraft in a forward direction. A distance of 1 m should be maintained, wherever possible, between ground support equipment and any fuelling equipment, i.e. vehicles, hoses, hydrant pits.

z) Ground Power Units (GPUs) must not be operated unless they are positioned 3 m from the aircraft fuelling vents and venting points.
   1. The GPU shall be started and electrical connections made before fuelling begins.
   2. The unit shall not be disconnected or switches operated during fuelling.
   3. In the event of fuel spillage, if safe to do so, the GPU shall be stopped immediately and must remain stationary until the spill is removed and there is no danger from flammable vapour.

   Spilled fuel shall be removed or dried up immediately with the fire service in attendance before passengers are boarded. If fuel spillage requires the intervention of the fire brigade, a work-order has to be opened and an occurrence report has to be filed.

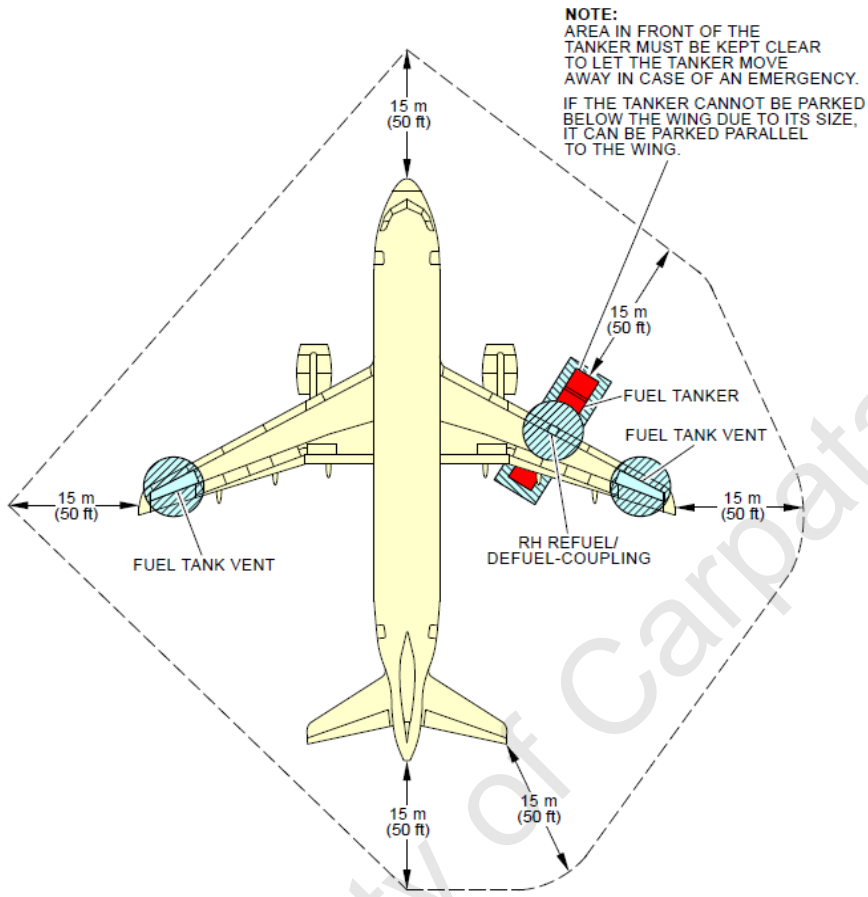
   Equipment with metal wheels or metal studded tyres capable of producing sparks shall not be moved in the safety zones.

aa) Cargo/baggage may be loaded, provided the loading equipment complies with the safety regulations regarding the formation of sparks.

bb) Only authorised persons and vehicles are permitted in the fuelling zone.

cc) Fuelling operations with Air Conditioning Units in operation may be carried out subject to the same conditions as those applicable to general aircraft servicing, with the exception that, in the event of fuel spillage, the engine of the unit shall be stopped. This is to prevent the possibility of flammable vapours being passed into the

Airbus A320 Family Fueling Safety Zone:



4.4.2 Supervision of Tankage and Fuel

Responsibility

Tankage according to the fueling order must be supervised and the quantity and the quality at designated stations to be checked by the person responsible, i.e. the CDR or at his order the copilot.

To ensure that the requested amount of fuel according to OFP and fueling order is on board, a double check has to be performed.

A dip stick check has to be performed:

- If required by the MEL/MELPG.
- If the amount of the calculated and the indicated fuel differs beyond acceptable tolerances.
- If any technical deficiency has been observed in the fueling system.

If the person responsible deems it necessary

Ordered fuel

The commander of the departing flight decides on the quantity of fuel. After he received the Operational Flight Plan (OFP), the handling agent shall ask him about the required fuel quantity and inform the fueling company accordingly.

The commander shall:

- Delivered fuel – Compare the quantity of fuel on the Fuel Delivery Sheet with the fuel gauges of the fuel truck;
- If the quantity is correct: the commander shall sign the Fuel Delivery Sheet on behalf of Carpatair;
- The flight deck crew compares the quantity on the Fuel Delivery Sheet with the indicated quantity at the cockpit fuel gauges;
- Keep the Fuel Delivery Sheet;
- File one copy of the Fuel Delivery Sheet in the Flight File;
- File the original or another copy separately to the flight brief for accounting reasons

Before commencing fueling the authorized fuel provider must take precautions to ensure that the suppliers offer the correct grade.

Before signing his acceptance, the commander must, with respect to fuel, check that:

(a) the departure fuel on board agrees with the fuel flight plan;
(b) the freeze point of the fuel loaded or that of the resultant mixture is satisfactory for the flight that is planned.

Safety Precautions

Safety precautions must always be taken to preclude the possibility of fire during refueling and defueling procedures.

The main causes of risk of fire with fuel deal with:

- a spark due to static electricity;
- hot points (engines, APU, ground installations, smoking).

Fuel generally does not catch fire easily, but the risk of fire is increased when the fuel is sprayed (leak, disconnecting pipe) or in the presence of fuel vapor especially when low flash point fuels are used.

Observe all local airport regulations for fueling/defueling that may exceed the regulations listed below.

The following precautions apply during any fueling operations:

- engine ignition system must be 'off'
- the weather radar must be switched 'off'
- radio shall not transmit on HF
- electrical circuits in the tanks area shall not be connected or disconnected

- no open flame or smoking is permitted around the aircraft

If one or more of these safety measures and regulations are not observed or cannot be observed immediately interrupt fueling.

Thunderstorms

No refueling/de-fueling is permitted during thunderstorm in the aerodrome area.
Danger: Risk of serious injury or even death!
If the aircraft is electrically charged or hit by a lightning, fuel gases may be lighted by electrical discharging.
Agree with the commander whether the fueling shall be started or continued.
If the commander is not on board, and there is any doubt about safety, immediately interrupt the fueling procedure.

Oxygen bottles

If oxygen bottles are being filled or changed at the aircraft:
Do not fuel or defuel at the same time.

Fuel trucks

Fuel trucks may only be driven backward to the aircraft if they are marshaled by an accompanying person.
The truck must be positioned in a way that the aircraft cannot be damaged when the truck drives towards or away from the aircraft.
Keep free an escape route for the fuel truck all the time.
Do not disconnect fuel trailers from the towing truck if the trailer cannot be easily moved by hand.

Bonding

Any static electricity must be discharged before the fueling starts.
Establish bonding connections from the fuel truck to the aircraft before connecting the fuel hoses.

Fuel hoses

Lay fuel hoses by the nearest way to the fuel inlets.
Keep a safety distance of at least 1 m between the fuel hoses and the aircraft wheel brakes and the APU air intakes.
Never cross fuel pits or fuel hoses with (GSE) or other vehicles.

Deadman control switch

Press the deadman control switch all the time during fueling.
If fueling is performed by two persons, it is not necessary to press the deadman control switch. In this case, make sure that one person is present all the time at the switch board of the fuel truck.

Fuel vents and venting areas

Do not position any vehicle within the venting areas during fueling or defueling, not even fuel trucks.
The fuel vents are at the wing tips.
The venting area under the fuel vents is formed like a cone. The size of the cone is described by its base radius R. The venting area cone for Jet fuel at the wing tips of narrow body aircraft has an approximate base radius R = 1.5 m; at wide body aircraft, R = 2.5 m.

Approved Fuels
Please refer to KRP Fuel Manual current edition.

Start and end of fueling
The fueling process starts at the moment when the fuel hose is connected to the aircraft and finished when disconnected.
Inform the Flight Crew about the end of the fueling process.

Flight Crew

If it is not obvious that the Flight Crew is on board or not:
- Ascertain whether the Flight Crew is on board;
- Fueling personnel has to check with the responsible ramp agent or check actively himself by knocking on the cabin door or on the hull underneath the cockpit, before pressurizing the fuel hose.

Flight Crew on board

Whenever the Flight Crew is on board:
- Agree with the Flight Crew about the time to start fueling.
- The Flight Crew ensures the necessary safety measures on board;
- Do not start fueling without clearance from the Flight Crew;
- Clearance may be given verbally, with undoubtful hand signals, or via an indication at the fueling operation panel of some aircraft types;
- If the fueling staff has assured that disembarking is completed, refueling may be started without prior clearance from the Cockpit Crew.

Flight Crew not on board

If the Flight Crew is not on board and the minimum take-off fuel (MINTOF) or block fuel is not known:
- Do not start fueling. If the Flight Crew is not on board and the minimum take-off fuel (MINTOF) or the block fuel is known;

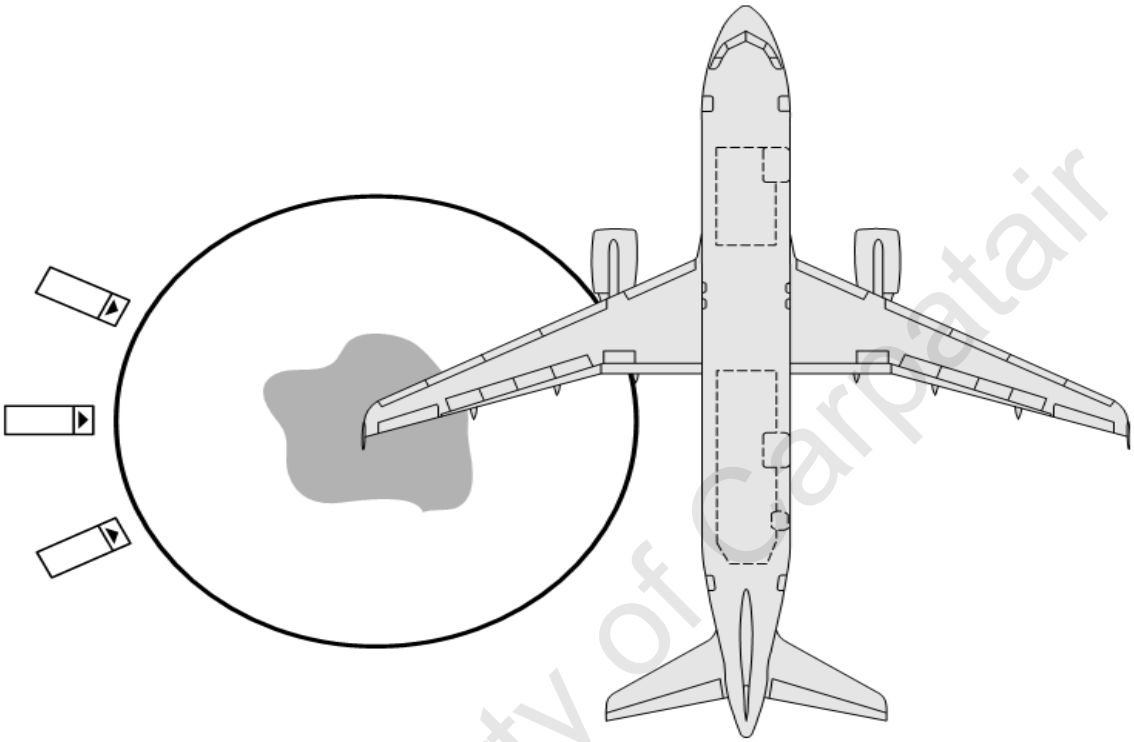
According to local procedures and regulations:
- Operations personnel (handling agent) or;
- Flight Engineer or;
- Fueling personnel will make sure that the necessary safety measures are observed.

Personnel who perform this task must have been instructed. If you are not sure about your specific responsibilities:
- Do not perform any activities in the cockpit or the cabin without an instruction.

4.4.3 Fuel Spillage

Take the following safety measures whenever a fuel spill occurs:
a) Activate the emergency shut-off valve where installed. Ensure the fueling is immediately stopped.
b) Alert the person in charge of fueling and/or the commander 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 reduce the risk of ignition;
f) Immediately initiate a removal or dry up of spilled fuel according to all local airport regulations;

g) If the Auxiliary Power Unit (APU) had to be shut down due to the proximity and danger from flammable vapors or fuel spray, do not restart the APU until the spillage is removed and there is no further risk from fuel or vapors;
h) Announce Fire Brigade;
i) Stop all the other engine activity near the aircraft at a range of 50 m;
j) A fueling safety zone must be established and GSE must be within the safety zone. No vehicles (except fuel trucks) shall be positioned within the venting areas. Usually, an area of 3 m radius of aircraft fuel vent openings is used. (A fueling safety zone is an area, where no spark is possible to ignite). See also OM-A, chapter 8. Safety on the Ramp, including Fire Prevention, Blast and Suction Areas.



4.4.4 Fueling/Defueling with Passengers on Board

When possible, the crew shall always consider to embark or disembark the passengers before or after, rather than during refueling.

For fueling with passengers embarking or disembarking, the necessary precautions shall be taken, and the aircraft should be properly manned by qualified personnel that should be ready to initiate and direct an evacuation of the aircraft by the most practical and expeditious means available.

Embarking or disembarkation of passengers during fueling is considered as fueling with passengers on board. Passengers, in small groups, shall be led directly to/from the aircraft, keeping the safest possible distance from the aircraft fueling zone.
Passengers disembarking or embarking shall be supervised by ground personnel in order not to enter the fueling area.
Before embarking/disembarkation of passengers during fueling, the commander has to be consulted.
If the passengers remain on board when fueling, the cabin crew will be informed by the commander or delegated person.
The person supervising the fueling shall notify the crew on board when the fueling starts and when it is finished.
Fueling supervision shall not be performed by the person fueling the aircraft due to the limited field of view.

Handling agents are instructed that the decision for "passengers on board" during fueling/defueling is strictly limited to the decision of the Carpatair commander.

When fueling with passengers onboard you must:
a) Keep designated escape exits clear. An escape exit may either be a bridge into a terminal building, a cabin door or a passenger stair truck positioned on an open cabin 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.

Refer to Carpatair policy regarding fueling as well as local airports and regulatory requirements. The above is applicable as a minimum standard.

Fueling of KRP aircraft is allowed as a standard procedure under certain conditions:
- with passengers disembarking;
- with passengers boarding;
- with passengers on board in transit.

All three cases are subject to certain restrictions.
Strictly observe the procedures described below.

Restrictions to be observed during fueling with passengers on board
- Do not fuel if the complete Flight Crew is absent;
- Do not fuel if the complete Cabin Crew is absent;
- Refueling with Wide Cut Type Fuel/Mixing Fuels – please see OMA ch. 8.2.1.3
- No over wing fueling;
- Refueling with an engine running – please see OMA ch. 8.2.1.4
- Do not defuel with passengers on board, boarding or disembarking.

Communication between flight crew, cabin crew and ground crew:

(a) Sufficient qualified personnel must be on board and be prepared for an immediate emergency evacuation.

One flight crewmember shall be on the flight deck to initiate and coordinate the precautions emergency evacuation, if required. In the absence of a flight crewmember, the Senior Cabin Crew may undertake these duties, positioned in the vicinity of the main door normally used for passenger boarding. In the event that the supervising flight crewmember leaves the aircraft, he should formally advise the Senior Cabin Crew.

The Refueling Supervisor should be advised if it is intended that the flight crew will leave the aircraft during refueling. He will then be aware that his line of communication may, in the event of an emergency, be through the Senior Cabin Crew.

The person performing fueling supervision must:
- Always remain in immediate vicinity of the aircraft.
- Always keep the overview on the parking position.
- Observe the complete fueling process and stay in vicinity of the fueling truck.
- Obtain the cockpit crew approval before fueling with passengers boarding / on board / deboarding.
- Not enter the aircraft, such as passenger cabin or lower compartments, as well as the terminal

- or offices.
- Inform all staff directly involved (ramp and gate staff) that fueling is about to begin and when it
- is completed.
- If locally required inform the airport authority and / or fire brigade and grant permission.

(b) A two-way communication shall be established by the aircraft's inter-communication system or by using marshalling signals between fueling supervisor and flight crewmember in the flight deck and must remain available throughout the entire fueling process until the fuel hose has been disconnected

In the event of an incident requiring prompt disembarkation or rapid evacuation of the passengers, the fueling supervisor will use the quickest available means of communication to notify the flight/cabin crew e.g. using:

- o flight or cabin service interphone;
- o passenger steps, power operated gangway or catering vehicle;
- o suitable aural or visual signals;

(c) One flight attendant who must be stationed at one of the main cabin doors will be responsible for notifying the refueling staff immediately should any fuel vapor be detected in the passenger compartment or if any condition arises which might constitute a potential hazard. If the presence of fuel vapors is detected inside the aircraft, or any other hazard arises during de-fueling, fueling must be stopped immediately. In this event all cleaning activities using electrical equipment within the aircraft must also be stopped immediately and not resumed until conditions permit;

(d) Crew, staff and passengers must be warned that fueling will take place;

Passengers remaining on board must be informed that they must remain in the seats with their seat belts unfastened and that they must not smoke or operate electrical equipment;

FUNCTIONAL SIGNALS ON BOARD

(e) The 'Fasten Seat Belt' sign must be off and 'No Smoking' signs must be on, together with sufficient interior lighting to enable the exits to be identified;

(f) Where appropriate to the aircraft type, the emergency lighting master switch must be selected to «arm»;

(g) The P.A. system must be serviceable;

GROUND SERVICING ACTIVITIES AND EVACUATION PATHS

(h) Any ground servicing activities and work within the aircraft must be conducted in such a manner that the ground area beneath exits intended to be used for emergency evacuation and slide deployment area must be kept clear of obstructions

(i) Where it is desired to move passengers to and from the aircraft during fueling the authorized refueler must ensure that the passenger movement paths are well clear of aircraft wing tip tank vents and fueling equipment and that the movement of passengers through the fueling area is supervised by a responsible person. Passengers must not be allowed to linger near the aircraft;

FIRE SERVICE

(j) The fire service must be alerted to the fact that fueling procedures are about to take place with passengers on board;

(k) If passenger/baggage reconciliation is necessary, it must be carried out away from the fueling area;

ACCESS

(l) With regard to access, the follow are the minimum requirements:

- The main door used for passenger embarkation must be open, clear of obstruction and manned. A loading bridge, power operated gangway or a set of passenger steps must be positioned at the door.
- Where a boarding bridge is in use, an interior access path is maintained from the aircraft to the terminal.
- Where a passenger boarding bridge is not in use, aircraft passenger steps or an alternate means of emergency evacuation shall be in place.
- The secondary rear exit door may, provided the slide is serviceable, remain closed but must be clear and manned. The authorized refueler must be instructed to ensure that the area of ground beneath the secondary door is kept unobstructed;

(m) All exit doors remained closed or emergency exits must be clear and manned, the ground area beneath the exits must be kept clear of any obstruction for slide deployment and emergency evacuation.

Information to crew

If fueling during boarding, disembarking or with transit passengers on board is planned:
- The commander is informed by ground ops in advance via e-mail (information is provided through charter brief delivered by Carpatair commercial office.

If the commander has any objections:
- Give "Unclear" signal to the fueling staff.

If the commander confirms:
- Give "Clear" signal to the fueling staff.

If fueling with pax on board is decided by Crew, commander will make all local arrangements and will ensure fulfilment of procedure laid down in OMA 8.2.1.2

Qualified ground staff

For fueling with passengers on board, embarking or disembarking, regulations in force require the presence of a qualified person (other than the fueling staff) in the immediate handling area of the aircraft.

Fueling supervision must not be performed by the person fueling the aircraft due to the limited field of view.
This person:
- must have been instructed in the general and locally applicable safety procedures and fire prevention regulations;
- is in close contact with the cockpit crew, e.g. via headset, mobile phone or other means of verbal communication;

If you are this qualified person responsible for fueling supervision:

- Do not go into the building or into the aircraft during fueling while passengers are embarking, on board, still disembarking;
- Supervise the fueling process;
- You may perform coordination and communication tasks at the same time in the immediate handling area of the aircraft.

If one or more of the safety measures and regulations shown above and on the next pages are not observed or cannot be observed, or in case of any other irregularity or emergency:

- Immediately interrupt the fueling process;
- Immediately inform the Flight Deck Crew and the fire brigade.

If fueling of Carpatair aircraft is performed with passengers disembarking, on board, or boarding:

- Observe Safety Regulations, Start and End of Fueling, and all additional safety regulations listed on the next pages;
- Observe all regulations of fueling with Passengers on Board;
- Do not place the DAA baggage trolley or any other equipment in the escape areas;
- Observe all local airport regulations for fueling with passengers disembarking, on board, or boarding, which may exceed the regulations.

Flight Crew

In addition to the regulations of Start and End of fueling:
Minimum one Flight Crew member must stay in the cockpit during the fueling process.

Commander's decision

Number and position of fuel trucks

Carpatair apply fueling procedure only with one fueling truck in any cases. If passengers shall disembark or board during fueling:

- Fuel with one fuel truck and from the right side only.

Exception: At some airports, it is technically not possible to fuel some aircraft types from the right side. Only in this case, it is allowed to fuel from the left side.

Passenger routes

If embarking or disembarking via passenger stairs and fueling are performed at the same time:
Keep the passengers away from fuel venting areas.

Embarking

If fueling takes place while passengers are boarding:

- Inform the gate personnel accordingly in due time;
- The gate personnel have to inform the passengers already at the boarding gate that fueling will take place during boarding;
- Try to avoid congestions in passenger jet ways and in front of the aircraft doors during boarding.

Airport Fire Brigade

For fueling Carpatair aircraft with passengers disembarking, boarding or with transit passengers on board:

- Make sure that the airport fire brigade is informed about the parking position – where locally required;
- The presence of the fire brigade at the aircraft is not required unless local regulations rule otherwise.

In exceptional cases, if the airport fire brigade is not available/serviceable at an airport:

- Make sure that all emergency exits and emergency slides are available and operative;
- Make sure that the escape areas at all exits are free all the time during fueling for immediate operation of the emergency slides;
- Do not position any vehicle (including the fuel truck), load or loading equipment in the escape area of any exit;
- Fuel the aircraft with only one fuel truck and from the right side only.

4.4.5 General rule if fueling Carpatair aircraft with passengers disembarking, on board or embarking:

- Two cabin doors must be open, and;
- Passenger stairs or jet ways must be positioned at these doors;
- Galley door must not be blocked by catering and unobstructed by ground support equipment.

Do not block the cabin aisles or the emergency exits from inside with catering or cleaning material.

If in some cases only one passenger stair or jet way is available:

- Make sure that the escape area at the exit with missing passenger jet way or stair is free all the time during fueling for immediate operation of the emergency slide;
- Fuel the aircraft with only one fuel truck and from the right side only.

If no passenger stairs are available:

- Make sure that all emergency exits and emergency slides are available and operative;
- Make sure that the escape areas at all exits are free all the time during fueling for immediate operation of the emergency slides;
- Do not position any vehicle (including the fuel truck), load or loading equipment in the escape area of any exit;
- Fuel the aircraft with only one fuel truck and from the right side only;
- Do not load the aircraft at the same time;
- Do not perform catering of the aircraft at the same time.

Inverted positioning

These procedures are also trained with the crews. If the GSE cannot be positioned as shown in the following pictures because of local conditions (narrow parking position etc.):
Inform the commander in any case about an inverted positioning.
The commander must agree to this.

Catering and cleaning

When fueling with passengers on board, boarding or disembarking:
Do not perform catering or cleaning at the same time
Do not position catering/cleaning vehicles at any doors or in escape areas
Do not block the cabin aisles or the emergency exits from inside with catering or cleaning material

Ground handling activities have to be conducted in such a manner that they allow an evacuation in case of an emergency (emergency exits must not be obstructed). The procedures within the crew aboard are well defined and their instructions must be followed carefully. Airport authority requirements must be clarified prior commencing the fueling and shall be requested by the handling agent and will be communicated to Carpatair Ground Operations Department.
Make sure that the escape areas are kept free from any obstacle. No vehicles or equipment, even DAA trolleys, in escape areas.

4.4.6 Aircraft Maintenance Operations during Refueling

- Electrical and radio equipment may be checked but maintenance must be limited to the exchange of complete Units;
- Radar must not be operated during fueling operations or when within 30 meters (100 ft) of such operations, fuel tanks, fuel trucks or fuel storage areas;
- When wide cut fuel is involved, radio equipment including radio-paging devices, pocket calculators and similar electrical equipment, unless otherwise stated to be intrinsically safe, must not be taken into the fueling zone or within 20 ft of a fuel spillage;
- Strobe lights are not to be operated or tested during refueling or defueling;
- An APU may be started during fueling operations. However, an APU must not be restarted following automatic shutdown or started following defect rectification until the fueling operation has ceased.

4.5 Adverse Weather Conditions

4.5.1 General

Adverse or poor weather conditions may have a negative impact on aircraft handling activities and ground safety.
Weather conditions such as rain, fog, snow or lightning reduce the visibility and may affect the operations on the platform. All activities shall develop with enhanced care under such conditions. The weather conditions shall be monitored and the staff shall be notified in due time about the weather forecast that could affect the operations on the platform.

4.5.2 Winter or Slippery Apron Conditions

Winter weather brings extra hazards which require awareness and more care on the part of personnel working on the aprons 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 approaching the aircraft. Remember that vehicles require greater distance to stop safely on slippery surfaces
c) Operators of potable water tankers and toilet servicing vehicles 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 or snow 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.

4.5.3 High Wind Conditions and/or Heavy Rain Work Instructions

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

- Ensure the safety of the aircraft by installing additional chocks;
- All vehicles/devices not directly connected to the servicing of the aircraft shall be removed from the aircraft and secured;
- The cargo doors shall be closed and secured;
- Take extreme care when opening or closing aircraft hold doors. Make sure parking brakes are set on all parked GSE;
- Set parking brakes and secure by additional means if necessary, all non-motorized ramp equipment. (i.e. baggage carts);
- Other items such as containers and garbage baskets will be secured accordingly.

Note:

- If there are difficulties at closing the compartment doors in wind speed conditions of over 40 knots, the aircraft will be re-positioned so that these doors should be sheltered from the wind (the wind direction should be perpendicular to the opposite side of the fuselage);
- The aircraft ground handling operations will be suspended in wind speed conditions of over 60 knots.

For aircraft handling in winds between 40Kts and 65Kts, the following safety regulations shall be adhered to:

- Load first the forward part of the aircraft (cabin sector OA then OB) so, in order to keep the nose wheels firmly on the ground, passengers shall embark/disembark through the FWD cabin door only;
- During loading the forward cargo compartments shall be loaded first;
- During unloading the aft cargo compartments shall be unloaded first;
- After unloading the a/c, all servicing equipment and passenger steps not immediately needed, shall be removed from the a/c, positioned to a distance of at least 5 m and secured;
- Consideration should be given to parking the aircraft nose into wind, loading more fuel to act as ballast and using extra wheel chocks;
- In case of heavy rain falling, any attempt should be made in order to reduce the possible water entering the aircraft. Refer also to *Operations Manual Part B* for further information.

4.5.4 Low Visibility (Fog, Rain, Snowing)

All activities around the aircraft shall be performed with enhanced care.
In order to secure maximum visibility at low luminosity, the staff will bear equipment that contains reflecting material.

Aircraft:

- the aircraft position lights are on during the ground operations;
- If the aircraft is pulled at reduced visibility, it will be lightened accordingly.

Equipment, devices:

- The vehicles/devices shall have the rotating overhead lamps on;
- All vehicles that are not necessary shall be removed from the maneuver surface and the pedestrian traffic will be reduced;
- Only the vehicles / devices directly concerning the handling of the aircraft are authorized to carry on their activity;
- The vehicles/devices will be in permanent radio connection with the dispatcher's office;
- Speed limitations must be observed;
- The moving speed of the devices will not exceed the walking speed of a pedestrian;
- All devices destined for services or for loading/unloading that approach the aircraft or move away from it will do this only guided.

4.5.5 Stormy Weather

In case of electrical storm in the immediate vicinity of the airport, the following safety measures will be taken:

- The fuel supply/ballast discharge will be stopped;
- Passengers boarding /disembarking in open places will be stopped;
- All the staff will shelter inside the buildings and/or the vehicles;
- All operations of devices with suspended platforms will be stopped;
- For the communication with the crew no headphones will be used but the hand signs and signals, with the approval of the flight crew.

Thunderstorm/Lightning

Generally if an individual can see lightning in his vicinity, he is already at a risk. Many lightning causalities occur in the beginning, as the storm approaches, because people ignore these precursors. The lightning threat generally diminishes with time after the last sound of thunder, but may persist for more than 30 minutes.

It is important to remember that lightning is always generated and connected to a thundercloud, but it may strike many miles from the edge of the thunderstorm cell.

No place is absolutely safe from lightning threat, however some places are safer than others, e.g.:

- inside terminal buildings;
- fully enclosed metallic vehicles or safety shelters.

For **Thunderstorm/Lightning** activity the notification process may be broken down into 3 phases:

Alert - Lightning activity is detected at a distance in excess of 8 km from your operation.

Stop/Suspend activities - Lightning activity is detected within 5 km of your operation.

All Clear - Lightning activity has moved beyond 5 km and is heading away from your operation.

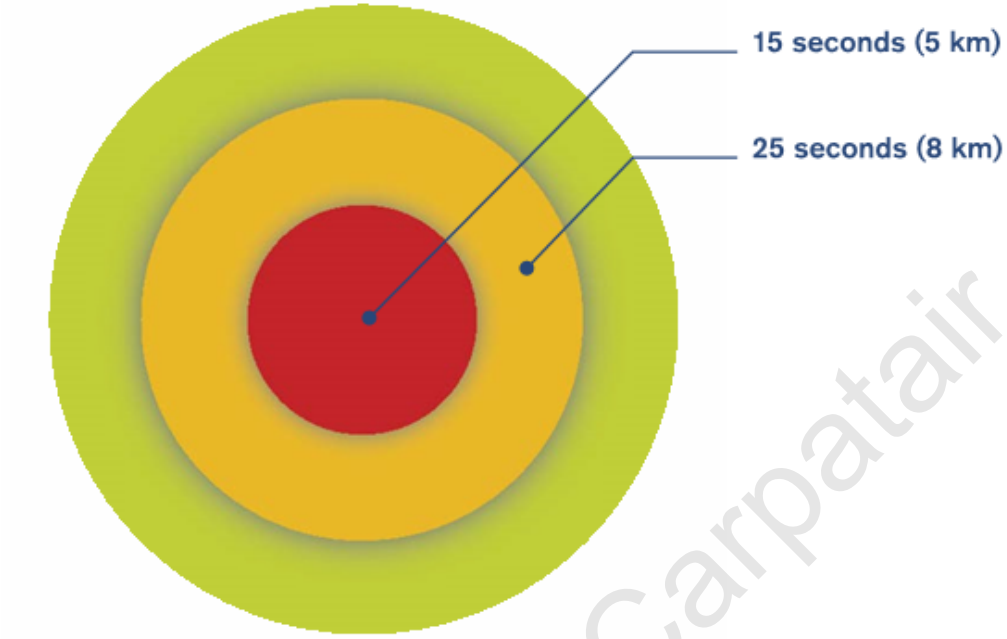
The distances referred to above may vary dependent upon local climatic parameters.

The notifications levels and associated actions, as published in IGOM shall apply:

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 Lightning 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.

All airside personnel must be trained on the counting method should be used by all airside operating staff for self-protection.

Counting Method Chart:



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

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

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

The following actions to be taken by Handling Coordinator / Supervisor:

On receipt of an ALERT:

a) Make preparations for the STOP phase.
1. Suspend non-essential activities in open areas and ensure any staff 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.

On receipt of STOP:

1. Stop fueling. Fueling hoses cannot be left attached to the aircraft during any thunderstorm/lighting 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. Ensure all passenger service personnel have up to date information on weather event.
6. If passengers have not started boarding hold the passengers in gate lounges.
7. If boarding has started, stop process and leave passengers already boarded on the aircraft.

8. If an aircraft has just arrived it should be held off the gate until the lightning alert is terminated.
9. Clear all persons off the stairs.
10. 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 fatality.

Lightning Alert Callout

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

a) Use the counting method to detect/predict lightning activity. Determine the corresponding level based on the counting method diagram, see chapter 4.5.5 – Stormy Weather

b) 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 selfprotection.

(c) In case of a Red Alert, proceed to a designated shelter.

4.5.6 High Wind Conditions

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

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

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 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.

4.6 Aircraft Coning

4.6.1 Safety Cone Placement and Removal

Safety cones are a caution sign for operators/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 engine can be identified as follows:

1. reduced engine noise,
2. visible fan or propeller speed
3. reduction, lack of exhaust heat/thrust plume.

(c) Place safety cones on the ground in accordance with the following diagrams–within a maximum of 1 meter radius outward from the point of the aircraft being protected. Cones shall not be placed in high wind conditions.
(d) Additional safety cones may be needed as per operational requirements or local regulations.
(e) GSE shall not approach the aircraft until all safety cones have been placed (not applicable for the passenger boarding bridge 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.

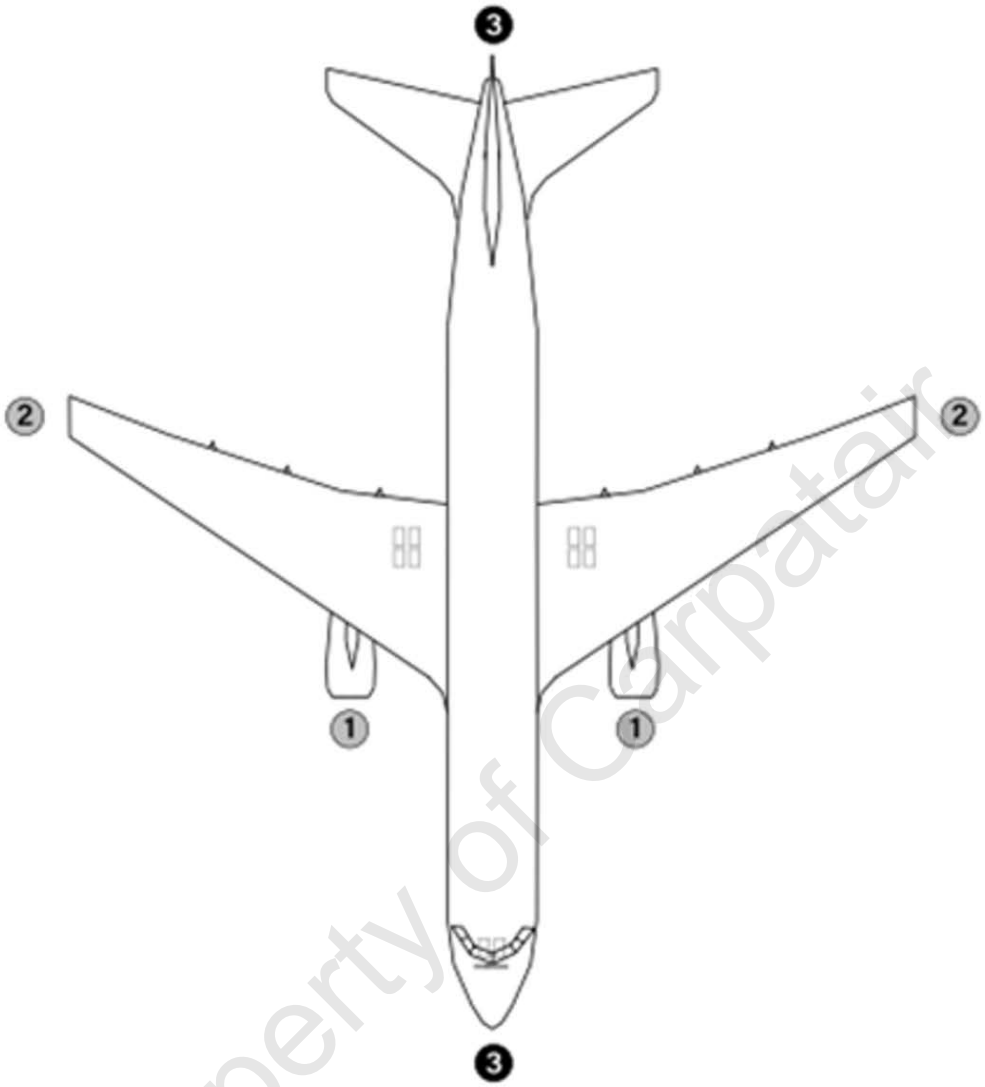
Note:

1. In some situations it may be necessary to re-position cones to allow GSE to be positioned.
2. Cones must not be placed under engines.
3. Reposition the cones when GSE is removed.

(g) Ensure all vehicles have been removed from the ERA
(h) Remove the safety cones from around the aircraft.
(i) When not in use, place the safety cones in the designated storage area.

Cone Placement for Wing-Mounted Twin Engine Jet Aircraft (A320Family)

Cone Placement for Wing-Mounted Twin Engine Jet Aircraft



CONE NUMBER	DESCRIPTION
1	Cones max. 1 m (3 ft) in front of engine
2	Cones max. 1 m (3 ft) from wingtip
3	Additional cones to be placed at the applicable end(s) of the aircraft where immediately adjacent to a service road.

4.7 Aircraft Chocking

4.7.1 Wheel Chock Placement

(a) Make sure the required number of serviceable chocks are available, considering the aircraft type and weather conditions.
(b) Chocks shall be kept clear of the guide-in line and kept in a safe area away from arriving aircraft and engine danger areas.
(c) Wait for aircraft to come to complete stop before approaching the aircraft to position chocks.
(d) One designated member of the ground staff immediately places chocks forward and aft of the aircraft nose gear (according to options listed in **4.2.2 - Chock Placement Diagram**). 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 gears in accordance with the applicable normal chock placement diagram. See **4.2.2 - Chock Placement Diagram**
(h) Notify the flight deck crew that the chocks are inserted.

The wheel chocks should be painted in a very visible color or must be seen due to very visible markings; they must have triangular profile with an angle of 45 degrees. They must cover the whole width of the aircraft wheels in length and must be proportional to the size of the wheels in height.
The chocks must be deposited in an area specific for this purpose, in order not to represent a danger (FOD) before the aircraft parking.
A sufficient safety distance must be kept towards the aircraft approaching the parking position, because of its running engines.
Normally two holds are positioned at the front landing gear and in adverse weather conditions or at a platform inclination angle higher than 1.5 degrees, additional holds will be positioned at the main landing gear.
The person responsible should establish contact with the flight crew via interphone when arriving at the position to verify that the aircraft is properly chocked.
Communication shall be maintained between ground staff and flight crew until this has been released.

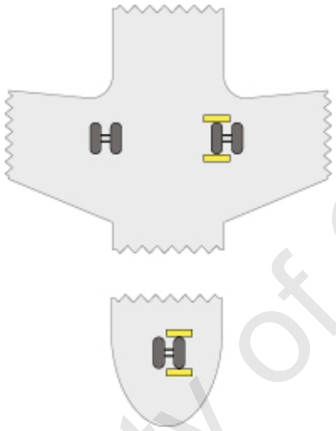
Cockpit	Ground
-	'Cockpit from ground'
'Go ahead'	'Chocks in position'
'Confirm chocks are in position'	

The ramp agent is to make sure that nobody approaches the aircraft (minimum distance is at least 7.5m away from it) as long as engines are running and the anti-collision beacon is on, even though the aircraft may be in parking position.

Installation of Wheel Chooks Airbus 320Family
Normal Operation / No Layover / Turnaround flights – 2 Options may be acceptable

Aircraft with single axle main gear bogie Option 1

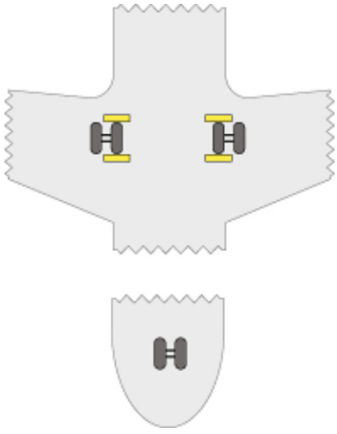
Note: *No nose gear chocks on aircraft with spray deflectors.*



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.*

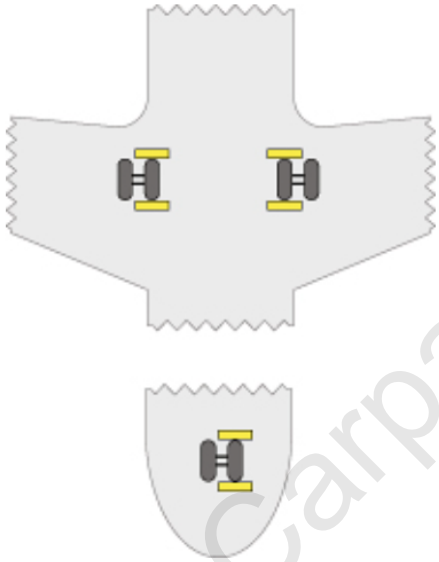


Note: *Inside or outside main gear chocks are acceptable*

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*

4.7.2 Communication with the Flight Crew

General rules

Communication ground – cockpit for taking over an aircraft and starting the engines will be made with the help of headphones (with an interphone system).
If these means are not available, communication will be done by signs and signals of the hands.
Communication with the flight crew can be done only by trained staff, with the help of the interphone / headphones.
Communication by interphone may be done only after the complete stop of the aircraft at the parking position.
The aircraft approaching must be done from a direction that provides visual contact with the flight crew for a time as long as possible.
Only the staff responsible with the communication by interphone will approach the aircraft.
In case of restoring the interphone connection after it has been interrupted, only the staff participating to the communication by interphone will approach the aircraft, after they have made sure that they have been seen by the flight crew and has understood their intentions (at the aircraft approaching a safety distance towards the operating engines must be kept).

The length of the earphone wire has to be of at least 5 m at a headphone communication system and a safety distance towards the operating engines must be kept.
Communication by headphones during a storm, in case of lightning or electrical storms is forbidden due to the risk of electrical discharges between the aircraft and the interphone system. In these cases, the standard signs and signals will be used. The following staff is responsible for the communication with the flight crew, by headphones or by standard signs and signals:

- Authorized staff of the handling company.

Communication will be made in English; knowing the standard phraseology and the signs and signals is compulsory.

Establishing of the interphone connection

Connect the headphones to the aircraft and call the flight crew.
If the communication is bad or no headphones are available, the contact will be made visually with the flight crew.

Resuming of the interphone connection

Will be made in case the ground staff or the flight crew wish the re-establishing of the interphone connection, after its interruption and if communication cannot be established by radio (ATC/TWR); the resuming of the interphone connection after the starting by the flight crew of the engine starting operation.

The intermittent flashing of the signalizing projectors or the using of the ground horn signalizes that the flight crew wishes the resuming of the interphone connection.
At these signals, the ground staff responsible with the engine starting or with the aircraft pulling/pushing will establish the visual contact with the flight crew.
By signals, the ground staff shall signalize to the flight crew that they have understood the signals.
After the elucidation of the situation, the sign “OK” will be shown again to the flight crew.
Re-establishing of the interphone connection after the starting by the ground staff operations for the engine starting:

- The flight crew will be notified by the ATC by radio that the ground staff wishes to establish the interphone connection.
  At this request, the flight crew will couple the landing projectors flashing or will use the ground horn, signalizing that the aircraft may be approached securely.

Re-establishment of Ground-to-Cockpit communication (initiated by crew)

Continuous flashing of an appropriate external white light until an acknowledgement from ground is given.
The aircraft shall be approached in the pilot's field of view.

Once the flashing light has been given, the aircraft shall remain stationary until the "ALL CLEAR" signal is given and acknowledged.

4.8 Hand Signals

4.8.1 Introduction

In order to standardize "ground staff–ground staff" communication or "ground staff–flight crew" 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 staff, to assist the flight crew during maneuvering of the aircraft and engine starting;
(c) **Technical/Servicing Hand Signals**–to be used by ground staff to communicate technical/servicing information to flight crew, and by flight crew to communicate technical/servicing information to ground staff;
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/towbar connection/disconnection process, as well as at the start and end of the aircraft ground movement.

4.8.2 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 maneuver. 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.

4.8.3 Specific Requirements for Using Marshalling Hand Signals

(a) Do not perform aircraft marshaling unless it is permitted by the local airport authority and you have been trained and authorized.
(b) Give marshaling hand signals from a position forward of the aircraft while facing and within view of the pilot.
(c) Wear a high-visibility vest.
(d) Use illuminated flashlights/wands to improve the visibility of the hand signals in the following situations:
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 man hand signals for equipment until all aircraft marshaling has been completed.

Note 1: The hand signals printed on the pages of IGOM 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

For the standard and correct Hand Signals to be used, please always refer to current edition if IGOM.

4.9 Aircraft Arrival

4.9.1 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 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 IGOM 4.1.3 for requirements/clearance for personnel to approach the aircraft.

Access to the aircraft

The access to the aircraft ready for flight is granted only to the staff on duty implied in the aircraft handling activities and the representing servants – border police, customs, security, medical staff.
The ramp duty officer may grant exceptions in mutual agreement with the flight crew.

4.9.2 Standard Arrival Procedure

4.9.2.1 Aircraft Arrival at a Gate or at remote parking position

(a) For a standard arrival procedure at a stand without an automated guide-in system or at an open ramp:

- as 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 STAND" signal. Wing walkers, if required, will be positioned approximately 1 meter outside the path of the wingtips. Wingwalkers shall maintain visual contact with the Marshaller until the aircraft has come to a complete stop;
- vehicles and staff shall remain clear of parking stand until engines are shut down and aticollision lights are turned off;
- while the aircraft taxies along the guide-in line, the marshaller gives the "Continue to Taxi ahead" signal with marshalling wands;
- the nose wheel should follow the lead-in line all the way to the appropriate stop point. Use the "Turn Left" or "Turn Right" signals to correct the track of the aircraft as required.
- if at any time during aircraft movement the marshaller is unsure or identifies an imminent danger, STOP the aircraft;
- if at any time during aircraft movement, the wingwalkers are unsure or identify an imminent danger, signal the marshaller with the "STOP" signal;
- as the aircraft approaches the stop position, use the "Slow Down" signal if required. As the nose wheel reaches the stop point slowly cross the wands in the "Stop" signal;
- once the aircraft has come to a complete stop and all conditions for chocking are met, the aircraft can be chocked;
- ground power is connected (if required)/

(b) For a standard arrival procedure at a stand with an automated guide-in system:

- the agent responsible for the arrival, "marshaller" shall verify that the correct aircraft has been selected for the arrival and the equipment is operational;
- the agent responsible for manning 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;
- in the event that the emergency stop is activated, and only after a check by the ground staff 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;
- wing walkers, if required, will be positioned approximately 1 meter (3 feet) outside the path of the wingtips. Wing walkers shall maintain visual contact with the marshaller until the aircraft has come to a complete stop.

4.9.2.2 Actions after Arrival

(a) Upon aircraft stopping:

- position wheel chocks at nose landing gear wheels
- position and connect the Ground Power Unit, if required, before engine shut down.

(b) After engines have been switched off, are spooling down and anti-collision lights have been switched off:

- position wheel chocks at the main landing gear wheels and verbal/visual confirm to flight crew;
- vehicles and personnel stay clear of parking stand until engines are shut down and anti-collision lights are turned off
- check there is no damage on the cabin door area prior to positioning the passenger boarding device(s). If any damages found report immediately to the crew and Carpatair;
- position the safety cones;
- conduct an arrival walkaround to inspect for damage on the following parts of the aircraft:
  - all cargo doors
  - all access panels and servicing access points
  - aircraft fuselage
  - aircraft engine cowlings
  - aircraft passenger doors.
- give clearance for GSE to approach aircraft;
- remove nose gear chocks (if required).

Note: If any damage is found, report it immediately to supervisor and do not approach the aircraft with any GSE in the area where the damage has been found.

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.

4.9.3 Ground Support Equipment on Arriving Aircraft

Before approaching the aircraft with GSE:

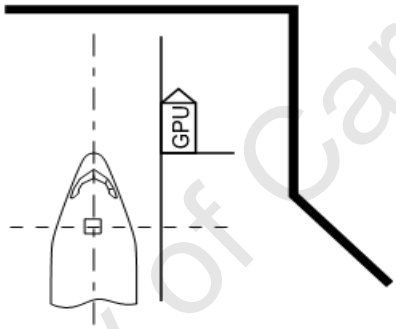
- Wait until the engines have come to a complete stop
- Wait until the parking brake is set or chocks are positioned.

4.9.3.1 Ground Power Unit (GPU) and Fixed Power Unit

a) It is permitted to pre-position a GPU inside the ERA provided there is an assigned GPU parking position.
b) Position the GPU on the appropriate side of the aircraft as shown in picture below.
c) Set parking brake/chock 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) to ensure they 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 procedures, including the 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.
n) Whenever available, cable holding strap must be used. It should be connected only to fitting designed for this purpose in the aircraft structure. Make sure that the cable strap supports all the weight of the cable when the connector is connected. This prevents damage to the external power receptacle.

Example of GPU Positioning at aircraft:



4.9.3.4 Positioning of Passenger Stairs

The stairs will be positioned so as to frame the access door and grant its closing/opening without obstruction. The stairs fixing device will be positioned upwards. During the embarking/debarking from the aircraft, the platform must have a distance of 20 cm from the door threshold in opened position, and the rubber of the protection rubber must slightly touch the fuselage.

Climbing on the stairs during the positioning process is forbidden. The stair fixing stabilizers will be removed immediately after positioning (the self-propelled doors will also have the parking breaks coupled, as additional safety measure).

Remark:
Special attention will be paid to the handling of access doors in order to prevent accidental collision between these and the stair banisters (the stair banisters will be completely removed before the stair positioning).

4.9.3.5 Positioning of Conveyor Belt

The device will approach the aircraft only guided, with a rolling speed of a pedestrian, with the belt arm lowered and the belt stopped. Upon positioning the belt at the cargo compartment door, this will stop at

a distance of 3 m to adjust height and direction of the belts height. The device will be positioned with the belt arm raised up to the cargo door, with the rubbers don't touching the fuselage.
During loading / unloading the belt height adjustment may be required. The parking brake will be activated and the wheels will hold.

4.9.3.6 Positioning of Drinking Water Supplier

The device will approach the aircraft only guided, with the traveling speed of a pedestrian. The supplier will be positioned in front of the aircraft's control panel, perpendicular to the aircraft fuselage with the parking brakes on and the wheels on hold. The minimal distance between the device and the aircraft fuselage will be of 1 m (in case of the aircraft with narrow fuselage).

4.9.3.7. Positioning of Deject Emptier

The device will approach the aircraft only guided, with the traveling speed of a pedestrian.

The deject emptier will be positioned in front of the toilet panel of the aircraft, perpendicular to the aircraft fuselage, with parking brakes on and the wheels on hold. The minimal distance between the device and the aircraft fuselage will be of 1 m (in case of the aircraft with narrow fuselage).
The person who handles the device must have total visibility.

4.9.3.8. Cleaning of the Aircraft Interior

The interior of all Carpatair aircraft should be kept clean to the highest possible standards. After landing, the responsibility for interior cleaning reverts from the cabin crew to the handling agent and the cleaning personnel.

a. Aircraft Cleaning: The removal of visible dirt or particles through mechanical action, normally undertaken on a routine and frequent basis. Cleaning and disinfection can be combined into one process if disinfectants are used during the cleaning.
b. Disinfection/Sanitization/Sanitation: The procedure whereby measures are taken to control or kill infectious agents on a human or animal body, on a surface, on goods or in/on baggage, cargo, containers, and/or conveyances by direct exposure to chemical or physical agents.
c. Event: An occurrence of suspected or confirmed communicable disease on board an aircraft; or aircraft contaminated with body fluids, or other non-standard (uncommon) situation necessitating additional cleaning and disinfection.

The following is a guide of the list of different cleaning operations to be performed.

CABIN

Dispose of loose litter

Fold and store away blankets and pillows

Arrange head-rest covers

Empty ash-tray

Sweep or vacuum-clean floor

Wipe collapsible tables

Remove litter from seat back-pockets and racks

GALLEYS

Change dirty head-rest covers, if necessary

Put safety instructions back in the seat back-pockets, refill with

Advertising material and air sickness bags

Dispose of loose litter

Clean up after catering supplies have been loaded

Empty ashtrays and refuse bins

Empty waste water

Clean floor

TOILETS

Clean wash basins

Clean toilet seats and WC bowls

Empty ash-trays and litter bins

Clean mirrors

Mop floor

Refill distributors for towels, soap, paper, etc

Empty and clean used towel containers

Disinfect toilet bowls and other containers

(*) To be performed as lowest priority operations.

4.9.4 Disembarking the Passengers

The ramp agent in charge of ground handling of the flight concern is responsible for the safe disembarkation of the passengers.

- Disembarkation must not start before the engine has come to a complete stop;
- Make sure that the passenger route from the aircraft to the bus / terminal is secured;
- Confirm to the Cabin Crew verbally or via hand signal (“thumb up”) that disembarkation may start and the passenger way is secured and safe;
- Disembarkation will start if the balance permits it;
- Ask information about the number of DAA;
- Take over any documents and/ or co-mail from the cabin crew (load sheet, passenger list, Notice of Dispatch for Co-mail, cargo manifest etc.)

4.9.5 Delivery at Aircraft

'Delivery at aircraft' baggage is carry-on baggage, loaded in hold at the time of boarding and returned to the passenger when disembarking, i.e. at the aircraft stairs or at the loading bridge.

- It is not considered as checked baggage, although carried in hold;
- If used for carry-on baggage, the weight is part of the carry-on baggage allowance;
- This category also includes “cabin baggage taken away at the gate”, which is taken away from the passenger before boarding as being excessive or oversize baggage, or cabin baggage taken away and stored in the cargo hold because of the limited stowage space on board;
- DAA shall be counted and mentioned on loadsheet

Upon arrival:

- Cabin crew requests the ground staff to unload the items/baggage;
- Passenger receives the items/baggage when disembarking.

Disembarking process may begin before the DAA starts to be unloaded from the aircraft, to prevent the passengers from waiting on the aircraft.
This operation has to start as soon as possible and is processed while passengers are disembarking. It is forbidden for passengers to go behind the aircraft or to pass below the aircraft wings to look for their baggage.

4.9.6 Unloading

- The unloading activities must be planned before the aircraft arrival;
- All necessary actions must be taken in accordance with the received messages;
- The necessary staff and equipment from the handling provider will be available at the waiting position;
- Immediately after the aircraft engines have stopped, the equipment will be placed observing the applicable security requirements. Unloading must begin according to the loading instructions.

The following aspects will be taken into consideration:

- All unloaded items must be properly protected against rain and snow;
- Give DAA baggage back to the passengers at the passenger stairs ,bus stairs, terminal baggage belt;

- Transfer luggage must be unloaded first and transported to the transfer area without delay;
- Send priority baggage immediately to the arrival hall;
- Send the rest of baggage to the arrival hall immediately;
- Unload cargo and send it to cargo department;
- Special cargo (heavy items, dangerous goods, live animals, values, human remains, etc.), communicated by telex by the previous station must be treated with special care;
- Check the net for small items for pieces to be unloaded;
- In case of cargo damage, inform the Carpatair Cargo department immediately at flight.dispatch@carpatair.com and at cargo@carpatair.com ;
- Flight route equipment, i.e. flight panel and standard equipment must not be unloaded from the aircraft;
- When heavy items or heavy tools are unloaded, they must not be placed directly on cargo hold floor. If the use of such tools is necessary, the floor must be protected by plates, in order not to suffer deteriorations;

- After unloading, check the compartments carefully for:
    - Damages;
    - Spilled liquids or other substances and necessary cleaning of the compartment;
    - Loading accessories and tie-down equipment left behind etc. Take it into custody or send it back to the original station.
- At the last flight destination, all compartments have to be checked in order to unload everything left on the aircraft.

Baggage

Baggage must be unloaded first and immediately transferred to the baggage delivery.

Delivery Priority of Baggage

Baggage must arrive on the conveyor belt in the baggage claim area in the following sequence:

1. Rush baggage;
2. VIP baggage;
3. Transfer baggage;
4. Local baggage.

This follow-up may be changed on some certain cases.
If crew baggage needs to be temporarily unloaded, make sure to stow it again at the correct location after completion of loading.
Special attention must be given to live animals shipped as checked baggage.

Ballast

Ballast must always be unloaded, if not required.

Cargo and Mail

Must be unloaded as required if it consists of special load or dangerous goods.

Damaged goods

Baggage, cargo or mail, which is damaged or missing identification, must be reported to the lost&found office of the handling agent and to ground.admin@carpatair.com for hold baggage and to cargo@carpatair.com for cargo or mail.

Leaking goods in compartment

If the floor of compartment is found soiled by leaking goods, take the following action:

- Inform the station responsible and Carpatair flight crew.
- Transmit the following information given below for baggage, cargo and mail to Maintenance Department.
- If the substance cannot be clearly identified, leave the item where found, for further investigation.

a) Baggage

- Flight number and date;
- Baggage tag number;
- Name of pax and address (according to the name label or inquiry at the baggage claim area);
- Type of baggage (material and description);
- Name and / or description of leaking substances.

b) Cargo

- Flight number and date;
- AWB number;
- Technical name and / or description of leaking substance or contents (as described on AWB);
- Type of packaging used (e.g. cardboard box, wooden chest, textile bag, steel drum, etc.).

c) Mail

- Flight number and date;
- Dispatcher number;
- Original / final destination;
- Name and / or description of leaking substances.

NOTE: In case of heavy soilure or damage, take photographs, if permitted.

Visual checks

a) Transit stations

Visually check bulk compartments for a rough estimate and comparison of the volume of the through load with the data on the loading instruction. If there is any difference, inform the origin station by message, where the item was loaded.

b) Terminating stations

Check all compartments for over-carried load.

Irregularities

- If part of the load is found missing during the A/C ground stationing, the Carpatair representative will decide if the flight delay is justified for a search action. If that search remains without success, a pursue action will be initiated at the stops of the flight itinerary;
- The additional luggage found or the deteriorated luggage will be treated according to the Lost&Found regulations;

- Cargo and mail irregularities will be solved by the Cargo department. In case of damages to aircraft or aircraft contamination, Carpatair flight crew will be notified immediately. Aircraft damages classified as incidents must be reported;
- If leaks are observed in the compartments, the cargo department must be notified immediately.

All technical flaws of loading system components, as well as other damages at the A/C will also be reported.

4.10 Aircraft Doors

4.10.1 General Safety Requirements

Caution:
Do not operate or leave doors open in winds exceeding those indicated in the manufacturer's limitations.

Door Operation
Passenger and service doors may be opened and closed by Carpatair technical staff and crewmembers once they have passed the appropriate

4.10.2 Cabin Access Doors

4.10.2.1 General

Danger:
Cabin access doors shall only be in open position if there is an appropriate boarding device positioned at the door. Cabin access doors may not be opened without appropriate equipment positioned at the door.
There is a risk of falling while operating cabin doors.
Slide deployments can be fatal. If an armed door begins to open, do not attempt to hold the door, as you risk being seriously injured or killed.

If a cabin access door is found open without a boarding device positioned at the door you must immediately notify a supervisor and Carpatair at ground.admin@carpatair.com and at flight.dispatch@carpatair.com

a) Do not attempt to close the cabin access door unless trained and qualified.
b) Guard the cabin access door until a qualified person is present to close it.

All passenger doors may only be opened/ closed by Carpatair technical staff from outside or crewmembers from inside the aircraft.

The passenger door must never be opened from the outside when a red safety strip inside the cabin or any illuminated light can be seen through the door window. Cabin crew will start the opening procedures as described in the related booklets manuals.

After the door has been opened, the staff concerned must ensure that the positioning of the passenger steps or jet way has been completed and approval to disembark has been received from the ground personnel before crewmembers or passengers enter the passenger steps or jet way.

Before removing ground support equipment (jet way/steps/catering truck etc.) from any aircraft cabin access door, the driver must advise the cabin crew.

Passenger steps or jet way and catering trucks must not be removed from the aircraft unless a safety device has been put across the door opening or until the respective cabin door is either already closed or the cabin crewmember is in the process of closing it.

When doors are opened without any ground equipment outside (due to safety or climatic reasons), securing with the black-yellow safety ribbons and surveillance by flight attendants is strictly to be observed.

When passengers are on board, the positioning of safety straps or bars at the open door are not sufficient.

Cabin crew will start the closing procedures as described in the relative booklets/manuals upon receiving the specific order by the commander.

4.10.2.2 Opening Cabin Access Doors from Inside by Carpatair Crew

Ground staff should:

(a) Knock twice on the door from outside, to indicate that a GSE or PBB is properly positioned outside the door to be opened and that the door swing area is free of obstructions. 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.
NOTE: If no reactions from cabin crew, please repeat the procedure!
(c) Assist cabin crew when required, with moving the door to the fully opened position and engaging the gust lock.
(d) Trained crew is responsible for cabin door opening.

4.10.2.3 Opening Cabin Access Doors from Outside with Crew 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.

Caution:
If there is no confirmation that the door is disarmed or safe to open, do not open the door.

(c) Knock twice on the door to indicate that the door is ready to be opened. Receive a "thumbs up" acknowledgement if required 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.
(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.
(j) Authorised and Trained Ground staff is responsible for cabin door opening.

4.10.2.4 Opening Cabin Access Doors from Outside with no Crew 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.
(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.

4.10.2.5 Embarkation or Disembarkation through Cabin Access Doors

Before allowing passengers or crew embarkation or disembarkation via a cabin access door, ensure that the boarding device is properly positioned at the door, and if stairs are to be used, that both guard rails (if applicable) are extended.

4.10.2.6 Closing 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.

4.10.2.7 Reopening Cabin Access Doors

If a cabin access door is not closed properly then it must be reopened and reclosed after initial closing. Other situations when cabin access doors may need to be re-opened include the following:

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 in the Opening Cabin Access Doors sections.

Opening of the Passenger Door

WARNING: Stop the opening procedure if the red warning light flashes. Residual pressure could cause the door to open with a sudden force and injure persons and/or damage the aircraft.

WARNING: Do not open or go near pressure-sealed doors when the aircraft is pressurized. A pressure-sealed door that opens when the aircraft is pressurized.
- will cause explosive decompression.
- can kill or cause injury to persons and/or cause damage to the aircraft

WARNING: Do not open the passenger door if the wind speed is more than 65 knots.

CAUTION: Do not use the inner / outer control handle to push/pull the door. Use the handle only to lock/unlock the door. If you use the handle to push/pull the door, you can cause damage:
- to the interlock mechanism hook or hook.
- to the handle, and to the handle cut-out on the door skin

Opening of the Passenger Door from the Outside

NOTE: The CABIN PRESSURE warning-light panel is installed on the door window.

(a) Before you open the door, make sure that:
- The emergency control handle (10) is in the DISARMED position.
- The SAFETY PIN - SLIDE ARMING is installed on the emergency control handle

(b) Fully lift the inner control handle to the door up position (the door moves up)

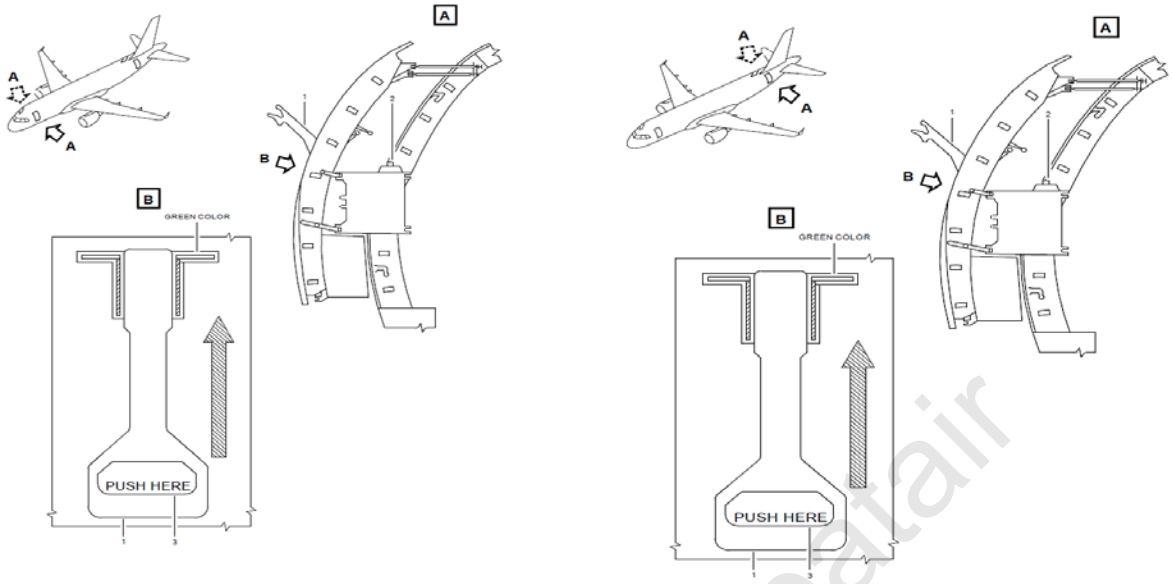
(c) Make sure that the door is in the fully up position and the indicator plate shows UNLOKED

(d) Use the assist handle on the door to push the door out and forward

(e) Make sure that the pushbutton switch on the door stay mechanism looks the door in the open position

(f) If there is no access platform in front of the open door and/or you do maintenance or other activity near the door, put the safety barrier in position in the door frame.

Opening of the Passenger Door AFT&FWD from Outside

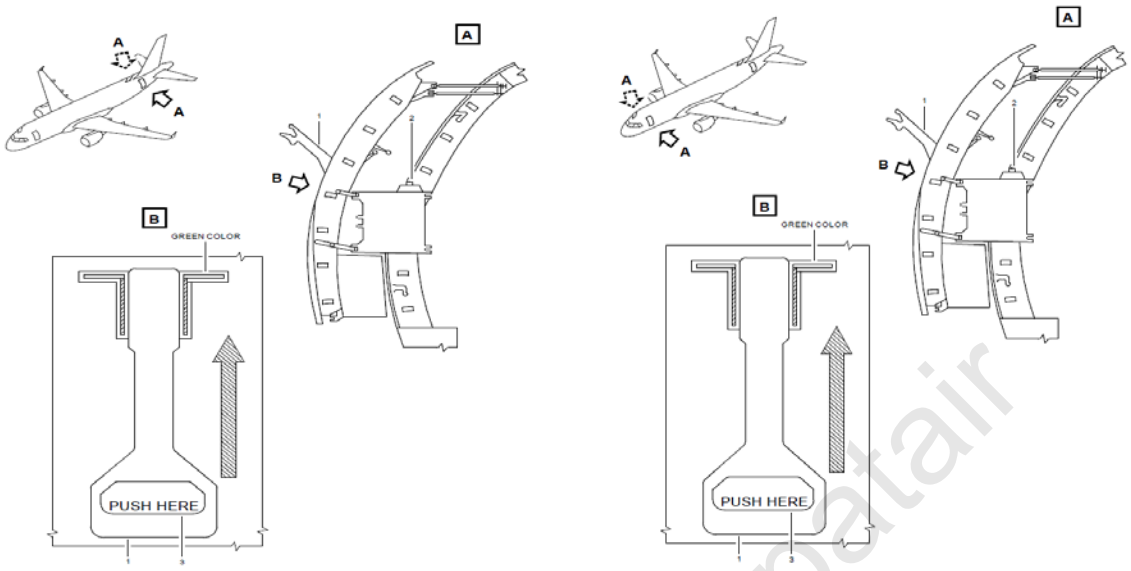


Closing of the Passenger Door from the Outside

CAUTION: Do not use the inner / outer control handle to push/pull the door. Use the handle only to lock/unlock the door. If you use the handle to push/pull the door, you can cause damage:
- to the interlock mechanism hook or hook.
- to the handle, and to the handle cut-out on the door skin.

(1) If there is a safety barrier in position in the door frame, remove it.
(2) Push the pushbutton switch (2) of the door stay mechanism with one hand to release the door from the fuselage.
(b) Push the door rearward into the door frame.
Fully lower the outer control handle (1) (the door moves down). Make sure that:
- the door is fully closed and flush with the fuselage,
- the outer control handle (1) is in the correct position in its housing and flush with the door.
- the flap (3) is flush with the door.

Closing of the Passenger Door AFT&FWD from Outside



Closing of the Passenger Door from the Inner Side

(a)Hold the assist handle (16) on the door frame to keep it in a correct position in front of the open door.
(b)Push the pushbutton switch (11) of the door stay mechanism and at the same time pull the support arm (15) to release the door from the fuselage.
(c)Use the assist handle (14) on the door to pull the door into the door frame.
(d)Fully lower the inner control handle (12) (the door moves down).
(e)Make sure that the door is fully closed and the indicator plate (13) shows LOCKED.

4.10.3 Cargo Hold Doors

Ground handling staff only, when they have been duly trained, shall perform opening and closing of the lower compartment doors.
Ground staff operating cargo doors will check twice to ensure all door indicators show "closed".
It will be the duty of the start up crew to check that the compartment doors have been closed and locked properly on completion of loading. The ramp agent will check again after loading is complete.
All procedures for safe opening and secure closing of the hold doors are written on the aircraft frame in the vicinity of the hold.

4.10.3.1 Opening Cargo Hold Doors

(a) Do not operate cargo doors unless trained and authorized;
(b) Do not open the cargo doors until the aircraft engines have been shut down and the anti-collision lights have been switched off;
(c) Before positioning loading equipment or any other ground support equipment at cargo doors and opening cargo doors, perform a visual check for any signs of damage to the doors or surrounding areas. If any irregularities are discovered during this visual check, report them to Carpatair technician or to the commander;

(d) 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.
(e) Open the cargo hold access door in accordance with the specific instructions for the aircraft type
(f) Cargo doors must be opened using technical steps or belt loaders equipped with raised safety rails to reach the cargo doors.

(a) Open the cargo doors in accordance with the respective aircraft type specific instructions;
(b) Allow adequate space for door clearance to avoid equipment obstructing the free passage of the door:
- most aircraft lower compartment cargo doors hinge upwards. Be aware that when opening or closing cargo doors, the lower edge of the door will swing down before going upward; If the cargo door will not open, do not use excessive force, tools or ground support equipment to push or pull on the door to open it. Contact Carpatair technician for assistance.

4.10.3.2 Closing Cargo Hold Access Doors

(a) Do not operate cargo doors unless you have first be trained and authorized;

Before closing the cargo doors, ensure that:
- load restraint and door protection nets are properly fitted;
- the cargo compartment lights have been switched off
- the door area including the door sill and frame are free of gravel, water, ice and other foreign substances or obstructions;
- the door and door frame show no visible signs of damage;

Any damage discovered during the inspection of the cargo doors and surrounding areas/frames is immediately reported to aircraft maintenance personnel and the commander.

(b) All cargo doors must be closed using technical steps or belt loaders equipped with raised safety rails to reach the cargo doors. Check that door lock indicators engaged/properly set as applicable and that the doors is properly locked, handles are stowed flush and panels are properly closed;
(c) If a cargo compartment door is not closed properly, it must be re-opened and re-closed.

Caution:
If a cargo door must be re-opened prior to aircraft movement, approval from the flight crew via the ground staff responsible for the departure must be obtained.

4.10.3.3 Re-Opening of Cargo Hold Access Doors

(a) If a cargo compartment door is not closed properly, it must be re-opened and re-closed;
(b) Once the predeparture walkaround has taken place, do not attempt to re-open any aircraft cargo holds doors without the authorization of the flight crew;
(c) If you believe a door must be re-opened, you must notify the flight crew through an open cockpit window or use the flight interphone system;
(d) If the flight or cabin crew requires a door to be re-opened, they will notify ground staff;

(e) If authorization to re-open the door is not granted, do not attempt to re-open the door unless clearance is received from the flight crew.

Operation of Doors in Windy Conditions

Be careful when operating the aircraft doors in strong wind conditions. Injury to persons and/or damage to equipment can occur. More than one person can be necessary to operate the aircraft doors in strong wind conditions.

Carpatair notification concerning the cargo doors operation Airbus A320 Family

Airbus A319 has two cargo compartment doors on the lower right side of the fuselage
The forward (FWD) and AFT cargo doors open outward and upward, and can only be opened from the outside. They are hydraulically operated and mechanically locked.

Airbus A320 has three cargo compartment doors on the lower right side of the fuselage
The forward (FWD) and AFT cargo doors open outward and upward, and can only be opened from the outside. They are hydraulically operated and mechanically locked.

Operation of Doors in Windy Conditions

Be careful when operating the aircraft doors in strong wind conditions. Injury to persons and/or damage to equipment can occur. More than one person can be necessary to operate the aircraft doors in strong wind conditions.

CAUTION: Do not open the cargo compartment doors if the wind speed is more than 40 knots to prevent damage to the door or to the aircraft structure.
Close the cargo compartment doors before the wind speed is more than 65 knots to prevent damage to the door or to the aircraft structure.

Opening of the FWD or AFT Cargo Compartment Door Using the Hand Pump

	ITEM	ACTION	RESULT
(a)	Access panel 198CB	OPEN	Access to Yellow Ground Service Panel
(b)	EL/MAN selector valve	SET LEVER TO 'HAND PUMP'	
(c)	Access panel 134AR (154AR)	OPEN	
(d)	Door locking handle	PULL THE DOOR LOCKING HANDLE AWAY AND UP FROM THE DOOR STRUCTURE TO THE 'UNLOCKED' POSITION.	Vent door opens and door is unlocked
(e)	Manual selector valve	SET LEVER TO 'OPEN' AND HOLD UNTIL DOOR IS FULLY OPEN	
(f)	Hand pump	OPERATE UNTIL INCREASE IN PRESSURE IS FELT	Door is locked in open position

Closing the FWD or AFT Cargo Compartment Door Using the Hand Pump

CAUTION: RAISE BOTH DOOR SILL LATCHES BEFORE CLOSING FORWARD OR AFT CARGO COMPARTMENT DOOR

	ITEM	ACTION	RESULT
(a)	Manual selector valve	SET LEVER TO 'CLOSE' AND HOLD UNTIL DOOR IS FULLY CLOSED	
(b)	Hand pump	OPERATE UNTIL INCREASE IN PRESSURE IS FELT	Door is closed
(c)	Door locking Handle	PUSH THE DOOR LOCKING HANDLE DOWN TO THE 'LOCKED' POSITION	Door is locked
(d)	Door locking handle	PUSH THE DOOR LOCKING HANDLE FULLY INTO THE RECESS	Vent door closes and locking handle is flush with door
(e)	EL/MAN selector valve	SET LEVER TO 'E-PUMP'	
(f)	Access panels 198CB, 134AR (154AR)	CLOSE	

Bulk Cargo Compartment Door Operation (installed on Airbus A320)

(1) Open the bulk cargo compartment door

(a) Press the button 'PUSH' on handle to release.

(b) Turn the handle to 'OPEN' and push the door inwards.

(c) Turn the handle to 'LOCKED' and push it into the recess.

(d) Push the door upwards until the hook engages.

(2) Close the bulk cargo compartment door:

(a) Press the button 'PUSH' on the handle to release.

(b) Turn the handle to 'OPEN' to release the hook.

(c) Pull the door downwards to the closed position.

(d) Turn the handle to 'LOCKED' and push it into the recess

4.11 Aircraft Loading

4.11.1 Supervision of Aircraft Loading

4.11.1.1 General

Before loading, the hold shall be visually inspected for damage that can affect the load capacity. A qualified individual must supervise the loading of the aircraft and provide a signed confirmation to say:

(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 or any other incoming messages
    2. Loaded in accordance with the corresponding loading instruction report (LIR)
(a) Visible dangerous goods packages were inspected prior to loading;
(b) Special loads, including dangerous goods have been stowed and secured according to regulations in force and Carpatair procedure
(c) The holds are free of any foreign objects;
(d) Any deviations are approved by the load agent for ACMI operation when weight&balance is performed by the handling agent or by the commander for ad-hoc operation and recorded;
(e) At the completion of loading, the ramp must pass the final loading information to the load agent for the ACMI operation and to the commander for the ad-hoc operation

4.11.1.2 Loading of General Baggage/Cargo

The person responsible for loading is in charge of, and responsible for the safe and efficient loading and offloading of the aircraft as well as the protection of the goods carried. She will ensure the aircraft is loaded as specified by the load agent for ACMI operation if weight&balance is performed by the handling agent or by the commander for ad-hoc operation, in accordance with Carpatair procedures. The person responsible for loading shall be trained in accordance to applicable standards.

4.11.1.3 Load Planning

4.11.1.4 Load Distribution

General Principles

The following general principles apply to load distribution:

- On all sectors, balance conditions of the aircraft and the total load in the compartments must be within limits;
- Observe special loading regulations and restrictions for ground stability (refer to the respective aircraft guides);
- On arrival, all stations must have direct access to their offload and baggage must be available first;
- If load for different stations is carried in the same compartment, it must be clearly separated to avoid over carriage;
- Stations should not have to reload large amounts of transit load for balance reasons.
- Stowing regulations for baggage, dangerous goods, live animals and other special loads must be strictly observed;

- Temperature requirements, loading restrictions and maximum quantities per compartment must be strictly followed if live animals and / or perishable goods are involved;
- Stowing each category of load in a different compartment section can reduce loading errors.

Planning for Fuel Economy

To limit fuel consumption and save fuel costs, the aircraft shall be loaded in such a way that the center of gravity is positioned as close as possible to the aft limit.

a) Baggage
- shall not be loaded on pallets.
- Small quantities of mail may be loaded with baggage in the same container, if agreed by the receiving station.

b) Cargo
c) Mail
- Shall, in principle, be carried in the bulk compartment or in containers.
- If exceptionally loaded on pallets, mail may not be mixed with cargo unless agreed by the receiving station.

Airbus A319 Loading:
Aft compartments shall be loaded first and up to 150 bags maximizing compartment 4 usage.
Overspill bags shall be loaded in compartment 1

Aft Compartment Loading procedure
Compartment 4 shall be loaded first when expected loading is less than 100 bags.
If number of expected bags is above 100, then compartment 5 should be loaded first (around 30 pieces), and the rest in compartment 4.

Airbus A320 Loading:
If the weight of the cargo is below and up to 1500 kg everything should be placed in compartment 3 and compartment 4.
Weights exceeding 1500 kg should be divided and distributed with 1/3 in compartment 1 and 2/3 in compartment 3 and compartment 4.

If the flight has 2 destinations, the destination heavier cargo must be placed in compartment 3 and compartment 4 to avoid reloading.

High-density volumes should be tied down.
Volumes with sharp edges should be fixed to the floor or conveniently protected to prevent vertical and lateral movements, thus avoiding structural damages.

Priority baggage

Segregation of priority baggage is recommended by loading it in a different compartment.

Transfer baggage

Baggage for transfer must always be segregated from local baggage. The information concerning the loading position of transfer baggage must be given under SI of the LDM or with the deadload remark BT. If special stickers (short transfer at…) are used for short connection baggage, they must be loaded near the door.

Baggage for merged flights must always be loaded in separate holds for each destination.

"Delivery at aircraft" (DAA) – The load marked with "DAA" tag which has to be handed over directly to the aircraft loading staff (baby chairs, wheelchairs, hand luggage taken from PAX, etc.) must be loaded in the door area of the main cargo hold. After unloading, it will be handed over to the passenger at the aircraft stairs.

Baggage

Definition
Baggage means clothes, private belongings and necessary equipment providing passengers' comfort and convenience during journey.

Baggage priority:

1. **Rush baggage:**
   - the baggage is loaded on the aircraft without its owner being on board. It is labelled with a "RUSH" label or tag.
2. **VIP baggage:**
   - special service procedures
3. **Short connection Baggage:**
   - Baggage of passengers having onward connection at the other station;
   - Short connection time can differ according to the station facilities;
   - Passenger Handling Services must label this kind of baggage as "priority"
4. **Transfer baggage:**
   - Must be transferred onto a connection flight for final destination;
   - Must always be separated from local baggage.
5. **Local baggage:**
   - Regular baggage on a flight segment or route.

Load planning of baggage priority

- All baggage must be determined separately
- Must be loaded in different compartment or containers
- The loading position must be mentioned in the LDM
- To arrange quick unloading; loading instruction is arranged according to baggage priority

Ballast
A sufficient number of ballast bags must be available at each station where balance problems may be expected.

- Weight per bag: 25kg;
- Bag to be made of tightly woven jute/plastic material;
- Contents: dry shingle, coarse round gravel or pebbles of an average diameter of 1.5 cm;
- Preferable to be stored indoors;
- If stored outdoors, to be placed on planks and protected against weather by a suitable cover;
- To be periodically checked for weight and conditions;
- Only to be loaded if in proper condition;
- Must be mentioned in SI part of LDM.

Baggage stowage in the passenger's compartment when the number of passengers is less than the number of seats available in the aircraft

Procedure below applies in those situations when the cargo compartments of the aircraft are full, there are still empty seats in the cabin but there is an excess of baggage that cannot be secured in the regular stowing places.
The access of baggage in cabin is allowed only if the baggage was subject to the security checks in accordance with security requirements for screening of cabin baggage.

I. Crew Members rules of baggage stowage in the passenger compartment

1. Any baggage that cannot be secured in the overhead bin compartments or under the seats in front shall be stowed:
   a. Adequately and securely only on / or between the rear empty passengers seats and rows; and
   b. In a way that cannot cause any injury or damage, or obstruct aisles and exits if displaced; and
   c. As to prevent movement; and
   d. Be packed or covered in a manner to avoid possible injury to passengers and cabin crew members
   e. In the rear part of the passengers compartment, in order not to delay and impede passengers and crew evacuation; and
   f. With properly restraint devices, such as safety belts (SEAT belts, INFANT belts, EXTENSION belts) or restraint device having enough strength to eliminate the possibility of shifting under all normal anticipated flight and ground conditions, that are to be passed at least one of the luggage's handles, in order to prevent forward, sideway or upward movements.

2. The baggage shall be stowed respecting simultaneously the following aspects:
   a. Each item carried in a cabin is stowed only in a location that is capable of restraining it;
   b. Weight limitations placarded on or adjacent to stowage are not exceeded;
Under seat stowage is not used unless the seat is equipped with a restraint bar and the baggage is of such size that it may adequately be restrained by this equipment;
   d. Items shall not be stowed in lavatories or against bulkheads that are incapable of restraining articles against movement forwards, sideways or upwards;
   e. Baggage and cargo placed in lockers shall not be of such size that they prevent latched doors from being closed securely;
   f. Baggage and cargo shall not be placed where it can impede access to emergency equipment, emergency or regular exits, or aisle in the cabin or where it can obscure passenger's view of the seat belt sign, no smoking sign or required exit sign.
   g. Checks shall be made by the crew members before take-off, before landing and whenever the fasten seat belts signs are illuminated or it is otherwise so ordered by the commander, to ensure that baggage is stowed where it cannot impede evacuation from the aircraft or cause injury by falling (or other movement) as may be appropriate to the phase of flight.

II. Flight Crew will take into account that:

For mass and balance calculation Airbus A3320 Family
   a. all luggage stowed in compartment 0A, corresponding weight will be added to the weight of the goods and baggage carried in Forward Hold;
   b. all luggage stowed in compartment 0A, corresponding weight will be added to the weight of the goods and baggage carried in Fwd Hold;

c. all luggage stowed in compartment 0C, corresponding weight will be added to the weight of the goods and baggage carried in Aft Hold;
d. all luggage stowed in compartment 0D, corresponding weight will be added to the weight of the goods and baggage carried in Rear Bulk Cargo Hold.

III. Charter department

Carpatair Ground Operations Department shall inform the customer, prior the flight, via e-mail, in respect to hold baggage allowance and any special equipment and about the permitted content of the baggage (as it is defined in chapter 11 of the Passenger Handling Manual).

The handling agent will be informed via e-mail by the Ground Operations in regards to cabin and hold baggage allowance and loading procedure, if specific requirements would need to be followed

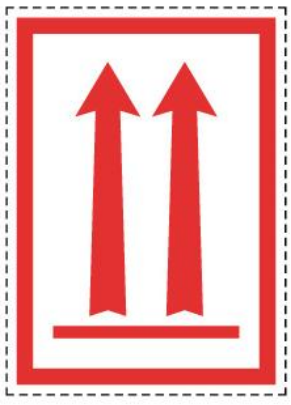
4.11.1 5 Special Loads

4.11.1.5.1 Heavy and Outsized Items

Outsize Items (BIG)
Outsize items are items which, due to their size and / or weight, have to be put on 2 or more pallets.

Heavy Items (HEA)
Heavy items are items weighing 150 kg or more per piece
General principles

- Utmost care should be taken when loading machine parts, which are sent open;
- The center of gravity of cargo must be clearly mentioned;
- On bulk loading, if the limitation is exceeded, a spreader should be used;
- If the contact area is not equal, the piece to be carried should be placed on wooden pallets;
- If a forklift is used, in order to avoid any damage to the compartment doors, the tips should be lowered;
- “HEA” label should be stuck on it and if it must be loaded in the up side position, the label “This Way Up” must be used;



- If it must be carried from the specific points, these points must be mentioned clearly;
- When lashing, utmost care should be taken for any damage to lashing equipment;
- If there is more than one piece, all pieces must be packed together (e.g. automobile parts, automobile doors, etc).

Acceptance
Carpatair must ensure the following:
- The aircraft limitation will not be exceeded;
- Necessary equipment and other factors at the station concerned.

Before acceptance the following information must be determined:
- Weight of each item and dimensions;
- Necessary pallets and areas.

Other useful loading information is:
- The identification of the item;
- Special handling requirements.

Confirmation is required from the receiving station before acceptance of this kind of cargo.

4.11.1.5.2 Equipment in Compartment (EIC)

Definition
Equipment in compartment shipments is company equipment items or goods not belonging to the aircraft equipment and not manifested. They are not included in DOW /DOI and are not covered by a service airway bill. They are identified be the general code EIC, followed by a specific code, if any, see below.

This procedure is applicable for:
- Aircraft spare parts (see FKT);
- Tie-down equipment;
- Ballast.

Labelling
To avoid risk of diversion, all EIC items shall be labelled with a tag completed with destination, department forwarding flight / date and gross weight of package.

E I C	
Flight No	Destination
Total Nr. Pieces	Weight This Pieces (kg)
REMARKS	
Originator	RETURN TO

Loading

EIC shipments, when labelled, are delivered to handling agent responsible with loading.
The handling agent must check the loading compartment and ensure the item is secured. The weight of the item must be added to the total sum of the hold baggage weight. It must be mentioned on loadsheet and on the LDM.

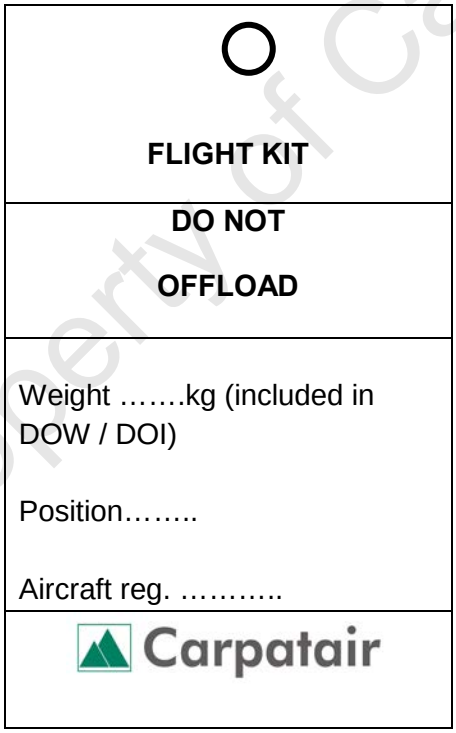
4.11.1.5.3 Flight Kit (FKT)

Definition

A flight kit is any set of spare parts and / or tools specific or not to an aircraft type, which is carried on the aircraft. They are identified by the general code FKT (e.g. wheels). A flight kit may be permanent or occasional (for a particular route or sector).
The tool kit for Airbus is located in hold 1.
Weight of the flight kit is not included in DOW / DOI, the weight must be added to dead load. It shall never be off-loaded unless authorized by Carpatair staff.

Labelling

In order to avoid any risk of confusion due to equipment forwarded to a station or unscheduled off-loading, each box or item of the flight kit shall be labelled with a completed FKT tag completed with destination, forwarding flight / date and gross weight of package. Maintenance department is responsible for labelling.



4.11.1.5.4 Miscellaneous Special Loads

Company mail (COMAIL), Company Material (COMAT)

The following is considered company mail or company material:

- All correspondence pertaining to company matters.
- Office materials, printed forms, timetables, manuals, advertising and marketing materials.

- Company revenue documents.
- Newspapers, magazines, books, photos, drawing, and press cutting related to aviation.

Maximum company mail must not weigh more than 10 kg per bag and should be mentioned on the loadsheet. Company material must also be mentioned on the loadsheet.
Loading positioned should be mentioned on the LDM.

4.11.1.5.5 Diplomatic Shipment (DIP)

Diplomatic Cargo – to be handled as regular cargo.
Diplomatic Mail – to be handled as valuable cargo.
Loading – not to be loaded in mixed cargo.

DIP shipments must be indicated in weight & balance (loadsheet) and load message with the 3-letter code DIP.

4.11.1.5.6 Human Remains (HUM)

General

Human Remains (HUM/non-cremated) in coffins
Human remains (non-cremated) can be accepted on an airport-to-airport basis subject to advance bookings /prior arrangements having been made.

Human remains may only be accepted for carriage only based a confirmed reservation for both origin and destination airport.

The following conditions should be met:

- all laws, governmental rules or regulations covering the carriage of human remains have been complied with;
- corpses are embalmed and secured in coffins preventing shifting and the escape of offensive odors
- reservation right through to the destination had been confirmed;
- a pre-advice message (telex, e-mail) must be sent to airport of destination.

Acceptance
Human remains may be offered for transportation by air and may be accepted for carriage on an airport-to-airport basis subject to advance bookings having been made to the final destination.

Packing and Marking Requirements
Human remains tendered for dispatch must in all instances be embalmed and enclosed in a hermetically sealed inner coffin made of lead or zinc and then be placed in a stout wooden leak-proof coffin.

The coffin must be fully covered with burlap hessian or may be enclosed in a secondary outer packaging constructed of wood or strong fiberboard.

The coffin, whether covered or placed in a secondary outer packaging, must be constructed so as to withstand the rigorous experienced during normal handling and transportation

No marks, letters or endorsements other than the required cargo identification label, name and address of Consignee and package orientation (This Side Up) labels which are required on opposite sides of the outer packaging must appear on the package/wrapping.

Handling and Loading Requirements
Carriage of human remains in coffins on aircraft is subject to the following conditions:

- Human remains (HUM) shall not be loaded in close proximity to foodstuffs (EAT);
- Human remains (HUM) and live animals (AVI) should be segregated in aircraft cargo compartments;
- Human remains (HUM) and live human organs (LHO) shall be segregated in aircraft cargo compartments;
- The coffin shall be loaded in horizontal position;
- Is treated as HEA load
- The human remains consignments must always be tied down. Lashing materials (rings, ropes, straps) shall be provided by the handling agent;
- Funeral urns are to be handled as regular cargo.
- Human remains shall be carried in cargo hold compartments;
- The pilot-in-command must be informed by means of the Notification to Captain (NOTOC). Also the NOTOC must be send to Carpatair flight dispatcher on duty at at the following email address: loasheets@carpatair.com

Human remains should be loaded in any of cargo hold compartments except cargo hold compartment 5.
The authority to decide in which the hold compartment the human remains will be loaded lies to the pilot in command.

Acceptance
Reservation is required.

Documentation
Certain countries have stringent regulations regarding the importation of human remains.
The Air Cargo Tariff (TACT) Rules - Section 7, Information by Countries may be consulted in this regard, however, it is advisable to contact the Embassy or Consulate of the country concerned for the latest information.
A permit approving the removal, and a certificate of endorsement from the Consulate/Embassy concerned representing the country of destination, approving the importation, must be produced.

The application for the permit must be accompanied by:

- a medical certificate stating the cause of death (or a properly certified copy thereof);
- a certificate or statement (or a properly certified copy or translation thereof) by the foreign authority signifying the approval of the importation of the human remains;
- a removal order from the District Registrar of Births and Deaths of the district where the death took place; and
- a non-infectious disease certificate (or a properly certified copy thereof).
- any other additional documents required by authorities of origin/destination countries.

All permits must state the following information: the name, age, sex of the deceased; the date and place of death; cause of death; the circumstances under which it is desired to remove the body from point A to point B; the proposed mode of conveyance; the precautions which will be taken to prevent any danger to health and to ensure that offence will not be caused; and the proposed mode and place of disposal of the body at destination.
Funeral urns are to be handled as regular cargo.
The human ashes may be transported without any special conditions or special approval.

4.11.1.5.8 Living Human Organs and Blood Plasma (LHO)

General

- Usually cooled with dry ice or cryogenic liquids and thus must be handled accordingly
- Handling instructions given on the airway bill or other attached documents must be strictly observed;
- May be carried in the cabin in the care of the crew, if the size allows proper stowage in the cabin;
- For urgent LHO shipment, the departure station must notify the receiving station by separated telex message;
- Special pre-advice is required for LHO

Loading

- Must be loaded on door side;
- Flight crew must be informed by NOTOC;
- LHO shipments must be indicated in weight & balance and SI part of the LDM with 3-letter code LHO.

4.11.1.5.11 Magnetized Materials (MAG)

Magnetized materials do not affect humans directly but affect the navigation system. They must not be loaded in such a position that they will have a significant effect on the direct-reading magnetic compasses or on the master compass detector units of the aircraft.

4.11.1.5.9 Aircraft on Ground (AOG)

Aircraft spare parts, which are tagged AOG, are necessary equipment, which must be loaded on aircraft, which was breakdown due to technical problems during ground time.

4.11.1.5.10 Loading of Dangerous Goods (where Carried)

The person responsible for loading is responsible for the loading of Dangerous Goods shipments as described in the IATA DGR current edition and must be qualified in accordance with ICAO Technical Instructions and national training regulations of each state based on competency-based training and assessment (CBTA). .

Definition: Dangerous goods are articles or substances which are capable of posing a risk to health, safety, property or the environment. Dangerous goods are defined and listed in the "IATA Dangerous Goods Regulations".
The IATA manual specifies:

- what may be carried (with or without the operator's approval)
- responsibility of the Shipper and the Operator
- under which conditions shipment can be transported, etc.

Cargo items require careful consideration. Innocent items on their own when combined with other seemingly innocent items can combine to become highly poisonous, toxic, flammable or explosive mixtures. Some items may be completely forbidden for transportation on passenger aircraft, others are accepted only as cargo (sometimes only in limited quantities), while a series of dangerous goods may also be accepted in passengers' baggage, either in carry on or as checked baggage.

The ICAO "Technical Instructions" are the 'sole authentic legal source' regarding the carriage of dangerous goods by air. However, the 'field document' used by CARPATAIR and in the airline industry is the IATA Dangerous Goods Regulations. Company procedures are based on the IATA manual, and Carpatair uses the IATA manual and Doc 9481 An/928 latest Edition for operational purposes.
A current copy of IATA DGR shall be available on each location where Carpatair operates.

Duties of Load Planners

All staff involved in the carriage of dangerous goods must receive appropriate training. There are specific requirements for training; these appear in the IATA Dangerous Goods Regulations, Training Requirements, and ICAO Technical Instructions.

Load planners must:

- interpret correctly the list of dangerous goods of IATA DGR;
- take into account the correct loading, segregation, and stowage of DG items on the airplane cargo compartment according to the regulations for completing the loadsheet 100% correctly. They must also consider the segregation of DG items from other DG items or non-dangerous goods items (eg. AVIH, HUM etc.)
- consider the priority of loading and unloading of dangerous goods packages;
- be familiarized with the methods of securing certain dangerous goods in the cargo compartment in accordance with the Technical Instructions;
- be familiarized with the Shipper's Declaration, as it is the basic document based on which they complete the NOTOC;
- fill in NOTOC for DG by which the commander of the airplane is informed about the dangerous goods loaded on board.

Duties of Ramp Personnel

Cargo agent provider, involved in the process of supervising the loading or unloading of dangerous goods shall:

- ensure that dangerous goods are correctly identified and properly documented (the documentation accompanying the DG is received from the cargo agent and handed over to the cabin attendant on departure while on arrival is handed over by chief cabin attendant to the cargo agent);

- perform a visual inspection of the package, make sure that the packaging of dangerous goods presents no holes, breaks or signs of leakage or other indication that it has been damaged;
- strictly ensure that all special handling instructions (labels or imprints), such as “Keep away from heat” or “This Way Up!” arrows, etc. have been complied with;
- ensure that dangerous goods are loaded, segregated, stowed and secured on the airplane in accordance with IATA DGR and the Technical Instructions;
- ensure that the package is not damaged because of being lashed too tightly;
- ensure that pieces on top of the dangerous goods do not damage the dangerous goods piece by their weight or edges or that other load underneath the dangerous goods can be damaged by type of DG package (such as barrels);
- upon unloading, inspect the dangerous goods packages for damage or leakage;
- also inspect the cargo hold for any contamination;
- check the written information (Special Load – NOTOC for DG) provided to the commander about dangerous goods loaded on board;
- should any sign of damage of leakage is discovered, take the appropriate emergency response actions and immediately inform the ramp supervisor and Carpatair cargo and flight dispatch department at cargo@carpatair,com/flight.dispatch@carpatair.com
- not accept for loading any package with dangerous goods that has been damaged or leaking or seems to be damaged or leaking;
- fill out a DG Occurrence Report for damaged packages or if they discover undeclared DG in a passenger baggage (KRP Form 152).

Classes of DG with their Hazard Labels

Dangerous goods are defined as those goods which meet the criteria of one or more of nine UN hazard classes and, where applicable, to one of three UN Packing Groups according to the provisions of this section. The nine classes relate to the type of hazard whereas the packing groups relate to the applicable degree of danger within the class.
Some hazard classes are further subdivided into hazard divisions due to the wide scope of the class, shown by a second figure. The order in which they are numbered is for convenience and does not imply a relative degree of danger.

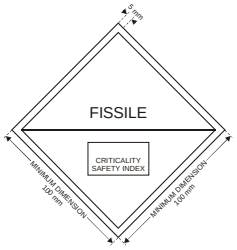
*** NOTE: IMP (load message) codes are used extensively within the airline industry for quick reference.**

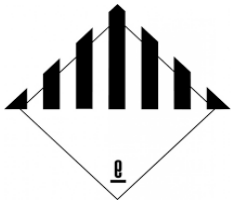
Hazard label	Background colour	IMP code	DESCRIPTION
    	Orange	RXB RXC RXD RXE RXG RXS	**Class 1 – Explosives** 1.4.S is the only division normally transported on passenger aircraft. It consists of articles and substances which present no significant hazard (e.g. cartridges for weapons). Not accepted on Carpatair aircraft except as provided by Table 2.3.A, in Passenger or Crew Baggage. * Division and compatibility group ** Compatibility group

	Red	RFG	**Class 2** **Division 2.1 – Flammable gases** (e.g. butane)
	Green	RNG RCL	**Division 2.2 – Non-flammable, non-toxic gases** (e.g. carbon dioxide or liquefied nitrogen) When refrigerated liquefied gases (gases which, when packed for transport, are partially liquid because of their low temperature) are transported, use IMP code: RCL (e.g. air, argon, helium, neon and nitrogen).
	White	RPG*	**Division 2.3 – Toxic gases** (e.g. hexafluoroacetone) *** NOTE:** Normally not to be transported on passenger aircraft.
	Red	RFL	**Class 3 – Flammable liquids** (e.g. paint, alcohol)
	White / Red	RFS	**Class 4 Flammable Solids; Substances Liable to Spontaneous Combustion; Substances which, in Contact with Water, Emit Flammable Gases** **Division 4.1 – Flammable solids; Self-Reactive Substances; Polymerizing Substances; and Solid Desensitized Explosives.** (e.g. celluloid, matches)

	Upper half White Lower half Red	RSC	**Division 4.2 – Substances liable to spontaneous combustion** Substances liable to spontaneous heating in contact with air and then liable to catch fire (e.g. phosphorus, fish meal stabilized).

	Blue	RFW	**Division 4.3 – Substances which, in contact with water, emit flammable gases (Dangerous when wet). Substances**, which, in contact with water, are liable to become spontaneous flammable or to give off flammable gases (e.g. calcium, magnesium silicide, carbide).
			**Class 5**
	Yellow	ROX	**Division 5.1 – Oxidizing substance** **A substance that may generally cause or stimulate the combustion of other material by yielding oxygen (e.g. potassium chlorate, calcium chlorate).**
	Upper half red Lower half yellow (flame may be black or white)	ROP	**Class 5** **Division 5.2 -Organic Peroxides**
	White	RPB	**Class 6** **Division 6.1 – Toxic substances** (e.g. arsenic, chloroform, nicotine, cyanide)
	White	RIS	**Division 6.2 – Infectious substances** (e.g. infectious substances affecting humans: HIV, rabies, Ebola, etc.)

	White	RRW	**Class 7 – Radioactive material** **Category I** Slightly radioactive material with a very low radiation level. No transport index indicated as TI = O. Not accepted on Carpatair aircraft.
	Upper half yellow Lower half white	RRY	**Category II** TI not exceeding 1. Not accepted on Carpatair aircraft.
	Upper half yellow Lower half white	RRY	**Category III** TI between 1 and 10.
 	Criticality safety index label Radioactive Material , Excepted Package		Not accepted on Carpatair aircraft.
	Upper half white Lower half black	RCM	**Class 8 – Corrosives** - No divisions. - Substances that may cause severe damage if in contact with skin and materials (e.g. battery acids, mercury, sulphuric acid, etc.)

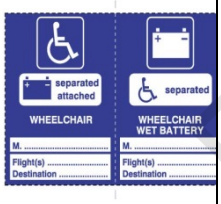
	Black and White	RLI, RLM ,RBI,RBM	**Class 9 lebel for Section IA and IB Lithium battery shipmnts**
	Black and White	RMD RSB ICE	**Class 9 – Miscellaneous Dangerous Substances and Articles, Including Environmentally Hazardous Substances** - Articles and substances which, during air transport, present a danger not covered by other classes.

Some substances have also subsidiary risks. In this case, all other subsidiary risk labels must be affixed on the same surface of the package, next to the primary hazard risk label.

To identify the precedence of hazards with substances presenting two different hazards, Table 3.10 from IATA DGR will help establish the primary hazard and the appropriate packing group.

The handling labels must be affixed next to the hazard labels, on the same surface of the package.

Whenever the size of the package permits, the hazard and handling labels should be affixed on the same surface of the package as the other markings: the name of the substance (Proper Shipping Name), the UN or ID number assigned the net or gross quantity of the package, and the full names and addresses of the Shipper and Consignee.

Handling Labels	Back ground color	IMP code	Class 9 – Miscellaneous dangerous goods – cont'd
	Blue	MAG	Packages bearing the *magnetized material* label must not be loaded in such a position that they will have a significant effect on the direct reading magnetic compass or on the master compass detector units of the aircraft.
	Black on Orange	CAO	This is a *cargo aircraft only* label. No package bearing this label shall be loaded on board Carpatair aircraft.
	Red or Black	-	This is an example of package orientation labels, meaning: *this way up*.
	Black with red		This is a "keep away from heat" label used especially for self-reactive substances of Div. 4.1 and organic peroxides of Div. 5.2, which must be protected from direct sunlight and stored away from any source of heat in a well-ventilated area.
	Green with white		Some non-flammable gases are cryogenic liquids (deeply refrigerated gases). These gases have the label for non-flammable gases but have the IATA Air IMP code RCL. RCL must have this additional handling label.
	Blue with white		Double label to be used for the transport of wheelchair and its battery. The left half will be attached to the wheelchair and the right half will be attached to the battery, together with Class 8 Corrosive label and 2 orientation labels "This Way Up" attached on two opposite sides of the package.
	Red or black hatching and symbol on white or suitable contrasting background		Some dangerous goods in small quantities (REQ) may be transported under a simplified procedure. They are marked with the label for Dangerous Goods in Excepted Quantities. * —The Class or, when assigned, the Division number(s) are shown in this location. ** —The name of the shipper or of the consignee are shown in this location if not shown elsewhere on the package.

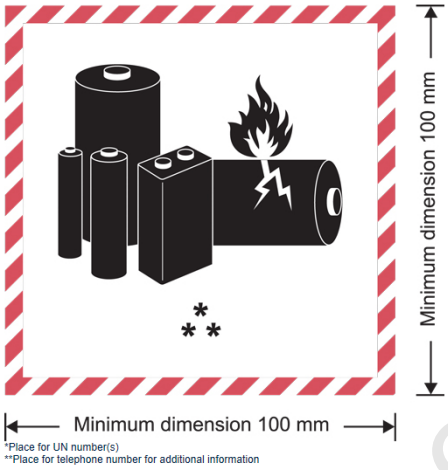
Carpatair shall ensurethat its contracted cargo agents have a complete set of DG hazard and handling labels to ensure the replacement of detached, lost or illegible labels on shipments.

Environmentally Hazardous Substance Marking

A special marking for environmentally hazardous substances has been introduced from January 2009:

Symbol (fish and tree): Black
Background: White or suitable contrasting background

Lithium Battery Label



Note:

Packages containing lithium cells or batteries prepared in accordance with Section II of Packing Instructions 966, 967, 969 and 970 and Section IB of Packing Instructions 965 and 968 must be marked with Lithium Battery Label as shown in Figure 7.1.C IATA DGR.
Packages containing lithium cells or batteries prepared in accordance with Section II of Packing Instructions 965 to 970 and Section IB of Packing Instructions 965 and 968 must be marked as shown in Figure 7.1.C from IATA DGR/Section 7 – Marking and Labelling and described above.

The mark must indicate:
(a) the appropriate UN number preceded by the letters “UN” as follows:
1. “UN 3090” for lithium metal cells or batteries;
2. “UN 3480” for lithium ion cells or batteries;
3. “UN 3091” for lithium metal cells or batteries contained in, or packed with, equipment; or
4. “UN 3481” for lithium ion cells or batteries contained in, or packed with, equipment.

Where a package contains lithium cells or batteries assigned to different UN numbers, all applicable UN numbers must be indicated on one or more marks.

(b) the UN number(s) indicated on the mark should be at least 12 mm high.
(c) a telephone number for additional information.

Limited quantities mark

Many dangerous goods when in reasonably limited quantities present a reduced hazard during transport and can safely be carried in good quality packaging's 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 IATA DGR, some of which are more stringent than those of the UN Model Regulations and of other modes of transport.

NOTE: The marking 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.

Acceptance of Dangerous Goods

Carpatair will not accept for transport any dangerous goods belonging to class 1 (Explosives) or class 7 (Radioactive Material) on any of its aircraft.
Ammunition and other goods permitted in or as carry-on or checked baggage will be accepted only within the limits of Table 2.3. A of IATA DGR
The permissible amount of dangerous goods which can be carried in the passenger and cargo aircraft is defined and listed in the "IATA Dangerous Goods Regulations"
The list of substances that are forbidden for air transport under any circumstances is to be found in IATA Dangerous Goods Regulations chapter 2.1.1.
Upon receiving the information about any transport of DG, Carpatair Ground Operations Department weather the dangerous goods can be accepted on board.

Table 2.3A – Provisions for DG Carried by Passengers and Crew as Baggage – always consult the current edition of IATA Table 2.3.A

Provisions for Dangerous Goods Carried by Passengers or Crew (IATA DGR Subsection 2.3).

Dangerous goods must not be carried in or as passengers 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.

Note for Carpatair flights / flights operated by Carpatair:
The limit for Carpatair flights is a maximum of 15 PED and a maximum of 20 spare batteries per person.

Note for Carpatair flights / flights operated by Carpatair regarding "Lithium Batteries: "Portable electronic devices (PED) containing lithium metal or lithium ion cells or batteries (IATA Table 2.3A)"
Portable electronic devices (PED) containing lithium metal or lithium ion cells or batteries, including medical devices as portable oxygen concentrators (POC) and consumer electronics such as cameras, mobile phones, laptops and tablets carried by passengers shall be carried in the passenger cabin only on the basis that, if a PED ignite, the cabin crew can identify the incident, take appropriate firefighting action and monitor the device for possible re-ignition.

N/a means not applicable.

According to Carpatair internal procedure, a NOTOC is required for ammunition.
According to Carpatair internal procedure Electronic Cigarettes and related devices must be carried exclusively in the aircraft cabin and must be protected from accidental activation.
During the Carpatair flights the use of the electronic cigarettes and e-cigars, e-pipes, other personal vaporizers is forbidden.

Electronic Cigarettes
Electronic cigarettes also called personal vaporizer or electronic nicotine delivery systems are battery powered devices that simulate tobacco smoking by producing heated vapor which resembles smoke. The device has a heating element to vaporize a liquid solution.
Several incidents were reported, involving electronic cigarettes overheating through the accidental activation of the heating elements resulting in fires in checked baggage.
These incidents have shown that electronic cigarettes can overheat and can cause fires when the heating element is accidently activated or left on.
Special attention will be paid to information process, where the passengers enter in contact with check-in agents, handling agents or other personnel related to industry and where the passenger can be informed of the hazard to carry in checked baggage of electronic cigarette which can be accidentally activated and can cause fires.
Handling provider will inform the passengers which come to check-in that is recommended to carry electronic cigarettes and related device exclusively in the cabin baggage and also that During the Carpatair flight's the use of the Electronic Cigarettes and e-cigars, e-pipes, other personal vaporizers is forbidden.
Recharging of these devices and/or batteries on board the aircraft is not permitted

Transport of Lithium Batteries
Carpatair shall not accept any DG belonging to Class 1 (Explosives), Class 7 (Radioactive material) on board its aircraft.

All consignments containing the following lithium batteries are prohibited as cargo on Carpatair aircrafts:

- UN 3091 Lithium metal batteries packed with equipment prepared in accordance with Section I of PI 969
  Section I of Packing Instructions (PI) 969 applies where equipment is packed with lithium metal cells with a lithium metal content in excess of 1 g or lithium metal batteries with a lithium metal content in excess of 2 g which must be assigned to Class 9 and are subject to all of the applicable requirements of these Regulations;

- UN 3091 Lithium metal batteries contained in equipment prepared in accordance with Section I of PI 970
  Section I of Packing Instructions (PI) 970 applies where equipment contains lithium metal cells with a lithium metal content in excess of 1 g or lithium metal batteries with a lithium metal content in excess of 2 g which must be assigned to Class 9 and are subject to all of the applicable requirements of these Regulations;

- UN 3481 Lithium ion batteries packed with equipment prepared in accordance with Section I of PI 966
  Section I of Packing Instructions (PI) 966 applies where the equipment is packed with lithium ion cells with a Watt- hour rating in excess of 20 Wh or lithium ion batteries with a Watt-hour rating in excess of 100 Wh, which must be assigned to Class 9 and are subject to all of the applicable requirements of these Regulations;

- UN 3481 Lithium ion batteries contained in equipment prepared in accordance with Section I of PI 967

Section I of Packing Instructions (PI) 967 applies where the equipment contains lithium Ion cells with a Watt-hour rating in excess of 20 Wh or lithium ion batteries with a Watt- hour rating in excess of 100 Wh, which must be assigned to Class 9 and are subject to all of the applicable requirements of these Regulations.

The carriage of lithium batteries by passengers and crew is regulated by IATA 2.3.A table.
Ground Staff shall inform the passengers at the time of check-in/boarding about the procedure regarding the transport of lithium batteries. This process shall also include an acknowledgement by the passenger of this information. This may be done by displaying, among others, visual examples of lithium batteries.

Security-type equipment – requirements for checked baggage

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, may be carried as checked baggage only if the equipment complies with the following:

- The equipment must be equipped with an effective means of preventing accidental activation;
- For a lithium metal cell, the lithium content must not exceed 1g;
- For a lithium metal battery, the aggregate lithium content must not exceed 2g;
- For lithium ion cells, the Watt-hour rating must not exceed 20Wh;
- For lithium ion batteries, the Watt-hour must not exceed 100WH;
- 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 IATA DGR 3.1.7.1;
- Each cell or battery is of the type proven to meet the requirements of each test in the UN Manual of Tests and criteria, Part III, subsection 38.3;
- 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 Regulations 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. In case of accidental activation all hazardous effects must be confined within the equipment and must not produce extreme noise;
- Security type equipment that is defective or that has been damaged is forbidden for transport.

In addition, Ground Staff shall inform the passengers to remove lithium batteries from their carry-on baggage where such baggage cannot be accommodated in the cabin. In these cases where the baggage is removed from the passenger at the gate or at the stairs of the aircraft, Ground Staff shall ensure that the information on the items that cannot be placed in checked baggage is provided to the passengers again at this point.

Ground Staff shall make passengers aware of the risks caused by PED (iPad, iPod, iPhone, laptop, hoverboards, self-balancing devices, or gravity boards, electric shavers), as a result of the battery being potentially short-circuited or damaged if caught in the movable part of seats, and that they shall call a staff member when such situation occurs and/or whenever any abnormal situation is suspected, either on board the aircraft or at the aerodrome.

Baggage intended to be carried in the cabin that is placed in the cargo compartment must only contain dangerous goods permitted in checked baggage. When baggage intended as carry-on is taken by the operator and placed into the cargo compartment for carriage, the ground staff and or crew members must confirm with the passenger that any dangerous goods which are only permitted in carry-on baggage have been removed.

Crew members:
Shall inform the passengers to remove lithium batteries from their carry-on baggage where such baggage cannot be accommodated in the cabin and require passengers to carry such devices in the cabin, where an incident can be immediately mitigated. Shall make passengers aware of the risks caused by PED (iPad, iPod, iPhone , laptop hoverboards, self-balancing devices, or gravity boards, electric shavers) as a result of the battery being potentially short-circuited or damaged if caught in the movable part of seats, and that they shall call a staff member when such situation occurs and/or whenever any abnormal situation is suspected either on board the aircraft or at the aerodrome.
All staff involved shall report any event/occurrence related to lithium batteries to the operator and appropriate authorities, in accordance with the applicable requirements.

A. Loading of Dangerous Goods
Dangerous goods must be loaded, stowed and secured on the airplane as required by ICAO Technical Instructions and IATA DGR. This includes segregating packages from each other when they contain incompatible dangerous goods or non-dangerous goods items, and securing packages to ensure that their orientation or position does not change to the extent that they may be damaged or affect passengers.
No dangerous goods will be loaded on cabin compartment or on the flight deck except as provided by IATA DGR Table 2.3A, as Provisions for Passengers and Crew.

Loading Procedure
Carpatair ground operations department and the cargo agent shall inform via e-mail handling agent I about the existence of DG transport, and the need to secure them by ropes or cables, specifying the cargo compartment where they must be loaded

Cargo agent will supervise the loading of DG packages on the cargo hold. He makes sure that they are correctly secured and lashed (if necessary) according to the load securing procedure provided in GOM. In this purpose, he will use the checklist form entitled *Checklist for loading DG in cargo compartment* as well as Table 9.3.A from IATA DGR regarding the segregation of DG.

The transportation of DG packages is forbidden if there is no possibility to secure or anchor them against movement during flight.

DG Loading Principles

- You must visually inspect and check for completeness and integrity of the packages before loading and upon unloading. If a package with DG labeling or marking is visibly damaged or unsealed, it must be rejected and referred to the shipper or his agent;
- Although correct labeling is the responsibility of the shipper, should you be asked to handle a DG and are given the accompanying papers at the same time, and then become aware of a discrepancy between the labeling and the written documents – you must reject the package. This may be the last line of defense between handling an item of structural integrity and one that has been tampered with in earlier transit. Primary documentation and labeling must be in clear plain language English and must be item for item – e.g. ‘Mister Jones’ on the label is not the same person as ‘Mr. Jones’ on the air waybill. Always maintain an awareness of the correctness of the paperwork;
- Be aware of orientation labels – those arrows pointing out the way the container should stand when in situ on the aircraft. Unless orientation arrows indicate otherwise, a DG package must be loaded accordingly. Always take care that loading is done in accordance with the orientation arrows and take care that the positioning of these packages enables the labels to remain visible;

- When you or other agents involved in the chain of transportation discover that labels have become lost, detached or illegible, you must replace them in accordance with the info provided on the Shipper's Declaration. This requirement does not apply where the labels are found to be missing or illegible at the time of acceptance;
- **Goods marked with an orange and black label showing 'Cargo Aircraft Only' must never be loaded on** Carpatair aircrafts. Should such good be identified, it will be immediately unloaded. An investigation will begin to determine whether the CAO label is correctly applied of it should be removed as the respective good is not a DG but regular cargo or baggage;
- DG marked with labels or signs saying 'Top Load Only' or similar should be loaded at the top of the rest of the cargo load but otherwise be suitably netted down or restrained as for the rest of the load;
- Be aware of any restrictions which the shipper or his agent may impose, or which may be stated on the packaging – some DG which can be carried on an aircraft carrying other DG on the same flight may need to be loaded at a distance from the other DG or may need to be separated by a non-DG item. Check with the segregation of DG table 9.3A of IATA DGR;
- Dangerous goods must be secured in such a way that will prevent any movement in flight which would change the orientation of the package or will prevent accidental damage to the aircraft or the other load of the cargo compartment where it has been loaded;
- Any package, which appears to be damaged or leaking, will be removed from the aircraft and safe disposal arranged. In case of leakage, the ramp agent will ensure that the remainder of the consignment is undamaged and that no other package, baggage or cargo has been contaminated;
- In the aircraft has been contaminated by dangerous goods leakage
- Dangerous goods shall be loaded separately from other cargo or incompatible material as per the current DGR manual. Details of dangerous goods must be reflected on the Special Load – Notification to Captain Form (KRP 165);
- The only cases when dangerous goods can be carried in the passenger cabin as passenger or crew baggage are those accepted according to Table 2.3A of IATA DGR, Provisions for Passengers and Crew. If dangerous goods are transported as cargo, they shall be carried in the cargo compartment(s) only.

B. Segregation of Dangerous Goods and Incompatibility Chart

Packages containing dangerous goods, which might react dangerously with each other, must not be stowed on an aircraft next to each other or in a position that would allow interaction between them in the event of leakage. To maintain acceptable segregation between packages containing dangerous goods having different hazards, 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, irrespective of whether the hazard is the primary or subsidiary risk.

NOTE:
Incompatible dangerous goods must also be segregated during acceptance, handling and loading. Operators, freight forwarders and ground handling agents must also ensure that local government regulations applicable to the storage and handling of dangerous goods are complied with. These local government regulations may impose a greater requirement than that specified in Table 9.3.A.

Table 9.3.A (IATA Dangerous Goods Regulations)

Segregation of Packages (9.3.2)

Δ **TABLE 9.3.A Segregation of Packages (9.3.2)**

Hazard Label	1 excl. 1.4S	2.1	2.2, 2.3	3	4.1	4.2	4.3	5.1	5.2	8	9 see 9.3.2.1.3
1 excluding 1.4S	See 9.3.2.2.5.	x	x	x	x	x	x	x	x	x	x
2.1	x	—	—	—	—	—	—	—	—	—	x
2.2 2.3	x	—	—	—	—	—	—	—	—	—	—
3	x	—	—	—	—	—	—	x	—	—	x
4.1	x	—	—	—	—	—	—	—	—	—	x
4.2	x	—	—	—	—	—	—	x	—	—	—
4.3	x	—	—	—	—	—	—	—	—	x	—
5.1	x	—	—	x	—	x	—	—	—	—	x
5.2	x	—	—	—	—	—	—	—	—	—	—
8	x	—	—	—	—	—	x	—	—	—	—
9 see 9.3.2.1.3	x	x	—	x	x	—	—	x	—	—	—

Notes:

1. 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.

2. Divisions 1.4S and Classes 6, 7 and 9 (other than lithium batteries, see 9.3.2.1.3) are not included in Table 9.3.A as they do not require segregation from other classes of dangerous goods.

Packages containing dangerous goods with multiple hazards where the class or division of the primary and subsidiary hazards require segregation in accordance with Table 9.3.A need not be segregated from other packages bearing the same UN number, e.g. UN 3129, Water reactive liquid, corrosive, n.o.s.

Packages and overpacks containing UN 3480 - lithium ion batteries prepared in accordance with Section IA or Section IB of PI 965 and packages and overpacks containing UN 3090 - lithium metal batteries prepared in accordance with Section IA or Section IB of PI 968 must not be stowed on the 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 4.1or 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.

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.

Incompatibilities between Dangerous and Non-dangerous Items

Some dangerous goods may also be incompatible with some types of *non-dangerous cargo*. These LOADING PRECAUTIONS are detailed in the chart below.

CLASS / CARGO	Toxic and Infectious Substances	Radioactive Material Categories II and III	Dry Ice and Cryogenic Liquids
	Class 6	Class 7	Class 9
Live Animals	✕	↔	◀‖▶
Hatching eggs		↔	◀‖▶
Undeveloped Films		↔	
Foodstuff or Other Edible Substances (Fish, Seafood, Meat)	✕		

✕ identifies packages must not be loaded in the same compartment
↔ minimum separation
◀‖▶ identifies packages to be physically separated, either by other cargo, or by separate tie-down

Notes:

1. *Magnetized materials must not be loaded in such a position that they will have a significant effect on the direct-reading magnetic compasses or on the master compass detector units.*
2. *Live animals should be stowed above packages containing Carbon dioxide, solid (dry ice), as the vapors emitted are heavier than air and will concentrate on the lower level of the hold*
3. *All class 6 substances (toxic and infectious) must **not** be stowed in the same compartment with animals, substances marked as or known to be foodstuffs, feed or other edible substances intended for consumption by humans or animals. This does not apply if:*
   a. *either the toxic or infectious substances and the foodstuffs or animals are loaded in separate ULD's and, when stowed aboard the aircraft, the ULD's are not adjacent to each other; or*
   b. *the toxic or infectious substances are loaded in one close ULD and the foodstuffs or animals are loaded in another closed ULD.*

Packages of dangerous goods must be protected from damage and secured to prevent any movement in flight that would change the orientation of the packages.

Packages containing dangerous goods, which might react dangerously with each other, must not be stowed on an aircraft (or in a warehouse) next to each other, or in any position that would allow interaction between them in the event of a leakage.

Physical separation can be achieved by:

- EITHER separating tie-down of the packages;
- OR locating ordinary non-dangerous cargo packages between incompatible packages.

To maintain acceptable segregation between packages containing dangerous goods having different hazards, the segregation requirements shown in DGR Table 9.3.A must be observed. The segregation requirements apply based on all hazard.

Loading of dangerous goods and other types of cargo and baggage must comply with the stowage and segregation restrictions. For instance:

- All packages bearing **orientation labels** must be loaded in upright position. Such packages must be properly secured. Single packaging with end closures containing liquids must be stowed with such closures upwards.

Loading of Wheelchair as Checked Baggage

Wheelchairs or other battery-powered mobility aid being carried with the approval of the Operator as checked baggage must be loaded according to IATA DGR.

A. Wheelchairs/Mobility Aids with Non-spillable Wet Batteries, Nickel-Metal Hydride Batteries or Dry Batteries

Battery-powered wheelchairs or other similar mobility aids 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), with non-spillable wet batteries which comply with Special Provision A67 or nickel-metal hydride batteries which comply with Special Provision A199 or dry batteries which comply with Special Provision A123. These batteries must meet the following requirements:

(a) The mobility aid must be prepared for transport to prevent :
- unintentional activation; and
- non-spillable batteries are not permitted to contain any free or unabsorbed liquid

(b) The operator must secure, by use of straps, tie-downs or other restraint devices, a battery powered mobility aid with installed battery (ies). The mobility aid, the battery(ies), electrical cabling and controls must be protected from damage including by the movement of baggage, mail or cargo;

(c) the operator must verify that:

1. the passenger has confirmed that the battery is a non-spillable wet battery that complies with special provision A67, or a nickel-metal hydride battery that complies with Special Provision A199 or dry battery that complies with Special Provision A123;

2. the battery terminals are protected from short circuits, e.g. by being enclosed within a battery container;

3. the battery is either:

   (i) adequately protected against 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 manufacturer's instructions; or

   (ii) removed from the mobility aid following the manufacturer's instructions.

(d) a passenger may carry a maximum of :

- one spare wet, non-spillable battery meeting Special Provision A67; or

- two spare nickel-metal hydride batteries meeting Special Provision A199 or dry batteries meeting Special Provision A123

(e) the operator must ensure that any battery(ies) removed from the wheelchair/mobility aid or spare batteries are carried in strong, rigid packaging which must be carried in the cargo compartment (see 9.3.14.6 and Figure 9.3.C);

(f) the operator must inform the pilot-in-command of the location of mobility aids with installed battery(ies), removed battery(ies) and spare battery(ies).;

(g) advance arrangements are required

B. Wheelchairs/Mobility Aids with Spillable Batteries

Battery-powered wheelchairs or other similar mobility aids 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), with spillable batteries.

These batteries must meet the following requirements:

(a) 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;

(b)) the operator must verify that:

1. the battery terminals are protected from short circuits, e.g. by being enclosed within a battery container;

2. the battery is fitted, where feasible, with spill-resistant vent caps;

3. the battery is either:

- securely attached to the mobility aid and the electrical circuits are isolated following the manufacturer's instructions;

  or

- removed from the mobility aid following the manufacturer's instructions when required by Part 2.13.2.3 of the Technical Instruction.

(c) the operator must load, stow, secure and unload a mobility aid with a spillable battery in an upright position. If the wheelchair or mobility aid cannot be loaded, stowed, secured and unloaded always in an upright position or if the mobility aid does not adequately protect the battery(ies), the operator must remove the battery(ies). The removed battery must be carried in strong, rigid packaging's as follows:

1. packaging's must be leak-tight, impervious to battery fluid and be protected against upset by securing to pallets or by securing them in cargo compartments using appropriate means of securement (other than by bracing with freight or baggage) such as by use of restraining straps, brackets or holders;

2. batteries must be protected against short circuits, secured upright in these packaging's and surrounded by compatible absorbent material sufficient to absorb their total liquid contents; and

3. these packagings must be marked "BATTERY, WET, WITH WHEELCHAIR" or "BATTERY, WET, WITH MOBILITY AID" and be labelled with the "Corrosive" label and with the "Package Orientation" label as required by Part 5;3 of the Technical Instructions.

(d) the operator must inform the commander of the location of mobility aids with installed batteries

and removed batteries;

(e) it is recommended that passengers make advance arrangements.

C. Wheelchairs/Mobility Aids with Lithium Ion Batteries

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;

The operator must verify:

1. the battery terminals are protected from short circuits, e.g. by being enclosed within a battery container;

2. the battery is either:

   a) securely attached to the mobility aid and the electrical circuits are isolated following the manufacturer's instructions;

   or

   b) removed by the user, if the mobility aid is specifically designed to allow it to be, following the manufacturer's instructions; and

3. the removed battery does not exceed 300 Wh and that its spare battery does not exceed 300 Wh or its two spare batteries do not exceed 160 Wh each.

The operator must ensure that any battery(ies)removed from the mobility aid and any spare battery(ies) is (are) carried in the cabin and protected from damage (e.g. by placing each battery in a protective pouch) and the battery terminals protected from short circuit (by insulating the terminals, e.g. by taping over exposed terminals).

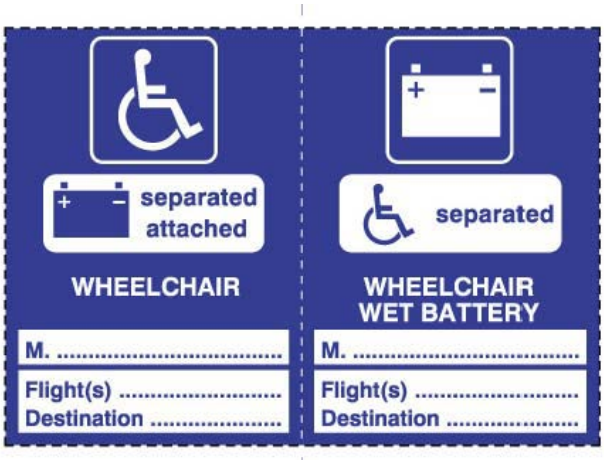
Commander shall be informed of the location of any mobility aids with installed lithium ion battery(ies), removed battery(ies) and spare battery(ies).

It is recommended that passengers make advance arrangements.

For complete loading instructions, check also with IATA Dangerous Goods Regulations.

Battery-Powered Wheelchair / Mobility Aid Label

To assist the handling of wheelchairs and mobility aids with batteries, the label below may be used to assist in identifying whether or not a wheelchair has had the battery removed. The label is in two parts; Part A remains with the wheelchair and indicates whether or not the battery has been removed. In the particular case where the battery is separated from the wheelchair, Part B may be used to assist in identifying the battery and also in reconciling the battery and its wheelchair.



Securing Orientation Label Packages

Packages bearing the package orientation “This Way Up” label must be loaded, stowed and handled at all times in accordance with such a label. Single packagings with end closures containing liquids must be stowed with such closures upwards.
All packages with orientation labels are to be properly secured to prevent their movement during the flight, and their labels are visible.

Loading of Magnetized Material

Magnetized material must not be loaded in such a position on the aircraft as to have a significant effect on the direct reading magnetic compasses or on the master compass detector units.
Note: 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 aircraft 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 magnetised material.

Loading of Dry Ice

Carbon dioxide, solid (dry ice) shipped by itself or used as a refrigerant for other commodities may be carried only as checked baggage or carry on baggage or as refrigerator for catering supplies.. The ground staff must be informed that Carbon dioxide, solid (dry ice) is being loaded or is on board the aircraft.

The information provided to the pilot-in-command must reflect the quantity of dry ice.

As required by the Regulations, crew and passenger checked baggage containing dry ice must be marked to identify that the baggage contains dry ice and shows the quantity of dry ice or identifies that there is 2.5 kg of dry ice or less. To assist with the handling of passenger and crew checked baggage containing dry ice, the figure above shows the baggage label used by Carpatair to identify such items of checked baggage.
Dry ice used for other purpose like refrigerator for catering, is described in KRP PR -157 loading of dry ice in the Carpatair aircraft’s cabin

- *Caution: To avoid suffocation, before entering a confined space (including the cargo holds) where Carbon dioxide, solid (dry ice) has been loaded or stored, ensure adequate ventilation has occurred..*

Check – in – Dry Ice transported in checked or as checked baggage

- ensure if packages / bags contain Dry Ice and if so, check if the general packing condition is met: max 2.5 kg Dry Ice / package / bag and if they allow the release of Co2 formed.
- will apply the above label on the packages / bags containing Dry Ice
- the maximum total amount of Dry Ice accepted at check in per flight is 10 kg
- shall notify via e-mail the Load Control office and Carpatair Ground Operations about the amount of Dry Ice loaded in the hold.

Cabin - Dry Ice transported in cabin or as cabin baggage

Maximum amount of Dry Ice that can be loaded into the aircraft in the cabin is 10kg per flight.

Loading of Miscellaneous DG – Self-inflating life-saving appliances

Life rafts, survival kits or aircraft emergency evacuation slides may be transported like many other aircraft spare parts according to the relevant instructions of the IATA Dangerous Goods Regulations (DGR).
The number of self-inflating life-saving appliances per aircraft is not limited if transported under the conditions of the IATA Dangerous Goods Regulations (DGR).
This means that unpacked or not properly packed self-inflating lifesaving appliances are totally forbidden without exception.

Toxic and Infectious Substances 6.1 and 6.2

Such dangerous goods must never be stowed next to animals, foodstuffs, feed or other edible substances intended for consumption by humans or animals.

Loading of Expandable Polymeric Beads

A total of not more than 100 kg (220 lb) net weight of expandable polymeric beads (or granules) or plastic molding materials referenced to Packing Instruction 908, may be carried in any inaccessible hold on any aircraft.

Handling of Self-Reactive Substances and Organic Peroxides

Packages and unit load devices containing packages of self-reactive substances of Division 4.1 and/or organic peroxides of Division 5.2 must be protected from direct sunlight and kept away from all sources of heat and be placed in adequately ventilated areas during the course of loading, unloading and storage.

Special Load NOTOC (Notification to Captain) for DG

Carpatair shall inform the commander about the dangerous goods that will be carried on board (except for DG in Excepted Quantity). This must be done before departure and in writing.
This information is presented on the Special Load Notification to Captain.

Carpatair will ask, as well, its handling agent to issue NOTOC for the dangerous goods that are to be carried.

The ground handling staff (acceptance personnel) of an aircraft in which dangerous goods are to be carried must provide to the load control in charge person(s) and to Carpatair on duty flight dispatcher at flight.dispatch@carpatair.com the following information concerning dangerous goods (except for "excepted quantities") which specifies at least the following:

1. the date of the flight;
2. the Air Waybill number (when issued);
3. the proper shipping name (see 8.1.3) (the technical name(s) shown on the Shipper's Declaration is not required) and UN number or ID number as listed in these Regulations. 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";
4. the class or division and subsidiary hazard(s) corresponding to label(s) applied (see also 8.1.6.9.1, Steps 4 and 5n IATA DGR), by numerals and in the case of Class 1, the compatibility group;
5. the Packing Group as shown on the Shipper's Declaration;
6. 6.(for non-radioactive material) the number of packages, the net quantity, or gross weight if applicable, including the units of measurement, of each package, except that this does not apply to dangerous goods where the net quantity or gross weight is not required on the Shipper's

Declaration for Dangerous Goods (see 8.1.6.9.2, Step 6 IATA DGR), or, when applicable, alternative written documentation and their exact loading location;

a) 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;
b) the number of overpacks and an indication of which dangerous goods packages are contained in each overpack;
c) the number of all packed in one packages and an indication of which dangerous goods are contained in the package(s).

8. whether the package must be carried on cargo aircraft only;

9. the airport at which the package(s) is to be unloaded; and
10. (where applicable) an indication that the dangerous goods are being carried under a State exemption.
11. confirmation there is no evidence of damaged or leaking packages

When dangerous goods packages are contained in an overpack, the information should show the overpack information immediately following the entries within it.

When different dangerous goods are contained in one outer packaging, the piece count may be left blank for each entry and shown only for the outer packaging. The information should show the all packed in one information immediately following the entries within it.

Where the operator intends to make it possible for the pilot-in-command to provide telephone number instead of the details about the dangerous goods on board the aircraft as specified in 9.5.1.3, the telephone number from where a copy of the information to the pilot-in-command can be obtained during the flight must be provided in addition to the information specified above in 9.5.1.1.3.

The dangerous goods listed in Table 9.5.A need not appear on the information provided to the pilot-in-command.

For UN 1845, Carbon dioxide, solid (dry ice), the information required by 9.5.1.1.3 may be replaced by the UN number, proper shipping name, class, total quantity in each cargo compartment on the aircraft and the aerodrome at which the package(s) is to be unloaded need to be provided.

For UN 3480 (Lithium ion batteries) and UN 3090 (lithium metal batteries), the information required by 9.5.1.1.3 may be replaced by the UN number, proper shipping name, class, total quantity at each loading location, the aerodrome at which the package(s) is to be unloaded and whether the package must be carried on a cargo aircraft only. UN 3480 (Lithium ion batteries) and UN 3090 (lithium metal batteries) carried under a State exemption must meet all of the requirements in 9.5.1.1.3 DGR.

This information to the commander should be presented on a dedicated form and should not be by means of Air Waybills, “Shipper's Declaration for Dangerous Goods”, invoices, etc. The pilot-in-command must indicate on a copy of the information to pilot-in-command, or in some other way, that the information has been received.

The information to the commander must also include signed confirmation, or some other indication, from the person responsible for loading the aircraft, 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 aircraft.

The information to the commander must be readily available to the commander during flight.

A legible copy of the information to the commander must be retained on the ground. This copy must have an indication (pilot signature) on it or with it that the commander has received the information. A copy, or the information contained in the notice to the commander, must be readily accessible to Carpatair, until after the arrival of the flight.

In addition to the languages, which may be required by the State of the operator, English should be used for the information to the commander.

In the event of the information to the commander being of such a size as to make in-flight radiotelephony transmission impracticable in an emergency situation, a summary of the information should also be provided by the operator, containing at least the quantities and class or division of dangerous goods in each cargo compartment.

The above information and the ERG code shall be communicated in written by the load control to the pilot in-command via NOTOC

The NOTOC:

- must be signed by the load control agent who completes the NOTOC;
- must contain the name and signature of the handling / loaders' supervisor responsible for loading the Dangerous Goods, in which he confirms that there was no evidence of any damage to or leakage from DG packages loaded on the aircraft;
- must be signed by the commander prior to departure;
- must be prepared at least in two copies, of which the one bearing the commander's signature shall be retained on the ground, readily accessible at the airport of departure; the other copy shall be readily accessible in the cockpit during all phases of the flight as this information is vital when responding to in-flight emergencies;
- must be entered in DCS by the load control agent.

The PIC or, the Co-pilot, must check if the Dangerous Goods are loaded correctly and if they are properly secured on board the aircraft.
For the carbon dioxide, solid (dry ice) when carried as refrigerant for other than dangerous goods, only the UN number, proper shipping name, class, total quantity in each hold on the aircraft and the airport at which the package(s) is to be unloaded need to be provided.
A legible copy of the NOTOC will be retained on ground. This copy will have an indication on it or with it that the pilot-in-command has received the information (the PIC's signature on the copy of the NOTOC). The copy or the information contained in it must be readily accessible to the airport of last departure and next scheduled arrival, until after the flight to which the information refers.

C. Unloading of Dangerous Goods

In general, the same basic requirements for careful handling are observed as when loading DG onto the aircraft. Usually DG are loaded last and unloaded first, but this is not a rule, as different types of priority carriage may change this sequence so that dangerous goods sometimes need to be loaded first and unloaded last. Some aircraft types may be specially equipped for the carriage of DG as a specialized carriage process.

Upon unloading, both the segregation rules and the specifications of the handling labels attached to the packages (the orientation indications, the "keep away from heat" label, etc.) will be respected so as to prevent any incident or accident on the apron or in the store.

Procedure in Case of Damaged or Spilling DG Package
If you receive a damaged package from the Shipper at the acceptance office:

- Do not open the package.
- Inform the Shipper that the package is damaged, refuse the package and fill out a Dangerous Goods Occurrence Report

When commencing the unloading of DG, the cargo agent must be aware of the possibility that a spill may have occurred. If so, the unloading process must be stopped immediately, he should inform the pilots and leave the aircraft. The pilots will leave the aircraft as well, irrespective of the stage of their duties. Most immediately, handling agent (if he is present at the aircraft) must notify the Airport Fire Fighting and/or any other specialized team on the Airport as soon as possible. The Fire Fighters have their own specific drills as to how to handle the situation to secure the aircraft and render it safe until unloading can be resumed. They will liaise with Carpatair cargo agent on that point.
This is one of the reasons for the DG labeling – so that if something does go wrong, there is enough detail on the labels to allow the Fire Fighting team to determine what they will do about the situation.
Once the damage has been contained and decontamination effected, the aircraft will be released to its owner and suitable liaison between the owner and the appropriate charterer, freight company or handling company, unloading can then continue.

Then, the cargo agent must:

- Fill out a Dangerous Goods Occurrence Report and send it to the appropriate authorities.
- If the package is damaged but there are no leakages, write the report and warn the consignee.
- If there are leakages, start the emergency procedure and call for decontamination team (announce the Fire Brigade at the airport).
- Warn everybody on the spot not to touch the package.
- Depending on the type of DG, take the appropriate measures (isolate the area and the other cargo and baggage, if possible or keep distance minimum 25 m).
- Return the package to the Shipper in a Salvage packaging.
- Assuming there has been no untoward occurrence, once DG are unloaded and placed in suitable transport for onward travel (a SALVAGE packaging), further unloading of the aircraft may continue.

Emergency Procedures

Emergency procedures for dangerous goods must be available wherever dangerous goods are handled. Such procedures may be established by government or airport authorities' operators or other sources. It is important that the staff must be trained and familiar with the local requirements and aware of all emergency contacts.

Never touch damaged or leaking packages which contain or which are suspected to contain dangerous goods until the nature of the hazard is known and – if necessary – protective measures for handling are taken.

The general emergency procedures to be followed comprise the following:

- immediately advice the first supervisor and the airport operations supervisor
- identify the nature, source and corresponding hazard of the contamination
- immediately inform the commander of the aircraft
- stop the handling activities, remove all possible sources of ignition, if necessary
- isolate the package by removing other packages or property in the area
- do not allow the access to unauthorized personnel
- avoid contact with the contents of the package, do not touch, sniff, taste or walk trough any substances or spilled material
- seek professional advice from the emergency services who are trained to respond to these incidents
- remove the contamination from the aircraft without delay
- seek confirmation from the emergency services that the area is safe and you may enter
- in case of radioactive contamination the aircraft must also be taken out of service for evaluation by qualified staff and not returned to service it has been determined that there is no risk to health of the personnel of Carpatair and its passengers.
- If contents come in contact with the body or clothes, isolate all personnel suspected of being contaminated and refer to treatment
  - wash your body with plenty of water
  - remove contaminated clothes
  - do not eat or smoke
  - keep hands away from eyes, mouth and nose
  - seek medical assistance

Staff involved in such incidents should stay on site until their names are noted.
The dangerous goods incident/accident report form shall be kept for 12 months.

Undeclared dangerous goods

If undeclared dangerous goods are noticed or strongly suspected to be in baggage, cargo or mail packages:

- do not load these bags or packages into the aircraft;
- Inform the flight dispatch at TSR or the operations supervisor on other stations

Emergency Response Chart
The organizations responsible for the salvage of dangerous goods (fire brigade, technical and medical institutions, etc.) must be informed immediately.

Handling
If damage or leakage of a DG package is noticed during loading or unloading:
- do not load DG packages which are inadequately packed or damaged or leaking, or which seem to be damaged;
- check packages of the same shipment for similar defects, e.g., insufficient plugs;
- unload other packages also, if necessary;
- unload other packages if they are contaminated by DG leaking from a damaged package

Additional Procedures for Responding to Emergency Situations

When a situation of spillage or leakage appears on board aircraft, the possibility of an in-flight emergency caused by dangerous goods incident (e.g. spillage or leakage) exists. Such situations require immediate attention to both flight and cabin crew. The following procedure shall be used after landing as guidance when responding in to emergency situation involving dangerous goods.
Disembark all passengers and crew before opening the affected area (e.g. cargo compartment). Even if it has not been necessary to complete an emergency evacuation after landing, passengers and crew should disembark before any attempt is made to open the cargo compartment doors and before any further action is taken to deal with a dangerous goods incident. The cargo compartment doors should be opened with the emergency services in attendance.
Inform the ground personnel / emergency services of the nature and location of the dangerous goods items.

Upon arrival, take the necessary steps to identify to the ground staff where the item is stowed. Pass on by the quickest available means all information about the item including, when appropriate, a copy of the NOTOC.
The aircraft must also be taken out of service and not returned to service until it has been determined that there is no risk to health of the personnel of Carpatair and its passengers.
A good reference guide to have on station is ICAO document 9481-AN928, which details Emergency Response Guidance, but is rather useful for crew members when such accident/incident occurs during the flight.

Reporting of Incidents Involving Dangerous Goods

Any type of dangerous goods incident or accident must be reported, irrespective of whether the dangerous goods are contained in cargo, mail, passengers' baggage or crew baggage. The finding of any undeclared, omitted or misdeclared goods in cargo, mail or baggage shall be reported as well. Appropriate notification shall be given to the state in which the accident occurred, as well as to the Romanian Civil Aeronautical Authority.
According to IATA DGR, chapter 9.6.2, "the operator must report any occasion when dangerous goods not permitted under Subsection 2.3 are discovered in passengers' baggage. Such a report must be made to the appropriate authority of the State in which this occurred."
The initial report shall be made as soon as possible using the specific Dangerous Goods Occurrence Report (form KRP 152, *Occurrence Report for a Dangerous Goods Accident or Incident* in the Annex B) by the person directly involved in the occurrence (whether accident, incident or other). It will be sent (by email or fax) to ground.admin@carpatair.com. A file will be opened for each event, which will comprise of all the information, documents and communication evidence related to the event. If available, photos and other relevant documents shall be included to the report.
Then, the procedure described above for all kinds of incidents will be observed.
In case of leakage and/or damage to packages, of which the integrity of the package cannot be guaranteed, the incident shall be reported immediately.

4.11.2 Safety Requirements Specific to Aircraft Loading Operations

4.11.2.1 General

a) Get assistance when moving heavy articles;
b) Do not use baggage carts to gain access to cargo compartments;
c) The loader bridge height shall be monitored during the loading process and adjusted as necessary to maintain a correct alignment with the cargo hold floor;
d) Block or secure cargo which will not lie flat on conveyor belts;
e) Push DO NOT PULL containers on and off dollies and loaders;
f) Transporters must be secured to prevent movement by the use of locks, stops, rails or straps at all times, except when the load is being transferred onto or off the equipment;
g) Protect live shipments from inclement weather;
h) Be alert for special/dangerous goods shipments. Know how they must be handled and secured;
i) Operators of equipment shall ensure that other personnel are not entrapped by movement of Load/pallets/containers either in the aircraft or on the loading equipment;
j) Gates of loaded carts should be lowered carefully, in case loose cargo falls out and causes injury;
k) Holds and compartments shall only be entered or exited by using the appropriate elevating device and which has been positioned and secured, e.g. belt conveyor and cargo loader;
l) Elevating devices must not be removed from the aircraft when personnel are still within the cargo hold;
m) Do not walk between carts being towed, or when they are stationary on the ramp as you do not know when they may be moved;
n) When loading has been completed, move all loading equipment well clear of the aircraft.

4.11.2.2 Special Precautions when using Carts and Dollies

a) Do not wedge light packages between heavier items;
b) During transportation in carts and dollies ensure that the load is properly secured by using appropriate locks, stops, rails, curtains and straps;
c) Ensure the overall height of load permits safe lifting of each piece of load during loading and offloading of carts by personnel standing on the ground;
d) When using tarpaulins, ensure all straps are securely fastened to the baggage cart. (e) When not in use the braking system shall be engaged on all strings of baggage carts.

4.11.2.3 Special Requirements when using Tractors

a) Drive tractors and carts within speed limits according to local airport regulations, and take care to avoid sharp turns, jerks and sudden stops;
b) Approach the aircraft at walking speed;
c) Limit the number of carts and dollies in a train to the maximum specified by the local airport regulations;
d) Do not attempt sharp turns close to the aircraft. Keep at least 1 m away from the fuselage.

4.11.2.4 Special Precautions when using Belt Loaders

a) Ensure proper separation between articles on the conveyor belt to avoid jamming;
b) Adjust the back of the conveyor belt correctly to avoid dropping goods from the belt;
c) Handrails shall be deployed when a belt loader is used to gain access to aircraft cargo holds; however caution shall be exercised where there is restricted clearance with the aircraft fuselage or engines.

Warning Fall Hazard: Do not ride on the elevating platform to gain access to the loader bridge.

4.11.3 General Loading Precautions

a) Hold baggage must be inspected for signs of leakage before loading;

b) Any item of load which is not properly packed and any item that may damage or contaminate the aircraft must not be loaded;
c) Containers must not be contaminated when loaded (snow, wood, plastic etc.);
d) Use tarpaulins or covered carts during inclement weather;
e) Do not place goods directly on the apron;
f) Always observe the specific instruction labels and marks such as FRAGILE, TOP, THIS SIDE UP, etc;
g) Report torn (or missing) baggage tags and cargo labels, and do not load unless corrected;
h) Report immediately any damage to the load, whether it occurs during handling or is noticed on arrival;
i) Report immediately any spills, unusual fumes or smells, etc., to a Supervisor, Flight Crew or local authorities as required.
j)

4.11.4 Spills in Cargo Holds

a) Spills can occur in cargo holds during loading and in flight due to:
   - improper packaging;
   - damage due to mishandling prior to loading;
   - improper loading in the compartment.
b) Spills can be liquid, gels, or material in a powdered or granulated form;
c) Spills can be hazardous corrosive, flammable, explosive, toxic or 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 not cleaned up quickly.

It is essential that any spill is reported immediately to the crew, so that corrective action can be taken. Initiate the local emergency response plan for spill events.

4.11.5 Cargo Hold Inspection

4.11.5.1 General

When an offload is completed, a final check of ALL cargo holds must be conducted to inspect each cargo hold for:
a) Damage to the compartment;
b) Damaged or malfunctioning floor locks;
c) Spills in the hold that may have occurred;
d) Baggage or cargo that may have been left onboard the aircraft;
e) Any other items that should not be present in the hold.

A check must be conducted in a hold even if on arrival the hold was reported as not carrying any cargo/baggage (empty).
If any damage is found to the compartment or locks, if a spill has occurred, or if any other irregularity is found, it must be immediately reported to a supervisor, the flight crew, and/or a company representative as required by operating airline.

4.11.5.2 Cargo Hold Damage

Any damage to the structure or linings of containerized or bulk holds may lead to specific loading limitations. Therefore, any damage must be reported. The Load Controller shall be informed accordingly.

4.11.5.3 Compartment Separator Nets

Compartment separator nets must be secured prior to all flight departures.
Between offload and onload, compartment nets must be secured inside aircraft compartments and not left hanging outside, to avoid clips and attachment points from striking fuselage (especially during adverse weather conditions) or inadvertently hooked on GSE and pulled out of the aircraft.

4.11.5.4 Cargo Door Barrier Nets

Between offload and onload, compartment nets must be secured inside aircraft compartments and not left hanging outside.
Cargo door barrier nets must be installed prior to flight departure to prevent cargo from shifting in flight and damaging or blocking the compartment door.

4.11.6 Aircraft Ground Stability

Loading or offloading may cause the aircraft to become unstable or could cause the aircraft to tip. Respect aircraft ground stability requirements during loading and offloading. In general:

a) Offload aft holds before forward holds
b) When loading, load forward holds before aft holds

4.11.7 Loading

Responsibilities of Aircraft Handling Personnel
All handling personnel must make sure that the following load principles are observed.

Before loading:
Check the compartments for damage, missing or loose equipment or other items not belonging there.

Loading procedure

- Observe the regulations for crew baggage, cabin load and special loads including load incompatibilities;
- Before starting loading the baggage, perform again a short check of the cargo compartments and make sure they are empty and clean, with no sign of leakage or damage;
- Baggage can be loaded before the boarding of passengers if the balance sheet permits it. If there is any risk to perform this operation, then loading of the cargo compartment is stopped until boarding of passengers is completed and balance is restored;
- Make sure that all loading activities are performed according to the regulations provided in Load Control Manual about:

Load Instruction Report and loadsheet loading general rules, special loads, segregation, securing of load, loading priorities

- Use the available volume of the compartments to the maximum possible extent;
- Load heavy or solidly packed pieces always on or near to the floor;
- Do not load heavy or solidly packed pieces on top of lighter or sensitive load;
- If offloading the shipments because of weight or volume problems, observe load;
- Load sensitive shipment with special care (e.g., measuring instruments, fragile pieces, flowers, dangerous goods, etc.);
- Make sure that sensitive shipment cannot be damaged by other load.

Place of loading

- Use only the allowed compartments for loading;
- Ensure the distribution of the load according to the loading instruction;
- Do not load any pieces in toilets or in the crew compartments;
- Make sure that specially marked positions which must always be accessible for safety reasons are free at all times (e.g., vision lenses, gear extension indicators in the cabin floor, emergency exits).

Load Limits
Before any piece of cargo is accepted for carriage on an aircraft, the size of the compartment door must be checked.

4.11.7.1 Structure Limitations / Running Load Limitation

Definition
An aircraft is a flexible structure. In particular, the fuselage contorts during flight according to the loads it contains. For the fuselage contortion not to exceed - at any point - the maximum allowed limit, which would result in a risk of permanent damage, the manufacturer defines a running (linear) limitation, i.e. a maximum load acceptable on any given fuselage length. This limitation is expressed in kg/m of fuselage length. The linear limitation applies to the whole of the load located in a given part (on a given length) of the hold.

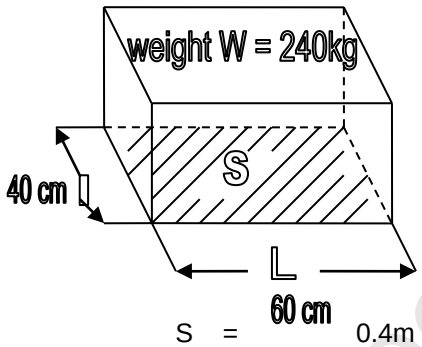
General
The linear limitation determines the total maximum load allowed in each bulk hold section. It is provided by the manufacturer in the appropriate chapter of the *Weight and Balance Manual.* Therefore, it is prohibited to exceed this maximum load per section.

Heavy packages:
In the event of carriage of one or several heavy packages, the running load limitation is completed.

4.11.7.2 Area Limitations

Definition
The area load limitation, expressed in kg/m^2, is to prevent the weight of the load expressed in kg resting upon a certain area of the compartment floor expressed in m^2 to exceed structure underneath the floor (beams, cross beams, attachments to the aircraft body).

General
The hold area load limit is provided by the aircraft manufactures in the appropriate chapter of the *Weight and Balance Manual.* It is generally referred to as "*Uniformly distribution Floor Loading"* or "*Maximum distributed Load*".
If it is stated that the area load limit is 750 kg/m^2, this means that 1m^2 of the floor, not more than a total amount of 750 kg may be loaded, with one or several pieces of cargo, and irrespective of the way the piece (or the pieces) of cargo is (are) in contact with the floor within the square meter considered.
In practice, the area load limitation shall be checked dividing the weight of the piece of cargo by the area defined by the external contour of its contact points on the floor.



S = L x l

Contact area = W

S

W = 240 kg

S = 0.4m x 0.6m = 0.24m²

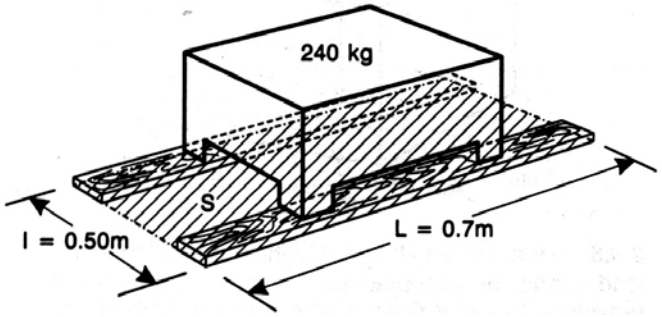
240 kg = 1000 kg/m² > 750 kg/m²

0.24m²

If the resulting figure is higher than the limitation, the load cannot be accepted as it is. It will be necessary to provide a spreader floor to be placed under the load. The spreader floor shall meet two requirements:

- It shall possess a sufficient degree of stiffness to effectively accomplish the load transfer; this degree of stiffness will be dictated by the weight of the load and the length of spreader projecting beyond or within each actual contact point of the package with the spreader floor;
- The resulting area, defined by the external contour of the contact points of the spreader floor, shall distribute the load below or up to the maximum permitted area load.

To determine the area required, the following calculation is made: divide the weight of the piece of cargo by the hold area load limit.



Area load limit = 750 kg/m²
W = 240kg

Minimum surface defined by the external contour of the contact points of the spreader floor:

240kg = 0.32m² spreader = 10 kg
750m² L = 0.7m l = 0.5m

S = L x l = 0.7m x 0.5 m = 0.35 m²

NOTE: The total weight is a combination of the load and spreaders.
The load imposed by the total weight of cargo and spreader on the aircraft structure may now be compared with the area load limit dividing the weight by the new area.

240kg + 10kg = 715 kg/m2 < 750 kg/m²
0.35m²

If the package requires a spreader floor, this means that even with this floor, the maximum area load limitation is reached. Therefore, no other cargo shall be loaded on the package itself or on the accessible parts of the spreader floor.

4.11.7.3 Contact Load Limitations

Definition
The floor contact load limitation expressed in kg/m^2 is used to prevent the weight imposed by those parts of the load in direct contact area to determine the area required the following calculation is made divide the weight of the piece of cargo by the hold area load limit.
Act with the floor from exceeding the capability of the horizontal floor panels (metal sheets, honey comb sandwich panels).

Floor Load Limitation – Generalities
The bearing capacity of the cargo compartment structure is limited and should never be exceeded. When needed, the contact area and the contact length of the load with the floor must be extended by attaching supporting boards or platforms.

It is of utmost importance to pay attention to:
The maximum floor load limitation, namely the maximum weight allowable for a load per 1 m^2.
The maximum floor compartment load in longitudinal direction, namely the maximum weight allowable for a load per linear meter.

- The maximum floor compartment load is specified in the IATA-AHM Manual chapter on aircraft characteristics;
- The contact surface between the floor and the load (item) is the surface of the item which is in direct contact with the compartment floor and which represents the real pressure area;

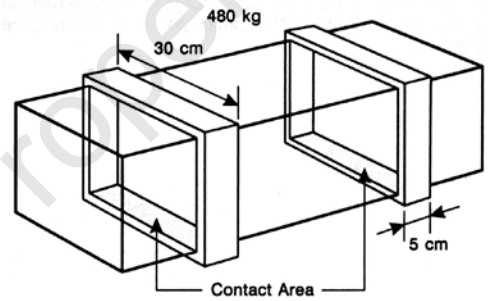
- For the calculation of floor load limitation, it is important to consider all parcels placed above the item located on the supporting boards or platforms, or on the free space of the boards;
- As a rule, the supporting boards will never be broken in order to cover smaller surfaces, as their contact surface cannot be determined, and consequently, useless material loss will result;
- Great pressure on the supporting boards by contact on a smaller surface of an object could bend the plate. To avoid this, several board layers should be used;
- On the aircraft board, the load must be accurately tied in order to resist under stability conditions at different forces during taking-off, in flight and upon landing as described below:

Forward forces: horizontal forces which operate during landings and during downward slopes of the aircraft
Rearward forces: horizontal forces which act during landing and during upward aircraft slopes
Sideward forces: forces that operate during brutal landings, turbulences and tight turns
Upward forces: vertical forces which operate during hard ladings and harsh turbulences during flights

The g factor indicates at which weight the load must be secured by binding (for example, 1.5 means 1.5 x the object's weight).

The floor contact load limit is provided by some aircraft manufacturers in the corresponding chapter of the *Weight and Balance Manual.* It is generally referred to as *"concentrated (Foot Print) load"* or *"Maximum Local Load".*

If it is stated that the floor contact load limit is 2000 kg/m^2, this limitation shall be checked dividing the weight of a piece of cargo by the sum of its actual contact area with floor.



W = 480 kg

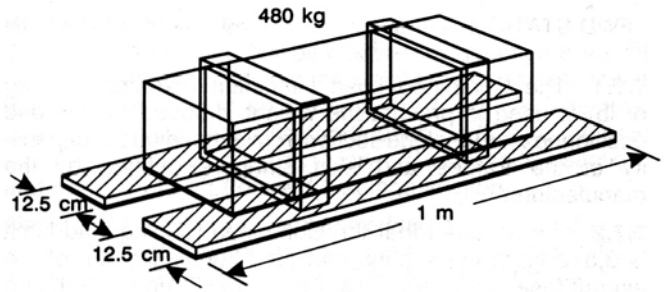
Actual contact area = 0.3m x 0.05 m x 2 battens = 0.03m²
480 kg = 16000 kg/m² > 2000 kg/m²
0.03m²

If the resulting figure is higher than the limitation, the load cannot be accepted as it is. It will be necessary to provide a spreader floor to be placed under the load.

The spreader floor shall meet two requirements:

- It shall posses a sufficient degree of stiffness to effectively accomplish the load transfer; this degree of stiffness will be dictated by the weight of the load and the length of spreader projecting beyond or within each actual contact point of the package with the spreader floor.
- Its actual contact area with the aircraft floor will distribute the load below or up to the maximum permitted contact load.

To determine the contact area required, the following calculation is made: divide the weight of the piece of cargo by the floor contact load limit.



Floor Contact Load Limit = 2000 kg/m²

W = 480 kg

Min. Contact Surface = 480 kg = 0.24 kg/m²

2000m²

Weight of spreader = 20 kg

L = 1m

I = 0.125m

Spreader floor contact surface = 1m x 0.125m x 2 = 0.25m²

NOTE: The total weight is a combination of load and spreader.
The load imposed by the cargo on the aircraft floor panels through the spreader floor may now be compared with the contact load limit dividing the weight by the new contact area.

480 kg + 20 kg = 2000 kg/m² = 2000m²

0.25m²

If the package requires a spreader floor, this means that even with this floor the maximum contact load limitation is reached. Therefore, no other cargo shall be loaded on the package itself or on the accessible parts of the spreader floor.

Where no floor local load limit is provided by the manufacturer, it is recommended to take the following steps when heavy pieces of cargo.

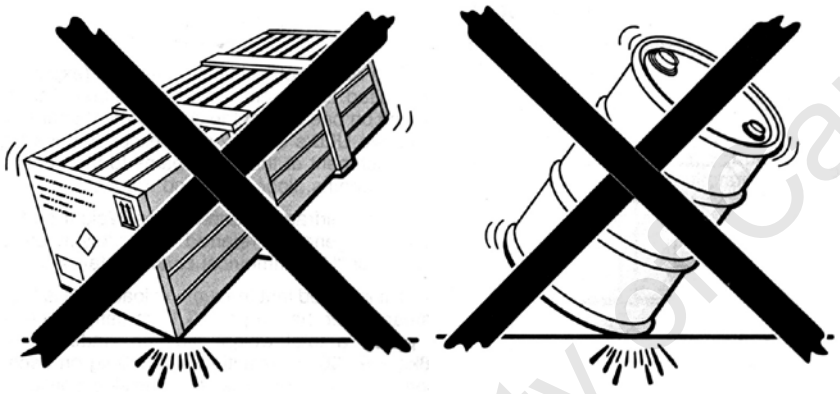
a) Check with the structure area load limitation;
b) Even if the area load limitation is not exceeded, but if the actual contact area of the piece of cargo with the floor is small, place spreader material between the piece of cargo and the floor.
The contact surface of the spreader should be at least equivalent to one quarter of the external contour area;
c) Step A is not required if it has been found necessary to use a spreader floor after checking step B.

4.11.7.4 Point of Limitation

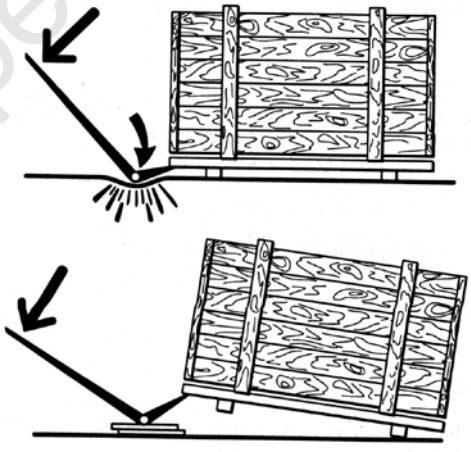
Definition
If defines the resistance to puncture (by a heavy load bearing onto a very small surface) to the material used in bulk hold floor. It is equivalent to a pressure, and is expressed in kg/cm².

General
In practice, the concentrated load limit of bulk floor is very high, normally handled packages does not reach that limit. This is why the point load limitation is not mentioned in the manuals of the aircraft manufacturers and carriers.
It is recommended, however, to apply the elementary package handling precautions indicated hereafter in order to avoid a floor puncture by a point load during handling in bulk hold.

Package handling:
- During handling, never lay a heavy (more than 50 kg) package on corner;
- Never drop down a heavy (more than 50 kg) package on an edge or a corner: the impact might result in floor puncture.



When using “Pinch Bar”, place floor protector device beneath the “Pinch Bar” prior to applying the load.



Spreaders
Being loaded pieces, which are, exceeded the maximum area limitation and / or running load limitation, to distribute the weight of the pieces to a large area, it is necessary to support the load with spreaders.

During operation:
- At least two spreaders must be used;
- It shall possess a sufficient degree of stiffness;
- Spreaders must be placed under the load.

WIDTH (Cm)	HEIGHT (Cm)	WEIGHT (Kg)	AREA (m^2)
15	**100**	**5**	**0.15**
15	**150**	**7.5**	**0.25**
15	**200**	**10**	**0.3**

4.11.7.5 Refusal of Load

Do not load any load:

- which may cause damage to the aircraft or to other load
- which has not been weighed properly
- which may contaminate the compartment or other load: dirty bowls for casings, dirty plastic foil, extremely dirty load or live animals, as having odor or causing discomfort
- which is not packed according to valid packing requirements, e.g. dangerous goods, human remains, animals
- if special handling instructions cannot be observed
- if necessary loading accessories are not available (ropes, planks, rings, etc.)
- which exceeds the permitted volume or the weight (as overload or compartment limitations – area load limitation, floor panel limitation, etc)
- if ventilation cannot be ensured when needed (AVIH, PER, etc.)
- which causes balance problem

Floor loading limits Airbus A320 Family

The floor structure can sustain via the floor panels the following load in the flat and sloped areas a maximum distributed load of 732kg/ m^2)

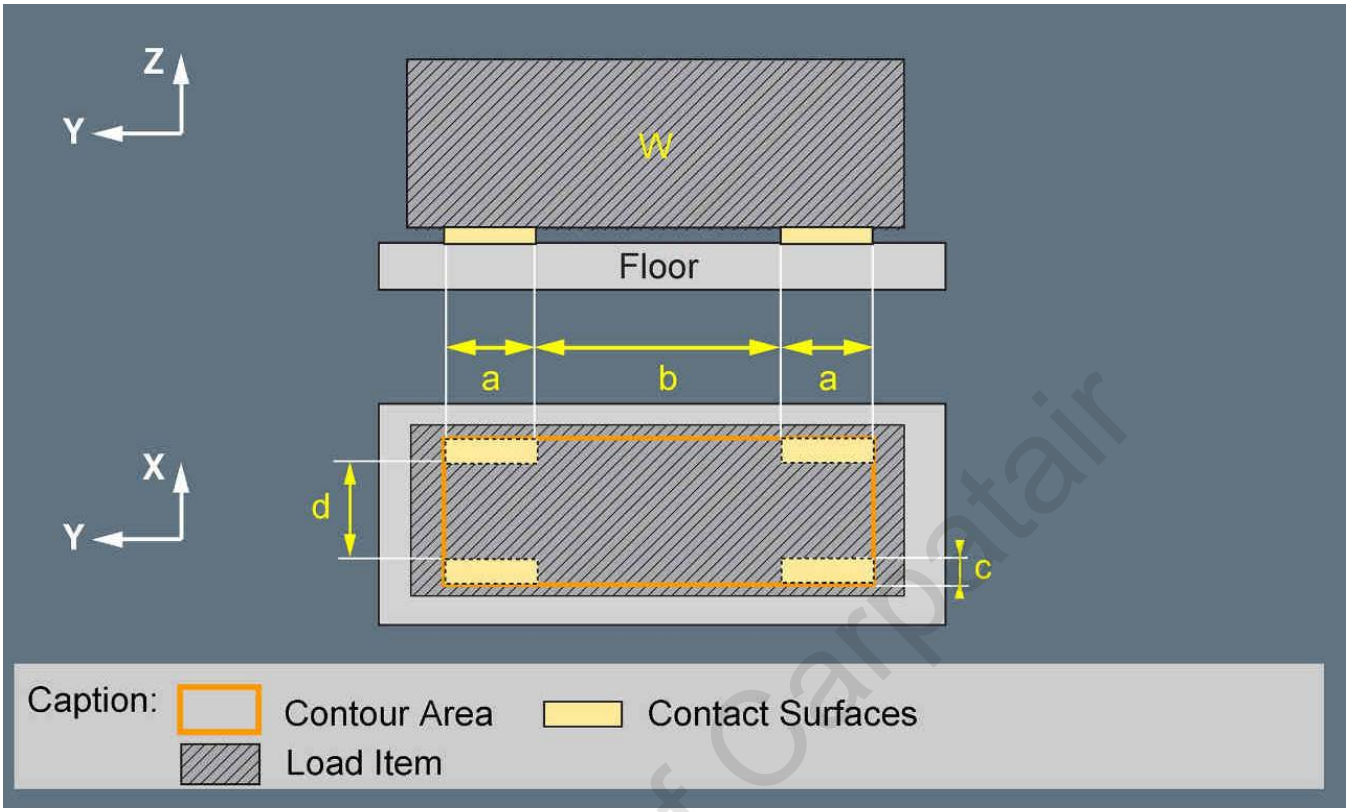
The distributed load limit is the maximum weight acceptable on the area delimited by the external contour of the contact points between the load and the floor.

Contact Load limitation

Each floor panel is capable of carrying a local load of **906 kg** on **0,093** m^2) for Airbus A320 Family
The local loads must be separated from each other in such a way that the floor structure load limitations are not exceeded.

The local load limit is the maximum weight acceptable on any floor panel area of 0.093 m^2 that will not lead to permanent deformations.
The point load limit is the maximum weight acceptable on any unit of surface of the floor panel that will not lead to puncture of the panel

FLOOR LOADING EXAMPLE



Symbol	Definition	Unit
W	Weight of the load item	Metric
a	Length of the contact surface	kg
b	Longitudinal distance between two contact surfaces	m
c	Width of the contact surface	
d	Lateral distance between two contact surfaces	

METRIC UNITS

$$\text{Distributed Load } (\text{kg/m}^2) = \frac{\text{Weight of the load item}}{\text{Contour Area}} = \frac{W}{(2a+b)\times(2c+d)}$$

LOAD FACTORS

When a restraint system is required to fasten an item, the operator must ensure that the restraint system resists the maximum apparent weight of the item in each direction.
In order to calculate the apparent weight of an item in each direction, the operator must use the load factors provided in the following table.

Compartment	Direction			
	FWD	Aft	Side	Up
1	Load Factors			
	1.69	1.37	0.88	2.44

EXAMPLE:

ASSUMPTIONS:

The operator loads an item with a weight of 200 kg. In accordance with the "Load Factors" table, the item is subject to a load factor of 1.69 in the forward direction.

OUTPUTS:

The apparent weight of the item in the forward direction is 338 kg (200 kg x 1.69).
This apparent weight is identical to the weight of an item with a weight of 338 kg not subject to a load factor.

4.11.7.6 Completion of Loading

Loading is completed after the following tasks have been finished:
Carpatair handling agent will inspect the cargo holds that:

- the load is secured;
- door safety nets and compartment separation nets are properly closed;
- the doors have not been damaged during loading;
- the doors are closed and locked properly.

4.11.7.7 Bulk Loading

General application

- Stowing of baggage, cargo and mail is permitted only in compartments designed for the accommodation of such load;
- The load must be properly protected against rain or snow until it is put on the aircraft;
- Loads must be treated with care to avoid damage to the aircraft and load;
- Special loads must be handled according to the special handling labels used. (e.g. “fragile”, “this side up”);
- Leaking shipments must not be loaded; any damage noticed must be reported to the appropriate departments;
- Any load missing identification (e.g. missing baggage tag, cargo label), must be identified before loading;
- The available separation nets must be properly secured to prevent shifting of load in flight;
- Heavy loads must be stowed at the bottom; if necessary, put heavy loads on spreaders in order not to exceed the maximum floor load;
- Special loads must be stowed in accordance with the relevant regulations;
- Stowing sequence:
- For maximum utilization of the available compartment volume, loads must be stowed as tightly as possible;
- When loading is completed, a visual check of the compartment should be done to roughly compare the volumes and weights with those mentioned in the loadsheet;
- Door protection nets must be properly secured before closing the compartment door.

Securing of the bulk load

- All loads must be secured in such a way that: in flight, it cannot work loose and cause hazardous displacement of the aircraft's center of gravity;
- Items weighing 150 kg or more must be secured, irrespectively whether the compartment or net section is volumetrically full or not;
- Items with an individual weight between 50 kg and 150 kg must be secured, if the compartment is not volumetrically full.

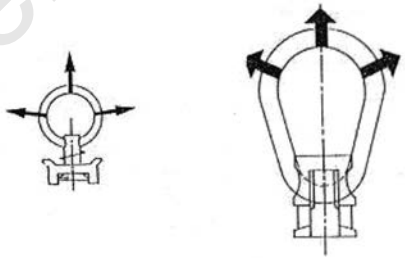
Any other individual items which, by their nature, shape or density, may constitute a hazard must be restrained by either filling the compartment or net section to its volumetric capacity or by tying down to the tie-down tracks of the compartment by means of tie-down fitting and ropes or straps.

Items with a weight over 150 kg must be anchored.
The load from individual net sections is secured with the help of compartment separation nets. After loading is finished, the nets have to be tightened very safely on the corresponding fixing devices.
In the main cargo hold, the crash net – if there is one – will be installed correctly.

Regulations

- It is not allowed to tie-down a load with different equipment;
- Tie-down must be performed exclusively either with straps or with ropes, without and mixing;
- Tie-down shall ensure restraint in at least three directions: forward, aft and upward in relation to the aircraft;
- Each strap or rope shall make a maximum angle of 30º degrees with the direction of restraint;
- Where the ropes or straps are attached directly from the load to the floor or edge rail two of these ropes or straps make one lashing.

Single tie-down may receive up to three straps or ropes in three different restraint directions. But it shall not receive more than one strap or rope in the same direction.



Application

- **Forward movement:** The entire lashing needed must be from the point of restraint on the load to a lashing point behind this point of restrain;
- **Backward movement:** Lashing must be from the point of restrain on the load to a lashing point forward this point of restrain;
- **Upward movement:** Lashing must be from a point as close as possible to the load, preferably going over the load from a lashing point side being restrained;
- **Sideways movement:** Lashing against sideways movement must always be on the opposite side being restrained.

Normal shaped load, the sideway restraint is provided by the restraints in the other directions. Load with **irregular** shape or high centre of gravity requires left-right restraint. Loose load is usually restrained by separation nets between sections or door protection

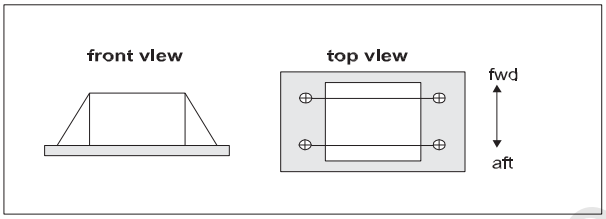
nets. Nevertheless, certain type of loads must always be tied-down. The following are examples of items which must always be tied-down:

a) All high density packages (sharp angles, steel extrusions, metallic trunks, etc.);
b) Power driven wheelchairs (bulk compartment);
c) Human remains (HUM).

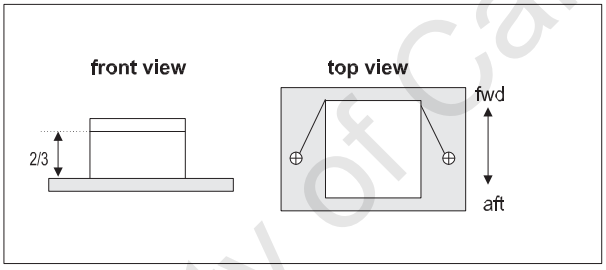
The following must be considered when applying tie-down of cargo. The total tie-down must ensure restraint in at least the following directions:

- Upward
- Forward and Aft
- Sideward

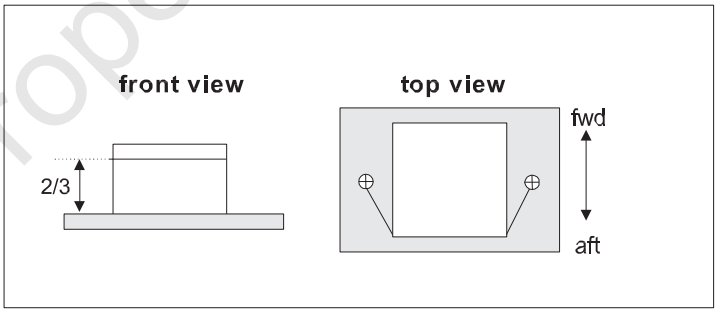
Upward:



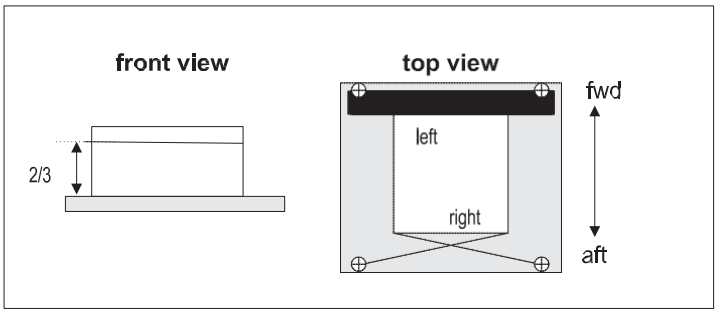
Forward and Aft:



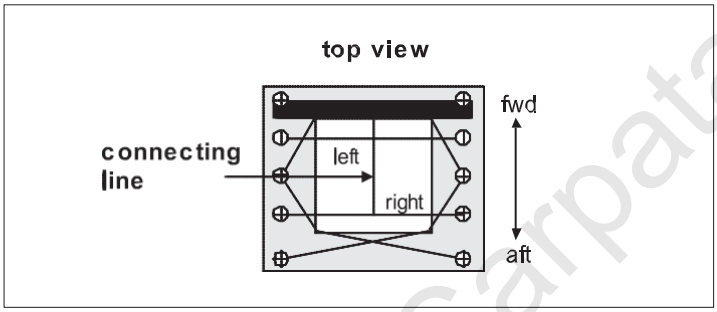
Rearward:



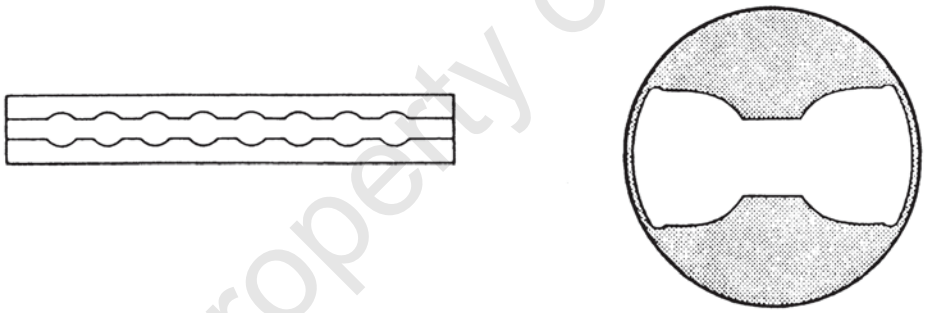
Sideward:



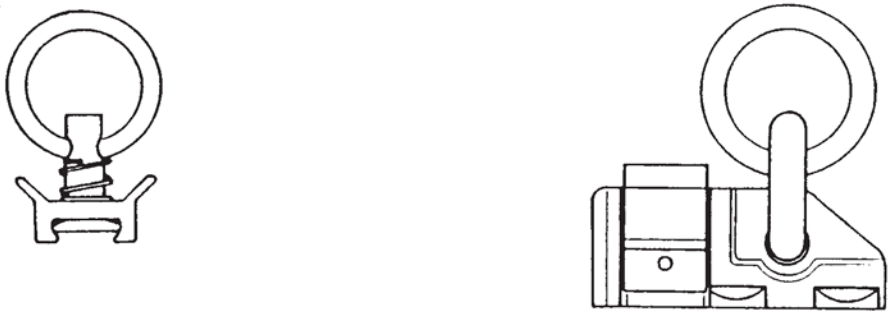
Completed Tie-down:



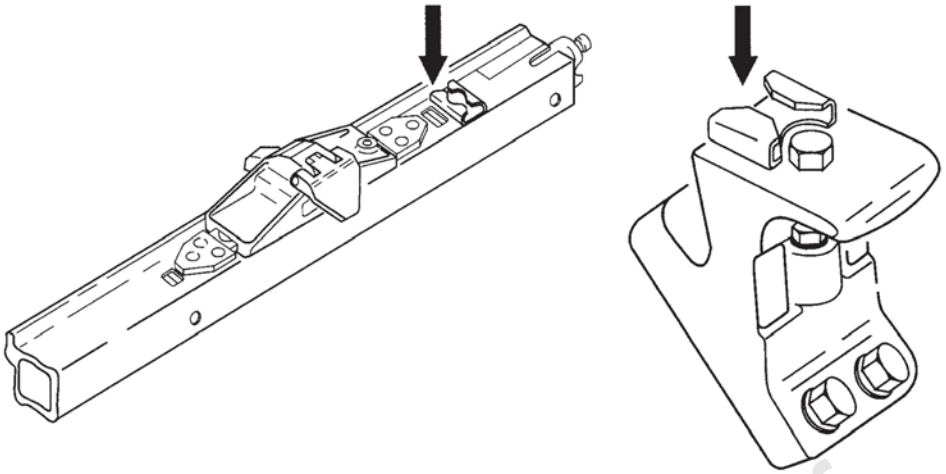
Tie-Down Equipment
Track and Anchor Plate



1-stud and 2-stud Fittings

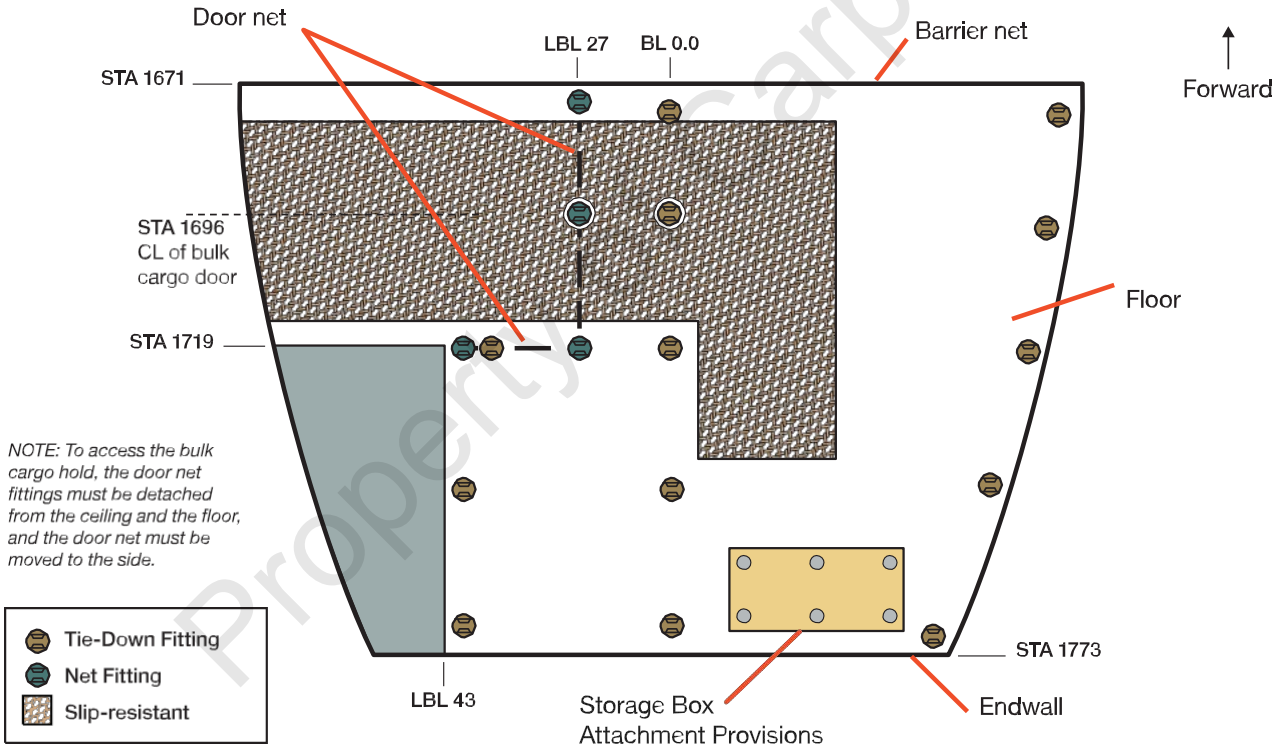


Outboard Side Lock and Side Guide



Tie-down Rope

Example of Tie-Down Provisions in Bulk Compartment

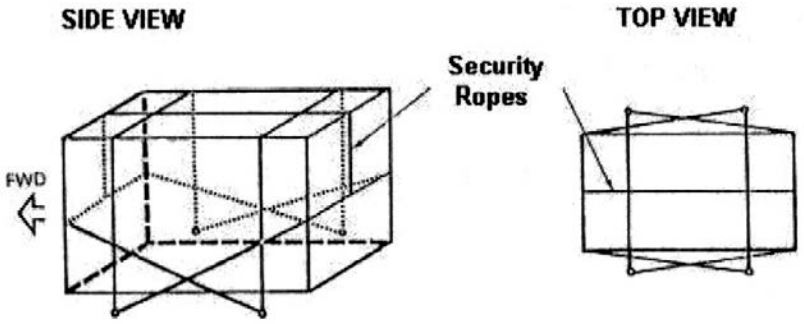


Caution:
Tie-down on any other part of the aircraft structure, or on other restraints than those above, even if equipped with rings or tie-down points, is forbidden.

Standard Lashing

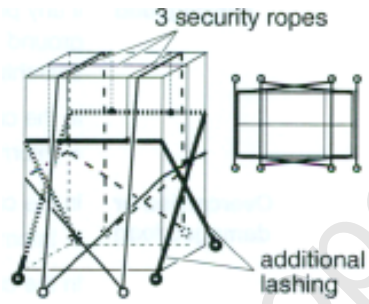
Standard lashing requires four tie-down rings, four lashing ropes and one security rope.
Two lashing ropes or straps will be used against upward forces, two lashing ropes or straps each against forward and backward forces.

The security rope is necessary to prevent sliding down of the lashing ropes / straps used against forward and backward forces.



As the sideward forces are already included in the standard lashing, no individual lashing against sideward forces is normally required.

However, in case a high and narrow item is loaded, the height of which is more than double of its width, an individual lashing against sideward forces is required in addition to the standard lashing. This additional lashing shall be placed between half and two thirds of the height of the item and be secured by two security ropes in order to prevent it from sliding down. Depending on the weight of the item and lashing material used, additional lashing may be required.



Do not secure the load additionally against sideward forces.

Exception if a piece is more than twice as high as wide:

- Tie-down against sidewards forces of 1.5 g additionally to the standard lashing.
- Place this additional lashing between half and two third of the height.
- Secure this lashing by 2 security ropes to prevent it From gliding down.

Barrels

Barrels are difficult to lash because of their round shape and mostly sharp rims.
Use supporting planks for a safe lashing.

Number of Lashings
Single stud fittings (based on strength 900 kg).

Load to be restraint	Number of Single Stud Fittings	Number of ropes hooked on 2 fitting (One each side of the load)				
Kg		1.5 G				3 G
		Left	Right	Forward	Aft	Upwards
Less than 300	2	1	1	1	1	1
301-600	4	1	1	1	1	2
601-900	6	2	2	2	2	3
901-1200	8	2	2	2	2	4
1201-1500	10	3	3	3	3	5
1501-1800	12	3	3	3	3	6
1801-2100	14	4	4	4	4	7
2101-2400	16	4	4	4	4	8

Double stud fittings (based on strength 2250 kg).

Load to be restraint	Number of Double Stud Fittings	Number of ropes hooked on 2 fitting (One each side of the load)				
Kg		1.5 G				3 G
		Left	Right	Forward	Aft	Upwards
Less than 3000	4	1	1	1	1	2
3001-4500	6	2	2	2	2	3
4501-6000	8	2	2	2	2	4
6001-7500	10	3	3	3	3	5
7501-9000	12	3	3	3	3	5

Use of loading accessories/ fixing belts

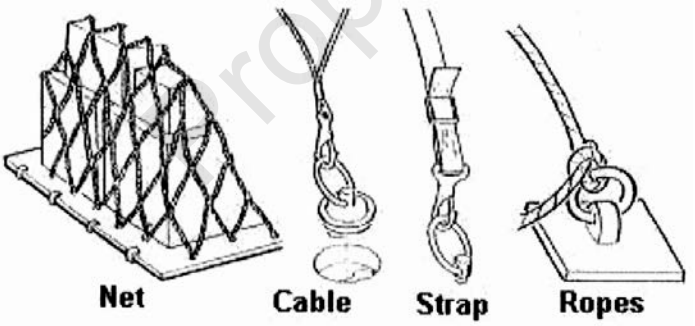
- The fixing equipment that is no longer necessary will be collected and remains into custody;
- The loading accessories/ belts not property of the handling provider will be returned to the owning carrier;
- Binding ropes and straps must be attached only to tie-down rings or authorized devices, such as binding points and must be in perfect condition;

- For security reasons, any makeshift is prohibited (combination of binding fittings with binding straps);
- To secure with binding ropes, only ropes or other **certified** binding materials will be used;
- Steel cables must not be used to tie goods. Steel cables can be used only for the transferred transit freight and only if they are used to secure these goods onto the pallet and provided the pallet is appropriately fixed in the aircraft. If securing to the aircraft structure is necessary, the steel cables will be completely exchanged for binding straps;
- All straps/ropes used to anchor an object must have the same length in order to achieve a uniform distribution of forces. Large shipments must be divided in groups and secured separately;
- The ties have to be tight but not excessively, so as not to deteriorate the items or the tie-down rings. In order to protect fragile units (such as dangerous goods), edge protectors will be used;
- The tie-down rings will be equally distributed along the load, which is to be fixed and they will be installed before the loading;
- Within their capacity limits, the same rings/ropes may be used to secure against different directional forces, as opposite forces do not act simultaneously;
- The tie-down points of the separating nets will not be used to secure when they have the meshes attached to them;
- In order to avoid breaking or degradation of straps/ropes, the sharp edges of an item must be covered (by clothes, mulch or edge protectors);
- The ropes must be attached to the tie-down rings so that they are easy to loosen during unloading. The ends of the ropes must be long enough in order not to loosen because of a sudden force.

Lashing Equipment

General

To secure cargo which may be loaded on aircraft cabin or compartment, a variety of securing equipment can be employed.
The most popular equipment used are nets, cables, straps, ropes, tensioners, etc.
Needed equipment can be requested from the Technical Department.



The handling agent should ensure that he uses lashing equipment to meet the restraint requirements of Carpatair If such equipment is not available, the handling agent must ask Carpatair for it.

Lashing equipment and lashing rings (except for standard pallet restraint equipment, compartment nets forming part of the aircraft standard equipment, ropes and webbing) must be marked permanently with the breaking strength in kg.

Only equipment for which a definite breaking strength can be ascertained should be used.

4.11.8. Offloading Procedure

4.11.8.1 Identifying Shipments Requiring Specific Handling

Carpatair handling agent shall comply with any special handling requirements. Carpatair Ground Operations department shall inform the handling agent in case of any items requiring specific handling.
Make sure that packages with directional handling labels are kept in the correct orientation (this way up, etc);
(a) Take care with fragile items.

4.11.8.3 Safety Precautions for Offload

(a) Take care when handling heavy items. Use proper lifting techniques and ask for assistance if required;
(b) Take care when placing items on belt loaders. Make sure they are stable and will not fall off;
(c) Take care if load has shifted during flight;
(d) Containers can tip during movement because the base is smaller than the top, causing a high center of gravity.

4.11.9 Loading Procedure

Before loading commences, verify the aircraft registration with the registration on the loading instruction report.
(a) Ensure onload has been checked against LIR. Weights must be cross checked;
(b) Ensure special equipment (tie down straps, etc.) is available, as required;
(c) Ensure LIR is received and understood by loading crew;
(d) Before loading commences, carry out inspection of cargo compartments and restraint system. Report any defects to supervisor, the flight crew, and/or a company representative as required by operating airline;
(e) For cargo shipments, ensure the nets or tie down straps are tight and the load is secure;
(f)
(g) Items with directional handling labels should be loaded so that the labels will be visible during offload;
(h) When loading pallets or containers make sure that the edges are either guided by the side rails or fit under the stops/locks/guides and that the height of the pallet allows for sufficient clearance in the door opening;
(i) When loading pallets or containers make sure that the edges are either guided by the side rails or fit under the stops/locks/guides and that the height of the pallet allows for sufficient clearance in the door opening;
(k) Ensure separator nets, fire barriers, door nets, pallet locks and container stops are installed and locked as required as the hold is loaded;
(l) Keep count of bulk loaded baggage by compartment and destination;
(m) Document all changes to the load and sign the Load Instruction Report;
(n) Carry out load verification prior to finalising the weight and balance;

Airbus A3320 Family obey the cargo holds maximum loading height limit :

In order to guarantee correct and effective operation of the smoke detection and suppression system, a free space is required to exist between the cargo compartment ceiling and the cargo itself.
In this respect, a black line 9cm below the ceiling was painted on the side panels of the cargo compartment with a warning legend visible displayed above this line, to indicate the maximum loading height.

4.11.10. Live Animals

Live animals shall not be accept on Airbus A3320 Family due to lack of ventilation and temperature control system.

4.11.11 Wet Cargo

The Loading Supervisor must check if:
(a) The wet cargo is properly packed and free of leakage.
(b) The aircraft floor is properly protected from risk of spillage.

Wet Cargo (WET)
Definition
"Wet cargo" means shipment containing liquids or other items which, by their nature, may produce liquids, and which are not subject to the IATA Dangerous Goods Regulations.
The following are to be considered as "wet cargo":

- Shipments of liquids in watertight containers;
- Shipments of materials not packed in watertight containers (e.g. fish packed in wet ice, wet hides and skins, etc.);
- Goods, which may produce liquids (e.g. live animals).

General
General rules for handling of wet cargo:

- Leaking, damaged or weakly packed shipments may not be loaded. Spillage and leakage could cause damage to the aircraft;
- Avoid crushing of packages when stacked on top of one another, as damp and liquids considerably reduce the strength of certain packaging;
- If spilled liquid is discovered in the compartment, apply the procedure described in chapter Unloading.

Casings:

- May only be carried in the special casings container;
- In addition, a plastic sheet completely surrounding the shipment must be put on the compartment floor.

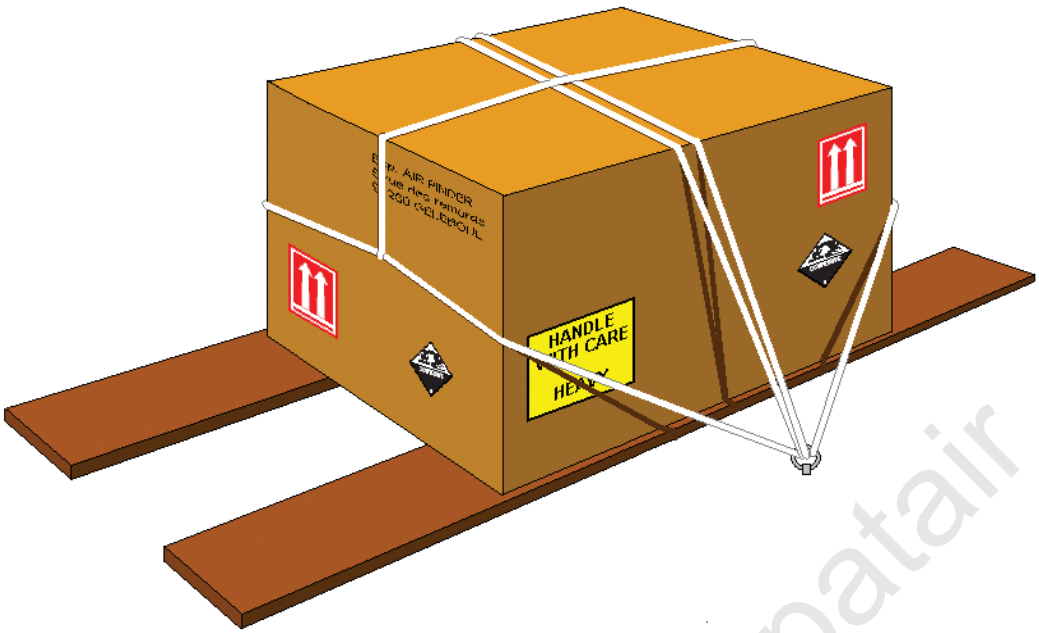
4.11.12. Load Spreading

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 has to be spread to prevent damage to the compartment floor. This applies to HEAs, but may also apply to smaller items weighing less than 150 kg. The item must be fully restrained (see example below).

Caution:
Overloading can cause damage to aircraft frames and ribs and consequently can have serious implications for the safety of the aircraft.

The weight can be spread by making use of spreading wood, in which case:
(a) The surface to support the weight will be enlarged;
(b) The length will be enlarged.

The Load Agent or Cargo will advise the spreading requirements for each item. The information will be notified on the LIR.



4.12 Aircraft Departure

4.12.1 Introduction

Carpatair Handling agent will make sure that a sufficient amount of qualified and instructed staff is available that they are familiarized with Carpatair Ground Operations Manual and its procedures and are willing to secure an efficient and safe handling of the aircraft.

It is mainly the responsibility of the handling agent to co-ordinate and supervise the passenger boarding operations, the operations of luggage, cargo and mail loading according to the specific rules and procedures.

The following services will be assured for an aircraft preparing for departure:

- Handing over the documents
- Boarding of passengers
- Loading
- Last Minute Changes (LMC)
- DAA
- De- / Anti-icing
- Engine Start-up and Push-back

The flight crew and cabin crew are already on board ready to receive the passengers. Communicate to the boarding gate agent in the terminal that he or she may start boarding the passengers on the bus.
Handing the documents to the crew.

Activities during turnaround

The following actions will be supervised and coordinated by handling provider:

- Catering
- Preflight brief regarding flight requirements
- Pre-arrival check that the parking position is free of FOD, spillage
- All personnel and GSE positioned outside equipment restraint area
- Guidance service is activated/marshaller is correctly positioned
- Personnel stay clear of the aircraft until anti-collision lights have been switched off
- Aircraft has been choked and coned
- Equipment is properly positioned and operated
- Cargo holds are correctly unloaded/loaded and inspected for damage
- Passenger steps/air bridge are set to correct height before opening cabin doors and all safety devices are installed
- Passengers boarding/deboarding is protected and guided in walkways
- Walkways are clean of obstacles
- Fuel safety zones are respected
- Refueling (it can be done during passenger boarding / disembarking, as the case may be)
- Loading is performed according to LIR
- Dangerous goods are correctly handled
- Final load information is provided to crew
- Holds are checked to verify load and nets configuration
- GSE removal procedure is followed
- Final walk around/inspections prior departure are performed

Aircraft Ground Times

The aircraft ground time is the lapse of time between arrival and departure, required to perform the station operations needed.
The ground time may be different for each station, route area and aircraft type
There are the following types of aircraft ground times:

Planning Ground Time

It is the ground time supplied by the Planning Department, the office dealing with Schedule planning, in order to process and handle the activity plans.

Published Ground Time

It is the ground time within which all ground operations shall be performed, with respect to quality and punctuality standards, and it is determined by the office dealing with schedule planning, based on specific company's requirements or external factors. The published ground time is equal or greater that the planning ground time.

Minimum Ground Time (TTO)

It is the maximum allowed ground time in case of late arrival of the aircraft, and it allows a partial or total recovery of the delay by speeding up some station operations and/or leaving transit passengers on board the aircraft. It is less than or, sometimes, equal to the published ground time.

The delay on departure shall be calculated on the basis of minimum ground time.

In case of late arrival of the aircraft, certain ground operations (eg. cleaning service) shall be performed in a more flexible way.

Boarding of passengers

- Get clearance for passenger boarding in due time from the Cockpit crew directly or via the Senior Cabin Crew;
- Do not start boarding without clearance;
- If boarding of passengers is performed during fuelling, the procedure of fuelling with passengers on board shall be applied (see the procedure in this manual);
- DAA is loaded on the cargo hold.

4.12.2 Final Walk-around before start-up

This procedure is an external check performed by the Carpatair crew members and by handling provider before the aircraft start-up and after completing the handling activities.
Make sure:

- All vehicles and equipment are away from the aircraft at minimum safety distance;
- All safety nets are installed;
- All access doors are closed;
- There is no uncontrolled fluid leakage out of the aircraft body;
- The doors have not been damaged during the loading operation;
- Doors and panels are properly closed and locked;
- Main parts of the aircraft do not show any sign of damage.

Guiding lines for performing walk-around

- walk-around is the main visual check and is made at pedestrian speed, both directions are possible;
- If doors, door handles or service panels seem to be improperly closed or locked, it is recommended to check that by slightly pushing the panels or doors. If this is not possible due to height, call for the handling staff with the proper equipment;
- The ramp agents can detect only scratches, bends to the aircraft fuselage, missing parts, etc., which are visible and clear.

The pre-departure walk around check includes, but is not limited to, ensuring the following:

(a) The apron is clear of all FOD items that may cause aircraft damage or pose a risk;
(b) All GSE and passenger boarding devices are detached;
(c) The stand area is clear of obstructions. GSE and vehicles are positioned clear of the aircraft path;
(d) Adequate clearance exists between the aircraft and facilities or fixed obstacles along the aircraft movement path;
(e) All aircraft servicing panels and/or hatches are closed and secured (except - external power and headset panels);

(f) Cabin/cargo doors:
- handles are flush with the fuselage;
- there is no visible damage on the aircraft, particularly around cabin and cargo doors.

(g) Any abnormalities on the aircraft observed (e.g. obvious damage, fluid leakage) are immediately brought to the attention of the pilot in command and maintenance;
(h) Landing gear safety pins are removed;
(i) There are no obvious signs of unmarked dents or other skin panel damage.

Caution:
If any of the above conditions or actions are not met, inform your supervisor and the pilot in command. This may affect the safety of the intended flight.

Walk-around on the left side
Final walk-around before start-up

The following aspects will be checked:
- Doors and structure parts, wing edges must not have visible damages;
- All cargo and cabin doors must be closed and handles in correct position;
- All service panels doors must be properly closed;
- There are no FOD (documents, labels, stones, etc.) in the intakes area and / or propellers and in the evacuation area.

Walk-around on the right side
Final walk-around before start-up

The following aspects will be checked:
- Doors and structure parts, wing edges must not have visible damages;
- All cargo and cabin doors must be closed and handles in correct position;
- All service panels doors must be properly closed;
- There are no FOD (documents, labels, stones, etc.) in the intakes area and / or propellers and in the evacuation area.

For any irregularity found to the walk-around as described above, the ramp agentmust prepare a report – *IATA AHM Airline Ground Incident / Accident Damage Report*) follow the reporting procedure to be found here in chapter *Reporting System*.

A departure is normally conducted with a dialogue between flight crew and ground staff in charge of the departure via an interphone. This procedure ensures the highest level of safety during departures based on a precise exchange of information.

The person responsible for pushback is in charge of the departure operation remains in 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 where an interphone system is used.

4.12.3 Wheel chocks Removal

A. Headset Operator:

1. via the interphone, request chock removal approval from the flight crew, and confirm the aircraft parking brakes are set;
2. check all GSE have been disconnected from the aircraft;
3. check the passenger boarding stairs have been retracted from the aircraft, if applicable;
4. check the tow tractor and tow bar are fully secured to the nose gear and parking brakes are set on the tractor, if applicable;
5. for towbarless tractor operation, check that equipment is fully secured to the applicable landing gear and parking brakes are set on the tractor, if applicable:
   a) remove chocks at applicable gear only and leave remaining chocks in place until departure;
   b) nose gear wheel chocks may be removed without notification for the purpose of tractor connection provided the main gear wheel chocks are still positioned (except for main gear towbarless tractor).
6. give clearance to ground staff to remove chocks;

Note: If a chock is stuck, the responsible personnel remove it by tapping it with a spare chock or moving the aircraft after the aircraft brakes have been released.

7. relay ‘Chocks Removed’ hand signal to the flight crew, and ensure the flight crew repeats the ‘Chocks Removed’ hand signal as confirmation.

B. Responsible personnel stow chocks in their designated stowage place.

Note: Nose gear wheel chocks may be removed without notification provided the main gear wheel chocks are still positioned. 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.

C. If hand signals are used (i.e. aircraft interphone system is inoperative) the person performing the hand signal must:

1. be in continuous visual communication with the flight crew throughout the pushback;
2. display the ‘Set Brakes’ hand signal;
3. receive confirmation from the flight crew when they display the ‘Brakes’ hand signal in response;
4. display the ‘Chocks Removed’ hand signal;
5. receive confirmation from the flight crew. Do not remove chocks until confirmation of the flight crew is received.

4.12.4 Action Prior to Departure

(a) Prior to departure of the aircraft, make sure that:
(b) The ramp area is clear of all FOD and any equipment;
(c) The apron surface condition is sufficiently free of ice, snow or any other contamination., to ensure safe aircraft movement;

(d) The ramp area is free of objects/obstacles which may be impacted by the aircraft or may endanger others due to jet blast effects;
(e) All persons not involved in the aircraft departure operation must remain clear of the departing aircraft, behind the ERA;
(f) Additional ground staff such as wing walkers are present (if applicable/required);
(g) Verbal communication with flight crew is established by means of an interphone system, departures using marshalling hand signals without any headset communication are only conducted in exceptional cases;

(h) Anti-collision lights are used;
(i) Vehicles and personnel remain clear of aircraft engine intake and/or blast area during engine start;
(j) Communication with the flight crew on ASU positioning, engine start sequence and identification of minimum specifications for volume and pressure of air supply, if applicable

Note: Prior to connecting the tractor to the aircraft, the tractor may be parked in front of the aircraft or outside of the ERA, but never behind the wings.

Pre-Departure Table
General

Prior to aircraft movement, the responsible ground staff (headset operator) must ascertain that the following requirements are met:
Legend:
TT–towbar tractor
TBL–towbarless tractor
PPU–powered push unit

ACTION	APPLICABLE TO					
	PUSHBACK			TOWING		TAXI OUT
	TT	TBL	PPU	TT	TBL	
The required Pre-Departure Servicing Checks are completed.	X	X	X	X	X	X
Fire protection devices are available and correctly positioned (as per local rules).	X	X	X	X	X	X
Communication with flight crew and ground staff is established via interphone system.	X	X	X	X	X	X
The path and area that the aircraft is moving towards is clear of objects (FOD) ensuring safe aircraft movement.	X	X	X	X	X	X
The stand surface condition is sufficiently free of ice, snow, etc., to ensure safe aircraft movement.	X	X	X	X	X	X

ACTION	APPLICABLE TO					
	PUSHBACK			TOWING		TAXI OUT
	TT	TBL	PPU	TT	TBL	
The GSE is outside the ERA, and Loading bridge is fully retracted (if applicable).	X	X	X	X	X	X
If an Air Start Unit is required, check the equipment is correctly positioned and suitable for the operation.	X	X	X			X
Wing Walkers are present (if applicable).	X	X	X	X	X	
The air intake and blast areas of the aircraft engines are clear of persons and obstacles, such as ground support equipment.	X	X	X			X
The bypass pin is installed correctly or nose gear steering torque links are disconnected. (if applicable).	X	X		X	X	
All persons involved in the aircraft movement stay well clear of the danger areas around the tractor, landing gear and aircraft engines.	X	X	X	X	X	
A qualified brake operator is in the cockpit.				X	X	
Wheel chocks are not removed from MLG until Flight Deck has confirmed that Aircraft parking brake is set, the tractor is fully secured to NLG and the parking brake of the tractor is set.	X	X		X	X	
Wheel chocks are not removed from the NLG until the powered push unit (PPU) is fully secured to the MLG and its parking brake is set.			X			
The tractor and shearpin combination (if applicable) are suitable for the operation, considering the aircraft type and weight, the weather and surface conditions.	X			X		
The completion of the pre-departure table is indicated to the Flight Deck.	X	X	X	X	X	

4.12.5 Communication Requirements

4.12.5.1 Communication during Engine Start

Coordinate the engine starting sequence with the flight crew by conducting a pre-departure briefing and refer to the operating airline's GOM for specific engine start procedures.

(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) In case of starting up with an ASU, supply the pressure at the request of the flight crew.

Note: From the captain's seat facing forward, engine on his/her left is referenced as engine number one.

Start-Up Communicating Procedure (with Interphone)

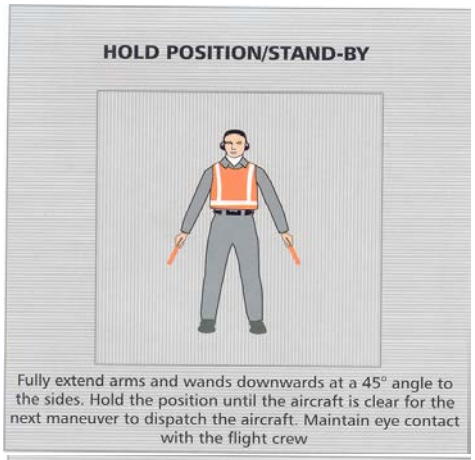
Prior to start-up, the aircraft shall be checked whether all doors and panels are closed and no damages or bents are visible. The ground mechanic (or the person responsible for start-up) is responsible for ensuring that the Captain is advised that personnel and ground equipment are positioned to ensure a safe pushback.
Communication shall be maintained throughout pushback procedure.
Before disconnecting the tow bar at the departure point, the aircraft parking brake shall be set to "on". The parking brake is not released until the ground staff has confirmed that the aircraft is clear of obstacles and the chocks are off. The following communication procedures should be adhered to:

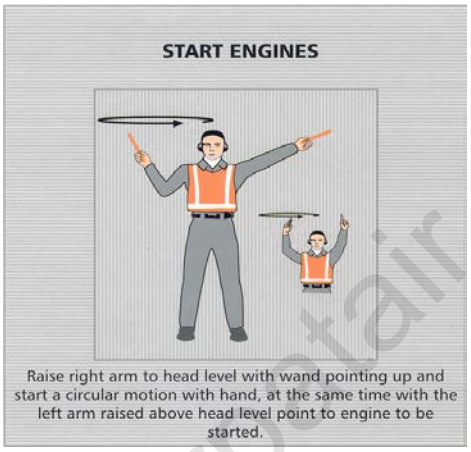
Cockpit	Ground
Ground from cockpit	Go ahead
Ready for start-up	You are clear for start-up at your discretion.
	Wheel chocks in position, areas clear, doors and handles are closed, all equipment removed. If no P/B light please confirm parking brake set.
Ready for engine start Sequence 2 - 1	All engines clear. Start in sequence 2-1
Clear for # 2 Call ready for # 1	No. 2 is running, are you ready for no. 1?
Clear for # 1	
OK ground, start-up completed, make the sign after taxi lights are on, thanks cooperation	Confirm start-up completed, I will make the sign after taxi lights switched on, thank coop, see you next time

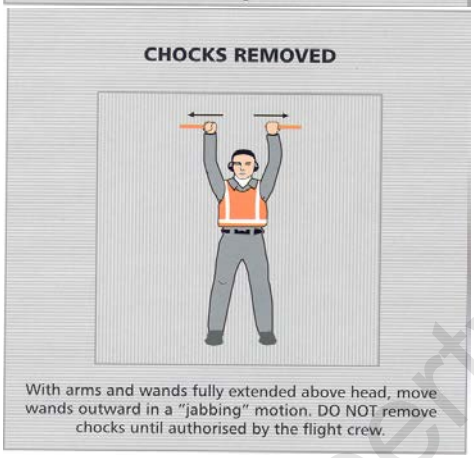
Also check the communication phraseology as established in Start-up and Push-back Procedure.

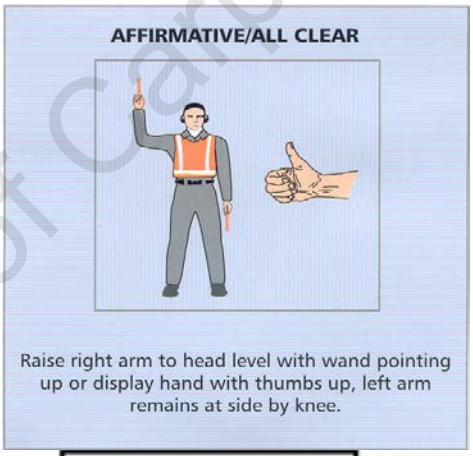
Start-Up Communicating Procedure (without Interphone)

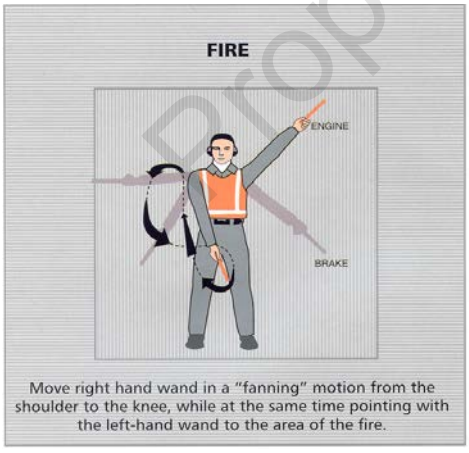
Prior to departure, the captain should establish a common understanding with the ground staff responsible for start-up/push-back as to how the procedure will be accomplished and which communication signals would be used. Prior to start-up, the aircraft shall be checked whether all doors and panels are closed and no damages or bents are visible.









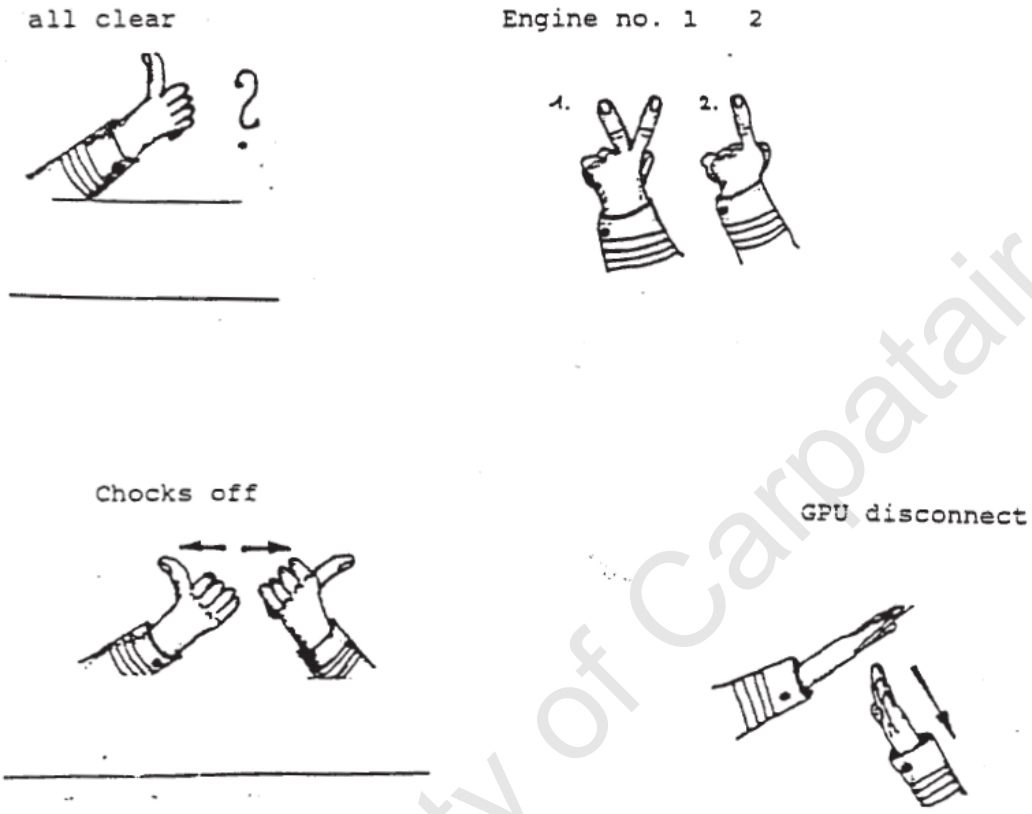


Important:

The captain relies on the clearance signal of the ramp agent/start mechanic as he cannot overlook the whole apron traffic. Therefore the ramp agent/start mechanic must ensure that the traffic situation on the ramp permits free taxiing before clearance for taxiing is given by thumb.

Visual Communication Ground to Cockpit Clearance

The handling agent shall be responsible to perform "Visual Ground to Cockpit Clearance" procedures. The handling agent shall never leave an aircraft ready for departure until the Captain has acknowledged the clearance by the "thumbs-up" sign.



4.12.5.2 Communication during Engine Fire

The Flight Crew normally detects an engine or APU fire and will take action using the engine fire extinguishing system. However, alert the flight crew immediately via the headset if flames are noticed from the engine or engine pylon.
In the event that an headset is not available, the appropriate “Fire” hand signal must be used. (Refer to the
Marshalling Hand Signals section in this chapter)
Tailpipe/Exhaust Fire

If you notice flames from the engine tailpipe during engine starting, 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.

4.12.6 Departure Communication

4.12.6.1 General

Departure communication outlined in this section is a basic standard for both pushback and open ramp (taxi out) departures.
This specific dialogue does not forbid the exchange of additional important information between flight crew and ground staff using non-standard phraseology (e.g. request for authorization to disconnect ground support units etc.).
Note: If the pushback must be stopped, the following call will be made: STOP PUSH BACK.
Where applicable, use “pull out” instead of “pushback”.
Only engage the towbarless tractor and lift the aircraft once the passenger boarding device has been removed from the aircraft and the flight crew has requested for pushback.

4.12.6.2 Departure Communication Dialogue

The dialogue is a sample communication to be used for a departure:

Dialogue between Ground Staff and Flight Crew		
Phase	Ground Staff	Flight Crew
Preparation	Call: CONFIRM PARKING BRAKES ARE SET. Reply: BYPASS PIN INSTALLED & CLEARED TO PRESSURIZE (IF APPLICABLE)	Reply: PARKING BRAKES SET. Call: CONFIRM BYPASS PIN INSTALLED. (if applicable) Reply: ROGER BYPASS PIN INSTALLED, PRESSURIZING (if applicable)
After completion of the pre-departure servicing checks	Call: PRE-DEPARTURE CHECKS COMPLETED, GROUND READY (TOWBARLESS) CLEAR TO START ENGINE(S) (FOR OPEN RAMP DEPARTURE ONLY)	Reply: ROGER. STANDBY or YOU MAY LIFT THE AIRCRAFT. (TOWBARLESS) or [STARTING ENGINE(S)...]
Pushback [and engine start]	Call: RELEASE PARKING BRAKES or LIFTING COMPLETED, RELEASE PARKING BRAKES (TOWBARLESS) Call: COMMENCING PUSHBACK [AND CLEAR TO START ENGINE(S)...] Note: communicate with flight crew on aircraft direction if applicable	Request pushback [and engine start] clearance from ground control. After clearance received: Call: READY FOR PUSHBACK When brakes are released: Reply: PARKING BRAKES RELEASED [Reply: STARTING ENGINE(S)...]
Pushback completed	Call: PUSHBACK COMPLETED, SET PARKING BRAKES. Tractor is disconnected and positioned in view of the flight deck (If applicable)	When parking brakes are set: Reply: PARKING BRAKES SET Call: YOU MAY DISCONNECT.
Clearance to Taxi	Reply: DISCONNECTING, HOLD POSITION AND WAIT FOR VISUAL SIGNAL ON YOUR LEFT/RIGHT. Disconnect headset and give the ‘All Clear’ hand signal. (‘All Clear’ signal includes showing the steering bypass pin)	Reply: HOLDING POSITION AND STANDING BY FOR VISUAL SIGNAL TO MY LEFT/RIGHT. Acknowledges “All Clear” signal. (Taxi clearance may only be requested after the ‘All Clear’ signal is received)

Note: In case of taxi-out, the phases “Pushback” and “Pushback Completed” in the above table will not be performed.

4.12.6.3 Items to be communicated between Ground Staff and Flight Crew

Phase	Task	Ground Staff Action
Departure Preparation	GPU removal	When instructed by flight crew, remove GPU.
	Towbar/Towbarless Tractor connection	(a) Get confirmation that the aircraft's parking brake is set. (b) Get confirmation that the nose wheel steering is depressurized or advise flight crew that the bypass pin is inserted (if applicable). (c) Connect the Towbar. (d) Connect the Towbarless tractor.
	Chock removal	(a) Get confirmation from flight crew that aircraft parking brakes are set. (b) Remove chocks.
	Pre-departure check	Advise the flight crew that the pre-departure check has been completed or communicate any discrepancies.
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 aircraft's parking brakes have been released.
	Movement of the aircraft (pushback/ pull out)	Get permission from flight crew, to commence the pushback.
	Direction of push/nose	If applicable, ask in which direction the aircraft has to pushed/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 & Engine start completed	Towbar/Towbarless Tractor disconnect	(a) Get confirmation that the aircraft's parking brake is set. (b) Disconnect. (c) Remove the steering bypass pin–where applicable.
	Headset removal	(a) Get permission from flight crew to disconnect the headset. (b) Advise flight crew to hold position and wait for visual signal at left/right of the aircraft.
Departure	"All Clear" signal	(a) Ensure verification of 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 of "All Clear" signal.

4.12.7 Departure Communication without Interphone

An aircraft departure must always be conducted using interphone communications.

In the event that the interphone becomes unserviceable or under extreme circumstances where the interphone is not available, you must use conventional hand signals for the departure (not applicable to main gear pushback unit departures).

Prior to departure a briefing must be held between the Captain and the ground agent responsible for the departure, including:
(a) Review of departure specifics, e.g. direction of movement, final positioning, and taxi out direction;
(b) The hand signals to be used, including emergency signals.

Caution:
Read back all given instructions or acknowledge them in a manner clearly indicating that they have been understood and will be complied with.

4.12.8 Preparation for Pushback

(This section is also applicable to pull-out using applicable equipment)

Pushback Operation Safety

Checks before the flight:
a. The walk-around check will be performed before every take-off by:

- Qualified ground mechanic according to the instructions issued by Carpatair technical department;
- The flight crew, according to the instructions from the aircraft operating manual.

The person responsible for the walk-around before the flight will certify the conclusions of this checking signing in the aircraft technical log kept on board. Pilot in command has to check the performing of these checks and their registering in the technical log of the aircraft.

b. The ramp agent will perform the final walk-around check before every take-off pursuing the following:

- That the access doors to the cabin are well closed;
- That the cargo compartment doors are well closed;
- That the aircraft safety area is free of foreign objects and rests;
- That the lids of the control panels are well closed;
- That no device (except the ones destined for the engines start or aircraft handling) is in the safety area of the aircraft;
- That no person (except the ones who handle the devices for engines starting or the handling of the aircraft) is in the safety area of the aircraft;
- That the guidance staff is present.

4.12.8.1 Pre Departure Communication

An aircraft departure must always be conducted using interphone communications. In the event that the interphone becomes is unserviceable, you must use conventional hand signals see IGOM 4.8.4 and IGOM 4.8.5 for the departure (not applicable to main gear pushback unit departures). Prior to departure a briefing must be held between the Pilot in command and the ground agent responsible for the departure, including:
(a) Review of departure specifics, e.g. direction of movement, final positioning, and taxi out direction;

(b) The hand signals to be used, including emergency signals.

Caution: Repeat all given instructions or acknowledge them in a manner clearly indicating that they have been understood and will be complied with.

4.12.8.2 Connecting the Pushback Vehicle

The pushback vehicle is connected as follows:

1. Aircraft main gear chocks installed, nose gear chocks removed–if applicable;
2. Approach nose gear to centerline of fuselage;
3. Use a spotter to assist in the final approach to nose gear:
   a) tractor & towbar:
      - connect towbar to nose gear first;
      - raise towbar so that its head is at same height as the tractor connection;
      - approach slowly until connection aligns and secure connection to tractor;
      - raise towbar wheels;
      - select “Neutral” or “Park” and set parking brake of tractor.
   b) towbarless tractor:
      - on final approach to aircraft, the tractor must be properly aligned and correctly positioned;
      - position towbarless tractor to standby for lifting and wait for approval from flight deck to lift, if applicable;
      - select “Neutral” or “Park” and set the parking brake.

Caution:
Do not remove the main landing gear chocks until:
all GSE–with the exception of the boarding passenger stairs(s), GPU, PCA, and ASU is removed from the aircraft, the pushback vehicle is connected to the aircraft and the parking brakes of both the pushback vehicle and the aircraft are set.

4.12.8.3 Ground Crew in Charge of Pushback

Ground Crew Responsibility

The responsible ground crew is defined as the person performing the communications with the flight crew. A responsible ground crew must be in charge of each aircraft pushback. This function can be performed by different agents in different roles and positions.
Responsible ground crew for the departure will:

1. Be in charge of the entire pushback, once clearance to begin pushback has been given by the flight crew;
2. Ensure that the towbar/shearpin/towbarless tractor is suitable for the specific aircraft type;
3. Conduct briefings with all persons involved in the aircraft movement to review and confirm how the aircraft will be maneuvered;
4. Be in continuous communication with flight crew by interphone;
5. Have ultimate responsibility to review pushback procedures based on conditions he/she observes and must inform the flight crew:
6. If ramp conditions are below standard for a normal pushback (e.g. hazards, obstacles, slippery or icy) then he/she will inform the flight crew that engine start clearances will not be given until either:
    a. the aircraft is moving over an area of the ramp where the conditions are considered to be safe for an engine start; or
    b. the pushback has been completed, the aircraft has come to a complete stop and the parking brake has been set;
7. Ensure that the nose gear steering bypass pin is installed prior to towbar connection to aircraft;
8. Connect the interphone and conduct a communication check to:
    a. verify the communication system is functional;
    b. update flight crew on progress of the ramp operation;
    c. request permission & disconnect ground power after verbal approval is received from flight crew.
9. Conduct a Pre-Departure walkaround;
10. Signal “All Clear” to pushback tractor driver and wingwalkers (if applicable) once advised by flight crew that the aircraft brakes have been released and approval for pushback given by Flight Crew;

Danger:
If walking adjacent to nose gear: walker and tug driver must be in visual contact throughout the pushback. After approval of flight crew, the tug driver must always assure taxiway is free of other aircraft/equipment/obstacles.

11. Monitor the interphone during the pushback and communicate with the flight crew as required;
12. Advise the flight crew if for any reason it is not safe to start an engine and stop the engine start (the flight crew may advise as each engine is being started);
13. Advise the flight crew to set aircraft brakes at end of pushback. Once confirmation from the flight crew has been received, give the brakes set signal to the tractor driver and wingwalkers (if applicable);
14. Give visual signal to the tractor driver and wingwalkers (if applicable) that it is clear to disconnect towbar after flight crew advises that engines were started normally and the ramp is clear to disconnect the towbar;
15. Disconnect the headset and close the access panel on the aircraft once the approval to disconnect has been given by flight crew and the towbar has been disconnected;
16. Remove the nose gear steering bypass pin (if applicable) and ensure the swing lever is returned to the proper position;

17. After headset, towbar and steering bypass pin are removed, close and latch all access panels and then move to designated position to conduct final departure marshalling;
18. Ensure verification of pin removal has been completed–if applicable.
    Show the “All Clear Taxi” signal;

19. Give the “All Clear to Taxi” signal 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;
20. Remain in position until an acknowledgement from the flight crew is received and the aircraft begins to taxi.

Caution:
The flight crew (or brake operator) must be notified immediately:
in the event any connection between the tractor and the aircraft is lost during aircraft movement; to stop the aircraft movement using gentle brake application if the aircraft is about to overtake the tractor while towing

Danger:
If the nose wheels are not in the centered position, they can turn quickly to their centered position when the bypass pin is removed. Personnel injury or aircraft damage could result.
Do not disconnect the interphone communication cable until the towbar (or towbarless tractor) has been disconnected from the nose gear.

4.12.8.4 Wingwalker

Wingwalkers or other assist personnel during a pushback is not an international requirement.
The presence of such personnel may also be controlled or restricted by civil aviation authorities or local airport authorities.
If wingwalkers are not being utilized in the operation for any of the above reasons, all references in this section of GOM shall be ignored.

Wingwalker or other assist personnel must:
1. Be under the direction of the responsible ground crew at all times;
2. Use 2 marshalling wands, either day-wands or illuminated wands for low visibility operations;
3. Be positioned before and during movement of aircraft as follows where applicable and/or permitted:
    a. approximately 1 meter outboard of the wingtip;
    b. in line with the rearmost main gear wheel;
    c. must maintain visual contact with person responsible for pushback/towing.
4. Ensure the aircraft movement path is clear of any obstructions, other aircraft, vehicles etc;

5. Provide “Safe to Proceed” clearance signals at all times to the person responsible for pushback by using a distinct “Pendulum” motion of the arm;
6. Continue to monitor the aircraft path until the aircraft is stopped at the departure point;
7. Position themselves in clear visibility of the flight crew on the terminal side, at a safe distance away from the aircraft (either at the 11 o'clock or 1 o'clock position);

8. Give the “AIRCRAFT HOLD” signal to the flight crew when the visual “Brakes Set” signal has been received from the person responsible for pushback (crossed wands may be over head or in front of chest);
9. Remain in position until the responsible ground crew walks over to take over the marshalling clearance of the aircraft;
10. Return to terminal once marshalling duty has been transferred.

4.12.8.5 Tractor Driver

The pushback tractor driver will:

1. Align the tractor or tractor and towbar combination with the center line of the aircraft gear before the aircraft movement;
2. Completely raise the towbar wheels before the start of the aircraft movement (if used);
3. Standby for clearance to push communication from flight crew or responsible ground crew;
4. Select appropriate gear on tractor and slowly begin movement;
5. Prior to the aircraft movement, make sure that the parking brakes are released and the anti-collision lights are switched on (depending on the local airport regulations);
6. Start the pushback operation on a straight line;
7. Keep the maneuvering speed to a minimum, and apply the vehicle brakes gently;
8. Scan the apron during pushback, monitor clearances and wingwalkers (if applicable) to ensure that aircraft is moving clear of all obstructions. Be prepared to stop.
9. Ensure during pushback the steering turn limits are not exceeded and advise flight crew if any are exceeded. Damage to nose gear will occur.
10. If responsible ground crew on interphone is walking on ramp, maintain visual contact and ensure a safe distance is maintained from the nose gear during entire pushback.
11. If the responsible ground crew is too close to the nose gear, the pushback must be stopped and a review of the required safety clearance conducted.
12. Set brakes on the tractor once pushback is completed.
13. Maintain the brakes on the pushback until the release signal is received from the flight crew or responsible ground crew on interphone.
14. Wait for flight crew or responsible ground crew on interphone to give the “Aircraft Brakes Set” signal.
15. Release the tractor brakes and put the gear selector in “Neutral” after aircraft brakes have been set, to release any pressure on the towbar.
16. Position the tractor in the aircraft's path and be visible to the flight crew (if possible) after the towbar has been disconnected from the tractor.
17. Remain in position visible to the flight crew until the headset operator has disconnected and is in view of the flight crew.
18. Drive tractor back to terminal or appropriate parking position.

Caution:
If the nose wheels are not in the centered position, they can turn quickly to their centered position when the bypass pin is removed. Personnel injury could result.

4.12.9 Open Ramp Departure

Complete all pre-departure checks.
(a) Refer to departure communication section and follow required phases of dialogue.
(b) Ensure all staff and equipment is clear of the aircraft behind the ERA;
(c) 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).

4.12.10 Maneuvering During Adverse Weather Conditions

General
During adverse weather conditions (fog, rain, etc.) visibility and traction will be affected.
The Tractor Driver must reduce and adapt vehicle speed as required by the present conditions.

4.12.10.1 Icy Conditions

When maneuvering the aircraft on slippery apron surfaces, extreme caution is required to avoid losing control of the tractor due to skidding. Many elements can contribute to the hazards involved such as strong winds, slippery road surfaces, pavement slopes etc.

Observe the following minimum precautions:
1. Avoid sudden turns, deceleration or acceleration.
2. Except when using an Air Start Unit, do not start aircraft engines unless:
   a) the condition of the pavement is such that reasonable traction is ensured;
   b) the aircraft parking brakes are set and the aircraft is disconnected from tow tractor/towbarless tow tractor.

4.12.11 Nose Gear Steering

Danger:
The bypass pin must be:
labeled with the specific aircraft type(s) for which it can be used;
identified with a “Remove Before Flight” streamer;
checked regularly for proper technical condition, or as per manufacturer instructions.

4.12.11.1 Nose Gear Protection and Steering Angles

In order to protect the nose gear from damage, visual turning limit markings indicate the aircraft's maximum nose gear steering angles. Refer to the Airbus A319 AOM for details.

Danger:
In the event of exceeding the maximum nose gear steering angle, inform the maintenance department and flight crew, if applicable, and request a technical inspection. The aircraft must return to the parking stand in order to check whether the gear is damaged.
When using a towbarless tow tractor equipped with either an over steer warning or over steer protection device, verify the visual turning limit markings at all times to prevent exceeding the maximum nose gear steering angle.
When using a towbarless tractor on an aircraft, the “over steering” or “over torque” system of the tractor must be operative.

4.12.12 Anti-Collision Lights

On a standard departure, once all aircraft doors are closed, the flight crew requests pushback clearance from ATC. Once clearance is obtained the flight crew will switch on the aircraft's anti-collision lights.

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 must stop until the aircraft has departed from the area.

4.12.13 Engine Cross Bleed Start

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.

4.12.14 Re-Establishing Communication after Departure

This procedure is to be used in case the ground staff or flight crew wishes to re-establish interphone communication after it has been disconnected.

4.12.14.1 Initiated from the Cockpit

The flight crew sets the parking brake and re-establishes communication with ground staff via company channel or ATC.

If visual communication with responsible ground agent is still established then visual signals may be used.

4.12.14.2 Initiated from the Ground

If ground staff needs to re-establish communication with the aircraft after dispatch, do NOT approach the aircraft. If communication cannot be established using hand signals, make contact via company channel or through ATC.

When preparing to re-establish communication with aircraft, take the following precautions:
(a) Make sure you have 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 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 pushback tractor in front of aircraft in clear view of 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.

4.12.15 Interphone Communication Failure

4.12.15.1 General

Aircraft pushback requires a communication interphone. In the event the interphone becomes unserviceable or communications is lost, the following procedure must be followed:

(a) In case of a single person operation and if no other means of communication are available, stop the movement (depending on local situations and regulations) and immediately request assistance to continue the movement;
(b) In case of multiple person operation then communication with the flight crew will be established using hand signals as described in this chapter. The tractor driver must 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 ATC (if radio available) and continue the movement in co-operation with ATC, depending on local regulations.

4.12.15.2 During Towing

If during the tow the interphone fails, the tow must immediately be stopped and an alternate means of communication established before continuing. If this is not possible, assistance must be requested.

4.13 Aircraft Towing

4.13.1 Aircraft Towing Requirements

The following requirements must be met to perform an aircraft tow:
(a) Ensure hydraulic system pressure for aircraft braking and/or the brake accumulator is within required pressure range;
(b) Ensure any required electrical systems for towing are energized;
(c) Ensure all gear safety pins/sleeves are installed, and after tow, ensure all pins are removed and stowed;
(d) Make sure a qualified brake operator is in the cockpit;
(e) Establish communication with the brake operator by means of the interphone system;
(f) Make sure wheel chocks are positioned at the end of the maneuver, prior to disconnecting the towbarless tow tractor or towbar.

Caution:
Inform the brake operator/flight crew and/or contact the maintenance department for technical inspection if you:
- observe any type of excessive fluid leakage;
- notice any signs of unmarked aircraft damage;
- observe any fault, failure, malfunction or defect which you believe may affect the safe operation of the aircraft for the intended flight.

4.13.2 Towing Maneuvering

General

The towing maneuvering procedure is similar for all aircraft types. The following minimum safety precautions and procedures must be followed prior to and during aircraft towing operations:

(a) Align the tractor or tractor and towbar combination with the center line of the aircraft before the aircraft movement;
(b) Completely raise the towbar wheels before the start of the aircraft movement (if used);
(c) Prior to the aircraft movement, make sure that the parking brakes are released and the anti-collision lights are switched on (depending on local airport regulations);
(d) Wait for the authorization of the flight crew or brake operator before moving the aircraft.
(e) Start the pushback operation on a straight line;
(f) Keep the maneuvering speed to a minimum, and apply the vehicle brakes gently;
(g) Do not exceed the towing speed limit as regulated by the towing equipment, aircraft and/or airport;
(h) Use relevant apron lines as guidance during maneuvering to ensure safe obstacle clearance;
(i) Keep a minimum safety distance between vehicles sufficient in which to stop;
(j) Stop 50 m before a taxiway intersection, if a stop is required;
(k) Avoid sharp turns, which results in excessive tire scrubbing;
(l) Make all stops smoothly;
(m) When arriving at the allocated position, move the aircraft in a straight line for a few meters to ensure that the nose wheels are in the straight ahead position. This relieves any torsional stress applied to landing gear components and tires;
(n) Apply the tractor parking brake after a complete stop;

Note: Some of these precautions may not be applicable to towbarless vehicles.

4.13.3 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 centre of gravity. If you are unable to determine this, then you must request assistance from a qualified weight and balance agent of the operating airline.

Towing by the nose landing gear from the front with a towbar Airbus 319

Safety precautions

(1) Make sure that the CHOCK - WHEEL(S) are in position.
(2) Make sure that the safety devices are installed on the landing gears.
NOTE: It is optional to install the landing-gear safety devices when you tow or push the aircraft during flight operations (to put the aircraft in position for the flight crew at arrival or departure).
(3), Make sure that the PARK BRK control-switch is set to ON.
(4) Make sure that the aircraft is stable.

Visual inspection
(1) Make sure that the engine cowls are closed and latched.
(2) Make sure that the dimension "H" of the Nose Landing Gear (NLG) is not more than 300 mm when you tow the aircraft. If you tow, you can cause damage to the cams that make the nose gear wheels go back to the center position.

Communication systems

(a) VHF system
If communication is necessary between the aircraft and the control tower:
- On RMP (Radio Management Panel), push the VHF1 pushbutton switch.
- Connect a boomset.

(b) Flight interphone system
- ,Connect a boomset to the FLT INT socket. This lets you speak to the cockpit.

Installation of the towbar

CAUTION: Make sure that the tow bar has:
- A damping system
- Applicable and calibrated shear pin(s). This is to prevent high loads which can cause damage to the landing gear.
(1) Use a towbar that agrees with SAE ARP 1915E or ISO 9667 standard.
(2) For the requirements related to towbars shear pin and towbar tractors weight, refer to AC 5-8-0.
(3) Put the TRACTOR (TOWBAR TYPE) in position in front of the NLG, aligned with the aircraft centerline.
(4) Install the TOWBAR on the tow fitting.
(5) Connect the TOWBAR to the TRACTOR (TOWBAR TYPE).
(6) Apply the TRACTOR (TOWBAR TYPE) parking brake.
(7) Remove the CHOCK - WHEEL(S) from the main and nose landing-gear wheels.
(8) On panel 110VU, set the PARK BRK control-switch to OFF.

Towing

CAUTION: Put the PARK BRK CONTROL switch in the off position before you tow or push back the aircraft. This is to prevent high loads which can cause damage to the nose landing gear.

(1) During the towing operations:
- One person in the cockpit to operate the brakes if necessary
- Each person in the cockpit or cabin, must be seated and the seat belts fastened
- Two persons to monitor the wing tips if necessary.

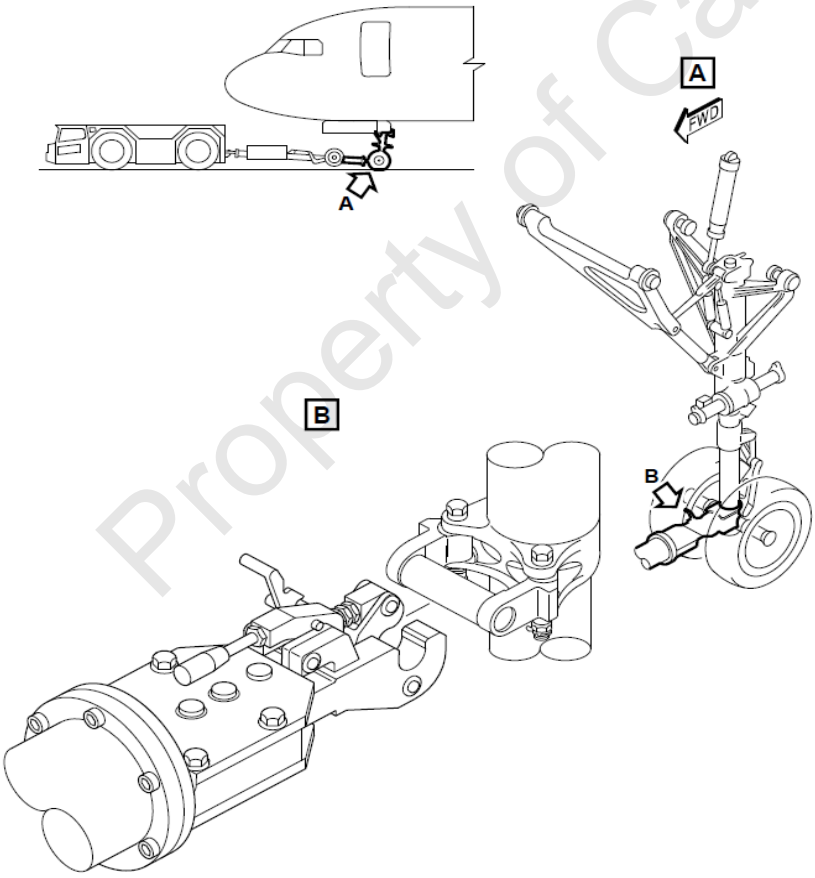
(2) During the towing operations, make sure that the pressure indication on the Yellow brake-pressure triple-indicator is correct: 3000 psi (207 bar). The pointer must be in the green range.
- If necessary, pressurize the Yellow hydraulic system.

(3) All persons must be at a minimum distance of 3 m from the wheels and the tractor while the aircraft moves.

NOTE: The shock absorber reaction can cause the aircraft to move forward and rearward when you stop the wheels. Because of this, you must make sure that there is sufficient space around the aircraft when you tow with the nose gear.

(4) Tow slowly and smoothly.

NOTE: It is recommended to turn slowly and smoothly when you tow the aircraft by the NLG. Sudden, fast turns can cause the rupture of the shear pin in the towbar.



(a) Speed limits

1. Passenger/crew and cargo doors closed and locked or removed:
- For a TRACTOR (TOWBAR TYPE), a maximum speed of 25 km/h is permitted.

2. Passenger/crew doors fully open and locked and/or cargo doors open in vertical position:
- The maximum speed permitted is 10 km/h.

3. In wind conditions, calculate the permitted towing speed before towing:
- Measure the wind speed.
- Subtract the measured wind speed from the wind speed limit shown on the stability curve. This gives the maximum permitted towing speed.

Approximate towing loads
(1) Approximate towing forces:

TOWING CONDITIONS	TOWING FORCES
BREAKAWAY	4% MRW
ROLLING	3% MRW
BREAKAWAY ON SLOPE	6% MRW +1% MRW PER 1% SLOPE
ROLLING ON SLOPE	3% MRW +1% MRW PER 1% SLOPE

NOTE: MRW = Maximum Ramp Weight.

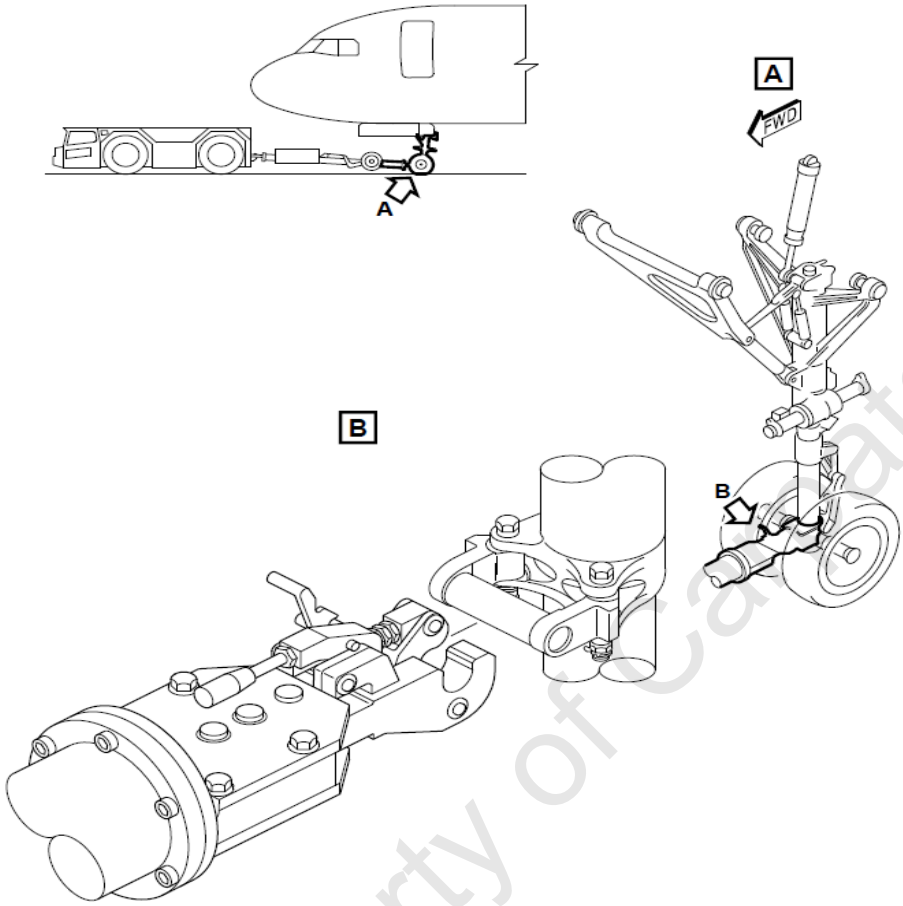
(2) Use these coefficients for the friction between the tires of the tow tractor and the ground to calculate the tow tractor weight:
- Dry concrete or asphalt: 0.80Wet asphalt: 0.75
- Wet concrete: 0.57
- Hard snow: 0.20
- Ice: 0.05

Steering angle (Alpha)
(1) The maximum permitted steering-angle on each side of the aircraft centerline is +/- 95 deg.
(2) For aircraft with steering-angle marking on NLG doors or on the fuselage, the maximum towing angle must not be more than the angle shown.

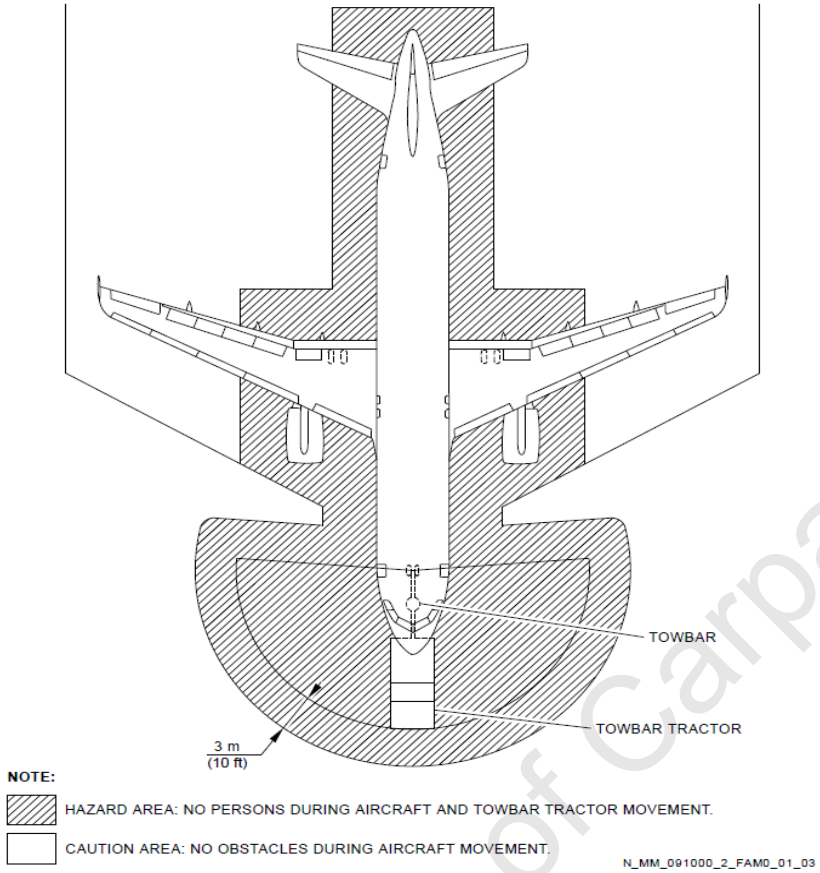
Visual inspection
(1) After you complete the towing operation, make sure that the nose wheels are aligned with the aircraft centerline.

Removal of the towbar
(1) Apply and hold the TRACTOR (TOWBAR TYPE) service brake.
(2) Set the PARK BRK control-switch to ON.
(3) Put the CHOCK - WHEEL(S) in position on the Main Landing Gear (MLG)
(4) Release the TRACTOR (TOWBAR TYPE) service brake.
(5) Remove the TOWBAR from the TRACTOR (TOWBAR TYPE).
(6) Remove the TOWBAR from the fitting of the NLG.
(7) Remove the PIN-SAFETY and make sure that the ground-towing lever goes to its initial position.
(9) Put CHOCK - WHEEL(S) in position in front of and behind the NLG wheels if necessary.

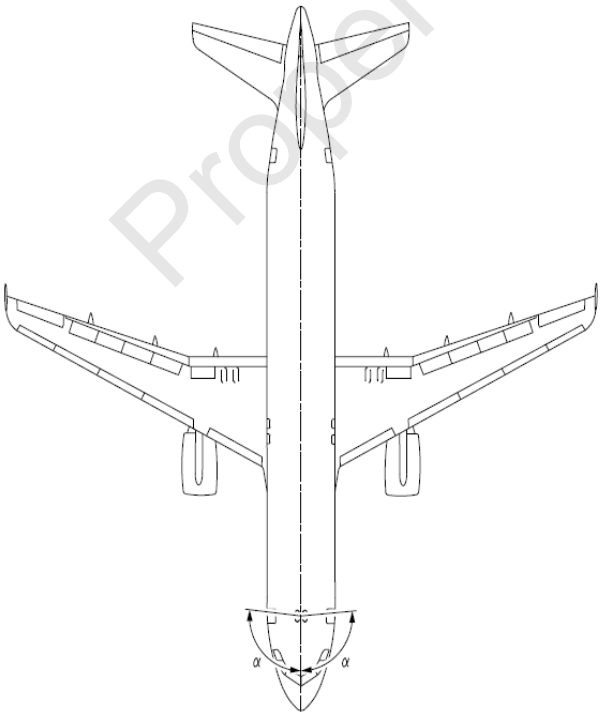
Communication systems
(a) VHF system
- On panel, disconnect the boomset.
- Release the VHF1 pushbutton switch if there is communication between the control tower and the cockpit.
(b) Flight interphone system
- On panel, disconnect the boomset.



Towing –Hazard Area – Towbar Tractor



Maximum Towing Angle with Towbar



Towing with the towbarless tractor

Safety precautions

(1) Make sure that the CHOCK - WHEEL(S) are in position.
(2) Make sure that the safety devices are installed on the landing gears.
NOTE: It is optional to install the landing-gear safety devices when you tow or push the aircraft during flight operations (to put the aircraft in position for the flight crew at arrival or departure).
(3),Make sure that the PARK BRK control-switch is set to ON.
(4) Make sure that the aircraft is stable.

Visual inspection

(1) Make sure that the engine cowls are closed and latched.
(2) Make sure that the dimension "H" of the Nose Landing Gear (NLG) is not more than 300 mm when you tow the aircraft. If you tow, you can cause damage to the cams that make the nose gear wheels go back to the center position.
(3) Do not tow the aircraft with a TRACTOR TOWBARLESS with one or two deflated tires on the NLG.

Communication systems

(a) VHF system
If communication is necessary between the aircraft and the control tower:
- On RMP (Radio Management Panel), push the VHF1 pushbutton switch.
- Connect a boomset.
(b) Flight interphone system
-, Connect a boomset to the FLT INT socket. This lets you speak to the cockpit.

CAUTION: When you use a towbarless tractor, make sure that you obey fully all the instructions in this procedure. If you do not, the tractor can cause important scraping or other damage to the NLG and to the airframe structure around the NLG.

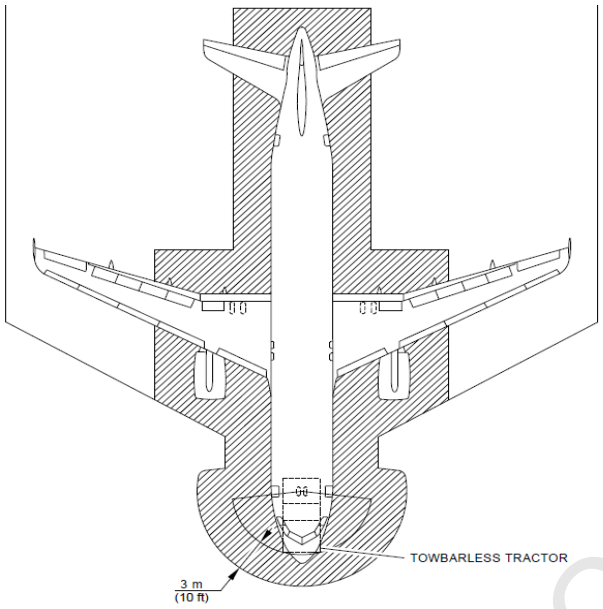
CAUTION: When you put the nose landing gear on the tractor, be careful to align the clamping device of the tractor with the NLG axis. The distance between the cradle and the torque link can be very small. Thus, if you do not align the clamping device with the NLG axis, there is a risk of damage to the torque link pin.

Installation of the towbarless tractor

NOTE: There are special approval procedures for towbarless tractors. Before towing, make sure that the towbarless tractor is approved for the towing of this aircraft.
(1) Set the aircraft type on the TRACTOR TOWBARLESS.
(2) Remove the CHOCK - WHEEL(S) from the nose-landing-gear wheels.
(3) Put the TRACTOR TOWBARLESS in position in front of the NLG, aligned with the aircraft centerline.
(4) Align the clamping device of the TRACTOR TOWBARLESS with the NLG axis.
(5) Put the clamping device in contact with the NLG tires.
(6) Make sure that the NLG is correctly engaged in the clamping device.
(7) Lock on and lift the NLG.
(8) Make sure that the nose landing gear is correctly on the center of the TRACTOR

TOWBARLESS cradle and cannot be disengaged from the TRACTOR TOWBARLESS.
(9) Apply the TRACTOR TOWBARLESS parking brake.
(10) Remove the CHOCK - WHEEL(S) from the main-landing-gear wheels.
(11), Set the PARK BRK control-switch to OFF.

Towing - Hazard Area - Towbarless Tractor



NOTE:
HAZARD AREA: NO PERSONS DURING AIRCRAFT AND TOWBARLESS TRACTOR MOVEMENT.
CAUTION AREA: NO OBSTACLES DURING AIRCRAFT MOVEMENT.
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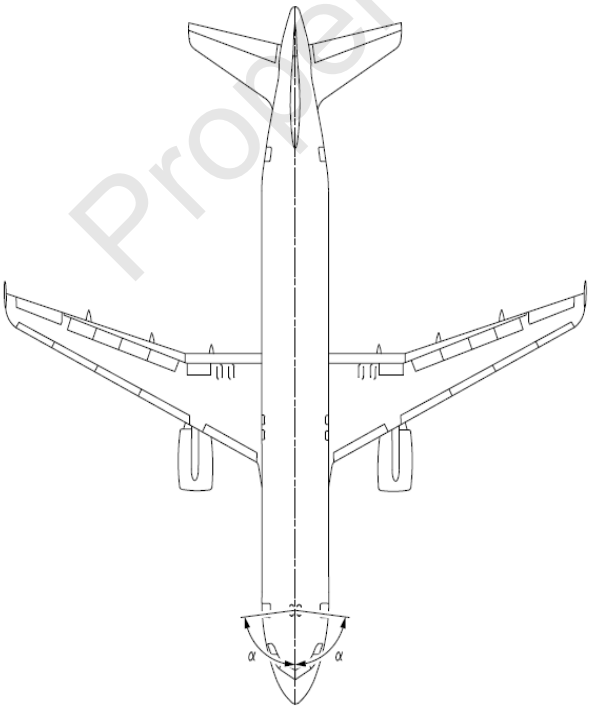
Maximum Towing Angle without Towbar



Towing

WARNING**:** When you tow the aircraft with a towbarless tractor, only use the aircraft parking brake or the brake pedals when there is an emergency. If you apply the aircraft parking brake or the brake pedals, you can cause:
- Overload to the nose landing gear
- Damage to the towbarless tractor
- Injury to maintenance personnel.

CAUTION: Put the PARK BRK CONTROL switch in the off position before you tow or push back the aircraft. This is to prevent high loads which can cause damage to the nose landing gear.

CAUTION: Before you tow the aircraft with a towbarless tractor, make sure that the aircraft or the tractor has an oversteering warning system in operation.
(1) During the towing operations:
- One person in the cockpit to operate the brakes if necessary
- Each person in the cockpit or cabin, must be seated and the seat belts fastened
- Two persons to monitor the wing tips if necessary.

(2) During the towing operations, make sure that the pressure indication on the yellow brake-pressure triple-indicator is correct: 3000 psi (207 bar). The pointer must be in the green range.
- If necessary, pressurize the Yellow hydraulic system.

(3) All persons must be at a minimum distance of 3 m from the wheels and the tractor while the aircraft moves.

NOTE: The shock absorber reaction can cause the aircraft to move forward and rearward when you stop the wheels. Because of this, you must make sure that there is sufficient space around the aircraft when you tow with the nose gear.

(4) Tow slowly and smoothly.

(a) Speed Limits

1. Passenger/crew and cargo doors closed and locked or removed:
- For a TRACTOR TOWBARLESS, a maximum speed of 32 km/h is permitted.

2. Passenger/crew doors fully open and locked and/or cargo doors open in vertical position:
- The maximum speed permitted is 10 km/h.

3. In wind conditions, calculate the permitted towing speed before towing:
- Measure the wind speed.
- Subtract the measured wind speed from the wind speed limit shown on the stability curve. This gives the maximum permitted towing speed.

Approximate towing loads

(1) Approximate towing forces:

TOWING CONDITIONS	TOWING FORCES
BREAKAWAY	4% MRW
ROLLING	3% MRW
BREAKAWAY ON SLOPE	6% MRW +1% MRW PER 1% SLOPE
ROLLING ON SLOPE	3% MRW +1% MRW PER 1% SLOPE

NOTE: MRW = Maximum Ramp Weight.

(2) Use these coefficients for the friction between the tires of the tow tractor and the ground to calculate the tow tractor weight:

Dry concrete or asphalt: 0.80
Wet asphalt: 0.75
Wet concrete: 0.57
Hard snow: 0.20
Ice: 0.05

Steering angle (Alpha)
(1) The maximum permitted steering-angle on each side of the aircraft centerline is +/- 85 deg with TRACTOR TOWBARLESS.
(2) For aircraft with steering-angle marking on NLG doors or on the fuselage, the maximum towing angle must not be more than the angle shown.
NOTE: The internal mechanical stops keep the maximum angle to +/- 95 deg. Damage will occur on the landing gear if the towing angle is more than this value and landing gear inspections will be necessary.

Visual inspection
(1) After you complete the towing operation, make sure that the nose wheels are aligned with the aircraft centerline.

Removal of the towbarless tractor
(1) Apply and hold the TRACTOR TOWBARLESS service brake.
(2) Set the PARK BRK control-switch to ON.
(3) Put the CHOCK - WHEEL(S) in position on the MLG.
(4) Release the TRACTOR TOWBARLESS service brake.
(5) Lower and open the pick-up system.
(6) Disengage the TRACTOR TOWBARLESS from the NLG.
(7) Remove the PIN-SAFETY and make sure that the ground-towing lever goes to its initial position.
(8)
(9) Put CHOCK - WHEEL(S) in position in front of and behind the NLG wheels if necessary.
Communication systems
(a) VHF system
-, Disconnect the boomset.
- Release the VHF1 pushbutton switch if there is communication between the control tower and the cockpit.

(b) Flight interphone system
- disconnect the boomset.

Push back towing by the MLG

Safety precautions
(1) Make sure that the interphone between the crew and the departure agent operates correctly (it must be possible for the departure agent to speak to the crew at all times).
(2) The departure agent must be forward of the aircraft and out of the engine dangerous areas during the push back operations.

Positioning of the tractor
(1) Make sure that the tractor does not hit and cause damage to the MLG structure or other equipment.
(2) Put the tractor in position.

NOTE: If you must do a turn during the aircraft push back operation, you must put the tractor

in position at the inner or outer gear. You must do this with an aircraft Nose Wheel Steering limit of +/- 45 deg for 90 deg turns and +/- 30 deg for "S" turns.
(3) When the tractor is in position on the MLG, ALL personnel must go out of the work area.

NOTE: The tractor has a remote control system, use this system for the aircraft push back operation.

Engine Start

WARNING: Make sure that when the engines operate on the ground:
- No persons go where the aircraft can cause them injury or can kill them
- No objects stay where the engines can blow them away or where they can be pulled into the engines by suction.
(1) Start the engine 2.

NOTE: Start the engine 1 at the end of the push back operation after the departure agent removes the tractor from the MLG with the remote control system.

Aircraft push-back

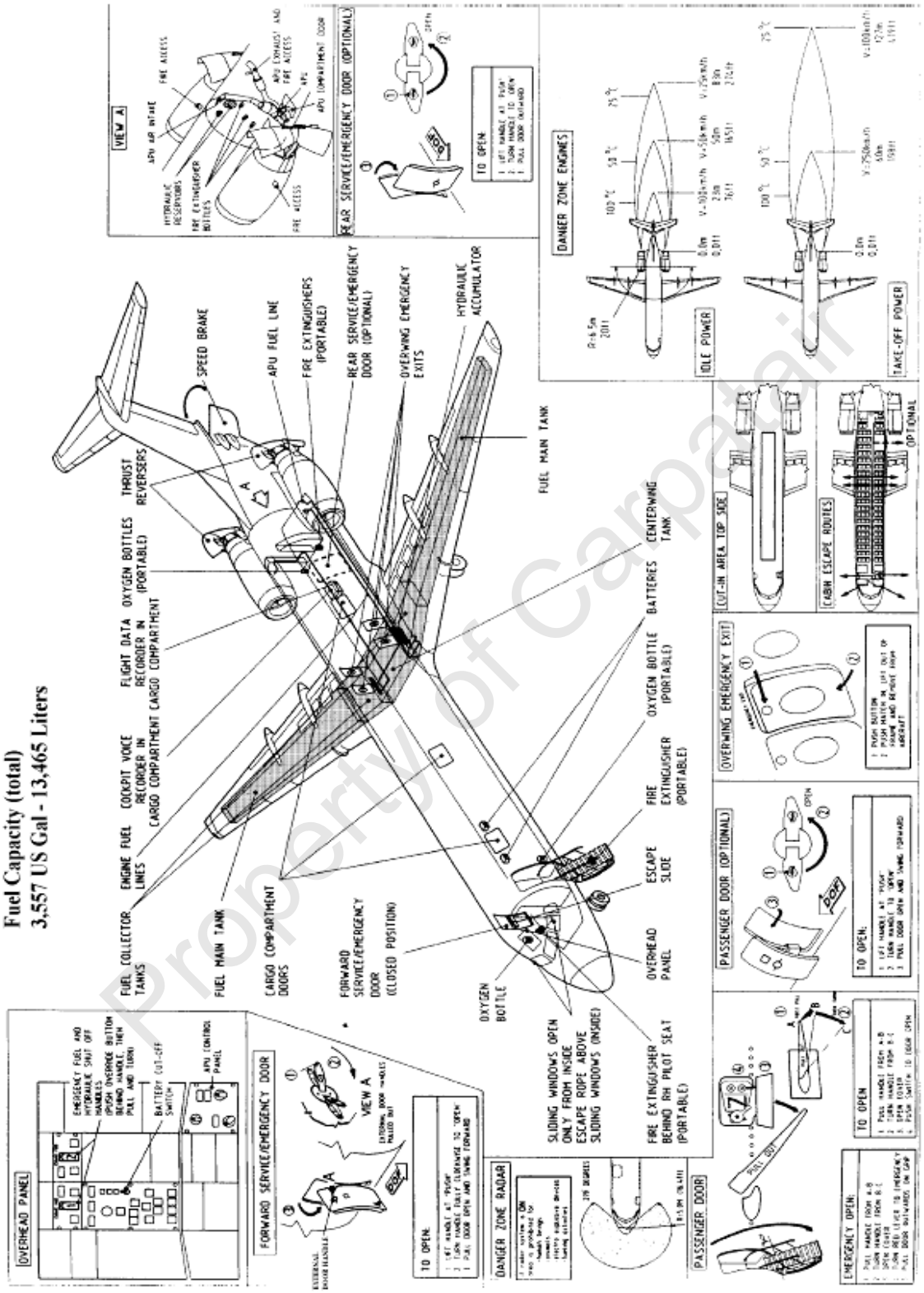
(1) The crew controls the aircraft direction during push back, with the steering wheel. They obey the instructions of the departure agent.
(2) During push back towing, emergency stop is possible. Two procedures are possible:
- Stop the tractor.
- Apply aircraft brakes.
(3) During push back towing, obey the guiding instructions of the departure agent.

Safety precautions

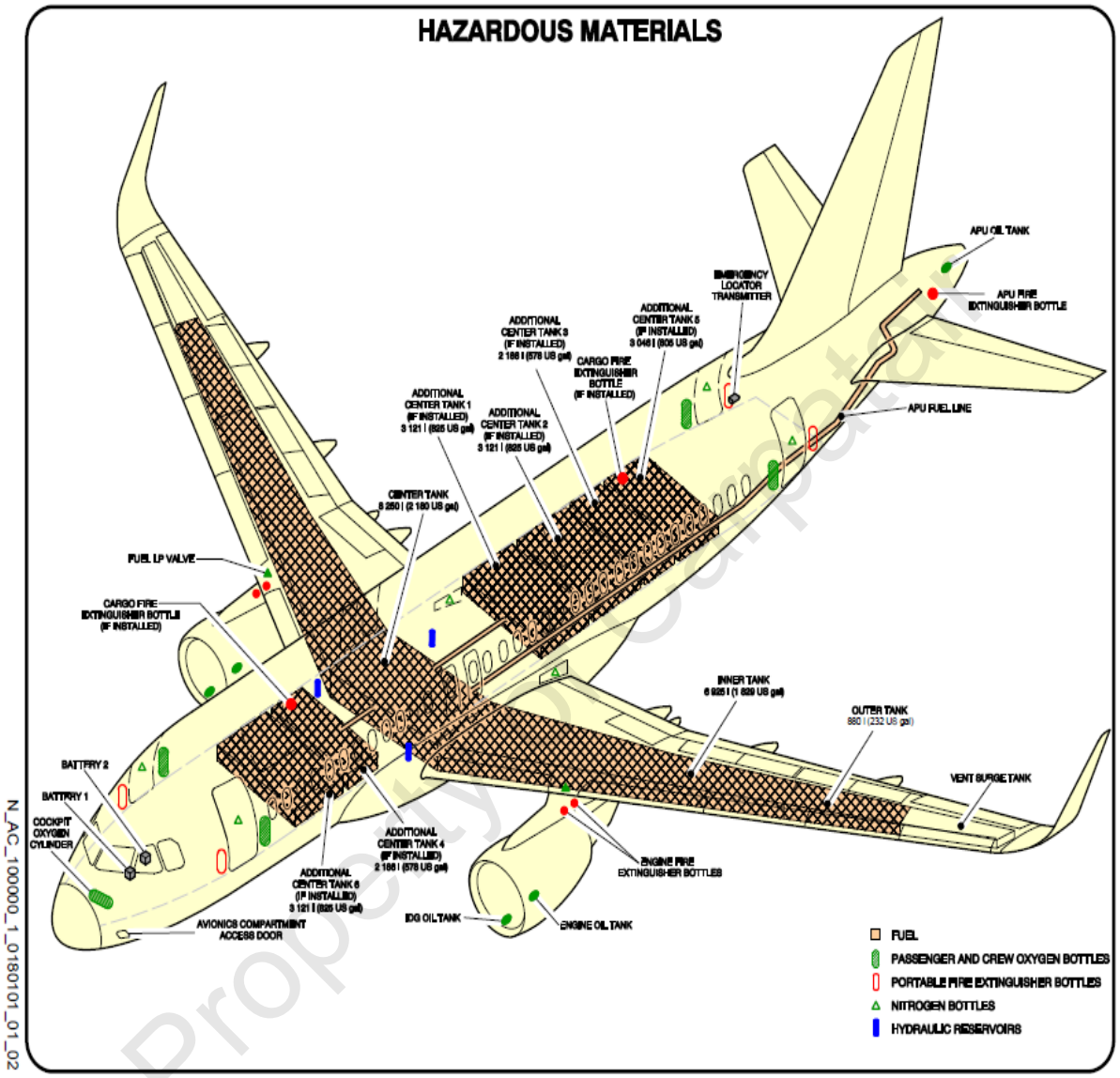
(1) At the end of the pushback operation, make sure that the aircraft is parallel to the taxiway axis.
(2) Set the PARKING BRK control switch to ON.

Disconnection of the tractor
(1) With the tractor remote control system, disconnect the tractor from the MLG.

4.14 Emergency Rescue Chart



AIRBUS 319



4.15 Operations during the winter

Ground De-icing and Anti-icing Procedures

Under weather conditions that lead to the icing of the aircraft during ground operations, the crew will be informed and de-icing or anti-icing will be requested. The presence of ice layer, slush, snow or ice on any part of the aircraft critical surfaces may seriously affect flight performance of the aircraft.

Such depots enhance the aerodynamic resistance and the aircraft weight; reduce its lift and its handling ability. Also ice, slush or snow may lead to the blocking of the control surfaces (mobile parts) of the aircraft.

Aircraft icing

Icing means the accumulation of frozen liquids (rain, snow, enhanced humidity) on the aircraft components (fuselage, wings) and on the system components (landing gear, engines, data system, etc.) and on the mechanism surfaces or spaces (front board, flaps, ailerons, stabilizer).

Stages of the accumulation process:
Slush – weak and inhomogeneous accumulation
Hoarfrost or rime – weak and incompact accumulation
Ice film – weak and compact accumulation
Ice – fix and compact accumulation

Necessary checking before the applying of the de-icing /anti-icing fluids.

Normally, these checks are made by the flight crew or by the technical staff, representing a circling of the aircraft or a walk-around before the flight. The critical surfaces of the aircraft, the fuselage and the landing gear will be checked for ice or snow, slush or ice films.
In the present of such deposits, the de-/anti-icing or anti-icing procedures will be started.

Checks after the applying of the defrost/anti-icing liquids

After finishing of de-icing/anti-icing procedures and before take-off, the critical surfaces of the aircraft must be clean of deposits: ice film, slush, snow or ice according to the concept of “Clean aircraft”:

- Wings, tail and controls surfaces – these surfaces have to be free of precipitates;
- The Pitot tubes and the static pressure plugs will be free of deposits and liquid rests;
- The in and out couplings for the air conditioning device will be free of deposits, the ballast discharge valves will be clean and un-obstructed;
- The landing gear and the doors of the landing gear compartments will be clean of deposits and unobstructed;
- The valves of the fuel tank will be free of deposits;
- The fuselage will be free of deposits.

Checks before take-off

The checks are the responsibility of the commanding pilot of the aircraft and are meant to confirm that the representative surfaces of the aircraft are clean and free of deposits before take-off.
The checks will be performed as soon as possible after the de-/anti-icing and are normally performed visually from the inside of the aircraft, observing the wings and other critical surfaces of the aircraft.

Communication during de-icing and anti-icing operations (information to the Commander)

The communication between the ground staff and the flight crew are part of the de-icing and anti-icing procedures.

The aircraft will not be guided for take-off after the de-icing and anti-icing procedures before the commanding pilot has been notified and confirms the kind of the procedure of de-icing/anti-icing performed and has made sure that this operation is according to the concept of “clean aircraft”.

The standard written or oral notification made by the qualified staff confirms that the critical surfaces of the aircraft are checked and are clean of deposits, containing also information about the de-icing/anti-icing procedures, necessary to allow the flight crew to estimate the supplementary holdover time according to the present weather conditions.

Note: This chapter will be mandatorily consulted according to the valid edition of Carpatair De-/Anti-Icing Manual.

Toilet Tanks and Sanitation of the Aircraft

In order to prevent the freezing of water in tanks and the sanitation pipes during the cold season, the following rules will be observed:

- The toilets will be emptied of water in case the aircraft remains parked outside for several hours without being coupled to an exterior or interior electric power source;
- The toilets will be refilled with water after the coupling to a power source and as shortly before take-off as possible.

Drinking Water Tanks and Installation

In order to prevent the freezing of water in tanks and the sanitation pipes during the cold season, the following rules will be observed:

- The drinking water tanks and pipes will be emptied of water in case the aircraft will remain parked outside for several hours without being coupled to an exterior or interior electric power source;
- The drinking water tanks and installation will be refilled with water only after the coupling to a power source and as shortly before the take-off as possible.

Aircraft Pulling Operation

Should an aircraft be tracked on ice or snow, it will make a complete stop before the performing of any turning, regardless of the angle.

4.16. Security of Ground Handling Activities

4.16.1 Introduction

Appropriate personnel has to be familiar with the present procedures and apply them as necessary to prevent weapons, explosives or any other dangerous devices/forbidden items which may be used to commit an act of unlawful interference, the carriage or bearing of which is not authorized, from being introduced, by any means whatsoever, on board an aircraft engaged in international civil aviation.
Patience and good judgment are required to avoid unnecessary disruption of our worth service and inconvenience to our customers, but the paramount consideration must be the security and safety of persons and facilities.

In order to guarantee an acceptable level of security to passenger, crew, aircraft, etc. all local, company and government security policies and rules must be observed and followed.

No passenger will be permitted to board any Carpatair aircraft unless the passenger has been cleared by a detection device, or physically searched, and the carry-on items of each passenger have been inspected to detect weapons or dangerous articles. If any weapon, explosive or dangerous articles are found during the screening process, that person and his/her carry-on baggage will be referred to a law enforcement officer for appropriate action. The company or its representative must be advised.

4.16.2 Passenger / Baggage Reconciliation Procedure

At departure gates, Passenger Handling Services staff is to carry out passenger/boarding card reconciliation before any passenger is allowed to board. Upon the passengers' check-in for the flight and upon their boarding, the handling agent personnel renders the identity check of all passengers, for all flights, no matter the destination.

a) At check-in counters during the registration procedure, the handling agent staff ask each passenger a valid ID - ID, identity card or passport - and check if the person who registers is the same with the person who holds the ticket or in the case of an electronic ticket, compares the name of the identity card with the one in the reservation system.
b) At embarkation gates during the procedure for boarding, staff handling agent, ask each passenger the boarding pass and a valid ID - ID, identity card or passport - face name inscribed in the two documents and ensure that person who is about to embark is the same as that recorded for that flight.

Crew members are also to ensure that the exact number of passengers checked-in for that particular flight in fact boards the aircraft and in case of any discrepancy the flight will not be allowed to leave, unless and until the discrepancy is resolved.

Any checked-in passenger who fails to board must be identified and his/her hold baggage off-loaded. Any baggage that does not bear a valid tag must not be loaded on the aircraft.

It is to be ensured that a passenger and his/her baggage board the same aircraft and follow the same route to their final destination. A suitcase going astray is not only a great potential security hazard, but also a very real inconvenience to the passenger concerned, as well as an **additional expense to the airline** – not only in terms of compensation payments, but also in customer satisfaction.

Baggage Identification Procedure

When it becomes necessary to conduct hold-stowed baggage identification, the following procedures are to be adopted:

a) If the holds have already been loaded, they must be emptied of all baggage and the Pilot in command of the aircraft should ensure that no baggage is left in the holds;
b) Sufficient baggage handlers are to be made available and all baggage must be placed on the tarmac in parallel rows. If the weather is inclement, consideration should be made to carry this identification under cover;
c) There should be sufficient gaps between the rows for the passenger to be able to walk freely between them to identify their baggage;
d) Before the passengers leave the aircraft or departure areas (as the case may be) there should be a public announcement informing them that they will have to identify their own baggage;
e) Passengers are told to have their tickets with them;
f) If passengers have already boarded, they are to be told not to leave their cabin baggage behind them in the aircraft;
g) Cabin crew are to control the flow of passengers leaving the aircraft so that there is never more than ten/fifteen people on the tarmac at any one time;
h) The handling agents must assure that the identification is carried out in a quiet manner and that when a passenger has identified his/her bag, the baggage tag number corresponds to the receipt on the ticket or to the sequential number;
i) The bags identified are to be marked with a security sticker and loaded directly into the hold of the aircraft;
j) Passengers must never be allowed to remove any items from their hold baggage into the cabin of the aircraft when they re-board it;
k) Baggage reconciliation is performed either automatically (by means of an automatic system of hold baggage) or manually. In case of manual reconciliation, the number of the bag tags must be established by using the “Bingo Cards” list;
l) A Baggage Manifest or a similar document will be issued for confirmation that baggage reconciliation has been performed and the security measures for RUSH baggage have been applied.

4.16.3 Baggage Areas

Carpatair handling agent staff is to be instructed to check that all baggage make-up areas and baggage transfer points are restricted to authorized personnel only. Staff should report immediately to the police or to the security guards any unauthorized personnel observed in these areas.

Carpatair handling agent staff will remain vigilant throughout the entire operations. They are to be on the alert to prevent unauthorized bags or packages from being placed on conveyor belts, carts or vehicles and they should report immediately any infringements to the security forces of the airport.

Loading supervisors shall ensure that loaded baggage carts are not left unattended in areas accessible to the public.

Loading supervisors shall retain baggage in make-up area, moving it to planeside not earlier than necessary. Driver of baggage carts shall keep ground route from make-up area to planeside as short as possible. Baggage carts must be kept in good condition and should not be overloaded. They should also be protected from bad weather.

4.16.4 Baggage Not Identified

If a bag remains unidentified, handling agent is requested NOT to load the bag and it should be handed over to the security staff to be security checked. After the bag is released by Passenger Handling Services, every effort is to be made to trace its owner, as it is possible that the bag had been wrongly coded and it is a misdirected baggage.

If properly carried out, baggage identification procedures are the best method of preventing an in-flight act of sabotage where a no-show passenger ploy has been used by terrorist.

Whenever baggage identification is necessary, airport security personnel must take charge of the whole situation

4.16.5 Protection of Aircraft and Facilities

All handling agents shall ensure that all staff under their jurisdiction and who have access to restricted areas are in possession of a valid security pass issued by the Airport Authorities and the company's ID badge (ground personnel and engineering staff).

This security pass must be worn at all times whilst in a restricted area and must be worn in a conspicuous place in front of the outer garment.

The police staff must be immediately notified, in case of location of unauthorized persons inside sterile areas or nearby Carpatair aircraft.

These measures are needed at all airports serving national or international civil aviation.

4.17.6 Reporting Threats Made on the Ground

All Carpatair employees including contracted handling agents must be aware that they are to report any threats heard to the company security manager. Carpatair Operations Control Centre must also be informed as soon as possible.

The Security Manager or his Deputy shall notify the Airport Security Manager and the Director General of Civil Aviation of any threats received by the company. The emergency response actions will unfold as described in Carpatair Emergency Response Manual. In such cases, coordination of response actions must take into consideration the special rules of communication imposed by security threats.

4.17 Staff Protection

4.17.1 Generalities

Safety is essential for anybody working on the platform.

This requests vigilance, care in the performing of operations and an alert state towards the potential dangers. Staff has to avoid the three potential dangers which are always present:

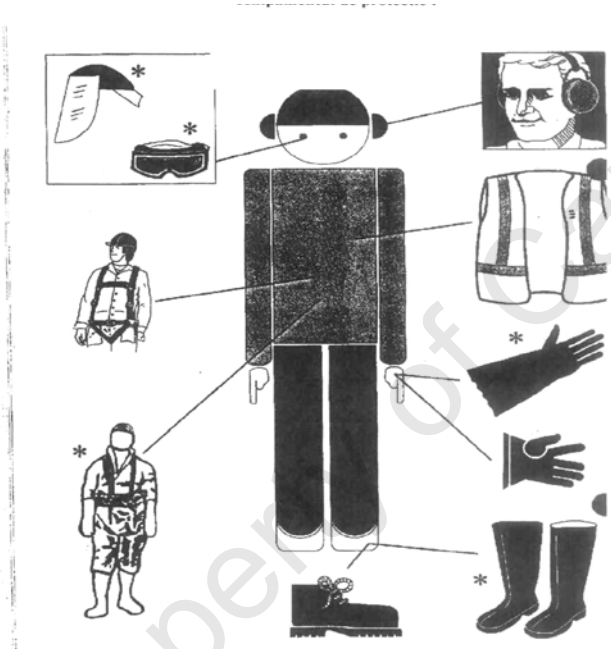
- ROUTINE – may cause the staff to be indifferent and uncaring towards dangers;
- HURRY – focus and control may be lost at movements done in a hurry;
- COLLEAGUES – it is necessary to pay attention to the others who do not observe the security rules.

Therefore, it is necessary that all the staff implied should be familiarized with the security rules.

4.17.2 Working Clothes and Shoes, Hearing Protection

- The working clothes shall be very visible by day or by night and shall be equipped with reflecting singes;
- Loose clothes will be avoided because they may be caught by moving mechanical parts of the equipment (ties and scarf will be fastened with pins to the uniform);
- Working shoes must protect the feet from possible injuries (they will not have metallic nails or heel pieces that may cause sparks).

Use of protection equipment



Special defrost equipment

- The antiphons must be used when staff is exposed to engine roar or other noise sources on the platform.

-

4.17.3 Handling Devices

- The devices will be operated only by qualified staff;
- The aircraft and the pedestrians will always grant right hand priority;
- The staff will not move and will not station on the luggage strip;
- The staff will not climb or descend the loading platform;
- The staff will never try to jump on and from moving vehicles;
- The staff will not stay on the elevating platform even when it is moving;
- The staff should not walk on the roll platforms.

Contents

Chapter 5 Load Control

Terms and Definitions associated with Load Control & Weight and Balance

The following terms and definitions published in IATA AHM 501 may be used in daily activity and communications, as required:

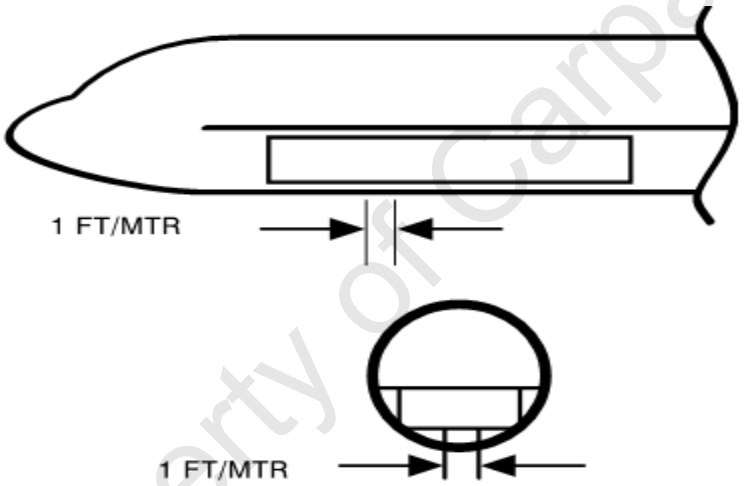
Manufacture's Empty Weight: The weight of the structure, power plant furnishings, systems and other items of the equipment that are considered an integral part of the aircraft.

Adults: persons over the age of 12 years and may be classified as male or female.

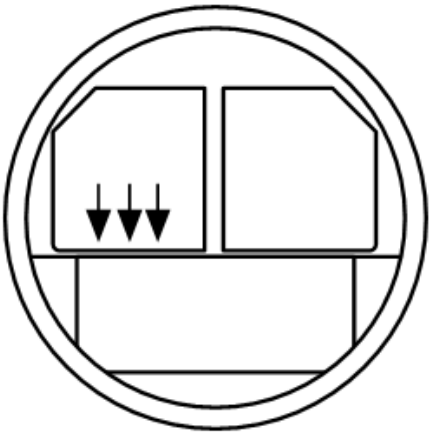
Aircraft registration: a unique alpha/numeric designation for an aircraft.

Allowed traffic load: the load which can be carried on the aircraft on any one sector and is the difference between the allowed weight for take-off and the operating weight.

Area load limitation: maximum load acceptable on any m2 (ft2) of an aircraft floor.



Asymmetrical load limitation: maximum load acceptable on each side of the compartment floor in relation with each other (also unsymmetrical load limitation).



Automated load planning: load planning performed using an EDP system.

Baggage (luggage): such articles, effects and other personal property of a passenger as are necessary or appropriate for wear, use, comfort, or convenience in connection with his trip. Unless otherwise specified, it includes both checked and unchecked baggage.

Baggage standard weight: approved baggage standard weights to be used for weight and balance calculation.

Balance condition: numeric expression of the position of the centre of gravity.

Balance limits: the end points forward and aft of the range within which the centre of gravity must lie for safe flight.

Ballast: deadload weight carried to achieve a particular balance condition.

Barrier net: restraining divider between compartments.

Barrier net load limitation: maximum weight that a barrier net can withstand under emergency forward load factors.

Basic index (BI): a numerical expression of the centre of gravity of the aircraft at its basic weight.

Basic weight (BW): the Basic Empty Weight or Fleet Empty Weight" and includes all fixed equipment, system fluids, unusable fuel and configuration equipment including galley structure.

Bulk: loading piece by piece.

Bulkhead: a rigid partition.

Bulkload: any loose or non containerised load.

Cabin: area where passenger seats are installed (also known as fitted interior).

Cabin baggage: baggage of which the passenger retains custody (also known as "Hand" and/or "Unchecked").

Cabin crew: crew members, other than flightdeck crew.

Cabin section: division of the cabin into zones for the purpose of balance.

Cargo: Any goods carried on an aircraft which are covered by an air waybill.

Carriers: the air carrier issuing the ticket (or air waybill) and all air carriers that carry or undertake to carry the passenger and/or his baggage (or the cargo) thereunder or to perform any other services related to such air carriage.

Catering weight: see pantry weight.

Centre of gravity (C of G): the point at which an aircraft would balance if it were possible to suspend it at that point.
CG targeting system: automated function to tailor the fuel distribution to achieve an aircraft specific centre of gravity (C of G) condition on the ground.

Checked baggage: baggage of which the carrier takes sole custody and for which the carrier has issued a baggage check.

Children: persons between the ages of 2 and 12 years.

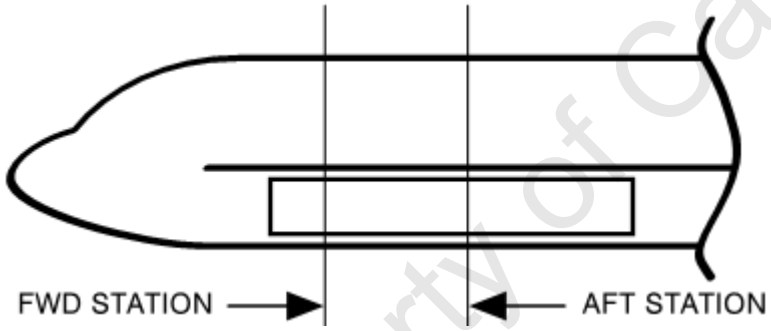
Chord: width of the wing on an airplane.

Class: segregation of passengers according to the facilities and services offered.

Cockpit: that part of an aircraft from which the flightcrew control the aircraft.

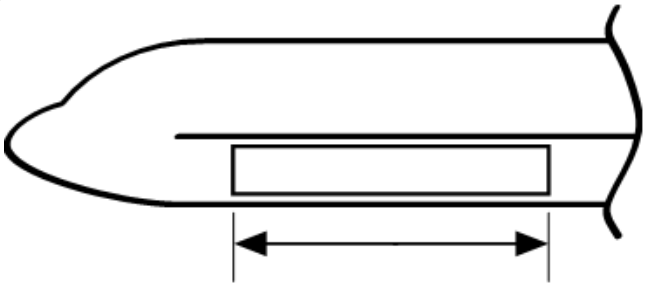
Combined load: see combined load limitation.

Combined load limitation: maximum load acceptable on main deck combined with lower deck and upperdeck in the section between a given fwd and aft location (station/balance arms)



Compartment: a space designated within a hold.

Compartment load limitation: maximum load acceptable in a compartment.



Compressible load: compressible (or crushable cargo) load that can be used to prevent damage to, or penetration of, the barrier net or aircraft structure, in the event of rapid deceleration.

Conditional: a format element marked C becomes mandatory under certain circumstances which have to be specified in the table of format. The element may be omitted if these circumstances do not prevail.

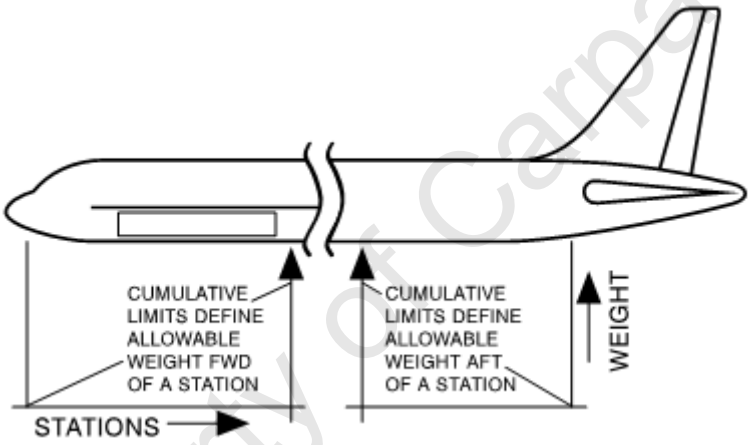
Configuration: planned utilisation layout of aircraft interior space.

Contact load limitation: maximum load acceptable in direct contact with the aircraft floor per m2 (ft2).

Crew baggage: baggage which is the property of operating crew and which is separately identified, excluding carry-on baggage.

Crushable cargo: see above compressible load.

Cumulative load limitation: maximum load acceptable forward or aft of a given location (station/balance arm or section). Can also be referred to as “Fuselage Shear load” or “Integrated load”



Dangerous goods: articles or substances which are capable of posing a significant risk to health, safety or property when transported by air and which are classified as such in the IATA Dangerous Goods Regulations (DGR).

Deadload: baggage, cargo, mail, ballast and equipment in compartments not included in dry operating weight of the aircraft.

Deadload index (DLI): index effect of the deadload. See index unit.

Deck: a structural floor level. For aircraft having one structural level only, this floor level shall be referred to as the main deck. For aircraft having more than one structural floor level, the different floor levels shall be referred to as “lower deck”, “main deck” and “upper deck”, starting from bottom to top.

Density: the relationship of weight to volume, i.e. kg per m3, kg/m3 or kg/l

Departure control system (DCS): an automated method of performing check-in, capacity and load control and dispatch of flights.

Dry operating index (DOI): the centre of gravity of the aircraft at its Dry Operating weight expressed in index units. (See index unit.)

Dry operating mass (DOW): basic weight plus operational items, such as crew, crew baggage, flight equipment and pantry as per company specifications.

EDP system: electronic data processing system (computer).

EIC: equipment which is carried on the aircraft but which is not manifested and which is not elsewhere included in the weight composition, such as additional flight kit.

Flight number: the alpha-numerical designator of a flight, prefixed by a two-character or three-character designator.

Flightdeck crew: crew members whose duties require them to be on the flightdeck.

Galley: the integral part of the aircraft where pantry/catering material is stored.

Hold: a space confined by ceiling, floor, walls, and bulkhead, used for carrying load.

Index unit: unit used to simplify the calculation of the influence of weight on balance.

Infant: persons up to 2 years of age.

Integrated load limitation: see cumulative load limitation.

Landing weight: weight of an aircraft at landing. It is calculated by subtracting the trip fuel from the take-off weight.

Lashing: see tie-down.

Lateral imbalance: expression of any imbalance caused by off-centre loading of payload and/or fuel.

Layout: see configuration.

Left: to be understood as left-hand side of the aircraft in the direction of flight.

Leg: see sector.

Linear load limitation: see running load limitation.

Loaded index at landing weight (LILAW): a numerical representation of the C of G of the aircraft at landing weight.

Loaded index at zero fuel weight (LIZFW): a numerical representation of the C of G of the aircraft at zero fuel weight.

Loaded index at take-off weight (LITOW): a numerical representation of the C of G of the aircraft at take-off weight.

Last minute changes (LMC): weight and/or index adjustments to either load and/or fuel necessary to adjust the loadsheet after completion.

Load control: process that ensures that an aircraft is safely and economically loaded for flight.

Load securing equipment: see tie-down.

Loading instruction report (LIR): document containing instructions for the correct and safe loading of the aircraft.

Loading report: signed LIR with any deviations recorded for action as required.

Loading supervisor: person responsible for the safe and correct loading of the aircraft.

Load message (LDM): message sent summarizing the load for that particular flight sector.

Loadsheet: a legal document which 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 form of transmission.

Luggage: see baggage.

Mail: goods carried under the terms of an international postal convention.

Mandatory: a format element marked M which must be specified in the table of format.

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. Also referred to as RC by some manufacturers.

Missing restraints: part of the aircraft restraint system missing or unserviceable.

Net: a network of webbing affixed to an aircraft within its holds or to an aircraft ULD for the purpose of restraining a load within the hold or in the ULD.

Net section: a subdivision of a non-containerised/palletised compartment.

Net weight: the difference between total weight and the tare weight.

Operating weight: sum of dry operating weight plus take-off fuel.

Pallet: a platform with a flat under-surface onto which deadload is bulk loaded and designed to be locked on a position/bay as a unit. See also unit load device.

Pantry: removable catering equipment.

Pantry weight: weight of pantry and additional unmanifested catering material transported in the galley.

Passenger standard weight: approved passenger standard weights to be used for weight and balance calculation.

Payload: the weight of passengers, baggage, cargo and mail and includes both revenue and non-revenue items.

Point load limitation: an applied limitation to prevent damage to the aircraft floor panels.

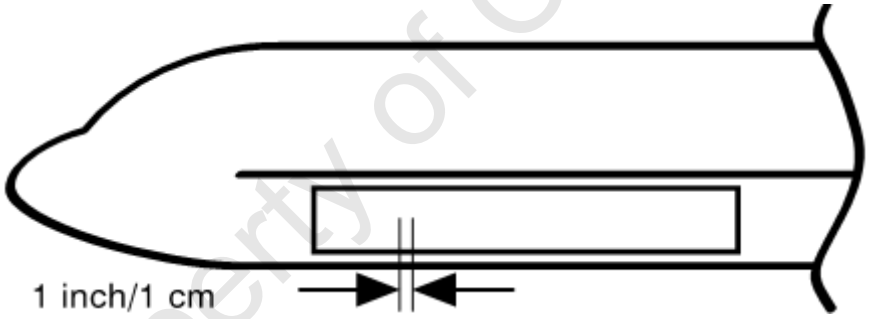
Position: see bay.

Reference chord (RC): see mean aerodynamic chord.

Restraint: permanent or removable fixture for the securing of load. See tie-down, locks, nets.

Right: to be understood as right-hand side of the aircraft in the direction of flight.

Running (linear) load limitation: maximum load acceptable on any given fuselage length of an aircraft floor.



Seating condition: passenger distribution in the aircraft cabin section/zone.

Seating restrictions: the limitations applied to the occupying of certain seats to achieve a satisfactory balance and/or safety criteria.

Section: a subdivision of a non-containerised/palletised compartment often separated by a net.

Sector: the flight between two consecutive scheduled stops on any given flight.

Special load: a load which requires special attention and treatment during the process of acceptance, storage, transportation, loading and unloading.

Spreader: devices, usually boards, on which items of deadload are placed to distribute the weight of the load over a greater area to ensure that maximum floor loading limitations are not exceeded.

Stabiliser setting at landing (STAB LA): the required position of the horizontal stabiliser based on the aircraft performance configuration at landing.

Stabiliser setting at take-off (STAB TO): the required position of the horizontal stabiliser based on the aircraft performance configuration at take-off.

Standard weights: the statically calculated weights approved by government authorities for weight and balance purposes for items of load regularly carried.

Structural load limitations: limitations of an aircraft defined by the manufacturer in order to avoid overstressing the aircraft.

Take-off weight: actual weight including take-off fuel of an aircraft at take-off. It is calculated by adding zero fuel weight and take-off fuel.

Take-off fuel: the amount of fuel on board less the fuel consumed before take-off run.

Tie-down: Equivalent to “Restrain/Secure/Lash”. A term used to describe the securing of load to fixed restraint points within an aircraft

Tie-down points: attachment points for the tie-down equipment to secure load on aircraft

Tie-down equipment: equipment to secure load on an aircraft

Traffic load: passengers, baggage, cargo, mail and equipment in compartments not included in dry operating weight of the aircraft.

Transfer: traffic load arriving at a point on one flight and continuing its journey there from on another flight.

Transit: traffic load which arrives on a flight and continues on the same flight.

Transit load: see transit.

Trip fuel: amount of fuel planned to be consumed from take-off to the station of the first intended landing.

Underload: the difference between the allowed traffic load and the actual traffic load.

Unit load device (ULD): NA to Carpatair fleet;

Version: the designator used to indicate the aircraft configuration together with the details of the equipment carried.

Weight: the term “weight” is used herein in lieu of the correct technical term “mass”, in order to conform to standard industry terminology.

Zero fuel weight: actual weight of the fully equipped aircraft including crew, traffic load and, if applicable, ballast fuel.

5.1 Introduction

Load control is a function which ensures the production of all load control and mass and balance documentation to comply with Carpatair and applicable regulations in force.

This includes planning, reporting and recording the loading of the aircraft.

5.2 Load Control Principles

Load Control is an essential function which guarantees the safety of a flight. It includes accurate planning, recording and reporting of all load distributed on an aircraft.
Documented communication is required to ensure correct mass & balance calculations are conducted and provided to commander prior to an aircraft's departure.

5.3 Regulatory Requirements

5.3.1 General Requirements

Within Carpatair, Load control function is carried out by flight deck personnel for ad-hoc operation (commander is the load controller of the flight) and short term ACMI operation using FlySmart software application – Loadsheet module installed on the crew member's iPads UDID.

For all Carpatair ad-hoc operation, the loadsheet will be generated by Carpatair crew using Flysmart+ application/Mass and Balance Module, while for ACMI operation, the loadsheet will be generated automatically by the handling agent of the ACMI partner only if authorized by Carpatair.
The data integrity of the mass&balance application will be checked every 6 months by generating at least 2 electronic loadheets. The data recorded on these loadsheets will be checked against 2 manual loadseets.
Same data and figures will be recorded on both types of loadsheets. Tests will be performed by NPFO and NPGO.

Mass and balance documentation is issued and revised in compliance with the provisions of Regulation (EU) No 965/2012 AMC1 CAT.POL.MAB. 100(a) AMC (except point 8 which is not applicable) and in accordance with IATA AHM 565.

The loadsheet issuance and calculation procedure is described in Flysmart User Manual being in conformity with:
CAT.POL.MAB.105,
AMC1 CAT.POL.MAB.105 (b),
GM1 CAT.POL.MAB.100(e)

For the long term ACMI operation, load control function is carried out by the own load control staff of ACMI partner or by the load control staff of the handling agent contracted by the ACMI partner.
The loadsheet will be generated by Carpatair ACMI partner only after the database of the ACMI partner is fully set up and loadsheet approval has been granted by Carpatair.

The ACMI DCS database will be set up before the start of operation considering the data recorded on the IATA AHM 565 for each aircraft registration number.
In this respect 3 electronic loadsheets test will be generated and submitted to Carpatair for the approval process.

The loadsheet must be prepared in 4 copies. It must be signed by flight crew and distributed as follows:

- Original copy for the operator (the aircraft, in Carpatair case);
- Second copy for the handling agent from the arrival station;

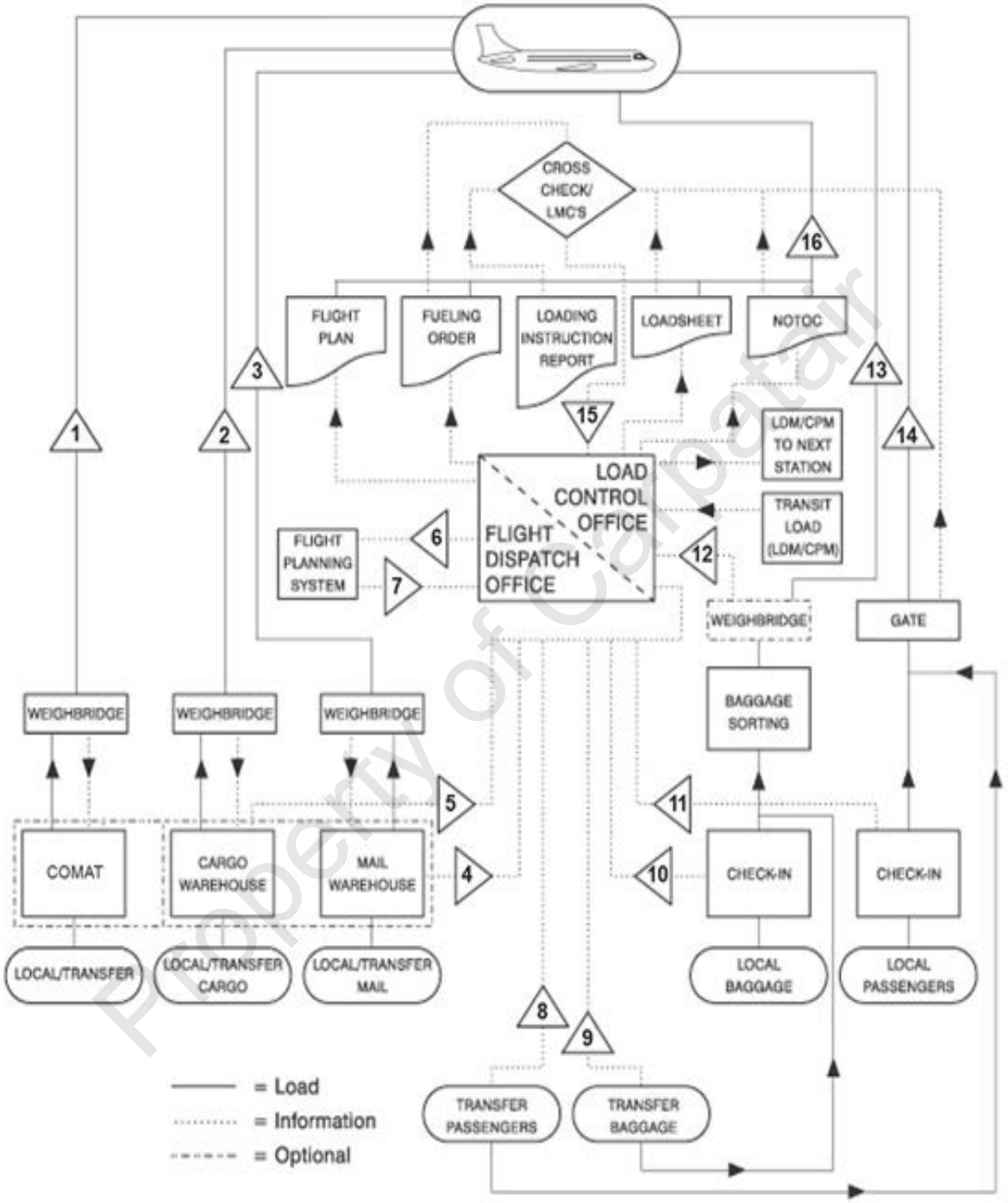
- One copy for the handling agent from the departure station;
- One is retained by ACMI partner, as required;

5.3.2 Qualification requirements

Personnel performing Load Control tasks shall be duly qualified. Training shall be in accordance with AHM1110.
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 Carpatair's policies.

5.4 LoadControl Process Flow

5.4.1Load Control Process Flow Schema



5.4.2 Load Control Process Flow Legend: (Actions in triangles above are defined below)

TRIANGLE #	ACTION
1.	Comat.
2.	Cargo to aircraft.
3.	Mail to aircraft.
4.	Mail weight/destination/category/DG/Special Load information to Load Control Office.
5.	Cargo weight/destination/category/DG/Special Load information to Load Control Office.
6.	ZFW/Aircraft registration/Route to Flight Planning System.
7.	Flight plan including Take-off/Trip-Fuel/Maximum Gross Weights to Flight Dispatch/Load Control Office.
8.	Transfer passenger number/category/destination/class/status to Load Control Office.
9.	Transfer baggage weight/number/category/destination/class and any special information to Load Control Office.
10.	Local baggage weight/number/category/destination/class and any special information to Load Control Office.
11.	Local Passengers number/category/destination/class/status to Load Control Office.
12.	Baggage weight/number/category/destination/class and any special information to Load Control Office.
13.	Baggage to aircraft.
14.	Passengers to aircraft.
15.	Cross-check documents and LIR information to Load Control Office for final loadsheet.
16.	Final Loadsheet/LMC/NOTOC/Fuelling Order/Flight Plan to Flight Deck (Cockpit).

Note: Actions and items not in chronological order.

5.4.3 Information Exchange

The handling agent staff will communicate to Carpatair flight deck personnel all figures related to total number of passengers and passengers gender distribution, if necessary, total number of checked baggage, comat, cargo etc, total weight of hold baggage. All data pertaining to aircraft weight and balance calculations shall be communicated to the person responsible for the loadsheet and manually or electronically documented and filed.

5.5 Load Planning

5.5.1 General

The Carpatair load planning procedure takes into consideration, as applicable for each flight, the following:

a) Aircraft weight and balance conditions are correct and within limits;
b) Aircraft is loaded in accordance with applicable regulations and specific loading instructions for each flight;
c) Information related to dangerous goods and other special load information applicable to each flight;
d) Information related to LMC;
e) Aircraft limitations;

The flight plan will state the estimated fuel load which the Load Controller will use to ensure load is optimized without aircraft limits being exceeded.
The load distribution shall be planned by the Load Controller for the ACMI flights and by the commander for ad-hoc charter flights adhering to the operator's specific requirements and procedures.
The LIR will be released to the loading team. After confirmation of final loading, loadsheet shall be released and provided to commander for the ACMI flights.

For the ad-hoc charter flight, LIR will be produced by the flight deck personnel.

Load Control procedures ensure that:
- Figures on the loadsheet reflect the actual load of the aircraft prior to take-off, passengers and fuel included;
- The aircraft is loaded in accordance with the company regulations in general and with the specific loading instructions for the flight concerned in particular;
- Aircraft structural and operational limits are not exceeded;
- Weight and balance conditions of the aircraft are correct and within prescribed limits.

Baggage:
Load planning must be based on established actual weights per baggage. If actual baggage weight cannot be established, “Standard Baggage Weight” must be used.

Cargo
It is mandatory to use actual weight for cargo.

Mail
It is mandatory to use actual weight for mail.

Passenger
Load planning must be made using standard passenger weights, for specific type of flight. Passengers shall be calculated as adults (if required, passenger gender distribution should be used male /female), children and infants separately.

Communication of data for normal and non-normal weights
Whenever special loads are booked, Carpatair ground operations department shall inform via charter brief the handling agent and the crew members about such.
Special loads:
- hold baggage, individual or cumulative weights, that exceed normal allowances;
- general passenger loads that do not comply with conventional aircraft loading weight allowances (eg. rugby, basketball, handball, hockey players, military troops);
- Aircraft commander, according to operational conditions, has the right to add an adequate mass increment to standard passenger mass;
  For flights with certain passenger groups (eg. rugby, basketball, handball, hockey players, and military troops), following passenger weight shall be used for male or adult: 100kg;
- gate delivery items, including individual or cumulative weights that exceed normal allowances;
- other non-normal items (musical instruments, sport, photo equipment) that must be considered in the load control process.

The same communicating procedure applies for carriage of Cargo, and/or cargo flight operations. Whenever a cargo shipment is booked on a particular flight, Cargo agents ask for confirmation from Carpatair ground operations department that there is available space on the aircraft and that the weight limitations are not exceeded. Only after the confirmation the cargo agent will accept the shipment.

This procedure ensures accuracy in aircraft load calculations even for such unconventional weight loads.

Basic Rules
In order to ensure the above requirements, the Load Control procedure is based on the following principles:

- An efficient control system shall be in operation ensuring compatibility of all figures on the loadsheet with the corresponding actual loading of the aircraft;
- The Load Control system shall be based on three functions (load planning, supervising of aircraft loading and loadsheet issuing);
- The three functions should be performed by at least two staff;
- Any work done by staff without the appropriate experience or training must be supervised by qualified staff;
- Any significant figures verbally communicated in connection with load control work must be confirmed before aircraft departure either in writing or by any other effective pre-departure checks.

Purpose, Application and Capacity Planning

The purpose of load planning is to achieve:
- Maximum safety;
- Maximum regularity, taking into account the length of the scheduled ground stops en route;
- The most economical utilization of aircraft capacity with respect to safety aspects;
- Smooth handling of aircraft and load at all stations en route;
- Most accurate EZFW to give to the flight crew with the aim of efficient fuel planning.

Application
- Load planning applies to all flights;
- May be prepared for transit flights;
- For the stations where the flights end, load plan may not be prepared, LDM can be used instead;
- Only to be made by qualified staff.

To extent of load planning depends on:
- Aircraft type;
- Number of transit stops;
- Traffic volume.

Based on the maximum capacity available, Carpatair ground operations department verify and decide for the ad-hoc charter flights if the total load intended to be transported by the customer by can be carried.
In order to proceed with corresponding volume calculations, the customer shall provide to ground operations department data related to all 3 dimensions of each item, total number of items and weight of each item.
If the booking exceeds the maximum available capacity, ground operations department shall authorize for loading and transport only those items that can be accommodated in the holds.
For the ACMI flights, based on the maximum capacity available, the ACMI's partner load planner decides on the load to be transported by the passengers based on aircraft performance and limitations according to provisions of Carpatair AHM-565 for respective aircraft.

5.5.2 Loading Instructions Report (LIR)

LIR shall be issued for each flight. Manual LIR should comply with AHM 515, electronic LIR shall comply with AHM 514. Both could be subject to operator customization.
The aircraft shall be loaded in accordance with the LIR. All deviation requests shall be approved as per operator requirements.
LIR shall be done only by qualified staff, according to responsibilities described in IATA AHM 590.

LIR shall be signed by responsible person as described in AHM 514 or 515 to confirm that bulk load have been loaded and secured in accordance with operator instructions.

Procedure

Handling agent has to supervise aircraft loading, therefore he will check the correct loading and distribution as stated on the LIR (Load Instruction Report), considering the maximal hold weights, balance and volume requirements.

The procedure will develop according to each station local procedures but basically in the following sequence:

1. The handling agent will obtain LIR from the commander prior to the aircraft loading and give it to head loader;
2. The head loader will give proper instructions to the baggage handler as to the loading of the aircraft and will supervise loading;
3. When loading is completed, head loader will check the loading on the aircraft against LIR and will sign the document to certify correct loading;
4. Any deviations to LIR will be communicated to the Load Control Agent and to Carpatair flight crew;
5. Cargo hold shall be inspected by the ramp agent for damages and leakages;
6. The ramp agent shall ensure that only confirmed and documented items are loaded into aircraft;

Manual Loading Instructions Form for Airbus A319

A319-100 Carpatair

LOADING INSTRUCTIONS / REPORT Form

LIR to be used in conjunction with Flysmart Loadsheet application or manual loadsheet

LOADING INSTRUCTIONS

BAGs:_____Kg
_____Pcs
CGO: _____Kg
MAIL:_____ Kg
TOOL KIT: _____Kg
TTL :_____Kg
Issued/Approved by:
NAME:_____
Signature:_____

REPORT / DEVIATIONS

BAGs:_____Kg_____Pcs
CGO:_____Kg
MAIL:_____Kg
TOOL KIT:_____Kg
TTL:_____Kg

This Aircraft has been loaded in accordance with Loading Instructions above, including deviations shown in this Report/Deviations section. The load has been secured in accordance with company regulation.

Loading Confirmed by:
NAME:_____
Signature:_____

DATE:	A/C REG:	FLT NR:	FROM:	TO:

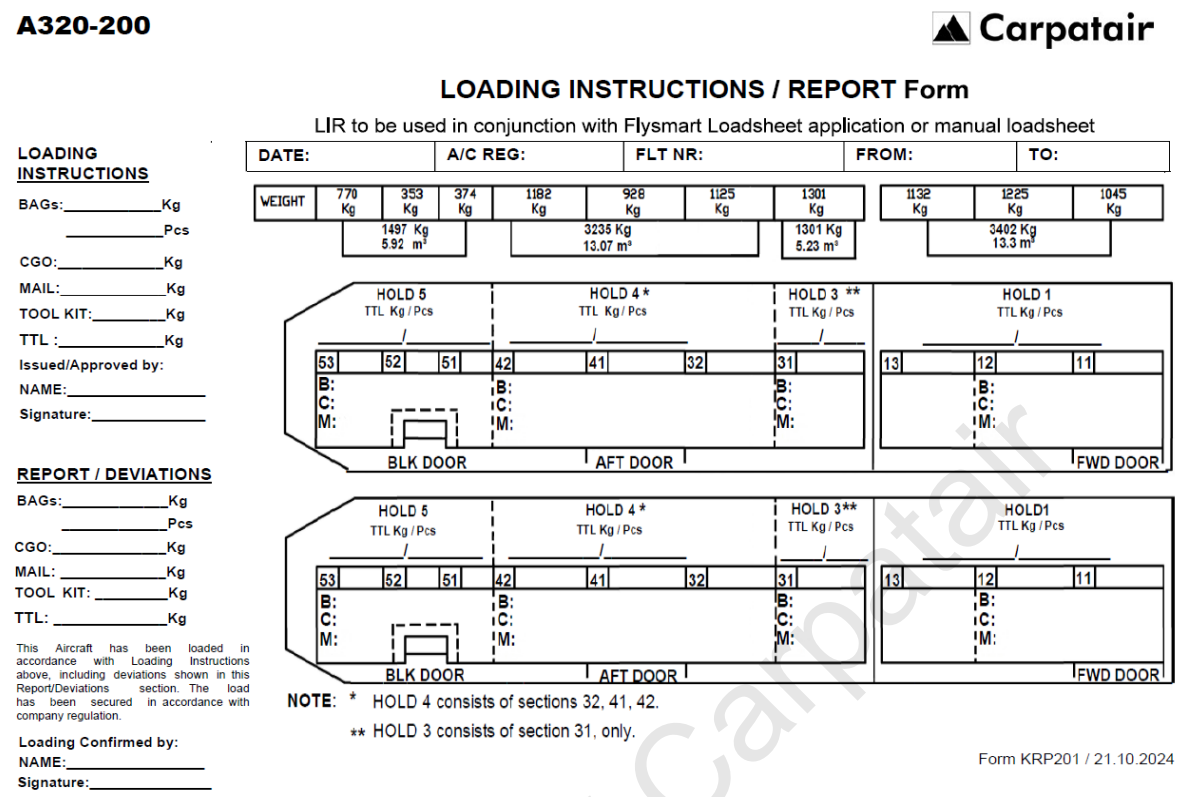
WEIGHT	1497 KG	1965 KG	1326 KG	1223 KG	1045 KG
	1497 Kg 7.22 m³	3021 Kg 11.94 m³		2268 Kg 8.53 m³	

HOLD 5 TTL Kg / Pcs	HOLD 4 TTL Kg / Pcs		HOLD 1 TTL Kg / Pcs	
51	42	41	12	11
B:	B:		B:	
C:	C:		C:	
M:	M:		M:	
	AFT DOOR			FWD DOOR

HOLD 5 TTL Kg / Pcs	HOLD 4 TTL Kg / Pcs		HOLD 1 TTL Kg / Pcs	
51	42	41	12	11
B:	B:		B:	
C:	C:		C:	
M:	M:		M:	
	AFT DOOR			FWD DOOR

Form KRP188 Rev1 / 21.10.2024

Manual Loading Instructions Form for Airbus A320



A320-200

Carpatair

LOADING INSTRUCTIONS / REPORT Form

LIR to be used in conjunction with Flysmart Loadsheet application or manual loadsheet

DATE:	A/C REG:	FLT NR:	FROM:	TO:

LOADING INSTRUCTIONS

BAGs:_____Kg
_____Pcs
CGO:_____Kg
MAIL:_____Kg
TOOL KIT:_____Kg
TTL :_____Kg
Issued/Approved by:
NAME:_____
Signature:_____

WEIGHT	770 Kg	353 Kg	374 Kg	1182 Kg	928 Kg	1125 Kg	1301 Kg	1132 Kg	1225 Kg	1045 Kg
	1497 Kg 5.92 m³			3235 Kg 13.07 m³			1301 Kg 5.23 m³	3402 Kg 13.3 m³		

	HOLD 5 TTL Kg / Pcs			HOLD 4 * TTL Kg / Pcs			HOLD 3 ** TTL Kg / Pcs	HOLD 1 TTL Kg / Pcs		
	53	52	51	42	41	32	31	13	12	11
B:										
C:										
M:										
	BLK DOOR			AFT DOOR						FWD DOOR

	HOLD 5 TTL Kg / Pcs			HOLD 4 * TTL Kg / Pcs			HOLD 3** TTL Kg / Pcs	HOLD1 TTL Kg / Pcs		
	53	52	51	42	41	32	31	13	12	11
B:										
C:										
M:										
	BLK DOOR			AFT DOOR						FWD DOOR

NOTE: * HOLD 4 consists of sections 32, 41, 42.
** HOLD 3 consists of section 31, only.

REPORT / DEVIATIONS

BAGs:_____Kg
_____Pcs
CGO:_____Kg
MAIL: _____Kg
TOOL KIT: _____Kg
TTL: _____Kg

This Aircraft has been loaded in accordance with Loading Instructions above, including deviations shown in this Report/Deviations section. The load has been secured in accordance with company regulation.

Loading Confirmed by:
NAME:_____
Signature:_____

Form KRP201 / 21.10.2024

Carpatair Loading Instructions Report Form consists of following sections:

a. flight details (aircraft registration, flight number, route (origin and destination airport)
b. maximum weight per sections an maximum weight per hold compartment
c. loading instruction part to be completed by the commander to instruct the loading supervisor about the distribution of the load and name and signature of the commander issuing the loading instructions
d. loading report part to be completed by the loading supervisor to confirm that the aircraft has been loaded in conformance with the instructions given and name and signature of the loading supervisor. Loading supervisor is not authorized to deviate from the instructions unless confirmation has been obtained from the load planner/commander. Deviation from the instructions shall be clearly stated on the report.

For every departing flight a Loading Instruction Report must be issued.
Three-letter IATA airport codes shall be used for all documents related to ground operations

5.5.3 Off-Loading Instruction Report

An OIR may be issued prior to aircraft arrival. Refer to AHM 514 and 515 for data elements and format. Consideration shall be given to ensure aircraft stability during the offloading process and passenger disembarkation.

5.5.4 Notification to the Captain (NOTOC)

The flight crew must be provided with a notification concerning dangerous goods and any other special load as required the (i.e. DG, PER, AVI, HEG, HUM, WEAP) onboard the aircraft in the form of a NOTOC (Notification to Captain).

The flight crew, or person responsible for the loadsheet is liable to decide on the loading positions.
This will be reflected in the right hand side of the NOTOC. Any change must be agreed and communicate in advance with load controller.
For special loads, NOTOC will be produced by the handling agent.
If agreed, NOTOC shall be updated by personnel responsible for loading or loading supervision. Finalized NOTOC shall be signed and delivered to PIC for familiarization and subsequent signature.
For NOTOC forms refer to AHM 381.

The NOTOC is usually generated by the DCS system in electronic format, but in cases of DCS breakdown, the manual forms must be used.

Required NOTOC information:
1. The station of loading;
2. The flight number;
3. The date;
4. The aircraft registration;
5. The three-letter code and signature of the load control agent issuing the NOTOC;
6. The station of unloading;
7. The air waybill number (it is mandatory only when the goods are transported as cargo);
8. The contents and description of goods;
9. The number of packages;
10. The weight of the packages (in kg);
11. The supplementary information;
12. The IMP code;
13. The hold position where the goods are loaded
14. The loading supervisor signature
15. The commander signature;

Other information (Information about the loading of goods or passenger details

5.6 Loadsheet

5.6.1 Production of Loadsheet

In order to produce the loadsheet the following criteria shall be met:
a) passenger acceptance finalized;
b) all hold load confirmed;
c) fuel figures finalized;
d) crew configuration confirmed;
e) pantry codes confirmed
f) operator specific requirements confirmed.

Staff responsible shall confirm that all aircraft limitations are adhered to before any loadsheet is released. Loadsheet format and contents should meet criteria prescribed in AHM 516 and 517.

5.6.2 Aircraft documents

Following documents shall be carried on each flight:

- Mass and balance documentation;
- Cargo and/or passenger manifests;
- Notification of special categories of passengers and special loads, if applicable; and
- Any other documentation that may be pertinent to the flight or is required by the states concerned with the flight.

The loadsheet: This is a legal requirement to show the various component weights that make up an aircraft's total weight.

The cargo manifest: This document is used to record details of the cargo consigned to each destination.

The passenger manifest: This document records the names of all passengers checked in and boarded.

5.6.3 Duties and Responsibilities

The load control functions are classified as follows:

Function	Load control functions
1	Load planning, weight and balance pre-calculation, completion of Loading Instruction Report (LIR) **Function designator:** **Load control and planner agent - ACMI Operation** **Commander and load control - Ad-hoc operation**
2	Supervision of aircraft loading in accordance with Loading Instruction Report, upon completion of loading, confirmation or an advice should be passed to the load control agent. **Function designator:** **Loading supervisor / Ramp agent/ – ACMI Operation** **Commander - Ad-hoc operation**

3	Loadsheet issuing, checking of the loadsheet against LIR and other documents (e.g. Fuelling Order) and entry of Last Minutes Changes (LMC). **Function designator:** **/ Load control agent/Ramp Agent – ACMI Operation** **Commander – Ad-hoc Operation**

Division of Duties
Whenever possible, each of 3 load control functions must be assigned to different qualified staff numbers. Functions 1 and 3 may be performed by the same person.

This is applicable, irrespective of whether planning of load distribution and loadsheet calculation are done manually or by DCS / any other approved electronic application.

Exceptions
- Are permitted only if the basic rule cannot be applied;
- May be performed by 1 person, if planning of load distribution and loadsheet calculations are done by Electronic Data Processing (EDP) system and both documents are printed out;
- In exceptional cases (eg. DCS breakdown, shortage of qualified staff) also applicable if loadsheet is done manually.

5.6.4 Commander responsibilities for the issuance of the loadsheet

The loadsheet issuer's signature, printed name or printed code on the loadsheet confirms:
- The data have been correctly entered;
- The data have been compared with those of the pre calculation;
- Correct totals of cargo and mail as given by cargo department and mail department respectively;
- Correct basic weight and basic index used according to aircraft type, version, number of crew and pantry weights;
- Correct take-off and trip fuel figures used;
- Total traffic load not exceeding allowed traffic load;
- Correct entry of transit load data from incoming load message / loadsheet;
- The compartment totals of the loading report have been compared with the corresponding figures on the loadsheet;
- Significant differences have been clarified;
- Actual loading positions of dangerous goods and other special load entered on the NOTOC;
- Checking of the final loadsheet against passenger figures at the gate and Loading Instruction Report has been done;
- Balance calculation performed correctly and conditions of loaded aircraft included LMCs are within prescribed limits;
- Flight safety regulations are applied and no limits exceeded.

The load planner's/commander signature on final loadsheet confirms that:

- Compartments totals figures of the LIR have been compared and correspond with load distribution figures on the loadsheet;
- Passengers' figures on the loadsheet correspond with the equivalent figures at the boarding gate;
- Fuel figures on the loadsheet correspond with the final quantities stated on the Fuelling Order;
- Actual loading positions of dangerous goods and/or other special load of the LIR correspond with loading positions on the Special Load Notification to Commander (NOTOC);
- The reasons for significant differences have been clarified in accordance with instructions in chapter *Last Minute Changes*.

To carry out the prescribed checks, the load controller needs, in addition to the loadsheet, the following documents:

- The completed and signed Loading Instruction Report;
- The Fuelling Order showing the final amount of fuel uplifted;
- The completed and signed NOTOC showing dangerous goods and /or other special loads' loading positions.

By signing the Loading Instruction Report the load planner/commander confirms:

- The aircraft structural and operational limits are not exceeded;
- Balance condition is within safety limits;
- The loading positions, maximum quantities, separation and segregation requirements for special loads and dangerous goods comply with the company regulations.

5.6.5 Supervisory Functions

Main functions requiring supervision are:

- Loading / unloading;
- Cleaning, catering, toilet servicing, fuelling, de-icing / anti-icing;
- Documentation exchange and safety factors;
- Obtain LIR;
- Assemble off-loading / loading equipment;
- Off-load disembarking deadload and dispatch expeditiously;
- Assemble load;
- Ensure load spreading is correct;
- Ensure load lashing is correct;
- Check the condition of dangerous goods packages (bulk loading);
- Ensure dangerous goods loads are stowed correctly;
- Ensure special loads are stowed correctly together with cargo agent and handling agent;
- Upon completion of loading, confirm or advice the deviations to the LC agent.

By signing the Loading Instruction Report the loading supervisor confirms:

- The holds maximal weights are not exceeded;
- Load is properly secured;
- Load spreading is correct, load lashing is correct;
- Dangerous goods packages are in good condition and correctly stowed;
- Special loads are correctly stowed;

- Upon completion of loading, loading instructions are confirmed or deviations from the original load distribution have been reported and registered;
- The compartment totals of the loading report have been compared with the corresponding figures on the loadsheet.

Any significant figures verbally communicated in connection with load control work must be confirmed before aircraft departure either in writing or by any other effective pre-departure checks.

Function 2 belongs to the ramp handling activity as related in IATA AHM 590.

The ramp personnel is responsible to:

1. Arrange for service equipment:
   - adequate passenger steps – positioning and removal;
   - positioning / removal of passenger air jetties (when necessary);
   - positioning / removal of adequate loading equipment depending on the type of aircraft;positioning / removal of GPU / ASU and other ground equipment, if required;
   - prompt availability of fuelling equipment;

2. Arrange for personnel:
   - to load/unload (bags, cargo, etc.);
   - to assemble, deliver, onload and secure loads;
   - to load, stow and secure special loads in accordance with instructions and procedures (lashing materials may be charged at cost);
   - to distribute loads in cargo holds, according to Carpatair and load control instructions;
   - to secure and close doors;

3. Arrange for transportation of:
   - passengers;
   - crew, if necessary;
   - provide for adequate and suitable transport of all loads in airport area.

The ramp duty before starting operations, coordinate and supervise all activities concerning the aircraft, crew, passengers and their baggage, as well as ramp handling operations. He is responsible to:

a) Planning All required equipment for ramp handling, loading, off-boarding is available.
b) Check: All loads for destination are offloaded.
c) Check: With loading personnel if all baggage, cargo, service cargo for the flight concerned has been loaded and distributed according to the load control instructions.
d) Ensure: The proper loading and securing of load.
e) Confirm: Correct load distribution and securing of load by signature.
f) Check: With the commander if the aircraft is ready and the purser has cabin services completed.
g) Inform: Commander/purser if any special categories of passengers or any special loads) are on board.
j) Ensure: That all necessary documents required for the flight are on board the aircraft.
k) Inform: In advance the commander if any special load is to be loaded (dangerous goods,

heavy cargo, etc)

l) Inform: In advance the commandern if any armed passenger is to be boarded (seat allocation

is to be reported in the Load sheet or in the passenger list with the note WAM/C).

The ramp duty officer shall fill in a ground incident/accident occurrence report form every time such an event occurs, and then hand it over to his direct supervisor.

The responsibilities of external service providers as well as the scope and extent of services to be provided are subject to a written agreement between the service provider and *Carpatair*.
The ramp handling agents are assigned by station manager, which are qualified to perform this responsibility.

- Obtain LIR;
- Assemble off-loading / loading equipment;
- Off-load disembarking deadload and dispatch expeditiously;
- Assemble load;
- Ensure load spreading is correct;
- Ensure load lashing is correct;
- Check the condition of dangerous goods packages (bulk loading);
- Ensure dangerous goods loads are stowed correctly;
- Ensure special loads are stowed correctly;
- Upon completion of loading, confirm or advice the deviations to the LC agent.

A ramp agent shall be available during the complete ground time to coordinate and supervise all activities concerning the aircraft, crew, passengers and their baggage, cargo etc., as well as ramp handling operations. He is responsible to:

The Handling company shall report to the Carrier immediately any incidents and accidents.

Load information codes

Purpose
Besides load and load distribution information, further information is required in the LDM for efficient ground handling at transit / arrival station, such additional information shall be given in the form of standardized remarks to keep the LDM as brief as possible.

Sequence
Remarks must be shown for each destination following the PAX and PAD, CY distribution, in the following sequence:
Passenger and cabin related remarks: DHC, XCR.
Dead load related remarks such as: AVI, BAL, RFL, etc.

Format rules for LDM
The following format rules apply:

- All remarks composed of the load information code consisting of 3-alpha characters and the specification of variable length;
- Any transmittable characters except hyphens (-) may be used in the specification;

- All remarks must be preceded by a full stop;
- A slash must separate the different data within the remarks. (e.g. EIC/2/120);
- For further information, see AHM 583.

Number of copies
The loadsheet generated by Carpatair crew using Carpatair Mass&Balance application will be delivered prior flight departure to the handling agent (e-mail address is communicate through charter brief) and to Carpatair headquarter to following e-mail address: loadsheets@carpatair.
In case of malfunction of the Mass&Balance application, the flight crew will issue manual loadsheet.

The loadsheet produced by the handling agent for the ACMI operation must be signed by the flight crew, as well and distributed as follows:
- Original copy for the operator (the aircraft, in Carpatair case);
- Second copy for the handling agent from the arrival station;
- One copy for the handling agent from the departure station.

In case of armed bodyguards or armed escorts on board
- The check-in agent sends the written information (using the DCS “Remarks” input or via email) to the load control agent. The encoding is “Armed person on board/seat XX”. They will specify the number of armed passengers and their seating on board;
- The load control agent will send this information to the flight crew via the Loadsheet and Load message (to include the number of armed passengers and their seating on board in the SI column). This way, the information reaches to the cabin crew and the Pilot-in-command.

LMC Procedure for Load Planners

General
The loadsheet must reflect the actual loading state of the aircraft prior to take-off. Compliance with this requirement often implies adjusting the loadsheet after completion. Such adjustments are called last minute changes (LMC). They reflect all the changes in traffic load after closing the flight and the issuance of the loadsheet. LMCs are usually done at the aircraft’s side and mostly under pressure of time. Because of the risk of making errors under such circumstances, great care and attention are required from those carrying out the corrections. Therefore, only trained and experienced personnel may perform this duty.

In case of LMC for the loadsheet generated by Carpatair crew using Carpatair Mass&Balance application, a new loadsheet will be issued.

Definitions
“Traffic Load LMC”
The traffic load LMC means the difference between:
- the actual loading of aircraft (according to the LIR) and the relevant figures on the loadsheet;
- the actual number of passengers according to the gate check and relevant figures on the loadsheet.

"Fuel LMC"
Fuel LMC means the difference between the final amount stated on the Fuelling Order and the respective amount of fuel used for the calculations on the loadsheet.

NOTE: LMC for fueling deviations are never permitted. If the fuel figures contained on the loadsheet differ from the fuel in the tank(s), a new loadsheet must be prepared.

Responsibilities of the Load Control Agent
Prior to completion of the LMC entries on the loadsheet, the load control agent must check that:

- The maximum gross weights (ZFW, TOW, LDW) applicable for the flight are not exceeded;
- The maximum weight limitation of each compartment, the limitations for combined load, and the cumulative load are not exceeded;
- The calculated center of gravity at TOW and at ZFW and LDW is within the allowed limits.

Entry of Last Minute Changes
Only changes in the weight of traffic load (passenger, baggage, cargo, equipment and mail) or in its distribution are to be recorded in the LMC box of the loadsheet.

NOTE: LMC for crew deviations are never permitted. If the crew figures contained on the loadsheet differ from the crew figures on board the aircraft, a new loadsheet must be prepared.
The following LMC limitations must be observed:

Aircraft type	**LMC limitation**
Airbus A319	+/-400kg or 4 pax
Airbus A320	+/-500kg or 5 pax

The limitations for LMC are for loading or offloading (example 1) moving load from one compartment to another, or to move passengers from the front section of the aircraft to the rear section of the aircraft (example 2).

Untitled

DVC-58524 1443 16APR09
□□□□
CARPATAIR

□L O A D S H E E T CHECKED BY APPROVED EDNO
ALL WEIGHTS IN KG 01

FROM/TO FLIGHT	A/C REG	VERSION	CREW	DATE	TIME
TSR VCE V30101/16	YRFKA	Y105	2/4	16APR09	1443

	WEIGHT	DISTRIBUTION
LOAD IN COMPARTMENTS	1200	1/200 2/1000 4/0 0/0 0/0
PASSENGER/CABIN BAG	4620	55/0/0 PAX 55 TTL 55 CAB 0
TOTAL TRAFFIC LOAD	5820	
DRY OPERATING WEIGHT	27008	
ZERO FUEL WEIGHT ACTUAL	32828	MAX 36740 L ADJ
TAKE OFF FUEL	6000	
TAKE OFF WEIGHT ACTUAL	38828	MAX 44450 ADJ
TRIP FUEL	3000	
LANDING WEIGHT ACTUAL	35828	MAX 39915 ADJ

BALANCE AND SEATING CONDITIONS

DOI	312.69		
LIZFW	142.53	MACZFW	19.53
LITOW	116.31	MACTOW	20.93
LILAW	119.34	MACLAW	19.56
		DLMAC	26.28

SEATING
0A/10 0B/35 0C/10

LAST MINUTE CHANGES

DEST	SPEC	CL/CPT	+	-	WEIGHT
VCE	CGO/10PCS	1		-	-200kg
VCE	CGO/10PCS	4	+		+200kg

UNDERLOAD BEFORE LMC 3912 LMC TOTAL (+) - 0kg

LOADMESSAGE AND CAPTAINS INFORMATION BEFORE LMC

*** NO CONNECTION TO CHECK-IN APPLICATION ***

THIS AIRCRAFT HAS BEEN LOADED IN ACCORDANCE WITH THE
LOADING INSTRUCTIONS INCLUDING THE DEVIATIONS RECORDED.
THE LOAD HAS BEEN SECURED IN ACCORDANCE WITH COMPANY
REGULATIONS

SIGNED .....

NOTOC - NIL

LDM
V3101/16.YRFKA.Y105.2/4
-VCE.55/0/0.0.T1200.1/200.2/1000.B1000.C200.MNIL.ENIL
.PAX/55.PAD/0
SI BAG/60PCS.CGO/14
PAX WEIGHT USED A84 C35 I0

;

Correction of Balance Conditions
The balance conditions should be corrected if they are affected by the last minute changes.

Codes for loads requiring special attention
The codes shown below shall be used to identify that type of load, which require special handling and/or special treatment.

When used on Loadsheet / Load message, the codes are entered as follows:

Passenger or cargo / passenger aircraft in the “Remarks” box of the respective destination.

Code	Description	Example
AOG	Spare Parts required for Aircraft on Ground. 1-3 alpha-numeric to indicate the loading position.	**.AOG/1**
AVI	Live Animals. 1-3 alpha-numeric to indicate the loading position.	**.AVI/4**
BAL	Ballast hold loaded (Unmanifested). 1-3 alpha-numeric to indicate the loading position.	**.BAL/1/30**
CAO	Dangerous Goods Aircraft Only (Labelled). 1-3 alpha-numeric to indicate the loading position followed by an oblique to indicate weight.	**.CAO/A/58**
CAT	Cargo attendant on Cargo Aircraft. 1 or 2 numerics to indicate number.	**.CAT/2**
COM	Company Mail (Unmanifested). 1-3 alpha-numeric to indicate the loading position followed by an oblique indicate the weight.	**.COM/1A/2**
CSU	Catering equipment and food supply not used on flight (Unmanifested). 1-3 alpha-numeric to indicate the loading position followed by an oblique and 2-4 numeric to indicate the weight.	**.CSU/1/40**
DHC	Crew positioning to/from duty not directly involved in the operation of the flight, which are occupied passenger seats. DHC are included in passenger figures.	**.DHC/0/1**
DIP	Diplomatic Mail. 1-3 alpha-numeric to indicate the loading position followed by an oblique and 1-2 numeric to indicate the number of bags.	**.DIP/1A/1**
EAT	Foodstuffs for human consumption other than meat and fish/seafood as specific handling codes are designated for such codes.	**.EAT/2**

	1-3 alpha-numeric to indicate the loading position.	
EIC	Equipment in Compartment (Unmanifested). Miscellaneous items not included in the Dry Operating Weight/Index but not including BAL, BED, COM, CSU, FKT and BEH. 1-3 alpha-numeric to indicate the loading position followed by an oblique and 1-4 numeric to indicate the weight..	**.EIC/1/100**
FIL	Undeveloped Film/Unexposed Film. 1-3 alpha-numeric to indicate the loading position.	**.FIL/1**
FKT	Flight Kit (Unmanifested). 1-3 alpha-numeric to indicate the loading position followed by an oblique and 1-4 numeric to indicate the weight.	**.FKT/2/130**
HEA	Heavy Cargo above 150 kg per piece. 1-3 alpha-numeric to indicate the loading position followed by an oblique and 1-4 numeric to indicate the weight. *NOTE: Two or more heavy pieces in the same compartment need to be shown individually.*	**.HEA/2/160** **.HEA/1/170** **.HEA/1/156**
HEG	Hatching Eggs. 1-3 alpha-numeric to indicate the loading position.	**.HEG/2**
HUM	Human Remains in Coffins. 1-3 alpha-numeric to indicate the loading position followed by an oblique and 2-3 numeric to indicate the weight.	**.HUM/2/200**
ICE	Carbon dioxide, solid (Dry Ice).1-3 alpha-numeric to indicate the loading position.	**.ICE/1**
LHO	Live Human Organs/Blood. 1-3 alpha-numeric to indicate the loading position.	**.LHO/1A**
MAG	Magnetized Materials (Labelled).	*Not to be use on Loadsheet and Loadmessage.*

MOS	Miscellaneous Operational staff other than crew, who perform function relating to the flight and occupy passenger seats.	**.MOS/1**
NIL	No items loaded or manifested.	**.NIL**
PAD	Passengers not entitled to a firm booking who may be off-loaded at a station en route to their ticketed destination in order to accommodate joining passengers who have higher priority.	**.PAD/2**
PEA	Hunting trophies, skin, hide and all articles made from or containing parts of species in the CITIES. 1-3 alpha-numeric to indicate the loading position.	**.PEA/2**
SOC	Seats occupied by baggage, cargo and/or mail.1-3 alpha-numeric to indicate the number of seats occupied in each class separated by an oblique.	**.SOC/2**
VAL	Valuable Cargo.	*Not to be used on Loadsheet and Loadmessage*
WET	Shipments or wet materials not packed in watertight containers, e.g. fish packed in wet ice.1-3 alpha-numeric to indicate the loading position.	**.WET/2**
XCR	Operating Crew requiring passenger seat(s). 1-3 alpha-numeric to indicate the number of seats occupied in each class separated by an oblique. *NOTE: XCR are included in the operating crew figures, not included in passenger figures.*	**.XCR/2**

Communication between Ramp and Load Planning

When the handling agent makes the LMC to the loadsheet by the aircraft, he communicates the LMC to the load control agent by radio, phone, verbally face to face. The load control agent will introduce the proper adjustments into the DCS system before releasing the flight and sending the load message to the destination station(s).

Communication Load Planning to Crew for Manual Loadsheet Purposes

If automatic loadsheet cannot be produced, manual loadsheet will be completed by the crew with the data confirmed by the load planner.
Loading instruction / report data can be transmitted to the crew by the following means:

- Radio;

- Telephone;
- Verbally, face to face.

All transmissions shall be made by the same person.
Any verbally communicated load control data shall be confirmed in writing prior to departure on the LIR form. The name and signature of the agent who transmits the data to the Crew must be present on the document.

The person responsible for the transmission of the loading report data shall keep the Crew informed continuously of:
- subsequent changes to the data already transmitted;
- completion of the loading operations

5.6.10 Loadsheet Discrepancies

Any discrepancies found after the loadsheet release, shall be communicated to person responsible for the loadsheet and to loadsheets@carpatair.com /
Commander and/or operator shall be informed without delay, as per operator communication policy.

5.6.11 Load Documentation

The flight file shall contain:
1. OFP (Operational Flight Plan/Journey Log);
2. Load sheet will be sent via e-mail to loadsheets@carpatair;
3. Passenger manifest;
4. Fuel receipt;
5. The de-icing form(s);
6. The cargo / unaccompanied minor form;
7. Meteo folder.

5.6.12 Weight and Balance Calculation

5.6.12.1 Weight Calculation

The purpose is to ensure that the structural and operational aircraft limits are not exceeded. Weight calculation is
- Required by every flight;
- Made either manually or by DCS system;
- Only to be done by qualified staff;
- Structural and operational aircraft weights limits are not exceeded;
- The number of passengers accepted does not exceed maximum number specified for the respective cabin configuration or seat limitation.

5.6.12.2 Balance Calculation

The purpose is to ensure that the aircraft is loaded and the passengers are seated in such a way that balance conditions are within prescribed limits. Balance calculation is
- Required for every flight for which a loadsheet is issued;
- Made either manually or by EDP system;
- Only to be done by qualified staff.

5.6.12.3 Additional Requirements

Pre-calculation of gross weights and balance conditions:

- Is mandatory in case of manual loadsheet;
- Is optional in case of DCS loadsheet calculation.

Pre-calculated figures must be compared with corresponding loadsheet figures. Significant difference must be clarified before departure.

5.6.12.4 Aircraft Release

Commander must check and, if necessary, correct the loadsheet or issue a new loadsheet in accordance with the regulation of last minute changes.

The load controller must ensure that:
- Passenger figures are established at the gate check;
- Load distribution and fuel figures correspond with the equivalent figures on the loading report;
- Flight crew has been informed of any last minute changes made;
- Flight crew has accepted a copy of loadsheet issued for that flight.

5.6.12.5 Training, Technical and Test Flights

- A loadsheet need not be issued by ground staff unless requested by the flight crew;

5.6.12.6 Weight Control of Load

Different systems of weight control are applied, depending on:
- Aircraft type;
- Destination of the flight;
- Local conditions at the departure station.

A program to ensure that calibration of scales used is verified and properly adjusted.

5.6.12.7 Actual Weight

General
In principle, weights used for documentation are based on the actual weight of baggage, cargo and mail.
The actual weight is obtained by means of bulk weighing during check-in process.

The actual weight shall be used for load control purposes for:
- baggage
- cargo
- mail.

Weight established at check-in

Baggage weight as established at check-in (baggage):
- Actual piece weight must be transmitted to the commander to the pilot
- Pieces must be counted

Total number put into each compartment must be recorded on the loading instruction form.

5.6.12.8 Standard Weight

Baggage
Standard baggage weight can be used for load control purposes if the actual weight cannot be established (e.g. missing scale, unserviceable scale).

- Pieces must be counted
- Total number of pieces loaded into each compartment must be recorded on the Loading Instruction Report.

As an alternative method, standard baggage weights may be used for loadsheet purposes, if the actual weight cannot be established.

Standard baggage weights used by Carpatair are:
Charter flights**: 15 Kg**

Standard baggage weight is applicable to all pieces of standard checked baggage, whose sum of dimensions does not exceed 158 cm.

In case of non-standard baggage (e.g. musical instruments, sport equipment) note that:

- Standard baggage weight may not be used for this baggage;
- Baggage must be weighed;
- Baggage must be dispatched to the aircraft on the separate carts.

Passengers weight – please see Carpatair AHM 565

Adults (male and female), are defined as persons of age of 12 years and above.
Children are defined as persons between 2 and 12 years of age.
Infants are defined as persons who are less than 2 years of age.

The weight of the carry-on baggage (5kg) is included in the standard passenger weights.

Crew weights – please see Carpatair AHM 565

Pantry - please see Carpatair AHM 565

Taxi Fuel
Taxi fuel is the amount of fuel expected to be used prior take off taking into account the APU fuel consumption and local conditions at the departure airport
Airbus A320 Family - 200 kg.

5.6.12.9 Electronic Data Processing System (EDP)

Basic Requirements for EDP System

Before a loadsheet / balance sheet is printed out, the EDP system must automatically check that:

- Maximum gross weights of the aircraft are not exceeded;
- Weight limit of each compartment
- Combined load limits are not exceeded;
- Calculated centre of gravity of the aircraft is within the prescribed limits.

The system must inhibit printout of the loadsheet / balance sheet if any weight limit is exceeded or if the aircraft calculated centre of gravity is outside the prescribed limits.

If the balance calculation and the required checks of the centre of gravity limits are not or only partly performed by the EDP system, the missing item(s) must be manually determined, using the relevant balance table / chart form. The EDP loadsheet / balance sheet must be amended accordingly.

Database
The DCS system or any other system that is accepted by Carpatair ground operations department for processing Carpatair flights must be configured according to the data contained in carpatair AHM 565.

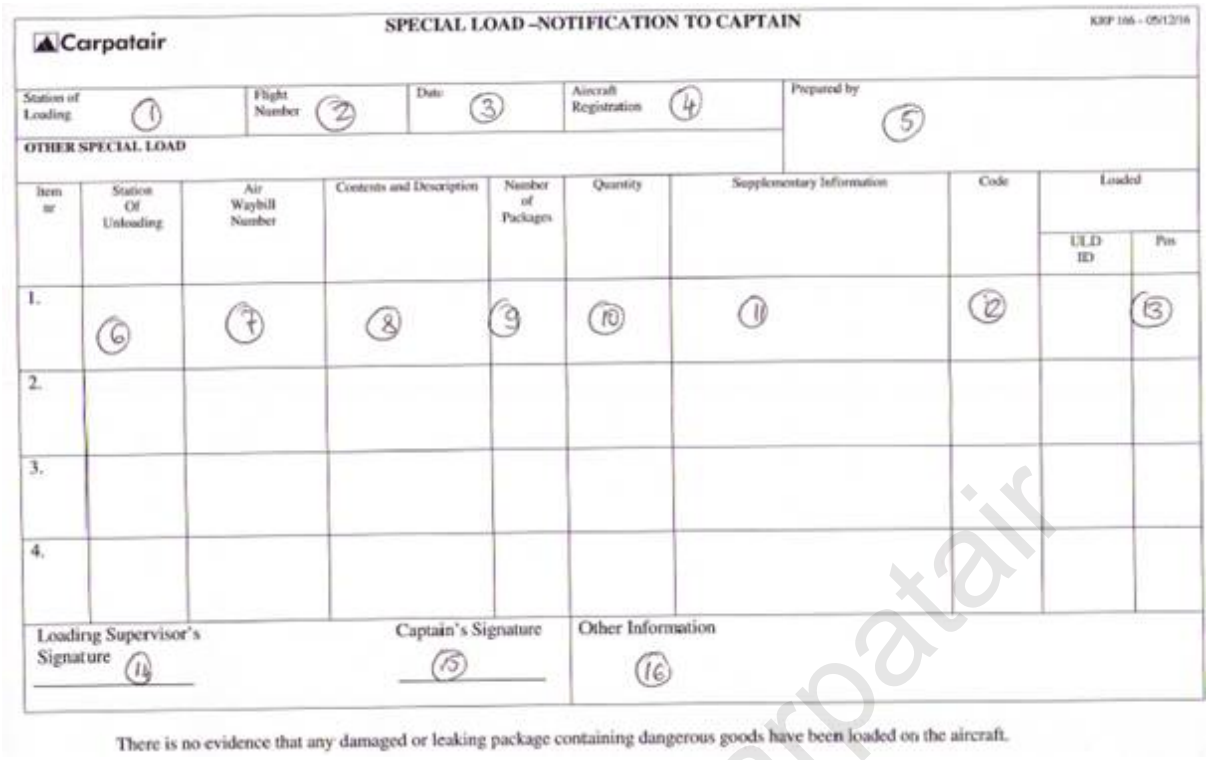
The data included in AHM 565 are provided by Carpatair Engineering Department.

The Carpatair Ground Operation Department is mainly responsible for:

- updating, amending, distributing the AHM 565.

The system integrity used by Carpatair's ground handling providers must be verified by Carpatair. The persons in charge with the DCS at the stations that use systems which are approved to issue automatic loadsheets for flights operated by Carpatair must send at least 2 automatic loadsheet to the Carpatair Ground Operations Department in order to check the data integrity.

Data Change to Aircraft Basic Weight / Basic Index / Pantry Codes
The department responsible for updating and /or distribution of changes of aircraft Basic Weight (BI) / Basic Index (BI) to Ground Operations Department is Engineering Department.
The department responsible for updating and /or distribution of changes of Pantry weights / index is Carpatair Catering Department.
Note: If changes are not approved by the time they become effective, the EDP loadsheet / balance sheet may not be accepted. Manual loadsheet /balance sheet must be issued until approval is given.



Carpatair

SPECIAL LOAD –NOTIFICATION TO CAPTAIN

KRP 166 – 05/12/16

Station of Loading (1)	Flight Number (2)	Date (3)	Aircraft Registration (4)	Prepared by (5)

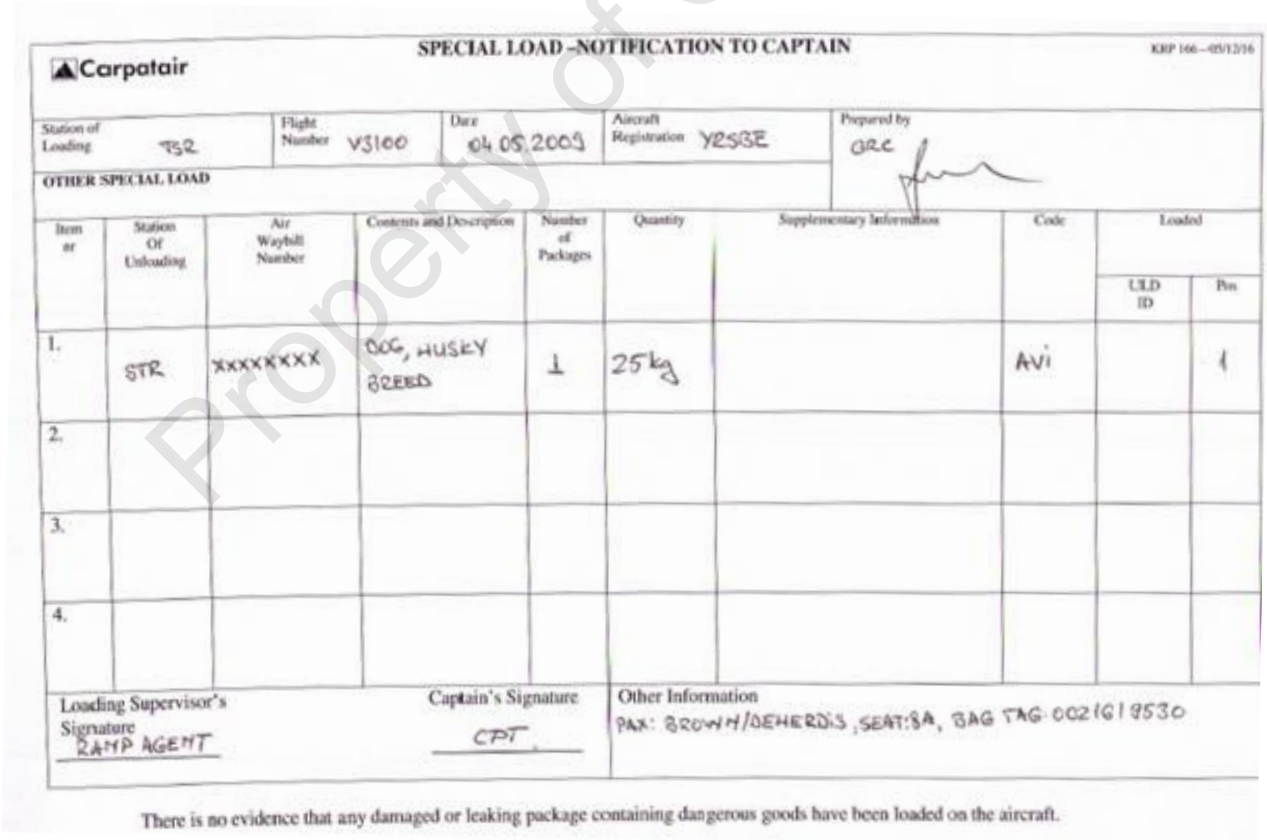
OTHER SPECIAL LOAD

Item nr	Station Of Unloading	Air Waybill Number	Contents and Description	Number of Packages	Quantity	Supplementary Information	Code	Loaded	
								ULD ID	Pos
1.	(6)	(7)	(8)	(9)	(10)	(11)	(12)		(13)
2.									
3.									
4.									

Loading Supervisor's Signature (14) | Captain's Signature (15) | Other Information (16)

There is no evidence that any damaged or leaking package containing dangerous goods have been loaded on the aircraft.

Example of a manually completed NOTOC – Other Special Load:



Carpatair

SPECIAL LOAD –NOTIFICATION TO CAPTAIN

KRP 166 – 05/12/16

Station of Loading TSR	Flight Number V3100	Date 04.05.2009	Aircraft Registration YR-SSE	Prepared by ORC

OTHER SPECIAL LOAD

Item nr	Station Of Unloading	Air Waybill Number	Contents and Description	Number of Packages	Quantity	Supplementary Information	Code	Loaded	
								ULD ID	Pos
1.	STR	XXXXXXXX	DOG, HUSKY BREED	1	25kg		AVI		1
2.									
3.									
4.									

Loading Supervisor's Signature RAMP AGENT | Captain's Signature CPT | Other Information PAX: BROWN/DEHERDIS, SEAT:8A, BAG TAG 0021619530

There is no evidence that any damaged or leaking package containing dangerous goods have been loaded on the aircraft.

DVC-58524 1131 09JUL08

SPECIAL LOAD NOTIFICATION TO CAPTAIN PRE-FLIGHT 11:30

FROM	FLIGHT	DATE	A/C REG	PREPARED BY
TSR	V3 0100 /09	09JUL08	YRSBC	CLN

****

*** **OTHER SPECIAL LOAD** ***

TO	AWB NR	CONTENTS	PCS	QTY	IMP CODE	POS ULD CODE
001.		DOG	0001	0020KG	AVI	2

STR XXXXXXXX DOG

****

****

THERE IS NO EVIDENCE THAT ANY DAMAGED OR LEAKING PACKAGES CONTAINING DANGEROUS

GOODS HAVE BEEN LOADED ON THE AIRCRAFT

LOADING SUPERVISOR CAPTAIN

NAME AND SIGNATURE: NAME AND SIGNATURE:

5.6.13 Transmission of Information

5.6.13.1 Transfer of LIR Data

If direct comparison of the LIR and loadsheet is not possible:

- LIR data can be transmitted to the loadsheet issuer agent by radio or telephone;
- Data can be transmitted by responsible loading supervisor or load controller agent;
- All transmissions must be made by the same person;
- The person responsible for the transmission of the LIR data must keep the loadsheet issuer agent informed of:
    - Subsequent changes to data already transmitted;
    - Completion of the loading operations.

He must confirm, by signing the loading report, that all data (including changes) have been transmitted to the loadsheet issuer agent (

The loadsheet issuer agent must:

- Read back all information received by radio or telephone, to confirm correctness of information;
- Record all information on paper to be able to clarify differences at any time before the final loadsheet is transmitted;
- Keep this record until departure of the flight;
- Put the updated and signed Loading/Instruction Report in the Flight File, where it must remain.

5.6.13.2 Methods of Transmission LMC to the Flight Crew

Is done in writing. The handling agent writes the LMC by hand before handing it in to the Commander for signing.
Ground staff is responsible for immediate reporting of Last Minute Changes to the flight crew.

Note: The LMC weight tolerance must not be exceeded.

Written transmission of LMC to flight crew:

- By means of a copy of the loadsheet amended according to chapter *Last Minute Changes*

The transmission of LMC to flight crew is done

- Only after the load control agent has:
    - Entered all changes on the loadsheet copies to be retained on ground;
    - Assured that weight limits have not been exceeded;
    - Assured that the calculated centre of gravity of the aircraft is within the prescribed limits.

Contents of transmission:

- Number of LMC passengers per class, specifying (+) or (-);
- Number of infants (to be given separately);
- Total weight of LMC, specifying (+) or (-);
- Corrected balance conditions.

Change of fuel figures:

- Verbal communication is not allowed;
- New loadsheet or loadsheet amended according to chapter *Last Minute Changes* must be delivered to the flight crew.

The aircraft commander's signature on loadsheet and balance sheet confirms:
The loadsheet and balance sheet are finally approved.

5.7 Post Departure Messaging

All relevant messages pertaining to flight handling such as: LDM, SOM, MVT, DIV shall be produced and delivered in accordance to AHM.

OPERATIONAL MESSAGES

- It is mandatory for the entire Handling agents and Carpatair staff involved in handling operations to fully understand the meaning of Teletype messages;
- It is mandatory to use UTC in every messages;
- In case of communication breakdowns it is recommended to use alternative ways of data transmission (as e-mail or fax) using also standard teletype format.

Movement Messages

1. **Departure message**
   a) Departure message is to be dispatched for every flight operated by V3 aircraft and/or V3 flight number;
   b) Departure message is to be dispatched immediately after take-off;
   c) Departure message must contain:
      - Priority indicator (QD, QU or QX);
      - Appropriate Teletype address(es);
      - Originator, recharge (if required), date/time group and operator's initials (if required);
      - Teletype address of originator;
      - Standard identifier for movement messages (MVT);
      - Flight number and date;
      - Aircraft registration;
      - The 3-letter IATA code for airport of origin;
      - Actual departure time (block-off time / airborne time);
      - Estimated arrival time;
      - The 3-letter IATA code for airport of destination;
      - Irregularity code and duration of delay (as seen below in "Standard IATA Delay codes");
      - Total number of seats occupied by passengers;
      - Supplementary information.

Examples of departure messages		
QU MUCAPXH MUCKDXH TSRAPV3 311332	QU MUCAPXH MUCKDXH TSRAPV3 311350	QU MUCAPXH MUCKDXH TSRAPV3 311350

MVT V3221/31.YRVGM.TSR AD1325/1332 EA1532 MUC PX18 SI PIC/PETA	MVT V3221/31.YRVGM.TSR AD1345/1350 EA1545 MUC DL84/0015 PX18 SI PIC/PETA	MVT V3221/31.YRVGM.TSR AD1345/1350 EA1545 MUC DL99/0015 PX18 SI DL99/SICK PASSENGER

2. Arrival message

a) Arrival message is to be dispatched for every flight operated by V3 aircraft and/or V3 flight number;
b) Arrival message is to be dispatched immediately after landing;
c) Arrival message must contain:
- Priority indicator (QD, QU or QX);
- Appropriate Teletype address(es);
- Originator, recharge (if required), date/time group and operator's initials (if required);
- Teletype address of originator;
- Standard identifier for movement messages (MVT);
- Flight number and date;
- Aircraft registration;
- The 3-letter IATA code for airport of arrival;
- Actual arrival time (landing time / block-on time);
- Supplementary information.

Example of standard arrival message:
QU TSRAPV3
MUCAPXH 311537
MVT
V3221/31.YRVGM.MUC
AA1530/1537
SI/NIL

3. Return to ramp message

a) Return to ramp (RR) is to be dispatched whenever a flight is returning to parking position before take-off;
b) Return to ramp message must be followed immediately by an Estimated Departure message or Next Information Message;
c) RR message must contain:
- Priority indicator (QD, QU or QX);
- Appropriate Teletype address (es);
- Originator, recharge (if required), date/time group and operator's initials (if required);
- Teletype address of originator;
- Standard identifier for movement messages (MVT);
- Flight number and date;
- Aircraft registration;

- Actual block-off time and actual block-on time;
- Supplementary information.

Example of standard return to ramp message:
QU TSRAPV3
MUCAPXH 311537
MVT
V3221/31.YRVGM.MUC
AD1530 RR1537

4. Return from airborne message (forced return)

a) Forced return (FR) is to be dispatched whenever a flight is returning from airborne after take-off;
b) Forced return message must be followed immediately by an Estimated Departure message or Next Information Message;
c) FR message must contain:
   - Priority indicator (QD, QU or QX);
   - Appropriate Teletype address (es);
   - Originator, recharge (if required), date/time group and operator's initials (if required);
   - Teletype address of originator;
   - Standard identifier for movement messages (MVT);
   - Flight number and date;
   - Aircraft registration;
   - Actual landing time and actual block-on time;
   - Supplementary information.

Example of standard forced return message:
QU TSRAPV3
MUCAPXH 311537
MVT
V3221/31.YRVGM.MUC
FR1530/1537

5. Delay message

a) Delay message is to be dispatched for every flight operated by V3 aircraft and/or V3 flight number;
b) Delay message is to be dispatched for flights which will be delayed 15 minutes or more relative to scheduled or otherwise stated departure time;
c) Delay message is to be dispatched as soon as the delay may be foreseen, but no later than 5 minutes after the originally scheduled departure time;
d) If a flight is delayed beyond the estimated departure time specified in a previously dispatched message, a new delay message marked as "correction" (COR) is to be sent as soon as the further delay becomes apparent, but no later than the departure time specified in the previous delay message;
e) After departure of the flight, a normal departure message is to sent to all addresses that received the delay message(s);
f) Delay message must contain:

- Priority indicator (QD, QU or QX);
- Appropriate Teletype address (es);
- Originator, recharge (if required), date/time group and operator's initials (if required);
- Teletype address of originator;
- Standard identifier for movement messages (MVT);
- Flight number and date;
- Aircraft registration;
- Estimated time of departure time (ED) or next information time (NI);
- Irregularity code (delay indicator DL followed by maximum 2 irregularity codes);
- Supplementary information.

Examples of delay messages		
QU MUCAPXH MUCKDXH TSRAPV3 311330 MVT V3221/31.YRVGM.TSR ED1345 DL84 SI SLOT 13:25	QU MUCAPXH MUCKDXH TSRAPV3 311345 COR MVT V3221/31.YRVGM.TSR ED1355 DL84/99 SI DL99/SICK PASSENGER	QU MUCAPXH MUCKDXH TSRAPV3 311352 MVT V3221/31.YRVGM.TSR NI1400 DL99 SI DL99/SICK PASSENGER

6. Diversion Message

a) Diversion message is to be dispatched for every flight operated by V3 aircraft and/or V3 flight number;
b) A diversion message is to be used to inform all the departments concerned about a flight diversion;
c) Diversion message is dispatched by the station or department first receiving notification of the diversion;
d) After departure of the flight, a normal departure message must be sent to all addresses that have received the diversion message(s);
e) The station of originally intended landing must immediately relay all operational and handling messages to the airport of diversion;
f) Diversion message must contain:
   - Priority indicator (QD, QU or QX);
   - Appropriate Teletype address (es);
   - Originator, recharge (if required), date/time group and operator's initials (if required);
   - Teletype address of originator;
   - Standard identifier for diversion messages (DIV);
   - Flight number and date;

- Aircraft registration;
- The 3-letter IATA code for airport of originally intended landing;
- Estimated time of arrival at diversion airport;
- The 3-letter IATA code for diversion airport;
- Reason for diversion (DR) followed by the irregularity code;
- Total number of seats occupied by passengers;
- Supplementary information.

Example of standard diversion message:
QU STRAPXH TSRAPV3
MUCAPXH 311530
DIV
V3221/31.YRVGM.MUC
EA1600 STR
DR72 PX18
SI ALL RUNWAYS CLOSED DUE TO HEAVY SNOW

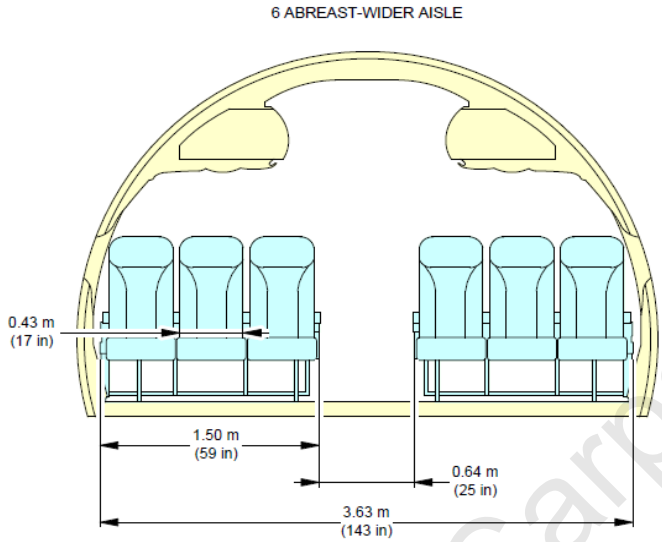
Load Distribution Message (LDM)

The load message is based on IATA AHM 583.

a) Load message is to be dispatched for every flight operated by V3 aircraft and/or V3 flight number;
b) Load message is to be dispatched not later than 10 minutes after departure of the flight;
c) Load message must include any last minute changes in the final passenger and load figures before dispatching the LDM;
d) Load message must contain:
   - Priority indicator (QD, QU or QX);
   - Appropriate Teletype address(es);
   - Originator, recharge (if required), date/time group and operator's initials (if required);
   - Teletype address of originator;
   - Standard identifier for load message (LDM);
   - Flight number and date;
   - Aircraft registration;
   - Aircraft version number;
   - Number of crew including working crewmembers occupying passenger seats (XCR);
   - The 3-letter IATA code for airport of disembarkation of passengers and/or unloading of deadload;
   - Number of passengers per weight category (adults, children, infants);
   - Total weight of deadload;
   - Total weight of the load per compartment and/or ULD position;
   - "NIL" must be shown if there is no traffic load for a destination;
   - Total number of seats occupied by passengers per class;
   - Total number of seats occupied by PADs per class;
   - Any special load;
   - Supplementary information.

Example of standard load message:
QN MUCAPXH MUCKDXH MUCAGXH
TSRAPV3 311330
LDM
V3221/31.YRVGM.Y33.2/1
-MUC.14/4/0.0.T128.1/31.2/97.B128.CNIL.MNIL.ENIL
.PAX/18.PAD/0
SI BAG/11PCS.BT/1.BL/2.DAA/01PCS

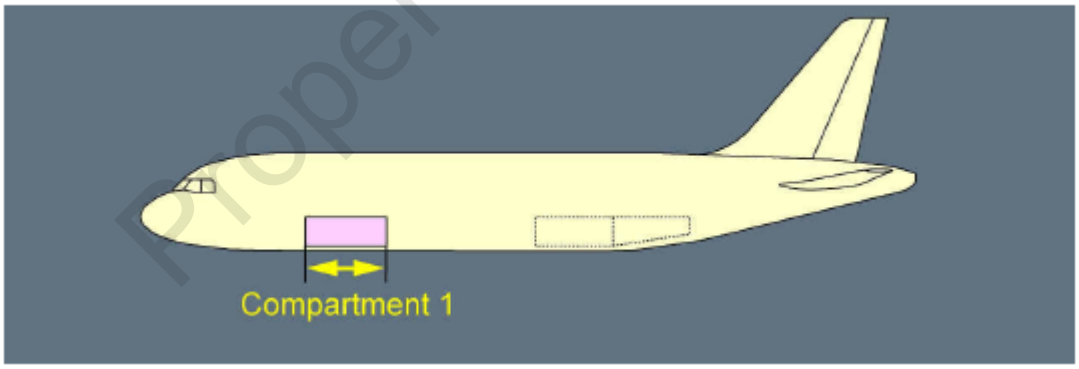
5.7.1. Airbus A320 Cabin Cross Section



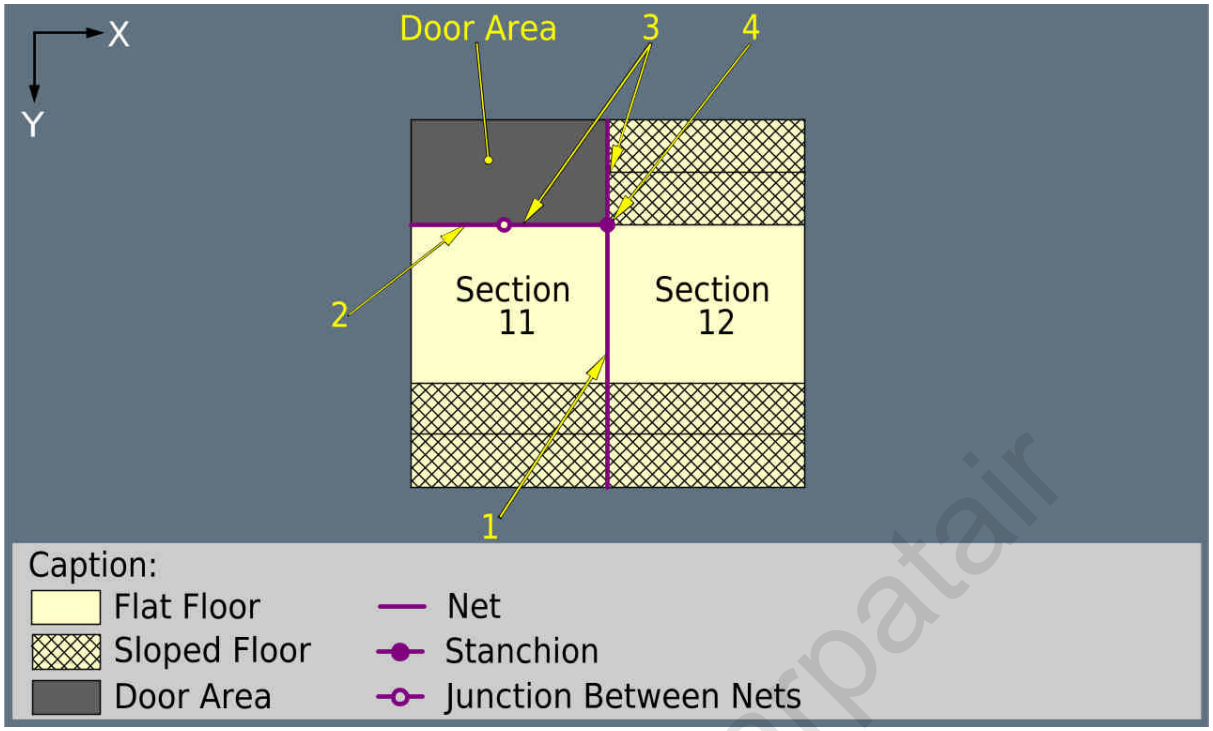
5.7.1.1. Mass Limits, Volumes and Dimensions

FORWARD CARGO HOLD CAPACITY

The forward cargo hold has one compartment (compartment 1).



The weight capacity of the cargo hold is 2 268 kg.
The cargo hold is divided in section 11 and section 12 to help the control of the loading.
The cargo hold is equipped with a net restraint system for the transport of bulk loads.
The net restraint system is an arrangement of nets that is certified to restrain the bulk loads against the load factors induced by aircraft accelerations.
Note: Bulk loads are defined as loose items, baggage, or freight that can be loaded in a net section. A net section is a section defined by two successive nets, or by a net and a wall.



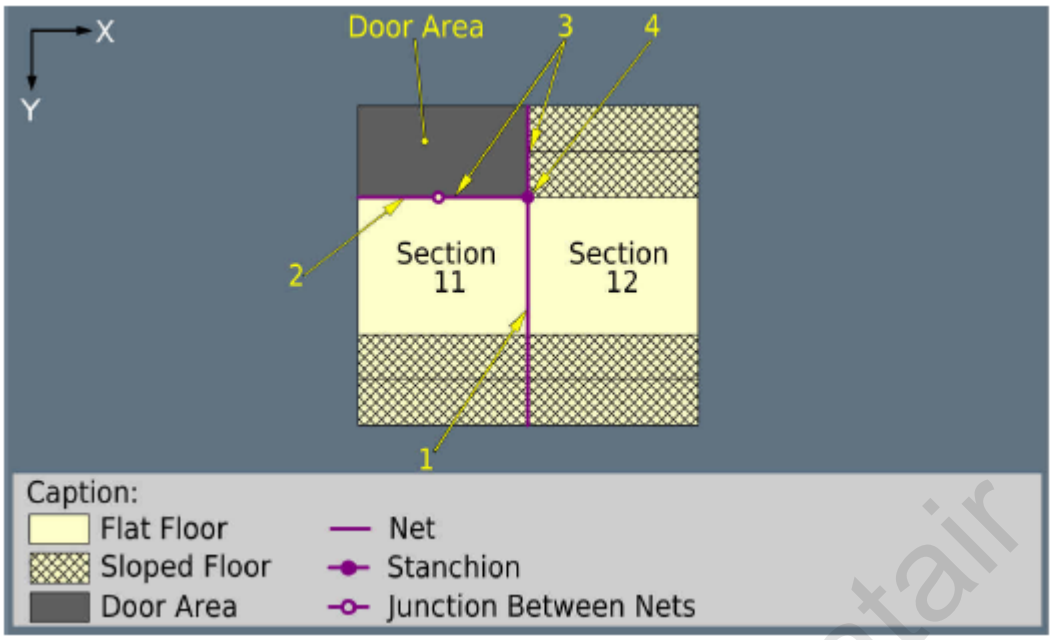
The following table provides the maximum gross weight per section.

Section	Max Gross Weight	Max Usable Volume
	kg	m3
11	1045	4.140
12	1223	4.390

For bulk loading, if the mandatory nets are installed, no additional restraints are required, except in either of the following cases:
- When a load item may be hazardous due to its nature, form, or density
- When a load item has a weight of more than 150 kg.

The additional restraint of the above-mentioned items is achieved if:
- The operator fills the applicable net section to at least three quarters of its height, or
- The operator individually fastens the load items to the tie-down points of the aircraft.

A bulk item may be too large to fit in a net section. In this case, the operator is authorized to remove the mandatory divider net. Then, the operator must individually fasten all bulk items in the cargo hold.
The operator must ensure that there is a minimum clearance of 0.051 m between the top of the load and the cargo hold ceiling.
The following illustration indicates the net arrangement in the cargo hold:



RESTRAINT CONDITIONS

Mandatory door nets and stanchions ensure that the door area is not blocked, to be able to correctly open the cargo door.
A mandatory divider net separates the cargo hold in two net sections, to ensure the restraint of the load.

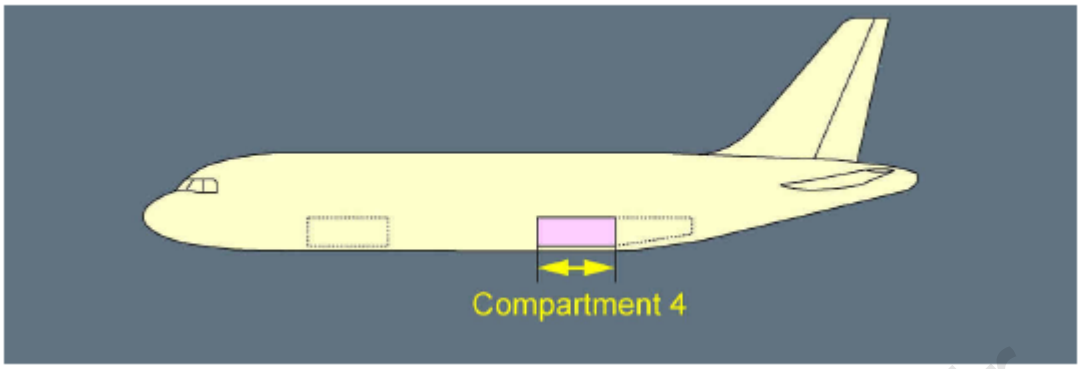
FASTENING LOAD REQUIREMENTS

The operator must use nets and straps to fasten the load to the tie-down points of the cargo hold floor.

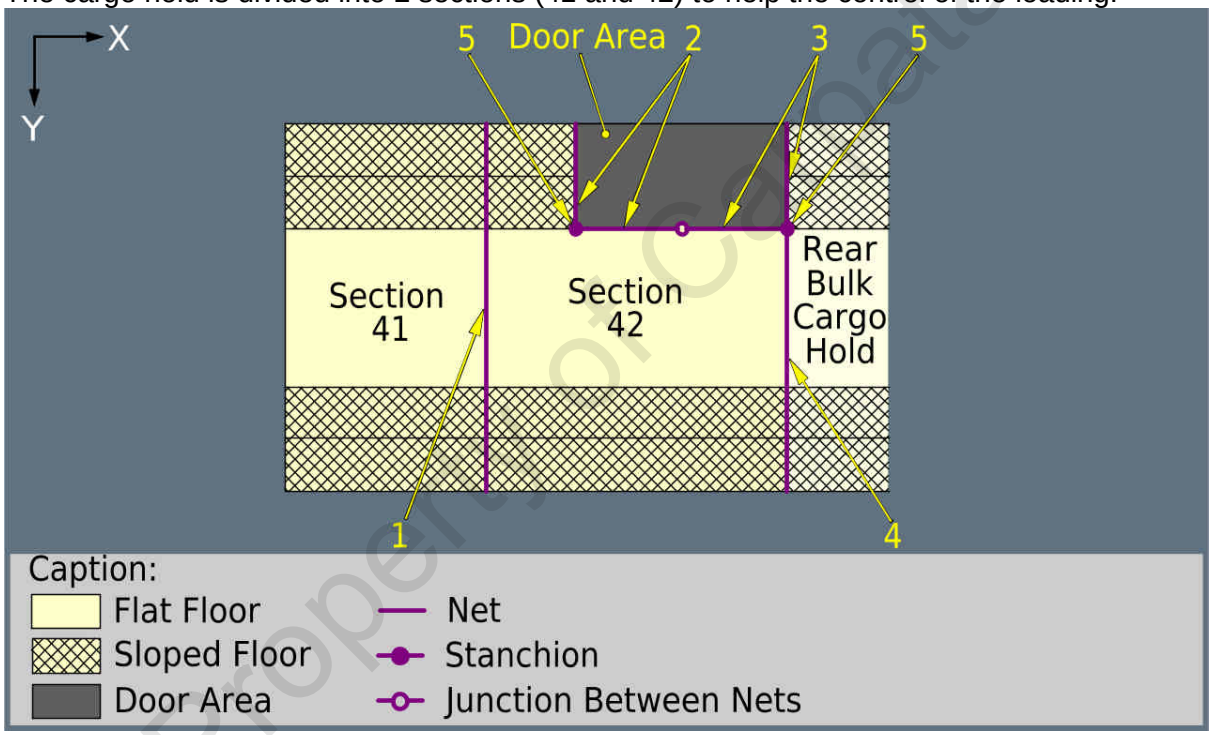
The operator must ensure that the load applied to a tie-down point does not exceed 906 kg in any direction.
The operator must arrange and fasten the load to the cargo hold floor in a way to ensure an even distribution of the load.
The tie-down points on the ceiling of the cargo hold are only dedicated to the installation of nets.
To restrain bulk items, the operator only uses the standard tie-down points that are not already used to attach the nets.

AFTERWARD CARGO HOLD CAPACITY

The aft cargo hold has one compartment (compartment 4).



The weight capacity of the cargo hold is 3 021 kg
The cargo hold is divided into 2 sections (41 and 42) to help the control of the loading.



The following table provides the maximum gross weight per section.

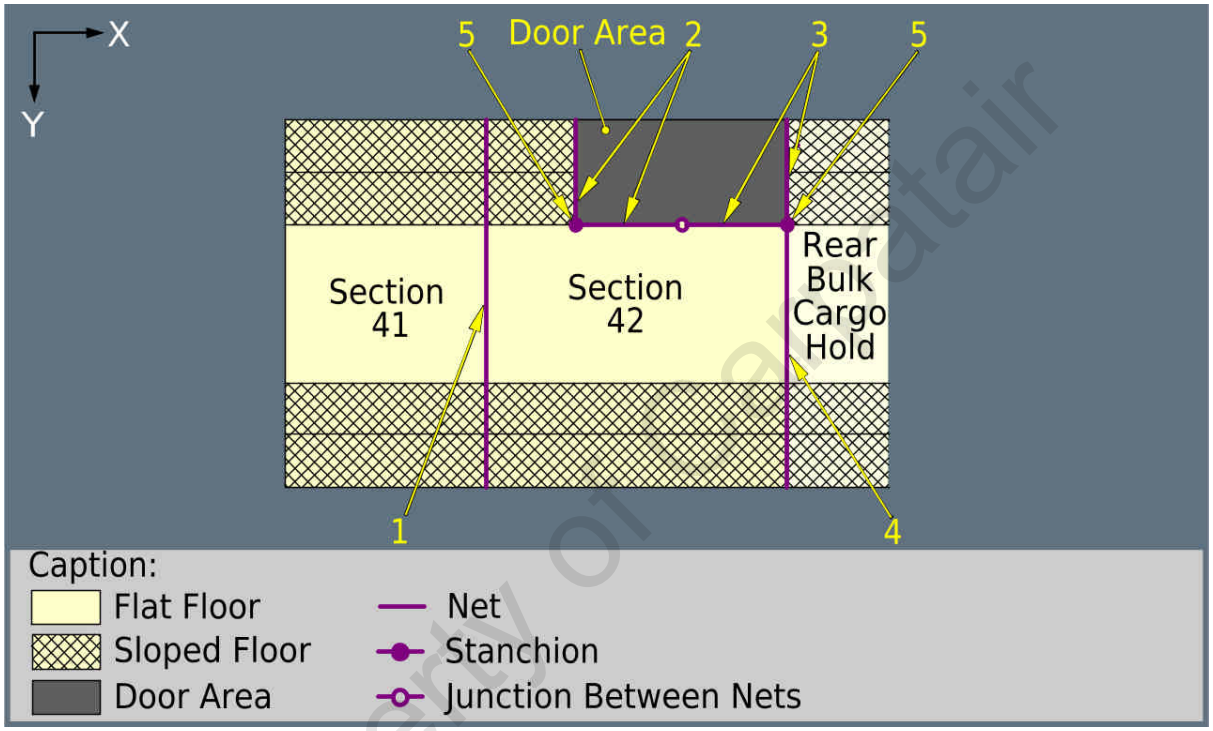
Section	Max Gross Weight	Max Usable Volume
	kg	m3
41	1326	5.230
42	1695	6.710

For bulk loading, if the mandatory nets are installed, no additional restraints are required, except in either of the following cases:
- When a load item may be hazardous due to its nature, form, or density

- When a load item has a weight of more than 150 kg

The additional restraint of the above-mentioned items is achieved if:
- The operator fills the applicable net section to at least three quarters of its height, or
- The operator individually fastens the load items to the tie-down points of the aircraft

A bulk item may be too large to fit in a net section. In this case, the operator is authorized to remove the mandatory divider nets, in order to create a larger net section. This new net section is defined by two successive mandatory divider nets, or by a mandatory divider net and a wall.
The operator must individually fasten all the bulk items which are located in this new net section.



RESTRAINT CONDITIONS

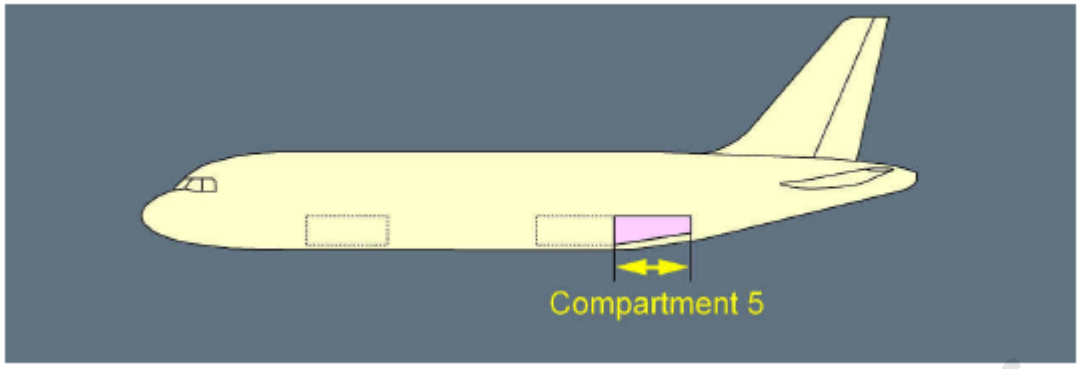
Mandatory door nets and stanchions ensure that the door area is not blocked, to be able to correctly open the cargo door.
Two mandatory divider nets separate the cargo hold in two net sections, to ensure the restraint of the load.

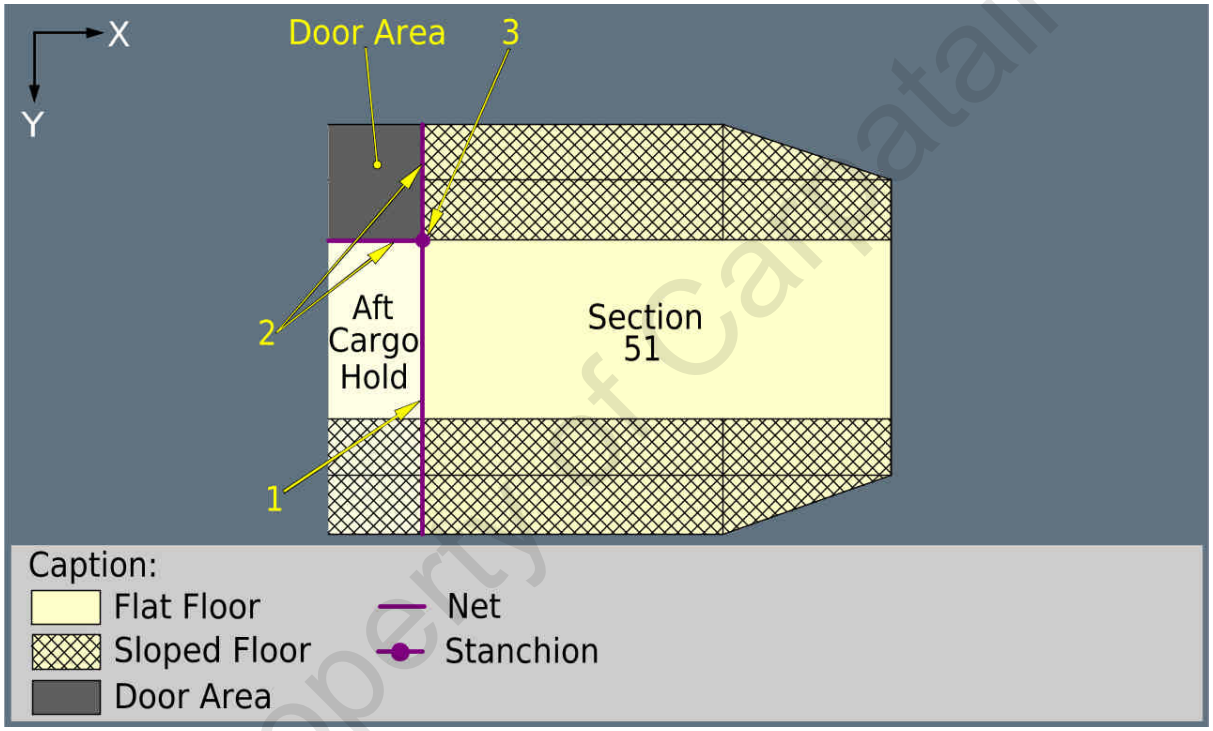
FASTENING LOAD REQUIREMENTS

The operator must use nets and straps to fasten the load to the tie-down points of the cargo hold floor.
The operator must ensure that the load applied to a tie-down point does not exceed 906 kg in any direction.
The operator must arrange and fasten the load to the cargo hold floor in a way to ensure an even distribution of the load.
The tie-down points on the ceiling of the cargo hold are only dedicated to the installation of nets.
To restrain bulk items, the operator only uses the standard tie-down points that are not already used to attach the nets.

REAR BULK HOLD CAPACITY

The rear bulk cargo hold has one compartment (compartment 5).





The cargo hold is equipped with a net restraint system for the transport of bulk loads.
The net restraint system is an arrangement of nets that is certified to restrain the bulk loads against the load factors induced by aircraft accelerations.
Note: Bulk loads are defined as loose items, baggage, or freight that can be loaded in a net section. A net section is a section defined by two successive nets, or by a net and a wall.

The weight capacity of the cargo hold is 1497 kg.
The following table provides the maximum gross weight per section.

Section	Max Gross Weight	Max Usable Volume
	kg	m3
51	1497	7.220

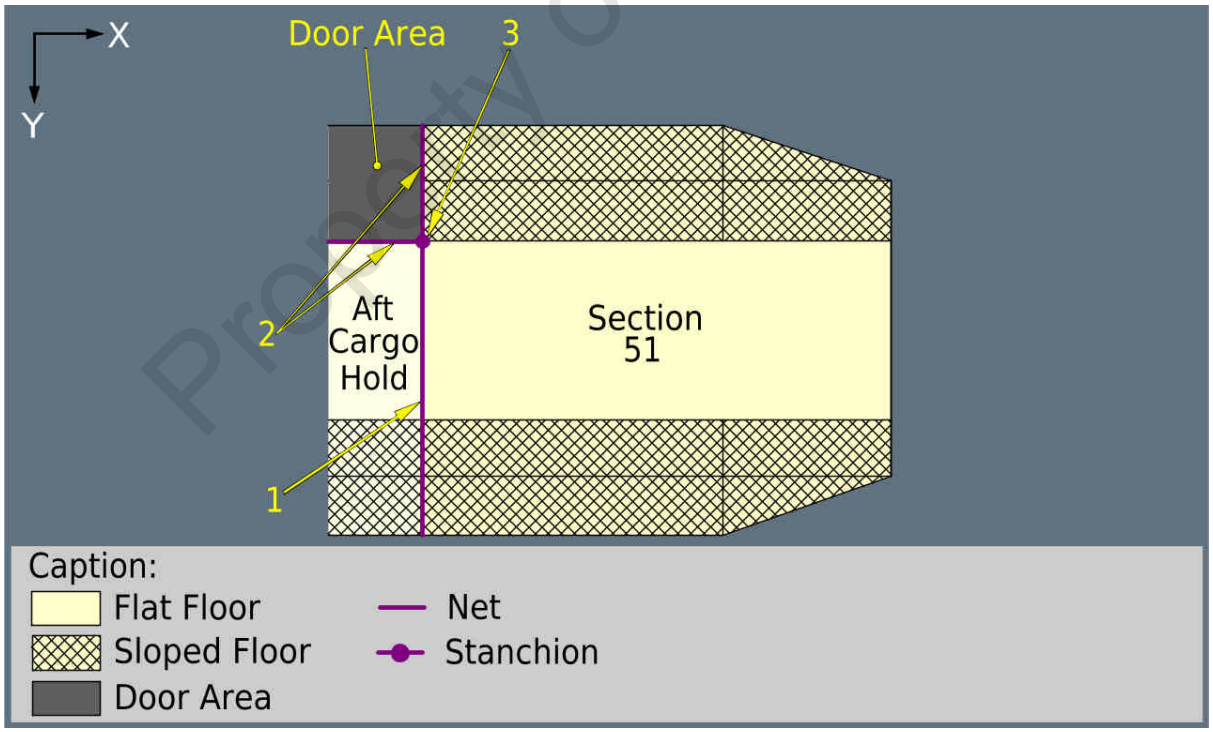
For bulk loading, if the mandatory nets are installed, no additional restraints are required, except in either of the following cases:
- When a load item may be hazardous due to its nature, form, or density
- When a load item has a weight of more than 150 kg

The additional restraint of the above-mentioned items is achieved if:
- The operator fills the applicable net section to at least three quarters of its height, or
- The operator individually fastens the load items to the tie-down points of the aircraft.

A bulk item may be too large to fit in a net section. In this case, the operator is authorized to remove the mandatory divider net, in order to create a larger net section. This new net section is defined by two successive mandatory divider nets, or by a mandatory divider net and a wall.
The operator must individually fasten all the bulk items which are located in this new net section.

The operator must use nets and straps to fasten the load to the tie-down points of the cargo hold floor.
The operator must ensure that the load applied to a tie-down point does not exceed 906 kg in any direction.
The operator must arrange and fasten the load to the cargo hold floor in a way to ensure an even distribution of the load.
The tie-down points on the ceiling of the cargo hold are only dedicated to the installation of nets.
To restrain bulk items, the operator only uses the standard tie-down points.

The following illustration indicates the net arrangement in the cargo hold.



RESTRAINT CONDITIONS
A mandatory divider net separates the rear bulk cargo hold from the aft cargo hold to ensure the restraint of the load.

For bulk loading, if the mandatory net is installed, no additional restraints are required, except in either of the following cases:
- When a load item may be hazardous due to its nature, form, or density
- When a load item has a weight of more than 150 kg.

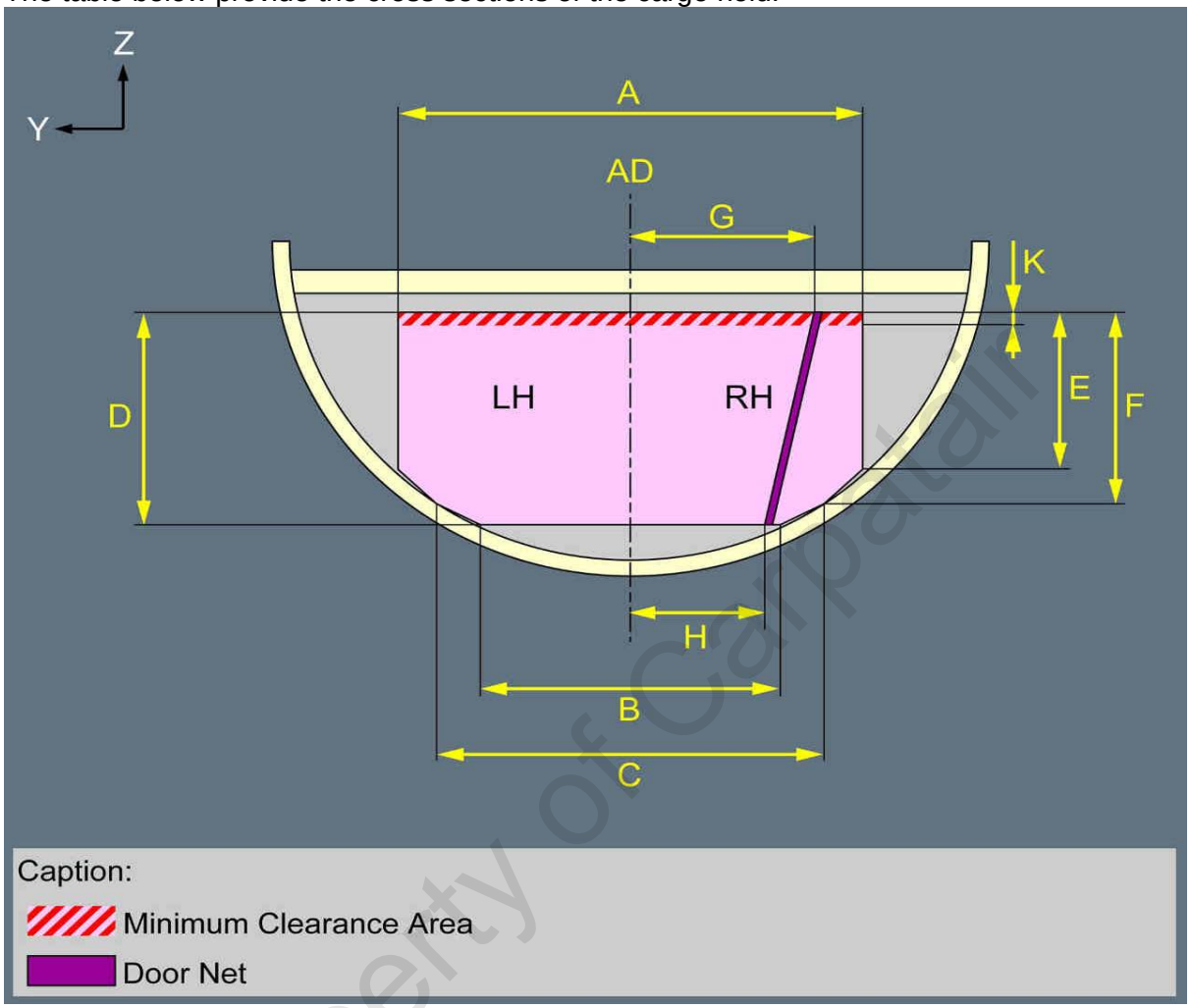
The additional restraint of the above-mentioned items is achieved if:
- The operator fills the applicable net section to at least three quarters of its height, or
- The operator individually fastens the load items to the tie-down points of the aircraft.

A bulk item may be too large to fit in a net section. In this case, the operator is authorized to remove the mandatory divider net, in order to create a larger net section. This new net section is defined by two successive mandatory divider nets, or by a mandatory divider net and a wall.
The operator must individually fasten all the bulk items which are located in this new net section.

PACKAGE DIMENSIONS – please see Cargo Manual, ch 9.7.2.6

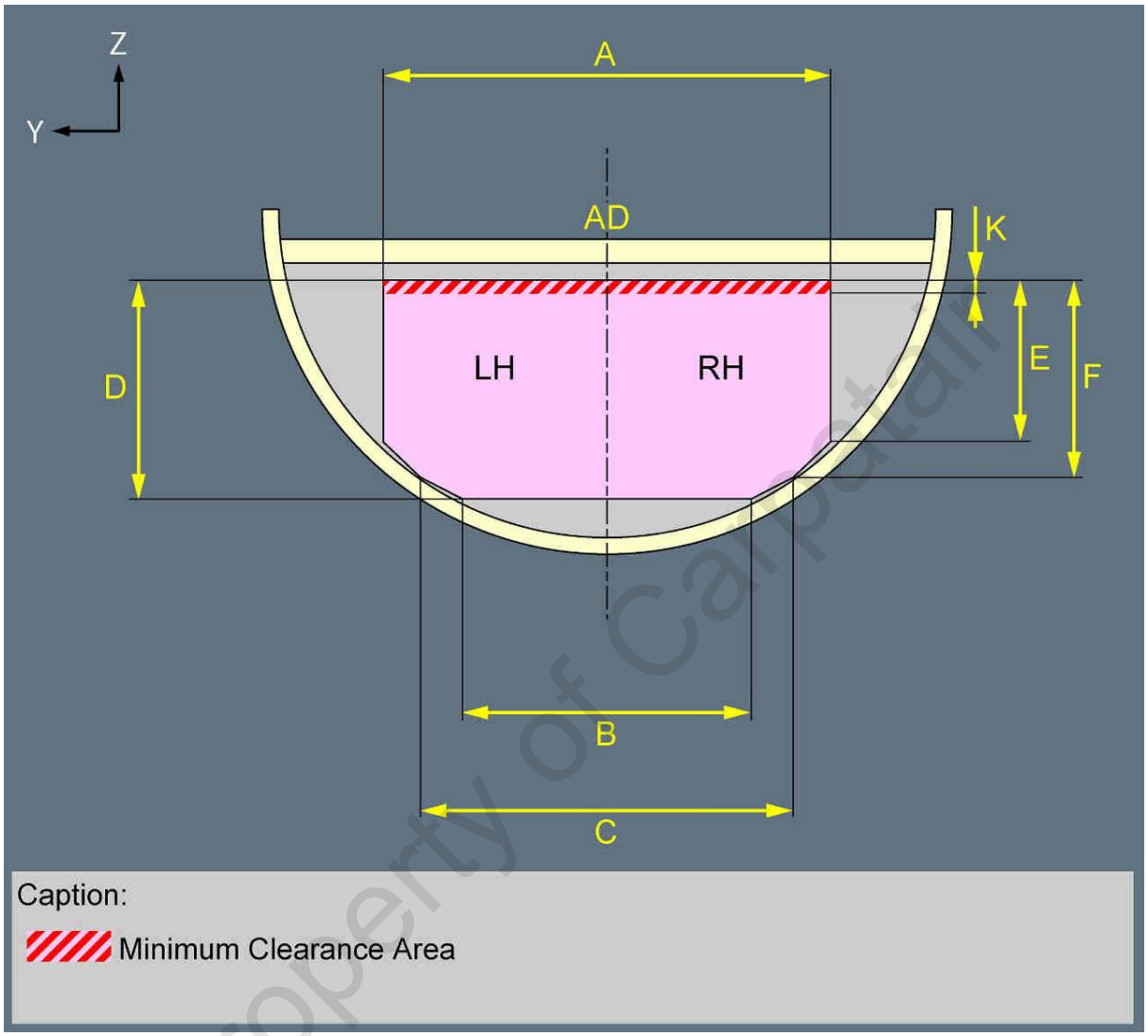
Cross Section Airbus A319 – Afterward Cargo Hold

The table below provide the cross sections of the cargo hold.



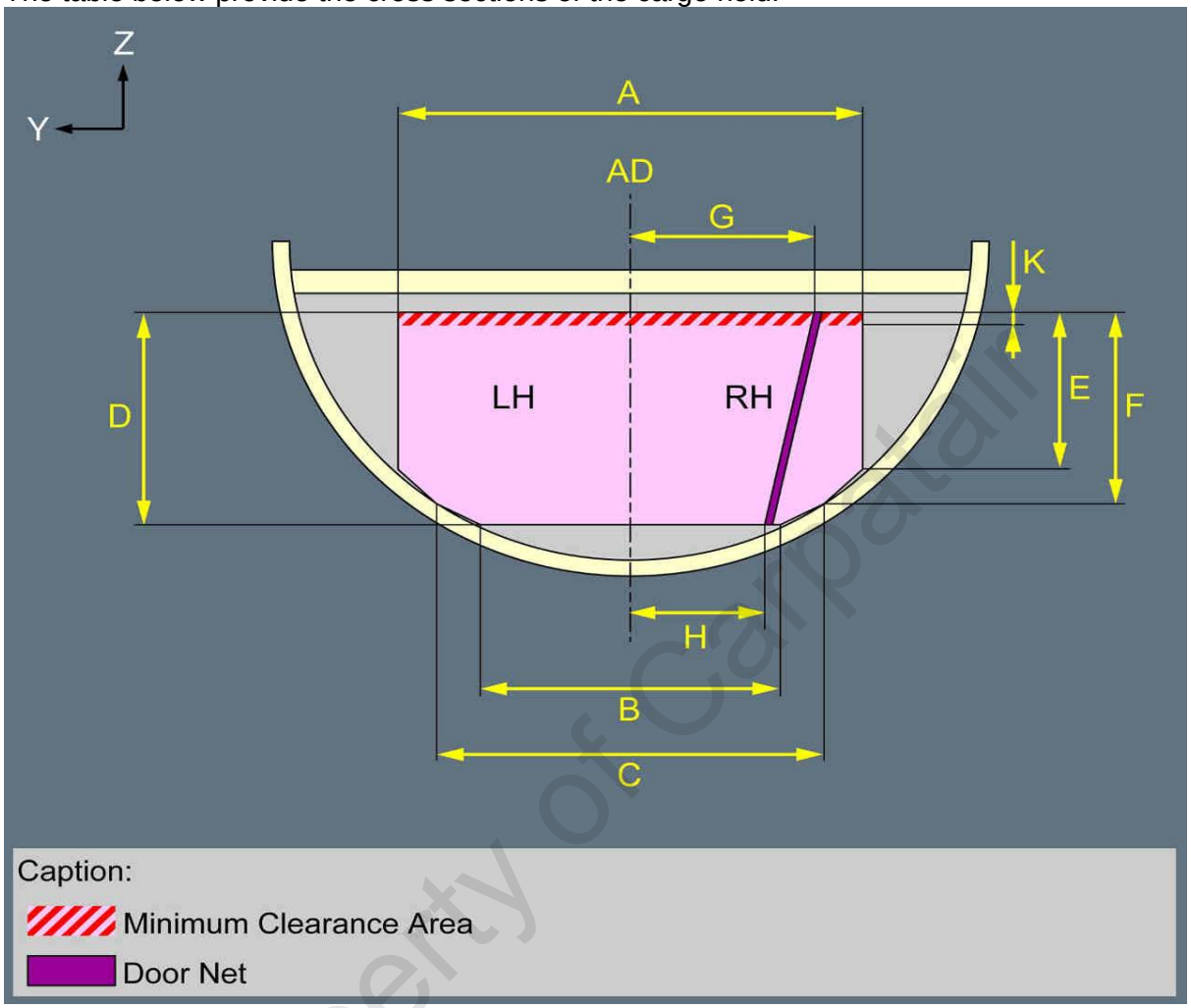
Cross Section Airbus A319 – Rear Bulk Cargo Hold

The tables below provide the cross sections of the cargo hold.



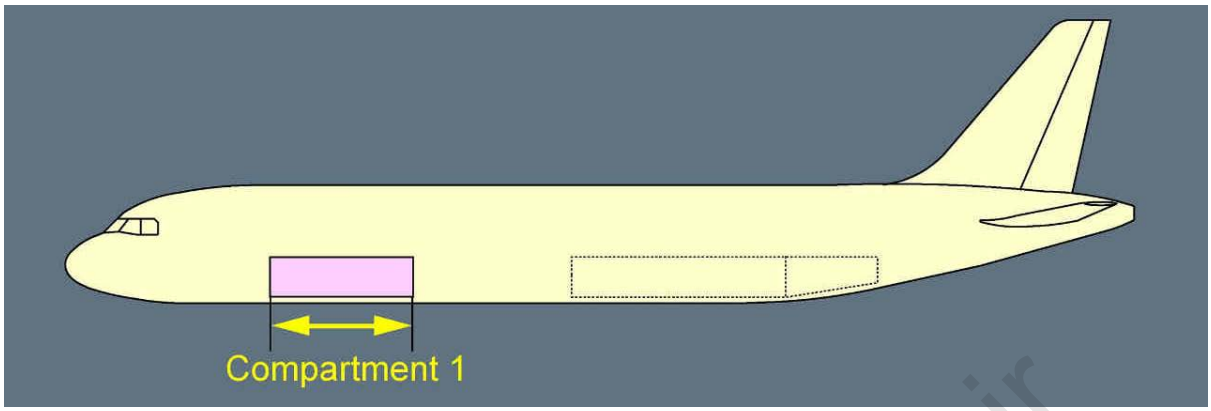
Cross Section Airbus A320 Family - Cargo Hold

The table below provide the cross sections of the cargo hold.



5.7.1.2 Mass Limits, Volumes and Dimensions Airbus A320

The foreword cargo hold has one compartment.



The capacity of the cargo hold is 3 402 kg
The cargo hold is divided into 3 sections to help the control of loading.

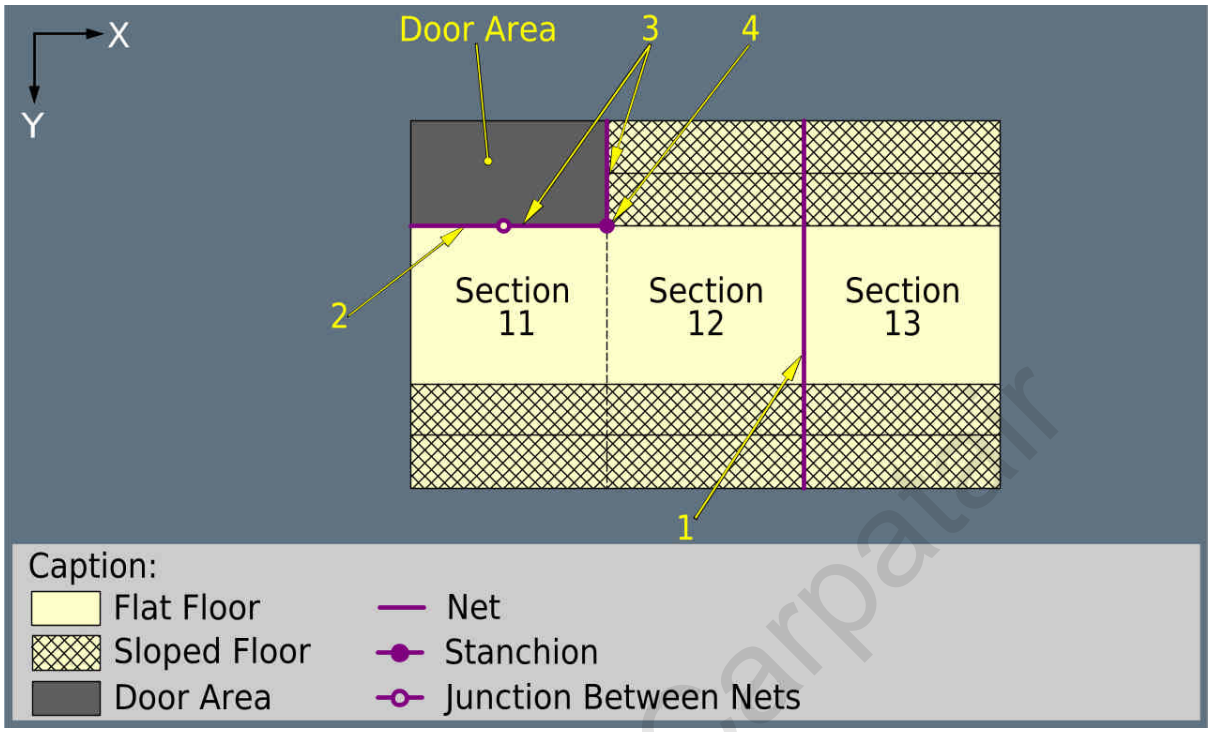
Section	Max Gross Weight	Max Usable Volume
	kg	m3
11	1045	4.140
12	1225	4.770
13	1132	4.390

For bulk loading, if the mandatory nets are installed, no additional restraints are required, except in either of the following cases:
- When a load item may be hazardous due to its nature, form, or density
- When a load item has a weight of more than 150 kg.

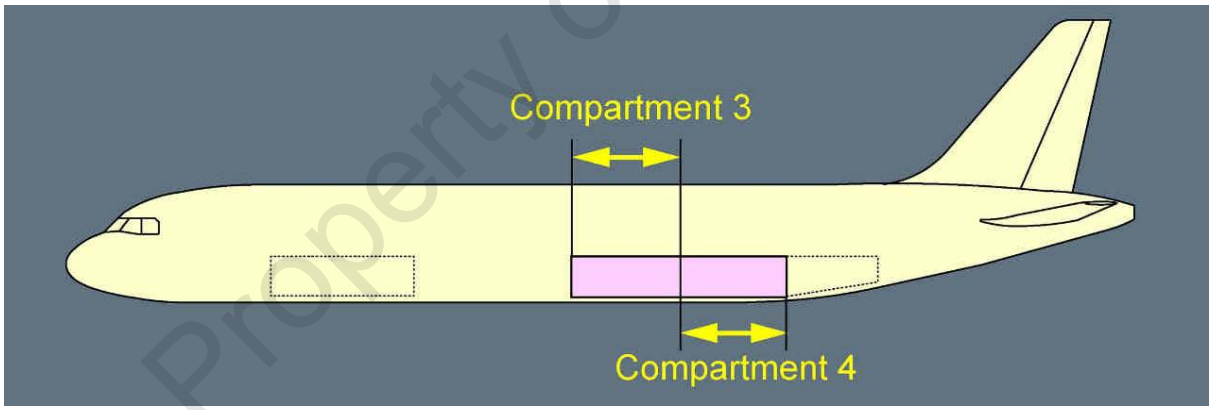
The additional restraint of the above-mentioned items is achieved if:
- The operator fills the applicable net section to at least three quarters of its height, or
- The operator individually fastens the load items to the tie-down points of the aircraft.

A bulk item may be too large to fit in a net section. In this case, the operator is authorized to remove the mandatory divider net. Then, the operator must individually fasten all bulk items in the cargo hold.
The operator must ensure that there is a minimum clearance of 0.051 m between the top of the load and the cargo hold ceiling.
The operator must use nets and straps to fasten the load to the tie-down points of the cargo hold floor.
The operator must ensure that the load applied to a tie-down point does not exceed 906 kg in any direction.
The operator must arrange and fasten the load to the cargo hold floor in a way to ensure an even distribution of the load.
The tie-down points on the ceiling of the cargo hold are only dedicated to the installation of nets.
To restrain bulk items, the operator only uses the standard tie-down points.

The following illustration indicates the net arrangement in the cargo hold.



The afterward cargo hold is divided in two compartments (compartments 3 and 4)



The capacity of the cargo hold is 3 402 kg
The cargo holds are divided each into 2 sections to help the control of loading.

Section	Max Gross Weight	Max Usable Volume
	kg	m3
31	1301	5.230

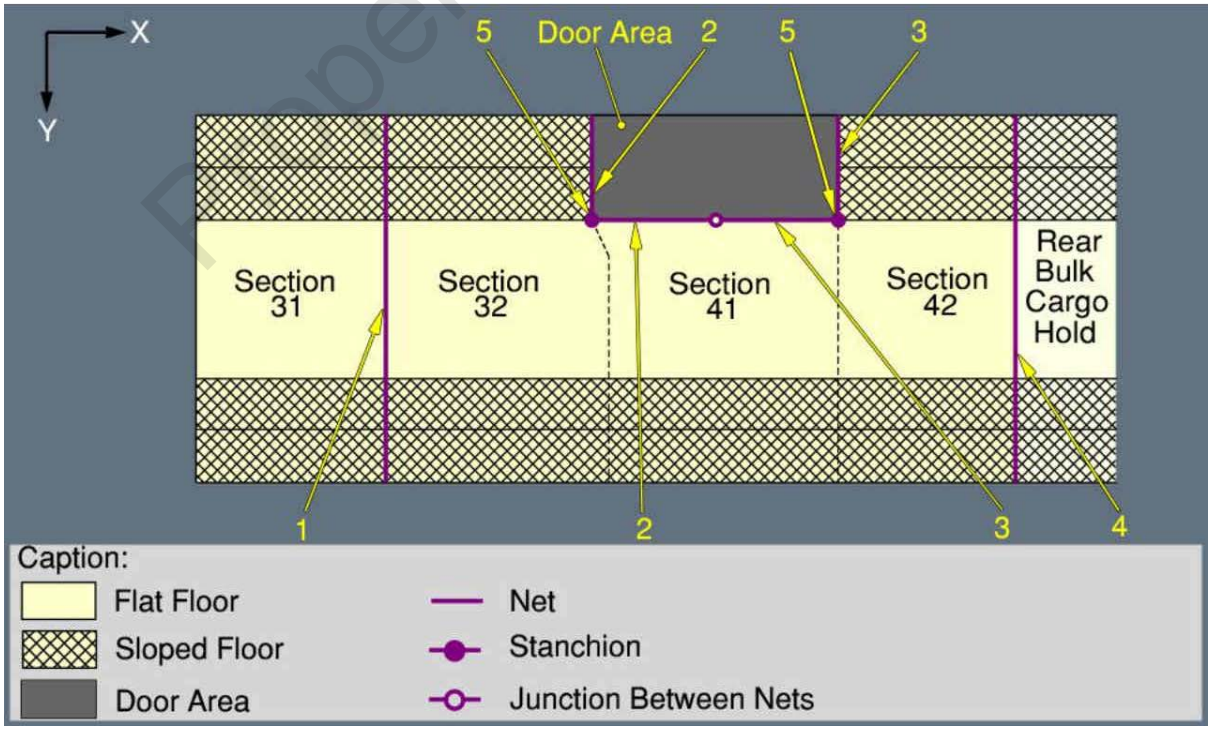
32	1125	4.530
41	928	3.790
42	1128	4.750

For bulk loading, if the mandatory nets are installed, no additional restraints are required, except in either of the following cases:
- When a load item may be hazardous due to its nature, form, or density
- When a load item has a weight of more than 150 kg.

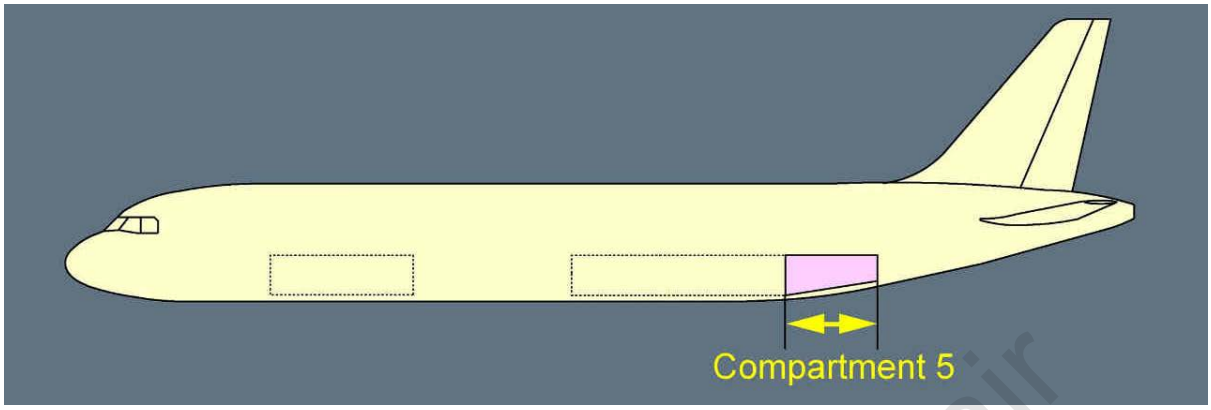
The additional restraint of the above-mentioned items is achieved if:
- The operator fills the applicable net section to at least three quarters of its height, or
- The operator individually fastens the load items to the tie-down points of the aircraft.

A bulk item may be too large to fit in a net section. In this case, the operator is authorized to remove the mandatory divider net. Then, the operator must individually fasten all bulk items in the cargo hold.
The operator must ensure that there is a minimum clearance of 0.051 m between the top of the load and the cargo hold ceiling.
The operator must use nets and straps to fasten the load to the tie-down points of the cargo hold floor.
The operator must ensure that the load applied to a tie-down point does not exceed 906 kg in any direction.
The operator must arrange and fasten the load to the cargo hold floor in a way to ensure an even distribution of the load.
The tie-down points on the ceiling of the cargo hold are only dedicated to the installation of nets.
To restrain bulk items, the operator only uses the standard tie-down points.

The following illustration indicates the net arrangement in the cargo hold.



The rear bulk cargo hold has one compartment (compartment 5).



The capacity of the cargo hold is 1 497 kg
The cargo hold is divided into 3 sections to help the control of the loading.

Section	Max Gross Weight	Max Usable Volume
	kg	m3
51	374	1.490
52	353	1.390
53	770	3.040

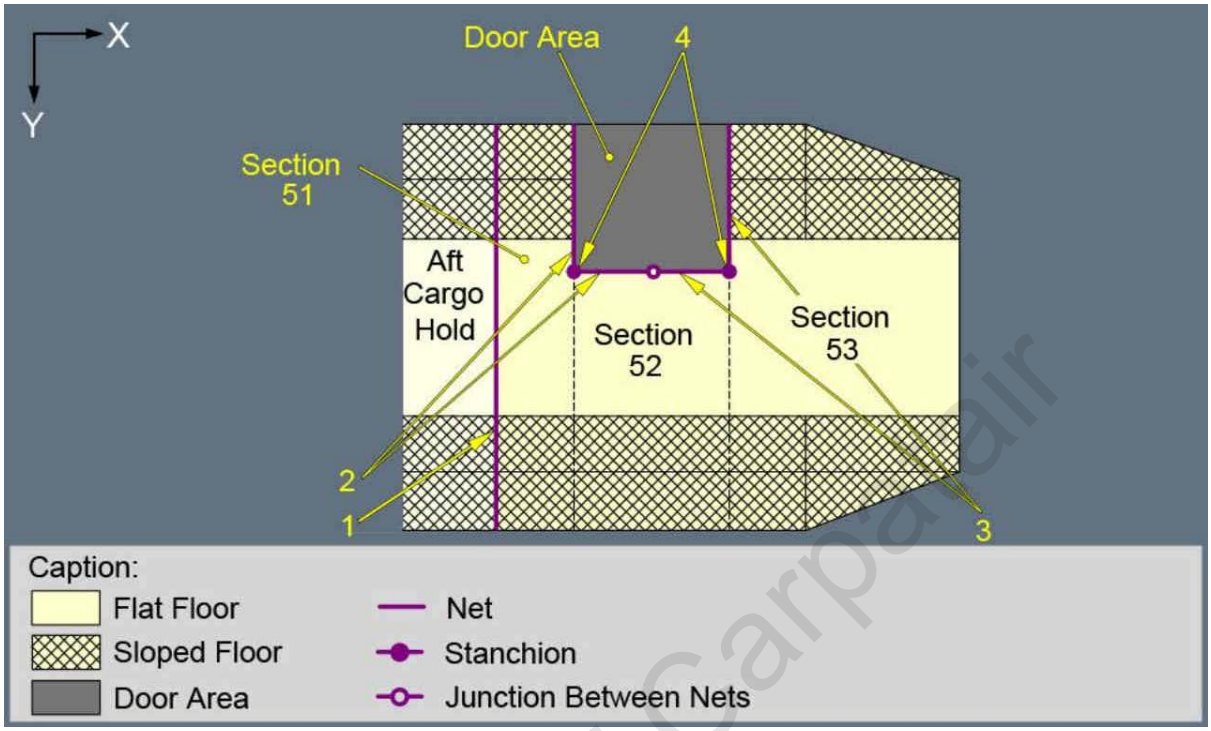
For bulk loading, if the mandatory nets are installed, no additional restraints are required, except in either of the following cases:
- When a load item may be hazardous due to its nature, form, or density
- When a load item has a weight of more than 150 kg.

The additional restraint of the above-mentioned items is achieved if:
- The operator fills the applicable net section to at least three quarters of its height, or
- The operator individually fastens the load items to the tie-down points of the aircraft.

A bulk item may be too large to fit in a net section. In this case, the operator is authorized to remove the mandatory divider net. Then, the operator must individually fasten all bulk items in the cargo hold.
The operator must ensure that there is a minimum clearance of 0.051 m between the top of the load and the cargo hold ceiling.
The operator must use nets and straps to fasten the load to the tie-down points of the cargo hold floor.
The operator must ensure that the load applied to a tie-down point does not exceed 906 kg in any direction.
The operator must arrange and fasten the load to the cargo hold floor in a way to ensure an even distribution of the load.
The tie-down points on the ceiling of the cargo hold are only dedicated to the installation of nets.

To restrain bulk items, the operator only uses the standard tie-down points.

The following illustration indicates the net arrangement in the cargo hold.



For package dimensions please see Cargo Manual, ch 9.7.2.6**.**

Airbus A320 Fastening Load Requirements

The operator must use nets and straps to fasten the load to the tie-down points of the cargo hold floor.
The operator must ensure that the load applied to a tie-down point does not exceed 906 kg in any direction.
The operator must arrange and fasten the load to the cargo hold floor in a way to ensure an even distribution of the load.
The tie-down points on the ceiling of the cargo hold are only dedicated to the installation of nets.
To restrain bulk items, the operator only uses the standard tie-down points that are not already used to attach the nets.

Contents

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Chapter 6: Airside Safety Operational Oversight

6.1 Introduction

To ensure ground operational safety, all station activities, including, if applicable, those outsourced to an external third-party ground service provider or its subcontractors, shall be conducted under the direct oversight of supervision personnel.

6.1.1 Operational Requirements

a) Supervision personnel must be trained and qualified to perform the assigned functions;
b) Assigned individuals will provide oversight of personnel conducting airside operations;
c) An assigned individual will oversee the aircraft turnaround during ramp/apron activities ensuring the aircraft is handled and serviced according to the Operator's specific requirements, these duties may be combined with another function/role;
d) If applicable checklists are provided, they shall be completed as required by the individual assigned to provide oversight;
e) Individuals assigned to oversee ground handling operations must have oversight on airside operations, ground safety and flight schedule.

6.2 Supervision Scope

Oversight for an aircraft arrival/departure includes, but is not limited to the following activities:

a) Aircraft, vehicles and GSE operations and parking;
b) Arrival;
c) Baggage handling;
d) Cabin Equipment;
e) Catering ramp handling;
f) De-icing/anti-icing services and snow/ice removal;
g) Departure;
h) Exterior cleaning;
i) Interior cleaning;
j) Load control document accuracy:
   - LIR;
   - NOTOC;
   - other documents as applicable.
k) Load control and flight operations;
l) Marshalling;
m) Moving of aircraft;
n) Passenger services;
o) PRM;
p) Ramp fuelling/de-fuelling operations;
q) Ramp regulations;
r) Ramp services;
s) Ramp to flight-deck communications;
t) Staff conduct, behavior and operational practice, PPE;
u) Toilet services;
v) Towing cargo and baggage;
w) Bulk loading and unloading of baggage and cargo;
x) Water service.

6.3 Safety Management System

In the event of an, incident or accident, the work must stop and the event shall immediately be reported to the supervisor and to the commander, if present. In his absence, the event shall be reported via e-mail to Carpatair headquarter at flight.dispatch@carpatair.com and to fso@carpatair.com .
Complete the Ground Incident Damage Report form to collect all relevant information regarding the event;

- Submit the Ground Incident Damage Report form to the line management, the airline at fso@carpatair.com and local authorities as required.

Work Method
The initial report shall be made as soon as possible after the event.

The following forms will be filled out (depending on the type of occurrence):

- for incidents involving dangerous goods, the Dangerous Goods Occurrence Report (form KRP 152, *Occurrence Report for a Dangerous Goods Accident or Incident; please refer to Cargo Manual- Annexes*) will be used;
- for incidents related to the aircraft on ground, the IATA AHM 650 Airline Ground Incident/ Accident/ Damage will be used by the person directly involved in the occurrence (whether accident, incident or other).

It will be sent the same day (by email or fax) to fso@carpatair.com/ ground.admin@carpatair.com. The persons within the Safety/Ground Operations department in charge with the internal investigation will open a file for each event, to include all the information, photos, communication evidence and any relevant documents related to the event.
The Nominated Person Ground Operations will forward the information to Carpatair Safety Department (fso@carpatair.com), as it is in charge with completing the report and transmitting the information to the appropriate authorities in Romania, and in the country of the incident / accident occurrence, within the time limit.
If necessary or requested by the national authority, or whenever additional information, not available for the first report, has been obtained, a second report will be made.

What to report?
Any hazard that has the potential to cause damage or injury or threatens the company viability should be reported.

a. Fuel and oil spills
b. Any events related to dangerous goods
c. Incidents/accidents involving GSE
d. Severe weather emergencies
e. Personnel injuries
f. Illegal acts

Injury
Occurrences, which have or could, have led to significant injury to passengers or crew but which are not considered reportable as an accident.

Security

- Unlawful interference with the aircraft including a bomb threat or hijack;
- Difficulty in controlling intoxicated, violent or unruly passengers;
- Discovery of a stowaway;
- Other occurrences;

- Repetitive instances of a specific type of occurrence which in isolation would not be considered ‘reportable’ but which due to the frequency with which they arise, form a potential hazard;
- Significant spillage during fueling operations;
- Loading of incorrect fuel quantities likely to have a significant effect on aircraft endurance, performance, balance or structural strength.

Handling of passengers, baggage and cargo

- Significant contamination of aircraft structure, systems and equipment arising from the carriage of baggage or cargo, including dangerous goods;
- Incorrect loading of passengers, baggage or cargo, likely to have a significant effect on aircraft mass and/or balance;
- Incorrect stowage of baggage or cargo (including hand baggage) likely in any way to endanger the aircraft, its equipment or occupants or to impede emergency evacuation;
- Inadequate stowage of cargo shipments or other substantial items of cargo;
- Carriage or attempted carriage of dangerous goods in contravention of applicable regulations, including incorrect labeling and packaging of dangerous goods.

Aircraft ground handling and servicing

- Failure, malfunction or defect of ground equipment used for the testing or checking of aircraft systems and equipment when the required routine inspection and test procedures did not clearly identify the problem, where this results in a hazardous situation;
- Non-compliance or significant errors in compliance with required servicing procedures;
- Loading of contaminated or incorrect type of fuel or other essential fluids (including oxygen and potable water).
  - Loading of incorrect fuel quantities likely to have a significant effect on aircraft endurance, performance, balance or structural strength.
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