

Nesma Airlines
نسمة للطيران

Operations Manual

Part A, Volume 3

(Station Operation Manual)

Issue No.: 09

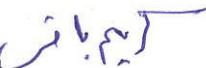
Rev. No.: Temp. 01



Form 12210-23

Operations Manual Approval /Acceptance Form

Part I :to be completed by the Operator

- Operator Name: -NESMA Airlines
- Manual Title: - Station Operation Manual
 - Issue No.: 09
 - Revision No.: 00
 - Date :Jan 2024
- Prepared by:
 - Name: Mr. Shady Said
 - Title: NESMA Airlines Ground Handling Manager
 - Signature: 
 - Date : 08-1-2024
- Revised by:
 - Name: Eng. Bahy Matikis
 - Title: NESMA Airlines Quality & Safety Director
 - Signature: 
 - Date : 08-1-2024
- Accountable Manager:
 - Name: Mr. Karim Bakry
 - Title: Nesma Airlines Vice President & CEO
 - Signature: 
 - Date: 08-1-2024

Nesma Airlines
نسماء للطيران
(Operator Stamp)

Part II :to be completed by ECAA

ECAA : Acceptance Approval

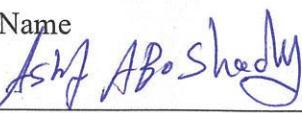
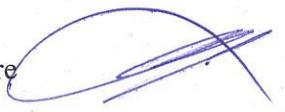
Ops Inspector:

Name  Signature  Date: 19-1-2024

Certification G.D:

Name  Signature  Date: 19-1-2024

FOCA Administrator:

Name  Signature  Date: 19/1/2024



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Chapter 00 Introduction & Index

0.1 Introduction

This manual contains Nesma Airlines Policies, detailed instructions and procedures on matters which particularly concern personnel engaged in Ground Handling Activities in order to ensure standardization.

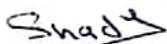
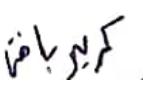
Nesma Airlines chose to adopt IGOM Manual (IATA Ground Operations Manual), and all procedures and processes in IGOM was reviewed by Ground Handling Manager and accepted as Nesma Airlines minimum standard, IGOM last revision is considered part of This manual and completing it.

The holder of this manual is responsible for keeping his copy up – to – date by immediately inserting all revisions whenever issued. Any comments and suggestions will be given careful consideration.

This Manual contains legible and accurate information; is presented in a format that is appropriate for use by ground handling personnel; is accepted by the Egyptian Civil aviation authority.

The procedures in this manual must be adhered to in the manner outlined but nothing herein should be considered as limiting personnel from acting on their own best judgment in case of emergency but maintain the framework outlined.

0.2 Record of Approval:

	Name	Signature	Position	Date
Prepared by	Shady Said		Ground Handling Manager	Feb. 2024
Reviewed by	Bahy Matkis		Quality and Safety Director	Feb. 2024
Approved By	Karim Baky		Vice President and CEO	Feb. 2024

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0.3 Record of Revisions

Stations Operations Manual is to be kept up-to-date by the insertion of all revisions received. Page number and date of insertion are to be entered in the table below.

Issue No.	Revision No.	Revision Date	Effective Date	Inserted by
09	00	Jan 2024	19 Jan 2024	

0.4 Record of Temporary Revision

TR No.	Issue Date	Date filed	Filed by	Signature	Remarks
01	Feb.2024	Feb. 2024	Shady Said		

For any Missing Revision or Updates Request from:

Ground Handling Manager

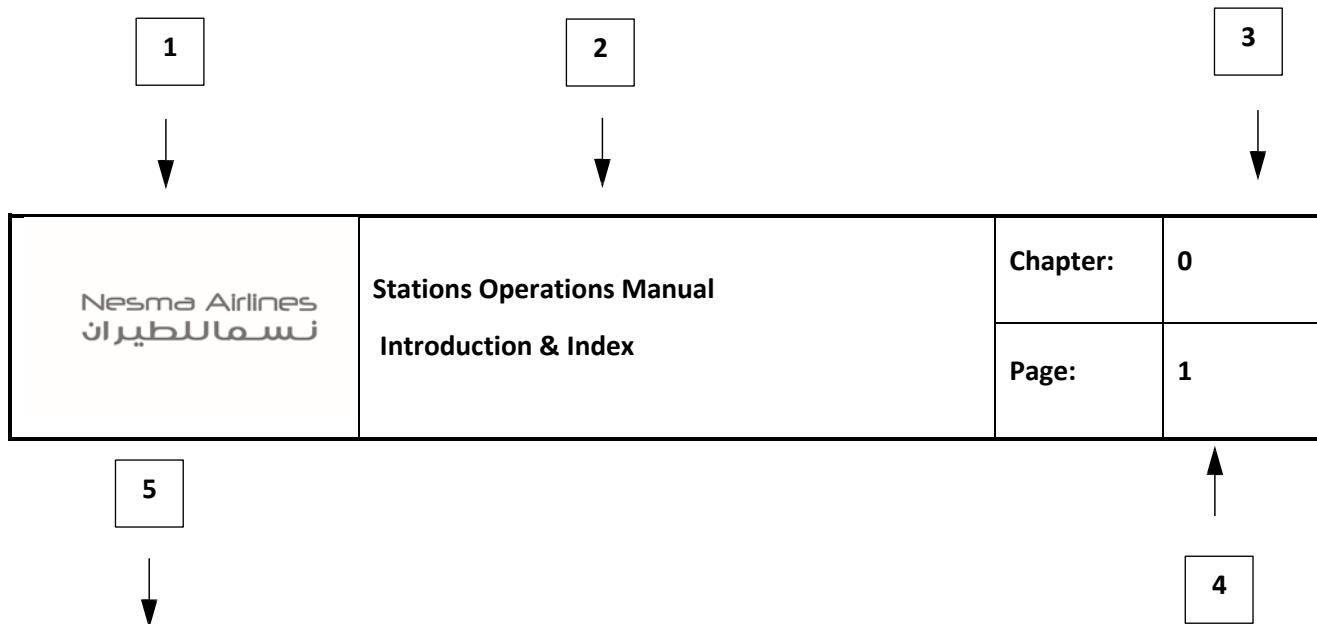
Ground.Handling@Nemsairlines.com

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0.5 Manual Pages Layout

A vertical line indicates revised or newly published text on the pages. It will not be used to indicate format or page number changes. Editorial revisions e.g. spelling corrections may have revision bar with no associated highlights.

The **header and footer** of each page contains:



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Issue Date: Feb 2018

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Revision Date: Feb 2018

② Header:

- 1) : Nesma Airlines Logo
- 2) : Name of Operations Manual and Chapter title
- 3) : Chapter Number
- 4) : Page Number.

③ Footer :

- 5) : Date of issue in the left hand corner; Revision number in the right hand corner. The Date of Issue indicates the actual date of effectivity of the published revision.

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0.8 S.O. M's Copies Distribution

Copies of Station Operations Manual are to be assigned as follow: -

No	Position/Department	Type of Copy	Copy Number
1	ECAA	Hard Copy	1
2	Ground Handling Manager	Hard Copy	2
3	Vice President (Accountable Executive)	Soft Copy	3
4	Operations Library	Soft Copy	4
5	Technical Library	Soft Copy	5
6	IT Department (Electronic Library)	Soft Copy	6
7	Safety and Quality Director	Soft Copy	7
8	Security Manager	Soft Copy	8
9	In-Flight Services Manager	Soft Copy	9
10	OCC Manager	Soft Copy	10
11	Reserved	--	11-19
12	Handling Stations	Soft Copies	20

Each Holder of a copy of the manual is responsible of keeping it up-to-date in conjunction with Nesma Airlines Ground Handling Department

Every Holder must send back a confirmation of receiving this document by email or Fax following contacts:

Ground.Handling@Nesmaairlines.com

Fax No. +20 (2) 262175972

Issue No.: 09

Issue Date: Jan24

Revision No.: 00

Revision Date: Jan24

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0.9 Changes/Amendments to Station Operations Manual

General policy:

The Ground Handling Manager is responsible for the amendments of the manual, the inclusion of associated documents and the manual's submission to the ECAA.

Any changes to the SOM shall require a prior acceptance by ECAA, Changes are to be made by the Ground Handling Manager then forwarded to ECAA for acceptance; If they disapprove the change, then a further change is to be made for their satisfaction.

Preparation:

Ground Handling Manager is responsible for the compilation of new or revised procedure proposals covering activities within his scope.

The Ground Handling Manager is responsible for: -

- Presenting the S.O. M's amendments and proposals for approval and inclusion in the manual.
- Securing the agreement of any concerned or involved party.

On receipt of a new or revised procedure proposal, the Ground Handling Manager will get the proposal for correctness.

Once acceptable, the manual will stamp (Controlled Copy) and distributed to each involved department by the Ground Handling Manager, according to the Distribution list. and older revisions are being terminated

Revised pages will be identified by revision number and date of revision.

In case the entire manual was changed it is referred to as new Issue, with new issue date starting revision 00.

Distribution is taking place to all stations that Nesma Airlines have flights to. Will be subjected to receiving confirmation.

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0.10 IGOM Compliance:

General

Nesma Airlines chose to adopt IGOM Manual (IATA Ground Operations Manual), and all procedures and processes in IGOM was reviewed by Ground Handling Manager and accepted as Nesma Airlines minimum standard, IGOM last revision is considered part of This manual and completing it.

Process

Once new edition of IGOM is being issued the following process is being activated:

- Ground Handling Manager is making the order of the new documentation, and it is his responsibility for the new documentation to be available for users before effective date
- Ground handling Manager initiates Performing an updated gap analysis of Nesma airlines own procedures against the new IGOM to ensure a complete set of procedures exists for the applicable operations.
- New amendments if any are sent to approval from safety and quality department, and to ECAA afterwards according to amendment procedures, and once approved it is being distributed

0.10.1 IGOM GAP Analysis Procedures

- Ground Handling Safety and Quality Coordinator shall Perform and maintaining an updated gap analysis of its own procedures against the IGOM to ensure a complete set of procedures exists for the applicable operations; Gap analysis form is available on IOSA website
- In case identified any variations against the IGOM procedures, Ground Handling Safety and Quality Coordinator shall communicate them to applicable operational personnel of outsourced functions;
- Ground Handling Safety and Quality Coordinator shall ensure that any variations are identified against IGOM "Safety Critical" procedures, such variations are communicated to Ground Handling Manager to be risk assessed utilizing Nesma Airlines SMS and risk management method to ensure an alternative procedure is accepted by Nesma Airlines.
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0.11 Glossary of Abbreviations

AOC	Air Operator Certificate
AOG	Aircraft On Ground
AVIH	Animal In Hold
AVML	Asian Vegetarian Meal
BBML	Baby Meal
BIKE	Bicycle
BLML	Bland Meal
BLND	Blind
BSCT	Bassinet / Carrycot
BULK	Bulky Bags
CBBG	Cabin Baggage
CHD	Child
CHML	Child Meal
COUR	Courier
CTC	Contact
CTCA	Contact Address
CTCB	Contact Business
CTCH	Contact Home
CTCP	Contact Phone
CTCT	Contact Travel agent
DAPO	Do All Possible
DBML	Diabetic Meal
DEAF	Deaf
DEPA	Deportee Accompanied By an Escort
DEPO	Deportee Not Specified

DEPU	Deportee Unaccompanied
DIPB	Diplomatic Bag
DNB	Denied Boarding
EMIG	Emigrant
ETA	Estimated Time Arrival
ETD	Estimated Time Departure
EXST	Extra Seat
FQTV	Frequent Traveler
FQTU	Frequent Traveler Upgrade Request
FPMI	Fruit Platter Meal
FRAG	Fragile Bag
FRAV	First Available
GD	General Declaration
GFML	Gluten Free Meal
GPST	Group Seat Request
GPU	Ground Power Unit
GRPS	Groups
HAJJ	Haj Pilgrim
HFML	High Fibre Meal
HNML	Hindu Meal
INAD	Inadmissible Passenger
INCS	Infant In Car Seat
INF	Infant
KSML	Kosher Meal
LCML	Low Calorie Meal

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LFML	Low Fat / Cholesterol Meal
LMC	Last Minute Change
LPML	Low Protein Meal
LSML	Low Sodium / Salt Meal
MAAS	Meet And Assist
MCT	Minimum Connecting Time
MEDA	Medical
MLW	Maximum Landing weight
MOML	Moslem Meal
MTOW	Maximum takeoff weight
MZFW	Maximum zero fuel weight
NLML	Non Lactose Meal
NSML	Salt Free Meal
NSST	Non Smoking Seat
OFP	Operational Flight Plan
OM	Operations Manual
OPS	Operations
OCC	Operation Control Center
ORML	Oriental Meal
OTHS	Other Services
OXYG	Oxygen For Passenger On Seat Or STCR
PETC	Animal (Pet) In Cabin
PNL	Passenger Name List
PRML	Low Purin Meal
RQST	Seat Request
RTOW	Regulated Takeoff weight
RVML	Raw Vegetable Meal

SEMN	Seaman
SFML	Seafood Meal
SITA	Société Internationale de Télécommunications aéronautiques
SLA	Service Level Agreement
SMST	Smoking Seat
SPML	Special Meal
SPON	Special Passenger to Be On loaded(Previously Mishandled)
STA	Schedule Time Arrival
STBY	Standby Passenger
STCR	Stretcher
STD	Schedule Time Departure
STF	Staff
STPC	Station To Pay Cost
TCP	To Complete Party
TKTL	Ticket Time Limit
TOD	Ticket On Departure
TWOV	Transit Without Visa
UMRA	UMRA Passenger
UM	Unaccompanied Child / Minor
VIP	Very Important Passenger
VGML	Vegetarian (Non-Dairy)
VLML	Vegetarian (Dairy)
WCHC	Wheelchair Cabin
WCHR	Wheelchair Ramp
WCHS	Wheelchair Steps
XBAG	Excess Baggage

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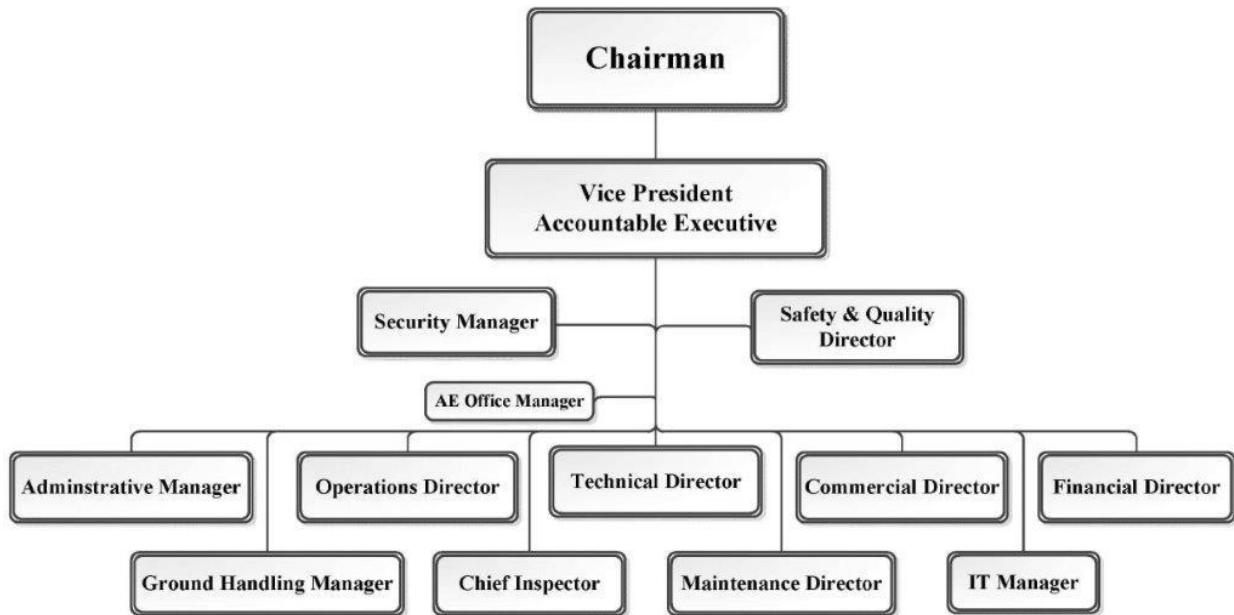
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Chapter 01 Management & Facilities

1.1 Company Organization Chart.



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1.2 Management System

According to the previous Organization chart (1.1) Nesma Airlines decided to manage the Ground Handling Division through a controlled Management System which ensures continuity for the division functions and activities, by the comprehensive definition of the authorities and the responsibilities within the Ground Handling Division, explanation for the duties, reporting and supervision system, that also must satisfy stability and flexibility to meet the regulations (ICAO, IATA, ECAR and IOSA) requirements, and own company requirements which concerns quality, safety and security outcomes for the Ground Handling Scope which includes,

- Passenger Handling
- Baggage Handling
- Aircraft Handling and loading
- Load Control
- Aircraft Fueling
- Aircraft de-/anti-icing

And as a general policy for Nesma Airlines all of these functions are being performed by another parties in each location service is being provided, where the contracting process takes place through a standard ground handling agreement, controlled through the Operator Manual (Stations Operations Manual), Published instructions, on time instructions. Based on regulations (ICAO, IATA, ECAR and IOSA) requirements, and own company requirements which concerns quality, safety and security.

Nesma airlines ground handling management system is documented in controlled company media (Station Operations Manual), Ch1 provides a comprehensive description of the scope, structure, and functionality of management system in the ground handling department and depicts lines of accountability throughout the organization.

As well as authorities, duties, responsibilities for the management and the non-management personnel throughout the ground handling department for ensuring safe and secure operations.

Ground handling department sets a process for periodic review of the management system for effectiveness in achieving desired Operational, Safety & Security outcomes , and verify that requirements are being applied, throughout the organization to ensure effective, safe, and secure operation.

Nesma Airlines Ground Handling department is monitoring all the functions which are contracted, to ensure ground handling safety, security and quality, through the following:

- Review Feedback of stations supervision report / Pilot report for each flight. For proper processing. To take necessary actions with service provider.
- Audits performed by Safety and Quality department for review of compliance of the service provider with the standards included in the ground handling contract.

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1.3 Infrastructure:

Ref: Corporate Manual 1.6

A physical infrastructure and work environment that satisfies management system and operational safety and security requirements is made available within Nesma Airlines, once the need is raised for additional facilities, Ground Handling manager is requesting from administrative manager to provide, after approval from accountable Executive.

The facilities include:

- Buildings, workspaces and associated utilities;
- Facilities for people in the organization;
- Support equipment, including tools, hardware and software (computers, printers, Scanners, copying machines, etc.);
- Support services, including transportation and communication (Buses, Microbuses, telephone lines, Arinc and internet facilities).
- Physical environment for the work place are properly set to positively enhance motivation, satisfaction and performance of personnel for the sake of maximize safe and secure operations.

A suitable work environment satisfies human and physical factors and considers:

- Safety rules and guidance, including the use of protective equipment;
- Workplace location(s);
- Workplace temperature, humidity, light, air flow;
- Cleanliness, noise or pollution.

Physical environment for the work place are properly set to positively enhance motivation, satisfaction and performance of personnel for the sake of maximize safe and secure operations.

Ground Handling Management office is located in the headquarter building Second Floor, in a well-furnished office, provided with all means of communication, air conditioning – Lighting, to enable supervision of all activities in – out of Egypt.

Nesma Airlines ground handling agents are responsible to provide suitable facilities to carry out all ground handling activities in different stations, these facilities are evaluated through monitoring, and audits performed by Safety and Quality department, Nesma Airlines may add additional facilities/equipment to support supervision applied on the subcontractor.

Due to the importance of CAI Airport operation, Nesma Airlines obtained an airport office at Terminal 1, Departure Hall, (2014) well-furnished and includes all communication facilities, and Lost and Found Store.

Nesma Airlines provides its supervision team with Computers, Internet connection, Phone.

During audits for service providers who provide services under ground handling scope, part of the checklists used to evaluate adequacy the (Facilities/workspace/equipment/supporting services).

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1.4 Use of Electronic system

Nesma Airlines is not using Electronic System for data of flights related to Ground Handling Operations.

An Electronic system data (if used) for the management and control of documentation is backed up by the IT department regularly every 24 hours and a continuous backup system is to be updated daily& shall be stored in a safe place away from the area in which the original computers are located.

- To ensure retrieval of archived documents, applicable hardware and/or software is retained

1.5 Control of Documents and Records

Refer to corporate manual Chapter 2 Documentation and records

- Current S.O.M is distributed according to the distribution list using distribution list form F300, and is accessible for any staff that will need to refer to it.
- The ground handling manager will deliver all Service Providers in all locations where ground handling operations are conducted PDF Copy either by direct sending or link for uploaded documents on cloud drive service from requires manuals to stations with his own control number and the receiving responsible will send confirmation email back that
 - The manual/amendments were received
 - The manual/amendments were replaced/inserted
 - Previous revision was disposed (Electronic and/or Hard Copy)
- Forms that are used in the conduct of Ground Handling support are stored and controlled into Nesma Airlines headquarter, available up on request from any station that is nearly out of stock by E-Mail to: Ground.Handling@Nesmaairlines.com
- Old versions/revisions from forms are being disposed upon issuance of a new form, Ground Handling Manager is responsible to ensure the current forms only are being used for Ground Handling Functions.
- Information for records available at each station are AVAILABLE AT Ch11 of this manual.

1.5.1 Nesma Airlines Operational, Safety Bulletin and Circulars:

- The bulletin and circulars from manager of department May be via an electronic method (department email)
- Manager of department responsibility to review the contents of each bulletins and/or circulars
- Any updating method either by adding, deleting and/or amending existing information shall be made by the director of department and under their responsibilities:

Note: Brief bulletin (About Program) on how to use the application is on line.

1.5.2 List of Manuals available in each Station

The following documents must be available at each service provider location performing Ground handling operations for Nesma Airlines operated flights and Part of the audit performed on ground handling service providers to check that each provider made available of the below list of documents in a usable & accessible format.

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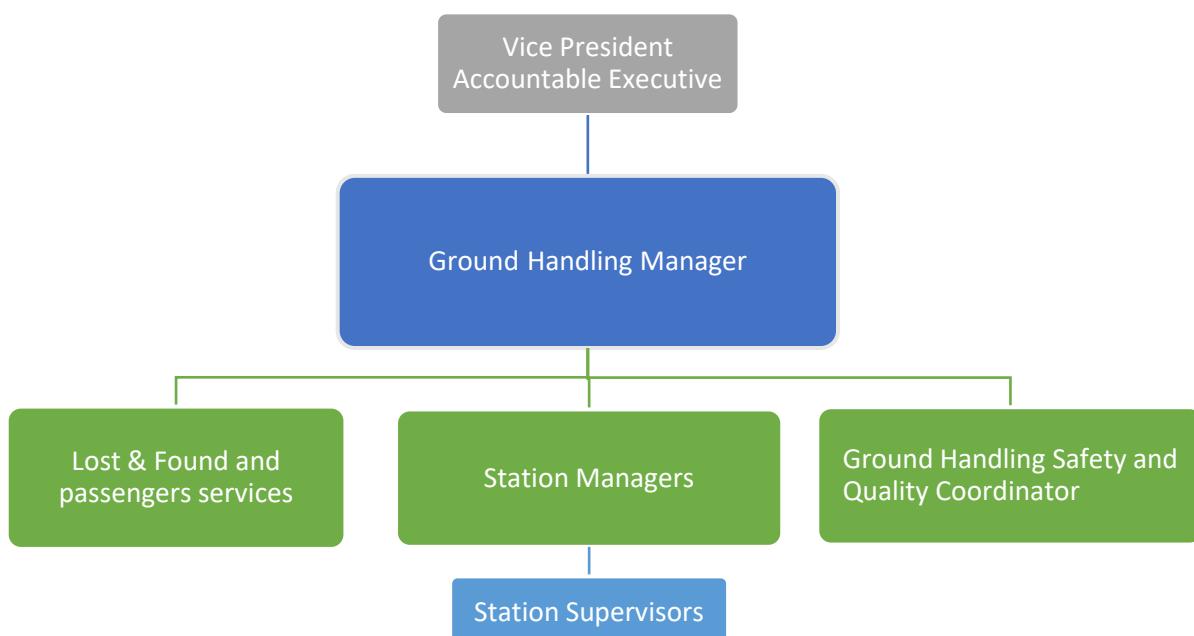
- Nesma Airlines Stations Operations Manual (Provided by Nesma Airlines)
- Nesma Airlines Emergency Response Plan (Provided by Nesma Airlines)
- Nesma Airlines Security Program (Provided by Nesma Airlines)
- Nesma Airlines Flight Operations Manual (Provided by Nesma Airlines)
- IATA Airport Handling Manual Current edition (Provided by service provider)
- IATA IGOM Current edition (Provided by service provider)
- IATA Dangerous Goods Regulations Current edition/ICAO DGR Technical Instructions. (Provided by service provider) including Passengers check-in and/or boarding area.
- Nesma Airlines Reading File (Contains all operational instructions or information that is not related to S.O.M amendments. (Provided by Nesma Airlines)
- Access to Nesma Airlines Contacts – Addresses (Provided by Nesma Airlines)

1.6 Communication

- Refer to corporate manual 1.4, Nesma Airlines has communication system that enables and ensures an effective exchange of operationally relevant information throughout the management system and areas where Ground Handling Operations are conducted;
- This effective communication system ensures an exchange of relevant operational information throughout all areas of the organization, to include senior managers, operational managers and front line personnel. To be totally effective, the communication system also includes external organizations that conduct outsourced operational functions.
- The distribution of Contacts and addresses through company server which contains all stations network contacts information that Nesma airlines have flights to, for communication between all Nesma Airlines departments and the ground handling operations subcontractors.
- Methods of communication will vary according to the size and scope of Nesma Airlines business.
- External communications include but are not limited to:
- Telephone lines, Faxes, Arinc, Reports, Pilot reports, outstation ground service reports, Letters, internet and web site (www.nesmaairlines.com) NESMA Airlines always tries to use any methods of communication which vary according to the size and scope of business. However, to be effective, any methods are as uncomplicated and easy to use as is possible, and facilitate the reporting of operational deficiencies, hazards or concerns by operational personnel.
- Emergency Response plan distributed to all areas where Ground Handling Operations are conducted provides also means of communication in cases of Emergency.
- (Hazard Report – Voluntary report) covered by Ch10, (Dangerous Goods Occurrence – Dangerous goods Un/Miss-Declared reporting) covered by Ch 8, provides also means of communication related to safety matters
- Data sent requires acknowledgment of receipt, is monitored until all concerned have confirmed receiving the information.
- Meetings also considered as means of official communication, Ground Handling Manager is making general meeting twice a year, to discuss with all personnel under ground handling management safety and security outcomes, and necessary improvements.

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1.7 Ground Handling Department Chart



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1.8 Ground Handling Management System Authorities and Responsibilities

1.8.1 Ground Handling Manager

Job Description:

He ensures that all Ground Handling activities are carried out in compliance terms and conditions of Nesma Airlines AOC, ECAA, Regulations and additional Nesma Airlines requirements are satisfied.

He is managing, monitoring the Ground Handling Operations scope with the following structure:

- Lost & Found and Passenger services,
- Stations Handling Supervision.

And He must ensure the following:

- Airport agreements and payments,
- The Ground Handling Agreements and payments,
- Fuel Suppliers are contracted and secured at the stations
- De/Anti-Icing agreement is established with potential airports that Nesma Airlines aircraft have the possibility to require de/anti-icing before departure and to ensure being done according to SAE recommendations.

Authority:

The Ground Handling Manager derives his authority from the accountable executive and reports to him, for the management and supervision of functions and activities within the scope of ground handling operations.

Responsibilities:

- Ground Handling Manager has responsibility to manage and supervise functions and activities within the scope of ground handling operations, accountable to accountable executive for ensuring the safety of ground handling operations.
- He has sole responsibility for making decisions and ensuring safety, security and risk management of the Ground Handling Operations scope and the only authority to make decisions regarding risk tolerability with respect to the safety and/or security of ground handling operations, in front of the accountable executive Initiation for corrective actions resulting from compliance monitoring of ground operations.
- Issuance for this manual SOM which is a part of OM, which contains, Work instructions for Ground handling personnel assigned to operational duties in connection with the preparation and/or conduct of a flight, and to ensure that current edition is available in a usable format at each location where ground handling operations is conducted.
- Review and revision to maintain the currency of information contained in station operations manual.
 - 1. ECAR Regulations Change 2. New Instructions / improved Procedures
 - 3. IOSA Standards Manual Revisions 4. Audit Findings requires Information changes.
 - 5. Change of Management

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- The coordination of activities required to direct and control the Ground Handling section and the interfacing with internal or external customers and suppliers.
- Definition and coordinates the required processes and determines the related responsibilities, procedures and resources.
- Ensure existence of physical infrastructure that satisfies the duties of Ground Handling Operations.
- The coordination of activities required to direct and control the ground handling stations and the interfacing with internal and external customers and suppliers.
- Ensuring that all ground handling activities of ground handling stations are carried out to an approved standard such that the terms and conditions of Nesma Airlines AOC and additional Nesma Airlines requirements are satisfied through existing signed contract, and SLA.
- Control and supervision the process realization and initiates any corrective action resulting from compliance monitoring of the contracted party.
- The contracting in accordance with instructions and guidelines provided by accountable executive, Safety and quality director, Operations Director, Security Manager, Financial Manager.
- Analyzing data of contractual negotiations concerning ramp, passenger, Baggage handling and supervision under consideration of operational and economic issues.
- Preparation of Standard Service Level Agreements (SSLA).
- Monitoring terms of contracts.
- Follow-up of negotiation process and correspondence with possible suppliers and contracted partners.
- Ensure that fuel delivery will be according to the published standards of IATA Fuel quality pool.

During his absence, he delegates his duties to CAI Station Manager.

Note: Delegation process according to corporate manual 1.2.3

1.8.2 Station Manager

Job Description

In some stations appeared the need of having a Nesma Airlines supervision that is part of monitoring for quality assurance. Through the station manager.

He is ensuring that handling agent is strictly adhering to Nesma Airlines standards published into S.O.M, Published instructions, on time instructions. But he is not allowed to take over the contracted agent duties

Responsibilities

- Responsible about reporting any safety or security occurrence resulting from ground handling activities.
- Pre-flights duties in cooperation with operations staff,
- Keeping close contact to all departments involved in handling of Nesma Airlines operated flights,

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- Ensure Coordination between airport ground services, technicians, catering, fueling cleaning, other contracted partners involved, in order to ensure smooth, quick, safe, and secure turn-around,
- Ensure Coordination of all services provided at airplane with operations staff and crew,
- Keeping close contact to operations and Ground Handling Manager specially in case of irregularities,
- Check of suitable cabin appearance,
- Receipt of incoming papers for further action,
- Retention of flight documents and data for documentation and statistical purposes;
- Check and sign trip files done by his station Supervisors

During Station Manager Absence, he delegates his duties to Station Supervisor of his station with the acknowledgment of Ground Handling Manager.

1.8.2.1 Station Supervisor

Job Description

- Ensure Coordination of passenger boarding between Handling agent and cabin crew,
- He is the Contact person for special requests of crew, gate etc.,
- Delivery of all outgoing documents needed to flight crew and cabin crew,
- Receipt of all incoming documents and transfer to local operations for further action,
- Issue of trip file,
- Handling of SITA messages before and after flight;

Responsibilities

- Responsible about reporting any safety or security occurrence resulting from ground handling activities.

And find below a detailed pre-timing distribution of activities he must confirm for each flight he is assigned to it.

24 Hours before STD DEP: Check PNL, and request it from Commercial department if negative, check with financial department and/or ground handling management for payments confirmation at destination for flight on focus for (Airport – Fuel – Handling agent – Catering if applicable)

06 Hours before STD DEP: Confirm Catering Order done by Catering Department.

210 min before STD DEP: Receive flight documents (Notam, weather, wind charts, OFP, etc.)
And check Operating crew, Pick up times, and confirm Catering order again.

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- 150 min before STD DEP: Ensure Check-in open and necessary materials are ready.
 Refresh Check-in agent about seating policies, and if there is any special notices on the flight.
 Revise with Load control loading and offloading plan and specials.
 Re-Confirm with catering supplier and advice ETA.
 Keep fuel ready and updated with fuel quantity needed and aircraft arrival time
- 070 min before STD DEP: Meet Operating Crew
 Liaise with immigrations for Crew passports, Immigrations trip file,
 (Never leave passports out of sight - count on receiving, and count on delivering back).
- 060 min before STD DEP: When requested by crew re-request from Handling agent:
 GPU
 Special loading material (lashing etc.)
 Also provide Customs check if necessary.
- 055min before STD DEP: Accompany operating crew, and provide keeping money if applicable.
 Brief crew of PAX amount and any irregularity
 Request manpower loading / offloading
 Random Check Bag Tags destination
 Ensure handling agent issued loading instructions
- 050 min before STD DEP: Co-Ordinate between fuel truck and engineers for provide Fuel according minimum fuel (OFP) until Captain Confirmation is available.
 Request Catering Truck and brief to crew.
 Request cleaning.
 Request toilet service
 Request water service
 Supervise on - offload according LIR,

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Supervise special loading instructions (lashing etc.)

- 045 min before STD DEP: Accompany arriving Crew, arrival crew stamp.
 (Never leave passports out of sight - count on receiving, and count on delivering back), receive flight documents (GD.in) (PNL in)
- 040 min before STD DEP: Ensure fueling according block fuel confirmed with P.I.C
 Info to Engineer
 Ensure fulfillment of safety measures during fueling
 If necessary fire brigade / fueling with passengers on board
- 030 min before STD DEP: Cross check after Fueling, Cleaning, Catering and estimate completeness time for all, advice P.I.C and C.D.C, ask for boarding confirmation.
- 025 min before STD DEP: boarding (latest time!)
 Cross Check actual C/I PAX; Compare with catering ordered
- 015 min before STD DEP: Cross check actual on load / operations
 Ensure Crew receive actual L/S according to Nesma Policy
 If not used then ask to remove additional stairs, GPU etc.
 Cross check fuel figures and used passengers weights/ L/S - actual
 Ensure L/S copy to flight deck / info to purser act. PAX fig.
- 010 min before STD DEP: If necessary request push back / equipment for walk out assistance.
- 005 min before STD DEP: Ensure handling agent repositioning all used equipment
 Safety outside check
 Collect L/S / signed LIR

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Once departure took place,

Inform OPS with departure,

Send related messages, MVT/LDM/PSM/TPM and if necessary SOM/PTM

Sign and close opened work order, charge of handling agent etc, and revise according to activities occurred, obtain a copy for filing.

Complete Trip file components

LS in-out

PNL in-out

LIR out

GD in-out

Technical log

Send irregularity report if necessary to his station manager who in his turn will transfer it to ground handling manager for a proper action.

During Station Officer Absence, he delegates his duties to another station officer on duty with the acknowledgment of the station manager

1.8.3 Lost & Found and Passengers Services Responsible

Job Description

- Establishing Nesma Airlines own Lost & Found policies, procedures and official forms.
- Defining and coordinating the required processes and determines the related responsibilities, procedures, and resources.

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- Ensuring that the entire luggage accompanied with the passengers flying with Nesma Airlines to be delivered and intact.

Responsibilities

The Lost & Found and passenger services responsible is responsible in front of the Ground Handling Manager and reports to him the following:

- Responsible about reporting any safety or security occurrence resulting from ground handling activities.
- Solving all mishandling baggage's issues and problems beginning with the damages and including all lost misrouted and on-hand baggage.
- Follow up that compensations and deliveries of lost baggage to the passengers are made according to Nesma Airlines policies and according to IATA/ICAO/ECAR rules, national and international regulations, and handling procedures as well as to instructions of Nesma Airlines, keeping tour operators aware of the situation.
- Follow up with all the Stations to ensure that all Nesma Airlines procedures and policies are followed exactly and make all necessary procedures to upgrade the performance and the quality to the stranded measures and according to the internal and the international regulations.
- Publish the services that can be provided by Nesma Airlines to passengers according to the technical availability of those services and the costs related to them.
- Follow up passenger special requests and comments, complains, initiate corrective actions for the deviation in any matter related to passengers discomfort.
- Issue for the excess baggage rates and MCO's, also their settlements and follow up with all stations concerning this matter.
- Keeping Nesma Airlines commercial department aware of all services made to passengers or baggage irregularity, to inform the tour operators.
- Ensure that all passengers' claims are passing through him for proper procedures that ensure regulations implementation.
- Supply all handling agents with means of communication and to advice Nesma Airlines policies and guarantee their achievements.

During his absence, he delegates his duties to a Station Supervisor But the responsibility rests with him.

1.8.4 Ground Handling Safety & quality Coordinator

Job Description

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Chapter 02 Qualifications and Training

2.1 Qualification and training of Ground Handling Staff

Operational positions within the scope of ground handling operations must be filled by personnel on the basis of knowledge, skills, training and experience appropriate for the position. Each staff member must be trained, educated and have a thorough understanding of his responsibilities within the organization.

In performance of his duties each staff member shall contribute to an optimum operation of the flights planned in order to enable

- Safety and security.
- Economy and efficiency.
- Regularity and punctuality.

All personnel involved in operational duties related with Ground handling function of Nesma Airlines including external service provider personnel must complete:

- Initial training prior to being assigned to perform such operational duties; according to the function they are performing in order to provide safe and punctual services according to IATA/ICAO/ECAR rules, national and international regulations, and handling procedures as well as to Nesma Airlines instructions.
- Recurrent training on a frequency in accordance with requirements of the regulatory authority but not less than once during every 36-month period, except for recurrent training in dangerous goods limited to 24 months and according to table 1.5.A on IATA DGR Book Minimum Requirements for Training Curricula according to their job they will perform.
- Re-qualification training applicable to personnel that become unqualified for any reason, prior to being reassigned to perform operational duties.

Ground handling staff has to be trained and qualified prior to be assigned without supervision to perform any of their duties.

And for what concerns the outsourced functions, Safety and Quality department is scheduling all Handling agents for Audits, and part of the audit is to acquire training files and training syllabus their staff is being trained according training syllabus in (S.O.M Chapter 2).

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2.2 Employment Process

2.2.1 Employment Policy

General

Ground Handling Department coordinates with Administration department for its needs and requirements for new employees. Ground Handling Manager is requesting approval from the vice president and provides according to the post requirements all standards and qualifications of candidates.

Ground Handling Manager is interviewing relevant applicants after Receiving and reviewing their personal C.V ,all necessary documents , certificates and written test results (if applicable).

Administration Department will review:

- The above
- Medical check if required for all candidates including Drug and Alcohol test (if applicable) .

After the concerned department assign successful applicant for the required position he/she will fill the employment application which be signed by applicant and the department manager, and then presented to the Vice president (CEO) for approval.

According to the vice president approval the administration department will prepare the contract to be signed by the new employee and the vice president (CEO)

2.2.2 Qualifications Requirements (Administrative Requirements)

All candidates prior to the date of employment must meet the following qualifications and requirements:

- a. Educational certificates.
- b. Original birth certificate.
- c. Approved medical check if applicable.
- d. No criminal record and a certificate of good conduct.
- e. Release from national service or exemption.
- f. Release from previous employer.
- g. 6 personal photos
- h. Copy of national I.D./Passport

Employment process ensures candidates, prior to being employed have to satisfy the prerequisites qualification as indicated in the Organization Manual.

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2.2.3 Qualifications Requirements (Specific for Ground Handling)

Ground Handling Manager

- 6 Years of Experience in Ground Handling,
- 3 Years of Experience in managerial levels,
- Studied law or commerce collage,
- Perfect command of English language written and spoken,
- Perfect computer skills.

Station Manager

- Diploma / University degree.
- 4 Years of Experience in Ground Handling,
- 1 Year of Experience in managerial or supervisory levels,
- Perfect command of English language written and spoken,
- Perfect computer skills.

Station Supervisor

- Diploma / University degree.
- One Year experience in Ramp and passengers Handling
- Good command of English Language.
- Good computer skills.

Lost & Found and passenger services

- 3 Years of Experience in Passengers and baggage Handling,
- Familiar with world tracer.
- Perfect command of English language written and spoken,
- Perfect command of computer software.

Ground Handling Quality & Safety Coordinator

- Diploma / University degree.

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- 4 Years of Experience in Ground Handling,
- 1 Year in Auditing ,
- 1 Year in experience of implementing IATA and ICAO Programs and procedures.
- Very good command of English language written and spoken,
- Very good computer skills.

- For contracted ground handling services providers, it is included into the auditor checklist, to check the minimum qualification for personnel in the station against their positions, and it becomes a finding if the qualification is less than required by service provider.

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2.3 Training Syllabus and Records Monitoring

The operations personnel engaged in the ground handling activities are divided in the following categories to identify necessary training syllabus for each:

1. Nesma Airlines staff, Station Managers – Station Supervisors
2. Airside Driving (Subcontracted)
3. Load control (Subcontracted);
4. Passenger Handling (Subcontracted);
5. Baggage handling (Subcontracted);
6. Aircraft Handling and Loading (Subcontracted);
7. Passenger Boarding Bridge (Subcontracted);
8. Aircraft Loading Supervision (Subcontracted);
9. Aircraft Ground Movement (Subcontracted);
10. Fueling Operations (Subcontracted);
11. De/Anti-Icing Operations (Subcontracted);
12. Safety Training Specifications
13. SMS Training
14. Security Training Specifications
15. Dangerous Goods Training

For category number (1), Ground Handling Manager is making annual training plan each year according to training needs approved by the Accountable executive and according to the syllabus defined into 2.3.1, Each staff qualification and training is recorded into his file at the headquarter Ground Handling office, by the ground handling manager, with an additional copy at his station, this file shows his qualifications, previous experiences and the training courses he had or scheduled on, also the time of the next refreshing training he is scheduled on, to ensure updated, secured, and easy retrieval for staff documentation, these files shall remain as long as the staff is employed and on duty.

For the rest of categories, part of auditing checklist is to check training records of subcontractors, to ensure same requirements of retention, update, easy retrieval, system of alerting once training expired.

Additionally, the training syllabus to remain relevant and provide the knowledge necessary to perform duties, execute procedures and operate equipment associated with specific ground handling functions and responsibilities to include:

- Familiarization training on general provisions and regulations
- In-depth training on requirements, including policies procedures and operating practices
- Training in human factors principles
- Safety training on associated operational hazards.

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2.3.1 Training Syllabus for Nesma Airlines Handling Supervision Staff

- As the fact that all Nesma Airlines functions are outsourced which in conjunction with ground handling, still Nesma Airlines has to Monitor the quality, security and safety for flights conducted there for Nesma Airlines station supervisors even if they do not perform duties in functions within the scope of ground handling operations which is:

- Airside Driving
- Load control
- Passenger Handling
- Baggage handling
- Aircraft Handling and Loading
- Passenger Boarding Bridge
- Aircraft Loading Supervision
- Aircraft Ground Movement
- Fueling Operations
- De/Anti-Icing Operations

Still the need to have initial trainings and recurrent as follows:

▪ **Basic Ground Handling Supervision**

Initial and recurrent every 3 years for the following subjects:

- Aviation industry, Organizations, and Regulations
 - Company Organization, Company Background and History,
 - Departments within the company and their responsibilities,
 - ECAA departments and ECAR Regulations,
 - Ground Handling department,
 - Duties and responsibilities,
 - Airport authorities,
- * Training is provided by Nesma Airlines
- Manuals of Nesma Airlines,
 - Passenger services,
 - Aircraft familiarization,
 - Ramp handling,
 - Load sheet,
 - Aircraft loading / unloading.
 - General forms, and specific Ground handling forms

▪ **Dangerous goods regulations**

Initial and recurrent every 2 years for the following subjects:

- General familiarization
 - Limitations
 - Labeling and marking
- *Training is provided by approved ECAA and IATA Course.
- Recognition of Undeclared DG
 - Provisions for passengers and crew
 - Emergency procedures

▪ **Airline security for ground services**

Initial and recurrent every 3 years for the following subjects:

- Introduction
 - Global civil aviation structure
 - Threats & Risks to civil aviation
 - Development of security measures
- Check-in security procedures
 - Hold baggage security and passenger baggage reconciliation
 - Recognition of prohibited items and devices
 - Protection of aircraft on ground

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- Aviation security emergencies
- Aircraft searches and security checks
- Security awareness Screening point and boarding gate
- Bomb threats aircraft on ground
- security procedures

*Training is provided by approved ECAA Course.

▪ Human Factor according to AHM 1110 Item 11

Initial and recurrent every 3 years for the following subjects:

- • Safety philosophy;
- • Safety regulations;
- • Hazards;
- • Human factors;
- • Airside markings and signage;
- • Emergency situations;
- • FOD prevention;
- • Personal protection;
- • Accidents, incidents, near misses;
- • Airside safety supervision.

-

*Training is provided by approved ECAA Course.

▪ Air Side Safety

Initial and recurrent every 3 years for the following subjects:

- The airport environment
 - The airport
 - Communication
 - Hand signals
 - Aircraft ground support equipment
- Security and Safety
 - Security
 - Aircraft danger zones
 - Health and safety
 - Severe weather conditions
 - Traffic rules at the ramp
 - Accident and incident reporting
- Fire and first aid
 - Fire prevention

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- Fire protection and fire action
- First aid

▪ **SMS Refer to SMS Manual 4.1**

Initial and recurrent every 3 years for the subjects as mentioned in SMM 4.1

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▪ **Passenger Handling for Station Manager**

Initial and recurrent every 3 years for the following subjects:

Training for personnel with duties and/or responsibilities in operational passenger handling functions typically addresses the following subject areas, as applicable operational function(s):

- i. Passenger check-in policies and procedures;
- ii. Baggage check-in policies and procedures;
- iii. Manual check-in procedures;
- iv. Cabin seating considerations, to include exit row, special category passengers;
- v. Passenger boarding policies and procedures;
- vi. Cabin access door operation, if applicable;
- vii. Boarding bridge operation, if applicable;
- viii. Dangerous goods regulations, considerations and procedures;
- ix. Security regulations, considerations and procedures;
- x. Load control consequences, coordination and procedures;
- xi. Handling and boarding of weapons and authorized persons carrying weapons;
- xii. Passengers requiring special handling;
- xiii. Communication procedures (customer airlines, load control, authorities, others);
- xiv. Data protection and security;
- xv. Document protection and security;
- xvi. Abnormal and emergency procedures (fire, dangerous goods, security, other);
- xvii. Health and safety;
- xviii. Emergency response procedures.

▪ **Baggage Handling for Station Manager**

Initial and recurrent every 3 years for the following subjects:

Training for personnel with duties and/or responsibilities in operational baggage handling functions typically addresses the following subject areas, as applicable operational function(s):

- i. Baggage handling procedures (identification, sorting, loading in ULDs);
- ii. Manual baggage handling procedures;
- iii. ULDs (designation codes, inspecting, loading, tagging, removal from service);
- iv. Dangerous goods (regulations, considerations, procedures);
- v. Security (regulations, considerations, procedures);
- vi. Load control (consequences, coordination, procedures);
- vii. Communication procedures (customer airlines, load control, authorities, others);
- viii. Data protection and security;
- ix. Document protection and security;
- x. Abnormal and emergency procedures (fire, dangerous goods, security, other);
- xi. Health and safety;
- xii. Emergency response procedures

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2.3.2 Training required for service provider staff:

2.3.2.1 *Training by Syllabus:*

Dangerous Goods Training Specifications

Reference to tables 1.5.A-B IATA DGR Book

Nesma Airlines does not carry dangerous goods as cargo, mail or stores still must ensure that personnel must receive Initial and recurrent every 2 years for the following in the requirements commensurate with their responsibilities.

The subject matter to which their various categories of personnel must be familiar is indicated in below table:

Aspects of transport of dangerous goods by air with which they should be familiar, as a minimum	Operators and ground handling agents		Operators Non-Carry and ground handling agents	
	9	10	14	15
General philosophy	X	X	X	X
Limitations	X	X	X	X
Labelling and marking	X	X	X	X
Recognition of Undeclared Dangerous Goods	X	X	X	X
Provisions for passengers and crew	X	X	X	X
Emergency procedures	X	X	X	X

KEY

9. Passenger handling staff

10. Flight crew members and load planners

14. Operator's and ground handling agent's staff involved in the handling, storage and loading of baggage

15. Passenger handling staff (No-Carry)

Above categories are acceptable for Nesma Airlines since Nesma Airlines is (No Carry) Operator.

personnel shall complete dangerous goods training, to include initial training and recurrent training within 24 months of previous training in dangerous goods. Such training shall be completed by personnel that perform operational duties in the following functions within the scope of ground handling operations:

- Passenger handling;
- Baggage handling;
- Aircraft loading;
- Load control.

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Safety Management System Training Specifications

All Categories of personnel providing ground handling operational functions from external service providers Must Receive Initial And Recurrent every 3 years as a minimum SMS Training reference to SMS Manual 4.1, , Nesma Airlines ensures personnel of external service providers are trained and competent to perform SMS duties. The scope of such training should be appropriate to individual involvement in the Operator's SMS.

Security Training Specifications

Refer to security program chapter 13

All Categories Security training is required for staff with duties in scope of ground handling Initial and recurrent every 3 years as a minimum for the following subjects:

- a. AVSEC Foundations
- b. Security awareness
- c. Check – in Security
- d. Hold baggage security and PAX baggage reconciliation
- e. Recognition of prohibited items and devices
- f. Protection of aircraft on ground
- g. Aircraft security searches
- h. Bomb threat to aircraft on ground
- i. Screening regulations and pertinent legislation;
- j. Identification of firearms, weapons, incendiary or explosive devices, other dangerous devices, or parts thereof;
- k. Operation and testing of security equipment (metal detectors, X-ray units, explosives detection devices);
- l. Manual search of the person;
- m. Manual search of baggage, cargo, mail and stores; and
- n. Emergency procedures.
- o. Terrorism

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2.3.2.2 Training requirements for the Function performed:

Initial and recurrent training completed by applicable ground handling personnel addresses the following areas of operations, as applicable to ground handling duties or function(s) performed:

Passenger Handling Services

- Aviation Basics;
- Arrivals/Departures;
- Baggage Services;
- Check-in;
- Passenger Assistance and PRM (passengers with reduced mobility);
- Post-Flight Requirements;
- Special Category Passengers;
- Transfer of Load Information;
- Transfer, Transit and Connection;
- Boarding Bridge Operations;
- Aircraft Cabin Access Doors.

Ramp Services

- Basic Ramp;
- Airside Driving;
- Basic Hand Signals;
- Aircraft Marshalling;
- Boarding Bridge Operations;
- Aircraft Cargo Access Doors;
- Aircraft Cabin Access Doors;
- Aircraft Loading;
- Aircraft Arrival;
- Aircraft Departure;
- Aircraft Pushback;
- Aircraft Towing;
- GSE Operations;
- Ground-to-Flight Deck Headset Communication and Engine Start;
- Ramp Baggage Handling;
- Aircraft Loading Supervision;
- Airside Safety Supervision.

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Load Control

- Aviation Basics;
- Aircraft Weight & Balance Principles;
- Load Planning and Load Sheet;
- Documentation and Messaging.

Aircraft Fueling

- Safe operation of equipment;
- Emergency procedures;
- Fuel spillage avoidance response;
- Aircraft fueling and defueling procedures;
- Aircraft-specific training.

Aircraft Ground De-/Anti Icing

- Common standard, regulation and recommendation including local rule and restriction;
- Hazard of snow, ice and frost;
- Safe operation of equipment and de/anti-icing operation including aircraft critical area;
- Fluid characteristics and application, and limitation of holdover time;
- Deicing/anti-icing codes, communication and coordination

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2.4 Quality of Training

2.4.1 Evaluation programs

All groups have to get initial training upon employment; recurrent training will be carried out at intervals of 3-2 years according to the course type by lecture training and handouts covering all sectors of the initial training. Subject areas specified above are typical for training of personnel in each associated ground handling function. Personnel assigned to perform more than one ground handling function as defined by the service provider, could have different ground handling roles and responsibilities that would require training in a combination of the functions specified.

After initial and recurrent training there will be testing or evaluation by written, oral or practical means, passing grade shall be 80% minimum, which shall revalidate his qualification, the examination shall demonstrate adequate knowledge, and competency and proficiency in executing his duties and or operate equipment, the exam shall be in writing.

Mass and balance staff additionally has to prepare manual Load & Trim sheets twice per month for training purposes or according to handling partner regulations.

Note:

On-the-job Training is accepted provided that it is under the supervision of a well trained staff. And that the proficiency of the trainee is later evaluated through a written exam that covers all syllabus items, and in this case trainee must pass this exam with at least 80%.

2.4.2 Staff Evaluation

Ground Handling Manager is carrying out evaluation for staff annually based on Job Knowledge, Productivity, quality of work, adaptability, communication skills, Cooperation & Interpersonal Skills, Attendance & Punctually. Form used 613

2.4.3 Checking Programs Process

Ground Handling Manager shall review and update training syllabus at least once a year to remain relevant and provide the knowledge necessary to perform duties, execute procedures.

- During the initiation of the training plan, it is confirmed along with it the training syllabus which will be given for these courses.
- Ground Handling Manager is checking any new requirements from ECAR/IOSA, to ensure compliance of the syllabus
- Ground Handling Manager documents syllabus approval in a file retained in his office
Ground Handling Quality and safety Manager is briefing the instructors before each course to ensure the approved syllabus is being used.

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Chapter 03 Passengers Handling

3.1 Passenger handling procedures at airport

Handling agents will ensure that Nesma Airlines flights are correctly indicated on flight information board.

As a general rule the check-in counters assigned for Nesma Airlines flights, have to display the following information in the best presentable fashion, using proper materials for the purpose:

- Destination,
- Flight number,
- Scheduled time of departure,
- Nesma Airlines logo.
- Prohibited items sign (Material for this Sign shall be manufactured / provided by handling agent or carrier if the handling is unable). Passengers must be notified with forbidden DGR from transport before check-in at the point of boarding pass issuance, or before boarding.

The Check-in counters are to be opened for check-in Three hours prior STD/ETD.

The check-in for flights must be closed not later than 45 Min prior STD can be extended up to 30 Min by approval from airport authorities.

In case of delayed reporting of some PAX to check-in desks, due to city traffic or if tour operator representative requires delaying the departure of the flight, information MUST be immediately sent to: Operations Control Center

OCC@Nesmaairlines.com

3.1.1 Passenger Pre-Flight Preparation

Prepare check-in for flights in accordance with Nesma Airlines policy prior to the opening of web or airport check-in, and verify all necessary data has been transferred into the check-in system correctly.

- a. Review the booking status.
- b. For code share flights with an active blocked space agreement, check the allotment to ensure the block of seats, as agreed, is guaranteed to the partner.
- c. Review the curtain version, if applicable.
- d. Confirm the Passenger Name List (PNL) and Additions and Deletions List (ADL) were properly transmitted and match the booking status.
- e. Block seats for security officers, crew, weight and balance, and if seats are unserviceable.
- f. Confirm the seating plan is set according to the actual aircraft type and version.
- g. Review the flight remarks, if applicable.
- h. Record the passenger status on Passenger Name Record (PNR) if applicable.
- i. Review the boarding time, departure time, and gate. Brief staff about the reason for any delays.
- j. Apply payload restrictions, if any.

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- k. Check the passenger list for special passengers (e.g. Wheelchair assistance (WCH), Unaccompanied Minors (UM), etc.) and pre-assign as per Nesma Airlines policy and according to the aircraft type.
- l. If not pre-reserved, prepare seating for families traveling with infants or children, as per operating airline policy. Check total infants booked and order additional life vests, if needed.
- m. Where free/open seating is applied, inform the crew and passengers and ensure special category passengers have appropriate seats.
- n. Ensure flight status is open for web check-in, if applicable.
- o. Check-in is opened once the pre-flight preparation is complete.

3.2 Passenger Check-In Procedures:

3.2.1 General

It is at the check-in that the passenger often makes the first-to-face contact with the airline, and consequently it is important to ensure that his / her initial impression is a good one.

Prior Opening the check-in counters:

- Start and test equipment.
- Ensure scales are functioning and calibrated.
- Stock boarding card and bag tag printers as per Nesma Airlines policies.
- Ensure adequate stock of any other tags required by Nesma Airlines.
- Display signage required by Nesma Airlines, both electronic and manual versions.
- Ensure Dangerous goods notifications are prominently displayed at the at check in area as well as ticket office.
- Proper Check-in queues, stanchions, carpets, baggage sizers.



“SMILE” and maintain eye contact with the passenger.

- Each desk, and the check-in area in general must be kept clean and tidy.
- Nesma Airlines representative (in uniform) at applicable stations should always be present at the check-in.
- Check-in staff should be properly briefed in order to anticipate. All information regarding special passengers, overbooking, and disruptions should be known before check-in commences.
- Address the passenger by name whenever possible.
- Always inform passenger about:
 - Check-in formalities
 - Destination of the baggage
 - Boarding gate and boarding time
 - Immigration formalities
 - Delay (If Known)
- Provide special services where applicable (Special Assistance).
- Always wish the passenger a pleasant flight with Nesma Airlines.

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“SMILE”

- To prevent fraudulent use, no boarding passes or baggage labels should be left unattended.

STAFF MUST BE FRIENDLY, COURTEOUS and PROFESSIONAL SERVICE MUST BE CONSISTENT, QUICK, and EFFICIENT.

3.2.1.1 Check in Deadlines

The Check-in counters are to be opened for check-in Three hours prior STD/ETD.

The check-in for flights must be closed not later than 45 Min prior STD can be extended up to 30 Min by approval from airport authorities.

3.2.1.2 Operating Carrier, Marketing Carrier and Wet Lease

Advise the passenger of Nesma Airlines before check in, in case wet leased.

3.2.2 Passengers Identification:

Air Crew and Ground staff shall take all reasonable measures to ensure that no person secretes himself or secretes cargo on board an aircraft. To comply with this safety requirement crew members and technicians according to respective appropriate Manual and/or Booklets must carry out specific actions. Round personnel supervising and/or handling Nesma Airlines flights are also requested:

To exercise maximum attention when surveying the ground operations; and to establish procedures in accordance to local regulations to prevent a person secreting himself/herself or objects on board. The use of a seal can reduce the inspection if the aircraft has been left unattended in an area guarded by Airport Authority.

Mandatory to cross check passenger with his ticket – boarding pass against his passport, or other form of official photo identification.

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3.2.3 Check of Baggage

1) security Questioning, passengers shall be asked 05 questions:

- Are these your bags?
- Have you packed your bags yourself?
- Did you leave your baggage not attended since you have packed them?
- Did anyone interfere with your baggage since you have packed them?
- Do you carry any item that belongs to someone else?

2) the attention of passenger shall be drawn to Dangerous goods Sign placed on Check-in Desk provided by the handling and / or Nesma Airlines in addition to any kind of Sign regarding banned Devices Samsung Note 7 , Mac book Pros , etc. (please refer S.O.M Chapter 8) and to IGOM 2.5.7 , and confirm with the passenger his understanding and that he doesn't carry any of the listed items, this sign shall contain most common DG articles as the fact that some passengers carry dangerous goods without knowing that, they must read it while check-in process is taking place Warning on Passenger ticket or on the check-in counter must include the items below:

Dangerous articles in baggage

For safety reasons, dangerous articles such as those listed below, must not be carried in passengers' baggage.

Compressed gases – (Deeply refrigerated, flammable, non-flammable and poisonous) such as butane, oxygen, liquid nitrogen, aqualung cylinders

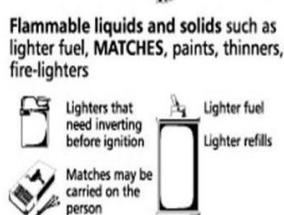
Compressed gas cylinders



Corrosives such as acids, alkalis, mercury and wet cell batteries



Apparatus containing mercury



Radioactive materials

Brief-cases and attaché cases with installed alarm devices

Oxidising materials such as bleaching powder, peroxides

Poisons and infectious substances such as insecticides, weed-killers and live virus materials

Other dangerous articles such as magnetised material, offensive or irritating materials

Medicines and toiletries in limited quantities which are necessary or appropriate for the passenger during the journey, such as hairsprays, perfumes and medicines containing alcohol may be carried. Many of these listed articles can be carried as air cargo provided they are packed in accordance with cargo regulations.

Further information is available on request.



Hand luggage liquids

As part of the hand luggage, passengers are only allowed to take liquids in individual containers with a maximum volume of 100ml and these must all be able to fit "comfortably" into a transparent plastic bag that is not larger than 18 by 20 centimetres, known as a one-litre bag."



Such information can be delivered to passengers also by:

- Passenger Ticket,
- Tour operator flyers,
- Visual or Audio airport information at:
 - Aircraft boarding areas,
 - In baggage claim areas.

Nesma Airlines ensures that contracted handling agents comply with the up line standard procedures by the scheduled audits performed by Safety and Quality department.

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During boarding in case cabin baggage cannot be accommodated in the passenger cabin, the subject baggage must be removed from cabin and loaded properly in the cargo after alerting the passenger again if the bag had dangerous goods item that was allowed in the cabin and prohibited from loading in cargo holds for example (Spare Lithium battery).

In case Un/Miss-Declared dangerous goods, or dangerous goods incident, procedures mentioned in (S.O.M Chapter 8) shall be followed accordingly.

3.2.4 Recommended Practice In Check-In For Nesma Airlines:

Greet the passenger and establish his / her name.



"SMILE"

- Address the passenger by name (use title if you can e.g. Dr., Mr., etc...) and confirm the final destination.
- Confirm the number of passengers traveling together.
- Ask the passenger to produce all the bags and make sure there is a name and address label on each piece. Remove old baggage tags. Check the condition for any damage. Make sure that no dangerous / restricted articles are packed.
- Ensure that the passenger is told where to claim his / her baggage (otherwise the baggage could be lost or left behind).
- Establish the pieces / size weight of the hand baggage and look for pieces that may be hidden by the passenger. If decided that additional removed hand baggage has to be checked-in, ask the passenger to remove valuables, documents, money and check this baggage with the other checked pieces. Charge excess accordingly. Attach (date stamped) hand baggage label to the approved cabin baggage.
- Ask the passenger for seat preference.
- Give the passport, ticket, and boarding pass to the passenger.
- Using the passenger's name, confirm the number of baggage pieces and the destination to which they have been tagged, drawing attention to the baggage claim portions attached to the ticket.
- If delay is known, then the passenger must already be advised at time of check-in, if necessary meal vouchers could already be given at the counter.
- Point out on the boarding pass the gate number, boarding time, and seating.
- Finally direct the passenger through further departure control points, wish him / her a pleasant flight with NESMA AIRLINES.
- Assess each passenger in terms of security risk by looking for anomalies and observing certain emotional and/or body language, be on the lookout for overall fitness to fly , including potentially communicable diseases, medical conditions , intoxications , check in agent shall immediately update Nesma Airlines Station Supervisor who shall contact local authority for assistance,



"SMILE"

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3.2.5 Passengers Documents Check and verification:

3.2.5.1 General

- a) Check the validity of the ticket regarding to the itinerary, flight, date, carrier, reservation status, class, and restrictions.
- b) Check the ticket for the final destination and confirm this with the passenger.
- c) Verify the passenger's identity against the travel documents presented, including review of the date of birth, expiry status of document, a visual comparison of the photo to the passenger, and ensure the name on the travel document matches the booked name.
- d) Verify the travel document is valid and good for all persons travelling, as not all States allow family members to be registered in a single passport.
- e) Report any document that shows signs of tampering.
- f) Locate the passenger in the DCS and review any special remarks.
- g) Check travel documents for destination and/or transit requirements.
- h) Review visa or entry conditions/limitations, if required.
- i) Collect advanced Passenger Information (API), if required.
- j) When you identify an issue with a document, notify your supervisor who will contact appropriate authority for assistance.

➤ Nesma Airlines shall take necessary precautions at the point of embarkation to ensure that persons are in possession of the documents prescribed by the States of transit and destination for control purposes according to ICAO - ANNEX 9 - Chapter 03.

➤ check-in agent shall check

- Valid Visa applicable to country regulations.
- What document required for the destination or enroot station (e.g. Transit Visa).
- Photo of the bearer matches the customer.
- Valid signature (if required by destination).
- The issuing date.
- The expiry date required (check TIMATIC).
- Date of Birth and Gender relevant to customer.

3.2.5.2 Advanced Passenger Information

Many governments require airlines to submit Advanced Passenger Information (API) at specified times for disembarking passengers.

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

As per Nesma Airlines policy and according to authority's requirements collect API data at the time of check-in, or review data already provided.

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Transmit API data at pre-arranged times to recipients specified by Nesma Airlines according to boarders authorities request, always protect passengers personal information and securely dispose of any related paperwork not kept on file.

3.2.6 Check in Types

3.2.6.1 Self Check-in

3.2.6.1.1 ONLINE CHECK-IN

- Online Check-In is available between 24 and four hours prior to scheduled departure time for international flights and two hours prior to scheduled departure time for domestic flights.
- Online Check-in is allowed for passengers holding electronic tickets with confirmed reservations on flights operated by Nesma Airlines; currently this option is not available for charter flights.
- Each passenger must present their valid travel documents.
- International passengers must proceed to check-in counter and verify their passports and visa documents.
- Passengers must present their check-in baggage at the check-in desk no later than ONE hour before departure for domestic flights and TWO hours before departure for international flights.
- Unaccompanied minors and handicapped passengers should not check-in online due to special procedures.
- Passengers must have TWO copies of the boarding pass.
- Notification of prohibited DGR Items available before booking and before check-in as follows:



3.2.6.1.2 Others

Currently Nesma Airlines does not provide other self-check-in service for its flights. Other than online check-in.

Kiosk-SMS, and offsite check-in as well are not available.

3.2.6.2 Emergency Back-Up Check in

In case of DCS and/or Baggage Handling System (BHS) failure, ground handling service provider will arrange back-up DCS in order operate flight normally, back-up DCS shall be established in every station and tested regularly,

3.2.6.3 Check-In Opening

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

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3.2.7 Passenger Acceptance

3.2.7.1 Requirements for Passenger Acceptance

Certain categories may be refused travel if they are not met Nesma Airlines policies and procedures and they are failed to respect and comply with Nesma Airlines policies.

3.2.7.2 Seating

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

- a. Allocate seating for special categories of passengers in accordance with Nesma Airlines policy.
- b. The acceptance of passengers on the waitlist is based on booking status and Nesma Airlines policy.

3.2.7.3 Exit Row Seating

Passengers occupying emergency exit row seating must be able-bodied.

Occupancy of emergency exit row is restricted in accordance with Nesma Airlines policy.

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3.3 Special Passengers

The Captain and the purser must be informed before departure of any Special Passenger on board his aircraft. They should make sure that the carriage of such passengers will not cause inconvenience or discomfort to other passengers and that emergency evacuation and safety during the flight will be guaranteed.

MEDA must be assisted by Able Bodies Persons (ABP) or, in case they are missing, by Air Crew, as detailed in the present paragraph. In terms of age, when a passenger is older than 12 years, is considered "Adult" and does not have to be classified as Special Passenger. Special Passengers types are defined below with each category special procedures of Check-in/Boarding required:

3.3.1 Infant & Children

Infant is a child with less than 2 years of age. The following policy will apply:

- The maximum number of infants depends on the number of supplementary oxygen masks, number of lap belts and special infant life jackets available. The standard maximum allowed number of infants is 20 infants for (A320) and 15 for A319.
- An infant must be accompanied by at least one adult and must be seated with the adult or on a cradle (BSCT);
- An infant must not be seated beside an emergency exit;
- No more than one infant may be seated in a set of seats due to limitation of supplementary oxygen mask;
- An infant may sit only in a row where a supplementary oxygen mask is available on the A320 and A319 on all odd number rows 1,3,7,9... Etc.
- Any group of seats with supplementary oxygen masks should be alternatively assigned to infants to allow Cabin Crew to use oxygen mask during depressurization;
- An infant must be secured by a supplementary lap belt.
- An approved child / Infant restraint system on an extra seat booked by the passenger, bearing either a label showing approval of a foreign government or a label showing that the seat was manufactured under the standards of the United Nations for aircraft or automobile, may be used, provided the certificate holder complies with the following requirements:
 1. The restraint system must be properly secured to an approved forward facing seat or berth; and
 2. The child must be properly secured in the restraint system and must not exceed the specified weight limit for the restraint system. However, an adult who is occupying a seat may hold an infant. In such case, and when oxygen dispensing units are prescribed, one unit each shall be installed and available for both the adult and the infant.

Children: A minor between two and twelve if reached to this age during journey he/she will be considered as Child, Child shall not seat in Emergency Exit row, above restrain devices producers shall be adhered.

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3.3.2 Pregnant Women

An expectant mother is a passenger who is expecting the birth of a child. Expectant mothers are normally not regarded as incapacitated. However certain restrictions apply, which are given below:

Up to 28 weeks of Pregnancy:

Passenger may be accepted for travel provided that they have completed the Expectant Pregnancy Declaration Form available with Cabin Crew.

From 29th to 36th week of Pregnancy: (Up to Beginning of Nine Month)

Passenger may be accepted for travel provided that they have:

Completed the Expectant Mother Pregnancy Declaration Form, and.

Is in possession of a "Fit for Air Travel" medical certificate. This certificate shall be signed by a Doctor and issued within 24 Hours before commencement of travel

36th week of Pregnancy: (Starting of Nine Month)

Passenger with normal pregnancies and no previous history of premature labor can travel up to and including the 36th week. After that time pregnant women can travel under the following:

- Medical certificate by the treating physician that there is no sign of imminent delivery and confirmation about the expected delivery date.
- Is in possession of a (fit for air travel) medical certificate. This certificate shall be signed by a doctor and issued within 24 hours before commencement of travel
- Completed the expectant mother pregnancy declaration form.

Caution:

- Airport staff should be very vigilant at all times when it comes to Pregnant Women, and it must be shown in the Passenger Information List (PIL).
- If the passenger has no medical certificate, and you are in doubt, then you must obtain a doctor's opinion (airport doctor).
- Tour Operators are informed that at all times of reservation, staff should recommend the passenger that a medical certificate from a qualified doctor should be carried even before the 28th week of pregnancy. This will avoid possible discussion at the check-in desk.
- Preferably to be seated on an aisle seat close to the toilet.
- Traveling by air is not advisable for women who have given birth within 7 days before flight or expect to do so within 7 days after the flight.

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3.3.3 Unaccompanied Minors

Passenger of two years and up to 12 years is defined as a Child or Minor. If a Minor is not accompanied by an adult, it is defined as Unaccompanied Minor (UM) and acceptance is conditioned with the following **Policy and procedure**:

- The maximum allowed number of UM is five (5) Children. It must be highlighted that children between two and four years old must be accompanied either by an adult or an extra Cabin Crew.
- UM's shall be seated in first four or last four rows;
- Complete the handling advice/declaration from ensuring the responsible adult has signed authorization and provide proof of identity, inform him/her to remain at Airport until Airborne.
- Distribute and keep copies, as required.
- Ensure that correct remarks and SSR codes are in check-in record.
- Apply handling fee, where applicable.
- The UMNR must not unsupervised until handed over to the cabin crew, advise the responsible adult once flight is airborne.
- **In case of Transit:** MAAS for UMNR and collect Travel document from Crew, hand over UMNR to cabin crew of connecting flight, in case of cancellation of connecting UMNR must be accompanied at all times.
- **At Arrival Station:** MAAS for UMNR and collect Travel document from Crew, hand over UMNR to designated adult noted on the handling advice after verifying the identity of this person and having received his signature for receipt of the UMNR.

3.3.4. Passengers Requiring Assistance

3.3.4.1 General

For Passengers with disabilities and those requiring or requesting assistance:

- a) Ask the passenger what assistance they require and how you can help them.
- b) Discuss the most appropriate seating based on their individual needs and the aircraft specifications, even seats have already been pre-assigned.
- c) Advise the passengers of what services and assistance are available based on their needs.
- d) Advise the passenger of available services (i.e. on board wheelchairs, braille or tactile markings, accessible lavatories).
- e) Provide information to passengers in alternate formats upon request.
- f) Ensure accurate SSR codes and any other relevant information are recorded in the DCS and PNR.

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3.3.4.2 Person with Reduced Mobility

A person with Reduced Mobility (PRM) is a person whose mobility is reduced due to physical incapacity (sensory or locomotors), an intellectual deficiency, age, illness or any other cause of disability when using transport and when the situation needs special attention and the adaptation to a person's need of the service made available to all passengers. In circumstances in which the number of PRMs forms a significant proportion of the total number of passengers carried on board the number of PRMs requiring assistance in order to reach an emergency exit during an evacuation (NON MEDA) should not exceed the number of able bodied persons (ABP) capable of assisting during an emergency evacuation. Any **passenger with Reduced Mobility (PRM) shall not be seated adjacent to an emergency exit, shall not** impede the Crew in their duties in an emergency evacuation and shall not obstruct access to emergency equipment. The following IATA definitions indicate the degree and extent of assistance required in each case of PRM:

- WCHR (Wheelchair - Romeo). - Disabled passenger with some impairment in mobility: needs assistance within the airport terminal to/from gates or exits, at immigration control point, on baggage delivery etc.; WCHR does not automatically mean that the passenger depends on being moved in a wheelchair but indicates the degree of incapacity including passengers requiring assistance due to the age (i.e. 'old people');
- WCHS (Wheelchair - Sierra). - Disabled passenger more heavily impaired in mobility. Cannot climb stairs/steps and must be carried;
- WCHP (Wheelchair - Papa). - passengers who need a wheel chair to move inside the aircraft and require assistance only for embarking and disembarking;
- WCHC (Wheelchair - Charlie). - Passenger can use normal passenger seat with back in upright position but is unable to cover distances unassisted i.e. in the passenger cabin to/from seat and the toilets (i.e. paraplegic, multiple sclerosis in an advanced stage etc.). Will require being carried on/off aircraft;
- STCR (Stretchers). - Passengers unable to use normal passenger seat with back in upright position, but must be carried lying on a stretcher. Unless indicated otherwise, it will be assumed that such a passenger must be carried into/out of the aircraft on the stretcher;
- OXYG (Oxygen). - Passengers that require oxygen therapy;
- BLND (Blind). - Blind passengers;
- DEAF. - Deaf passengers.

3.3.4.3 Passengers with Visual or Hearing Impairments

- Provide Passengers who defined themselves as persons having a visual or hearing impairment with access to the same information provided to other passengers in addition to that assistance shall be made by Station through escorting by 01 of station staff according to passenger needs.
- Ensure an accurate SSR Code and any other relevant information is recorded in DCS and PNR.

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3.3.4.4 Wheelchairs

A passenger's own wheelchair (excl. battery-drive) will be carried as checked baggage in the aircraft cargo compartment free of charge (i.e. over and above the passengers free baggage allowance) but never in the passenger cabin.

Battery-driven wheelchairs cannot be carried as at present *Nesma Airlines* is not authorized to load dangerous goods.

Wheelchair Acceptance procedures

Check-in

At check-in, the agent must control that the conditions and number limitation of these categories for air transport have been respected, and then he/she must:

- Check- in the passenger, entering the following codes as appropriate:
- "WCHC/WCHS/WCHP/WCHR". The keying of the code allows the information to be added to the PSM (Passenger Service Message), which, upon departure, will be sent automatically or manually (from non-computerized station) to all the stations en route and to the destination, so that they may organize the required assistance. The passenger's name will automatically be entered into the 'Special Passenger Check- in List'.
- The information telex sent by non-automated station must contain:
- The passenger's name, the code of the category to which he/she belongs, the complete route, specifying the connecting or transit stations carrier, the flight number, date request for any necessary assistance / equipment, the number of the compartment in which the wheelchair has been stowed, should the passenger be traveling with his/her own wheelchair. Non automated stations must fill in the 'Special Assistance' form.
- If a wheelchair passenger is carrying his/her own wheelchair, "OWN" must be included;
- The wheelchair put in hold must be properly "Delivery at Aircraft" advised.

Transport of the Wheelchair

Free transport of a wheelchair belonging to the passenger:

- Foldable Wheelchair WCMP (Manual Power) may be transported free of charge in addition to the normal baggage allowance. On passenger's request such a wheelchair may be transported in the passenger cabin if it can be suitably stowed.
- Dry Battery powered wheelchair may be transported free of charge in Cargo Holds, addition to the normal baggage allowance.
- Wet Battery powered wheelchair is not to be transported on Nesma Airlines.

Boarding / Disembarkation

Board the passengers with motion or sensory problems **before** other passengers so that the cabin crew can briefly illustrate the safety equipment while the aircraft is empty, and the passengers may clearly identify their seats and the emergency exits. Should it not be possible to carry out priority

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boarding, chose an alternative solution, in agreement with the cabin crew so that the emergency procedure can be illustrated in any case whilst respecting punctuality objectives?

Seat assignment for individual incapacitated passengers (and their escorts)

- A. Passengers with mobility problems should be seated so as not to impede a rapid evacuation of the aircraft. They should be accommodated near to floor level exits provided with slides, but not at the emergency exits.
- B. Passengers with stiff legs, legs in plaster, paraplegics, etc., should be accommodated in seats allowing the maximum space for their comfort, or space for leg support devices with the least possible disturbance to passengers in adjacent seats. Limbs in plaster casts should not obstruct the aisle or the emergency exits. In order to avoid a mutually interference, two incapacitated passengers must not be seated at both sides of the aisle in the same row. Escorts shall be seated immediately adjacent to the passenger(s) they are taking care of.

3.3.4.5 Passengers with Arms or Legs in Casts or Splints

Passengers with arms or legs in cast or splints are required to produce a medical certificate where it is clearly stated that the person is fit to fly. It is worth to note that improperly fit or too tight casts or splints, when at high cabin altitude, may lead to such a degree of pain to the passenger, requiring a diversion to nearest airport to give medical assistance.

3.3.4.6 Groups of Handicapped Passengers

The groups will consist of the handicapped and their escorts.

- Aircraft chartered partially for groups of incapacitated. The minimum number of escorts will be:
 - One person over 18 years to escort each fully handicapped passenger;
 - One person over 18 years to escort each partially handicapped passenger;
 - One person to escort each blind passenger.

Note: handicapped passengers must be embarked before the rest of the passengers. PIC and purser must be informed before the flight of the number of handicapped passengers.

- Aircraft fully chartered for handicapped passengers: all the previous rules for aircraft partially chartered for groups of handicapped apply, plus:
 - Special arrangements will be made and a special authorization from ECAA will be requested;
 - No other passengers, apart from the handicapped and their escorts, will be permitted on board.

3.3.4.7 Stretchers

For the time being, stretchers **cannot be boarded** on Nesma Airlines aircraft.

3.3.5 Passengers Requiring Medical Clearance

3.3.5.1 General

As per Nesma Airlines policies, medical clearance may be required by passengers:

- a) Who appear to have a communicable diseases or condition that could pose a direct threat to the health and safety of others on the flight.

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- b) Whose medical condition gives reasonable doubt that individually can complete the flight safely without requiring extraordinary assistance during flight (e.g. persons with acute medical conditions such as a recent hard attack, stroke, embolism or persons with recent surgery).
- c) Requesting medical treatment during flight (e.g., needing extra oxygen or other medical treatment like infusions),

3.3.5.2 Medical Information Form

Please refer SOM 11.2.16,

3.3.5.3 Advanced Notification

Passengers are asked to advise Nesma Airlines of their needs at the time of reservation,

Nesma Airlines summarized policy regarding special passengers shall be adhered, refer 3.3.10

3.3.5.4 Seating

Medical case (MEDA) passengers are entitled to the most appropriate seating according their needs, Provide adjacent seating, as applicable, for:

1. A personal care attendant.
2. A Safety assistant.
3. A reader/interpreter in case of a vision or hearing impairment.

PRM/MEDA and PRM/Non-MEDA shall not be seated in emergency exits.

3.3.5.5 Request for Assistance without advanced Notice

If a passenger's special needs were not communicated at the time of booking, or a passenger identified as a PRM or potential MEDA case upon arrival, make all reasonable efforts to accommodate the passenger, as appropriate questions and record required codes in the DCS,

Nesma Airlines summarized policy regarding special passengers shall be adhered, refer 3.3.10

3.3.6 PRM s not Requiring Medical Clearance

Check in Agent shall check that additional needs have been communicated via appropriate SSR codes and entered into the DCS and PNR , verify that escort requirements and required assistant are fulfilled .

3.3.6.1 Handling

Check that additional needs have been communicated via the appropriate SSR codes and entered into the DCS and PNR. Verify that escort requirements are fulfilled.

3.3.6.2 Refusal of PRMs and/or MEDA Cases

General

Nesma Airlines representatives shall not refuse the passenger unless there is a legitimate reason for refusal as per Nesma Airlines policy.

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Right of Refusal

A PRM and/or MEDA case shall be refused based on Nesma Airlines General Conditions of Carriage,

Reasons for Refusal

- a) Nesma Airlines supervisors and GSP shall not refuse passenger unless one of the following reasons is applicable,
- b) The person has such a degree of physical infirmity that the trip would likely result in complications or death, leading to a diversion.
- c) The person requires individual nursing or care during flight and is not accompanied by suitable escort.
- d) The person, because of their physical or medical condition, poses a direct threat to the health or safety of other passengers, their property, the aircraft or crew, and the threat cannot be eliminated by providing additional aid or services by other means (e.g. face masks, separate seating)
- e) The person fails or refuses to submit themselves to the specific conditions of carriage required by Nesma Airlines.
- f) Information is required about the passenger's medical condition (diagnosis) where passengers own physician refuses to disclose such information to Authorized Medical service.
- g) The person has a communicable disease.

3.3.6.3 Handling

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

Nesma Airlines polices shall be implemented,

Enter all relevant information about the reason for refusal into the PNR or in Nesma Airlines flight report, (e.g. passenger refused (flight/date) d/t lack of safety assistance).

Forward the PNR or report to Nesma Airlines Ground Handling Department, document all details of the incident and to be submitted to Nesma Airline when requested.

3.3.5.8 Authority of the Captain

The Captain has the final authority to accept or reject PRM for a specific flight. This authority is valid for "last minute boarding" as well as for passengers with reduced mobility already accepted. The following guidelines are intended to help the Captain in making his decision. As a guideline, acceptable factors for the PIC decision include:

- Important documents, e.g. statements of attending physician, inquires by the station of departure;
- Qualified accompanying personnel (doctor, nurse);
- No imminent danger to life as far as recognizable;
- Return flight domicile;
- Proper care and transportation organized at destination.

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The Station personnel have to give all pertaining information to assist the Captain in his decision. If the Captain decides to refuse transportation, he, after consultation with and using the help and assistance of the Nesma Airlines representative or the Handling Agent, must inform such passenger(s) about alternative travel means, e.g. other line connections or special flights which provides expeditious, accompanied transportation.

3.3.7 VIP's

Passengers who may be of real commercial interest for the company or who are widely known persons in private or public activities, are entitled to special attentions on the ground as well as on board. Stations noticing that one of these passengers is booked on one of our flights should make the necessary arrangements to offer him/her a personalized service at the airport of departure including assistance by a staff member through customs / immigrations formalities, seat selection. If additional attentions, (bunch of flowers, presence of local press representatives, ground transportation, etc.) are necessary Nesma Airlines representative should be contacted for the coordination of the appropriate arrangements. The station of departure shall inform the PIC and advise the Cabin Crew of the VIP's name and title and the seat number allocated to him/her. The station of destination shall be informed about VIP's in PSM message

Attentions similar to those offered on departure shall be provided at the arrival point.

Station will receive information from Nesma Airlines with the Name of the VIP, and the services required according to type of VIP Travelling:

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Extra Baggage tolerance

Yes
 No

Special seating

Yes
 No

VIP bus separate

Yes
 No

Upgrade when seats are available

Yes
 No

Immigration facilitation

Yes
 No

Special meal

Yes
 No

Avoid queue

Yes
 No

Escort with Worker

Yes
 No

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3.3.8 Inadmissible Passengers/Deportees/Escorted Prisoners.

3.3.8.1 Definitions

Inadmissible Passenger (INAD) is defined as a person who is refused admission to a State by authorities of that State, or who are refused onward carriage by a State authority at a point of transfer due failure to comply on the required travel documents such as no visa, expired, forged visa or passport

Entry means the normal permission granted by the respective authorities to a passenger having arrived from another country to move freely about in the country.

Permission or refusal of entry is normally decided immediately at the airport of arrival by the immigration authorities. Permission or refusal may, however, be delayed in exceptional cases when higher authorities, consulates or courts are involved.

Note: *Difference between an inadmissible passenger and a deportee: The deportee has already entered the country and is then proclaimed undesirable by the authorities.*

Deportee: is defined as a person who had legally been admitted to a country by its authorities or who had entered a country illegally and who at some later stage is formally ordered by the authorities to be removed from that country.

The deportees are classified as follows:

a) **Deportee Accompanied (DEPA):** is a deportee who is escorted in the aircraft cabin by authorized government escort personnel. The category falls under judicial cases such as jail passengers. Known also as (Passengers in Custody).

b) **Deportee Unaccompanied (DEPU):** is a deportee who is not escorted in the aircraft cabin by authorized personnel during the flight. The category falls under administrative cases against the state.

Note:

- ❖ At some airports, the local procedure will require the airport police to escort the DEPU to the aircraft door. In such cases, the Flight Crew shall be advised by the Ground Staff prior to passenger boarding. The Flight Crew shall be briefed about the categories of the passenger to ensure that no further action is required by the Crew.

Nesma Airlines Policy

Nesma Airlines accept INAD and DEPUs on board same flight. Carrying Accompanied deportees (DEPA) is subject to special flights contracts and special arrangements, the PIC has the authority to accept 5 DEPAs if their carriage is considered not carrying risk.

NESMA AIRLINES has the right to refuse the transportation of such passengers if their carriage poses risk to the safety of the aircraft or its occupants.

At all times, it is the prerogative of the Commander to refuse to carry any inadmissible passenger, deportee or person in custody or to impose any additional restrictions as considered necessary

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3.3.8.2 Notification Requirements and Travel Documents

- Following departments should be notified from Deportee State Authorities to approve deportation and make all arrangements
 - Nesma Airlines OCC
 - Nesma Airlines Operation Manager
 - Nesma Airlines Security Manager
 - Nesma Airlines Crew Manager
 - Nesma Airlines Ground Handling Manager
 - Departure & Arrival Stations Managers,
- Nesma Airlines should have the deporting State 24-hour contact concerning deportee situations. Deporting States should also provide contact information for an official or office to which questions of policy interpretation can be addressed.
- The deporting State should identify and publish, or otherwise share with other governments, the contact details for the desk or department to which notification of inbound removals should be directed.
- Notification should be received 05 days' prior deportation day.
- Deporting States, when making arrangements with Nesma Airlines for the removal of a deportee, shall make available the following information as soon as possible, but in any case not later than 24-hours before the scheduled time of the departure of the flight.
 - a) A copy of the deportation order, if legislation of the Contracting State allows it;
 - b) A risk assessment by the State and/or any pertinent information that would help the Nesma Airlines assess the risk to the security of the flight; and,
 - c) The names and nationalities of any escorts."

- The deporting State should inform authorities in transit and destination States of the deportee's movement and of the details surrounding that movement whenever practicable and permitted under national and/or international laws.
- The originating agent shall ensure that any other aircraft operator involved in the itinerary is informed of the deportee's movement via Nesma Airlines Station of Deportation.
Similar remarks (i.e. Other Service Information (OSI) remarks) contained within the deportee's Passenger Name Record (PNR) should be utilized to identify the escort(s) as well
- The deporting State should ensure that travel documents required by the transit and/or destination State for transit/entry clearance have been obtained or otherwise arranged.

3.3.8.3 Requirements of Escorting

- When removal of a deportee is under consideration, the deporting State should conduct a risk assessment of that deportee to determine whether the use of escort is required, and if so, the number of escorts to be assigned to the removal.
- The deporting State should inform Nesma Airlines, to the extent legally allowed, of the results of its risk assessment to facilitate Nesma Airlines own evaluation and notification process.
- When official en-route supervision of a deportee is warranted based on the results of risk assessment, the deporting State should ensure that escorts travelling with the deportee possess all

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travel documents required by destination and transit States, or that alternative arrangements have been approved by those States.

- Any limitation on the number of deportees that can be carried on a specific aircraft will be subject to the Nesma Airlines policy, and to consultation between the deporting State and the aircraft operator involved in the transportation.
- The deporting State should use only authorized Escort personnel for its removals.
- When an escort is based solely on legal requirements imposed by a State at a transit/transfer point, and not on any finding of risk, that escort requirement may be waived on the connecting flight, subject to applicable local regulations and where agreed by all operators involved.

3.3.8.4 Reservation and Ticketing

- In general, flight reservations are the responsibility of the deporting State, and should be agreed with the Nesma Airlines Reservation Department.
- When making a flight reservation, the deporting State should always indicate that it concerns a deportee who will be escorted (DEPA) or unescorted (DEPU), and who may require medical assistance (MEDA).
- The reservation made for the escort(s) should clearly indicate their status and the name of the deportee being escorted. Where possible, and subject to local agreement, ticketing for deportees and/or Escorts should be accomplished well in advance of departure.
- Ticket refunds should only take place at the request of the purchasing deporting State.

3.3.8.5 Procedure

Escort :

Escort means a person authorized by the departing state and trained to accompany the deportee (DEPA) during the removal flight. The escort shall:

- ❖ Wear civilian clothes, and travel with tickets and their passports;
- ❖ Not carry firearms and weapons in the cabin; and
- ❖ Keep the deportee under surveillance at the point of destination until all entry and inspection formalities have been completed.
- ❖ Escort facility is based on Security Department assessment with the following specifications:
- ❖ If the DEPA was carried on Nesma Airlines flight. Ticket cost for the Escort will be levied by the carrier of the DEPA. Hence, supporting evidence can be generated through Immigration records/history.
- ❖ For Governmental and other entities, the escort requirements and incurred ticket cost will be levied by the requesting party.

3.3.8.7 Check-in & Boarding

- Validity of documents (visa, passport, etc.) must be re-checked at check-in.
- Deportees must be treated with the same courtesy as any other passenger
- Check-in and boarding processes should be adapted to fit the specific removal situation and airport infrastructure.
- Check-in and boarding of deportees should be as unobtrusive as possible and kept separate from the normal passenger process to the extent allowed by the existing airport facility.
- Additional check-in and boarding process criteria should be agreed between the deporting State if required and if applicable according to Airport infrastructure.
- The baggage of deportees and escorts should be handled in such a manner as to avoid delaying the flight's departure in the event that the deportee does not travel.
- In general, and consistent with Nesma Airlines procedures and requirements, pre-boarding of deportees, especially those who are escorted en-route, is strongly encouraged. Alternative arrangements may be necessary depending on the situation at hand.
- Deportees requiring physical restraints should be boarded with their escort(s) in such manner as to reduce the possibility of drawing undue attention.
- The Pilot-in-command shall be advised by Nesma Airlines of the presence and status of the deportee using information provided by the deporting State.

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- The Pilot-in-command may request clarification of information provided by the State concerning the deportee, and should be given as much additional information as is permitted under applicable laws or regulations.
- The seating of deportees and their escorts on the aircraft is guided by applicable policies established in accordance with International Regulations⁹, preferably seat them on window or middle seats in the rear section of the cabin and if it is possible leave the seat beside them not occupied.
- Where deportees are delivered to the aircraft via direct ramp-side transfer, State and airport screening personnel should cooperate with Nesma Airlines Staff to ensure that alternative arrangements are made which allow all applicable government-mandated security-screening requirements to be observed prior to embarking the deportee.
- The use of restraining devices, including sedatives or other drugs, with regard to deportees on aircraft must conform to the laws and/or regulations of the States involved (including States of transit) and applicable Nesma Airlines policy.
- Where their use is anticipated based upon a risk assessment, escorts should be trained in the safe use of restraint devices, including sedatives or other drugs and, subject to government regulation and the transporting Nesma Airlines policy, have access to such appropriate devices when accompanying a deportee.
- States that administer sedatives or other drugs to deportees should ensure that the deportee is accompanied to the final destination by a medical attendant, or by an escort authorized to administer the medication during travel.

A) Arrival

- Arrival Station should be informed to take all required producers and update Airport Authorities about number of Deportees O/B, in case special requirements should be taken (Presence of Airport Police on Stand to receive Deportees)
- NESMAAIRLINES Crew and Station have to coordinate together regarding Deportees in proper manner to avoid any disturbing to passenger's O/B.
- Deporting Form should be created and kept 03 copies, 01 for Departure station, 01 for Flight Crew and 01 for Arrival Station.

B) Responsibilities of Deportation State and Nesma Airlines

- States should adopt as best practice the following ICAO Annex 9 standard¹⁰, which reads :" Contracting States removing deportees from their territories shall assume all obligations, responsibilities and costs associated with the removal."
- The delivering Nesma Airlines should not be held liable for refusal by a receiving connecting aircraft operator; or the transit and/or destination State's authorities.
- If entry into the destination or transit State is refused for any reason, Nesma Airlines should not be penalized or face other obligations or liabilities associated with the return of the deportee.
- States should adopt as best practice the following ICAO Annex 9 standard¹¹, which reads:" Contracting States shall not prevent the departure of an operator's aircraft pending a determination of admissibility of any of its arriving passengers."
- Pilot-in-command's authority:
 - At the point of the deportee's boarding, and in accordance with national law and international conventions, the Pilot-in-command of the aircraft assumes full authority with respect to the deportee.
 - Pilot in Command of Nesma Airlines has full authority to determine number of Deportee or INAD could be accepted O/B and refuse any case could pose Safety or Security risk to the flight.
 - That authority may extend to refusing to accept an escorted or unescorted deportee for transportation when the Pilot-in-command considers that action to be in the best interest of flight safety. Such refusal should be based on objective reasons related to the passenger and his or her action or behavior being exhibited at the time of boarding or at a subsequent time.
 - During transit, the deporting State must conform to the laws and regulations of the State(s) of transit. The deporting State should ensure that the onward carriage of a deportee beyond a transit point should be within the shortest possible time scale. Any costs incurred as a result of a longer than necessary transit period between flights would be borne solely by the deporting State.

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- NESMAAIRLINES has full authority to refuse carriage in case deportee could cause any danger or security risk to the flight.

3.3.9 Groups

Nesma Airlines accept Groups and shall be on same PNR , no baggage pooling except for 01 family members after check their travel documents and their PNR carefully , Groups shall be accepted according to below policy and procedure :

- Check in shall preformed and accept all passengers individually.
- When possible assign seats together, if requested respect any special seating requirements.
- Issue baggage tags individually:
 - 1- Each piece of baggage must bear the respective passengers identification.
 - 2- Exception: bag tags for family members travelling together may be issued on one family name.

3.3.9.1 Non Standard Groups

Unusual groups, excessive weights, or anything outside the standard needs to be communicated to load control and to be informed to person who make Load sheet (i.e sports teams with higher passenger weights).

Procedure:

- Check in Counter Supervisor shall update the person who will make Load Sheet with this information in order to calculate required weights via taking average by sample.
- Check in Counter shall ensure that passenger provided with 02 Seats one vacant seat beside the main seat with retractable arm rest.
- Flight Crew shall ensure extension seat belt provided to passenger.

3.3.10 Unruly Passengers

3.3.10.1 General Conditions of Passengers Carriage

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

3.3.10.2 Handling Unruly Passengers During Check-in or Boarding

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

3.3.10.3 If an Unruly Passenger is Denied Carriage

- Offload the passenger in the DCS and offload their baggage from the aircraft.
- Document the case in the airport and Nesma Airline shall be notified with details of the passenger's condition (e.g. intoxication, general abuse)

3.3.10.4 If an Unruly Passenger is Accepted for Travel

- Inform the PIC and the senior cabin crew member.
- Document the case in the airport and Nesma Airline shall be notified with details of the passenger's condition (e.g. intoxication, general abuse)

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3.3.11 Nesma Airlines Summarized Policy Regarding Special Passengers:

The following table summarizes Nesma Airlines Policy regarding to passengers with special requirement /Services, however special arrangements can be taken according to special contract / Accountable Executive Approval.

CASE	Rule
1	PET IN CABIN Accepted, carry on cage dimensions 55L x 40W x 25H Centimeters.
2	Intoxicated and/or abusive passengers Not accepted/disembark if already boarded
3	EYE DOGS Not Accepted
4	STRETCHER CASES Not Accepted
5	BLIND PAX Accept on first 4 ROWs window seat, boarding first disembark last
6	WCHR No restriction
7	WCHS boarding first disembark last
8	WCHC Seating will be in AFT 26-29 window seats, in case unescorted maximum 2
9	DEAF AND DUMB No restriction
10	PREGNANT LADY PAX Accepted S.O.M 3.3.3
11	AFTER SURGERY PAX Medical report is required
12	PAX WITH CONSTANT NEED OF OXYGEN Not Accepted Not provided
13	PAX WITH SKIN, VIRAL OR CONTAGIOUS DISEASES Not accepted
14	PAX WITH TUBERCULOSIS Not accepted
15	INSANE OR MENTALLY RETARDED PAX Must be accompanied
16	PARKINSON DISEASE Must be accompanied
17	UM Accepted S.O.M 3.3.3
18	CAST Seating will be in AFT 26-29 window seats, in case unescorted maximum 2

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19	INSULINE	Station will inform crew with passenger who has insulin kit to hand it over until arrival at the destination
PAX WITH SPECIAL BAGGAGE		
1	WEAPONS (TRADITIONAL SWORDS OR DAGGERS)	Not accepted in hold baggage's/in cabin
2	ELECTRICAL WHEELCHAIR	Wet battery is not allowed.
3	Passenger items in the Cabin (e.g. antique musical instruments; works of art, etc.)	<p>Only baggage accompanied by a passenger may be accepted. Maximum weight 75 kg</p> <p>Dangerous goods Not accepted as cabin load other than the exemptions listed in IATA DGR.</p> <p>Maximum booked Seats 3, Use window seats must be well clear of Emergency Exits secured by seat belt or by lashing ropes and tie down rings attached to the seat track.</p>

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3.4 Refusal of Passengers

A passenger shall be refused carriage/or removed from the aircraft when, in the exercise of reasonable discretion, the handling staff or the commander decides that:

- Such action is necessary in the interest of safety of the aircraft or its occupants; or
- Such action is necessary to prevent violation of laws, regulations or decrees of any country to be flown from, into or over; or
- Refusal of search either self-person or any type of luggage or property.
- The conduct, behavior or appearance of the passenger make him objectionable to other passengers; or
- The age or mental or physical condition of the passenger is such as to require special assistance which cannot be provided.

Procedure for Passenger Removal.

Whenever it becomes necessary to deny acceptance of a passenger before boarding,

- Police and Immigration authorities must be informed at once for their own actions.
- Passenger will be offloaded if he was checked-in and all baggage returned baggage receipt destroyed.

In case the need is to remove a passenger from an aircraft,

- Flight crew shall inform the handling staff who, in return, will initiate the appropriate action as above and, if necessary calling upon the service of law enforcement officers.

In case of refusal inform via SITA.CAINOXH/CAINSXH

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3.5 Special Policy Regarding Alcohol

General

Drunken passengers shall not be boarded on Nesma Airlines airplanes. Drunken passengers are a danger to themselves and others when on board the aircraft, especially in the event of an emergency situation. It is the responsibility of passengers not to be drunk or get drunk on the aircraft. Nesma Airlines has therefore established a policy in regard to drunken passengers.

Boarding

A passenger who illegally boards a Nesma Airlines aircraft when drunk conflicts with our goal to be a safe and secure airline and lowers the level of customer satisfaction felt by other passengers. General Conditions of Carriage entitle to refuse travel. Nesma Airlines will therefore support all crews and ground staff who deny boarding to drunken passengers.

Passengers under the age of 16

Alcohol must never be served to any passenger under 16. This rule applies even when the child / young / adult is traveling with his parents or an adult and that parent or adult has requested that alcohol should be served. Nesma Airlines will therefore support crews enforcing this rule.

Drunkenness on board the aircraft

Excessive drinking causes often-disruptive incidents and assaults on board. It is therefore important that crews should exercise discretion in serving alcohol to passengers who appear to be near the limits of drunkenness. If there is any doubt in the minds of Cabin Crew they should act on the side of caution and tactfully refuse to serve the passenger with more drinks. When in doubt, cabin staff should refer to the Captain for guidance and the Captain must be informed immediately if a passenger's behavior threatens flight safety or the safety of other passengers or the crew.

Removal of drink

The crew may, at the absolute discretion of the Captain, remove alcohol (including the passengers duty free) for safe custody. This should only be done where safety would be compromised if the passenger retained the alcohol and any duty free must be returned when the passenger leaves the aircraft.

Drugs

The use of drugs is not allowed on board of Nesma Airlines aircraft. It must be kept in mind; however, that safety of passengers, crew and aircraft itself is the main important thing.

No alcohol in the cockpit

Alcohol must never be taken into the cockpit except in a sealed bottle.

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3.6 General Conditions of Carriage of Passengers and Baggage

Captain may refuse carriage or onward carriage of any passenger if, in the exercise of his reasonable discretion, the Captain finds it necessary:

- for reasons of safety, or
- in order to prevent violation of any applicable laws, regulations, or orders of any State or country to be flown from, into or over, or
- because the conduct, age, or mental or physical state of the passenger is such as to:
 - Require special assistance of Nesma Airlines, or
 - Cause discomfort or make himself objectionable to other persons or to property, or
 - Involve any hazard or risk to himself or to other persons or to property, or
- Because the passenger has failed to observe the instructions of Nesma Airlines.

Tokyo Convention

The Tokyo Convention comes into effect as soon as doors are closed.

- 1)** The aircraft Captain may, when he has reasonable grounds to believe that a person:

- Has committed, or is about to commit, on board the aircraft, an offence, or
- Acts in a manner which, whether or not they are offences, may or do jeopardize the safety of the aircraft or of persons or property therein or which jeopardize good order and discipline on board,

Impose upon such person reasonable measures including restraint, which are necessary:

- To protect the safety of the aircraft, or of persons or property therein, or
- To maintain good order and discipline on board, or
- To enable him to deliver such person to competent authorities or to disembark him in accordance with provisions of the Tokyo Convention.

- 2)** The aircraft Captain may require or authorize the assistance of other Crew Members and may request or authorize, but not require, the assistance of passengers to restrain any person whom he is entitled to restrain.

- 3)** Any Crew Member or passenger may also take reasonable preventive measures without such authorization when he has reasonable grounds to believe that such action is immediately necessary to protect the safety of the aircraft, or persons or property therein.

- 4)** The aircraft Captain may:

- In so far as it is necessary for the purpose of the above Sub-paragraph, disembark in the territory of any State in which the aircraft lands any person who he has reasonable grounds to believe has committed, or is about to commit on board the aircraft an act contemplated in Sub-paragraph above.
- Deliver to the competent authorities of any Contracting State (Tokyo Convention) in the territory of which the aircraft lands any person who he has reasonable grounds to believe has committed on board the aircraft an act which, in his opinion, is a serious offence according to the penal law of Egypt.

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3.7 Indemnity Form

This form is intended to release Nesma Airlines from the administration commitment for any disbursement and/or expenses the passenger should meet at destination (e.g. overnight, meals, etc), or to reach the departure point, if required by local Authorities (e.g. return ticket, class difference for unavailable place).

This form is not lifting Nesma Airlines from the sanctions (fines) foreseen for lack of proper passengers documentation. The indemnity form should therefore not be used in order to escape rules and regulations required by destination countries (e.g. Cuba, USA, and Italy).

In above mentioned cases, where sanctions and fines are foreseen, the passenger should be denied boarding.

In case of needs, please use the following indemnity form:

INDEMNITY FORM

LACK OF MEDICAL CERTIFICATE

I undersigned, hereby acknowledge that my attention has been drawn on the fact that:

I do not hold vaccination certificates required according to the terms of international sanitary conventions or particular dispositions of the countries of transit or of destination.

I do therefore hereby declare to indemnify Nesma Airlines against any liability connected with the difficulties I might encounter during my journey or with the damages I might suffer because of the non-observance of the obligations here above mentioned concerning vaccination.

I do furthermore hereby agree to bear any consequent loss or expense, whatever may be their nature, which may occur to me and particularly the expenses pertaining to an eventual period of quarantine.

Date:

Read and approved by.....

Signature.....

Permanent address:

.....

Passport N°:

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3.8 Overbooked Passengers

Should passengers in excess of available number of seats show up for boarding on a Nesma Airlines flight, their acceptance must be refused and these passengers should be directed to the Sales agent / Tour Operator.

In any case exceptional tact and courtesy are required by the ground staff.

Whilst every effort is made by Nesma Airlines and its Sales Agents / Charterers to avoid overbooking, it is possible that such a situation will occasionally occur. When this does arise, exceptional tact and courtesy is required by the ground staff, and care must be taken to avoid blaming any specific person or agency for the occurrence. The Charterer's local representative or duty officer must be contacted immediately to establish the action to be taken. This should be done via Nesma Airlines Operation Centre or Representative (where existing). If an overbooking becomes apparent at the check-in, passenger should be offloaded in the following order providing the aircraft departure is not delayed:

- Staff passengers on space available tickets
- Last passengers to arrive at check-in counters or to let the tour operator chose.

It is very important at this stage to re-assure and regain the passenger's confidence with Nesma Airlines. All Nesma Airlines, tour operators, representative and handling agents must offer all possible assistance to arrange onward transportation for the overbooked passenger.

Important Notes:

- Flight deck seats may never be used to carry revenue passengers, except company staff subject to notification and consent of the Captain;
- Children aged 2 years or over must be allocated a seat and may never be downgraded to infant status;
- Tour operator's representatives should attend operation till the aircraft is airborne.

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3.9 Flight Deck / Cabin Crew Jump Seat Travel and Admission to Flight Deck

- a)** No person may admit any person to the flight deck of an aircraft unless the person being admitted is:
 - 1. A cockpit crewmember;
 - 2. An ECAA inspector, who is performing official duties;
 - 3. An employee of the ECAA, the certificate holder, or an aeronautical enterprise who has the permission of the pilot in command and whose duties are such that admission to the flight deck is necessary or advantageous for safe operation; or
 - 4. Any person who has the permission of the pilot in command and is specifically authorized by the certificate holder's management or by the ECAA. Subparagraph (a) (2) of this paragraph does not limit the emergency authority of the pilot in command to exclude any person from the flight deck in the interests of safety.
- b)** For the purposes of paragraph (a)(3) of this section, employees of the ECAA who deal with matters relating to safety and employees of the certificate holder whose efficiency would be increased by familiarity with flight conditions, may be admitted by the certificate holder. However, the certificate holder may not admit employees of traffic, sales, or other departments that are not directly related to flight operations, unless they are eligible under paragraph (a) (4) of this section.
- c)** No person may admit any person to the flight deck unless there is a seat available for his use in the passenger compartment, except:
 - 1. An ECAA inspector who is checking or observing flight operations;
 - 2. An air traffic controller who is authorized by the ECAA to observe ATS procedures;
 - 3. A licensed crewmember employed by the certificate holder whose duties require a license;
 - 4. A licensed crewmember employed by another certificate holder whose duties with that carrier require a license and who is authorized by the certificate holder operating the aircraft to make specific trips over a route;
 - 5. An employee of the certificate holder operating the aircraft whose duty is directly related to the conduct or planning of flight operations or the in-flight monitoring of aircraft equipment or operating procedures, if his presence on the flight deck is necessary to perform his duties and he has been authorized in writing by a responsible supervisor, listed in the operations manual as having that authority;
 - 6. A technical representative of the manufacturer of the aircraft or its components whose duties are directly related to the in-flight monitoring of aircraft equipment or operating procedures, if his presence on the flight deck is necessary to perform his duties, and he has been authorized in writing by the responsible supervisor of the operations department of the certificate holder, listed in the Operations Manual as having that authority; and

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7. Any person so authorized by the ECAA or the certificate holder's management.

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3.10 Deadhead Crew Handling (DHC)

General

Any crew member proceeding from or to work and boarding a Nesma Airlines aircraft must be in his full uniform.

Deadhead Crew (DHC) is a crew positioning to / from duty not directly involved in the operation of the flight, occupy passenger seat, and traveling in uniform.

Procedures

- Deadhead Crew reports at the airport check-in desk with his / her baggage, he /she must always be checked-in and seated on normal passenger seat.
- Deadhead Crew should never go straight to the aircraft, this situation would create confusion about the number of passengers on board, and it is against security and safety.
- Name of the DHC will be entered on the PNL.
- Weights of DHC and their baggage will be entered on the Load sheet.
- Station of destination will expedite DHC baggage offloading and arrange for immediate delivery.
- Station must use "DHC" as a comment code for deadhead crew.

3.11 Transportation of Nesma Airlines staff on Nesma Airlines Flights

Transportation of an unlimited number of *Nesma Airlines* ground personnel up to the aircraft capacity is authorized provided that:

- Approval of Accountable Executive
- No extra handling costs will arise;
- The passengers are all listed on PNL;

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3.12 Seat Assignment

If free seating cards are issued, the Senior Cabin Crew must be informed accordingly by the ground staff and will accommodate the passengers in accordance with the load-sheet. It is Nesma Airlines policy to accept the “Free Seating” procedure only when the handling agent doesn’t know the aircraft configuration or with an offline station on route. Exemption to this policy is only allowed in case of particular situations. The seats, which permit direct access to emergency exits, shall be allocated to passengers that appear reasonably fit, strong and able to assist the rapid evacuation of the aircraft in emergency. If the check-in ground staff cannot comply with above due to the impossibility to screen all the passengers when they are accepted, then a further check during boarding will be useful. In any case Cabin Crew during the embarkation and/or during the safety check will verify compliance with above. Incapable passengers allocated wrongly will be moved to other seats to avoid difficulties occurring on the ground, during take-off or landing, when an emergency situation can arise. The following categories of passengers are among those that should not be allocated to, or directed to seats, which permit access to emergency exits.

3.12.1 Exit Row Seating Assignments

- Exit rows seats shall not be assigned to passengers who do not have sufficient mobility, strength and dexterity in their arms, hands and legs to open an exit. In addition, designated exit rows seats will not be assigned to passengers who are unwilling or are not able to assist in the event of an emergency due to any of the following selection criteria:
 - Cannot understand English language or language in use in the country of the operations (language in use during the flight).
 - Physically are not able to open an exit and assist others.
 - Are not able to hear verbal crew commands or do not have the visual capacity to assist in an emergency.
 - Are unable to shout information to other passengers.
 - Have the responsibility of caring for small children or another passenger.
 - Are younger than 15 years of age.
 - Have condition that is not apparent that may prevent him from understanding and performing the functions shown on the passenger safety information card.
 - Are traveling with infants.
 - Are traveling with a pet in the cabin.
 - Are blocking the exit row floor with uncheck baggage.
 - Are expectant mothers.
 - Are deportees or prisoners in custody?
 - Obese passengers.
 - Passengers seated in an exit row who prior to boarding decide they wish to be reseated, will be issued another seat assignment in a non-exit row without question and without being required to disclose the reason for requesting reseating.

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3.12.2 Least Favourable Seats

- Least favorable seats are less attractive for passenger's comfort.
- Also seats which do not have full recline are least favorable.

3.13 Check-in Notice

Keep track with number of passengers booked and number of passengers checked- in.

In case a deviation of more than 10 passengers is observed the operations must be informed immediately for further action.

3.14 Last Minute Changes (LMC's) about Passengers

Nesma Airlines shall not be held responsible for any claim resulting of late arrival of passengers for check in. Acceptance of LMC's must not delay the flight departure.

The carrier or its appointed handling agent will not be held responsible if the flight departs before the passengers arrive at the aircraft.

Effect of LMC's on the load sheet will be reflected in the box L. M. C.

Last minute changes to the load and trim- sheet are only permitted if the changes of the load do not exceed 500 Kg. If this number is exceeded, new mass and balance documentation must be prepared.

3.15 Passengers Embarkation / Disembarkation

General:

- Check that boarding facilities and gate monitors are displaying flight information.
- Ensure Dangerous Goods and prohibited articles notices are displayed at the Boarding gate.
- Before Boarding, ensure passengers and their cabin baggage are security screened.
- If passengers and staff need to walk on ramp, ensure the route to the aircraft is safe and clearly marked. Passengers must be supervised on the ramp at all times.
- For boarding with passenger boarding bridge (PBB), secure the route to the aircraft and block off any unused passageways, if required. identify passageways (e.g., by class) as per Nesma Airlines requirements when there is more than passageways in use.
- Obtain clearance for boarding from the flight crew, according to local procedures and Nesma Airlines policies.
- Follow safety requirements for fueling in progress as per Nesma Airlines procedures.
- Make boarding announcements.
- Follow Nesma Airlines policies for passengers requiring assistance or pre-boarding.
- Verify each passenger's identity as per requirements.
- Cross-check the name on the passenger identity document with the one on the ticket, and visually match the passenger with the photograph.
- Confirm each passengers boarding acceptance in the DCS before allowing them to board.
- For manual or non-automated boarding, check the flight number and date on the boarding card.
- Apply the cabin baggage policies of Nesma Airlines, and account for any gate tagged items.
- Secure the flight by matching the checked-in passengers to the boarded passengers.
- Provide final passenger numbers to cabin and/or fight crew.

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- Provide required flight documents to cabin and/or flight crew.
- Advise ramp staff and/or load control of the gate baggage to be loaded.
- Ensure communication with load control about passenger and/or baggage information, as per Nesma Airlines policies.
- Send required post-flight messages upon flight close-out.
- Embarkation and Disembarkation procedures must meet the main objectives of moving passengers as efficiently, safety, and quickly as possible from the departure lounge to the aircraft cabin.
- Before disembarking or embarking, passengers' steps must be in position. The step between steps and aircraft should not be too high and the steps should be against the aircraft.
- When an aircraft is parked away from the terminal, the passengers must be transported in buses. In very exceptional cases, when the aircraft is parked close to the terminal and when permitted by local regulations, passengers may walk across the ramp area to / from the aircraft. This procedure needs accurate supervision, where it comes to safety matters.
- Remark: During refueling the Weight of the aircraft increases and the shock absorbers settle down. In consequence the bottom of the door may touch the steps and may be damaged.

3.15.1 Embarkation

It is the responsibility of the station staff to ensure that:

- Flight number / boarding time are clearly mentioned through the airport FIDS and at the boarding gate.
- There is smooth communication with cabin crew on when to commence the boarding process.
- Clear announcements are made (including in local language).
- Gate staff is well prepared for flight to depart.
- Passengers requiring special attention are given all necessary assistance they need.
- Correct boarding sequence is adhered to.
- Boarding starts on time in order to have On Time Performance.
- All security and safety procedures are implemented.
- All necessary documents are produced and delivered on board.
- Passenger transport on apron is provided, if necessary.
- Aircraft door is closed on time.

3.15.1.1 Embarkation Procedures and Timings

Announcements:

The following announcements should be made in the local language, and English:

- Pre-boarding announcements for passengers with small children and those needing assistance.
- Normal boarding announcements.
- Call for missing passenger(s), if necessary.
- Final call, if necessary.
- In case of delay, route change, cancellation of a flight, change of aircraft, inform the passengers as soon as possible (make at least an announcement at the reporting time mentioned on the boarding pass) and keep them updated, also advice cabin crew about announcements (to be) made.

Boarding Sequence:

Issue No.: 09

Revision No.: 00

Issue Date: Jan24

Revision Date: Jan24

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- Incapacitated passengers, passengers with small children, and passengers who need assistance.
- Transit passengers at intermediate stops
- The rest of passengers.

Note: According to the actual circumstances, such as availability of medical lift vehicle if required, it is at the discretion of the airline representative to decide whether passengers such as UM and those needing WCHR, should be boarded first or last.

Control:

- If applicable, collect and count the Transit Boarding Passes first.
- Collect the boarding pass stubs and make a total count, total on board (TOB) must match the number of checked-in passengers (including Transit Passengers).
- Report to load control any large groups, which are seated in the same cabin section, and where the individual weights are obviously above (e.g. adults) or below (e.g. children) average. This is to prevent any flight safety risk caused by weight and balance problems.

Gate No Show:

- If a locally checked-in passenger or transit passenger does not show up at the gate, advice crew and load control, offload the baggage concerned and cancel any through check-in records.

Documents:

- Ensure all documents to be handed over to Cockpit and / or Cabin Crew are printed or manually prepared and legible.

Timings:

- Commencement of boarding (by jetty) = STD – 30
- Commencement of boarding (transport by buses) = STD – 40
- Door closure = STD – 5

Above timings are given as general guidelines and may be varied according local circumstances, Real time boarding should be decided, taking in account:

- The planned time at which the cabin will be ready to accept passengers (crew / cleaning / catering).
- The distance from the gate to the aircraft.
- Expected delays.

3.15.2 Disembarkation

It is the responsibility of the station staff to ensure that:

- Review pre-arrival information from DCS and/or messages.
- Prepare for Short connections if applicable.
- Gate staff is well prepared for flight to arrive.
- All security and safety procedures are implemented.
- Passenger transport on apron is provided, if necessary.
- Passengers requiring special attention are given all necessary assistance they need.
- Assistance is given to the passengers at the baggage claim area.

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3.15.2.1 Disembarkation Procedures

- Staff must attend at the gate or stand as each flight arrives.
- Local disembarkation procedures should be established at each airport. These need to take account of the local airport facilities, and the position of the parked aircraft relative to the gate.
- Passengers requiring special assistance should be disembarked either first or last (check incoming PSM).
- Connecting passengers, staff must be able to inform passengers about their connecting flights. Passengers with short connections should be personally assisted and prior arrangements for quick transfer must be made.
- Every possible assistance should also be given at the baggage claim area.

3.15.3 Disembarkation and Embarkation Transit Flights

Transit Passengers Disembarking:

- Ground staff must prepare the same number of boarding cards as mentioned on the Load Message (LDM) including infants.
- Announce passengers arriving at their final destination should disembark first, transit passengers should disembark last.
- Where transit passengers are to disembark, they should be advised (via the announcement which the crew is asked to make) to take all hand luggage with them. In stations, where the local security department allows passengers to leave personal items on board, these may only be left in the overhead bins. This personal items may never remain on the seat or in the seat pocket. This to enable quick and thorough cleaning.
- Transit passengers must be clearly advised at what time and what gate they should report to re-board.
- Each disembarking transit passenger must be given a Transit Boarding Pass when entering the airport terminal. In case some passengers stay on board, the number of passes issued must reconcile with the number of passengers remaining on board.
- Transit passengers should be called to re-board before the joining passengers. Advise them to re-take their personal seats.

Transit Passengers Remaining On board:

- When all or any of the transit passengers remain on board, at least some of the cabin crew must remain with them.

Boarding Transit Passengers:

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

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3.15.4 Circulation on Apron

Transport by Bus:

- If embarkation / disembarkation is not possible via a jet way and the distance to the aircraft, weather conditions, or airport regulations require passengers to be transported by buses, the NESMA AIRLINES representative must arrange for suitable buses to be available at boarding time and upon arrival.
- The passengers must be accompanied to the aircraft by a ground staff.
- Avoid having passengers staying in buses for a long time, especially under extreme weather conditions.

Walking to / from the Aircraft (if permitted by local regulations):

- Ground staff shall conduct the passengers to / from the aircraft as a group.
- Avoid all spots which may cause incidents (e.g. Oil, Water, Wing Tips, Dangerous Engine Areas, etc...).
- Avoid having passengers on the apron, especially under extreme weather conditions.

Additional Safety Precautions:

- Under no circumstances, passengers are allowed to smoke in buses, on the apron, or in the vicinity of the aircraft. This is because of fuel fumes at airport environment.
- Never leave passengers unattended during the transport or walk to / from the aircraft.
- Passengers must be conducted straight to / from the aircraft. They are not allowed to walk around on the apron, or around the aircraft.

3.15.5 Passenger Boarding Discrepancies

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

- a) Make every attempt to locate missing passengers and obtain visual proof of boarding and verify documents if the missing passengers are found to be already onboard the aircraft.
- b) Apply Nesma Airlines SOP and government regulations with respect to the removal of checked baggage of passengers who checked in but failed to board.
- c) Notify crew and load officer of any last minute changes to passenger and/or baggage load.

3.15.6 Boarding in case of DCS Breakdown

Where no DCS is available or in case of DCS failure, apply manual boarding procedures.

Ensure the final checked-in count matches the boarded passenger count prior to door closure, then prepare and board a final manifest.

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3.16 Security Checks

3.16.1 General

It is recommended that under **normal conditions** the following actions are taken:

- Screening of deportees and prohibited immigrants to establish if they are likely to be a danger;
- Briefing of escorts with prisoners and mentally ill persons, to ensure they know what to do in the event of an emergency;
- In-flight and transit security procedures to be checked;
- Staff trained to observe characteristics or potential hijackers;
- Secure boarding passes including transit cards and hand baggage tags.

It is recommended that under **extreme conditions** the following actions are taken:

- Keep passengers under surveillance between check-in point and boarding gate;
- Consider boarding passengers through one aircraft door only, to facilitate surveillance;
- Identify passengers by cross check with passport or other acceptable ID document, at the boarding gate;
- Transit and interline passengers to be included;
- Mark passenger's name on boarding pass to enable cross check to be made as above;
- If passenger head count is at variance with boarding passes issued, or with passenger coupons lifted, resolve before aircraft departure;
- Segregate interline and joining passengers from through passengers and check at gate on re-boarding;
- institute system of identification to defeat "gate no-show" passengers;
- Where passengers are disembarked at transit stops, through passengers should also be disembarked to facilitate search of aircraft after cleaning;
- If a suspect is refused carriage other operators at that airport to be advised accordingly.

Important Rules:

- The passenger and his / her baggage must travel on the same aircraft.
- The baggage of passengers who do not show up at the gate must be offloaded.

Passenger / Baggage Reconciliation:

- It is the responsibility of the station staff to ensure that the correct amount of passengers boarded the aircraft and that the count of the total onboard
- (TOB) before departure tallies with the count of the Passenger Manifest and Load / Trim documents.
- In DCS stations, where Gate Readers are available, boarding passes are processed automatically in the system.
- In DCS stations, where no Gate Readers are available, all boarded passengers must be entered in the system by their security or seat number.
- In manual stations, a Serial Number Tally Sheet or a Seat Plan must be used to reconcile.
- Confirm TOB with CSD (Cabin Service Director).
- If any TOB discrepancy, immediate action and investigation is needed to ensure safety and to avoid unnecessary delays.

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- In case of missing passengers :
 - Retrieve the passengers' file or record and establish pieces / weight of baggage plus tag numbers.
 - Check to see if the passenger is TCI, if so, confirm arrival on inbound flight.
 - Forward these data to the ramp agent who must start to trace bag(s).
 - Page the passenger by name using the announcement system.
 - Double check the count to ensure that no mistake was made during the boarding process.
 - Check passengers' seat on aircraft to see if he / she has in fact boarded without the boarding pass being retrieved.
 - Check immigration / custom / duty free / restaurants / lounge areas.
 - Offload bags if passenger finally does not board the flight.
 - Liaise accurately with crew during the whole process.

Headcount:

- In case a passenger is missing at the gate, ground staff will ask the crew to check the seat and to page the passenger, in case the passenger is not located, crew may be asked by ground staff to do a headcount.
- A headcount is mandatory in cases where transit passengers remain on board during a transit stop.

Baggage Identification:

- In the event of TOB discrepancies, the pilot in command (PIC) may decide that every piece of baggage must be identified by its passenger.
- Therefore, all baggage will be offloaded from the aircraft and passengers shall be asked to indicate their checked-in pieces of baggage, which should be cross checked with claim tag numbers attached to the ticket.
- Only the positively identified bags will be loaded on the aircraft.
- The non-identified bags remain at the origin station.
- The procedures of Baggage Identification is time consuming and will in most cases cause delay on the flight, but this procedure may sometimes be necessary in order to ensure flight safety (especially in times of high political tension in certain countries / areas).

3.16.2 Security of Documents

3.16.2.1 Boarding Passes, Transit Passes and Baggage Tags

All materials used for passenger and hold baggage processing (e.g. boarding passes, baggage tags, Flight information Manifest (FIM), vouchers, stamps) shall be protected or under surveillance at all times to prevent unauthorized access and use.

3.16.2.2 Disposal of Printed Documents

Print material such as boarding passes, passenger lists and handling forms may have reprinted. Dispose of the original of these documents according to data protection rules, as they contain passenger data.

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3.16.2.3 Information Security

The DCS shall be controlled to prevent unauthorized access.

- a. Follow Airport procedures to prevent unauthorized access to and use of un-issued (blank) boarding passes.
- b. Before leaving the counter, remove boarding passes and baggage tags from the printers or lock them.
- c. Before leaving the counter, sign out, log off and lock the system.
- d. Observe regulations concerning the usage of sign-ins and passwords.

3.16.2.4 Restricted Areas

Secure all gate and departure areas by keeping doors closed.

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

3.17 Passenger Suitability for Travel

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

Further question may be required to assist with passenger assessment:

- a. When you identify a potential problem passenger, notify your supervisor.
- b. The supervisor will contact the appropriate local authority for assistance.

3.18 Security of Passengers and their Baggage

Its responsibility of supervision staff to ensure all security threats are immediately reported to Nesma Airlines, flight crew and applicable authorities as per local requirements and Nesma Airlines Security procedures,

Apply Nesma Airlines Security procedures and policies and/or regulatory/airport authority security procedures for the handling of passengers and their baggage in the event of

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

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3.19 Passenger Arrival

3.19.1 Pre-Arrival

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

- a. Arrange facilitation for passengers requiring assistance (e.g. UMNR, PRM)
- b. Check requirements for any gate delivery mobility aids.

3.19.2 Arrival

- a. Prepare passenger boarding bridge, ensuring it is free of debris and positioned as per the standard height of the aircraft type.
- b. Secure disembarkation route for passengers. If passengers are required to walk across the ramp, they shall be supervised.
- c. Disembark passengers in accordance with Nesma Airlines disembarkation procedure.
- d. Provide assistance to passengers requiring it. Communicate any delays in providing assistance.

3.20 Programmed Aircraft Change En Route

- Advise Cabin Crew that all transit passengers must disembark with their carry-on baggage.
- Distribute transit boarding passes (or instruct passengers to retain their original boarding pass) and inform passengers about boarding time and gate as well as available facilities.
- Provide passenger assistance as required.
- In case of change of configuration, assign passengers new seat numbers if applicable, or apply free/open seating.

3.21 Flight Closing

3.21.1 Weight / Zone Transmission to Load Control

- To enable load control staff to produce the necessary documents (load and trim sheet) on time, check-in staff must endeavor by all means to :
 - Close check-in on time.
 - Forward passenger / baggage breakdown (as indicated below) as soon as possible.
 - Minimize LMC passengers (= Last Minute Change).

3.21.2 Passenger Breakdown

- When check-in is finalized, Passenger Breakdown has to be transmitted to the load control as soon as possible (for load / trim sheets purposes).
- The breakdown must be produced as follows :
- Males/Females/Children/Infants.
- In DCS stations, these final figures are produced automatically by the system.
- In manual stations, the breakdown has to be prepared manually according to the Passenger Manifest and the flight coupons. Flight coupons must be segregated and counted accurately in order not to have any discrepancies. The form (Pay Load Information To Captain)
- In addition, manual stations must advise load control about the "Zone Division" (= number of passengers in each Zone of the aircraft), this to enable load control staff to produce the correct load and trim sheets.

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3.24.3 Baggage Breakdown

- When check-in is finalized, Baggage Breakdown has to be transmitted to the load control staff as soon as possible (for load / trim sheets purposes).
- In DCS stations, these final figures are produced automatically by the system.
- In manual stations, the breakdown has to be prepared manually. Normally Baggage Services will forward the total weight and number of pieces of the checked-in baggage.

Note: For flight safety reasons, check-in agents must always mention the actual Baggage Weight on:

- The flight coupon.
- In DCS.
- The passenger manifest.

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3.21.3 Passenger Information List (PIL)

- The PIL shows details about passengers who actually check-in at a particular station.
- The PIL enables the crew on board to provide the required service.
- On multi-sector flight, PIL will be put on board at each station.
- Automated check-in systems will automatically produce a PIL, based on check-in records, when the check-in is finalized.
- Manual stations must complete a manual PIL based on the information shown on the PNL and gathered during check-in.
- On the PIL following must be listed :
 - VIPs / CIPs.
 - Deportee Accompanied with Escort (DEPA).
 - Deportee Unaccompanied (DEPU).
 - INAD information.
 - Those who have requested Special Meal.
 - Sick or Disabled passengers (WCHR, etc....).
 - UMs / YPs.
 - All MAAS passengers.
 - Tour leader of groups.
 - Staff Travel passengers.
 - Deadhead crew.
 - Pet carried on cabin.
 - Show the passengers' name / seat number / destination.
- The PIL or equivalent must be produced in 4 copies distributed as follows :
 - 3 copies to Purser.
 - 1 copy to the station file.

3.21.4 Post-Flight Departure Activities

The following messages must be sent immediately after flight departure to next down line station:

- Passengers Messages :
 - TPM (Tele-Type Passenger Manifest).
 - PSM (Passenger Service Message).
 - PPM (Passenger Protective Message).
 - ETL(Electronic Ticket List).
 - SOM* (Seat Occupied Message).
 - LDM (Load Distribution Message).
 - ETD* (Estimated Time Departure).
 - MVT (Movement Message).

(*) means only if applicable.

- In DCS stations, all reports / messages are system produced.
- In Non-DCS stations, all reports to be sent manually except PFS and TPM.

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3.22 Procedures In Case Of Operational Irregularities

General

Irregularities will cause inconvenience to passengers, therefore every effort must be made to minimize the inconvenience they might cause and to keep in such instances the passengers goodwill towards Nesma Airlines. When dealing with claims, the handling agent must not make any statements committing Nesma Airlines, their employees or agents to any liability. Even the most moderate verbal promise may be of prejudice to Nesma Airlines.

“Operational Irregularities” are all the events that have an influence on the regularity of a flight or the services offered to the passengers, such as:

- Delayed flights
- Cancelled flights
- Route variations
- Diversions
- Station omissions
- Missed connections
- Change of aircraft-type and/or aircraft
- Lack of seats on the chosen flight

Nesma Airlines OCC is responsible of the collection of all operational information.

As a guideline, following points are recommended:

Passengers should be informed on real cause of delay and entity if known,

Information to Passengers shall be updated at time intervals not exceeding 30’,

Delay up to 60 minutes

The handler must inform passengers about delay reason and update flight information system of the airport (FIDS),

Delay more than 01:30 and Up to 02:00 Hours

Passengers are provided with Soft Drinks and Water, as they chose.

For Europe we give voucher amount.

From 02:00 to 03:00 Hours

Passengers are provided with Soft Drinks and Snack (One Sandwich + Cake)

For Europe we mention the voucher amount.

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From 03:00 to 06:00 Hours

Passengers are provided with:

For breakfast times: 2 Sandwich + 1 Sweet + 1 Drink + 1 Garnish.

For Lunch – Dinner: Full Hot meal.

For Europe we mention the voucher amount.

From 06:00 Hours and Above

Passengers are provided with suitable Hotel Accommodation with Hot meal, including transfer to/from airport. It is important that a tour operator rep and personnel from NESMA station stay with passenger to keep them up to date about the operation situation.

Please note that a written authorization from NESMA OCC is requested before offering any type of refreshment.

Refreshment/Meal Voucher

In case of delays ascribed to NESMA longer than two hours, and also in consideration of the actual time on which delay is occurring, Handling Agent Staff may offer refreshment / continental breakfast / sandwiches / snack / lunch or dinner at the airport bar/restaurant. Staff is requested to keep the copy for internal files; the first coupon will be given to the passenger for his/her use at the bar/restaurant.

Important Note: It is understood that official approval BEFORE offering this service MUST BE ALWAYS REQUESTED and OBTAINED by NESMA OCC.

Information

Lack of information about any irregularities and feeling of having been abandoned by the airline are generally the major reasons for passenger's complaints. Consequently, as soon as the occurrence of an irregularity is known, an announcement must be made. For charter flights the Tour Operator local representative or guide shall also be advised immediately. The reason for irregularity must be clearly, although briefly, stated. The expected extent of the delay should be given. If this is not known, the phrase "next information in minutes" must be used instead. The term "indefinite delay" is to be avoided in all cases. Further announcements at regular intervals and personal contacts between handling agent and tour operator and passengers should keep the latter aware of the arrangements made for them, the estimated time of departure and, in general the progress of the irregularity. All stations concerned with the operation on any particular flight must be informed immediately by delay message, especially the estimated time of departure must be updated periodically. The PIC must be informed before boarding about the content of the announcements made to passengers.

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Chapter 04 Baggage Handling

4.1 General

- Baggage means 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 / her trip.
- Nesma Airlines is not liable for damage to fragile or perishable articles, money, jewelry, silverware, valuables, samples, cameras, diving equipment, and surf board.
- Baggage handling is very important for comfort of our passengers following points must take place to avoid mishandling - misrouting and damage of baggage:
 - Make sure that the baggage is correctly tagged as per the flight and destination.
 - Secure that name labels are stocked on the baggage.
 - Re-check and confirm destination.
 - Use limited release tags for unsuitable, damaged or frigate baggage.
 - Secure that every passenger must carry his own bags.
 - Pay attention to heavy hand bags during boarding.

4.2 Normal Baggage

The free baggage allowance for checked and uncheck baggage is determined by the ticket fare paid and not by the class actually traveled.

4.3 Hand Baggage / Carry-on Items

Cabin Baggage: is baggage that is carried and stowed in the cabin under the passengers control and custody, its commonly referred to as hand baggage, carry-on baggage or uncheck baggage.

- Each item carried in a cabin must be stowed in a location that is capable of restraining it.
- Weight limitations placard on or adjacent to stowage must not be exceeded.
- Under seat stowage must not be 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.
- Items must not be stowed in toilets or against bulkheads that are incapable of restraining articles against movement forwards, sideways or upwards unless the bulkheads carry a placard specifying the greatest mass that may be placed there.
- For reasons of safety and comfort no carry on item should measure more than 45 x 35 x 15 cm. Weight not to exceed 7 kgs.
- Baggage placed in lockers must not prevent doors from being closed securely.
- Baggage must not be placed where it can impede access to emergency equipment.
- Item carried in passenger or crew compartment (e.g. hand baggage of crew or passenger, each item of galley equipment, each serving cart not in use, any medical or other apparatus providing in flight medical aid for a passenger) shall be secured in such a way so as not to become hazard by shifting under the appropriate load factors corresponding to the ultimate inertia forces specified in the emergency landing condition of type certification.

The secure stowage of hand baggage could be obtained in case the following is crosschecked:

- Limits of inference.
- The permissible size.

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- The weight of the hand baggage.
- These limits vary of course each aircraft type / cabin layout combination. The company and its handling agent(s) shall brief passengers at check-in by means of placards / posters, or orally, upon the maximum size and weight of hand baggage.
- When boarding is in progress, ground staff and crew members shall visually scan the hand baggage held by passengers. In case check-in personnel were bypassed, and such baggage exceeds the allowance, politely deny the passenger access to the aircraft until such baggage has been given up to be stowed in the cargo compartment or suitable place outside of the aircraft's cabin.
- In exceptional cases, a passenger is prepared to pay for an extra seat in order to carry extremely valuable baggage (e.g. antique musical instruments, works of art etc...). Acceptance is only permitted if the safety and comfort of other passengers will not be impaired and if the size of such baggage permits it to be secured on the seat in such a manner as to prevent movement forward, sideways or upwards under crash impact sufficient to induce the ultimate inertia forces specified in the emergency landing condition of type certification.
- In addition to the one piece of hand baggage, the following items will be carried free per passenger:
 - 1 overcoat wrap or blanket.
 - 1 small lady's handbag or small wrist bag or small bag with shoulder –strap.
 - 1 umbrella or walking stick.
 - 1 small camera and / or binoculars.
 - 1 infant's carrying basket or FAA approved baby seat / or baby stroller or push buggy, but only in cargo compartment.
 - A reasonable amount of reading material for the flight.
 - For an infant, infant's foods for consumption during the flight.
 - For an incapacitated passenger dependent upon 1 wheelchair (cargo compartment), or 1 pair crutches, or self-operated dialectic equipment, or other prosthetic device.

4.4 Checked Baggage

Checked baggage: is baggage for which the carrier takes custody and issues a baggage Tag, Nesma Airlines may refuse to carry Checked baggage that is inadequately packed or unsuitable for air carriage due to its weight, size or nature.

4.4.1	Checked	Baggage	Allowance
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Nesma Airlines adopt weight concept measured by the total weight of checked baggage, which is shown on weight amount on the ticket.

4.4.2 Standard Baggage Check-in

Accept Checked baggage that is appropriately packaged and labeled with passenger identification.

- Ensure dangerous goods notifications are on display.
- Review weight and pieces for recording on DCS against Passenger ticket.
- Security questions shall be displayed and asked to passengers.
- Accurate numbers of pieces and weights recorded to DCS to finalize payload information to PIC.

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4.4.3 Bags Tags

- Remove all old Tags
- Apply appropriate destination and handling tags.
- Place tags in easily readable location and where they will not easily be torn off.
- Use limited release Tag if required.
- Nesma Airlines policies and procedures regarding supplementary tags on baggage items, such as Priority Tag-to identify priority baggage to be offloaded first and to be segregated from other baggage, Limited release tag- used on fragile or unsuitably packaged items, Fragile Sticker for items need extra care in handling, Heavy Tag-placed on items over 23KG, Connection tag if required.
- Bag Tag should be marked with passenger first stop over.
- Apply sorting and loading procedures for containers and cards based on above mentioned classification.

4.4.4 Baggage Destination

Through-label baggage to one of the following points, whichever occurs first:

- The first stopover point of the passenger.
- The point to which transportation has been confirmed OK in ticket, requested RQ in ticket or listed SA in ticket.
- The point where a change of airport is involved.
- The final destination specified in the ticket, including any tickets issued in conjunction with this ticket.
- Make sure that Minimum Connecting Time (MCT) is respected.
- Unless subject to specify agreement between airlines, through check in baggage on separate tickets is prohibited.

4.5 Excess Baggage

- Excess baggage charges should be applied when any passenger exceeds his / her baggage allowance which is written on his / her ticket.
- The excess baggage charge rates are being issued by Nesma Airlines in a separate Check-in Sales form, please request it from ground.handling@nesmaairlines.com.

4.6 Restricted Articles as / in Baggage

- Restricted Articles as defined in the IATA Restricted Articles Regulations such as those listed below shall not be accepted for carriage even if within or part of the passenger baggage.
 - A. Briefcases and attach cases with installed alarm devices.
 - B. Compressed gases (flammable, non-flammable, and poisonous)
 - C. Such as camping gas.
 - D. Corrosive materials such as acids, alkalis, and wet cell batteries. d- Etiologic agents.
 - E. Explosives, ammunitions, firearms, fireworks, flares.

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- F. Flammable liquids and solids such as lighter or heating fuels, matches, and articles which are easily ignited.
- G. Irritating materials.
- H. Magnetized materials.
- I. Oxidizing materials such as bleaching powder and peroxides.
- J. Poisons.
- K. Radioactive materials.
- L. Other restricted articles such as mercury or noxious materials as listed in the "IATA Restricted Articles Regulations".

4.7 Specific Items / Articles as / in Baggage

- The following items are occasionally carried by passengers as / in baggage, these items must be accounted against the passenger's free baggage allowance.

Ammunition

Only small caliber ammunition for hunting and sporting guns in small quantities may be carried as checked baggage (never as / in hand baggage).

It must be securely boxed e.g. original packing.

Arms

Arms and any items which can be used as weapons must not be permitted to be taken into the cabin. Passengers may carry hunting or sporting arms exclusively as / in checked baggage which must be loaded in the cargo compartment. The arms must be unloaded and packed in an unbreakable container e.g. original gun case. Passengers have to observe all regulations for the import and transit of arms and weapons for the transit as well as destination country.

Exception:

Bodyguard upon arrival at the aircraft, the bodyguard has to hand-over his weapon unloaded and secured to the captain, and it is up to the decision of the captain where the weapon has to be located during the flight either cockpit or hold.

Batteries

Wet cell batteries will not be accepted for carriage as baggage whether checked or unchecked.

Battery driven

Carriage only permitted with dry battery or non-spoilable type

Wheelchair

with battery, in this case, cables must be removed; battery and battery contacts must be insulated. Non-spoilable type of battery is filled with a jelly type electrolyte or wet cell battery with specially designed filling and venting devices mounted on the filler holes which completely prevent any leakage.

Bicycles

Accepted as checked baggage. For loading:

- Pedals must be fumed inside.
- Handle must be fumed-in parallel to frame.

Oxygen

Providing oxygen supply to a passenger's empty bottles will

Apparatus

Only be accepted as checked baggage.

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Nesma Airlines will provide oxygen supply to the passenger during the flight if the passenger has this requested via the tour operator to NESMA Airlines.

Television Sets TV's may in principal be accepted as checked baggage but due to risk of implosion must properly be packed in unbreakable packing e.g. original trade packing.

Skin diving Compressed air bottles (including spare bottles) will only be

Equipment accepted as checked baggage when completely empty. The passenger shall be requested to demonstrate this by opening the valve.

Wheelchair Accepted as checked baggage for a passenger dependent upon it, and it will be carried free of charge.

Note: Do not operate portable radio receiver, telephone, compact disk player etc... In the cabin during flight.

4.8 Baggage Handling

4.8.1 Baggage Room Preparation

The Baggage room must prepare a sufficient and pre-determined number of baggage carts in accordance with the expected passenger load for a flight.

4.8.2 Baggage Sorting

Apply sorting and loading procedures for baggage carts based on Nesma Airlines policy with respect to checked items tagged as:

- Priority baggage
- Heavy baggage
- Fragile Baggage
- Sporting equipment
- Mobility Aids or devices
- Crew baggage
- Strollers
- Items with limited release tag.

4.8.3 Baggage Cut-Off and ULD Load Verification Process

Once flight has been closed for check in, the baggage room lead or the baggage supervisor will:

- Review total pieces for each ULD.
- Pass on all baggage ULD figures, including baggage counts for each container and total ULD Numbers so that the total load summary can be prepared.
- Conduct a baggage room sweep to ensure there are no left behind bags, if baggage is left behind, report Station Manager and messages shall be to destination till expedite baggage.

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4.9 Removal of Checked Baggage

To remove checked baggage shall obtain the name, security number and number of pieces of baggage requiring removal, refer to electronic records or the bingo sheets to identify the ULD where the baggage is in offload.

Once the baggage is removed, local security procedures shall be adhered.

4.10 Transfer Baggage - Special cases

Not Applicable on Nesma Airlines flights.

4.11 Baggage Security

Refer Chapter 09

4.11.1 Security Removed Items

Items not permitted in hand baggage that are removed by security personnel may only be accepted in checked baggage,

4.12 Special Baggage

4.12.1 Bulky and Oversized Baggage

4.12.1.1 General

Baggage is considered bulky/oversized as defined by Nesma Airlines its weights exceeds 32kg (70lbs).

4.12.1.2 Maximum Single Item Weight

Nesma Airlines determine a maximum single item weight for checked baggage that considers

- a) Any local legislation or health and safety requirements.
- b) Any other applicable limits for transfer baggage.

Specific rules apply for wheelchairs, musical instruments and large sports equipment.

4.12.2 Cabin Seat Baggage

4.12.2.1 Definition

Cabin Seat Baggage (CBBG) is baggage not usually suitable for loading in the aircraft hold. Such baggage may include:

- a) Musical instruments
- b) Works of art
- c) Electronic equipment
- d) Diplomatic baggage
- e) Valuable baggage

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Nesma Airlines dictate the acceptance of CBBG and if not accepted after checked by check in counter, it can travel as hold-checked baggage provided packaging is appropriate.

4.12.2.2 Loading and Lashing Cabin Seat Baggage

Nesma Airlines approved GSP are responsible for loading, securing and lashing bulky, oversized, fragile or valuable CBBG in the cabin.

- To be secured by a safety belt or restraint device having enough strength to eliminate the possibility of shifting under all normal anticipated flight and ground conditions;
- To be packaged or covered in a manner to avoid possible injury to passengers and cabin crew members;
- To not impose any load on the seats that exceeds the load limitation for the seats;
- To not restrict access to or use of any required emergency or regular exit, or aisle(s) in the cabin;
- To not obscure any passenger's view of the seat belt sign, no smoking sign or required exit sign.

Refer to cabin manual for more information CCM 2.7.1

4.12.3 Crew Baggage

Crew Baggage shall be presented at check in or airside and should be clearly identified with crew label as well as all flight details.

4.12.4 Limited Release Bag

4.12.4.1 General

Nesma Airlines implement limited release Tag for inadequate packaging baggage, perishable, late check in, not admissible for cabin and discovered at the gate by Nesma Airlines gate agent,

4.12.4.2 Handling

- a) Nesma Airlines reserved all rights to refuse baggage at any point as long as baggage not compatible with Nesma Airlines requirements.
- b) Limited Release Tag divided into 03 parts, 01 large part to be placed on Baggage , small portion to be stored on Bingo Sheet and last part to be presented to passenger.
- c) Limited release tags shall be stored and kept as same as Nesma Airlines all material in secured place with limited access to Nesma Airlines Staff.
- d) Nesma Airlines representative shall be responsible for Limited release tags and approval to accept such bags,
- e) Baggage which labeled with Limited release tag shall be subjected to all security measures as same as Checked baggage.
- f) All data on Limited release tag shall be completed accurately.

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4.12.4.3 Limited Release Tag Sample

 LIMITED RELEASE NE 01/01/09	<p>PLANE OR AIRCRAFT NUMBER: <input type="checkbox"/> PERSONAL <input type="checkbox"/> LUGGAGE <input type="checkbox"/> AIR CARGO <input type="checkbox"/> AIR MAIL <input type="checkbox"/> SECURITY GUARDED <input checked="" type="checkbox"/> SPECIAL <input type="checkbox"/> NOT ASSIGNED TO CABIN <input type="checkbox"/> SEC.</p> <p>NAME: _____</p> <p>CHARTER/INTERLINE/TRANSPORTATION OR THE NAME OF THE AIRLINES WHICH OWNED THE PLANE THAT IS BEING RELEASED FROM THIS AIRPORT OR THE AIRPORT OF DESTINATION OR THE AIRPORT OF ORIGIN OR THE AIRPORT OF TRANSFER OR THE AIRPORT OF THE AIRLINES WHICH OWNED THE PLANE THAT IS BEING RELEASED FROM THIS AIRPORT OR THE AIRPORT OF DESTINATION OR THE AIRPORT OF ORIGIN OR THE AIRPORT OF TRANSFER</p> <p>TO: <input type="checkbox"/> AIRPORT <input type="checkbox"/> NE <input type="checkbox"/> VA <input type="checkbox"/> AIRLINE <input type="checkbox"/> US <input type="checkbox"/> OTHER <input type="checkbox"/> N/A</p> <p>SIGNATURE: _____</p>	 LIMITED RELEASE NE 01/01/09
		 LIMITED RELEASE NE 01/01/09 DATE: 01/01/09 FROM: _____ TO: _____

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4.12.5 Sporting Equipment

Sporting Equipment shall be accepted on Nesma Airlines flights according to Check In- Sales Chart

Which updated by Nesma Airlines Ground Handling Department and disseminated to all stations to be showed on Check in Counter.

4.12.6 Wheelchairs and Mobility Aids

4.12.6.1 Handling Wheelchairs/Mobility Aids

In order to prevent damage to aircraft and to ensure flight safety, power driven wheelchairs or mobility aids shall be carried as checked baggage on passenger aircraft with the approval of Nesma Airlines, Wheelchairs or other battery-powered mobility aids powered by non-spill able wet batteries or dry batteries as specified in the IATA Dangerous Goods Regulations (DGR).

Apply the following in case of battery-operated wheelchairs and mobility aids:

- a) For a wheelchair or mobility aid with an installed battery, inform the pilot in command of the location.
- b) When the battery is removed the wheelchair or mobility aid, inform the PIC of the location of the battery.
- c) Stow and secure the wheelchair/mobility aid to prevent unintentional operation and ensure it is protected from being damaged by the movement of baggage.
- d) Ensure Load control are aware of the carriage of electrical mobility aids.
- e) A message shall be sent to the destination or transfer station to ensure the availability of the wheelchair to the passenger as soon as possible, the message shall indicate the passengers name and seat number and the location of the wheelchair and the battery, separated from the wheelchair.

4.12.6.2 Wheelchairs or other Battery Operated Mobility Aids

There are three main types of batteries used with wheelchairs or mobility aids devices:

Type of battery	Description
Non-spill able battery	Dry Battery (including integrated battery) Gel type Wet (sealed, non-spill able) battery
spill able battery	Wet battery
Lithium battery	Lithium ion battery

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4.12.6.3 Accepting Wheelchairs/Mobility Aids with Non-Spillable Batteries

Nesma Airlines GSP 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.

Pre-notification shall be required and acceptance shall be required, Nesma Airlines representative and staff shall verify that:

- a) The passenger has confirmed that the battery is a non-spillable wet battery that complies with special provision A67, or nickel-metal hydride battery or dry battery.
- b) Battery terminals must be insulated to prevent accident short circuits (e.g. by being enclosed within a battery container). The battery either:
 - 1. Securely attached to the wheelchair or mobility aid, and electrical circuits are isolated following the manufacturer's instructions. Or
 - 2. Removed by the user, if the mobility aid specifically designed to allow it to be, following the manufacturers instruction.
- c) A passenger may carry a maximum of one spare battery.
- d) Nesma Airlines loading agents shall ensure that any battery(ies) removed from the wheelchair/mobility aid or spare batteries are carried in strong, rigid packaging which must be carried with the cargo compartments.
- e) Nesma Airlines agents shall inform the PIC of the location of mobility aids which installed batteries, removed batteries and spare batteries.

4.12.6.4 Accepting Wheelchairs/Mobility Aids with Spillable Batteries

Wheelchairs or other battery powered mobility aids with spillable batteries, as specified in the IATA Dangerous Goods Regulations (DGR) as follow:

Nesma Airlines GSP 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.

Pre-notification shall be required and acceptance shall be required, Nesma Airlines representative and staff shall verify that:

- a) Battery terminals must be insulated to prevent accident short circuits (e.g. by being enclosed within a battery container).
- b) Battery is fitted, where feasible, with spill-resistant vent caps.
- c) Battery is either:
 - 1. Securely attached to the wheelchair or mobility aid, and electrical circuits are isolated following the manufacturer's instructions. Or
 - 2. Removed from the mobility aid following the manufacturer's instructions when the mobility aid cannot be maintained in an upright position.
- d) The mobility aid with spillable battery is loaded, stowed, secured and unloaded while maintaining an upright position.

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- e) 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, battery shall be removed.
- f) The removed battery must be carried in storage; rigid packaging as follow:
 - 1. Packaging must be leak tight, impervious to battery fluid and protected against upset by securing to pallets or by securing them in cargo compartments using appropriate means for securement (other than by bracing with cargo or baggage) such as restraining straps, brackets or holders.
 - 2. Battery terminals must be protected against circuits (e.g. by being enclosed within a battery container).
 - 3. Battery must be secured upright in the packaging and surrounded by compatible absorbent material sufficient to absorb its total liquids.
 - 4. Outside packaging must be marked (battery-wet-with wheelchair)
 - 5. Outside packaging must be labeled with (corrosive) label.
 - 6. Battery must not be loaded on the aircraft if not packed appropriately.
- g) Nesma Airlines agents shall inform the PIC of the location of mobility aids which installed batteries, removed batteries and spare batteries.

4.12.6.5 Accepting Wheelchairs/Mobility Aids with Dangerous Goods Regulations Lithium Batteries

Lithium-ion battery powered wheelchairs or other similar mobility aids as specified in the IATA DGR, as follow:

- a) The batteries must be of a type which meets the requirements of each test *UN Manual of Tests and Criteria, Part III, subsection 38.3*.
- b) Nesma Airlines GSP 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.
- c) Pre-notification shall be required and acceptance shall be required, Nesma Airlines representative and staff shall verify that:
 - 1. Battery terminals must be insulated to prevent accident short circuits (e.g. by being enclosed within a battery container). The battery either:
 - 2. Battery either:
 - I. Securely attached to the wheelchair or mobility aid, and electrical circuits are isolated following the manufacturer's instructions. Or
 - II. Removed by the user, if the mobility aid is designed to allow it to be, following the manufacturer's instructions. The battery removed from the mobility aid must not exceed 300Wh, or for more mobility aids fitted with two batteries, each battery must not exceed 106Wh.
 - d) A passenger may carry a maximum of one spare lithium ion battery not exceeding 300WH, or two spare batteries each not exceeding 160Wh.
 - e) Nesma Airlines Agents shall ensure that any battery removed from the mobility aid and any spare batteries are carried in the passenger cabin.

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- f) The removed or spare batteries must be protected from damage (e.g. by placing each battery in a protective pouch).
- g) Nesma Airlines agents shall inform the PIC of the location of mobility aids with installed batteries lithium battery or the location of the lithium battery when removed and carried in the cabin.
- h) Nesma Airlines agents shall inform the PIC of the location of mobility aids which installed batteries, removed batteries and spare batteries.

4.13 Handling of Pets

Nesma Airlines accept only PETEC on its flights after coordination and approval from destinations authorities.

4.14 Delivery at Aircraft

4.14.1 Applicability

As Nesma Airlines policies, apply the Delivery at Aircraft (DAA) procedure for:

- a) Fully collapsible baby strollers and pushchairs (large baby carriages/prams must be checked in)
- b) Wheel chairs and mobility aids that are not needed during the flight and cannot be stored in the cabin.
- c) DAA procedure shall not implemented on valuable items (e.g. laptop computers, large video cameras, important documents) as such items should remain with the passenger.

4.14.2 Procedure at Boarding Gate

GSP or Nesma Airlines supervisor shall ensure that the loading position of DAA and WCH are noted on the Load Message (LDM) under SI-Remark. Inform the flight crew of the number of DAA bags.

4.14.3 Procedure at Arrival

Upon Arrival, as per the LDM and/or crew request, unload the DAA items/baggage for delivery to the aircraft door.

4.14.4 Security Procedure for Ad-Hoc Disembarking Passengers

If a passenger disembarks, check if any DAA items/baggage have been loaded for the passenger. Where in doubt, perform full DAA Baggage identification.

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4.15 Lost and Found

4.15.1 General

- To give a good service in lost and found, do not delay any correspondence and get in contact with as much as possible.
- Deliver always correct information to the passenger.
- Always follow the regulations.

Note: While preparing the PIR do not forget to write the weight and contents of the lost piece.

4.15.2 Missing Baggage Procedures

- Use the standard Property Irregularity Report (PIR).
- Use the Baggage Identification Chart.
- Send a tracing MISSING message to all stations in the passenger's itinerary.
- Distribute PIR as follows:
 - Original copy for issuing station (Airline to follow-up).
 - 1st copy to passenger.
 - 2nd copy for issuing station (GHA in order to trace).
 - In any case of a loss of checked baggage, a Property Irregularity Report (PIR) must be completed, if not also complete PIR upon arrival but it will only be followed as courtesy.
 - All files must be followed - up by handling agencies only for one week. If the passenger's baggage is not found within one week. Handling agencies must hand over the file to the Airline with the following documents. The passenger must be informed that the search will be continued by Nesma Airlines until the second month of occurrence, also a PIR report must be filled up as well as the required documents must be attached to the PIR report.

PIR Report:

- It is a passenger claim letter comprising a list of missing items and value, and the following documents required to be attached:
 - Photocopy of the Ticket.
 - Photocopy of the passport.
 - Tracing messages.
 - Baggage identification tag(s).

4.15.3 Payment Procedures of Missing Baggage

- If after a period of one month the missing items cannot be located claim will be settled on the basis of legal liability 20 USD or equivalent for each kg.
- Payments will be handled by the station or via "Head Office Accounts Dept. ".

4.15.4 Damaged Baggage Procedures

- If a passenger's baggage arrives damaged, check first if the piece has already been checked-in damaged at the point of departure
- (I.e. Limited Release Tag will be stocked on the baggage), then Nesma Airlines is not liable for this.
- If the baggage has been damaged during the flight, a "Damage Pilferage Report "(DPR) must be completed upon arrival.

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- Distribute DPR as follows:
 - Original copy for issuing station (Airline to follow-up).
 - 1st copy to passenger.
 - 2nd copy for issuing station (GHA in order to trace).
- In case the suitcase can be repaired by the passenger he / she will get the costs for repair or a reasonable sum for the loss of value of his / her suitcase. Alternatively, the damaged suitcase can be replaced by a new one of equivalent current value, but if the statements of the passenger are doubtful, a specialized dealer must issue a written confirmation of the value and the degree of the damage.
- If a passenger files a claim after having left the airport he / she has to know that Nesma Airlines will not make any payments for the damaged baggage.

4.15.5 Payment Procedures of Damaged Baggage

*** Irreparable Damages:**

- If the suitcase is irreparable, the current value of the suitcase may be compensated. The current value has to be calculated according to the following formula:

Price - 20% from price for each year of age = current value, e.g. a two-year-old suitcase has cost 150 USD, then 150 USD - 60 USD = 90 USD to be paid.

*** Repairable Damages:**

- They are divided in two subparts:

Fist one: Minor damage:

I.e. broken wheel, broken handle, broken zipper. Nesma Airlines will pay up to 30 USD or equivalent currency.

This is valid also for hard plastic and leather baggage.

Second one: Major Damage:

I.e. torn of handle base, side or bottom torn. Nesma Airlines will pay up to 50 USD or equivalent currency.

This is valid for leather and winless baggage but not for hard plastic.

4.15.6 Found Baggage

- If a baggage with Nesma Airlines baggage tag for another destination has been found, then follow the following steps:
 - Send a telex to the LL-Office of the destination.
 - Tag the piece with RUSH Tag.
 - Forward it as soon as possible on the First available flight to the destination.
 - Send a forwarding message containing tag number, routing, and flight number(s) to the destination, also copy transfer station(s).

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- If unclaimed baggage with Nesma Airlines baggage tag for the station where the piece is found, or without a baggage tag has been found, then follow the following steps:
 - Tag the piece with RUSH Tag.
- If baggage has been traced:
 - Complete reverse side of Rush Tag for forwarding.
 - Send a forwarding message containing tag number, routing, and flight number(s) to the destination, also copy transfer station(s).
- In both cases, before loading, X-Ray the baggage first.

4.15.7 Pilferage

- If a passenger report items out of his checked baggage to be missing, then complete a Damage Pilferage Report (DPR) and sent a telex to origin destination.
- This must be done upon arrival, because if the passenger left the airport and then came back to claim, there is no liability.

4.15.8 Customs Clearance and Delivery

- If a lost piece of baggage arrives with RUSH tag at your station, notify the representative of the tour operator and the passenger immediately.
- If local authorities permit customs clearance, clear baggage immediately.
- After customs clearance, the baggage will be delivered to the passenger.
- If the passenger is not living close to the airport, delayed / lost baggage must be sent to the passenger with a taxi, a train, and post or cargo delivery after having an authorization from the related Nesma Airlines Station Manager.

4.15.9 Storage and Handling of Mishandled/Unidentified/Unclaimed Baggage

- Enter mishandled or unclaimed found baggage details into the tracing system.
- Hold such baggage in a safe and secure area where access is controlled.
- Make sure such baggage is subject to security controls before being loaded into an aircraft these controls could include a combination of:
 - Manual Search (Airport Authority)
 - X-Ray
 - Simulation chamber
 - Vapor or trace analysis
 - Delayed onward dispatch for 24 hours or more.

in addition:

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

4.15.10 Mishandled Mobility Aids

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

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- a) Provided a suitable equivalent loaned item or replacement as needed and as per Nesma Airlines policy.
- b) Arrange for the repair or replacement of the item,

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Chapter 05 Aircraft Handling

5.1 General

The **A320** are a subsonic, medium-range, civil transport aircraft.

ENGINES

Each aircraft has 2 high bypass turbofan engines, mounted under the wings.

COCKPIT

Both Cockpits are designed for a two-member crew. They also have a place for 2 observers.

CABIN

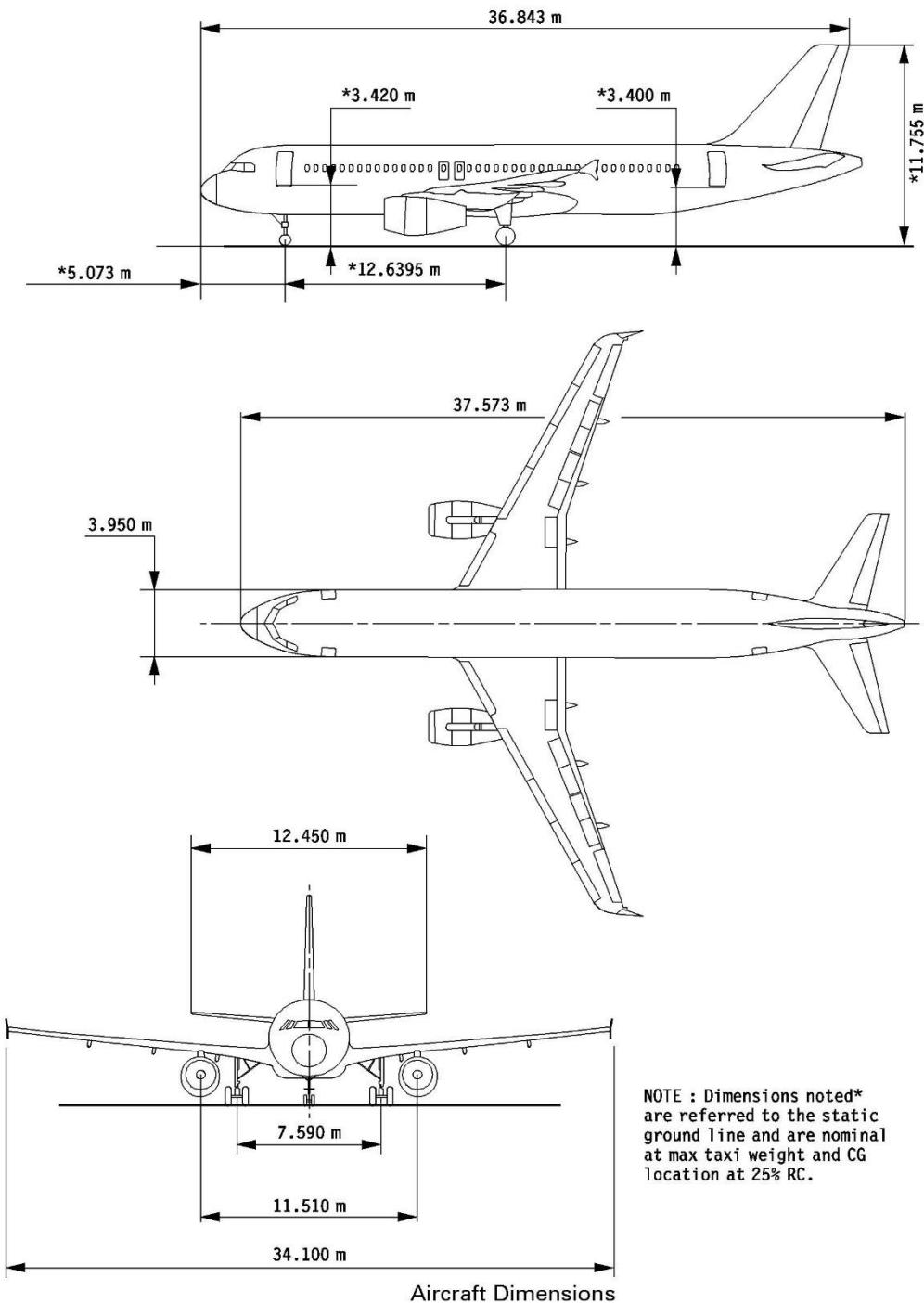
The passenger seating layout for A320 is 180 seats.

CARGO

There are 2 cargo compartments under the cabin floor.

5.1.1 Outside Dimensions

A320



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5.1.2 Aircraft doors

5.1.2.1 Opening Cabin Access Doors from Inside by Trained Crew

Ground Staff shall:

- Knock twice on the door from outside to indicate that Boarding devise is properly positioned outside a door to be opened and the door swing area is free of obstructions.
- Stand Clear of the door and wait for the cabin crew to open.
- Assist Cabin Crew with moving the door to the fully opened position and engaging the gust lock as applicable and necessary.

Responsibility

Principally cabin doors, i.e. passenger entrance and service doors should be opened by cabin staff on respective position or by trained and qualified staff from **outside**

- Two types of Passenger / Crew doors provided on the left hand side of the aircraft, and two types of Service doors provided on the right hand side of the aircraft.
- Doors are plug type opening outward.
- Doors can be operated from inside and outside. However, door opening shall not be from outside under any circumstances, and to be opened from inside only by Cabin staff after appropriate signals have been exchanged with Traffic / Technical staff to confirm start door operation from inside.

5.1.2.2 Embarkation or Disembarkation Through Cabin Access Doors

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

5.1.2.3 Closing Cabin Access Doors

- Make sure cabin access doors are closed immediately after servicing is completed.
- Receive confirmation from the crew that the cabin access door(s) may be closed for departure.
- Before removing the last boarding device from an aircraft, inform any ground staff onboard the aircraft that the last cabin access door is being closed and the last boarding device is being removed from the aircraft.
- Look for any possible obstructions around the door area and remove them.
- Make sure the door gust lock is released and assist crew closing the door by moving ajar position.
- The intention to remove the boarding device shall communicate to cabin crew, Don not remove the boarding device from the aircraft until the door is fully closed and locked.
- If stairs were used at a cabin access door, retract the stairs handrails if necessary to close the door. Remain at the top of the stair platform until the door is fully closed, and then descend the stairs before they are moved.

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- Doors shall be closed slowly and carefully in accordance with the instructions and markings labeled on the door and specific instructions for the aircraft type.
- Before leaving the vicinity of the door, confirm that the door is properly seated flush with the surrounding airframe and that the exterior door handle is flush with the surface of the door.
- Seek assistance from aircraft maintenance personnel or engineer on board any time a door malfunction occurs.
- Do not retract equipment stabilizers in advance of the cabin door being fully closed.
- Before retracting equipment from the door, check to ensure the maneuvering area is clear of all obstruction and personnel.
- If a passenger boarding stairs unit is used, retract the passenger stairs canopy. Move the equipment to its approved parking position and engage any applicable restraints.
- Visually inspect the cabin access door and the surroundings fuselage for signs of damage, particularly in any areas where the boarding device was in contact with the aircraft. If damage is discovered immediately report it to aircraft maintenance personnel, engineer on board and PIC.

5.1.2.4 Re-opening Cabin Access Doors

If a cabin access door is not closed, it must be reopened and re closed, Other operational situations when cabin access doors may need to be re-opened include the following:

- a- Subsequent delivery of catering and/or supplies, after the passenger boarding devices have been removed.
OR
- b- Re-connecting of passenger boarding devices after the initial removal.
- c- Once the cabin access door has been closed in preparation for departure, do not attempt to reopen any aircraft door without the authorization of the flight crew.
- d- If you believe a door must be reopened, you shall notify the flight crew through an open cockpit window or use the flight interphone system.
- e- If the crew requires a door must be reopened they will notify ground staff.
- f- If authorization to reopen the door is not granted, do not attempt to reopen the door unless clearance given by the flight crew.

5.1.2.5 Emergency Exits

- Two types of Emergency Exit doors are installed over the Wing Box on each side.
- Doors are plug type opening outward.
- Doors can be operated from inside and outside. However, door opening shall be from inside by Cabin staff and only in case of emergency.

5.1.2.6 Cargo Compartment Doors

5.1.2.6.1 Opening Cargo Hold Doors

- a. Do Not operate cargo doors unless trained and authorized.
- b. Manual operation of an electrically or hydraulically operated cargo door may only be performed by maintenance personnel or flight crew.
- c. Do not open the cargo doors until the aircraft engines have been shut down and the anti-collision lights have been switched off.

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- d. Before positioning loading equipment or any other GSE 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 maintenance personnel, engineer on board and the PIC.
- e. Open cargo doors in accordance with the specific instructions for the aircraft type.
- f. Allow adequate space for door clearance to avoid equipment obstructing the free passage of the door:

Nesma Airlines 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.

- g. If the cargo door will not open, do not use excessive force, tools or GSE to push or pull on the door to open it. Report maintenance personnel, engineer on board and PIC.

Responsibility

Cargo doors and lower compartment doors shall normally be operated by ground staff. If special training for operation of cargo and lower compartment doors is necessary (e.g. electrically, pneumatically or hydraulically operated doors) the handling agent is responsible for execution. In any case the operation of aircraft doors has to be demonstrated to the personnel concerned before it is allowed to do so.

- Two outward opening doors, power operated on the lower right hand side on the fuselage.
- This section contains weight and balance information relating to the flight crew, cabin crew and passengers.

5.1.2.6.2 Closing Cargo Hold Doors

- a) Do not operate cargo doors unless you have first been trained and authorized.
- b) Manual operation of an electrically or hydraulically operated cargo door may only be performed by maintenance personnel or flight crew. Before closing the cargo door, ensure that:
 - 3. Load restraint and door protection nets are properly fitted.
 - 4. Cargo compartment lights have been switched off.
 - 5. Door area, including the door sill and frame, are free of gravel, water, ice and other foreign substances or obstructions.
 - 6. Door and door frame show no visible signs of damage.
 - 7. Any damage discovered during the inspection of the cargo doors and surrounding areas/frames is immediately reported to aircraft maintenance personnel, engineer on board & PIC.
- c) Check the door lock indicators are engaged/properly, set as applicable, and the door properly locked, Handles are stowed flush and panels are properly closed.
- d) If a cargo compartment door is not closed properly, it must be reopened and re-closed.
- e) If a cargo door must be reopened prior to aircraft movement, approval from the flight crew via the ground staff responsible for the departure shall be obtained.

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5.1.2.6.3 Re-opening of Cargo Hold Doors

- a) If a cargo compartment door is not closed properly, it must be reopened and re-closed.
- b) Once pre-departure walk-around has taken place, do not attempt to reopen any aircraft door without the authorization of the flight crew.
- c) If you believe a door must be reopened, you shall notify the flight crew through an open aircraft window or use the flight interphone system.
- d) If the flight or cabin crew requires a door to be reopened, they shall notify ground staff.
- e) Regardless of which party requested that the door be reopened, if the flight crew gives clearance for the door to be reopened, Nesma Airlines procedures for opening Cargo hold doors shall be adhered.
- f) If authorization to reopen the door is not granted, do not attempt to reopen the door unless clearance is received from the flight crew.

5.1.3 Flight Compartment:

The flight compartment accommodates four occupants

- Two pilots (Captain and first officer),
 - Third occupant: located at the rear of the pedestal,
 - Fourth occupant: located to the left rear flight compartment.
1. The take-off and landing H-arm positions for the flight crew members are shown on the table below.

Cockpit Crew Seat Locations

NUMBER OF SEATS	CREW	H-ARM (m)
1	Captain	5.085
1	First officer	5.085
1	Third occupant	5.722
1	Fourth occupant	5.867

2. Flight Compartment Facilities

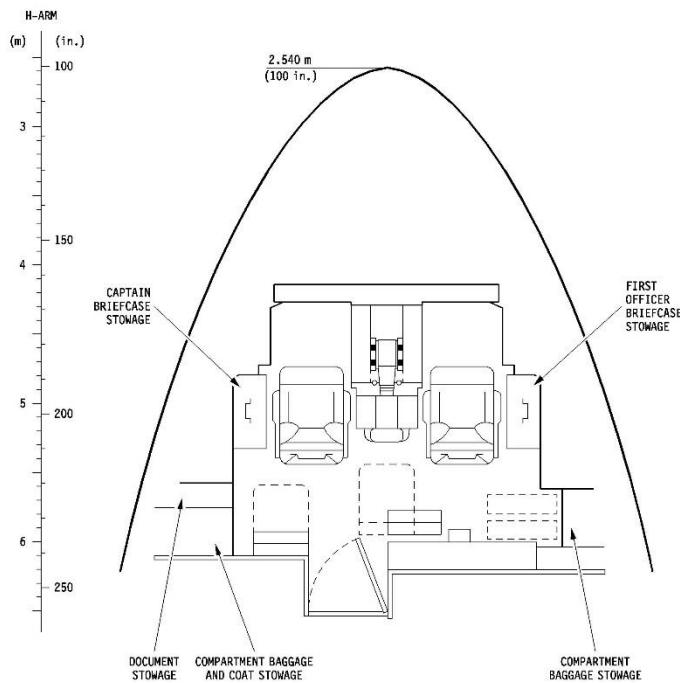
Facility	Location	Arm (M)	MAX. Load (kg)
Brief-Case Stowage	Left-Hand CAPT	5.000	12
	Right-Hand F/O	5.000	12
Document Stowage	AFT Compartment LH Side	5.700	12
Baggage Stowage	AFT Compartment	5.950 / 5.800	24 / 24

LH & RH side

3. Coat Stowage**A320** is provided at the rear Left-Hand side of Flight Compartment

LOCATION	H-ARM (m)	MAX LOAD (kg)
Aft compartment left side	6.052	2.0

A compartment for coats is provided at the rear left hand side of the flight compartment.

4. Crew Compartment Layout A320

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5.1.4 Passenger Compartment

A320: REG: SUNML/G

- Configuration 180 Y seats, or 04C/174Y
- Rows 12 / 14 (Over wing Emergency Exits).
- All Non – Smoking.

A320: REG: SUNMR

- Configuration 180 Y seats, or 08C/168Y
- Rows 12 / 13 (Over wing Emergency Exits).
- All Non – Smoking.

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5.2 Limitations

5.2.1 Weight Limitations

- Every aircraft has a certain weight limitation, printed on the manual load sheet to ensure it will not be exceeded, which are to be determined by the manufacturer. The weight limitations must never be exceeded.

Maximum Design Weights (in kilograms) for A320:

SU-NMG/SU-NML

Max Design Taxi Weight MTW77400 kg

Max Design Take-off Weight MTOW77000 kg

Max Design Landing Weight MLW64500 kg

Max Design Zero Fuel Weight MZFW61000 kg

REG: SUNMR Capacity 180Y, Configuration 08C168Y MTOW 77 Ton

Maximum Design Weights (in kilograms) for A320 SUNMR

Max Design Taxi Weight MTW77400kg

Max Design Take-off Weight MTOW77000 kg

Max Design Landing Weight MLW66000 kg

Max Design Zero Fuel Weight MZFW62500 kg

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5.2.2 Center of Gravity Limits

Design Center of Gravity Limits:

- These limits are maximum design limits, and should not be used for weight and balance purpose. For operational limits refer to latest edition from weight and balance data.

A320

A. Forward CG limits

A / C Weight (kg)	For take-off in % RC (landing gear, slats and flaps down)		For flight in % RC (landing gear, slats and flaps up)		For landing in % RC (landing gear, slats and flaps down)	
	BASIC	ALTERNATE	BASIC	ALTERNATE	BASIC	ALTERNATE
37 230	25	15 constant	23	13 constant	25	15 constant
to 53 000		15 linear variation		13 linear variation		15 linear variation
to 63 000		17		15		17 constant
to 64 500	constant	constant	constant	constant	25	17
to 72 000		17 linear variation		15 linear variation		
to 73 500		18.9 linear variation		16.9 linear variation		
to 77 000	25	28	23	26		

B. Aft CG limits

A / C Weight (kg)	For take-off in % RC (landing gear, slats and flaps down)	For flight in % RC (landing gear, slats and flaps up)	For landing in % RC (landing gear, slats and flaps down)
37 230	37 constant	45	43
to 47 500	37 linear variation		constant
to 61 500	42	constant	
to 64 500	constant		43
to 69 500		45	
to 71 000	42 linear variation	linear variation	
to 77 000	37.5	39.5	

5.2.3 CG Envelope

Available in chapter 11 forms

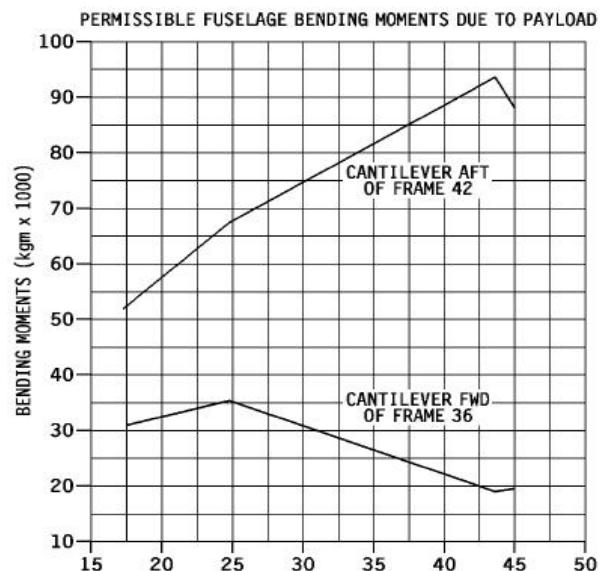
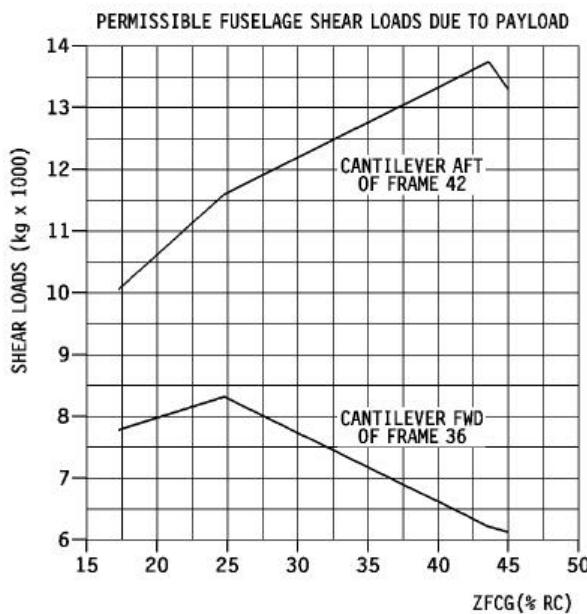
5.2.4 Shear Loads and Bending Moments

- Moment of the aircraft design can withstand structurally in relation to:
 - Pay load.
 - Zero – Fuel center of Gravity.
- These limits are measured at two points:

A320

- Frame 36 – Arm 15.900M – For FWD cantilever Section.
- Frame 42 – Arm 18.694M – For AFT cantilever Section.

And can be detained from diagrams in fig below:



- Considering A/C operation empty weight in any passenger configuration and Zero Fuel Limits, there are no limitations due to shear load and bending moments. Therefore, shear loads and bending moments need not to be checked unless in an unusual loading situation.

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5.2.5 Cabin Floor Loading Limits

CAUTION: IT IS PROHIBITED TO CARRY LOOSE BULKFREIGHT IN THE PASSENGER CABIN.

Structure

The floor structure is capable of supporting seats, loaded with 91 kg (200 lb), equivalent to the seat and passenger weight, fitted six per row at a minimum pitch of 0.711 m (28 inches) between rows.

Panels

Each floor panel is capable of carrying a local load of 339 kg (750 lb) on any 0.093 m² (1 ft²) without permanent deformation, and 91 kg (200 lb) walking load on any 645 mm² (1 in²) without appreciable deformation.

Floor panels in service and aisle areas are of adequate robustness to withstand the maximum expected rolling loads from service carts up to 100 kg (220 lb) gross weight.

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5.2.6 Cargo holds loading limits:

A320: Cargo holds (compartments 1, 3, 4, and 5) floor

Structure

The floor structure is capable of supporting via the floor panels in the flat and sloping floor areas a maximum distributed load of 732 kg/m² (150 lb/ft²).

Panels

Each floor panel is capable of carrying a local load of 906 kg (2000 lb) on 0.093 m² (1 ft²) without permanent deformation. The local loads must be separated from each other in such a way that the floor structure load limitations as stated above are not exceeded, as well as relevant maximum compartment loads.

5.2.7 Cargo Holds Capacity

- The maximum floor load limitation must not be exceeded.
- Cargo holds are designed for carriage of bulk loads with a maximum density of 240 kg/cu.m.
- For loading control purposes cargo holds are divided into individual section separated by net fittings.

A320

Compartment	Net Section	Max. Weight per Net Section (kg)	Max. Compartment Capacity (kg)
1	11	1045	
	12	1225	
	13	1132	
Total			3402
3	31	1301	
	32	1125	
Total			2426
4	41	928	
	42	1182	
Total			2110
5	51	374	
	52	353 770	

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	53		
Total			1497

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5.2.8 Restraint Limits

When the certified net restraint system is used, additional tie down is normally not required except as shown in the following.

All individual items of load which by their nature, shape or density may constitute a hazard shall be restrained. Restraint can be achieved by filling the cargo hold volumetrically, or by tie down.

Compartments or net sections which are 80 % volumetrically filled are considered to be volumetrically full.

Packages weighing more than 150 kg (330 lb) **shall** be restrained or individually tied down. Single packages could be tied down.

All single items exceeding the size of a net section are considered as non-unitized load. In case of non-unitized load the divider net at frame station 28 can be removed if:

- All items in net sections forward and behind a removed divider net are individually restrained.
- No loose cargo left in net sections forward and behind a removed divider net.

5.2.9 Tie Down Requirements:

Tie down of loads to aircraft structure is achieved via tie down straps and nets connected to the tie down points located on the cargo hold floor.

Each tie down point is designed to an ultimate load of 906 kg (2 000 lb), in any direction.

Tie down arrangement via tie down straps and nets or equivalent restraint hardware shall provide evenly distributed loads to the cargo hold floor.

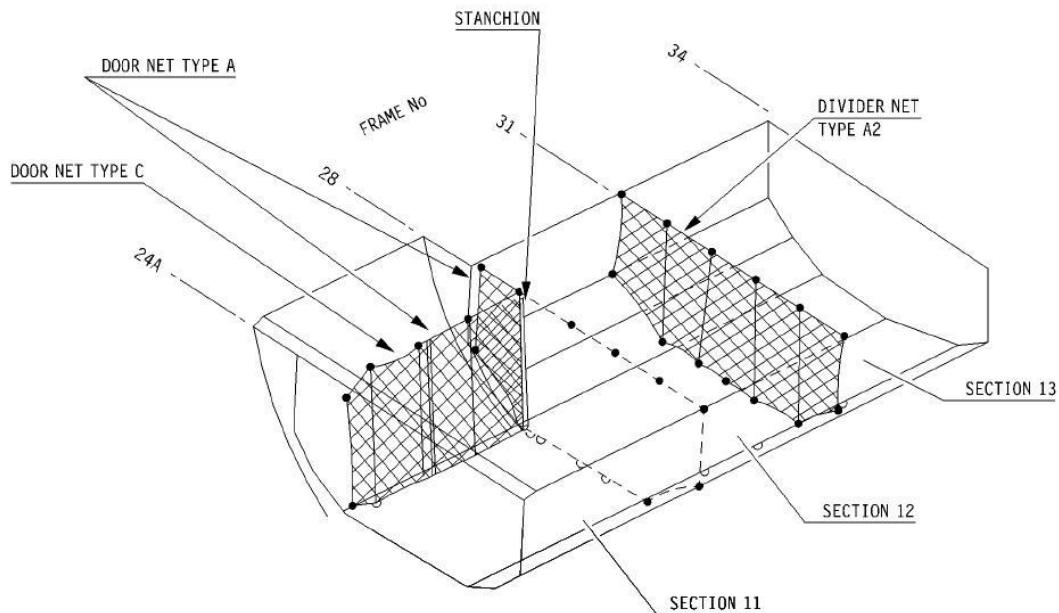
5.2.10 Tie Down Methods (A320)**Loading of FWD cargo hold (compartment 1)**

The load factors below must be used when establishing the ultimate load.

COMPARTMENT NUMBER	LOAD FACTOR			
	FWD	AFT	SIDE	UP
1(Forward)	1.69	1.12	0.87	2.57

Cargo hold nets malfunction limitations

For layout of the net installation in the forward cargo hold (compartment 1) see the illustration below.



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Loading of aft cargo hold (compartment 3 and 4)

CAUTION: THE MAXIMUM LOAD ON THE FLOOR MUST NOT EXCEED THE VALUES SPECIFIED IN PARAGRAPH 1.10.04.C.

The aft cargo hold (compartment 3 and 4) is designed for the carriage of bulk loads with an average load density of 240 kg/m³ (15 lb/ft³).

Bulk loads are defined as loose loads, baggage or freight which can be loaded within a net section.

A. Cargo hold (compartment 3 and 4) capacity

The cargo hold has a maximum load capacity of 4 536 kg (10 000 lb).

For loading control purposes the cargo hold is divided into individual sections as given in the table below.

SECTION DESIGNATION	EXTENSION FRAME STATION		MAXIMUM LOAD CAPACITY	
	From	To	(kg)	(lb)
31	47	50	1 301	2 868
32	50	52N53	1 125	2 481
Sub-Total Compartment 3	47	52N53	2 426	5 349
41	53	56	928	2 046
42	56	59	1 182	2 605
Sub-Total Compartment 4	53	59	2 110	4 651
Sub-Total Net Section 32, 41 and 42	50	59	3 235	7 132
Total Compartment 3 and 4	47	59	4 536	10 000

The cargo hold is subdivided by a removable lateral net at frame station 50 into two net sections, and is separated from the rear (bulk) cargo hold (compartment 5) by a removable lateral net at frame station 59.

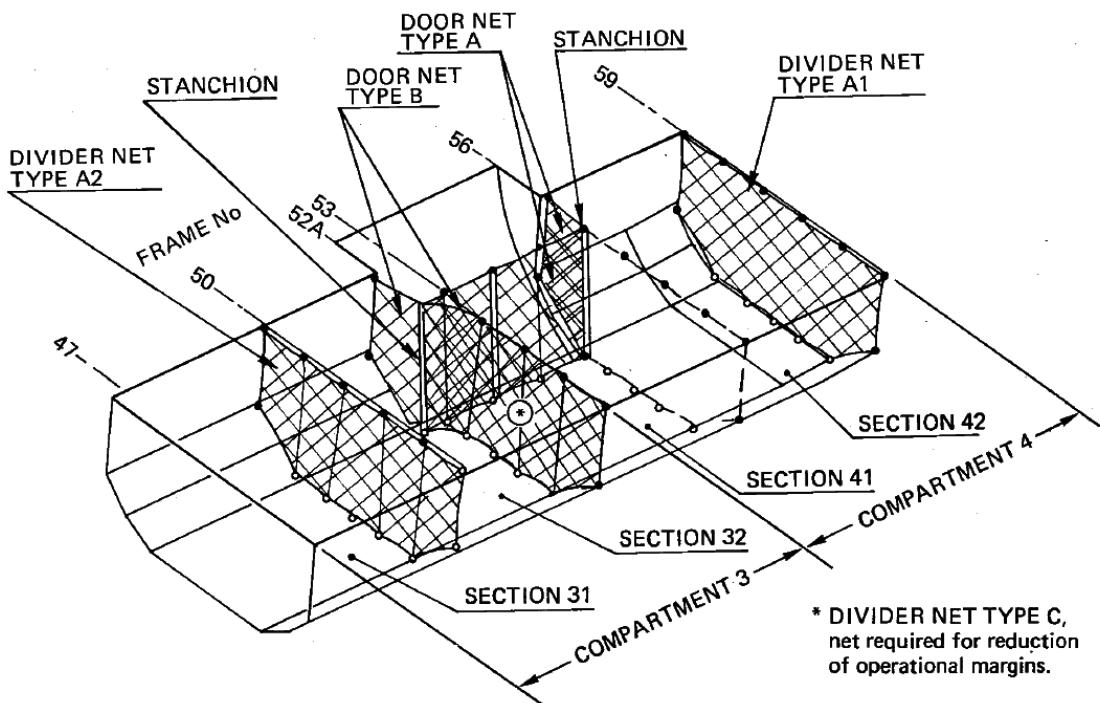
After installation of a removable lateral net at frame station 52A/53 the cargo hold is divided into compartments 3 and 4 for reduction of operational margins.

The load factors below must be used when establishing the ultimate load.

COMPARTMENT NUMBER	LOAD FACTOR			
	FWD	AFT	SIDE	UP
3 (Aft)	1.69	1.12	1.46	3.01
4 (Aft)	1.69	1.12	1.72	3.53

Cargo hold nets malfunction limitations

For layout of the net installation in the aft cargo hold (compartment 3 and 4) see the illustration below.



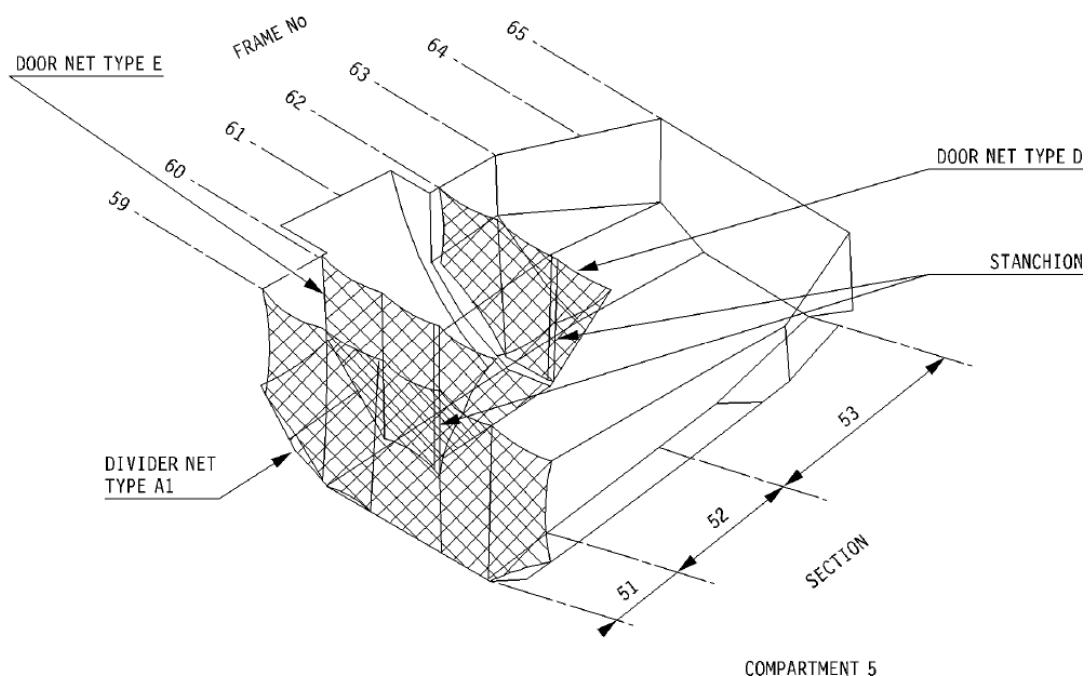
Loading of AFT rear cargo hold (compartment 5)

The load factors below must be used when establishing the ultimate load.

COMPARTMENT NUMBER	LOAD FACTOR			
	FWD	AFT	SIDE	UP
5 (Rear)	1.69	1.12	2.15	4.26

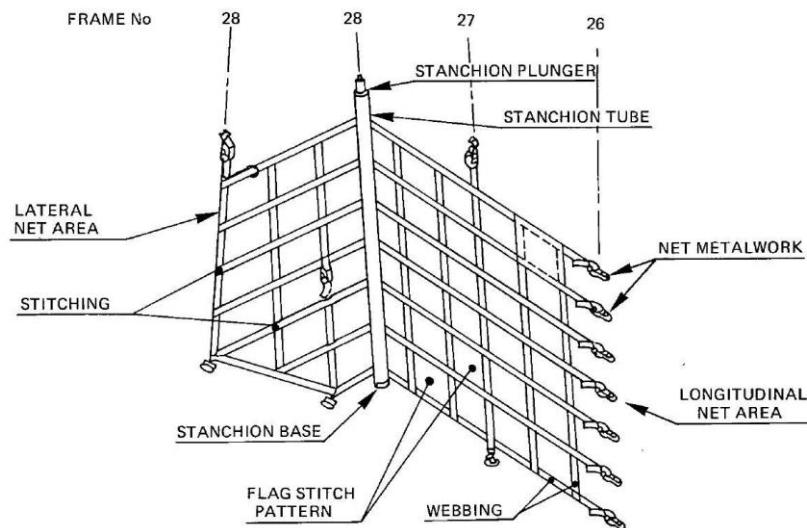
Cargo hold nets malfunction limitations

For layout of the net installation in the rear (bulk) cargo hold (compartment 5) see the illustration below.



5.2.11 Restrictions in Damage or Missing Nets (A320)

The following tables give the load restriction to be applied when nets are damaged or missing.

Door net type A

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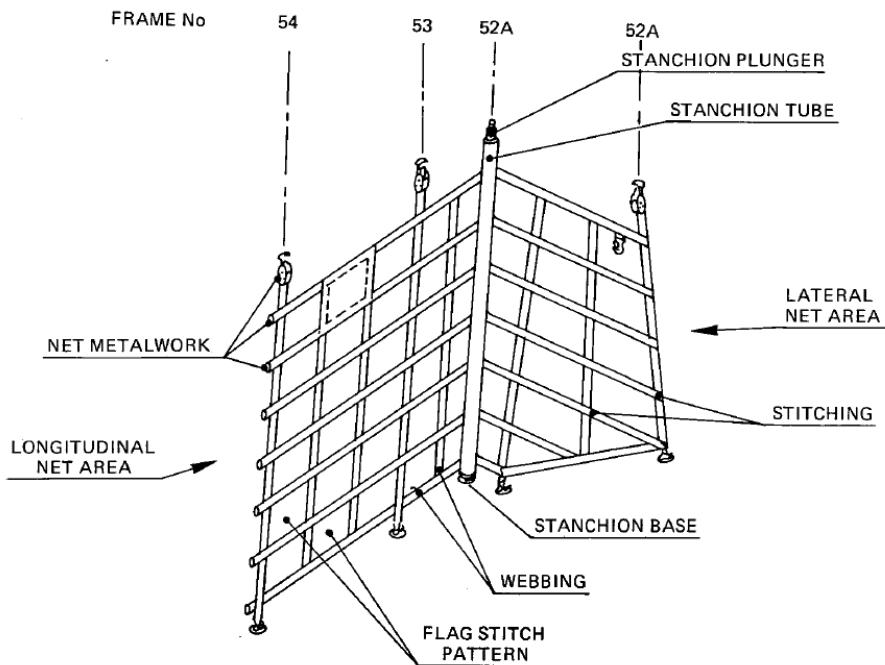
ITEM	FAILURE	RESTRICTIONS
Net webbing	Broken stitching at web intersection, but not more than two flag stitch patterns affected	No restriction
	Broken stitching at web intersection, but not more than four flag stitch patterns affected	Gross weight of net section 11 and 12 must be reduced to 1 702 kg (3 752 lb), <i>or bulk load is restrained individually</i>
	Slight abrasion at webbings or stitching's, but no cuts or severing's	Gross weight of net section 11 and 12 must be reduced to 1 702 kg (3 752 lb), <i>or bulk load is restrained individually</i>
	All damage exceeding the failures defined above	Net section 11 and 12 remains unoccupied, or bulk load is restrained individually

ITEM	FAILURE	RESTRICTIONS
Net metalwork	Light surface corrosion not affecting function of component	No restriction
	Minor damage not affecting mechanical function of component, e.g. deep scratches	Gross weight of net section 11 and 12 must be reduced to 1 702 kg (3 752 lb),
	All damage exceeding the failures defined above	Net section 11 and 12 remains unoccupied, or bulk load is restrained
Stanchion tube	Light surface corrosion not affecting function of component	No restriction
	Minor dents with a maximum depth of 2 millimeters (0.08 inches)	Gross weight of net section 11 and 12 must be reduced to 1 702 kg (3 752 lb),
	Minor damage not affecting mechanical function of component, e.g. deep scratches	Gross weight of net section 11 and 12 must be reduced to 1 702 kg (3 752 lb), <i>or bulk load is restrained individually</i>

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	All damage exceeding the failures defined above	Net section 11and 12 remains unoccupied, or bulk load is restrained
Metal loops on stanchion tube	One loop detached or missing	No restriction
	Light surface corrosion not affecting function of component, e.g. deep scratches on more than one loop	No restriction
	Minor damage not affecting mechanical function of components, e.g. deep scratches on more than one loop	Gross weight of net section 11 and 12 must be reduced to 1 702 kg (3 752 lb),
	More than one loop detached or missing	Net section 11and 12 remains unoccupied, or bulk load is restrained
Base or plunger on stanchion tube	Light surface corrosion not affecting function of component	No restriction
	Minor damage not affecting mechanical function of component, e.g. deep scratches	Gross weight of net section 11 and 12 must be reduced to 1 702 kg (3 752 lb), or bulk load is restrained individually
	All damage exceeding the failures defined above	Net section 11and 12 remains unoccupied, or bulk load is restrained

Door net type B



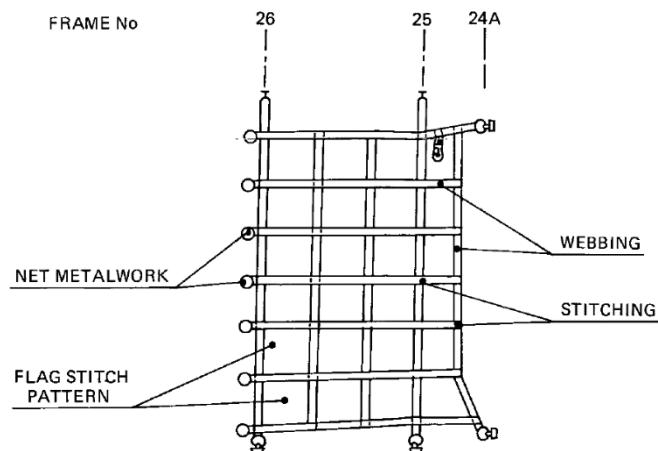
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ITEM	FAILURE	RESTRICTIONS
Net webbing	Broken stitching at web intersection, but not more than	No restriction
	Broken stitching at web intersection, but not more than four flag stitch patterns affected	Gross weight of net section 32, 41 and 42 must be reduced to 2 426 kg (5 349 lb), or bulk load is
	Slight abrasion at webbings or stitching's, but no cuts or severing's	Gross weight of net section 32, 41 and 42 must be reduced to 2 426 kg (5 349 lb), or bulk load is
	All damage exceeding the failures defined above	Net section 32, 41 and 42 Remains unoccupied, or bulk load is restrained individually

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ITEM	FAILURE	RESTRICTIONS
Stanchion tube	Light surface corrosion not affecting function of component	No restriction
	Minor damage not affecting function of component, e.g. deep scratches	Gross weight of net section 32, 41 and 42 must be reduced to 2 426 kg (5 349 lb), or bulk load is restrained individually
	All damage exceeding the failures defined above	Net section 32, 41 and 42 remains unoccupied, or bulk load is restrained
	Light surface corrosion not affecting function of component	No restriction
Metal loops on stanchion tube	Minor dents with a maximum depth of 2 millimeters (0.08 inches)	Gross weight of net section 32, 41 and 42 must be reduced to 2 426 kg (5 349 lb), or bulk load is restrained individually
	Minor damage not affecting mechanical	Gross weight of net section 32, 41 and 42 must be reduced to 2 426 kg (5 349 lb), or bulk load is restrained individually
	Function of component, e.g. deep	Net section 32, 41 and 42 remains unoccupied, or bulk load is restrained
	All damage exceeding the failures defined above	Net section 32, 41 and 42 remains unoccupied, or bulk load is restrained
Base or plunger on stanchion tube	One loop detached or missing	No restriction
	Light surface corrosion not affecting function of component	No restriction
	Minor damage not affecting mechanical	Gross weight of net section 32, 41 and 42 must be reduced to 2 426 kg (5 349 lb), or bulk load is restrained individually
	Function of components, e.g. deep	Net section 32, 41 and 42 remains unoccupied, or bulk load is restrained
	More than one loop detached or missing	Net section 32, 41 and 42 remains unoccupied, or bulk load is restrained
	Light surface corrosion not affecting function of component	No restriction
	Minor damage not affecting mechanical	Gross weight of net section 32, 41 and 42 must be reduced to 2 426 kg (5 349 lb), or bulk load is restrained individually
	Function of component, e.g. deep	Net section 32, 41 and 42 remains unoccupied, or bulk load is restrained
	All damage exceeding the failures defined above	Net section 32, 41 and 42 remains unoccupied, or bulk load is restrained

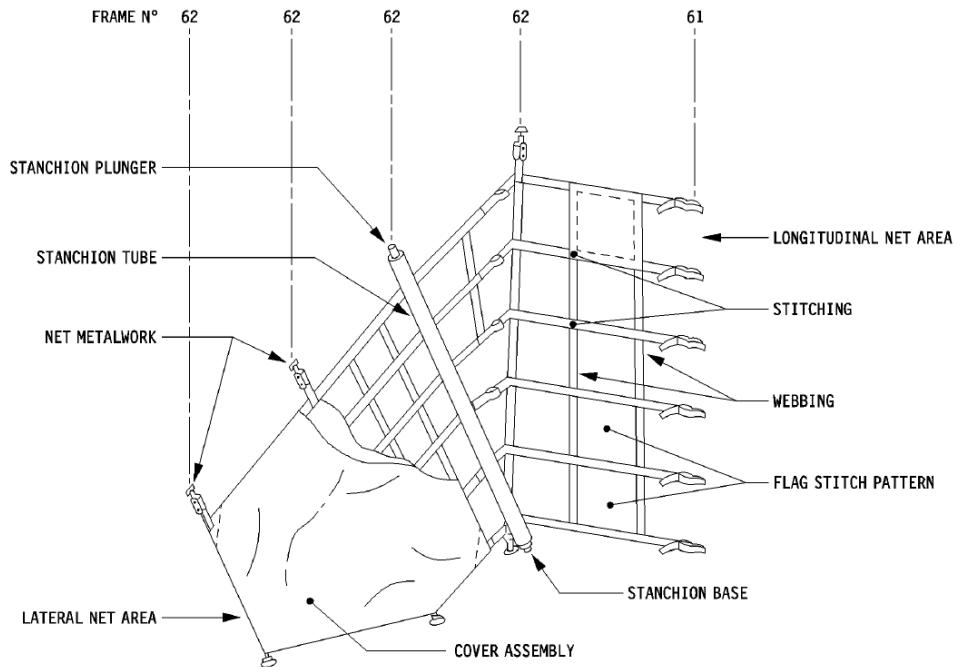
Door net type C



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ITEM	FAILURE	RESTRICTIONS
Net webbing	Broken stitching at web intersection, but not more than two flag stitch pattern	No restriction
	Broken stitching at web intersection, but not more than four flag stitch pattern	Gross weight of net section 11 and 12 must be reduced to 1 702 kg (3 752 lb),
	Slight abrasion at webbings or stitching's, but no cuts or severing's	Gross weight of net section 11 and 12 must be reduced to 1 702 kg (3 752 lb),
	All damage exceeding the failures defined above	Net section 11and 12 remains unoccupied, or bulk load is restrained
Net metalwork	Light surface corrosion not affecting function of component	No restriction
	Minor damage not affecting mechanical function of component, e.g. deep scratches	Gross weight of net section 11 and 12 must be reduced to 1 702 kg (3 752 lb).
	All damage exceeding the failures defined above	Net section 11 and 12 remains unoccupied, or bulk load is restrained

Door net type D



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ITEM	FAILURE	RESTRICTIONS
Net webbing	Broken stitching at web intersection, but not more than two flag stitch pattern	No restriction
	Broken stitching at web intersection, but not more than four flag stitch pattern	Gross weight of cargo hold (compartment 5) must be reduced to 1 123 kg (2 475 lb), or bulk load is affected
	Slight abrasion at webbings or stitching's, but no cuts or severing's	Gross weight of cargo hold (compartment 5) must be reduced to 1 123 kg (2 475 lb), or bulk load is
	All damage exceeding the failures defined above	Cargo hold (compartment 5) remains unoccupied, or bulk load is restrained

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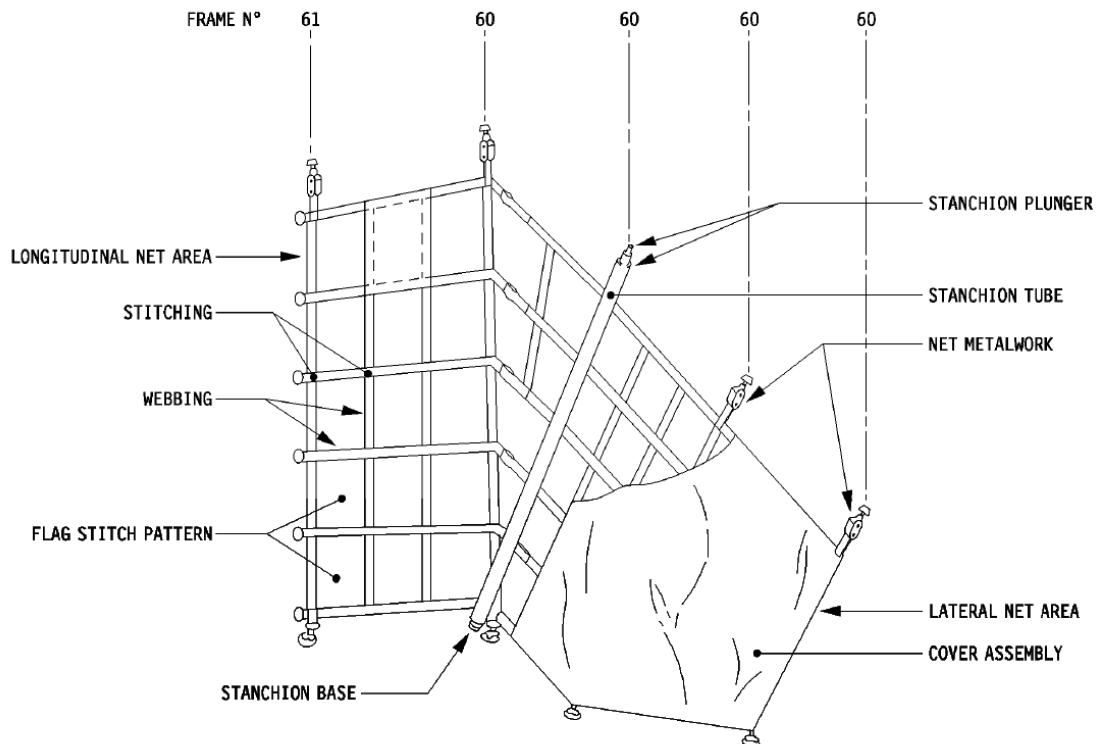
ITEM	FAILURE	RESTRICTIONS
Net metalwork	Light surface corrosion not affecting function of component	No restriction
	Minor damage not affecting mechanical Function of component, e.g. deep	Gross weight of cargo hold (compartment 5) must be reduced to 1 123 kg (2 475 lb), or bulk load is
	All damage exceeding the failures defined above	Cargo hold (compartment 5) remains empty, or bulk load is restrained
Stanchion tube	Light surface corrosion not affecting function of component	No restriction
	Minor dents with a maximum depth of 2 millimeters (0.08 inches)	Gross weight of cargo hold (compartment 5) must be reduced to 1 123 kg (2 475 lb), or bulk load is
	Minor damage not affecting mechanical Function of component, e.g. deep	Gross weight of cargo hold (compartment 5) must be reduced to 1 123 kg (2 475 lb), or bulk load is
	All damage exceeding the failures defined above	Cargo hold (compartment 5) remains empty, or bulk load is restrained
Metal loops on stanchion tube	One loop detached or missing	No restriction
	Light surface corrosion not affecting function of components	No restriction
	Minor damage not affecting mechanical Function of components, e.g. deep	Gross weight of cargo hold (compartment 5) must be reduced to 1 123 kg (2 475 lb), or bulk load is
	More than one loop detached or missing	Cargo hold (compartment 5) remains individually
Base or plunger on stanchion tube	Light surface corrosion not affecting function of component	No restriction
	Minor damage not affecting mechanical Function of component, e.g. deep	Gross weight of cargo hold (compartment 5) must be reduced to 1 123 kg (2 475 lb), or bulk load is

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All damage exceeding the failures defined above	Cargo hold (compartment 5) remains empty, or bulk load is restrained
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Note: Damaged or missing cover assemblies and hook on devices do not constitute a loading restriction.

Door net type E



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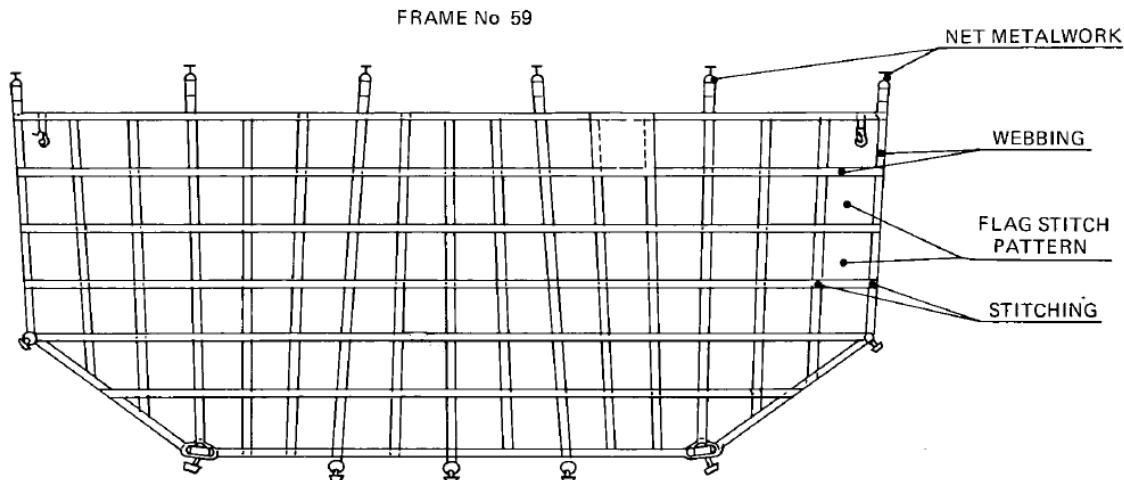
ITEM	FAILURE	RESTRICTIONS
Net webbing	Broken stitching at web intersection, but not more than two flag stitch pattern	No restriction
	Broken stitching at web intersection, but not more than four flag stitch pattern affected	Gross weight of cargo hold (compartment 5) must be reduced to 1 123 kg (2 475 lb), or bulk load is
	Slight abrasion at webbings or stitching's, but no cuts or severing's	Gross weight of cargo hold (compartment 5) must be reduced to
	All damage exceeding the failures defined above	Cargo hold (compartment 5) remains unoccupied or bulk load is

ITEM	FAILURE	RESTRICTIONS
Net metalwork	Light surface corrosion not affecting	No restriction
	Minor damage not affecting mechanical	Gross weight of cargo hold (compartment 5) must be reduced to 1123 kg (2 475 lb), or bulk load is restrained individually
	Function of component, e.g. deep scratches	
	All damage exceeding the failures defined above	Cargo hold (compartment 5) remains empty, or bulk load is restrained individually
Stanchion tube	Light surface corrosion not affecting	No restriction
	Minor dents with a maximum depth of 2 millimeters (0.08 inches)	Gross weight of cargo hold (compartment 5) must be reduced to 1123 kg (2 475 lb), or bulk load is restrained individually
	Minor damage not affecting mechanical	Gross weight of cargo hold (compartment 5) must be reduced to 1123 kg (2475 lb), or bulk load is restrained individually
	Function of component, e.g. deep scratches	
	All damage exceeding the failures defined above	Cargo hold (compartment 5) remains empty, or bulk load is restrained individually
Metal loops on stanchion tube	One loop detached or missing	No restriction
	Light surface corrosion not affecting	No restriction
	Minor damage not affecting mechanical	Gross weight of cargo hold (compartment 5) must be reduced to 1123 kg (2475 lb), or bulk load is restrained individually
	Function of components, e.g. deep	
	More than one loop detached or missing	Cargo hold (compartment 5) remains empty, or bulk load is restrained individually
Base or plunger on stanchion tube	Light surface corrosion not affecting	No restriction
	Minor damage not affecting mechanical	Gross weight of cargo hold (compartment 5) must be reduced to 1123 kg (2475 lb), or bulk load is restrained individually
	Function of component, e.g. deep scratches	
	All damage exceeding the failures defined above	Cargo hold (compartment 5) remains empty, or bulk load is restrained individually

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- a) **Note:** Damaged or missing cover assemblies and hook on devices do not constitute a loading restriction.

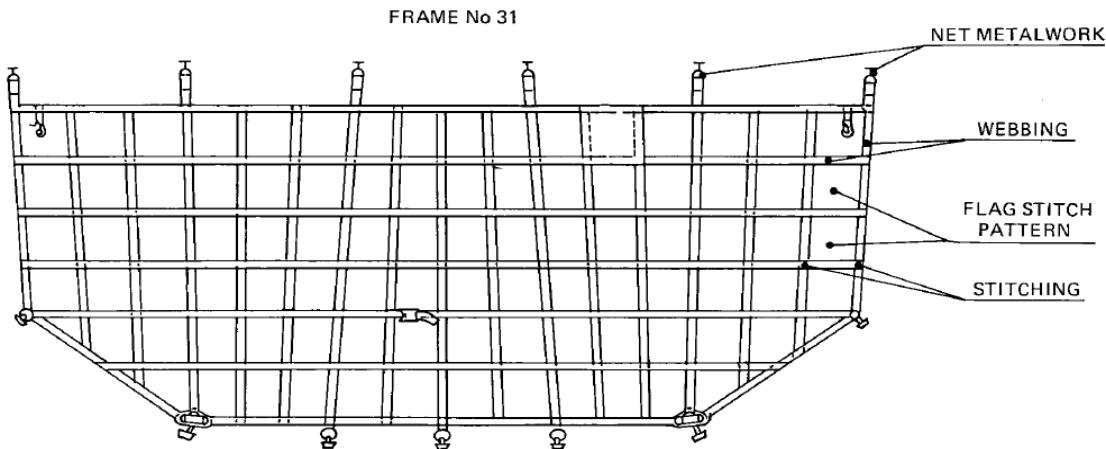
Divider net type A1 (frame 59)



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ITEM	FAILURE	RESTRICTIONS
Net webbing	Broken stitching at web intersection, but <u>not more than two flag stitch pattern</u>	No restriction
	Broken stitching at web intersection, but not more than four flag stitch pattern <u>affected</u>	Gross weight of net section 32, 41 and 42 must be reduced to 2 426 kg (5 349 lb), or bulk load is restrained individually
	Slight abrasion at webbings or stitching's, but no cuts or severing's	Gross weight of net section 32, 41 and 42 must be reduced to 2 426 kg (5 349 lb), or bulk load is restrained individually
	All damage exceeding the failures defined above	Net section 32, 41 and 42 remains unoccupied, or bulk load is restrained individually
Net metalwork	Light surface corrosion not affecting function of component	No restriction
	Minor damage not affecting mechanical function of component, e.g. deep scratches	Gross weight of net section 32, 41 and 42 must be reduced to 2 426 kg (3 752 lb), or bulk load is restrained individually
	All damage exceeding the failures defined above	Net section 32, 41 and 42 remains unoccupied, or bulk load is restrained individually

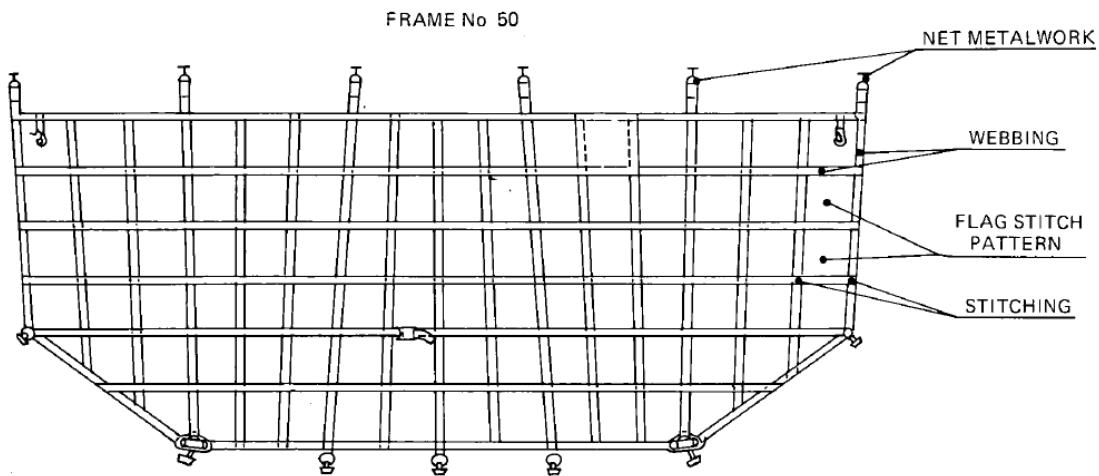
Divider net type A2



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ITEM	FAILURE	RESTRICTIONS
Net webbing	Broken stitching at web intersection, but not more than two flag stitch pattern affected	No restriction
	Broken stitching at web intersection, but not more than four flag stitch pattern affected	Gross weight of net section 11 and 12 must be reduced to 1 702 kg (3 752 lb) and gross weight of net section 13
	Slight abrasion at webbings or	Gross weight of net section 11 and 12 and gross weight of net section 13 must be reduced to 849 kg (1 871 lb), or bulk load is restrained individually
	All damage exceeding the failures defined above	Net section 11 and 12 and net section 13 remain unoccupied, or bulk load is
Net metalwork	Light surface corrosion not affecting function of component, e.g. deep scratches	No restriction
	Minor damage not affecting function of component, e.g. deep scratches	Gross weight of net section 11 and 12 must be reduced to 1 702 kg (3 752 lb) and gross weight of net section 13 must be reduced to 849 kg (1 871 lb)
	All damage exceeding the failures defined above	Net section 11 and 12 and net section 13 remain unoccupied, or bulk load is

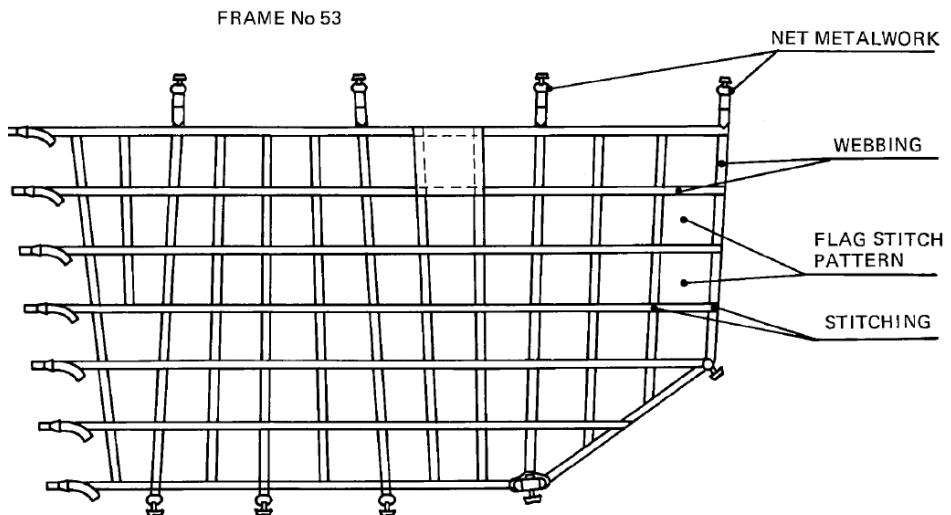
Divider net type A2 (frame 50)



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ITEM	FAILURE	RESTRICTIONS
Net webbing	Broken stitching at web intersection, but not more than two flag stitch pattern	No restriction
	Broken stitching at web intersection, but not more than four flag stitch pattern affected	Gross weight of net section 31 must be reduced to 976 kg (2 151 lb) and gross weight of net section 32, 41 and 42 must be reduced to 2 126 kg (5 310 lb)
	Slight abrasion at webbings or stitching's, but no cuts or severing's	Gross weight of net section 31 must be reduced to 976 kg (2 151 lb) and gross load is restrained individually
	All damage exceeding the failures defined above	Net section 31 and net section 32, 41 and 42 remains unoccupied, or bulk load is restrained individually
Net metalwork	Light surface corrosion not affecting function of component	No restriction
	Minor damage not affecting mechanical Function of component, e.g. deep scratches	Gross weight of net section 31 must be reduced to 976 kg (2 151 lb) and gross weight of net section 32, 41 and 42
	All damage exceeding the failures defined above	Net section 31 and net section 32, 41 and 42 remains unoccupied, or bulk load is restrained individually

Divider net type C (frame 53)



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ITEM	FAILURE	RESTRICTIONS
Net webbing	Broken stitching at web intersection, but	No restriction
	Broken stitching at web intersection, but not more than four flag stitch pattern affected	No load restrictions but the reduction of operational margins is not allowed or Gross weight of net section 32 must be reduced to 844 kg (1860 lb) and
	Slight abrasion at webbings or stitching's, but no cuts or severing's	No load restrictions but the reduction of operational margins is not allowed or Gross weight of net section 32 must be reduced to 844 kg (1860 lb) and
	All damage exceeding the failures defined above	No load restrictions but the reduction of operational margins is not allowed

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ITEM	FAILURE	RESTRICTIONS
Net metalwork	Light surface corrosion not affecting function of component	No restriction
	Minor damage not affecting mechanical function of component, e.g. deep scratches	No load restrictions but the reduction of operational margins is not allowed or Gross weight of net section 32 must be reduced to 844 kg (1860 lb) and gross
	All damage exceeding the failures defined above	No load restrictions but the reduction of operational margins is not allowed or

5.3 Fuel

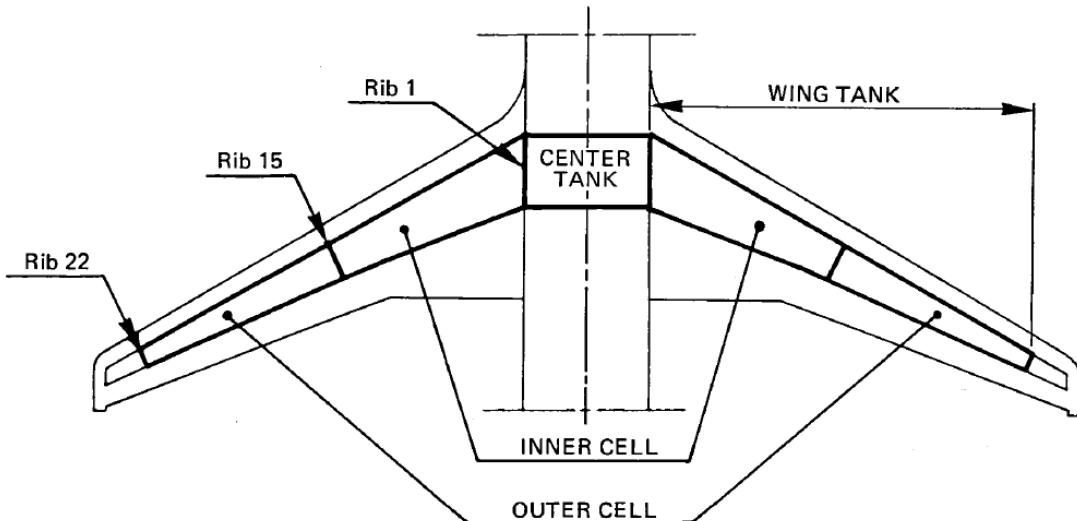
5.3.1 Introduction

- This instruction is to cover ECAA requirement to prevent the contamination of A/C fuel systems.
- Kerosene is normally clear, free water and fuel will separate distinctly but it is clouded with water and need ten minutes minimum time to settle.
- Routine water drain checks are to remove water accumulated through condensation
- Refueling of Aircraft is performed according to AMM procedure.

5.3.2 Fuel Tank:

The fuel is contained in three tanks, one in each Wing Box and one in Wing Box center section.

Fuel Tank Arrangement Layout:



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5.3.3 Fueling and De-fueling Procedures

5.3.3.1 Definitions:

Fueling Operations

Embraces aircraft fueling, de-fueling, tank draining, fuel transfers, fuel flow tests and fuel tank calibrations, the procedures and precautions detailed herein must be observed during all operations where appropriate.

Fasten seat Belt light must be switched OFF and cabin Crew should make certain that passenger seat belts are not fastened and full procedures as per Cabin Crew manual part 1 section 3 page 15 item 3.9 .

5.3.3.2 Responsibility

Nesma Airlines certified accompanied engineer must supervise the fueling process of Nesma Airlines aircraft.

The responsibility for the whole fueling activity quantity and grade of fuel rests with the Captain of the aircraft who prior to the commencement of each flight, signing the fueling receipt.

5.3.3.3 Fueling Areas

All Fueling operations normally must be carried out in the open air, not less than 50 feet from inhabited buildings and only in areas approved by the Airport Authority. If, in exceptional circumstances, it is necessary to perform fueling operation under cover, special permission must be obtained, normally from the Senior Company Official at the base or station who will, if necessary obtain permission from the appropriate Airport Authority.

5.3.3.4 Fueling safety Zone

Definition of Fueling Safety Zones

Area with radius of at least 3 m or as specified by local regulations, from filling and venting points on the aircraft, fueling vehicle and within the hydrant pits.

Equipment performing aircraft servicing functions shall not be positioned within a 3 m (10 ft) radius of aircraft fuel system vent openings.

Due to the fire hazard associated with fuel vapors personnel shall not use items and processes such as; matches, open flames, welding, use of photographic flashbulbs etc. while fueling is taking place on the aircraft stand.

Portable electronic devices, such as Mobile (Cell) Telephones, Portable Radios and Pagers, should not be used within the fuel safety zone.

Fuel safety zones

- The connection or disconnection of any aircraft electrical equipment, including GPUs, batteries and battery chargers, is not permitted.

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- Only tail mounted APU may be started during refueling if the start is an initial start or a restart after normal shutdown.

If the APU exhaust discharges cross the upper surface of the aircraft wing, over wing fueling must not be carried out while the APU is running.

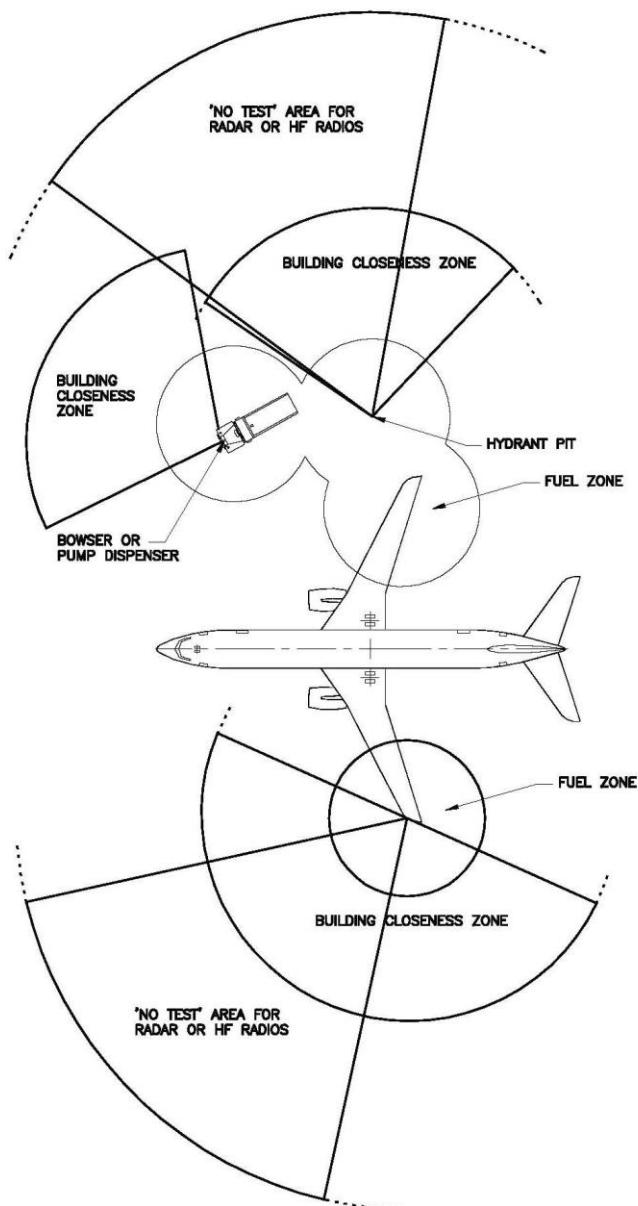
If the APU exhaust discharges to the side or rear of the aircraft, fueling vehicles should be positioned to avoid any risk of coming in the path of the exhaust stream i.e. the APU exhaust must discharge outside the fueling zone.

- Do not attempt to start the APU during fueling if the APU had an automatic shutdown or a failed start attempt. Make sure the fueling operation is complete, and the hose disconnected before another APU start is attempted.
- The APU may be shutdown (manual or automatic) during the refueling operation.
- The engines of unattended GSE should be switched off.
- GSE MUST NOT be parked under the aircraft wingtip fuel vents.
- Equipment must be positioned so that the fueling vehicle has a clear exit route and can be moved away from the aircraft in a forward direction.
- A distance of 1 m (3 ft) should be maintained, wherever possible, between ground support equipment and any fueling equipment, i.e. vehicles, hoses, hydrant pits.
- Ground Power Units (GPUs) must not be operated unless they are positioned 6 m (20 ft) from the aircraft fueling vents and venting points.

The GPU shall be started and electrical connections made before fueling begins. The unit shall not be disconnected or switches operated during fueling.

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 vapor.

- Equipment with metal wheels or metal studded tires capable of producing sparks shall not be moved in the safety zones
- Only authorized persons and vehicles are permitted in the fueling zone.
- Fueling 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 vapors being passed into the aircraft passenger compartment.



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5.3.3.5 Fueling Equipment

Fueling vehicles must be constantly attended by at least one competent person and the accompanied engineer must ensure that a clear path is maintained to permit rapid removal of aircraft fueling equipment from an aircraft in an emergency.

Vehicles and equipment must not be located where they would obstruct the evacuation of persons from occupied portions of the aircraft in an emergency.

Adequate manpower shall be constantly available to shut off the flow of fuel quickly in an emergency. Handbrakes must be applied on vehicles before the driver leaves the cab of vehicle.

The Fuel Supplier must display on the apron an adequate warning notice, except at those airports where permanent notices are erected and/or there is constant supervision by the Airport Authority of the all personnel proceeding on the apron. The aircraft, the static fueling dispensers or vehicles from which the fuel is taken. And the hose, or other appliances by which it is delivered, must be electrically bonded throughout. Before operations commence the following bonding connections are to be made in the order shown:

- The aircraft and the fueling vehicle must be earthed, the use of conductive tires is acceptable.
- The aircraft must be effectively connected to the fueling vehicle, tank or hydrant pit by means of a bonding cable and clips or plugs attached to designated points or to suitable clean and unpainted surfaces on the aircraft.
- The hose nozzle bonding cable must be connected to the aircraft tank or wing at a designated point before the filler cap is removed. However, in the case of under wing fueling the hose coupling provides the necessary bond between the delivery hose and the aircraft, and a separate bonding cable is unnecessary. in the case of over-wing fueling (a practice to be avoided whenever possible) and where no provision is made for such connection of the hose nozzle bonding cable, action must be taken to dissipate whatever electrical potential exists in the fueling hose. This is achieved by making momentary metallic contact between the hose nozzle and the aircraft structure before unscrewing a fuel tank over-wing filler cap.
- As soon as a cap is unscrewed the bond cable clip must be attached to the cap securing and bonding cable.

Note: Normally, only approved equipment such as standard tankers or other bulk installations are to be used. Where these are not available, it will be necessary to ensure that the equipment and safety procedures used are satisfactory. The use of funnels and chamois leather filters is normally not necessary, but in the event of an emergency when a funnel has to be used it must be bonded to the aircraft tank (if possible before the filler cap is removed) and any loose parts, such as rings and clips securing filter leathers, leather must be free from pin holes and the whole of its under surface should be in contact with the metal strainer or gauze. The funnel or filter is not to be removed from the aircraft tank until the fuel has completely drained into the tank. The funnel is to be removed from the tank BEFORE the earthing clip is disconnected.

When refueling from or de-fueling into drums or cans, similar precautions must be taken to bond and earth the hose and containers in use. Draining into UN bonded receptacles is prohibited; closed containers with funnels, or safety cans, must be used where practicable.

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De-fueling hoses must be attached to the off-take point on the aircraft by a secure and leak-proof coupling, where practicable, and the hose must always directly enter and extend to within 2 inches of the bottom of the receptacles.

Care must be taken that fueling hoses and other equipment are not dragged over or dropped on hard ground in the fueling zone, thus causing frictional sparks. When fueling is completed, the disconnection of bonding circuits must be in the reverse order and must not commence until over-wing filler caps are replaced and there is no risk of igniting fuel vapors.

The cables, clips and plugs used for bonding and earthing must be maintained in good condition and should be tested for continuity daily by the fuel suppliers or their agents.

5.3.3.6 Ground Servicing Equipment

Ground equipment employing electrical or mechanically driven machinery shall not be used within the fueling zone (see paragraph "Fueling zones") unless the equipment is fully approved for such use and bears an Approval Plate issued and agreed by the Headquarters' Branches concerned. Restrict equipment performing aircraft servicing functions must be positioned within 10 foot radius from aircraft fuel vent openings. Any connections between electrical ground equipment and the aircraft must be made before fueling commences, and must not be broken until fueling ends.

NOTE: The Zone limitation does not apply when ground batteries only are being used to supply current to the aircraft provided connection, disconnection or switch operation does not take place during fueling.

Ground power generators may be operated (where Local Airport regulations permit) providing they are positioned not less than 20 feet from Aircraft fill and venting points, and fueling unit pumping compartments. The engines of vehicles, including electrically powered vehicles, normally employed for servicing aircraft, must not be run within the fueling zones unless such equipment has been designed for the purpose. The power driven vehicles must be fitted with effective flame traps on exhaust outlets and air intakes where the design of equipment necessitates this to prevent flame propagation. Such approved vehicles must be subjected to regular inspection and maintenance to preserve their safety characteristics.

Electrical lights and hand torches used in the fueling zone must be certified flameproof.

Vehicles operating in the fueling zone should not pass under or park beneath the aircraft wings unless specifically required to do so for operations.

Equipment with all metal wheels or shed with metal capable of producing sparks should not be moved in the fueling zone whilst fueling is in progress.

5.3.3.7 Personnel

- The number of staff permitted onboard is to be kept to a reasonable minimum.
- Smoking or any form of naked light is not permitted in the fueling zone and matches and lighters are not be carried by personnel engaged in fueling duties.

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- Personnel engaged on fueling duties must take reasonable precautions to avoid sparks being generated by frictional contact of footwear with aircraft and other hard surfaces; the obvious precaution is to refrain from wearing boots or shoes having nailed soles and heels.

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5.3.3.8 Aircraft Maintenance Operations

Electrical equipment and radio may be checked but maintenance must be limited to the exchange of complete units.

Weather mapping radar may ignite inflammable vapour or mixtures due to inductive electrical heating of solid materials or from electrical arcs or sparks from chance resonant conditions. Do not operate the radar & HF during fueling operations or when within 100 feet of such operations, fuel tanks, fuel trucks or fuel storage areas when antenna is stationary, direct it so that none of these fire hazards is within 200 feet.

The aircraft combustion heaters are not to be operated engines are not to be turn, and ignition switches must be in the "off" position.

5.3.4 Safety Precautions During De-/ Refueling

1) Within the safety area it is not permitted:

- To smoke,
- To use an open flame,
- To perform work likely to create sparks,
- To use flash bulbs,
- To start or restart ground power units.

2) De-/ refueling is not permitted during severe local electrical storms.

3) The tanker must be positioned within the safety area so that the vehicle may be immediately withdrawn in case of danger.

4) "NO SMOKING" signs or symbols must be displayed in prominent positions near tanker and airplane. These symbols may be painted onto the sides of the tanker.

5) Fire extinguishers must be readily available at tanker and airplane.

6) Venting areas and the area underneath fuselage and wings must be kept clear of mobile equipment.

7) Establishment of a bonding connection between the fueling vehicle and aircraft to provide for dissipation of electrical energy that may develop Before connecting a hose to the airplane ensure that tanker and airplane are correctly connected to an approved ground and that electrical bonding between tanker and airplane are made in the following order:

- Tanker to ground,
- Airplane to ground,
- Tanker to airplane,
- Hose/nozzle to airplane.

NOTE: Bonding is essential, grounding is recommended.

8) Prevention of damage to the fuel hose Hoses, must be routed by the nearest way from the tanker to the de-/ refueling inlets, however with a minimum clearance of 4 meters from APU air intakes and/or airplane wheel brakes.

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- 9) Nothing prohibits the use of APU but it must not be re-started during de-/refueling,
- 10) Prohibition from connecting or disconnecting electrical equipment to the aircraft Electrical ground power must not be connected / disconnected or its switches operated during de-/refueling. The airplane electrical system may be operated as required.
- 11) Mobile phones must be switched off completely within a radius of 6m from the fueling station.
- 12) De-/ refueling must permanently be monitored for possible leakage. If a leakage is detected, de-/ refueling must be stopped immediately. In case of a fuel spillage air-conditioning units must be stopped, if required, and actions must be taken according to airport regulations.
- 13) General airplane servicing such as baggage handling and catering services may be carried out during de-/ refueling.
- 14) Cessation of aircraft fueling when it is determined lightning is a threat

5.3.5 A/C Fuel Tank Draining & Sampling For Water Contamination:

- Water can enter the fuel tanks from either being uplifted while refueling as contaminant, or condensation in the air space above the fuel
- At every station before refueling, ensure that fuel samples are taken by the fueling agency at the bowser /source and checked for water presence by using water detector
- During daily checks, drain fuel tank sumps prior to a flight and ensure free water by visualizing the sample in a transparent container.

Note: Not while the A/C being refueling as the water will be suspended in the fuel. Wait as long as possible, a minimum of 10 minutes is required.

5.3.5.1 Check Method

- Using syringe and capsule, note detector container expire date, fit a capsule normally colored yellow) onto syringe, draw from the fuel sample and check color of capsule, if water content is above acceptable limits, the capsule will change to dark green / blue.

5.3.5.2 Procedure If Supply Contamination Is Encountered

- For fuel supplier, notify in writing, suspend uplifts from suspect source, inform Safety and Quality Director, and await clearance from him. Before accepting further deliveries.
- Take adequate samples & send for test through Materials / stores, all samples must be labeled to show origin, source, date and time.
- Packing of samples and dispatch must be in accordance with restricted articles regulation.

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5.3.6 Miscellaneous Precautions

5.3.6.1 Cleanliness to Fueling Equipment

Before commencing fueling, the equipment to be used must be examined by the Ground Engineer/Refueling Supervisor for cleanliness to avoid contamination of aircraft fuel tanks. This will include a check of the Supplier's fueling equipment for the presence of water. This check must be made by the Ground Engineer/Refueling Supervisor, in the presence of the Fuel Supplier's Fueling Supervisor.

5.3.6.2 Precautions against Damage to Aircraft

The fuel hose shall be lifted over the leading edge of the wing and must not be dragged against it.

Fueling personnel shall be instructed to walk only on clearly defined areas of wing surface and shall exercise care.

Nailed boots or shoes shall not be worn during over wing fueling or checking operations.

5.3.6.3 Fueling during Storms

Where practicable fueling during electrical and rain storms should be avoided. Where this is not possible, means must be employed to prevent the ingress of water into the fuel tanks. Fueling in dust storms should be avoided but, when essential, may proceed provided some means of sheltering open orifices from the ingress of sand is used.

A check for the presence of water in the fuel tanks and system is to be carried out following fueling, details of which are to be specified in TECHNICAL MANUAL, to cover individual peculiarities or the various fuel systems.

5.3.6.4 Possibility of Bowser Failure

When fueling aircraft, both sides should be fuelled simultaneously. If for any reason one bowser fails, then the other should be stopped immediately and a variation of not more than 1000 gallons in either wing should be permitted during refueling.

5.3.7 Security of Fuel Tank or Fueling Point Covers

Upon completion of fueling operations the Ground Engineer/Refueling Supervisor must physically check the security of all covers, regardless of whether or not the a which they fit were used during the fueling operations.

NOTE: It is undesirable for persons to walk on the wing surface of any aircraft, unless provision has been made to permit t. It is more than ever important to a walking on thawing surface of aircraft having a wing of Laminar or near Laminar flow design characteristics. At transit stops, when aircraft are not refueled over the wing, the inspection of filler caps and their covers if fitted may be confined to visual check.

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5.3.8 Certification of Fuel Grade and Uplift

The Ground Engineer/Refueling Supervisor is responsible for advising the Fueling Supervisor of the grade, quantity and required distribution of the fuel in the aircraft tanks.

Before commencing fueling the Ground Engineer/Refueling Supervisor must take precautions to ensure that the correct grade is offered by the Suppliers.

Accuracy of quantities delivered should be checked and agreed between the Ground Engineer/Refueling Supervisor and the Fuel Supplier's Fueling Supervisor, by joint examination of meter readings before and after and agreed between the Ground Engineer/Refueling Supervisor and the Fuel Supplier's Fueling Supervisor, by joint examination of meter readings before and after fueling.

The Ground Engineer/Refueling Supervisor must also make a double check on the fuel uplifted by comparing the aggregate quantities of fuel on board before and after fueling. Where a discrepancy exists between the uplift as revealed by this second check and the uplift as determined jointly by the Ground Engineer/Refueling Supervisor and the Fuel Supplier's Fueling Supervisor from the tanker meter readings, the Supplier's issuing documents should be endorsed accordingly and reference should also be made in the Voyage Report.

When fueling is not supervised by the Ground Engineer/Refueling Supervisor, the Captain must arrange for himself or his nominee to check the fuel quantity on board at a time sufficiently in advance of scheduled departure to ensure that no delay is caused by any further adjustment of fuel quantity.

5.3.9 Fueling With Passengers Onboard or During Embarkation / Disembarkation

(Reference to IGOM 3.2.3)

5.3.9.1 Introduction

During short turnarounds and en-route transits it will often be necessary for fueling to occur with passengers onboard or with passenger embarkation / disembarkation taking place.

There are specific procedures and restrictions which apply to fueling an aircraft in such circumstances and these shall always be adhered to.

5.3.9.2 Scope

This section provides the minimum criteria necessary for the safe fueling of aircraft with passengers onboard.

5.3.9.3 Regulations

Members shall obtain permission from local authorities to undertake fueling with passengers on board and during the embarkation/disembarkation process,

Consideration must be given to:

- The local airport regulations;

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Issue Date: JAN24

Revision No.: 00

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- Fire regulations of fueling companies.

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5.3.9.4 Responsibilities

General

When fueling with passengers onboard you must:

- 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. The ground area beneath aircraft exit doors that have been designated for rapid deplaning or emergency evacuation is kept clear of obstructions
- 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.
- Not hinder escape routes of passengers on board by ensuring that passenger stairs and bridges are clear of FOD.
- 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 is in place.

5.3.9.4.1 Crew Member (Cockpit and Cabin Crew)

A Flight Crew member will normally be on the flight deck to co-ordinate the necessary precautions and procedures to be observed. However when Flight Crew are not in attendance, the Senior Cabin Crew member, who will be positioned in the vicinity of the main door used for passenger embarkation, may undertake these duties.

The Cabin Crew shall be trained in Emergency Evacuation Procedures.

The aircraft illuminated 'NO SMOKING' signs shall be ON and illuminated 'FASTEN SEAT BELT' signs shall be OFF, together with sufficient interior lighting to enable emergency exits to be identified. Such lighting shall remain on until fueling operations have been completed.

The emergency lighting master switch shall be positioned to 'ARM' prior to commencement of fueling operations, and shall remain positioned to 'ARM' until fueling operations are completed.

The Public Address system shall be serviceable. Appropriate announcements should be made instructing passengers to unfasten their seat belts and refrain from smoking. The Cabin crew should also advise passengers and other responsible staff that fueling will take place and that they shall not operate electrical equipment or other potential sources of ignition

A Senior Cabin Crew Member, who shall be stationed at the main cabin door, during fueling, shall be responsible for notifying pilot in command and ramp supervisor to inform the Refueller immediately, should either the presence of any fuel vapour be detected or any other hazard arises in the aircraft interior. Fueling operations and all cleaning activities using electrical equipment within the aircraft shall be stopped until conditions permit resumption.

A minimum of one Cabin Crew member is to be onboard for every 50 passengers (or fraction thereof) on the aircraft, with at least one cabin attendant for each separate passenger compartment to secure the rapid safe evacuation of passengers if an incident occurs.

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Cabin Crew shall always be onboard when passengers are onboard with one cabin crew member positioned at each pair of aircraft doors.

Cabin Crew are required to supervise passengers and to ensure that aisles and emergency doors are unobstructed.

Provision for the safe evacuation of passengers in the event of an emergency shall be made via at least two of the main passenger doors, (or the main passenger door plus one emergency exit), and preferably at opposing ends of the aircraft. These doors shall be constantly manned by a cabin crew member throughout the fueling operation.

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

5.3.9.4.2 Ground Handling Staff

Handling agents are instructed that the decision for "passengers on board" during fueling/defueling is strictly limited to the decision of the Nesma Airlines Pilot in Command. Fueling or defueling may be carried out with passengers boarding, on board or disembarking provided that the following requirements can be satisfied. If these cannot be complied with, fueling operations must not take place.

Ground handling staff must be advised if fueling is to take place when passengers are remaining onboard, or are being embarked / disembarked.

When a loading bridge is in use, no additional sets of aircraft passenger steps need be provided, however either the left or right rear door will be prepared for use as an emergency escape route using the automatic inflatable slide

When a loading bridge is NOT available for use, aircraft passenger steps shall be positioned at two of the main passenger doors (i.e. preferably one forward and one aft) which are to be open.

When passengers are boarding during fueling operations, they shall be under the supervision of Customer Services' staff and their route shall avoid the fueling zone. The use of personal hand held telephones by passengers shall not be permitted.

Passenger baggage reclamation on the ramp shall be carried out away from the fueling zone. Fueling shall cease if this requirement cannot be complied with.

Ground service personnel shall ensure that the ground below an exit or the emergency slide deployment area is kept clear of all obstructions.

Work within the aircraft such as catering and cleaning shall be conducted in such a manner that they do not create a hazard or obstruct exits.

All personnel involved with the operation shall be aware of the fire protection emergency procedures, including the alerting of any personnel on board, the procedure for summoning the Airport Fire Service and action to be taken in the event of a fuel spillage or kerosene contamination.

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This procedure is used where a disembarking of passengers is not practicable. Embarkation/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. Before embarkation/disembarkation of passengers during fueling, the PIC has to be consulted.

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5.3.9.4.3 Ground Engineer/Refueling Supervisor

- The Ground Engineer/Refueling Supervisor must be advised if it is intended that the flight crew will leave the aircraft during refueling.
- Communicates with senior cabin crew on board the aircraft,
- Provides notifications to the senior cabin crew and to the other appropriate personnel engaged in aircraft ground handling activities when fueling is about to begin and has been completed, unless an equivalent procedural means has been established to ensure the flight and/or cabin crew are aware of fueling operations and are in a position to effect an expeditious evacuation of the aircraft, if necessary
- Provides notifications to the senior cabin crew and to the other appropriate personnel engaged in aircraft ground handling activities when a hazardous condition or situation has been determined to exist.
- In case of hazardous conditions or situations the Ground Engineer / Refueling Supervisor will use the quickest available means of communication to notify the flight/cabin crew e. g. using:
 - Aircraft intercommunication system,
 - Direct person – to – person contact,
 - Suitable aural or visual signals.

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5.3.10 Fire Protection and Fuel Spills Procedure

Firefighting equipment of not less than TWO 12 lbs. Carbon dioxide or dry powder fire extinguisher units, or their equivalent, are to be positioned and manned at all operations. The staff are to be trained in their use as initial intervention and in the method of alerting the Airport Fire Service, rescue or firefighting service in cases of an emergency for example a fire or a major fuel spill.

In the event of fire at the tank filling point, stop fuel supply, cast off the hose, and try to seal the tank opening by filler cap or any convenient covering.

Care must be taken to avoid over-filling of tanks or spillage from pipes or cans. Any overflow on to the aircraft must be removed before engines are started. Small spillages of fuel should be covered with sand or earth and then removed to a safe place.

In the event of a serious spillage,

- Stop fueling and notify the flight crew member onboard the aircraft.
- Notify the Airport Fire Service at once.
- Notification of the flight crew or other qualified persons on board the aircraft.
- Pending arrival, if the Airport Fire Service at once.
- Pending arrival, post a guard and maintain a restricted area around the spill to keep away unauthorized persons or vehicles,
- Disembark passengers, crew, or other staff to a safe area.
- No mechanically or electrically propelled vehicles should be allowed to approach within 50' of the spill.
- Service vehicles already within the area with prime movers running should, if circumstances permit, be removed to a safe place, after disconnection from the aircraft, bearing in mind that the shutting down or starting of equipment in the spill area may produce ignition hazards.
- Notwithstanding the above, the ground power and air conditioning units should be stopped.
- Removal of the aircraft from the spill area must depend on local conditions but tractors should not be brought within 50' of the spill area.
- After spillage, fuel should not be washed into drains or culverts unless there is no alternative, in which case large-scale water flushing must be carried out at once and the Local Authorities notified.
- Sand or earth dams can sometime be improvised to contain the spillage temporarily, using non-ferrous implements.
- The Airport Fire Service may elect to put down a foam blanket over the area to minimize vaporization and assist removal of aircraft. The use of
- Extinguishing agent such as vaporizing liquids or inert gases, in an effort to render the fuel vapor non-flammable, is not recommended, as these have no lasting effect.
- All spills should be thoroughly investigated as to cause, so that remedial action can be taken to avoid similar accidents.
- Approved flame proof electrical equipment in the vicinity of the aircraft may be left on if essential. Other electrical equipment should be switched off.

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5.3.11 The Use of Photographic Flash Bulbs and Electronic Flash Equipment

The use of photographic flash bulbs and electronic flash equipment within 10' of the filling and venting point on aircraft equipment is prohibited.

5.3.12 Quality Control Checks At Stations

Safety and Quality audit, is carried out for all fuel suppliers, ensuring that the suppliers are maintaining standards of fuel safety and quality acceptable by Nesma Airlines,

This audit shall cover the following:

- Fuel suppliers should have records, supplemented by Q.C. periodic sampling checks on refueling equipment preferably once every 6 months including check during routine filter / water separator element changes for signs of microbiological ingestion (typically black water stains, element discoloration and / or slime)
- Training and qualification of the supplier personnel. Who are required to have initial and recurrent training according to SOM 2.3.2.2
- Fuel facilities.
- Fuel is of the correct grade and specifications for the aircraft type.
- Fuel delivered and loaded onto aircraft is free from contamination.
- Safety and quality procedures.
- Performance levels of personnel.

In the event of any irregularity being found the local supplier must be notified and Safety and Quality Director informed.

5.3.13 Fueling with Passengers Onboard or During Embarkation / Disembarkation

In Some Europe Airports have its certain local procedures which should be adhered, Formal Communication with Local Airport Authority should be done and received procedure should be implemented,

5.3.13.1 Italian Airports

Decree of 30 June 2011 issued by the Ministry of Internal Affairs. Rules to be observed during aircraft refueling operations ENAC Regulation for the building and operation of Airports, Ed. 2 - Emendam.6 of 20/06/2011, Cap. 10 §6.

5.3.13.2 Duties and Responsibilities

The complex nature of refueling operations, also determined by the simultaneous presence of multiple operators planeside involved in both refueling operations and ground handling

operations, requires a well- orchestrated approach towards all activities so that safety is ensured at all times. For this purpose, a system known as the "Safety net"

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has been established which, by assigning roles and responsibilities, ensures that the highest safety standards are achieved during refueling operations.

The various operators that make up the "Safety net" are listed below, along with their respective duties and responsibilities:

5.3.13.3 Air Operator

1. Appoint a Refueling Supervisor, shall be identified as the Captain of the flight, Co-pilot or Qualified Technician.
 2. incorporate the refueling procedures into the specific regulations to be applied in the case of "Refueling/defueling with passengers embarking, on board or disembarking," in accordance with EU- OPS 1.305 in its most recent amendment.
- Specifically, the Air Operator's procedures must deal with:
- a) the number of flight crew members and their respective tasks
 - b) the on-board activities compatible with refueling operations
 - c) information provided to passengers
 - d) the use of on-board devices, such as security announcements and the use of safety belts
 - e) the use of emergency exits
 - f) the interruption of refueling operations in the presence of fuel vapors inside the aircraft or other hazards
 - g) the interruption of refueling operations in the event of the Airport Fire Service being unavailable due to unexpected emergencies arising within the airport area.
3. ensure that during refueling operations with passengers embarking, onboard or disembarking there is a two-way communication line open between the Refueling Supervisor and a crew member on board the aircraft
 4. ensure that there is a two-way communication line open between the Refuelling Operator and the Refuelling Supervisor.

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5.3.13.4 Refueling Supervisor:

The Refueling Supervisor is responsible for coordinating and monitoring refueling operations to ensure compliance with procedures, handling contacts with the Refueling Handler personnel and with any personnel on board the aircraft as well as activating emergency procedures in accordance with ENAC Regulations.

In particular, the Refueling Supervisor must, either directly or through his delegate, ensure that:

1. the required firefighting devices are available;
2. any personnel or equipment not involved in aircraft servicing operations are kept outside the refueling area (safety zone - 6 m);
3. access routes to the refueling area for emergency rescue vehicles are not obstructed by vehicles or equipment;
4. if necessary, any passengers and personnel from the Air Operator or other Handlers on board the aircraft can be evacuated quickly;
5. the escape routes used for the rapid removal of the refueling vehicle are not obstructed by vehicles or equipment.

In the case of a start of a fire or a large fuel spill the Refueling Supervisor is required to alert any personnel and passengers on board the aircraft and to activate the Airport Fire Service as specified in the Airport Emergency Plan or the Procedure for managing fuel spills, immediately providing information as to the type of incident and the stand where it occurred.

If the Airport Fire Service is unavailable (or in the event of an ongoing state of alert, emergency, accident and/or at the request of the VVF), once notification has been received from the Airport Management Company or the Handler located planeside, the Refueling Supervisor must not start refueling operations or, if already started, he must interrupt them.

5.3.13.5 Refueling Handler

1. The Refueling Handler must be in possession of a certificate, issued by ENAC in accordance with their regulations, certifying the conformity of the organization and the procedures under both ordinary and emergency operating conditions. Personnel qualifications and conformity of vehicles used for firefighting purposes are established in accordance with the regulations laid down by the C.N.VV.F. (Italian National Fire Corps).
2. Any Refueling Handler personnel operating plane side must be in possession

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of a valid certificate issued by the C.N.VV.F. (Italian National Fire Corps).

3. For each refueling operation, the Refueling Handler must ensure the presence of at least one person trained to carry out those operations. Training conformity is attested by a specific declaration issued by the Manager of the Handler and sent to the Airport Management Company and the VVF.
4. In the event of a start of a fire or a fuel spill, the Refueling Handler is required to interrupt refueling operations immediately and request instructions from the Refueling Supervisor.
5. Depending on the specific nature of the incident (type, extent, etc.) the Refueling Handler shall assess when it is necessary to remove their vehicles and equipment, as well as what safety measures and emergency response actions may need to be taken, which may even involve using the fire extinguishers available on the stand, where circumstances allow.
6. Before the start of refueling operations, the Refueling Handler personnel must ensure that adequate escape routes are made available to allow the refueller tanker to move away quickly.
7. If the Airport Fire Service is unavailable (or in the event of an ongoing state of alert, emergency, accident and/or at the request of the VVF), once notification has been received from the Airport Management Company, the Handler located planeside or the Refuelling Supervisor, the Refuelling Handler must not start refuelling operations or, if already started, they must interrupt them.

5.3.13.6 Airport Management Company

The Airport Management Company has carried out specific assessments and has verified the conformity of the aircraft stands that can be used for refueling aircraft with passengers embarking, on board or disembarking for the purposes of fire rescue operations, taking into account factors such as location in relation to the fire stations, availability of extinguishing devices in the immediate vicinity that are ready to use for emergency response action, the relative positions of the dedicated stands, etc. On the basis of these assessments, the Airport Management Company has prepared a special risk assessment to indicate the risks associated with refueling operations with and without passengers on board, and the corrective measures implemented.

1. For the purposes of prevention and emergency response in the event of fuel fire, in accordance with the procedures laid down in the Airport Manual, the

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Airport Management Company must ensure that fully efficient firefighting devices are available on the stand where refueling is taking place or in the immediate vicinity. These devices must provide a total of no less than 50 kg of dry chemical powder, with an extinguishing capacity of no less than "A-B1-C", as well as 50 liters of foam with an extinguishing capacity of no less than "A-B4" as required by the Fire Department of the Ministry of Internal Affairs.

2. The Airport Management Company must notify the VVF whenever there is a request for refueling with passengers embarking, on board or disembarking, by sending a report specifying the type of aircraft, the stand and the actual time of the start of refueling as communicated by the Handler.
3. The Airport Management Company must notify the Refueling Handlers, Air Operators and ground handling Service Providers of the suspension of refueling operations in the event of the Airport Fire

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5.3.13.7 Ground Handling Service Providers

All ground handling Service Providers must:

1. Be in possession of the relevant certification to operate as a Handler as required by current legislation.
2. Train their staff on the basis of the Guidelines for the Preparation of the training program for personnel operating on the Apron- Aircraft Refueling, issued by ENAC and the Ministry of Internal Affairs.
3. ensure that any vehicles used planeside are in perfect working order and do not produce sparks or flames or any other fire risks.
4. If the Airport Fire Service is unavailable (or in the event of an ongoing state of alert, emergency or accident and/or at the request of the VVF), once notification has been received from the Airport Management Company (by telephone, via radio or via remote alarm system) the ground handling Service Providers must inform the Nesma Airlines and Refueling Operator that refueling operations cannot be started and must interrupt any refuelling operations currently underway.

5.3.13.8 Instructions for aircraft refueling operations

During refueling operations for fixed wing aircraft, with or without passengers embarking, on board or disembarking, the following technical requirements and precautions must be observed. These rules also apply to operations where fuel is extracted from aircraft fuel tanks (de-fuelling).

1. the aircraft refueling operations are performed by the Refuelling Handler (refuelling Service Provider) under the responsibility of the Air Operator
2. the Air Operator must appoint a Refuelling Supervisor
3. refuelling cannot be carried out in the absence of the Refuelling Supervisor during refuelling operations a safety area must be maintained around the aircraft, consisting of a circular area with a radius of 6 metres from the aircraft fuel tanks, vents, equipment and mobile vehicles used for refuelling. This safety area is strictly off-limits to any persons not involved in refuelling operations, aircraft servicing or monitoring of operations.

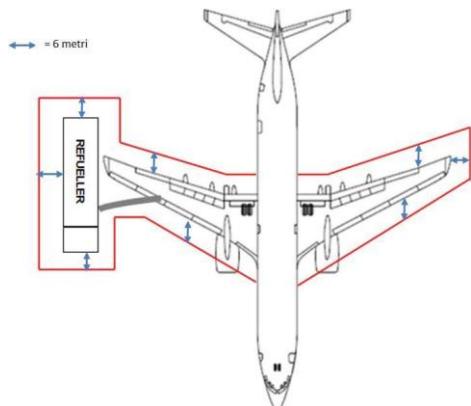


Figure 1: The diagram shows the 6-metre safety zone. Given that the position of the tanks and vents may vary depending on the type of aircraft, the Refuelling Supervisor must thoroughly check the position each time and notify the Refuelling Operator and the ramp operator located planeside if the safety zone does not correspond to the one shown in the diagram above.

4. for each refuelling operation the Refuelling Handler must ensure the presence of at least one person who is trained to carry out those operations: the required level of training must be certified by a specific declaration issued by the manager of the Refuelling Handler. Each Refuelling Handler must send a list of their certified Refuelling Operators, along with details of the two- yearly expiry dates, to the VVF (Fire Department) and the Airport Management Company, who will archive this list together with documents relating to the certification of the Service Provider and the Service Provider Register. This list must include a revision index and relevant date of issue and must be kept updated by the Refueller Handler.
5. the refuelling equipment and the aircraft tanks and vents must be kept at a distance of no less than 15 metres from any building, with the exception of objects related to the relevant airport operations.
6. it is not permitted to simultaneously refuel 2 aircraft positioned on adjoining ERA/ASA stands if both aircraft have passengers embarking, on board or disembarking. To avoid this, the Refueller Supervisor must check with the Airport Management Company whether they can start refuelling operations with passengers embarking, on board or disembarking.
7. a maximum of no more than 8 aircraft may be refuelled at any one time.

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8. each refuelling vehicle must be manned by the necessary personnel so as to ensure its rapid removal in the event of an emergency or for any other safety requirements.
9. during refuelling operations the escape routes must be kept clear of obstructions to allow the refuelling vehicle to move away from the area quickly.
10. if refuelling is carried out simultaneously via two attachments that are not located on the same wing, the presence of at least one certified Refuelling Operator is required for each attachment during refuelling operations, the Air Operator and the Refuelling Handler must take the necessary measures required for each type of aircraft, as specified in the relevant operating procedures, so as to exclude the risk of fuel vapours escaping from the machinery or equipment located in the refuelling area. They must also execute procedures to ensure that the aircraft and all of the relevant refuelling vehicles are properly earthed.
11. during refuelling operations all of the aircraft thrust engines must be switched off
12. any vehicles used for refuelling, aircraft servicing and monitoring of operations and any other equipment must be positioned in such a way as to allow:
 13. free and clear access to the aircraft for Fire and Rescue Services
 14. the rapid evacuation of people on board the aircraft, via the exits in use
 15. the rapid removal of refuelling vehicles
16. vehicles must not pass or stop under the wing of the aircraft, with the exception of those vehicles required for refuelling operations and only if their presence is essential for dispensing fuel or lubricating and hydraulic oils
17. in the case of refuelling via a fuel tanker:
 18. the part of the tanker containing the engine must not be positioned under the wing
 19. the equipment used for maintenance services must be positioned at a distance greater than 3 meters from the vents of the aircraft fuel tanks.
20. All refuelling vehicles operating within the safety zone must be equipped with fire extinguishers in perfect working order.
21. during refuelling operations, properly maintained and fully working firefighting devices must be available in the vicinity of the safe area (Airport Manual section 4 PO02 AIRSIDE INSPECTION AND EVALUATION OF THE CONDITION OF THE RUNWAY "weekly checks to ensure that the firefighting devices located on the aircraft stands are in full working order, under the responsibility of the Airport Management Company - limited to checking that the pressure level indicated on the gauge is within the correct range highlighted in green") to ensure the availability of a total of no less than 50 kg of dry

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chemical powder, with an extinguishing capacity of no less than "A- B1-C", as well as 50 liters of foam with an extinguishing capacity of no less than "A-B4"

22. emergency/medical and Government flights have absolute priority for refuelling. For all other flights, refuelling operations are managed on the basis of the commercial agreement between the Air Carrier and the Refuelling Handler and in order of request
23. operators involved in refuelling procedures must include, within their Operation Manuals, ad hoc procedures for refuelling operations, with or without passengers on board
24. refuelling operations cannot be carried out or, if already started, must be interrupted in the event of:
 - electrical storms over the airport or in the immediate vicinity
 - overheating of the aircraft landing gear
 - fuel vapours inside the aircraft
 - the presence of flames or use of equipment capable of producing sparks or flames
 - recharging or replacement of oxygen cylinders
 - recharging, installation or removal of aircraft batteries
 - activation of radar equipment in the immediate vicinity
 - activation of the HF transmitter, transponder or on-board radar
 - any other event that might lead to dangerous situations
 - the Airport Fire Service being unavailable.
25. in the event of a fire or start of a fire the Airport Emergency Plan must be activated
26. in the event of a fuel spill the specific procedures outlined in the Airport Manual must be applied (Airport Manual section 4, PO28 Managing spills of hazardous substances).
27. areaand, in any case, outside the safety zone.
28. the switching on and off of electrical equipment must be limited to those units required to perform the refuelling operations or to load/unload the aircraft
29. during aircraft refuelling operations, within the safety area:
30. it is strictly forbidden to use electrically powered tools or any other devices or tools that might produce flames or sparks

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- 31. it is strictly forbidden to use flash, whether filament or electronic
- 32. it is strictly forbidden to use lighters or matches
- 33. it is strictly forbidden to drag ladders or other equipment with metal wheels or ones that scrape along the ground when towed
- 34. it is strictly forbidden to use mobile phones
- 35. it is strictly forbidden to connect/disconnect any kind of batteries for wheelchairs
- 36. it is strictly forbidden to load/unload and handle DGR
- 37. in the event of a fire or start of a fire the Airport Emergency Plan must be activated
- 38. in the event of a fuel spill the specific procedures outlined in the Airport Manual must be applied (Airport Manual section 4, PO28 Managing spills of hazardous substances).

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5.4 De-Icing / Anti-Icing Program



5.4.1 Objective and Applicability:

To set a program for de-icing/anti-icing of an A/C before dispatch when there, exists or expected, frost, ice or snow adhering to the wings, control surfaces, engine inlets or other critical surface of the A/C that may adversely affects the safety of the flight.

According to the nature of Nesma Airlines operations which is able to fly to European airports, De-/Anti-Icing becomes applicable at the European airports in the winter season of each year.

Ground Handling Manager will have to make sure those policies and procedures of De-/Anti-Icing are available with the subcontractors who will perform this service for Nesma Airlines aircraft.

The following policies, and procedures described in this program aim to ensure:

- Adherence to the Clean Aircraft Concept;
- Defines responsibilities within the Program;
- Addresses applicable locations within the route network;
- Defines areas of responsibility;

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- Specifies technical and operational requirements;
- Specifies training and qualification requirements;
- Is applicable to external service providers that perform de-/anti-icing functions for Nesma Airlines
- Standardized methods of fluid application
- Compliance with specific aircraft limitations
- A clean aircraft through proper treatment of applicable surface.

(Ref, AMM 12.31.12. Ice and Snow Removal – Maintenance Practices)

5.4.2 References:

ECAR 121.629,

SAE AS6285

ICAO DOC 9640/AN-940

AMM 12.31.12. Ice and Snow Removal – Maintenance Practices

5.4.3 Definitions

Active frost:

Active frost is a condition when frost is forming. Active frost occurs when aircraft surface temperature is:

- at or below 0 °C (32 F)
And
- at or below dew point

Anti-icing:

Precautionary procedure which provides protection against the formation of frost or ice and accumulation of snow or slush on treated surfaces of the aircraft for a limited period of time (holdover time).

Anti-icing fluid:

- a) mixture of water and Type I fluid;
- b) Premix Type I fluid;
- c) Type II fluid, Type III fluid, or Type IV fluid;
- d) Mixture of water and Type II fluid, Type III fluid, or Type IV fluid.

Note:

Fluids mentioned in a) and b) must be heated to ensure a temperature of 60 °C (140 °F) minimum at the nozzle.

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An examination of an item against a relevant standard by a trained and qualified person.

Cold-soak effect:

The wings of aircraft are said to be "cold-soaked" when they contain very cold fuel as a result of having just landed after a flight at high altitude or from having been re-fuelled with very cold fuel. Whenever precipitation falls on a cold-soaked aircraft when on the ground, clear icing may occur. Even in ambient temperatures between -2 C, ice or frost can form in the presence of visible moisture or high +15 C or below. Clear ice is very humid if the aircraft structure remains at 0 difficult to be detected visually and may break loose during or after takeoff. The following factors contribute to cold-soaking: temperature and quantity of fuel in fuel cells, type and location of fuel cells, length of time at high altitude flights, temperature of re-fuelled fuel and time since re-fueling.

Contamination:

Contamination in this document is understood as all forms of frozen or semi-frozen moisture such as frost, snow, ice or slush.

Contamination check:

Check of aircraft surfaces for contamination to establish the need for de-icing.

De-Icing:

Procedure by which frost, ice, slush or snow is removed from an aircraft in order to provide clean surfaces.

De-icing/anti-icing:

Combination of the procedures 'de-icing' and 'anti-icing'. It may be performed in one or two steps.

De-icing fluid:

- a) heated water;
- b) mixture of water and Type I fluid;
- c) Premix Type I fluid;
- d) Type II, Type III, or Type IV fluid;
- e) Mixture of water and Type II, Type III, or Type IV fluid.

Note: De-icing fluid is normally applied heated in order to assure maximum efficiency.

Freezing drizzle:

Fairly uniform precipitation composed exclusively of fine drops (diameter less than 0.5 mm (0.02 in)) very close together which freezes upon impact with the ground or other exposed objects.

Freezing fog:

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A suspension of numerous minute water droplets which freezes upon impact with ground or other exposed objects, generally reducing the horizontal visibility at the earth's surface to less than 1 km (5/8 mile).

Frost/hoar frost:

Ice crystals that form from ice saturated air at temperatures below 0°C (32°F) by direct sublimation on the ground or other exposed objects.

Hail:

Precipitation of small balls or 50 mm (0.2 to pieces of ice with a diameter ranging from 5 to >2.0 in.) falling either separately or agglomerated.

Holdover time:

Estimated time for which an anti-icing fluid will prevent the formation of frost or ice and the accumulation of snow on the protected surfaces of an aircraft, under weather conditions.

Ice pellets:

Precipitation of transparent (grains of ice), or translucent (small hail) pellets of ice, which are spherical or irregular, and which have a diameter of 5 mm (0.2 in.) or less. The pellets of ice usually bounce when hitting hard ground.

Light freezing rain:

Precipitation of liquid water particles which freezes upon impact with the ground or other exposed objects, either in the form of drops of more than 0.5 mm (0.02 inch) or smaller drops which, in contrast to drizzle, are widely separated. Measured intensity of liquid water particles is up to 2.5 mm/hour (0.10 inch/hour) or 25 grams/dm²/hour with a maximum of 0.25 mm (0.01 inch) in 6 minutes.

Lowest operational use temperature (LOUT):

The lowest operational use temperature (LOUT) is the higher (warmer) of

- a) The lowest temperature at which the fluid meets the aerodynamic acceptance test (according to AS5900) for a given type (high speed or low speed) of Aircraft or or
- b) The freezing point of the fluid plus the freezing point buffer of 10 °C (18 qF) for Type I fluid and 7 °C (13 qF) for Type II, III or IV fluids.

For applicable values refer to the fluid manufacturer's documentation.

Moderate and heavy freezing rain:

Precipitation of liquid water particles which freezes upon impact with the ground or other exposed objects, either in the form of drops of more than 0.5 mm (0.02 inch) or smaller drops which, in contrast to drizzle, are widely separated. Measured intensity of liquid water particles is more than 2.5 mm/hour (0.10 inch/hour) or 25 grams/dm²/hour.

Rain or high humidity (on cold soaked wing):

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Water, visible moisture or humidity forming ice or frost on the wing surface, when the temperature of the aircraft wing surface is at or below 0°C (32 °F).

Rain and snow:

Precipitation in the form of a mixture of rain and snow.

Rime ice

Small frozen water droplets, spherical opaque/milky granular appearance looking similar to frost in a Freezer. Typically rime ice has low adhesion to the surface and its surrounding rime ice particles.

Snow:

Precipitation of ice crystals, most of which are branched, star-shaped or mixed with unbranched crystals.

At temperatures higher than -5 °C (23 °F), the crystals are generally agglomerated into snowflakes.

Snow Grains:

Precipitation of very small white and opaque particles of ice that are fairly flat or elongated with a diameter

Of less than 1 mm (0.04 inch). When snow grains hit hard ground, they do not bounce or shatter.

Note: For holdover time purposes treat snow grains as snow.

Snow Pellets:

Precipitation of white, opaque particles of ice. The particles are round or sometimes conical; their diameter

Range from about 2 - 5 mm (0.08 - 0.2 inch). Snow pellets are brittle, easily crushed; they do bounce and

May break on hard ground.

Note: For holdover time purposes treat snow pellets as snow.

Slush:

Snow or ice that has been reduced to a soft watery mixture.

5.4.4 Procedures

These procedures specify the recommended methods for de-icing and anti-icing of Aircraft on the ground to provide an aerodynamically clean Aircraft.

When Aircraft surfaces are contaminated, they shall be de-iced prior to dispatch. When there is a risk of contamination of the Aircraft surfaces at the time of dispatch, these surfaces shall be anti-iced. If both de-icing and anti-icing are required, the procedure may be performed in one or two steps. The selection of a one- or two-step process depends upon weather conditions, available equipment,

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available fluids and the holdover time to be achieved. If a one-step procedure is used, then both SOM 05.4.4.3 and SOM 5.4.4.7 apply.

For guidance regarding fluid limitations, see SOM 5.4.5.1

Note 1: Slippery conditions can exist on the ground or equipment following the de-icing/anti-icing procedure.

Note 2: Where holdover time is critical, a two-step procedure using undiluted Type II, III, or IV fluid for the second step should always be considered.

5.4.4.1 Checks

De-icing pre-flight check

This check is performed by crew, or approved ground engineer, or approved ground personnel. This inspection shall determine the need for a clear ice inspection after de-icing / anti-icing.

De-icing final check

This check includes a check performed by qualified ground personnel after de-icing / anti-icing has been completed. This check is an integral part of the de-icing / anti-icing procedure. No aircraft shall be dispatched for departure after a de-icing / anti-icing operation, unless the aircraft has received a final check by a responsible authorized person.

The check shall also include verification that the correct fluid mixture has been applied. Personnel qualified to perform de-icing / anti-icing shall also be qualified to perform this check. If not, the check shall be performed by a certified organization from the national civil aviation or Flight Crew.

De-icing hands on check

De-icing hands on check is performed by qualified personnel to ensure that no clear ice, frost or snow remains on the critical surfaces after de-icing / anti-icing.

This check is a close physical check of the applicable aircraft surface. This check should be performed if clear ice was detected at the pre-flight check.

Multiple Checks

When these checks are duplicated by different personnel or organizations, disagreements may occur. In the event of any disagreement the most limiting action must always be taken.

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5.4.4.2 De-Icing/Anti-Icing Methods

- De-icing anti-icing is generally carried out by using heated fluids dispensed from spray nozzles mounted on specially designed de-icing anti-icing trucks. Other methods include de-icing anti-icing gantry spraying systems. Small portable spraying equipment & mechanical means (brushes, ropes, etc.), infra-red radiation, and forced air.
- De-icing anti-icing fluids are applied close to the skin of the Aircraft to minimize heat loss. Unique procedures to accommodate Aircraft design differences may be required. Spraying usually starts with the fuselage. General techniques are outlined below.
 - a) Fuselage. Spray along the top center line and then outboard. Avoid spraying directly on windows.
 - b) Wings and horizontal stabilizers. Spray from the leading edge towards the trailing edge, and from the highest point of the surface camber to the lowest point. Aircraft configuration and/or local conditions may require a different procedure.
 - c) Vertical surfaces. Start at the top and work downwards, spraying from the leading edge toward the trailing edge.
 - d) Wing gear and wheel base. Keep application of de-icing anti-icing fluid in this area to a minimum. High-pressure spraying is not recommended. Do not spray directly onto brakes/wheels.
 - e) Engines/APUs. Avoid spraying fluids into engines or APUs. Consult manufacturers' recommendations. Ensure that engines are free to rotate before start up and that the front and back of fan blades are free of ice. Air-conditioning bleed systems must be switched off during de-icing anti-icing operations when engines or APUs are running. Do not spray directly onto exhausts or thrust reversers.
 - f) Instrument sensors. Avoid spraying directly onto Pitot heads, static vents or air stream direction detector probes and angle of attack sensors.

Aircraft have to be treated symmetrically.

- De-icing anti-icing can be carried out as a one-step process using heated de-icing anti-icing fluid to both de-ice and anti-ice, or as a two-step process using heated de-icing fluid or hot water to de-ice, followed immediately by an anti-icing fluid to anti-ice. Fluid temperature and pressure restrictions must be observed. Selection of the one-or two-step method depends upon local situations, such as weather conditions, available equipment, available fluids, and holdover time.
- De-icing anti-icing an airplane as close to its departure time and/or departure runway as possible provides the minimum interval between de-icing anti-icing and take-off, thus conserving holdover time.
- Fluid application and airplane-related limits such as correct fluid mixtures, fluid temperature, and pressure at the nozzle, application procedure, and spraying techniques have to be observed.

CAUTION the repeated application of Type II or Type IV fluid. Without subsequent application of Type I or hot water, may cause a residue to collect in aerodynamically quiet areas. This residue may rehydrate and freeze under certain temperature, high humidity and/or rain conditions. It may also block or impede critical flight control systems and may require removal.

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After prolonged periods of de-icing anti-icing, it is advisable to check aerodynamically quiet areas and cavities for residues of thickened de-icing anti-icing fluid. Consult airframe manufacturers for details and procedures.

5.4.4.3 De-Icing

Ice, snow, slush or frost may be removed from Aircraft surfaces by heated fluids, mechanical methods, alternate technologies or combinations thereof. The following procedures shall be used for their removal by fluids.

Note 1: Alternate technology may be used to accomplish the de-icing process.

Note 2: Pre-step process to be done prior to de-icing/anti-icing

If agreed by the Aircraft operator, a pre-step process prior to the de-icing process, in order to remove large amounts of frozen contamination (e.g. snow, slush or ice), may be considered to reduce the quantity of glycol-based de-icing fluid that is needed.

This pre-step process may be performed with various means (e.g., brooms, forced air, heat, heated water, and heated fluids with negative buffer freezing point). If the pre-step procedure is used, make sure that the subsequent de-icing process removes all frozen contamination including the contamination that may have formed on surfaces and or in cavities due to the pre-step process.

Requirements

Ice, snow, slush and frost shall be removed from Aircraft surfaces prior to dispatch or prior to anti-icing.

General

For maximum effect, fluids shall be applied close to the surface of the skin to minimize heat loss.

NOTE: The heat in the fluid effectively melts any frost, as well as light deposits of snow, slush and ice. Heavier accumulations require the heat to break the bond between the frozen deposits and the structure; the hydraulic force of the fluid spray is then used to flush off the residue. The de-icing fluid will prevent re-freezing for a period of time depending on Aircraft skin and ambient temperature, the fluid used, the mixture strength and the weather.

Removal of frost and light ice

General procedure

A nozzle setting giving a solid cone (fan) spray should be used.

NOTE: This ensures the largest droplet pattern available, thus retaining the maximum heat in the fluid. Providing the hot fluid is applied close to the Aircraft skin, a minimal amount of fluid will be required to melt the deposit.

Removal of local area contamination

When no precipitation is falling or expected, a “local area” de-icing may be carried out under the below mentioned or similar conditions.

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In some cases a full or complete de-icing is not necessary. When the presence of frost and/or ice is limited to localized areas on the surfaces of the Aircraft and no holdover time is likely to be required, only the contaminated areas will require treatment.

This type of contamination will generally be found on the wing and/or stabilizer leading edges or in patches on the wing and/or stabilizer upper surfaces.

Spray the affected area(s) with a heated fluid/water mixture suitable for a One-Step Procedure. Then spray the same area(s) on the other side of the Aircraft.

Both sides of the Aircraft must be treated identically (same areas, same amount and type of fluid, same mixture strength), even if the contamination is only present on one side.

A trained and qualified person must check that both the treatment was performed symmetrically and that all contamination has been removed.

After this check has confirmed that the treated areas are clean, the following statement shall be given to the Commander: "Local Area De-icing only. Aircraft is clean. Holdover times do not apply"

Under wing de-icing procedures

Treatments must be symmetrical and may include flaps lower surfaces. Spray the affected areas with a heated fluid/water mixture suitable for a One-Step Procedure or a Two Step Procedure, as required, (see caution below), and then spray the same areas under the other wing. Both wings must be treated identically (same areas, same amount and type of fluid, same mixture strength), even if the frozen contamination is only present under one wing. A trained and qualified person must check that the treatment was done symmetrically and that all frozen deposits have been removed, and then report the details of the treatment to the Commander. No holdover times apply to under wing treatments.

CAUTION: Under wing frost and ice are usually caused by very cold fuel in the wing tanks.

Use a fluid/water mixture with a higher concentration of glycol than is usually required by the OAT to prevent re-freezing.

5.4.4.4 Removal of Snow

A nozzle setting sufficient to flush off deposits and minimize foam production is recommended. Foam could be confused as snow.

NOTE: The procedure adopted will depend on the equipment available and the depth and type of snow; i.e. light and dry or wet and heavy. In general, the heavier the deposits the heavier the fluid flow that will be required to remove it effectively and efficiently from the Aircraft surfaces.

For light deposits of both wet and dry snow, similar procedures as for frost removal may be adopted.

Wet snow is more difficult to remove than dry snow and unless deposits are relatively light, selection of high fluid flow will be found to be more effective.

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Under certain conditions it will be possible to use the heat, combined with the hydraulic force of the fluid spray to melt and subsequently flush off frozen deposits.

However, where snow has bonded to the Aircraft skin, the procedures detailed in SOM_05.4.4.5 should be utilized.

Heavy accumulation of snow will always be difficult to remove from Aircraft surfaces and vast quantities of fluid will invariably be consumed in the attempt. Under these conditions, serious consideration should be given to removing the worst of the snow manually before attempting a normal de-icing procedure.

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5.4.4.5 Removal of Ice

Heated fluid shall be used to break the ice bond. The method makes use of the high thermal conductivity of the metal skin.

A stream of hot fluid is directed at close range onto one spot at an angle of less than 90°, until the Aircraft skin is just exposed. The Aircraft skin will then transmit the heat laterally in all directions raising the temperature above the freezing point thereby breaking the adhesion of the frozen mass to the Aircraft surface. By repeating this procedure a number of times, the adhesion of a large area of frozen snow or glazed ice can be broken. The deposits can then be flushed off with either a low or high flow, depending on the amount of the deposit.

5.4.4.6 General De-Icing Fluid Application Strategy

For effective removal of snow and ice, the following techniques shall be adopted.

Certain Aircraft can require unique procedures to accommodate design differences, see aircraft manufacturer's instructions.

Ice, snow or frost dilutes the fluid. Apply enough hot de-icing fluid ensure that re-freezing does not occur and all contaminated fluid is driven off.

Wings, horizontal stabilizer, and elevators

Spray from the leading edge to the trailing edge. Do not spray from the rear. Start at the highest point of the surfaces and work to the lowest parts, i.e. on most Aircraft start at the wing tip and work towards the wing root.

NOTE: Refer to the aircraft manufacturer's documentation for any deviation from this procedure.

Vertical surfaces

Start at the top and work down.

Fuselage

Spray along the top centre-line and then outboard. Ensure that it is clear of snow, slush or ice in accordance with aircraft manufacturer's documentation. Hoarfrost may be allowed.

Nose/Radome Area and Flight Deck Windows

Type I fluid/water mixture or manual methods of removal (such as squeegees or brushes) are recommended.

When thickened fluids are used, avoid spraying near flight deck windows, as fluid residues can cause a severe loss of visibility during flight.

Any thickened fluid remaining on nose areas where it could blow back onto the windscreens should be removed prior to departure, using squeegees or equivalent.

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If flight deck windows are contaminated with thickened fluids use water or an approved windshield cleaner (use of a low freezing point windscreens washing fluid is recommended when OAT is at or below 0 °C (32 °F)).

CAUTION: Prior to cleaning of Flight Deck Windows ensure that the window heating system is switched off.

Landing gears and wheel bays

The application of de-icing fluid in this area shall be kept to a minimum. De-icing fluid shall not be sprayed directly onto brakes and wheels.

NOTE: Accumulations such as blown snow may be removed by other means than fluid (mechanically, air blast, heat etc). However, where deposits have bonded to surfaces, they can be removed by the application of hot air or by spraying with hot de-icing fluids.

Engines

Deposits of snow shall be removed mechanically from engine intakes prior to departure. Any frozen deposits that have bonded to either the lower surface of the intake, the fan blades including the rear side, or propellers, shall be removed by hot air or other means recommended by the engine manufacturer.

5.4.4.7 Anti-Icing

Ice, snow, slush or frost will, for a period of time, be prevented from accumulating on Aircraft surfaces by the application of anti-icing fluids. The following procedures shall be adopted when using anti-icing fluids.

Required usage

Anti-icing fluid shall be applied to the Aircraft surfaces when freezing rain, snow or other freezing precipitation may adhere to the Aircraft at the time of Aircraft dispatch.

Optional usage

Type II, III, or IV fluid may be applied onto clean Aircraft surfaces at the time of arrival (preferably before unloading begins) on short turnarounds during freezing precipitation and on overnight parked Aircraft. This will minimize ice accumulation prior to departure and often makes subsequent de-icing easier.

CAUTION: This practice has the potential to build up residues. An appropriate inspection and cleaning program shall be established.

On receipt of a frost, snow, freezing drizzle, freezing rain or freezing fog warning from the local meteorological service, Type II, III, or IV fluid may be applied to clean Aircraft surfaces prior to the start of freezing precipitation. This will minimize the possibility of snow and ice bonding or reduce the accumulation of frozen precipitation on Aircraft surfaces and facilitate subsequent de-icing.

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CAUTION: This practice has the potential to build up residues. An appropriate inspection and cleaning program shall be established.

Prior to fight the Aircraft must be de-iced, unless the integrity of the fluid can be ensured. De-ice in accordance with Table 1, whenever possible, to reduce the potential for residue build up.

General

For effective anti-icing, an even layer of sufficient thickness of fluid is required over the prescribed Aircraft surfaces, which are clean (free of frozen deposits). For longer anti-icing protection, undiluted Type II, Type III, or Type IV fluid should be used.

The high fluid pressures and flow rates normally associated with de-icing are not required for this operation and, where possible, pump speeds should be reduced accordingly. The nozzle of the spray gun should be adjusted to provide a medium spray.

NOTE: Type I fluids provide limited holdover effectiveness when used for anti-icing purposes. Little benefit is gained from the minimal holdover time generated.

Anti-icing fluid application strategy

The process should be continuous and as short as possible. Anti-icing should be carried out as near to the departure time as operationally possible in order to utilize maximum holdover time.

The anti-icing fluid shall be distributed uniformly and with sufficient thickness over all surfaces to which it is applied. In order to control the uniformity, all horizontal Aircraft surfaces shall be visually checked during application of the fluid.

The correct amount is indicated by fluid just beginning to run off the leading and trailing edges.

For guidance on amount of fluid refer to the SAE document "Training Recommendations and Background Information for De-icing/Anti-icing Aircraft on the Ground".

Spray from the leading edge to the trailing edge. Do not spray from the rear.

Start at the highest point of the surfaces and work to the lowest parts, i.e. on most Aircraft start at the wing tip and work towards the wing root. On vertical surfaces, start at the top and work down.

The following surfaces shall be treated:

- a) wing upper surfaces including leading edges and upper control surfaces;
- b) horizontal stabilizer upper surfaces including leading edges and elevator upper surfaces;
- c) vertical stabilizer surfaces including the rudder surfaces (both sides);
- d) Fuselage upper surfaces depending upon the amount and type of precipitation (especially important on centre-line engine Aircraft).

CAUTION: Anti-icing fluids may not flow evenly over wing leading edges, horizontal and vertical stabilizers. These surfaces should be checked to ensure that they are properly coated with fluid.

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5.4.5 Limits and Precautions

5.4.5.1 Fluid Related limits

Temperature limits

When performing two-step de-icing/anti-icing, the freezing point of the fluid used for the first step shall not be more than 3° C (5 °F) above ambient temperature. (See also Tables 1 and 2.)

Type I fluids

The freezing point of the Type I fluid mixture used for either one-step de-icing/anti-icing or as a second step in the two-step operation shall be at least 10 °C (18 °F) below the outside air temperature. In no case shall this temperature be lower than the lowest operational use temperature (LOUT).

CAUTION: Type I fluids supplied as concentrates for dilution with water prior to use shall not be used undiluted. For exceptions refer to fluid manufacturer's documentation.

Type II / Type III / Type IV fluids

Type II, III, and IV fluids used as de-icing/anti-icing agents may have a lower temperature application limit of -25 °C (-13 °F). The application limit may be lower, provided a 7 °C (13 °F)

Buffer is maintained between the freezing point of the neat fluid and outside air temperature.

In no case shall this temperature be lower than the lowest operational use temperature (LOUT).

Note: These fluids may not be used below -25°C (-13°F) in active frost conditions (see Table 3).

Application limits

Under no circumstances shall an Aircraft that has been anti-iced receive a further coating of anti-icing fluid directly on top of the contaminated film.

If an additional treatment is required before flight, a complete de-icing/anti-icing shall be performed (see Application Tables 1 and 2). Ensure that any residues from previous treatment are flushed off. Anti-icing only is not permitted.

5.4.5.2 Aircraft Related Limits

The application of de-icing/anti-icing fluid shall be in accordance with the requirements of the airframe/engine manufacturers.

5.4.5.3 Procedure Precautions

One-step de-icing/anti-icing is performed with a heated anti-icing fluid.

The fluid used to de-ice the Aircraft remains on the Aircraft surfaces to provide limited anti-ice capability.

The correct fluid concentration shall be chosen with regard to desired holdover time and is dictated by outside air temperature and weather conditions (see Application Tables 1 and 2).

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Wing skin temperatures may be lower than OAT. If this condition is identified, a stronger mixture (more glycol) may need to be used to ensure a sufficient freezing point buffer.

The application of Type II, III, or IV fluid, especially when used in a one step process, may cause residues to collect in aerodynamically quiet areas, cavities and gaps.

Dried residues may rehydrate and freeze following a period of high humidity and/or rain conditions. This may impede flight control systems. These residues may require removal. Consult the aircraft manufacturer with regard to inspection methods and frequency, related maintenance requirements and Aircraft washing recommendations.

If a Type II, III or IV fluid is used in a one step process, then an appropriate inspection and cleaning program shall be established. Whenever suitable, de-ice and anti-ice with only Type I.

When checking for residues, their visibility may be facilitated by misting with water.

If removal of contamination is required on the lower side of the wings and the horizontal stabilizer and elevator, de-icing/anti-icing fluid shall be applied sparingly to minimize fluid flow into drain holes.

Whenever possible, use Type I only.

Consult the aircraft manufacturer's documentation.

Two-step de-icing/anti-icing (When the first step is performed with de-icing fluid):

The correct fluid(s) shall be chosen with regard to ambient temperature. After de-icing, a separate over-spray of anti-icing fluid shall be applied to protect the relevant surfaces thus providing maximum possible anti-ice capability. The second step is performed with anti-icing fluid.

The correct fluid concentration shall be chosen with regard to desired holdover time and is dictated by outside air temperature and weather conditions (see Application Tables 1 and 2).

The second step shall be performed before first step fluid freezes (typically within 3 min), if necessary area by area.

When applying the second step fluid, use a spraying technique, which completely covers the first step fluid (for example using the method described in SOM 05.4.4.7 and provides a sufficient amount of second step fluid. For guidance on amount of fluid refer to the SAE document "Training Recommendations and Background Information for De-icing/Anti-icing Aircraft on the Ground".

Where re-freezing occurs following the initial treatment, both first and second step must be repeated.

CAUTION: Wing skin temperatures may be lower than OAT. If this condition is identified, a stronger mixture (more glycol) may need to be used to ensure a sufficient freezing point buffer.

CAUTION: The application of Type II, III, or IV fluid, especially when used in a one step process or in the first step of a two-step process, may cause residues to collect in aerodynamically quiet areas,

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cavities and gaps. Dried residues may rehydrate and freeze following a period of high humidity and/or rain conditions. This may impede flight control systems. These residues may require removal.

CAUTION: Consult the aircraft manufacturer with regard to inspection methods and frequency, related maintenance requirements and Aircraft washing recommendations.

The use of hot water or heated mixture of Type I fluid/water for the first step of a two-step de-icing/anti-icing process will minimize the formation of residues.

NOTE 1: If a Type II, III or IV fluid is used in the first step of a two-step process, then an appropriate inspection and cleaning program shall be established

Whenever suitable, de-ice and anti-ice with only Type I.

NOTE 2: When checking for residues, their visibility may be facilitated by misting with water.

NOTE 3: Anti-icing of the lower side of the wings and/or horizontal stabilizer and elevator is normally not foreseen. However, if these surfaces must be de-iced, the freezing point of the de-icing fluid must be low enough to prevent refreezing.

With regard to holdover time provided by the applied fluid, the objective is that it be equal to or greater than the estimated time from start of anti-icing to start of takeoff based on existing weather conditions.

De-icing treatments shall be symmetrical, that is, left-hand and right-hand side of the Aircraft shall receive the same treatment, even when only one side of the Aircraft is contaminated.

Anti-icing treatments shall always cover the entire wing and the entire horizontal stabilizer /elevator on both sides of the Aircraft.

CAUTION: Aerodynamic problems could result if these requirements are not met.

During anti-icing and de-icing, the moveable surfaces shall be in a position as specified by the aircraft manufacturer.

Engines are normally shut down but may remain running at idle during de-icing/anti-icing operations.

Air conditioning and/or APU air shall be selected OFF, or as recommended by the airframe and engine manufacturer.

De-icing/anti-icing fluids shall not be sprayed directly on wiring harnesses and electrical components (receptacles, junction boxes, etc.), onto brakes, wheels, exhausts, or thrust reversers.

De-icing/anti-icing fluid shall not be directed into the orifices of Pitot heads, static ports or directly onto air stream direction detectors probes/angle of attack airflow sensors.

All reasonable precautions shall be taken to minimize fluid entry into engines, APU, other intakes/outlets and control surface cavities.

De-icing/anti-icing fluid shall not be directed into engine inlets or directly onto engine probes/sensors.

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Fluids shall not be directed onto flight deck or cabin windows as this can cause crazing of acrylics or penetration of the window seals.

In general, prior to the application of de-icing/anti-icing fluids all doors and windows should be closed and all service vehicles/personnel should be clear to prevent:

- a) galley floor areas being contaminated with slippery de-icing fluids;
- b) upholstery becoming soiled;
- c) Vehicles/personnel becoming contaminated with fluid.

However, when ramp activities have been completed and all doors, except the forward passenger door, are closed, it is permissible to start de-icing/anti-icing surfaces well away from the open door, provided that:

- a) the Commander is informed and has agreed to this procedure before spraying;
- b) passengers and staff will not be subjected to fluid overspray;
- c) fuselage in the vicinity of the open door is not treated;
- d) Wind conditions are such that fluid or fluid overspray cannot reach the passenger door area.

This procedure is not recommended if passengers are boarding the Aircraft via open stairs.

NOTE: Doors shall not be closed until all ice or snow has been removed from the surrounding area.

Any forward area from which fluid can blow back onto windscreens during taxi or subsequent takeoff shall be free of residues prior to departure.

If Type II, III, or IV fluids are used, all traces of the fluid on flight deck windows should be removed prior to departure, particular attention being paid to windows fitted with wipers.

De-icing/anti-icing fluid may be removed by rinsing with an approved cleaner and a soft cloth.

Landing gear and wheel bays shall be kept free from build-up of slush, ice or accumulations of blown snow.

When removing ice, snow, slush or frost from Aircraft surfaces care shall be taken to prevent it entering and accumulating in auxiliary intakes or control surface hinge areas. Remove snow from wings, stabilizer, ailerons and elevators by spraying from the leading edge to the trailing edge.

Start at the highest point of the surfaces and work to the lowest parts, i.e. on most Aircraft start at the wing tip and work towards the wing root.

Ice can build up on Aircraft surfaces when descending through dense clouds or precipitation during an approach. When ground temperatures at the destination are low, it is possible for flaps to be retracted and for accumulations of ice to remain undetected between stationary and moveable surfaces. It is therefore important that these areas are checked prior to departure and any frozen deposits are removed.

Under freezing fog conditions, the rear side of the fan blades shall be checked for ice build-up prior to start-up. Any deposits discovered shall be removed by directing air from a low flow hot air source, such as a cabin heater, onto the affected areas.

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A flight control check should be considered according to Aircraft type (see relevant manuals). This check should be performed after de-icing/anti-icing.

After frequent applications of de-icing/anti-icing fluids it is advisable to inspect aerodynamically quiet areas and cavities for residues of thickened de-icing/anti-icing fluid. For these inspections it may be necessary to open access panels.

Consult airframe manufacturers for inspection and cleaning details and procedures.

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5.4.5.3 Clear Ice Precautions

Clear ice can form on Aircraft surfaces, below a layer of snow or slush. It is therefore important that surfaces are closely examined following each de-icing operation, in order to ensure that all deposits have been removed.

Significant deposits of clear ice can form, in the vicinity of the fuel tanks, on wing upper surfaces as well as under-wing. Aircraft are most vulnerable to this type of build-up when:

- a) wing temperatures remain well below 0 °C (32 °F) during the turnaround/transit;
- b) ambient temperatures between -2 °C and +15 °C (28 °F and 59 °F) are experienced;
- c) Ambient humidity is high and/or precipitation occurs while the Aircraft is on the ground.

This type of ice formation is extremely difficult to detect. However, frost or ice on the lower surface of either wing can indicate the presence of clear ice on the upper wing surfaces.

Therefore when the above conditions prevail, or when there is otherwise any doubt whether clear ice has formed, a close examination shall be made immediately prior to departure, in order to ensure that all frozen deposits have in fact been removed.

NOTE 1: Clear ice can form at other temperatures if conditions a) and c) exist.

NOTE 2: Low wing temperatures associated with this type of build-up normally occur when large quantities of cold fuel remain in wing tanks during the turnaround/

Transit and any subsequent re-fueling does not cause a sufficient increase in wing temperature.

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5.4.6 General Aircraft Requirements after De-Icing/Anti-Icing

5.4.6.1 Following the De-Icing/Anti-Icing Procedures and Prior to Takeoff,

The critical Aircraft surfaces shall be clean of all frost, ice, slush, and snow accumulations in accordance with the following requirements.

- Wings, tail and control surfaces

Wings, tail and control surfaces shall be free of ice, snow, slush, and frost except that a coating of frost may be present on wing lower surfaces in areas cold soaked by fuel between forward and aft spars in accordance with the aircraft manufacturer's published documentation.

NOTE: Frost or any other contamination is not acceptable on the lower side of the horizontal stabilizer and elevator, unless specified otherwise in the AFM or other aircraft manufacturer's documentation.

- Pitot heads and static ports

Pitot heads and static ports shall be clear of ice, frost, snow and fluid residues.

- Engines

Engine inlets, exhaust nozzles, cooling intakes, control system probes and ports shall be clear of ice and snow. Engine fan blades or propellers (as appropriate) shall be clear of ice, frost and snow, and shall be free to rotate.

- Air conditioning inlets and exits

Air conditioning inlets and exits shall be clear of ice, frost and snow. Outflow valves shall be clear and unobstructed.

- Landing gear and landing gear doors

Landing gear and landing gear doors shall be unobstructed and clear of ice, frost and snow.

- Fuel tank vents

Fuel tank vents shall be clear of ice, frost and snow.

- Fuselage

Fuselage shall be clear of snow, slush or ice. Frost may be present in accordance with the aircraft manufacturer's documentation.

- Nose/Radome Area and Flight Deck Windows

Any significant deposits of snow, slush, or ice on the windscreens or on areas forward of the windscreens shall be removed prior to departure.

Heated flight deck windows will not normally require de-icing.

5.4.6.2 Flight Control Check

A functional flight control check using an external observer may be required after de-icing/anti-icing depending upon Aircraft type (see relevant manuals). This is particularly important in the case of an Aircraft that has been subjected to an extreme ice or snow covering.

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5.4.6.3 Dried Fluid Residues When the Aircraft Has Not Been Flown After Anti-Icing

Dried fluid residue could occur when surfaces have been treated but the Aircraft has not subsequently been flown and not been subject to precipitation. The fluid may then have dried on the surfaces. In such situations the Aircraft must be checked for residues from de-icing/anti-icing fluids and cleaned as necessary.

5.4.6.4 Special Maintenance Considerations

Proper account should be taken of the possible side-effects of fluid use. Such effects may include, but are not necessarily limited to, dried and/or rehydrated residues, corrosion and the removal of lubricants.

5.4.7 Post De-Icing/Anti-Icing Check

An Aircraft shall not be dispatched after a de-icing/anti-icing operation until the Aircraft has received the following visual check by a trained and qualified person.

This check shall cover wings, horizontal stabilizer, vertical stabilizer and fuselage, plus all other parts of the Aircraft on which a de-icing/anti-icing treatment was performed according to the requirements identified during the contamination check.

The check shall be performed from points offering sufficient visibility of all prescribed surfaces

(E.g. from the de-ice itself or other equipment suitable for gaining access). Any contamination found, shall be removed by further de-icing/anti-icing treatment and the check repeated.

Before take-off the Commander must ensure that he has received confirmation that this Post De-icing/Anti-icing Check has been accomplished.

NOTE: For specific Aircraft types, additional requirements exist e.g. special clear ice checks, such as tactile checks on wings. These special checks are not covered by the Post Deicing/Anti-icing Check. Aircraft operators shall make arrangements for suitably qualified personnel to meet these requirements.

Where the de-icing provider is carrying out the de-icing/anti-icing process and also the Post De-icing/Anti-icing Check, it may either be performed as a separate check or incorporated into the de-icing operation as defined below.

The de-icing provider shall specify the actual method adopted, where necessary by customer, in his winter procedures:

- a) As the de-icing/anti-icing operation progresses the De-icing Operator will closely monitor the surface receiving treatment, in order to ensure that all forms of frost, ice, slush or snow (except as may be allowed in the AFM and/or AMM) are removed.
- b) Once the operation has been completed, the De-icing Operator will carry out a close visual check of the surface where treatment commenced, in order to ensure it has remained free of contamination (this procedure not required under 'frost only' conditions).
- c) Where the request for de-icing/anti-icing did not specify all of the following surfaces, i.e. wing, horizontal stabilizer, vertical stabilizer and fuselage, the surfaces omitted from the request shall

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also receive a close visual check at this time, in order to confirm that they have also remained free of contamination.

- d) Any evidence of contamination that is outside the defined limits shall be reported to the Commander immediately.

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5.4.8 Pre-Takeoff Check

The Commander shall continually monitor the weather conditions after the performed de-icing/anti-icing treatment. Prior to takeoff he shall assess whether the applied holdover time is still appropriate and/or if untreated surfaces may have become contaminated.

This Check is normally performed from inside the flight deck.

5.4.8.1 Pre-Takeoff Contamination Check

This is a check of the critical surfaces for contamination.

This check shall be performed when the condition of the critical surfaces of the Aircraft cannot be effectively assessed by a pre-takeoff check or when the applied holdover time has been exceeded. This check is normally performed from outside the Aircraft.

The alternate means of compliance to a pre-takeoff contamination check is a complete de-icing/anti-icing re-treatment of the Aircraft.

5.4.9 Communication Procedures

The person communicating with the flight crew shall have a basic knowledge of the English language in order to communicate properly (Operational level or equivalent according to SAE Training Recommendations).

Communication between the Commander and the de-icing crew will usually be achieved using a combination of printed forms and verbal communication. For treatments carried out after Aircraft doors are closed, use of flight interphone (headset) or VHF radio will usually be required.

Electronic message boards may also be used in 'off stand' situations Use of hand signals is not recommended except for the final 'all clear' signal SOM 05.4.9.5

5.4.9.1 Communication Prior To Starting De-Icing/Anti-Icing Treatment

- i. Before de-icing/anti-icing, the Commander shall be requested to confirm the treatment required (areas to be de-iced, anti-icing requirements, special de-icing procedures).
- ii. Before fluid application starts, the Commander shall be requested to configure the Aircraft for de-icing/anti-icing (surfaces, controls and systems, as per Aircraft type requirements). The de-icing crew shall wait for confirmation that this has been completed before commencing the treatment.
- iii. For treatments carried out without the flight crew present, a suitably qualified individual shall be nominated by the Aircraft operator to confirm the treatment required and to confirm correct configuration of the Aircraft.

5.4.9.2 Post De-Icing/Anti-Icing Communication

An Aircraft shall not be dispatched for departure after a de-icing/anti-icing operation until the Commander has been notified of the type of de-icing/anti-icing operation performed

(Anti-icing Code).

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The Anti-icing Code ([SOM 05.4.6.3](#)) shall be provided by a qualified person at the completion of the treatment, indicating that the checked surfaces (see [SOM 5.4.7](#)) are free of ice, frost, snow, and slush, and in addition includes the necessary information to allow the Commander to estimate the holdover time to be expected under the prevailing weather conditions with reference to [SOM Error! Reference source not found.](#) [5.4.11](#)

5.4.9.3 Anti-Icing Codes

The following information shall be recorded and be communicated to the Commander by referring to the last step of the procedure and in the sequence provided below:

- a) the fluid Type; i.e. Type I, II, III, IV
- b) the concentration of fluid within the fluid/water mixture, expressed as a percentage by volume;
NOTE 1: No requirement for Type I fluid.
- c) the local time (hours: minutes), either
 - for a one-step de-icing/anti-icing: at the start of the treatment or
 - for a two-step de-icing/anti-icing: at the start of the second step (anti-icing);
- d) the date (written: day, month, year);

NOTE 2: Required for record keeping, optional for Commander Notification.
- e) The complete name of the anti-icing fluid (so called "brand name").
NOTE 3: Optional; for Type II and IV fluids only.
- f) the statement "Post de-icing/anti-icing check completed"
NOTE 4: For specific Aircraft types, additional requirements exist e.g. special clear ice

Checks, such as tactile checks on wings.

Additional confirmation for these checks is required.

EXAMPLE

A de-icing/anti-icing procedure whose last step is the use of a mixture of 75% of a Type II fluid and 25% water, commencing at 13:35 local time on 20 February 2011, is reported and recorded as follows:

TYPE II/75 13:35 (20 Feb 2011) (Complete name of anti-icing fluid) "Post de-icing/anti-icing check completed".

5.4.9.4 Post De-Icing/Anti-Icing Check and Transmission of the Anti-Icing Code To the Commander

It shall be clearly defined by the Aircraft operator which company is responsible for carrying out the post de-icing/anti-icing check and providing the Commander with the Anti-icing Code.

If two different companies are involved in the de-icing/anti-icing treatment and post de-icing/anti-icing check, it must be ensured that the Anti-icing Code is not given before the post de-icing/anti-icing check is completed.

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The company carrying out the de-icing/anti-icing treatment shall be responsible for the treatment and pass all information about the treatment to the company carrying out the post de-icing/anti-icing check.

5.4.9.5 All Clear Signal

The flight crew shall receive a confirmation from the ground crew that all de-icing/anti-icing operations are complete and that all personnel and equipment are clear before reconfiguring or moving the Aircraft.

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5.4.10 The Clean Aircraft Concept

THE CLEAN AIRCRAFT CONCEPT IS ESSENTIAL.

No aircraft may be dispatched, released, or take-off if conditions are such that frost, ice, or snow may be reasonably expected to adhere to the aircraft, unless the aircraft has been de-iced / anti-iced with the following exceptions:

- Up to 3.2mm frost on the lower wing surface in the fuel tank area,
- Thin hoarfrost is permitted on the top surface of the fuselage if all the vents and ports are clear. Thin hoarfrost is a white layer of constant thickness with a sharp crystalline texture. It usually occurs on surfaces that are out on a cold night with no clouds. Hoar frost is thin; you can see items on the surface below the layer of frost, such as paint lines, marks or letters.

5.4.11 Holdover Time

Holdover time is obtained by anti-icing fluids remaining on the Aircraft surfaces.

With a one-step de-icing/anti-icing the holdover time begins at the start of the treatment and with a two-step de-icing/anti-icing at the start of the second step (anti-icing)

Holdover time will have effectively run out when frozen deposits start to form/accumulate on treated Aircraft surfaces.

Due to their properties, Type I fluids form a thin liquid wetting film, which provides limited holdover time, especially in conditions of freezing precipitation. With this type of fluid no additional holdover time would be provided by increasing the concentration of the fluid in the fluid/water mixture.

Type II, III, and IV fluids contain a pseudo plastic thickening agent, which enables the fluid to form a thicker liquid wetting film on external Aircraft surfaces. This film provides a longer holdover time especially in conditions of freezing precipitation.

With this type of fluid additional holdover time will be provided by increasing the concentration of the fluid in the fluid/water mixture, with maximum holdover time available from undiluted fluid.

The Tables 3, 4, 5, and 6 give an indication as to the time frame of protection that could reasonably be expected under conditions of precipitation. However, due to the many variables that can influence holdover time, these times should not be considered as minimums or maximums as the actual time of protection may be extended or reduced, depending upon the particular conditions existing at the time.

The lower limit of the published time span is used to indicate the estimated time of protection during moderate precipitation and the upper limit indicates the estimated time of protection during light precipitation.

The responsibility for the application of these data remains with the user.

CAUTION: Heavy precipitation rates or high moisture content, high wind velocity or jet blast may reduce holdover time below the lowest time stated in the range. Holdover time may also be reduced when Aircraft skin temperature is lower than OAT.

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Therefore, the indicated times should be used only in conjunction with a pre-takeoff check.

NOTE 1: Certain fluids may be qualified according to fluid specifications but may not have been tested during winter to develop the holdover time guidelines specified in this document. Holdover time guidelines in this document are not applicable to these fluids.

NOTE 2: For use of holdover time guidelines consult fluid manufacturer's technical literature for minimum viscosity limits of fluids as applied to Aircraft surfaces.

NOTE 3: A degraded Type II, Type III, or Type IV fluid may be used, provided the holdover time guidelines for Type I fluids (Table 3 or 4 as applicable) are used.

A Type II, Type III, or Type IV fluid is considered to be degraded if the viscosity is below the minimum limit as provided by the fluid manufacturer.

The Type II fluid holdover time guideline (Table 5) may be used with degraded Type IV fluids only after substantiation by holdover time testing.

NOTE 4: Holdover time guidelines can also be obtained for individual fluid products and these "brand name" holdover times will be found to differ from the tables published here.

Table 1 - Guidelines for the application of Type I fluid/water mixtures (minimum concentrations) as a function of OAT

OAT	One-Step Procedure		Two-Step Procedure		
	De-icing/Anti-icing	First step: De-icing	Second step: ⁽¹⁾ Anti-icing		
-3 °C (27 °F) and above	Heated <i>fluid/water mixture</i> with a freezing point of at least 10 °C (18 °F) below OAT	Heated water or a heated <i>fluid/water mixture</i>		Heated <i>fluid/water mixture</i> with a freezing point of at least 10 °C (18 °F) below OAT	
below -3 °C (27 °F) down to LOUT		Heated fluid/water mixture with a freezing point not more than 3 °C (5 °F) above OAT			
⁽¹⁾ To be applied before first step fluid freezes, typically within 3 minutes.					
NOTE 1:	Temperature of water or fluid/water mixtures shall be at least 60 °C (140 °F) at the nozzle. Upper temperature limit shall not exceed fluid and aircraft manufacturer's recommendations.				
NOTE 2:	This table is applicable for the use of Type I Holdover Time Guidelines. If holdover times are not required, a temperature of 60 °C (140 °F) at the nozzle is desirable.				
NOTE 3:	To use Type I Holdover Time Guidelines, at least 1 litre/m ² (~2 Gals/100ft ²) must be applied to the de-iced surfaces.				
CAUTION:	Wing skin temperatures may be lower than OAT. If this condition is identified, a stronger mixture (more glycol) may need to be used to ensure a sufficient freezing point buffer.				

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Table 2 - Guidelines for the application of Type II, Type III, and Type IV fluid/water mixtures (minimum concentrations) as a function of OAT

OAT ⁽¹⁾	Concentration of neat fluid/water mixture in vol%/vol%		
	One-Step Procedure		Two-Step Procedure
	De-icing/ Anti-icing	First step: De-icing	Second step: ⁽²⁾ Anti-icing
-3 °C (27 °F) and above	50/50 Heated ⁽³⁾ Type II, III, or IV fluid/water mixture	Heated water or a heated Type I, II, III, or IV fluid/water mixture	50/50 Type II, III, or IV fluid/water mixture
below -3 °C (27 °F) to -14 °C (7 °F)	75/25 Heated ⁽³⁾ Type II, III ⁽⁴⁾ , or IV fluid/water mixture	Heated Type I, II, III, or IV fluid/water mixture with a freezing point not more than 3 °C (5 °F) above OAT	75/25 Type II, III ⁽⁴⁾ , or IV fluid/water mixture
below -14 °C (7 °F) to -25 °C (-13 °F)	100/0 Heated ⁽³⁾ Type II, III ⁽⁴⁾ , or IV	Heated Type I, II, III, or IV fluid/water mixture with a freezing point not more than 3 °C (5 °F) above OAT	100/0 Type II, III ⁽⁴⁾ , or IV
below -25 °C (-13 °F)	Type II/Type III/Type IV fluid may be used below -25 °C (-13 °F) provided that the freezing point of the fluid is at least 7 °C (13 °F) below OAT and that aerodynamic acceptance criteria are met (LOUT). NOTE: <i>Type II/Type III/Type IV fluid may not be used below -25°C (-13°F) in active frost conditions</i> Consider the use of Type I fluid/water mixture when Type II, III, or IV fluid cannot be used (see Table 1).		
	<small>(1) Fluids must only be used at temperatures above their LOUT.</small> <small>(2) To be applied before first step fluid freezes, typically within 3 minutes.</small> <small>(3) Clean aeroplanes may be anti-iced with unheated fluid.</small> <small>(4) Type III fluid may be used below -10 °C (14 °F) provided that the freezing point of the fluid is at least 7 °C (13 °F) below OAT and that aerodynamic acceptance criteria are met (LOUT).</small>		
NOTE:	For heated fluid and fluid mixtures, a temperature not less than 60 °C (140 °F) at the nozzle is desirable. When the first step is performed using a fluid/water mixture with a freezing point above OAT, the temperature at the nozzle shall be at least 60 °C (140 °F) and at least 1 litre/m ² (~2 Gals/100 ft ²) must be applied to the surfaces to be de-iced. Upper temperature limit shall not exceed fluid and aircraft manufacturer's recommendations.		
CAUTION:	Wing skin temperatures may be lower than OAT. If this condition is identified, it shall be verified if a stronger mixture (more glycol) may need to be used to ensure a sufficient freezing point buffer. As fluid freezing may occur, 50/50 Type II, III, or IV fluid shall not be used for the anti-icing step of a cold soaked wing as indicated by frost or ice on the lower surface of the wing in the area of the fuel tank.		
CAUTION:	An insufficient amount of anti-icing fluid, especially in the second step of a two step procedure, may cause a substantial loss of holdover time. This is particularly true when using a Type I fluid mixture for the first step (de-icing).		
CAUTION:	Some fluids shall only be used undiluted. For some fluids the lowest operational use temperature (LOUT) may differ. For details refer to fluid manufacturer's documentation.		

**Table 3 - Guidelines for holdover times anticipated for Type I, II, III and IV fluid mixtures in Active Frost Conditions as a function of OAT
(Valid for metallic and composite surfaces)**

Approximate Holdover Time (hours/minutes) Active Frost	OAT		Type II, III, and IV Fluid Concentration Neat Fluid/Water Vol %/Vol %	Approximate Holdover Times (hours/minutes) Active Frost		
	Type I ⁽¹⁾ ⁽²⁾	°C		Type II ⁽³⁾	Type III ⁽³⁾	Type IV ⁽³⁾
0:35	-1 and above	30 and above	100/0	8:00	2:00	12:00
	below -1 to -3	below 30 to 27	75/25	5:00	1:00	5:00
			50/50	3:00	0:30	3:00
	below -3 to -10	below 27 to 14	100/0	8:00	2:00	12:00
			75/25	5:00	1:00	5:00
	below -10 to -14	below 14 to 7	100/0	1:30	0:30	3:00
			75/25	5:00	1:00	5:00
	below -14 to -21	below 7 to -6	100/0	6:00	2:00	6:00
			75/25	1:00	1:00	1:00
	below -21 to -25	below -6 to -13	100/0	2:00	2:00	4:00

⁽¹⁾ Type I fluid/water mixture is selected so that the freezing point of the mixture is at least 10 °C (18 °F) below the outside air temperature.

⁽²⁾ May be used below -25 °C (-13 °F) provided the lowest operational use temperature (LOUT) of the fluid is respected.

⁽³⁾ **These fluids may not be used below -25 °C (-13 °F) in active frost conditions.**

De-icing/anti-icing fluids used during ground de-icing/anti-icing are not intended for - and do not provide - protection during flight.

Table 4 - Guidelines for holdover times anticipated for Type I fluid mixtures as a function of weather conditions and OAT
(Valid for metallic and composite surfaces)

		Approximate Holdover Times under various weather conditions (hours:minutes)				
OAT ⁽¹⁾	°C °F	Freezing Fog	Snow/ Snow Grains/ Snow Pellets ⁽²⁾	Freezing Drizzle ⁽³⁾	Light Freezing Rain	Rain on Cold Soaked Wing
-3 and above	27 and above	00:09 - 0:16	0:03 - 0:06	0:08 - 0:13	0:02 - 0:05	0:01 - 0:05 ⁽⁶⁾
below -3 to -6	below 27 to 21	0:06 - 0:08	0:02 - 0:05	0:05 - 0:09	0:02 - 0:05	CAUTION: No Holdover Time Guidelines exist
below -6 to -10	below 21 to 14	0:04 - 0:08	0:02 - 0:05	0:04 - 0:07	0:02 - 0:05	
below -10	below 14	0:04- 0:07	0:02 - 0:04			

(1) Ensure that the lowest operational use temperature (LOUT) is respected.

- (2) In light "Rain and Snow" conditions use "Light Freezing Rain" holdover times
- (3) If positive identification of "Freezing Drizzle" is not possible use "Light Freezing Rain" holdover times
- (4) Other conditions are: Heavy snow, ice pellets, hail, moderate freezing rain and heavy freezing rain
- (5) For holdover times under active frost conditions see the separate frost table (Table 3)
- (6) No holdover time guidelines exist for this condition for 0 °C (32 °F) and below

Type I Fluid/Water Mixture is selected so that the Freezing Point of the mixture is at least 10 °C (18 °F) below actual OAT

CAUTION: The time of protection will be shortened in heavy weather conditions. Heavy precipitation rates or high moisture content, high wind velocity or jet blast may reduce holdover time below the lowest time stated in the range.
Holdover time may also be reduced when the aeroplane skin temperature is lower than OAT. Therefore, the indicated times should be used only in conjunction with a pre-takeoff check.

De-icing/anti-icing fluids used during ground de-icing/anti-icing are not intended for - and do not provide - protection during flight.

Table 5 - Guidelines for holdover times anticipated for Type II fluid mixtures as a function of weather conditions and OAT
(Valid for metallic and composite surfaces)

OAT ⁽¹⁾		Approximate Holdover Times under various weather conditions (hours:minutes)						
°C	°F	Type II Fluid Concentration Neat Fluid/ Water (Vol %/Vol %)	Freezing Fog	Show/ Snow Grains/ Snow Pellets ⁽²⁾	Freezing Drizzle ⁽³⁾	Light Freezing Rain	Rain on Cold Soaked Wing	Other ⁽⁴⁾⁽⁵⁾
-3 and above	27 and above	100/0	0:35 - 1:30	0:20 - 0:45	0:30 - 0:55	0:15 - 0:30	0:08 - 0:40 ⁽⁶⁾	
		75/25	0:25 - 1:00	0:15 - 0:30	0:20 - 0:45	0:10 - 0:25	0:06 - 0:25 ⁽⁶⁾	
below -3 to -14	below 27 to 7	50/50	0:15 - 0:30	0:05 - 0:15	0:08 - 0:15	0:05 - 0:09		CAUTION: No Holdover Time Guidelines exist
		100/0	0:20 - 1:05	0:15 - 0:30	0:20 - 0:45 ⁽⁷⁾	0:10 - 0:20 ⁽⁷⁾		
below -14 to -25 or LOUT	below 7 to -13 or LOUT	75/25	0:25 - 0:50	0:10 - 0:20	0:15 - 0:30 ⁽⁷⁾	0:08 - 0:15 ⁽⁷⁾		
		100/0	0:15 - 0:35	0:15 - 0:30				

⁽¹⁾ Ensure that the lowest operational use temperature (LOUT) is respected. Consider the use of Type I fluid when Type II fluid cannot be used.

⁽²⁾ In light "Rain and Snow" conditions use "light Freezing Rain" holdover times

⁽³⁾ If positive identification of "Freezing Drizzle" is not possible use "Light Freezing Rain" holdover times

⁽⁴⁾ Other conditions are: Heavy snow, ice pellets, moderate and heavy freezing rain, hail

⁽⁵⁾ For holdover times under Active Frost conditions see the separate frost table (Table 3)

⁽⁶⁾ No holdover time guidelines exist for this condition for 0 °C (32 °F) and below

⁽⁷⁾ No holdover time guidelines exist for this condition below -10 °C (14 °F)

CAUTION:

The time of protection will be shortened in heavy weather conditions. Heavy precipitation rates or high moisture content, high wind velocity or jet blast may reduce holdover time below the lowest time stated in the range.

Holdover time may also be reduced when the aeroplane skin temperature is lower than OAT.

Therefore, the indicated times should be used only in conjunction with a pre-takeoff check.

De-icing/anti-icing fluids used during ground de-icing/anti-icing are not intended for - and do not provide - protection during flight.

Table 6 - Guidelines for holdover times anticipated for Type III fluid mixtures as a function of weather conditions and OAT
(Valid for metallic and composite surfaces)

OAT ⁽¹⁾		Type III Fluid Concentration Neat Fluid/Water (Vol %/Vol %)	Approximate Holdover Times under various weather conditions (hours:minutes)				
°C	°F	Freezing Fog	Snow/Snow Grains/Snow Pellets ⁽²⁾	Freezing Drizzle ⁽³⁾	Light Freezing Rain	Rain on Cold Soaked Wing	Other ^{(4)/⁽⁵⁾}
-3 and above	27 and above	100/0	0:20 - 0:40	0:10 - 0:20	0:10 - 0:20	0:08 - 0:10	0:06 - 0:20 ⁽⁶⁾
		75/25	0:15 - 0:30	0:08 - 0:15	0:08 - 0:15	0:06 - 0:10	0:02 - 0:10 ⁽⁶⁾
below -3 to -10	below 27 to 14	50/50	0:10 - 0:20	0:04 - 0:08	0:05 - 0:09	0:04 - 0:06	CAUTION: No Holdover Time Guidelines exist
		100/0	0:20 - 0:40	0:09 - 0:15	0:10 - 0:20	0:08 - 0:10	
below -10	below 14	75/25	0:15 - 0:30	0:07 - 0:10	0:09 - 0:12	0:06 - 0:09	
		100/0	0:20 - 0:40	0:08 - 0:15			

⁽¹⁾ Ensure that the lowest operational use temperature (LOUT) is respected. Consider the use of Type I fluid when Type III fluid cannot be used.

⁽²⁾ In light "Rain and Snow" conditions use "Light Freezing Rain" holdover times

⁽³⁾ If positive identification of "Freezing Drizzle" is not possible use "Light Freezing Rain" holdover times

⁽⁴⁾ Other conditions are: Heavy snow, ice pellets, moderate and heavy freezing rain, hail

⁽⁵⁾ For holdover times under active frost conditions see the separate frost table (Table 3).

⁽⁶⁾ No holdover time guidelines exist for this condition for 0 °C (32 °F) and below

CAUTION: The time of protection will be shortened in heavy weather conditions. Heavy precipitation rates or high moisture content, high wind velocity or jet blast may reduce holdover time below the lowest time stated in the range.

Holdover time may also be reduced when the aeroplane skin temperature is lower than OAT.

Therefore, the indicated times should be used only in conjunction with a pre-takeoff check.

De-icing/anti-icing fluids used during ground de-icing/anti-icing are not intended for - and do not provide - protection during flight.

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5.4.12 Fluid Handling

De-icing/anti-icing fluid is a chemical product with environmental impact. During fluid handling, avoid any unnecessary spillage and comply with local environmental and health laws and the manufacturer's safety data sheet.

Different products shall not be mixed without additional qualification testing.

- All fluids must be handled in accordance with fluid manufacturers' recommendations, health and environmental regulations, and operator requirements.
- The protective properties of Type II, III and IV fluids will be degraded when the fluid is subjected to contamination, improper transportation or storage, excessive heating or when exposed to excessive shear forces during transfer or use.
- Quality control methods for handling de-icing/anti-icing fluids, as specified, must be strictly followed at all times.

5.4.12.1 Storage

Tanks dedicated to the storage of de-icing/anti-icing fluids shall be used.

Storage tanks shall be of a material of construction compatible with the de-icing/anti-icing fluid, as specified by the fluid manufacturer (corrosion resistant steel, plastic, etc). Care should be taken to avoid using dissimilar metals in contact with each other, as galvanic couples may form and degrade thickened fluids.

Tanks shall be conspicuously labelled to avoid contamination.

Tanks shall be inspected annually for corrosion and/or contamination. If corrosion or contamination is evident, tanks shall be maintained to standard or replaced. To prevent corrosion at the liquid/vapour interface and in the vapour space, a high liquid level in the tanks is recommended.

NOTE: If the quality of the fluids is checked, the inspection interval may be longer than one year.

The storage temperature limits shall comply with the manufacturer's guidelines.

The stored fluid shall be checked routinely to ensure that no degradation/contamination has occurred.

5.4.12.2 Pumping

De-icing/anti-icing fluids can show degradation caused by excessive mechanical shearing. Therefore only compatible pumps and spraying nozzles shall be used. The design of the pumping systems shall be in accordance with the fluid manufacturer's recommendations.

5.4.12.3 Transfer Lines

Dedicated transfer lines shall be conspicuously labeled to prevent contamination and shall be compatible with the de-icing/anti-icing fluids to be transferred.

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5.4.12.4 Heating

De-icing/anti-icing fluids shall be heated according to the fluid manufacturer's guidelines. For Type I fluids, water loss may cause undesirable aerodynamic effects.

For Type II / III / IV fluids thermal exposure and/or water loss may cause a reduction in fluid viscosity leading to lower holdover times.

The fluids shall be checked periodically

CAUTION: Avoid unnecessary heating of fluid in vehicle tanks.

Prolonged or repeated heating of fluids (directly or indirectly) may result in loss of water which can lead to performance degradation of the fluid.

Any of the following situations or a combination of them can accelerate the fluid performance degradation:

- a) Low fluid consumption;
- b) Trucks being in standby mode with heating system on for extended periods of time;
- c) High temperatures in fluid tanks;
- d) High temperatures in water tanks, which are in direct contact with the fluid, tank (no insulation between tanks).

5.4.12.5 Application

Application equipment shall be cleaned thoroughly before being initially filled with de-icing/anti-icing fluid in order to prevent fluid contamination.

De-icing/anti-icing fluid in trucks shall not be heated in confined or poorly ventilated areas.

The integrity of the fluid at the spray nozzle shall be checked periodically.

5.4.12.6 Contamination Check

This is a check for the need to de-ice. This check shall include the areas mentioned in SOM 0 and any other as recommended by the aircraft manufacturer. It shall be performed from points offering sufficient visibility of these parts (e.g. from the de-icing vehicle itself or any other suitable piece of equipment).

Any contamination found, except frost mentioned in SOM 05.4.6.1, shall be removed by a de-icing treatment. If anti-icing is also required, this treatment may be performed as a one-step or two-step de-icing/anti-icing of the relevant surfaces. Requests for de-icing/anti-icing shall specify the parts of the Aircraft requiring treatment.

NOTE: For specific Aircraft types additional requirements exist e.g. special clear ice checks, such as tactile checks on wings. These special checks are not covered by the contamination check. Aircraft operators shall make arrangements for suitably qualified personnel to meet these requirements.

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5.4.13 Fluid Sampling Procedure for Type II, Type III, Or Type IV Fluids

5.4.13.1 Introduction

To ensure that the necessary safety margins are maintained between the start of the de-icing/anti-icing operation and takeoff, the fluid used to both de-ice and anti-ice Aircraft surfaces, must be in an "ex-fluid manufacturers" condition and at the correct concentration. Due to the possible effect of vehicle/equipment heating and/or delivery system components on fluid condition, it is necessary for the sampling method to simulate typical Aircraft application.

This section therefore describes the approved methods for collecting samples of Type II, III, and IV fluids, sprayed from operational Aircraft de-icing/anti-icing vehicles/equipment, prior to the necessary quality control checks (see SOM 05.4.14) being carried out.

5.4.13.2 Method

The preferred method is to spray the fluid onto a purpose built stand, consisting of a suitable plate (for fluid application) and an associated fluid collection system. In the absence of such a stand, the application can be made onto a clean polythene sheet (approx. 2m x 2m) laid directly on the ground.

Depending on wind speed/direction at the time of sampling the polythene sheet may require to be weighted down at the edges, to prevent movement.

The distance between the spray nozzle and the surface shall be approximately 3m and the fluid shall be sprayed perpendicular to the surface.

Where different spray patterns and flow rates are used during routine de-icing/anti-icing operations, samples shall be taken at typical nozzle settings (e.g. fine, medium or coarse) and flow rates for anti-icing.

5.4.13.3 Procedure

Select the required flow rate/spray pattern for the fluid to be sampled.

Spray the fluid to purge the lines and check the concentration of a sample, taken from the gun/nozzle after purging.

Should the refractive index indicate that the lines have not been adequately purged, repeat the previous step until the concentration is correct for the fluid to be sampled (on certain vehicles it may be necessary to spray more than 50 liters of fluid, before the lines are completely purged).

Direct the fluid onto the sampling surface and spray an adequate amount of fluid to allow for a 1 liter sample to be taken.

Where a polythene sheet is used for sampling purposes, carefully lift the corners of the sheet and collect 1 liter of the fluid in a clean and dry bottle.

5.4.13.4 Reference Fluid

For reference purposes, take a 1 liter sample of the base fluid from the storage facility and a 1 liter sample from the fluid tank of the de-icing/anti-icing equipment/vehicle being sampled.

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5.4.13.5 Identification of Samples

Attach a label to each sample, providing the following data:

Brand name and Type of the fluid (e.g. Dow UCAR ADF Concentrate/Type I, Kilfrost ABC-3/Type II, Clariant Safe wing MPIV Launch/Type IV, etc.)

Identification of de-icing/anti-icing equipment/vehicle (e.g. Elephant Beta DT04, Fixed Rig R001, etc.)

Detail where the sample was taken from (e.g. nozzle, storage tank or equipment/vehicle tank)

Mixture strength (e.g. 100/0, 75/25, etc.).

Station (e.g. BAK, etc.)

Date sample was taken

5.4.14 Checking Procedure for Aircraft De-icing/Anti-icing Fluids

5.4.14.1 Introduction

This checking procedure for aircraft de-icing/anti-icing fluids is in compliance with SAE station quality assurance program for Aircraft de-icing/anti-icing operations and with the relevant sections of EU-OPS 1.345. The procedure ensures that the required safety standards concerning the de-icing/anti-icing fluids quality are maintained when discrepancies are found investigate and rectify, i.e. ensure the fluid is within limits prior to use.

5.4.14.2 Fluid Acceptance at Delivery

Check of documentation, must be manufactures in accordance with SAE specifications.

Check that the fluid delivered corresponds to the fluid ordered.

Make sure the brand name and concentration of the product specified in the delivery documents corresponds to the delivered fluid. Each container/road tanker shall be checked.

Make sure that the brand name and the concentration of the delivered fluid corresponds to the brand name and the concentration of the storage or vehicle tanks.

Fluid Sample Checks

Before the first use of the delivered fluid for filling a storage tank or vehicle tank, take a sample from the container/road tanker (each separate compartment if applicable) and perform the following checks:

Type I fluid:

- Perform a visual contamination check according to SOM 05.4.14.6
- Perform a refractive index check according to SOM 05.4.14.6
- Perform a pH-value check according to SOM 5.4.14.6 *)

Type II, Type III, and Type IV fluids:

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- Perform a visual contamination check according to SOM 05.4.14.6

- Perform a refractive index check according to SOM 0

- Perform a pH-value check according to SOM 0 *)

- Perform a field viscosity check according to fluid manufacturer's instruction(s) or SOM 0

*) Perform this check if it is suitable to identify contaminants in the fluid and/or detect degradation of the fluid used.

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5.4.14.3 De-Icing/Anti-Icing Vehicle Fluid Checks

Concentration Checks

Fluids or fluid/water mixture samples shall be taken from the de-icing/anti-icing vehicle nozzles on a daily basis when vehicles are in use. The sample shall be protected against precipitation. Perform a refractive index check according to SOM 05.4.14.6

NOTE 1: Trucks without a mixing system Samples may be taken from the truck tank instead of at the nozzle. Ensure that the fluid is at a uniform mixture.

NOTE 2: Trucks with proportional mixing systems

Operational setting for flow and pressure shall be used. Allow the selected fluid concentration to stabilize before taking sample (see also SOM 005.4.13.3)

NOTE 3: Trucks with automated fluid mixture monitoring system

The interval for refractive index checks has to be determined by the handling company in accordance with the system design.

Checks on (directly or indirectly) heated Fluids

Fluid or fluid/water mixture samples shall be taken from the de-icing/anti-icing vehicle tanks.

As a guideline, the interval should not exceed two weeks, but it may be adjusted in accordance with local experience.

Perform a Refractive Index Check in accordance with SOM 05.4.14.6

5.4.14.4 Laboratory Checks for Fluids

The laboratory checks shall be performed for the fluids at the start and in the middle of the de-icing season and upon request by the airline. Fluid samples shall be taken from all de-icing/anti-icing vehicle spray nozzles of all vehicles and from all storage tanks in use.

For thickened de-icing/anti-icing fluids take the sample as described in fluid sampling procedure for Type II, Type III, and Type IV fluids (see SOM 0). Samples shall be taken in all concentrations used for anti-icing.

Perform the laboratory check for fluids as follows: Type I fluid:

- Perform a visual contamination check according to SOM 05.4.14.6
- Perform a refractive index check according to SOM 05.4.14.6
- Perform a pH-value check according to SOM 05.4.14.6

Type II, Type III, and Type IV fluids:

- Perform a visual contamination check according to SOM 05.4.14.6
- Perform a refractive index check according to SOM 05.4.14.6
- Perform a pH-value check according to SOM 05.4.14.6
- Perform a laboratory viscosity check according to SOM 05.4.14.6 *)

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*) Not applicable to samples taken from spray nozzle(s) used for de-icing exclusively.

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5.4.14.5 Field Check for Fluids

Field check for fluids shall be made always when station inspection is made. The samples shall be taken from the storage tank and from the de-icing/anti-icing equipment nozzle.

For thickened de-icing/anti-icing fluids take the sample as described in fluid sampling procedure for Type II, Type III, or Type IV fluids (see SOM 5.4.13).

Perform the field test for fluids as follows: Type I fluid:

- Perform a visual contamination check according to SOM 05.4.14.6
- Perform a refractive index check according to SOM 05.4.14.6
- Perform a pH-value check according to SOM 005.4.14.6 *)

Type II, Type III, and Type IV fluids:

- Perform a visual contamination check according to SOM 05.4.14.6
- Perform a refractive index check according to SOM 005.4.14.6
- Perform a pH-value check according to SOM 005.4.14.6 *)
- Perform a field viscosity check according to SOM 05.4.14.6

*) Perform this check if it is suitable to identify contaminants in the fluid and/or detect degradation of the fluid used.

5.4.14.6 Fluid Check Methods

The following checks can be performed by any equivalent method. Visual Contamination Check

- Put fluid from the sample into a clean glass bottle or equivalent
- Check for any kind of contamination (e.g. rust particles, metallic debris, rubber parts, etc.)
- Refractive Index Check
- Make sure the refract meter is calibrated and clean
- Put a fluid drop taken from the sample or from the nozzle onto the test screen of the refract meter and close the prism
- Read the value on internal scale and use the correction factor given by the manufacturer of the fluid in case the temperature of the refract meter is not 20 °C (68 qF)
- Compare the value with the refractive index limits provided by the fluid
- Manufacturer, to ensure it is within tolerance.
- Clean the refract meter and return it into the protective cover
- pH-Value Check
- Take a piece of pH Indicator Paper and put it in the fluid so that it becomes wetted with the fluid
- Remove the pH Indicator Paper from the fluid and compare its color with the color of the table provided with the pH Indicator Paper and read the corresponding pH value
- Compare the pH-value with the figures from the fluid manufacturer

NOTE: The pH check in the laboratory should be performed with a pH measurement instrument.

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5.4.15 Local Frost Prevention in Cold Soaked Wing Areas

5.4.15.1 Introduction

Wing surface temperatures can be considerably below ambient due to contact with cold fuel and/or close proximity to large masses of cold soaked metal. In these areas frost can build up on wing surfaces and may result in the entire wing being de-iced/anti-iced prior to the subsequent departure.

This procedure provides recommendations for the prevention of local frost formation in cold soaked wing tank areas during transit stops in order to make de-icing/anti-icing of the entire wings unnecessary under such circumstances. This procedure does, however, not supersede standard de-icing/anti-icing procedures and has to fulfill the requirements of aircraft de-icing/anti-icing methods with fluids. This procedure also does not relieve from any requirements for treatment and inspections in accordance with aircraft manufacturer's documentation.

5.4.15.2 Definitions

Local frost build-up: Limited formation of frost in local wing areas sub-cooled by cold fuel or large masses of cold metal; this type of frost does not cover the entire wing!

5.4.15.3 Procedure

Using suitable spray equipment, apply a proper coating of undiluted Type II or IV anti-icing fluid on the wings in the limited cold soaked areas where formation of frost may be expected due to contact of the wing skin with sub cooled fuel or masses of cold metal.

A proper coating completely covers the treated area with visible fluid.

NOTE: For limitations see SOM 05.4.15.4.

5.4.15.4 Limits and Precautions

- This Local Frost Prevention procedure does not substitute standard de-icing/anti-icing procedures in accordance with Aircraft de-icing/anti-icing methods with fluids, clear ice checks or any other aircraft manufacturer requirements, nor the requirement that Aircraft surfaces are clear of frost, slush, and snow and ice accumulation.
- This Local Frost Prevention procedure shall only be carried out if approved by the operator of the Aircraft to be treated, and it shall only be carried out by properly qualified and trained personnel.
- This Local Frost Prevention procedure shall be applied on clean wings immediately following arrival of the Aircraft. Application is acceptable at the latest when frost just starts to build up, but in this case the fluid shall be applied at a minimum temperature of 50 °C (122 °F).
- If precipitation occurred between application of the fluid and dispatch of the Aircraft and/or if precipitation is expected before takeoff, a standard de-icing/anti-icing treatment shall be performed in accordance with Aircraft de-icing/anti-icing methods with fluids.

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- Both wings shall receive the same and symmetrical treatment, i.e. the same area in the same location shall be sprayed, also when conditions would not require the treatment of both wings.

CAUTION: Aerodynamic problems could result if this requirement is not met.

- A holdover time shall not be assigned to a Local Frost Prevention procedure since the treatment does not cover the entire Aircraft or wing surface respectively.

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5.4.15.5 Final check

A tactile check (by touch) of the treated areas and a visual check of the untreated areas of both wings shall be performed immediately before the Aircraft leaves the parking position.

These checks are conducted to ensure that both wings are clean and free of frost.

The applied de-icing/anti-icing fluid shall still be liquid and shall show no indication of failure, such as color turning to white, loss of gloss, getting viscous, showing ice crystals etc.

5.4.15.6 Flight Crew Information

Following information shall be provided to the flight crew: "Local frost prevention was accomplished".

5.4.16 Off-Gate De-Icing/Anti-Icing Procedures

5.4.16.1 Communications

During off-gate de-icing/anti-icing a two-way communication between flight crew and de-icing/anti-icing operator/supervisor must be established prior to the de-icing/anti-icing treatment.

This may be done either by intercom or by VHF radio. In case VHF is used, the register or "tail number" of the Aircraft instead of flight number must be used during all communications.

An alternate means of communication may be the use of Electronic Message Boards. In the event of conflict, verbal communication shall take precedence.

During treatment all necessary information to cockpit must be given by this means (Beginning of treatment, treatment of sections requiring de-activation of Aircraft systems, anti-icing code, etc.). Contact with flight crew may be closed after anti-icing code and readiness for taxi-out has been announced. For standard phrases refer to SOM 5.4.17

5.4.16.2 Taxi Guidance

When off-gate de-icing/anti-icing area is entered by taxiing, a sufficient taxi and stopping guidance must be arranged, or Marshaller assistance must be given. In case radio contact must be established before entering the de-icing/anti-icing area, the signs with clearly marked operation frequency must be visible from the cockpit before entering this area.

5.4.16.3 General Instructions

The de-icing/anti-icing operator together with the airport authorities must publish all necessary information about how to operate on the off-gate site by NOTAM or in local AIP. This information has to include at least the location of, and standard taxi routing to the de-icing/anti-icing area, means to coordinate the deicing/anti-icing operation, means to communicate before and during the de-icing/anti-icing operation, and information about taxi and stopping guidance.

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5.4.17 Responsibility

5.4.17.1 Commander

The commander has the ultimate responsibility to determine that the aircraft is in a safe condition for flight.

This requirement is considered to be fulfilled if the commander obtains verification from properly trained and qualified de-icing personnel that:

- The airplane is free from frost, ice, and snow
- The anti-icing has been performed according to approved procedures and the commander's specification.
- The report from the responsible de-icing / anti-icing personnel to the commander has been given and the airplane is ready for flight

After receiving the anti-icing code, the commander is responsible for ensuring that the relevant surfaces remain free from contamination until take-off.

The authority to decide whether de/anti-icing of the airplane is necessary lies with the Commander. He determines the necessity for removal of frost, slush, snow or ice and orders the deicing equipment via Flight Dispatcher, Ground Engineer or through the responsible ground staff.

The Commander decides which airplane parts have to be de-/anti-iced, e.g. wings only, wings and tail or the complete airplane. He is responsible for calculating the Hold-Over-Time (HOT) base on:

- HOT tables;
- Actual weather conditions;
- Applied type and mixture ratio of de/anti-icing fluid.

The decision regarding airplane acceptance after de/anti-icing treatment rests with the Commander. He takes responsibility for the air-worthiness of the airplane after confirmed completion of airplane de/anti-icing.

When the de-/anti-icing procedures are clearly required station manager and/or station engineer may decide to start the de/anti-icing treatment.

5.4.17.2 Maintenance

The maintenance person responsible for dispatching the aircraft is responsible for ensuring that Operator de-icing/anti-icing procedures have been properly and fully applied prior to dispatch of the aircraft.

The Commander, by-the-way, has the ultimate responsibility for determining that his aircraft is in a condition for safe flight and releasing the aircraft for service shall be satisfied that correct and complete de-icing/anti-icing has taken place and that the aircraft is fit for flight.

When the Certifying Staff is available, he is responsible for all the formality that must be done.

Whenever Certifying Staff is not available or cannot be present at the de-icing procedure, the Commander upon confirmation from Handling Company or through his own verification that the

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deicing has been performed will make sure that all the formality has been done. If the aircraft is not free from ice and snow, the Commander shall determine the requirements for de-icing and anti-icing, based on the holdover times and outside temperature.

5.4.17.3 Station Manager

The station manager is responsible for the availability of personnel equipment and fluids. All action in connection with de/anti-icing shall be coordinated with the station engineer and the Flight Deck Crew.

5.4.17.4 Ground Staff

The ground staff is responsible for the correct de/anti-icing of the airplane. This must be performed according to Commander's instruction and the regulations published in the Maintenance Manual and in this Manual S.O.M as well.

The provider of the de-icing service is responsible for the final release of the aircraft. The person responsible for the release of the aircraft must ensure that the aircraft has been de-iced in accordance with the requirements detailed above, and / or that relevant surfaces are free from frost, ice, slush, and snow at the time of dispatch.

The person responsible for the final check after de-icing is the Station Engineer, the Station Manager or a person designated by the handling agent.

It is the responsibility of the spray operator or the authorized person releasing the airplane that the Commander be correctly informed regarding the performed de/anti-icing treatment.

The communication of the anti-icing code to the Flight Deck Crew confirms that the check after deicing / anti-icing was completed and the aircraft critical parts are free of ice, frost snow and slush.

The de/anti-icing procedure form shall be filled and presented to the Commander. One entry on airplane Technical Log is required and one page left on the ground.

5.4.17.5 Terminology

Following standard communication terminology is recommended during off-gate de-icing/anti-icing procedures:

(DIS = De-icing/anti-icing supervisor) (COMMANDER = Pilot in command)

DIS: "Set parking-brakes, confirm Aircraft is ready for treatment, inform on any special requests."

After Aircraft is configured for treatment:

COMMANDER: "Brakes are set, you may begin treatment and observe ...

(Any special requests like: ice under wing/flaps, clear-ice on top of wing, snow on fuselage, ice on landing-gear, anti-ice with Type IV fluid, etc.)".

DIS: "We begin treatment now and observe ...

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(Special request given, like “ice under wing”, etc.). I will call you back when ready”.

Only after all equipment is cleared from Aircraft and all checks are completed:

DIS: “De-icing/anti-icing completed, Anti-icing Code is:

(Plus any additional info needed).

I am disconnecting.

Standby for clear signal at right/left and/or contact ground/tower for taxi clearance.”

COMMANDER: “De-icing/anti-icing completed, Anti-icing code is”

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5.4.18 Monitoring De-Icing / Anti-Icing Functions

"De-icing/Anti-icing - Quality Assurance audit" is carried out for airports with conditions conductive to ground aircraft icing, Ensuring:

- 1) Compliance with this program
- 2) Availability and use of adequate facilities and equipment for aircraft de-/anti-icing operations at applicable locations.
- 3) That any outstanding deficiencies (negative responses) identified, are resolved as a matter of urgency
- 4) That an effective audit program is maintained.

Please Refer to (Corporate Manual)

Note: Stations shall be Audited once every two years as a minimum.

This audit shall cover the following areas:

A/C de-icing/anti-icing procedures and responsibilities including inspection and check.

1. The implementation of holdover times and tables.
2. Communication procedures.
3. A/C surface contamination and critical area identification
4. Type and characteristics of de-icing/anti-icing fluids.
5. Fluids are manufactured in accordance with ISO Specifications
6. Fluid is stored and handled and applied in accordance with SOM 05.4.12, fluid manufacturer and aircraft manufacturer.
7. The availability and use of adequate facilities and equipment for aircraft de-icing/anti-icing operations at applicable areas.
8. Cold weather preflight inspection procedures.
9. Techniques for recognizing contamination of the A/C.
10. Initial and recurrent training of personnel performing or monitoring the process of A/C anti-icing /de-icing, according to SAE recommendations, and SOM 2.3.2.2
11. Check against icing from outside the A/C.

5.4.19 Safety During Aircraft Deicing /Anti-icing Operations

5.4.19.1 General

No aircraft shall attempt takeoff when frozen or freezing contamination is present on or adhering to the wings, propellers, control surfaces or other critical surfaces. This is known as the ICAO (Clean Aircraft Concept). Deicing operations must be performed with extreme caution to prevent injury to personnel and damage to aircraft and equipment. Deicing is not permitted during the fueling process.

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5.4.19.2 Personnel Safety

The Safety factors given below are designed to ensure that the performance of deicing an aircraft, the safety of personnel performing the task is not compromised.

- a. Appropriate PPE should be checked for serviceability and worn by all personnel engaged in deicing operations.
- b. Cones should be removed as necessary to allow access to the aircraft surfaces. Replace the cones on completion of the deicing operation, if the aircraft is not departing.
- c. To prevent injury, caution must be taken when filling deicing vehicles with hot fluid.
 - 1- When handling deicing fluids, personnel should understand and follow the precautions contained in fluid manufacturer's Safety Data Sheets.
 - 2- Before deicing operations start, deicing should be coordinated between deicing and ground handling personnel.
 - 3- Deicing/anti-icing fluids may be very hot, to prevent injuries, ground personnel, passengers and flight crew shall be prevented from walking near an aircraft that being deiced.
 - 4- Slippery conditions can exist on the ground and on the equipment surfaces during and following the deicing processes. Caution should be exercised, particularly in low humidity or nonprecipitating weather conditions, due to increased slipperiness following the use of glycol that not diluted by the weather element.
 - 5- When deicing on a stand, all ramp equipment. Including steps, should be clear of the area to be sprayed to avoid contamination by fluid.
 - 6- Care should be taken to prevent the transfer of fluid by foot on to GSE, interiors of aircraft and aircraft cargo holds.

5.4.19.3 Open Basket Operations

The following minimum precautions should be taken when deicing from an open basket:

- a. Ensure that fall restraint device is securely anchored and the safety harness is always worn when deicing from an open basket.
- b. Ensure that the basket door or safety chain is securely latched.
- c. Caution should be taken to avoid exposure to a running Auxiliary Power Unit (APU)

5.4.19.4 Closed Basket Operations

The following minimum precautions should be taken:

- a. Ensure the seat belt is always worn.
- b. Ensure the windows of the cabin are clean. Check wiper(s) for condition and check window washer fluid level.
- c. Ensure the door of the cabin is securely closed.
- d. Ensure there are no obstructions to the cabin heater/ventilation system.

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5.5 Moving an Aircraft:

5.5.1 Introduction

Aircraft movement operations must be performed with extreme caution to prevent injuries to personnel as well as to avoid damage to aircraft, equipment and facilities. Independently of the minimum safety requirements incorporated into the design of ground support equipment, (see [AHM 913](#)), safety factors should be incorporated into the Standard Operating Procedures.

5.5.2 Definitions

For the purposes of this instructions the following definitions will apply:

- “PUSHBACK” Moving of aircraft from parking position to taxi position by use of specialized ground support equipment.
- “POWERBACK” Moving of aircraft from parking position to taxi position by use of the aircraft's engines.
- “TOWING” Moving of aircraft, other than pushback operations, with/without load on board by use of specialized ground support equipment.

5.5.3 Recommendation

It is recommended that members instruct their staff and their handling agents involved in aircraft movement operations that the following safety factors be taken into consideration;

5.5.4 General

- Prior to performing any aspect of aircraft movement operations an assessment, will be made. Considering infrastructure, number of persons involved, aircraft and equipment used to ensure a safe operation.
- Only those personnel trained and qualified should perform aircraft movement operations functions. Assign a person to be “in charge” of the operation. The person “in charge” of the operation should brief all other personnel involved in the operation of their responsibilities.
- Personnel should be instructed on the hazards associated with aircraft movement operations, e.g. engine ingestion, nose wheel movement, aircraft track, visibility.
- Prior to aircraft movement the following activities should take place:
 - An inspection is to be made of the surface conditions to determine if it is safe to conduct the operation, (e.g. ice, snow etc.)
 - A visual inspection is to be made of the aircraft to ensure all service doors/panels are closed and locked.
 - Ensure that all ground support equipment is removed from the aircraft and there are adequate clearances between the aircraft and facilities/equipment.
 - A visual inspection be made of the area of the operation to ensure it is clear of FOD.
 - Verification is to be made that power cables, loading bridges etc. are detached from the aircraft.
 - A visual inspection be made to ensure chocks are removed from all wheels.
 - A general check of landing gear shock strut extension.

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- Personnel performing the functions required by the operation should be positioned away from hazard zones.
- Only those persons required to perform operating functions should be in the operating area.
- During aircraft movement the maximum nose-gear turn limits shall not be exceeded in accordance with airframe manufacturers' instructions.
- Communication with the flight deck should if possible be achieved in a manner that eliminates the need for personnel to walk in close proximity to the aircraft nose gear or the tow tractor during the operation; e.g. use of flexible cord to the tractor driver, or cordless system.
- Agreed phraseology should be used for all verbal communication between the flight deck and ground personnel.
- When communication between the flight deck and tractor driver is relayed by a third person it is important that this person either uses a flexible cord between their headset and the connection to the aircraft or a cordless system to be able to maintain a safe distance from both the aircraft and tractor in motion.
- Provision should be made for a back-up communication system in the event of a failure of the primary system.
- Standard hand signals should be used for manual communications.
- Prior to moving an aircraft all personnel involved in the operation must have agreed on how communication should be performed and towing maneuvered.
- Standard operating procedures should be developed, in accordance with airframe manufacturers' recommendations, for each type of aircraft movement operation.
- Personnel performing marshaling or wing-walking functions should utilize: during daytime operations both wands or mitts of a high visibility color and during low visibility/night operations lighted wands.
- Operations conducted in poor surface/weather conditions should be performed at low speed.
- The general area of the operation should be kept clear of ground support equipment.

5.5.5 Preparation for Pushback

5.5.5.1 Pre Departure Communication

An aircraft departure must always be conducted using interphone communications. If interphone becomes/is unserviceable, you must use conventional hand signals,

Prior to departure a briefing must be held between the PIC and the ground agent responsible for the departure, including:

- a) Review of departure specifics (e.g. direction of movement, final positioning, taxi out direction)
- b) Review hand signals to be used, including emergency signals.

5.5.5.2 Connecting the Pushback Vehicle

The pushback vehicle is connected as follows:

- a) Aircraft main gear chocks installed, nose gear chocks removed.

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- b) Ensure that the nose gear steering bypass pin is installed prior to towbar/towbarless connecting to aircraft and/or ensure the nose gear steering mechanisms are set as required for pushback.
- c) Use a spotter to assist in the final approach to nose gear:
 - 1. Tractor and towbar:
 - I. Connect towbar to nose gear first.
 - II. Raise towbar so that its head is at same height as tractor connection.
 - III. Approach slowly until connecting aligns and secure connection to tractor.
 - IV. Raise towbar wheels.
 - V. Select (Neutral) or (Park) and set parking brake of tractor.
 - 2. Towbarless tractor:
 - I. On final approach to aircraft, the tractor must be properly aligned and correctly positioned.
 - II. Position towbarless tractor to standby for lifting and wait for approval from flight deck to lift, if applicable.
 - III. Select (Neutral) or (Park) and set the parking brake.

Do not remove the MLG until:

All GSE-with the exception of the boarding passenger's stairs(s), GPU, and PCA-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.

5.5.6 Aircraft Pushback

5.5.6.1 Pushback Requirements

All staff walking on ramp must remain clear of:

- a. Aircraft nose gear thought the pushback operation
- b. The Tractor path
- c. Engine danger areas

5.5.6.2 Pushback and Pull Forward

If an aircraft is to be pulled forward after pushback and engines started, care and special precautions must be taken to reduce the risk of the aircraft's engine thrust causing damage to the nose gear and towbar when stopping the aircraft at completion of maneuver.

If the requirement of pull forward is known in advance, consider not starting the engines until the pull forward maneuver is completed.

Special precautions include gentle application of brake, engine at idle thrust, towngi operation at lowest gear available.

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When using a towbarless tractor, do not lift the aircraft when loading equipment and/or a passenger boarding device is still connected to the aircraft.

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5.5.6.3 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.

Responsible ground crew for the departure will:

- a. Be in charge of the entire pushback, once clearance to begin pushback has been given by the flight crew.
- b. Ensure that the towbar/sherpin/towbarless tractor is suitable for the specific aircraft type.
- c. Conduct briefings with all persons involved in the aircraft movement to review and confirm how the aircraft will be maneuvered.
- d. Be in continuous communication with flight crew by interphone.
- e. Have ultimate responsibility to review pushback procedures based on conditions observed and inform the flight crew.
- f. If ramp conditions are below standard for a normal pushback (e.g. hazards, obstacles, slippery, icy): 1. He/she will inform the flight crew that engine start clearances will not be given until either:
 - I. The aircraft is moving over an area of the ramp where the conditions are safe for an engine start.
 - OR
 - II. The Pushback has been completed, the aircraft has come to a complete stop and the parking brake has been set.
- g. Ensure that the nose gear steering bypass pin is installed prior to towbar/towbarless connection to aircraft and/or ensure the nose gear steering mechanisms are set as required for pushback (as applicable for aircraft type).
- h. Connect the interphone and conduct a communication check to:
 1. Verify the communication system is functional.
 2. Update flight crew on progress of the ramp operation.
 3. Request permission and disconnect ground power after verbal approval is received from flight crew.
- i. Conduct a pre departure walkaround.
- j. Signal (All Clear) to pushback tractor driver and wingwalkers once advised by flight crew that the aircraft brakes have been released and approval for pushback is given by flight crew.
- k. Be positioned as required walking on the apron at safe distance from the nose gear and tractor.
- l. If walking adjacent to nose gear, the walker and tug driver must be in visual contact throughout the pushback, after approval of the flight crew, the tug driver must always assure taxiway is free of other aircraft/equipment/obstacles.
- m. Monitor the interphone during the pushback and communicate with the flight crew, as required.

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- n. Advise the flight crew if for any reason it is not safe to start an engine and stop the engine start procedure.
- o. Advise the flight crew to set 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.
- p. Give (Brakes On) hand signal to indicate the tractor driver and wingwalkers, if applicable, that it is clear to disconnect pushback equipment. Remove the nose gear steering by pass pin and/or ensure the nose gear steering mechanisms are set to normal position for taxiing (as applicable to aircraft type).
- q. After the towbar/towbarless tractor has been disconnected, complete the headset communication, After the flight crew approval, disconnect the headset and close the access panel, if applicable to the aircraft type.
- r. Close and latch all access panels and move clear of the aircraft to a safe position visible to flight crew. If the torque link has been disconnected it shall be re-connected and flight crew informed.
- s. Display the steering bypass pin, if applicable to the aircraft type, to the flight crew. If the torque link has been disconnected it shall be re-connected and flight crew informed.
- t. 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.
- u. Remain in position until an acknowledgement from the flight crew is received.

Note:

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. Stop the aircraft movement using gentle brake application if the aircraft is about to overtake the tractor while towing.

If the nose wheels are not in the centered position, they can turn quickly to 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.

5.5.6.4 Wing Walker

The presence of such personnel controlled and restricted by civil aviation authorities or local airport authorities.

Where applicable, the wing walker or other assist personnel must:

- a) Be under the direction of the responsible ground crew at all times.
- b) Use two marshalling wands, either day-wands or illuminated wands for low visibility operations.
- c) Be positioned before and during movement of aircraft as follows where applicable and/or permitted:

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- 1. Approximately 1 m (3 ft) outboard of the wingtip
 - 2. In line with rearmost main gear wheel
 - 3. Must maintain visual contact with person responsible for pushback/towing.
- d) Ensure the aircraft movement path is clear of any obstruction (i.e., other aircraft, vehicles).
 - e) Provide (SAFE TO PROCEED) clearance signals at all times to the person responsible for pushback by using a distinct (pendulum) motion of the arm.
 - f) Continue to monitor the aircraft path until the aircraft is stopped at departure point.
 - g) If at any time during aircraft movement, the wing walkers are unsure or identify an imminent danger, signal the person responsible for pushback with (STOP) signal.
 - h) Position themselves either at 11 o'clock or 1 o'clock position in clear visibility of the flight crew on the terminal side at safe distance away from the aircraft.
 - i) Remain in position until the responsible ground crew walks over to take over the marshalling clearance of the aircraft.
 - j) Return to terminal once marshalling duty has been transferred.

5.5.6.5 Tractor Driver

The pushback tractor driver will:

- a) Align the tractor/towbar combination with center line of the aircraft gear before the aircraft movement.
- b) Completely raise the towbar wheels before the start of the aircraft movement, if used.
- c) Standby for clearance to push communication from the flight crew or responsible ground crew.
- d) Select appropriate gear on tractor and slowly begin movement.
- e) Prior to aircraft movement, make sure that the parking brakes are released and the anti-collision lights are switched on in with the local airport regulations.
- f) Start pushback operation on a straight line.
- g) Keep the maneuvering speed a minimum and apply the vehicle brakes gently.
- h) Scan the apron during pushback, monitor clearances and wingwalkers , if applicable, to ensure that the aircraft is moving clear all obstructions. Be prepared to stop.
- i) Ensure during pushback the steering turn limits are not exceeded and advise the flight crew if any are exceeded. Damage may occur to the nose gear; Nesma Airlines specific limits shall be adhered.
- j) If the responsible ground crew on interphone is walking on the ramp, maintain visual contact and ensure a safe distance is maintained from the nose gear during entire pushback.
- k) 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.
- l) Set brakes on the tractor once pushback is completed.
- m) Maintain the brakes on the pushback until (Release) signal is received from the flight crew or the responsible ground crew on the interphone.
- n) Wait for the flight crew or responsible ground crew on the interphone to give the (Aircraft Brakes Set) signal.
- o) Release the tractor brakes and put the gear selector in (Neutral) after aircraft brakes have been set, to release any pressure on the towbar.

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- p) 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.
- q) Remain in a position visible to the flight crew until the responsible ground crew on the interphone has disconnected and is in view of the flight crew.
- r) Drive the tractor back to the terminal or appropriate parking position.

5.5.7 Maneuvering During Adverse Weather Conditions

5.5.7.1 General

During adverse weather conditions (e.g. Fog, rain) visibility and traction will be affected.

The tractor driver must reduce and adapt vehicle speed as required by current conditions.

5.5.7.2 Icy Conditions

When maneuvering the aircraft on slippery apron surfaces, extreme caution is required to avoid losing control slippery tractor due to skidding. Many elements can contribution to the involved (i.e., strong winds, slippery road surfaces, pavement slopes).

Observe the following minimum precautions:

- a) Avoid sudden turns, deceleration or acceleration.
- b) Except when using an ASU, do not start aircraft engines unless:
 - 1. The condition of the pavement is such that reasonable traction is ensured.
 - 2. The aircraft parking brakes are set and the aircraft is disconnected from the tow tractor/towbarless tow tractor.

5.5.8 Nose Gear Steering

5.5.8.1 General

Each aircraft type has specific requirements for the bypass of the nose gear steering mechanism. Nesma Airlines adhere manufacturer instructions for nose gear steering bypass pin details.

The bypass pin shall be:

- 7. Labeled with the specific aircraft type(s) for which it can be used.
- 8. Identified with a (Remove Before Flight) streamer.
- 9. Checked regularly for proper technical condition, or as per manufacturer instructions.

5.5.8.2 Nose Gear Protection and Steering Angles

To protect the nose gear from damage, visual turning limit markings incidents the aircraft maximum nose gear steering angles,

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In the event of exceeding the maximum nose gear steering nose gear angle, inform the maintenance department, flight crew and engineer on board and request technical inspection. The aircraft shall return to the parking stand 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 (oversteer) or (overtorque) system of the tractor must be operative.

5.5.9 Anti-Collision Lights

On a standard departure, once all aircraft doors are closed, the flight crew request ATC. Once clearance is obtained the flight crew will switch on the aircraft's anti-collision lights.

Note:

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.

5.5.10 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.

Note:

With engine(s) above idle thrust, blast and suction effects are greater.

5.5.11 Power Push Unit with Main Gear Towbarless Tractor

5.5.11.1 Power Push Unit Specifics and Safety Measures

- a) Before connecting the PPU to the aircraft, it can be parked in front of the aircraft or outside of the ERA, but never behind the wings. Ensure the remote control system is functioning at normal operating distances.
- b) It is imperative that the driver seat be pulled up, whenever the PPU is connected to the aircraft.
- c) Pushback with a PPU is not permitted in case of an interphone failure.
- d) The agent in charge of the departure operation must be in permanent intercommunication with the flight crew. He/She must stand forward of the aircraft, follow its movements and always be in sight of the flight crew. He/She must stay outside the engines intake/suction area and wheel path of the aircraft during the entire pushback maneuver.
- e) In case of overpowering the roller jacks resistance of the PPU due to failure at the end of the pushback operation, it is mandatory:
 - I. To ask the engineer on board for intervention on the PPU.
 - II. To ask the engineer on board for an inspection of the aircraft.

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5.5.11.2 Actions before Pushback with a Power Push Unit

5.5.11.2.1 Power Push Unit Connection

Before connecting the PPU:

- a) Inform the flight crew that a PPU will be used.
- b) Refueling must be completed.
- c) Make sure the NLG is chocked.
- d) Make sure the aircraft parking brake is set.
- e) Remove the MLG chocks.

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f) **5.5.11.2.2 Engine Start-Up when a Power Push Unit is Used**

The start-up of engine #2 takes place in the normal sequence at the parking stand.

Start-up of engine #1 must be performed after pushback, with parking brake set, when the agent in charge of the departure operation has moved the PPU to the base of the aircraft stabilizer.

Note:

In some cases, (e.g. start up with an external air supply), start-up of all engines can take place at the parking stand, provided that:

- a) It has been agreed upon beforehand by the flight crew and the agent in charge of the departure operation.
- b) The hazardous areas around the engines are clear.

5.5.11.3 Pushback with a Power Push Unit

Note:

- a) An aircraft pushback by using a PPU must be finished by a straight-line length of at least 5 m (16 ft.). if this instruction cannot be complied with, it is forbidden to perform an aircraft (Pull).
- b) Likewise, an aircraft pull forward must be finished by a straight –line length of 5 m (16ft).

Emergency braking during pushback can be performed by:

- a) PPU engine stop (remotely controlled)
- b) Brake application by the flight crew

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5.5.11.4 Departure Dialogue when Using a Power Push Unit

Dialogue between Ground Staff and Flight Crew (PPU)		
Phase	Ground Staff	Flight Crew
Preparation	Call: CONFIRM PARKING BRAKE SET. <i>Check that the steering bypass pin is not installed.</i> <i>Position the PPU.</i>	Reply: PARKING BRAKES SET
	Reply: CLEAR TO PRESSURIZE	
After completion of the pre-departure servicing checks	Call: PRE-DEPARTURE CHECKS COMPLETED	Reply: ROGER
Engine No.2 start	Call : CLEAR TO START ENGINE NO.2 <i>Remove the aft chock of the nose gear.</i>	Reply: STANDBY Call: STARTING ENGINE NO.2
Pushback	<i>Remove the forward chock of the nose gear.</i> Reply: COMMENCING PUSHBACK (+ACKNOWLEDGEMENT OF ANY SPECIFIC PUSHBACK REQUIREMENT) <i>Activate the PUSH function of the PPU and give the cockpit crew the guidance instructions:</i> <ul style="list-style-type: none"> - Steering on left or on right - a little bit more or less - straight on 	Call: PARKING BRAKE RELEASED CLEARED TO PUSH (+ ANY SPECIFIC PUSHBACK REQUIREMENT) <i>The flight crew steers the aircraft according to the guidance instructions provided by the agent in charge of the departure operation</i>
Pushback completed	Call: PUSHBACK COMPLETED, SET PARKING BRAKE. <i>The PPU is moved back below the tail (beyond the rear cabin door).</i>	Reply: PARKING BRAKES SET
Engine No.1 start	Call: AIRCRAFT CLEAR, CLEAR TO START ENGINE NO.1	Reply: STARTING ENGINE NO.1

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Disconnecting	Reply: DISCONNECTING, POSITION AND WAIT VISUALSIGNAL ON YOUR LEFT/FRONT/RIGHT.	Call: CLEAR TO DISCONNECT. Reply: HOLDING POSITION AND WAIT FOR VISUALSIGNAL ON YOUR LEFT/FRONT/RIGHT.
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5.5.11.5 Actions after a Power Push Unit Pushback

5.5.11.5.1 Power Push Unit Disconnection

- a) Once the aircraft parking brake is applied with the remote control, the agent in charge of the departure operation controls the opening of the rollers.
- b) With the remote control, the agent in charge of the departure operation controls the move back of the PPU until at least below the tail (beyond the rear cabin door).
- c) Once the aircraft has taxied and the blast risk has disappeared, the agent in charge of the departure operation withdraws the PPU from the taxiway.

5.5.11.6 Incidents During Pushback with Power Push Unit

5.5.11.6.1 Instructions in Case of Power Push Unit Fire During Pushback

- a) Aircraft on the parking stand, interphone connected.

The agent in charge of the departure operation must:

1. Warn the flight crew via the ground/aircraft interphone. The flight crew warns the Fire Brigade using VHF.
2. Controls the release of rollers

3. If PPUs engine is on:

- I. Remove the PPU by remote control.
- II. Remain in contact with the flight crew.
- III. Stop the PPUs engine by remote control, if not automatically.
- IV. Leave the interphone contact after consent from the flight crew to fight the fire and report to the flight crew about the on-going situation.

4. If PPUs engine is off:

- I. Leave the interphone contact after consent from the flight crew to fight the fire.
- II. Press one of the three emergency stop buttons (the most accessible).
- III. Tow the tractor away from the aircraft and report to the flight crew about the on-going situation.

b) Pushback in progress

The agent in charge of the departure operation must:

1. Inform the flight crew via ground/aircraft interphone. The flight crew warns the Fire Brigade using VHF.
2. Stop the pushback.
3. Request setting of the aircraft parking brake.
4. Control the release of rollers and remove the PPU by remote control.
5. Stop PPUs engine by remote control, if not automatically.

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6. Report to the flight crew about the on-going situation.

5.5.11.6.2 Power Push Unit Incidents Checklist

Flight Crew	Ground Staff
Aircraft unable to move alone-PPU removed	
Ask for aircraft inspection.	<ul style="list-style-type: none"> * Informs the flight crew that rollers are open and the PPU is removed. * Leaves the interphone contact after consent from the flight crew.
Aircraft unable to move alone-PPU not removed	
If the engine on the opposite side of the PPU is running: Shuts down the engine.	Informs the flight crew that PPU is not removed.
* Forbids the evacuation of passengers via the wing emergency exit on the PPU side. * Asks for Aircraft inspection.	<ul style="list-style-type: none"> * Leaves the interphone contact after consent form the flight crew. * Fights the fire.
Aircraft able to move alone-PPU removed	
Asks for aircraft inspection.	<ul style="list-style-type: none"> * Informs the flight crew that the rollers are open and the PPU is removed. * Leaves the interphone contact after consent from the flight crew. * Guides the flight crew to move the aircraft forward.
Aircraft able to move alone-PPU not removed	
If the engine on the opposite side of the PPU is running: Does not shut down the engine.	Informs the flight crew that PPU is not removed.
	<ul style="list-style-type: none"> * Leaves the interphone contact after consent form the flight crew. * Presses the most accessible stop button.

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<ul style="list-style-type: none"> * Guided by the agent in charge of the departure operation, moves the aircraft forward with engine thrust overpowering the rollers jacks resistance. * Asks for aircraft inspection. 	<p>Re-establishes the interphone contact and reports to the flight crew.</p>
---	--

5.5.12 Open Ramp Departure

An Open ramp is taxi-in and taxi-out operation area. in some locations, the aircraft may be towed from an open ramp to a taxiway, prior to engine start.

- a) Complete all pre departure checks.
- b) Refer to departure Communication and follow the required phases of dialogue.
- c) Ensure all staff and equipment is clear of the aircraft and behind the ERA.
- d) Position for marshalling in an area behind ERA while being in clear view of the flight crew on either side of the aircraft, depending on facility.

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5.5.13 Pushback Operations

Nesma Airlines lay out procedures for pushback below to ensure:

- Equipment used is suitable for the aircraft type;
- Maximum aircraft nose gear turn limits are not exceeded;
- Standardized verbal communication is used between the ground crew and the flight crew;
- A safe connection, operation and disconnection of the pushback or towing equipment

5.5.13.1 Nose-Gear Controlled (Tractor and Towbar)

- The tractor and towbar/shear-pin combination should be suitable for the operation, considering: the aircraft type and weight, the weather conditions, the apron surface conditions.
- The tractor should be in the appropriate drive mode prior to the commencement of the operation.
- Chocks should not be removed from the main-gear until the tractor and towbar are fully secured to the nose-gear and the parking brake set on the tractor.
- When connecting the towbar to the aircraft's nose-gear assembly the towbar should be detached from the tractor.
- When connecting the towbar to the tractor personnel should be facing the tractor and have both legs on only one side of the towbar. I.e. they should not straddle the bar.
- The tractor and towbar should be in-line with the center line of the aircraft before the pushback commences.
- The tractor should not be left unattended with its engine running.
- The wheels on the towbar should be fully retracted/off the ground before the pushback commences.
- For aircraft fitted with a Steering By-pass system, ensure that the by-pass pin is correctly installed prior to connecting the towbar to the aircraft and before pushback commences and is removed after the towbar has been disconnected.
- For aircraft not fitted with a Steering By-pass system, ensure that either the steering hydraulic system is depressurized or the nose leg steering torque links are disconnected (as applicable).
- Personnel should not step across the towbar whilst the pushback operation is in progress.
- If the connection between the aircraft and tractor should be lost while in motion it is important to inform the flight deck to apply brakes gently.
- When stopping the pushback the throttle on the tractor will be closed and brakes applied gently.
- At the end of the pushback sequence and before the towbar is disconnected, the flight deck should be instructed to set the aircraft brakes and hold position until receipt of visual signals for final clearance to taxi.

Note:

Brakes set must be confirmed to ground staff.

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- At the end of the pushback sequence and before the towbar is disconnected, tension must be released from the towbar.
- A chock may be positioned in front of the nose wheel while the disconnect of the towbar takes place.
- Before the aircraft commences taxiing under its own power, ground staff shall give the final clearance signal, display the by-pass pin (if appropriate) to the flight deck and receive acknowledgement.

5.5.13.2 Nose-Gear Controlled (Tow bar less)

- The tractor should be suitable for the operation, considering: the aircraft type and weight, the weather conditions, the apron surface conditions.
- The aircraft shall not be lifted while equipment and/or boarding bridge are still connected to the aircraft. Inform cockpit crew prior to lifting the aircraft nose landing gear.
- Chocks should not be removed from the main-gear until the tractor is fully secured to the nose-gear and brakes on tractor set.
- Ensure that the aircraft nose wheels are safely locked in the tractors locking mechanism when connected to aircraft.
- Ensure that the nose wheels are lifted well above ground during the entire pushback.
- The tractor should be in-line with the center line of the aircraft before the pushback commences.
- For aircraft fitted with a Steering By-pass system, ensure that the by-pass pin is correctly installed prior to connecting the tractor to the aircraft and before pushback commences and is removed after the tractor has been disconnected.
- For aircraft not fitted with a Steering By-pass system, ensure that either the steering hydraulic system is depressurized or the nose landing gear steering torque links are disconnected (as applicable).
- If the connection between the aircraft and tractor should be lost while in motion it is important to inform the flight deck to apply brakes gently.
- At the end of the pushback sequence and before the tractor is disconnected the flight deck shall be instructed to set the aircraft brakes and hold position until receipt of visual signals for final clearance to taxi.

Note:

Brakes set must be confirmed to ground staff.

- After disconnecting the tractor from the nose gear and before removal of the by-pass pin, position the tractor in such a way that it is visible from the cockpit (e.g. at a 90 degrees angle from the aircraft).
- Before the aircraft commences taxiing under its own power, ground staff shall give the final clearance signal, display the by-pass pin (if appropriate) to the flight deck and receive acknowledgement.

Main-gear controlled

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- Prior to connection of the unit to the aircraft a check should be made, at normal operating distance, to ensure that the unit's remote control system is functional.
- When positioning the unit on an aircraft verification should be made that the unit is appropriately configured for the aircraft type.
- Standard terminology should be used by the headset operator to enable the aircraft steering function to be performed from the flight deck, as follows:
 - “left, left” — flight deck apply left steering
 - “right, right” — flight deck apply right steering
 - “steady” — flight deck hold steering in current position
 - “reduce turn” — flight deck reduce steering angle
 - “neutral” — flight deck place steering in neutral position
 - “rollers are open — standby for hand signals”
- In the event of any equipment malfunction during push-back the headset operator should instruct the flight deck to gently apply the aircraft brakes.
- At the end of the pushback the operator should verify that the rollers are fully open by observing the unit's indicator lights, before giving the all-clear signal to the flight deck.
- In the event that an emergency passenger evacuation is required during pushback, the main-gear controlled unit may have to be removed from the aircraft so that it will not interfere with the evacuation process.

5.5.14 Power back Operations

- Power back operations should only be carried out within limitations/approval of the respective authorities.
- Ground crew should consist of a minimum of 3 persons, i.e. a marshaller and 2 wing walkers. The marshaller is in charge of the operation.
- Only wireless communication should be used for power back operations.
- The Marshaller engaged in power back operations should wear, in addition to their normal personal protective equipment, protective goggles.
- In conjunction with the content of 6.1 to 6.4 power back operations should not be conducted if any one of the following conditions exist:
 - if any member of the ground crew is not properly protected, the departure gate is not approved for such operations,
 - the entire area of the operation is not adequately illuminated,
 - visibility is restricted due to weather conditions,
 - an accumulation of ice, snow or slush is on the apron,
 - Verbal agreement is not reached between the marshaller and the flight deck.
- To terminate a power back only the “come straight ahead” signal is to be given to the flight deck, the “stop” signal only being given when the aircraft has achieved forward movement.

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5.5.15 Aircraft Towing

5.5.15.1 Aircraft Towing Requirements

The following requirements must be met to perform an aircraft tow:

- a) Ensure the hydraulic system pressure for aircraft parking and/or the brake accumulator is within the required pressures range. Nesma Airlines follow manufacturer instructions.
- 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 cockpit.
- e) Establish communication with the brake operator by means of the interphone.
- f) Make sure wheel chocks are positioned at the end of the maneuver, prior to disconnecting the towbarless tow tractor or towbar.

Note:

For following situations please refer engineer on board,

1. Observe any type of excessive fluid leakage
2. Notice any signs of unmarked aircraft damage
3. Observe any fault, failure, malfunction or defect that you believe may affect the safe operation of the aircraft for the intended flight.

5.5.15.2 Towing Maneuvering

The Towing maneuvering procedure is similar for all aircraft types. The following minimum safety precautions and procedures shall be followed prior to and during aircraft towing operations:

- a) Align the tractor or tractor/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 the parking brakes operator 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 (55 yd) 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.

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- n) Apply the tractor parking brake after a complete stop.
- o) Some of these precautions may not be applicable to towbarless vehicles.

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5.5.15.3 Towing Preparation

The following checklist is to be used in preparation for an aircraft tow.

Action	Performed by	
	Brake Operator	Tractor Driver
Apply the cockpit checklist for towing. Refer Nesma Airlines Instructions for Towing Operation.	✓	
Connect and test the interphone link	✓	
Insert the bypass pin.	✓	✓
Give permission to connect the towbar and tractor or towbarless tractor after applying the aircraft parking brake.	✓	
Install the gear safety pins, if required .	✓	✓
Connect the towbar first to the aircraft then to the tractor.		✓
Before connecting the towbarless tractor, ensure the aircraft MLGs are symmetrically chocked.		✓
Connect the towbar or towbarless tractor and set the parking brake.		✓
Once all GSE has been cleared away from the aircraft, remove or check removal of aircraft chocks.		✓
Switch on the external and anti-collision lights of the aircraft.	✓	✓
Contact the ATC for clearance to start moving the aircraft (depending on local regulations),	✓	✓
After receiving the clearance, release the aircraft parking brake.	✓	
Give clearance to the tractor driver to start moving the aircraft.	✓	
Request confirmation from the brake operator that the aircraft parking brake has been released.		✓
Conduct tow.		✓

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5.5.15.4 Towing Completion

Action	Performed by	
	Brake Operator	Tractor Driver
Set tractor parking brake.		✓
Request the brake operator to set the aircraft parking brake.		✓
Inform ATC that towing is completed and the frequency will be left, depending on local regulations.	✓	✓
Set the aircraft parking brake and check the pressure. Inform the tractor driver: PARKING BRAKE SET , PRESSURE CHECKED.	✓	
Chock the aircraft MLG.		✓
Switch off the external and anti-collision lights of the aircraft.	✓	
Inform the brake operator (AIRCRAFT CHOICKED)		✓
Request permission from Brake Operator to disconnect the towbar or towbar or towbarless tractor.		✓
Give permission to disconnect the towbar or towbarless tractor.	✓	
Disconnect the towbar or towbarless tractor and remove the bypass pin.		✓
Chock the aircraft.		✓
Inform the brake operator (TOWBAR/TRACTOR DISCONNECTED).		✓
Release the aircraft parking brake and inform the tractor operator (PARKING BRAKE OFF.)	✓	
Check and inform the brake operator, shut down and disconnect the tractor GPU.		✓
Install and connect a GPU.		✓
Remove and stow gear safety pins in the dedicated location.	✓	

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Issue Date: JAN24

Revision No.: 00

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5.5.15.5 Incidents During Towing

Brake Operator	Tractor Driver
<i>VHF Communication Failure</i>	
	<p>(a) Stop aircraft/tractor set immediately: unless Crossing a runway, in which case clear the runway, then stop.</p> <p>(b) Apply tractor parking brake.</p> <p>(c) Advise Towing Regulation and wait for assistance (Follow me before completing the towing).</p>
<i>Tractor Failure</i>	
<p>(a) Inform ATC.</p> <p>(b) Apply parking brake.</p> <p>(c) Listen to VHF and wait for assistance.</p>	<p>(a) Stop aircraft/tractor set.</p> <p>(b) Inform ATC (towbarless towing with one person operation).</p> <p>(c) Apply tractor parking brake.</p> <p>(d) Chock the aircraft.</p> <p>(e) Listen to VHF (towbarless towing with one person operation).</p>
<i>Coupling Break Off</i>	
<p>(a) Brake the assembly by stepping on both brake pedals progressively.</p> <p>(b) As soon as the aircraft is at a standstill, apply the parking brake before releasing the pedal.</p>	<p>(a) Do not apply tractor breaks.</p> <p>(b) Follow the aircraft path attentively and stop the tractor according to the aircraft position.</p> <p>(c) Chock the aircraft.</p>
<i>Tractor Fire</i>	
<p>(a) Inform ATC.</p> <p>(b) Apply parking brake.</p>	<p>(a) Inform the brake operator.</p> <p>(B) Stop aircraft/tractor set immediately.</p> <p>(c) Move tractor away as rapidly as possible.</p> <p>(d) Fight the fire, using fire extinguisher.</p> <p>(e) Chock the aircraft.</p>
<i>Aircraft Fire</i>	
<p>(a) Inform ATC.</p> <p>(b) Apply the parking brake.</p> <p>(c) Fight the fire with on-board</p>	<p>(a) Stop aircraft/tractor set immediately</p> <p>(b) Move tractor away as rapidly as possible.</p>

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<p>extinguisher.</p> <p>(d) Evacuate the aircraft using on-board means, if required.</p>	<p>(c) Chock the aircraft.</p>
<i>Accident with Other Aircraft or Vehicle</i>	
<p>(a) Contact the ATC stating position and nature of trouble.</p> <p>(b) Listen to VHF and wait for assistance.</p>	<p>(a) Stop aircraft/tractor set immediately (b) Apply tractor parking brake. (c) Advise towing regulation. (d) Do not unload or disconnect the aircraft. (e) Chock the MLG.</p>
<i>Interphone Communication Failure</i>	
If during the tow the interphone fails, the two must be immediately stopped and an alternate means of communication established before continuing. If this is not possible, assistance must be requested.	

5.5.16 Towing Limit

Fuel and other loads can affect an aircraft's balance. To avoid (tail tipping) during towing, ensure that the actual center of gravity of the aircraft is forward of the critical center of gravity.

If you are unable to determine this, you must request assistance from PIC.

5.5.17 Movement In/Out of Hangars

- Only those personnel trained and qualified in the movement of aircraft in/out of hangars should perform this operation and a crew chief assigned to the operation.
- Adequate personnel (wing/tail walkers) should be assigned to the operation to ensure clearances between the aircraft and objects in the hangar.
- Method of communication between the personnel involved in the aircraft movement in/out of the hangar should be agreed upon before any movement is started.
- The tractor and/or towbar/shear-pin combination should be suitable for the operation, considering: the aircraft type and weight, the weather condition, the apron surface conditions.
- Hangar doors should be opened and secured to ensure sufficient wingtip and horizontal/vertical stabilizer clearances under all operational conditions.
- Aircraft docking systems and all other equipment must be removed and stowed out of the path of travel of the aircraft.
- Consideration should be given to the ability of the tow tractor to maneuver in/out of the tow position inside the hangar.
- Floor markings and stop signs should be in accordance with aircraft type operating in/out of the hangars.

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Chapter 06 Aircraft Loading

6.1 Supervision of Aircraft Loading

6.1.1 General

Before Loading, the hold shall be visually inspected for damage that can affect the load capacity. The loading supervisor shall ensure that all tasks below are performed, before aircraft departure. This includes

- a) Confirm the aircraft has been loaded/offloaded as instructed, including any special load instructions.
- b) Ensure compliance between loading instructions and load presented, including
 - 1- Bulk Load: Pieces and weight.
 - 2- Airport of unload.
- c) Visually check serviceability of locks and restrains that could affect the load capacity of the airport prior to loading.
- d) Ensure bulk load is correctly secured.
- e) Ensure lashing/load spreading is correctly applied.
- f) Ensure the holds are free of any foreign objects.
- g) Ensure any deviations are approved by the person responsible for the weight and balance calculation.
- h) Upon completion, confirm the final load.

6.1.2 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 goods carried, shall ensure that aircraft is loaded as specified by PIC, in accordance with Nesma Airlines policies, the person responsible for loading shall be trained in accordance with the standards outline in the IATA Airport Handling Manual.

6.2 Safety Requirements Specific to Aircraft Loading Operations

6.2.1 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 cargo hold floor.
- d. Stabilize irregularity shaped items to prevent failing from the conveyor belts during loading and unloading.
- e. Operators of equipment shall ensure that the other personnel are entrapped by movement of loads, either in the aircraft or on the loading equipment.
- f. Hinged side gates of loaded carts should be lowered carefully in case losse cargo falls out and causes injury.
- g. Holds and compartments shall only be entered or exited by using the appropriate elevating device, which has positioned and secured (e.g. belt conveyor and cargo loader)

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- h. Elevating devices must not be removed from the aircraft when personnel are still in the cargo hold.
- i. When loading has been completed, move all loading equipment well clear of the aircraft.

6.2.2 Bulk Loading of Aircraft

- a. Use belt loaders if the door sill height does not allow to be passed into the doorway without undue lifting. Always consider the use of belt loaders for heavy items over 23 kg.
- b. Keep a gap of at least 1 m (3 ft) between baggage carts and the cargo belt when towing to prevent collisions when approaching the belt loader.
- c. Carts must be disconnected from the tractor and maneuvered by hand if carts needs to be closer than 1 m (3 ft)
- d. When removing baggage carts, the tractor shall be positioned pointing away from the aircraft wing and the baggage cart pulled to the tractor.

6.3 General Loading Precautions

- a) Hold Baggage shall be inspected for signs of leakage before loading.
- b) Any item of load that is not properly packed and any item that may damage or contaminate the aircraft shall not be loaded.
- c) Use closed or covered carts during inclement weather.
- d) Do not place goods directly on the apron.
- e) Always observe the specific instruction labels and markings (FRAGILE, TOP, THIS SIDE UP).
- f) Report torn or missing baggage tags and cargo labels, and do not load unless corrected.
- g) Report immediately any damage to the load, whether its occurs during handling or is noticed on arrival.
- h) Report immediately any spills, unusual fumes or smells, etc., to a supervisor, flight crew or local authorities as required.

6.4 Identifying Shipments Requiring Special Handling

a) General

- 1- all shipments requiring special handling will be identified on the Load Message (LDM) for an arrival or under NOTOC for departing flights.
- 2- Comply with any special handling requirements. Be alert for special load and/or dangerous goods for Mobility Aids batteries, as carriage of DGR not applicable on Nesma Airlines.
- 3- Always follow the orientation markings and/or special handling instructions as applicable while handling.
- 4- Make sure that packages with directional handling labels are kept in the correct orientation (e.g. THIS WAY UP)
- 5- Always observe the specific instruction labels and markings (FRAGILE, TOP, THIS SIDE UP)
- 6- Always handle fragile items with care.

b) Dangerous Goods

Nesma Airlines shall not accept DGR on its flights, in case of mobility aids with batteries identified as DGR according to IATA DGR Table, NOTOC shall be issued and shall be accepted and loaded according to IATA DGR Manual.

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c) Live Animals

Not applicable for Nesma Airlines flights.

d) Wet Cargo

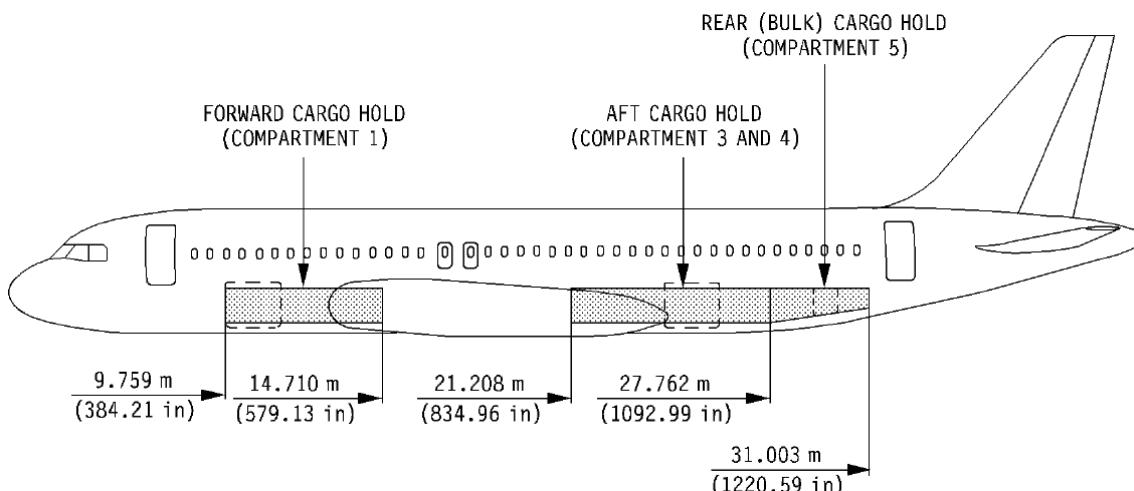
Not applicable for Nesma Airlines flights.

6.5 Cargo Holds

6.5.1 General

Cargo and Baggage are loaded in 3 Under Floor Cargo Holds designated as follow:

- Forward Cargo Hold - Compartment 1
- AFT Cargo Hold - Compartment 3 & 4
- Rear AFT Cargo Hold - Compartment 5
 - AFT cargo hold (compartment 3 and 4) and rear (bulk) cargo hold (compartment 5) are separated by a lateral divider net.
 - The general arrangement of the cargo holds is shown in the illustration below:



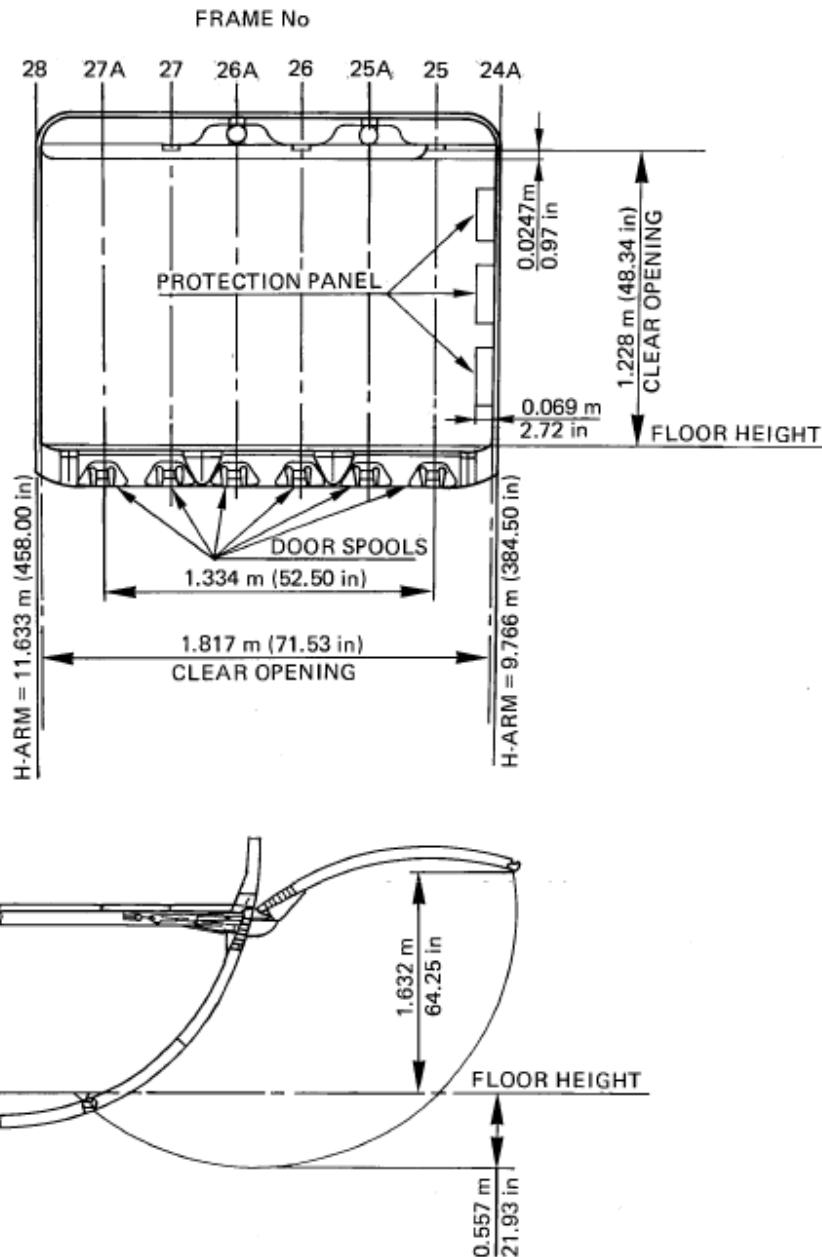
6.5.2 Cargo Hold Doors

Door Opening Size and Stations:

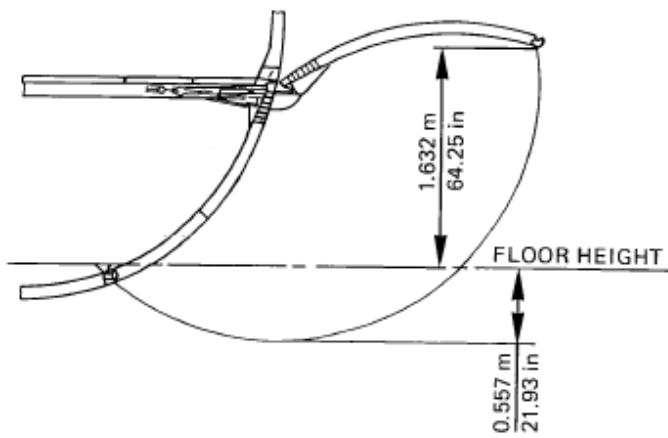
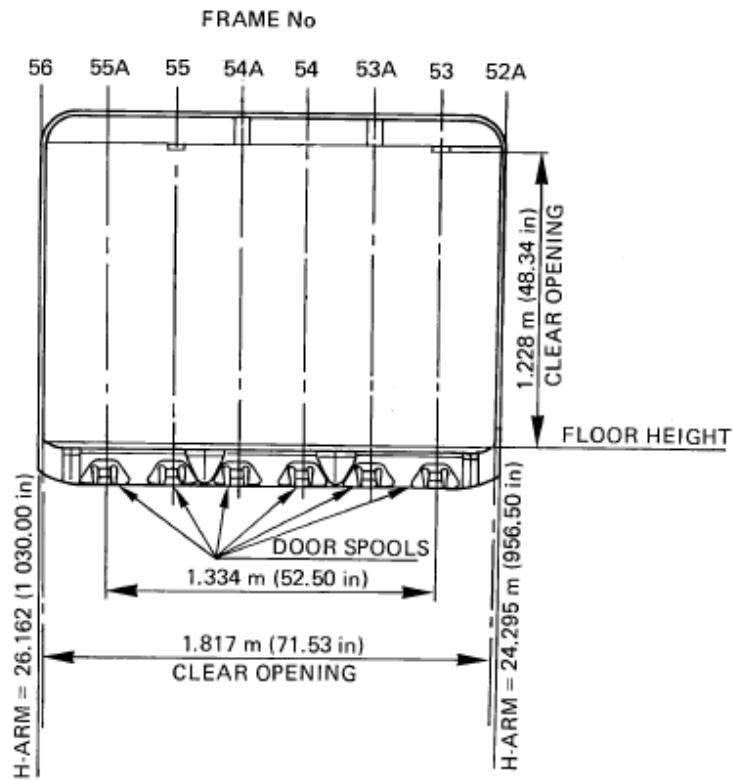
1. The three Cargo Holds are each equipped with an individual access door located on the lower right side of the Fuselage.
2. The doors for the Forward and AFT cargo holds are hydraulically powered. Manual operation is possible using hand pumps when hydraulic power is not available.
3. The rear (bulk) cargo hold (compartment 5) is manually operated from outside or inside the aircraft.
4. Loading of the rear (bulk) cargo hold (compartment 5) is achieved either through the access door in the AFT cargo hold after removal of the lateral divider net at frame station 59, or through the rear (bulk) cargo door.

5. Figures below show the cargo hold doors opening sizes and the door stations.

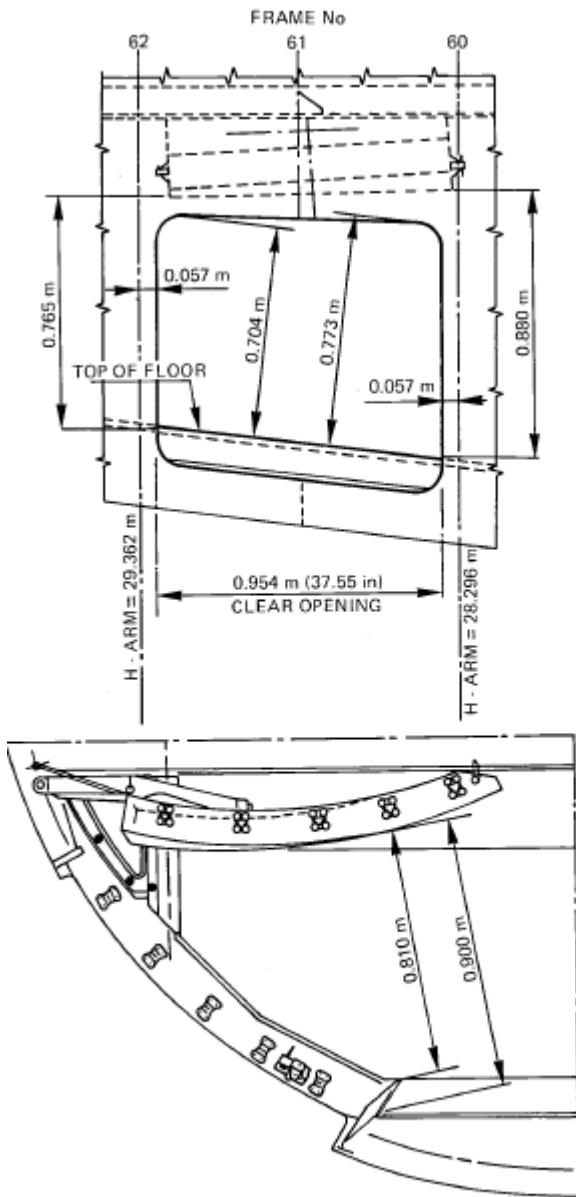
FWD Cargo Door Opening Size and Stations



Forward Cargo Door Opening Size and Stations

AFT Cargo Door Opening Size and Stations

Aft Cargo Door Opening Size and Stations

Rear (BULK) Cargo Door Opening Size and Stations

Rear (Bulk) Cargo Door Opening Size and Stations

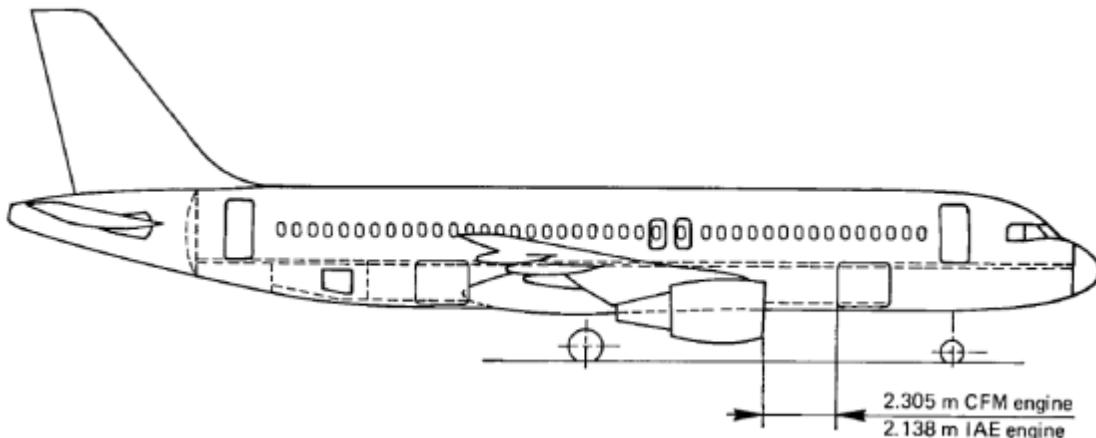
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Cargo Doors Clearances:

Forward Cargo Door

Caution:

A minimum clearance of 1.970 meter (78 inches) to the fuselage side has to be respected before the door is operated. The distance between the rear edge of the forward cargo door and the engine is given in the illustration below:

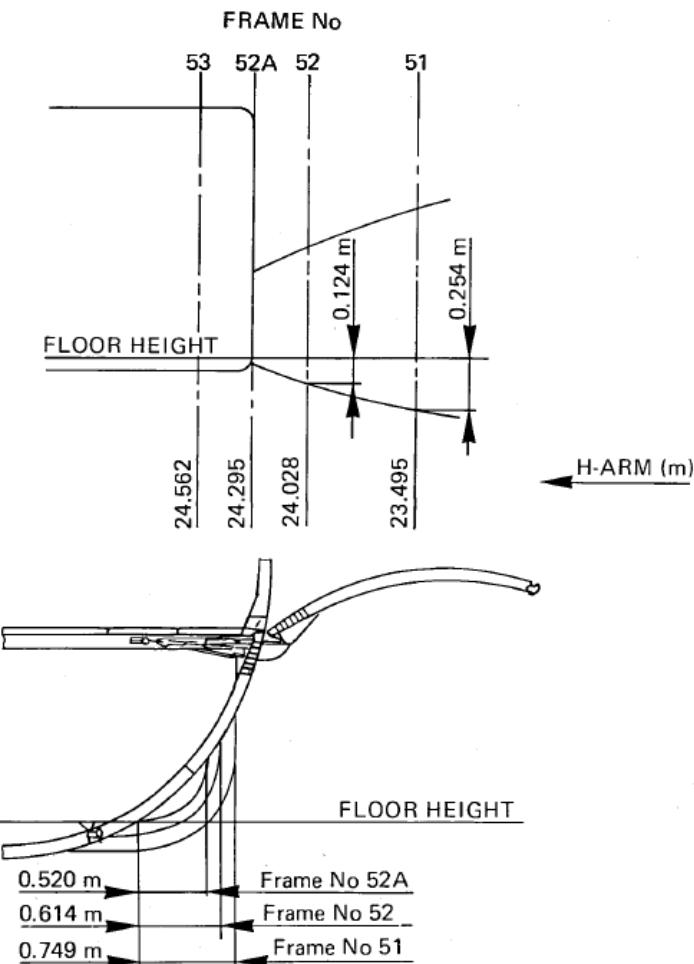


The ground clearance for the lower edge of the forward cargo door is approximately 2.0 meters (78.74 inches), but varies dependent on aircraft weight, aircraft CG position, landing gear wheel, and tire sizes.

AFT Cargo Door

Caution: A minimum clearance of 1.970 meter (78 inches) to the fuselage side has to be respected before the door is operated.

- For loader handling it has to be considered that the Wing / Fuselage fairing protrudes from the Fuselage and therefore may limit movement of equipment in the door area. The most important dimensions of the fairing are given in the following illustrations:



The ground clearance for the lower edge of the forward cargo door is approximately 2.0 meters (78.74 inches), but varies dependent on aircraft weight, aircraft CG position, landing gear wheel, and tire sizes.

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6.5.3 Cargo Holds Volume:

- Before putting volume details we have to repeat the following precautions:
 - The maximum cumulative loads in the cargo holds and their net sections must not exceed the maximum permissible loads.
 - When the certified net restraint system is used, additional tie down is not normally required except if necessary.
 - For load-planning, loading control and load restraint, cargo holds are divided into net sections; nets may be removed for loading but must be erected after loading is complete.
 - Special attention must be paid to door protection lateral and longitudinal nets.
NEVER CLOSE CARGO DOORS WITHOUT BEING SURE THAT THE NETS ARE FIXED AND CORRECTLY IN POSITION.
 - During loading and unloading sufficient clearances shall be kept to the cargo door frame to prevent damage.

Volume Definition

- The maximum usable volume that will appear in the following table is defined by subtracting:
 - Door area protection volume.
 - Volume occupied by protection devices.
 - Minimum clearance to the ceiling.

Cargo Holds Data Table

- From the Theoretical Volume, the table below reflects holds and net sections designations and respective data:

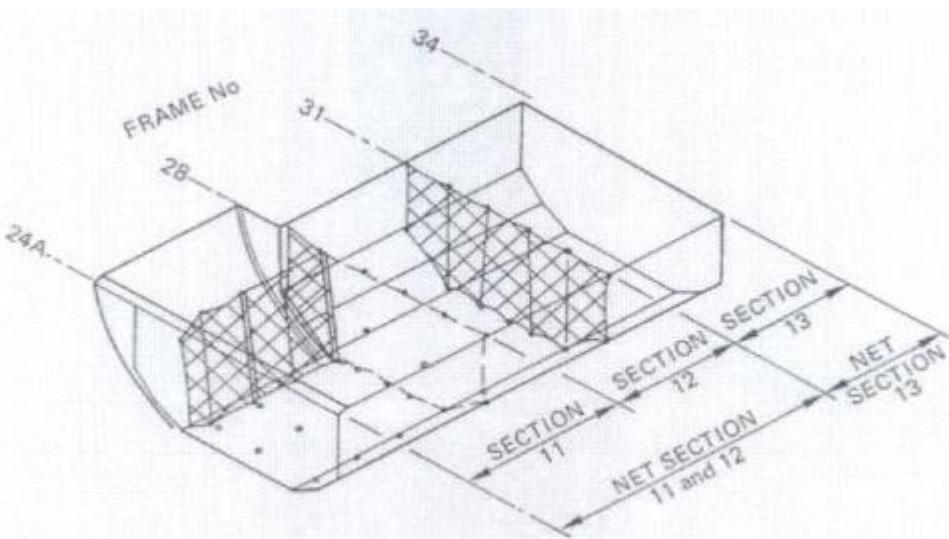
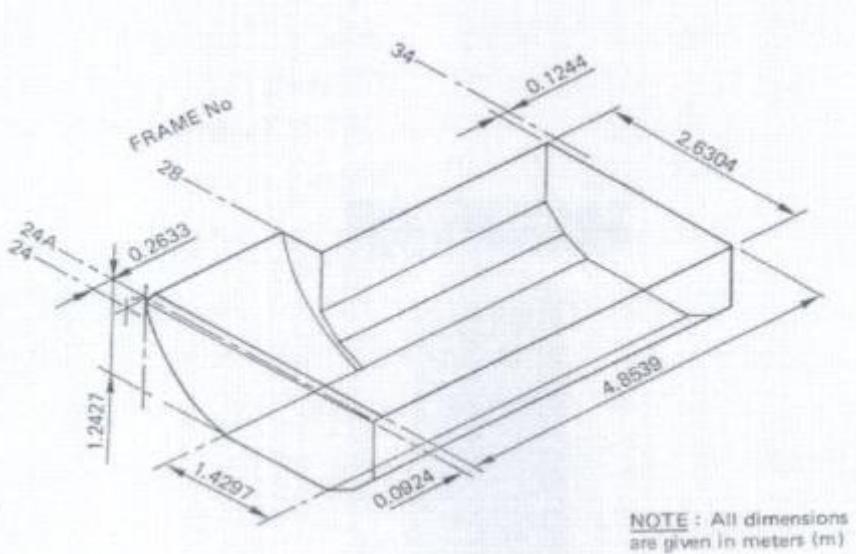
HOLD	NET SECTION	LENGTH (m)	CROSS SECTION AREA (m ²)	USEABLE VOLUME		H-ARM (m)
				(m ³)	(ft ³)	
1	11	1.777	2.300	4.090	144	10.744
	12	1.600	2.984	4.770	169	12.433
	13	1.477	2.984	4.420	156	13.971
TOTAL HOLD 1		4.854	-	13.280	469	12.283
3	31	1.754	2.984	5.230	185	22.085
	32	1.600	2.984	4.530	160	23.762
4	41	1.600	2.300	3.750	132	25.362
	42	1.600	2.931	4.750	1680	26.962
TOTAL HOLD 3 & 4		6.554	-	18.260	645	24.485

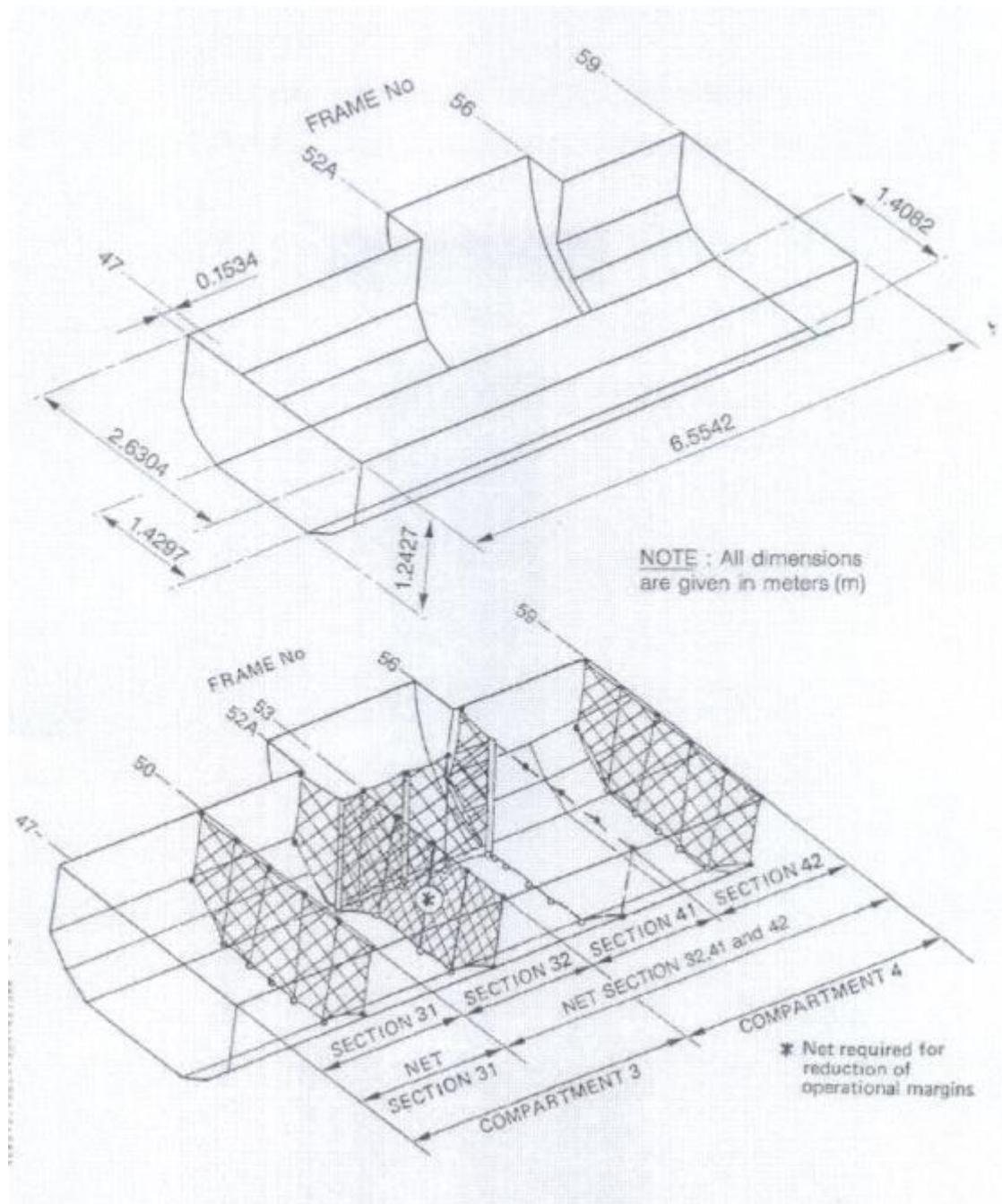
Nesma Airlines نسما للطيران	Stations Operations Manual Aircraft Loading	Chapter: 6
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5	51	0.534	2.931 2.797	1.460	52	28.029
	52	1.066	1.339 1.247	1.380	49	28.829
	53	1.641	2.433 1.426	3.040	107	30.182
TOTAL HOLD 5		3.241	-	7.220	208	29.38
TOTAL PER AIRCRAFT				38.760	1369	

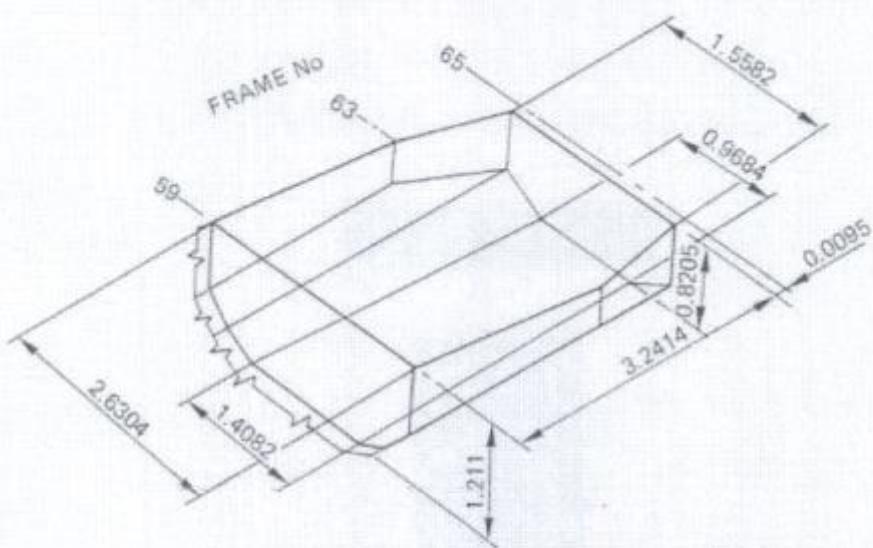
6.5.4 Cargo Holds Arrangement:

- The following figures illustrate the cargo holds arrangement:

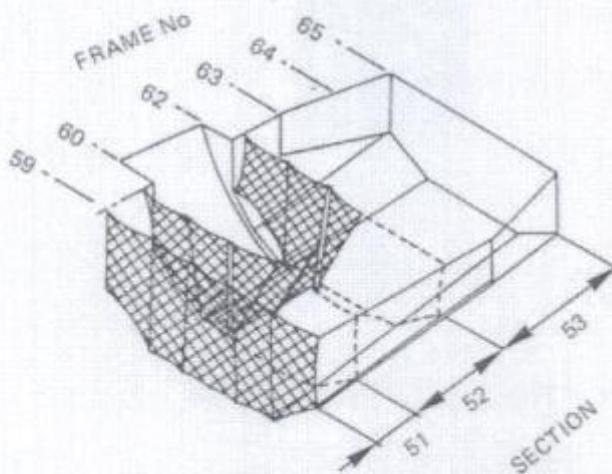


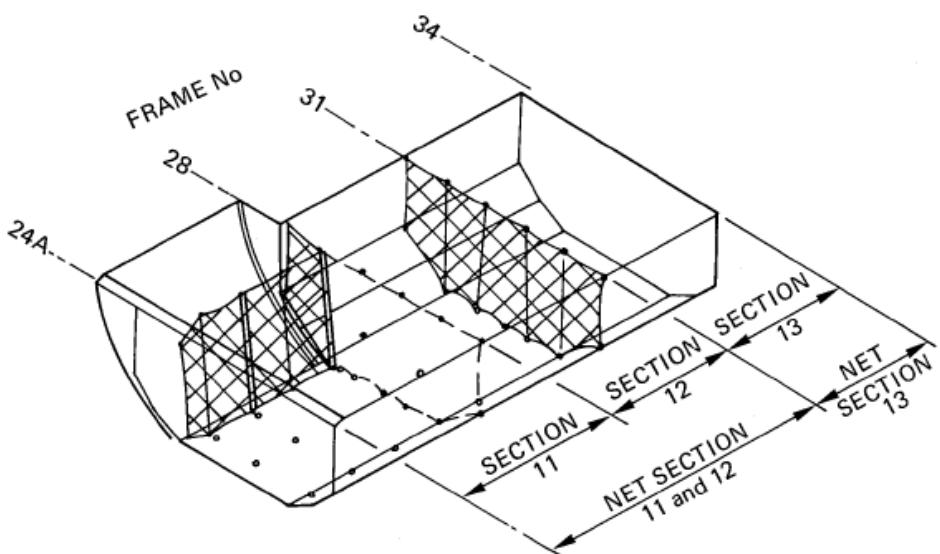
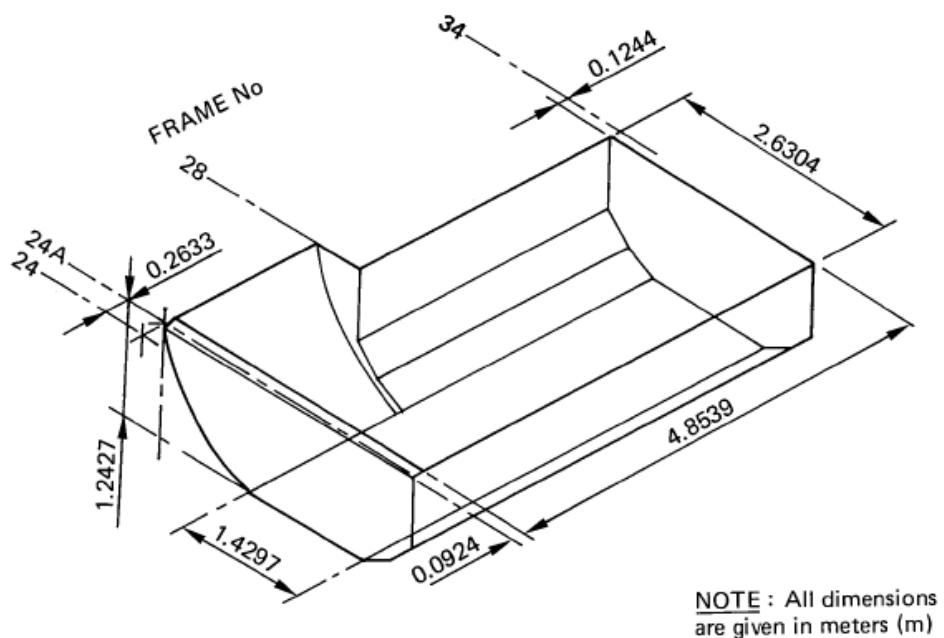
Arrangement of FWD Cargo Hold (Compartment 1)

Arrangement of AFT Cargo Hold (Compartment 3 & 4)

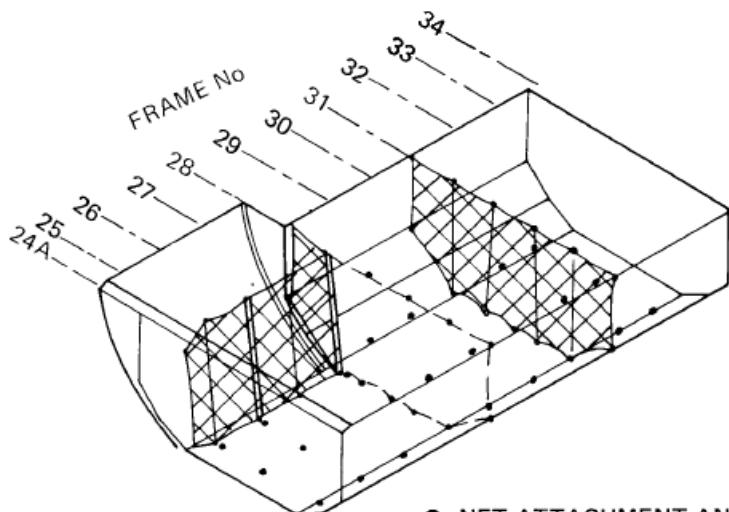


NOTE : All dimensions
are given in meters (m)



Arrangement of Rear (BULK) Cargo Hold (Compartment 5)**Tie down points arrangement**

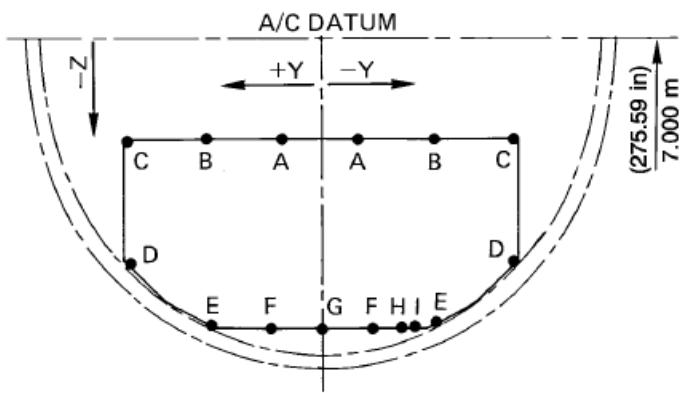
Arrangement Forward Cargo Hold (Compartment 1)



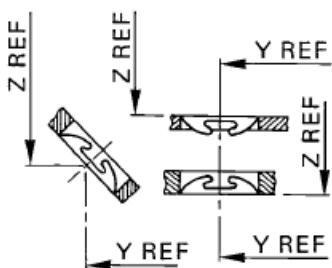
● NET ATTACHMENT AND TIE DOWN POINTS

DEFINITION OF REFERENCE POINTS FOR NET ATTACHMENT AND TIE DOWN POINTS

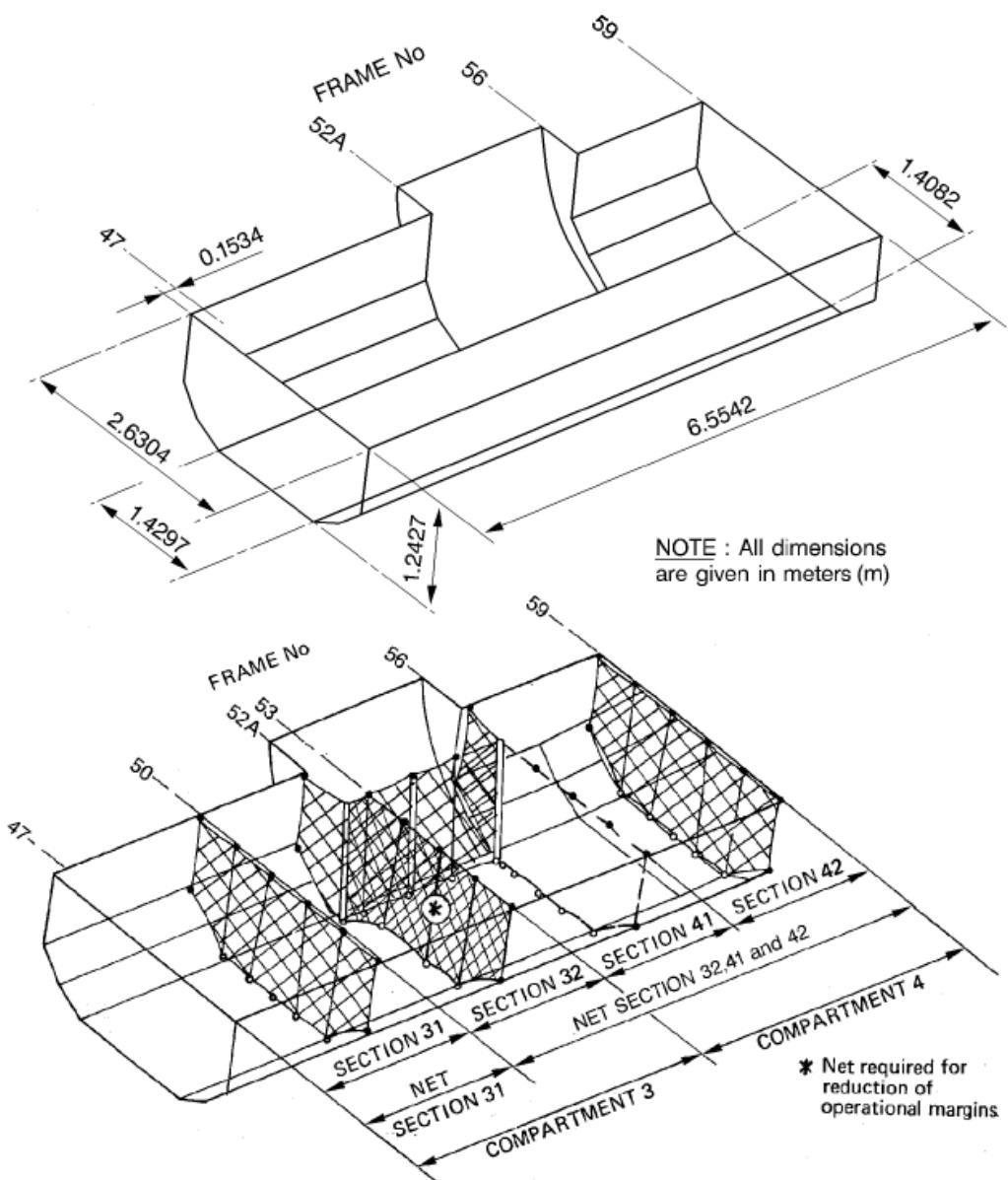
DEFINITION OF PLUG AND TIE DOWN POINT STATIONS



VIEW IN FLIGHT DIRECTION

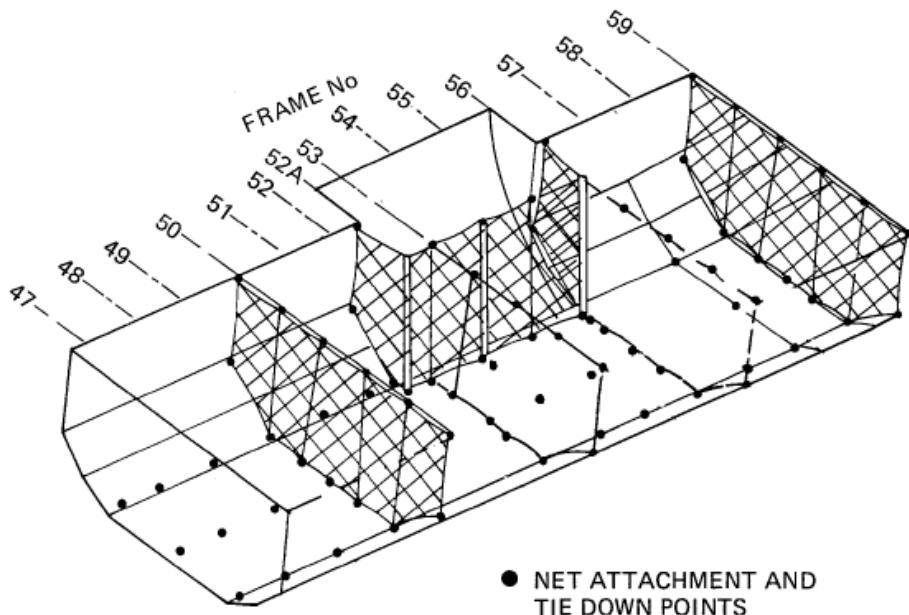


Tie Down Points Arrangement Forward Cargo Hold



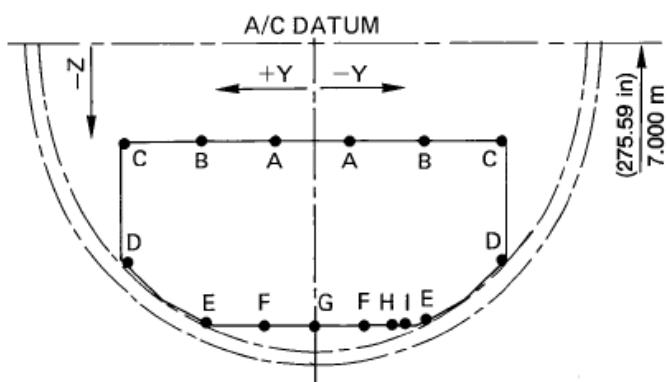
Arrangement Aft Cargo Hold (Compartment 3 and 4)

Aircraft Loading



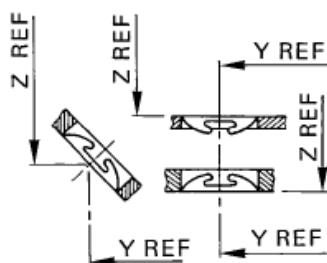
DEFINITION OF REFERENCE POINTS FOR NET ATTACHMENT AND TIE DOWN POINTS

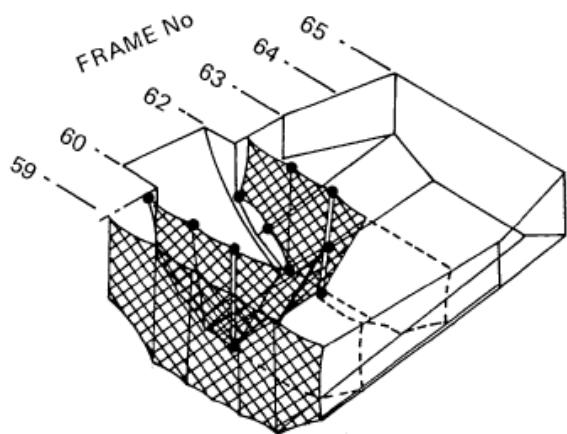
DEFINITION OF PLUG AND TIE DOWN POINT STATIONS



VIEW IN FLIGHT DIRECTION

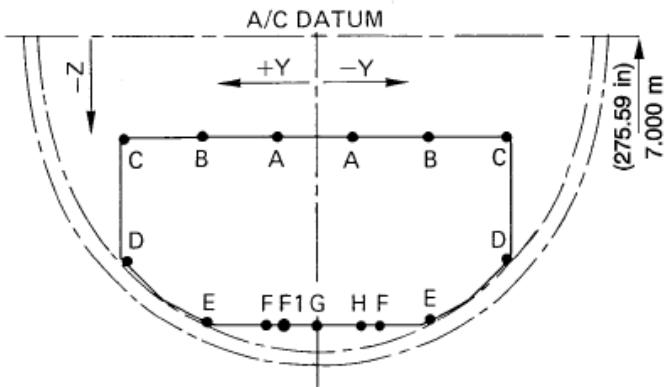
Tie Down Points Arrangement Aft Cargo Hold





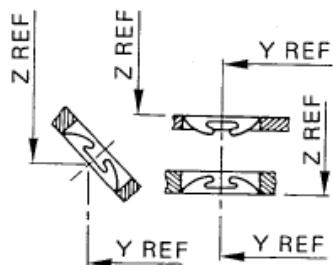
- NET ATTACHMENT AND TIE DOWN POINTS

DEFINITION OF REFERENCE POINTS FOR NET ATTACHMENT AND TIE DOWN POINTS

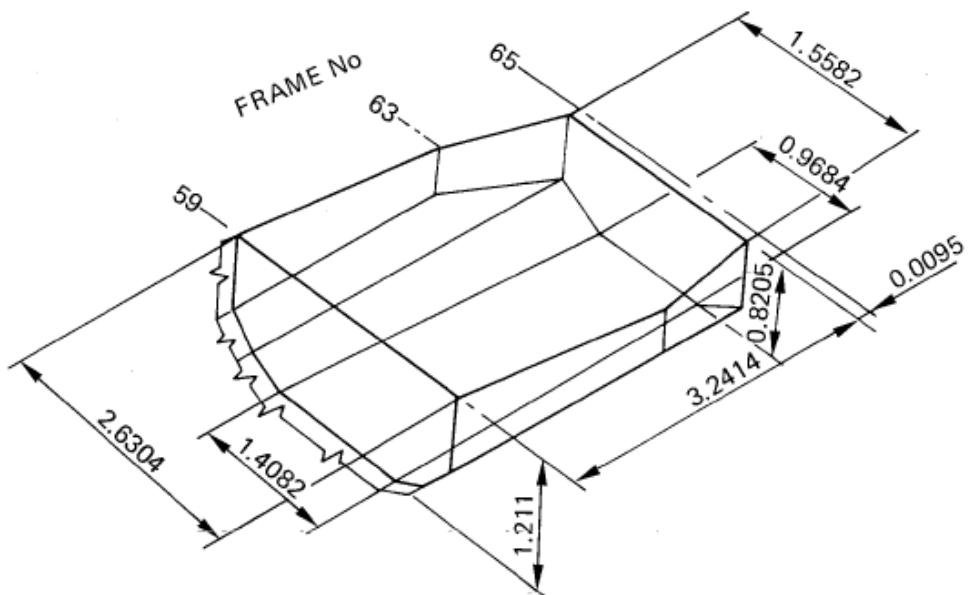


VIEW IN FLIGHT DIRECTION

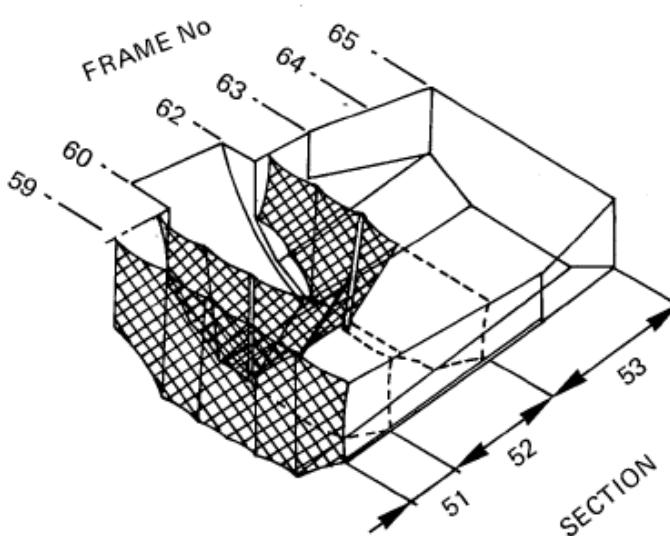
DEFINITION OF PLUG AND TIE DOWN POINT STATIONS



Tie Down Points Arrangement Rear (Bulk) Cargo Hold



NOTE : All dimensions
are given in meters (m)



Arrangement Rear (Bulk) Cargo Hold (Compartment 5)

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6.5.6 Maximum Package Dimensions:

- The maximum dimensions of cargo packages which will pass through the doors of respective compartments and which must be restrained are shown in tables below:
 1. Upright Loading: Upright Loading refers to large or heavy packages loaded with assistance of mechanical ground support equipment and maneuvered through the door in an upright position.
 2. Titled Loading: Titled Loading refers to large low density cargo which may require hand maneuvering through the door in a titled position to avoid destruction.

The maximum dimensions of cargo packages which will pass through the cargo door in the AFT cargo hold compartment (3 and 4) and which must be restrained in the rear (bulk) cargo hold (compartment 5) AFT of the separation net are shown in the following tables.

- Table 1 for upright loading,
- Table 2 for tilted loading.

These dimensions are approximate values and refer to rectangular packages.

a) Upright loading

Upright loading refers to large or heavy packages loaded with the assistance of mechanical ground support equipment and maneuvered through the door in an upright position.

Table 1

WIDTH		HEIGHT		LENGTH	
(m)	(in)	(m)	(in)	(m)	(in)
1.499	59.0	1.228	48.3	1.748	68.8

b) Tilted loading

Tilted loading refers to large low density cargo which may require hand maneuvering through the door in a tilted position to avoid obstructions.

Table 2

WIDTH		HEIGHT		LENGTH	
(m)	(in)	(m)	(in)	(m)	(in)
0.250	10.0	0.250	10.0	3.240	127.5
0.500	20.0	0.500	20.0	3.240	127.5
0.750	30.0	0.750	30.0	3.240	127.5

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Loading through rear (bulk) cargo door

The maximum dimensions of cargo packages which will pass through the cargo door in the rear (bulk) cargo hold (compartment 5) and which must be restrained in the rear (bulk) cargo hold aft of the separation net are shown in the following.

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a) Loading of heavy packages

The maximum dimensions given in figure below apply to large or heavy packages which only can be loaded with the assistance of mechanical ground support equipment and in a position parallel to the floor of the cargo hold. These packages must be positioned on the horizontal part of the floor under consideration of the floor loading limits.

b) Loading of low density packages in a non-tilted position

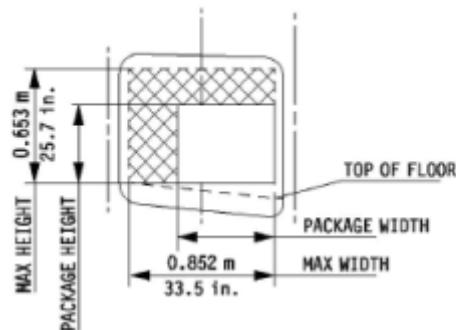
The maximum dimensions given in figure below apply to low density packages which can be maneuvered by hand through the door. These dimensions refer to upright loading, but for transport the packages may be lifted on the sloping parts of the cargo hold floor. To use the maximum possible length the packages may be positioned with one end on the sloping part of the floor and the other end on the horizontal part of the floor, provided that the floor loading limits are observed.

Use of load spreaders on the sloping part of the floor is recommended to avoid too high local loads.

c) Loading of low density packages in a tilted position

The maximum dimensions of low density packages which will pass through the cargo door in a tilted position are given in the table below.

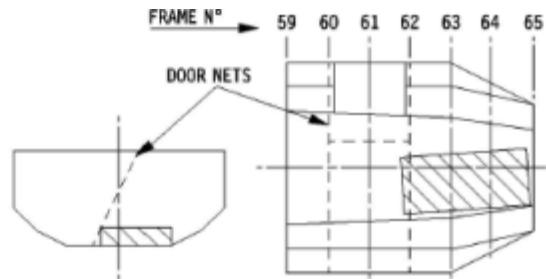
WIDTH		HEIGHT		LENGTH	
(m)	(in)	(m)	(in)	(m)	(in)
0.950	37.4	0.100	3.9	1.930	75.9



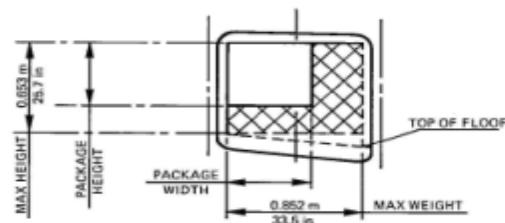
PACKAGE WIDTH (m/in)										
	0.100	0.200	0.300	0.400	0.500	0.600	0.700	0.800	0.850	
	3.9	7.8	11.8	15.7	19.6	23.6	27.5	31.4	33.4	
PACKAGE HEIGHT (m/in)	0.100	2.820	2.670	2.440	2.250	2.050	1.860	1.650	1.480	1.410
	3.9	111.0	105.0	96.0	88.5	80.7	73.2	64.9	58.2	55.5
	0.200	2.820	2.620	2.430	2.250	2.050	1.860	1.650	1.480	1.410
	7.8	111.0	103.0	95.6	88.5	80.7	73.2	64.9	58.2	55.5
	0.300	2.820	2.610	2.430	2.250	2.050	1.860	1.650	1.480	1.410
	11.8	111.0	102.7	95.6	88.5	80.7	73.2	64.9	58.2	55.5
	0.400	2.820	2.610	2.430	2.250	2.050	1.860	1.650	1.480	1.410
	15.7	111.0	102.7	95.6	88.5	80.7	73.2	64.9	58.2	55.5
	0.500	2.790	2.610	2.430	2.250	2.050	1.860	1.650	1.480	1.410
	19.6	109.8	102.7	95.6	88.5	80.7	73.2	64.9	58.2	55.5
	0.600	2.790	2.610	2.430	2.250	2.050	1.860	1.650	1.480	1.410
	23.6	109.8	102.7	95.6	88.5	80.7	73.2	64.9	58.2	55.5
	0.650	2.790	2.610	2.430	2.250	2.050	1.650	1.650	1.480	1.410
	25.5	109.8	102.7	95.6	88.5	80.7	64.9	64.9	58.2	55.5

MAX.
PACKAGE
LENGTH
(m/in)

Aircraft Loading

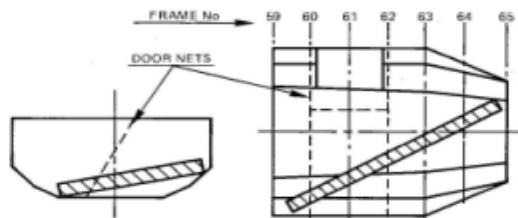


Maximum Dimensions of Heavy Packages



PACKAGE WIDTH (m/in)									
0.100	0.200	0.300	0.400	0.500	0.600	0.700	0.800	0.850	
3.9	7.8	11.8	15.7	19.6	23.6	27.5	31.4	33.4	

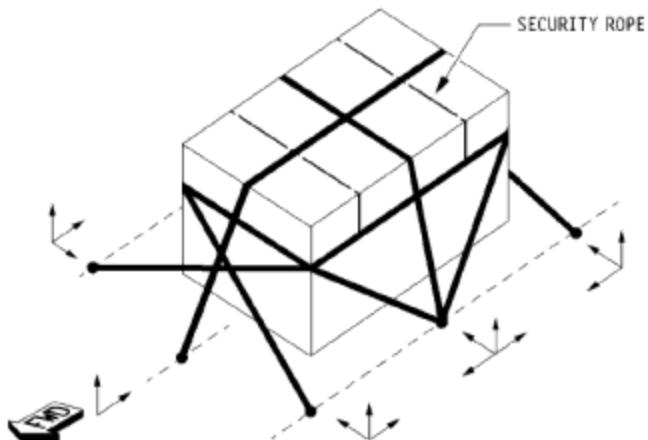
PACKAGE HEIGHT (m/in)	MAX PACKAGE LENGTH (m/in)									
	0.100	0.200	0.300	0.400	0.500	0.600	0.700	0.800	0.850	
0.100	3.230	3.230	3.210	3.180	3.160	3.100	3.030	2.770	2.680	
3.9	127.0	127.0	126.0	125.1	124.4	122.0	119.2	109.0	105.5	
0.200	3.230	3.230	3.210	3.180	3.150	3.070	2.960	2.730	2.650	
7.8	127.0	127.0	126.0	125.1	124.4	120.8	116.5	107.4	104.3	
0.300	3.230	3.210	3.170	3.140	3.040	2.950	2.780	2.600	2.540	
11.8	127.0	126.0	124.8	123.6	119.6	116.1	109.4	102.3	100.0	
0.400	3.190	3.150	3.110	3.010	2.900	2.820	2.620	2.480	2.430	
15.7	125.6	124.2	122.4	118.5	114.1	111.0	103.1	97.6	95.6	
0.500	3.110	3.090	2.910	2.810	2.710	2.570	2.420	2.310	2.280	
19.6	122.4	121.6	114.5	110.6	106.6	101.1	95.2	90.9	89.7	
0.600	2.900	2.730	2.590	2.470	2.340	2.240	2.170	2.110	2.080	
23.6	114.1	107.4	101.9	97.2	92.1	88.1	85.4	83.0	81.8	
0.650	2.700	2.540	2.410	2.290	2.170	2.080	2.020	1.980	1.930	
25.5	106.2	101.1	94.8	90.1	85.4	81.8	79.5	77.9	75.9	



Maximum Dimensions of Low Density Packages

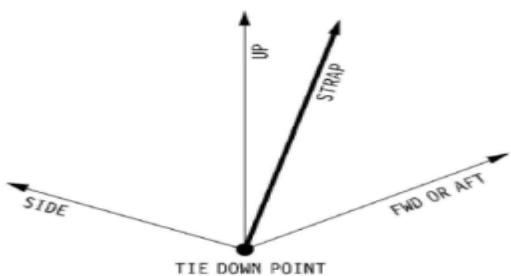
6.5.7 Package Restraint

The following diagram shows the general arrangement of tie down of a typical package the pallet rims or the cargo hold floor.



NOTE : Only one end of each strap is shown to simplify the diagram.

For each tie down point the typical load directions are as follows:



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6.5.8 Baggage Loading

It is essential that the Loading Supervisor Responsible for overseeing aircraft loading, specifies the loading requirement correctly and has a reliable method by -which he/she can be satisfied that his/her instructions have been carried out as requested. Whilst modern methods are likely to use automated systems to determine the seating options for passengers and the disposition of dead load between available loads, effective procedures and compliance remain the only way of ensuring that what has been specified and passed to the aircraft commander has actually been achieved. For Hold Loading, this is usually achieved by the completion of a [Loading Instruction Report](#) (LIR). The LIR is given to the loading supervisor who certifies that it has been complied with and returns it to the issuer as evidence that the work has been completed. The completed load and trim sheet are then given to the aircraft commander. The human supervisor must also have a reliable means of confirming that the dangerous goods regulations and any special requirements for securing unusual items in the holds or in the passenger cabin have been complied with.

Passenger Baggage:

For all flights baggage must be loaded into separate net sections. In the load distribution message (LDM), the net sections occupied by transfer baggage must be shown under SI with the load category code (BT).

Crew Baggage:

- Baggage of operating crew is always labeled with the crew baggage label.
- Baggage of operating crew shall always be loaded in the following net section: **320net section 51**
- Baggage of operating crew will be collected by the crew on the ramp.
- Baggage of deadheading crew is always checked-in and loaded as passenger baggage.

6.5.9 Loading of Dangerous Goods and Other Special Loads

Nesma Airlines is not authorized and doesn't carry any item that it's classified as dangerous goods,

6.5.10 Cargo Hold Inspection

6.5.10.1 General

- a) A Cargo hold inspection shall be performed
 1. After aircraft unload is complete
 2. Prior to loading if this does not follow immediately after unloading is complete.
 3. In case the aircraft was unattended between unloading and loading: or
 4. There was a change of persons responsible for the aircraft loading and supervision task
- b) The person (Nesma Airlines Flight Engineer) undertaking the cargo hold inspection shall perform a visual check of all cargo holds to ensure:
 1. No damage of compartment floors, walls, ceiling, door frames, panels, door.
 2. No missing, damage or malfunctioning floor locks, load restraints or nets.
 3. No Spills.

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- 4. No Loads other than transit loads have been left on-board the aircraft.
- 5. Any other items that should not present in the hold have been unloaded.
- c) The person responsible for undertaking the cargo hold inspection (flight engineer) shall provide positive confirmation that the inspection has been carried out to the Load supervisor prior to the commencing loading of the aircraft,
- d) Any damage or discrepancies observed shall be reported to the PIC and maintenance team.
- e) A check shall be conducted in a hold even if on arrival the hold was reported as being empty.
- f) Any other items that should not be present in the hold.

6.5.10.2 Cargo Hold Damage

Any damage such as holes, tears or detachment to compartment liners may reduce their effectiveness, permitting air to enter the compartment and fire suppression agent to escape, reducing the capability to handle fire event and may lead to specific loading limitations, therefore:

- a) Any technical malfunction or damage shall be reported to the captain, Flight engineer for further actions as applicable.
- b) Adhere to any resulting load limitations according to Crew and flight engineer instructions.
- c) Inform the onward stations of the load limitations according to Crew and flight engineer instructions, if the defect cannot rectified before departure.

6.5.10.3 Spills in Cargo Holds

- a) Spills can occur in cargo holds during unloading and/or loading in flight due to:
 - 1. Improper packaging
 - 2. Damage due to mishandling prior to loading
 - 3. Improper loading in the compartment
- b) Spills can be if liquids, gels, or material in a powdered or granulated form.
- c) Spills can be hazardous, corrosive, flammable, explosive, toxic, poisonous, etc. even water can cause serious damage to electrical components and systems.
- d) Spills can be corrosive to the aircraft structure. Mercury spills are particularly corrosive to the extent that the affected aircraft structure may have to be completely replaced if the spill is not cleaned up quickly.
- e) It is essential that any spill is reported immediately so that corrective action to be taken.
- f) Initiate the local spill response plan for spill events,
- g) Request information the Loaded station about the nature of what has leaked as well as the safety Data Sheet,

6.5.10.4 Cargo Compartment Nets

Compartment separator nets and cargo doors barrier nest must be secured prior to all flight departure to prevent cargo from shifting in the flight and damaging or blocking the compartment door.

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Between offload and on load, compartment nets must be secured inside aircraft compartments and not left hanging outside to avoid clips and attachment pints striking the fuselage, especially during adverse weather conditions, or inadvertently hooking on GSE and being pulled out of the aircraft.

6.5.10.5 Aircraft Ground Stability

Loading or offloading may cause the aircraft to become unstable or could cause tipping, For Nesma Airlines off-loading sequence and On Loading Sequence shall be adhered according to Aircraft Type and LIR (Load Instruction Report)

6.6 Offloading Procedures

6.6.1 Scaling Process

If the flight experiences a handling irregularity on take-off the flight crew may request aircraft scaling (weighting of all baggage and cargo on board) at the arrival station. The aircraft must not be offloaded when a scaling been requested until the process has been initiated, information shall be sent to Nesma Airlines OCC & Ground Handling Department.

6.6.2 Identifying Shipments requiring specific Handling

Refer 6.4 for all details.

6.6.3 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.
- c) Take care if load has shifted during flight.
- d) Offloading sequence shall be adhered.

6.7 Loading Procedures

Before loading commences, verify the aircraft registration on the Loading Instruction Report (LIR)

- a) Ensure on load has been checked against LIR.
- b) Ensure special equipment (tie-down straps, etc.) is available, as required.
- c) Ensure LIR is received and understood by loading staff.
- d) Before loading commences, carry out inspection of cargo compartments and restraint system. Report any defects to supervisor, flight crew & engineer on board.
- e) Ensure the load is secure.
- f) Items with directional handling labels should be loaded so that the labels will be visible during offload.
- g) Ensure separator nets, fire barriers, door nets locked as required.
- h) Keep count of bulk loaded baggage by compartment and destination.
- i) Document all changes to the load and sign the LIR.
- j) Carry out load verification prior to finalizing the weight and balance.

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6.8 Securing of Load

6.8.1 General Rules

When transporting a load in an aircraft, it must be secured such that:

- a) It shall not move during the flight, which could dangerously affect the weight distribution and balance of the aircraft.
- b) It shall not cause damage to the aircraft structure or other important parts of the aircraft.
- c) It shall not cause damage to another load or become damaged itself.
- d) In case of an emergency landing, neither passengers nor crew are injured by the load.

6.8.2 Bulk Compartments

- a) The Load in bulk compartments is generally secured by door nets and net sector divider nets. Ensure that following items are always secured:
 - 1- Powered mobility devices
 - 2- Load which needs spreading
 - 3- Fragile loads
 - 4- Business Class baggage
 - 5- Heavy baggage
- b) Following loads must not move vertically upward or horizontally during flight. If the available volume of the compartment or net section is not volumetrically filled (three quarters of the height) with load, additional securing is necessary for:
 - 1- Load which is sensitive against shocks or titling
 - 2- Pipes, tubes, bars, beams, planks, poles or other objects of penetrating nature
- c) If long pieces do not fit into one net section and the divider net cannot be closed correctly, load shall be refused.

6.8.3 Tie-Down

Tie-down load on board of the aircraft properly to withstand the following different forces during take-off flight and landing.

Force	Definition
Forward	Horizontal forces effective during landing and steep angles of descent
Backward	Horizontal forces effective during take-off and steep angles of climb
Sideward	Vertical forces effective during rough landing, turbulence and close turns
Upward	Vertical forces effective during landing and heavy turbulence in flight

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Depending on the flight situation, the ultimate forces can be stronger than the normal gravity force of 1 g. secure all loads against the different forces according to the gravity factor (g-factor)

Tie-down of load with straps or ropes

If the primary restraint of the load is done by straps, tie down must be carried out according to AHM 311

The usage of tie down material with different capacities is not allowed.

There are two ways to secure a package with tie-down ropes or tie down straps:

a. Lashing across or around a package (**embraced lashing**)

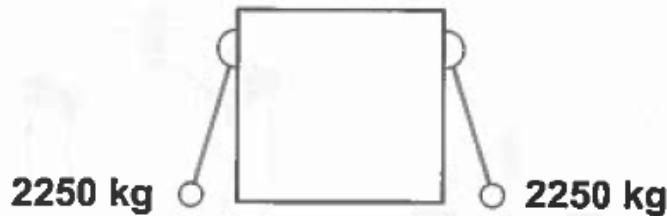
The embraced lashing method with tie-down straps or tie-down straps ropes is to fasten the strap or rope from one tie down fitting across or around the load to a second tie-down fitting on the opposite side.

A strap attached to the fittings on opposite sides of the load is rated for twice its ultimate load capacity e.g. an ETSO/TSO-C172 strap with 2.250 kg (5000 lb) rated restraint capacity will provide up to maximum 4.500 kg (10000 lb) ultimate load for standard lashing.



b. Lashing directly fastened to the package (direct lashing)

If a tie-down strap is directly fastened to the load with one tie-down fitting, the ultimate restraint of the strap, e.g. an ETSO/TSO-C172 strap with 2.250 kg (5000 lb) ultimate load, will apply.

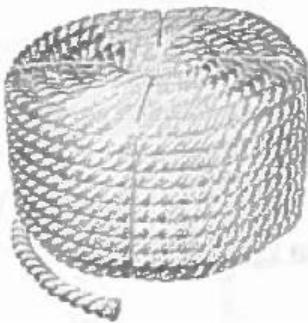


6.8.4 Use of Tie Down Material

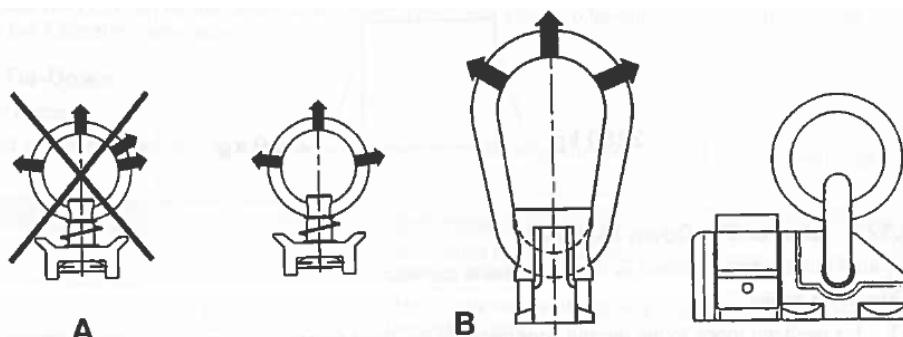
Make sure that tie-down material is in serviceable condition.

a) Tie down ropes

3. Fix tie-down ropes to the aircraft floor tracks or tie down fittings.
4. Make sure that the overlapping ends of the tie-down ropes are long enough and will not loosen in the case of sudden stress.
5. Fix the tie-down ropes to the tie-down rings in a way that they may be easily loosened for unloading.
6. Do not fix tie-down ropes to other parts of the aircraft.
7. Do not use the same attachment points for lashing, which are used to secure the net sector divider nets.

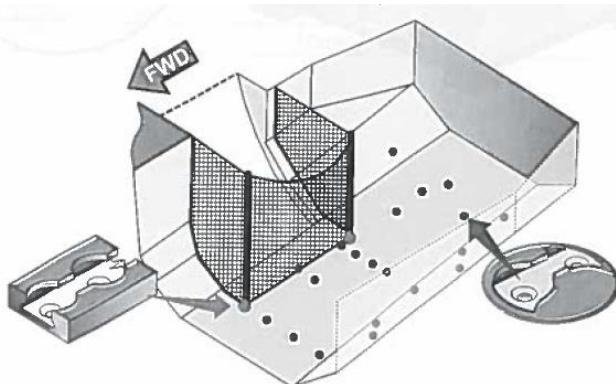
**b) Tie down fittings**

A single tie-down fitting may receive up to three straps/ropes in three different restraint directions (one up and two opposite horizontal directions). Forces generated by the load can never act in more than one direction at the same time, thus, the fitting will never be pulled by more than one strap/rope at the same time. Therefore, a fitting may never receive more than one strap/rope in the same direction.



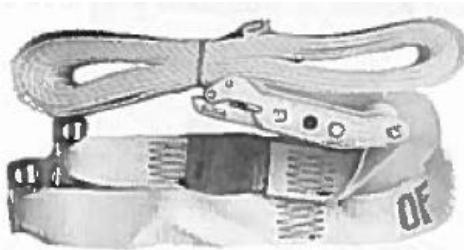
Alpha -Numeric	DESCRIPTION
A	Forbidden
B	Allowed

Fix tie-down rings to the aircraft floor only at tie-down points distribute that attachment points of the tie-down rings evenly (nearly equal distances) over the length of the piece

Example of tie down attachment points in the bulk compartment**c) Tie-down straps**

Use only certified ETSO/TSO C172 tie-down straps

Fix tie-down straps to the aircraft with their fixed tie-down rings only at tie-down rings only at tie-down points or tie-down tracks

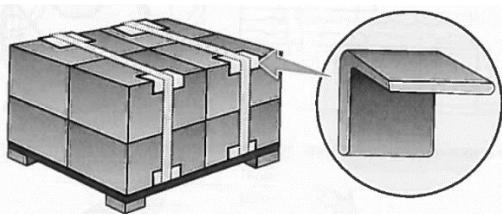
**d) Tightening**

1. Tighten the lashing strongly, but not so strong that load or tie-down material is damaged.

2. Make sure that all tie-down ropes or tie-down straps used for lashing the same piece have the same tension
3. To protect fragile or sensitive shipment use cloth, cardboard or similar material for edge protection

e) Sharp edges

To avoid cutting or grinding of tie-down straps smoothen sharp edges with a piece of soft materials (e.g. cloth, cardboard, plank or similar)

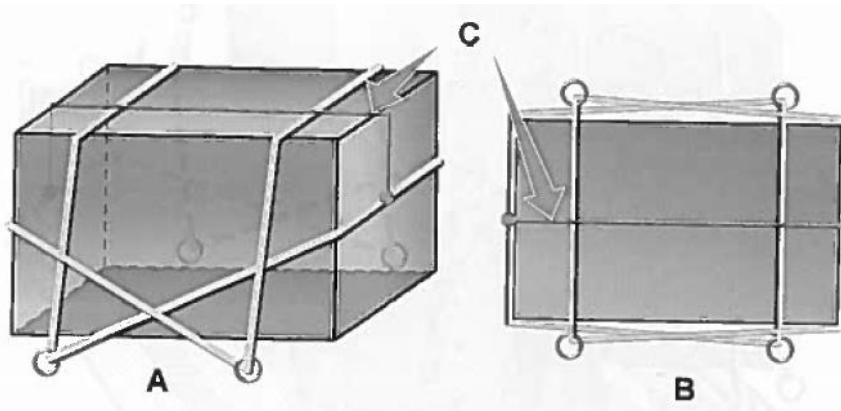


6.8.5 Standard Lashing

For standard lashing use:

- a) 4 tie-down rings
- b) 4 tie-down ropes or tie-down straps
 - 1. 2 against upward forces
 - 2. 1 against forward forces
 - 3. 1 against backward forces
 - 4. 1 safety rope

The safety rope prevents the tie-down ropes or tie-down straps used against forward and backward forces from sliding down.



Alpha -Numeric	DESCRIPTION
A	Isometric View
B	Top View
C	Safety Rope

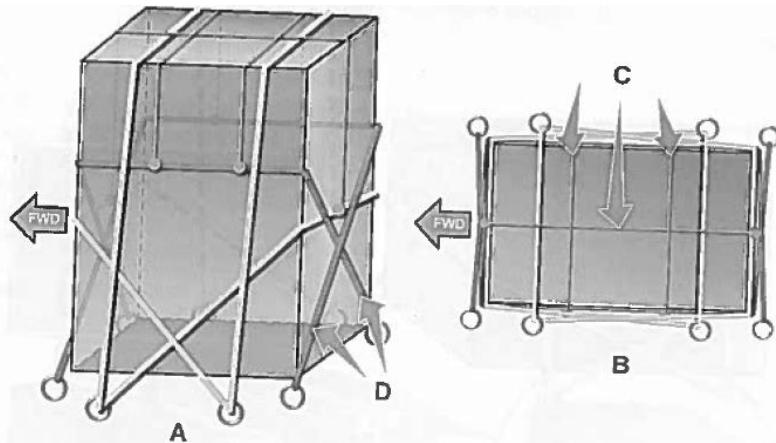
Slide forces

Sideward forces are normally covered by the standard lashing for upward, forward and aft, but the rope/straps must be close to the pieces.

Exception

If a piece is more than twice as high as wide:

- a) Tie-down against sideward forces additionally to the standard lashing
- b) Place this additional lashing between half and two third of the height
- c) Secure this lashing by two safety ropes to prevent them from sliding down



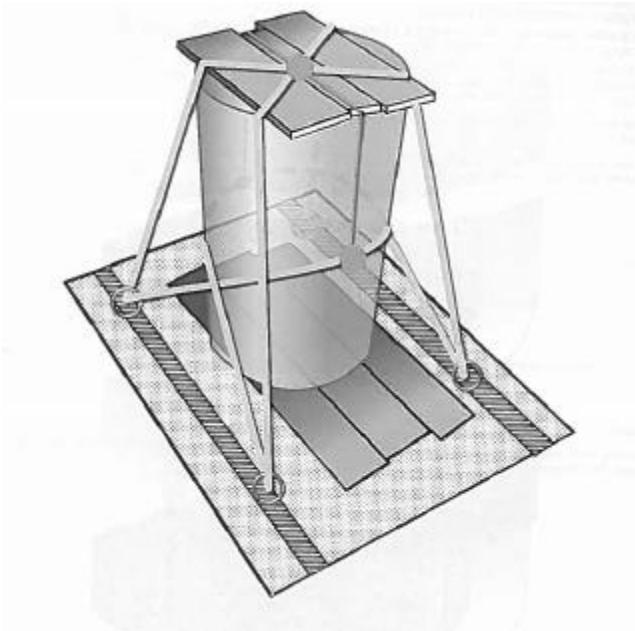
Alpha -Numeric	DESCRIPTION
A	Isometric View
B	Top View
C	Safety Rope
D	Additional Lashing

Barrels

Barrels are difficult to lash because of their round shape and mostly rims.

Use supporting planks for a safe lashing.

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6.8.6 Securing of Dangerous Goods

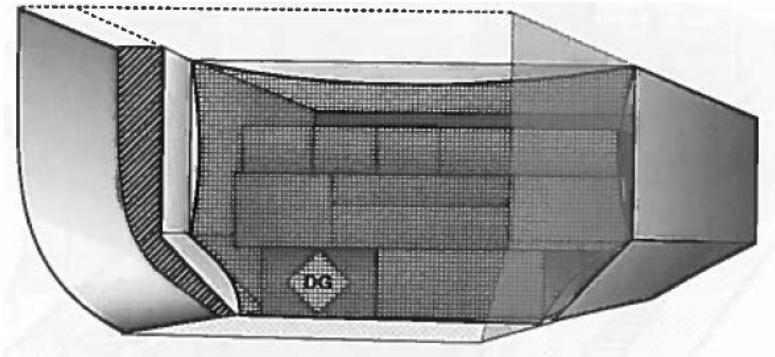
Nesma Airlines don't accept DGR on its flights, below procedure in case of passenger's mobility aids powered by batteries categorized as DGR.

- a) Handle dangerous goods with utmost care to prevent any damage to persons or goods
- b) Strictly observe all special handling instructions, labels or imprints (e.g. This Way Up or arrows showing the proper orientation of the package)
- c) In bulk compartment securing by tie-down is not necessary if the package cannot move horizontally or vertically. The net section must be volumetrically full (three quarters of the height) and the entire floor area must be covered

Observe the securing requirements as shown below:

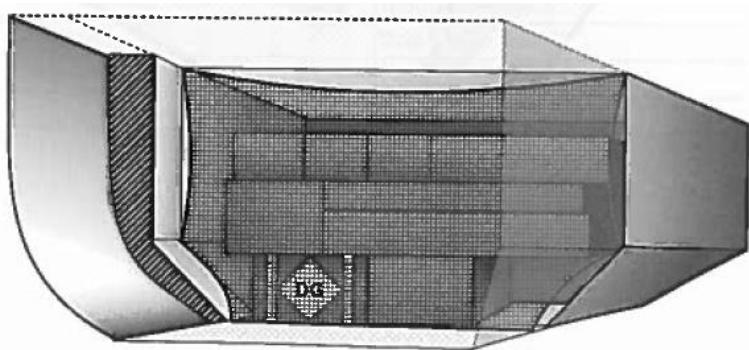
Example 1.

When the net sector in the bulk compartment is volumetrically full or filled completely with other load on the entire floor area securing by tie down is not necessary.



Example 2.

The entire floor area is not filled completely with another load. Tie down the aids with battery to prevent any movement.



6.9 Load Spreading

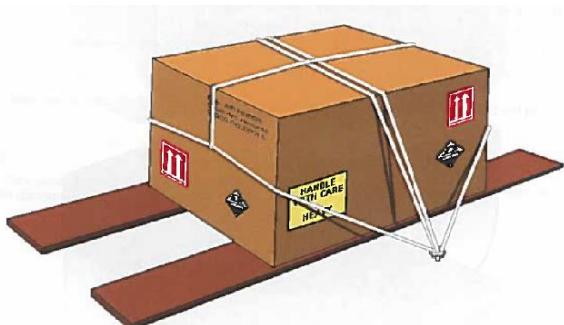
When the weight of item(s) to be loaded exceeds the maximum floor load per square meter or the maximum floor load per running meter of a compartment, the weight shall be spread to prevent damage to the compartment floor. This applies to Heavy Loads,

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- a) The weight can be spread by making use of spreading wood:
- b) The surface to support the weight will be enlarged.

The length will be enlarged.

Load agent will advise the spreading requirements for each item. The information shall be notified to PIC to be added to LIR.



6.10 Load and Trim Sheet

6.10.1 Introduction

Load Control is a process that ensures the production of all applicable documentation to comply with Nesma Airlines procedures and regulatory authorities for the safe and secure handling on an individual flight. This includes planning, reporting and recording of the loading of the aircraft.

The Load Control process comprises of the following tasks:

The Load Control process comprises of the following tasks:

- a) Load planning
 1. Production of a Loading Instruction Report (LIR)
 2. Weight and balance calculation.
- b) Aircraft loading and unloading supervision

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- 1. Verification and recording of aircraft loading.
- 2. Communicating final loading figures
- c) Weight and balance calculation
 - 1. Load production
 - 2. Other Loading documents such as Notice to Captain (NOTOC), if applicable
- d) Post-departure messages
 - 1. Transmission of messages
 - 2. Document retention, as applicable

6.10.2 Load Control Principles

Load Control is an essential process with the purpose of ensuring that the aircraft is safely loaded within operational limits, considering both the weight and center-of-gravity parameters.

To ensure flight safety, all items to be loaded into an aircraft must be precisely planned, documented and filed. Documented communication is required to guarantee accurate weight and balance calculations for the pilot in command (PIC) prior to an aircraft's departure.

Therefore, The Load Control process shall ensure that for each flight:

- 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 the flight.
- c) Information about dangerous goods and other special loads is taken into account.
- d) The final loadsheet reflects the actual loading of the aircraft, including last minute changes (LMC).
- e) Operational messages are dispatched to relevant bodies.
- f) All approved documentation is filed for retention.

6.10.3 Regulatory Requirements

Load Control for Nesma Airlines performed by Nesma Airlines PIC via EFB System,

6.10.4 Load Control Tasks

6.10.4.1 Load Planning Task

6.10.4.1.1 General

The Load Planning task shall ensure loads are planned safely and distributed in the aircraft compartments and/or holds considering all aircraft limits.

The Load Planner shall:

- a) Check aircraft basic weight/index (BW/BI).
- b) Check all items to be included in the dry operating weight/index, (DOW/DOI).
- c) Check operational messages from the previous flight or leg, including any special loads, if applicable.
- d) Check aircraft operational limitations or any other restrictions that may limit load planning.

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- e) Calculate expected traffic load.
- f) Check any other dangerous goods and special loads (DGSL) that require special handling and segregation (Nesma Airlines do not transport DGR).
- g) Allocate loading positions for all traffic load and special loads, if applicable, taking into consideration all flight legs.
- h) Calculate the estimated zero fuel (EZFW) and transmit to flight dispatch, as applicable, for flight planning purposes.
- i) EZFW should be communicated every time there is a significant difference from the previous calculation, as per Nesma Airlines requirements.
- j) Check fuel load and distribution.
- k) Perform a pre-calculation of the aircraft weight and balance should be done to ensure that the aircraft operational limits are not exceeded.
- l) Give consideration to aircraft ground stability to avoid tail tipping, as Nesma Airlines requirements and aircraft specifications.
- m) LIR, Loadsheets for Nesma Airlines issued by PIC after receiving complete and correct Payload informations form, from station.

6.10.4.1.2 Loading Instructions Report

- a) A LIR shall be issued for each departing flight, to ensure all safety parameters to each flight are adhered to.
- b) Complete load distribution for the departing flight, using provisional data and adhering to the segregation policy.
- c) Indicate all information that could affect loading in the Supplementary information (SI) section.
Refer 6.11.9 For more details,

6.10.4.1.3 Offloading Instructions

- a) Off-loading instructions may be issued prior to aircraft arrival.
- b) For Transit flights, produce offloading instructions where transit load, off-load and all positions are reported.
- c) Consideration shall be given to ensure aircraft stability during the offloading process and passenger disembarkation process.

6.10.4.1.4 Notification to Captain

The Notification to the captain (NOTOC) is used to inform the PIC of DGSL carried, Nesma Airlines do not transport Dangerous Goods, only batteries for Personal mobility aids classified as DGR shall be transported and mentioned in NOTOC.

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Station is responsible for providing DGSL information in legible written, printed or digital form and transmitting it to PIC who charged with load planning task. PIC shall produce LIR taking into consideration DGSL information, their compatibility and segregation criteria.

The information contained in the NOTOC shall be made available to the person charged with aircraft loading and supervision task. The person shall:

- a) Verify that DGSL are not damaged or leaking.
- b) Ensure the correct positioning of DGSL as per the LIR and NOTOC.
- c) Report actual loading position.
- d) Signs the NOTOC.
- e) Deliver the NOTOC to PIC for signature.

The NOTOC must be issued in adequate number of copies, in order to provide information to all concerned and for file retention.

DGSL information shall be made available to the next downline airport before the flight arrives.

6.10.5 Aircraft Loading and Supervision Task

For this task refer to 6.1 Supervision of Aircraft Loading.

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6.11. Weight and Balance Calculation Task

6.11.1 General

The objective of the weight and balance calculation task is to ensure that a final and accurate load sheet is issued and this has been crosschecked with:

- a) Final LIR from the person in charge of the Loading Supervision task.
- b) Final passenger close-out data.
- c) Final fuel figures.
- d) All aircraft operational and structural limitations for the appropriate aircraft registration
- e) Load sheet accuracy check will continuously be performed prior to production or transmission of the final load sheet:
 - 1. Correct flight number and data (flight identifier)
 - 2. Correct aircraft registration.
 - 3. Correct DOW/DOI used according to aircraft type, registration, version, number of crew and pantry.
 - 4. Underload (total traffic load not exceeding allowed traffic load).
 - 5. Correct entry of final fuel figures.
 - 6. Correct entry of transit load data from incoming load-message/loadsheet.
 - 7. Correct passenger closes out data.
 - 8. Hold baggage weight and gate delivery items shall be added.
 - 9. Actual loading position of DGR (Personal Mobility Aids classified as DGR) indicated on the NOTOC.
 - 10. Balance calculation and conditions of loaded aircraft, including LMCs, are within prescribed limits.
 - 11. The loadsheet must be checked against the final LIR and other information related to the actual load.
 - 12. Nesma Airlines specific requirements are adhering.
 - 13. All specified documents shall be signed by means of manual or electronic identifiers.
- f) Loadsheets format and contents shall meet the minimum criteria set in IATA AHM.
- g) PIC shall issue Loadsheets based on transmitted information on Payload information for received from station.
- h) Any changes occurring after the final loadsheet has been produced must be accounted for by either production of a new edition of Loadsheets or via documented Last Minute Change process as per the Nesma Airlines requirement.
- i) If a discrepancy is discovered after the aircraft push-back, the PIC must be informed immediately to prevent an unsafe take off.

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6.11.2 Definitions

The weight terms used throughout this section are given below together with their respective definitions.

Empty Weight

The actual weight of the aircraft's structures (fuselage, landing gears, wings, and engines), control surfaces (ailerons, rudder, and elevators), power plants, fixed equipment's (communications, navigational, and emergency equipment's), instruments and furnishing carpets, seats, curtains, etc...

Basic Weight

The sum of the empty weight of the aircraft and includes all fixed equipment's (passenger seat depending on the seat configuration), standard safety equipment's (life rafts, life vests), and all unusable fluids.

Pantry Weight

Weight of catering, cutlery plus weight of catering service units.

Crew Complement

Weight of standard crew, i.e. Flight Deck Crew plus their baggage and Cabin Crew plus their baggage.

Dry Operating Weight (DOW)

The sum of the basic weight, crew complement, and pantry weight.

Passenger Loads

The sum of passengers weight, e.g. Adult as 76 kgs (Charter) 84Kgs (Schedule), Child as 35 kgs, and infant as Zero kgs.

Dead Loads

The sum of the weight of the baggage, cargo, mail, and the weight of empty ULDs on ULD aircraft.

Actual Traffic Load (Payload)

The actual weight of passengers, baggage, cargo, and mail (i.e. revenue or non-revenue).

Actual Zero Fuel Weight (AZFW)

The sum of actual traffic load and dry operating weight.

Take-Off Fuel

The total amount of fuel on board minus the taxi fuel consumed before the take-off run.

Actual Take-Off Weight

The weight of the aircraft at the start of take-off run (i.e. Zero Fuel Weight plus Take-Off Fuel).

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Trip Fuel

The amount of fuel planned to be consumed from take-off to the airport of arrival, this amount includes fuel required for take-off, climb, cruise, descent, approach, and landing.

Actual Landing Weight

The weight of the aircraft over the landing threshold (i.e. Actual Take-Off Weight minus Trip Fuel).

Maximum Design Taxi Weight (MTW)

The maximum permitted weight of the aircraft at which it may be moved, either using its engines or being pushed

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Maximum Design Zero Fuel Weight (MZFW)

The maximum weight of the aircraft without any fuel in the tanks (Restricted by strength of wing roots).

Maximum Design Take-Off Weight (MTOW)

The maximum weight of the aircraft at which it can safely lift from the ground (Restricted by engines).

Maximum Design Landing Weight (MLW)

The maximum weight of the aircraft at which it can safely land

(Restricted by strength of landing gears).

Regulated Take-Off Weight

Maximum take-off weight for a particular flight, which can be restricted by length and slope of runway, air pressure, wind direction, temperature, and runway contamination. The Commander has to show the RTOW in the payload and fuel docket.

Minimum Weight

The minimum weight at which the aircraft may be operated.

6.11.2 Description

It is crucial to the safety of an aircraft in flight that it is loaded in such a way that the specified maximum allowable weights are not exceeded and that the center of gravity as loaded will be and remain within the permitted flight envelope for all stages of the intended flight. Once these conditions have been satisfied, it is equally crucial that the flight crew are aware of the prevailing weight and center of gravity so that they can make appropriate settings to aircraft equipment; these include take off reference speeds, trailing edge flap, and pitch trim position. This is important to ensure that rotation can be made at the right indicated airspeed and will result in a successful transition from ground to flight meeting any restrictions imposed by the TORA (Takeoff Run Available) and with full control of the aircraft retained. It is also very important that aircraft baggage load complies with the restrictions on carriage of [dangerous goods](#).

The load and trim sheet is:

- a) Mandatory Document: All Nesma Airlines flights must carry on board a load and trim sheet correctly prepared and signed by an authorized person concerned.
- b) Legal Document: A person preparing load and trim sheet shall not willfully or negligently make a load and trim sheet or any entry which is incorrect in any material particular or omit any loads that are traveling on the said aircraft.
- c) Safety Document: A person preparing this document must ensure that weight and balance conditions are correct and within limits, and that the weight and balance calculations are based

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on current and accurate aircraft weight and balance data. Also does not exceed limitations of the manufacturer and Nesma Airlines.

The load and trim sheet must be completed accurately in accordance with the Airline's authorized manual so that the aircraft is loaded and balanced within the structural and operational limits.

All load sheets and trim sheets must confirm to IATA standard practices.

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6.11.3 Purpose of Preparing Load and Trim Sheet:

- To ensure the structural weight limitations of MRW, MZFW, MTOW, and MLW of the manufacturer and Nesma Airlines are protected.
- To calculate the allowed traffic load.
- To know the composition of total traffic carried and how the same is distributed.
- To ensure that the center of gravity (CG) is within the specified limits at all stages of the flight.
- To indicate the maximum loading in each compartment and how much is actually loaded.
- To arrive at the center of gravity of a loaded aircraft.

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6.11.4 EDP/DCS Load and Trim Sheet

All Systems producing Load and Trim Sheets used by Nesma Airlines are now not acceptable, we use only the Flysmart version on IPAD by pilots, following procedures are in case alternative method is used by issuing of AHM560 and sending test of load and trim sheet for verification and final approval of the (System) to generate the Load and Trim Sheet for the specific aircraft. Where systems are used, the data input and electronic generation of the load and trim sheet may be carried out at a regional center and merely printed off - together with corresponding Loading Instructions by the aircraft operator or the contracted handling agent employees.

TABLE OF FORMAT

Ref. No.	Printed Heading	Definition/Description	Format/Example	M/C/O	Remarks
Part 1. Heading					
1	From	Three-letter IATA airport code of airport of movement	e.g. JFK LHR	M	
2	To	Three-letter IATA airport code of station of first intended landing		M	
3	Flight	Flight number/identifier	Format: two- or three-character airline code followed by up to eight characters. Maximum 11 characters for flight identifier. A two-character date may be included in these 11 characters preceded by an oblique	M	
			e.g. LH402/06 SR504		
4	A/C reg.	Aircraft registration	Format: 2–10 characters. No hyphen to be shown and/or transmitted	M	

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Ref. No.	Printed Heading	Definition/Description	Format/Example	M/C/O	Remarks
			e.g. 4XAXA GAWNA N12345	M	
5	Version	Version/Configuration code of aircraft used by carrier	Format: 1–12 characters		
			e.g. 10A/Q 20/124 8065	M	
6	Crew	Number of crew, excluding crew travelling as passengers For passengers occupying crew seats see AHM 533	Format: 3–7 characters	M	Crew figures must be separated by an oblique
		Option 1: Cockpit crew followed by cabin crew	e.g. 2/5 or 3/15	C	
		Option 2: Cockpit crew/cabin crew male/cabin crew female	e.g. 2/2/5 or 3/5/10	C	
7	Date	Self-explanatory	e.g. 05 JUN 89	M	Local date
8	Time	Four-digit value of local time this edition was produced	e.g. 0920 1215	O	
9	Ed. No.	Edition number	Maximum two figures	O	
			e.g. 01 12		
Part 2. Load and Distribution					
10	Total weight	Total of weight of dead load in compartments		M	
11	Load compartments	in Total weight of dead load per compartment and/or position of unitized load		C	

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Ref. No.	Printed Heading	Definition/Description	Format/Example	M/C/O	Remarks
12	Total weight	Total passenger weight calculated according to company procedures based on the figures of items 13, 14, 15, 16 and 18		M	
13	M	Total number of males		M	
14	F/Adults	Total number of female or adult passengers		C	
15	Chd	Total number of children		M	
16	Inf	Total number of infants		M	
17	Total No.	Total number of passengers on board. Sum of items 13, 14, 15 and 16		O	
18	Cabin Bag	Weight of cabin baggage not included in passenger weight		O	
19	PAX	Passenger Identifier		O	
20		Actual class of service designator(s)		O	
21		Total number of seats, per class, occupied by outgoing passengers including PAD. Maximum of three classes.		M	
22	SOC	Seats occupied by cargo, baggage and/or mail per class		C	
23	Blocked	Fitted seats not available for passengers or dead load		O	
23a	BLKD				

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Ref. No.	Printed Heading	Definition/Description	Format/Example	M/C/O	Remarks
24	Total Traffic Load	The total weight of passengers, baggage, cargo and mail. Operational items not included in DOW, e.g. pallets, nets, must be added to the cargo weight figures		M	
Part 3. Gross Weight Calculation					
25	Dry Operating Weight	The "Basic Weight" plus "Operational Items", e.g. crew, crew baggage, flight equipment and pantry, company specification and is equal to "Operation Empty Weight"		M	
26	Actual Zero Fuel Weight	Sum of Ref. Nos. 24 and 25		M	
27	Maximum Zero Fuel Weight	Equal to "Maximum Design Zero Fuel Weight"		M	
28	Take-off Fuel	The amount of fuel on board less the fuel consumed before take-off		M	
29	Actual Take-off Weight	Sum of Ref. Nos. 26 and 28		M	
30	Maximum Take-off Weight	The "Maximum Design Take-off Weight", or "Operational Take-off Weight", whichever is lower		M	
31	Trip Fuel	The amount of fuel planned to be consumed from take-off to the station of first intended landing		M	
32	Actual Landing Weight	Ref. No. 29 minus Ref. No.31		M	

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Ref. No.	Printed Heading	Definition/Description	Format/Example	M/C/O	Remarks
33	Maximum Landing Weight	The "Maximum Design Landing Weight" or the "Operational Landing Weight", whichever is the lower		M	
34		Indicator showing which of the maximum weights is limiting the allowed traffic load	L	M	
35	Under load before LMC	Difference between maximum and actual gross weight indicated by L		M	

Note: For aircraft operating with injection water or water methanol, the weight of this is to be included in the take-off and trip fuel entries. For captain's information a specification, e.g. "Injection Water 1,500 kg" to be shown under "Captain's Information Part" (Ref. No. 45).

Part 4. Balance and Seating Conditions					
36	Balance and Seating Conditions	According to carriers requirements. Use standard abbreviations for balance according to AHM 516 and AHM 560		C	
37	Dest.	Destination of LMC		C	
38	Specification	Kind of LMC		C	
39	CL/CPT	Class/Compartment and/or position of unitized load		C	
40	+/-	Identification of on or off-load		C	
41	Weight	Weight of LMC stated in Ref. No. 38		C	
42	LMC total +/-	Identification of LMC sum total		C	

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Ref. No.	Printed Heading	Definition/Description	Format/Example	M/C/O	Remarks
43	(LMC total weight)	Total weight of all LMC		C	
44	Adj	Ref. No. 43 affects Ref. No. 44. Entry to be made according to company regulations		C	
Note: Completion to be in accordance with AHM 551 .					
Part 5. Captain's Information/Notes					
45	Captain's Information/Notes	Any entries or remarks the company requires to be printed in this area		O	
Part 6. Load message Before LMC					
46	Load message	If Load message is shown it must be in standardized format		O	Refer to AHM 583 for conditions of dispatch
Part 7. Signatures					
47	Checked	Load sheet agent's signature or electronic identification		M	
48	Approved	Signature of authorized person, if required		C	

Description with reference numbers.

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6.11.5 Manual Load Sheets

You can find on the blank load sheet printed the aircraft MTOW, MZFW, MLW and index correction table for crew, and index correction for fuel, obtained from aircraft manufacture, and CG limits must be within the trim envelop.

The load sheet shall be prepared according to the following instructions:

The reference No. refer to those as stated in the specimen Load sheets;

M/C/O refers to this item as mandatory/conditional/optional;

The description is divided in eight parts.

Table of Format

Ref. No.	Printed Heading	Definition/Description	Format/Example	M/C/O	Remarks
Part 1. Addresses and Heading					
1	Priority	Priority indicator	e.g. QU or QX	C	As required by carrier
2	Address(es)	Teletype address(es) for load message as required	e.g. FRAKLLH	C	
3	Originator	Teletype address of originator	e.g. LISKLTP	M	Always to be shown
4	Recharge	Recharge facility	e.g. AF/	C	
5	Date/time	Date and time group	e.g. 120111	M	
6	Operators initials	Self-explanatory		O	
7	LDM	Standard message indicator	Format: LDM	M	Pre-printed
8	Flight	Flight number/identifier	Format: Two- or three-character airline code followed by up to eight characters. Maximum 11 characters for flight identifier. A two-character date may be included in the 11 characters preceded by	M	

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Ref. No.	Printed Heading	Definition/Description	Format/Example	M/C/O	Remarks
			an oblique (/). e.g. LH402/06 SR504		
9	A/C rec.	Aircraft registration	Format: 2–10 characters. No hyphen to be shown and/or transmitted. e.g. 4XAXA GAWNA N12345	M	
10	Version	Version/configuration code of aircraft used by carrier	Format: 1–12 characters e.g. 10A/Q 20/124 8065	M	
11	Crew	Number of crew excluding crew travelling as passengers	Format: 3–7 characters	M	Crew figures must be separated by an oblique
		For passengers occupying crew seats see AHM 533			
		Option 1: Cockpit crew followed by cabin crew	e.g. 2/5 or 3/15	C	
		Option 2: Cockpit crew/cabin crew male/cabin crew female	e.g. 2/2/5 or 3/5/10	C	
12	Date	Self-explanatory	e.g. 05 JUN 89	M	Local date
Note: Address and communication references (Ref. Nos. 1–7) must be in accordance with ATA/IATA Interline Communications Manual or AFTN if required.					
Part 2. Operating Weight Calculation					
13	Basic Weight	The “Basic Empty Weight” or “Fleet Empty Weight” and includes all fixed equipment, system fluids, unusable fuel and configuration equipment including galley structure		C	No entries to be made if carrier is publishing dry operating weights
14	Crew	Weight of crew members shown under Ref. No. 11		C	

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Ref. No.	Printed Heading	Definition/Description	Format/Example	M/C/O	Remarks
15	Pantry	Weight of pantry and additional un manifested catering material transported in the galley		C	No entries to be made if carrier is publishing dry operating weights
16		Spare line for adjustments to the basic weight		C	
17	Dry Operating	The "Basic Weight" plus "Operational Items", e.g. crew, crew baggage, flight equipment and pantry, as per company specification and is equal to "Operational Pantry Weight"		M	Sum of items 13, 14, 15 and 16 (see also AHM 540)
18	Take-off Fuel	The amount of fuel on board less the fuel consumed before take-off		M	
19	Operating Weight	Sum of Ref. Nos. 17 and 18		M	

Part 3. Allowed Traffic Load Calculation — Optional — (if used complete as below)

20	Maximum weight for Zero Fuel	Equal to "Maximum Design Weight" or "Operational Weight"		M	
21	Maximum weight for Take-off	The "Maximum Design Take-off Weight" or "Operational Take-off Weight", whichever is lower		M	
22	Maximum weight for Landing	The "Maximum Design Landing Weight" or the "Operational Landing Weight", whichever is the lower		M	
23	Trip Fuel	The amount of fuel planned to be consumed from take-off to		M	

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Ref. No.	Printed Heading	Definition/Description	Format/Example	M/C/O	Remarks
		the station of first intended landing			
24	Allowed Weight for Take-off	Self-explanatory, use lowest of items 24a, b or c		M	
25	Allowed Traffic Load	Difference between 19 and the lowest of 24a, b or c		M	

Note: For aircraft operating with injection water or water methanol, the weight of this is to be included in the take-off and trip fuel entries. For Captain's information the note box shall include specification, e.g. "Injection Water 1,500 kg". On EDP-Load sheet same information to be shown under "Captain's Information Part".

Part 4. Load Information per Destination and Totals					
26	Dest.	Airport of destination	e.g. JFK	M	Ref. Nos. 26–44 referring to an individual destination
27	No. of Passengers	Total number of transit passenger(s), including PAD(s)	Format according Ref. No. 29	C	
28	No. of Passengers	Total number of joining passenger(s), including PAD(s)	Format according Ref. No. 29	C	
29	No. of Passengers	Total number of outgoing passenger(s). Sum of Ref. Nos. 27 and 28 and LMC		C	Load message
		Option 1: Adult/Children/Infant (Boxes b, c and d must be used)	e.g. 123/22/3		
		Option 2: Male/Female/Children/Infant (Boxes a, b, c and d must be used)	e.g. 76/94/22/3		

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Ref. No.	Printed Heading	Definition/Description	Format/Example	M/C/O	Remarks
		Note: If there is a dead load to this destination but no passengers, zeros must be filled in.	e.g. 0/0/0 0/0/0/0		
		If there is no traffic load to this destination, enter NIL	e.g. NIL		
		Note: On cargo aircraft load sheets include the weight of any passenger, e.g. cargo attendants carried in specially fitted seats in a cargo bay, in the appropriate bay position. Use SI-box to notify onward station (format according to AHM 510)			
30	Cab Bag	Cabin baggage not included in standard passenger weight. Split-up in: Transit, Joining and Total, including LMC		O	
31	Total Tr.	Weight of transit dead load (to be obtained from incoming LDM or load sheet)		C	
32	Total B	Weight of joining baggage excluding Ref. No. 30		C	
33	Total C	Weight of joining cargo		C	To be in accordance with AHM 540
34	Total M	Weight of joining mail		C	
35	Total T	Total weight of dead load. Sum of Ref. Nos. 31–34 and LMC		C	Load message
35a	TW	Total weight of dead load per destination, Ref. No. 37		C	Cargo aircraft only

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Ref. No.	Printed Heading	Definition/Description	Format/Example	M/C/O	Remarks
36	Distribution	Weight distribution of the different load categories per compartment and/or position(s) of unitized load.		C	
37		Total weight of dead load (transit dead load plus joining baggage, cargo, mail and LMC) per compartment and/or position(s) of unitized load. Entries to be made only for compartment(s) holding load		C	Load message
	REMARKS				
38	PAX	Seat(s) occupied by transit passenger(s) per class, including PAD(s) (Ref. Nos. 27a, b and c)			
39		Seat(s) occupied by joining passenger(s) per class, including PAD(s) (Ref. Nos. 28a, b and c)		C	
40	.PAX/	Total seat(s) occupied by outgoing passenger(s) per class, including PAD(s) and LMC. Sum of Ref. Nos. 38 and 39	e.g. .PAX/2/111 .PAX/19/93	C	Load message on a one class aircraft PAX information may be omitted. If transmitted it must be in the standard format
41	PAD	Seat(s) occupied by transit PAD(s) per class		C	
42		Seat(s) occupied by joining PAD(s) per class		C	

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Ref. No.	Printed Heading	Definition/Description	Format/Example	M/C/O	Remarks
43	.PAD/	Total seats occupied by outgoing PAD(s) by class, including LMC. Figure group of each class to be separated by an oblique. All PAD(s) are included in the FY distribution	e.g. .PAD/3/2 .PAD/5/16	C	Load message. If no PAD(s) are on board, PAD information may be omitted. If transmitted it must be in the standard format, e.g. PAD/0/0
44		Additional remarks as per AHM 510	e.g. .RRY/1/6 .HUM/4/258	C	
45		Total number of passenger(s)		C	
46		Total weight of cabin baggage		C	Ref. Nos. 45–50 referring to the totals of all destinations
47		Total weight of dead load. Sum of Ref. Nos. 31, 32, 33 and 34		C	
48		Total weight of dead load per compartment and/or position of unitized load		C	
49		Total number of seats occupied by passengers per class. Sum of Ref. Nos. 38 and 39		C	
50	Total Passenger Weight	Total passenger weight is calculated according to company procedures based on the figures of items 45a, b, c and d		C	

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Ref. No.	Printed Heading	Definition/Description	Format/Example	M/C/O	Remarks
51	Total Traffic Load	The total weight of passengers, baggage, cargo and mail. Operational items not included in DOW, e.g. pallets, nets, must be added to the cargo weight figures		M	
52	Under load	Under load before LMC. Ref. Nos. 25 minus 51		M	
Part 5. Actual Gross Weight Calculation					
53	Zero Fuel Weight	Actual zero fuel weight. Sum of Ref. Nos. 17 and 51		M	
54	Take-off Weight	Actual take-off weight. Sum of Ref. Nos. 18 and 53		M	
55	Landing Weight	Actual landing weight. Ref. No. 54 minus Ref. No. 23		M	
Part 6. Last Minute Changes					
56	Dest.	Destination of LMC		C	
57	Specification	Kind of LMC		C	
58	CL/CPT	Compartment and/or position of unitized load		C	
59	+/-	Identification of on or off-load		C	
60	Weight	Weight of LMC stated in Ref.No. 57		C	
61	LMC total +/-	Identification of LMC, sum total		C	
62	(LMC total weight)	Resultant weight of all LMC		C	

Issue No.: 09

Revision No.: 00

Issue Date: JAN24

Revision Date: JAN24

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Ref. No.	Printed Heading	Definition/Description		Format/Example	M/C/O	Remarks
63	LMC	Ref. No. 63 equals Ref. No. 62. Entry to be made according to company regulation			O	
Note: Completion to be in accordance with AHM 551 .						
Part 7. Supplementary Information and Notes						
64	SI	Supplementary Information to be included in LDM. Free format			O	
65	Notes	Information not transmitted with LDM			O	
Part 8. Balance and Seating Conditions						
66	Balance	Balance conditions according to carriers requirements. Use the following abbreviations:			O	
		Basic Index	BI			
		Dry Operating Index	DOI			
		Dead load Index	DLI			
		Loaded Index at zero fuel weight	LIZFW			
		Loaded Index at take-off weight	LITOW			
		Loaded Index at landing weight	LILAW			

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Ref. No.	Printed Heading	Definition/Description	Format/Example	M/C/O	Remarks
		% MAC — at dead load weight	MACDLW		
		% MAC — at zero fuel weight	MACZFW		
		% MAC — at take-off weight	MACTOW		
		% MAC — at landing weight	MACLAW		
		Stabilizer trim setting at take-off	STAB TO or TOANU TOAND		
		Stabilizer trim setting at landing	STAB LA or LAANU LAAND		
67	Seating Conditions	Seating conditions according to carriers requirements		O	
68	Total Passengers	Total number of passengers on board. Sum of Ref. No. 45a, b, c, d and LMC	O		
69	Prepared by	Load sheet agent's signature		M	
70	Approved by	Signature of authorized person, if required		C	Refer to AHM 550

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6.11.6 Aircraft Commanders' Acceptance of Load and Trim Sheets

It is a requirement that an aircraft commander has a copy of the completed load and trim sheet for their flight and is given the opportunity to check and accept it by signature before ensuring that a copy is left at the point of departure. The aircraft commander is obliged to accept that the aircraft is loaded as stated in respect of the Hold Loading but in respect of Passenger Cabin Loading it is usual for there to be a report from the senior cabin crew of the number of passengers actually on board derived from a headcount after boarding has been completed.

Note:

For aircraft returning to ramp and subsequently making second departure (With or without change of A/C), a copy of load sheet for each departure must be retained in file. According to circumstances, the load sheet for the first departure whether or not the aircraft actually took-off may be called for by accident's investigation personnel.

Transit Stations may carry forward load sheet details from previous stations load sheet, but must check information with the incoming load message to avoid repetition of errors. If an error in traffic load is apparent, the appropriate cross checks must be made to locate the error.

6.11.7 Information for Load Sheet

Definition,

Means of communication between pilot and load control office with data necessary for load sheet that are for current flight, shows the flight data and gives the load control the necessary data for fuel and aircraft DOW/DOI, Restricted Takeoff weight if applicable.

Purpose,

Supporting document for load sheet issuance, signed by commander, shows his request for fuel and current crew configuration and the reflected DOW/DOI, to ensure that the aircraft weight and balance, are according to aircraft data and also to the specific flight data.

Procedures,

- Commander will fill in the form
- Commander will deliver it to redcap
- Redcap will hand it over to load control office
- Load control office will check data, and apply it on the load sheet
- In case confusion, double check is to be made with commander via radio or any means of communication to confirm data.
- In case changes, new form is requested from pilot
- After load sheet issuance, the form is filed at the station file

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6.11.8 Payload Information to Captain

Means of communication between Station and Pilot in command used only in cases where pilot in command is making the load sheet and the station is informing him with the payload data, shows passengers and baggage figures.

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6.11.9 Load and Trim Sheet Completion

We divide the load and trim sheet completion in 2 categories depending on the contractual nature at each location, additionally in some locations where training requirements are not fulfilled Nesma Airlines Crew are responsible to issue the LTS, normally crew are briefed if the station is ready to issue Nesma Airlines Load and Trim sheet or not before the flight.

6.11.9.1 Procedures for LTS by Handling Agent

- Load Control Office will issue (LIR) according to planned Loading.
- Up on arrival Pilot will complete and sign the flight information data on (information for Load Sheet Form), and send it for Load Control Office.
- Load Control will process the data acquired from the pilot and the data resulted from check-in after check-in closure to issue Load and Trim Sheet.
- Loading supervisor will return signed LIR to Load Control Office:
 - Loading was done according to Planned = No Action
 - Loading changed within 500 Kgs = Do last minute change
 - Loading changed above 500 Kgs = Do New Load Sheet.
- The completed document is presented to the Pilot who carry out some cross checks of input and calculated data for gross errors and, if the cross checks are satisfactory, the commander formally accepts the load and trim sheet by means of a signature
- Load and Trim Sheet copies are distributed
 - Original : Pilot
 - Copy: Purser.(Destination Copy)
 - Copy: Station Trip File
 - Information for Load Sheet: Station Trip File.

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6.11.9.2 Procedures for LTS by Crew:

- Station will prepare (Payload Information to Captain)
- Pilot will issue (LIR) according to planned Loading.
- Pilot may send Load Sheet by email to the station to be printed
- Pilot will process the data acquired from the Station and the data of the flight from flight plan and fuel calculations, taking into consideration crew configuration and if there are any DHC on board the station will not include in the Payload Information, to issue Load and Trim Sheet.
- Loading supervisor will return signed LIR to the pilot:
 - Loading was done according to Planned = No Action
 - Loading changed within 500 Kgs = Do last minute change
 - Loading changed above 500 Kgs = Do New Load Sheet.
- The completed document is reviewed again carrying some cross checks of input and calculated data for gross errors and, if the cross checks are satisfactory, the commander formally accepts the load and trim sheet by means of a signature.
- Load and Trim Sheet copies are distributed
 - Original : Pilot
 - Copy: Purser.(Destination Copy)
 - Copy: Station Trip File
 - Payload information for Captain: Pilot.

Note:

A fresh Load / Trim Sheet must be prepared for each leg of the flight. It should be signed by the Load / Trim planner and the commander of the flight before Take – Off. The maximum Zero Fuel, Take-Off, and Landing weights must not exceed the structural limits.

All LMC MUST be made sure they were included in LMC box, a final confirmation from check-in, and loading responsible is required before L.S Signature.

6.11.10 Standard Crew, Passenger, and Baggage Weights

Standard Weights	in KGS
Crew (Cockpit/Cabin) including Baggage	85/75
Adult Passengers Charter/Schedule Including Cabin Baggage and Infants	76/84
Children	35
Checked Baggage	Actual Weights

Note:

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In case of impossibility of getting actual weight, alternative weight can be used (15Kg per bag), and in this case special loads must be noted, as well, gate delivery items if they exceed the normal allowance 5 Kg per PAP and reported to load control office.

Unusual groups, excessive weights, or passenger loads that do not comply with conventional aircraft load allowances must be communicated to load control (i.e. sports teams with higher passenger weights).

6.11.11 Last Minute Changes

General

The load sheet must reflect the actual loaded state of the aircraft prior to take-off. In order to comply with this requirement, it is often necessary to adjust the load sheet after completion. Such adjustments are called last minute changes (LMC). They 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 demanded from those carrying out the corrections. This duty may therefore only be performed by personnel trained and experienced in load control. Maximum tolerance allowed for LMC is +/- 500 Kg, more than this new Load sheet must be re-issued.

Definitions

TRAFFIC LOAD LMC" means the difference between:

The actual loading according to the Loading Instruction/Report and the relevant figures on the load sheet;

The actual number of passengers according to the gate check and the relevant figures on the load sheet.

"FUEL LMC" means the difference between the final amounts stated on the Fueling Order and the respective amounts used for the calculations on the load sheet.

ENTRY OF LAST MINUTE CHANGES

Traffic Load

In general, only changes in the weight of the traffic load (passengers, baggage) or in its distribution are to be recorded in the LMC box of the load sheet. However, in addition to the load categories mentioned above, changes to items absorbed in the DOW such as crew, crew baggage, pantry, potable water, ballast fuel, etc. may also be entered in the LMC box. The total weight change represented by the LMC entries must be shown in the LMC total box. A weight increase must not exceed the under load before LMC. It is not required to correct the previously calculated zero fuel, take-off and landing weights.

Fuel

Fuel LMCs (take-off fuel or trip fuel) must not be entered in the LMC box. In order to ensure that the maximum gross weights are not exceeded, the previously calculated take-off and/or landing weights must be adjusted by the amount of the fuel LMC. These adjustments should be carried out,

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irrespective of whether the new take-off and trip fuel figures are higher or lower than the previous figures.

Traffic Load and Fuel

If the LMC consists of traffic load and fuel changes, the zero fuel weights must be adjusted by the total weight of the traffic load LMC, and the take-off weights and landing weights must then be calculated again with the new fuel and traffic load figures.

Correction of Balance Conditions

No need for balance correction if the LMC is within the tolerance +/- 500 Kg.

Responsibility of the Load Control Agent

After completion of the LMC entries on the load sheet, the Load Control Agent must check that:

The maximum gross weights (ZFW, TOW, and LDW) applicable for the flight are not exceeded;

The maximum weight limitation of each compartment or ULD position and, if applicable, the limitations for combined load, cumulative load and asymmetrical load are not exceeded;

The calculated center of gravity at TOW and, if applicable, at ZFW and LDW is within the allowed limits.

INFORMATION OF FLIGHT CREW

Standard Procedure

Normally the load sheet presented to the Pilot-in-Command should include all last minute changes. These should be shown as entries in the LMC box and, if required, as corrections to gross weights, fuel figures and balance conditions.

Note:

If EDP load sheets are issued, it is advisable to adjust the passenger and load figures before the final version is printed.

To inform the flight crew about last minute changes in writing, a special LMC box should be used. The information to be recorded on this form may be limited to the following:

Total weight of all last minute changes;

Total number of LMC passengers;

Corrected balance conditions.

Crew needs to sign next to the LMC with acknowledgment of the changes.

Station staff must ensure that:

Cargo Load LMC is recorded into LDM and in LIR

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Passengers LMC is recorded into passenger Manifest and figures given to captain

Crew LMC is recorded into General Declaration and LDM

6.11.12 Information Exchange

All data pertaining to aircraft weight and balance calculations shall be communicated to PIC with payload information and LIR and to be transferred to Load officer this information shall be documented and filed using one of the following methods:

- a) Digitally
- b) Written via documentation.
- c) Verbal communication in this case the person receiving the information must assure that one of the following is applied:
 - 1. Read back all information received by radio or telephone to guarantee accuracy of the data.
 - 2. Record all verbal transmissions in written format (manually or digitally) to be able to clarify all discrepancies before the final load sheet is transmitted.
 - 3. Digitally record all verbal communications.
 - 4. A written transmission is always the recommended method. If it is necessary to use verbal communication, ensure that the following details are recorded:
 - I. Name of the agent
 - II. Time of transmission.
 - III. Confirmation that the receiving party has acknowledged the changes this record must form part of the flight file for retention.

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6.11.13 Risks Arising From Aircraft Loading

The primary risks arise from the aircraft being 'set up' for take-off with pitch, trim and/or take off reference speeds which are not correct. This can arise in one of three ways:

The aircraft is not loaded in the way stated on the accepted load and trim sheet (any load sheet type)

The aircraft load and trim sheet uses correct input data but the output data is wrong (manual load sheets)

The flight crew apply the (correct) load and trim data incorrectly when using it to calculate pitch trim, or reference speed data.

The hold load is not properly secured or contains prohibited or incorrectly packed items.

6.11.14 Consequences of Actual Mis-Loading or Incorrect Input of Load-Related Data

Either actual Mis-loading of an aircraft or incorrect use of correct load related data for aircraft systems set up can severely affect aircraft control. Loss of Control may occur during an attempted take off or during subsequent flight because either:

An attempt (usually inadvertent) is being made to operate the aircraft outside of the Aeroplane Flight Manual limits, or

The actions of the flight crew to control the aircraft are ineffective because the aircraft is not in the condition of load and or trim which is believed to prevail and/or has been used to set up key aircraft control parameters, whether manually interpreted e.g. Vr on the ASI or automatically taken from erroneous FMS inputs.

Runway Excursion has been a regular result of errors of both these types in the past, whether or not an RTO has been attempted.

6.11.15 Post-departure Messages Task

All post-departure messages and any other relevant messages pertaining to flight handling shall be sent to the identified stations as per Nesma Airlines requirements, such messages may include, but are not limited to:

- a) Load Departure Message (LDM)
- b) Statistical Load Summary (SLS)

Messages shall be produced and delivered in accordance with AHM chapters.

A flight file shall be maintained for each departing flight in a secure location according to Nesma Airlines requirements.

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6.12 Load Control Task Job Responsibility

Responsibilities of persons performing the Load Control task divided between Nesma Airlines PIC as he is the only person responsible for issue Load Sheet and LIR based on Payload Information Form received from and following steps shall be adhered:

- a) The load planning task and weight and balance calculations task shall performed by Nesma Airlines PIC and Station Load officer who responsible for aircraft loading and unloading supervision task , both tasks shall not combined.
- b) The aircraft loading and unloading supervision task, and the post departure messages task shall be performed by station of departure agent, LIR and Loadsheets issuance task responsibility of PIC.

6.13 Qualification Requirements

Personnel performing Load Control tasks shall be duly qualified. Training must be in accordance with AHM591 and AHM1110.

Training for the Load Control task shall be performed by a qualified and approved instructor, Load Control licensing, training and documentation shall be in compliance with regulations and Nesma Airlines Policies.

6.14 Documentation

Nesma Airlines is responsible for providing all relevant documentation for load planning and weight balance calculations.

Nesma Airlines shall define the data content and terminology for documents reports and messages.

Nesma Airlines PIC issuing the loadsheet shall accurately reflect all received data on documents, reports and messages produced for each flight as per AHM590.

Relevant documents shall be manually or electronically issued and signed as per Nesma Airlines policy and regulatory requirements.

Specified documents shall be retained for a period in accordance with applicable local regulations and Nesma Airlines retention policy. As a minimum the documentation for each departing flight shall include:

- a) Final LIR signed by the responsible person.
- b) NOTOC (If required)
- c) Fuel figures confirmation (if applicable)
- d) Final Loadsheets and trim sheet, including LMC, signed by PIC.

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Disposal of documents may also be subject to regulation.

6.15 Loading Instruction Report (LIR)

* General:

- For every flight, a written LIR shall be issued.
- This document is divided into:
 - General information, i.e. issuing station, flight, date, etc...
 - Cargo Holds designation and maximum capacity
(To be used to enter arriving load).
 - Cargo Holds arrangement, with net sections designation
(To be used to enter departure load).
 - Special instruction box for transmitting special loading instruction to ramp agent, e.g. DGR, AVI, etc...
- Certification box where the ramp agent certifies that the A/C has been loaded in accordance with these instructions and / or transmits deviations to weight and balance.

* Principles of load planning:

- Following principles shall be observed for load planning:
 - Maximum weights must never be exceeded.
 - Center of gravity must be within limits.
 - Observe segregation requirements for special loads.
 - Observe offloading priorities.
 - Observe offloading sequence for multi sector flights.
 - Plan the heavier load to the center of the aircraft.
 - Always do a trial trim if you prepare a manual load sheet.

Note:

On long haul flights, an AFT center of gravity improves the performance of the aircraft and saves fuel. Therefore, the center of gravity, whenever possible and if loading priorities allow, should be planned in the AFT third of the balance envelope.

There are different ways to identify load categories in the load sheet / load message, in the loading instruction report (LIR), and in the container and pallet distribution message (CPM).

- BT = Transfer Baggage • X = Empty ULD
- B = All Other Baggage O = Courier Baggage
- E = Equipment in Compartment U = Unserviceable ULD

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- C = All Other Cargo M = Mail
- N = Empty Loading Position

Load planning shall be conducted in such a way that offloading is possible according to the following order (i.e. First to offloaded, Last to be loaded):

- Transfer Baggage (BT)
- Local Baggage (B)

Shipments labelled (Cargo Aircraft Only) shall not be loaded under any condition onboard our flights.

Standard Loading which matches all cases, to distribute one third of the total load on the FWD Hold, and the rest (two thirds) to be distributed on the AFT holds. This shall guarantee a perfect load planning. Taking in consideration passengers seating which should be always centered. To fill zone B, and then to start filling zone A, and C with equal quantities of passengers, as well this will be the best way to save fuel consumption.

*** Utilization:**

- This document is used to:

- Calculate center of gravity position.
- Perform A/C loading and report deviation.
- Transmit LDM / CPM to line stations.
- Fill load sheet.

*** Data Required:**

- Maximum weight of each cargo position.
- Maximum certified weight for each net section.
- Missing restraints criteria.
- Acceptable loads table.

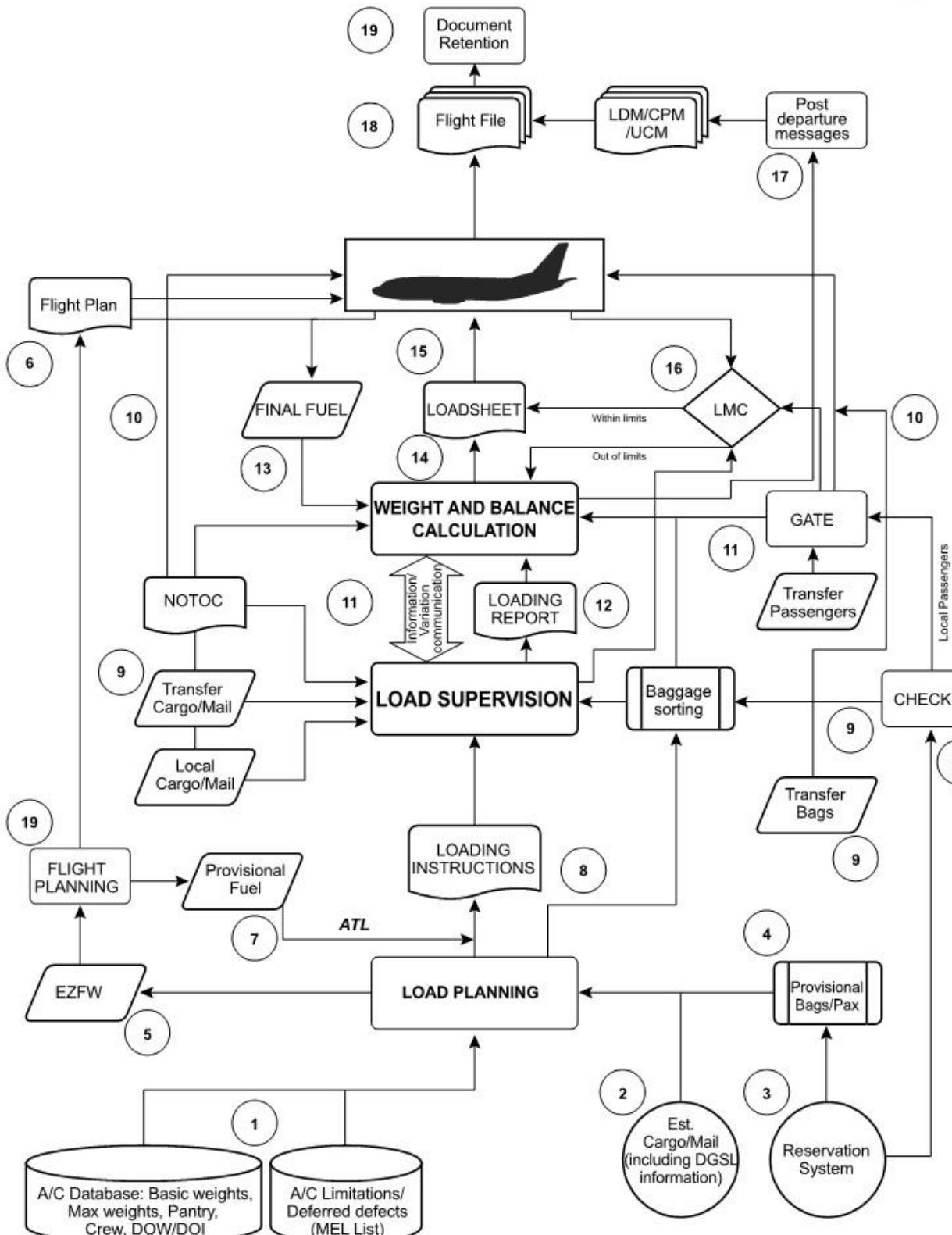
*** Units of Measurement and Conversion Factors:**

6.16 Load Control Process Flow Diagram

CIRCLE #	ACTION
1	Aircraft designation: access to permanent and semi-permanent data as per AHM565 and maintenance data related to limitations that could affect loading and weight and balance.
2	Estimated/Provisional cargo and mail, data including DGSL information, to load planning.

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3	Data from reservation system to capacity calculation (passenger and bag counts) and check in (SSR).
4	Provisional passengers sorted by class and provisional bags according to Nesma Airlines policy to load planning
5	Provide EZFW, to flight planning system.
6	Operational flight plan to PIC.
7	Provisional fuel, to calculate the allowed traffic load and verify that load planning is within limits.
8	Loading Instruction to Load Supervision and loading team. Segregation plan to sorting area.
9	Actual data flowing from check-in (passenger number, baggage pieces and weight, special load information), cargo and mail warehouse (special load information), transfer load.
10	Load to aircraft.
11	Load info and variation communication between Load Control and Load Supervision: discrepancies between planned and real load weight, nature and distribution.
12	Final data confirmation from Loading Supervision and Gate (gate collected items).
13	Final fuel figures communication from the flight planning system or PIC.
14	Loadsheets verification and release
15	Loadsheets to aircraft.
16	Last minute changes.
17	Post-departure load messages and DGSL information to station of arrival.
18	Signed documents verification and collection.
19	File archiving and retention.



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6.17 Units of Measurement:

- Weight : Kilograms (kg)
- Length : Meters (m)
- Moment : product of weight and length in
Kilogram-m (kgm)
- Velocity : Kilometers per hour
- (Km/h) Capacity and quantity : Liters (l)
- Volume : Cubic meters (m³)
- Density : Kilograms per liter (kg/l)
- Area : Square meters (m²)
- Pressure : bars

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6.18 Conversion Table

To Convert	Into	Multiply by (unless indicated)
Celsius	Fahrenheit	$9/5 + 32$
Centimeter's	Inches	0.3937
Centimeter's	Meters	0.01
Centimeter's	millimeter's	10
Cubic feet	Cubic centimeter's	28320
Cubic feet	Cubic inches	1728
Cubic feet	Liters	28.32
Cubic inches	Cubic centimeter's	16.39
Cubic inches	Fluid ounces (imperial)	0.4614
Cubic inches	Fluid ounces (U.S.)	0.5541
Cubic meters	Cubic feet	35.31
Cubic meters	Cubic inches	61.023
Fahrenheit	Celsius	$-32 \times 5/9$
Feet	Centimeter's	30.48
Feet	Meters	0.3048
Feet	Inches	12
Fluid ounces (imperial)	Milliliter's	28.4123
Fluid ounces (imperial)	Pints (imperial)	0.05
Fluid ounces (U.S.)	Milliliter's	29.5729
Fluid ounces (U.S.)	Pints (U.S.)	0.0625
Grams	Ounces (avoirdupois)	0.0353
Imperial gallons	Liters	4.546
Imperial gallons	U.S. gallons	1.2009
Imperial pints	Fluid ounces (imperial)	20
Imperial pints	Liters	0.5682

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To Convert	Into	Multiply by (unless indicated)
Imperial quarts	Liters	1.1365
Inches	Centimeter's	2.54
in/lb	Beach units	÷ 0.2650
in/oz per in of tear	in/lb	0.28
Kilograms	Pounds (16 ounces)	2.2046
Kilograms per cubic foot	Pounds per cubic foot	2.2046
Kilograms per cubic foot	Kilograms per cubic meter	35.31
Kilograms per cubic meter	Pounds per cubic foot	0.0624
Kilograms per square centimeter	Pounds per square inch	14.2234
Kilograms per square foot	Pounds per square foot	2.2046
Kilograms per square foot	Kilograms per square meter	10.76
Kilograms per square meter	Kilograms per square foot	0.093
Kilograms per square meter	Pounds per square foot	0.205
Liters	Fluid ounces (imperial)	35.196
Liters	Fluid ounces (U.S.)	33.8147
Liters	Imperial gallons	0.22
Liters	Imperial pints	1.7598
Liters	Imperial quarts	0.8799
Liters	U.S. gallons	0.2642
Liters	U.S. pints	2.1136
Liters	U.S. quarts	1.0567
Meters	Centimeter's	100
Meters	Feet	3.2808
Meters	Inches	39.37
millimeter's	Centimeter's	0.1

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To Convert	Into	Multiply by (unless indicated)
millimeter's	Inches	0.0394
Ounces (avoirdupois)	Pounds	0.0625
Ounces (avoirdupois)	Grams	28.3495
Pounds	Ounces	16
Pounds	Grams	453.5924
Pounds (16 ounces)	Kilograms	0.4536
Pounds per cubic foot	Kilograms per cubic foot	0.4536
Pounds per cubic foot	Kilograms per cubic meter	16.0166
Pounds per cubic meter	Kilograms per cubic foot	0.0128
Pounds per inch (linear)	Kilograms per centimeter	0.17858
Pounds per square foot	Kilograms per square foot	0.4536
Pounds per square foot	Kilograms per square meter	4.883
Pounds per square foot	Kilograms per square centimeter	0.0004883
Pounds per square inch	Kilograms per square centimeter	0.0703
Square inch	Square centimeter	6.451589
Square centimeter	Square inch	0.155001
Tons (long)	Kilograms	1016
Tons (long)	Pounds	2240
Tons (long)	Tons (short)	1.12
Tons (metric)	Kilograms	1000
Tons (metric)	Pounds	2205
Tons (short)	Pounds	2000
Tons (short)	Kilograms	907.1849
Tons (short)	Tons (long)	0.8929
Tons (short)	Tons (metric)	0.9072

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To Convert	Into	Multiply by (unless indicated)
U.S. gallons	Imperial gallons	0.8327
U.S. gallons	Liters	3.7853
U.S. pints	Fluid ounces (U.S.)	16
U.S. pints	Liters	0.4732
U.S. quarts	Liters	0.9463
To Convert	Into	Multiply by (unless indicated)
Celsius	Fahrenheit	$9/5 + 32$
Centimeter's	Inches	0.3937
Centimeter's	Meters	0.01
Centimeter's	millimeter's	10
Cubic feet	Cubic centimeter's	28320
Cubic feet	Cubic inches	1728
Cubic feet	Liters	28.32
Cubic inches	Cubic centimeter's	16.39
Cubic inches	Fluid ounces (imperial)	0.4614
Cubic inches	Fluid ounces (U.S.)	0.5541
Cubic meters	Cubic feet	35.31
Cubic meters	Cubic inches	61.023
Fahrenheit	Celsius	$-32 \times 5/9$
Feet	Centimeter's	30.48
Feet	Meters	0.3048
Feet	Inches	12
Fluid ounces (imperial)	Milliliter's	28.4123
Fluid ounces (imperial)	Pints (imperial)	0.05
Fluid ounces (U.S.)	Milliliter's	29.5729
Fluid ounces (U.S.)	Pints (U.S.)	0.0625

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To Convert	Into	Multiply by (unless indicated)
Grams	Ounces (avoirdupois)	0.0353
Imperial gallons	Liters	4.546
Imperial gallons	U.S. gallons	1.2009
Imperial pints	Fluid ounces (imperial)	20
Imperial pints	Liters	0.5682
Imperial quarts	Liters	1.1365
Inches	Centimeter's	2.54
in/lb	Beach units	÷ 0.2650
in/oz per in of tear	in/lb	0.28
Kilograms	Pounds (16 ounces)	2.2046
Kilograms per cubic foot	Pounds per cubic foot	2.2046
Kilograms per cubic foot	Kilograms per cubic meter	35.31
Kilograms per cubic meter	Pounds per cubic foot	0.0624
Kilograms per square centimeter	Pounds per square inch	14.2234
Kilograms per square foot	Pounds per square foot	2.2046
Kilograms per square foot	Kilograms per square meter	10.76
Kilograms per square meter	Kilograms per square foot	0.093
Kilograms per square meter	Pounds per square foot	0.205
Liters	Fluid ounces (imperial)	35.196
Liters	Fluid ounces (U.S.)	33.8147
Liters	Imperial gallons	0.22
Liters	Imperial pints	1.7598
Liters	Imperial quarts	0.8799
Liters	U.S. gallons	0.2642
Liters	U.S. pints	2.1136

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To Convert	Into	Multiply by (unless indicated)
Liters	U.S. quarts	1.0567
Meters	Centimeter's	100
Meters	Feet	3.2808
Meters	Inches	39.37
millimeter's	Centimeter's	0.1
millimeter's	Inches	0.0394
Ounces (avoirdupois)	Pounds	0.0625
Ounces (avoirdupois)	Grams	28.3495
Pounds	Ounces	16
Pounds	Grams	453.5924
Pounds (16 ounces)	Kilograms	0.4536
Pounds per cubic foot	Kilograms per cubic foot	0.4536
Pounds per cubic foot	Kilograms per cubic meter	16.0166
Pounds per cubic meter	Kilograms per cubic foot	0.0128
Pounds per inch (linear)	Kilograms per centimeter	0.17858
Pounds per square foot	Kilograms per square foot	0.4536
Pounds per square foot	Kilograms per square meter	4.883
Pounds per square foot	Kilograms per square centimeter	0.0004883
Pounds per square inch	Kilograms per square centimeter	0.0703
Square inch	Square centimeter	6.451589
Square centimeter	Square inch	0.155001
Tons (long)	Kilograms	1016
Tons (long)	Pounds	2240
Tons (long)	Tons (short)	1.12
Tons (metric)	Kilograms	1000

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To Convert	Into	Multiply by (unless indicated)
Tons (metric)	Pounds	2205
Tons (short)	Pounds	2000
Tons (short)	Kilograms	907.1849
Tons (short)	Tons (long)	0.8929
Tons (short)	Tons (metric)	0.9072
U.S. gallons	Imperial gallons	0.8327
U.S. gallons	Liters	3.7853
U.S. pints	Fluid ounces (U.S.)	16
U.S. pints	Liters	0.4732
U.S. quarts	Liters	0.9463

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Chapter 07 Ground Handling

7.1 List of Ground Handling Activities

Marshalling:

- Providing or making the required preparations for marshalling the aircraft on its arrival or departure.

Parking:

- Providing / placing and removing wheels chocks.
- Providing /operating the unit of ground electricity control for providing the necessary electric power.
- Making contacts between the apron and the piloting cabin for pulling the aircraft forward, pushing it backward, during engines operation or for other reasons.

Loading and Unloading:

- Providing / placing and removing appropriate passengers stairs.
- Providing / placing and removing appropriate loading belts.
- Providing / placing and removing of piloting cabin stairs.
- Providing passengers / cabin crew with means of transportation between the aircraft and the airport facilities.
- Providing / operating the equipment that is required for loading and unloading.
- Providing / operating equipment suitable for transporting cargos among points agreed on in the airport.
- Unloading the cargo from the aircraft and removing tying equipment.
- Loading, storing, and tying cargo on the aircraft.
- Administrating the loading system on the aircraft.
- Loading, storing, and tying special cargos such as fragile materials, live animals, valuable goods, news films, dangerous goods, and other special loads.
- Re-distributing the load on the aircraft.
- Opening and stabilizing / closing the doors of the aircraft stores.
- Providing / operating an air starter unit for engines operation.
- Providing / operating appropriate firefighting equipment and other fire prevention equipment.
- Providing / placing and removing appropriate equipment for pulling the aircraft forward and pushing it backward.
- Qualified personnel are only allowed to monitor loading process, as loads has to be accurately distributed according to LIR.

Aircraft Servicing:

- Cleaning the aircraft.
- Emptying / cleaning / washing the toilets and providing them with liquids.
- Refilling tanks with drinking water.
- Proving / operating air conditioning apparatus.

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Catering:

- Unloading / loading and storing the catering load from/on the aircraft.
- Transporting the catering load to the aircraft.
- Transporting the catering load between the aircraft and the points that are agreed on.
- Emptying / washing / cleaning portable catering equipment.
- Cleaning / washing the covers of the passenger cabin.
- Unloading / getting rid of the food and residuals remaining on the arriving aircraft in accordance with the local calendars.
- Filling the portable containers again with hot and cold drinking water.

7.2 Responsibility Distribution

All procedures and responsibilities are subject to local conditions, practices and contract arrangements.

Note: The Station Officer or (flight dispatcher) has overall control of the turnaround

Table 1 PRE-ARRIVAL

TASK	DIRECT RESPONSIBILITY
FOD check of stand area before arrival of aircraft	Marshaller
assume control of turn round	Ramp Supervisor
stand entry guidance system switched on, (Marshaller)	Ramp Supervisor
equipment and personnel in position ready for aircraft arrival all behind marked lines or in safe areas	Ramp Supervisor

Table 2 ARRIVAL

TASK	DIRECT RESPONSIBILITY
A/C taxis on to stand	Marshaller
A/C is chocked, (engines switched off and anti-collision lights switched off)	Marshaller
Mobile steps or air bridge maneuvers into position – banks men used to control positioning of steps	Marshaller
height and stability and lighting of steps are checked	Ramp Supervisor
Safe positioning of air bridge is checked	Ramp Supervisor

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Wing cones or passenger guidance chains deployed	Marshaller
Crew given clearance to open a/c doors	Ramp Supervisor
Dispatcher boards a/c	Ramp Supervisor
Walkways clear or coaches in position	Ramp Supervisor
PAX allowed to disembark	Ramp Supervisor
Disabled PAX disembark by use of suitable equipment e.g. ambulift	Cabin crew/ ambulift crew

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Table 3 OFFLOAD

TASK	DIRECT RESPONSIBILITY
After anti-collision lights are off unloading equipment approaches a/c	Marshaller
All equipment is guided by banks men	All
Offload is under direction of supervisor, guided by offload policy e.g. risk of tipping aircraft due to imbalance	Loading crew
Vehicles must be positioned so as to allow clear exit for fuel bowser	Ramp/loading crew
Vehicles must not be left unattended with their engines running	All

Table 4 SERVICING

TASK	DIRECT RESPONSIBILITY
After anti-collision lights are off servicing equipment approaches a/c	All
All equipment is guided by banks men	All
Catering staff enter the cabin only after approval from the crew	Cabin crew/caterers
Cleaning staff enter the cabin only after approval from the crew	Cabin crew/cleaners
Toilet and water services begin immediately	Cleaners
Fueling is under control of Engineer (Nesma Airlines)	Fueller/Engineer
Vehicles must be positioned so as to allow clear exit for fuel bowser	All
De-icing carried out (depending on conditions) when all personnel and baggage/cargo are clear	De-icing crew
Vehicles must not be left unattended with their engines running	All

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Table 5 ONLOAD

TASK	DIRECT RESPONSIBILITY
Cargo and baggage is loaded after the inbound load has been offloaded	Loading supervisor
Loading is in accordance with loading instructions	Loading supervisor
Loading supervisor completes and signs loading report and hands to dispatcher	Loading supervisor
All equipment is guided by banks men	All
Vehicles must not be left unattended with their engines running	All

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Table 6 BOARDING

TASK	DIRECT RESPONSIBILITY
Walkways are clear and clean, steps/air bridge are safely positioned	Ramp Supervisor
PAX board after cabin crew have given approval	Cabin crew / red cap
Disabled PAX board by use of suitable equipment e.g. ambulift	Cabin crew / ambulift crew
Handling agent confirms all PAX are on board	Ramp Supervisor
Paperwork is completed	Ramp Supervisor
Steps removed, banks man employed if required	Ramp Supervisor
Doors closed	Cabin crew / Ramp Supervisor
Air bridge removed – operator ensures route and area beneath are clear	Operator / Ramp Supervisor
De-icing carried out (depending on conditions) when all personnel and baggage/cargo are clear	Ramp Supervisor /de-icing crew

Table 7 DEPARTURE

TASK	DIRECT RESPONSIBILITY
All equipment (except tug) is removed from a/c	Marshaller
Tow bar is connected	Pushback crew
Chocks removed	Pushback crew
Walk around ensures all doors and hatches are closed	Pushback crew
Ground/flight deck communications established	Headset operator
Wingmen in position if required	Pushback crew

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Clearance given to push	Flight crew / Headset operator
Pushback commences, ensuring aircraft follows a marked and safe route	Pushback crew
Engines start –ensure no personnel or equipment in the danger area	Headset operator
Tow bar is disconnected from aircraft	Pushback crew
All clear to flight crew on left/right of aircraft depending on circumstances	Headset operator

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7.3 Arrival and Departure Procedures

7.3.1 Actions Prior to Arrival

- a. Conduct FOD check on entire stand removing all debris just prior to arrival.
- b. Make sure that stand surface condition is sufficiently free of ice, snow, or any contamination could be hazardous to aircraft movement.
- c. Make sure all GSE is available and serviceable, and is positioned well clear of the aircraft path, outside the Equipment Restraint Area (ERA).
- d. Make sure the aircraft path and ramp area free of objects and obstacles that the aircraft may strike or endanger others due to jet blast effects.
- e. Make sure the aircraft docking guidance system is operating or marshaling staff is present.
- f. Make sure additional ground personnel (wing walkers) are present, if required.

Danger:

- 1- all persons not responsible for the aircraft arrival operation must stay well clear of the arriving aircraft and must not approach the aircraft until:
- 2- The engines have been shut down and are spooling down.
- 3- The anti-collision lights have been switched off.
- 4- The main gear wheel chocks are positioned.
- 5- Clearance to approach the aircraft has been given by the agent responsible for the arrival operation if applicable.

7.3.2 Arrival Procedures

7.3.2.1 Aircraft arrival at a Gate or Open Ramp

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

- The handling of aircraft and load requires careful planning and starts well ahead of the arrival of the aircraft.
- The estimated time of arrival (ETA) will be received by means of the departure message from the preceding station. This time must be promulgated immediately to all station departments concerned with the handling of the flight.
- The station personnel, (defined as tech, ground services or traffic)shall utilize IATA recommended hand signals to communicate ramp operations movement of the aircraft,
- As the aircraft approaches the stand area, the marshaller points to guide-in line on the ramp to be followed by the aircraft by standing at the top of guide in line and giving (identify stand) signal, wing walkers if required, will be positioned approximately 1 m outside the path of wingtips. Wing walkers shall maintain visual contact with the marshaller until the aircraft has come to complete stop.
- While the aircraft taxis along the guide-in line, the marshaller gives the (continue to Taxi Ahead) signal with marshalling wands.
- The nose wheel should follow the guide-in line all the way to appropriate stop point. Use the turn left or Turn right signals to correct the track of aircraft as required.

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- If any time during the aircraft movement the marshaller is unsure or identifies an imminent danger, STOP the aircraft.
- 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 chocks have been positioned, notify the flight crew using the signal (Chocks Inserted)

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

1. As the Agent responsible for the arrival, the Marshaller shall verify that the correct aircraft has been selected for the arrival and the equipment is operational.
2. 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. It is essential to maintain a continuous unobstructed view between the agent responsible for manning the emergency stop button and the ground personnel ensuring clearance.
3. If 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.
4. Wing walkers if required will be positioned approximately 1 m outside that path of wingtips and shall maintain visual contact with marchaller until the aircraft has come to complete stop.

7.3.2.2 Actions After Arrival

- Marshaller shall ensure that the following principles are observed:
Upon arrival of the aircraft, the marshaller shall perform a walk around of the aircraft to inspect for any visible damage, prior to positioning any GSE onto the aircraft to identify and record anything which may have occurred during the flight or from the departure station. Inspection of the aircraft shall include door panels, fuselage and wing areas.
In case any damage found:
 - do not position to the aircraft any equipment where that damage existsd
 - Report any damage immediately to the maintenance department and the flight crew, or the engineer onboard.
- Surface condition of the apron is adequate to conduct aircraft movement operations;
- The apron is clear of items that might cause aircraft FOD;
- Equipment and vehicles are positioned clear of the aircraft movement path;
- Adequate clearance exists between the aircraft and facilities or fixed obstacles along the aircraft movement path;
- Personnel and equipment must not enter the safety areas until the engines have completely stopped.
- All necessary loading/servicing equipment shall be serviceable and shall meet the safety requirements.
- Loading and servicing equipment's shall not approach the aircraft until the engines have come to a complete stop and each chock is in position in front and aft the nose wheel landing gear.

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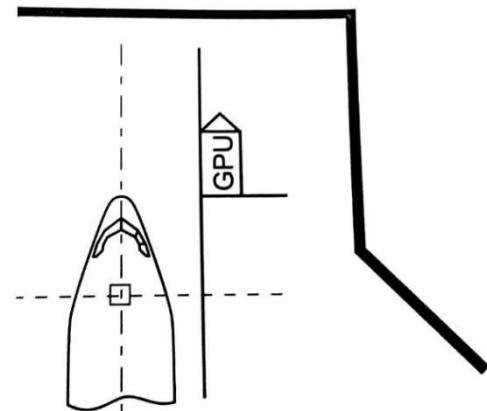
- Safety cones are placed onto aircraft according to SOM 7.13.8
- Loading / servicing equipment shall be positioned at the aircraft according to a locally planned pattern, considering the position of buildings and operational stands as well as the movement of other types of equipment around the aircraft.
- A reasonable distance between the aircraft and Loading servicing equipment shall be maintained to avoid damage caused by vertical changes of the fuselage during loading/unloading.
- Passenger and service doors shall be opened by the cabin crew from inside only,
- Before disembarkation of passengers a cabin attendant shall hand the aircraft briefcase to station personnel
- Upon the arrival of the aircraft, lavatory servicing shall be completed. After servicing the lavatory, personnel shall wipe the service area with a cloth to ensure there is no leak in the system and to prevent any possibility of "blue ice formation."
- Upon the arrival of the aircraft, potable water servicing shall be completed. Cleaning and disinfecting records of the potable water servicing equipment must be maintained in the station.
- For aircraft scheduled to remain on the ground overnight, the cabin must be searched by security or Nesma Airlines staff, after cleaning and / or off-loading to ensure no dangerous devices are left onboard. The cabin doors must be closed and the aircraft must remain in a well-lighted secured area. Access to the aircraft must be restricted to only those personnel authorized with proper credentials
- The disembarkation of passengers must be controlled:-
 - Care should be taken to keep passengers away from the fueling area.
 - The shortest possible route to the arrival hall or transit waiting room must be selected in such a way that the risk of accidents kept to a minimum.
 - Transportation must be provided in case of adverse weather conditions.
- A qualified Nesma Airlines employee must supervise the aircraft handling.
- Transit passengers may stay on board during short stops provided the necessary safety measures are complied with and local airport regulations are not contradictory.
- Whenever an aircraft door is opened without the steps being in position, the guard strap must be in position across the doorway.
- Steps must be positioned so that persons cannot slip between them and the aircraft side.
- The steps brakes must be on and wheels jacked off the ground before every use to ensure that they cannot open accidentally.

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7.3.2.3 Ground Support Equipment on Arriving Aircraft

A. Ground Power Unit

- 1- It is permitted to preposition a Ground Power unit (GPU) inside the ERA provided there is a marked GPU parking position.
- 2- Position the GPU on the appropriate side of the aircraft as shown.
- 3- Set parking brake/chock for the GPU.
- 4- Ensure the GPU, while in operation, is positioned a minimum of 3 m from any fueling vehicles and aircraft fuel vent exists.



B. Cooling/Heating Units/Pre-Condition Air

Before supplying air by an external source, make sure that at least one cabin door is open and remains open during air unit operation, make sure that a motorized ground air supply unit is not near the aircraft. The engine exhaust pipe of the unit must point away from aircraft. Heat from the exhaust can cause damage to the aircraft structure.

As part of the fuel conservation programs of most airlines, Pre-conditioned Air (PCA) is required at all airports that provide on-stand PCA.

For PCA positioning to Nesma Airlines, manufacturer recommendations shall be adhered after check with flight engineer who shall make sure there is no blockage of the hose.

- **To connect PCA:**

1. Open the access panel.
2. Connect ground PCA unit to the aircraft.
3. Start up ground PCA unit.
4. On the ground PCA unit, select the desired cooling or heating settings (air temperature and flow rate) or position the selector in appropriate position.

- **To disconnect PCA:**

1. Shut down ground PCA unit.
2. Disconnect ground PCA unit from aircraft.
3. Close the access panel.
4. Retract the PCA hose to the fully stowed and secured position.

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7.3.3 Departure Procedures

7.3.3.1 Introduction

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 ground person in charge of the departure operation shall maintain continuous contact with the flight crew and is responsible for the ground maneuver.

7.3.3.2 Responsibilities

It is the responsibility of the Station Manager to ensure on-time operation of Nesma Airlines aircraft. All necessary handling activities must be performed within the time available before departure.

- At the station of origin, aircraft must be positioned on time before a scheduled departure.
 - In case of late arrivals or delayed positioning of aircraft, arrangements must be made to reduce the transit time to minimum so that the departure will be as close to the schedule as possible.
 - A qualified Nesma Airlines employee must supervise the aircraft handling.
 - For aircraft loading refer to the instructions laid down.
 - All loading / servicing equipment must meet the safety requirements.
- Prior to boarding the passengers, the ramp agent will obtain clearance from the pilot-in-command or his deputy at least 45 minutes before departure for scheduled international flights and 30 minutes for scheduled domestic flights.
- The aircraft handling and load clearance documents must be presented to the crew in due time prior to departure for further check.
- Care should be taken to keep passengers away from engine and the fueling area.
- The number of persons on board must be limited to those having essential duties to perform.
- Last minute changes (LMC) must be included in the load sheet and balance chart. It must be ensured that the maximum permissible weights for zero fuel, take-off and landings as well as the maximum weight per compartment are not exceeded and the center of gravity remains within limits.
- For every multi sector flight a copy of load distribution sheet must be on board.
- Door safety nets must be installed properly before closing the cargo compartment doors even if there is no load in the compartments.

7.3.3.3 Actions Prior Departure

Prior to departure of the aircraft, make sure that:

- a) The ramp area is clear of all FOD and any equipment.
- b) The apron surface condition is sufficiently free of ice, snow, or any contamination could be hazardous to aircraft movement.

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- c) The ramp area is free of objects/obstacles that may impacted by the aircraft or may endanger others due to jet blast effects.
- d) All persons not involved in the aircraft departure operation must remain clear of the departing aircraft behind the ERA.
- e) Additional ground staff such as wing walkers are present, if applicable/required.
- f) Verbal communication with the flight crew is established by means of an interphone system, departures using marshaling hand signals without any headset communication are only conducted in exceptional cases.
- g) In the event and Air Starter Unit (ASU) is required for engine start, communicate with flight crew on ASU positioning and engine start sequence.
- h) Prior to connecting the tractor to the aircraft, the tractor shall be parked in front of the aircraft or outside of the ERA, but never behind the wings.

7.3.3.4 Pre Departure Check

7.3.3.4.1 Pre Departure Walkaround Check

The walkaround shall start as soon as possible after all ground servicing activities have been completed.

Walk around the entire aircraft at a normal walking pace. The check shall start as possible to departure time. If any part of the aircraft still has GSE engaged at the time of check, or if GSE re-engages with the aircraft after the check, the applicable area(s) must be reinspected.

The pre departure walk around check shall include the following:

- a) The apron is clear of all FOD items that may cause aircraft damage or pose a risk.
- b) All GSE and boarding devices are detached.
- c) The stand area is clear of obstructions. GSE and vehicles are positioned clear of 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. Exception , external power and headset panels.
- f) Cabin/Cargo Doors
 - 1. Handlers are flush the fuselage
 - 2. 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 PIC, engineer on board and maintenance for the base. Also applies for item F checks.
- h) Landing gear safety pins are removed.
- i) There are no obvious signs of unmarked dents or other skin panel damage.
- j) In the event of the aircraft returning to the stand, the pre departure walk around check must be repeated.
- k) It is essential to have adequate lighting when doing the walk around check. If the lighting is insufficient, use a flashlight.

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7.3.3.5 Wheel Chock removal

- a) Headset Operator:
 - 1. Via interphone, request chock removal approval from the flight crew, and confirm the aircraft parking breaks are set.
 - 2. Check all GSE have been disconnected from the aircraft.
 - 3. Check the passenger boarding stairs have been retracted from the aircraft.
 - 4. Check the tow tractor and tow bar are fully secured to the nose gear and parking brakes are set on the tractor,
 - 5. For towbarless tractor operation, check the equipment is fully secured to the applicable landing gear and parking brakes are set on the tractor, if applicable:
 - I. Remove Chocks at applicable gear only and leave remaining chocks in place until departure.
 - II. Nose gear wheel chocks may be removed without notification for 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.
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 the Chocks Removed hand signal to the flight crew, and the flight crew repeats the Chocks Removed.
- b) Responsible personnel stow chocks in their designated stowage place.
- 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 Breaks 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.

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7.3.3.6 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-power push unit

Action	APPLICABLE TO					
	PUSHBACK			TOWING		TAXI OUT
	TT	TB L	PP U	TT	TBL	
The required pre departure servicing checks are completed	✓	✓	✓	✓	✓	✓
Fire protection devices are available and correctly positioned (as per local rules).	✓	✓	✓	✓	✓	✓
Communication with flight crew and ground staff is established via interphone system.	✓	✓	✓	✓	✓	✓
The path and area that the aircraft is moving towards is clear of FOD ensuring safe aircraft movement.	✓	✓	✓	✓	✓	✓
The standard surface condition is sufficiently free of ice, snow, etc., to ensure safe aircraft movement.	✓	✓	✓	✓	✓	✓
The GSE is outside the ERA, and loading bridge is fully retracted, if applicable.	✓	✓	✓	✓	✓	✓
If an ASU is required, check the equipment is correctly positioned and suitable for operation.	✓	✓	✓			✓
Wing walkers are present, if applicable.	✓	✓	✓	✓	✓	
The air intake and blast areas of the aircraft engines are clear of persons and obstacles, such as GSE.	✓	✓	✓			✓
The bypass pin is installed correctly or the nose gear steering torque links are disconnected, if applicable.	✓	✓		✓	✓	
All persons involved in the aircraft movement stay well clear of the danger areas around the tractor, landing gear and aircraft engines.	✓	✓	✓	✓	✓	
A qualified brake operator is in cockpit.				✓	✓	

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Wheel Chocks are not removed from MLG until flight crew has confirmed that the aircraft parking brake is set, the tractor is fully secured to the NLG and the parking brake of the tractor is set.	V	V		V	V	
Wheel chocks are not removed from the NLG until the PPU is fully secured to the MLG and its parking brake is set.			V			
The tractor and shearpin combination, if applicable, are suitable for operation, considering the aircraft type and weight, the weather and surface conditions.	V	V	V	V	V	
The completion of the pre departure table is indicated to the flight crew.	V	V	V	V	V	

7.3.3.7 Engine Start using Air Start Unit

- a) Only personnel and equipment involved in engine starting or aircraft are permitted within ERA during engine start.
- b) Establish communications with the flight crew and confirm the total number of engines to be started, the engine start sequence to be used and number of ASUs being used.
- c) All Personnel and equipment must remain clear of engine danger areas.
- d) Advise the engine start sequence to the ASU operator(s) and any other ground personnel.
- e) Where possible, the ASU should be positioned on the opposite side of the aircraft to the engine being started.
- f) If the aircraft is to be pushed back, connect the pushback tractor and set the tractors parking brake, where this is possible without disconnecting ground electrical power.
If a pushback tractor is not connected, position a chock in front of the nose wheel.
- g) Confirm with the flight crew that the aircraft parking brake is set, then remove main gear chocks.
- h) The ASU operator shall ensure that the unit is ready to supply air pressure.
- i) The headset operator informs the flight crew that the ground crew are ready for engine start.
- j) Start engine(s) according to Departure communication dialogue and signals for communications requirements.
- k) When engines start is complete, the headset operator signals ASU and ground power operator(s) to disconnect the ASU and remove ground power.
- l) Disconnect the ASU hose(s).
- m) Close and latch external air start and electrical panels.

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- n) When connecting and disconnecting ASU hose(s), walk directly underneath the fuselage, or close alongside it, keeping clear of engine danger areas.

7.3.3.8 Start-Up Procedures

- Start-up aircraft engines must not be given unless clearance from station is obtained.
- A fire extinguisher must be available.
- Passenger, cockpit and servicing steps as well as left trucks must not be removed from the aircraft before security belts or bars are in position or aircraft doors are closed.
- Steps must be kept in a suitable distance outside the safety zones until the aircraft has departed.
- An attendant from station has to remain in stand-by position away from the direct noise area until the aircraft has departed.
- Technical personnel must ensure that the engine blast and in take area are free from personnel or equipment before start-up clearance is given.
- For all Nesma Airlines aircraft “ground to cockpit communication” signals for starting the engine. Removal of ground power / air starter unit and chocks as well as clearance for taxing will be given by the technical personnel only.
- Unless there is a delay station clearance for start-up should be given 5 minutes ahead to STD.
- The ground time is the time from chocks-on to chocks-off.
- In case of crew delays, the delay must be specified and the pilot-in command must be informed accordingly prior to departure.
- A qualified marshaller must perform a pre departure walk around of the aircraft to ensure there is no damage to the aircraft from ground handling activities, and to report the damage to qualified maintenance personnel for evaluation and action.
 - Surface condition of the apron is adequate to conduct aircraft movement operations;
 - The apron is clear of items that might cause aircraft FOD;
 - Aircraft servicing doors and panels are closed and secure;
 - Power cables and loading bridge are detached;
 - Equipment and vehicles are positioned clear of the aircraft movement path;
 - Adequate clearance exists between the aircraft and facilities or fixed obstacles along the aircraft movement path;
 - Chocks are removed from all wheels.
 - Taxiing airplanes always have right of way.
 - Speed limits on apron are strictly to be observed.
- The marshaller duties require using IATA recommended hand signals, and pushing and towing procedures.

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- For other carriers, which are technically handled by Nesma Airlines, same start-up procedure will apply as mentioned above.
 - Airplane movement operations must be performed with extreme caution to prevent injuries to personnel as well as to avoid damage to airplane, equipment and facilities.
 - Only trained and qualified personnel are allowed to perform airplane movement operations functions. As, due to blast and suction, a running engine of an airplane can produce a hazard to ground personnel and since the visibility from the cockpit is limited all ground handling personnel has to observe the minimum safety distances.
 - An engine start on the apron normally must be conducted with the aid of ground personnel. In order to facilitate safe handling on the ramp, ground staff and pilots should use interphone contact and/or hand signals as indicated in IATA Airport Handling Manual, AHM 631 or in Nesma Airlines S.O.M, Before starting airplane movement operations the general area of the operation has to be clear of ground support equipment and with the below phraseology:

G=Ground

C=Cockpit

C: Cockpit to ground
G: Go Ahead

C: We are clear for pushback.
G: All doors are closed, aircraft cleared, chokes removed, steering pin in position, you can release parking brakes

C: Parking brakes removed.
G: Pushing back. I will call you back when cleared to start engines.

G: Pushing back, I will call you back when cleared to start engines.
G: You are now cleared to start engines.
C: Starting number ?

C: Starting number 2
G: ok for number 2
G: Ground to cockpit 2

G: Pushback completed set parking brakes
C: Go

G. Pushback completed set parking brakes

C: Parking brakes set (Starting number one)
G: Ok for number one

C: both engines started you can disconnect.

G: Steering pin removed, aircraft is clear we see on the left/right hand side (it depends where the gate is) for the signal.

Ground to walk away of the aircraft and to give the ok signal to the crew, showing the steering pin (has red band "REMOVE BEFORE FLIGHT")

7.3.3.9 Communication Requirements

7.3.3.9.1 Communication During Engine Start

Coordinate the engine sequence with the flight crew by conducting a pre departure briefing and refer to above mentioned procedure.

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- a) During the engine start, communicate with 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.
- c) From the PIC seat facing forward, the engine on his/her left is referenced as engine number one.

7.3.3.9.2 Communication During Engine Fire

Engine Fire

The flight crew normally detects an engine or APU fire and will take action using the engine extinguishing system. However, alert the flight crew immediately via the headset if flames are noticed from the engine or engine pylon.

If a headset is not available, the appropriate (Fire) hand signal must be used.

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 aircraft.

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.

7.3.3.9.3 Departure Communications

General

The specific dialogue contained herein does not forbid the exchange of additional important information between flight crew and ground staff using non-standard phraseology

7.3.3.9.4 Departure Communication Dialogue

In case of an aircraft taxi out, Pushback and Pushback completed, The dialogue is a sample communication to be used for a departure:

Dialogue between Ground Staff and Flight Crew		
Phase	Ground Staff	Flight Crew

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Preparation	Inform the flight crew about use of a towbar or towbarless tractor (if applicable) Call: CONFIRM PARKING BRAKE SET Reply: BYPASS PIN INSTALLED/NOSE WHEEL STEERING DEACTIVATED	Reply: PARKING BRAKES SET Call: CONFIRM BYPASS PIN INSERTED/NOSE WHEELS STEERING DEACTIVATED Call: CONFIRM CLEAR TO PRESSURIZE?
	Reply: CLEAR TO PRESSURIZE	
After completion of the pre-departure servicing checks	Call: PRE-DEPARTURE CHECKS COMPLETED Call: ELEVATING AIRCARFT Call: READY FOR PUSHBACK	
		Reply: STANDBY
		Call: PUSH-BACK APPROVED (MENTION AIRCRAFT NOSE DIRECTION, START-UP POINT , PULL FORWARD,ETC.)
	Call: CONFIRM PARKING BRAKE RELEASED?	
		Reply: PARKING BRAKE RELEASED
	Call: COMMENCING PUSHBACK (MENTION AIRCRAFT NOSE DIRECTIO, START UP POINT, PULL FORWARD, ETC.)	
Engine start	Call : CLEAR TO START ENGINES.	
		Reply: STARTING ENGINES (MENTION ENGINE START-UP SEQUANCE)
Pushback completed	Call: PUSHBACK COMPLETED,SET PARKING BRAKE	
		Reply: PARKING BRAKE SET.
Disconnecting	Reply: DISCONNECTING, HOLD POSITION AND WAIT FOR HAND SIGNAL ON YOUR LEFT/FRONT/RIGHT (DISPLAY THE STEERING BYPASS PIN	Call: CLEAR TO DISCONNECT.
		Reply: HOLDING POSITION AND

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(IF APPLICABLE TO THE AIRCRAFT TYPE) TO THE FLIGHT CREW	STANDING BY FOR HAND SIGNAL ON THE LEFT/FRONT/RIGHT
---	---

7.3.3.9.5 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	1. Get confirmation that Aircraft parking brakes are set. 2. Get confirmation that the nose wheel steering is depressurized or advise flight crew that the bypass pin is inserted, if applicable. 3. Connect the the Towbar. 4. Connect the Towbarless tractor.
	Chock removal	1. Get confirmation from flight crew that aircraft parking brakes are set. 2. Remove chocks.
	Pre Departure check	Advise the flight crew that 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 parking brakes have been released.
	Movement of the aircraft (pushback/pull out)	Get permission from the flight crew , to commence the pushback.
	Direction of push/nose	If applicable, ask in which direction the aircraft must be pushed or/in which direction the nose should point after pushback.

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	Engine start	When requested by the flight crew, advise when the engines may be started.
Pushback completed and engine start completed	Towbar/Towbarless Tractor disconnect	<ol style="list-style-type: none"> 1. Get confirmation that the aircraft parking brakes are set. 2. Disconnect. 3. Remove the steering bypass pin. If applicable.
	Headset removal	<ol style="list-style-type: none"> 1. Get permission from the flight crew to disconnect the headset. 2. Advise the flight crew to hold position and wait for visual signal at left/front/right of the aircraft.
Departure	All Clear signal	<ol style="list-style-type: none"> 1. Ensure verification of pin removal has been completed if applicable. 2. Give the (All Clear) signal when the path of the aircraft is clear of all obstacles. 3. Get acknowledgement of the (All Clear) signal.

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7.3.3.9.6 Departure Communication without Interphone

An aircraft departure must always be conducted using interphone communications.

If 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 PIC and the ground agent responsible for the departure, including:

- a) Review departure specifics (e.g. direction of movement, final positioning, and taxi out direction).
- b) Review hand signals to be used, including emergency signals.
- c) Repeat all given instructions or acknowledge them in a manner clearly indicating that they have been understood and will be complied with.

7.3.3.9.7 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.

a) Initiated from the Cockpit

The flight crew sets parking brake and re-establishes communication with ground staff via company channel or Air Traffic Control (ATC).

b) Initiated from the Ground

If ground staff needs to reestablish communication with the aircraft after dispatch, do not approach the aircraft if communication cannot be established using hand signals, make contact via company channel or through ATC.

When preparing to re-establish communication with the 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 for as long as possible.
- c) Only the person establishing the interphone communication shall approach the aircraft.
- d) Stay outside the aircraft' engine danger area when approaching the aircraft.
- e) If possible, position the pushback tractor in front of the aircraft in clear view of the flight crew to act as a safety barrier and prevent premature movement of the aircraft.
- f) 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 discharge between the aircraft and the interphone system, Under these conditions communication headsets cannot be worn.

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7.3.3.9.8 Interphone communication Failure

Aircraft Pushback requires a communication interphone. If the interphone becomes unserviceable or communications is lost, the following procedures must be followed:

- a) In the case of a single person operation and if no other means of communication are available, stop the movement, depending on local situation and immediately request assistance to continue movement.
- b) In case of multiple person operation, communication with the flight crew will be established using hand signals, 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 cooperation with ATC, depending on local regulations.

7.3.4 Night Stop Procedures:

Refer to Security Program SP 17.1.6

On night-stop of an aircraft the ground Handling Agent and the Ground Engineer share the responsibility to:

- a. Make sure no one is still hiding on board,
- b. Aircraft are parked in a well-lit area;
- c. Aircraft, when possible, are parked in an observable area;
- d. Aircraft are parked away from fences or buildings which would provide easier access;
- e. For every aircraft parked overnight, NESMA AIRLINES shall apply a tamper-evident seal to all doors of the aircraft
- f. When the aircraft aft is not accessible by a bridge:
 - Close all exterior doors and exterior hatches of the aircraft,
 - Remove all stairs,
 - Ensure no portable stairs, lift devices or passenger transfer vehicles are in the immediate vicinity of the aircraft;
 - Dedicated guards posted on close proximity to each aircraft from the police authority;
- g. When the airplane is accessible by a bridge:
 - Close all exterior hatches of the aircraft,
 - Close all exterior doors of the aircraft not served by a bridge,

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- Lock the door between the terminal and the bridge and ensure that no portable stairs, lift devices or passenger transfer vehicles are in the immediate vicinity of the aircraft;
- h. Lock or keep under constant surveillance, doors which provide access to the bridge from the apron or retract the bridgehead from the aircraft and deactivate the bridgehead positioning controls.

When a higher level of threat is known to exist, the following additional precautions may be recommended.

- a. Additional security lighting stands;
- b. Frequent irregularly timed security patrols on foot or by vehicles;
- c. Tamper evident seals applied to doors, operable windows, inspection and service panels;
- d. Covers on access points such as engine intakes;

In case there is an intrusion, it is important that the security authority does not allow the person to have access to the aircraft. Subsequently, the security coordinator should be notified.

7.3.5 Opening/Closing Aircraft Cabin Access Doors

GSE or a passenger boarding bridge shall be:

1. Positioned at a cabin access door prior to door opening;
2. Remains positioned at a cabin access door at all times when such door is open unless an appropriate fall prevention device is placed across the open door;
3. Removed from a cabin access door immediately after such door is closed.

GSE or a passenger boarding bridge should not to be removed from a position at an aircraft cabin access door until either:

- The door has been closed and secured by an authorized person, or
- An appropriate fall prevention device has been placed across an open door.

7.4 Main Factors of Operating the Equipment on the Aircraft

Equipment's:

- Daily check the equipment for its cleanliness and fitness before bringing it to the site to make sure it's serviceable.
- Equipment should be placed in the north of the site within 15 minutes before the aircraft arrival.
- Equipment shouldn't be placed between aircraft.
- Equipment shouldn't be placed under aircraft.
- Equipment shouldn't be placed beside the aircraft and the front or the back of the equipment shouldn't be towards the aircraft.

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- Equipment that enters the aircraft shouldn't make any contact with the aircraft frame and shouldn't be very close to it.
- It is not allowed to use any equipment with a broken exhaust pipe or any equipment diffusing sparks or flames.
- It should be noted that the aircraft should be lowered by about 12 inches during being provided with catering, loading and during passengers boarding.
- Equipment tiers should be checked as the contact between the tires and the ground will diffuse sparks or flames.
- Equipment's must be maintained according to manufacturer instructions

Driving:

- Driving an equipment will be allowed only to authorized persons.
- Nesma Airlines use audits as a tool to ensure only qualified and authorized personnel are permitted to operate ground support equipment
- Driving on the ramp with a speed exceeding 20 km/h is forbidden.
- Driving on the ways is forbidden.
- Driving on flammables or oils is forbidden.
- Drivers are not allowed to drive with their shoes having any oils or similar materials.
- Driving in front of the aircraft is forbidden during the aircraft taking off.
- Cargos shouldn't be piled up on cargo trolleys that should be pulled slowly.
- Navigation lights should be checked in order to ensure their soundness.
- Equipment should approach the aircraft slowly MAX 5 Km/h.

Aircraft:

- After the aircraft stops completely, chocks should be placed in front of and behind the aircraft wheels.
- It should be noted that the aircraft should be lowered by about 12 inches during being provided with catering, loading and during passengers boarding.
- During providing the aircraft with fuel, no stairs can be pulled till finishing providing the aircraft with fuel so long as there are passengers or worker on the board of the aircraft.
- Lights of stairs steps should be turned on by night during passengers boarding and descending.
- During starting the engines, stairs should be placed away from the aircraft till its departure from the site.
- A belt should be placed on the aircraft door before pulling any stairs while the door is open.

Stand:

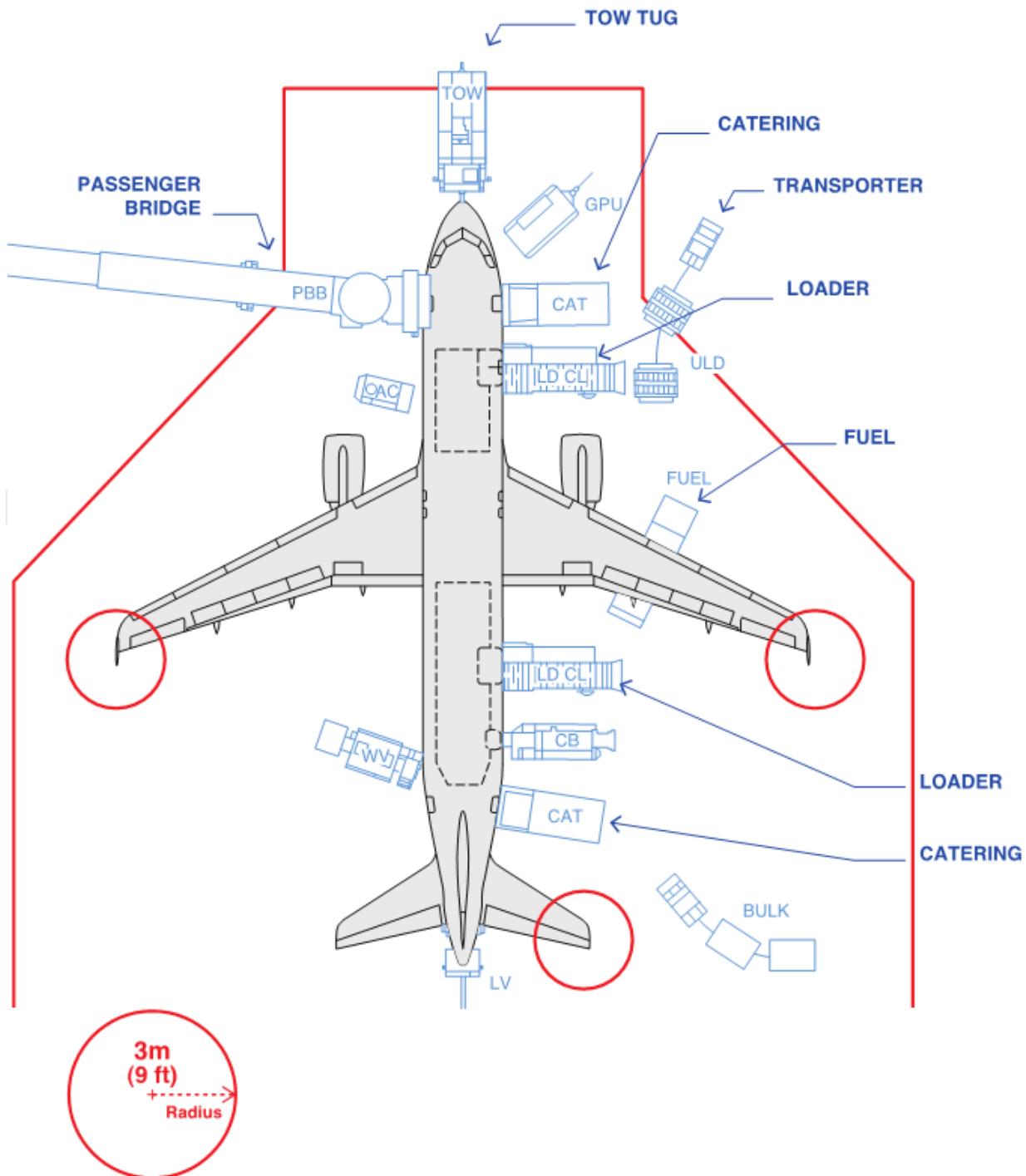
- Consider the size of the site and its cleanliness and remove everything hindering the entrance of the aircraft or anything that may move because of its exhaust which will lead to an accident.

7.5 Equipment's required for the Aircraft Servicing (Taking off – Arrival)

- The Equipment required for marshalling the aircraft to the site are marshalling sticks during the daylight and lightened lanterns during night.
- Chocks should be placed for securing the aircraft wheels after its stoppage.
- Passenger stairs.
- Buses for passengers coach.

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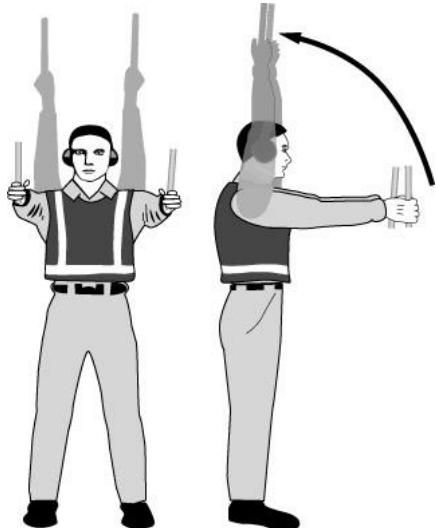
- Conveyer belts for loading / offloading baggage and cargo.
- Tow tractors for moving baggage and cargo trolleys to the halls.
- Cargo and luggage trolleys.
- Water vehicle for providing aircraft with water.
- Toilets vehicle for toilets servicing.
- Catering vehicle for catering loading / offloading.
- Ground power unit (GPU) to provide electricity to operate engines in case APU in-operation.
- Air start unit (ASU) to provide bleed to operate engines in case APU in-operation.
- Air conditioning for providing cold air in case air condition is not serviceable.
- The following illustration shows the positioning of ground handling equipment's required for the aircraft servicing:



7.6 Signals for Marshalling Aircraft on Ground

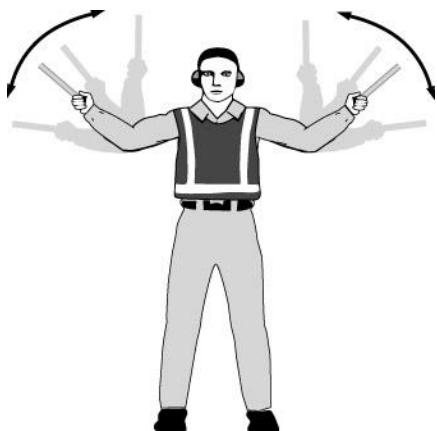
In the following, reference to wands may also be read to refer to 'Day-Glo' table tennis bats or gloves (daytime only).

Identify gate



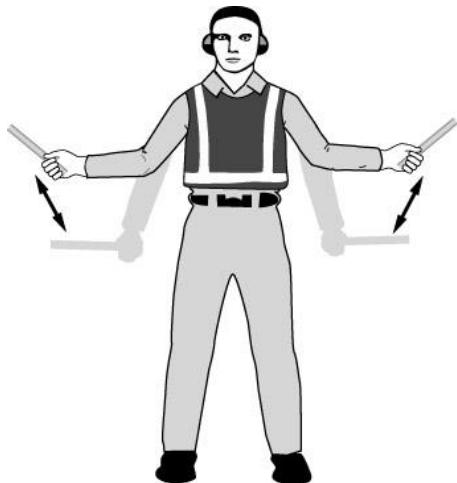
Raise fully extended arms straight above head with wands pointing up, move hands fore and aft to keep from blending into background.

Continue to taxi straight ahead



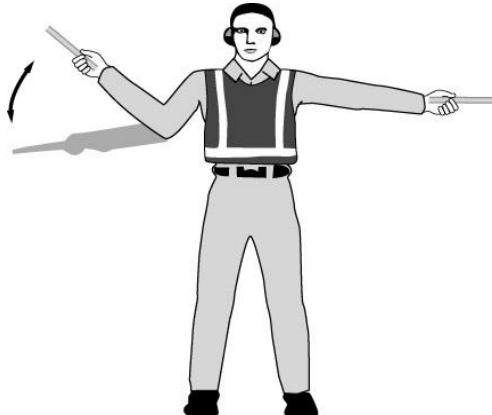
Bend extended arms at elbows and move wands up and down from waist to head.

Slow down



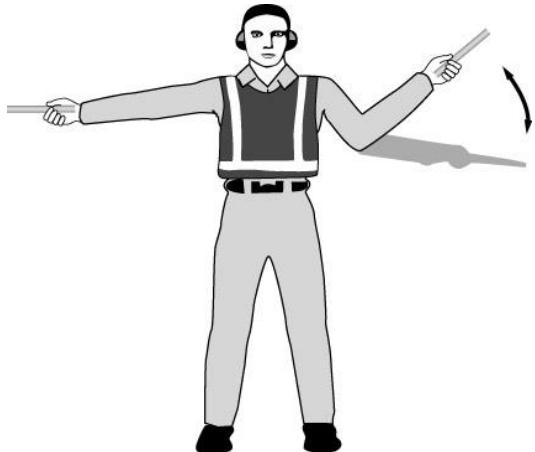
Move extended arms downwards in a “patting gesture”, moving wands up and down from waist to knees.

Turn right (from the pilot's point of view)



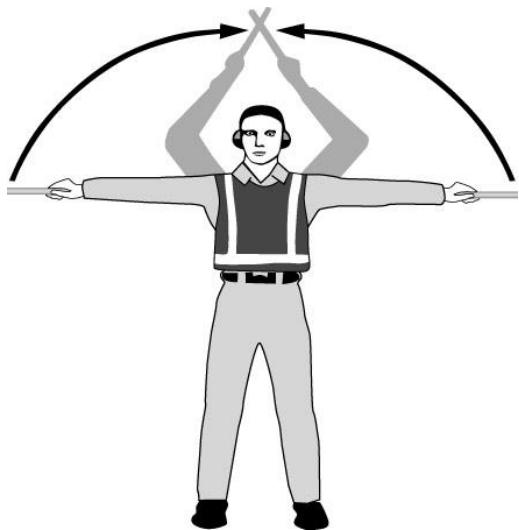
With left arm and wand extended at a 90° angle to the body, right hand makes the come ahead signal. The rate of signal motion indicates to the pilot the rate of aircraft movement desired.

Turn left (from the pilots point of view)



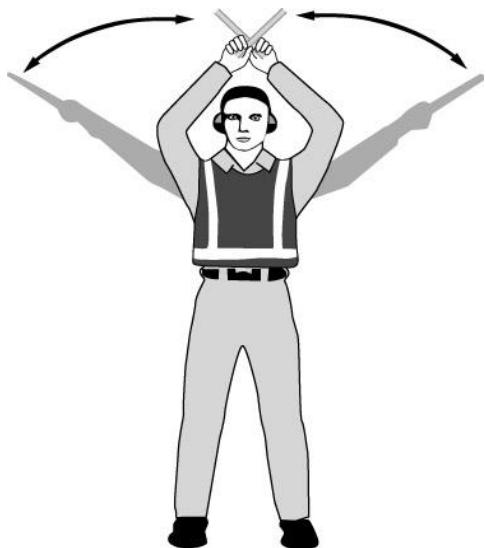
With right arm and wand extended at a 90° angle to the body, left hand makes the come ahead signal. The rate of signal motion indicates to the pilot the rate of aircraft movement desired.

Normal stop



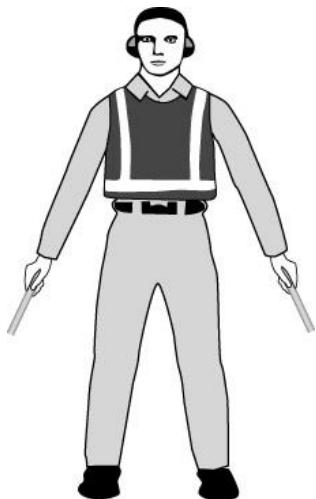
Fully extend arms and wands at a 90° angle to the sides and slowly move above the head until wands cross.

Emergency stop



Abruptly extend arms and wands to top of head, crossing wands.

Hold position/Stand-by



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

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Proceed to next marshaller or as directed by tower/ground control



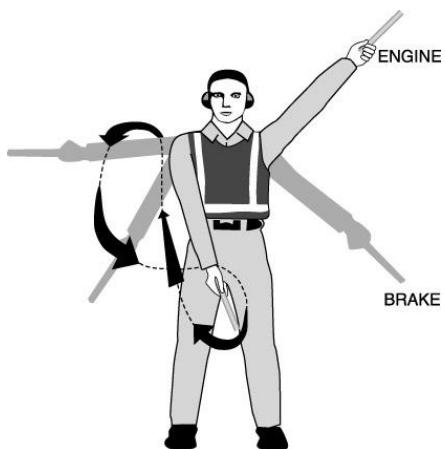
Point both arms upward, move and extend arms outward to side of body and point with wands to direction of next marshaller or taxi area.

End Marshalling



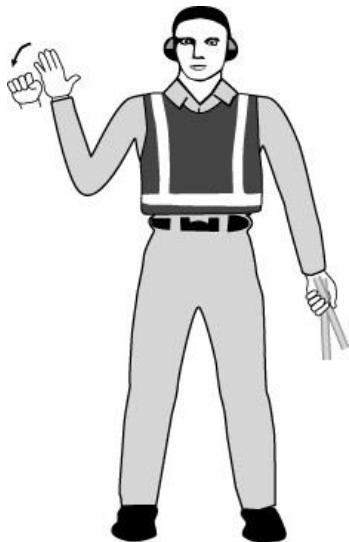
Perform a standard military salute with right hand and/or wand to dispatch the aircraft. Maintain eye contact with the flight crew until the aircraft has begun to taxi.

Fire



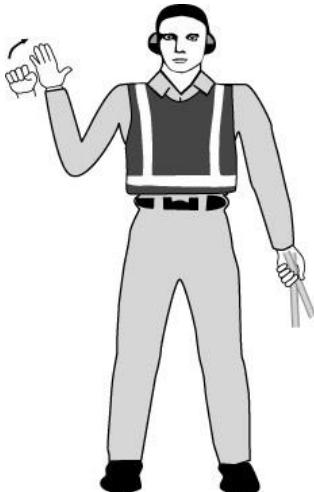
Move right hand wand in a "fanning" motion from the shoulder to the knee, while at the same time pointing with the left-hand wand to the area of the fire.

Set brakes



Raise hand just above shoulder height with open palm. Ensuring eye contact with the flight crew, close hand into a fist. **DO NOT** move until receipt of thumbs up acknowledgment from the flight crew.

Release brakes



Raise hand just above shoulder height with hand closed in a fist. Ensuring eye contact with the flight crew, open palm. **DO NOT** move until receipt of thumbs up acknowledgment from the flight crew.

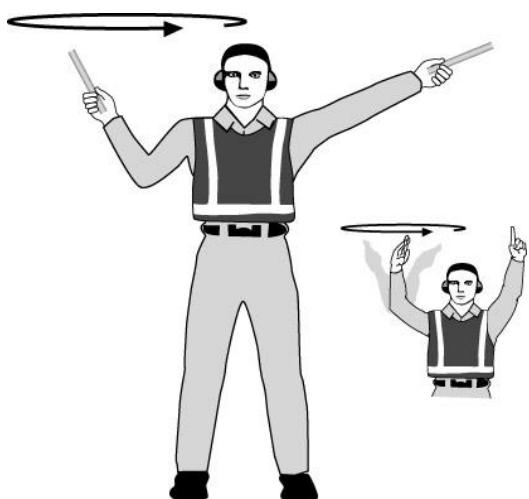
Chocks Inserted



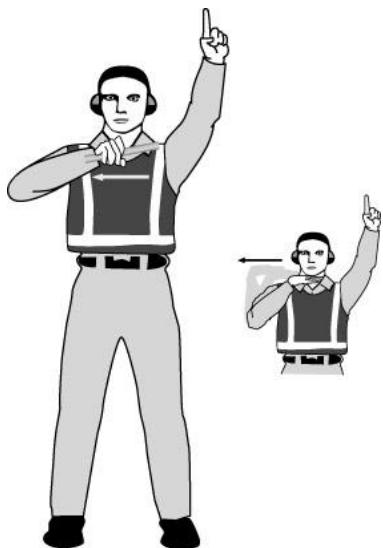
With arms and wands fully extended above head, move wands inward in a “jabbing” motion until the wands touch.

Chocks removed

With arms and wands fully extended above head, move wands outward in a “jabbing” motion. **DO NOT** remove chocks until authorized by the flight crew.

Start engines

Raise right arm to head level with wand pointing up and start a circular motion with hand, at the same time with the left arm raised above head level point to engine to be started.

Cut engines

Extend arm with wand forward of body at shoulder level, move hand and wand to top of left shoulder and draw wand to top of right shoulder in a slicing motion across throat.

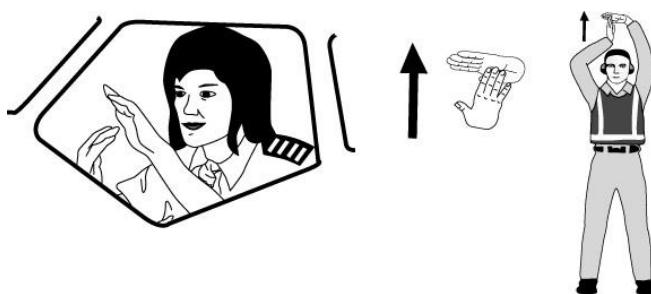
Technical/Servicing communication

A number of hand signals are used to communicate to flight crews during the aircraft movement process that relate to servicing or handling functions.

Manual signals should only be used when verbal communication is not possible. Ensure an acknowledgment is received from the flight crew on all occasions.

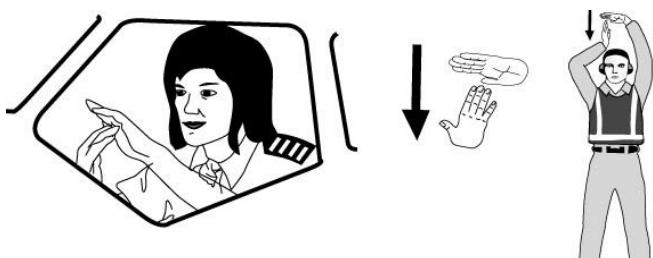
Technical/Servicing Signals

In the following, reference to wands may also be read to refer to 'Day-Glo' table tennis bats or gloves (daytime only).

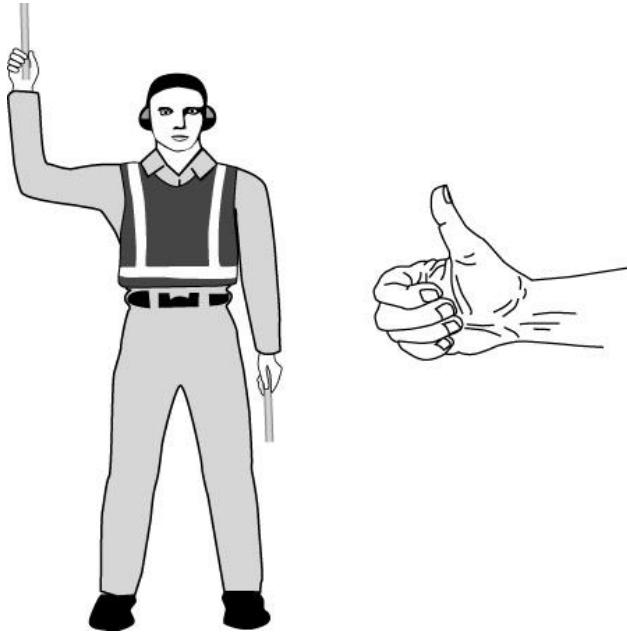
Connect/disconnect ground power

1. To connect ground power:

Hold arms fully extended above head, open left hand horizontally and move finger tips of right hand into and touch the open palm of left hand (forming a "T"). At night, illuminated wands can also be used to form the "T" above the head.

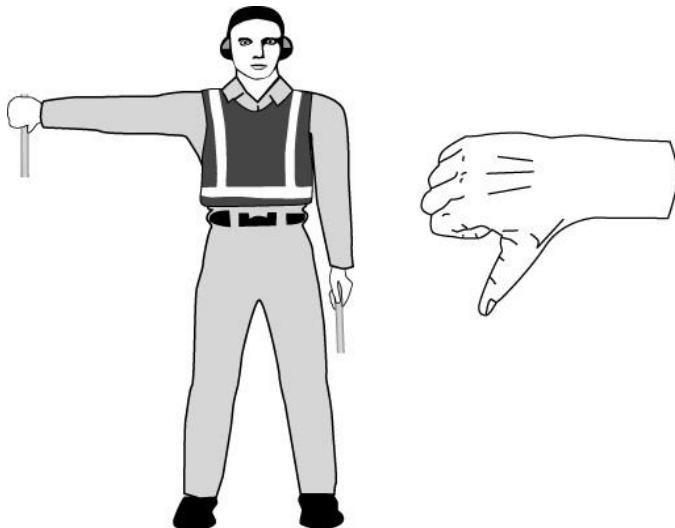
**2. To disconnect power:**

Hold arms fully extended above head with finger tips of right hand touching the open horizontal palm of the left hand (forming a "T"), then move right hand away from the left. **DO NOT** disconnect power until authorized by the flight crew. At night, illuminated wands can also be used to open the "T" above the head.

Affirmative/all clear

Raise right arm to head level with wand pointing up or display hand with thumbs up, left arm remains at side by knee.

Negative



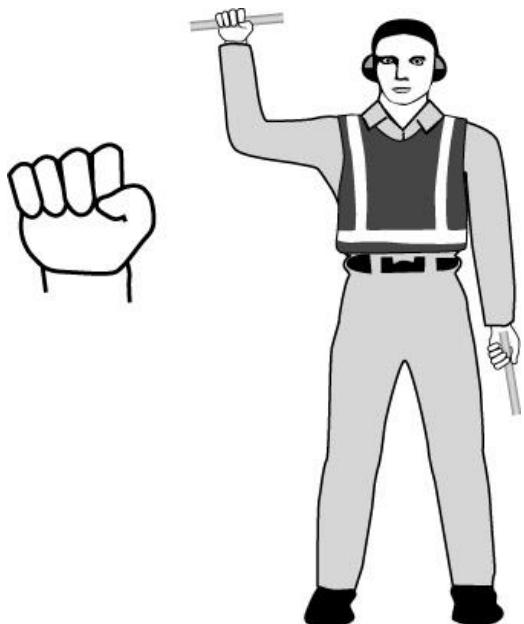
Hold right arm straight out at 90° from shoulder and point wand down to ground or display hand with thumbs down, left hand remains at side by knee.

Interphones



Extend both arms at 90° from body and move hands to cup both ears.

Do not touch controls



Raise right hand above head level and close fist or hold wand in horizontal position, left arm remains at side by knee.

Open/close stairs forward/aft



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With right arm at side and left arm raised above head at a 45° angle, move right arm in sweeping motion towards top of left shoulder.

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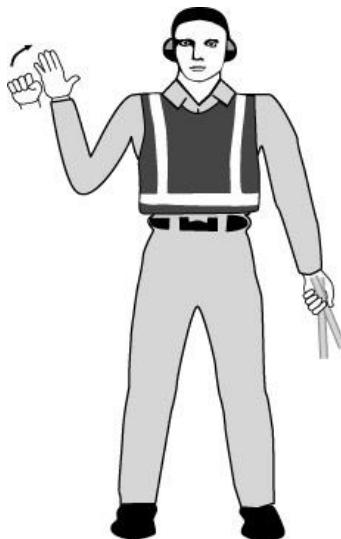
GROUND CREW PUSHBACK COMMUNICATION (HAND SIGNALS)

The following signals should be used to provide a standard means of non-verbal communication between the ground personnel involved in pushback operations.

The signals are to be used during both the tug/towbar connection/disconnection process and at the start and end of the pushback operation as indicated.

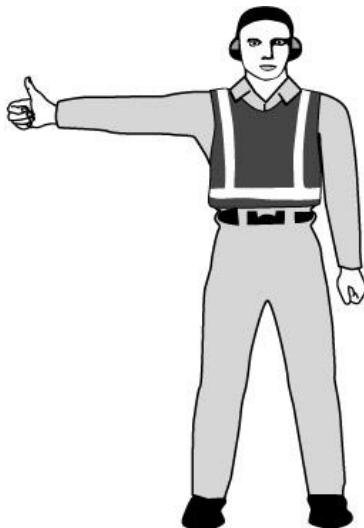
Headset operator to Tug driver

Vehicle brakes off



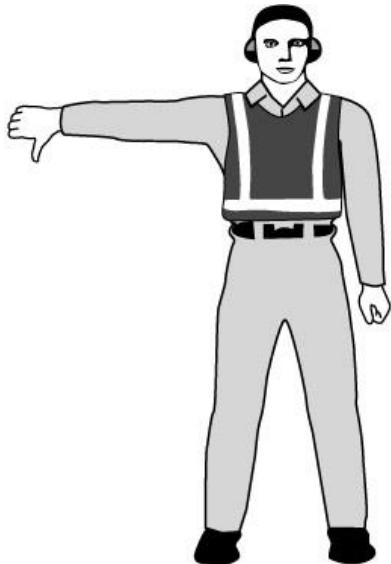
Raise hand just above shoulder height with closed fist and **ensuring eye contact with tug driver** open palm.

Clear to push



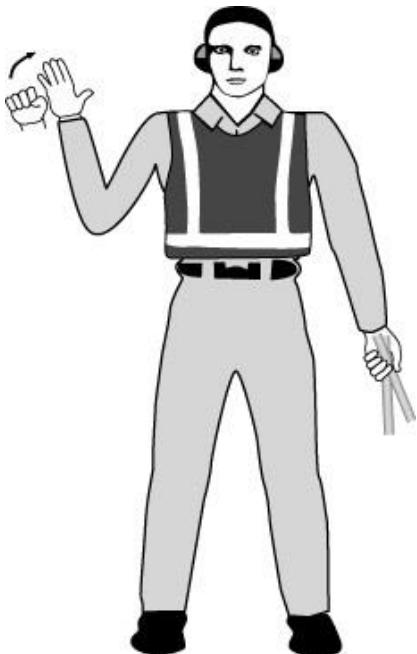
Hold arm straight out at a 90° angle from the shoulder and display hand with thumb up. This indicates to the tug driver that all equipment is clear of the aircraft, the chocks have been removed, the aircraft brakes are off and the flight crew has given clearance to commence pushback.

Negative/hold



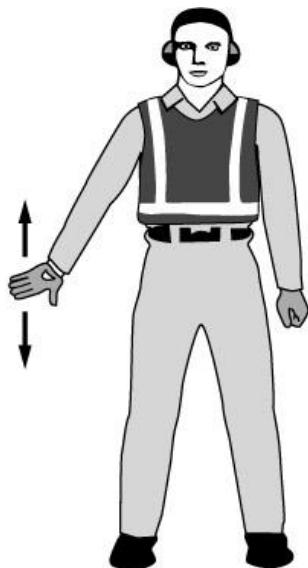
Hold arm straight out at 90° angle from the shoulder and display hand with thumb down. This indicates to the tug driver that the aircraft is not ready for pushback and to hold position.

Vehicle brakes on/stop



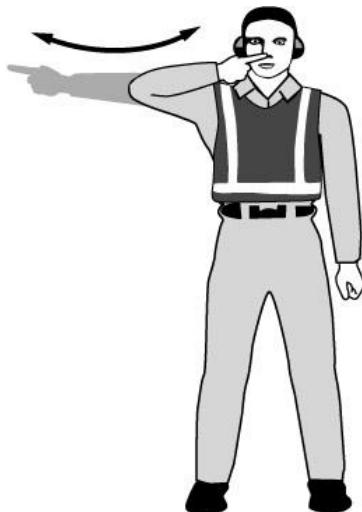
Raise hand just above shoulder height with open palm and **ensuring eye contact with tug driver** close into a fist. At the end of the pushback also indicates to tug driver that aircraft brakes have been set. Tug driver should return the signal to the Headset operator to confirm vehicle brakes set.

Slow down



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

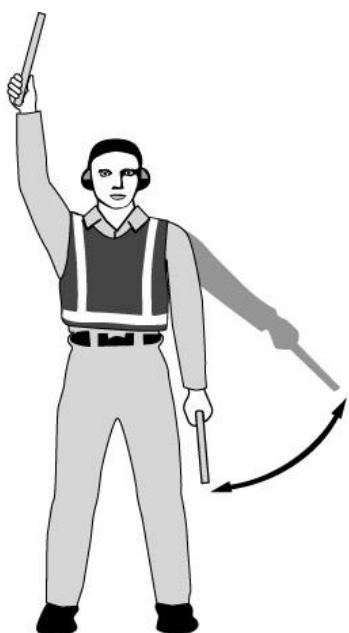
Change of pushback direction



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

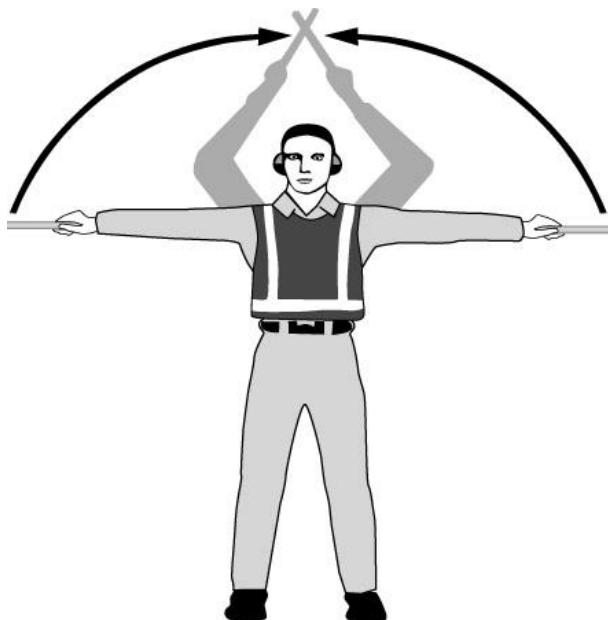
Wing walker to headset Operator/Tug driver

Clear to move aircraft



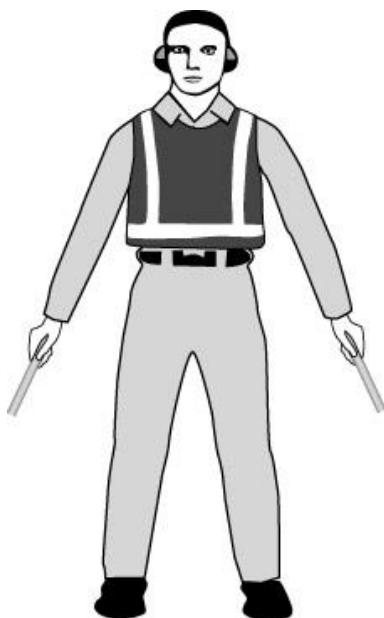
Raise one fully extended arm with wand straight above head and with the other arm and wand at a 45° angle downward to the side make a “sweeping” motion.

Stop movement of aircraft



Fully extend arms and wands to cross above the head.

Hold movement of aircraft



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

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Aircraft Arrival

It is the responsibility of all ground staff to be aware of the dangers that may be present when an aircraft is taxiing onto stand. There must be procedures in place that in the event of imminent danger the aircraft commander is made aware and the aircraft brought to an emergency stop. This may be achieved by:

- The internationally recognized hand signals
- Pressing the “EMERGENCY STOP” button on the stand guidance system.

When an aircraft is taxiing onto stand a member of the ground staff must be clearly visible to the flight crew or, stationed at the “EMERGENCY STOP” button where this is fitted to the stand guidance system.

Where “EMERGENCY STOP” buttons are fitted both at ramp level and in the air bridge either button may be attended. Where the EMERGENCY BUTTON on the jet bridge is attended and other ground handling staff are present, a person must be allocated to attend the ground level “EMERGENCY STOP” button.

7.7 Main Instructions for Operating the Equipment on the Ramp

The following must be observed during operating the equipment on the ramp, practices and procedures set below and in this chapter are for the safe operation of GSE in aircraft handling operations to prevent aircraft damage and injury to personnel:

Make sure GSE are:

- Subjected to a walkaround safety inspection prior to use;
- Parked only in designated areas;
- Driven safely on the apron and within the ERA;
- As applicable to equipment type, operated with a load that is securely locked;
- Where applicable, operated with the use of guide persons;
- As applicable to equipment type, operated with stabilizers, handrails, attachment fittings, transfer bridges and/or platforms correctly deployed when in position at the aircraft;
- Positioned so as not to obstruct an aircraft evacuation or the free movement of other GSE.
- Make an external inspection of the equipment.
- Check the engine oil and the level of cooling water.
- Make sure that the equipment indicators are working soundly.
- Warm the machine up before using it in order to prepare it for operation.
- Check the equipment brakes and the hand brake before driving.
- Check the equipment fire extinguisher and make sure of positioning it in its place to facilitate using it when needed.
- Equipment with technical defects must not be used.

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- Equipment shouldn't be provided with fuel so long as there is fuel in their tank which will prevent fuel leaking which is dangerous for the safety of the equipment.
- The driver is completely responsible for the equipment while driving it during the shift.

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7.7.1 Maintenance of GSE

- Ground equipment's must pass through a scheduled preventive maintenance program and all checks are being recorded, controlled and signed by the authorized engineer.
- Supervisors – Pilots – Engineer – are responsible to report when Nesma Airlines aircraft is handled with equipment clearly visible that they have not been subjected to any kind of maintenance.
- A preventive maintenance program plan for each type of equipment;
- Maintenance completed on such equipment is recorded;
- Such equipment remains serviceable and in good mechanical condition.
- Safety and Quality department is auditing equipment of external providers, to ensure the implementation of scheduled controlled maintenance on Ground support equipment.

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7.8 Main Principles of Sound Driving on the Ramp

- Speed shouldn't exceed (20 km/h).
- Priority of road is to the moving aircraft then to passengers.
- Aircraft is approached from its side.
- Driving under the aircraft wings should be avoided.
- Equipment shouldn't be driven behind aircraft with working engines.
- Driving between aircraft wings should be very careful.
- No one can ride equipment unless there is a seat for him on the equipment.
- Equipment with working engines shouldn't be left without being watched over.
- Aircraft catering vehicles shouldn't be driven while their doors are open. Besides loaded cargo trolleys shouldn't be pulled without having an attendant at the last trolley.
- Smoking is forbidden in the tarmac.
- It is not allowed to pull more than 2 double, 4 single or 4 cargo trolleys.
- It is forbidden to throw any wastes on ground such as aircraft cleaning wastes. It is not allowed also to leave any of the aircraft maintenance tools such as towels, greasing boxes, rasps, screwdrivers, bolts, or even plastic bags as all these tools can cause serious damages to the aircraft. Such things should be avoided and the ground of the airport should be kept clean for the safety of aircraft and passengers.
- Number of the site in which the aircraft would stand must be checked with the tower.
- An inspection must be made for ensuring the inexistence of any impediment which may affect the safety of the aircraft, and should be made within five minutes at least before the arrival of the aircraft to the site.
- Ensuring that the aircraft is standing in a right manner and that its wheels are in their decided places.

7.8.1 Instructions for Sound Driving on the Ramp

- Carelessness during driving and moving around aircraft may lead to injury of personnel or damage of equipment or aircraft. Even if these losses are slight, they may lead to serious damages to the aircraft. Besides, any injury in any part of the aircraft or the equipment may result in delaying the service, in addition to repairing costs that should be incurred. Technicians should always take the following into account:
 - As being responsible for the equipment, you should test brakes efficiency, wheels, and protection means & units. You should also check the general soundness of the equipment and inform the responsible officer immediately about any break down.
 - Any injury, even the injuries that you consider slight, may affect the aircraft badly, and the maintenance engineer or the responsible officer should be informed of them immediately.
 - Remember that you mustn't move the equipment backwards without the help of one of your colleagues. You should comply with the known instructions.
 - In case of the equipment waiting in the waiting places, its front wheels should be upright, the transmission in passing position, waiting brakes in operation position, and contacts are close. If the equipment will be used for performing other assignment, engine can be left working.

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- Remember that equipment shouldn't park beside additional emergency equipment's that are used in passenger evacuation. Equipment shouldn't also park beside aircraft emergency doors.
- It is forbidden to drive the equipment in front of or at the back of the aircraft while its engines are working or during seeing the flashing lights which indicate that the aircraft engines are working.
- Remember to lower the high equipment after finishing its work on the aircraft. Make sure that an appropriate space is left between the equipment and the aircraft before lowering the equipment to avoid scratching the aircraft frame or contacting with it.

7.8.2 Careful driving on the Airport Apron

- Movements around the aircraft should be made very carefully in order to avoid hurting personnel or damaging the aircraft or the used equipment. Even slight break downs may have certain effects on the aircraft due to the difference in pressure during flying. On the other hand, any break down in the aircraft or the equipment may delay the flights in addition to the costs required for repairing damages.

Remember: You are responsible for the vehicle that you are driving. Hence, you should inspect brakes, wheels, and the hubcap (if there is any) before operating the equipment. You should inform the responsible immediately of any disorder.

Remember: Any break down, even slight breakdowns, may affect the aircraft badly due to the difference in pressure during flying. The responsible engineer or the aircraft captain should be informed immediately of any breakdown.

Remember: You shouldn't drive backwards during approaching the aircraft or moving away from it without being guided by somebody.

Remember: On stopping your vehicle, make sure that the wheels are in a straight position, the hand brakes are pulled and the engine is stopped. The engine can be left working if the equipment is required for performing another assignment.

Remember: Vehicles and equipment should not be stopped in a manner hindering when approaching the aircraft or descending its passengers in incidental flights.

Remember: You shouldn't drive on the dangerous areas around the aircraft during seeing the light signal indicating that the aircraft engines are still working or are about to work.

Remember: Levers should be lowered immediately after finishing their usage and after making sure that there is enough space between the vehicle and the aircraft.

Remember: Vehicles shouldn't be driven while their frames are raised.

Remember: Severe turnings around the aircraft should be avoided during driving a unit trailing equipment.

Remember: Driving should be always careful within the speed limits after taking into account prevalent conditions on the apron, such as weather conditions (e.g. rains, snow, ice, fog, etc...). Stable calm driving is the basis of safety on the apron.

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Remember: It is not allowed to drive under aircraft wings (without having permission) and vehicles shouldn't be stopped very close to these wings.

Remember: Don't leave your equipment near the aircraft in a manner hindering the performance of other services.

Remember: The sliding stairs should be driven by using hand gear. Before driving, make sure that this gear can move appropriately.

Remember: Be always careful and alert that the driver in front of you may stop suddenly at any moment without a previous warning or signal.

Remember: Start stopping gradually before arriving to the place in which you will stop. Don't wait till the last moment as it is dangerous to delay stopping.

Remember: You can cross only after making sure that it is not wrong to cross. Don't depend on the other driver in complying with laws.

Remember: Make sure that the lights and light signals are working appropriately before driving.

Remember: While turning around the aircraft, the aircraft should be at the driver's side.

Remember: The aircraft has always the priority of the road.

7.9 Safety of Aircraft, Passengers, and Equipment Movement

- According to the document number 4444 that was issued by the International Civil Aviation Organization (ICAO) to describe the duties of air control officers in the civil airports. Aviation movement service is:
 - Preventing aircraft crash with each other in air and on ramp as well as preventing crashes between aircraft and other objects.
 - Facilitating air and ground movements for achieving the required speed and smoothness.
 - Airport Marshalling is responsible for securing the movement safety in the airport or the movement reasons. The Aforementioned department has the right to:
- Monitor the ground movements of aircraft, vehicles, equipment, personnel, and supervises the implementation of the local and international rules related to securing the safety of these movements. Make sure that all the equipment's meet the navigational specifications. Can issue official licenses for equipment's and driving licenses for all aviation companies' personnel. Can also impose fines on the companies that don't comply with the technical instructions related to securing the safety of aviation or facilitating passengers' movement. Can also impose fines in case of violating passengers' rights.

Breaches are recorded in the following cases:

- Testing aircraft engines on sites without getting permission from the tower or in case of operating high power engines.
- Aircraft standing in sites other than their own sites or aircraft deviating from navigational signs in a way affecting other entrance to or departure from these sites.
- Infiltrating human wastes on sites or throwing aircraft cleaning wastes on sites
- Pouring petrol out on site during providing aircraft with fuel.

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- Delayed arrival of equipment or passenger buses to the site.
- Leaving the equipment in places other than the places decided for them.
- Driving without a license or having invalid driving license for the equipment or its driver.
- Exceeding the permitted speed.
- Driving in other roads or on the runway and taxiways.
- Piling up cargo and / or baggage on trolleys or trailers and not having an attendant at the last trailer.
- Leaving empty or cargo loaded vehicles, equipment, or trailers on the aircraft sites or under or besides loading bridges.
- Having more than one rider beside tractors drivers.
- Driving unsound equipment or an equipment not complying with the international specifications.
- Driving aircraft catering vehicles while their back doors are open.
- Smoking on the tarmac especially in sits and under loading bridges.
- Any other breaches affecting the work.

7.10 Safety on the Aircraft Stand

- As jet engines have a great suction power, you shouldn't move within 6 meters in front of the jet engine and within 2 meters from its sides.
- The least speed of the jet engines is 160km/h and its temperature is about 38 degrees centigrade. These ranges increase during increasing the jet engine. Hence, you should for your safety, stay 65 m away from the engine of the stopped aircraft and 156 m from the moving aircraft. Take care also that some equipment such as stairs and cargo trolleys can be overthrown by this exhaust.
- Flaps and slats existing in front of and at the back of the wings can open suddenly. Hence, you should stay away from the front and the back of the wings.
- Works shouldn't be performed near the aircraft wheels without informing the technicians on the aircraft as doors of landing wheels can be opened or closed suddenly which is very dangerous.

7.11 Safety of Aircraft Loading Equipment

- All loading personnel should know the equipment that they use in performing their assignments and work.
- Cargo transportation trailers that are used by loading personnel who are responsible for the safety of these trailers and for their correct usage to avoid accidents. Loading personnel should not use defective trailers as these trailers should be sent to the specialized workshops to be repaired.
- Self-motioned loading belts capable of carrying certain weights suitable for their capacities. These belts are driven and operated by technicians and are used by loading personnel under the aircraft.
- Winches with forks are used for parcels with certain sizes or weights. Loading personnel should use these winches carefully in order to avoid damaging the floor of the aircraft stores or the parcel itself.

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- Types of levers and cranes for moving heavy parcels and cargos within the stores or to the stores. These levers and cranes should be used carefully to avoid damaging the floor of the aircraft stores or the parcel itself.
- Ropes that loading personnel use for fastening heavy parcels in the stores or on bales.
- Fastening rings for fastening parcels with each other on the floor of the store to prevent their movement.
- Nets for the loading processes:
 - Special nets for bales contents.
 - Nets in the stores for keeping cargos in their places on the aircraft stores.
- Boards for heavy and very big parcels to distribute the load on a bigger area of the aircraft floor in compliance with the recommended floor loading specifications.

7.12 Safety of Loading Personnel and Accidents Prevention

- Cargos and loads should be arranged in compliance with the distribution agreed on taking into account to load the heavy cargos first, then the lighter cargos and then the fragile cargos in order to ensure cargos safety and performance efficiency.
- Personnel should wear industrial safety shoes in order to avoid injury and sliding.
- You should lift loads suitable for your physical abilities.
- Personnel should wear safety belt to avoid injury.
- Loading personal should use suitable means for boarding to and descending from stores to avoid falling or injury.
- Animal cages should be handled from the part dedicated for hands in order to avoid being hurt by the animals kept in these cages.
- Loads that are not fastened well should be handled carefully in order to avoid injury or loads damage.
- Make sure before moving that trailers are connected well to the tractors in order to avoid accidents.
- Loads of cargo transportation trailers should be secured before moving to avoid their sliding or falling which will in its turn lead to avoid personnel, equipment or aircraft accidents.
- Parcels or baggage without cards showing their destination and data shouldn't be loaded because loading such parcels or baggage will make subject to being:
 - Lost
 - Loaded to another destination
- Tractors, during moving in the handling area around the aircraft, should move only on the movement paths of the ramp with a speed not exceeding 20km/h.
- Doors of wide aircraft stores should be opened very carefully especially in the windy weather to preserve the safety of these doors.
- Anything noticed in the aircraft body should be reported about immediately in order to fix it promptly to preserve the safety of the aircraft.
- Fork cranes should be used carefully to avoid accidents and aircraft body damage.
- Drivers should be directed in order to ensure the good performance of work.
- Care should be taken during loading and unloading bales on and from aircraft stores in order to avoid hurting your body or feet.

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- Make sure that the window is fixed well behind the doors of the aircraft stores to ensure that cargos or loads are not behind the door which will make it easy to open and close these door.
- Don't approach aircraft with working engines in any case.
- Don't load any cargo on the aircraft till making sure from the loading officer of its destination and its data.
- Seriousness, punctuality, and compliance with orders will result in a distinguished performance without any accidents and will preserve personnel, equipment, and aircraft safety.

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7.13 Safe Operating Practices in Aircraft Handling

INTRODUCTION

Safety in aviation is a permanent requirement and its first commandment. In the air and on the ground, safety first is the rule. Airside safety rules and procedures ensure safe handling, therefore, safety regulations should be understood and always applied on the apron, on and around aircraft, in hangars and workshops.

Should even the slightest scratch or dent in the aircraft occur or is noticed, it must immediately be reported to permit technical evaluation. As aircraft have to withstand very great forces at high altitudes personnel should be made aware that even minor deformations, apart from detracting from performance, could be the direct cause of serious accidents.

Every organization should co-ordinate safety performance measures, promote safety and assist with continuous improvement practices in order to maintain the highest standards of safety.

SCOPE

The scope of this AHM is to provide organizations with industry "best practices" guidance material that, when implemented, will provide an acceptable standard of safety in aircraft handling operations.

The material contained in this AHM must be complemented with detailed procedures and practices.

RECOMMENDATIONS

It is recommended that:

Training of personnel in correct operating procedures and safe work practices, with the reasons for these procedures and practices, form an integral part of any organization's structure.

The training should stress to the personnel the benefits/value to themselves of using all appropriate personnel protective equipment and of following established practices and procedures.

Companies enforce the application of all safety rules, procedures and requirements in all activities connected with aircraft handling.

Ground support equipment, when driven or operated on the apron, particularly in the vicinity of an aircraft, must be operated with extreme care to avoid any hazard to personnel and/or any damage to aircraft or load.

Authorities utilize standard markings on all aprons, gates and roadways per AHM 632.

Aircraft be fitted, whenever practical, with powered/ mechanized in-plane loading systems.

The following practices, as a minimum, should be taken in order to ensure that safety is a prime consideration in all activities associated with aircraft handling operations.

7.13.1 Personnel Safety in Aircraft and Load Handling Operations

Introduction

Issue No.: 09

Issue Date: JAN24

Revision No.: 00

Revision Date: JAN24

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People are both a vital asset and a valuable resource, therefore specific practices must be in place to ensure their safety.

As manual handling of baggage/material is the primary cause of personnel injuries, suitable and sufficient risk assessment of the manual handling tasks should be conducted and appropriate controls put into place. This would include both long term and short term solutions.

To protect the health and safety of personnel, identified hazards within the workplace should be managed in the following order:

- (a) by the elimination of the hazard;
- (b) by the reduction or control of the hazard; and
- (c) Finally through administrative controls e.g., procedures, training, devices, materials, personal protective equipment.

Safe operating procedures, training, and supervision of personnel should clearly monitor "at-risk" behavior and conditions related to baggage/material handling operations.

7.13.2 Personal Protection

Safety shoes or boots should be worn to prevent foot injuries.

Approved hearing protection should be worn when working in noise-intensity areas, i.e. on the apron, maintenance lines, etc.

Outer garments that contain reflective material and are of high visibility colours should be worn by any person whose duties require airside access should wear. The design, material and layout of the high visibility garment should take into consideration both local regulations and specific operating conditions, e.g. weather.

Clothing appropriate to the weather conditions should be made available to personnel.

Gloves should be worn by material handling personnel and equipment operators.

Protective gloves should be worn as appropriate to the job function, e.g. lavatory servicing.

Face protection should be worn where there is the possibility of fluid "splash back" in the job function.

Safety glasses should be worn as appropriate to the type of work being performed.

Jewellery such as rings and identification bracelets should not be worn.

Neckties should not be worn, unless they are quick release (clip) type.

7.13.3 Operating Practices

Personnel shall not walk or stand on a moving conveyor belt.

Personnel must not ride up or down on the rear platform of a loader.

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Personnel should never attempt to jump off or on a moving vehicle.

Personnel should not be transported on equipment unless there is a seat for them.

Personnel on moving equipment must be seated properly and should keep their bodies within the confines of the vehicle structure.

Personnel must not ride on elevating platforms when the vehicle is in the drive mode.

Personnel should not walk on rollers or castors

On arriving aircraft all personnel must remain clear of the propellers, engine inlets and exhausts until the engines have spooled down and, in the case of propellers stopped turning. Personnel, unless required to perform a specific function such as connection of ground power due to an unserviceable APU, must not approach an aircraft until the anti-collision beacons have been switched off. There should be a clearly defined procedure detailing how personnel may safely approach an aircraft when the anti-collision beacons are on.

On departing aircraft, as soon as the anti-collision beacons are on, personnel must remain clear of propellers, engine inlets and exhausts. Personnel, unless required to perform a specific function must immediately vacate the area. There should be a clearly defined procedure detailing how personnel involved in the departure process are to remain clear of the aircraft when the anti-collision beacons are on.

Personnel should stand clear of exits/entrances of facilities when a train of carts/dollies passes.

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.

Gates of loaded carts should be lowered carefully. Serious injuries have resulted from cargo tumbling out of carts.

Extreme care should be exercised when entering and leaving aircraft cabins, holds and compartments. Aircraft cabins shall only be entered or exited by using stands, steps, or loading bridges and which have been properly positioned and secured. 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.

Loose objects (FOD) dropped onto or observed on the apron must be picked up and put into FOD bins. The surface of the apron must be kept free of any objects that might cause damage to aircraft or equipment. Examples of such objects are; catering items, baggage tags/straps, garbage.

Personnel should not walk between unit load devices (ULDs) which are being transported by vehicle or trailer. Nor should they walk between ULDs which are being held on the ramp awaiting dispatch.

7.13.4 Portable Electronic Devices (PED)

Portable Electronic Devices (PEDs) covers, but is not limited to, Mobile (Cell) Telephones, Portable Radios and Pagers. Where National, State or Local road traffic legislation exists governing the use of portable electronic devices, this should be applied airside. Only company approved and/or issued

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devices should be allowed airside, should not impair the use of PPE especially hearing protection and, in order to prevent accidental battery detachment, be suitably encased in a protective cover. Personal PEDs, unless specifically authorized, should not be allowed airside.

Use of portable electronic devices, especially mobile (cell) telephones, can cause loss of concentration and situational awareness, even to pedestrian users. Communication should be relevant and as brief as possible.

7.13.5 Load Handling

Personnel should assess the weight and never attempt to lift or move more than their personal physical capabilities.

Recognized lifting techniques should be utilized at all times to reduce the risk of personnel injury.

To prevent fingers and hands becoming jammed between objects all load should be slid into place rather than lifted.

Handling load by the metal strapping, which is frequently used to bind heavy or awkward shipments, should be avoided.

All load should be set down easily (rather than dropping it) to avoid injuries to the feet and toes as well as to prevent damage to aircraft flooring and load.

When moving pallets/containers, hands and feet should be kept clear of stops/locks/guides so they do not get caught between the pallet/container and floor hardware.

When handling live animals, fingers and hands should be kept clear of the interior of the containers to avoid being bitten.

With the aim of reducing muscular/skeletal injuries to passenger handling and baggage loading employees, it is recommended that:

The maximum weight of any single piece of checked baggage should not exceed 23 kgs (50 lbs), without prior arrangement. "Heavy" tags/labels must be placed on all pieces of baggage which exceed 23 kgs, with the actual weight of the piece to be shown on the "heavy" tag/label. While must not exceed 32 Kg.

7.13.6 Fire Protection and Prevention

Fire prevention is more important than firefighting.

Good housekeeping is essential. Garbage should not be allowed to accumulate, but should be disposed of into approved containers.

Any suspected or known fire must be reported immediately.

Faults in electrical wiring must be reported immediately.

Smoking shall NOT be permitted on any apron areas or in any vehicles on the apron.

The wearing of boots with steel tips showing, steel heels or nails in soles should be prohibited.

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The location of fire-fighting equipment, fire alarms, emergency shut-offs, etc. must be known to personnel.

Access to fire-fighting equipment, fire alarms, emergency shut-offs, etc. should not be obstructed.

If fire is discovered in a parked aircraft any persons on board should be immediately advised and evacuated.

If possible, doors and hatches etc. on aircraft should be closed.

If fire occurs on a piece of ground support equipment, it should be controlled utilizing either the apron extinguishers or extinguishers on the equipment. As soon as is practical, the equipment should be removed from the vicinity of the aircraft.

Equipment should not be operated in the vicinity of a fuel spill.

Personnel should know the types of firefighting equipment available and should be trained in their use.

7.13.7 Chocking Of Aircraft

Chocks should be of a high visibility colour or be identified by high visibility markings.

Chocks should be triangular in shape, with an approximate 45° angle at the point at which the tyre makes contact.

Chocks should be made of a material that has a suitable coefficient of friction and that has adequate rigidity.

The length of the chock should be such that it covers the full width of the wheel(s) required to be chocked.

The height of the chock should be in relation to the size of the wheel and the type of tyre.

Chocks should be stored in a dedicated area so that they are not the cause of FOD.

Personnel should be made aware of danger areas in the vicinity of the aircraft wheels, such as hot brakes and protrusions, gear doors and antennae, which could cause injury.

Chocks should be positioned on an aircraft according to airframe manufacturer recommendations.

Chocking of the aircraft main gear should be achieved by positioning the chocks in the front and rear of the outboard tires using an approach path directly from the front and rear.

Placing of chocks on an arriving aircraft must only be performed after engine spool down, anti-collision lights switched off and clearance to approach the aircraft is given by the responsible person.

Chocks, when positioned, should be parallel to the wheel axle and only lightly touching the tyres.

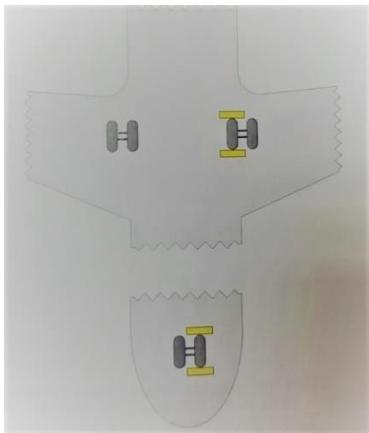
In the event of high wind conditions, additional chocking/other measures may have to be taken to secure the aircraft.

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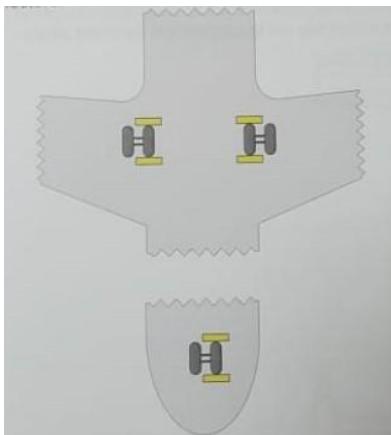
Chocks should not be removed from an aircraft until clearance is given by the responsible person.

After use, chocks should be removed to a designated storage area.

7.13.7.1 Chock Placement Diagrams (Normal Operation)



7.13.7.2 Chock Placement Diagrams (Out of service/Night-Stop/High Winds)

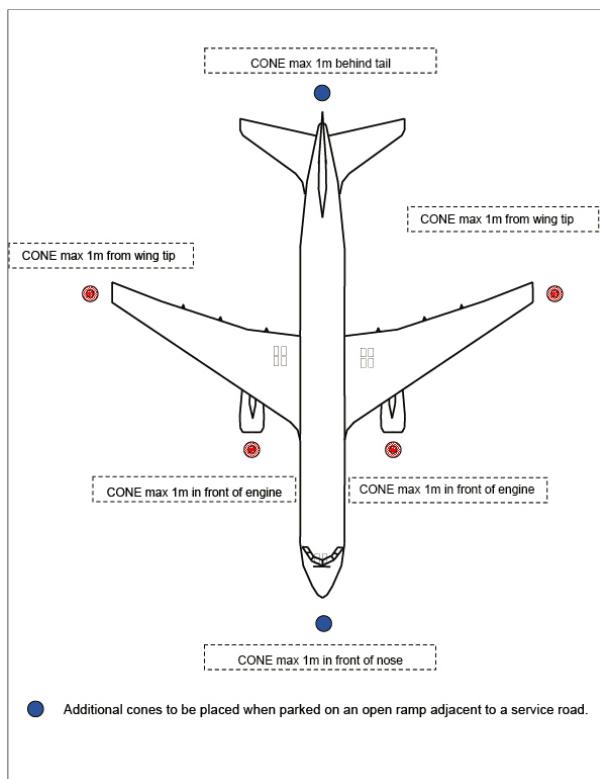


7.13.8 Use of Marker Cones

The purpose of "coning" aircraft is to create a safety buffer around specific areas on aircraft that are susceptible to ground damage.

- Prior to arrival of the aircraft, make sure there are sufficient serviceable safety cones to protect the aircraft type to be handled.
- Do not approach the aircraft to position cones unless all of the following criteria are met:
 - Aircraft has come to a complete stop.
 - Engines have been shut down and are spooling down.
 - Anti-collision lights are switched off.
 - Aircraft has been chocked.

- Place safety cones on the ground in accordance with the following diagrams—within a maximum of 1 meter outward from the point of the aircraft being protected. Cones must not be placed in high wind conditions:
 - Additional safety cones may be needed as per operational requirements or local regulations.
- GSE must not approach the aircraft until all safety cones have been placed.
- All required safety cones shall remain in place until GSE and vehicle activities around the aircraft have ceased prior to departure of the aircraft.
- Ensure all GSE has been removed from the safety zone.
- Remove the safety cones from around the aircraft.
- When not in use, place the safety cones in the designated storage area.



Cone Number	Description
Red Color	Cones max. 1 m (3 ft) in front of engine
Red Color	Cones max. 1 m (3 ft) from wingtip

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Blue Color	Additional cones to be placed at the applicable end(s) of the aircraft where immediately adjacent to a service road.
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7.13.9 Basic Operating Requirements for Ground Support Equipment Operations

- Only adequately trained, qualified and authorized personnel should be permitted to operate equipment.
- Personnel must not operate motor vehicles or equipment whilst using hand held portable electronic devices. Such devices should not be used unless a suitable 'Hands Free' device, either personal or installed, is available.
- Equipment should only be used for its intended purpose.
- 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.
- Apron equipment is to be positioned behind the equipment restraint line with the parking brakes applied prior to the arrival of the aircraft at the parking position.
- The passenger loading bridge is to be in the fully retracted position prior to aircraft arrival.
- During positioning of the passenger loading bridge, only the bridge operator should be in the bridgehead. For safety reasons, all other staff must keep sufficient distance from the bridgehead.
- Equipment, including passenger loading bridges must not move towards the aircraft until it has; come to a complete stop, chocks are positioned, engines shut down (see note), anti-collision beacons switched-off, and if applicable, ground to flight deck contact established. Note: It may be necessary to connect external power prior to engine shut down.
- The interface of equipment with the aircraft must take into consideration the hazard areas as identified in AHM 904.
- Equipment shall have parking brakes applied, with gear selector in park or neutral when parked away from, or positioned at, the aircraft. If equipped, wheel chocks will be applied.
- Ground support equipment should be in good mechanical condition.
- Equipment when approaching or leaving an aircraft should not be driven faster than walking speed.
- Attachment fittings/transfer bridges and platforms must be correctly deployed.
- Handrails on conveyor belts, loaders and other elevated devices must be in the raised position when the unit is in use.
- Ground equipment which interfaces with the aircraft passenger doors (e.g. passenger steps, catering vehicles etc), should have platforms of sufficient width that will allow the aircraft doors to be opened/closed with the equipment in place and the safety rails deployed.
- Guides and safety rails on loaders must be properly deployed.
- Stabilizers, when fitted on equipment, must be deployed.
- Prior to the movement of any ground support equipment a walk around check must be made.
- Hoses or cables on equipment must be securely stowed before the unit is moved.
- Elevating devices must not be driven in the elevated position except for final positioning.
- Baggage/cargo must not be transported on equipment not specifically designed for that purpose.

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- Cargo should be stowed evenly, in cargo carts, with heavy pieces on the bottom and the center to ensure stability. All doors, gates and curtains should be secured to prevent cargo from falling out.
- The movement of carts/dollies by hand-operated equipment is very simple, however, it has resulted in many injuries, and additional care must be taken.
- Loaded transporters and dollies must have the load secured from 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. All locks, stops, rails and straps should be checked every time before use.
- Trains of carts/dollies tend to "drift in" or shorten the turning radius on comers. Therefore, drivers should avoid turning prior to, or immediately after, passing an obstacle.
- Unserviceable equipment should be clearly tagged "Out of Service" and immediately be sent to the repair/ maintenance department.
- When positioning equipment, special care must be exercised to ensure adequate clearance of vehicles, aircraft, other equipment and facilities.
- When operator vision is restricted (such as positioning certain pieces of equipment to or backing away from an aircraft) a guide person should be used.
- Standard hand signals (see AHM917) must be used to guide ground support equipment.
- 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
- When electrical/motorized equipment are in operating mode, an operator must be within easy reach of the emergency controls. Vehicles without external emergency controls that have their engines running may not be left unattended in the stand area. The operator must remain in the driving position, in control at all times.

Non-Motorized Ground Support Equipment

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

- a) When parked and/or connected motorized vehicles, all non-motorized GSE must have brakes set or chocks in place.
- b) The number of carts allowed is usually limited by the local airport authority or ground service provider however in critical conditions (e.g. slippery surface conditions, congested facilities, low visibility)
- c) This number should be reevaluated and might be reduced to ensure safe operations on the ramp.
- d) During transportation with carts the load shall be properly secured by using appropriate locks,
- e) The overall height loads shall permit safe lifting of each piece of the load during loading and offloading of carts by personnel standing on the ground.
- f) Light packages shall not be wedged between heavier items.
- g) When using tarpaulins, al straps shall be securely fastened to the baggage cart.
- h) When not in use, the parking system shall be engaged on all strings of baggage carts(d) if using access steps to open and close cargo hold doors, position and remove the steps in a straight line. Do not move or reposition the steps while a staff member is on the steps.

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- i) 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 make sure the unit is disconnected from the aircraft.

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Ground Support Equipment Safety Driving and Parking Inside The Equipment (ERA)

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

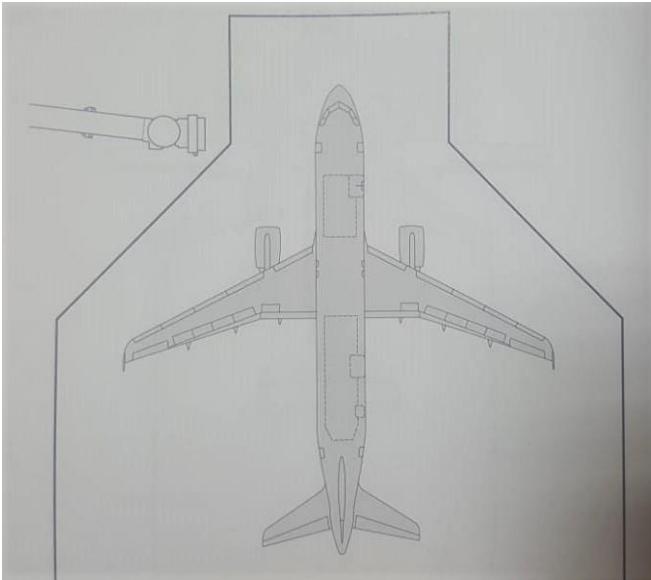
- Make one complete stop with all motorized vehicles/equipment prior to entering the ERA or 5 m from the aircraft. This action must be carried out even if there is no ERA Line marked on the apron.
- Maneuver GSE carefully to prevent personnel injury and /or aircraft damage
- Avoid making sharp turns near aircraft, particularly when towing equipment.
- When GSE is being moved near aircraft, and when vision of the GSE operator is might be restricted, the GSE Operator must be:
- Guided by a person using standard IATA signals,
- Assisted by means of appropriate proximity sensing and warning systems or visual aids such as cameras and mirrors.
- GSE that are not directly involved in the handling or servicing of the aircraft shall not be driven through or parked within the ERA.
- Do not drive or park under the aircraft fuselage and /or wing, exceptions due to aircraft type or local restrictions may apply.

7.13.9.1 Equipment Restraint Area and 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 painted line. If not marking exist, local procedures must establish safe parking areas, etc. the illustration below provides an example of the markings used at some locations.

The ERA must be free of obstructions and Foreign Object Debris (FOD) before and during aircraft arrival and departure.

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7.13.9.2 Passenger Boarding Bridge

Passenger Boarding bridge operator (PBB) must be trained and authorized to operate the PBB and shall

- Check that the PBB is serviceable and clean before use.
- Report any malfunction pf the PBB to the appropriate person/authority.
- Check that the walking surfaces are free of FOD, obstacles and safe for use.
- Only personnel required for the PBB operation shall be in the PBB while its moving.
- The PBB must be fully retracted or parked in its safe designated parking position prior to arrival and departure movement.
- The safety barrier must be in place whenever the PBB is not at the aircraft.
- Make sure that the movement path is clear before moving the PBB.
- When positioning the PBB at doors and driver/operator vision is restricted, use guide person.
- Make sure that guide person can accurately judge clearances and communicate signals to the driver/operator.
- Operator shall move the PBB slowly towards the aircraft, avoiding any aircraft sensors until either the protective bumpers just touch the aircraft or the PBBs proximity sensors stop the movement.
- Make sure the PBB does not contact the wing root leading edge fairing that extends under certain cabin access doors or any other sensors of firings.
- Make sure any sliding rails and canopies on the PBB are fully retracted during positioning and fully extended only once the equipment is in position.
- Maintain adequate clearance between the PBB and the bottom of the door, or as directed by the cabin door markings, this reduces the possibility that the Aircraft door will rest on the PBB as aircraft settles during loading and unloading.

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- Any safety systems shall be engaged and auto-leveler features if applicable, don't leave gaps PBB and the Aircraft that allow person or large of equipment to fall through.
- Ensure that the cabin door is closed before removing the PBB , if PBB GPU or ASU connected it must be disconnected to remove PBB safely .
- Ensure passenger boarding bridge is secured to prevent movement from non-authorized persons.

7.13.9.3 Passenger Stairs

The following precautions shall be taken when operating passenger stairs:

- Check that the passenger stairs are serviceable before use.
- Check that the walking surfaces are free of contamination and safe for use.
- Passenger stairs shall be outside ERA before Aircraft arrival and departure.
- Make sure the movement path is clear before moving the passenger stairs.
- Operator shall move the stairs slowly towards the aircraft, avoiding any aircraft sensors until either the protective bumpers just touch the aircraft or the stairs proximity sensors stop the movement.
- Make sure that guide person can accurately judge clearances and communicate signals to the driver/operator.
- If passenger stairs are towed, disconnect them from the tractor and manually position them at the aircraft and maintain adequate clearance between the passenger stairs and the underside of Cabin door to prevent damage.
- Deploy stabilizers if fitted, Do not allow anyone (except the operator) to use the stairs until stabilizers are deployed.
- Make sure slide rails on the passenger platform fully retracted, extend side rails after Aircraft door open, make sure stairs positioned so cabin door can be used as an unobstructed escape route in emergency/evacuation.
- Close cabin door before removing passenger stairs, confirm there is no staff on the stairs prior to retracting stabilizers, if stairs are not positioned on the aircraft, they must be pulled back sufficiently to allow the deployment of slides in case of emergency.
- 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.

7.13.9.4 Belt Loader

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

- Do not sit or stand on a conveyor belt while it is in operating (up or down)
- The boom of the belt loader shall never be positioned inside the cargo hold of any aircraft.
Exception: specially designed belt loaders (Ramp Snake and Powerstow) that require to be positioned inside the Cargo hold.
- Position and remove a belt loader in a straight line.
- Position the boom at an angle to the cargo hold doorsill that will:

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- 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.
- Ensure the boom is clear of the aircraft or other obstacles before making a turn.
 - The rubber bumpers on the belt loader must never contact the aircraft. Maintain clearance between the belt loader and the aircraft at all times.
 - Always raise the side handrail as soon as the belt loader is positioned. Make sure it does not touch the aircraft fuselage.
 - The handrail shall also 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 aircraft fuselage engines.
 - Ensure proper separation between articles on the conveyor belt to avoid jamming.
 - Adjust the back of the conveyor belt correctly to avoid dropping goods from the belt
 - The handrail may be lowered to accommodate large items during loading and offloading.
 - Do not stand or walk on the conveyor belt when the handrail is lowered.

7.13.9.5 Unit Load Device Loader

Unit Load devices not applicable currently for Nesma Airlines due to current fleet not equipped for ULD Loading.

7.13.9.6 Elevating Equipment

The following precautions must be taken when operating elevating equipment:

- The final position of the elevating equipment must allow for a safe working area while in the raised position at the aircraft door to prevent personnel and objects from falling.
- Raise the body of the elevating equipment to the correct height for servicing.
- Check the security of seals, as required.
- Check Security documentation, as required.
- Any elevating equipment doors not used for servicing at the aircraft must be closed and latched.
- Carefully place the elevating equipment on the doorsill from the platform side, as necessary.
- Elevating equipment must be pushed on the and off aircraft. Always ensure a hand-to-hand exchange. No elevating equipment is to be staged on the platform, and no loose items are to be transported on top of carts.
- Continually observe and be aware of the clearance between the aircraft door and elevating equipment platform.
- When the servicing is finished, close the aircraft door according to Nesma Airlines procedures carefully remove the elevating equipment from the platform side and stow securely.
- The passengers and/or the load must be secured properly inside the elevating equipment.
- Visually check for any obstructions over both sides of the elevating equipment before lowering and make sure that edge of elevating equipment supported by proper protection to protect Aircraft body.
- Lower the truck body into fully lowered position, Close and secure all doors of elevating equipment when service is finished.

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- Perform walk around to check the FOD and stabilizer clearance, use guide person when vision is restricted.
- All elevating equipment shall cease operating when the wind speed reaches 40 knots.

7.13.9.7 Tractor

Following procedures and precautions shall be adhered when operation a tractor:

- Drive tractor within speed limits according to local airport regulations, and avoid sharp turns jerks and sudden stops.
- Approach the aircraft at walking speed.
- Limit the number of carts and dollies (if applicable) to the maximum specified by local airport regulations.
- Do not attempt sharp turns close to the aircraft.
- Keep at least 1 m away from the fuselage.

7.13.9.8 Toilet Servicing

The complete for servicing the aircraft toilet waste tanks consists of the following three steps:

- During of the waste tank (s)
- Flushing of the waste tank (s)
- Adding an amount of pre charge and/or concentrated deodorant precharge product as applicable.

Note: Toilet service fluids are corrosive, prior to servicing, 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, look again for signs of leakage.

Blue ice build-up at higher altitudes may influence airworthiness. In case of possible leak, immediately inform flight crew & flight crew.

7.13.9.8.1 Hygiene precautions

- Wear heavy rubber gloves, protection and protective clothing against harmful wastes when performing toilet servicing.
- Do not park the toilet service unit in the same area as the water service unit nor at the water filling point.

7.13.9.8.2 Toilet Servicing procedure

- Prior to operating a toilet service panel, check for stains around the panel.
- While opening service panel, stay clear and watch for signs of leakage.
- Stay clear of the drain fitting cap while opening, and watch for signs of leakage.
- Make sure the drain hose Y-Fitting coupling is connected correctly, before a drain valve handle is pulled.
- Empty the waste tank.
- Flush the waste tank twice and empty them again.

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- Pre-charge the tank with the correct amount of water quantity of water and disinfectant, if required.
- Fill the waste with the correct amount of water and concentrated deodorant pre-charge packets or pre-mixed fluid.
- After servicing ensure there are no leaks at the drain fitting cap and the end of the drain hose.
- Close the nozzle tightly to prevent the accumulation of ice during flight and wipe off residual water.
- Check for possible leakage, after servicing close and latch the fitting caps and service panel door.
- Inform aircraft maintenance or flight crew if fluid leakage is observed & if the drain valve will not open or the waste tank cannot be drained.

7.13.9.8.3 Draining

- Drain the aircraft waste system into the waste tank of a toilet service unit.
- Observe the waste drain hose during draining to confirm that the waste tank is completely emptied, the hose will also vibrate for a few seconds as contents of the waste tank pass into the waste tank of a toilet service.

7.13.9.8.4 Servicing During Freezing Conditions

Take the following measures to prevent freezing of the fluid in the aircraft toilet tanks and lines during freezing conditions:

- 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.
- Fill the aircraft toilet system only after electrical power supply has been restored, and as close to flight departure time as possible.
- Ensure the fill line is fully drained before closing the cap to prevent freezing of fluid in the fill line.

7.13.9.8.5 Inoperative Toilet Systems

If defects of the toilet system prevent regular servicing, ask qualified technical staff, Flight Engineer or Cabin crew for assistance.

7.13.9.9 Potable Water Servicing

Water Service must not be performed by staff that has already performed toilet servicing during the same shift, replenish the aircraft tank any deviation must be reported to Flight engineer or Crew.

7.13.9.9.1 General Hygiene Precautions

To perform water servicing, you must:

Wear Clean clothing.

Thoroughly wash your hands using soap or wearing new disposable gloves before starting water servicing:

- 1- Do not fill potable water service unit from the same water source as the toilet service unit.
- 2- Do not park the potable water service unit and the toilet service unit in the same area.

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- 3- Do not service the toilet and water on the aircraft at the same time.

7.13.9.9.2 Potable Water Unit Servicing Procedures

A. Filling Aircraft Water Tanks

- Fill the aircraft water system as close to the departure time of the aircraft as possible.
- Before connecting the aircraft filling hose to the aircraft, flush the hose.
- Adhere filling instructions.
- When the filling hoses are not in use, the nozzles or connectors must be protected from contaminations in a proper way.

B. Water Servicing During Freezing Conditions

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

- Drain the aircraft water tanks if instructed, dispose of water in accordance with airport operator requirements.
- Ensure the fill line is fully drained before closing the cap to prevent freezing of fluid inside.
- Do not attempt to remove the frozen substance in the fill lines or connections or on the service panels, Contact maintenance immediately.

7.13.9.9.3 Potable Water Service Inspection

Nesma Airlines Auditor shall check availability of valid water service quality certificates.

7.13.9.10 Aircraft Cabin Servicing

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7.13.9.10.1 Aircraft Dressing and Cleaning

Clean and prepare the following five areas as per below procedures:

- a. Seats
- b. Cabins
- c. Toilets
- d. Galleys
- e. Flight Deck

Standards shall be followed for each area; Nesma Airlines requirements may vary according to turnaround time available.

A. Seats:

- Rough out all waste. Including waste disposal (Sick) bags, Seat pockets and ashtrays emptied and brushed out.
- All Seat pockets stowed in uniform pattern with (Safety on Board) cards visible at front.
- Headrest covers clean, unwrinkled and of correct style.
- Arm rests and ashtray covers clean and unmarked.
- Tables completely clean, including table lips, no cup rings, no finger marks on the table back, no liquid runs or food particles.
- All pockets correctly stocked and neatly stowed in uniform pattern, no debris remaining.
- Seat belts straightened and crossed.
- Remove and replace headrest covers, pillow covers and blankets.
- Ensure all seats are dressed uniformly, as appropriate to class or sector.

B. Cabin:

- Floors vacuumed leaving no loose dirt or debris, remove marks and chewing gum, etc. from the carpets Spot clean carpet where necessary.
- Clean overhead lockers.
- Wipe video screens removing all marks and smears.
- Clear out wardrobes and remove all debris.
- Clean passenger door interior panels of any finger marks, smears or any obvious isolated marks.
- Remove debris and obvious marks from magazine racks. Ensure magazines are neat and tidy.
- Remove opened blanket packs and replace with fresh ones.
- Reposition armrests as required.

C. Toilets:

Do not reuse the mops and towels used for toilet cleaning when cleaning the galley,

- All waste removed and bins disinfected, if required.
- Mirrors, basin and fittings clean with no smears.
- Walls and ceilings clear of any obvious isolated marks.
- All amenities fully stocked with approved sizes/patterns.
- Floors washed with no debris or ingrained dirt remaining.
- Toilet seat lid completely clean.
- Toilet Surrounds clean with no fluid marks or stains.
- Check/renew deodorant, if fitted.

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D. Galleys

- All Waste cleared, bin liners replenished and bins disinfected if required.
- Work tops, framework and ovens cleaned with no food residues remaining.
- Remove any waste from sinks, clean and polish dry.
- Clean all stowage doors, panels and frameworks.
- Clean and vacuum stowage areas.

E. Flight Deck

Do not enter the flight deck unless the flight crew or technician is present to avoid operating any switches during cleaning.

- Empty waste bins and ashtrays.
- Floors clean and free of any loose debris.

7.13.9.10.2 Cleaning Equipment

All equipment and materials used to clean aircraft shall be in accordance with Nesma Airlines requirements and approved standards.

- a. **Vacuum Cleaner:** operating on aircraft power for carpets, air vents, seat arm storage, seat rails and behind storages, Manual carpet cleaners are not ad adequate substitute but may be necessary when time is limited or large numbers of passengers remain on board.
Caution: Do not unplug a vacuum cleaner by pulling the cord from the socket. Pull from the plug.
- b. **Hand Brushes:** for use on areas inaccessible to vacuum cleaners.
- c. **Chewing Gum Remover:** to remove Chewing gum.
- d. **Mops and Brushes:** for floor and hard surface washing. Must be clearly identified or color-coded for toilet cleaning and general cleaning.
- e. **Towel/White Cloth:** for general purpose cleaning and polishing. Must be clearly identified or color-coded for toilet cleaning and general cleaning.
- f. **Absorbent Wipes:** for mopping up spillages.
- g. **Hand Sprayers:** for dispensing detergent mix.
- h. **Runners:** for floor/carpet protection.
- i. **Soft Rolls/Wipes:** for wiping off spillages.

7.13.9.10.3 Health and Safety General Instructions

- a. Wear the required personal protective equipment.
- b. Exercise caution while checking the contents of seat covers/pockets to prevent cuts and injures by any sharp items place there.
- c. Ensure suitable disposal containers are available and used for the removal of solid articles, waste and sharps.
- d. Dispose of waste in accordance with local airport authority regulations.
- e. Use the correct and approved cleaning materials.

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- f. Be familiar with the Material Safety Data Sheets (MSDS) to understand the hazards of the chemicals used in cleaning.
- g. Take care while using PBB and stairs.

7.13.9.10.4 Lost/Found/Damage/Suspicious Items

- a. Do not Check/open any items found as nature of the contents inside is unknown and has the potential of being harmful/dangerous.
- b. Any lost property found must be handed in.
- c. Any seat or cabin interior/area found damage must be reported, as appropriate.
- d. Any suspicious item found must be immediately reported.

7.13.9.10.5 Garbage Disposal

- a. All Aircraft garbage must be transported to the designated disposal area.
- b. Do not obstruct jetties or steps with garbage bags.
- c. Do not throw garbage bags onto the ramp from the aircraft or from the steps.

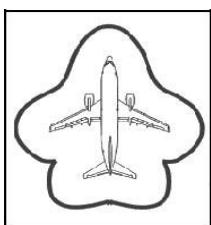
7.13.10 Circle of Safety

Personnel shall observe a virtual operational safety buffer zone when positioning motorized vehicles/equipment to an aircraft.

The following processes shall be adhered to at all times:

- Conduct a vehicle/equipment pre-operational check including a brake test prior to operating motorized vehicles/equipment;
- All motorized vehicles/equipment must make a minimum of one complete stop prior to entering the operational safety zone or at a distance of no less than five meters (15 feet) from the aircraft;

All equipment must be driven at a 'Walking pace' when operating within the operational safety buffer zone.



Protective rubber bumpers on equipment, e.g. passenger steps, loading bridges, conveyor belts, catering

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trucks, must not be compressed against the aircraft fuselage, in order to prevent damage and to allow for aircraft settling during servicing.

When loading has been completed remove all loading equipment well clear of the aircraft.

Before removing ground support equipment from any aircraft cabin access door, the equipment operator must ensure that the door has been closed and secured by an authorized person, or that a restraint device designed and secured to prevent a person falling from the doorway (e.g. full width door net attached to anchor points etc) has been placed across the opening. A single strap does not meet these criteria. Prior to moving the equipment the operator should advise any personnel on board the aircraft and/or the person responsible for the operation around the aircraft that the equipment is to be removed. Where Cabin Crew are on-board the aircraft and are responsible for closing the air-craft cabin doors, they must request a member of the ground staff to assist them. The ground staff should not leave the immediate area outside of the cabin door until it is closed, seated and fully latched. The access equipment may then be removed.

Before removing a passenger loading bridge from the aircraft, a safety device must be put across the forward opening area of the loading bridge platform.

All equipment, except that necessary for the departure, should be removed from the aircraft, ensuring that there are adequate clearances between the aircraft and facilities/ equipment.

The passenger loading bridge is to be in the fully retracted designated parking position before aircraft departure.

On an open gate area, equipment must be positioned so as to allow the clear movement of the aircraft.

7.13.11 Hand Signals

7.13.11.1 Introduction

In order to standardize (ground staff – to- ground staff) communication and/or (ground staff-to – flight crew), the following hand signals are defined:

- a) **Guide Person Hand Signals-** to be used by specific guide person in direct liaison with the equipment operator to facilitate movements of any type of GSE.
- b) **Marshaling 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.
- d) **Pushback Hand Signals-** to be used during the tractor/tow bar connection/disconnection process, as well as at the start and end of the pushback operation.

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7.13.11.2 Guide Person Hand Signals for Ground Support Equipment

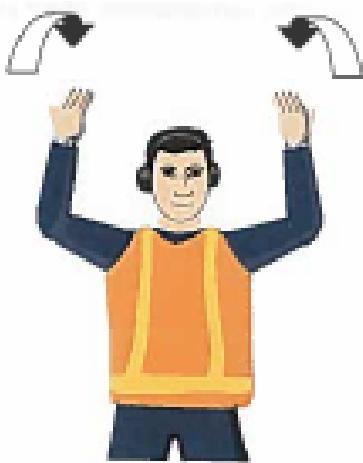
7.13.11.2.1 To Attract THE Operators attention and take command



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

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

7.13.11.2.2 Forward Movement



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Arms a little aside and repeatedly moving upwards and backwards, beckoning onwards.

Meaning: Move towards the guide person.

7.13.11.2.3 Backward Movement:



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

Meaning: Move directly away from the guide person.

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



Left arm pointed downward, hand extended: right arm repeatedly moved upwards towards the guide persons left. Speed of arm movement indicates rate of turn.

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



Right arm pointed downward, hand extended: left arm repeatedly moved upwards towards the guide persons right. Speed of arm movement indicates rate of turn.

7.13.11.2.6 Lift



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

7.13.11.2.7 Lower



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

7.13.11.2.8 Accompanied Movement



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

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7.13.11.2.9 Indicate Distance



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

7.13.11.2.10 Stop



Arms raised and crossed over head.

Immediate stop: Hands cross over head with clenched fists.

7.13.11.2.11 OK all is clear or continue on drive away



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

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

7.13.11.2.12 Chocks Inserted: Stabilizers On



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

7.13.11.2.13 Chocks Removed: Stabilizers Off



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

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



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

7.13.11.2.15 Stop Engine



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

7.13.11.2.16 To Connect or Disconnect



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

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

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

7.13.11.2.17 Brakes On/Off



Right arm and hand raised horizontally in front of body.

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

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

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7.13.11.3 Pushback Hand Signals-Headset Operator to Tug Driver

7.13.11.3.1 Vehicle Brakes Off



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

7.13.11.3.2 Clear to Push



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

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

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7.13.11.3.3 Negative/Hold



Hold arm straight out of 90-degree angle from shoulder and display hand with thumb down.

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

7.13.11.3.4 Vehicle Brakes On/Stop



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

7.13.11.3.5 Slow Down



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With hand at a 45-degree angle downward to the side, make a (patting) motion.

7.13.11.3.6 Change of Pushback Direction



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

7.13.11.4 Pushback Hand Signals-Wingwalker to Headset Operator/Tug Driver

7.13.11.4.1 Clear to Move Aircraft



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

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7.13.11.4.2 Stop Movement of Aircraft



Fully extend arms and wands horizontally 90-degree angle at shoulder level, raise arms and wands to cross above head.

7.13.11.4.3 Hold Movement of Aircraft



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

7.13.11.5 Marshalling Hand Signals for Aircraft

- a) Do not perform aircraft marshalling unless it is permitted by the local airport authority and you have been trained and authorised.
- b) Give marshalling 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 situation:
 - 1. Insufficient apron lighting
 - 2. Poor visibility
 - 3. Night conditions
 - 4. When required by local airport authorities or regulations.

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Note:

- To avoid any possible confusion by the flight crew, do not use guide person hand signals for equipment until all aircraft marshalling has been completed.
- The hand signals printed on the following pages are illustrated with the use of wands. The meaning of the signals remains the same when bats, gloves or illuminated flashlights are used.
- It's not possible to give signals for engaging/releasing parking brakes with the use of bats or illuminated flashlights.

7.13.11.5.1 Identify Gate/Stand



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

7.13.11.5.2 Continue to Taxi Straight Ahead

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

7.13.11.5.3 Slow Down



Held at sides and slightly bent at elbows, move arms downwards in (patting gesture), moving wands up and down from waist to knees.

7.13.11.5.4 Turn Right (from the Pilot's point of view)



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With left arm extended at a 90-degree angle to the body, right hand makes the come ahead signal. The rate of signal motion indicates to the pilot the rate of aircraft movement desired.

7.13.11.5.5 Turn Left (from the pilot's point of view)



With right arm and wand extended at a 90-degree angle to the body, left hand makes the come ahead signal. The rate of signal motion indicates to the pilot the rate of aircraft movement desired.

7.13.11.5.6 Stop



Fully extend arms and wands horizontally 90-degree at shoulder level, raise arms and wands to cross above head.

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7.13.11.5.7 Hold Position/Stand-by



Fully extended arms and wands downwards at a 45-degree angle to the side. Hold the position until the aircraft is clear for the next maneuver.

7.13.11.5.8 Proceed to Next Marshaler or as Directed by Tower/Ground Control



Point both arms upward, move and extend arms outward to side of body and point with wands to direction of next marshaler or taxi area.

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7.13.11.5.9 Dispatch Aircraft



Perform a standard military salute with right hand and/or wand to dispatch the aircraft. Maintain eye contact with flight crew until the aircraft has begun to taxi.

7.13.11.5.10 Fire



Holding right arm straight, move right hand in an exaggerated figure eight (8), or a fanning-type motion, from the shoulder to the knee, while at the same time pointing with left-hand wand to the area of the fire.

At night use same process with wands.

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7.13.11.5.11 Set Brakes



Raise right hand just above shoulder height with open palm. Ensuring eye contact with flight crew, close hand into a fist. **Do NOT** move until receipt of thumbs up acknowledgment from flight crew.

7.13.11.5.12 Release Brakes



Raise right hand just above shoulder height with hand closed in a fist. Ensuring eye contact with flight crew, close hand into a fist. **Do NOT** move until receipt of thumbs up acknowledgment from flight crew.

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7.13.11.5.13 Chocks Inserted



With arms and wands fully extended above head, move wands inward in a (Jabbing) motion until wands touch, ensure acknowledgement is received from flight crew.

7.13.11.5.14 Chocks Removed



With arms and wands fully extended above head, move wands outward in a (Jabbing) motion, ensure acknowledgement is received from flight crew.

7.13.11.5.15 Start Engines



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Raise right arm to head level with wand pointing up and start a circular motion with hand, at the same time, with the left arm raised above head level, point to engine to be started.

7.13.11.5.16 Emergency Engine Shut Down/Cut engines

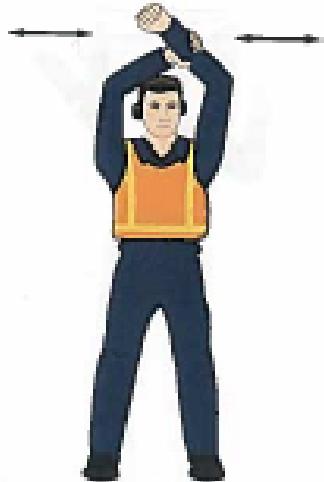


Extend right arm with wand forward of body at shoulder level, move hand and wand to top of left shoulder and draw wand to top of right shoulder in a slicing motion across throat. Hold left arm above head with closed fist.

7.13.11.6 Technical/Servicing Hand Signals-Ground Staff to Flight Crew

- a) Only use hand signals when verbal communication is not possible.
- b) Make sure acknowledgement of all signals is received from flight crew.

7.13.11.6.1 Connect Towbar



Bring arms above the head and grasp forearm with opposite hand.

7.13.11.6.2 Air Up



Wave arms up and down from thigh to waist with palms up.

Meaning: Supply pressurised air for engine start

7.13.11.6.3 Connect/Disconnect Ground Power



To connect ground power:

Holds arms fully extended above head: open left hand horizontally and move finger tips of right hand up to touch the open palm of left hand (forming a T). At night, illuminated wands can also be used to form the T above the head.



To disconnect power:

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Hold arms fully extended above head with finger tips of right hand touching the open horizontal palm of the left hand (forming a T) , lower right hand away from the left, Do Not disconnect power until authorized by the flight crew . At night , illuminated wands can also be used to open the T above the head.

7.13.11.6.4 Affirmative/All Clear



Raise right arm to head level with wand pointing up or display right hand with thumbs up, left arm at side by knee.

7.13.11.6.5 Negative



Hold right arm straight out at 90-degree angle from shoulder and point wand down to ground or display right hand with thumbs down, left hand remains at side by knee.

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7.13.11.6.6 Interphone



Extend both arms at 90-degree from body and move hands to cup both ears.

7.13.11.6.7 Do not Touch Controls



Raise right hand above head level and close fist or hold wand in horizontal position, left arm remains at side by knee.

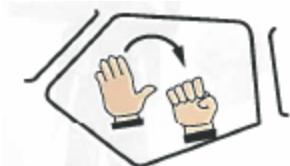
7.13.11.6.8 Open/Close Stairs Forward/Aft



With right arm at side and left arm raised above head at a 45-degree angle, more right arm in sweeping motion towards top of left shoulder.

7.13.11.7 Technical/Servicing Hand Signals-Flight Crew to Ground Staff

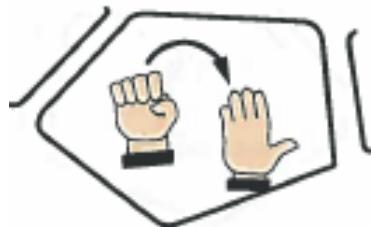
7.13.11.7.1 Brakes Engaged



Raised arm and hand, with fingers extended, horizontally in front of face, close in a fist.

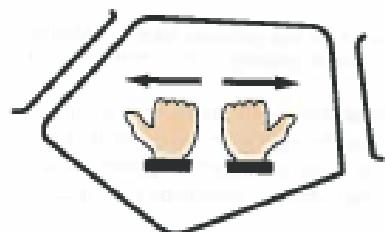
7.13.11.7.2 Brakes Released

Raised arm, with fist clenched, horizontally in front of face, extend fingers open palm.

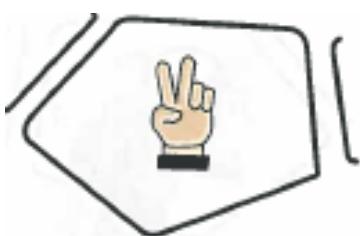


7.13.11.7.3 Insert Wheel Chocks

Hand held in front of face, palms outwards with fingers closed and thumbs extended, move hand inwards.

7.13.11.7.4 Remove Wheel Chocks

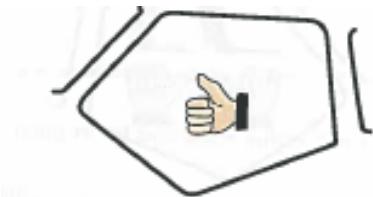
Hands held in front of face, palms inwards with fingers closed and thumbs extended, move hands outwards.

7.13.11.7.5 Ready to Start Engine(s)

One hand raised with the appropriate number of fingers outstretched to indicates the number of the engine to be started.

7.13.11.7.6 All Clear

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One hand raised with closed fingers and extended. Acknowledgement of all ground actions.

7.13.12 Aircraft Loading/Unloading Operations

Special precautions must be taken to prevent damage that may result from;

- exceeding aircraft floor load limitations;
- inadequate tie-down and failure to fasten separation nets and door nets;
- loading cargo on seats in the passenger cabin;
- incorrect opening or closing of door and operation of cargo doors during strong or gusty wind conditions;
- failure to use the tail strut or nose wheel weight, if provided;
- Mishandling of catering equipment.

During loading or unloading operations there may be vertical movement of an aircraft up or down and full allowance must be made for this movement when ground support equipment is positioned/operated at the aircraft.

Care must be exercised during loading and unloading operations to avoid damage to the doors or their openings.

Doorsill protection must be installed, when provided.

The loading of any items, bulk or ULDs, onto an aircraft must be undertaken according to written load instructions to ensure correct weight and balance requirements.

The condition of the load, including ULDs shall be checked prior to loading in order to detect leaking or otherwise damaged items. Items or ULDs with any evidence of leaking contents MUST NOT BE LOADED. Dangerous goods which are damaged MUST NOT BE LOADED.

The handling of Dangerous Goods must be undertaken with particular care to ensure that the integrity of the packaging is not adversely affected. Loading and stowage of Dangerous Goods must conform to all prescribed national and international regulations/standards, e.g. IATA DGR.

When a poorly packaged shipment is observed, proceed with caution. All contents should be prevented from spilling out and causing injuries.

Spills of any sort in the holds must be reported immediately as the spilt material it might result in damage to the aircraft floor or wiring.

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Should a package containing dangerous goods be damaged or found to be leaking, immediate action must be taken in accordance with the carriers' regulations.

Spillage from wet cargo shipments or live animal wastes in the aircraft must be reported immediately.

Any spillage on the apron, e.g. fuel, oil, hydraulic liquids, etc. must be reported immediately and the area cleaned.

When maneuvering large or heavy items within the holds, and within the cabin in case of cargo aircraft, that are not equipped with a mechanized in-plane loading system a moveable roller track system should be utilized. Crowbars and similar implements should never be used directly upon the aircraft floor.

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. Also check that the passage of the ULDs into their position is not obstructed by stops/locks/guides.

When containers and pallets are handled manually, full control of them should be maintained as their impact against locks and stops at high speed can cause damage

7.13.13 Aircraft Equipment

Aircraft equipment such as ULDs etc. should be inspected before use to ensure it is in a serviceable condition.

Equipment in unserviceable condition, such as having protruding bolts, torn metal, damaged doors etc. should be tagged, isolated and reported to a supervisor for maintenance attention.

When fastening pallet nets, do not exert so much force that the pallet bends thus making it impossible to secure with the aircraft stop/locks/guides.

Consider pallets and containers to be "load" and apply the same rules as for baggage, cargo and mail (reporting of torn tags, reporting of damage, provide protection from bad weather, etc.).

Maximum floor loads and maximum weights for pallets and containers should not be exceeded.

Aircraft floor locks for pallets and containers should be secured to prevent the load shifting in flight.

In-plane loading systems for both narrow and wide-body aircraft may consist of either containers or mechanized bulk-loading. Serviceability deficiencies in the systems must be reported immediately.

All unit load devices should be marked with the warning "DANGER, DO NOT WALK BETWEEN ULD'S OR TRAILERS". A warning sign may be used. A suggested warning sign is shown below.

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7.13.14 Off Bridge Passenger Operations

Passenger movement on the apron between the aircraft and terminal building or bus must be closely supervised.

Passenger movement should follow a clearly designated and visible route.

The designated route must be kept free of any equipment and the surface conditions kept clean.

Where passengers are embarked/disembarked by walking across the ramp, the use of mobile telephones should be discouraged until the passengers are inside the terminal building or transporter.

Passengers must be kept clear of protrusions on the aircraft. Propellers, ground support equipment, fueling zones as well as jet blast/prop wash from other aircraft.

7.13.15 Mobile Ground Level Covered Walkway Operations

The operating path of the unit should be marked as a pedestrian walkway.

The unit should be marked on either side with reflective material.

The drive unit of the walkway should have a flashing beacon to indicate the unit is in motion.

The unit when extended should be secured to the ground at suitable intervals to prevent movement by jet-blast or wind.

Consideration must be given to the manufacturers' operating recommendations when the unit is used in high-wind conditions.

The unit should not make a final approach to the aircraft until either the aircraft stairs have been extended or mobile stairs are in place.

The unit should be positioned as close as is practical to the aircraft steps to prevent vehicular traffic from operating between the unit and the aircraft.

7.13.16 Aircraft Fueling Interface

Introduction

As aircraft ground handling activities take place at the same time as aircraft fueling, these activities must be compatible to ensure the safety and integrity of the operation.

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This section provides specific operating criteria for ground handling personnel that when implemented will enable the interface of activities to be accomplished safely,

When an aircraft is being fueled:

Aircraft

The connection or disconnection of any aircraft electrical equipment, including GPUs, batteries and battery chargers, is not permitted.

The APU may be started during refueling if the start is an initial start or a restart after normal shutdown.

Do not attempt to start the APU during fueling if the APU had an automatic shutdown or a failed start attempt. Make sure the fueling operation is complete and the hose disconnected before another APU start is attempted.

The APU may be shutdown (manual or automatic) during the refueling operation.

In the event of a fire occurring either on or in the vicinity of the aircraft STOP the refueling operation.

Fuel safety zones

Due to the fire hazard associated with fuel vapours all personnel must be cautioned to ensure that items and processes such as; matches, open flames, welding, use of photographic flashbulbs etc. are kept out of the fueling safety zone.

Portable electronic devices, such as Mobile (Cell) Telephones, Portable Radios and Pagers, may be used within the fuel safety zone providing a separation distance of not less than 3m (10ft) is maintained from aircraft fuel vents and/or fueling equipment.

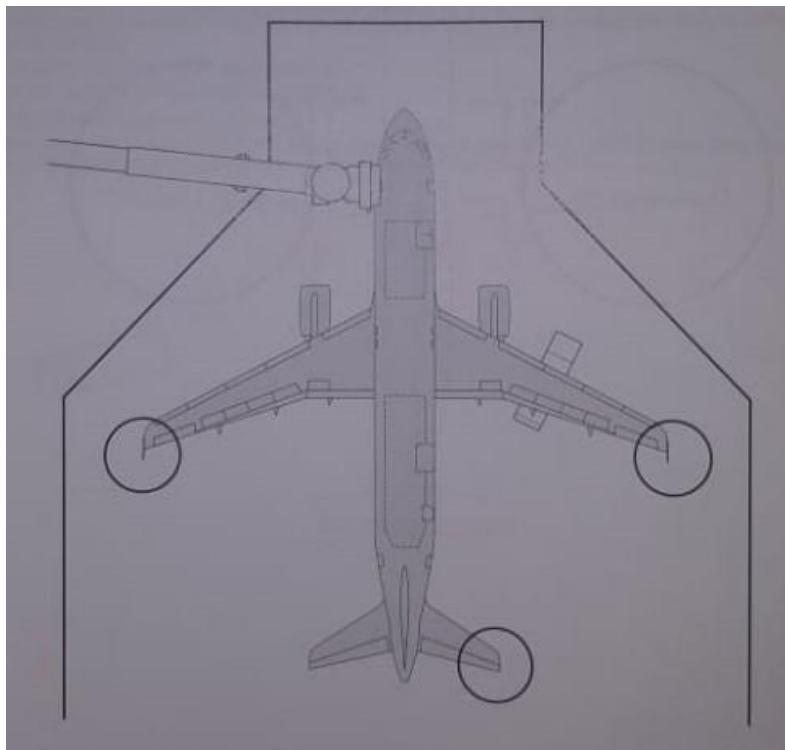
The refueling safety zone shall be regarded as an area extending 3m (10 ft) radially from fueling receptacles, tank vents and fueling equipment.

Equipment performing aircraft servicing functions shall not be positioned within a 3m (10ft) radius of aircraft fuel system vent openings.

Within the FSZ, all personnel shall ensure that they:

- a) Do not smoke.
- b) Only use company-issued and approval radios, radio telephones, pagers, flashlights/torches, lamps and lighting systems. Battery charges shall not be operated.
- c) Enter the FSZ only when required by your current job task/responsibility.
- d) Assume that fueling is taking place anytime a fuel vehicle is on the stand during aircraft servicing and fuel hoses are connected.
- e) Do not leave vehicle engines running unnecessarily.
- f) Position all GSE and vehicles so they do not obstruct the fueling vehicles escape route; this is not a mandatory requirement for Hydrant type fueling vehicles but every effort should be made to ensure a clear exit pathway.
- g) Do not allow any passengers to enter the FSZ.

- h) Do not park any equipment in the FSZ.
- i) Ensure fuel hoses are protected and all equipment is kept a minimum of 1 m (3 ft) away from any fuel hose on the stand that is connected between a fuel truck and an aircraft.



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Fuel Hose Safety

Refueling vehicles and equipment should have hoses of sufficient length to allow the fueling platform to be fully lowered whilst the hoses/couplings are connected to the aircraft fueling manifold.

Extreme care must be taken to position refueling vehicles and equipment correctly, ensuring that strain is not applied to the fueling hoses, coupling and manifolds on the aircraft when the platform is lowered.

Care must be taken to ensure that the fueling hoses do not become entangled on equipment during movement of the fueling vehicle's platform.

Fuel spillage

In the event of a fuel spillage the following actions should take place.

STOP the refueling operation, advise the Captain or appropriate Authority and the Emergency Services.

As directed by the Captain or appropriate Authority evacuate all persons from the immediate area.

Mobilize all available firefighting equipment as standby protection until the arrival of the airport emergency services.

Control the movement of unauthorized personnel and equipment into the area.

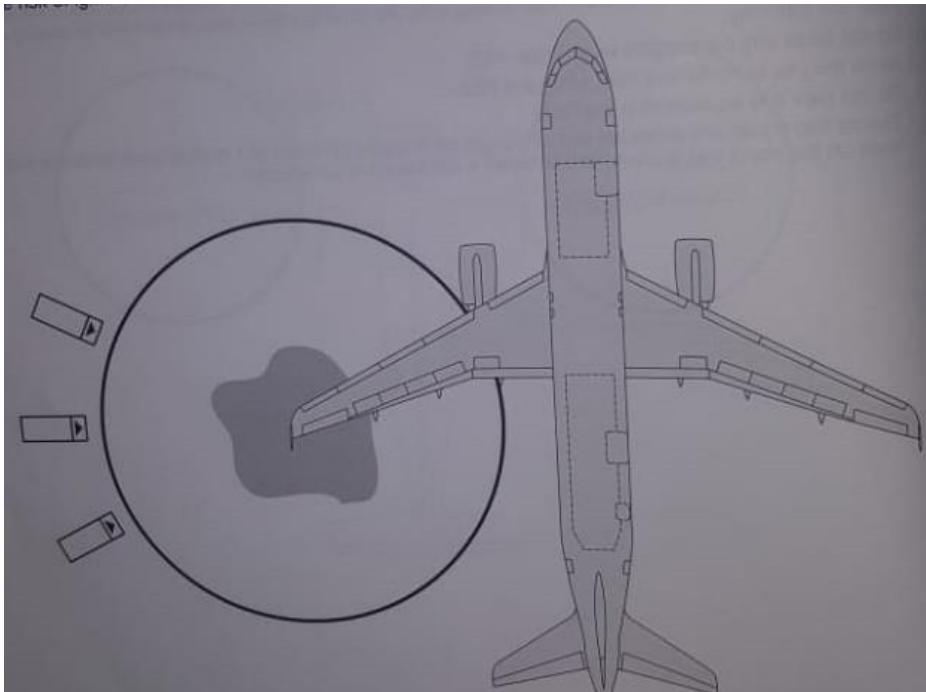
As far as possible, restrict all activities inside and outside the spill area to reduce the risk of ignition.

All electrical equipment in use during the fueling operation must be switched off immediately.

Unload the APU and shut it down. DO NOT start the APU until the spilled fuel is removed and there is no further risk of spilled fuel or vapours.

Normal operations must not be resumed on the aircraft or any engines started before the person in charge of the emergency determines that it is safe to continue.

If fuel is spilled on any load, then such items are NOT TO BE LOADED into the aircraft.



7.13.17 Ground Support Equipment

The engines of unattended vehicles should be switched off.

Vehicles MUST NOT be parked under the aircraft wingtip fuel vents.

Equipment must be positioned so that the fueling vehicle has a clear exit route and can be moved away from the aircraft in a forward direction.

A distance of 3m (10ft) should be maintained, wherever possible, between ground support equipment and any fueling equipment, i.e. vehicles, hoses, hydrant pits.

Ground Power Units (GPUs) must not be operated unless they are positioned 6m (20ft) from the aircraft fueling vents and venting points.

The use of metal-wheeled equipment in close proximity to the aircraft is prohibited.

If the bonding cable connecting the fueling vehicle to the aircraft becomes disconnected during ground operations the fuel operator must be immediately advised.

Fueling with crew or other persons onboard

The person responsible for fueling shall inform crew/staff on board and around the aircraft that fueling is about to commence and when fueling is completed.

The person responsible for fueling shall inform the crew/staff on board should a hazardous situation arise.

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Ground activities outside the aircraft and work within the aircraft, such as catering and cleaning, should be conducted in such a manner that they do not create a hazard or obstruct emergency exits.

All exit areas, exit accesses areas, cabin aisles and cross aisles inside the aircraft should be kept clear of obstructions.

The ground area beneath exit doors should be kept clear of any obstructions.

When passenger loading bridges are in use, access to the terminal must be available.

When a passenger loading bridge is not used, as a minimum a set of aircraft passenger steps should be positioned at the door normally used for boarding.

Aircraft fitted with integral stairs must have these deployed.

DE / ANTI ICING OF AIRCRAFT

No aircraft shall be allowed to depart with contamination on the airframe and this can be prevented by a process of anti-icing and removed by de-icing. Procedures are well defined in other documents and this section will provide guidelines for safe Anti/De-icing operations.

De / Anti Icing operations must be performed with extreme caution to prevent injury to personnel and damage to aircraft and equipment.

The term de-icing will be used throughout this section of the AHM but should also be considered to cover the anti-icing process.

All staff involved in any stage of de-icing operations must be properly trained, qualified and have access to information regarding specific procedures for the aircraft they are servicing.

Prior to winter season all involved staff must undergo refresher training to maintain their qualification. This qualification must be verified by a written examination.

Prior to de-icing, accumulations of snow may be removed by a process approved by the operator. This can include the use of brooms, brushes, scrapers or ropes but extreme caution must be taken to avoid damage to Pitot tubes, antennas etc. and all measures to prevent injury by falls from height taken.

De-icing Fluids must be stored in accordance with the manufacturers instructions and tested regularly to ensure no degradation has occurred.

The operators published holdover charts must be observed.

Communications must be in a standard format. Ensure two way communication between Flight Deck and Ground Crew is maintained prior, during and when finalizing de-icing.

To ensure flight safety, on completion of the de-ice process the Pilot in Command must be informed, using carrier defined de-icing code, of the measures taken. At a minimum this must include -

- Fluid type
- Fluid Mix

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- Date and Local start time of final step
- Fluid brand name
- Confirmation of final check

If there is any doubt, this must be agreed with the pilot in command prior to commencing the de-icing process.

Post de-icing inspection, where this is delegated to ground staff, can only be performed by a suitably qualified person and this person should be able to identify themselves by issuing a personalized release.

7.14 Severe Weather Operations

Introduction

Severe weather is a constant danger to all industries that have activities outdoors. Airside operations are particularly affected because of the open areas of airports that are part of the work area. A Severe Weather Operations Plan should be established.

Scope

This section provides industry recommended practices that when included in a Severe Weather Operations Plan can minimize the dangers associated with severe weather in the airside workplace.

Weather definitions

High/sustained winds - Winds whether steady or gusting in excess of 75kph (40 knots).

Lightning - shall include cloud-to-cloud as well as cloud-to-ground activity.

Low visibility - shall include rain, snow, sandstorms or fog conditions when visibility is typically below 800m (% mile).

Ground icing conditions - shall include the presence of snow and ice on surfaces and movement areas as well as when surface temperatures/wind chills can cause freezing.

Working in Extreme Temperatures (hot and cold)

Notification to staff is to be coordinated with the specifics of the weather patterns as wind conditions will add to effects of the extreme temperature conditions. (E.g. wind chill, sand storms)

Extreme Temperatures

Extreme temperatures might affect personal safety performance depending on time of exposure, personal protection, activity and work rotation. All staff should be made aware of the hazards, and processes should be adapted to such extreme conditions where applicable. Medical advice should be sought in the event of extremes in temperatures.

Heat stress will result in poor performance, lack of concentration, dehydration, and in the most severe cases hospitalization. Awareness should be given to the exposure to working in the environment.

Heat stress injuries can be reduced by some of the following:

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- Adequate breaks, ventilation and shelter between activities to reduce exposure to sunrays.
- Ample supply of drinking water located near to work area.
- Loose and appropriate clothing.
- Work rotation and monitoring.

Cold affects the human performance such as loss of feeling in extremities, fatigue, muscle seizures, loss of awareness, poor concentration and in severe cases may result in hospitalization.

Prolonged exposure to wind is a significant factor in increasing cold weather effects on the human body (wind chill factor).

Things to mitigate the cold effects:

- Correct clothing.
- Rotation of activity.(essential to sedentary staff)
- Staff monitoring.
- Adequate breaks, provision of hot fluids and warmed shelter between activities.

A wind chill chart or forecast shall be made available to staff.

Severe Weather Forecasting

Knowing when severe weather will impact your work site is a key element in prevention of injuries or damage. Below are some methods to obtain timely information on approaching weather:

- Internal weather forecasting
- National Weather Service Alerts
- Local TV and Radio broadcasts
- Pilot reports
- Airport tower observations
- Ramp tower observations
- Local detection devices

In the case of lightning, automatic detection systems are available that track storms, count and locate each lightning strike and determine the potential for lightning strikes, based on atmospheric conditions.

These systems require human monitoring and human interpretation. Systems that combine several methods of detection along with visual observation are the most effective.

Severe Weather Notification

Notification Phases

High Winds

As the measures to be taken in the event of high winds requires a lot of preparation the earlier the 'Warning" is given the better.

Lightning

Issue No.: 09

Issue Date: JAN24

Revision No.: 00

Revision Date: JAN24

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For lightning activity the notification process may be broken down into 3 phases:

Alert - Lightning activity is detected at a distance in excess of 8km (5 miles) from your operation.

Stop/Suspend activities - Lightning activity is detected within 5km (3 miles) of your operation.

All Clear - Lightning activity has moved beyond 5km (3 miles) and is heading away from your operation.

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

Notification Levels

Levels	ACTION
Amber-Alert Lighting activity is detected at a distance in excess of 8 km from your operation	Disseminate lighting 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 requirement.
Red- STOP/SUSPEND Lighting activity is detected within 5 km of your operation	Disseminate the order to stop all airside activities and seek shelter to all airside operating staff
Green- ALL Clear Lighting activity has moved beyond 5 km and is heading away from your operation.	Disseminate the order to resume normal activities to all airside operating staff.

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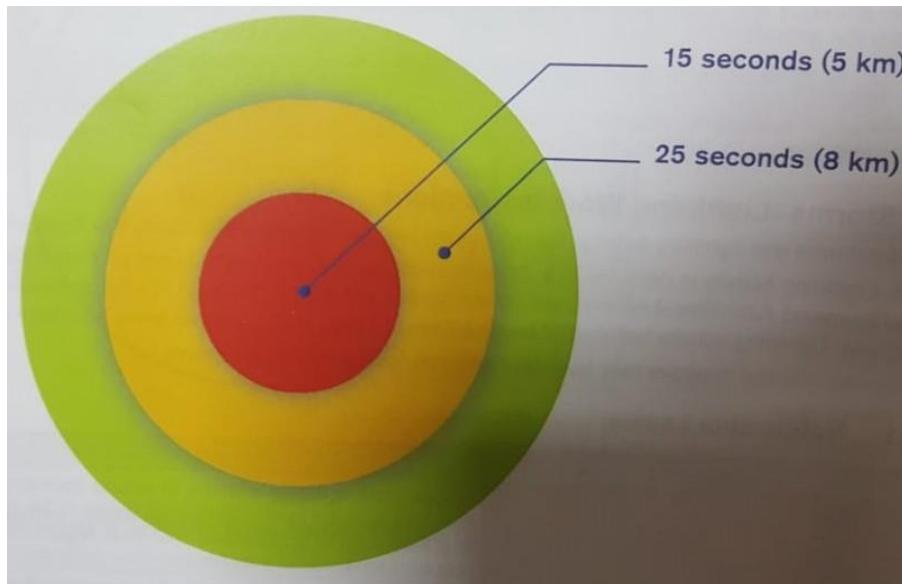
Lighting Alert Callout

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

- Use the counting method to detect/predict the lighting activity, determine the corresponding level based on counting method diagram.
- The responsible person notifies all airside operating staff of the lighting alert level.
- In case of Red-Alert, proceed to designated shelter.

Counting Method

The counting method is used when an integrated airport notification system is absent, it is used to estimate the level of lighting.



Note: The time indicates is the time between the lighting and the sound of thunder.

1. If the counted time is less than 15 seconds, the lighting activity is less than 5 km from the airport.
2. If The counted time is between 15 seconds and 25 seconds, the lighting activity is between 5 and 8 km from the airport.

Low Visibility and Ground Icing

As low visibility and/or ground icing conditions can be associated with various types of weather events the notification phase will need to be coordinated with the specifics of the weather patterns.

Notification Methods

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Getting the word out to all personnel that severe weather is on the way or imminent is a challenge, therefore all organizations must be integrated into the notification process. One or more systems may be used:

- Radio - Good for small areas where workers perform their duties together and team leaders with radios can get the word to everyone.
- Visual - Lights on structures that indicate that you are to take shelter in doors is another method. These lights must be distinctive so as not to blend into the back-ground or be confused with other lights. Some airports use several different color lights, Green for all clear, yellow for warning, red for take shelter. For single light systems a blue flashing light may be used as it is less likely to be confused with other lights. How these lights are activated and by whom must also be considered.
- Audible - Horns or sirens can also be used but they must be able to be heard over engine and equipment noise.

What to do when Severe Weather is Imminent

General

Activate the "The Severe Weather Plan" and communicate to all personnel that it is in effect.

Meet with ground operations, ground support equipment and maintenance managers to outline the forecast and review resources.

Notify dispatch, passenger service and planning groups that operations may be interrupted.

Continue to monitor and communicate the weather situation.

High winds

Before the high winds arrive determine how long it will take to do all the items below.

Ensure all personnel know of the impending weather event

Secure aircraft

Aircraft should be appropriately secured, per airframe manufacturer's procedures by using additional chocks, and/or setting aircraft park brakes, and/or tie-down, and/or the ballasting of the aircraft.

Secure all cargo nets and close all cargo doors on aircraft.

Secure all aircraft cabin doors (Note: Securing the passenger cabin doors with the APU/packs operating or an external conditioned air source connected can pressurize the aircraft).

Close cockpit windows. Close all service panels.

Lock control surfaces in accordance with aircraft maintenance manuals.

Secure aircraft nose gear torsion links to prevent weather vanning with free moving nose wheels.

Hook up towbar and attach tugs when possible and install by-pass pins.

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If time permits and parking areas are available move aircraft into hangars.

If hangars are not available consider remote parking aircraft to get them away from structures that they could be blown into. Use all above securing techniques and face aircraft into the wind if possible.

Loading bridges

Retract ground power cords.

Close all doors, retract loading bridges, lower them and secure wheels.

Position loading bridges so that they face into the wind or up close to the terminal or where available in a location for tie down and tie them down.

Remove any loose equipment, e.g. ladders, FOD containers.

Ground support equipment

Remove non-essential ground support equipment from air-craft.

Position equipment away from the aircraft and outside the path of possible aircraft movement.

If possible, stow equipment indoors. All equipment left outside must be secured with brakes set, disconnect strings of carts or dollies so each conveyance is held by its own brake or attach a vehicle to them to help hold them in place.

Ensure all containers are locked on dollies or transporters with doors or curtains secured. Remove all empty loose containers from areas around aircraft. If possible tie them together and/or to a firm structure or store them indoors.

Secure work stands by chain to hitching rails where available or to fences or other secure equipment. Put jack screws down if so equipped.

Lower all high-reach equipment, e.g. loaders, steps, catering trucks etc. and deploy stabilizers.

Remove any loose equipment, e.g. chocks, cones, ladders etc.

Baggage and Cargo

Ensure all baggage room and cargo personnel are aware of conditions and do not continue to bring load to aircraft or outside to be stored.

Use baggage rooms to stow luggage if possible. Secure all cargo equipment the same as above.

Contact mail and freight facilities and return unloaded freight and mail.

Aircraft Cleaning

Stow all supplies and equipment, do not leave equipment or garbage on loading bridge steps.

Move vehicles away from aircraft parking areas.

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Keep doors of cleaning vehicles closed to avoid loose material being blown around.

Stow hoses on lavatory and water trucks.

Facilities

Ensure facilities personnel are aware of impending weather.

Put facilities personnel on standby for possible shut down of power or possible need to do facility repairs.

Close all doors that lead to the outside. Secure all dumpsters and trash bins.

Passenger Safety

Ensure all passenger service personnel have up to date information on weather event.

Be prepared to move passengers to safe areas in terminal.

Passenger enplaning/deplaning may need to be suspended during the weather alert phases.

Flight crews

Ensure that pilots are advised that because of anticipated high winds, brakes shall be set on all parked aircraft.

Shift change: Ensure all personnel coming on duty know that your severe weather plan is in effect.

Wintery or Slippery Apron Conditions

The following precautions to reduce accident risk must be taken:

- Plan additional time for ramp activities and take extra care when walking across apron surfaces.
- Take extra care when driving when approaching the aircraft , GSE need greater distance to stop on slippery surfaces.
- Operators of Potable water tankers and toilet service must be vigilant that there is no spillage or leakage could lead to subsequent freezing.
- If apron conditions hazardous, contact the competent authority to mitigate the hazard.
- Close all entrance and cargo hold doors as soon as possible and keep the closed to avoid precipitation entry into the aircraft.

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Sandstorms and Low Visibility

The following minimum precautions should be taken

- a) Issue appropriate PPE such as masks, covered clothes.
- b) Ensure the provision of shelter, as required.

Intense Heat

The following minimum precautions should be taken

- a) Issue appropriate PPE
- b) Ensure the provision of hydration for staff
- c) Ensure the provision of a temperature-controlled environment during rest breaks

Below table to summarize staff actions shall be taken when sustained winds and/or gusts of wind exceeding 25 knots are predicted:

High Wind Activity Table

Staff Actions	25 to 39 kt	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	✓	✓	✓
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		✓	✓

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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			✓

Lightning

On receipt of an ALERT

Make preparations for the **STOP** phase. Suspend non-essential activities in open areas.

Reduce fueling pressures to prevent accumulation of static charges.

Avoid using highly conductive equipment. **On receipt of STOP**

Stop fueling.

Discontinue aircraft communication by head set. **Stop** all ramp activity and clear ramp.

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.

Ensure all passenger service personnel have up to date information on weather event.

If passengers have not started boarding hold the passengers in gate lounges. If boarding has started, stop process and leave passengers already boarded on the aircraft. If an aircraft has just arrived it should be held off the gate until the lightning alert is terminated.

Low visibility

All non-essential equipment should leave the Maneuvering Area.

Only the minimum required equipment should be permitted airside during low visibility operations.

Equipment operating speeds must be considerably reduced.

Motorized equipment should have all running lights on during low visibility operations.

Equipment operators must take extra caution at all intersections and vehicle/apron taxi-lane crossings.

Crossing of taxiways, where permitted, should only be undertaken with ATC clearance.

When visibility is low, operators must take additional care to ensure that vehicle windshields are clean.

Operations in Snow & Ice Conditions

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Both ground and work surfaces on equipment will become particularly hazardous during periods of ground icing conditions. The use of De/Anti-Icing fluid can add to the slippery conditions on the ground.

When ground icing conditions are predicted, special preparations of the equipment will be necessary to ensure their functionality and safety of operation.

Wherever possible, snow and ice formations on equipment and work surfaces should be removed prior to the start of operations.

Personnel should allow extra time for activities, drive more slowly and allow a greater distance to stop equipment.

Personnel should be provided with suitable clothing to be able to maintain efficiency.

Lightning Safety

General

Generally if an individual can see lightning and/or hear thunder they are already at risk.

High winds, rainfall, and cloud cover often act as precursors to actual cloud-to-ground strikes notifying individuals to take action.

Many lightning casualties occur in the beginning, as the storm approaches, because people ignore these precursors. Also, many lightning casualties occur after the perceived threat has passed.

The lightning threat generally diminishes with time after the last sound of thunder, but may persist for more than 30 minutes.

When thunderstorms are in the area but not overhead, the lightning threat can exist even when it is sunny, not raining, or when clear sky is visible.

Remember that lightning is always generated and connected to a thundercloud but may strike many miles from the edge of the thunderstorm cell. Acceptable downtime has to be balanced with the risk posed by lightning.

Lightning Protection

The purpose of lightning protection is to protect persons, buildings and their contents, or structures in general, from the effects of lightning, to a certain acceptable level. There is no 100% protection level seen within technical and economic constraints. Lightning protection is not aimed to prevent the formation of the lightning discharge, instead it is intended to prevent the object from being directly hit or affected by a remote lightning discharge.

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.

Personnel Safety

During lightning activity personnel should not:

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- Get out of enclosed vehicles
- Use a head set connected to aircraft
- Use portable electronic devices, e.g. mobile phones, pagers, two-way radios in open areas or in front of windows.
- Stay in open areas or under aircraft
- Seek shelter under a tall tree
- Load or unload explosive or flammable material

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7.15 Foreign Object Damage (FOD) Prevention Program

7.15.1 Introduction

Damage to aircraft/equipment/property/injury to personnel caused by foreign object debris is not only a serious threat to safety but continues to cost aircraft operators annually in direct losses resulting from aircraft/equipment out of service and disruption of schedules. Creating a FOD prevention culture requires constant vigilance.

7.15.2 Definition

FOD is defined as damage to aircraft, aircraft engines, tyres or aircraft components caused by foreign object debris. This does not include damage from natural causes such as lightning and hail. FOD (foreign object debris) can result in FOD (foreign object damage).

7.15.3 General

This information provides guidance for establishing and conducting an effective foreign object damage (FOD) prevention program. Responsibilities are specifically outlined in this program but ultimately the responsibility for FOD prevention and the implementation of this program rests with senior management. Key elements in the FOD program but not limited to are; tool accountability, enforcing proper maintenance practices and housekeeping.

7.15.4 Objective

The objective of this program is to eliminate FOD by identifying and eliminating conditions that if not corrected could cause damage.

7.15.5 Application

The program applies to all aircraft operators, airlines, ground handling companies, refuellers, airport companies and all airport stakeholders.

7.15.6 Causes of FOD

FOD may results from:

- Failure to properly clean areas and account for removed objects, nuts, bolts, paper, plastic, drink containers/cups/cans, rags, pavement fragments, baggage components/tags, aircraft waste, catering equipment etc. used during the performance of any task.
- Inadequate housekeeping.
- Clean-up operations after severe weather. (Reference [IGOM 3.3](#))
- Failure to account for tools and parts.
- Failure to maintain ground support equipment, i.e. parts break off or fall off.
- Apron works in progress/construction sites.

7.15.7 Training

All personnel involved in aircraft operations/handling, maintenance and associated businesses should receive initial and recurrent training in FOD detection/prevention/removal. This training should form part of the induction and recurrent training programs.

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7.15.8 Housekeeping

Effective housekeeping to maintain a FOD free and tidy work-place is the key element to FOD prevention.

Conducting inspections to ensure areas where aircraft operate are clean of rubbish and other debris that can cause FOD.

A FOD check should be completed at each gate area prior to any aircraft arrival and departure or aircraft movement

7.15.9 Responsibilities

7.15.9.1 Management

Have the overall responsibility for developing and implementation of an effective FOD program in their work area (s). Management must lead by example and encourage all employees to participate in the program by:

- Establishing and assigning specific areas of responsibility for FOD prevention (example FOD inspections, FOD sign-age, FOD promotion etc).
- Review FOD reports (originating at station) assure corrective action as necessary.
- Ensure that each FOD incident is investigated and positive corrective action is taken to prevent recurrence.)
- All stakeholders work with the airport companies to ensure that required FOD inspections of runway/taxiway surfaces are inspected per guidelines IATA/ICAO, including sweeping.
- Participate personally in the program (walk the talk) through regular area inspections (safety observations).

7.15.9.2 Supervisors

Must constantly be aware of the potential for FOD and be knowledgeable of their area of responsibility and assure subordinate personnel are aware of and are participating in the FOD prevention program effort. They will inspect their area of responsibility regularly.

7.15.9.3 All Employees

All employees involved in aircraft operations and associated businesses — must receive training to recognize and be responsible for the elimination of conditions that could result in FOD. Personnel must take ownership for identifying FOD hazards and advise their manager/supervisor of any condition that may result in FOD.

“If you see it (FOD) remove it”.

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7.15.10 FOD Prevention Strategies

Maintaining control of FOD includes using several methods such as:

7.15.10.1 General

- Continual improvement practices should be considered and implemented with an aim to minimize and ultimately remove FOD on the apron. For example, the use of plastic wrapping to cover or contain bulk freight items onto rolling stock/pallets/containers etc is strongly discouraged and alternative solutions should be used. If plastic wrapping must be utilized, effective disposal or work practices must be implemented to ensure proper removal and disposal.
- Magnetic bars can be suspended beneath ground service equipment (generally tow motors) to pick-up metallic material. However, the bars should be cleaned regularly as part of your vehicle maintenance program to prevent them from dropping the collected debris.

7.15.10.2 FOD Reporting and Investigation

7.15.10.2.1 FOD Investigations

Each occurrence of FOD resulting in damage to aircraft engines, tyres or components should be investigated to determine the cause of damage source of the FOD and ways to prevent recurrence. FOD investigations will be conducted as soon as possible following awareness of the incident.

7.15.10.2.2 FOD Incident Reporting

To measure program effectiveness, each FOD incident will be reported using the appropriate reporting form.

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7.15.11 FOD Containers

7.15.11.1 FOD Receptacles/Containers/Bins

Probably the biggest deterrent to the effectiveness of any program is the lack of sufficient disposal containers, conveniently located, and conspicuously marked. Should an individual take the time and effort to pick up foreign material and then find no place to dispose of it, invariably the individual may redeposit it from where it was found — only to again create an FOD hazard.

7.15.11.2 Apron Areas

A waste container should be placed at each gate position. This container should be equipped with a lid to protect against the wind blowing debris from the container. The size of the container and disposal opening of the container should be relatively small so that the container is not used for bulk waste. The container should be a fluorescent or bright colour (yellow) with large red decals or lettering "F.O.D.". Consideration should also be given to the fitment of FOD bins in or on some ground support equipment, including a process for the emptying of these receptacles.

7.15.11.3 Sweeping

Sweeping may be done manually or with the airfield sweeper, which is the most effective equipment for removing FOD from airside. The sweeper removes debris from cracks and pavement joints, and should be used in all areas except for those that can be reached only with a hand broom. Other methods are also available. All airside areas including aircraft maneuvering areas, aprons and gates and the areas adjacent to them should be swept routinely. The areas in which ground support equipment is staged should be swept periodically.

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7.15.12 Hangar/Line Maintenance Areas, Aprons and Run-Up areas

Hangar/Line Maintenance areas

Practicing good housekeeping is the single most important issue. "Clean as you go" should be the motto for all work areas.

FOD receptacles should be available in work areas

Regular cleaning and/ or vacuuming of all work areas should be done.

Tool Control — Tools used in and around aircraft and aircraft engines must be accounted for.

There are a number of methods to assist with tool control including the use of shadow boards, shadow boxing, bar coding, special canvass layouts with tool pockets, tool counters, chit system tool bags or consolidated tool kits.

When using lock wire and other loose articles (nuts/bolts), care must be taken not to leave these items (lock wire off cuts) in the work area or allow pieces to fall onto the ground.

FOD checks for debris on floor and/ or equipment must be done prior to bringing the aircraft into a hangar. FOD checks for debris on floor, in engine inlets, on winds and fuselage, and a check for any tools left on or around aircraft will be performed prior to removing the aircraft from the hangar for run-up, repositioning, or completion of service.

Hangar aprons

Hangar aprons like other areas must be maintained FOD free.

Areas must be inspected daily, prior to aircraft arrival, and prior to aircraft pushback.

Pavement must be inspected for deterioration and any deterioration identified should be reported and repaired promptly.

Run-Up Bays

Run-up bays or areas are particularly susceptible to engine damage from loose pavement or other items.

Before each run-up, the area must be inspected for FOD, particularly pavement deterioration.

All loose equipment should be kept well away from operating engines.

7.15.13 FOD Promotion and Coordination

There are several methods available to promote FOD. Promotional efforts should be an integral part of the operation. Some of the methods below include the use of FOD committees or alternate discussion forums, FOD walks and general FOD promotional material (posters, videos etc.).

- Safety meetings could include an agenda item to ensure FOD is regularly discussed. Specific FOD committee's within organizations or involving other airport tenants could be another alternative.

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- A pro-active strategy is to conduct regular “FOD walks” as groups or crews. This FOD walk concept could also form part of your toolbox type meetings or FOD discussion forums.
- FOD promotion — There are several ways to promote FOD awareness. Whether it is through the use of a FOD campaign, safety week, FOD displays, discussion forums or posters, stickers, banners, videos and brochures.

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7.15.14 FOD Prevention Checklist for Management/Supervisors

A FOD Prevention checklist used for FOD prevention and its control could include the following:

- A physical FOD inspection is conducted by the ground crew prior to each aircraft arrival and prior to departures
- In coordination with the Airport Company, ensure the program for the inspection of runways, taxiways and aprons for foreign objects and surface deterioration.
- Observing whether personnel are conscientiously picking up foreign objects and disposing of them appropriately.
- Undertaking a spot check of general housekeeping in work areas.
- Observing personnel at work for proper FOD prevention practices.
- Reviewing induction and currency training of staff
- Monitoring staff about their awareness about FOD and evaluate their participation.
- Following up on corrective actions recommended from FOD investigations and observations.
- Ensuring equipment operators clean out their vehicles prior to and during their shift.
- Ensuring there is adequate provision of FOD receptacles/ containers in these areas.
- Ensuring adequate FOD promotional material is displayed.
- Accountability for tools and parts.
- Routine maintenance of ground support equipment is conducted.

SUMMARY

An effective FOD program can greatly reduce the high cost of FOD damage and the potential for injury to personnel. FOD control is most effective when all affected parties coordinate their efforts.

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7.16 Airside Safety Operational Oversight

7.16.1 Introduction

To ensure ground operational safety, all station activities, including, if applicable, those outsourced to an external third-party ground service provider or its subcontractor, shall be conducted under the direct oversight of supervision personnel.

7.16.2 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 IGOM and Nesma Airlines specific requirements, these duties may be combined with another function/role.
- d) Nesma Airlines Checklists shall be provided and 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.

7.16.3 Supervision Scope

Oversight for an aircraft arrival/departure includes, but is not limited to the following activities:

- a) Aircraft, vehicles and Ground Support Equipment 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:
 - 1. LIR
 - 2. load sheet
 - 3. NOTOC
 - 4. Other documents, as applicable.
- k) Load control and flight operations.
- l) Marshalling
- m) Moving of aircraft
- n) Passenger services
- o) Precision Runway Monitor (PRM)
- p) Ramp fueling/de-fueling operations

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- q) Ramp regulations
- r) Ramp services
- s) Ramp to flight-deck communications
- t) Staff conduct, behavior and operational practice
- u) Personal Protective Equipment (PPE)
- v) Toilet services
- w) Towing cargo and baggage
- x) Bulk loading/unloading of baggage and cargo
- y) Water service

7.16.4 General Safety Rules during Aircraft Handling on the Airport Apron:

In addition to any local airport safety regulations, the following rules must be strictly adhered to for handling of Nesma Airlines aircraft:

- No unauthorized person shall be in the vicinity of or enter a Nesma Airlines aircraft.
- Smoking and the use of open fire on the ramp are strictly forbidden.
- While on duty on the ramp, personnel must wear ear protections permanently.
- Ground Servicing Equipment (GSE) used to service Nesma Airlines aircraft shall only be operated by well-trained licensed personnel.
- GSE must be of a construction and condition that is suitable and safe for the use at Nesma Airlines aircraft.
- Prior to arrival of the aircraft, the ramp position has to checked and cleared of any foreign objects in order to avoid damage to the aircraft.
- GSE must not approach Nesma Airlines aircraft until the engines have come to a complete stop, anti-collision light switched off, and the parking brake of the aircraft is set or the chocks are positioned respectively.
- Operators must maintain a reasonable distance between the aircraft and GSE, in order to avoid damage caused by vertical movements of the fuselage during loading, unloading, and fueling.
- The maneuvering of equipment in the vicinity of aircraft must take place with utmost care and accuracy.
- Hose lines and connecting cables must neither be crossed by GSE nor by any other kind of vehicle.
- GSE, excluding fuel bowsers or fuel hydrants, must not be positioned or maneuvered under the aircraft wings.
- GSE, excluding fuel bowsers or fuel hydrants, must not be positioned within the venting areas during fueling and de-fueling.
- When passengers are required to walk on the ramp, they must be escorted by ground staff to and from aircraft. Passenger routes as well as passenger stairs shall be clear of oil, ice, snow, and other hazards and shall be selected in such a way that the risk of accidents is kept to a minimum (e.g. no passing below wings or engines).
- Inside the cockpit, walky-talkies shall not be used when the cockpit crew is present.
- The responsible engineer in charge or ramp agent must make sure that the engine blast and intake areas are clear of personnel and equipment's before start-up clearance is given.

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- During start-up and after removing stairs or jet ways, no GSE shall be positioned in the area below the emergency exit doors so that the emergency exit chutes can be deployed immediately.
- Exception: When starting the engines by means of air start units (ASU), a momentary blocking of a maximum of one emergency exit by the ASU is permitted. In this case, a reduction of the maximum permissible number of passengers is not required. The captain must be informed about the blocked exit.
- Whenever any damage to the aircraft occurs or noticed, it must be reported immediately to the engineer in charge and the commander and an incident report according to "Incident Reporting" must be sent to the managing director.

7.17 Turnaround Coordination/Supervision Requirements

- **Station Supervisor Checklist**

The checklist on SOM 11.2.15 contain elements that require supervision by individuals assigned and oversee ground handling operations. The primary task is to stop all unsafe acts.

- **Outstations Crew Service Report**

The report on SOM 11.2.18 contain services received by flight crew in outstations, in case any service failure or remarks crew shall fill it on this report and get GSP signature on it, then revert Ground Handling Manager to investigate, maintenance department, engineers on board, if they need to communicate any information relevant to the conduct of ground handling operations or performance of Ground Service providers station, GSE or fuel, they can use this form.

7.18 Reporting-Incidents, Accidents and Near-Misses

In the event of an incident or accident, the work must stop, the scene must be frozen and isolated and the event shall be immediately reported to the line management of Nesma Airlines and as required to local authorities. In general:

- a) Complete the Ground Incident Damage Report form to collect all relevant information regarding the event.
- b) Submit the Ground Incident Damage Report form to the line management of Nesma Airlines and local authorities.

Refer to AHM650 for more details.

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7.19 Airside Safety Investigation Procedure

7.19.1 General

The investigation process will be conducted in a logical way by collecting and analyzing facts to identify root causes as well as contributing and human factors.

7.19.2 Factual Information

In general:

- a) Gather factual information including photographs, testimonials, reports, sketches, video footage, maps and any other relevant information.
- b) Determine the level of investigation:
 - 5. Basic investigation-an informal inquiry to identify the key elements that led to the event.
 - 6. Formal investigation- a formal inquiry with all parties involved, including legally required internal and external parties.

7.19.3 Investigation Procedure

In general:

- a) Gather all information available about the event:
 - 1. Identify the circumstances leading up to the event.
 - 2. Review all reports pertaining to the event.
 - 3. Collect all available data (e.g. CCTV and other video footage, photographs, objects, testimonials, sketches, maps).
 - 4. Identify the people involved and any witnesses.
 - 5. Gather all relevant information concerning the people involved (e.g. roster, training records, medical information. Employee records, assigned task, all reports, any other).
 - 6. Gather all relevant information concerning the technical, environmental and infra structural conditions.
- b) Conduct interviews with all individuals and any witnesses.
- c) Conduct a confirmation site visit if possible.
- d) Confirm whether a Standard Operating Procedures (SOP) are published and available for task being performed.
- e) Identify human factors:
 - 1. Communication
 - 2. Stress and timing
 - 3. Fatigue
 - 4. Loss of situational awareness
 - 5. Health condition
 - 6. Use of available resources
 - 7. Staff feedback related SOP
 - 8. Teamwork
 - 9. Knowledge retention and competence.
- f) Technical factors

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1. Use of a GSE
2. Preventive and corrective maintenance records
3. Current technical condition
4. Suitability for the task

7.19.4 Analysis

Analyze the event by:

- a) Describing the sequence of events as they occurred for each person/element involved.
- b) Identifying any failures in the tasks performed in relation to written instructions.
- c) Identifying any causal links between events.
- d) Documenting a chronological sequence of events that led to the incident/accident as supported by facts.
- e) Determining which failures contributed to the accident based on factual evidence in relation to the sequence of events.
- f) Identifying pre-existing and/or new hazards that contributed to the event.

7.19.5 Conclusion and Causes

Specify:

- a) Root causes
- b) Contributing factors
- c) Human factors

7.19.6 Investigation follow up

Follow-up the investigation by:

- a) Establishing the following for each root cause:
 4. Corrective action requests.
 5. Preventive actions requests.
- b) Making safety recommendations that:
 1. Address the root causes as well as the contributing and human factors identified as a part of the investigation.
 2. Ensure corrective and preventive action requests will be issued to Nesma Airlines line management.
 3. Provide line management with corrective action plans to address the root causes as well as contributing and human factors for approval.
 4. Ensure that an action plan implementation is confirmed through a monitoring/audit process.
 5. Ensure that the human factor information in the Airside Safety investigation form is completed.

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Section I General Information			
Case:	Date of Event:	/ /	
Airline:	Time of Event:	(use 24hr clock)	
Station:	Lead investigator:		
Area/Gate:	Date of Investigation:	/ /	
	Date Investigation Closed:	/ /	
Type of Event			
<input type="checkbox"/> Aircraft Damage	<input type="checkbox"/> GSE Damage	<input type="checkbox"/> Occupational Injury	
<input type="checkbox"/> Near-Miss Aircraft Damage	<input type="checkbox"/> Near-Miss GSE Damage	<input type="checkbox"/> Near-Miss Occ Injury	
<input type="checkbox"/> Passenger Injury			
Phase of Operation (Tick all that apply)			
<input type="checkbox"/> Ramp Transfer	<input type="checkbox"/> Bag Tug Operation		
<input type="checkbox"/> Aircraft Arrival	<input type="checkbox"/> Fueling		
<input type="checkbox"/> Loading/Unloading Aircraft	<input type="checkbox"/> Maintenance		
<input type="checkbox"/> Loading Bridge Docking or Positioning	<input type="checkbox"/> Lavatory Service		
<input type="checkbox"/> Aircraft Pushback, Towing or Taxi	<input type="checkbox"/> Water Service		
<input type="checkbox"/> Aircraft Repositioning	<input type="checkbox"/> Bag Tug Bag Cart Operation		
<input type="checkbox"/> Belt Loader Operation	<input type="checkbox"/> Other		
Section II Impact of Event			
<input type="checkbox"/> Flight Cancel	GSE Removed From Service due to event		
<input type="checkbox"/> Flight Delayed	Employee Received First Aid Only		
<input type="checkbox"/> Flight Equipment Changed	Employee Hospitalised		
Description of Incident: (Describe the incident in detail and include a description of the activity.)			

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Section III Contributing Factors		
A. Work Area/Environment (Tick all that apply)		
a. Traffic Congestion	f. High Winds	k. Trip Hazard
b. Ramp Markings	g. Snow/Ice	l. Noise
c. Visual Reference	h. Rain	m. Dust Storm
d. Spatial Judgement	i. Lightening	n. Heat (ambient temp)
e. Lighting	j. Slippery Surface	o. Other
Specifically describe how the selected factor contribution to the event.		
B. Equipment/Tools (Tick all that apply)		
a. Equipment Malfunction (verified)	i. Inappropriate Equipment Used	
b. Pre-Operation Tick list not completed	j. No instructions Provided	
c. Preventive Maintenance not completed	k. Equipment Incorrectly Used	
d. Faulty Equip not removed from service	l. Safety Device Bypassed	
e. Unsafe or Unreliable Equip used	m. Operated at Excessive Speeds	
f. Equipment Difficult to Use	n. Not Trained on Equipment	
g. Proper Equipment Unavailable	o. Design Problem	
h. Not Familiar with Equipment	p. Other	
Specifically describe how the selected factor contribution to the event.		
C. Communication (Tick all that apply)		
a. Shift Debriefing	e. Incomplete Message	
b. Communication, Ground to/fr Flight Deck	f. Confusing Message	
c. Communication, Ground/fr Ground	g. Hand Signals	
d. Communication, Supervisor to/fr agent	h. Other	
Specifically describe how the selected factor contributed to the event, Describe form of communication used.		
D. Ergonomics (Tick all that apply)		
a. Repetitive/Monotonous	g. Difficult to Grip	
b. Forceful Exertions	h. Long Duration	
c. Kneeling/Bending/Stooping	i. Heat/Cold	
d. Twisting	j. Awkward Position	
e. Vibration	h. Other	
f. Contact Stress		
Specifically describe how the selected factor contributed to the event,		

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E. Procedures/Task/Training (Tick all that apply)	
a. Lacked Skill or Training	h. Procedure not Communicated
b. Failed to Plan for Task	i. Not Familiar with Procedure
c. Task too Difficult	j. Procedure Did Not Anticipate Hazard
d. Deviated from Procedure	k. Task Encourages Deviation from Procedure
e. Procedure not Documented	l. New Tool or Equipment
f. Procedure not Trained	m. New Tool or Equipment
g. Procedure or Training not Reinforced	n. Other

Specifically describe how the selected factor contributed to the event,

F. Individual Factors (Tick all that apply)	
a. Physical Health (hearing/sight)	g. Memory Lapse (Forgot)
b. Fatigue	h. Situational Awareness (failed to id hazard)
c. Peer Pressure	i. Stress
d. Body Size or Strength	j. Time Constraints
e. Personal Event (family problem, car acc)	k. Job/Task Experience
f. Workplace Destruction/Interruption	l. Other

Specifically describe how the selected factor contributed to the event,

G. Leadership/Supervision/Organization (Tick all that apply)	
a. Planning/Organization of Task	f. Responsibility not Assigned
b. Prioritization of Work	g. Failed to communicate
c. Delegation of Task	h. Failed to Co-ordinate
d. Unrealistic Attitude or Expectations	i. Workload Management
e. Amount of Supervision or Availability	j. Other

Specifically describe how the selected factor contributed to the event,

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H. Organizational Factors (Tick all that apply)

a. Quality of Support Mgt/Eng./Planning	f. Work Process
b. Company Policies	g. Insufficient Staff
c. Corporate Change/Restructuring	h. Local Norms Permit At-Risk Behavior
d. Union Action	i. Other
e. Normal Practice	

Specifically describe how the selected factor contributed to the event,

List Contributing Factor (Causes) and Associated Corrective Action

#1 Contributing Factor

Corrective Action

Owner	Estimated Completion Date:	/	/
-------	----------------------------	---	---

#2 Contributing Factor

Corrective Action

Owner	Estimated Completion Date:	/	/
-------	----------------------------	---	---

#3 Contributing Factor

Corrective Action

Owner	Estimated Completion Date:	/	/
-------	----------------------------	---	---

#4 Contributing Factor

Corrective Action

Owner	Estimated Completion Date:	/	/
-------	----------------------------	---	---

#5 Contributing Factor

Corrective Action

Owner	Estimated Completion Date:	/	/
-------	----------------------------	---	---

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7.20 Handling Of Emergencies Requiring The Evacuation Of Aircraft During Ground Handling

(Reference AHM 620) IGOM 6.7

INTRODUCTION

In the event of an emergency situation occurring during ground handling operations, evacuation of an aircraft may be necessary. The safety of passengers and staff in such circumstances is of utmost importance. The decision and method of evacuation will be dependent on the circumstances and at the discretion of the aircraft commander or designated authority.

SCOPE

The scope of this AHM is to outline the circumstances that may require an evacuation of the aircraft and/or the general work area.

The action guidelines specified should be read in conjunction with the relevant emergency plans i.e. company/airport emergency plan.

RESPONSIBILITIES

It is the responsibility of each agency involved in handling operations to ensure that personnel are made aware of their specific responsibilities in the event of an emergency situation.

All organizations shall instruct and train their staff in the procedures that must be enacted in emergency situations.

The procedures must clearly define responsibility for directing passengers and staff to a safe assembly area as appropriate to the type of emergency and the conditions at the time.

TYPES OF EMERGENCIES

The following guidelines are provided:

Fuel Spill

Activate Emergency fuel shut-off.

Notify the Aircraft Commander or designated authority, Emergency services and Airport Authority.

Evacuate all persons, if required.

Contain spill by use of initial spill response kit.

Secure the area.

Aircraft Fire

Notify the Aircraft Commander or designated authority, Emergency services and Airport Authority.

If directed, evacuate passengers and staff.

Attempt to extinguish the fire.

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Secure the area.

Dangerous Goods Incident

Notify the Aircraft Commander or designated authority, Emergency services and Airport Authority.

Evacuate all persons if required.

Secure the area, isolate the consignment and identify source.

Security Incident

Assess threat and follow the appropriate procedures.

Evacuate all persons if required.

Aircraft/equipment to be positioned as directed.

General items to consider

Electrical devices, portable electronic devices (PEDs), camera's including flashes must not be used.

Restrict all vehicle movement.

Secure the area and comply with the emergency services directions.

Control potential ignition sources.

EMERGENCY EVACUATION OF GROUND PERSONNEL DURING HANDLING OPERATIONS (NO AIRCREW PRESENT)

Emergency evacuation of aircraft by ground personnel may be required when there is no aircrew on board.

The following guidelines are provided:

Procedures should be established and implemented for aircraft emergency evacuation situations. The procedures should be written in conjunction with and complement existing building evacuation procedures as appropriate.

These procedures would apply only when aircrew are not on board the aircraft and apply to ground personnel such as engineering, cleaning, catering, ramp etc.

Refinement and integration of these procedures will require close and continued co-operation between stakeholders (airport authorities, airlines and contractors).

A designated person "in charge" (supervisor etc.) on board the aircraft would take charge of the emergency, co-ordinate the evacuation and direct personnel to the assembly point.

Different methods of evacuation from the aircraft should be included in the procedures, e.g. mobile stairs, loading bridge etc.

Means of communicating the evacuation should also be considered (radios, audible warnings).

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Effective communication is vital to a safe evacuation.

Staff should be trained in the evacuation procedures including periodic evacuation drills/practices.

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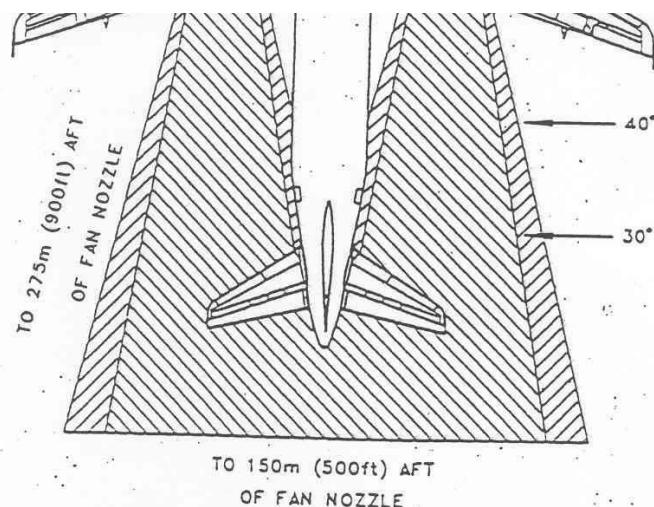
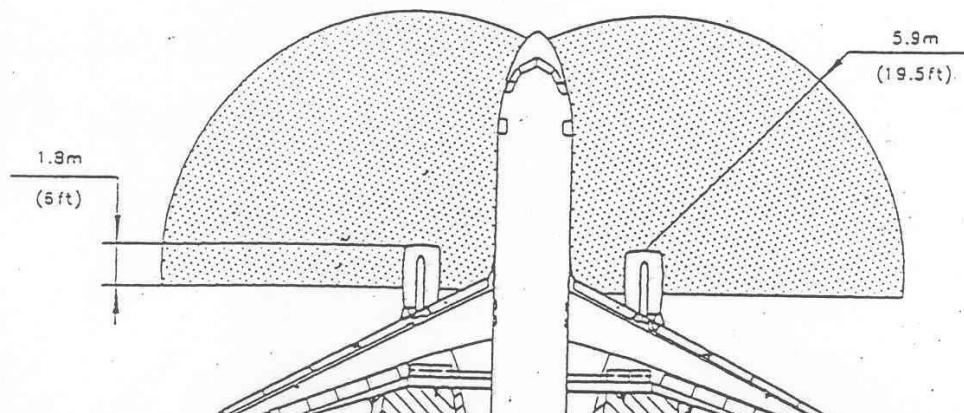
7.21 Methods of Achieving Members Safety

1. Method of weight lifting:

- Most of individual's accidents happen during heavy weights lifting as individuals may lose balance while lifting these weights. The rules that should be complied with to prevent muscles cramping during heaving weights lifting are:
 - a. Use the strong muscles of the legs instead of the weak muscles of the back.
 - b. Use the body weight during moving in the required direction.
 - c. Maintain the natural shape of the fan movement.
 - d. If the object that should be lifted is very heavy, ask for help.

2. Dangers of jet aircraft (Engine Danger Areas) :

- There is a particular risk of injury or damage in areas affected by aircraft engine intakes, exhausts and propellers. The risk is further increased if for any reason an aircraft stops and then applies the additional thrust required to (break away) and continue the maneuver.
- Vehicles and personnel must remain clear of aircraft danger areas when aircraft danger areas when aircraft engines are running and/or the anti-collision lights are on.
- Suction resulting from operating jet aircraft engines can suck a human body and tear it into pieces.
- Suction resulting from jet machines can suck even the away rags, papers, tiny stones, plastic bottles, and catering tins which results in damaging the aircraft machines which in its turn costs the company much money. Accordingly, all these objects should be collected from the ramp and put in waste baskets.
- In order to prevent incidents and accidents caused by aircraft engines, you must never position yourself or equipment in the following critical areas or during aircraft arrival or departure:
 1. Engine intake area.
 2. Engine blast area.
- Make sure the engine intake area is clear at all times when engines are running or the engine start is about to begin.



INLET SUCTION DANGER
AREA



EXHAUST WAKE DANGER
AREA 65 MPH (105km/h)
OR LESS

Issue

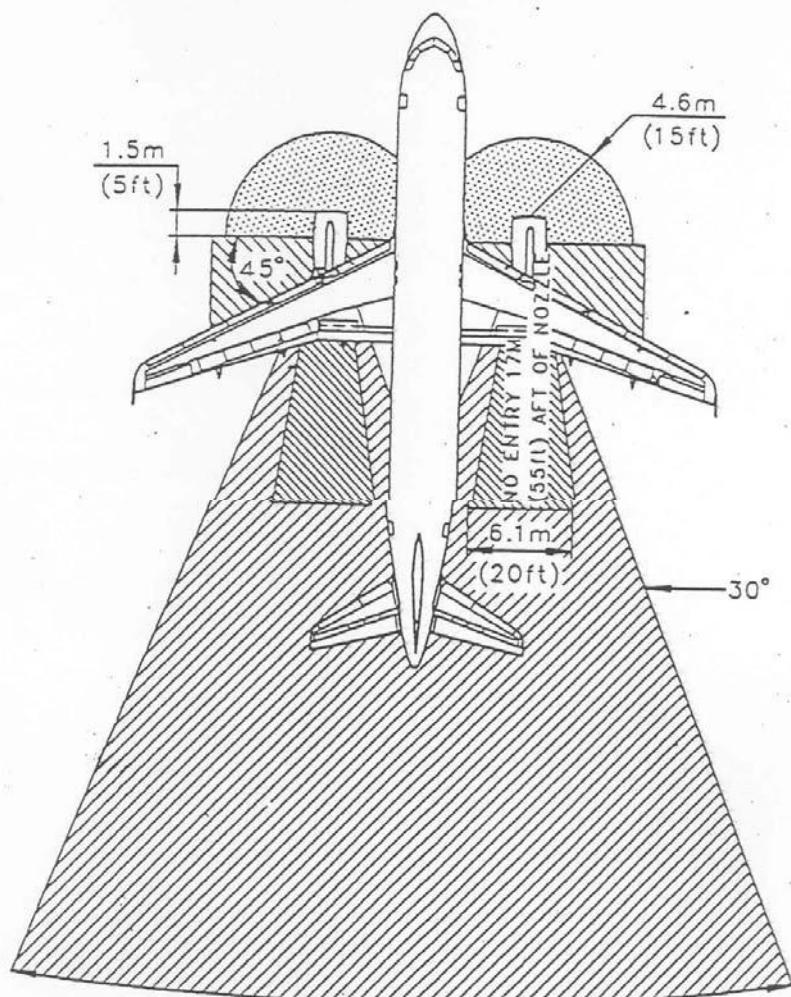
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EXHAUST WAKE DANGER
AREA 65 MPH (105km/h)
OR GREATER

: JAN24



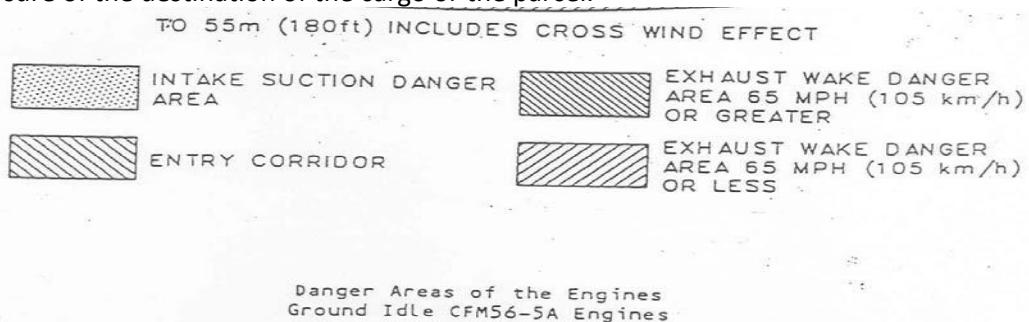
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The exhaust inrush power of jet machines is not less dangerous than their suction power as the high temperature of that exhaust can burn the skin of anybody near the aircraft machine. Besides, its force can push any person regardless of his / her weight. Accordingly, remember the following:

- a) On the aircraft arrival to the site, all personnel and equipment's should stay outside the aircraft safety area till all its engines stop.
- b) On the aircraft departure, all personnel and equipment's should be evacuated from the area lying in front of and at the back of the engines before operating them.
- c) **Noise:** Noise resulting from jet aircraft has harmful effects on hearing on the long term. Hence, it is necessary to wear ears plugs during working on the ramp.
- d) **Cloths:** You should wear protective cloths such as: hats, boots, and gloves during working on the ramp. Make sure that you cloths are tightened well.

7.22 Warning:

- It is forbidden to drive carelessly or speedily on the apron.
- Motor equipment's shouldn't be driven speedily as the speed of these equipment's while being around or near the aircraft should be equal to the speed of an ordinary walking person.
- Hand brakes should be pulled during stopping any part of the ordinary or motor equipment's.
- Smoking is forbidden during working on the aircraft, in the stores or in cargos handling or loading.
- Neglecting to clean the aircraft stores is considered a default of the loading person and his foreman.
- Neglecting to keep loading equipment's such as containers and bales in the places dedicated for keeping them in, and leaving these equipment's in aircraft stands will result in the destruction and damage of these equipment's as well as making them subject to accidents.
- There shouldn't be any equipment behind the aircraft during operating its engine.
- Loading a damaged torn or broken parcel without reporting about this and taking the suitable procedure will make the loading person and his foreman responsible for this parcel.
- Loading person and his foreman are responsible for loading luggage or parcel to a wrong destination.
- Loading person and his foreman are responsible for not reviewing the cargo manifest and not making sure of the destination of the cargo or the parcel.



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7.23 Post-Flight Messages

The following messages must be sent immediately after flight departure to next down line station:

- Passengers Messages:
 - TPM (Tele-Type Passenger Manifest).
 - PSM (Passenger Service Message).
 - SOM* (Seat Occupied Message).
 - LDM (Load Distribution Message).
 - ETD* (Estimated Time Departure).
 - MVT (Movement Message).

(*) means only if applicable.

- In DCS stations, all reports / messages are system produced.
- In Non-DCS stations, all reports to be sent manually except PFS and TPM.

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7.24 Standard Delay Codes

Airline Internal Codes

Numeric	Alphabetic	
00-05		These codes are left blank so that each airline may develop codes specifically to meet their own individual requirements, e.g. 03 "Three-class system" moving curtain.

Others

Numeric	Alphabetic	
06	OA	NO GATE/STAND AVAILABILITY DUE TO OWN AIRLINE ACTIVITY

Schedules

Numeric	Alphabetic	
09	SG	SCHEDULED GROUND TIME LESS THAN DECLARED MINIMUM GROUND TIME

Passenger and Baggage

Numeric	Alphabetic	
11	PD	LATE CHECK-IN, acceptance after deadline
12	PL	LATE CHECK-IN, congestion in check-in area
13	PE	CHECK-IN ERROR, passenger and baggage
14	PO	OVERSALES, booking errors
15	PH	BOARDING, discrepancies and paging, missing checked-in passenger
16	PS	COMMERCIAL PUBLICITY/PASSENGER CONVENIENCE, VIP, press, ground meals and missing personal items
17	PC	CATERING ORDER, late or incorrect order given to supplier
18	PB	BAGGAGE PROCESSING, sorting, etc.

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Cargo and Mail (If delays caused by mail handling can be identified, use codes 27–29, otherwise use codes 21–26.)

Numeric	Alphabetic	
21	CD	DOCUMENTATION, errors, etc.
22	CP	LATE POSITIONING
23	CC	LATE ACCEPTANCE
24	CI	INADEQUATE PACKING
25	CO	OVERSALES, booking errors
26	CU	LATE PREPARATION IN WAREHOUSE

Mail Only

Numeric	Alphabetic	
27	CE	DOCUMENTATION, PACKING, etc.
28	CL	LATE POSITIONING
29	CA	LATE ACCEPTANCE

Aircraft and Ramp Handling

Numeric	Alphabetic	
31	GD	AIRCRAFT DOCUMENTATION LATE/INACCURATE, weight and balance, general declaration, pax manifest, etc.
32	GL	LOADING/UNLOADING, bulky, special load, cabin load, lack of loading staff
33	GE	LOADING EQUIPMENT, lack of or breakdown, e.g. container pallet loader, lack of staff
34	GS	SERVICING EQUIPMENT, lack of or breakdown, lack of staff, e.g. steps
35	GC	AIRCRAFT CLEANING
36	GF	FUELING/DEFUELING, fuel supplier

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Revision No.: 00

Issue Date: JAN24

Revision Date: JAN24

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Numeric	Alphabetic	
37	GB	CATERING, late delivery or loading
38	GU	ULD, lack of or serviceability
39	GT	TECHNICAL EQUIPMENT, lack of or breakdown, lack of staff, e.g. push-back

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Technical and Aircraft Equipment

Numeric	Alphabetic	
41	TD	AIRCRAFT DEFECTS
42	TM	SCHEDULED MAINTENANCE, late release
43	TN	NON-SCHEDULED MAINTENANCE, special checks and/or additional works beyond normal maintenance schedule
44	TS	SPARES AND MAINTENANCE EQUIPMENT, lack of or breakdown
45	TA	AOG SPARES, to be carried to another STN
46	TC	AIRCRAFT CHANGE, for technical reasons
47	TL	STANDBY AIRCRAFT, lack of planned standby aircraft for technical reasons
48	TV	SCHEDULED CABIN CONFIGURATION/VERSION ADJUSTMENTS

Damage to Aircraft

Numeric	Alphabetic	
51	DF	DAMAGE DURING FLIGHT OPERATIONS, bird or lightning strike, turbulence, heavy or overweight landing, collision during taxiing
52	DG	DAMAGE DURING GROUND OPERATIONS, collisions (other than during taxiing), loading/off-loading damage, contamination, towing, extreme weather conditions

EDP/Automated Equipment Failure

Numeric	Alphabetic	
55	ED	DEPARTURE CONTROL
56	EC	CARGO PREPARATION/ DOCUMENTATION
57	EF	FLIGHT PLANS

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Numeric	Alphabetic	
58	EO	OTHER AUTOMATED SYSTEM format

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Flight Operations and Crewing

Numeric	Alphabetic	
61	FP	FLIGHT PLAN, late completion or change of, flight documentation
62	FF	OPERATIONAL REQUIREMENTS, fuel, load alteration
63	FT	LATE CREW BOARDING OR DEPARTURE PROCEDURES, other than connection and standby (flight deck or entire crew)
64	FS	FLIGHT DECK CREW SHORTAGE, sickness, awaiting standby, flight time limitations, crew meals, valid visa, health documents, etc.
65	FR	FLIGHT DECK CREW SPECIAL REQUEST, not within operational requirements
66	FL	LATE CABIN CREW BOARDING OR DEPARTURE PROCEDURES, other than connection and standby
67	FC	CABIN CREW SHORTAGE, sickness, awaiting standby, flight time limitations, crew meals, valid visa, health documents, etc.
68	FA	CABIN CREW ERROR OR SPECIAL REQUEST, not within operational requirements
69	FB	CAPTAIN REQUEST FOR SECURITY CHECK, extraordinary

Weather

Numeric	Alphabetic	
71	WO	DEPARTURE STATION
72	WT	DESTINATION STATION
73	WR	EN ROUTE OR ALTERNATE
75	WI	DE-ICING OF AIRCRAFT, removal of ice and/or snow, frost prevention excluding unserviceability of equipment
76	WS	REMOVAL OF SNOW, ICE, WATER AND SAND FROM AIRPORT

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Numeric	Alphabetic	
77	WG	GROUND HANDLING IMPAIRED BY ADVERSE WEATHER CONDITIONS

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Air Traffic Flow Management Restrictions

Numeric	Alphabetic	
81	AT	ATFM DUE TO ATC EN-ROUTE DEMAND/CAPACITY, standard demand/capacity problems
82	AX	ATFM DUE TO ATC STAFF/EQUIPMENT EN-ROUTE, reduced capacity caused by industrial action or staff shortage or equipment failure, extraordinary demand due to capacity reduction in neighboring area
83	AE	ATFM DUE TO RESTRICTION AT DESTINATION AIRPORT, airport and/or runway closed due to obstruction, industrial action, staff shortage, political unrest, noise abatement, night curfew, special flights
84	AW	ATFM DUE TO WEATHER AT DESTINATION

Airport and Governmental Authorities

Numeric	Alphabetic	
85	AS	MANDATORY SECURITY
86	AG	IMMIGRATION, CUSTOMS, HEALTH
87	AF	AIRPORT FACILITIES, parking stands, ramp congestion, lighting, buildings, gate limitations, etc.
88	AD	RESTRICTIONS AT AIRPORT OF DESTINATION, airport and/or runway closed due to obstruction, industrial action, staff shortage, political unrest, noise abatement, night curfew, special flights
89	AM	RESTRICTIONS AT AIRPORT OF DEPARTURE WITH OR WITHOUT ATFM RESTRICTIONS, including Air Traffic Services, start-up and pushback, airport and/or runway closed due to obstruction or weather (restriction due to weather in case of AFTM regulation only, else refer to code 71 (WO)), industrial action, staff shortage, political unrest, noise abatement, night curfew, special flights

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Reactionary

Numeric	Alphabetic	
91	RL	LOAD CONNECTION, awaiting load from another flight
92	RT	THROUGH CHECK-IN ERROR, passenger and baggage
93	RA	AIRCRAFT ROTATION, late arrival of aircraft from another flight or previous sector
94	RS	CABIN CREW ROTATION, awaiting cabin crew from another flight
95	RC	CREW ROTATION, awaiting crew from another flight (flight deck or entire crew)
96	RO	OPERATIONS CONTROL, rerouting, diversion, consolidation, aircraft change for reasons other than technical

Miscellaneous

Numeric	Alphabetic	
97	MI	INDUSTRIAL ACTION WITH OWN AIRLINE
98	MO	INDUSTRIAL ACTION OUTSIDE OWN AIRLINE, excluding A.T.S.
99	MX	This code shall be used only when it is clear that a reason cannot be matched to a code above (explain in SI section)

Commentary:

The IATA Airport Services Committee has responsibility for the development of this procedure.

Any proposals for amendment to this procedure should be forwarded to the Manager, Airport Services, IATA, and Geneva, who will circulate the proposals.

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Chapter 08 Dangerous Goods and Weapons

Are articles or substances which are capable of posing a significant risk to health, safety, or to property when transported by air, and which are classified according to Section 3 of the IATA-Dangerous Goods Regulations.

8.1 Policy for the Transport of Dangerous Goods

Nesma Airlines does not carry dangerous goods, cargo, mail, or even company materials COMAT, but still the need for the related personnel to be trained to identify dangerous goods once met, and specially identifying Mis/Undeclared dangerous goods.

8.2 Rules Concerning the Safe Transport of Dangerous Goods.

- The transport of dangerous goods must be performed according to the IATA-Dangerous Goods Regulations and/or the ICAO-Technical Instructions for the safe transport of dangerous goods (Air Doc 9284-AN/905).
- This manual is written according to IATA-Dangerous Goods Regulations, which is to be used as an Operational Policy Manual for the transport of dangerous goods by air.
- This Manual specifies:
 - What may be carried?
 - Responsibility of Nesma Airlines.

8.3 Dangerous Goods - Exclusions from the Regulations

- a) Articles, which would otherwise be classed as dangerous goods, are excluded from the provisions of the Technical Instructions, to the extent specified in the Technical Instructions, provided:
 - i. They are required to be aboard the airplane in accordance with the relevant CAA regulations or for operating reasons. That is those which are for:
 - ii. The airworthiness of the airplane, the safe operation of the airplane, the health of passengers or crew,
 - iii. They are carried as catering or cabin supplies,
 - iv. They are carried for use in flight as veterinary aid or as a humane killer for an animal,
 - v. They are carried for use in flight for medical aid for a patient. These dangerous goods are not those which are part of the normal equipment of
 - vi. The airplane. Gas cylinders, drugs, medicines, other medical material (such as sterilizing wipes) and wet cell or lithium batteries are the dangerous goods which are normally provided for use in flight as medical aid for a patient. These may be carried provided that:
 1. Gas cylinders have been manufactured specifically for the purpose of containing and transporting that particular gas,
 2. Drugs, medicines and other medical matter are under the control of trained personnel during the time when they are in use in the airplane,

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- 3. Equipment containing wet cell batteries is kept and, when necessary secured, in an upright position to prevent spillage of the electrolyte,
 - 4. Proper provision is made to stow and secure all equipment during take-off and landing and at all other times when deemed necessary by the commander in the interests of safety,
- vii. the dangerous goods listed in sub-paragraph (iv) above may also be carried on a flight made by the same airplane to collect a patient, or after that patient has been delivered, when it is impracticable to load or unload the goods at the time of the flight on which the patient is carried.
- b) Articles and substances intended as replacements for those detailed in sub-paragraph (a) (i) above will be transported on an airplane as specified in the Technical Instructions.

DANGEROUS ARTICLES - PUBLIC NOTICES

- a) Handling agents shall ensure that passengers are warned as to the types of goods which may not be taken on board an aircraft by displaying notices sufficient in number and prominence at:
 - I. Each of the places at an airport where tickets are issued, passengers checked-in, and aircraft boarding areas are maintained, and
 - II. Any location where passengers are checked-in.

DANGEROUS GOODS - CARRIED BY PASSENGERS OR CREW

- a) Except as outlined in the following table, dangerous goods shall not be carried by passengers or crew
 - As or in checked baggage
 - As or in carry-on baggage, or on their person.
- b) In all cases **with the approval of the operator** means that Nesma Airlines is under no obligation to perform the service and that a representative of Nesma Airlines (which may be the handling agent), shall be required to give consent. Where such approval is not usually granted a note to this effect is included.
- c) **Attaché Cases, Cash Boxes / Bags.** Security-type equipment such as attaché cases, cash boxes, cash bags, incorporating dangerous goods, such as lithium batteries and / or pyrotechnic devices, are totally forbidden.
- d) **Disabling Devices.** Disabling devices, such as mace, pepper spray, containing an irritant or incapacitating substance, are prohibited on the person and in checked or carry-on baggage.
- e) **Small Vehicles Powered by Lithium Batteries,** Personnel, including those of ground service providers, must verify that:
 - the devices are protected against accidental activation by either being in the original manufacturer's packaging or by taping over the on/off switch;
 - The Watt-hour rating of the lithium ion battery in the device does not exceed 160 Wh. All lithium ion batteries are required to have the Watt-hour rating marked on the outside of the

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battery case. If passenger handling staff are unable to verify the Watt-hour rating by checking either the battery, or the user documentation, it is recommended that the passenger be advised that the device cannot be carried;

- Note: The watt-hour rating is calculated by multiplying the voltage (V) by the ampere hours (Ah). Where the amperage is shown as milliampere hours (MAH) divide the MAH value by 1,000 to establish the Ah.
- If cabin crew identify that the device does not meet the operator's requirement during boarding, they should refer to the ground personnel for proper offloading.

f) Portable Items powered Defective or Recalled Lithium Batteries

• Nesma Airlines shall take necessary precautions & recommendations regarding Defective or Recalled Lithium Batteries especially devices powered by such batteries such as Samsung Note 7 and MacBook Pro laptops which circulated by EASA , ECAA & ICAO safety bulletins & its recommendations by

- Make information available to Passengers and staff processing passengers about any restrictions and limitations to carry on board an aircraft damaged, defective or recalled lithium batteries or devices; (Nesma Airlines Sign for such devices should be available on Check in Counters).
- Sign contains instructions if a damaged, defective or recalled battery or device is noticed to have been carried inadvertently on board an aircraft, require the passenger concerned to keep the battery or device turned off, protect it from accidental activation (also disabling any features that may turn it on), keep it on the person, and not charge it at any time;
- Remind passengers of the need to immediately inform the cabin crew when a device is damaged, hot, produces smoke, is lost, or falls into the seat structure;
- Ensure that staff responsible for cargo acceptance and processing is fully aware that damaged, recalled or potentially hazardous lithium batteries, including those contained in equipment and/or shipped with equipment, are forbidden to be transported by aircraft as cargo.

Approval Process:

All items listed in below table requiring operator approval, shall be communicated in writing from the passenger or service provider to email: Ground.Handling@Nesmaairlines.com 72H before the flight to run the check and approve the transport against limitations and substance nature according Nesma Airlines policy.

The approval/refusal is communicated back to the sender copying the station of departure.

In case passenger will show up with item at check-in / Boarding point without operator approval, Item shall not be accepted.

During out of office hours inquiries to this regards shall be addressed to
OCC@nesmaairlines.com

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Dangerous Goods Regulations

TABLE 2.3.A
Provisions for Dangerous Goods Carried by Passengers or Crew
(Subsection 2.3)

2

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.

2.3

	The pilot-in-command must be informed of the location			
	Permitted in or as carry-on baggage		Permitted in or as checked baggage	
	The approval of the operator is required			
Alcoholic beverages , when in retail packagings, containing more than 24% but not more than 70% alcohol by volume, in receptacles not exceeding 5 L, with a total net quantity per person of 5 L.	NO	YES	YES	NO
Note: <i>Alcoholic beverages containing 24% or less alcohol by volume are not subject to any restrictions.</i>	YES	YES	NO	NO
Ammunition, securely packaged (in Div. 1.4S, UN 0012 or UN 0014 only), in quantities not exceeding 5 kg gross weight per person for that person's own use. Allowances for more than one person must not be combined into one or more packages.	YES	YES	YES	NO
Avalanche rescue backpack , one (1) per person, containing cartridges of compressed gas in Div. 2.2. May also be equipped with a pyrotechnic trigger mechanism containing no more than 200 mg net of Div. 1.4S. The backpack must be packed in such a manner that it cannot be accidentally activated. The airbags within the backpacks must be fitted with pressure relief valves.	NO	FORBIDDEN		
Baggage with installed lithium batteries non-removable batteries exceeding 0.3 g lithium metal or 2.7 Wh.	NO	YES	YES	NO
Baggage with installed lithium batteries:	NO*	NO	YES	NO
– non-removable batteries. Batteries must contain no more than 0.3 g lithium metal or for lithium ion must not exceed 2.7 Wh;				
– removable batteries. Batteries must be removed if baggage is to be checked in. Removed batteries must be carried in the cabin.				
Batteries, spare/loose , including lithium batteries, non-spillable batteries, nickel-metal hydride batteries and dry batteries (see 2.3.5.8) for portable electronic devices must be carried in carry-on baggage only. Articles which have the primary purpose as a power source, e.g. power banks are considered as spare batteries. These batteries must be individually protected to prevent short circuits.	YES	YES	NO	NO
Lithium metal batteries: the lithium metal content must not exceed 2 g (see 2.3.5.8.4). Lithium ion batteries: the Watt-hour rating must not exceed 100 Wh (see 2.3.5.8.4).				
Each person is limited to a maximum of 20 spare batteries.				
*The operator may approve the carriage of more than 20 batteries.				
Non-spillable batteries: must be 12 V or less and 100 Wh or less. Each person is limited to a maximum of 2 spare batteries (see 2.3.5.8.5).				
Camping stoves and fuel containers that have contained a flammable liquid fuel , with empty fuel tank and/or fuel container (see 2.3.2.5 for details).	YES	YES	NO	NO
Chemical Agent Monitoring Equipment , when carried by staff members of the Organization for the Prohibition of Chemical Weapons on official travel (see 2.3.4.4).	YES	YES	YES	NO
Disabling devices such as mace, pepper spray, etc. containing an irritant or incapacitating substance are forbidden on the person, in checked and carry-on baggage.		FORBIDDEN		
Dry ice (carbon dioxide, solid) , in quantities not exceeding 2.5 kg per person when used to pack perishables not subject to these Regulations in checked or carry-on baggage, provided the baggage (package) permits the release of carbon dioxide gas. Checked baggage must be marked "dry ice" or "carbon dioxide, solid" and with the net weight of dry ice or an indication that there is 2.5 kg or less dry ice.	YES	YES	YES	NO
e-cigarettes (including e-cigars, e-pipes, other personal vaporizers) containing batteries must be individually protected to prevent accidental activation (see 2.3.5.8.2).	NO	NO	YES	NO
Electro shock weapons (e.g. Tasers) containing dangerous goods such as explosives, compressed gases, lithium batteries, etc. are forbidden in carry-on baggage or checked baggage or on the person.		FORBIDDEN		
Fuel cells containing fuel, powering portable electronic devices (e.g. cameras, cellular phones, laptop computers and camcorders), see 2.3.5.9 for details.	NO	NO	YES	NO
Fuel cell cartridges , spare for portable electronic devices, see 2.3.5.9 for details.	NO	YES	YES	NO
Gas cartridges, small, non-flammable containing carbon dioxide or other suitable gas in Division 2.2. Up to two (2) small cartridges fitted into a self-inflating personal safety device, intended to be worn by a person, such as a life jacket or vest. Not more than two (2) devices per passenger and up to two (2) spare small cartridges per device, not more than four (4) cartridges up to 50 mL water capacity for other devices (see 2.3.4.2).	YES	YES	YES	NO
Gas cylinders, non-flammable, non-toxic worn for the operation of mechanical limbs. Also, spare cylinders of a similar size if required to ensure an adequate supply for the duration of the journey.	NO	YES	YES	NO
Hair styling equipment containing a hydrocarbon gas cartridge , up to one (1) per passenger or crew-member, provided that the safety cover is securely fitted over the heating element. This hair styling equipment must not be used on board the aircraft. Spare gas cartridges for such hair styling equipment are not permitted in checked or carry-on baggage.	NO	YES	YES	NO

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65th EDITION, 1 JANUARY 2024

Issue No.: 09

Revision No.: 00

Issue Date: JAN24

Revision Date: JAN24

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Limitations

TABLE 2.3.A
Provisions for Dangerous Goods Carried by Passengers or Crew
(Subsection 2.3) (continued)

	The pilot-in-command must be informed of the location				2.3
	Permitted in or as carry-on baggage		Permitted in or as checked baggage		
	The approval of the operator is required				
Insulated packagings containing refrigerated liquid nitrogen (dry shipper), fully absorbed in a porous material containing only non-dangerous goods.	NO	YES	YES	NO	
Internal combustion or fuel cell engines , must meet A70 (see 2.3.5.12 for details).	NO	YES	NO	NO	
Lithium Batteries: Portable electronic devices (PED) containing lithium metal or lithium ion cells or batteries , including medical devices such as portable oxygen concentrators (POC) and consumer electronics such as cameras, mobile phones, laptops and tablets (see 2.3.5.8). For lithium metal batteries the lithium metal content must not exceed 2 g and for lithium ion batteries the Watt-hour rating must not exceed 100 Wh. Devices in checked baggage must be completely switched off and must be protected from damage. Each person is limited to a maximum of 15 PED. *The operator may approve the carriage of more than 15 PED.	NO NO*	YES YES	YES YES	NO NO	
Lithium batteries, spare/loose, including power banks , see Batteries, spare/loose	YES	YES	YES	NO	
Lithium battery-powered electronic devices . Lithium ion batteries for portable (including medical) electronic devices, a Wh rating exceeding 100 Wh but not exceeding 160 Wh. For portable medical electronic devices only, lithium metal batteries with a lithium metal content exceeding 2 g but not exceeding 8 g. Devices in checked baggage must be completely switched off and must be protected from damage.	YES	YES	YES	NO	
Lithium batteries, spare/loose with a Watt-hour rating exceeding 100 Wh but not exceeding 160 Wh for consumer electronic devices and PMED or with a lithium metal content exceeding 2 g but not exceeding 8 g for PMED only. Maximum of two spare batteries in carry-on baggage only. These batteries must be individually protected to prevent short circuits.	YES	NO	YES	NO	
Matches, safety (one small packet) or a small cigarette lighter that does not contain unabsorbed liquid fuel, other than liquefied gas, intended for use by an individual when carried on the person. Lighter fluid and lighter refills are not permitted on one's person or in checked or carry-on baggage.	NO	ON ONE'S PERSON		NO	
Note: "Strike anywhere" matches, "Blue flame" or "Cigar" lighters or lighters powered by a lithium battery without a safety cap or means of protection against unintentional activation are forbidden (see 2.3.5.6.4(e)).					
Mobility Aids: Battery-powered wheelchairs or other similar mobility devices with non-spillable wet batteries, nickel-metal hydride batteries or dry batteries , (see 2.3.2.2).	YES	YES	NO	YES	
Mobility Aids: Battery-powered wheelchairs or other similar mobility devices with spillable batteries or with lithium ion batteries (see 2.3.2.3 and 2.3.2.4 for details).	YES	YES	NO	YES	
Mobility Aids: Battery-powered wheelchairs or other similar mobility devices with lithium ion batteries where the design of the mobility aid does not provide adequate protection for the battery(ies) (see 2.3.2.4.3 for details).	YES	NO	YES	YES	
Non-radioactive medicinal or toiletry articles (including aerosols) such as hair sprays, perfumes, colognes and medicines containing alcohol; and Non-flammable, non-toxic (Division 2.2) aerosols , with no subsidiary hazard, for sporting or home use (see 2.3.5.1).	NO	YES	YES	NO	
The total net quantity of non-radioactive medicinal or toiletry articles and non-flammable, non-toxic (Division 2.2) aerosols must not exceed 2 kg or 2 L and the net quantity of each single article must not exceed 0.5 kg or 0.5 L. Release valves on aerosols must be protected by a cap or other suitable means to prevent inadvertent release of the contents.					
Oxygen or air, gaseous, cylinders required for medical use . The cylinder must not exceed 5 kg gross weight.	YES	YES	YES	YES	
Note: Liquid oxygen systems are forbidden for transport.					
Permeation devices , must meet A41 (see 2.3.5.13 for details).	NO	YES	NO	NO	
Radioisotopic cardiac pacemakers or other devices, including those powered by lithium batteries, implanted into a person or fitted externally.	NO	ON ONE'S PERSON		NO	
Security-type equipment (see 2.3.2.6 for details).	YES	YES	NO	NO	
Security-type attaché cases, cash boxes, cash bags, etc. incorporating dangerous goods, such as lithium batteries and/or pyrotechnic material, except as provided in 2.3.2.6 are totally forbidden. See entry in 4.2—List of Dangerous Goods.		FORBIDDEN			
Specimens, non-infectious packed with small quantities of flammable liquid, must meet A180 (see 2.3.5.11 for details).	NO	YES	YES	NO	
Thermometer, medical or clinical , which contains mercury, one (1) per person for personal use, when in its protective case.	NO	YES	NO	NO	
Thermometer or barometer, mercury filled carried by a representative of a government weather bureau or similar official agency (see 2.3.3.1 for details).	YES	NO	YES	YES	

Note:

The provisions of Subsection 2.3 and Table 2.3.A may be limited by State or operator variations. Passengers should check with their airline for the current provisions.

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8.4 Hidden Dangerous Goods

- (a) Check-in and ramp handling staff must be adequately trained to assist them to identify and detect dangerous goods presented.
- (b) In case suspected baggage that it may contain dangerous goods agent shall ask the passenger to open the bag for checking, in case passenger refused, then passenger shall be immediately refused from boarding and airport authorities must be informed with this occurrence.

A HIDDEN DANGEROUS GOODS Can be in: (we do not carry COMAT or Spare parts) just for information, Please refer to IATA DGR Manual 2.2 for full list

Aircraft on Ground (AOG) Spares, May contain explosives(flares or other pyrotechnics) , chemical oxygen generators, unserviceable tire assemblies, and cylinders of compressed gas (oxygen, carbon dioxide or fire extinguishers), fuel in equipment, wet or lithium batteries, matches.

Breathing Apparatus, May indicate cylinders of compressed air or oxygen.

Camping Equipment. May contain flammable gases (butane, propane, etc.), flammable liquids (kerosene, gasoline, etc.), flammable solids (hexamine, matches, etc.), or other dangerous goods.

Chemicals. May contain items meeting any of the criteria for dangerous goods, particularly flammable liquids, flammable solids, oxidizers, organic peroxides, toxic or corrosive substances.

COMAT (Company Materials). Such as aircraft parts, may contain dangerous goods as an integral part, e.g. chemical oxygen generators in a passenger service unit (PSU), compressed gas, flammable liquid, corrosive material, magnetized material, etc.

Dangerous Goods – Mis/Un-declared or Emergency Response Accident / Incident Report

Nesma Airlines Handling agent is responsible for the station at which a dangerous goods Mis/Un-declared, accident or incident occurs must send a report using form 627 to the Ground Operations Manager within 24 hours of the occurrence.

Email: Ground.handling@nesmaairlines.com

SITA : CAINOXH/CAINSXH

Any type of dangerous goods accident or incident must be reported, irrespective of whether the dangerous goods were as cargo, mail, passengers' baggage or crew baggage.

Prevention of dangerous goods from being inadvertently carried or loaded onto the aircraft:

Handling agents must report to Nesma Airlines when dangerous goods not permitted are found in passengers' baggage.

Nesma Airlines ensures that handling agents are adequately trained to detect or recognize dangerous goods carried by passengers through the scheduled audits, performed by the Safety and Quality department, and confirming their knowledge of the proper procedures for reporting on occurrence. when dangerous goods not permitted for carriage on board the aircraft are discovered on the person of or in the baggage of a passenger, report on SOM 8.11.6 is made to the appropriate

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authority of the state of occurrence, a copy of that form must be reported to the airport authorities where the prohibited dangerous goods is found depends on the subject occurrence.

As earlier Mentioned, Nesma Airlines doesn't carry Dangerous goods, awareness of dangerous goods here in after

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8.5 Classification of Dangerous Goods

- Dangerous goods are classified by type of hazard as follows:
 - Class 1 Explosives
 - Class 2
 - 2.1 Flammable gas
 - 2.2 Non-flammable, non-toxic gas
 - 2.3 Toxic gas
 - Class 3 Flammable liquids
 - Class 4
 - 4.1 Flammable solids
 - 4.2 Substances liable to spontaneous combustion
 - 4.3 Substances which, in contact with water, emit flammable gas
 - Class 5
 - 5.1 Oxidizing substances
 - 5.2 Organic peroxides
 - Class 6
 - 6.1 Poisonous (toxic) substances
 - 6.2 Infectious substances
 - Class 7 Radioactive material
 - Class 8 Corrosives
 - Class 9 Miscellaneous dangerous goods

8.5.1 Class 1 Explosives:

- Explosive articles and substances are assigned to one of six divisions and to one of thirteen compatibility groups.
- Divisions: 1.1/1.2/1.3/1.4/1.5/1.6
- Compatibility groups: A/B/C/D/E/F/G/H/J/K/L/N/S
- Most of the explosives are normally forbidden for carriage by air. Only the explosives listed below are permitted for transportation on civil aircraft:

Cargo Aircraft Only: 1.3C RCX

(ICAO) 1.3G RGX

1.4B RXB

1.4C RXC

1.4E RXE

1.4G RXG

- Passenger and Cargo Aircraft (PAX OK): 1.4S RXS

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- Division 1.3: Articles and substances having a fire hazard and either a minor blast hazard or minor projection hazard or both, but not a mass explosion hazard. This division comprises articles and substances that:
 - Give rise to considerable radiant heat.
 - Burn one after another producing minor last and/or projection effects.
- Division 1.4: Articles and substances having no significant hazard
(Only a small hazard) on the event of ignition or initiation during transport.
- The effects are largely confined to the package and no projection of fragments of appreciable size or range is to be expected in external fire which must not cause practically instantaneous explosion of virtually the entire contents of the package.

Examples: ignites, fireworks, fuzz, ammunition

Labels:



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8.5.2 Class 2 Gases:

- This class comprises compressed gases, liquefied gases, gases in solution, refrigerated liquefied gases, mixtures of one or more gases with one or more vaporous substances of other classes, articles charged with a gas, tellurium hex fluoride, and aerosols.
- A gas is a substance which:

At 50 degrees centigrade (122 F) has a vapor pressure greater than 399 k

PA (3.0 bar, 43.6 IB/in), or is completely gaseous at 20 degree centigrade

(68 F) at a standard pressure of 101.3 k Pa (1.01 bar, 14.7 IB/in).

Flammable gas (RFG)

Examples: Butane, hair sprays, lighters

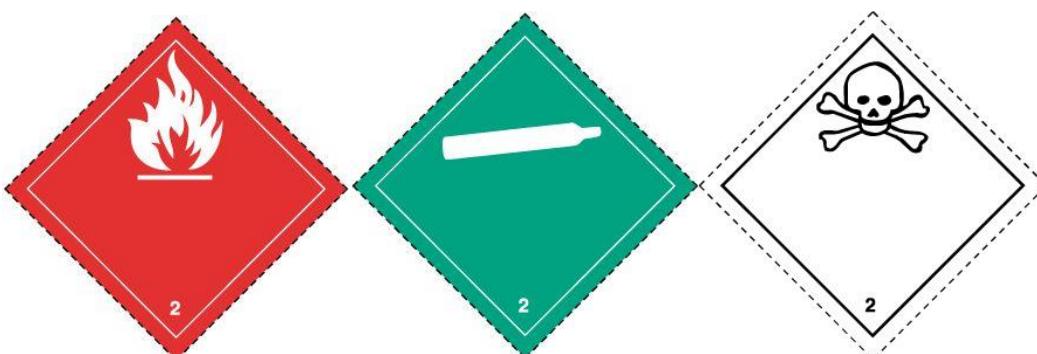
Non-flammable, non-toxic gas (RNG)

Examples: Compressed air, fire extinguishers I

Toxic gas (RPG)

- Normally forbidden on a passenger aircraft. Examples: Chlorine, carbon monoxide

Labels :



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8.5.3 Class 3 Flammable Liquids (RFL):

- Liquids or mixtures of liquids containing solids in solution or in suspension with a flash point.
 - not greater than 60.5 degree centigrade (141 F)
(According to closed-cup test)
 - not greater than 65.6 degree centigrade (150 F)
(According to open-cup test).
- Flash point: Lowest temperature at which enough flammable vapor is given off a liquid to be ignited in air when exposed to a source of ignition.

Examples: paint, adhesives, alcohols, kerosene

Labels:



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8.5.4 Class 4: Flammable Solids (RFS)

- Solids which are readily combustible or may cause or contribute to fire through friction, self-reactive, and related substances which are liable to undergo strongly.

Exothermic reaction and desensitized explosives which may explode if not diluted.

Examples: matches, magnesium



Substances Liable to Spontaneous Combustion (RSC)

- Substances which are liable to spontaneous heating under normal conditions encountered in transport, or to heating up in contact with air, and being then liable to catch fire.

Examples: phosphorus (yellow)

Substances which in Contact with Water, Emit Flammable Gases (RFW)

- Substances which by interaction with water are liable to become spontaneously flammable or to give off flammable gases in dangerous quantities.

Examples: potassium, sodium, lithium

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8.5.5 Class 5: Oxidizing Substances (ROX)

- Substances which in themselves are not necessarily combustible, but may generally cause or contribute to the combustion of other material by yielding oxygen.

Examples: bleaching powder, potassium permanganate

Organic Peroxides (ROP)

- Organic substances which contain the bivalent structure O-O- and may be considered derivatives of hydrogen peroxide in which one or both of the hydrogen atoms have been replaced by organic radicals. Organic peroxides are thermally unstable substances which may undergo exothermic self- a celebrating decomposition.

In addition, they have one or more of the following properties:

- Be liable to explosive decomposition burn rapidly.
- Be sensitive to impact or friction.
- React dangerously with other substances.
- Cause damage to the eyes.

8.5.6 Class 6: Poisonous (Toxic) Substances (RPB)

- Substances which are liable to cause death or injury or to harm human health if swallowed. Inhaled or contacted by the skin.

Examples: pesticides, arsenic, chloroform, cyanites

Infectious Substances (RIS)

- Substances containing viable micro-organisms including a bacterium, virus etc... that are known or reasonably believed to cause disease to animals or humans.

8.5.7 Class 7 Radioactive Materials (RRW/RRY):

- Substances which emit certain types of radiation. They are harmful to health and other materials (e.g. data storage media) and cannot be detected by any of the human senses.

Examples: cobalt, iodine, cesium, radium

- Protective factors:

Shielding materials, keep your distance, and time limitation

- Package must be assigned to one of three categories:
 - Category I (RRW) 0 T.I.
 - Category II (RRY) 0.1-1.0 T.I.
 - Category I1I (RRY) 1.1-10 T.I.
- The Transport Index (T.I.) indicates the radiation level of the package at 1 meter distance.

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8.5.8 Class 8 Corrosive Material (RCM):

- Substances which in the event of leakage, can cause severe damage by chemical action when in contact with living tissue or other material
(E.g. aluminum).

Examples: batteries, mercury, sulfuric acid

8.5.9 Class 9 Miscellaneous Dangerous Goods (RMD)

- Substances which could not be classified under the eight other classes but which present a danger during transport.

Examples: cars, motorcycles, asbestos, electric wheelchair, life-saving devices

- This class includes:

Other Regulated Substances

- A liquid or solid which has anesthetic, noxious or other similar properties which could cause extreme annoyance or discomfort to passengers and/or flight crew members.

Polystyrene (Polymeric) Beads or Granules (RSB)

- Expandable, impregnated with flammable gas. Not more than 100 kg of RSB may be loaded in each inaccessible hold or in any inaccessible ULD on the main deck.

Magnetized Materials (MAG)

- It does not affect humans directly, but can influence the compass or other materials (e.g. undeveloped films).

Dry Ice (ICE)

- It may be carried for cooling perishables or as cargo.
- Dry ice and live animals must not be loaded together in the same hold.
- The structure of compartments, pallets, and containers must be protected against direct contact with dry ice by insulating material.
- Transit and destination stations must ventilate the compartments before entering.
- Exception: These restorations are not valid for live animals packed air-tight (e.g. tropical fish).

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8.6 Labels and Packages

- Labels and package rules and instructions for dangerous goods transportable in passenger or cargo aircraft specified in the IATA manual of Dangerous Goods Regulations must be applied. Although under the responsibility of the shipper, labels and packages must be checked by a competent person nominated by the carrier Nesma Airlines. In case of incorrect or defective label or package the dangerous goods should not be loaded.
- Packages for dangerous goods of all classes, other than classes 1, 2, 7, division 5.2, and 6.2, have been divided among three packing group according to the degree of danger these goods present:
 - Packing group I great danger.
 - Packing group II medium danger.
 - Packing group III minor danger.
- The extreme temperatures which may be encountered in international transportation are in the order of -40 degree centigrade and 55 degree centigrade. Since receptacles or packaging may be filled at low temperatures and then exposed in transit in tropical areas, the increase in temperature may tend to cause discharge of liquid contents or bursting of receptacles or packaging during transit. Receptacles or packaging have to be adapted for the increase of pressure and/or the risk of leak.
- Due to altitude, pressure reduction will be encountered under flight conditions which may in normal conditions be in the order of 24 k Pa, and

In extreme conditions (depressurization) be of the order of 80 k Pa. These pressure reductions will tend to cause discharge of liquid contents or bursting of the receptacles or packaging during flight if receptacles and/or packaging are not adapted.

Over Pack

- An enclosure used by a single shipper to contain one or more packages and to form one handling unit for convenience of handling and stowage.

Dangerous goods packages contained in the over pack must be properly packed, marked, labeled, and in proper condition as required by the DGR.

8.7 Nesma Airlines and Dangerous Goods Acceptance

- As mentioned earlier Nesma Airlines policy is not to accept dangerous goods carried by passengers or crew members, at cabin or in the cargo holds.
- In particular cases a ground handling agent may by mistake accept dangerous goods for air transport if he does not have sufficient knowledge about dangerous goods.
- A ground handling agent must be provided with sufficient training to enable him to recognize dangerous goods and its markings and also where they can be found.

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8.8 Procedures for Responding to Emergency Situations

Treatment of Dangerous Goods in the cabin, when dangerous goods are discovered in the hand baggage of a passenger during flight, the cabin crew should:

- Ask the passenger concerned to identify the item and explain its nature.
- Inform the flight crew who will switch the No Smoking sign on to reduce the risk of ignition or explosion.
- The cabin crew shall follow checklist provided for treatment of dangerous goods in the cabin.
- If an in-flight emergency occurs and the situation permits, the commander must inform the appropriate Air Traffic Services Unit of any dangerous goods on board the aircraft.

The information must include the proper shipping name, the class/division and identified subsidiary risks, the compatibility group for explosive, the quantity and the location on board. For those dangerous goods for which a dangerous goods transport document is required, the commander of an aircraft carrying such goods must be provided with information which can be used on board to assist in planning the response to an emergency arising in-flight involving the dangerous goods. This information can be provided by the "Emergency Response Guidance for Aircraft Incidents involving Dangerous Goods"

(Air Doc 9481), which is published by the International Civil Aviation

Organization or by another document giving similar information.

8.9 Dangerous Goods Incident and Accident

Dangerous Goods Accident

- An occurrence associated with and related to the transport of dangerous goods by air which results in fatal or serious injury to a person or major person's property damage. Using form 8.11

Dangerous Goods Incident

- An occurrence other than a dangerous goods accident associated with and related to the transport of dangerous goods by air, not necessarily occurring on board an aircraft which results in injury to a person or person's property damage, fire, breakage, spillage, leakage of fluid, or radiation, or other evidence that the integrity of the packaging has not been maintained.

DANGEROUS GOODS - EMERGENCY RESPONSE

AIRCRAFT CONTAMINATION

- When any leakage or spillage is discovered in the aircraft holds:
 - Call the Emergency Services to identify the nature of the hazard and deal with it,
 - If possible, remove the damaged package to a remote safe place in the open air.
 - Inform the captain or an engineer who will check the aircraft for any contamination and advise Nesma Airlines Operations.

DAMAGED PACKAGES / SPILLAGE

- When handling damaged packages:

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- Do not inhale fumes.
- Do not allow the substance to come into contact with the skin, eyes or clothing.
- Use mechanical devices where possible.
- Guard against fire.
- When declared safe, return the damaged packages to the shipper for disposal or repair, except as below
- If it is suspected that the damage is the result of inadequate packing, then the packaging should be retained and the incident reported to the authorities.

Dangerous Goods Incident and Accident Reports

- Any type of dangerous goods incident and accident should be reported, irrespective of whether the dangerous goods are contained in cargo, mail, passenger baggage, or crew baggage.
- Dangerous goods incident, accident, Un/Mis-Declared dangerous goods, must be reported to the state where it happened, and to the state of our airlines Nesma Airlines, the Egyptian civil aviation. (Both)
- For accidents an initial report should be made to the authority within

3 days. Incidents should be reported to the authority within 10 days. Initial reports may be made by telephone, but in all cases a written report should be made.

- The report should contain all data known at the time the report is made, for example:
 - Date of incident or accident.
 - Location of the incident or accident, the flight number, baggage tag, ticket proper shipping name, and identification number as given in IATA Dangerous Goods Regulations manual.
 - Class or division and any subsidiary risk.
 - Type of packaging if applicable, and the packaging specification marking on it.
 - Quantity involved.
 - Name and address of the shipper or passenger.
 - Any other relevant details.
 - Suspected cause of the incident or accident.
 - Action taken.
 - Any other reporting action taken.
 - Name, title, address, and contact number of the person making the report.

8.10 Special Loads

All special loads items including but not limited to (Wet Cargo, Live Animals, Human Remains, Mail, Valuables, Weapons, Sporting Weapons and Ammunitions, Security Items) are not accepted on Nesma Airlines Flights.

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8.11 Forms

8.11.1 Dangerous Goods Accident/Incident Reporting Form

(See the notes on the next page of this form. Those boxes where the heading is in italics need only be completed if applicable)

Operator	
Flight No. And Date	
Date of occurrence	
Airports of Departure and Destination	
Aircraft Registration and Type	
Location of occurrence	
Origin of the goods	
Description of the occurrences, including details of injury, damage etc. (if necessary, continue on the next page of this form)	
Proper UN Shipping Name (including the technical name)	
UN ID No (When Known)	
Class / Division (When Known)	
Subsidiary Risk(s)	
Packing Group	
Type of packing	

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Packaging Specification Marking	
No. Packages and quantity	

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Reference No. of Air Waybill	
Reference No. of courier pouch, baggage tag or passenger ticket	
Name, Address and telephone number of shipper, passenger, etc.	
Other relevant information (Including suspected cause, any, action taken etc. ;)	
Name and title of person making report.	
Sign.;	
Address	
Telephone Number	
Fax Number	

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Description of the occurrence (continuation)

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8.11.2 Dangerous Goods Accidents and Incidents Record

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8.11.3 Contingency Plan For Dealing With Dangerous Goods Incidents

The following is a list of specialist who may be able to provide assistance when dealing with a dangerous goods incident or accident

Contacts	Name of Experts or Contacts personnel	Telephone numbers
Airport authority		
Air Traffic Services (ATS)		
Airport fire service		
Hospital		
Expert to dispose of the commodity		
Emergency Response teams		
Health Authority (for Division 6.1 and 6.2)		
Radioactive Material Protection (for Class 7)		
Explosives Bureau of Experts (for class 1)		
Police		
Customs Authority		
Postal Authority		
Food and drug		
Major Shippers		
Major Manufactures		

- Dangerous goods incidents may involve cargo or passengers' baggage
- They may occur in a freight shed, a passenger terminal or on the apron
- They may also occur on an aircraft, such as when a package is damaged through miss loading
- They may involve a fire, major spillage, leakage or finding undeclared dangerous goods
- The Contingency Plan need not be implemented for undeclared dangerous goods where the package is intact and there are no signs of leakage, although they still need to be identified
- If it is suspected there has been non-compliance with the Technical Instructions, the dangerous goods need to be retained for further investigation (provided it is safe to do so)
- To implement the Contingency Plan, take the following actions:

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All incidents

- record brief details, including the names of all persons involved
- make an initial assessment of the potential seriousness
- if there is fire, leakage or spillage, call the airport fire service, if not already in attendance
- notify the relevant airport authority, if not already in attendance

Any incident involving a suspected infectious substance

- Clear the immediate area; do not touch or move the container, bag, etc.
- Contact the shipper or consignee; if not contactable, contact the nearest hospital

Cargo related incidents - fire, major leakage or spillage

- Clear the immediate area; do not touch or move the dangerous goods or any container; do not attempt to clean-up a spillage or leakage; avoid breathing in fumes
- Call the airport fire service if not already in attendance
- Look at container for details of the contents (name, UN no., etc.), if this is possible without risking injury
- Locate shipping documents and use to confirm or establish details; retain for further investigation
- If the airport fire service is not available or other action needed see Subsequent Actions
- Ensure container and contents placed in a safe location (if this is considered safe to do so and possible) if further investigation needed; ensure full and accurate details recorded
- Ensure operator notified of incident, if not already aware

Cargo related incidents - minor leakage (e.g. wetting of part of the outer packaging)

- Keep persons away from immediate vicinity; avoid breathing in fumes
- Consider if calling airport fire service if considered justified
- Look at container for details of the contents (name, UN no., etc.)
- Locate shipping documents and use to confirm or establish details; retain for further investigation
- If airport fire service not called and other action needed see Subsequent Actions
- If airport fire service deal with the incident, ensure container and contents are placed in a safe location (if safe to do so and possible) if further investigation needed; ensure full and accurate details recorded
- Ensure operator notified of incident, if relevant

Passenger related incidents

- Keep persons away from immediate vicinity; avoid breathing in fumes
- Ask passenger to identify item or potential hazard
- Consider if calling airport fire service is justified
- If airport fire service is not called and other action needed see Subsequent Actions
- If airport fire service deal with the incident, ensure container and contents are placed in a safe location (if safe to do so and possible) if further investigation needed; ensure full and accurate details recorded

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Subsequent Actions

- If container shows emergency actions, deal with incident according to them
- If commodity identifiable, seek expert help if there are no emergency actions or if they cannot be followed
- Do not use water, cloth or paper to deal with any spillage, unless it is certain that it is safe to do so
- If commodity not immediately identifiable but container safe to handle (little evidence of leakage, no fumes), remove to well-ventilated place, use rubber gloves to protect hands and check for labels or markings on outer container; open if there are inner containers and check again for labels or markings
- Orientate any leaking container so further leakage is prevented
- Stop all actions immediately if fumes detected or more serious leakage found on closer inspection; call the airport fire service or other specialist assistance
- If there are fumes, covering spillage with plastic sheeting can contain them or plastic bags (unless emergency actions identify possible adverse reaction) but be aware this may lead to a build-up of fumes under the covering; remain at a safe distance
- A spillage can be contained by surrounding with dry sand to prevent spread (unless emergency actions identify a possible adverse reaction)
- Use dry sand to cover a spillage, unless commodity is identified as an acid
- Use sodium bicarbonate to cover a spillage of acid, but be aware this may result in bubbling and evolution of carbon dioxide (but there will be no other reaction)
- Seek expert help for cleaning up the scene; if help not immediately available and it is desired to remove containers, spillage, etc, assess whether or not it is safe to continue
- USIGN. rubber gloves to protect the hands put any container in a plastic bag; avoid breathing in any fumes; tie bag tightly
- USIGN. rubber gloves and plastic based tools or rigid plastic material, pick-up contaminated sand/sodium bicarbonate and place in another plastic bag; tie bag tightly
- Place all plastic bags in a further bag and tie tightly
- Place the bag(s) in a secure, well ventilated location well away from any occupied area; if in the open air ensure moisture, rain, etc., cannot come into contact with the plastic bag(s)
- Check the bag(s) at frequent intervals for any adverse reaction
- Seek expert help to dispose of the commodity, if not being retained

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8.11.4 List of Other Authorities

The following is a list of source of information

Contacts	Name of Experts or Contacts personnel	Telephone numbers
Customs Authority		
Postal Authority		
Explosives Bureau of Experts (for class 1)		
Radioactive Material Protection (for Class 7)		
Health Authority (for Division 6.1 and 6.2)		
Food and drug Authorities		
Airport authority		
Police Authority		
Air Traffic Services (ATS)		
Airport fire service		
OTHER SOURCES		
Major shippers		
Major Manufacturers		

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8.11.5 Dangerous Goods Occurrence Report

1. Location	2. City	3. Airport	4. Date	5. TIME

6. INCIDENT OCCURRED	7. FLIGHT INFORMATION
Warehouse/ Terminal	Type of aircraft
Onboard	Registration number
When transporting to/ From the aircraft	Pax. / Cargo/ Charter
While loading/unloading from the aircraft	Origin/ Transit/ Destination
	Hours flown from the origin

8.AWB No.	9. Flight no. / Date

10. Shipper's Name and Address:

11. Consignee's Name and Address:

12. Origin Address of the shipper if it defers from No 9:

13. Destination address of the Consignee of defers from No 10:

14. Proper Shipper Name:

15. Chemical/ Trade Name:

16. Hazard Class/ Division:

17. UN Number/ ID Number:

18. Consequences of the Incident:

19. Estimated Quantity of Hazardous Materials Released:

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Insert “✓” or “✗” as

Non-Hospitalized Injuries	Hospitalized Injured	Relevant Fatalities
Damage to the other shipments	No of People evacuated	Aircraft Damage

20. Consequences Associated with the incident

Explosion	Fire	Spillage
Other	Leakage	Vapor/ Gas Dispersion

21. Packaging Information

Type of Package	Inner	Outer
Description		
Weight/ Capacity		
No of Packages failed		
No of Packages in the shipment	N/A	
Package specification Identification		
Type of Labeling	N/A	

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22. Exemption/ Approvals from the Competent Authority:

23. Description of the Package Failure:

Corrosion	Transport vehicle collision
Friction	Overloading of Cargo
Fire/ Heat	Loose Fittings
Venting	Outer Package not strong
Incompatible	Dropped
No Absorbent Materials	Rammed
Other	Improper Loading

24. Object causing. Failure:

No absorbent Material	Other Freight
None	Forklift
Other	Nail protrusion
Water	

25. How Package Failed

Burst	Punctured
Crushed	Cracked
Other	Broken
Ripped	

26. Package Area that failed

Top	Bottom
Centre (Bottom)	Side left
Other	Side Right

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27. What failed on the Package?

Closure	Package Material
Seam	Fittings
Inner Liner	Valves

Description of the Event

28. Describe the sequence of the incident:

29. Action taken at the time it was discovered:

30. Any recommendations to prevent this type of accident:

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31. Attached to the Report:

DGD	AWB	Photographs
Other		Checklist

Name of the person responsible for preparing this Report

Title Telephone Number

Sign. Date/...../.....

NOTES

- I. Any type of dangerous goods occurrence must be reported irrespective of whether the dangerous goods are contained in cargo, mail or baggage.
- II. A dangerous goods accident is an occurrence associated with and related to the transport of dangerous goods which results in fatal or serious injury to a person or major property damage. For this purpose serious injury is an injury which is sustained by a person in an accident and which:
 - a. requires hospitalization for more than 48 hours, commencing within 7 days from the date the injury was received; or
 - b. Results in a fracture of any bones (except simple fractures of fingers, toes or nose); or
 - c. Involves lacerations which cause severe hemorrhage, nerve, muscle or tendon damage; or
 - d. Involves injury to any internal organ; or (e) involves second or third degree burns. or any burns affecting more than 5% of the body surface; or
 - e. Involves verified exposure to infectious substances or injurious radiation. A dangerous goods accident may also be an aircraft accident; in which case the normal procedure for reporting of air accidents must be followed.
- III. A dangerous goods incident is an occurrence, other than a dangerous goods accident, associated with and related to the transport of dangerous goods, not necessarily occurring on board an aircraft, which results in injury to a person, property damage, fire, breakage, spillage, leakage of fluid or radiation or other evidence that the integrity of the packaging has not been maintained. Any occurrence relating to the transport of dangerous
- IV. goods which seriously jeopardises the aircraft or its occupants is also deemed to constitute a dangerous goods incident.
- V. This form should also be used to report any occasion when undeclared or misdeclared dangerous goods are discovered in cargo, mail or unaccompanied baggage or when accompanied baggage contains dangerous goods which passengers or crew are not permitted to take on aircraft.
- VI. An initial report, which may be made by any means, must be dispatched within 72 hours of the occurrence, to the Authority of the State (a) of the operator; and (b) in which the incident occurred, unless exceptional circumstances prevent this. This occurrence report form, duly completed, must be sent as soon as possible, even if all the information is not available.
- VII. Copies of all relevant documents and any photographs should be attached to this report.

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- VIII.** Providing it is safe to do so, all dangerous goods, packaging, documents, etc., relating to the occurrence must be retained until after the initial report has been sent to the Dangerous Goods State Authority and they have indicated whether or not these should continue to be retained.

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8.11.6 Undeclared / Mis-declared DG Report

DATE:	FLT NR:	From/	To/
PSGR Name:			
Address:			
TEL NR:			
CLASS	Explosives		
	Gases		
	Flammable liquids		
	Flammable Solids		
	Oxidizing substances and organic peroxides		
	Toxic and infectious substances		
	Radioactive materials		
	Corrosives		
	Miscellaneous DGR		
Found <input type="checkbox"/> On the one's persons <input type="checkbox"/> In PAX Hold Luggage <input type="checkbox"/> In PAX Cabin Luggage			
Found <input type="checkbox"/> (Beofre/After) Check-in <input type="checkbox"/> (Before/After) Boarding			
MARK <input checked="" type="checkbox"/> to the class			
Quantity and description:			
Action Taken			
Copy to Station Manager Copy to Civil Aviation Authority (Egyptian Civil Aviation) Copy to Civil Aviation Authority (at the station country) Copy to Pilot In command			

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Chapter 09 Security

9.1 Sources of Regulations

- NESMA Airlines, as an Egyptian registered air operator shall adhere to the ECAA Regulations and their Consecutive Directives and shall comply with them together, and with the National Regulations of the States which NESMA Airlines operates to, out of, or over their territories.
- Regulations governing NESMA Airlines security program:
 - Egyptian Civil Aviation Law no. 28/1981
 - E.C.A.R. Part 107, Part 108
 - National Security Program for Civil Aviation
 - ICAO Annexes 9, 17, 18, and Doc 8973
 - Chicago Convention
 - Tokyo Convention of 1963
 - Hague Convention of 1970
 - Montreal Convention of 1971
 - Montreal Convention of 1991
 - Explosives definition Convention
 - The Interpol Regulations
 - States Regulations which NESMA Airlines operates to, out of, or over their territories.

9.2 Protection of Flight Documents

- All Nesma Airlines Station Material stocks (Boarding passes, Baggage Tags & etc.) shall be stored in locked store under control of Station Manager.
- In case of reprint any material such (Boarding passes, Baggage Tags & etc.), passenger lists and handling forms, Disposal of old documents shall be adhered according to data protection rules.
- An original copy of flight documents such as (PAX manifest, load sheet, general declarations, etc...) must be kept with the station and head office to be available upon request from proper authority. Those mentioned copies shall be destroyed after six months unless otherwise instructed or requested.

9.3 Duties and Responsibilities

Security Coordinator on Ground:

- a- Monitoring security related function.
- b- Ensure the continuing effectiveness of the security program and ECAR Part 108.
- c- Immediately initiates corrective action for each instance of noncompliance with this part, the security program certificate holders, and applicable security directives.

Ground Staff and Crew Members on Ground:

- As a general rule, pre-flight precautions should include:
 - a. The exterior and interior inspection of aircraft.
 - b. Monitoring of aircraft maintenance and servicing operations.

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- c. Prevention of unauthorized access to aircraft.
- d. The screening of passengers and cabin baggage when this function is assigned to NESMA Airlines.
- e. Supervision of the loading of baggage, cargo, mail, company stores and catering uplifts.
- f. Security of flight manuals and crew baggage.
- g. Confirmation of the presence and seat assignment of any authorized armed passengers, persons in custody, and their escorts.
- h. Review of security communications and signal procedures for the purpose of analyzing any intelligence and threat information for its impact upon the flight.
- i. Verification of procedures for the control of in flights security guards when utilized, by the pilot in command.

9.4 Security Control of Passengers and Hand Baggage

Authority for Security Control:

- Security control carried out by airport authorities by using baggage screening and hand-held metal detectors. Also no passenger is allowed to enter the departure area without checking his passport and his ticket. One of NESMA Airlines station staff shall accompany airport security personnel performing screening to ensure that the security checks are followed. Also to collect unauthorized passenger's property and hand it over to crew members.

Identification of Passengers:

- No passenger may leave the departure lounge to aircraft without authorization from airport security personnel. And once the ground staff starts boarding, airport security personnel shall check each passenger against his/her passport together with the boarding passes.

Standards for Security Control:

- Since airport security authority is carrying out security control of all passengers and their baggage, they apply their own standards for security control because NESMA Airlines does not have any security equipment such as (hand-held metal detectors, x-ray screening equipment, etc...).

Passenger Exclusion from Aircraft:

- In general, NESMA Airlines is authorized to refuse transportation to any passenger who is considered to be a potential threat to aircraft safety.
- Such action is necessary in the interest of safety and security.
- Such action is necessary to prevent violation of any applicable law, regulations, or orders of any state or country to be flown from, into, or over their territories.
- The conduct, status, age, mental, or physical condition of the passenger is very important so as not to cause discomfort or make himself/herself objectionable to other passengers, or involve any hazard or risk to himself/herself or to other persons or person's property.
- No person who is obviously under the influence of interacting liquors and drugs shall be permitted on board the aircraft. This does not apply to persons under the influence of intoxicating drugs who are subject to such condition following emergency medical treatment after commencement of flight, or to persons under medical care accompanied by personnel specifically trained for that purpose. Great care must be exercised in assessing the degree of

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intoxication. Whenever possible a doctor's opinion must be obtained to avoid punitive damages to the company.

- The authority to exclude a passenger for any cause shall be the joint responsibility of the Pilot-in-Command and the Manager at the Station.
Pilot in command is to ensure that the baggage of any excluded person is offloaded, and Airport Security Authorities must be informed if the exclusion reasons are of safety/security nature. In all such cases, it must be voyage reported giving full details to the Managing Director who should report it to ECAA.

Off-Airport Check-In:

- Not authorized in all Egyptian airports.

Personnel Security Screening:

- They belong to airport security authority.

Special Measures for High-Risk Flights:

- Security measures for a special flight may be increased to meet the requests from other states as far as may be practical.

Transit/Transfer Passengers Screening

When Nesma Airlines conducts international passenger flights that transit an airport that is deemed by appropriate authority or Nesma Airlines Security department to be under an increased security threat, Nesma Airlines set procedures below to ensure any items left behind by disembarking passengers from such transit flights are removed from the aircraft or otherwise addressed appropriately before the flight departure following the below procedures:

- a. To ensure that transit/transfer passengers didn't take unauthorized articles on board an aircraft, transfer and transit passengers and their cabin baggage *either*:
 - i) subjected to screening prior to boarding a passenger aircraft, *or*
 - ii) If they have been screened to an appropriate level at the point of origin and subsequently protected from unauthorized interference from the point of screening at the originating airport to the departing aircraft at the transfer or transit airport.
- b. Before using an airport as a transit airport Nesma Airlines security or the subcontracted security agency shall assess the airport to ensure that it is well protected from unlawful interferences and that transit passengers and their cabin baggage shall be protected also from such interference. While doing this assessment the historical record of the airport shall be taken into consideration.

During subsequent audits the security department will ensure those transit airports are in compliance with Nesma Airline security measures.

- c. Ground staff must prepare the same number of boarding cards as mentioned on the Load Message (LDM) including infants.

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- d. Announce passengers arriving at their final destination should disembark first, transit passengers should disembark last.

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- e. Where transit passengers are to disembark, they should be advised (via the announcement which the crew is asked to make) to take all hand luggage with them. In stations, where the local security department allows passengers to leave personal items on board, these may only be left in the overhead bins. These personal items may never remain on the seat or in the seat pocket. This to enable quick and thorough inspection and cleaning.
- f. If the threat assessment of the airport is 2 (intermediate) or 3 (high risk) transit passengers are not allowed to leave any items behind. If the cabin search revealed left behind items then the passenger (s) is identified through the seat number where the item
- g. Was found, interrogated and undergoes search and screening.
- h. Transit passengers must be clearly advised at what time and what gate they should report to re-board.
- i. Each disembarking transit passenger must be given a Transit Boarding Pass when entering the airport terminal. In case some passengers stay on board, the number of passes issued must reconcile with the number of passengers remaining on board.
- j. f. Transit passengers should be called to re-board before the joining passengers. Advise them to re-take their personal seats.
- k. It shall be ensured that all passengers/ baggage reconciliation, either transit or transfer passengers; matching passengers data with their ticket.

9.5 Security Control of Checked Baggage

Authority for Security Control:

- NESMA Airlines can take the required procedures for saving the batteries of electric and electronic equipment before loading to the aircraft.
- NESMA Airlines is responsible to control the checked-in baggage from the checked-in counter until loading it to the aircraft. During this airport security authority can inspect such baggage if needed.

Passenger/Baggage Reconciliation Procedure:

Under normal conditions, company staff or the apportioned agents should ensure the following procedures are carried out under security authority control:

- At check-in counters, immigration will be annotated with the serial number of the passenger as per the listing in the passenger manifest.
- Each checked-in baggage will then be tagged serially numbered with the slip portion to be stapled to the passenger ticket.
- Checked-in baggage will then be processed from the collection point to the aircraft under supervision of the airport security personal.
- Checked-in baggage of a passenger denied boarding for security reason or for refusal to be processed must be offloaded.
- It is essential that the number of passengers on an aircraft coincide with the number of boarding passes issued. This check ensures:

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- That all passengers in transit on the same flight who leave the aircraft re-board it.
- That only properly documented passengers aboard the aircraft, and that passengers terminating their journey at that stop do not re-board the aircraft.
- A careful headcount should be made of all passengers on board the aircraft. This headcount should also be checked against a pre-boarding count.
- In case the above mentioned checks failed, all checked-in baggage should be offloaded and identified, then reloaded under control of airport security authority.

Special Measures to Security-Clear Electric, Electronic, and Battery

Operated Items:

NESMA Airlines shall assure that:

- Passengers are not allowed to carry into the aircraft cabin any items of fire hazard, arms, ammunition, or any other items such as toy-guns, toy-bombs, etc... that could be deceiving if used for hijacking or threats.
- Passengers are not allowed to carry into the aircraft cabin any battery even into children toy or electric equipment.

Other Security Control of Checked-In Baggage:

- Airport security authority is responsible to control the checked-in baggage that inducting with the passenger until completely boarding to the aircraft.

Control of Movement of Hold Baggage:

- No hold baggage is allowed to be unaccompanied at the departure lounge. At times when NESMA Airlines passengers occupy departure lounge, one of NESMA Airlines station staff shall check the lounge for such unaccompanied bag with the co-operation of airport security authority.

Off-Airport Check-In:

- Not authorized in all Egyptian airports.

Protection of Baggage Tags:

- Strict control shall be over tags used to identify checked baggage. The handling of checked-in baggage shall be done carefully in order not to damage baggage tags. This is assured by NESMA Airlines loading supervisor. Passengers shall also be encouraged to lock their checked baggage so as to make it difficult for unauthorized persons to use such baggage as a means of committing an offence.

Treatment of Suspect Baggage:

- Any suspect baggage shall be pointed out by the person who suspects such baggage and who should not handle the baggage. Then he/she should report the situation to airport security authority.

Special Measures for High-Risk Flights:

- Upon request by a state, special security measures for a special flight could be taken as far as practical. States should defer procedures after mutual consultations, identifying parameters of

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special security measures at an operator level, responsibility for additional cost when applicable, and time frame to initiate action.

9.6 Security Control of Cargo/Mail/Small Parcel/Courier Services:

Nesma Airlines does not transport any revenue or non-revenue shipment of goods or property, Mail, or even company materials.

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9.7 Measures Related to Certain Passengers

VIPs and Diplomats:

- Normally they have special arrangements for handling their travel formalities
- In such a case, good liaison between NESMA Airlines and concerned agent must be established for baggage check-in and departure arrangements.
- The pilot in command must be informed with presence and seat numbers of the VIP passenger.
- In case undeclared VIP passengers, VIP passengers whether traveling on duty or personal travel, may request no travel publicity. They will process through customs and immigration as normal.

Government Couriers and Diplomatic Bags:

- Under the Vienna convention by the state, they normally have special agent to handle their travel formalities.
- The pilot in command must be informed.

Staff Members (including Crew):

- All crew baggage must carry an identification label giving full name and rank of the crew member.
- Crew members must not leave their baggage unattended at all times.
- Crew members must not accept sealed parcels from third parties. Any sealed package belonging to a crew member at all times must be carried by the crew member concerned onto the aircraft personally and must not be entrusted to any other crew member.
- The individual crew member is responsible for the handling and security of his personal baggage.

Special Case Passengers:

- NESMA Airlines or its handling agent shall liaise with airport security authority in case of private screening required when normal processing considered inappropriate.
- Those special case passengers are authorized armed personnel, disabled persons, passengers on crutches, in wheelchairs, on stretchers, or who use prosthetic aids such as artificial limbs, as well as persons carrying high value or sensitive items.
- A staff member of NESMA Airlines or its handling agent must accompany such a passenger throughout the departure process until boarding the aircraft.

Persons Traveling Under Legal Status:

Deportees

- Such passengers will commonly hand over their passports and air travel tickets to NESMA Airlines Aircrew to be seated at the rear of the aircraft.
- Each requests for transportation shall be evaluated and if additional measures are necessary.
- General guidance material for persons in custody:
 - a. A prisoner should not be transported on board NESMA Airlines aircraft unless escorted by one or more policing authority officers.
 - b. Policing authority officers should notify NESMA Airlines well before the date it is proposed to transport, or as soon as practicable in an emergency, of the identity of the person being

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escorted, the flight on which transportation has been arranged, and whether or not the escorted person is considered dangerous.

- c. NESMA Airlines shall not accept a prisoner and escort(s) as passengers unless concurrence has been obtained in advance from the states and other operators that may be involved enroute and at the intended final destination. In such cases, sufficient advance notification must be given by NESMA Airlines so that prior agreements can be obtained.
- d. Escorting officers should be apprised by NESMA Airlines of the potential danger to the safe operation of the aircraft as they should take any action during an act of unlawful interference without direction from the pilot in command.
- e. Escorts should not carry mace, tear-gas, or similar incapacitation gas-generating devices on board an aircraft.
- f. Escorts should adequately identify themselves to flight attendants, requesting that their presence on board and seat assignment be transmitted to the pilot in command, who should acknowledge receipt of this information.
- g. Passengers authorized to carry firearms on board the aircraft should be made aware of the transportation of prisoners and escorts and their location.
- h. Escorted persons should be boarded before all other passengers and disembarked after all other passengers have left the aircraft.
- i. They should be seated as far to the rear of the passenger cabin as possible, but not in a lounge area or next to/directly across from an exit.
- j. They should only be seated in a row of two or more seats and at least one escort should sit between the escorted person and any aisle.
- k. They should be accompanied at all times and kept under surveillance, including visits to the lavatory.
- l. No intoxicating beverage should be served escorts or prisoners while on board the aircraft.
- m. Prisoners may be served food at discretion of escorts but should not be provided with metal utensils or knife.
- n. NESMA Airlines may refuse to accept a prisoner if in the judgment of NESMA Airlines management such acceptance may jeopardize the safety of the other passengers

Unruly Passengers:

- Is defined as the passenger who is about to conduct unlawful act or any behavior that endangers the safety of the flight, the persons on board, or aircraft properties, which leads to a change of the laid down in-flight regulations such as interfering with the cabin crew duties and responsibilities.

Procedures on ground:

Pilot in command:

- The pilot in command has all authority to refuse transportation of any unruly passenger. Pilot in command is to ensure that the baggage of any excluded person is off loaded. Airport Security Authorities must be informed and all such cases must be voyage reported giving full details to the Managing Director who should report to ECAA.

Cabin crew:

- 1- Inform flight leader (purser).**

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- 2- Investigate the reasons behind the incident.
- 3- Find out if this passenger is traveling alone or accompanied by others.
- 4- Change passenger seat if necessary.
- 5- Not allowing this passenger to enter the cockpit trying to reassure and calm him.
- 6- If such behavior or act continues, inform the captain.

Reporting procedures:

- In all cases, flight commander shall submit a written report to the director of operations as soon as returning to base. The company shall notify the airport security authorities of any procedures conducted against any trouble making passenger. Nevertheless, this notification does not exempt the company from notifying the ministry of civil aviation within a week of any such procedures.

9.8 Carriage of Firearms and Weapons:

Legal Provisions and Regulations:

- It is forbidden to carry weapons, ammunitions of war, or part of them except with the express exemption of the National Authority (ECAA) and of the overflow country authority.

Protection on the Ground:

- They must be stowed in a place that is inaccessible to passengers during flight in the case of firearms and unloaded .The pilot in command must be notified of such a load.
- Sporting weapons and their ammunition need be approved from the authorities for their carriage provided they are properly packed and stowed in a place inaccessible to passengers in-flight and firearms unloaded, but they may be carried and stowed in a place other than in an inaccessible location in the aircraft subject to any conditions stipulated by the authority. Passengers must be asked to notify the station manager or his staff of carriage of any sporting weapons. Ammunition for sporting weapons is subject to the rules and conditions set out in ICAO Annex 18 and carriage of dangerous goods.

Escorts of Prisoners/Deportees:

- Firearms issued to escorts of prisoners/deportees. In every case, firearms should be unloaded and ammunition stowed in a separate secure container.

Bodyguards to Government VIPs:

- In exceptional cases, law enforcement officers, body-guards, or official security staff on duty having special permission from the authorities may be allowed to keep the weapons and ammunition prior boarding. They have to unload the weapon and keep the ammunition at their custody and hand over the weapon to the P.I.C when entering the aircraft.

In-Flight Security Guards:

- Firearms issued to security guards may be effectively disabled by the use of padlock with the hasp passing through the breach or between the trigger and trigger-guard, which will prevent

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the firearms being discharged. In every case, firearms should be unloaded and ammunition stowed in a separate secure container.

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9.9 Security of Aircraft:

Search of Aircraft:

- For originating flight, aircraft checks should include a security inspection prior to the boarding of passengers, cargo, and baggage.
- A relevant training and guidance on the subject is given by NESMA Airlines to its crew members. Also an aircraft security search checklist is available.

Protection on Ground:

- To prevent unauthorized access, aircraft in service shall not be left unattended, aircraft not in service must have all access doors secured, stairs, and jet-ways removed and parked in controlled and well illuminated areas. Persons servicing aircraft must identifiable as authorized persons and be subject to access control procedures.
- As a general rule, pre-flight precautions should include:
 - a. An inspection of the exterior of the aircraft, paying particular attention to wheel bays and technical areas.
 - b. A comprehensive inspection of the interior of the aircraft, including the passenger cabin area, seats, overhead luggage lockers, toilets, galleys, and other technical areas such as flight deck.
 - c. Monitoring of aircraft maintenance and servicing operations.
 - d. Prevention of unauthorized access to aircraft. Each employee must wear the airline identification card (ID card) issued for the duration of his employment. ID card must not be lent or disposed of in any manner. If the card is lost it must be immediately reported to Administration Manager or Station Manager as appropriate, and a replacement card must be obtained. The identification card is to be worn in a visible position at all times when on duty or when entering areas requiring the wearing of ID card. No person will be allowed to service the aircraft on ground or on board if not wearing his ID card. A flight attendant must always be positioned at A/C boarding point to ensure this procedure is carried out. Prior to availability of the cabin crew, the station engineer, station manager, or their staff should ensure that no non-authorized person services on board the aircraft.
 - e. The screening of passengers and cabin baggage carried out by airport security authority.
 - f. Supervision of the loading of baggage, cargo, mail, and stores.
 - g. Security of flight manuals and crew baggage.
 - h. Confirmation of the presence and seat assignment of any authorized armed passengers, persons in custody, and their escorts.

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- i. When a suspect package or bag located in the immediate vicinity of an aircraft, which might be damaged by possible explosion, the aircraft should be towed away from the parcel or the parcel moved away from the aircraft. If a suspect item or substance is located on board an aircraft, it should not be touched. The airport security authority should be notified immediately, so that the bomb disposal personnel may deal. Subject to the advice of the bomb disposal, official consideration should be given to towing the aircraft to a safe dispersal area. At the same time the aircraft should immediately be evacuated by inspection and/or search teams and all persons kept at a minimum radius of 100 meters. Firefighting services should stand by at a safe distance to deal with an explosion and fire, prior to and including the time when bomb disposal personnel declare the suspicious item or substance safe. After the suspicious item or substance is declared safe, inspection procedures should be completed to ensure that no secondary sabotage device or substance is on the aircraft. In the event of an explosion, first aid to injured personnel should be rendered immediately, followed by established damage control procedures. After the effects of the explosion are under control, the search should be continued to ensure that no secondary sabotage device or substance is on the aircraft.

9.10 Security Procedures for Transport of Catering Materials

- NESMA Airlines is contracted with specialized manufacturers of catering materials for flights.
- The manufacturer is responsible for the aircraft catering since the preparation till their delivery to aircraft by the following procedure:
 - The nominated employee from NESMA Airlines shall define the number and type of catering meals.
 - The manufacturer shall load the prepared meals on NESMA Airlines trolleys, then to special refrigerated well-sealed car.
 - The manufacturer representative shall transfer the prepared meals from the contracted manufacturer to the airport.
 - The airport police will inspect the car and the trolleys contents for explosive materials before entry to the airport.
 - The manufacturer representative shall hand over the catering trolleys to flight cabin crew according to numbers and type which have been sent by the nominated employee from NESMA Airlines.

9.11 Security Equipment

- NESMA Airlines has none of the following security equipment:
 1. X-ray.
 2. Walk-through metal detectors.
 3. Hand-held metal detectors.
 4. Explosive detectors.
 5. Simulation chambers
 6. Dogs and biosensors.

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9.12 Bomb Threat

- Before landing, the pilot in command should confirm the location of the isolated parking position and whether steps would be available to disembark passengers in order to avoid unnecessary delays. It may also be desirable to arrange with the senior steward, procedures for emergency evacuation.
- Immediately upon landing, the aircraft should be directed to the isolated parking position for search, using taxiway, which are cleared of other aircraft.
- If there is likely to be a delay due to distance or other conditions on the airport, the pilot in command may elect to direct emergency disembarkation by passengers. If possible, this action should be taken at a location which will not disrupt normal operations at the airport.
- Upon disembarkation, the crew and any available ground personnel should assemble passengers at a distance of 100 meters minimum.

9.13 Crisis Division Unit

- In case of any crisis, the station will notify the Security Manager, Operation Director, and Technical Director immediately. All operation staff should not reveal any information to the media.

9.14 Action by Recipient of a Bomb Threat

- Any person receiving a bomb threat directly by telephone should listen carefully and make a note of the actual words used by the caller, either take action to trace the call or alert a colleague in order that he/she may do so. Take such action as may be necessary to tape record the call, where this is not done automatically, prolong the call to obtain as much information as possible, and ask the caller the following questions:

WHERE is the bomb?	Asked first so that an evacuation can be planned
WHERE will it go off?	So that a time factor is known for the evacuation
WHAT does it look like?	To help in recognition of the device during a search
WHO are you?	To see if the caller is from a credible group.
WHY are you doing this?	To build up a better picture of the incident and keep the caller on the line to assist in tracing the call

Note 1. — The questions should be posed as open questions rather than as leading ones. For example, ask "Where exactly is the bomb?" rather than, "Is the bomb in the hold of the aircraft?"

Not2. — The order in which the questions are asked is important as the caller may hang up before all the questions can be asked.

- If possible, test the credibility of the caller by making up a nonexistent flight number, flight time or location and asking the caller whether that is the one to which he or she is referring.
- Inform a supervisor who should inform the nominated bomb threat assessor, the police, or security services.

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- People receiving calls from intermediaries should:
 - Ask for and make written note of the precise time at which the threat was issued and the exact words used by the caller.
 - Ask whether the intermediary obtained answers to any of the questions detailed above and about the origin of the call and the caller's identity.
- The recipient of a written bomb threat should preserve the message and deliver it to the supervisor with precise information about its discovery.
- Messages discovered in flight should be referred to the pilot-in-command immediately. Supervisors should interview the recipient of any call or message in order to complete the Bomb Threat Report Form shown below and relay it without delay to the nominated bomb threat assessor.

BOMB THREAT REPORT FORM

Name of person receiving threat message:	Time:	Date:
Message: (Caller's exact words)		

WHERE IS THE BOMB?

Terminal	Fuel storage facility	Cargo area	Airline offices or maintenance	Other
Aircraft	Flight number	Departing	Going to	
Did the caller appear to be familiar with the aircraft or building when describing the location? YES/NO				

WHEN WILL IT EXPLODE?

Time:	Day:	Date:
In flight?: YES/NO	If moved?: YES/NO	Other:

WHAT DOES IT LOOK LIKE?

Briefcase	Shopping/carrier bag	Suitcase
Box/parcel	Other (describe)	

WHO ARE YOU?

Name	Organization
Where are you now?	

WHY ARE YOU DOING THIS?

--

BACKGROUND DETAILS (Circle appropriate answer)

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Origin of call

Local	Long distance	Internal (from within building)	Public Telephone/cellular/mobile
-------	---------------	---------------------------------	-------------------------------------

Attempt made to trace call? Yes/No

Caller's identity

Sex:	Approximate age:	Language spoken:
------	------------------	------------------

Voice characteristics

Loud	Soft	High-pitched	Deep
Raspy	Pleasant	Other	

Speech

Fast	Distinct	Stuttering	Slurred
Sloshy	Distorted	Nasal	Other

Background noise

Noisy	Quiet	Trains	Aircraft
Street traffic	Voices	Office machines	Factory machines
Kitchen	Party atmosphere	Animals	Music
Mixed (describe)			

Accent

Local	Not Local	Colloquial	Regional	Foreign
-------	-----------	------------	----------	---------

Manner

Angry	Calm	Irrational	Rational
Coherent	Incoherent	Deliberate	Emotional
Intoxicated	Laughing	Righteous	Obscene
Other (describe)			

Command of language

Excellent	Good	Fair	Poor	
-----------	------	------	------	--

COMPLETE FORM AND PASS TO NOMINATED BOMB THREAT ASSESSOR DISCUSS THREAT CALL ONLY WITH BOMB THREAT ASSESSOR OR POLICING AUTHORITIES.

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Issue Date: JAN24

Revision No.: 00

Revision Date: JAN24

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9.15 Preliminary Report on Act of Unlawful Interference

INFORMATION PROVIDED
IN THIS REPORT IS
RESTRICTED AND WILL

PRELIMINARY

REPORT ON ACT OF UNLAWFUL INTERFERENCE

File Number:

Date of Report:

(Day/month/year)

TO BE COMPLETED AND FORWARDED TO ICAO WITHIN THIRTY DAYS

OF THE OCCURRENCE BY EACH STATE WITH RELEVANT INFORMATION

Reporting requirement under Annex 17, Article 11 of The Hague Convention or

Article 13 of the Montreal Convention

	Checks
a) Act of unlawful Seizure of Aircraft.	<input type="checkbox"/>
b) Attempted Act of unlawful of Aircraft.	<input type="checkbox"/>
c) Unlawful Act Against The safety of Civil Aviation	<input type="checkbox"/>
d) Attempted Unlawful Act Against The Safety of Civil Aviation	<input type="checkbox"/>
e) Other Act of Unlawful Interference.	<input type="checkbox"/>

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A. GENERAL INFORMATION

1. State providing the Report:

2. Date of the Occurrence:

(Day/month/year)

3. Time of the Occurrence:

(Local time – 24-hour clock)

4. Duration of the Occurrence:

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B. PARTICULARS OF AN ACT OF UNLAWFUL INTERFERENCE:

1. Flight information

Flight departure date:

(Day/month/year)

Flight departure time:

(Local time – 24-hour clock)

Flight identification:

Type of aircraft:

Operator:

Number of passengers:

Number of crew:

In-flight security guards (if any):

Number of perpetrator (s):

Type of operation (scheduled, chartered, etc)

Airport of departure:

Name Sate

Intended destination:

Name Sate

Diversion(s) (Including final destination)

.....

Name Sate

.....

Name Sate

.....

Name Sate

2. Airport where the sabotage device/substance was (believed) loaded on the aircraft

.....

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3. Airport buildings or facilities affected:

.....
.....

4. Brief summary of occurrence (include location of events, dates and times):

.....
.....

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1. Action to ensure the release of passengers and crew, including measures taken to facilitate the continuation of their journey, if applicable :

.....

2. Action to return the aircraft and its cargo to the persons lawfully entitled to possession, if applicable :

.....

3. Did the perpetrator(s) circumvent the security measures in place by use of :

Force Oth

Describe briefly:

.....

4. What new measures and procedures have been taken or are contemplated to prevent recurrence of a similar event :

.....

5. Action by the competent authorities to take the perpetrator(s) into custody or other measures taken to ensure his/her/their presence:

.....

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C. ANY ADDITIONAL RELEVANT INFORMATION

Name _____

[View Details](#)

Title

.....

Department

.....

-END-

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9.16 Final Report on Act of Unlawful Interference

INFORMATION PROVIDED
IN THIS REPORT IS
RESTRICTED AND WILL

FINAL

REPORT ON ACT OF UNLAWFUL INTERFERENCE

File Number:

Date of Report:

(Day/month/year)

TO BE COMPLETED AND FORWARDED TO ICAO WITHIN THIRTY DAYS

OF THE OCCURRENCE BY EACH STATE WITH RELEVANT INFORMATION

Reporting requirement under Annex 17, Article 11 of The Hague Convention or

Article 13 of the Montreal Convention

	Check S
a) Act of unlawful Seizure of Aircraft.	<input type="checkbox"/>
b) Attempted Act of unlawful of Aircraft.	<input type="checkbox"/>
c) Unlawful Act Against The safety of Civil Aviation	<input type="checkbox"/>
d) Attempted Unlawful Act Against The Safety of Civil Aviation	<input type="checkbox"/>
e) Other Act of Unlawful Interference.	<input type="checkbox"/>

A. GENERAL INFORMATION

5. State providing the Report:

6. Date of the Occurrence:

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(Day/month/year)

7. Time of the Occurrence:

(Local time – 24-hour clock)

8. Duration of the Occurrence:

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B. PARTICULARS OF AN ACT OF UNLAWFUL INTERFERENCE:

1. Flight information

Flight departure date:

(Dd/mm/yyyy)

Flight departure time:

(Local time – 24-hour clock)

Flight identification:

Type of aircraft:

Operator:

Number of passengers:

Number of crew:

In-flight security guards (if any):

Number of perpetrator (s):

Type of operation (scheduled, chartered, etc)

Airport of departure:

Name Sate

Intended destination:

Name Sate

Diversion(s) (Including final destination)

.....

Name Sate

.....

Name Sate

.....

2. Airport

State of registry:

Registration number:

Aircraft type:

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Airport where the sabotage device/substance was (believed) loaded on the aircraft

.....

3. Airport buildings or facilities affected:

.....

.....

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C. THE OCCURRENCE

1. Location of Aircraft

On the ground

On airport

During flight

Off airport

3. Weapons / Devises

Description

Real

Fake

Weapon no.2 :

Weapon no.3 :

Weapon no.4 :

Weapon no.5 :

Explosives:

Incendiary:

Other (describe)

4. Communications

4.1 Source of threat:

Written message

Telephone call

Other (describe):

4.2 Who received the threat?

Flight crew

Cabin crew

Airline ground staff

Passenger

Other (describe):

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	Yes	No
4.3 Where there specific demands made? (if yes, please explain)	<input type="checkbox"/>	<input type="checkbox"/>
.....		
.....		
4.4 Who transmitted the demands to authorities on the ground:	Yes	No
The pilot?	<input type="checkbox"/>	<input type="checkbox"/>
The perpetrator?	<input type="checkbox"/>	<input type="checkbox"/>
Other (describe):		
.....		
.....		
5. Counter measures:	Yes	No
5.1 Was there any attempt to stop the action of the perpetrator(s)?	<input type="checkbox"/>	<input type="checkbox"/>
5.2 If so, by what means?		
Negotiations <input type="checkbox"/> Force <input type="checkbox"/> Other <input type="checkbox"/>		
5.3 Results?		
Successful <input type="checkbox"/> Unsuccessful <input type="checkbox"/>		
	Yes	No
5.4 Did the perpetrator(s) enter the cockpit?	<input type="checkbox"/>	<input type="checkbox"/>
If yes, (describe):		
	Yes	No
5.5 Were crew members in possession of a bomb threat search list?	<input type="checkbox"/>	<input type="checkbox"/>
5.6 Were crew members familiar with least risk bomb location?	<input type="checkbox"/>	<input type="checkbox"/>
5.7 Did the perpetrator(s) have:		
Technical knowledge of the aircraft's operation?	<input type="checkbox"/>	<input type="checkbox"/>
Familiarity with the design of the aircraft?	<input type="checkbox"/>	<input type="checkbox"/>
Knowledge of the airport or essential navigation facilities?	<input type="checkbox"/>	<input type="checkbox"/>
If yes, please explain:		

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6. Diversion of the aircraft (Please answer only if aircraft was diverted)

6.1 List airports in chronological order:

a)	Airport	State	Arrival	Departure	Landing		
			date time	and	date time	and	Yes No
a)	<input type="checkbox"/> <input type="checkbox"/>
b)	<input type="checkbox"/> <input type="checkbox"/>
c)	<input type="checkbox"/> <input type="checkbox"/>
d)	<input type="checkbox"/> <input type="checkbox"/>
e)	<input type="checkbox"/> <input type="checkbox"/>

**6.2 Was there sufficient fuel to reach all of the destinations Yes No
order? List below.**

a)	<input type="checkbox"/> <input type="checkbox"/>
b)	<input type="checkbox"/> <input type="checkbox"/>
c)	<input type="checkbox"/> <input type="checkbox"/>
d)	<input type="checkbox"/> <input type="checkbox"/>
e)	<input type="checkbox"/> <input type="checkbox"/>

If yes, describe:

.....

**6.3 Did the crew have the necessary charts available for the Yes No
destination? List below.**

a)	<input type="checkbox"/> <input type="checkbox"/>
b)	<input type="checkbox"/> <input type="checkbox"/>
c)	<input type="checkbox"/> <input type="checkbox"/>
d)	<input type="checkbox"/> <input type="checkbox"/>
e)	<input type="checkbox"/> <input type="checkbox"/>

If yes, describe:

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6.4 Were any of the passengers allowed to leave the aircraft at any of the airport?

List airports in chronological

Airport		Yes	No
a)	<input type="checkbox"/>	<input type="checkbox"/>
b)	<input type="checkbox"/>	<input type="checkbox"/>
c)	<input type="checkbox"/>	<input type="checkbox"/>
d)	<input type="checkbox"/>	<input type="checkbox"/>
e)	<input type="checkbox"/>	<input type="checkbox"/>

If yes, describe:

.....

6.5 Was action taken at any of the airports to resolve the occurrence? List below.

Airport		Yes	No
a)	<input type="checkbox"/>	<input type="checkbox"/>
b)	<input type="checkbox"/>	<input type="checkbox"/>
c)	<input type="checkbox"/>	<input type="checkbox"/>
d)	<input type="checkbox"/>	<input type="checkbox"/>
e)	<input type="checkbox"/>	<input type="checkbox"/>

If yes, describe:

.....

6.6 Was maintenance undertaken at any of the airports? List below.

Airport		Yes	No
a)	<input type="checkbox"/>	<input type="checkbox"/>
b)	<input type="checkbox"/>	<input type="checkbox"/>
c)	<input type="checkbox"/>	<input type="checkbox"/>
d)	<input type="checkbox"/>	<input type="checkbox"/>

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e)

If yes, describe:

.....

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D. THE PERPETRATOR (use additional sheets if more than 3):

Total number of perpetrators:

1. Name: (male/female)

Alias:

Date of birth: Place of birth: Nationality:

(Day/month/year)

Airport of embarkation:

Name State

How did the perpetrator(s) gain access to the aircraft/building facility?

.....

.....

2. Name: (male/female)

Alias:

Date of birth: Place of birth: Nationality:

(Day/month/year)

Airport of embarkation:

Name State

How did the perpetrator(s) gain access to the aircraft/building facility?

.....

.....

3. Name: (male/female)

Alias:

Date of birth: Place of birth: Nationality:

(Day/month/year)

Airport of embarkation:

Name State

How did the perpetrator(s) gain access to the aircraft/building facility?

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E. AIRPORT SECURITY:

	Yes	No
1. Is there an airport security program where the perpetrator(s) boarded the aircraft?	<input type="checkbox"/>	<input type="checkbox"/>
2. Does the security programme provide for protection of the air side (fences, guards, locked gates, patrols, identification system, etc.)?	<input type="checkbox"/>	<input type="checkbox"/>
3. Are the identification cards issued to ground personnel and auxiliary services reviewed regularly?	<input type="checkbox"/>	<input type="checkbox"/>
4. Inspection /screening of passengers, crew and cabin baggage:	<input type="checkbox"/>	<input type="checkbox"/>
a) Are all passengers and cabin baggage subjected to inspection/screening for all international flights?	<input type="checkbox"/>	<input type="checkbox"/>
b) Are all passengers and cabin baggage subjected to inspection/ screening for all domestic flights?	<input type="checkbox"/>	<input type="checkbox"/>
c) Are all crew members subjected to security control?	<input type="checkbox"/>	<input type="checkbox"/>
d) Are alt passengers and their cabin baggage which have been subjected to inspection/screening re-screened before boarding the aircraft if they mix or have contact with persons who have not been subjected to inspection/screening?	<input type="checkbox"/>	<input type="checkbox"/>
5. Inspection/screening system used:		
Gate plan (direct access to aircraft)	<input type="checkbox"/>	<input type="checkbox"/>

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Sterile hold area plan (pre-boarding lounge)

Sterile concourse plan

6. System of security control in use:

Metal detection device:

Walk-through

Hand-held

X-ray unit

Physical inspection

Other

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- | | Yes | No |
|---|--------------------------|--------------------------|
| 7. Was the operation of the metal detection devices and x-ray units recently examined using objects? | <input type="checkbox"/> | <input type="checkbox"/> |
| 8. Has training regularly been provided to security personnel who operate metal detectors and x-ray units | <input type="checkbox"/> | <input type="checkbox"/> |
| 9. Matching baggage: | | |
| a) Is there a reconciliation made of the number of checked-in passengers with the pieces of baggage loaded on the aircraft? | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Does the procedure in a) above include transfer passengers and their inter-line checked baggage? | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. Did the perpetrator(s) circumvent the security measures in place by use of: | | |
| Force | <input type="checkbox"/> | |
| Other | <input type="checkbox"/> | |

Describe briefly:

.....
.....
.....

11. What new measures and procedures have been taken or are contemplated to prevent recurrence of a similar event?

.....
.....
.....
.....
.....

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F. TERMINATION OF THE OCCURRENCE:

1. Position of the negotiator (explain if the negotiator had decision-making authority or acted only as an intermediary):

.....

2. Airport/aircraft

Number of persons affected:

	Killed	Injured
Crew
Passengers
Perpetrator(s)
Others

3. Circumstances surrounding death or injuries:

.....
.....
.....

4. Damage to the aircraft/airport facilities (short description)

To include cost of damage, time loss and flights affected):

.....
.....
.....

5. Furnish any additional information relevant to circumvention of security during this Occurrence:

.....
.....

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PART II: INFORMATION CONCERNING THE ACTION TAKEN FOR THE RELEASE OF PASSENGERS AND CREW AND THE RETURN OF THE AIRCRAFT, IF APPLICABLE:

1. Action taken for the release of passengers and crew:

.....

2. Action taken to facilitate the continuation of the journey of the passengers and crew as soon as practicable:

.....

3. Action taken to return the aircraft and its cargo, without delay, to the persons lawfully entitled to possession:

.....

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PART III: INFORMATION CONCERNING THE MEASURES TAKEN RELEATION TO THE PREPETATOR(S):

1. Action by the competent authorities to take the perpetrator(s) into custody or other measures taken to ensure his/her/their presence:

.....

2. Action taken to institute extradition proceedings or to submit the case to the competent authorities for the purpose of prosecution; advice of the results of such proceedings, if available (other provide such information separately as soon as practicable). :

.....

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PART IV: ANY ADDITIONAL RELEVANT INFORMATION

Name _____

.....

Title

Department

-END-

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9.17 Training

- Stations staffs are subject to "Airport Ground Staff Training Courses".
- Airport ground staff training course will provide:
 - Procedures and controls of passengers/hand or hold baggage, cargo, and mail.
 - Procedure for quality checks.
 - Procedures to control catering supplies, duty free articles, and any other material boarded.
 - Procedures on surveillance and identification of passenger baggage at aircraft side.
 - Passengers profiling and checking of travel documents.
 - Procedures for surveying parked aircraft and checking of supplies.
 - Passenger identity/boarding cards control at gates.
 - Escorting of baggage, cargo, mail, catering and supplies to and from the aircraft.
 - Escorting to/from the aircraft firearms transported by the passengers on arrival and departure.
 - Survey and storage of baggage, cargo, and mail.
 - Aircraft inspections.
 - Auxiliary presence in police activities, connected to emergency and security procedures.
 - Any other security required by NESMA Airlines.

Refresher training courses

- minimum every 3 years

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Chapter 10 Quality Assurance and SMS Program

10.1 Quality Assurance Program

(Refer to Nesma Airlines Corporate Manual) **Airport Handling Quality Audit**

10.1.1 Scope

- This standard procedure encompasses the following airport activities:
 - Passenger and Baggage Handling;
 - Load Control;
 - Ramp Handling and Ground Support Equipment.

And as a general policy for Nesma Airlines all of these functions are being performed by another parties in each location service is being provided, where the contracting process takes place through a standard ground handling agreement, controlled through the operator Manual (Station Operations Manual), AHM560, Published instructions, on time instructions. Based on regulations (ICAO, IATA, ECAR) requirements, and own company requirements which concerns quality, safety and security.

- Nesma Airlines Ground Handling department is monitoring all the functions, which are contracted, through audits performed by Nesma Airlines Safety and Quality department.
- Nesma Airlines Management ensures sufficient resources to ensure audits of ground handling operations are performed and completed with intervals that meets regulatory and management requirements . Information on intervals can be found in corporate manual.

10.1.2 Purpose

- Nesma Airlines Safety and Quality department provides a quality assurance program for auditing of functions including the scope of ground handling operations to ensure:
- Complying with applicable regulations and standards;
- Satisfying stated operational needs;
- Identifying undesirable conditions and areas requiring improvement;
- Identifying hazards to operations;
- Assessing the effectiveness of safety risk controls.

10.1.3 Description

- Each activity is inspected / audited by a qualified quality auditor from Nesma Airlines every two years using a check-list that covers the following aspects:
 - Available services and providers.
 - Training and qualification. This part only covers the practical methods and standards of training. As concerns the actual standards of competence belonging to a given activity and its various functions, the following procedures shall be referred to

AHM 590 — Load Control Procedure, Responsibilities, Training and Qualification

AHM 613 — Aircraft Handling Personnel, Responsibilities and Qualifications

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- Procedures and organization assessment: how identified processes are translated into effective workable procedures and working instructions, i.e. the means and ways used for carrying out the various tasks and duties, as well as the identity of the personnel in charge.

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10.1.4 Utilization

- Nesma Airlines Quality Audit is used:
 - To evaluate, through an audit process, all handling companies, with the purpose of making the appropriate recommendations to the management. A final evaluation report, the layout of which is left at the company's discretion, may complement the findings and observations of the evaluation process.
 - For station inspections or quality audits of handling companies or Nesma Airlines own activities, to ascertain that policies, structures, facilities, resources and procedures remain relevant to Nesma Airlines operation and effective in maintaining safety and quality standards. It should be noted that a comprehensive airside safety performance audit is published under AHM 612 Recommendations for Airside Safety Performance Audits.
 - For Station inspections or quality Audits of contracted service providers who conduct ground handling operational functions for Nesma Airlines shall ensure ground handling safety and security requirements are fulfilled.

10.1.5 Audit Report

- Nesma Airlines Safety and Quality department is addressing findings resulting from audits of functions within ground handling operations scope, to ensure:
 - Finding the root-causes for non-compliance and identifying the area of failure will require in-depth questioning.
 - Development of corrective preventive action, to address findings
 - Implementation of corrective or preventive action in appropriate operational areas,
 - Recommendations of corrective actions with deadlines for completion.
 - Evaluation of corrective or preventive action to determine effectiveness.
 - Significant issues raised from Audits of functions within the scope of ground handling operations shall be subjected to management review.
- The audit report should contain the following information:

Observations made and a list of findings with supported evidence (only facts as observed can be used to demonstrate a case of non-compliance),

Recommendations of corrective actions with deadlines for completion.

- Quality Manager must ensure a copy of all audits and subsequent remedial actions which concerns Ground Handling scope are supplied to the Ground Handling Manager.
- The Ground Handling Manager is responsible for ensuring timely corrections, corrective actions and preventive actions of audits.
- The Ground Handling Manager also performs regular review to the significant issues arising from audits, and provides recommendations as preventive actions.

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10.2 Hazard Identification and Reporting Process

10.2.1 Introduction

Nesma Airlines have a hazard identification program that is implemented and integrated throughout the organization, to include:

- i. A combination of reactive and proactive methods for safety data collection;
- ii. Processes for safety data analyses that identifies existing hazards and predict future hazards to aircraft operations.

To ensure all hazards are identified to the extent possible, hazard identification processes are necessarily formalized, coordinated and consistently applied on an on-going basis in all areas where ground handling is performed where there is a potential for hazards that could affect aircraft ground handling operations.

To be effective, reactive and proactive processes are used to acquire information and data, which are then analyzed to determine existing or predict future (i.e. potential) hazards to aircraft operations. Nesma airlines has developed and maintains a formal process for collecting, recording, acting on and generating feedback about hazards in operations, based on a combination of reactive, proactive and predictive methods of safety data Collection, Examples of processes that typically yield information or data for hazard identification include:

- Reporting system;
- Investigation of accidents, incidents, irregularities and other non-normal events;
- Observation of service providers performance;
- Quality assurance and/or safety auditing;
- Safety information gathering or exchange (external sources).

Processes are designed to identify hazards that might be associated with organizational business changes e.g. addition of new routes or destinations.

The strategy that NESMA AIRLINES adopts for its SMS will reflect its corporate safety culture and range from purely reactive, responding only to accidents, through to strategies that are highly proactive in their search for safety problems. Safety objectives shall be published and distributed.

10.2.2 Reactive safety method:

Investigate accidents and reportable incidents.

This method is useful for situations involving failures in technology, or unusual events. The utility of the reactive approach for safety management purposes depends on the extent to which the

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investigation goes beyond determining the causes to include an examination of all the contributory factors.

The reactive approach tends to be marked by the following characteristics:

- a. Management's safety focus is on compliance with minimum requirements.
- b. Safety measurement is based on reportable accidents and incidents with such limitations in value as:
 - Any analysis is limited to examining actual failures.
 - Insufficient data is available to accurately determine trends, especially those attributable to human error.
 - Little insight is available into the "root causes" and latent unsafe conditions, which facilitate human error.
- c. Constant "catching up" is required to match human inventiveness for new types of errors.

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10.2.3 Proactive Safety Method:

Aggressively seeking information from a variety of sources which may be Indicative of emerging safety problems.

NESMA AIRLINES pursuing a proactive method for safety management believes that the risk of accidents can be minimized by identifying vulnerabilities before they fail and by taking the necessary actions to reduce those risks. Consequently, they actively seek systemic unsafe conditions using such tools as:

- a. Hazard and incident reporting systems that promotes the identification of latent unsafe conditions;
- b. Safety surveys to elicit feedback from front-line personnel about areas of dissatisfaction and unsatisfactory conditions that may have accident potential;
- c. Flight data monitoring (AIRFASE system) used as a predictive methods for identifying operational go beyond and confirming normal operating procedures;
- d. Operational inspections or audits of all aspects of operations to identify vulnerable areas before accidents, incidents or minor safety events confirm a problem exists; and
- e. A policy for consideration and embodiment of manufacturers' service bulletins

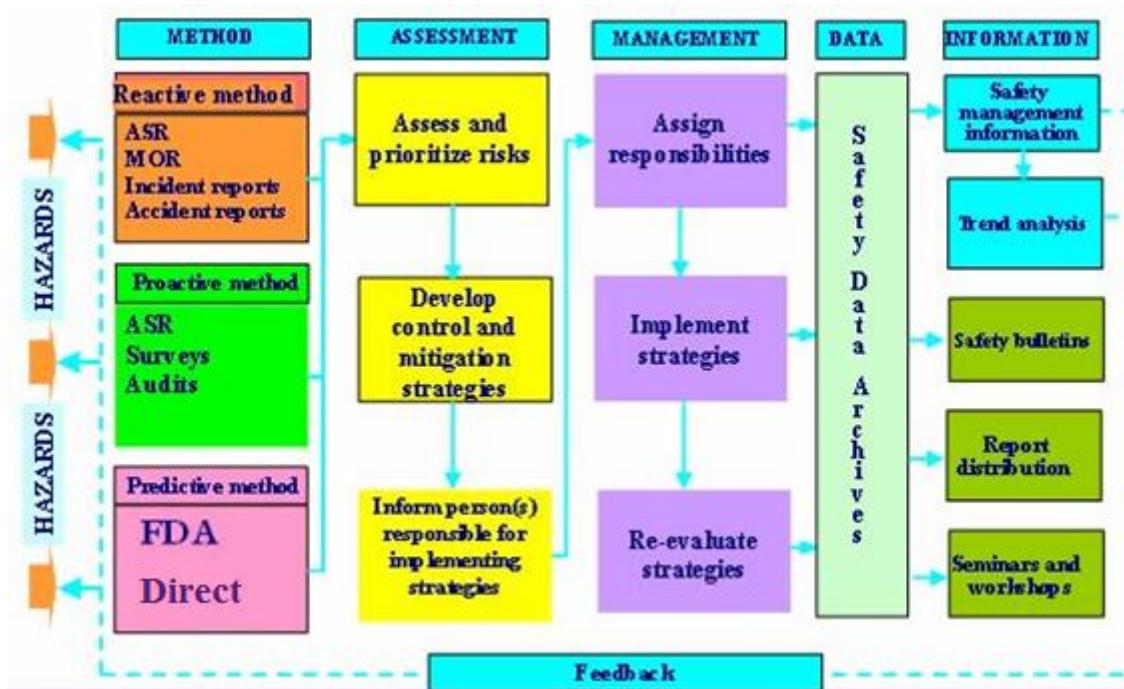


Figure 1 Safety Management System Process

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10.2.4 Predictive safety method

- This methodology involves data gathering in order to identify possible negative future outcomes or events, analyzing system processes and the environment to identify potential future hazards and initiating mitigating actions.

10.2.5 Reactive Processes

10.2.5.1 Occurrence and Hazard Reporting

Every event is an opportunity to NESMA AIRLINES to learn valuable safety lessons. The lessons will only be understood, however, if the occurrence is analyzed so that all staff, including management, understands not only what happened, but also why it happened. This involves looking beyond the event and investigating the contributing factors.

To achieve this, NESMA AIRLINES maintains procedures for the internal reporting and recording of occurrences, hazards and other safety related issues. The collection of timely, appropriate and accurate data will allow NESMA AIRLINES to react to information received, and apply the necessary corrective action to prevent a recurrence of the event.

The key to accomplish this, NESMA AIRLINES have a reporting system that meets the needs of all staff that will be using it – all staff. As such, personnel input into the development of the system are vital. A safety reporting system is worthless if no one uses it.

NESMA AIRLINES non-punitive discipline policy and a real and demonstrated Commitment by management to achieve the company's safety goals will help to foster the development of a reporting culture within NESMA AIRLINES.

10.2.5.2 Nesma Airlines' Safety Reporting Systems Elements

NESMA AIRLINES' safety reporting systems encompass the following elements:

- a. System for reporting hazards, events or safety concerns.
- b. System for analyzing data, safety reports and any other safety related information.
- c. Method for the collection, storage and distribution of data.
- d. Corrective action and risk reduction strategies.
- e. On-going monitoring.
- f. Confirmation of the effectiveness of corrective action.

10.2.5.3 Reporting Hazards, Events and Safety Concerns

NESMA AIRLINES has developed Hazards, Events and safety concerns forms to allow for a full description of the event.

10.2.5.4 Why Report?

All events require appropriate investigation in order to:

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- a. Establish their root cause, that is the underlying initial contributing factor(s) that caused the event, and identify actions to minimize the chance of recurrence;
- b. Satisfy any regulatory requirements for reporting and investigation as ECAR 39 (MOR)
- c. Provide a factual record of the circumstances of the event or hazard to allow others to learn from the situation; and
- d. Categorize the underlying causes and establish the appropriate remedial and continuous improvement action.

10.2.5.5 What Should Be Reported?

Any event or hazard with the potential to cause damage or injury should be reported.

- h. Poor communication between operational areas
- i. Lack of up to date technical manuals
- j. Poor shift changeovers
- k. Runway incursions
- l. Lack of adequate training and recurrent training.
- a. Examples of these issues are:
- b. Excessive duty times
- c. Crews rushing through checks
- d. Inadequate tool or equipment control
- e. Unruly passengers
- f. Emergency exit paths blocked
- g. Incorrect or inadequate procedures, and a failure to adhere to standard procedures.

10.2.5.6 When Should A Hazard Report Be Submitted?

Any individual involved directly or indirectly in the flight activities of the flight department (i.e. cockpit, cabin, dispatchers, maintenance, employees, personnel, and others providing aviation related products/services) must report any observed hazard. If a hazard is recognized and unable to be observed via normal procedures, the observer shall complete a hazard report and submit it to the Safety manager.

A Hazard Report or Flight Operations Incident Report shall be submitted when any situation, practice, procedure, or process is observed which either a recognized safety concern is, Considered unusual from an operational or procedural standpoint, or Considered deficient from a safety standpoint, and which, in the submitter's opinion, possesses a foreseeable potential for injury or illness to persons or damage or loss of property if not addressed in a timely manner.

Any safety concern that would be of interest to others that are involved in like activities should be reported. Hazard Report is not required for hazards which are able to be resolved locally, however, when a hazard is likely to be duplicated in other department workplaces a Hazard Report should be submitted for the benefit of other affected employees.

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10.2.5.7 How a Hazard shall be reported?

At NESMA AIRLINES the reports are acted upon in a timely manner by the Flight Safety Manager.

Available Forms:

- 3) Voluntary Report (Form No. 303)**
- 4) Cabin Crew Report (Form No. 304)**
- 1) Air Safety Report (ASR) (Form No. 305)**
- 2) Confidential / Hazard / Human Factor Report (Form No. 302)**

- NESMA AIRLINES's reporting system maintains confidentiality between the person reporting the hazard and the Flight Safety Manager. Any safety information distributed a hazard report must be de- identified.
- NESMA AIRLINES reporting system maintains confidentiality between the person reporting the hazard and the Safety and Quality Director

10.2.5.8 The System Includes the Following Procedures Such as:

- All safety reports go to Safety and Quality Director, Safety and Quality Director is responsible for investigation of the report the Safety Manger will follow- up on a report to clarify the details and the nature of the problem. Anyone submitting a safety report must receive acknowledgement and feedback within 10 working days after the investigation.
- Hazard Report Processing: upon receipt of a Hazard Report the Safety manager will conduct an investigation to determine the validity of the report as well as to gain additional information concerning the report's subject matter. Any hazardous situations or equipment shall be either placarded or removed from service until the hazardous situation is corrected. The submitter, if identified, will be advised of the result of the investigation. If a Hazard Report identifies a problem that is outside the scope or authority, the originator will be offered assistance in routing the information to the appropriate person responsible.
- The contents of the Hazard Report and the investigation results will be provided along with recommendations for corrective/preventive action. Appropriate action and a target date for elimination or reduction of the hazardous situation will then be determined.
- Final corrective action shall be documented.
- NESMA AIRLINES Decisions concerning risk acceptability should be made by management and they should be kept informed of all high-risk considerations.

10.2.6 Reports Should Be Distributed, As A Minimum, To The Following:

- a. The Safety and Quality Director for managing the safety management system.
- b. The safety committee.

10.2.7 Hazard, Confidential Human Factors Report:

Hazard Reports to be submitted using the Hazard Confidential / human factors Report form. The submitter's identification on the report is optional but is encouraged in the event that further information is required for elimination of the hazard. Reports shall be concise and should accurately

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and thoroughly describe the hazard. When applicable, reports should include the submitter's recommendation(s) for corrective action. In circumstances where the perceived hazard possesses the immediate potential for injury/illness to persons or damage/loss of property, management shall be notified immediately by the most expeditious means possible for the purpose of determining appropriate action to prevent such injury/illness or damage/loss. Confidential Reporting systems aim to protect the identity of the reporter. This is one way of ensuring that voluntary reporting systems are non-punitive. Confidentiality is usually achieved by de-identification, and any information about the reporter is known only to "Safety & Quality directory" in order to allow for the follow-up of the reported event(s). Confidential incident reporting systems facilitate the disclosure of hazards leading to human error, reporter can also use the email Safety@Nesmaairlines.com directly.

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10.2.8 Voluntary Reporting system:

This reporting is voluntary in nature which means it is submitted without any administrative requirement.

NESMA AIRLINES the top management encourages all employees and gives them the incentive to report voluntarily any hazard or Event. (Reporting Underlining Errors or Unintentional Violations) .In NESMA AIRLINES The reported information shall not be used against the reporter, The Voluntary Reporting system is non punitive and extend protection to the source of information to encourage the reporting of such valuable information.

10.2.9 Safety Oversight

- Safety oversight for cabin safety shall achieve by program of:
 - a. Aircraft inspections (e.g. emergency exits, emergency equipment, galleys);
 - b. Pre-flight (ramp) inspections;
 - c. In-flight cabin inspections (e.g. passenger briefings, crew briefings and use of checklists)
- NESMA AIRLINES internal safety audit program should include the cabin crew department. The audit process should include a review of all cabin operations as well as an audit of cabin safety procedures, training, cabin crew's operating manual, etc.

10.2.10 Safety Reporting Culture

Use of the following outlined principles helps to

1. overcome the natural resistance to safety reporting & improves Safety reporting culture at NESMA AIRLINES;
2. Encourages and facilitates ground handling operations personnel to submit reports that identify safety hazards, expose safety deficiencies and raise safety concerns;
3. Implement Required reporting of events that result in aircraft ground damage
4. Includes analysis and ground handling operations management action to address operational deficiencies, hazards, incidents and concerns identified through the reporting system.

10.2.10.1 Trust

- Persons reporting hazards or incidents must trust that the receiving organization the company will not use the information against them in any way. Without such confidence, people will be reluctant to report their mistakes or other hazards they have noticed.
- Trust begins with the design and implementation of the reporting system. Employee input into the development of a reporting system is therefore vital.

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- NESMA AIRLINES believes that positive safety culture in the organization generates such kind of trust necessary for a successful incident reporting system. Specifically, the culture must be error-tolerant and just. In addition, incident reporting systems need to be perceived as being fair in how they treat unintentional errors or mistakes. (Most people do not expect an incident reporting system to exempt criminal acts or deliberate violations from prosecution or disciplinary action.) NESMA AIRLINES considers such a process to be an example of a “just culture”.

10.2.10.2 Non-punitive

- Non-punitive reporting systems are based on confidentiality. Before employees will freely report incidents, At NESMA AIRLINES Top management committed that reported information would not be used punitively against them. The person reporting the incident (or unsafe condition) must be confident that anything said will be kept in confidence.
- Reporting anonymously is not the same as confidential reporting. Most successful reporting systems have some type of call-back capability in order to confirm details or obtain a better understanding of the occurrence. Reporting anonymously makes it impossible to “call back” to ensure understanding and completeness of the information provided by the reporter. There is also a danger that anonymous reporting may be used for purposes other than safety.

10.2.10.3 Inclusive reporting base

- Early voluntary incident reporting systems were targeted at flight crew. Pilots are in a position to observe a broad spectrum of the aviation system and are therefore able to comment on the system’s health. Nonetheless, incident reporting systems that focus solely on the perspective of flight crew tends to reinforce the idea that everything comes down to pilot error. Taking a systemic approach to safety management requires that safety information be obtained from all parts of the operation.
- Incidents reporting systems, collecting information on the same occurrence from different perspectives facilitates forms a more complete impression of events. Relying on only one perspective; may not provide a complete understanding of the event.

10.2.10.4 Independence

Voluntary reporting to the Quality & Safety Director benefits from a trusted “third party” managing the system. Quality & Safety Director receives, processes and analyses the incident reports and feeds the results back to the safety committee, and any information received will be used for safety purposes only; as part of NESMA AIRLINES safety management system.

10.2.10.5 Ease of Reporting

The task of submitting incident reports should be as easy as possible for the reporter. Reporting forms should be readily available so that anyone wishing to fill a report can do so easily. Forms should be simple to compile, have adequate space for a descriptive narrative and should encourage suggestions on how to improve the situation or prevent a reoccurrence. To simplify completion,

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classifying information, such as the type of operation, light conditions, type of flight plan, and weather, can use a “tick-off” format.

10.2.10.6 Acknowledgment

The reporting of incidents requires time and effort by the reporter and should be appropriately acknowledged. To encourage further submission of reports, one State encloses a blank report form with its acknowledgment letter. In addition, the reporter naturally expects feedback about actions taken in response to the reported safety concern.

10.2.10.7 Promotion

The (de-identified) information received from an incident reporting system should be made available for all employees in a timely manner. This could be done in the form of monthly newsletters or periodic summaries. Ideally, a variety of methods would be used with a view to achieving maximum exposure. Such promotional activities may help to motivate people to report additional incidents.

10.2.11 Types of incident reporting systems

In general, an incident involves an unsafe, or potentially unsafe, occurrence or condition that does not involve serious personal injury or significant property damage, i.e. it does not meet the criteria for an accident. Even though; NESMA AIRLINES is required – as an operator to report the occurrence to ECAA.

10.2.11.1 Mandatory incident reporting systems

- In a mandatory system, NESMA AIRLINES is required to report certain types of incidents. This necessitates detailed procedures outlining who shall report and what shall be reported. The number of variables in aviation operations is so great that it is difficult to provide a comprehensive list of items or conditions which should be reported. However, the rule should be: “If in doubt – report it.”
- Since mandatory systems deal mainly with “hardware” matters, they tend to collect more information on technical failures than on the human performance aspects. To help overcome this problem, NESMA AIRLINES developed voluntary incident reporting systems that aimed at acquiring more information on the Human Factors aspects of occurrences.
- Following is a listing of the types of occurrences or safety events to be reported to ECAA under the company’s incident reporting system. The list is neither exhaustive nor in any order of importance:
 - Any system defect which adversely affects the handling or operation of the aircraft;
 - Warning of smoke or fire, the activation of toilet smoke detectors or galley fires;
 - An emergency is declared;
 - The aircraft is evacuated by means of the emergency exits/slides;
 - Safety equipment or procedures are defective, inadequate or used;
 - Serious deficiencies in operational documentation;
 - Incorrect loading of fuel, cargo or dangerous goods;

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- Significant deviation from SOPs;
 - A go-around is carried out from below 1 000 ft above ground level;
 - An engine is shut down or fails at any stage of the flight;
 - Ground damage occurs;
 - A take-off is rejected after take-off power is established;
 - The aircraft leaves the runway or taxiway or other hard standing;
 - A navigation error involving a significant deviation from track;
 - An altitude excursion of more than 500 ft occurs;
 - Un-stabilized approach under 500 ft;
 - Exceeding the limiting parameters for the aircraft configuration;
 - Communications fail or are impaired;
 - A stall warning occurs;
 - GPWS activation;
 - A heavy landing check is required;
 - Hazardous surface conditions, e.g. icy, slush and poor braking;
 - Aircraft lands with reserve fuel or less remaining;
 - A TCAS RA event;
 - A serious ATC incident, e.g. near mid-air collision, runway incursion and incorrect clearance;
 - Significant wake turbulence, turbulence, wind shear or other severe weather;
 - Crew or passengers become seriously ill, are injured, become incapacitated or deceased;
 - Violent, armed or intoxicated passengers, or when restraint is necessary;
 - Security procedures are breached;
 - Bird strike or Foreign Object Damage (FOD); and
 - Any other event considered likely to have an effect on safety or aircraft operations.
- Effective 1 September 2020, Nesma Airlines Ground handling manager shall report aircraft ground damages to IATA for inclusion in the Incident Data Exchange (IDX). Such reports shall be submitted in accordance with the formal IATA ground damage reporting structure

10.2.11.2 Voluntary Incident Reporting Systems

NESMA AIRLINES shall introduce voluntary incident reporting systems to supplement the information obtained from mandatory reporting systems. In such systems, the reporter, without any legal or administrative requirement to do so, submits a voluntary incident report. In a voluntary reporting system, the reported information should not be used against the reporters, i.e. such systems must be non-punitive to encourage the reporting of such information. Form Number 302

10.2.11.3 Confidential Reporting Systems

Confidential reporting systems aim to protect the identity of the reporter. This is one way of ensuring that voluntary reporting systems are non-punitive. Confidentiality is usually achieved by de-identification, often by not recording any identifying information of the occurrence. One such system returns to the user the identifying part of the reporting form and no record is kept of these details. Confidential incident reporting systems facilitate the disclosure of human errors, without fear of retribution or embarrassment, and enable others to learn from previous mistakes.

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10.2.12 Retention of Reports

All Types of reports related to Incident/Accident or safety reports associated with aircraft ground handling operations are recorded into Ground Handling manager office into Separate file, and copy of these reports is also given to Safety and Quality Director, for indefinite period of time.

10.2.13 Proactive Safety Assessment

For a safety management system to transition from a reactive to a proactive, NESMA AIRLINES actively seeks out potential safety hazards and evaluates the associated risks. This can be achieved through a safety assessment. A safety assessment allows for the identification of potential hazards and then applies risk management techniques to effectively manage the hazard.

NESMA AIRLINES's safety assessment system should encompass the following basic elements:

- a. System for identifying potential hazards
- b. Risk management techniques
- c. On-going monitoring/quality assurance.

10.2.14 Assessment Frequency

A safety assessment should be undertaken, at a minimum:

- a. During implementation of the safety management system.
- b. When major operational changes are planned.
- c. If the organization is undergoing rapid change, such as growth and expansion, offering new services, cutting back on existing service, or introducing new equipment or procedures.
- d. When key personnel change.

10.2.15 Information Sources for Determining Potential Hazards

The following list details some of the possible resources:

- a. Company Experience: Existing safety reports detailing events.
- b. Minutes of safety meetings: committee meetings can also reveal potential areas of concern.
- c. Line management: line manager will have perceptions of the greatest hazards.
- d. Workplace opinions: This can be achieved through focus groups, consulting employee representatives.
- e. Audit Reports: internal audit system should contain a record of audit reports and remedial action plans.
- f. Corporate hazard analysis: Records of previously conducted formal hazard analyses.
- g. Safety data recording systems: Mandatory occurrence reporting (MOR)

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10.2.16 Active Monitoring Techniques

There are several active monitoring methods that can be employed in safety assessment, these include:

- a. Inspections: Usually achieved by inspection on activities against planned methods of procedures.
- b. Audits: Usually achieved by independent review of an organization's systems personnel, facilities, etc.
- c. Review – Provides an overview of the processes involved in a work area or system

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10.3 Safety Risk Assessment and Mitigation Program

10.3.1 Risk Management.

Not all risks can be eliminated, nor are all believable risk mitigation measures economically feasible. The risks and costs inherent in aviation necessitate a rational process for decision-making. Daily, decisions are made in real time, weighing the probability and severity of any adverse consequences implied by the risk against the expected gain of taking the risk.

This process is known as "Risk management". As shown in figure1

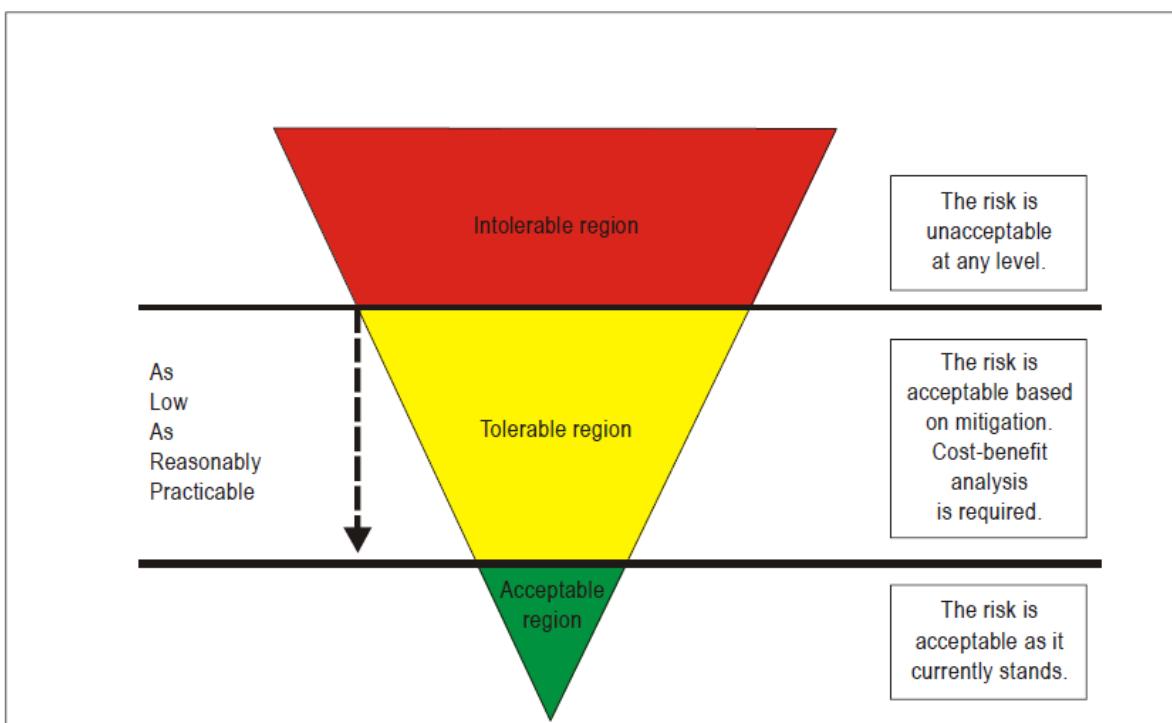


Figure 1 Risk management

Risk management facilitates the balancing act between assessed risks and viable risk mitigation. Risk management is an integral component of safety management. It involves a logical Process of objective analysis, particularly in the evaluation of the risks. The process for risk management is summarized in the flow chart in Figure 2 as the figure indicates; risk management comprises three essential elements: hazard identification, risk assessment and risk mitigation. The concepts of risk management have equal application in decision making.

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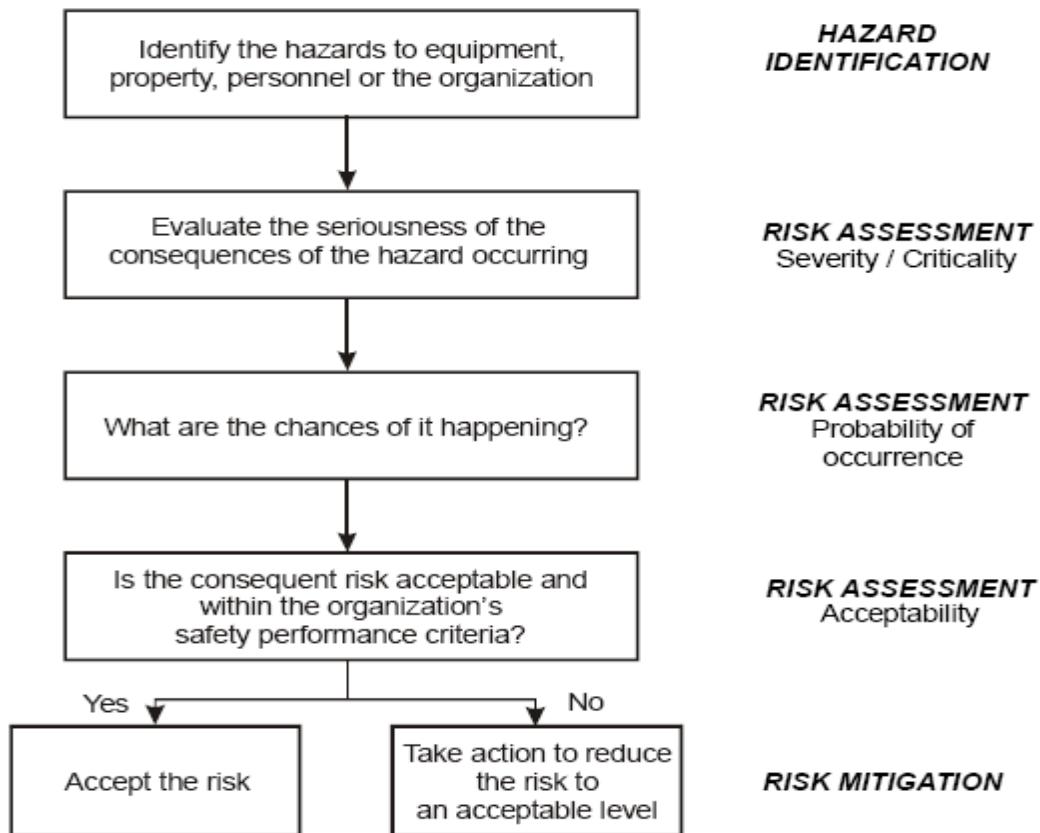


Figure 2 Risk management process

10.3.2 First fundamental – Risk management

What is it the identification? Analysis and elimination or mitigation to an acceptable level of risks that threaten the capabilities of an organization.

What is the objective? Aims at a balanced allocation of resources to address all risks and viable risk control and mitigation.

Why is it important a key component of safety management systems? Data-driven approach to safety resources allocation thus defensible and easier to explain.

Hazards are analyzed to determine the existing and potential safety risk to aircraft operations

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10.3.3 Second fundamental - Risk probability

Probability: The possibility that a situation of danger might occur as shown in figure 3

Questions for assessing the probability of an occurrence:

- a. Is there a history of occurrences like the one being assessed, or is the occurrence an isolated event?
- b. What other equipment, or similar type components, might have similar defects?
- c. What number of operating or maintenance personnel must follow the procedure (s) in question?
- d. How frequently is the equipment or procedure under assessment used?
- e. Are there organizational, management or regulatory implications that might generate larger threats to public safety?

PROBABILITY OF OCCURRENCES		
RISK PROBABILITY	MEANING	VALUE
FREQUENT	Likely to occur many times (has already occurred in the company (Freq. > 3 x year). Has occurred frequently in the history of the aviation industry)	5
OCCASIONAL	Likely to occur sometimes (has already occurred in the company (Freq. < 3 x year). Has occurred infrequently in the history of the aviation industry)	4
REMOTE	Unlikely to occur, but possible (has already occurred in the company at least once. Has regularly occurred in the history of the aviation industry)	3
IMPROBABLE	Very unlikely to occur (not known to have occurred in the company but has already occurred at least once in the history of the aviation industry)	2
EXTREMELY IMPROBABLE	Almost inconceivable that the event will occur (it has never occurred in the history of the aviation industry)	1

Figure 3 risk probability

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10.3.4 Third fundamental – Risk severity

Severity – The possible consequences of an unsafe event or condition, taking as reference the worst foreseeable situation. As shown in figure 4

Define the consequence(s) in terms of: Property, Health, Finance, People and Environment.

Questions for assessing the severity of the consequences of an occurrence:

How many lives are at risk?

- Employees, Passengers and Bystanders

What is the likelihood of environmental impact?

- Spill of fuel or other hazardous product.

What is the likely extent of property or financial damage?

- Direct operator property loss
- Damage to aviation infrastructure

RISK SEVERITY OF OCCURRENCES					
SEVERITY OF OCCURRENCE	MEANING				VALUE
	PERSONNEL	ENVIRONMENT	MATERIAL	IMAGE	
CATASTROPHIC	Multiple fatalities	Massive effects (pollution, destruction, etc.)	Damage > 1 M€	International impact	E
HAZARDOUS	Fatality	Effects difficult to repair	Damage < 1 M€	National impact	D
MAJOR	Serious injuries	Noteworthy local effects	Damage < 250K€	Considerable impact	C
MINOR	Slight injuries	Little impact	Damage < 50K€	Limited impact	B
NEGLIGIBLE	Superficial or no injuries	Negligible or no effects	Damage < 10K€	Light or no impact	A

Figure 4 risk severity

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10.3.5 Fourth Fundamental Risk Assessment and Tolerability

Using the risk analysis matrix as shown in figure 5, it is possible to standardize the qualitative risk assessments, and categorize the hazard using the tolerability NESMA AIRLINES considers important as shown in figure 6

Safety risks are assessed to determine the requirement for risk control action(s)

RISK PROBABILITY	RISK SEVERITY				
	NEGLIGIBLE (A)	MINOR (B)	MAJOR (C)	HAZARDOUS (D)	CATASTROPHIC (E)
FREQUENT (5)	5 A	5 B	5 C	5 D	5 E
OCCASIONAL (4)	4 A	4 B	4 C	4 D	4 E
REMOTE (3)	3 A	3 B	3 C	3 D	3 E
IMPROBABLE (2)	2 A	2 B	2 C	2 D	2 E
EXTREMELY IMPROBABLE (1)	1 A	1 B	1 C	1 D	1 E

Figure 5 risk assessments matri

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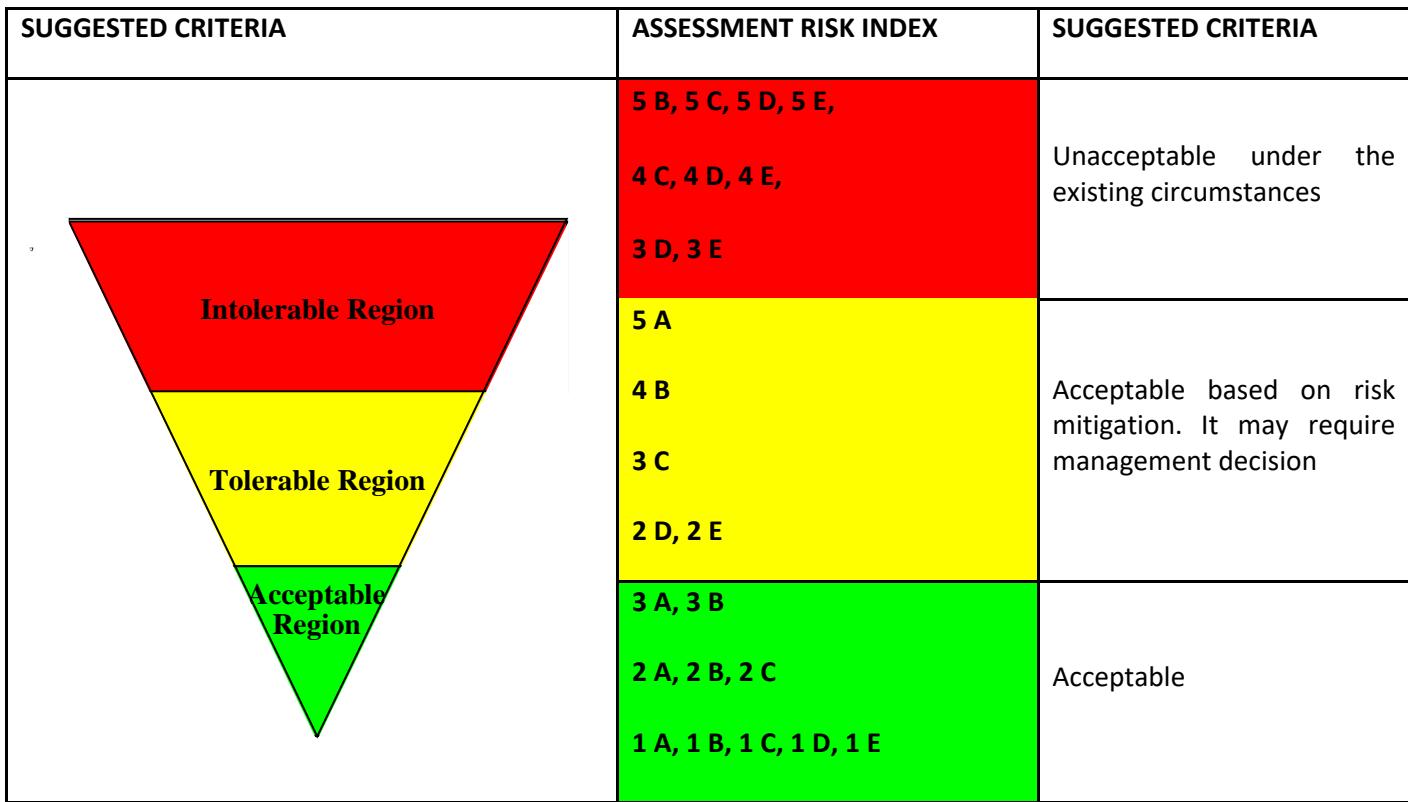


Figure 6 risk tolerability

10.3.6 Fifth Fundamental – Risk Control / Mitigation

Mitigation: Measures to eliminate the potential hazard or to reduce the risk probability or severity.

Risk mitigation = Risk control

Mitigate: To make milder, less severe or less harsh

Risk mitigation – Defences

When required, risk mitigation actions are developed and shall be implemented in ground handling operations

As part of the risk mitigation, determine:

- a) Do defences to protect against such risk (s) exist?
- b) Do defences function as intended?
- c) Are the defences practical for use under actual working conditions?
- d) Are staffs involved aware of the risks and the defences in place?
- e) Are additional risk mitigation measures required?
 - Recalling the three basic defences

- Technology
- Training
- Regulations

Avoidance: The operation or activity is cancelled because risks exceed the benefits of continuing the operation or activity. E.g. Regular operations into an aerodrome surrounded by complex geography and without the necessary aids are cancelled.

Reduction: The frequency of the operation or activity is reduced, or action is taken to reduce the magnitude of the consequences of the accepted risks. E.g. Regular operations into an aerodrome surrounded by complex geography and without the necessary aids are continued based upon the availability of specific aids and application of specific procedures.

Segregation of exposure: Action is taken to isolate the effects of risks or build-in redundancy to protect against it, i.e., reduces the severity of risk.

Note: Figure 7 showing risk mitigation and Figure 8 showing risk mitigation process

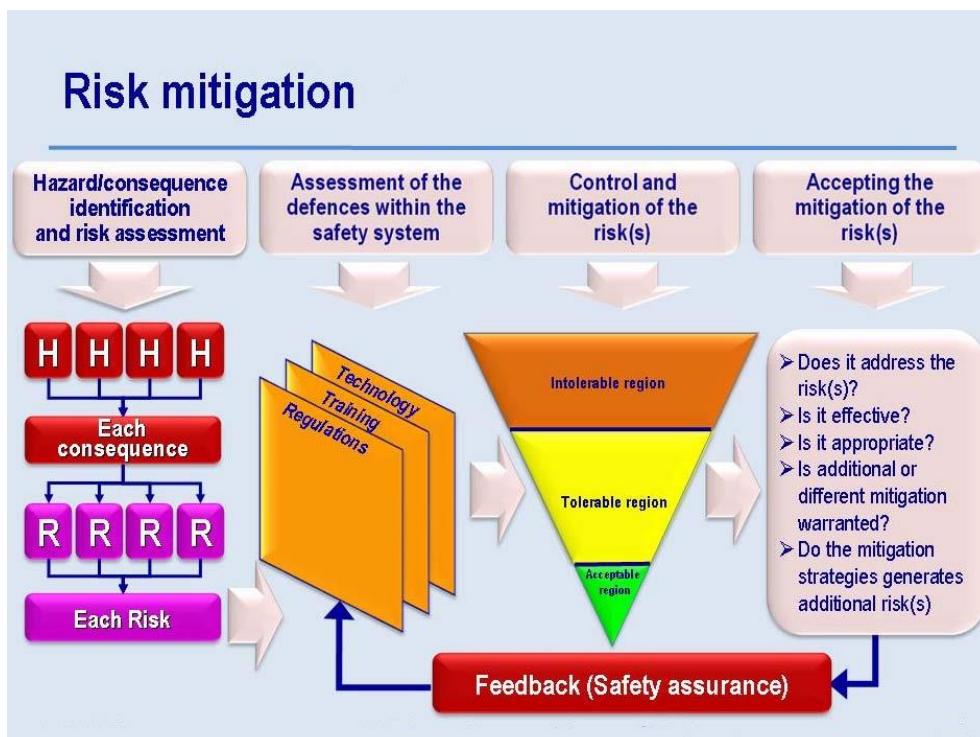


Figure 7 risk mitigation

Risk management process

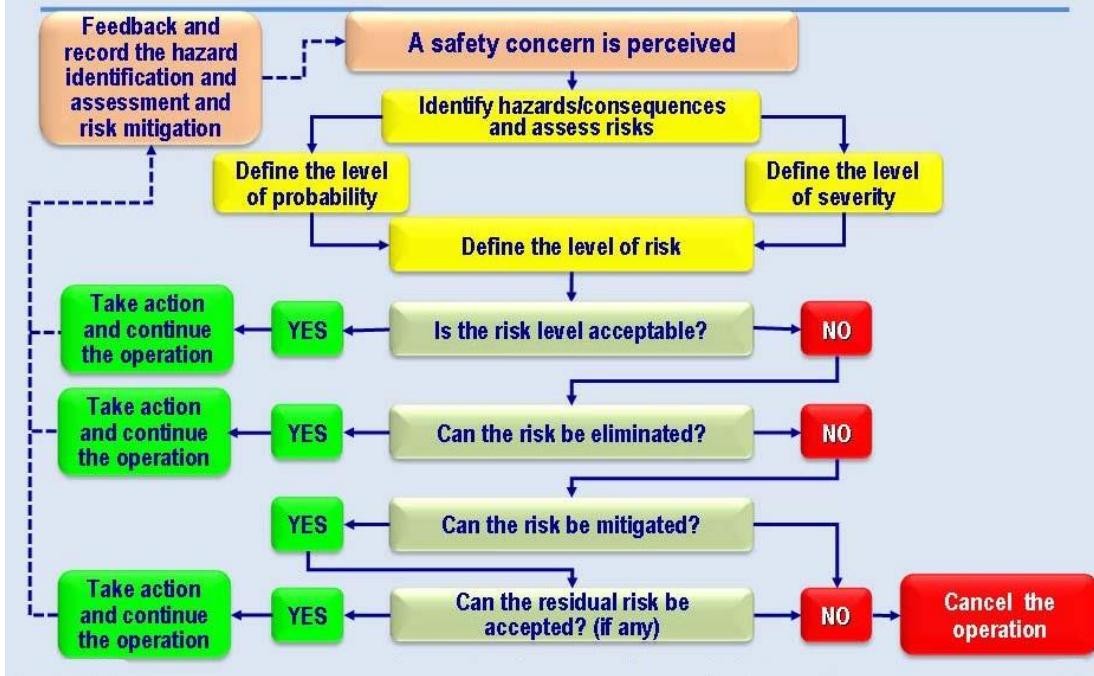


Figure 8 risk mitigation process

10.4 Safety Performance Measurement Program

Refer to SMM 3.2 Safety Performance Measurement program.

Setting performance measures that are consistent with safety objectives is an element of the Safety Assurance component of the SMS framework.

By setting performance measures, Nesma Airlines is able to track and compare its operational performance against a target (i.e. the performance objective, typically expressed as a rate or number reduction) over a period of time (e.g. one year). Achievement of the target (or objective) would represent an improvement in the operational performance. The use of performance measures is an effective method to determine if desired safety outcomes are being achieved, and to focus attention on the performance of the organization in managing operational risks and maintaining compliance with relevant regulatory requirements.

Performance measures in ground handling operations might address, for example, different types of aircraft ground damage.

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Chapter 11 Station Filing & Forms

11.1 Station Filing:

11.1.1 Trip File

- For every flight, a Trip File must be prepared. The Trip File must contain a written document for all data of the load sheet, except for aircraft basic data. The Trip File must be filed at the station for Six Months.
- Following documents must always be filed in the Trip File:
 - Load and Trim Sheet Copy, signed by Commander. Manual or Computerized.
 - Loading Instruction, signed by Ramp Agent.
 - Passengers Name List (Embarked and Disembarked).
 - General Declaration signed by commander or station responsible for dispatch.
- Depending on local situation, additional documents may be added to the Trip File, such as medical clearances that can be given to sick passenger on board.

Records keeping of ground handling operations records (Trip File)

Trip file must be retained in a secured locked area at the station where was the departure from, for period of 6 months as previously explained, easy to retrieve classified by operations month.

And then they are being disposed according disposal procedures described in chapter one of this Manual.

11.2 Forms

It is Mandatory for all forms related to conduct a flight to:

1. contains legible and accurate information;
2. is presented in a format that is appropriate for use by ground handling personnel;
3. Is accepted or approved by the Authority, if applicable.
4. The version and the distribution list.

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11.2.1 Flight Handling Report

Flight Handling Report				Station
FIR NBR :		DATE:		Cleaning
A/C REG:		A/C Type:		Cleaning team at[time] : (-40)
STA:		STD:		Toilet/ Water Service: (-50)
ETA:		ETD:		Cleaning staff NBR: (4)
ATA:		ATD:		Boarding
DLY Code/Time:				Staff at the gate at[time]: (-35)
Routing:				Boarding Announcements (3)
Block Fuel:		RTOW:		Passenger identification
Trip:		Taxi		Bus:
Flt Time:				Luggage delivery
Crew At the Airport (time at): (-01:15/-01:00) (INT/DOM)				First luggage delivery at[time]: (-45)
Crew on board at[time]: (-01:00/-50) (INT/DOM)				Last luggage delivery at[time]: (-10)
Ramp Handling				
OFF	Y	INF	TOT	Wheel chocks positioned at: (time) (-50)
TRN	Y	INF	TOT	Stairs positioned at: (time) (-50)
CPT:				Loading Team and Ramp Agent on arrival at stand:(time) (-55)
CREW				Loading team on departure at stand:(time) (-40)
EMB	Y	INF	TOT	Maximum Baggage height respected? (ARR/DEP)
TOT DEP	Y	INF	TOT	Catering Started at: (-55) Finish at: (-35) Trolley Sealing ARR by Crew DEP by Supplier
CPT:				Fuel Started at: (-50) Finish at: (-30)
CREW		DHC:	BUS:	First bus at the stand (time) (-25) Last bus at the stand (time) (-10)
Special Ass.				
Check In				Load Sheet(time): (-10) Doors Closed(time): (-5)
A/C Configuration		Y		Extra Services (ARR/DEP)
Pax Booked		Y		GPU Start at: Finish at:
Check in desk NBR: (2)		Y		ASU
Check in open at[time]: (-2:30)				ACU Start at: Finish at:
Check in close at[time]: (-30)				
Check List trip file:				Nesma Airlines Supervisor
MVT MSG	LIR	FLT Report	PAX LIST	Issued By: Comments:
IDM	PSM	TEC LOG	LOAD SHEET	
SOM	GD in/out	FLT CPN		

Scan and send to: Ground.Handling@NesmaAirlines.com

Or by FAX to: +2 02-26239772

Station Manager:

Issue No.:01

Dated: 01/2011

Form No.:616

Issue No.: 09

Issue Date: JAN24

Revision No.: 00

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11.2.3 Loading Instructions Report A320

LOADING INSTRUCTION REPORT - A320-200		ADDRESS	ORIGIN	LIR	FLIGHT N°	A/C REG	DEST	DATE	PREPARED BY/CERT N°:
BULK COMPARTMENT N°5	COMPARTMENT N°4 MAX. 2110 kg		COMPARTMENT N°3 MAX. 2426 kg		COMPARTMENT N°1 MAX. 3402 kg				
MAX. 1497 kg	MAX. 4536 kg		MAX. 4536 kg		MAX. 3402 kg				
Arrival		51	42	41	32	31	13	12	11
		52							
		53							
SPECIAL INSTRUCTIONS									
Loading instructions									
		51	42	41	32	31	13	12	11
		52							
		53							
SPECIAL INSTRUCTIONS									
Loading report									
Departure		51	42	41	32	31	13	12	11
		52							
		53							
SPECIAL INSTRUCTIONS									
THIS AIRCRAFT HAS BEEN LOADED IN ACCORDANCE WITH INSTRUCTIONS INCLUDING THE DEVIATIONS SHOWN ON THE REPORT ALL CONTAINERS/PALLETS AND BULK LOAD HAVE BEEN SECURED IN ACCORDANCE WITH COMPANY REGULATIONS.									
PERSON RESPONSIBLE FOR LOADING									
Issue No.: 01/2011									
Information codes									
B - BAGGAGE		D - DRY BAGGAGE		E - EQUIPMENT		F - F/C BAGGAGE		G - FULL X - EMPTY	
C - CARGO		N - NO LOAD AT POSITION		M - MAIL		T - TRANSFER		1 - % VOLUME AVAILABLE	
S - SORT		P - PALLET		J - PROXY BAGS		U - US CONTAINER		2 - % VOLUME AVAILABLE	
IOPC = CREW REQUEST		FNO		R		L		3 - % VOLUME AVAILABLE	

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11.2.4 Passenger Manifest

Nesma Airlines

Nesma Airlines
نسما للطيران

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11.2.5 General Declaration

GENERAL DECLARATION (Outward/Inward)			
<p>Operator : Nesma Airlines</p> <p>Marks of nationality and registration flight no : Date.....</p> <p>Departure from..... Arrival at</p> <p style="text-align: center;">(Place) (Place)</p>			
<p style="text-align: center;">FLIGHT ROUTING ("Place" Column always to list origin, every en-route stop and destination)</p>			
PLACE	NAMES OF CREW	NUMBER OF PASSENGERS ON THIS STAGE	
		DEPARTURE PLACE :	
		EMBARKING.....	
		THROUGH ON SAME FLIGHT....	
		ARRIVAL PLACE :	
		DISEMBARKING.....	
		THROUGH ON SAME FLIGHT....	
Declaration of Health Name and seat number or function of persons on board with illnesses other than airickness or the effects of accidents, who may be suffering from a communicable disease (a fever — temperature 38°C/100°F or greater — associated with one or more of the following signs or symptoms, e.g. appearing obviously unwell; persistent coughing; impaired breathing; persistent diarrhoea; persistent vomiting; skin rash; bruising or bleeding without previous injury; or confusion of recent onset, increases the likelihood that the person is suffering a communicable disease) as well as such cases of illness disembarked during a previous stop		FOR OFFICIAL USE ONLY	
Details of each disinsecting or sanitary treatment (place, date, time, method) during the flight. If no disinsecting has been carried out during the flight, give details of most recent disinsecting			
Signed, if required, with time and date _____ Crew member concerned			
I declare that all statements and particulars contained in this General Declaration, and in any supplementary forms required to be presented with this General Declaration, are complete, exact and true to the best of my knowledge and that all through passenger continue/have continued on the flight.			
Signature: Authorized Agent or Pilot-in-command			

Issue No. :02

Dated : 05/2015

From No. : 603

Issue No.: 09

Issue Date: JAN24

Revision No.: 00

Revision Date: JAN24

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11.2.6 INAD & Deportee Form

STATION:	DATE:																						
FLIGHT IN:	FLIGHT OUT:																						
INDICATE IF PASSENGER IS:																							
INAD 1 - refused admission due to : no visa visa expired – passport expired and NO charges to be collected	DEPA - deported accompanied (with escort) refused admission but requires escort as unwilling to be set back or to another destination																						
INAD 2 - refused admission due to: doubtful, forged documents AND/OR charges to be collected	DEPU - deported unaccompanied (without escort)																						
<p>A. PAX DETAILS: Name: Nationality:</p> <p>Address + Tel:</p> <p>Sponsor (if any :)</p> <p>Remarks (As many details as known why passenger is Inadmissible or Deportee / Any comments relevant to Crew or to Revenue Account):</p>																							
Travel documents are in care of : Passenger Crew Escort																							
<p>B. Name of Escort:</p> <p>Provided by (Nesma Airlines security or other)</p>																							
<p>C. ORIGINAL TICKET</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td>Ticket Number:</td> <td>Date issued:</td> <td>PNR:</td> </tr> <tr> <td>Issued at:</td> <td>By:</td> <td>Fare:</td> </tr> <tr> <td style="text-align: right;">Carrier</td> <td style="text-align: right;">Flight No.</td> <td style="text-align: right;">Date</td> <td style="text-align: right;">Class</td> </tr> <tr> <td>- Origin:</td> <td>To:</td> <td>.....</td> <td>.....</td> </tr> <tr> <td>- From:</td> <td>To:</td> <td>.....</td> <td>.....</td> </tr> <tr> <td>- From:</td> <td>To:</td> <td>.....</td> <td>.....</td> </tr> </table>		Ticket Number:	Date issued:	PNR:	Issued at:	By:	Fare:	Carrier	Flight No.	Date	Class	- Origin:	To:	- From:	To:	- From:	To:
Ticket Number:	Date issued:	PNR:																					
Issued at:	By:	Fare:																					
Carrier	Flight No.	Date	Class																				
- Origin:	To:																				
- From:	To:																				
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<p>D. NEW TICKET</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td>Ticket Number</td> <td>Date issued:</td> <td>PNR:</td> </tr> <tr> <td>Issued at:</td> <td>By:</td> <td>Fare:</td> </tr> <tr> <td style="text-align: right;">Carrier</td> <td style="text-align: right;">Flight No.</td> <td style="text-align: right;">Date</td> <td style="text-align: right;">Class</td> </tr> <tr> <td>-Origin:</td> <td>To:</td> <td>.....</td> <td>.....</td> </tr> <tr> <td>- From:</td> <td>To:</td> <td>.....</td> <td>.....</td> </tr> <tr> <td>- From:</td> <td>To:</td> <td>.....</td> <td>.....</td> </tr> </table>		Ticket Number	Date issued:	PNR:	Issued at:	By:	Fare:	Carrier	Flight No.	Date	Class	-Origin:	To:	- From:	To:	- From:	To:
Ticket Number	Date issued:	PNR:																					
Issued at:	By:	Fare:																					
Carrier	Flight No.	Date	Class																				
-Origin:	To:																				
- From:	To:																				
- From:	To:																				
<p>E. COSTS (If any) TO BE COLLECTED: Ticket fare or others (accommodation, food, transport, other....)</p> <p>TO be collected by:</p>																							
<p>F. DECLARATION: "I hereby assure that all the costs incurred by Nesma Airlines consequent to my being declared Inadmissible Passenger at shall be settled by me. I hereby authorize Nesma Airlines to initiate legal proceedings against me if the dues are not settled by me upon reaching my destination".</p> <p>Passenger signature:</p>																							
<p>G. Completed by: Station Rep Signature:</p> <p>Staff No.:</p>																							
 Nesma Airlines نسمة للطيران																							

- if applicable
 Distribution White : to First Destination via Pilot – in – command.
 Yellow : to second Destination via CSD
 Green : to revenue Accounts (+ copy of audit coupon, if any)
 Pink : Station File

GH/INAD/001

Issue No.:01

Dated: 01/2011

Form No.:611

Issue No.: 09

Issue Date: JAN24

Revision No.: 00

Revision Date: JAN24

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11.2.7 Unaccompanied Minor Request for Carriage Form

UNACCOMPANIED MINOR REQUEST FOR CARRIAGE			
Full Name Of Minor Given Name (S)	Age	Sex	Special Instructions if any / Diet
Family or Surname			
Permanent address and telephone no. of Minor			
Care of:			
Flight Details:			
Flight No.	Date	From	To
Flight No.	Date	From	To
Flight No.	Date	From	To
Person Seeing off on Departure			
Name _____	_____		
Address _____	_____		
Telephone No. _____			
Person Meeting and seeing off at Stopover Point			
Name _____	_____		
Address _____	_____		
Telephone No. _____			
Person Meeting on Arrival			
Name _____	_____		
Address _____	_____		
Telephone No. _____			
Signature for Release of Minor from Airline's Custody			

DECLARATION OF PARENT / GUARDIAN

1- Confirm that the liability of the carriers, their servants and agents for all claims or damages arising howsoever in connection with the transportation of the above mentioned minor, shall be limited in all respects in accordance with the conditions of Contract printed on the passenger ticket (s) and the carriers, their servants and agents shall have no further or other liability or responsibility .

2- I confirm that I have arranged for the above mentioned minor to be accompanied at airport on departure and to be met at stop over point and on arrival by the persons named. These persons will remain at the airport until the flight has departed and/or be available at the airport at the schedule time of arrival of the flight.

3- Should the minor not to met at stopover point or destination, I authorize the carrier(s) to take what ever action they consider necessary to ensure the minors safe custody including return of minor to the airport of departure and I agree to indemnify and reimburse the carrier(s) for the costs and expenses incurred by them in taking action.

4- I certify that the minor in my possession of all travel documents (passport, visa, health certificate etc.) required by applicable laws.

5- I further confirm that Master/ Miss _____ will not be in possession of any dutiable items. Should the custom authorities in India decide that certain items are dutiable; such items may be detained by the customs authorities, under a detention receipt. Suitable arrangements will subsequently be made by the local parents/ guardians to have these items cleared from customs (Applicable for Ums arriving at Airports in India).

6- I hereby further agree to indemnify the carriers, their servants and agents and hold them harmless against all such further or other liability and against all claims that may be made against them by or on behalf of the above named minor.

7- I the undersigned parent or guardian of the above mentioned minor agree to and request the unaccompanied carriage of the minor named above and certify that the information provided is accurate.

Name, Address and Telephone No.

SIGNATURE _____
DATE _____

Distribution : White Copy : Destination Airport / Yellow Copy : Departure Airport / Pink Copy : CSD

Issue No.:01

Dated:01/2011

Form No:607

Issue No.: 09

Revision No.: 00

Issue Date: JAN24

Revision Date: JAN24

11.2.8 Property Irregularity Report

PROPERTY IRREGULARITY REPORT (PIR) FOR CHECKED BAGGAGE																																																																																																																																																																																																																																																																																																																																																																																								
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Bag Tag Number		Carrier Bag - Tag Number									Carrier - Bag Tag Number		Carrier Bag - Tag Number							CT	→	Colour Type Description		Colour Type Description	RT	→	(Routing and/or locations to be traced (maximum of 15 city codes))										FD	→	Carrier - Flight Number		DATE (DAY/MO)		Carrier - Flight Number		DATE (DAY/MO)		Carrier - Flight Number	DATE (DAY/MO)	BI	→	Brand Name of Bag Distinctive Outside Identification (1) Other markings/Hotel/stickers on Bag (maximum of 58 characters)										BI	→	Brand Name of Bag Distinctive Outside Identification (2) Other markings/Hotel/stickers on Bag (maximum of 58 characters)										BI	→	Brand Name of Bag Distinctive Outside Identification (3) Other markings/Hotel/stickers on Bag (maximum of 58 characters)										BI	→	Brand Name of Bag Distinctive Outside Identification (4) Other markings/Hotel/stickers on Bag (maximum of 58 characters)										BI	→	Brand Name of Bag Distinctive Outside Identification (5) Other markings/Hotel/stickers on Bag (maximum of 58 characters)										Damage Information Please indicate damage on these drawings.										 Side 1		 Side 2		 End 1	 End 2	 Top	Type of Damage	Condition						Minor	<input type="checkbox"/>	Good	<input type="checkbox"/>						Major	<input type="checkbox"/>	Fair	<input type="checkbox"/>						Complete	<input type="checkbox"/>	Poor	<input type="checkbox"/>	PA	→	Passenger's permanent address (maximum 2 lines of 58 characters per line)									—	→										TA	→	Temporary address (maximum 2 lines of 58 characters per line)									—	→										PN	→	Passenger's permanent phone number (maximum of 20 characters)				↔	TP	→	Temporary phone number (maximum of 20 characters)		LD	→	Local delivery instructions (maximum 1 lines of 58 characters)									FF	→	Free Form Text (maximum 99 lines of 58 characters per line)									Additional Elements										PT	→	Passenger's Title		↔	NP	→	Number of Passengers		↔	LA	→	Language		↔	PP	→	Passport Number		TK	→	Ticket Number				↔	PR	→	PNR Record Locator			↔	FL	→	Frequent Flyer ID				BW	→	Weight of missing pc(s)		↔	RL	→	Reason for loss		↔	FS	→	Fault Station		↔	AG	→	Agent		INSURANCE			If bag(s) locked ask for key(s) and attach to PIR			YES		NO		Code of Combination Lock		Overnight Kit		Cash Advance paid				YES <input type="checkbox"/>			NO <input type="checkbox"/>			Key(s) attached		<input type="checkbox"/>				Male <input type="checkbox"/>		Female <input type="checkbox"/>									
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This report does not involve any acknowledgement of liability

AGENT SIGNATURE _____ PASSENGER SIGNATURE _____

Issue No.: 01

01/2011

Form No. 605

Issue No.: 09

Issue Date: JAN24

Revision No.: 00

Revision Date: JAN24

Nesma Airlines نسما للطيران	Stations Operations Manual Station Filing & Forms	Chapter: 11
		Page: 9

11.2.9 Receipt of Received Belongings

NESMA AIRLINES SECURITY SECTOR	Nesma Airlines نسما للطيران	شركة نسما للطيران قطاع الأمن
RECEIPT OF RECEIVED BELONGINGS أيصال تسليم متعلقات FROM NESMA AIRLINES SECURITY		
Flight No	:	رقم الرحلة
Date	:	التاريخ
Receiver Name :	:	اسم المستلم
Contains	:	بيان المتعلقات
 Signature : توقيع المستلم :		
Passport No : جواز سفر رقم :		

Issue No.: 01

Dated: 12/2011

Form No.: 628

Issue No.: 09

Issue Date: JAN24

Revision No.: 00

Revision Date: JAN24

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11.2.10 Information for Load Sheet

Information For Load Sheet

Date: / /20

Aircraft REG: SU-NM _____

Flight Number: NMA _____

Route: - - -

Crew CNFG: /

D.H.C. (Dead Head Crew)

D.O.W:

D.O.I:

Block Fuel:

Taxi:

Take Off Fuel:

Trip Fuel:

Trip Time:

MTOW:

RTOW (RSTRCT/OPS TOW)

MZFW:

MLW:

Other Info

Captain Signature:

Issue No: 02

Dated 06 / 2016

Form No. : 826

Issue No.: 09

Issue Date: JAN24

Revision No.: 00

Revision Date: JAN24

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11.2.11 Payload Information to Captain

Nesma Airlines نسماء للطيران								
Payload Information To Captain								
Date : / /	Flight Number :							
Aircraft Registration : SU-NM.....		Type : A319 <input type="checkbox"/>	Type : A320 <input type="checkbox"/>					
Route: /								
Crew CNFG: /								
DHC:	PAD :			SuperNumerY :				
FLT Type		Destination	M	F	C	I	TTL	
<u>Charter</u>	Pax No.:	Dest.1						
		Dest.2						
<u>Schedule</u>	Pax No.:	Dest.1						
		Dest.2						
A/C Type	<u>A320</u>			<u>A319</u>				
O A : Row 1 - 10				O A : Row 1 - 7				
O B : Row 11 - 20				O B : Row 8 - 15				
O C : Row 21-30				O C : Row 16 - 24				
Baggage NO: C / Y	TTL Baggage :							
Baggage Weight: C / Y	TTL Weight :							
<u>Other Info</u>								
Captain Signature :								
Agent Signature :		ID No. :						
Pilot will issue (Loading instructions) for Baggage distribution , separate Business Class Baggage . Dead Head Crew and Accompanied Engineer must be added to above mentioned on the load sheet .								
Issue No.: 01	Dated: 12/2018			Form No.: 609				

Issue No.: 09

Revision No.: 00

Issue Date: JAN24

Revision Date: JAN24

 Nesma Airlines نسما للطيران	Stations Operations Manual Station Filing & Forms	Chapter: 11 Page: 12
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11.2.12 Annual Staff Evaluation Form

 Nesma Airlines نسما للطيران	<u>Annual Staff</u> <u>Evaluation Form</u>	Ground Handling Department
---	---	---

A. Personal Details:

Department :	Section :
Name :	
Job Title :	Job Grade:
Date of Employment :	Period Covered: From : _____ to _____

B. Performance Factors:

Indicate with a **Mark on the scale** the performance level that clearly reflects the employees performance over the time period for this review:-

1. **Job Knowledge:** Understanding of job responsibilities & departmental procedure

Highly Effective Complete Knowledge of all phases of job and department procedures	Effective Good knowledge of job responsibilities and department procedures	Adequate Acceptable Knowledge of job responsibilities & acceptable knowledge of department procedures	Unacceptable Inadequate knowledge of job responsibilities. Inadequate knowledge of department procedures
--	--	---	--

Comments: _____

2. **Productivity:** Volume of acceptable work produced; meeting job standards

Highly Effective Always achieves high volume of acceptable work. Frequently achieves job standards & exceeds new assignments.	Effective Good volume of acceptable work is achieved. Achieved job standard.	Adequate Achieves adequate volume of acceptable work. Occasionally fails to meet job standards.	Unacceptable Unacceptable volume of work. Does not achieves minimum job standards.
---	--	---	--

Comments: _____

3. **Quality of work:** Accuracy, thoroughness & attention to work details.

Highly Effective Quality of work is always good and frequently exceeds expectations. Work is accurate. Seldom repeats errors	Effective Work is accurate and complete. Meets expectations. Seldom repeats errors.	Adequate Quality of work is acceptable. Errors may occur.	Unacceptable Quality of work is inaccurate and unacceptable. Rework is almost always required. Errors frequently occur.
--	---	---	---

Comments: _____

	Stations Operations Manual Station Filing & Forms	Chapter: 11 Page: 13
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	<u>Annual Staff Evaluation Form</u>	Ground Handling Department																																
<p>4. Adaptability: Ability to meet changing working conditions, peak workload, new responsibilities And procedures.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%; padding: 5px; text-align: center;"> Highly Effective </td> <td style="width: 25%; padding: 5px; text-align: center;"> Effective </td> <td style="width: 25%; padding: 5px; text-align: center;"> Adequate </td> <td style="width: 25%; padding: 5px; text-align: center;"> Unacceptable </td> </tr> <tr> <td>High ability & willingness to grasp new information, varying workload & new responsibilities.</td> <td>Adapts well with normal instructions to changing working conditions, varying workload & new responsibilities.</td> <td>Adapts adequately to changing working conditions, varying workload & responsibilities.</td> <td>Unacceptable response to changing working conditions, Varying workload & responsibilities.</td> </tr> </table> <p>Comments: _____</p> <hr/> <p>5. Communication Skills: Oral & written Communication skills with superiors & colleagues</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%; padding: 5px; text-align: center;"> Highly Effective </td> <td style="width: 25%; padding: 5px; text-align: center;"> Effective </td> <td style="width: 25%; padding: 5px; text-align: center;"> Adequate </td> <td style="width: 25%; padding: 5px; text-align: center;"> Unacceptable </td> </tr> <tr> <td>Exercises very good oral & written communication skills.</td> <td>Exercises above average oral and written communication skills.</td> <td>Exercises acceptable oral & written communication skills. Occasionally oral & or written communication is unclear and may lead to confusion.</td> <td>Demonstrates poor oral &/ or written communication skills.</td> </tr> </table> <p>Comments: _____</p> <hr/> <p>6. Cooperation & Interpersonal Skills: Ability and willingness to establish & maintain cooperative working relationship.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%; padding: 5px; text-align: center;"> Highly Effective </td> <td style="width: 25%; padding: 5px; text-align: center;"> Effective </td> <td style="width: 25%; padding: 5px; text-align: center;"> Adequate </td> <td style="width: 25%; padding: 5px; text-align: center;"> Unacceptable </td> </tr> <tr> <td>Always established & maintains very good & cooperative work relationship.</td> <td>Establishes & maintains good & cooperative work relationship.</td> <td>Establishes & maintains acceptable working relationship.</td> <td>Unable to work cooperatively with superiors & fellow colleagues.</td> </tr> </table> <p>Comments: _____</p> <hr/> <p>7. Attendance & Punctuality: No. of days absent:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%; padding: 5px; text-align: center;"> Highly Effective </td> <td style="width: 25%; padding: 5px; text-align: center;"> Effective </td> <td style="width: 25%; padding: 5px; text-align: center;"> Late beginnings: </td> <td style="width: 25%; padding: 5px; text-align: center;"> Early Quits: </td> </tr> <tr> <td>Attendance & Punctuality is always within the company guidelines. Requests for absence are always made in advance to line managers.</td> <td>Attendance & Punctuality is within the company guidelines. Is seldom late or absent with no prior authorization.</td> <td>Attendance & Punctuality is within the company guidelines. Is sometimes late or absent with no prior authorization.</td> <td>Below company guidelines. Is frequently late or absent with no prior authorization.</td> </tr> </table> <p>Comments: _____</p> <hr/> <p>C.1. Overall Evaluation (1st Assessor): _____</p> <hr/> <hr/>			Highly Effective	Effective	Adequate	Unacceptable	High ability & willingness to grasp new information, varying workload & new responsibilities.	Adapts well with normal instructions to changing working conditions, varying workload & new responsibilities.	Adapts adequately to changing working conditions, varying workload & responsibilities.	Unacceptable response to changing working conditions, Varying workload & responsibilities.	Highly Effective	Effective	Adequate	Unacceptable	Exercises very good oral & written communication skills.	Exercises above average oral and written communication skills.	Exercises acceptable oral & written communication skills. Occasionally oral & or written communication is unclear and may lead to confusion.	Demonstrates poor oral &/ or written communication skills.	Highly Effective	Effective	Adequate	Unacceptable	Always established & maintains very good & cooperative work relationship.	Establishes & maintains good & cooperative work relationship.	Establishes & maintains acceptable working relationship.	Unable to work cooperatively with superiors & fellow colleagues.	Highly Effective	Effective	Late beginnings:	Early Quits:	Attendance & Punctuality is always within the company guidelines. Requests for absence are always made in advance to line managers.	Attendance & Punctuality is within the company guidelines. Is seldom late or absent with no prior authorization.	Attendance & Punctuality is within the company guidelines. Is sometimes late or absent with no prior authorization.	Below company guidelines. Is frequently late or absent with no prior authorization.
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2. Overall Rating:

Please mark the appropriate box that would clearly reflect the employee's performance. It should be noted that the overall rating **Not the arithmetic average** of the performance categories since they have different importance but should reflect the resulting Weighting of all criteria.

Highly Effective

Effective

Adequate

Unacceptable

3. Decisions related (if applicable):

Employment Confirmed

Employment Not confirmed

Signed : _____

Date : _____

D. Endorsement : (This section must be revised and endorsed by the relevant Department Manager).

Comments:

Approved : _____

Date : _____

E. Approval: (This section must be revised and approved by the Managing Director).

Comments:

Approved: _____

Date: _____

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11.2.13 Turnaround Coordination Checklist

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Flight No	A/C – Reg.	ETA	ETD
Date	A/C Type	ATA	ATD

S/N	DEPARTURE	YES	NO	REMARKS
1	التأكد من حضور جميع الموظفين بالوقت المحدد والالتزام به بالجدول Ensure that all rostered staff have attended duty on time.			
2	التأكد من ارتداء الزي الرسمي للموظفين والعمال بالكامل ونطافة الموقف وجود كافة مستلزمات العمل Ensure that all staff are uniform, and all job requirement are in place (boarding passes, baggage tags, etc.).			
3	مراجعة جدول الرحلات والتسيق مع مركز العمليات لأي مستجدات Review flights schedule and coordinate with OCC in case of any abnormalities.			
4	الاجتماع مع الموظفين لمناقشة خطة العمل اليومية وتوزيع مهام العمل قبل فتح منصة قبول الركاب بخمسة عشر دقيقة Meet with staff and discuss daily operation and split of duty tasks.(15 minutes prior opening the counter)			
5	متابعة الطلبات الخاصة على الرحلات وإبلاغ الموظفين بأى ملاحظات Check flights on SSR and inform employees of any notes.			
6	التأكد من وجود جميع الموظفين بمواقعهم Check that all employees are their locations.			
7	متابعة تحصيل العفش الزائد وأدخاله على السيستم Follow up on the collection of excess baggage revenue.			
8	التأكد من وجود موظف عند نقطة التفتيش قبل دخول الركاب لصالحة المغادرة وزن وحجم حقائب اليد قبل وقت الإقلاع بخمسة وأربعين دقيقة Ensure that an employee is present at the checkpoint set before passenger entry to the boarding area to monitor weight & size of hand carry (not less than STD 45 min.)			
9	غلق الرحلات في الوقت المحدد (خمسة وأربعين دقيقة قبل وقت الإقلاع) Close flights as per standard times set. (STD-45 mins.)			
10	التأكد من القيام بالإعلان للركاب عن موعد المغادرة ورقم بوابة الصعود Ensure that announcement to passengers' departure time and gate number is made.			
11	التأكد من تصدع الركاب على الطائرة بالوقت المحدد مع مطابقة الهوية بكلرت صعود الطائرة Ensure passenger are boarded on time after an identity check is conducted at the boarding gate.			
12	التأكد من طلب الوجبات / المشروبات في حال تأخر احدى الرحلات وتقدمها للركاب وتسجيل أعداد الخدمات المقدمة Order and server refreshments/meals to passengers in case of flight delay, keep records of the quantities of services requested.			
13	إيجاد البديل للركاب الملغية حملاتهم بعد التسويق مع العمليات الجوية وقسم الحجوزات Find solutions for passengers whom their flight were cancelled in coordination with OCC and Reservations.			
14	إبلاغ محطات الوصول عن أي ركاب مواصلين على الرحلة Inform arrival stations of all transit passengers on board the flight.			
15	كتابة التقارير عن فحاليات العمل وإرسلها للمسؤولين Send reports of all work activities to all concerned.			
16	يجب التأكد من أن معلومات رحلات نسما صحيحة على شاشات عرض الرحلات في جميع صالات (انهاء إجراءات السفر / بوابات صعود أو وصول الركاب) Be sure that Nesma Flight Information are available at all airport information screen (FIDS). (Check-in Counter, Gates and Arrival Lounges).			
17	يجب التأكد من وجود بطاقة المواد المحظورة على منصة قبول الركاب في مكان ظاهر DGR and Restricted articles display at check in counter.			

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S/N	DEPARTURE	YES	NO	REMARKS
18	يجب التأكد من إرسال البرقيات الازمة بمعلومات الرحلة إلى محطة الوصول (حركة الطائرة /توزيع العفش / بيان بأسماء الركاب) بعد الإقلاع بعشرين دقيقة Make sure all flight information (LDM/PSM/MVT) sent to arrival station destinations not later than ATD +20 minutes.			
19	التأكد من أداء السيستم على الكوينترات Ensure that DCS (Departure Control System) operative			
20	التأكد من استلام رسائل الرحلة وصول/سفر Ensure receiving Post Arrival/Departure Messages			
21	التأكد على مقدم الخدمة من الخدمات بتعليمات الشركة التي تخص قبول الركاب وطريقة تسليمهم على مقاعد الطائرة (السيدة الحامل - الأطفال الرضع - مخارج الطوارئ - الركاب الذين يحتاجون مقعد متجردة) Ensure the GSP are updated with Nesma Airlines instructions for Passengers acceptance, seat allocation on board (Pregnant – PRM – Infants – Emergency Exits – WCHs)			
22	التأكد من أن جميع بيانات الطقم الطائري على GD بيانات صحيحة Ensure that General Declaration Form informations correct and last updated			
23	التأكد على فتح كونتر خاص لرکاب درجه الاولى Ensure Business Counter open			
24	التأكد على وضع ملصق على جميع حقائب اليد مع مقدم الخدمة Ensure that all Passengers Hand bags are labeled with Hand Bag Label.			

S/N	ARRIVAL	YES	NO	REMARKS
1	متابعة توافد موظفي إستقبال الرحلة عند الوصول وخدمات العفش بمواقعهم قبل وصول الرحلة بعشرين دقيقة من موعد وصولها Ensure that arrival staff and baggage service agents ETA – 10 min. are positioned in place in the arrival lounge place before arrival of flights.			
2	متابعة موظفي خدمات العفش (فتح الملفات للعفش المختلفة حسب الإجراءات وتسلیم أي عفش وصل للعميل وإيقاف الملف ، وخلافه) بقاء الموظفين حتى مائة وثمانين دقيقة بعد الموعد المجدول لوصول الرحلة Ensure that baggage services agents are following baggage procedures (opening files, delivering baggage, closing files, etc.). remain available until ATA +180mins.			
S/N	RAMP	YES	NO	REMARKS
1	التأكد من جاهزية الطائرة من التموين / الوقود/الملاحين Ensure that catering / fuel / crew are ready in the aircraft.			
2	التأكد من قيام المناولة الأرضية بتأدية العمل بالشكل المطلوب (تحميل العفش / أعداد كشف الحمولة / توافد الموظفين والمعدات تحت الطائرة) قبل الوصول بخمسة دقائق من الموعد المحدد Ensure that the GHA is performing work as required (Baggage loading - load sheet preparation - employees and equipment in location ETA -5 mins.			
3	التأكد من صلاحية المعدة للعمل على الطائرة من خلال عمل جولة تفقدية للمعدات المناولة الأرضية التأكد من ان جميع معدات الخدمة الأرضية والعاملين يقفون خارج المنطقه المحظورة (حرم الطائرة) التأكد من توافق مرشد للمعدات التي في حاجة لارتداد في حالة دخولها وخروجها من على الطائرة Ensure serviceability of GSE, shall be subjected to walk-around check before operation. Ensure that all GSE and personnel positioned outside Equipment Restraint Area (ERA). Ensure that Guide Person available if applicable to Guide GSE In/out.			
4	التأكد من نظام الارشاد (ان وجد) يعمل بشكل صحيح والتأكد من ان المرشد (Marshaller) يقف في مكانه الصحيح. Ensure that Guidance system is activated and marshaller correctly positioned as applicable.			
5	التأكد من ان المناولة الأرضية لا يقتربون من الطائرة لحين انطفاء الانذار التحذيرية للطائرة (فيما عدا حالة عدم عمل APU) Ensure personnel stay clear of the aircraft, until anti-collision lights have been switched off (exception applies if Auxiliary Power Unit (APU) is not operational)			
6	التأكد من وضع الصدادات اطارات الطائرة واقفال اسلامه بشكل صحيح Aircraft chocked and coned			

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S/N	RAMP	YES	NO	REMARKS
7	التاکد من عمل جوله حول جسم الطائرة قبل دخول اي من معدات المناولة ارضيه Ensure Walk around to check external aircraft body before approach of any GSE.			
8	التاکد من ان معدات المناولة الارضيه توقف و تعمل بشكل صحيح التاکد من ان كباري عمور الركاب تم و الى الطائرة او في حالة سلام الركاب تم وضعها بشكل صحيح من حيث الاارتفاع قبل فتح باب الطائرة و ان جميع متطلبات عمل المعده قد تم وضعها Equipment is properly positioned and operated (e.g. guide rails) Passenger Boarding Bridges and/or stairs are set correct height before opening cabin access doors and all safety devices are installed.			
9	التاکد من ان حركه هبوط و صعود الركاب من و الى الطائرة تحت الاشراف و ان تكون خالية من اي معوقات During passenger embarkation and disembarkation passenger movement to/from aircraft under supervision and passenger walkways are clean of obstacles.			
10	التاکد من مطابقة أعداد الركاب الذين تم قبولهم على الرحلة مع كشف الحمولة قبل المغادرة للإقلاع Reconcile the number of passenger accepted at the check-in counter with the number listed on the loadsheet STD – 10 mins.			
11	في حالة تخلف أي راكب عن البوابة يتم إزالة عفشة والغائه من قائمه الركاب (المنافست) قبل المغادرة الفعلي للإقلاع In case a passenger is missing at the boarding gate STD – 15mins, his luggage is to be offloaded STD – 10 mins and pap name is to be cancelled from the manifest.			
12	التاکد من خلو الساحة من اي شوائب او حطام و تكون واضحة للرؤيه Ramp area clear and free of Foreign Object Debris (FOD).			
S/N	RAMP	YES	NO	REMARKS
13	يجب التاکد من أن موظفي المناولة الأرضية يرتدون سترة السلامة ، أحذية السلامة ، والقفازات سماعات الحماية من الصจيج للذئن وأيضاً الزي الرسمي بالكامل GSP Staff wear safety vest, safety shoes, gloves and noise protection (PPE) including uniforms.			
14	مشغل معدة تزويد الطائرة بالوقود يجب عليه الوقوف بطريقة صحيحة وآمنة للإخلاء مع وضع العلامات التحذيرية حول المعدة و منطقه التموين الامنه موضحة . اجراءات واحتياطات السلامة في حالة تزويد الطائرة مع وجود او صعود ركاب على متن الطائرة . Fuel operator equipment will be positioned with a clear exit from the Aircraft and with reflective sign & Fuel Safety Zones are respected. Safety precautions for fueling with passengers on board or boarding are adhered to as applicable.			
15	قطع العفش الملصق عليها (تشحن على طائرات الشحن) يجب إيقاف شحنها على طائرات الركاب Shipment Labeled (cargo aircraft only) prevented from loading.			
16	يجب التاکد من إزالة جميع الأعتمدة من مستودعات الطائرة وعدم وجود أي قطع في مستودع الطائرة وإرسالها إلى صالة الوصول يجب التاکد من ان مستودعات الطائرة تم افراغها حسب التعليمات الموضحة في ال LIR و تم فحصها و خلوها من اي تضرر . Make sure to offload all baggage and send to baggage area moreover all cargo hold should be inspect and check that there is no left behind. Make sure that cargo holds offloaded according to LIR and inspected for damage.			

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17	<p>يجب التأكيد من ان عملية التحميل بدأت وان المسئول عن التحميل يقوم بالتحميل وفقاً للLIR On-load started and the person responsible for loading oversight, (i.e. Load Master) is in possession of the LIR. Baggage loaded and handled in accordance with LIR.</p>		
18	<p>يجب التأكيد من مستودعات التحميل بعد عملية التحميل وان العوازل وشباك الامان والاقفال قد تم وضعها بشكل صحيح. Holds are checked to verify load and locks/nets set properly.</p>		
19	<p>التأكيد من تبادل معلومات التحميل قد تم تبادلها في حالة اى اختلافات التأكد من ان اخر معلومات تحميل قد تم توفيرها لطاقم الرحلة. Load information is exchanged with all deviations noted. Final Load information is provided to flight crew as required.</p>		
S/N	RAMP	YES	NO
20	<p>التأكد من خروج معدات المناولة الأرضية وفقاً للإجراءات المعتمدة. التأكد من عمل جوهرة فقديمة حول جسم الطائرة الخارجي ومنطقه العدمه. التأكد من إزالة صدارات اطارات الطائرة واقماع السلامه وفقاً للإجراءات المتبعة. GSE Removal procedures are followed. Final Ramp inspection and aircraft walk-around check are performed. Chocks and cones removal procedures are followed.</p>		
21	<p>يجب التأكيد من معلومات الرحلة قبل الوصول (عدد الركاب والحالات الخاصة / كرسي متحرك / حالات مرضية / شخصيات هامة) قبل الموعد الفعلي للوصول بخمسة دقائق Make sure to provide before arrival of all flight information ETA – 5 mins., Pax Figure, Special Request such as Wheelchair, Medical Services and VIP onboard in the flight).</p>		
22	<p>تبدأ خدمات التنظيف بعد إنتهاء نزول آخر راكب لمدة خمسة عشرة دقيقة خلال ذلك تتم خدمات تنظيف دورات المياه وتغيير المياه تبدأ من بعد وقت الوصول الفعلي لمدة دقائق حتى عودة مقاتن قبل الإقلاع Cleaning start after passenger deplaned for 15 mins. while Toilet and Water services commence not later than ATA +10mins until STD -10mins.</p>		
23	<p>التأكد من ان اجراءات الترحيل تمت وفقاً للإجراءات و القواعد المنصوص عليها و التأكيد من حفظ ملف الرحلة وفقاً لسياسة حفظ الوثائق المتبعة. Post departure activities are conducted and Trip file retained according to retention policy</p>		
24	<p>التأكد من عدم وجود تسربات بعض المعدات أثناء تادية الخدمة على الطائرة Ensure that no leakage from GSE on stand.</p>		
25	<p>التأكد من وجود طفيات حريق على المعدات Ensure that all GSE equipped with Fire extinguishers</p>		
26	<p>التأكد من ارض المهبط خالية من السوائل المنسكبة Ensure that Stand free of any spillages.</p>		
Comments			

Duty Manager / Supervisor (Name/Signature)

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11.2.14 Medical Information Form

Neuma Airlines
Flight 1100

Issue No.: 01

Dated.: 01/2018

Form Nu. : 633

Issue No · 09

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Revision No : 00

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11.2.15 NOTOC (Notification to Captain)

[Нашите Авиони](#)

NOTOC DISTRIBUTION:

1.	Top Copy (white)	:	Captain
2.	Middle Copy (green)	:	Station File
3.	Bottom Copy (yellow)	:	Freight Agent

NOTIFICATION TO CAPTAIN (NOTOC)

Issue No.:01

Dated: 01/2015

Form No. 1634

Issue No.: 09

Issue Date: JAN24

Revision No.: 00

Revision Date: JAN24

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11.2.16 Outstations Crew Service Report

Nesma Airlines نسمة للطيران	Outstations Ground Services Report			Ground Handling Department			
Date	Flight Number	Route	Station	Aircraft Reg.			
Purser Name: _____ ID No.: _____							
Purser Report							
SN	Ground Service Equipment	Used	Not Used	Service on Time		Remarks	
				YES	NO		
1	Passenger Buses						
2	Jet Bridge						
3	Cleaning Service						
4	Toilet Service						
5	Medical Uplift						
6	Catering Uplift						
Water Service (%)							
Sector 1		Sector 2		Sector 3		Sector 4	
DEP.:	%	DEP.:	%	DEP.:	%	DEP.:	%
ARR.:	%	ARR.:	%	ARR.:	%	ARR.:	%
Pilot In Command Report							
SN	Ground Service Equipment	Used	Not Used	Service on Time		Remarks	
				YES	NO		
1	Ground Power Unit						
2	Air Starter Unit						
3	Air Condition Unit						
4	Fuel Service						
General Comments							
PIC Signature: _____			Station SPV Signature: _____				

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Chapter 12 Cargo

12.1 Policy

Nesma Airlines Not accept transport of all revenue or non-revenue shipment of goods

Note:

- If you received a request notify us immediately, we will arrange with the tour operator the possibility. SITA/ CAINOXH-CAINSXH
- Revenue cargo – Cargo that is transported on an aircraft for commercial purposes; generates revenue for the operator.
- Non-revenue cargo – Cargo that is transported on an aircraft for non-commercial purposes; does not generate revenue for the operator.
- COMAT (Company Material) is non-revenue cargo.
- Shipments labeled (**Cargo Aircraft only**) shall never be loaded on a passenger flight.

Cargo Risk Assessment

- (i) Hazards associated with the properties of the items to be transported;

Luggage's to be transported in the A/C Cargo are subjects to security screening, weighing, checked for damage, in good condition and do not cause damage to the rest of the bags

Do not contain declared forbidden items

- (ii) Capabilities of the operator;

It is not allowed to receive any luggage whose weight exceed the declared weight 23 Kg, unless there is agreed exceptions in certain circumstances, all paxes are allowed to have only two hold luggage

- (iii) Operational considerations (e.g. area of operations, diversion time);

- (iv) Capabilities of the aircraft and its systems (e.g. cargo compartment fire suppression capabilities);

- (v) Nesma airlines does not use unit load devices;

- (vi) Packing and packaging;

All hold luggage/packages should be packed and in good condition and using the standard gage

- (vii) Safety of the supply chain for items to be transported;

Only identified luggage/packages will be received

- (viii) No dangerous good will be accepted for transport on Nesma A/C

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Appendix 1 Schedule Operation

1.1 Scope:

This appendix is designed to serve and describe the schedule operation procedures for schedule flights of Nesma Airlines from the ground handling and stations prospective.

In this appendix we include the items needs to be known and understood to Nesma Airlines Handling agents/Check-in Staff/Station Supervisors monitoring this flight which is different type than our normal operated charter flights so far.

1.2 Reservation:

- Pre-Reservation for passenger's responsibility relies on the reservation partner.
- Reservation System (Crane) license owned, controlled by Nesma Airlines, and operated by the reservation partner.
- Name list of passengers is sent by Type B message in IATA PNL and ADL form, directly to DCS used for Check-in.
- Nesma Airlines is selling only E-Tickets on its flights.
- In case passenger will show on check-in counter without being properly booked for the flight, must be guided to the nearest reservation agent to modify the booking and issue a new ticket for the current flight.
- Check-in staff are never allowed to modify – book tickets – accept expired tickets for travel unless authorized in written from the reservation manager of Nesma Airlines.
- Upgrade/Downgrade is not possible from Check-in, passenger who wish to do this to be guided to the nearest reservation office.
- Group reservations are not to be accepted without names, they must be inserted by the reservation agent or Nesma Airlines reservation manager.
- Waiting list passengers are also to be sent to reservation agent to issue ticket for the current flight, and not to be accepted without this modification.

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1.3 Check-in:

General

- Check-in must start -03:00 Hours from STD of the flight.
- Test check-in desk equipment.
- Passengers will only be accepted holding valid tickets for the current flight.
- Passengers who will show without booking – expired tickets – tickets for other flights will be sent to the reservation agent.
- Travel documents must be checked according to the destination Country / City requirements.
- Passengers are to be addressed with security questions, or directed to the security questions sign, according to chapter 9.
- Passengers to be questioned if they carry any item of dangerous goods/ Liquids, for verification if quantity and grade are permitted on board Nesma Airlines flights according to Chapter 8.
- After check in closer Check in agent shall remove boarding passes and baggage tags from printers.
- In case of leaving counter Sign out and lock the system shall be adhered per each counter.
- Regulations concerning the usage of sign-ins and passwords shall be observed.
- Nesma Airlines Station Manager & Station Supervisor shall monitor Counter closure procedures.

Business Class

- One Dedicated check-in counter must be appointed for business class acceptance procedures.
- Material of (Bag Tag – Boarding Pass – Baggage Priority – Immigration card)
- Check-in staff appointed to be senior, has experience and aware of procedures.
- Passenger will be well briefed for the steps he will go through until boarding time for the flight.

Economy Class

- Two Check-in counters must be appointed for economy class acceptance procedures as a minimum.
- Material of (Bag Tag – Boarding Pass – Immigration card)
- Passenger will be well briefed for the steps he will go through until boarding time for the flight.

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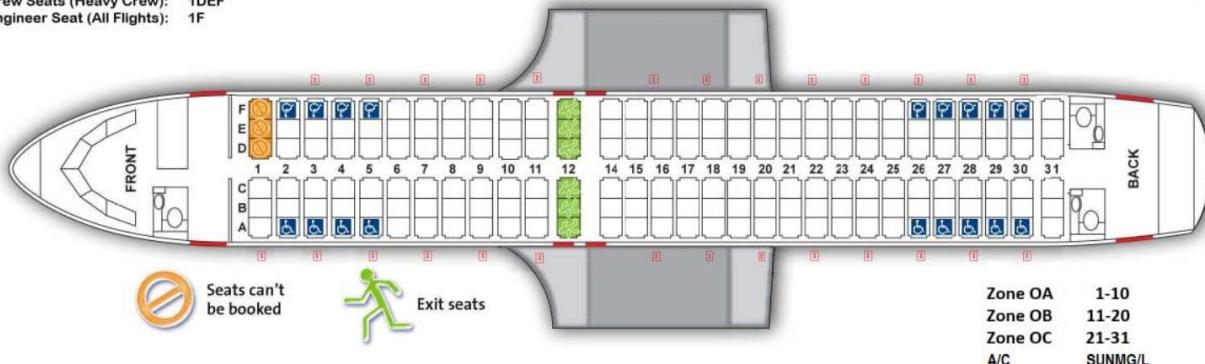
1.4 Seat Chart and Configuration:

A320

SU-NMG, SUNML (180 Seats 08C/168Y)

**Commercial
Configuration 180Y**

Extra leg Room: ROW 1
Exit Seats: ROW 12
Crew Seats (Heavy Crew): 1DEF
Engineer Seat (All Flights): 1F

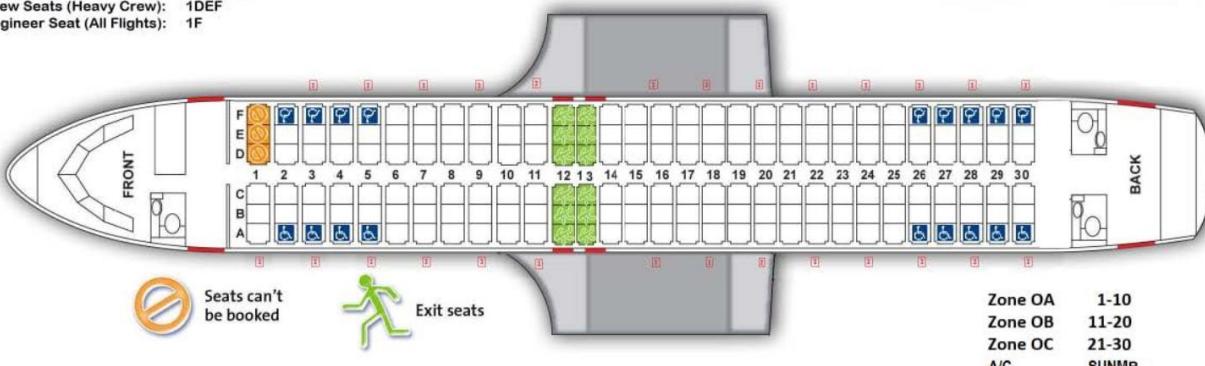


A320

SU-NMR(180 Seats 08C/168Y)

**Commercial
Configuration 180Y**

Extra leg Room: ROW 1
Exit Seats: ROW 12-13
Crew Seats (Heavy Crew): 1DEF
Engineer Seat (All Flights): 1F



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1.5 Excess Baggage:

- Passengers allowed hold baggage is written on their ticket as they vary for different class, maximum allowed hand luggage is 5 Kilograms.
- Excess weights more than outlined are subjected to excess baggage charges.
- Excess baggage charges are published in excess baggage program, which is being sent to all applicable stations.

1.6 Irregularities, Which Cause Delays

(OPERATIONAL REASONS)

- A. FLIGHT CANCELLATION
- B. CHANGES TO SCHEDULE
- C. CHANGES OF A/C TYPE
- D. OVER FLYING SCHEDULE STOPS
- E. DIVERSION
- F. REROUTING

1.6.1 Delays:

A delay occurs when an aircraft (due to operational reasons) departs behind schedule from the station of origin, station en-route or when the scheduled ground time is exceeded.

Types of delays

- 1) Planned delays.
- 2) Unplanned delays.

01- PLANED DELAYS

This kind of delay usually occurs in advance passengers are informed by reservation partner, at the airport you may find some passengers who had not been informed, in this case:-

- Inform passengers at check-in
- Accept their baggage if so preferred by the passengers
- If hotel accommodation or sightseeing to be offered then send them to the hotel before completing immigration formalities
- Do not accept any standby and/or go-show passengers before the closing time of the new ETD

02- UNPLANNED DELAYS

Which occurs during or after passenger's acceptance: -

- 1) Find out reason of delay and duration.
- 2) Inform the passenger and offer the appropriate service, reference to 1.9.
- 3) Change board sign accordingly.

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- 4) Inform OCC
- 5) Check carefully and find out the passenger holding onward connections, if the onward connection will be affected due to the delay duration out of Cairo start taking the necessary action.
- 6) Pay the maximum attention to the passenger requiring special handling.

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1.7 Involuntary Rerouting

Nesma Airlines under takes to use its best efforts to carry the passenger and his or her baggage with reasonable dispatch and to adhere to published schedule time effect on the date of travel. All deviations from the published schedule are considered irregularities. It is a condition, which creates a need for involuntary change in the passenger's journey. If the foregoing circumstances (operational irregularities) justify an Involuntary change of carrier, rerouting, class of service, delays, these may affect: -

- 1) "Forwarding members" means the member and/or a non-IATA carrier responsible for conditions, which create a need for involuntary changes in the passenger's journey.
- 2) "Original receiving member" means the member on whose flight a passenger is originally ticketed to be carried from a connection point.
- 3) "New receiving carrier" means a new carrying member or non IATA air carrier or surface transportation carrier selected for onward carriage by the forwarding carrier from the point where an involuntary rerouting is necessitating. Forwarding carries must put in consideration the passengers' reasonable interest therefor:-
 - Forwarding carriers must make sure that the passenger is holding a document with confirmed reservation(s).
 - Without any additional charges and least possible delay or inconvenience either on:-

01-THE SAME OR ANOTHER OF ITS OWN AIRCRAFT;

OR;

02- ON OTHER SERVICE THAN THOSE OF THE FORWARDING CARRIER.

01- Onward carriage on forwarding own aircraft must check :-

- 1) Ticket.
- 2) Change class of service.
- 3) Bags.

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02- ONWARD CARRIAGE ON SERVICES OTHER THAN THE FORWARDING CARRIER

1) More than 24 hours

Except for normal fares, if onward carriage is arranged more than 24 hours prior to departure of the new receiving carrier flight, rerouting may only take place, with prior approval from the new receiving carrier.

2) Less than 24 hours

- a. Upgrading to a higher class may only take place with the prior approval from the new receiving carrier.
- b. Re-routing within the first class may take place without prior approval of the new receiving carrier.
- c. Rerouting within any class below business class may take place without prior approval of the new receiving carrier.
- d. New reservations, acceptable to passenger, shall first be requested from the original receiving carrier, before being requested from a new receiving carrier.
- e. Upgrading shall be permitted only when at the time of making new reservation space is not available in the class originally paid for.
- f. Carriage at a higher cost, the new receiving carrier is to be advised that the reservation will be on an involuntary upgrading basis.
- g. When passenger is carried by a carrier at a higher cost, it shall be at no additional charges to the forwarding carrier.

3) Free baggage allowance

Where the case may arise for involuntary rerouting, the passenger shall be entitled to the free baggage allowance applicable to the fare originally paid.

4) Absorption of passenger's expenses

The forwarding member shall be responsible for such of the passenger's expenses as may be incurred during the period of the passenger's delay at the place where the involuntary change occurred, and may absorb such expenses at subsequent point en-route where they are a direct consequence of such a change, provided that they are limited to essential expenses such as hotel room, suitable meals and beverages, without regard to class of service, ground transportation, transit taxes, and reasonable communications costs necessarily incurred by the passenger because of the involuntary change; provided further that where the forwarding member's domestic service causes such a change, such forwarding member needs not comply with the requirements of this sub-paragraph and such responsibilities may be assumed instead by the original receiving member or new receiving carrier.

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5) Refunds

- A. Where the transportation cost for the revised routing or class of service is lower than the fare originally paid, the carrier effecting the involuntary change shall arrange for the difference to be refunded to the passenger. Where a passenger is carried in lower class of service, the refund shall be the difference between the higher and lower fare for the rerouted section(s) or the amount calculated as stated below, whichever is higher; forwarding carrier shall absorb any difference between the amount of the refund as calculated, and balance remains after the claims for carriage have been ascertained.
- B. Involuntary refunds may be made by the members responsible for forwarding the passenger, or by the issuing member as follows:
 - 1) If portion of the ticket has been used the amount of refund will be equal to the fare paid;
 - 2) If a portion of the ticket has been used the refund will be; Either in an amount equal to the one way fare less the same rate of discount, if any, that was applied in computing the original one way fare, or (on round trip or circle trip tickets, one half of the round trip fare) and charge applicable to the unused transportation from the point of transportation to destination or stopover point named on the ticket or to the point at which transportation is to be resumed, via:
 - The routing specified on the ticket, if the point of termination was on such routing,
 - The routing specified on the ticket, if the point of termination was on such routing, the routing of any member(s) operating between such point; if the point of termination was not on the routing specified on the ticket; in such case the amount of refund will be based on the lowest fare applicable between such points, or the difference between the fare paid and the fare for the transportation used or to be used whichever is higher;
 - 3) Service charges will not be imposed reasonable reservations communication expenses of the passenger will be assumed provided that in the case of cancellations required for safety or legal reason caused by the condition or conduct of the passenger. Such charge may be imposed and such expenses may be refused.

1.8 Delay Procedures

ANNOUNCEMENTS

- 1) When passengers are delayed, it is essential they will be told the reason promptly and kept informed of what is happening, and attended all the time during the period of delay by one of passenger service staff. If this is done the passengers will be much less likely to complain about being delayed.
- 2) The senior officer handling the flight must decide the wording of the announcement to the passengers and brief the passenger service staff accordingly, to ensure uniformity. The Captain must be advised of what the passengers have been told.

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- 3) Delay announcements should whenever possible be made to small groups of passengers, or even individually. Otherwise the public addressing system may be used.
- 4) In case of technical delays, the reasons given should be precise without being highly technical. Explanations such as "mechanical delay" or "technical trouble" should be avoided, as passengers tend to imagine the cause of the delay will be more serious than it usually is. Avoid such expressions as "fire warning light" or the passenger will imagine himself crashing in" flames" an electric fault "is better.
- 5) Particularly in the first stages of delay, the tendency to await developments before telling passengers must be resisted. An announcement that embarkation will not be, before a certain time, when another announcement will be made, should be given at the earliest opportunity. Passengers will be less restive awaiting information promised for a certain time than if kept waiting indefinitely.
- 6) The information board should be changed to show the new ETD and departure gate.

HANDLING SPECIAL PASSENGERS

- 1) A uniform reason of delay should be announced.
- 2) Good timing in announcing the delay is a must.
- 3) Before passengers' inquiries; information should be given.
- 4) Technical delay reasons should not be explained in details
- 5) Special handling should be given to the following categories: -
 - A. For Passengers having onward connection, make sure
 - 1) Minimum connecting times are not exceeded.
 - 2) If miss connection is unavoidable .new bookings should be made.
 - 3) If new bookings would violate rules of the state the passengers are connecting from, exclude the passenger from booking and a new routing should be made.
 - B. V.I.P.
 - 1) Must be informed personally of the delay, its reason, duration and your action.
 - 2) If the delay is known before his arrival at the airport contact him and advise him not to proceed to the airport, this depends on the duration of the delay.
 - C. Unaccompanied minors.
 - 1) Ground hostess should accompany them all the time.
 - 2) His sponsor should not leave the airport till STD, if they are still at the airport better to leave the child with them till departure time.

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- 3) If the delay is long, accommodate UM at airport hotel accompanied by a ground hostess and send a telex to station of destination to inform his sponsor of the hotel he is accommodated in.

D. Incapacitated passengers

- 1) If the delay is known and Incapacitated passenger is still in hospital contact him and request not to proceed to the airport till further notification
- 2) If the Incapacitated passenger has arrived at the airport he may be allowed to the airport clinic if available.
- 3) If the delay is prolonged, better to send him back to the hospital.

E. Technical delay reasons should not be explained in details.

F. The senior officer handling the flight must decide the wording of the announcement to the passenger and brief the passenger service staff accordingly, to ensure uniformity. The captain must be advised of what the passengers have been told.

G. The information board should be changed to show the new ETD and departure gate.

H. Flow of information is mandatory always keep the passengers aware of what is going on.

I. Priority in hotel accommodation should be given to Incapacitated, mothers with children and elderly passenger if the expected duration of the delay is more than three hours.

1.9 Meals and Accommodation

Delay up to 60 minutes

The handler must inform passengers about delay reason and update flight information system of the airport (FIDS),

Delay more than 01:30 and Up to 02:00 Hours

Passengers are provided with Soft Drinks and Water, as they chose.

For Europe we give voucher amount.

From 02:00 to 03:00 Hours

Passengers are provided with Soft Drinks and Snack (One Sandwich + Cake)

For Europe we mention the voucher amount.

From 03:00 to 06:00 Hours

Passengers are provided with:

For breakfast times: 2 Sandwich + 1 Sweet + 1 Drink + 1 Garnish.

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For Lunch – Dinner: Full Hot meal.

For Europe we mention the voucher amount.

From 06:00 Hours and Above

Passengers are provided with suitable Hotel Accommodation with Hot meal, including transfer to/from airport. It is important that a tour operator rep and personnel from NESMA station stay with passenger to keep them up to date about the operation situation.

NOTE:-

- The above instructions should not affect the new departure time and not to cause any further delay.

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1.10 Report on Handling Delayed Flights

- A. A report must be sent to Ground Handling Manager, Cairo.
 - 1) A delay over 30 mints at a transit station.
 - 2) A departure from a terminal station more than 30 minutes late, unless the delay was known in advance and passengers given a revised reporting time.
- B. The report must include the following information:
 - 1) Flight number, station and date.
 - 2) Details of the delay with reason and times.
 - 3) Progress of passenger handling, with times.
 - 4) Details of any unusual incidents, complaints or comments with names of passengers concerned
 - 5) Arrangements made to minimize inconvenience to passengers, such as meals, drinks, hotel accommodation, free message facilities offered and accepted, sightseeing tours or other entertainment arranged. This report will enable General Manager of Stations (and/or assistant manager in shifts) to deal quickly with any complaints or comments subsequently received.

EXPENSES

Reasonable expenses for telephone calls for passengers can be borne by

Nesma Airlines.

1.11 Overbooking and Denied Boarding

According to the general conditions of carriage the passenger has the right to get a valid ticket with confirmed reservation to board on a schedule flight. When booked passenger cannot be accommodated on a flight, and is denied boarding he is entitling to compensation.

01 – DEFINITION

1. Scheduled flight: flight operating to serve traffic between two or more points either:-
 - According to published time table or;
 - Regular or frequent so that they constitute a recognizably systematic services.
2. Confirmed reservation: means that a ticket sold by air carrier or its authorized travel agent exposes confirmation of carriage in the appropriate space.
3. Over booked: - the number of passenger holding confirmed reservation exceeds the number of available seats on flight
4. Denied boarding: no availability to accommodate passengers on a flight, despite confirmed reservation

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5. Overbooking profile: carrier's policy to confirm more passenger than aircraft capacity, to compensate the no-show percentage

02 - COMPENSATION

Passengers who are denied boarding on a scheduled flight are entitled to compensation, in order to qualify such passenger he must:-

- Be in a possession of a valid ticket.
- Have confirmed reservation for the particular flight shown on the ticket.
- Have presented him-self for check-in within the stipulated time limits.
- Be in possession of necessary traveling documents.

Passengers who are denied boarding shall have the choice of:-

1. Full refund of the cost of the unused portion of the ticket
2. Re-routing to the final destination of the ticket presented at check-in by the first available flight(s) or at a later date at the passenger's convenience.
3. Additionally, upon being denied boarding, each passenger is entitled to receive the following compensation:

30 Kg Additional Excess Baggage MCO

Note:-

Where the one way fare for the sector(s) concerned in the appropriate class of service is less than the DBC (denied boarding compensation) amount, the one way fare will be paid.

- The compensation shall be paid in cash or, if acceptable to the passenger, in travel vouchers. If the passenger's class of service is downgraded, then he/she shall be entitled to reimbursement of the difference in price.
- Any passenger denied boarding will be offered, in addition to the compensation payment, the following:-
 - A telephone call and a telex or fax message to the destination point;
 - Meals, refreshment and hotel accommodation as appropriate while waiting for alternative transportation arrangements.

The minimum denied boarding compensation amounts are indicated according to ECU (European Economic Community) and dealt with in Europe only, but in any other station it depends on the country law.

03 - EXCEPTIONS

The passenger shall not be entitled to denied boarding compensation in the following cases:

1. When Nesma Airlines succeeds to provide the passenger with alternative transport to his scheduled destination within six hours (four hours within Europe)
2. When there is a government order to limit the aircraft passenger capacity.
3. Change of aircraft type to smaller capacity due to technical operational and safety reasons.

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4. When the passenger does not comply with the airline security precautions and/or authorities requirements for travel;
5. When passenger's behavior, health or appearance is not in accordance with Nesma Airlines conditions of carriage.
6. When the passenger does not comply with the national law.

1.12 Catering:

- Catering Meals are being loaded from the base in the Egyptian stations.
- All passengers on board Nesma Airlines are served with our fresh well-chosen meal and beverages, depending on time and duration of the flight.

1.13 Security:

- All security procedures as per chapter 9 are to be adhered to.

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1.14 Load Control:

- According to ECAR 91, Appendix H, 91.AH.5 Mass values for passengers and baggage regulations, the applicable weights for calculation of passenger weights on board scheduled flights of Nesma Airlines are according to the following weights:

Male/Female (Adult) = 84 Kg, Child (2-12 Years) = 35 Kg, Infant (0-2 Years) = 00 Kg

Hold Baggage is to be calculated as actual weights.

Load Control office must be informed with oversized baggage from Check-in, Gate personnel, or loading agent's staff.

DOW/DOI,

Calculation for DOW/DOI compositions are prepared in advance by maintenance department and needs to be followed accordingly by load sheet maker.:

Recommended loading method is to load one third of the baggage in Hold Number 1, and the remaining of the baggage to be loaded in Hold Number 3, Business Class – Priority baggage to be loaded desperately and transmitted to destination station with their location.

1.15 Cargo and Mail:

- Currently permitted to be carried on board Nesma Airlines Flights.

1.16 Baggage Handling

- Refer to chapter 4 Baggage Handling and Mishandled baggage procedures and compensation rules.

1.17 Post flight Messages and reports:

- Flight Handling Report
- PFS Message to CAINSXH
- ETL Message to CAINSXH
- Check-in Sales Report
- MVT
- PSM
- PRL
- LDM.

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Appendix 2 CONDITIONS OF CARRIAGE

CONDITIONS OF CARRIAGE

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ARTICLE 2 – APPLICABILITY

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ARTICLE 12 – SUCCESSIVE CARRIERS

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As you read these Conditions, please note that: "**We**", "**our**", "**ourselves**" and "**us**" means Nesma Airlines. "**You**", "**your**" and "**yourself**" means any person, except members of the crew, carried or to be carried in an aircraft pursuant to a Ticket. (See also definition for "Passenger").

AGREED STOPPING PLACES means those places, except the place of departure and the place of destination, set out in the Ticket or shown in our timetables as scheduled stopping places on your route. AIRLINE

DESIGNATOR CODE means the three letters which identify particular air carriers, for Nesma Airlines its (NMA).

AUTHORIZED AGENT means a passenger sales agent who has been appointed by us to represent us in the sale of air transportation on our services.

BAGGAGE means your personal property accompanying you in connection with your trip. Unless otherwise specified, or unless the context otherwise requires, it includes both your Checked and Unchecked Baggage.

BAGGAGE CHECK means those portions of the Ticket which relate to the carriage of your Checked Baggage.

BAGGAGE IDENTIFICATION TAG means a document issued solely for identification of Checked Baggage.

CARRIER means an air carrier other than ourselves, whose airline designator code appears on your Ticket or on a Connection Ticket. **CHECKED BAGGAGE** means Baggage of which we take custody and for which we have issued a Baggage Check.

CONDITIONS OF CONTRACT means those statements contained in or delivered with your Ticket or Itinerary/Receipt, identified as such and which incorporate these Conditions of Carriage by reference, and notices.

CONJUNCTION TICKET means a Ticket issued to you with relation to another Ticket which together constitute a single contract of carriage. **CONVENTION** means whichever of the following instruments are applicable:

- the Convention for the Unification of Certain Rules Relating to International Carriage by Air, signed at Warsaw, 12 October 1929 (hereinafter referred to as the Warsaw Convention);
- the Warsaw Convention as amended at The Hague on 28 September 1955;
- the Warsaw Convention as amended by Additional Protocol No. 1 of Montreal (1975);
- the Warsaw Convention as amended at The Hague and by Additional Protocol No. 2 of Montreal (1975);
- the Warsaw Convention as amended at The Hague and by Additional Protocol No. 4 of Montreal (1975);
- the Guadalajara Supplementary Convention (1961) (Guadalajara);
- the Montreal Convention (1999);

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COUPON means both a paper Flight Coupon and an Electronic Coupon.

DAMAGE includes death, wounding, or bodily injury to a Passenger, loss, partial loss, theft or other damage, arising out of or in connection with carriage or other services incidental thereto performed by us.

DAYS mean calendar days, including all seven days of the week; provided that, for the purpose of notification, the day upon which notice is dispatched shall not be counted; and provided further that for purposes of determining duration of validity of a Ticket, the day upon which the Ticket is issued, or the flight commenced shall not be counted.

ELECTRONIC COUPON means an electronic flight coupon or other value document held in our database.

ELECTRONIC TICKET means the Itinerary/Receipt issued by us or on our behalf, the Electronic Coupons and, if applicable, a boarding document.

FLIGHT COUPON means that portion of the Ticket that bears the notation "good for passage," or in the case of an Electronic Ticket, the Electronic Coupon, and indicates the particular places between which you are entitled to be carried.

ITINERARY/RECEIPT means a document or documents we issue to Passengers travelling on Electronic Tickets that contain the passenger name, flight information and notices.

PASSENGER means any person, except members of the crew, carried or to be carried in an aircraft pursuant to a Ticket. (See also definition for "you", "your" and "yourself"). **PASSENGER COUPON** or **PASSENGER RECEIPT** means that portion of the Ticket issued by us or on our behalf, which is so marked and which ultimately is to be retained by you.

SDR means a Special Drawing Right as defined by the International Monetary Fund.

STOPOVER means a scheduled stop on your journey, at a point between the place of departure and the place of destination.

TARIFF means the published fares, charges and/or related Conditions of Carriage of an airline filed, where required, with the appropriate authorities.

TICKET means either the document entitled "Passenger Ticket and Baggage Check" or the Electronic Ticket, in each case issued by us or on our behalf, and includes the Conditions of Contract, notices and Coupons.

UNCHECKED BAGGAGE means any of your Baggage other than Checked Baggage.

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ARTICLE 2 – APPLICABILITY

2.1 GENERAL

Except as provided in 2.2, and 2.3, our Conditions of Carriage apply only on those flights, or flight segments, where our name or Airline Designator Code (which is "NMA") is indicated in the carrier box of the Ticket for that flight or flight segment or where we otherwise have a legal liability to you.

2.2 CHARTER OPERATIONS

If carriage is performed pursuant to a charter agreement, these Conditions of Carriage apply only to the extent they are incorporated by reference or otherwise, in the charter agreement or the Ticket.

2.3 OVERRIDING LAW

2.3.1 These Condition of Carriage are applicable unless they are inconsistent with Tariffs or applicable law in which event such Tariffs or laws shall prevail.

2.3.2 If any provision of these Conditions of Carriage is invalid under any applicable law, the other provisions shall nevertheless remain valid.

2.4 CONDITIONS PREVAIL OVER REGULATIONS

Except as provided in these Conditions of Carriage, in the event of inconsistency between these Conditions of Carriage and any other regulations we may have, dealing with particular subjects, these Conditions of Carriage shall prevail.

2.5 CODE SHARES

On some services we have arrangements with other carriers known as "Code Shares". This means that even if you have a reservation with us and hold a ticket where our name or Airline Designator Code is indicated as the carrier, another carrier may operate the aircraft. If such arrangements apply we will advise you of the carrier operating the aircraft before you take on your flight.

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ARTICLE 3 – TICKETS

3.1 REQUIREMENT FOR VALID TICKET

3.1.1 We will provide carriage only to the Passenger named in the Ticket, and you may be required to produce appropriate identification.

3.1.2 A ticket is not transferable.

3.1.3 Except in the case of an Electronic Ticket, you shall not be entitled to be carried on a flight unless you present a valid Ticket containing the Flight Coupon for that flight and all other unused Flight Coupons and the Passenger Coupon. In addition, you shall not be entitled to be carried if the Ticket presented is mutilated or if it has been altered otherwise than by us or our AUTHORIZED Agent. In the case of an Electronic Ticket, you shall not be entitled to be carried on a flight unless you provide positive identification and a valid Electronic Ticket has been duly issued in your name.

3.1.4 In case of loss or mutilation of a Ticket, or part thereof, or non-presentation of a Ticket containing the Passenger Coupon and all unused Flight Coupons, upon request of the Passenger, the issuer may replace such Ticket or part thereof by issuing a new Ticket, provided there is evidence, readily ascertainable at the time, that a Ticket valid for the flight(s) in question was duly issued and the Passenger signs an agreement to reimburse us for any costs and losses which are necessarily and reasonably incurred by us or another Carrier for misuse of the Ticket and which do not result from our own negligence.

3.1.5 A Ticket is valuable and you should take appropriate measures to safeguard it and ensure it is not lost or stolen.

3.2 PERIOD OF VALIDITY

Except as otherwise provided in the Ticket, these Conditions, or in tariffs, the Ticket is valid only for travel from the airport of departure to the airport of destination on the date and flights shown on the Ticket.

3.3 COUPON SEQUENCE AND USE

The Ticket will not be honored and will lose its validity if all the Coupons are not used in the sequence provided in the Ticket.

3.4 NAME AND ADDRESS OF CARRIER

Our name may be abbreviated to our Airline Designator Code NMA, or otherwise, in the Ticket.

Our address is:

Nesma Airlines 5 El Madina St., El Nozha El Gedida, Cairo, Egypt

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ARTICLE 4 – FARES AND CHARGES

4.1 GENERAL

Fares apply only for carriage from the airport at the point of origin to the airport at the point of destination, unless otherwise expressly stated. Fares do not include ground transport service between airports and between airports and town terminals.

4.2 TAXES, FEES AND CHARGES

Applicable taxes, fees and charges imposed by government or other authority, or by the operator of an airport, shall be payable by you. At the time you purchase your Ticket, you will be advised of all applicable taxes, fees and charges known to us. However, as the taxes, fees and charges imposed on air travel are constantly changing and can be imposed after the date of Ticket issuance you may be obliged to pay additional taxes, fees or charges, even after the Ticket has been issued.

ARTICLE 5 – RESERVATIONS

5.1 PERSONAL DATA

You recognize that personal data has been given to us for the purposes of making a reservation, purchasing a Ticket, obtaining ancillary services, developing and providing services, facilitating immigration and entry procedures, and making available such data to government agencies, in connection with your travel. For these purposes, you authorize us to retain and use such data and to transmit it to our own offices, authorized Agents, government agencies, other Carriers or the providers of the above-mentioned services.

5.2 SEATING

We will endeavor to honor advance seating requests, however, we cannot guarantee any particular seat, and we reserve the right to assign or reassign seats at any time, even after boarding of the aircraft. This may be necessary for operational, safety or security reasons.

ARTICLE 6 – CHECK-IN/BOARDING

6.1 Your journey will be smoother if you allow yourself ample time for check-in. Please note that we reserve the right to cancel reservation of Passengers who arrive at the check-in desk later than the times indicated 30 Minutes charter flights, and 45 minutes Scheduled flights, otherwise declared by the airport authority.

6.2 You must be present at the boarding gate not later than the time specified by us when you check-in.

6.3 We may cancel the space reserved for you if you fail to arrive at the boarding gate in time.

6.4 We will not be liable to you for any loss or expense incurred due to your failure to comply with the provisions of this Article.

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ARTICLE 7 – REFUSAL AND LIMITATION ON CARRIAGE

7.1 RIGHT TO REFUSE CARRIAGE

In the reasonable exercise of our discretion, we may refuse to carry you or your Baggage if we have notified you in writing. We may also refuse to carry you or your Baggage if one or more of the following have occurred or we reasonably believe may occur:

- 7.1.1 Such action is necessary in order to comply with any applicable government laws, regulations, or orders;
- 7.1.2 The carriage of you or your Baggage may endanger or affect the safety, health, or materially affect the comfort of other passengers or crew;
- 7.1.3 your mental or physical state, including your impairment from alcohol or drugs, present a hazard or risk to yourself, to passengers, to crew, or to property;
- 7.1.4 You have committed misconduct on a previous flight, and we have reason to believe that such conduct may be repeated;
- 7.1.5 You have refused to submit to a security check;
- 7.1.6 You have not paid for your Ticket or the applicable fare, taxes or charges by the required time;
- 7.1.7 you do not appear to have valid travel documents, may seek to enter a country through which you may be in transit, or for which you do not have valid travel documents, destroy your documentation during flight or refuse to surrender your travel documents to the flight crew, against receipt, when so requested;
- 7.1.8 You present a Ticket that has been acquired unlawfully, has been purchased from an entity other than our authorized Agent, or has been reported as being lost or stolen, is a counterfeit or you cannot prove that you are the person names in the Ticket;
- 7.1.9 You have not used the coupons in sequence, or you present a Ticket which has been issued or altered in any way, other than by us or our authorized Agent, or the Ticket is mutilated;
- 7.1.10 you fail to observe our instructions with respect to safety or security;
- 7.1.11 you have previously committed one of the acts or omissions referred to above.

7.2 SPECIAL ASSISTANCE

Acceptance for carriage of unaccompanied children, incapacitated persons, pregnant women, and persons with illness or other people requiring special assistance is subject to prior arrangement with us. Passengers with disabilities who have advised us of any special requirements they may have at the time of ticketing, and been accepted by us, shall not subsequently be refused carriage on the basis of such disability or special requirements.

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ARTICLE 8 – BAGGAGE

8.1 FREE BAGGAGE ALLOWANCE

You may carry some Baggage, free of charge, subject to our conditions and limitations, which are available upon request from us or our authorized Agents.

8.2 EXCESS BAGGAGE

You will be required to pay a charge for carriage of Baggage in excess of the free Baggage allowance. These rates are available from us or our authorized Agents upon request.

8.3 ITEMS UNACCEPTABLE AS BAGGAGE

8.3.1 You must not include in your Baggage:

8.3.1.1 items which are likely to endanger the aircraft or persons or property on board the aircraft, such as those specified in the International Civil Aviation Organization (ICAO) Technical Instructions for the Safe Transport of Dangerous Goods by Air and the International Air Transport Association (IATA) Dangerous Goods Regulations, and in our regulations (further information is available from us on request);

8.3.1.2 Items the carriage of which is prohibited by the applicable laws, regulations or orders of any state to be flown from or to;

8.3.1.3 Items which are reasonably considered by us to be unsuitable for carriage because they are dangerous, unsafe or by reason of their weight, size, shape or character, or which are fragile or perishable having regard to, among other things, the type of aircraft being used. Information about unacceptable items is available upon request.

8.3.2 Firearms and ammunition other than for hunting and sporting purposes are prohibited from carriage as Baggage. Firearms and ammunition for hunting and sporting purposes may be accepted as Checked Baggage. Firearms must be unloaded with the safety catch on, and suitably packed. Carriage of ammunition is subject to ICAO and IATA Dangerous Goods Regulations as specified in 8.3.1.1.

8.3.3 Weapons such as antique firearms, swords, knives, and similar items may be accepted as Checked Baggage, at our discretion, but will not be permitted in the cabin of the aircraft.

8.3.4 You must not include in Checked Baggage money, jewelry, precious metals, computers, personal electronic devices, fragile or perishable items, negotiable papers, securities or other valuables, business documents, passports and other identification documents or samples.

8.3.5 If, despite being prohibited, any items referred to in 8.3.1, 8.3.2 and 8.3.4 are included in your Baggage, we shall not be responsible for any loss or damage to such items.

8.4 RIGHT TO REFUSE CARRIAGE

8.4.1 Subject to paragraph 8.3.2, we will refuse to carry as Baggage the items described in 8.3, and we may refuse further carriage of any such items upon discovery.

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8.4.2 We may refuse to carry as Baggage any item reasonably considered by us to be unsuitable for carriage because of its size, shape, weight, content, and character or for safety or operational reasons, or the comfort of other passengers. Information about unacceptable items is available upon request.

8.4.3 We may refuse to accept Baggage for carriage unless it is in our reasonable opinion properly and securely packed in suitable containers. Information about packing and containers unacceptable to us is available upon request.

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8.5 RIGHT OF SEARCH

For reasons of safety and security we may request that you permit a search, x-ray or other type of scan be made of your person and Baggage. If you are not available, your Baggage may be searched in your absence for the purpose of determining whether you are in possession of or whether your Baggage contains any item described in 8.3.1 or any firearms, ammunition or weapons, which have not been presented to us in accordance with 8.3.2 or 8.3.3. If you are unwilling to comply with such request we may refuse to carry you and your Baggage. In the event an x-ray or other scan causes damages to you or your Baggage, we shall not be liable for such damage unless due to our fault or negligence.

8.6 CHECKED BAGGAGE

8.6.1 Upon delivery to us of your Baggage which you wish to check we will take custody of, and issue a Baggage Identification Tag for each piece of your Checked Baggage. 8.6.2 Checked Baggage must have your name or other personal identification affixed to it.

8.6.3 Checked Baggage will, whenever possible, be carried on the same aircraft as you, unless we decide for safety, security or operational reasons to carry it on an alternative flight. If your Checked Baggage is carried on a subsequent flight we will deliver it to you, unless applicable law requires you to be present for customs clearance. 8.7 UNCHECKED BAGGAGE

8.7.1 We may specify maximum dimensions for Baggage which you carry on to the aircraft. If we have not done so, Baggage which you carry onto the aircraft must fit under the seat in front of you or in an enclosed storage compartment in the cabin of the aircraft. If your Baggage cannot be stored in this manner, or is of excessive weight, or is considered unsafe for any reason, it must be carried as Checked Baggage, subject to Articles 8.2 and 8.3.

8.7.2 Objects not suitable for carriage in the cargo compartment (such as delicate musical instruments) and which do not meet the requirements in 8.7.1 above, will only be accepted for carriage in the cabin compartment if you have given us notice in advance and permission has been granted by us. You may have to pay a separate charge for this service.

8.8 COLLECTION AND DELIVERY OF BAGGAGE

8.8.1 You are required to collect your Checked Baggage as soon as it is made available at your destination or Stopover. Should you not collect it within a reasonable time, we may charge you a storage fee. Should your Checked Baggage not be claimed within three (3) months of the time it is made available, we may dispose of it without any liability to you.

8.8.2 Only the bearer of the Baggage Check and Baggage Identification Tag, is entitled to delivery of the Checked Baggage.

8.8.3 If a person claiming Checked Baggage is unable to produce the Baggage Check and identify the Baggage by means of a Baggage Identification Tag, we will deliver the Baggage to such person only on condition that he or she establishes to our satisfaction his or her right to the Baggage.

8.9 ANIMALS

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We reserve the right, at our absolute discretion, to refuse to carry any animals. If we agree to carry your animals they will be carried subject to the following conditions:

8.9.1 You must ensure that pets, are properly crated and accompanied by valid health and vaccination certificates, entry permits and other documents required by countries of entry or transit failing which, they will not be accepted for carriage. Such carriage may be subject to additional conditions specified by us, which are available on request.

8.9.2 We do not transport animals as checked baggage.

8.9.3 Guide dogs accompanying Passengers with disabilities are not permitted as the fact that we do not carry animals as checked Baggage, unless if the pet is suitable to (carry on animals conditions) will be carried free of charge.

8.9.4 Where carriage is not subject to the liability rules of the Convention, except in the case of our own negligence, we are not responsible for injury to or loss, sickness or death of an animal, which we have agreed to carry.

8.9.5 We will have no liability in respect of any animal not having all the necessary exit, entry, health and other documents necessary or convenient with respect to the animal's entry into or passage through any country, state or territory and the person carrying the animal must reimburse us for any fines, costs, losses or liabilities reasonably imposed or incurred by us as a result.

8.10 DAMAGED BAGGAGE

It is the passenger's obligation to verify that he has the total insurance coverage as he wishes. Our responsibility for any loss, delay of or damage to baggage is strictly limited unless a higher value has been declared in advance and an additional fee has been paid. Passengers are entitled to compensation when checked baggage is lost or damaged according to EU-regulations and the Montreal convention. Responsibility of fragile and/or valuable items lies with the Passenger. We will not be held responsible for:

- Inappropriately packed, perishable, damaged or fragile items
- Damage to the suitcase exterior (e.g. scratches, stains, soiling, dents)
- Damaged items outside the bags interior, such as but not limited to, wheels, zippers, handles and padlocks.
- Any damage done to items attached to the baggage outer side, like sleeping bags.
- Car seats and not restricted to items other than suitcases and bags.
- Damage as a result of unsuitable packing or not properly shut suitcase or excessive weight.
- Damaged pushchairs, prams, travel systems with removable wheels where the wheels have not been removed / stowed appropriately.
- Inappropriately packed liquids, gels etc.
- Valuable items like jewelry, money, etc.

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ARTICLE 9 – SCHEDULES, DELAYS, CANCELLATIONS AND DENIED BOARDING

9.1 SCHEDULES

9.1.1 The flight times shown in timetables may change between the date of publication and the date you actually travel. We do not guarantee them to you and they do not form part of your contract with us.

9.1.2 Before we accept your booking, we will notify you of the scheduled flight time in effect as of that time, and it will be shown on your Ticket. It is possible we may need to change the schedule flight time subsequent to issuance of your Ticket. If you provide us with contact information, we will endeavor to notify you of any such changes. If, after you purchase your Ticket, we make a significant change to the scheduled flight time, which is not acceptable to you, and we are unable to book you on an alternate flight which is acceptable to you, you will be entitled to refund in accordance with article 10.2.

9.2 CANCELLATION, REROUTING, DELAYS, ETC.

9.2.1 We will take all necessary measures to avoid delay in carrying you and your baggage. In the exercise of these measures and in order to prevent a flight cancellation, in exceptional circumstances we may arrange for a flight to be operated on our behalf by an alternative carrier and/or aircraft.

9.2.2 except as otherwise provided by the convention, if we cancel a flight, fail to operate a flight reasonable according to the schedule, fail to stop at your destination or Stopover destination, we shall, at your option, either:

9.2.2.1 Carry you at the earlier opportunity on another of our scheduled services on which space is available without additional charge and, where necessary, extend the validity of your Ticket; or

9.2.2.2 Within a reasonable period of time re-route you to the destination shown on your Ticket by us own services or those of another carrier, or by other mutually agreed means and class of transportation without additional charges. If the fare and charges for the revised routing are lower than what you have paid, we shall refund the difference; or

9.2.2.3 Make a refund in accordance with the provisions of Article 10.2.

9.2.3 upon the occurrence of any of the events set out in article 9.2.2 ,except as otherwise provided by the convention, the options outlined in article 9.2.2.1 through 9.2.2.3 are the sole and exclusive remedies available to you and we shall have no further liability to you.

9.2.4 If we are unable to provide previously confirmed space, we shall provide compensation to those passengers, in accordance with applicable law and Nesma Airlines policy.

9.2.5 Where boarding of an aircraft is delayed, we shall provide the following care for passengers:

a) Delay up to 60 minutes

The handler must inform passengers about delay reason and update flight information system of the airport (FIDS),

b) Delay more than 01:30 and Up to 02:00 Hours

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Passengers are provided with Soft Drinks and Water, as they chose.

For Europe we give voucher amount.

c) From 02:00 to 03:00 Hours

Passengers are provided with Soft Drinks and Snack (One Sandwich + Cake)

For Europe we mention the voucher amount.

d) From 03:00 to 06:00 Hours

Passengers are provided with:

For breakfast times: 2 Sandwich + 1 Sweet + 1 Drink + 1 Garnish.

For Lunch – Dinner: Full Hot meal.

For Europe we mention the voucher amount.

e) From 06:00 Hours and Above

Passengers are provided with suitable Hotel Accommodation with Hot meal, including transfer to/from airport. It is important that a tour operator rep and personnel from NESMA station stay with passenger to keep them up to date about the operation situation.

9.3 Non-Carriage due to Overbooking:

9.3.1 In case of a denied boarding we offers compensation, assistance and ticket refund within the scope of Nesma Airlines policy and any other applicable regulations concerning this issue.

9.3.2 We will give priority to unaccompanied minor, ill and handicapped people. In all other cases, passengers will be allocated a seat on the aircraft in the order in which they check in, also taking into account any specific interests.

9.3.3 When we reasonably expect to deny boarding on a flight, we first call for volunteers to surrender their reservation in exchange for benefits.

9.3.4 Any denied passenger is entitled to compensation. This is calculated according to the Nesma Airlines policy and any applicable regulation for this issue.

9.3.5 The financial compensation will be taken into account when deciding about further claim for damage.

ARTICLE 10 – CONDUCT ABOARD AIRCRAFT

10.1 GENERAL

If in our opinion you conduct yourself aboard the aircraft so as to endanger the aircraft or any person or property on board, or obstruct the crew in the performance of their duties, or fail to comply with any instructions of the crew including but not limited to those with respect to smoking, alcohol or drug consumption, or behave in a manner which causes discomfort, inconvenience, damage or injury to other passengers or the crew, we may take such measures as we deem reasonably necessary to

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prevent continuation of such conduct, including restraint. You may be disembarked and refused onward carriage at any point, and may be prosecuted for offences committed on board the aircraft.

10.2 ELECTRONIC DEVICES

For safety reasons, we may forbid or limit operation aboard the aircraft of electronic equipment, including, but not limited to, cellular telephones, laptop computers, portable recorders, portable radios, CD players, electronic games or transmitting devices, including radio controlled toys and walkie-talkies. Operation of hearing aids and heart pacemakers is permitted.

ARTICLE 11 – ADMINISTRATIVE FORMALITIES

11.1 GENERAL

11.1.1 You are responsible for obtaining all required travel documents and visas and for complying with all laws, regulations, orders, demands and travel requirements of countries to be flown from, into or through which you transit.

11.1.2 We shall not be liable for the consequences to any passenger resulting from his or her failure to obtain such documents or visas or to comply with such laws, regulations, orders, demands, requirements, rules or instructions.

11.2 TRAVEL DOCUMENTS

Prior to travel, you must present all exit, entry, health and other documents required by law, regulation, order, demand or requirement of the countries concerned, and permit us to take and retain copies thereof. We reserve the right to refuse carriage if you have not complied with these requirements, or your travel documents do not appear to be in order.

11.3 REFUSAL OF ENTRY

If you are denied entry into any country, you will be responsible to pay any fine or charge assessed against us by the Government concerned and for the cost of transporting you from that country. The fare collected for carriage to the point of refusal or denied entry will not be refunded by us.

11.4 PASSENGER RESPONSIBLE FOR FINES, DETENTION COSTS, ETC.

If we are required to pay any fine or penalty or to incur any expenditure by reason of your failure to comply with laws, regulations, orders, demands and other travel requirements of the countries concerned or to produce the required documents, you shall reimburse us on demand, any amount so paid or expenditure so incurred. We may apply towards such payment or expenditure the value of any unused carriage on your ticket, or any of your funds in our possession.

11.5 CUSTOMS INSPECTION

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If required, you shall attend inspection of your Baggage, by customs or other Government officials. We are not liable to you for any loss or damage suffered by you in the course of such inspection or through your failure to comply with this requirement.

11.6 SECURITY INSPECTION

You shall submit to any security checks by Governments, airport officials, Carriers or by us.

11.7 ADDITIONAL SERVICES

If we make arrangements for you with any third party to provide any services other than carriage by air, or if we issue a ticket or voucher relating to transportation or services (other than carriage by air) provided by a third party such as hotel reservations or car rental, in doing so we act only as agent for such third party, whose terms and conditions will apply. If we are also providing surface transportation to you, other conditions may apply to such surface transportation. Such conditions are available from us upon request.

ARTICLE 12 – SUCCESSIVE CARRIERS

Carriage to be performed by us and other Carriers under one Ticket, or a Conjunction Ticket is regarded as a single operation for the purposes of the Convention. However your attention is drawn to Article

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ARTICLE 13 – LIABILITY FOR DAMAGE

13.1 The liability of Nesma Airlines and each Carrier involved in your journey will be determined by its own Conditions of Carriage. Our liability provisions are set out in this Article 13.

13.2 Save as provided below, carriage hereunder is subject to the rules and limitations relating to liability established by the Convention unless such carriage is not international carriage to which the Convention applies. Nothing in these General Conditions of Carriage shall waive any exclusion or limitation of our liability under the Convention or applicable laws unless otherwise expressly stated.

13.3 Our liability for damages sustained in the event of death, wounding or any such bodily injury by you in the event of an accident shall not be subject to any financial limit, be it defined by law, convention or contract.

13.4 In accordance with the requirements of Article 7 of Regulation (EC) Number 2407/92 (as amended by Regulation (EC) 889/2002), we will be insured up to the limit of liability required under Article 13.5 below and thereafter up to a reasonable level. 13.5 For any damages up to the sum of the equivalent in Euros of 100,000 SDR, we shall not exclude or limit its liability by proving that we and our agents have taken all necessary measures to avoid the damage or that it was impossible for them to take such measures.

13.6 Notwithstanding the provisions of Article 13.5, if we prove that the damage was caused by, or contributed to by, your negligence, we may be exonerated wholly or partly from its liability in accordance with applicable law.

13.7 We shall without delay, and in any event not later than fifteen days after the identity of the natural person entitled to compensation has been established, make such advance payments as may be required to meet immediate economic needs on a basis proportional to the hardship suffered.

13.8 Without prejudice to Article 13.7, an advance payment shall not be less than the equivalent of 16,000 SDR per Passenger in the event of death.

13.9 An advance payment shall not constitute the recognition of liability and may be offset against any subsequent sums paid on the basis of our liability, but is not returnable, except in the cases prescribed in Article 13.6 or in circumstances where it is subsequently proved that the person who received the advance payment caused, or contributed to, the damage by negligence or was not the person entitled to compensation. Need to add the word entitled as its currently missing

13.10 SPECIAL AGREEMENT applicable to carriage to, from or with an agreed stopping place in the United States of America (see applicable tariffs).

We shall avail ourselves of the limitation of liability provided in the Convention. In accordance with Article 22(1) of the Convention, we agree that as to all international carriage by it to which the Convention applies and which according to the contract of carriage includes a point in the United States of America as a point of origin, a point of destination or agreed stopping place:-

1. Our liability for damages sustained in the event of death, wounding or any bodily injury by you in the event of an accident shall not be subject to any financial limit;

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2. We shall not, with respect to any claim arising out of the death, wounding or other bodily injury sustained by you, avail ourselves of any defense under Article 20 of the Convention. Nothing herein shall be deemed to affect our rights and liabilities with regard to any claim brought by, on behalf of, or in respect of, any person who has willfully caused damage which resulted in death, wounding, or other bodily injury to you.

13.11 For carriage which is not international carriage to which the Convention applies:

1. If the law of the United Kingdom is applicable, our liability is governed by the provisions of the Carriage by Air Acts (Application of Provisions) Order 1967 to the extent such Order applies; or
2. If the Carriage by Air (Application of Provisions) Order 1967 is not applicable and unless the applicable law otherwise requires we shall be liable for damage to a Passenger or his Checked baggage only if such damage has been caused by our negligence. If there has been contributory negligence on your part, our liability shall be subject to the applicable law relating to contributory negligence.

13.12 Where your carriage is not subject to the liability rules of the Convention, carriage shall be subject to the provisions of the Carriage by Air Acts (Application of Provisions) Order 1967.

13.13 We will be liable only for Damage occurring during carriage on flights or flight segments where our Airline Designator Code appears in the carrier box of the Ticket for that fight or flight segment. If we issue a Ticket or if we check Baggage for carriage on another carrier, we do so only as agent for the other carrier. Nevertheless, with respect to Checked Baggage, you may make a claim against the first or last carrier.

13.14 Unless such Damage resulted from the inherent defect, quality or vice of the Baggage, we shall be liable, up to a limit of 1000 SDRs, for destruction, loss or damage to Checked Baggage on condition that the event which caused the destruction, loss or damage took place on board the aircraft or during any period within which Checked Baggage was in our charge. If in the case of Checked Baggage a higher value is declared at the latest at check-in and, if required, you have paid the supplementary sum demanded, our liability shall be limited to such higher declared value unless we show that higher declared value is greater than your actual interest in delivery at destination. We will not be liable for Damage to Unchecked Baggage unless such Damage is caused by our fault or that of our servants and agents.

13.15 We shall be liable up to a limit of 1000 SDRs for Damage for delay of your Baggage, unless we show that we or our servants or agents took all reasonable measures to avoid the Damage or it was impossible for us or our servants or agents to take such measures. If in the case of Checked Baggage a higher value is declared at the latest at check-in and, if required, you have paid the supplementary sum demanded, our liability shall be limited to such higher declared value unless we show that higher declared value is greater than your actual interest in delivery at destination. We will not be liable for Damage to Unchecked Baggage unless such Damage is caused by our fault or that of our servants and agents.

13.16 Except where other specific provision is made in these Conditions, if we are liable to you we will compensate you for all losses and costs which you can prove you directly incurred as a result, in accordance with the applicable law, but we will not in any circumstance be liable for;

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1. any losses or costs not reasonably foreseeable by us at the time the contract of carriage was concluded;
2. any losses or costs caused otherwise than by our breach of contract or breach of duty to you;
3. any loss of profits or business losses;
4. any losses which indirectly flowed from the breach of contract or breach of duty to you;
5. Any indirect or consequential loss when you are travelling in the course of or for the purpose of business.

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13.17 We are not liable for any Damage caused by your Baggage. You shall be responsible for any Damage caused by your Baggage to other persons or property, including our property.

13.18 We shall have no liability whatsoever for Damage to articles not permitted to be contained in Baggage under Article 8.3.

13.19 We are not responsible for any illness, injury or disability, including death, attributable to your physical condition or for the aggravation of such condition.

13.20 The contract of carriage, including these Conditions of Carriage and exclusions or limits of liability, applies to our authorized Agents, servants, employees and representatives to the same extent as they apply to us. The total amount recoverable from us and from such authorized Agents, employees, representatives and persons shall not exceed the amount of our own liability, if any.

13.21 Nothing in these Conditions of Carriage shall waive any exclusion or limitation of our liability under the Convention or applicable laws unless otherwise expressly stated.

ARTICLE 14 – TIME LIMITATION ON CLAIMS AND ACTIONS

14.1 NOTICE OF CLAIMS

14.1.1 Acceptance of baggage by the bearer of the Baggage Check without complaint at the time of delivery is sufficient evidence that the Baggage has been delivered in good condition and in accordance with the contract of carriage, unless you prove otherwise.

14.1.2 If you wish to file a claim or an action regarding Damage to Checked baggage, you must notify us as soon as you discover the Damage, and at the latest, within seven (7) Days of receipt of the Baggage. If you wish to file a claim or an action regarding delay of Checked Baggage, you must notify us within twenty-one (21) Days from the date the Baggage has been placed at your disposal. Every such notification must be made in writing.

14.2 LIMITATION OF ACTIONS

Any right to Damages shall be extinguished if an action is not brought within two years of the date of arrival at destination or the date on which the aircraft was scheduled to arrive, or the date on which the carriage stopped. The method of calculating the period of limitation shall be determined by the law of the court where the case is heard.

ARTICLE 15 – MODIFICATION AND WAIVER

These conditions may only be modified by an express agreement with you in writing made by a person properly authorized by us.

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ARTICLE 16 – OTHER CONDITIONS

Carriage of you and your Baggage is also provided in accordance with certain other regulations and conditions applying to or adopted by us. These regulations and conditions as varied from time to time are important. They concern among other things:

1. the carriage of unaccompanied minors, pregnant women, and sick passengers;
2. restrictions on use of electronic devices and items;
3. The on board consumption of alcoholic beverages.

Regulations and conditions concerning these matters are available from us upon request.

ARTICLE 17 – APPLICABLE LAW

These General Conditions of carriage shall be governed by and construed in accordance with Egyptian law.

ARTICLE 18 – INTERPRETATION

The title of each Article of these Conditions of Carriage is for convenience only and is not to be used for interpretation of the text.

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Appendix 3 Audit Checklists

1.1 Ground Handling Service Provider Audit Checklist

نشاط الشركة:

: اسم الشركة (المراجع عليها) :

تاريخ المراجعة:

: أعضاء فريق المراجعة :

الدليل	المطابقة	المطلب	المرجع
		<p><u>المواصفات الفنية للمعدات الأرضية:</u></p> <p><u>51-301 عام</u></p> <p>(أ) وجود المعدات اللازمة لأنشطة الخدمات الأرضية .</p> <p>(ب) أن تكون هذه المعدات مناسبة لطراز وأجهزة الطائرة ومتقدمة للمواصفات القياسية الخاصة بالـ IATA والمعتمدة من سلطة الطيران المدني وذلك لكل خدمة Ground handling standard) (handbook .</p> <p>(ت) أن تكون هذه المعدات المستخدمة سليمة و صالحة للاستعمال وذات كفاءة عالية .</p> <p>(ث) أن تكون برامج الصيانة اليومية و الدورية للمعدات مطابقة لمتطلبات الصانع و يتم اعتمادها مسبقاً من سلطة الطيران المدني .</p> <p>(ج) أن يتم تنفيذ الصيانة والتشغيل للمعدات بواسطة أفراد مؤهلين وحاصلين على التدريبات الكافية .</p> <p>(ح) ضرورة وجود برامج لرفع المستوى الفني و التدريب الدوري و اختبار الكفاءة لهؤلاء الأفراد بصفة منتظمة .</p> <p><u>53-301 اعتبارات السلامة:</u></p> <p>(أ) توافر اشتراطات أمن الحريق لكل معدة / سيارة .</p> <p>(ب) توفير مكان مناسب بالمهبط لحماية المعدات من تأثير العوامل الجوية والحفاظ على سلامتها(مظلة معدات)</p>	ECAR PART 301 SUBPART D

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<p>(ت) توفير مكان مناسب للأفراد العاملين على المعدات بالمهبط.</p> <p>(ث) توفير مكان مناسب لعمل الصيانة والإصلاح للمعدات وتخزين قطع الغيار (ورشة ، مخزن).</p> <p>(ج) مراعاة تدوين كود الشركة مع رقم المعدة / السيارة في مكان مناسب على المعدة.</p> <p>(ح) مراعاة وضع العلامات الدولية الخاصة بالعمل ليلاً أعلى المعدات بما في ذلك العواكس الفسفورية.</p> <p>(خ) أن تزود الشركة أفراد الخدمات الأرضية بزي خاص يحمل اسم الشركة يتحتم ارتداؤه أثناء وجودهم على المهبط.</p> <p>(د) تقوم كل شركة بكتابة تعليمات التشغيل الأساسية لكل معدة وتوضع على المعدة في متناول القائم بتشغيلها وتغلق بالبلاستيك وتعتمد من المسئول بالشركة.</p> <p>(ذ) تدريب الأفراد القائمين بالصيانة والتشغيل على إجراءات الأمان المعتمدة وإتمام تنفيذ برامج الصيانة اليومية والدورية للمعدات أثناء التشغيل لضمان صلاحيتها.</p> <p>(ر) أن يتم إعادة تموين المعدات المتحركة بالوقود من محطة تموين متوفّر فيها المواصفات الفنية الازمة وإجراءات التأمين ضد الحريق.</p>	<p>61-301 دليل العمل:</p> <p>(أ) يجب أن يكون متاحاً في موقع العمل لجميع العاملين .</p> <p>(ب) يجب أن يكون معتمد.</p> <p>(ت) يجب أن يكتب تاريخ التعديل ورقمه على كل صفحة.</p> <p>(ث) يجب تحديد الشخص المسئول عن تعديل الدليل.</p> <p>63-301 الموضوعات التي يجب أن يتضمنها دليل العمل:</p> <p>(أ) الهيكل التنظيمي للشركة.</p> <p>(ب) مسؤوليات وواجبات كل مسؤول بالشركة.</p>	ECAR PART 301 SUBPARTE
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		<p>(ت) قائمة بجميع الأنشطة التي ستقوم الشركة بمزاولتها.</p> <p>(ث) قائمة بالمعدات وتشمل الآتي:-</p> <ul style="list-style-type: none"> (1) مواصفات المعدة. (2) بيانات وتعليمات تشغيل المعدة. (3) عدد العاملين اللازمين لتشغيل المعدة وتأهيلهم . (4) تعليمات التشغيل في حالة الطوارئ. <p>(ج) دليل الصيانة لكل معدة وتشمل :-</p> <ul style="list-style-type: none"> (1) برامج الصيانة اليومية و الدورية لكل معدة. (2) الاختبارات الواجب اجراؤها قبل تشغيل المعدة. <p>(ح) قائمة بالطرازات التي تقوم الشركة بخدمتها وتشمل الآتي :-</p> <ul style="list-style-type: none"> (1) الطراز. (2) أبعاد الطائرة. (3) ارتفاعات و أبعاد أبواب الطائرة (4) عدد الركاب. (5) حمولة البضائع ووسيلة تخزينها. <p>(خ) بيانات بالمطارات التي تقوم الشركة بخدمتها وتشمل الآتي:-</p> <ul style="list-style-type: none"> (1) رسومات توضيحية للممرات الرئيسية والفرعية. (2) رسومات توضيحية لمواقف الطائرات. (3) المصطلحات الفنية المتعلقة بساحة المطار. (4) طرق الخدمة و الدخول إلى موقف الطائرات و الخروج.
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	<p>(5) رسومات توضيحية لأماكن صالات الركاب.</p> <p>(6) تعليمات أمن التحركات وحدود السرعة و المسارات والاتصالات.</p> <p>(د) دليل التدريب يوضح سياسة التدريب وكيفية ضمان تاهيل العاملين للتشغيل و استخدام المعدات وبه برامج التدريب المعتمدة من سلطة الطيران المدني.</p> <p>(ذ) قائمة بالشركات المتعاقد معها لأداء أنشطة الخدمات الأرضية و مع ضرورة إرفاق صورة من هذه التعاقدات بدليل العمل.</p> <p>(ر) النماذج المستخدمة في تأدية الخدمة و بيان كيفية استخدامها.</p> <p>(ز) وثيقة تأمين.</p> <p>(س) إجراءات العمل لكل نشاط.</p> <p>(ش) برامج التقييم الداخلي.</p> <p>(ص) برامج المحافظة على البيئة.</p> <p>(ض) البرنامج الأمني طبقاً للتشريع رقم 107 فيما يتعلق بنشاط الشركة أو المنشأة .</p>	<p>متطلبات التدريب على أنشطة الخدمة الأرضية:</p> <p>81-301 تدريب الأفراد :</p> <p>(أ) يجب أن يتم وضع وتنسيق برامج التدريب وتعتمد بواسطة سلطة الطيران المدني.</p> <p>(ب) يجب أن تؤدي الخدمة بواسطة أطقم مدربة .</p> <p>83-301 مجالات التدريب :</p> <p>(أ) خدمة الحقائب والركاب والأمتعة.</p> <p>(ب) خدمة الطائرات في منطقة الإقلاع (المهبط).</p> <p>(ت) خدمة البضائع والبريد بما فيها البضائع الخطيرة.</p> <p>85-301 أنواع التدريب:</p> <p>تدريب المناهج بواسطة مدربي متخصصين وطبقاً للمعايير الدولية ومتطلبات سلطة الطيران المدني.</p> <p>يجب أن يحتوى برنامج التدريب على الأنواع التالية تفصيلا:</p>
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		<p>(أ) المتطلبات الأساسية للأفراد حديثي الالتحاق بالشركة:</p> <ul style="list-style-type: none"> (1) يجب على المرشحون الحصول على مؤهل متوسط مناسب. (2) الإلمام باللغة الإنجليزية. (3) الحصول على رخصة أو تصريح قانوني للعمل في مجال المعدات الأرضية لممارسة النشاط إذا كانت مطلوبة. <p>(ب) يجب أن يحتوى التدريب الأساسي للأفراد الجدد ما يلى:</p> <ul style="list-style-type: none"> (1) التدريب التأهيلي بالخدمات الأرضية. (2) التدريب على إجراءات تقديم الخدمة الأرضية . (3) التدريب على القواعد والإجراءات وموضوعات الأمان في المطارات التي تؤدى بها الخدمة. (4) التدريب على المعدات المستخدمة وحدود التشغيل واحتياطات الأمان والصيانة. (5) البيئة – الإصدارات البيئية. (6) وصف وتشغيل ومتطلبات الأمان للطائرات التي يتم خدمتها. (7) العوامل البشرية <p>(ت) الدورات التدريبية للتدريب على الاختلافات بين المعدات من نفس الفصيلة ويجب أن تغطي البنود من بـ2 بـ7 المذكورة بعاليه.</p> <p>(ث) التدريب من خلال الدورات التنشيطية يجب أن يعقد كل 3 سنوات على الأكثر متضمناً التدريب على التشريعات.</p> <p><u>87-301 دليل التدريب بالشركة:</u></p> <p>يجب أن يحتوى الدليل على التفاصيل الآتية:</p> <p>(أ) وصف مبنى الشركة ومحوياته مثل فصول التدريس، المعامل، الورش، المختبرات،</p>
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	<p>أجهزة مساعدات التدريب وأقسامها، غرف قضاء أوقات الفراغ والمكتبات.</p> <p>(ب) خطة التدريب.</p> <p>(ت) القواعد العامة لأقسام التدريب وتصنيف متطلبات التقدم إليه كذلك قواعد الرسوب والنجاح وعمليات التقييم المختلفة.</p> <p>(ث) برامج التدريب والامتحانات.</p> <p>(ج) شهادات أو نتائج الدورات.</p> <p><u>301-89 التصديق على برنامج ومناهج التدريب:</u></p> <p>يجب على قسم التدريب الحصول على التصديق لجميع برامج التدريب على الأقل بـ15 يوم قبل البدء في تنفيذه أول مرة وذلك باستخدام نماذج التطبيق المناسبة والمعتمدة بواسطة سلطة الطيران المدني ويجب أن يحقق التدريب الشامل للمناهج الآتي:-</p> <p>(أ) يجب أن تتوافق مع قياسات التدريب الصادرة من الطيران المدني للتدريب (ECASH).</p> <p>(ب) يجب وضع برامج لكل منهاج يحتوي على جدول لكل جزء من المنهج بما يتناسب مع مستوى المتدرب.</p> <p>(ت) المراجع التي أشتق منها أجزاء المنهج.</p> <p>(ث) يجب أن يوضح المنهج:</p> <p>(1) المشروعات العملية المطلوب إتمامها.</p> <p>(2) قائمة بالحد الأدنى من الاختبارات.</p> <p><u>301-91 المتطلبات الواجب توافرها في المدرب:</u></p> <p>(أ) تقدم إدارة التدريب (أو المتعاقد معها) المدربين الحاصلين على الشهادات والمؤهلات التي تراها السلطة ، لتقديم الإشراف للطلبة والذي يشمل مدرب واحد على الأقل لكل 18 طالب.</p> <p>(ب) يجب أن يستوفى المدرب الشروط التالية:</p> <p>(1) أن يكون قد حصل على منهج تدريبي وقد اكتسب الخبرة المماثلة لهذا النوع من التدريب.</p> <p>(2) يجب أن يكون قد حصل على التدريب التخصصي الخاص بالموضوعات التي سيدرسها.</p>	
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	<p>(3) يجب أن تقدم إدارة التدريب طلب لاعتماد المدرب قبل البدء في أي نشاط تدريبي يتطلب تصديق.</p> <p>93-301 متطلبات شركة الخدمات الأرضية من الأفراد والتصاريح والشهادات أو التصديقات:</p> <p>(أ) غير مسموح لأي فرد صيانة أو تشغيل (بشركة الخدمات) أن يؤدي واجبات الخدمة الأرضية دون أن يكون قد اجتاز امتحان من خلال لجنة امتحان معتمدة بالشركة بهذا الخصوص.</p> <p>(ب) غير مسموح للجنة الامتحان المعتمدة بالشركة أن تعطى أي اعتمادات للمرشح قبل:</p> <ul style="list-style-type: none"> (1) التأكد من حصول المرشح للأتي: <ul style="list-style-type: none"> (i) رخصة قيادة مناسبة تكون سارية المدة إذا كانت مطلوبة. (ii) شهادة بحصول المرشح على المناهج المعتمدة ذات الصلة. (iii) دليل بإتمام التدريب العملي. (iv) التصديق اللازم من سلطات المطار. <p>(2) أن يجتاز بنجاح الاختبارات التحريرية والشفوية والعملية.</p> <p>(ت) يجب على الشركة الاحتفاظ بكل سجلات التدريب والشهادات والاختبارات والتصاريح والرخص والتصديقات.</p> <p>(ث) يجب أن تقدم الشركة أو أي فرد من أفراد التشغيل الدليل على الحصول على الاعتماد المطلوب لأداء العمل.</p> <p>نظام قياس ومراقبة الجودة:</p> <p>101-301 متطلبات نظام الجودة بالشركة:</p> <ul style="list-style-type: none"> (أ) يصمم بأسلوب يحقق أقل تأثير سلبي على برنامج العمل (ب) يلتزم بمعايير الـ IATA وسلطة الطيران المدني 	ECAR PART 301 SUBPART H
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		<p>(ت) أن يؤدي إلى ثبات وانتظام العمل في أقصر وقت.</p> <p>(ث) يتناول كل الأنشطة الرئيسية.</p> <p><u>103-301 أهداف نظام الجودة بالخدمة الأرضية:</u></p> <p>(أ) ثلاثة أهداف بسيطة:</p> <ul style="list-style-type: none"> (1) تطبيق نظام دقيق لقياس الجودة ونظام التحكم. (2) الموافقة على معايير شركات الطيران. (3) تقديم نتائج دقيقة لشركات الطيران في التوقيتات المحددة. <p>(ب) التفتيش على الشركة سنويًا.</p>	
		<p><u>إجراءات الفحص والتتفيد:</u></p> <p>تعتبر الأفعال التالية مخالفة للأسس والقواعد المنصوص عليها في قانون الطيران المدني رقم 28 لسنة 1981 وتعديلاته.</p> <ul style="list-style-type: none"> (أ) تشغيل معدة أرضية بدون مستندات رسمية. (ب) تشغيل معدة أرضية بعد انتهاء سريان أي مستند لها. (ت) تشغيل معدة أرضية او النية في تشغيلها وبها إعطال فني يؤثر على سلامة الطيران. (ث) مخالفة برنامج الصيانة المعتمد للمعدة الأرضية. 	ECAR PART 301 SUBPART I
		<p><u>127-301 نظام إدارة السلامة (SMS):</u></p> <ol style="list-style-type: none"> 1 - يحدد أخطار السلامة 2- يضمن تنفيذ الإجراءات التصحيحية للحفاظ السلامة 3- يقوم بعمليات رصد وتقييم لمستوى السلامة 4- يهدف إلى التحسن المستمر في مستوى السلامة. <p>ج- وجود النشرة الإرشادية EAC00-11 لتفاصيل عن SMS .</p>	ECAR PART 301 SUBPART J

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	<u>141-301 سجلات الصيانة:</u>	
	<p>(أ) برنامج الصيانة المعتمد ينفذ من خلال السجلات الآتية:</p> <ul style="list-style-type: none"> (1) سجلات أعمال الصيانة تفصيلاً بالنسبة للمعدات الأرضية. (2) القراءة الكلية لعداد الكيلو مترات (او ما يتاسب مع المعدة) (3) القراءة الكلية لعداد الكيلو مترات (او ما يتاسب مع المعدة) منذ آخر عمرة للمعدات. (4) الحالة الحالية للفحص على المعدات ومدى ملاءمتها لتنفيذ برامج الصيانة المصدق عليها. (5) تفاصيل التعديلات والإصلاحات الجارية للمعدات والمحركات. <p>(ب) يجب الاحتفاظ بالسجلات المذكورة في الفقرة (أ) كما يلي:</p> <ul style="list-style-type: none"> (1) البند (أ)(2) ، (أ)(5) لمدة 12 شهر بعد سحب المعدة من الخدمة (2) البند (أ)(3) ، (أ)(4) حتى العمرة التالية أو التفتيش المقابل لها، يتم التحفظ لمدة 90 يوم لمجال العمل بعد العمرة أو الكشف. (3) البند (أ)(1) لمدة 24 شهراً بعد عودة المعدة للخدمة. 	ECAR PART 301 SUBPARTL

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FLIGHT NO.	DATE

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لا		
نعم		
	وجود مشرف للمعدات أثناء تأدية الخدمة	1
	الالتزام بتوقيتات تواجد دخول المعدات على الطائرة	2
	اختبار الفرامل قبل الدخول على الطائرة	3
	الالتزام بأرتداء / استعمال مهام الامان	4
	وجود تسريحات ببعض المعدات أثناء تأدية الخدمة على الطائرة	5
	وجود طفيفات حريق على المعدات	6
	وضع شوكسات للمعدات	7
	وجود اعداد مناسبة من افراد التشغيل	8
	وجود افراد لتوجيه المعدات أثناء دخولها على الطائرة	9
	وجود اقماع الأمان / صلاحية عوائل الاقماع	10
	الالتزام بتكليف سائقى المعدات وفقاً لمستوى رخص القيادة خاصتهم	11
	تم عمل FOD حول الطائرة	12
	تداول الحقائب (ووفقاً للتعليمات - التزام بالتعليمات)	13
	هل تم وضع اقماع اطراف الاجنحة عن وصول الطائرة ؟	15
	هل ارض المهبط خالية من السوائل المنسوبة ؟	16
	هل منطقة الموقع خالية من المعدات التي يمكن ان تتعوق ووصول او افلاع الطائرة ؟	17
	هل تم ركن معدات المهبط في أماكنها الصحيحة ؟	18
	في حالة عدم استخدام معدة هل يتم اطفاء المعدة وتنشيف فرامل اليد ؟	19
	هل تم التأكد من خلو مخازن العفش من حقائب الوصول ؟	20
	هل تم التأكد من الحقائب بأنه مطبوع عليها رقم الرحلة ؟	21
	هل تم التأكد من ربط جميع الشبک الخاص بمخازن العفش ؟	22
	هل تم التأكد من نظافة المخازن بعد تفريغ الحقائب ؟	23

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		<p style="margin: 0;">هل تم التأكيد بتحميل كل الحقائب في مخازن الطائرة عند الإقلاع ؟</p>	25
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التعليقات :

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Sig :

Auditor: :

Sig.:

Safety & Quality Director

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1.2 Ground Handling Check-in / Load Control Audit Checklist

							Safety&Quality Department	
Station Name:				Auditee name & position				
Audit Team Members:				Activity : Ground Handling				
. no.	Question/Requirement	Compl y		NA	Ref			
		Sat.	Unsat.					
-	<u>Organization</u>	-	-	-	-	-	-	-
1	The Service provider shall have a management system that ensures control of ground handling operations and the management of safety and security outcomes							
2	The Service Provider shall have a manager for ground handling operations that: i. Has the authority and is responsible for the management and supervision of functions and activities within the scope of ground handling operations; ii. Is accountable to senior management for ensuring the safety of ground handling operations							

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3	<p>The Service Provider shall ensure the management system defines the accountability, authorities and responsibilities of management and non-management personnel that perform functions relevant to the safety and/or security of ground handling operations. The management system shall also specify:</p> <ul style="list-style-type: none"> i. The levels of management with the authority to make decisions regarding risk tolerability with respect to the safety and/or security of ground handling operations; ii. Responsibilities for ensuring ground handling operations are conducted in accordance with applicable regulations and standards of the Operator; iii. Lines of accountability throughout ground handling operations, including direct accountability for safety and/or security on the part of ground handling operations senior management 										
4	<p>The Service Provider shall have a process for the delegation of duties within the management system for ground handling operations that ensures managerial continuity is maintained when operational managers are absent from the workplace</p>										

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5	The Service Provider shall have a communication system that enables an effective exchange of information relevant to the conduct of ground handling operations throughout the management system for ground handling operations and in areas where ground handling operations are conducted										
6	The Service Provider shall ensure the existence of the necessary facilities, workspace, equipment and supporting services, as well as work environment, to satisfy ground handling operational safety requirements										
7	The Service Provider shall ensure operational positions within the scope of ground handling operations are filled by personnel on the basis of knowledge, skills, training and experience appropriate for the position.										
8	The Service Provider shall have a system for the management and control of documentation and/or data used directly in the conduct or support of ground handling operations										

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9	The Service Provider shall ensure documentation used in the conduct or support of ground handling operations: i. Contains legible and accurate information; ii. Is presented in a format that is appropriate for use by ground handling personnel; iii. If applicable, is accepted or approved by the Authority										
10	The Service Provider shall have an Operations Manual, which may be issued in separate parts, that contains the operational policies, processes, procedures and other information necessary for ground handling personnel to perform their duties and be in compliance with applicable regulations, laws, rules and standards of the service provider										
11	The Service Provider shall ensure the current edition of the Operations Manual is available in a usable format at each location where ground handling operations are conducted										
12	The Service Provider shall ensure the OM contains the policies and associated guidance necessary to prevent dangerous goods from being inadvertently carried or loaded onto the aircraft										

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13	The Service Provider shall ensure a current edition of the IATA Dangerous Goods Regulations (DGR), the ICAO Technical Instructions for the Safe Transport of Dangerous Goods by Air (Technical Instructions) or equivalent documentation is accessible at locations where passenger check-in and/or boarding operations are conducted										
14	The Service Provider shall ensure the OM or an equivalent operational manual contains information that will permit ground handling personnel to carry out duties and responsibilities with respect to dangerous goods. As a minimum, such information shall include procedures to alert passengers that certain items of dangerous goods: i. Are specifically prohibited in hold baggage; ii. Must be removed from cabin baggage when cabin baggage is transported as hold baggage										
15	The Service Provider should ensure the OM or an equivalent operational manual contains information with respect to dangerous goods permitted in passenger and crew baggage										

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16	The Service Provider should ensure the processes and procedures contained in the OM for the conduct of ground handling operations are, as a minimum, equivalent to processes and procedures contained in the IGOM										
17	The Service Provider shall have a system for the management and control of ground handling records to ensure the content and retention of such records is in accordance with requirements of the Authority, as applicable, and to ensure operational records are subjected to standardized processes for: i. Identification; ii. Legibility; iii. Maintenance; iv. Retrieval; v. Protection and security; vi. Disposal or deletion (electronic records).										
18	If The Service Provider utilizes an electronic system for the management and control of operational ground handling records, The Service Provider shall ensure the system provides for a scheduled generation of back-up record files										

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19	The Service provider should have a process to ensure products purchased or otherwise acquired from an external vendor or supplier, which directly affect operational safety or security, meet the product technical requirements specified by the service provider prior to being used in the conduct of ground handling operations										
20	The service provider should have a process to ensure aircraft ground damages are reported to Nesma Airlines										
21	Contract or agreement between the service provider and Nesma Airlines for the provision of ground handling services in place, Identifies the application of measurable specifications that can be monitored by Nesma Airlines to ensure requirements that affect the safety and/or security of ground handling operations are being fulfilled by the service provider										
22	Agreement shall specify which ground handling services are to be provided										

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23	The service provider shall have a communication system that enables an effective exchange of information relevant to the conduct of ground handling operations throughout the management system for ground handling operations and in areas where ground handling operations are conducted, Controls shall be in place to ensure all relevant information is communicated to relevant organization staff										
24	The Service Provider shall have a management system that ensures control of ground handling operations and the management of safety and security outcomes, and clear Organization chart with duties and responsibilities for each job, and system of delegation.										
<u>Documents and Records</u>		-	-	-	-	-	-	-	-	-	-
25	Service Provider shall have his own ground operation manual, or a statement that they use IGOM										

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26	Trip File must be collected for every flight and retained for period at least 6 months and contains at least but not limited to: - Load and Trim Sheet Copy, signed by Commander. Manual or Computerized. - Loading Instruction, signed by Ramp Agent. - General Declaration signed by commander or station responsible for dispatch. - Passengers Name List (Embarked and Disembarked). - Depending on local situation, additional documents may be added to the Trip File, such as medical clearances that can be given to sick passenger on board.										
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27	The following documents must be available at each service provider performing Ground handling operations for Nesma Airlines operated flights: - Nesma Airlines Stations Operations Manual - Nesma Airlines Emergency Response Plan - Nesma Airlines Security Program - Nesma Airlines Flight Operations Manual - IATA Airport Handling Manual Current edition - IATA IGOM Current edition - IATA Dangerous Goods Regulations Current edition/ICAO DGR Technical Instructions. - Nesma Airlines Reading File (Contains all operational instructions or information that is not related to S.O.M amendments.) - Access to Nesma Airlines Contacts – Addresses											
<u>Airside Operation and GSE</u>												
28	The service provider should ensure a process is in place that assures only qualified and authorized personnel are permitted to operate ground support equipment											

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29	The Service provider shall ensure a program is in place for the maintenance of ground support equipment, which assures: i. A preventive maintenance program plan for each type of equipment; ii. Maintenance completed on such equipment is recorded; iii. Such equipment remains serviceable and in good mechanical condition.										
30	The Service provider should have practices and procedures are in place for the operation of ground support equipment used in aircraft handling operations that assure such equipment is operated in a manner that prevents damage to the aircraft and injury to personnel										
31	The Service provider must ensure personnel wear all PPE										
32	An FOD inspection has been made, FOD removed and properly disposed.										
33	All equipment is positioned outside aircraft clearance lines.										
34	The gate area is clear.										
35	The proper hand signals are used by marshaller, if marshaller is used										
36	Wands are used for marshalling and all signalling (illuminated in low visibility)										

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37	Aircraft chocks are properly installed according to airline procedures									
38	The grounding cable is connected to grounding point on Nose Leg (where available)									
39	Personnel wait until the aircraft has stopped, is chocked, anti-collision light off, engines shut down and "all clear" given by marshaller before approaching									
40	Wingtip/engine cones are properly positioned according to airline procedures									
41	Employees observe ramp safety rules (no horseplay, no smoking, etc.)									
42	Employees adhere to the "no seat, no ride rule"									
43	Employees walk rather than run on the ramp									
44	Local speed limits are observed by all drivers									
45	Roadways are used by equipment operators									
46	A guide-person is used when positioning equipment in confined areas									
47	A guide-person is used when backing equipment to the aircraft									
48	A guide-person is used when positioning high-reach trucks									
49	After positioning elevated units to the aircraft, stabilizers are immediately deployed									

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50	All vehicles make a stop for a brake check at the distance from the aircraft required by the airline									
51	The areas around cargo/passenger doors are visually checked for existing damage (dents, scratches, etc.) before ground equipment approaches									
52	Personnel check clearances when opening cargo/passenger doors									
53	Cargo/passenger doors are opened and secured properly by authorized personnel using required signals									
54	When mobile passenger steps are used, they are properly positioned to the aircraft. Stabilizers are deployed									
55	Personnel refrain from "Horseplay"									
56	The beltloader is in the full down position with handrail stowed when approaching the aircraft, when possible									
57	The beltloader front bumper is positioned below and away from the cargo door sill									
58	The beltloader handrail is raised when up to a wide body aircraft									
59	Employees refrain from walking, standing or sitting on a moving conveyor belt									

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60	Safety rails on wide body loaders are down upon approach to aircraft										
61	The container loader is properly positioned to the aircraft with stabilizers deployed										
62	Loader guardrails are installed for off/on load and stowed when cargo door is closed										
63	Employees use the ladder rather than riding up or down the loader platform										
64	Brakes are set on vehicles										
65	Where equipped, chocks are used on vehicles										
66	When carts/dollies are dropped off, the tractor comes to a complete stop, the hand brake is engaged and the driver dismounts to engage the brakes										
67	Locks on dollies are properly set prior to approach to container loader										
68	The operator's arms and legs are within the profile of vehicle at all times when moving										
69	Employees use correct body mechanics when loading/unloading or lifting										
70	Baggage is properly handled										
71	All container/cart doors or curtains are closed and fastened after loading										

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72	Baggage tractor hood/fender/seat or top of containers are free of baggage/cargo/mail										
73	All employees avoid driving equipment under the aircraft wing and fuselage										
74	Employees wear protective gloves when servicing lavatories										
75	The plug (donut) is properly installed and all access panels secured when lavatory servicing is finished										
76	The correct size of tractor is used for pushback										
77	A complete walk-around inspection is done to check that cargo/access doors are closed and secured, that there is no visible damage to the aircraft and that the gate area is clear of equipment										
78	Ground equipment is parked to avoid jet blast/prop wash/engine ingestion										
79	Wingtip clearance cones are removed and correctly stowed (if applicable)										
80	If the headset operator is not in the tractor they are clear of the nose gear when the aircraft is moving										
81	When utilized, Wing walkers are in position and using proper hand signals										
82	Wing walkers are aware of engine hazard zones										

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83	Employees understand the meaning of aircraft rotating beacons										
84	Employees avoid walking under the fuselage or stepping across the tow bar										
85	The marshaller is at the correct position to hold the aircraft brakes										
86	The tow bar is disconnected properly										
87	Chocks removed and correctly stowed.										
88	Vehicles are properly maintained										
89	a) Parking Brake - Foot Brake										
90	b) Windshield Mirrors, Windows Cracked/dirty										
91	c) Windshield wipers										
92	d) Wheels/tires										
93	e) Lights/reflectors										
94	f) Horn/back-up alarms										
95	g) No evidence of fluid leakage										
96	h) Cleanliness-interior and exterior										
97	i) Functional operating controls (levers, switches, etc.)										
98	j) Functional operating features (belts, casters, hoses, etc.)										
99	All vehicles requiring them have chocks										
100	The brake systems on carts/dollies operate properly										

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10 1	There is a complete complement of locks on all dollies										
10 2	Brakes are set on all carts/dollies										
10 3	Seats are provided for any passengers riding on equipment										
10 4	All safety devices are functional										
10 5	Fire extinguishers are installed on specified vehicles. Inspection tags are current										
10 6	Baggage containers are checked for serviceability prior to being loaded										
10 7	Sides on carts are in the up position; curtains closed during transport. Container doors are securely closed										
10 8	The beltloader is in the full down position when parked or moving on the ramp										
10 9	Rear doors of trucks are closed at all times when elevated and during movement on the ramp										
11 0	Trucks are driven with body lowered										
11 1	Vehicle doors are closed after the driver leaves										
11 2	The ramp is free of items which could cause FOD										
11 3	The ramp is swept regularly										
11 4	The ramp area is free of any fluid spillage										

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11 5	The ramp area is free of unnecessary congestion										
11 6	Gates are clear of equipment which may block the arrival or departure of an aircraft										
11 7	Ramp markings (taxi lines, etc.) are clearly identified										
11 8	Ground equipment is parked within marked areas										
11 9	All motorized vehicles are backed into parking spaces										
12 0	When not in use, all vehicles are shut off with parking brake on and transmission in park or neutral										
12 1	Aircraft chocks are properly stored when not in use										
12 2	There are sufficient numbers of trash cans, and they are emptied regularly										
12 3	All vehicles are free of any debris which could interfere with the safe operation of the vehicle or cause FOD										
12 4	Vehicles are free of evidence of smoking										
12 5	Towbars are disconnected from tugs when not in use										
12 6	Pallets/containers are stored off the ground and secured										
12 7	Emergency exits and equipment access is kept clear										
12 8	Catering truck approach procedures followed										
12 9	Catering truck positioning procedures followed										

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13 0	Catering truck operating procedures followed										
13 1	Engine inlet plugs used as required										
13 2	Catering truck removal procedures followed										
13 3	Catering truck is free of FOD; any FOD/garbage dropped on ramp removed										
13 4	Truck operated safely (e.g., speed, safety zones, reckless)										
13 5	Truck properly configured prior to removing from A/C										
13 6	Lavatory vehicle operating procedures followed										
13 7	Lavatory servicing procedures followed										
13 8	I. Water vehicle operating procedures followed II. Water Service certificates valid and available in station										
13 9	Cleaning vehicles approach procedures followed										
14 0	Cleaning vehicles positioning procedures followed										
14 1	Cleaning vehicles operating procedures followed										
14 2	All cabin cleaning safety procedures (e.g., biohazard, needle sticks) followed										
14 3	Cabin personnel support a FOD-free ramp/airside (e.g., pick up FOD)										
14 4	A/C door(s) operational procedures followed										

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14 5	Vehicle brakes must be checked before entering on the aircraft										
14 6	Equipment must approach aircraft at walking speed										
14 7	vehicle movements under wings must be prohibited										
14 8	Elevating devices must be driven in lowered position except for final positioning										
14 9	Guides and stabiliser on loaders must be properly deployed										
15 0	Allowance must be made for vertical aircraft movement										
15 1	Areas engine intake /exhaust personnel must keep clear										
15 2	No smoking must be respected										
15 3	Aircraft Handling and Loading										
15 4	Functions on the airside and responsibilities must be clearly defined										
15 5	The marshaller shall perform a departure check prior to commencing engine start procedure and arrival check before equipment entry to aircraft (even if the ground engineer has checked the aircraft), to ensure all cargo loading/handling equipment have been removed, all doors, panels are closed, no damage to aircraft										
	<u>Load Control</u>	-	-	-	-	-	-	-	-	-	-

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15 6	load control Must be based on three functions Function 1: Load control planning, weight and balance pre-calculation, and completion of loading instructions. Function 2: Supervising the loading of the aircraft in accordance with the Loading Instruction Report (LIR). Function 3: Completion and checking of the load sheet against the Loading Instruction Report (LIR) and other documents.										
15 7	The three load control functions must be carried out by at least two members of staff										
15 8	Any last minute change occurring after completion of the weight and balance sheet, must be brought to the attention of the commander										
15 9	Last minute change must be recorded on the weight and balance sheet, and also any reflection on passenger manifest/General Declaration/Loading Instructions must be amended accordingly										
16 0	Maximum last minute change used must be as specified in the operations manual										

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16 1	If applicable, copies of Nesma Airlines dry operating weights, dry operating indexes, and structural weights shall be available for load control staff and station use.								
16 2	Loading supervision must check loading is in compliance with loading instruction including accurate and timely reporting and recording of loading deviations								
16 3	The Handling Company shall ensure final verification of load sheet against loading instruction report prior to Captain's approval of load sheet								
16 4	Any exchange of information related to weight and balance of the aircraft must be communicated in writing								
	<u>Passenger Handling</u>	-	-	-	-	-	-	-	-
16 5	The Handling Company shall ensure that no unauthorised person have access to hold baggage once accepted at check-in								
16 6	The Handling Company shall ensure passengers are asked security questions								
16 7	The Handling Company shall ensure that stationery used to handle the Carrier's flight is stored securely								
16 8	Passengers must be positively identified against travel documents before baggage acceptance								

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16 9	Passenger-passport-boarding card verification shall be done at boarding gate								
17 0	Dangerous Goods notification sign must be prominently displayed at ticketing and check-in counters as well as boarding areas, passenger attention to be drawn to it.								
17 1	Check-in personnel must seek confirmation from passenger whenever it is suspected that his/her baggage may contain Hidden Dangerous goods, and report must be done according Nesma Airlines Procedures in case positive								
17 2	Check In personnel must ensure that no dangerous goods are carried as checked or carry-on baggage by passengers or crew except those permitted as per provisions in sub-section 2.3 of the IATA DGR Manual								
17 3	The Handling Company shall ensure flight details are being displayed on flight information boards, updated in case of delays, and with proper company logo display								
17 4	The Handling Company, as a minimum must open 01 Business (where applicable) and 02 Economy desks all the times								
17 5	UM, WCH and other passengers requiring special assistance must be promptly assisted to by trained personnel								

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17 6	Travel documents shall be checked online with TIM								
17 7	Baggage (hold and cabin) allowances must be effectively monitored and excess charges consistently applied								
17 8	handling personnel must confirm seat number, gate and boarding time to passenger								
17 9	In case of transfer passenger baggage tagged to the final destination and confirmed to passenger								
18 0	Passenger luggage which could not be accommodated onboard, and will be finally loaded in the cargo holds, requires to be re-checked against Dangerous goods, some items which could be permitted onboard, might not be permitted in the hold luggage.								
18 1	Service provider must ensure proper announcements are made for boarding first, mid, final calls, and also during delay to inform passengers about updates								
18 2	The Handling Company shall provide proper formalities in case of disruptive, inadmissible and deported passengers, controlled list of them must be available at the station as record								
18 3	Rush baggage must be subjected to additional security screening before loading or storing								

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18 4	The Handling Company provide a secure location or inside sterile area for mishandled baggage until forwarded or disposed										
	<u>Passenger Boarding Bridge</u>	-	-	-	-	-	-	-	-	-	-
	<u>Arrival</u>										
18 5	The bridge is fully retracted. If driveable type it is parked within its "Ramp Box"										
18 6	The bridge operator makes a visual check for clearance and the area beneath and within the travel of the boarding bridge is clear										
18 7	The gate and bridge areas are ready for arrival										
18 8	The bridge operator uses hearing protection										
18 9	There are not any obstructions present in the bridge										
19 0	Fall protection devices (doors/barriers) are utilized on the bridge										
19 1	The bridge operator is alert to devices on the fuselage										
19 2	Bridge warning devices operate (beacon, bell, etc.)										
19 3	The bridge auto levelling system is deployed and operating										
19 4	The boarding bridge is properly lighted										
19 5	The bridge is properly aligned to the aircraft										

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19 6	The weather canopy is deployed to the aircraft										
	<u>Departure</u>										
19 7	The bridge is properly aligned to the aircraft										
19 8	The bridge auto-levelling system is deployed and operating										
19 9	The bridge weather canopy is deployed to the aircraft										
20 0	The bridge is properly lighted										
20 1	The loading bridge is retracted before start of pushback										
20 2	The agent checks for clearances before retracting the bridge										
20 3	The bridge operator is alert to devices on the fuselage										
20 4	Bridge warning devices operate (bell, beacon, etc.)										
20 5	The weather door is closed when the bridge is stowed										
20 6	The agent remains on the bridge until the aircraft has pushed back										
	<u>Training</u>	-	-	-	-	-	-	-	-	-	-

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20 7	<p>The Service Provider shall have a process to ensure personnel that perform operational duties in functions within the scope of ground handling operations for the service provider</p> <p>Complete:</p> <ul style="list-style-type: none"> i. Initial training prior to being assigned to perform such operational duties; ii. Recurrent training on a frequency in accordance with requirements of the regulatory authority but not less than once during every 36-month period, except for recurrent training in dangerous goods 										
20 8	<p>The Service provider shall have a process to ensure the training programs completed by ground handling operations personnel in accordance with SOM Chapter 2 provide the knowledge necessary to perform duties, execute procedures and operate the equipment associated with specific ground handling functions and responsibilities.</p> <p>Such programs shall include:</p> <ul style="list-style-type: none"> i. Familiarization training on applicable regulations; ii. In-depth training on requirements, including policies, procedures and operating practices; iii. Training in human factors principles; iv. Safety training on associated operational hazards 										

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20 9	The service provider shall have a process to ensure training for personnel that perform operational duties in functions within the scope of ground handling operations for Nesma Airlines: i. Includes testing or evaluation by written, oral or practical means, as applicable; ii. Requires a demonstration of adequate knowledge, competency and proficiency to perform duties, execute procedures and/or operate equipment										
21 0	The Service provider shall have a process to ensure completion of required training by personnel that perform operational duties in functions within the scope of ground handling operations for the Operator is recorded and such records are retained										
21 1	The Service provider shall have a process to ensure the training programs completed by ground handling operations personnel in accordance with SOM Chapter 2 are reviewed and updated to remain relevant and current.										

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21 2	<p>The service provider shall have a process to ensure ground handling personnel receive dangerous goods training, to include initial training and recurrent training not more than 2 years. Such training shall be completed by personnel that perform operational duties in the following functions within the scope of ground handling operations:</p> <ul style="list-style-type: none"> i. Passenger handling; ii. Baggage handling; iii. Aircraft loading; iv. Load control 										
21 3	<p>The Service provider shall have a process to ensure initial and recurrent training completed by applicable ground handling personnel in accordance with SOM Chapter 2 addresses the following areas of operations, as applicable to ground handling duties or function(s) performed:</p> <ul style="list-style-type: none"> i. Airside Driving; ii. Load control; iii. Passenger Handling; iv. Baggage handling; v. Aircraft Handling and Loading; vi. Passenger Boarding Bridge; vii. Aircraft Loading Supervision; viii. Aircraft Ground Movement; ix. Fueling Operations; x. De/Anti-Icing Operations; 										

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21 4	The Service provider shall have a program that ensures ground handling operations personnel are trained and competent to perform SMS duties. The scope of such training shall be appropriate to each individual's involvement in the SMS								
21 5	Service provider must ensure staff are trained for each function according the requirements set in SOM Chapter 2 before performing any duties related to Nesma Airlines Flight								
21 6	if applicable, training syllabus must bbe approved by the Authority								
21 7	Dangerous goods training according table 1.5.1 DGR IATA Book								
21 8	Written test must be done after the theoretical training, with passing rate 80%								
21 9	Service Provider must have follow up system to check training of staff on duty								
22 0	Dangerous goods training recurrent shall be given at intervals of no longer than 2 years								
22 1	Personnel assigned to perform ground handling duties in airside operations for Nesma Airlines including the operation of ground support equipment complete initial and recurrent Air Side Safety Training, and human factor training								

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22 2	Frequency of recurrent training for each subject, must not be less than provided in SOM Chapter 2								
22 3	Training syllabus for all service provider staff shall be performed according to SOM Chapter 2								
22 4	Ground Handling staff responsible for Passenger/baggage/aircraft handling shall receive Security Training and Awareness sessions, conducted on an initial and recurrent basis (Ref. ECAA Regulation requirement)								
22 5	The service provider shall ensure a program is in place for the maintenance of ground support equipment, which assures: i. A preventive maintenance program plan for each type of equipment; ii. Maintenance completed on such equipment is recorded; iii. Such equipment remains serviceable and in good mechanical condition.								
	<u>Emergency Procedures</u>	-	-	-	-	-	-	-	-
22 7	The Service provider shall have an emergency management plan is in place for responding to accidents or other emergencies that may occur during aircraft ground handling operations								

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22 8	The Service provider shall have a process is in place that requires dangerous goods accidents or incidents to be reported to Nesma Airlines to enable reporting to required states									
22 9	The Service provider shall have procedures are in place for responding to emergencies that require the evacuation of an aircraft during the conduct of ground handling operations									
23 0	Procedures for Incident/Accident requiring passenger evacuation shall be made available to staff									
23 1	The Service provider shall have procedures are in place for response to ground handling incidents									
23 2	The Service provider should have a process is in place for the retention of records of accidents and incidents associated with aircraft ground handling operations									
	<u>Communication</u>	-	-	-	-	-	-	-	-	-
23 3	Service provider shall have contacts of operational key persons and duty numbers of Nesma Airlines departments									
23 4	Contacts during emergency must be clear and available for staff use									

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23 5	Following Telexes shall be sent for every flight as applicable: MVT (Arr/Dep/ETD) - LDM - PSM - TPM - PTM - SOM to (CAINOXH-CAINSXH) and additionally to destination										
<div style="display: flex; justify-content: space-between;"> Auditor Safety&Quality Director </div> <div style="display: flex; justify-content: space-between; margin-top: 20px;"> Sign Sig n </div> <div style="display: flex; justify-content: space-between; margin-top: 20px;"> Issue no. : (1) Form no. F </div> <div style="display: flex; justify-content: space-between;"> Issue date: 1/10/2010 391 </div> <div style="display: flex; justify-content: space-between;"> Rev.no.. </div>											

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1.3 Nesma Airlines Station internal Audit Checklist

						Safety&Quality Department
Station Name:		Auditee name & position				
Audit Team Members:						Activity : Internal Audit on Own Station
. no.	Question/Requirement	Comply		NA	Ref	
		Sat.	Unsat.			
1	Documents and Manuals					
2	Uniform					
3	Transportation Car					
4	Attitude with passengers, Crew					
5	Trip File Condition and storage					
6	Lost and Found files keeping					
7	Lost property keeping					
8	Baggage reconciliation					
9	Security sign					
10	DGR and Liquids Sign					
11	Checklists used					
12	DOW/DOL tables (Last Revision)					
13	Material Stock					
14	Exb Collection Receipts Stock and reconciliation					
15	Procedure of Hand baggage					
16	Special Service passengers procedures					
17	Supervision for Fuel Company					
18	Supervision for Ground Handling Company					
19	Supervision for Passenger Services Company					
20	Supervision for Catering Company					
21	Personal files training					
22	List of Staff in the station					
23	Security Department Files					
24	Technical Department Files					
25	Equipment condition (PC-Printer)					
26	On Time Performance for flights					
27	Readiness for Manual Check-in					
28	Aircraft Cleaning notes					
29	Flight Permissions					
30	Statistics of flights and passengers					
31	On Time Reporting					
32	Comments for Crew Hotac					
Auditor						Safety&Quality Director
Sign						Sign
Issue no. : (1)		Issue date: 1/10/2010		Rev.no..	Form no. F 391	

Issue No.: 09

Issue Date: JAN24

Revision No.: 00

Revision Date: JAN24

1.4 De-Anti-Icing Audit Checklist

Safety&Quality
Department

Department Name:		Auditee name & position			
Activity :					
. no.	Question/Requirement	Comply		NA	Ref
		Sat.	Unsat.		
<u>Organization</u>					
1	Is there Management Chart of Anti-/De-Icing function.				
2	Are there any Approvals / Certificates by authority or quality standards.				
3	Is there internal auditing process within the company.				
<u>Equipment</u>					
4	Are there adequate facilities and equipment available, and subject to Maintenance Program.				
5	Is vehicle tanks/filling ports labeled for fluid Type and/or Mixture				
<u>Fluids and materials</u>					
6	Does the Acceptance procedures of fluids before storage includes check of (Certificate of Conformance), and checks if they were manufactured in accordance with ISO Specification.				
7	Are procedures in place related to (Storage, Handling and Application in accordance with criteria established, fluid manufacturer, aircraft manufacturer, and SAE Recommendation.				
<u>Procedures</u>					
8	Is there a check that aircraft is properly configured by flight crew prior to beginning the de-/anti-icing process.				
9	Is there a process to ensure the flight crew is given all necessary information relevant to fluid(s) applied to the aircraft surfaces				
10	Is a Confirmation of clean aircraft, and "all clear" signal is given prior to A/C movement to flight crew				
11	Is there documentation with Methods of applying de-icing and anti-icing fluid to produce an aircraft free of contamination (clean aircraft).				
12	Is there limitations observed to successfully complete the process, including correct fluid mixtures, fluid temperatures and nozzle pressure,				
13	Is holdover times and tables implemented.				
14	Is there a method to identify Critical area per aircraft.				
15	Where de-icing/anti-icing is carried out at an area away from the gate, who certifies that the aircraft has been correctly de-iced/anti-iced and that appropriate surfaces are free of all forms of frost, ice, slush and snow.				
<u>Training</u>					
16	Is there an Initial and recurrent training				
17	Is the training syllabus includes but not limited to below syllabus:				
1	Effects of frost , ice , snow , slush and fluids on aircraft performance .				
2	Basic characteristics of aircraft de -icing /anti -icing fluids , including causes and consequences of fluid degradation and residues				
3	General techniques for removing deposits of frost , ice , slush , and snow from aircraft surfaces and for anti -icing .				
4	De -icing /anti -icing procedures in general and specific measures to be performed on different aircraft types .				
5	Types of checks required .				
6	De -icing /anti -icing equipment and facilities operating procedures including actual operation .				
7	Safety precautions .				
8	Emergency procedures .				
9	Cold weather operation				
10	Fluid application and limitations of holdover time tables .				
11	De -icing /anti -icing codes and communication procedures .				
12	Environmental considerations , e.g. Where to de -ice , spill reporting , hazardous waste control .				
13	New procedures and development , lessons learned from previous winters .				
14	Conditions which can lead to the formation of ice on the aircraft .				
18	Is there a test after the training and passing grade is more than 75%				
Auditor		Safety&Quality Director			
Sign _____ Issue No.: 09 Issue no. : (1)		Sign _____ Revision No.: 00 Form no. F 391			
Issue date : 1/10/2010 Rev .no..					
Issue Date: JAN24		Revision Date: JAN24			

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1.5 Fuel Service Provider Audit Checklist

Nesma Airlines نسماء طيران		Safety&Quality Department		
Station Name:	Auditee name & position			
Audit Activity : Refueling	Team	Members:		
. no.	Question/Requirement	Comply	NA	Ref
Sat	Unsat.			
<u>Organization</u>				
1	Is there Management Chart of Fueling function.			
2	Are there any Approvals / Certificates by authority or quality standards.			
3	Is there internal auditing process within the company.			
<u>Fuel Facilities</u>				
4	Are the storage tanks inlet and outlet filters sump checks performed daily and results recorded			
5	Is the inlet filter pressure differential check performed weekly			
6	Is the filter separator millipore test performed monthly			
7	Is the microbial contamination check performed quarterly			
8	Are the hydrant low point checks performed weekly			
<u>Vehicle</u>				
9	Are the vehicles clean and good mechanical condition			

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10	Are the grade plates present and in good condition					
11	Are the bonding system wires in good condition					
12	Are the grounding wire continuity checks performed monthly					
13	Are the fire extinguisher available, and are the inspection limits valid					
14	Are the fueling nozzle protective covers attached and serviceable					
15	Are the fueling nozzle screens checked for cleanliness monthly					
16	Are the deadman controls in good condition and operational					
17	Are the deadman controls and fuel cut-off checks performed monthly					
18	If brake interlocks are installed, are they functional					
19	Are the tank sump drain and the filter sump drain checks performed daily					
20	Are the filter pressure differential checks at maximum flow rate performed weekly					
21	Is the filter millipore test performed monthly					
22	Are all vehicle meters (Fuel Volume) within six months of last calibration					
23	Are the pressure control system functional tests performed every six months					
24	Is those high pressure checks performed every six months					
<u>Training</u>						
25	Is there an Initial and recurrent training					
26	Syllabus of Training Shall Include but not limited to: 1) Familiarization training on general provisions and regulations. 2) Procedures.					

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	3) Required communication procedures. 4) Human factors principles. 5) Safety. 6) Emergency evacuation in case of dangerous situations 7) Firefighting and personal protection.					
27	Is there a test after the training and passing grade is more than 80%					
Auditor			Safety Director Quality Director			
Sign			Sign			
Issue no. : (1) date: 1/10/2010		Issue Rev.no..		Form no. F 391		

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Appendix 4 Nesma Airlines Current Fleet

Nesma Airlines Fleet consisting of A320 aircrafts with below registrations, seat configurations and maximum take off weights Limitations

REG: SUNML/G Capacity 180Y, Configuration 08C168Y MTOW 78 Ton

Maximum Design Weights (in kilograms) for A320 SUNMG/L:

Max Design Taxi Weight MTW77400kg

Max Design Take-off Weight MTOW77800 kg

Max Design Landing Weight MLW 64500 kg

Max Design Zero Fuel Weight MZFW 61000 kg

REG: SUNMR Capacity 180Y, Configuration 08C168Y MTOW 77 Ton

Maximum Design Weights (in kilograms) for A320 SUNMR

Max Design Taxi Weight MTW77400kg

Max Design Take-off Weight MTOW77000 kg

Max Design Landing Weight MLW 66000 kg

Max Design Zero Fuel Weight MZFW 62500 kg

Nesma Airlines Ground Handling Department responsible for updating all GSP in operating stations with Aircrafts above mentioned data,