B737

AIRCRAFT TYPE: B737-800, -900, -900ER

Aircraft Doors — Sill Heights and Dimensions

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>737-800 MAX (AT OEW)</th>
<th>737-800 MIN (AT MTW)</th>
<th>737-900 MAX (AT OEW)</th>
<th>737-900 MIN (AT MTW)</th>
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<tbody>
<tr>
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<td>TOP OF FUSELAGE</td>
<td>10-3</td>
<td>5.58</td>
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<tr>
<td>B</td>
<td>ENTRY DOOR NO 1</td>
<td>5-0</td>
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<tr>
<td>C</td>
<td>PWD CARGO DOOR</td>
<td>4-9</td>
<td>1.45</td>
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</tr>
<tr>
<td>D</td>
<td>ENGINE</td>
<td>2-1</td>
<td>0.64</td>
<td>1-7</td>
</tr>
<tr>
<td>E</td>
<td>WINGTIP</td>
<td>12-10</td>
<td>3.91</td>
<td>12-0</td>
</tr>
<tr>
<td>F</td>
<td>AFT CARGO DOOR</td>
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<td>1.80</td>
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<tr>
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<td>J</td>
<td>VERTICAL TAIL</td>
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<td>12.62</td>
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NOTES: CLEARANCES SHOWN ARE NOMINAL. ADD PLUS OR MINUS 3 INCHES TO ACCOUNT FOR VARIATIONS IN LOADING, OIL AND TIRE PRESSURES, CENTER OF GRAVITY, ETC.
### AIRCRAFT TYPE/MODEL: B737-800

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<th>Requirement</th>
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<td></td>
</tr>
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<td><strong>Air Conditioning</strong></td>
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<td></td>
</tr>
<tr>
<td>Maximum Flow Rate</td>
<td>150 cfm</td>
<td>68 kgs</td>
</tr>
<tr>
<td>Maximum Output Pressure</td>
<td>32 psi</td>
<td>1.8 kgs/cm²</td>
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<tr>
<td>Cooling Capacity</td>
<td>250 kgs</td>
<td>107 kg/cm³</td>
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<tr>
<td>Heating Capacity</td>
<td>200 to 300 lbs</td>
<td>200.000 to 300.000 lbs (Approximate value)</td>
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<td></td>
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<td>3.2 kgs/cm³</td>
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<tr>
<td>Minimum Pressure</td>
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<td>3.2 kgs/cm³</td>
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<tr>
<td>Total Capacity</td>
<td>60 U.S. gal</td>
<td>100 L</td>
</tr>
<tr>
<td>Maximum Pressure</td>
<td>35 psi</td>
<td>3.2 kgs/cm³</td>
</tr>
<tr>
<td>Recommended Flow Rate</td>
<td>25 gpm 114 l</td>
<td>25 gpm 1.14 kg/cm³</td>
</tr>
<tr>
<td><strong>Lavatory</strong></td>
<td></td>
<td></td>
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<tr>
<td>Total Waste Capacity</td>
<td>60 U.S. gal</td>
<td>228 L</td>
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<tr>
<td>Total Race Capacity</td>
<td>74 U.S. gal</td>
<td>350 L</td>
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<tr>
<td>Maximum Delivery Pressure</td>
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<tr>
<td>Recommended Flow Rate</td>
<td>10 gpm 38 l</td>
<td>38 gpm 0.38 kg/cm³</td>
</tr>
</tbody>
</table>

**Note:**
This chart contains standard information from aircraft manufacturers; however, some operators may have changed specifications in their aircraft servicing systems. Therefore, particular care must be exercised when servicing such aircraft.
### Dimensions

**Date:** 05-JUN-13  
**Chapter:** 02.00.01  
**Rev:** 00  
**Page:** 6

#### On Ground Aircraft Service

**B777-200**

![Diagram of B777-200](image)

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<td>J</td>
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<tr>
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<td>L</td>
<td>23.6</td>
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<td>M</td>
<td>26.2</td>
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</table>

**NOTES:** Vertical clearances shown occur during maximum variations of airplane attitude. Combinations of airplane loading and unloading activities that produce the greatest possible variations in attitude were used to establish the variations shown.

During routine servicing, the airplane remains relatively stable, pitch and elevation changes occurring slowly.
B787

Table of Measurements:

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<td>F (FR ENGINES)</td>
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<td>4.61</td>
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<td>23 - 5</td>
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**AIRCRAFT TYPE: DC9 – 32**

**Aircraft Doors — Sill Heights and Dimensions**

![Diagram of aircraft showing doors A to E]

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<th>Door</th>
<th>Distance from A/C Nose</th>
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<tr>
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<td>921</td>
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Introduction

1. The purpose of this chapter is to let the ramp personnel know where the compartment doors / cargo is located at the aircraft and how to operate them, there are two types of doors: electronic and mechanical.
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A319/A320

NOTE: POINTS A, B, M, G AND H ARE MID DOOR AT FLOOR LEVEL
POINTS C AND D ARE EXTREMES OF STRAIGHT PORTION
ON FUZELAGE, POINT F IS THE BELLY PAIRING.

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<th>MAXIMUM RAMP WEIGHT 70.4 T CG 21.0%</th>
<th>MAXIMUM RAMP WEIGHT 70.4 T CG 37.5%</th>
<th>AIRCRAFT ON JACKS</th>
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<td>m</td>
<td>ft</td>
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<tr>
<td>C</td>
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MODEL *12 AT 70.4 MAXIMUM RAMP WEIGHT
A330-300
# Aircraft Type: B737-800, -900, -900ER

Aircraft Doors — Sill Heights and Dimensions

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<td>MIN (AT MTW)</td>
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Notes: CLEARANCES SHOWN ARE NOMINAL. ADD PLUS OR MINUS 3 INCHES TO ACCOUNT FOR VARIATIONS IN
B767-300, 300ER

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<td>F</td>
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<td>G</td>
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AIRCRAFT TYPE: DC9 – 32

Aircraft Doors
Introduction

The purpose of this chapter is:

1. To offer information diagrams (see Chapter 02.02.01) related with the location and through of the aircraft connectors.

2. To define the directly related procedure for the assisted aircraft model in the different airport. Refering to the location of the auxiliary connectors for the attatchement of the support equipment.
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### A319/A320

#### Connectors Location

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<th>From A/C</th>
<th>Height from Ground</th>
<th>Notes</th>
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<td>Metres</td>
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<tbody>
<tr>
<td>1. Air Conditioning</td>
<td>1.73</td>
<td>68</td>
<td></td>
</tr>
<tr>
<td>2. Electrical</td>
<td>2.00</td>
<td>79</td>
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<tr>
<td>3. Fuel</td>
<td>3.40</td>
<td>134</td>
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<td>4. Potable Water</td>
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<td>93</td>
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<tr>
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<td></td>
<td></td>
</tr>
<tr>
<td>Aft</td>
<td>2.79</td>
<td>110</td>
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</tr>
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</table>
Location to connect the Electric Generator.

A320 / A319
A320 / A319 Location to connect the Pneumatic Power Unit
Location to connect Drainage and portable water

A320 / A319

A320/319 Ubicación para el suministro de agua potable
B738/B739

Ground Servicing Points Location

<table>
<thead>
<tr>
<th>System</th>
<th>Distance</th>
<th>Height from Ground</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Aft of Nose</td>
<td>From A/C</td>
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<tr>
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<td>4. Potable Water</td>
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<tr>
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<td>N/A</td>
</tr>
<tr>
<td>Centre</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Overwing</td>
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<td>N/A</td>
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<td>Aft</td>
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<td>6. Pneumatic</td>
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B767/300

**Ground Servicing Points Location**

<table>
<thead>
<tr>
<th>System</th>
<th>Distance from Aft of Nose</th>
<th>Height from Ground</th>
</tr>
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<tr>
<td></td>
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<td>4. Potable Water</td>
<td>13.89 39 34</td>
<td>547 1,549</td>
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<td>5. Lavatory</td>
<td>N/A</td>
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<tr>
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<td>6. Pneumatic</td>
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</table>

Notes:
- RH Fuel Ports Opt
- Fwd Drain Aft Fill
## B777/200 & 300

### Ground Servicing Points Location

![Diagram of aircraft with connectors locations](image)

<table>
<thead>
<tr>
<th>System</th>
<th>Distance</th>
<th>Height from Ground</th>
<th>Notes</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Aft of Nose</td>
<td>From A/C</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Metres</td>
<td>Inches</td>
<td>Metres</td>
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<tr>
<td>1. Air Conditioning</td>
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<td>1.06LR</td>
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<td>*Potable Water-FWD</td>
<td>8.75</td>
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<td>959</td>
<td>1.72L</td>
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MD80

Ground Servicing Points Location

<table>
<thead>
<tr>
<th>System</th>
<th>Aft of Nose</th>
<th>Distance From A/C</th>
<th>Height from Ground</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Metres</td>
<td>Metres</td>
<td>Metres</td>
<td></td>
</tr>
<tr>
<td>1. Air Conditioning</td>
<td>26.7</td>
<td>0.6L</td>
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<td>2. Electrical</td>
<td>2.3</td>
<td>1.3L</td>
<td>1.5</td>
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</tr>
<tr>
<td>3. Fuel</td>
<td>17.8</td>
<td>6.5R</td>
<td>1.7</td>
<td>N/A</td>
</tr>
<tr>
<td>4. Potable Water</td>
<td>3.6</td>
<td>1.3R</td>
<td>1.6</td>
<td>N/A</td>
</tr>
<tr>
<td>5. Lavatory</td>
<td>Forward N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>Centre N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>Overwing N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>6. Pneumatic</td>
<td>22.9</td>
<td>1.3L</td>
<td>1.8</td>
<td>N/A</td>
</tr>
</tbody>
</table>

|                | Metres      | Inches           | Metres            | Inches |
| 1. Air Conditioning | 1,051       | 41.3             | 24L               | 9.4    |
| 2. Electrical    | 91          | 35.4             | 51L               | 20     |
| 3. Fuel         | 700         | 275.6            | 266R              | 105.1  |
| 4. Potable Water | 138         | 54.3             | 51R               | 20     |
| 5. Lavatory     | N/A         | N/A              | N/A               | N/A    |
| 6. Pneumatic    | 1,047       | 41.1             | 24L               | 9.4    |
Aircraft on Short Transit or Back in Short Term

1. F.O.D Inspection prior of the a/c arrival

2. All parked aircraft will be provided of chocks.

3. All aircraft at the arrival, (at the moment that anti-collision light are turned off) or remains parked, safety cones will be placed. The placement of the same ones should be made in the following order:
   a) A cone under the nose (except when the towbar and/or tug is attached)
   b) A cone under the tail.
   c) A cone under the tip of each wing
   d) A cone in front and behind of each turbine

4. The access to the aircraft will be responsibility of the Lead Agent / Person In Charge of the Flight or their designee and will control the entrance of personnel and cargo without authorization. Transit Aircraft do not need that the access doors are closed, only when company personnel or contractors are working inside, surrounding or near the aircraft and maintain it order surveillance.

5. The access doors to the aircraft will be closed when they do not have the assistant not the control of the airlines or contractors personnel.

6. In a short transit operation all safety procedure must be followed.
Ground Operation Manual

Protection of Parked Aircraft

On Ground Aircraft Service

Date: 05-JUN-13

Chapter: 02.03.00

Rev: 00

Page: 2

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Generalities

In short transit the aircraft’s normal conditions stays with the APU on.

The APU provides the electric power required to handle the aircraft on ground, during the operation it is not required any specific action by the ramp personnel.

If the APU turns off during the assistance of a flight:

1. To verify with the Captain or the maintenance personnel if it an electrical generator is required.

2. If this equipment is necessary (electric generator) should attached in aircraft permitted limit as stipulated by the Marshalling Plan

3. The Electrical assistance there are time is attached to the Jetbridge, when the ramp agent attach the connector to the aircraft, he will be the one to push on the system.
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Procedure

When the use of the electrical generator is required (Ground Power Unit)

1. Transfer the unit of GPU to the required door and place it in position according to the Marshalling Plan.

2. Verify the unit and turn on the same one previous to their use.

3. Measure the accelerator until reaches

<table>
<thead>
<tr>
<th>Volts</th>
<th>Hertz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turbo Props</td>
<td>28.5 V</td>
</tr>
<tr>
<td>Turbo Jets</td>
<td>115 V / 200 V</td>
</tr>
</tbody>
</table>

4. Verify that there are not loose cables or the vehicles or people traffic interrupts on ramp.

5. The attachment and transfer of the circuit that feeds the energy will be carried out by the qualified personnel and authorized by the company.

   CAUTION: NO EQUIPMENT SHOULD PASS ON OR OVER THE ELECTRIC CABLES.

6. During this process the turbines must remain turned on, reason why it is necessary to stay outside of the restricted areas, while the GPU is connected. The exception to the present disposition applies the personnel connecting the plant.
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Introduction

1. This chapter establishes procedures and instructions to the ramp personnel and aircraft service on ground.

2. It is provided the information to the ramp personnel respect to the procedure of opening doors of load compartments of each aircraft type.

Objective

To define the procedures and instructions directly related with the operating door handle when assistance of the aircraft in ramp is needed.

Note:
Be aware the some airlines customer delegates this function to the maintenance technician.
If there is no instruction for that aircraft model, please refer to the airlines customer manual for proper operation.
Intentionally left in blank
A319/A320

Opening of Doors

1. Previous to begin of the opening process verifies that there is no belt loader near the door during the operation, until the process of compartment opening has concluded.

2. Unlocked the door pulling the safety handles from the “LOCKED” position to the “UNLOCKED” position.

3. To move the selector handle until to “OPEN” position and to maintain in this position until it opens up completely and the green light of indication has turned on.

**CAUTION: NEVER OPEN THE DOORS OF THE CARGO COMPARTMENTS WHEN THERE ARE WIND BLASTS GREATER THAN 40 KNOTS.**

Closing of Doors

1. To make sure that there are not obstructions under the door

2. To move the selector handle to “OPEN” position to “CLOSED” position and to maintain it in this position until the door has closed completely and the green light has tuned off after 2 seconds.

3. Once locked the door, moves the security handle immediately to “UNLOCKED” position to “LOCKED” position, push the handle until hides in its lodging.

4. To make sure that the ventilation fin of the door is totally closed and the locked handle is housed in their cavity.

5. The lights in the inferior part of the doors indicate open or closed. If they are in red color they indicate that they are closed and if in green color they indicate open.

Door Handles

In the A320/A319 two types of door handles exist which are detailed in the following diagrams in pages 2, 3, 4 and 5 of this chapter.
FRONT DOOR   A-320/319   A TYPE
BACK DOOR   A-320/319   A TYPE
Procedures to open the Bulk Cargo door.

To open:

1- Press the button to loose the handle.
2- Rotate the handle to the position “open” for unlocked the door.
3- Open the door partially and put the handle in locked position and then press it in their lodging.
4- Push the door up until it hooks.

To close:

1- Press the button to loose the handle.
2- Rotate the handle to the position of “open” for unlocked the door.
3- Pull the door down.
4- Rotate the handle to locked position and then presses it in their lodging.
B737/800

Cargo Door Operation B737

TO OPEN DOOR:
1. PULL HANDLE OUTWARD.
2. ROTATE CLOCKWISE.
3. PULL DOOR OUTWARD.

WARNING: PASSENGER AND SERVICE DOORS, SLIDE MAY AUTOMATICALLY DEPLOY WHEN DOORS ARE OPENED FROM OUTSIDE
Intentionally left in blank
General

The defined aspects are detailed in the Marshalling Plan related with the positioning and appropriate operation of ground equipment during the aircraft service in ground.

Restrictions

1. Correct Route of access.  
The Marshalling Plan should indicate the correct route of access to the placement of each equipment unit of service toward and from the aircraft.

2. Movement Sequence.  
The movement sequence should be detailed in the Marshalling Plan and establish the order of the different kinds of services that given to the aircraft (onboard service and food service, maintenance, fuel supply, etc.) so that the whole necessary service is carried out in an organized and efficient form.

This kind of requirements should be detailed in the Marshalling Plan and should be carried out in each unit of the motorized equipment, before the aircraft approach. This checkup should be carried out when the vehicle is located 26 feet (8 meters) and 6 feet (2 meters) of the aircraft. All the vehicles that are not assisted, still short periods should have the hand brake On, the gear lever in neutral position and the engines off.

4. Speed Limits.  
The speed limits inside the security area of the aircraft are minimum speed of displacement that allows the equipment and is standard for all the station where it is operated.

All equipment that is attached to the aircraft needs the guide man so to carry out the designated functions. When is used guide man the visual contact should stay in every moment.

6. Equipment allowed under the wings and the fuselage.  
The only equipment allowed under the wings is fuel cistern vehicles and maintenance equipment when it is necessary. Additionally there is equipment that partially placed under the fuselage, drainage tractors and refill of portable water, which should be watch constantly.
7. Sensitive Zones
These are aircraft zones, vulnerable to a damage and ramp areas where can happen damages with bigger incidence or easier. These zones include engines, antennas, landing gear, pitot tubes, movable parts, ailerons, flaps, gates of brake, scuttles of gas, near areas to the boarding bridge and other confined areas that could be created due to the unique configuration of buildings, terminals and ramp.

8. Parking restrictions
All motorized equipment that in snot related directly with the aircraft service, should be parked outside of the safety area, and to be parked in specific parking places.

9. Vital Equipment Location
The whole personnel should know the location of the court valves of fuel emergency, extinguishers and covered deposits for the prevention of FOD.
21 Safety Precautions

1. At the arrival of the aircraft to the jetbridge, all personnel and equipment must remain outside the safety areas until the aircraft turn off the engines/turbines. And the anti collision light is turned off.

2. At the departure of the aircraft all personnel and equipment must be outside of the back part of the wings and far from the absorption zone of air from the turbines before the pilots start the engines.

3. All equipment that attaches to the aircraft must have a rubber part in good condition and it will be placed 3 inches between the equipment and the aircraft, trying not to damage the aircraft, because at the moment of unloading passengers, cargo, or fuel it will go up or down depending on the weight.

4. Any equipment driver when getting close to the aircraft must be assisted by hand signals for safety coordination.

5. The attachment and removal of the motorized equipment will be forward to the aircraft, is not allowed to go to the aircraft in reverse.

6. It is strictly prohibited to park under the wings or tails of an aircraft, unless the procedure is require for the nature of the service..

7. When a vehicle is attached, it must be done with the tires in right position (Straight).

8. The vehicles and equipment shall not be positioned in emergency exits or in places where they can be an obstacle for the evacuation of people.

9. Never drive inside the dangerous area behind the aircraft when anti-collision light is on, this indicates that the engines are on or about to be ignited.
10. It is not allowed to make rude turns with the equipment in the safety area of the aircraft.

11. It is not allowed to tow more than four carts carrying baggage with the same tractor near to the aircraft and do not exceed what the airport regulation permits.

12. All motorized equipment that attaches to an aircraft must have its proper ABC extinguisher where applies and according to the airport’s requirements.

13. When a fuel leakages occurs the following procedures must be done:
   a) All equipment that is outside the leaking area must be shut down or removed from the area.
   b) All equipment that is inside the leaking area must be moved, trying to extinguisher it can cause sparks that may start a fire.
   c) Notify maintenance and operations of any incident or undesired conditions.

   PRECAUTION: THE LEAKING MUST BE CONTROLLED WITH ABSORBENT MATERIAL AND REMOVED BEFORE MOVING OR PUSHING AN AIRCRAFT.

14. All aircraft must be assisted by the company-designated supervisor who will be the responsible of verifying that all rules and safety procedures are being accomplished.
15. All motorized and manual equipment that are attach to the aircraft must respect and maintain clear all emergency exits for the passengers evacuation and the display of the slides and escape exits of the fueling vehicle.

16. All motorized equipment that gets close to the aircraft must stop at least two times as a test brake before approaching the aircraft.

17. Motorized or manual equipment shall not circulate under the tail or wings of an aircraft.

18. For operational and safety reasons any inoperative of the aircraft mechanism must be reported to the mechanic supervisor or the station manager of the Airline Customer.

19. All motorized equipment will respect the assigned positions in the MARSHALLING PLAN.

20. Safety cones will be used under the tail, the wingtip, front and behind of the turbines.

21. The safety of the aircraft depends on everybody’s effort and following procedures and established rules it’s a must.
Generic Marshalling Plan

Observe other positions for the fuel truck
NOTE: Marshalling plan in the Aft left door of the different alternate service units can be attached such as Cabin cleaning truck, food services truck, and/or passengers loading, unloading stairways.

<table>
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<th>Code</th>
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<td>ASU</td>
<td>Air Starting Unit</td>
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<tr>
<td>BL</td>
<td>Bulk Loader</td>
</tr>
<tr>
<td>D</td>
<td>Dolly</td>
</tr>
<tr>
<td>F</td>
<td>Fuel Truck</td>
</tr>
<tr>
<td>GC</td>
<td>Ground Air Conditioning (ACU)</td>
</tr>
<tr>
<td>GPU</td>
<td>Electrical Ground Power Unit</td>
</tr>
<tr>
<td>GS</td>
<td>Galley Services Truck</td>
</tr>
<tr>
<td>LS</td>
<td>Lavatory Services</td>
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<tr>
<td>P</td>
<td>Passenger Loading Bridges</td>
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<tr>
<td>ST</td>
<td>Stairway</td>
</tr>
<tr>
<td>W</td>
<td>Water Services Truck</td>
</tr>
</tbody>
</table>

Safety Circle / Marshalling Plan

This is known as the area in where procedures for positioning the aircraft, movements around the aircraft are happening while the aircraft is been serviced.
Adverse Weather

1. Hurricanes, tropical storms, or tornadoes. Electrical storms, strong winds, hailstorm, and 40 knots winds.

2. Snow storms more than one inch per hour, and total accumulation exceeds more than 3 inches.

3. Rain and cold blizzards, 40 knot wind, temperatures under 0ºC.

Operational procedures in ramp with adverse atmospheric weather

1. Compartments or doors of the aircraft shall not be open, with 40-knot winds.

2. In strong rains is necessary to coordinate with crew or maintenance for the lock of passengers’ doors and cargo compartments to avoid damage caused by the water.

3. All personnel and team that need to work under the wings must take necessary precautions.

PRECAUTION: IN CASE OF SEVER ATMOSPHERIC THE FOLLOWING RECOMMENDATIONS ARE MANDATORY TO BE FOLLOWED:

1. GROUND EQUIPMENT.
   a) Mobilize all ground equipment inside a small area or in a closed under roof area.
   b) Secure all equipment that cannot be mobilized.
   c) Cover all equipment that can be damage by the elements or bad weather conditions.

2. All ground equipment must be park away from the aircraft proximities.

3. Cargo and luggage:
   a) Mobilize under roof immediately.
   b) Cover and secure to prevent the lost of luggage, in case it cannot be moved.
   c) Protect under roof all perishable cargo and live animals.
   d) Notify if the mail that comes or goes will be delay, to receive the appropriate instructions.

4. Aircraft in service process.
   Lock down and secure all doors and panel services.
Electrical storms and lightning

1. If you have previous knowledge about electrical storms approaching the management or the supervisor will coordinate appropriate actions with the personnel according to the following lineaments:

2. When a storm is in the airport’s area (8 to 11 Km. – 5 to 7 miles) consider the following:
   
   a) The use of headsets for communication must be suspended. The ground guide man that cabin dispatches the aircraft confirms to the crew that the earphones will not in used and will plan the appropriate hand signals.

3. Electrical discharges in a ratio of 5 Km./3 miles of the airport
   a) Suspend operations of gas services.
   b) Suspend all work under, near or around the aircraft.
   c) The personnel must protect themselves under the buildings, vehicles, but never under the aircraft wings.

Operations under raining conditions

1. The impact of the winter must be planed with anticipation added to all conditions that are presented during an operation under normal circumstances. All the stations must plan previously to operate during the winter:

2. The fact to anticipate to circumstances or any climatologically inclemency is essential that a coordinator must be assigned for the management to be the responsible of alert the personnel about the adverse weather conditions.

3. Lines of communication and responsibilities must be established. The personnel must be qualified to work under severe weather conditions in conformity to the training program.

Ground Equipment

1. The ground equipment must be ready for winter, and the personnel must be well trained.

2. All ground equipment must be storage and during low temperatures.
Aircraft De-icing

1. The units of defrost must be prepared and ready by October the 1\textsuperscript{st} of each year in the stations where applies during winter.
2. Make sure that enough anti freeze liquids are available.
3. When situations of defrost happens a person must be designated as activity coordinator in all departments. For more information refer to

Portable Water Draining system

During the Freezing environmental temperatures of the potable water system shall not be drained unless inside the Cabin heating is operating.

Personal protection during winter

1. The clothes must be the appropriate and maintain as clean as possible, boots with isolated sole. For extreme temperatures they will be used over the shoes.

2. During extreme colds if freezing signs are immediate medical assistance must be required.
Intentionally left in blank
Sand and snow removal equipment

1. The management must hire especial services to remove snow or sand. The contract must include emergent response items in short period of time.

2. The contractors change personnel frequently make sure that the equip operators are informed about the requirements.

3. Sand:
The following standard must be used according to the existent sand level. Sand will be washed only if it is free of stones, slats, or any corrosive.

**PRECAUTION:** ANY EASY TO BURN MATERIAL CAN BE DESTRUCTIVE FOR THE TURBINES IF ABSORBED.

4. The sand application to any operational surface of an airport must be carefully operated. If any excess remains must be cleaned immediately.

Ramp and runway inspection

1. In the stations where snows and applies the removal of snow from the platforms and runway must be inspected before continuing with the operation. The assigned personnel by the management must be familiarized with the respective information.

2. The taxing lines must be visible of snow. The lines covered by the snow or ice may hinder the visibility to the arrival gate. The aircraft that is not alignment in the taxing line can cause problems with adjacent gates.

3. Be aware of the accumulated snow in hillock, in the proximity of the aircraft maneuver areas. If any doubt exist concerning the size and place of the hillock, notify the appropriate personnel for its removal.

4. The ramps, taxing areas, and runways must be clean (no snow or ice)
**Introduction**
This chapter gives you the basic lineaments of ground-cabin communication by using headsets and approved hand signals.

**Procedures**

1. Establish communication with the captain, five minutes before the departure

2. If the APU is turned on by any crewmember before the departure of the aircraft the guide man or his designee will consult if the electric plant and air-conditioned are needed. If the captain says they are no longer necessary, they can be disconnected.

3. The guide man or his designee will continue with the headsets on to maintain continuous contact with cabin until the planned exit. During this time he/she shall not take the headsets off without informing the captain the reason and estimated time to return to the headsets.
<table>
<thead>
<tr>
<th>Ground Operation Manual</th>
<th>Generalities</th>
<th>Date: 05-JUN-13</th>
<th>Chapter: 03.00.00</th>
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<td>Rev.: 00</td>
<td>Page: 2</td>
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</table>

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### Phraseology used in the towed of the aircraft

#### To Initiate Towing

<table>
<thead>
<tr>
<th>Ground</th>
<th>Welcome, placed brakes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pilot</td>
<td>brakes engaged preparing to be towed</td>
</tr>
<tr>
<td>Ground</td>
<td>Ready to be towed.</td>
</tr>
<tr>
<td></td>
<td>Towbar in position</td>
</tr>
<tr>
<td>Pilot</td>
<td>Brakes released</td>
</tr>
<tr>
<td>Ground</td>
<td>brakes out</td>
</tr>
<tr>
<td>Ground</td>
<td>Clearing up the area towing to position</td>
</tr>
</tbody>
</table>

#### Upon arrival to towing destination

<table>
<thead>
<tr>
<th>Ground</th>
<th>In position placed brakes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pilot</td>
<td>Brakes engaged.</td>
</tr>
<tr>
<td>Ground</td>
<td>Chocks on</td>
</tr>
</tbody>
</table>
Intentionally left in blank
Phraseology used on pushback and turning engines on

Ground
360° Inspection Complete
Ready for pushback

Pilot
Pending

Ground
Pending

Pilot
Authorize, brake released

Ground
brakes out, pushing back, engines clear

Ground
Engines Clear

Pilot
Engine 1 check

Ground
Positive Engine rotation

Ground
After reaching the end of pushback and brake

Ground
Brakes on

Pilot
Brake set.

Ground
Normal, have a good trip, wait for signals at left side.

Pilot
Thanks, disconnect, waiting for signals..

Ground
After disconnect towbar, headsets, and equipment was move out of the aircraft path.

Ground
Make a visual contact with captain and with Both hands signal the taxi way.

Note: Ensure aircraft path is clear, is your responsibility.
Phraseology used on engines Stars at Gate

Ground  360° Inspection Complete

Pilot  ok copy

Ground  Engines Clear

Pilot  Copy Engines Clear

Pilot  Engine 1 check

Ground  Positive Engine rotation

Ground (Removes the air-star, electrical connector, a/c if applicable, jet way retracted).

Pilot  Authorize, brake released

Ground  brakes out, pushing back.

Ground (After reaching the end of pushback and brake)

Ground  Brakes on

Pilot  Brake set.

Ground  Normal, have a good trip, wait for signals at left side.

Pilot  Thanks, disconnect, waiting for signals..

Ground (After disconnect towbar, headsets, and equipment was move out of the aircraft path.

Ground  Make a visual contact with captain and with Both hands signal the taxi way.

Note: Ensure aircraft path is clear, is your responsibility.
Introduction

1. The establish procedures according to the regulations of FAA and Civil aviation, for the process of loading and unloading of the aircraft and that applies in all stations where they operate.

2. The loading and unloading procedures are found on the aircraft manufacture weight and balance, the information in this chapter is the main safety practices of the industry.

Objectives

a) To guarantee that the aircraft is properly loaded according to the instructions in the cargo sheet given by the dispatch of flights personnel.

b) Make sure that all luggage, cargo, mail, etc, is handed carefully to its final destination.

c) The airline will make sure that all original documents, and copies, related to ramp operations in each flight, even if the aircraft is not operating, are filed for a period of three-months, if the Airlines Customer contract is require, we do file the documents for the same period,
Distribution of cargo loading sheet.

The use of the distribution cargo sheet of aircraft, in the stations where the system are available, is mandatory for the procedure of cargo of an aircraft. In the stations where system is not available it will be done manually and it will have the following functions:

1. As a guide:
The distribution of cargo sheet will function as a guide to coordinate in which way will be loaded the aircraft in every single one of the compartments, according to the instructions of the weight and balance agent.

2. As a control:
Verifying that the quantity of pieces aboard for each compartment must be correct according to the weight and balance instructions of cargo in order to guarantee the safety of the flight.
Containerize aircraft the loading will be followed by distribution of each ULD number.

3. As a Flight Information
It will be used for the transmission of information to the following stations concerning the real location of cargo, luggage, and mail, according to its destiny, making easy the operations of unloading and transfers.

4. As a compromise:
A shared responsibility between the weight and balance agent with the person in charge of the flight, that compromises to follow all instructions given by the flight dispatcher.

Policy

1. If the cargo sheet given by the dispatcher is not ready, an aircraft cannot be loaded.

2. All aircraft will be loaded according to the instructions of the dispatch agent where applies, in case of variations to the original plan the person in charge of the flight will coordinate with flight dispatch as soon as possible.

3. Is considered as distribution of cargo sheet of the aircraft entered by the dispatch agent in the system where applies the information that is entered to the system.

4. For no reason luggage checked on the limit time of departing will be loaded if the passenger is not aboard.
5. At the last minute changes that the dispatcher considers necessary will be done for the safety of the flight and the passengers. These changes will be recorded in the cargo distribution sheet by compartments and the ramp personnel will make the changes requested in a minimum time so the flight won't be delay.

Example of electronic loading sheet.

<table>
<thead>
<tr>
<th>Compartment</th>
<th>Data proportionated by ramp according to the requested by dispatch</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

Loading Orders by compartments given by the dispatcher.

Name of the flight dispatcher.

Dispatcher phone number or extension.

END OF THE DISTRIBUTION SHEET
### INSTRUCCIONES DE CARGADO DE LAS AERONAVES

**FORMATO MANUAL**

#### AIRBUS A-319

<table>
<thead>
<tr>
<th>Número de Vuelo</th>
<th>Fecha</th>
<th>Segmento</th>
<th>Matrícula de la Aeronave</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>AFT-5</th>
<th>AFT-4</th>
<th>FWD-1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**NOTAS:**

Favor indicar marcando con un círculo en SI o NO si se está transportando los siguientes ítems:

- **Animales Vivos:** SI - NO - Nro. De Compartimiento: 
- **Artículos Restringidos:** SI - NO - Nro. De Compartimiento: 
- **Restos Humanos:** SI - NO - Nro. De Compartimiento: 

**NO:** Si alguno de estos ítems están abordo se debe de informar al Piloto al mando a través del Agente de Operación.

**DESPACHADOR:**

**ENCARGADO DE VUELO:**

---

#### AIRBUS A-320

<table>
<thead>
<tr>
<th>Número de Vuelo</th>
<th>Fecha</th>
<th>Segmento</th>
<th>Matrícula de la Aeronave</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>AFT-5</th>
<th>AFT-4</th>
<th>AFT-3</th>
<th>FWD-1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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**DESPACHADOR:**

**ENCARGADO DE VUELO:**
Procedure for the unloading of Aircraft

Unloading: Is the process of loading all the luggage, cargo, and mail of the flight according to the classification of compartments that reflects the flight distribution where it begins considering the intermediate stations and the connecting hubs for optimal distribution.

UNLOADING OF THE Narrow Body Aircraft (3 Cargo bins) As Example

1. Initiate the unload of the back compartment # 5
2. Unload the compartments simultaneously # 4 and # 1

UNLOADING OF THE Narrow Body (4 Cargo Bins) As Example

1. Initiate the unload of the back compartment # 4
2. Continue unloading compartment # 5
3. Once the first two steps are done you must proceed to simultaneously unload bin # 3 and # 1

Procedure for the loading

Loading: Is the process of boarding the aircraft with luggage, cargo, mail, etc, to be transported in different flights. According to the aircraft cargo distribution sheet related with the data inside the system.

LOADING OF THE Narrow Body (3 Cargo bins) As Example

1. Follow the instructions given by the flight dispatcher according to the priorities of cargo.
2. For weight and balance purposes, it is recommended to load the central parts of # 4 and # 1 bins to avoid lack of balance. And then load bin # 5.

For safety purposes and to guarantee the balance in the service of all aircrafts refers to the aircraft unloading procedure in the weight and balance manual.

Loading instructions is given by the flights dispatch and ramp personnel only follow the loading instructions.

LOADING OF THE Narrow Body (4 Cargo Bins) As Example:

1. Follow the instructions given by the flight dispatcher according to loading priorities.
2. For weight and balance purposes, it is recommended to load the central parts of the # 3 and # 1 bins to avoid lack of balance. And then load # 5 and # 4 bins.
INTENTIONALY LEFT BLANK
Introduction

The airline customer at its base (hubs) has created a control ramp center, with the purpose of gathering, analyzing and transmitting the information, which is constituted as a connection to the different stations and areas of the ground services.

Objectives

1. To guarantee an effective communication feedback with all the stations and areas related to the flights operation.

2. To offer an efficient and safe service

3. To qualify the personnel assigned to ramp control to be able to access to the system or received the information by telex, fax or email.

4. To maintain a constant and effective communication with the dispatcher and person in charge of the flight, to perform a good coordination with the aircraft loading instructions, in case the computerized system fails all the coordination with dispatch can be accomplished through: a telephone, fax, radio.

5. Send a message through the System providing the real number of baggage, cargo, mail, etc. per each aircraft compartment.
Phonetic alphabet

This has been established to ensure a positive communication is made when this in conducted by radio or voice boxes, ground to air communication as well.

When the communication is established by radio the receiver must always reed-back to the initiator of the communication confirming the instruction.

To use the phonetic alphabet the person will said the letter as a name without having to repeat the letter, sample follows:

A name of a women is ANA, the initiator will said ANA as: Apple-November-Apple.

Alphabet

<table>
<thead>
<tr>
<th>A</th>
<th>ALPHA</th>
<th>N</th>
<th>NOVEMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>BRAVO</td>
<td>O</td>
<td>OSCAR</td>
</tr>
<tr>
<td>C</td>
<td>CHARLIE</td>
<td>P</td>
<td>PAPA</td>
</tr>
<tr>
<td>D</td>
<td>DELTA</td>
<td>Q</td>
<td>QUEBEC</td>
</tr>
<tr>
<td>E</td>
<td>ECO</td>
<td>R</td>
<td>ROMEO</td>
</tr>
<tr>
<td>F</td>
<td>FOX</td>
<td>S</td>
<td>SIERRA</td>
</tr>
<tr>
<td>G</td>
<td>GOLF</td>
<td>T</td>
<td>TANGO</td>
</tr>
<tr>
<td>H</td>
<td>HOTEL</td>
<td>U</td>
<td>UNIFORM</td>
</tr>
<tr>
<td>I</td>
<td>INDIA</td>
<td>V</td>
<td>VICTOR</td>
</tr>
<tr>
<td>J</td>
<td>JULIET</td>
<td>W</td>
<td>WISKEY</td>
</tr>
<tr>
<td>K</td>
<td>KILO</td>
<td>X</td>
<td>XRAY</td>
</tr>
<tr>
<td>L</td>
<td>LIMA</td>
<td>Y</td>
<td>YANKEE</td>
</tr>
<tr>
<td>M</td>
<td>MIKE</td>
<td>Z</td>
<td>ZULU</td>
</tr>
</tbody>
</table>


## CODES

### Description of Codes:

<table>
<thead>
<tr>
<th>CODE</th>
<th>GP</th>
<th>PRI</th>
<th>BUSR 5678</th>
<th>Description</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LB</td>
<td>B</td>
<td>01</td>
<td></td>
<td>Local baggage</td>
<td>Local Baggage</td>
</tr>
<tr>
<td>CE</td>
<td>B</td>
<td>01</td>
<td></td>
<td>executive Class Baggage</td>
<td>Executive Class bag</td>
</tr>
<tr>
<td>IT</td>
<td>B</td>
<td>01</td>
<td></td>
<td>Baggage in TTOPS of it USA</td>
<td>ITI BAGGAGE</td>
</tr>
<tr>
<td>HB</td>
<td>B</td>
<td>01</td>
<td></td>
<td>Hand baggage</td>
<td>Hand Baggage</td>
</tr>
<tr>
<td>IB</td>
<td>B</td>
<td>01</td>
<td></td>
<td>Baggage in traffic</td>
<td>In transit Baggage</td>
</tr>
<tr>
<td>VP</td>
<td>B</td>
<td>01</td>
<td></td>
<td>Baggage of pax vice-president</td>
<td>VIP-PAXtce bag</td>
</tr>
<tr>
<td>HIM</td>
<td>B</td>
<td>01</td>
<td></td>
<td>Left behind baggage</td>
<td>Left over baggage</td>
</tr>
<tr>
<td>THE</td>
<td>C</td>
<td>01</td>
<td></td>
<td>Animal lives</td>
<td>Live animal</td>
</tr>
<tr>
<td>HR</td>
<td>C</td>
<td>01</td>
<td></td>
<td>Human remains</td>
<td>Human remains</td>
</tr>
<tr>
<td>CO</td>
<td>C</td>
<td>01</td>
<td></td>
<td>Mail of the company</td>
<td>Company mail</td>
</tr>
<tr>
<td>AO</td>
<td>C</td>
<td>01</td>
<td></td>
<td>Airship parts AOG</td>
<td>AOG-ACFT SPARES</td>
</tr>
<tr>
<td>RA</td>
<td>C</td>
<td>01</td>
<td></td>
<td>Local expresses</td>
<td>Local expresses</td>
</tr>
<tr>
<td>LC</td>
<td>C</td>
<td>02</td>
<td></td>
<td>It loads local</td>
<td>Local position</td>
</tr>
<tr>
<td>TC</td>
<td>C</td>
<td>02</td>
<td></td>
<td>It loads in traffic</td>
<td>In transits position</td>
</tr>
<tr>
<td>PE</td>
<td>C</td>
<td>02</td>
<td></td>
<td>It loads perishable</td>
<td>Perishable position</td>
</tr>
<tr>
<td>CM</td>
<td>C</td>
<td>03</td>
<td></td>
<td>Material of the company</td>
<td>Company material</td>
</tr>
<tr>
<td>DG</td>
<td>C</td>
<td>06</td>
<td></td>
<td>Restricted material</td>
<td>Dangerous goods</td>
</tr>
<tr>
<td>IT IS</td>
<td>M</td>
<td>01</td>
<td></td>
<td>Special mail</td>
<td>EMS MAIL</td>
</tr>
<tr>
<td>FD</td>
<td>M</td>
<td>01</td>
<td></td>
<td>Federal mail</td>
<td>Federal Express</td>
</tr>
<tr>
<td>LM</td>
<td>M</td>
<td>01</td>
<td></td>
<td>Local mail</td>
<td>Local mail</td>
</tr>
<tr>
<td>TM</td>
<td>M</td>
<td>02</td>
<td></td>
<td>Mail traffic</td>
<td>Intrasit mail</td>
</tr>
<tr>
<td>CD</td>
<td>M</td>
<td>01</td>
<td></td>
<td>Diplomatic mail</td>
<td>Diplomatic mail</td>
</tr>
</tbody>
</table>
**Procedure**

The procedure applies for the boarding and disembarking of passengers in ramp.

1. To the previous utilization of stairs verify that this is in operative conditions and clean. Its rubber protector in good shape.

2. After the arrival; and the anti collision light is off you can proceed to attach the stairs.

3. Verify that the stairs are positioned in a safety way and stabilizers properly extended.

4. Place security cones in ramp to guide the passengers to the terminal or designed areas when is applicable.

5. Be aware in case of wheel chair use and assistance to passengers with voluminous luggage.

6. The baby strollers will have priority when off-loading the aircraft and if possible to delivery at the gate.
Intentionally left in blank
Structural limit of the area

1. Is the limit of security that can handle any portion of floor panel, and it is expressed in weights by units of surface 150 Lbs. By squared foot.

2. This limit is composed by the capability of the compartment and it's structure associated, to transfer effectively under flight conditions the superficial limitation weight. The manufacturer determines this weight.

Structural limitations

1. Each aircraft has established the maximum weight per position, which can never be exceeded by the weight loaded. The flight dispatcher main objective is the safety of the aircraft and the integrity of the structure of the aircraft.

2. Normally for its structure the positions near the wings have more capability support to hold more weight than the ones that are far from it.

Cargo planning for the aircraft

1. The cargo area must verify in the reservation system, the reserve of passengers in flights in which needs to load cargo, after that will insert in the FL system the total weight and pieces (cargo type and volume).

2. To coordinate with flight dispatch so they can reflect in the instruction loading sheet.

3. To verify and coordinate with ramp operations for the loading of cargo.

Restrictions and limitations

1. All the aircraft have a different floor Limitation, for the safety of the loading operation it is important that the Airline Customer will provide the floor limitation for aircraft type and model, following is a sample of the following aircrafts.

   A319/A320

   Front compartment Lbs./squared foot 150
   Back compartment Lbs./squared foot 150

2. Lineal load limitation
   90 lbs. X inches. Lineal
The manufacturers determine the capability of weight for each compartment of the aircraft. This compartments must not be over loaded in any moment, in this case the safety of the flight may be affected and create structural damage.

Details of a aircrafts as sample:

<table>
<thead>
<tr>
<th>Aircraft type</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-320</td>
<td>7500 lbs</td>
<td></td>
<td>5349 lbs</td>
<td>4651 lbs</td>
<td>3300 Lbs</td>
</tr>
<tr>
<td>A-319</td>
<td>2268 Kls</td>
<td></td>
<td>3021 kls</td>
<td>1497 Kls</td>
<td></td>
</tr>
</tbody>
</table>
Unloading General Practices

1. According to loading information all types of cargo, baggage, mail, express packages, comat; is received at the station and proper loading distribution must be made to ensure the next station is able to make all connections and delivery the loads on time for the next connection.

2. Dangerous merchandise must be segregated from the cargo according to the instructions of handling. Refer to handling of dangerous merchandise chapter.

3. Pieces AOG may be required with urgency, because of this they are handed separately as the COMAT

4. The luggage is classified in:
   a) Priority Local (regular luggage, EC, VIP)
   b) Carry on baggage
   c) Must ride regular bags
   d) Interline bags
   e) Strollers & mobile devices.
   f) Oversize bags.
      The Airlines Customer will always ensure what is the priorities for the loading and off-loading.

5. The additional tag type in the luggage makes easy the especial handling that requires each piece.

6. Identify all luggages for its immediate transfer inside the established time in the connecting station.
General practices of load

When loading consider the following:

1. No piece of luggage, cargo, mail or se COMAT will be handled in case that is not tagged, labeled, in a visible and legible form.

2. All cargo and luggage must be weighted and reported using the check-in system, or previous manifest to be loaded in the aircraft.

3. According to the loading instruction sheet elaborated by the dispatcher, the flight in charge person organizes the process of loading to optimize the capability in a 100% of the compartments of the aircraft. According to the instructions given by the dispatcher.

4. In case of luggage, identify and guarantee that all luggage must be loaded according to the assigned priority.

5. Place the heavy and big pieces on the compartments floor, after those the medium, small and fragile pieces will be collocated. Make sure to separate according to their destination.

6. The COMAT will receive the exact same treatment as cargo.

7. Follow the instructions of labeling and stickers in the packing, for example arrows, Fragile, etc.

8. During the time you are handling the cargo make sure to arrange properly all cargo and luggage.

9. In all dangerous merchandise before being loaded in an aircraft with passengers aboard the packing and labeling must be carefully inspected and it will be loaded until the cargo Agent gives the signed notification by the aircraft’s Captain.

10. Keep control of the total of pieces of luggage, cargo, etc inside the compartments.

11. Be aware of carry-on bags and luggage received at last minute.

12. Ensure all nets and safety locks are set before aircraft cargo door is close.
Loading Priority

The airline customer will always indicate the loading priorities, in case that these priorities were not previously established the following guidance will be followed.

The loading order in flights with passengers must be followed and accomplished according to the following:

1. AOG Maintenance parts, properly identified.
2. Free allowance baggage with Executive/Business Class tag.
3. Free allowance baggage.
4. Handbag withdrawn at the door with carry-on manual tag.
5. Free allowance baggage from the previous day.
6. Human Remains. Limit of 1 per flight.
7. Dangerous Goods in Cargo
8. Passenger’s free allowance baggage on waiting list according to the agreement of the same.
9. Baggage on stand-by, co-mail
11. Co-mat.
12. Baggage of passengers subject to availability.
AOG and priority shipments

AOG Shipments,
These spare parts, accessories necessaries in order to repair any problem inside the aircraft. That is in ground out of service, in any station where the airline operates.

1. All this shipments must have their tags marked AOG card and a shipment list (airway bill) added by the area accepts the shipment.

2. Always locate them as close from the doors as possible, to facilitate the unloading, unless the size and weight are shall not allow you. In a wide body aircraft must be loaded in the bulk.

3. Shipments, connecting to other flight in a HUB, must be mobilized with baggage in transfer, and try not to mix them.

4. Depending on the local procedures, the shipments of AOG arriving to their destiny will be retired directly from the aircraft and mobilized to the cargo area to their final disposition.
The operations Agent of the Airlines Customer in charge of the weight and balance gives the details about where or how the cargo must be placed in each compartment, based on the received information of the different departments, cargo, baggage, and passenger service. (Loading Instructions).

When loading an aircraft do not forget the following procedures:

1. No piece of baggage, cargo, mail or COMAT will be handled if it is not tagged, labeled, in a visible and legible form.

2. Cargo, Baggage, or any article that does not have a tag or label should not be loaded. Notify the airlines representative immediately.

3. All cargo and baggage must be weighed and reported using the airline system, or previous manifest to be loaded in the aircraft.

4. According to the loading instruction sheet elaborated by the dispatcher, the flight in charge person organizes the process of loading to optimize the capability in a 100% of the compartments of the aircraft. According to the instructions given by the dispatcher.

5. In case of baggage, identify and guarantee that all baggage must be loaded according to the priority that it’s been assigned.

6. Place the heavy and big pieces on the compartments floor, after those the medium, small and fragile pieces will be placed. Make sure to separate according to their destination and connection priority.

7. The COMAT will receive the exact same treatment as cargo.

8. Follow the instructions of labeling and stickers in the packing, for example arrows, Fragile, etc.

9. During the time you are handling the cargo, if an accident causes damage, report the problem to the airlines representative and take the information for a following report to Triangle Services.

10. In all dangerous merchandise before being loaded in an aircraft with passengers aboard the packing and labeling must be carefully inspected and it will be loaded until the cargo Agent gives the signed notification to the aircraft’s Captain containing the where is found in the cargo bin.
11. Keep control of the total of pieces of baggage, cargo, etc inside the compartments.

12. Be aware of handbags and baggage of last minute received.

13. The person in charge of the flight will supervise that the ramp personnel load the aircraft according to the loading instructions list.
   
   a. Notify the operation agent, any discrepancy in order to readjust the distribution taking notes in the cargo sheet.
   
   b. Break down all information related with the process of loading of the aircraft with the intention of insert this information to the system so the information can be transfer to other stations.
   
   c. Maintain register of the localization for compartments with the total of baggage pieces, number of tags and its destiny inside the aircraft.
   
   d. Verify that the distribution of baggage is according to the priorities of unloading in the next stations.
      i. Business Class baggage.
      ii. Transfer baggage
      iii. Local baggage to the station
      iv. Small Packages, cargo and mail.

13. After the confirmation of the person in charge of the flight to Ramp Control of how the aircraft was finally loaded this will proceed to transfer the information through a message to the operation agent and this last to the pertinent next stations.

14. A copy will be given to the person in charge of the flight and will sign another that will be filed in ramp control.
Procedures for the loading of a flight

Step 1

When you receive the load and unload instructions sheet, from the weight and balance Agent:

1. Verify:
   a) Flight’s number
   b) Destination
   c) Aircraft register
   d) Date
   e) And origin

2. Verify the information is legible, confirm any doubt.

Step 2

Following the instructions of load and unload,

a) Unload the aircraft separately correctly the baggage without mixing them with other destination baggage. Same thing will be done with cargo and mail specifying destination as final destination or transit station.

b) Previous to the load, verify that the baggage, mail, cargo in transit on board of the aircraft must be checked to avoid the over flight of it.

c) If discrepancy exists, check meticulously to coordinate with the weight and balance agent in case that a change in the distribution is required before the departure of the aircraft.

Step 3

Following the instructions of load and unload,

Realize the process of loading taking care of the real information detailed in the instruction sheet:

1. Unload of compartments:
   a) The destiny and quantity of pieces of:
      i) Baggage,
      ii) Cargo,
      iii) Mail,
      iv) Small Packages
      v) comat, etc.

To load Example: for a Compartment # 1
30 / LB / SJO / 3000 LBS
2 / LC / PTY / 250 LBS
Step 4

Provide the information to ramp control about the load of the aircraft so the information can be given to the operation agent to up-date the system.

Step 5

Realize a report for each attended flight related to the procedures and the details of what is load in the flight, in the same way the names of personnel that were in the operation, this will be file for a three month period.

Procedures of searching for the baggage of passengers that are not flying

The steps to follow when a passenger is not going to flight for any reason, in case that the baggage is already inside the compartments, must be carried out to customs; it shall not fly.

1. The traffic or security are will notify ramp operations that the passenger is not flying and gives the following information:

   a) Number of flight
   b) Number of tag.
   c) If it is local or transit passenger
   d) Name of the person that requests the baggage.

2. Ramp operations proceeds to check in their controls if they have the piece of baggage requested, in this case they will search in the compartment that is been loaded.

3. Once ramp operations have tracked the baggage it notifies immediately the traffic area and sends the baggage to customs and/or the applying counter.

4. If at the end the passenger is going to fly traffic will notify to ramp the cancellation for the search of baggage and requests the loading of baggage again.
Generalities

1. Due to the inherent property of the objects to conserve their movement because of velocity and its direction such property is defined as inertia.

2. It is mandatory that the cargo inside the compartments is well accommodated to avoid any movement.

Tied down

1. All items are resistant to any change of velocity and to direction.

2. The objects on movement continue on movement with the same direction and velocity, unless an external force is applied to alter this condition. As an example the stationary bodies in an aircraft in movement.

3. If the aircraft slows down suddenly the objects continue on the same direction with the same velocity they have before, unless a brake is applied. This is noticed when the Pilot applies abruptly the brakes to the push inverses after the landing. The effect of the suddenly acceleration or turbulent winds also moves the objects inside the aircraft, unless they are properly, secure.

4. Cargo that can damage easily the plain and put in risk the safety of the flight, due to its movement modifies the balance condition. Also the cargo movement inside the compartments is necessary to secure the cargo to avoid any movement.

5. In case tie is required to secure the cargo inside the compartments, this must accomplish the following requirements to avoid:

6. Frontal movements. All necessary ties must go from the point where the cargo behind the first one is tie to a point between both.

7. Backward movements. The tie must go to a point in front of the cargo.

8. Up movements the strap must go from the nearest point to the cargo if possible over the cargo.

9. Lateral movement: the strings must be in the opposite side to the one need to be tie.

10. The nets and ties must be tauten to immobilize the cargo, in all sectors of the compartments.

11. The bulks that contain dangerous merchandise capable of reacting between each other will not be placed on top of each other inside an aircraft or any other position so they can combine.
12. The bulks of radioactive materials will be loaded in a different aircraft from live animals and no revealed films in conformity with the dispositions of the rules about dangerous merchandise.
Cargo compartments inspection

The person in charge of the flight or the assigned responsible will realize the inspection inside the cargo compartments to verify the floor and walls: conditions.

Objective

To detect any anomaly inside the compartments that happened during the flight or when the cargo was load:

a) Damage to the aircraft’s floor,
b) Complete curtains, with secure

c) Spill of liquids

d) Damage to the tie string and nets,
e) Damage to the marks/signs of weight in the compartments
f) Damage to the lateral walls,
g) Damage to the superior panels of the compartment,
h) Damage to the compartment’s locks.

Note: A writing report must be made to airline customer, with the exact location of the element found.

Report of Irregularities

Procedure

The person in charge of the flight or assigned responsible after the unloading, or before the load must be sure that the compartments are in good condition.

The curtains or nets must have all locks, if any is missing call the mechanic or assigned responsible of the flight.

If any liquids spill is detected its condition will be inspected and it will be cleaned immediately if not a hazardous material.
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360° inspection to the aircraft

The person in charge of the flight to the arrival during the service and at the departure of the aircraft from the station must realize a visual inspection of 360 degrees around the aircraft.

Objective

To detect damages or scratches in the fuselage, wings and compartments of the aircraft.

Procedure

The inspection begin at the passenger boarding door (Front left) and continue clock-wise make the 360º ending at the same door.

In the process of visual inspection of the aircraft if any damages are detected the procedure to follow is:

1- Call the ramp supervisor and the mechanic immediately and inform about the damage so they evaluate the situation.

2- Immediately notify your supervisor and he must proceed to write a message to the origin station and inform the operational responsible of the aircraft and will include the maintenance areas, security, air operations and ramp, informing about the detected damage to deduct responsibilities, very precise with location and description of what was found. Take picture if possible and attached to the report.

3- The message to be valid must be sent 45 minutes after the arrival of the aircraft to the station that detected the damage.

4- Copy of the report must be available to the Airline Customer.

Report

5- Writing report with details information as minimum content and copy of the report must be provide to the airline customer

- Date
- Flight Number
- Origin
- A/C registration
- Arrival Time
- Gate No.
- Precise description of Damage as example Dent, scratch, hole, puncture, burn,
- Flight delay (what was the original departure time and the new departure time)
- If flight was cancel what time the cancelation took place
- Witness of the event and contact number/email
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**Principles of Weight and balance**

The weight and balance of an aircraft can be explained easily, in comparison with the function of a scale. The effect of weights in balance is tied to the value of the weights and the distance to the support point of the balance.

Moment is the result of multiplying the weight index by the distance of the support point (arm).

Lack of balance: when the moments are different, the scale will be out of balance tending to incline to the mayor moment.

In terms of balance is not necessary that an aircraft is perfectly balanced in this case the manufactures specified a security limit in which the gravity center can be located without risk to the safety of the aircraft.

**Applications for weight and balance of the aircraft**

This figure shows how an aircraft has a security space over which the gravity center (CG Range), can be moved by forces originated by weights that are in front and on the back of the plain, inside the gravity limits..

That is why necessary to accomplish all cargo instructions is given by the weight and balance Agent in charge of a determined flight.

Failure to proper loading will affect the CG and cause the off center of gravity and possible lost of performance and leads to an accident.
Weight limitations

There is a transfer of weight through the fuselage always that something is placed inside the aircraft. To appreciate what occurs when a weight is placed is introduced in any part of the plain, is necessary to know how the weight is absorbed in the structure of the aircraft. Pretending that the maximum cargo limitations admitted for the different parts of the aircraft are respected, the structure of the aircraft will be capable of transmitting the cargo the wings and at the same time they are hold by the sustentation forces of the wings during a flight.

The fuselage of the aircraft is designed to accomplish the maximum requirements.
The fuselage of the aircraft is made of a skeleton, constructed by ribs narrow from the front to the back, interconnected, with series of rings and covered by a thin metal skin.

The floors of the cabin and compartments of the aircraft are formed by series of panels over a girder net support.

Generally are exposed in the following way:

A transversal girder unites both sides of the rings in the place every one of it touch the floor.

To increase the support from front to back are interconnection with the anterior longitudinally ribs.

The weight of all cargo collocated in the floor panels of the aircraft are transferred to the structure and the covering of the fuselage through the floor girders.

From this point is transferred to the main ribs of the wings where the support carries the weight

Structural limits of the fuselage

Are established by the manufacturers to secure that cargo never exceeds the limits of the design of each section of the floor.

Maximum weights allowed by compartments

In an aircraft the capability of transporting weight (cargo) is based in the capability of resistance of the structures, especially the floor panels, and the central supports main and laterals. That combined formed the main structure of the aircraft. Just like in the scale the excessive weight will damage the structures.
| **Weight of Passengers, cargo and luggage** | This is the total weight of passengers aboard, luggage, cargo and mail that is in the compartments including the equipment used to move the cargo. |
| **Position of the Gravity center** | The position of the gravity center normally is indicated in percentage of the aerodynamic string, (CAM) being expressed by the DATUM line through the distance (arm), in inches or centimeters or trough the basic limit in relation to a determine specified station determined by the manufacturer, being calculated with help of rules or appropriate graphs for balance. |
| **Gravity center** | A point in the aircraft that allows suspension in perfect balance, it also is the point where the total weight of the aircraft concentrates while the aircraft is flying. All movements of the aircraft are prosecuted around the gravity center. |
| **Gravity center limits** | The position of the gravity center will fall in the distribution of cargo. The limits of the gravity center are expressed in percentages of the CAM and are established by the manufacturer who determines the positions of the gravity center inside the safety patterns of the aircraft. These positions are denominated maximum frontal limit, and maximum back limits. The aircraft not necessarily has to be balanced, because the gravity center can oscillate in any point between the maximum limits in the front and the back. |
General

1. One of the functions in ramp is to handle appropriately the baggage of passengers. Also to make sure that the baggage is loaded in the same aircraft that the passenger is flying, guaranteed the delivery of the baggage to its final destiny in excellent conditions.

2. When the passenger gives us his baggage is giving us a valuable possession, in any case if the baggage is damaged or lost we are not giving the passenger the service he deserves and the service that he paid for, causing very serious inconvenient.

3. The general impression of the passenger is defined at the end with his final experience. The passenger must had excellent service in:
   a) Reservations.
   b) Front desk.
   c) On ground handling
   d) On time flight.
   e) Cabin attention
   f) Deliveries’ at Destination

Baggage Handling

Details to observe in the handling of luggage:
1. Appropriate classification.
2. Careful handling of the baggage to avoid damages.
3. Protection against the climate conditions.
4. On time transference of luggage.
5. Unload and delivery of baggage in customs in stipulated time.
Handling of cargo

1. Each supervisor is responsible for the efficiency and security of the operation.

2. The use of goods lift directly to the fuselage is prohibited.

3. To cover the cargo or close the curtains of the cars in the open air.

4. Move and storage the cargo very carefully.

5. Verify the tags to assure the appropriate handling.

6. Before cargo handling look for damages in the fuselage or panels, in case of damage notify the security areas and cargo department in order to realize the pertinent inspections.

7. Start loading with heavy pieces first, then the medium ones and then the light ones.

8. Try not to place any light or fragile cargo against heavy ones, it may cause damages to the light cargo.

9. Be careful in the appropriate handling of live animals and perishable cargo.

10. Collocate the cargo according to directional instructions described “this side up”, “do not place boxes on top”, “fragile”, etc.

11. Verify that carts are clean and dry.

12. Verify all compartments and look if they are clean and dry.

13. Verify that the shipment is the correct, according to the origin tag and destination.
Baggage Tags

1. Baggage tags are used by the industry of aviation with the end of identifying and this is rule by the IATA.

2. Baggage tags have a destiny code of three letters, so it can be read and interpreted by the personnel involved in the handling of baggage.

Handling of Tags

1. In addition exists tags for specials handling of baggage that are added to your normal tag and are identified in this way:

   a) E.C  (EXECUTIVE CLASS)
   b) A.O.G. (AIRCRAFT ON GROUND)
   c) I.I T  (IN INTERNATIONAL TRANSIT)
   d) U.M.  (UNACOMPANYMINOR)
   e) GROUP
   f) RUSH  (UNACOMPANY BAGGAGE)
   g) CREW  (CREW)
   h) STAND BY (STANBY BAGGAGE)
   i) LIVE ANIMALS
   j) DANGEROUS GOODS
   k) SMALL PACKAGE
   l) COMAT  (COMPANY MATERIAL)
   m) COMAIL (COMPANY MAIL)

2. These tags must be respected and give the necessary importance. As well as to the regular tags and code and destination conditional.

Types of Baggage Tags

1. Manual or automated tags.
   There are two types of tags that provide the same information independent of the system that is used in the handling manual or automated of tags, the ramp personnel must be careful in the reading of the tags from the bottom to the top.

2. On line tags
   These are baggage tags in flights that have no connection with other flight.

3. Interline tags
   These are used for the transfer of baggage from one flight to another with the same or different airline.
There is enough space to insert up to 3 destiny codes of airports and flight numbers.

4. Conditional tags
Are used with the finality of identifying the baggage that for any reason may suffer a delay, exempting the airline of covering any posterior claiming.

These tags stick to the baggage indicate the following:
   a) Fragile.
   b) Inappropriate package.
   c) Perishable.
   d) Damaged baggage.
   e) Delay check.
   f) Stand by

5. Rush tags
This tag is used to send back baggage to its original destiny.

THIS TYPE IS THE ONLY BAGGAGE THAT IS LOADED WITHOUT THE PASSENGER ON BOARD.

It can be used in on line flight or inter line and has 3 spaces for airport codes, flight numbers, and airlines.
Local Baggage Classification

Free Allowance baggage is considered as the one accepted in the station of a passenger that begins his trip.

The first phase of the classification it is done in the area posterior to the front desk where it will be arranged according to the flight number and destination. In some airports they used automate tags that have bar codes and are interpreted by laser machines. We always verify that all baggage carries its destination tag.

The second phase of classification its done during the process of loading:

For all baggage applies the following procedures in the classification area:

1. Keep carts available in the loading area.
2. BC. (Business Class) can be placed in the same cart.
3. Read every tag, verify it, keep record of the piece and place the baggage in the right cart by destination and connection flight.
4. The baggage in carts must not exceed the laterals.
5. Prepare a dispatch record for each flight.
6. Include information about baggage counting, number of tags, or type.
7. Coordinate with ticket counter when the last piece of baggage was sent to the bagroom at closing the check-in.
8. The Ramp Control must be informed about any piece of baggage received after the closure of the flight.
9. Always confirm the closing of the flight and last bag.
10. Follow the Airline Customer priorities of the baggage.
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Procedures for transfer Baggage

All luggage in connection must be handed rapidly and assure its load in the next flight.

Arrival luggage waiting to be transfer in the station to other airline.

1. The ramp personnel will select the luggage for destination and airline.
2. The luggage will be delivered to the designed airline and it will be distributed to facilitate transfers.
3. The luggage will be moved to the signed transfer area.
4. For immediate connections the luggage can be segregated while the aircraft it's been unloaded. The same can be moved from one aircraft from another under the control of the airlines involved in the airports where this operation is allowed.

Luggage arriving in other airline to be transferred in the station for a airline’s flight.

1. Personnel of the other airline will move the luggage to the assigned transfer area.
2. The personnel of the other airline or handling on ground companies will be the responsible of delivering the in transfer luggage before the departure of the next established flight.
3. To immediate connections the luggage can be transferred directly from the aircraft to another aircraft under the control of the airlines involved in the airports where this operation is allowed.
4. In any case keep a record of the transferred pieces (person in charge of the flight report) the attendance of the passengers must be confirmed in a flight when transfer cargo in received.
5. If any doubts about the information of the tags, or the tag are lost, is necessary to coordinate with the evolved departments to identify and correct the discrepancy previous to the loading of any piece.
Luggage in Transfer, USA stations

In USA stations where it is allowed to transfer one international flight to another, a special procedure of tags is used I.T.I.

1. The luggage that has the I.T.I tags cannot be delivered to the passengers in USA except with the supervision of the USA customs.

2. The ramp personnel must be in constant contact with the ITI room personnel to verify if any transfer luggage is waiting.

3. If they have the ITI luggage, it is necessary to pick up the luggage at the ITI room and must be taken to the aircraft in direct form.

4. It is recommended to go to the ITI room at least 20 minutes before the departure of the flight to check if any last minute luggage has arrived.
Misplaced baggage

1. The ideal is that no baggage shall be misplaced, but this situations are always present is necessary to be extremely careful, you may also have knowledge about what to do when baggage is not load in its respective flight.

2. At the moment of discovering and identifying a piece of baggage that has not been loaded in its correspondent flight due to different reasons, it must be taken to the assigned area for this case.

3. Notify immediately to the Ramp and Baggage Supervisor, to channel the information of timely warning with the object of notifying the station of destination about the occurred.

Rush Tag

4. When a misplaced baggage occurs and is located, this will be traveling in another flight, reason why it must re-tagged with a rush tag.