STANDARD OPERATING PROCEDURE_OPS006

Load Planning

Version/Rev	Date	Section	Amendment
V1/R1	11.03.2024	Reference	Reference added
V2	25.08.2025	Reference	Reference added

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Issued: 10.10.2023
Revised: 25.08.2025
Version: V2

PURPOSE

This SOP establishes a standardised process for aircraft load planning within DHS.
It ensures compliance with regulatory, safety and airline-specific requirements, while providing a clear reference for training and oversight.

OBJECTIVE

The objective of this SOP is to:

- guide Load Controllers and Turnaround Coordinators in carrying out load planning in a safe, efficient and consistent manner;
- ensure aircraft weight and balance remain within operational limits;
- guarantee correct handling of dangerous goods and special loads (DGSL);
- support communication with flight dispatch and flight crew through accurate Load Instruction Reports (LIR) and Notification to Captain (NOTOC);
- contribute to the prevention of operational risks such as tail tipping and misloading.

APPLICATION

Operations department: Load Controler

ABBREVIATIONS & DEFINITIONS

DG = Dangerous Goods
DGR = Dangerous Goods Regulations
SL = Special Load
DGSL = Dangerous Goods and Special Loads
DAA = Delivery at Aircraft
ULD = Unit Load Device
BI = Basic Index
BW = Basic Weight
DOW = Dry Operating Weight
DOI = Dry Operating Index
EZFW = Estimated Zero Fuel Weight
LDM = Load Message or Load Departure Message
LIR = Loading Instruction Report
SI = Supplementary Information
CPM = Container Pallet Message

NOTOC = Notification to Captain/Pilot-in-Command

PROCEDURE STEPS

Step	Action
1.	Check aircraft basic weight/index (BW/BI).
2.	Check all items to be included in the dry operating weight/index (DOW/DOI).
3.	Check operational messages from the previous flight or leg, including any special loads, if applicable.
4.	Check aircraft operational limitations or any other restrictions that may limit load planning.
5.	Calculate expected traffic load.
6.	Check any other dangerous goods and special loads (DGSL) that require special handling and segregation.
7.	Plan unit load devices (ULDs), taking into consideration the expected loading figures, the aircraft configuration and operating airline's procedures.
8.	Allocate loading positions for all traffic loads and special loads, if applicable, taking into consideration all flight legs.
9.	Calculate the estimated zero fuel weight (EZFW) and transmit it to flight dispatch, as applicable, for flight planning purposes.
10.	Communicate the EZFW every time there is a significant difference from the previous calculation, as per operating airline procedures.
11.	Check fuel load and distribution.
12.	Perform a pre-calculation of the aircraft weight and balance to ensure the aircraft operational limits are not exceeded.
13.	Consider aircraft ground stability to avoid tail tipping, as per operating airline procedures and aircraft specifications. Particular attention must be paid to the distribution of the transit load on multi-sector flights. The distribution of the load remaining in the compartments at the next station should be planned, such that it meets the above condition. When this condition cannot be met, the offloading/loading sequence at the transit station shall be planned to ensure aircraft ground stability is maintained. Methods to ensure ground stability include use of tables or graphs to determine the weight required in forward compartments to counteract the weight to be loaded in aft compartments, or calculation of center of gravity for comparison against the applicable tipping and/or towing limit: a. Method 1–a scale or table determining the distribution of the loads weight-wise, showing the weight required in the forward compartments to secure ground stability, and the load to be placed in the aft compartments. b. Method 2–calculation of the dead load index/% mean aerodynamic cord (MAC), which shall be forward of the dead load index limit on the balance chart and transmitted on the load message (LDM). c. Method 3–dynamic calculation of aircraft ground stability using a software application that takes every movement of load into account.
14.	Produce an LIR.

Following considerations are used in the planning process:

Step	Action
1.	Type of aircraft prepared for service.
2.	Fuel load and distribution.
3.	Aircraft equipment, catering, crew etc.
4.	Planned deadload.
5.	Expected passenger load and distribution.

6.	Aircraft manufacturer's defined, and company imposed, limitations.
7.	Specific requirements of operating airline.
8.	Special load including IATA Dangerous Goods Regulations (DGR) etc.

Loading Instruction Report

An LIR shall be issued for each departing flight to ensure all safety parameters specific to each flight are adhered to.

Step	Action
1.	Complete load distribution for the departing flight, using provisional data and adhering to the segregation policy, as per operating airline procedures.
2.	Indicate all information that could affect loading in the Supplementary Information (SI) section.
3.	LIR revisions shall be immediately communicated via appropriate means to loading staff.

A) Off-Load planning

A LIR (manual or electronic) is issued prior to aircraft arrival for incoming/transit flights. Refer to upline CPM and/or LDM and include the following:

Step	Action
1.	Baggage details (in handling sequence and priorities required by the operating airline).
2.	Cabin Load.
3.	Containers and pallets.
4.	Cargo & Mail.
5.	Mobility aids for gate delivery.
6.	Summary of DGSL.
7.	Any relevant plain language text/instruction if required.
8.	Flight details, which may include date, registration, issue number, etc.
9.	Any other requirements of the operating airline.

B) On-Load Planning

A signed LIR (manual or electronic) is issued for each flight and includes the following:

Step	Action
1.	Load planner or controller and contact details.
2.	Hold content instructions.
3.	Planned baggage.
4.	Planned cargo & mail.
5.	Mobility aids.
6.	Priority baggage.
7.	DAA baggage if applicable.
8.	Crew baggage (for placement and not weight recording).
9.	Transfer or connection baggage.
10.	Summary of Dangerous Goods/Special Loads.
11.	Flight details, which may include date, registration, issue number, etc.
12.	Any other requirements of the operating airline.

Baggage ULD Requirements

Step	Action
1.	Calculate the baggage ULDs required using the average number of bags and commodities for the route/aircraft type.

2.	Use average bags per booked passenger and average number of bags per ULD. Obtain Cargo weight, volume and contents.
3.	Where possible, plan so as not to obstruct passenger baggage offload at arrival station.
4.	Block any unusable ULD positions based on any operating airline requirements (e.g. extra fuel tanks, catering equipment or flyaway kits etc.).

Notification to Captain

The NOTOC is used to inform the PIC of DGSL carried as cargo or mail.
The information contained in the NOTOC shall be made available to the person charged with the aircraft loading and supervision task.

Step	Action
1.	Verify that DGSL are not damaged or leaking.
2.	Ensure the correct positioning of DGSL as per the LIR and NOTOC.
3.	Report actual loading position.
4.	Sign the NOTOC.
5.	Issue an adequate number of copies to provide information to all concerned and for file retention
6.	Deliver the signed NOTOC to PIC for signature.

- *For subsequent Weight & Balance calculation, refer to SOP_OPS007.*
- *For Load Supervision & Communication at the aircraft, refer to SOP_OPS008*

REFERENCE
DHS Ground Operations Manual (GOM):
- Chapter 5.2.1 – Load Planning - General
- Chapter 5.2.2 – Loading Instruction Report
- Chapter 5.2.3 – Offloading Instructions
- Chapter 5.2.4 – Notification to Captain

IATA DGR Manual