**AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING**

**HIGHLIGHTS**

Revision No. 18 - Feb 01/19

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**CHAPTER 3**

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Subject 3-2-1

Payload/Range - ISA Conditions                                  May 01/15

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Take-Off Weight Limitation - ISA Conditions                    May 01/14

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SCOPE

1-1-0 Introduction

**ON A/C A318-100

Purpose

1. General

The A318 AIRCRAFT CHARACTERISTICS – AIRPORT AND MAINTENANCE PLANNING (AC) manual is issued for the A318-100 series aircraft equipped with wing-tip fences, to provide necessary data to airport operators, airlines and Maintenance/Repair Organizations (MRO) for airport and maintenance facilities planning.

This document is not customized and must not be used for training purposes. No information within may constitute a contractual commitment.

The A320 Family is the world’s best-selling single-aisle aircraft. An A320 takes off or lands somewhere in the world every 2.5 seconds of every day, the family has logged more than 50 million cycles since entry-into-service and records a best-in-class dispatch reliability of 99.7%.
**ON A/C A318-100**

**Glossary**

1. List of Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>A/C</td>
<td>Aircraft</td>
</tr>
<tr>
<td>ACF</td>
<td>Aircraft Cabin Flex</td>
</tr>
<tr>
<td>ACN</td>
<td>Aircraft Classification Number</td>
</tr>
<tr>
<td>AMM</td>
<td>Aircraft Maintenance Manual</td>
</tr>
<tr>
<td>APU</td>
<td>Auxiliary Power Unit</td>
</tr>
<tr>
<td>B/C</td>
<td>Business Class</td>
</tr>
<tr>
<td>CBR</td>
<td>California Bearing Ratio</td>
</tr>
<tr>
<td>CC</td>
<td>Cargo Compartment</td>
</tr>
<tr>
<td>CG</td>
<td>Center of Gravity</td>
</tr>
<tr>
<td>CKPT</td>
<td>Cockpit</td>
</tr>
<tr>
<td>E</td>
<td>Young's Modulus</td>
</tr>
<tr>
<td>ELEC</td>
<td>Electric, Electrical, Electricity</td>
</tr>
<tr>
<td>ESWL</td>
<td>Equivalent Single Wheel Load</td>
</tr>
<tr>
<td>FAA</td>
<td>Federal Aviation Administration</td>
</tr>
<tr>
<td>F/C</td>
<td>First Class</td>
</tr>
<tr>
<td>FDL</td>
<td>Fuselage Datum Line</td>
</tr>
<tr>
<td>FR</td>
<td>Frame</td>
</tr>
<tr>
<td>FSTE</td>
<td>Full Size Trolley Equivalent</td>
</tr>
<tr>
<td>FWD</td>
<td>Forward</td>
</tr>
<tr>
<td>GPU</td>
<td>Ground Power Unit</td>
</tr>
<tr>
<td>GSE</td>
<td>Ground Support Equipment</td>
</tr>
<tr>
<td>HYD</td>
<td>Hydraulic</td>
</tr>
<tr>
<td>ICAO</td>
<td>International Civil Aviation Organisation</td>
</tr>
<tr>
<td>IDG</td>
<td>Integrated Drive Generator</td>
</tr>
<tr>
<td>ISA</td>
<td>International Standard Atmosphere</td>
</tr>
<tr>
<td>L</td>
<td>Left</td>
</tr>
<tr>
<td>L</td>
<td>Radius of relative stiffness</td>
</tr>
<tr>
<td>LCN</td>
<td>Load Classification Number</td>
</tr>
<tr>
<td>LD</td>
<td>Lower Deck</td>
</tr>
<tr>
<td>L/G</td>
<td>Landing Gear</td>
</tr>
<tr>
<td>LH</td>
<td>Left Hand</td>
</tr>
<tr>
<td>LPS</td>
<td>Last Pax Seating</td>
</tr>
<tr>
<td>MAC</td>
<td>Mean Aerodynamic Chord</td>
</tr>
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</table>
2. Design Weight Terminology
   - Maximum Design Ramp Weight (MRW):
     Maximum weight for ground maneuver (including weight of taxi and run-up fuel) as limited by aircraft strength and airworthiness requirements. It is also called Maximum Design Taxi Weight (MTW).
   - Maximum Design Landing Weight (MLW):
     Maximum weight for landing as limited by aircraft strength and airworthiness requirements.
   - Maximum Design Takeoff Weight (MTOW):
     Maximum weight for takeoff as limited by aircraft strength and airworthiness requirements. (This is the maximum weight at start of the take-off run).
   - Maximum Design Zero Fuel Weight (MZFW):
     Maximum permissible weight of the aircraft without usable fuel.
   - Maximum Seating Capacity:
     Maximum number of passengers specifically certified or anticipated for certification.
   - Usable Volume:
     Usable volume available for cargo, pressurized fuselage, passenger compartment and cockpit.
   - Water Volume:
     Maximum volume of cargo compartment.
   - Usable Fuel:
     Fuel available for aircraft propulsion.
# AIRCRAFT DESCRIPTION

## 2-1-1 General Aircraft Characteristics Data

**ON A/C A318-100**

General Aircraft Characteristics Data

1. The following table provides characteristics of A318-100 Models, these data are specific to each Weight Variant:

<table>
<thead>
<tr>
<th>Aircraft Characteristics</th>
<th>WV000</th>
<th>WV001</th>
<th>WV002</th>
<th>WV003</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Ramp Weight (MRW)</td>
<td>59 400 kg (130 955 lb)</td>
<td>61 900 kg (136 466 lb)</td>
<td>63 400 kg (139 773 lb)</td>
<td>64 900 kg (143 080 lb)</td>
</tr>
<tr>
<td>Maximum Taxi Weight (MTW)</td>
<td>59 000 kg (130 073 lb)</td>
<td>61 500 kg (135 584 lb)</td>
<td>63 000 kg (138 891 lb)</td>
<td>64 500 kg (142 198 lb)</td>
</tr>
<tr>
<td>Maximum Take-Off Weight (MTOW)</td>
<td>56 000 kg (123 459 lb)</td>
<td>56 000 kg (123 459 lb)</td>
<td>57 500 kg (126 766 lb)</td>
<td>57 500 kg (126 766 lb)</td>
</tr>
<tr>
<td>Maximum Landing Weight (MLW)</td>
<td>53 000 kg (116 845 lb)</td>
<td>53 000 kg (116 845 lb)</td>
<td>54 500 kg (120 152 lb)</td>
<td>54 500 kg (120 152 lb)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Aircraft Characteristics</th>
<th>WV004</th>
<th>WV005</th>
<th>WV006</th>
<th>WV007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Ramp Weight (MRW)</td>
<td>66 400 kg (146 387 lb)</td>
<td>68 400 kg (150 796 lb)</td>
<td>56 400 kg (124 341 lb)</td>
<td>61 400 kg (135 364 lb)</td>
</tr>
<tr>
<td>Maximum Taxi Weight (MTW)</td>
<td>66 000 kg (145 505 lb)</td>
<td>68 000 kg (149 914 lb)</td>
<td>56 000 kg (123 459 lb)</td>
<td>61 000 kg (134 482 lb)</td>
</tr>
<tr>
<td>Maximum Take-Off Weight (MTOW)</td>
<td>57 500 kg (126 766 lb)</td>
<td>57 500 kg (126 766 lb)</td>
<td>56 000 kg (123 459 lb)</td>
<td>56 000 kg (123 459 lb)</td>
</tr>
<tr>
<td>Maximum Landing Weight (MLW)</td>
<td>54 500 kg (120 152 lb)</td>
<td>54 500 kg (120 152 lb)</td>
<td>53 000 kg (116 845 lb)</td>
<td>53 000 kg (116 845 lb)</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Aircraft Characteristics</th>
<th>WV008</th>
<th>WV009</th>
<th>WV010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Ramp Weight (MRW)</td>
<td>64 400 kg (141 978 lb)</td>
<td>66 400 kg (146 387 lb)</td>
<td>68 400 kg (150 796 lb)</td>
</tr>
<tr>
<td>Maximum Taxi Weight (MTW)</td>
<td>64 000 kg (141 096 lb)</td>
<td>66 000 kg (145 505 lb)</td>
<td>68 000 kg (149 914 lb)</td>
</tr>
</tbody>
</table>
### Aircraft Characteristics

<table>
<thead>
<tr>
<th></th>
<th>WV008</th>
<th>WV009</th>
<th>WV010</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Maximum Landing Weight (MLW)</strong></td>
<td>56 000 kg (123 459 lb)</td>
<td>57 500 kg (126 766 lb)</td>
<td>57 500 kg (126 766 lb)</td>
</tr>
<tr>
<td><strong>Maximum Zero Fuel Weight (MZFW)</strong></td>
<td>53 000 kg (116 845 lb)</td>
<td>48 000 kg (105 822 lb)</td>
<td>48 000 kg (105 822 lb)</td>
</tr>
</tbody>
</table>

2. The following table provides characteristics of A318-100 Models, these data are common to each Weight Variant:

<table>
<thead>
<tr>
<th>Aircraft Characteristics</th>
<th>WV008</th>
<th>WV009</th>
<th>WV010</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Standard Seating Capacity</strong></td>
<td>132 (Single-Class)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Usable Fuel Capacity</strong></td>
<td>23 859 l (6 303 US gal)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(density = 0.785 kg/l)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>18 729 kg (41 290 lb)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Pressurized Fuselage Volume</strong> (A/C non equipped)</td>
<td>257 m³ (9 076 ft³)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Passenger Compartment Volume</strong></td>
<td>107 m³ (3 779 ft³)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Cockpit Volume</strong></td>
<td>9 m³ (318 ft³)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Usable Volume, FWD CC</strong></td>
<td>6.72 m³ (237 ft³)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Usable Volume, AFT CC</strong></td>
<td>8.87 m³ (313 ft³)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Usable Volume, Bulk CC</strong></td>
<td>5.71 m³ (202 ft³)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Water Volume, FWD CC</strong></td>
<td>8.34 m³ (295 ft³)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Water Volume, AFT CC</strong></td>
<td>10.38 m³ (367 ft³)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Water Volume, Bulk CC</strong></td>
<td>5.97 m³ (211 ft³)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
2-2-0 General Aircraft Dimensions

**ON A/C A318-100

General Aircraft Dimensions

1. This section provides general aircraft dimensions.
**ON A/C A318-100

General Aircraft Dimensions
Wing Tip Fence (Sheet 1 of 2)
FIGURE-2-2-0-991-001-A01

NOTE:
RELATED TO AIRCRAFT ATTITUDE AND WEIGHT.
**ON A/C A318-100**

NOTE:
RELATED TO AIRCRAFT ATTITUDE AND WEIGHT.

General Aircraft Dimensions
Wing Tip Fence (Sheet 2 of 2)
FIGURE-2-2-0-991-001-A01
2-3-0 Ground Clearances

**ON A/C A318-100**

Ground Clearances

1. This section provides the height of various points of the aircraft, above the ground, for different aircraft configurations. Dimensions in the tables are approximate and will vary with tire type, weight and balance and other special conditions.

   The dimensions are given for:
   - A light weight, for an A/C in maintenance configuration with a mid CG,
   - An aircraft at Maximum Ramp Weight with a FWD CG and an AFT CG,
   - Aircraft on jacks, FDL at 4.60 m (15.09 ft).

**NOTE**: Passenger and cargo door ground clearances are measured from the center of the door sill and from floor level.
**ON A/C A318-100**

NOTE:
PAASSENGER AND CARGO DOOR GROUND CLEARANCES ARE MEASURED FROM THE CENTER OF THE DOOR SILL AND FROM FLOOR LEVEL.

N_AC_020300_1_0010101_01_08

Ground Clearances
Wing Tip Fence

FIGURE-2-3-0-991-001-A01
**ON A/C A318-100**

---

**FLAPS EXTENDED**

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>A/C IN MAINTENANCE CONFIGURATION MID CG</th>
<th>MAXIMUM RAMP WEIGHT FWD CG</th>
<th>MAXIMUM RAMP WEIGHT AFT CG</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>m</td>
<td>ft</td>
<td>m</td>
</tr>
<tr>
<td>FLAP 1 INBD</td>
<td>A</td>
<td>2.05</td>
<td>6.73</td>
</tr>
<tr>
<td>FLAP 1 OUTBD</td>
<td>B</td>
<td>2.77</td>
<td>9.09</td>
</tr>
<tr>
<td>FLAP 2 INBD</td>
<td>C</td>
<td>2.81</td>
<td>9.22</td>
</tr>
<tr>
<td>FLAP 2 OUTBD</td>
<td>D</td>
<td>3.65</td>
<td>11.98</td>
</tr>
</tbody>
</table>

---

Ground Clearances
Trailing Edge Flaps - Extended
FIGURE-2-3-0-991-006-A01

---

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## FLAP TRACKS EXTENDED

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>A/C IN MAINTENANCE CONFIGURATION MID CG</th>
<th>MAXIMUM RAMP WEIGHT FWD CG</th>
<th>MAXIMUM RAMP WEIGHT AFT CG</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>m</td>
<td>ft</td>
<td>m</td>
</tr>
<tr>
<td>FLAP TRACK 2</td>
<td>A</td>
<td>2.10</td>
<td>6.89</td>
</tr>
<tr>
<td>FLAP TRACK 3</td>
<td>B</td>
<td>2.59</td>
<td>8.50</td>
</tr>
<tr>
<td>FLAP TRACK 4</td>
<td>C</td>
<td>3.05</td>
<td>10.01</td>
</tr>
</tbody>
</table>
**ON A/C A318-100**

Ground Clearances
Flap Tracks - Retracted
FIGURE-2-3-0-991-007-A01

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>A/C IN MAINTENANCE CONFIGURATION MID CG</th>
<th>MAXIMUM RAMP WEIGHT FWD CG</th>
<th>MAXIMUM RAMP WEIGHT AFT CG</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>m</td>
<td>ft</td>
<td>m</td>
</tr>
<tr>
<td>FLAP TRACK 2</td>
<td>A</td>
<td>2.70</td>
<td>8.86</td>
</tr>
<tr>
<td>FLAP TRACK 3</td>
<td>B</td>
<td>3.10</td>
<td>10.17</td>
</tr>
<tr>
<td>FLAP TRACK 4</td>
<td>C</td>
<td>3.50</td>
<td>11.48</td>
</tr>
</tbody>
</table>
**ON A/C A318-100

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>A/C IN MAINTENANCE CONFIGURATION MID CG</th>
<th>MAXIMUM RAMP WEIGHT FWD CG</th>
<th>MAXIMUM RAMP WEIGHT AFT CG</th>
</tr>
</thead>
<tbody>
<tr>
<td>FLAP TRACK 2 A</td>
<td>1.95 m (6.40 ft)</td>
<td>1.85 m (6.07 ft)</td>
<td>1.83 m (6.00 ft)</td>
</tr>
<tr>
<td>FLAP TRACK 3 B</td>
<td>2.31 m (7.58 ft)</td>
<td>2.21 m (7.25 ft)</td>
<td>2.18 m (7.15 ft)</td>
</tr>
<tr>
<td>FLAP TRACK 4 C</td>
<td>2.89 m (9.48 ft)</td>
<td>2.78 m (9.12 ft)</td>
<td>2.75 m (9.02 ft)</td>
</tr>
</tbody>
</table>

Ground Clearances
Flap Tracks - 1 + F
FIGURE-2-3-0-991-036-A01
**ON A/C A318-100**

### Aileron Down

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>A/C in Maintenance Configuration Mid CG</th>
<th>Maximum Ramp Weight FWD CG</th>
<th>Maximum Ramp Weight AFT CG</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>m</td>
<td>ft</td>
<td>m</td>
</tr>
<tr>
<td>AILERON INBD A</td>
<td>3.84</td>
<td>12.60</td>
<td>3.78</td>
</tr>
<tr>
<td>AILERON OUTBD B</td>
<td>4.19</td>
<td>13.75</td>
<td>4.13</td>
</tr>
</tbody>
</table>

Ground Clearances
Aileron Down
FIGURE-2-3-0-991-008-A01

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N_AC_020300_1_00800101_01_01
**ON A/C A318-100**

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>A/C IN MAINTENANCE CONFIGURATION MID CG</th>
<th>MAXIMUM RAMP WEIGHT FWD CG</th>
<th>MAXIMUM RAMP WEIGHT AFT CG</th>
</tr>
</thead>
<tbody>
<tr>
<td>AILERON INBD A</td>
<td>4.37 m 14.34 ft</td>
<td>4.31 m 14.14 ft</td>
<td>4.45 m 14.60 ft</td>
</tr>
<tr>
<td>AILERON OUTBD B</td>
<td>4.57 m 14.99 ft</td>
<td>4.51 m 14.80 ft</td>
<td>4.26 m 13.98 ft</td>
</tr>
</tbody>
</table>

Ground Clearances
Aileron Up
FIGURE-2-3-0-991-037-A01
**ON A/C A318-100

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>A/C IN MAINTENANCE CONFIGURATION MID CG</th>
<th>MAXIMUM RAMP WEIGHT FWD CG</th>
<th>MAXIMUM RAMP WEIGHT AFT CG</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>m</td>
<td>ft</td>
<td>m</td>
</tr>
<tr>
<td>SPOILER 1 INBD A</td>
<td>3.75</td>
<td>12.30</td>
<td>3.69</td>
</tr>
<tr>
<td>SPOILER 1 OUTBD B</td>
<td>4.01</td>
<td>13.16</td>
<td>3.94</td>
</tr>
<tr>
<td>SPOILER 2 INBD C</td>
<td>4.07</td>
<td>13.35</td>
<td>4.01</td>
</tr>
<tr>
<td>SPOILER 2/3 D</td>
<td>4.21</td>
<td>13.81</td>
<td>4.15</td>
</tr>
<tr>
<td>SPOILER 5 OUTBD G</td>
<td>4.60</td>
<td>15.09</td>
<td>4.54</td>
</tr>
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</table>

Ground Clearances
Spoilers - Extended
FIGURE-2-3-0-991-009-A01
**ON A/C A318-100**

![Diagram of aircraft](attachment:image.png)

### LEADING EDGE SLATS EXTENDED

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>A/C IN MAINTENANCE CONFIGURATION MID CG</th>
<th>MAXIMUM RAMP WEIGHT FWD CG</th>
<th>MAXIMUM RAMP WEIGHT AFT CG</th>
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<tbody>
<tr>
<td></td>
<td>m</td>
<td>ft</td>
<td>m</td>
</tr>
<tr>
<td>SLAT 1 INBD</td>
<td>A</td>
<td>2.54</td>
<td>8.33</td>
</tr>
<tr>
<td>SLAT 1 OUTBD</td>
<td>B</td>
<td>2.96</td>
<td>9.71</td>
</tr>
<tr>
<td>SLAT 2 INBD</td>
<td>C</td>
<td>3.05</td>
<td>10.01</td>
</tr>
<tr>
<td>SLAT 2/3</td>
<td>D</td>
<td>3.35</td>
<td>10.99</td>
</tr>
<tr>
<td>SLAT 3/4</td>
<td>E</td>
<td>3.61</td>
<td>11.84</td>
</tr>
<tr>
<td>SLAT 4/5</td>
<td>F</td>
<td>3.86</td>
<td>12.66</td>
</tr>
<tr>
<td>SLAT 5 OUTBD</td>
<td>G</td>
<td>4.10</td>
<td>13.45</td>
</tr>
</tbody>
</table>

Ground Clearances
Leading Edge Slats - Extended
FIGURE-2-3-0-991-010-A01

N_AC_020300_1_0100101_01_01
2-4-1  Interior Arrangements - Plan View

**ON A/C A318-100

Interior Arrangements - Plan View

1. This section provides the typical interior configuration.
**ON A/C A318-100**

Interior Arrangements - Plan View
Typical Configuration - Single-Class, High Density
FIGURE-2-4-1-991-001-A01
AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A318-100**

Interior Arrangements - Plan View
Typical Configuration - Two-Class
FIGURE-2-4-1-991-007-A01

Page 3
Feb 01/19
2-5-0 Interior Arrangements - Cross Section

**ON A/C A318-100

Interior Arrangements - Cross Section

1. This section provides the typical configuration.
**ON A/C A318-100

Interior Arrangements - Cross Section
Economy Class, 6 Abreast - Wider Aisle (Sheet 1 of 2)
FIGURE-2-5-0-991-005-A01
**ON A/C A318-100

Interior Arrangements - Cross Section
Economy Class, 6 Abreast - Wider Seat (Sheet 2 of 2)
FIGURE-2-5-0-991-005-A01
**ON A/C A318-100

**Interior Arrangements - Cross Section
First-Class
FIGURE-2-5-0-991-006-A01
2-6-0 Cargo Compartments

**ON A/C A318-100

Cargo Compartments

1. This section gives the cargo compartments locations, dimensions and loading combinations.
**ON A/C A318-100

Cargo Compartments
Locations and Dimensions
FIGURE-2-6-0-991-001-A01
2-7-0 Door Clearances and Location

**ON A/C A318-100

Door Clearances

1. This section provides door identification and location.

   **NOTE**: Dimensions of the ground clearances are approximate and will vary with tire type, weight and balance and other special conditions.
**ON A/C A318-100

Door Identification and Location
Door Location (Sheet 2 of 2)
FIGURE-2-7-0-991-001-A01
Doors Clearances
Forward Passenger/Crew Doors
FIGURE-2-7-0-991-005-A01
**ON A/C A318-100**

NOTE:
ESCAPE SLIDE COMPARTMENT DOOR OPENS ON WING UPPER SURFACE.

Doors Clearances
Emergency Exits
FIGURE-2-7-0-991-006-A01
**ON A/C A318-100

Doors Clearances
Aft Passenger/Crew Doors
FIGURE-2-7-0-991-007-A01
Doors Clearances
Forward Cargo Compartment Door
FIGURE-2-7-0-991-008-A01
Doors Clearances
Aft Cargo Compartment Door
FIGURE-2-7-0-991-009-A01
**ON A/C A318-100**

NOTE:
VALUE OF CG: 25% RC.

Doors Clearances
Main Landing Gear Doors
FIGURE-2-7-0-991-010-A01
Doors Clearances
Radome
FIGURE-2-7-0-991-011-A01
**ON A/C A318-100

Value of CG: 25% RC.

Doors Clearances
APU and Nose Landing Gear Doors
FIGURE-2-7-0-991-012-A01
2-8-0Escape Slides

**ON A/C A318-100

Escape Slides

1. General
   This section provides location of slides/rafts facilities and related clearances.

2. Location
   Slides/rafts facilities are provided at the following locations:
   - One single or dual lane slide at each door 1 & 4 (total four)
   - Dual lane overwing slides are installed above the wings in the left and right wing-to-fuselage
     fairings for off-the-wing evacuation (total 2).
**ON A/C A318-100

NOTE:
LH SHOWN, RH SYMMETRICAL.

Escape Slides
Location
FIGURE-2-8-0-991-001-A01
**ON A/C A318-100**

Escape Slides
Dimensions
FIGURE-2-8-0-991-002-A01
2-9-0 Landing Gear

**ON A/C A318-100

Landing Gear

1. General

   The landing gear is of the conventional retractable tricycle type comprising:
   - Two main gears with twin-wheel,
   - A twin-wheel nose gear.

   The main landing gears are located under the wing and retract sideways towards the fuselage centerline.
   The nose landing gear retracts forward into a fuselage compartment located between FR9 and FR20.

   The landing gears and landing gear doors are operated and controlled electrically and hydraulically.
   In abnormal operation, the landing gear can be extended by gravity.

   For landing gear footprint and tire size, refer to 07-02-00.

2. Main Landing Gear

   A. Twin-Wheel

      Each of the two main landing gear assemblies consists of a conventional two-wheel direct type with an integral shock absorber supported in the fore and aft directions by a fixed drag strut and laterally by a folding strut mechanically locked when in the DOWN position.

3. Nose Landing Gear

   The nose landing gear consists of a leg with a built-in shock absorber strut, carrying twin wheels with adequate shimmy damping and a folding strut mechanically locked when in the DOWN position.

4. Nose Wheel Steering

   Steering is controlled by two hand wheels in the cockpit. For steering angle controlled by the hand wheels, refer to AMM 32-51-00.
   For steering angle limitation, refer to AMM 09-10-00.

   A steering disconnection box is installed on the nose landing gear to allow steering deactivation for towing purposes.

5. Landing Gear Servicing Points

   A. General

      Filling of the landing-gear shock absorbers is done through MIL-PRF-6164 standard valves.
Charging of the landing-gear shock absorbers is accomplished with nitrogen through MIL-PRF-6164 standard valves.

B. Charging Pressure

For charging of the landing-gear shock absorbers, refer to AMM 12-14-32.

6. Braking
A. General

The four main wheels are equipped with carbon multidisc brakes.

The braking system is electrically controlled and hydraulically operated.

The braking system has four braking modes plus autobrake and anti-skid systems:
- Normal braking with anti-skid capability,
- Alternative braking with anti-skid capability,
- Alternative braking without anti-skid capability,
- Parking brake with full pressure application capability only.

B. In-Flight Wheel Braking

The main gear wheels are braked automatically before the wheels enter the wheel bay.

The nose gear wheels are stopped by the wheels contacting a rubbing strip (the brake band) when the gear is in the retracted position.
**ON A/C A318-100**

NOTE: MAIN DOOR SHOWN OPEN IN GROUND MAINTENANCE POSITION.

Landing Gear
Main Landing Gear - Twin-Wheel (Sheet 1 of 2)
FIGURE-2-9-0-991-002-A01
Landing Gear
Main Landing Gear - Twin-Wheel (Sheet 2 of 2)
FIGURE-2-9-0-991-002-A01
**ON A/C A318-100**

Landing Gear
Main Landing Gear Dimensions - Twin-Wheel
FIGURE-2-9-0-991-003-A01

N_AC_020900_1_0030101_01_00
Landing Gear
Nose Landing Gear (Sheet 1 of 2)
FIGURE-2-9-0-991-004-A01
**ON A/C A318-100**

Landing Gear
Nose Landing Gear (Sheet 2 of 2)
FIGURE-2-9-0-991-004-A01
**ON A/C A318-100

Landing Gear
Nose Landing Gear Dimensions
FIGURE-2-9-0-991-005-A01
**ON A/C A318-100**

**Landing Gear Maintenance Pits**

1. Description

The minimum maintenance pit envelopes for the landing-gear shock absorber removal are shown in FIGURE 2-9-0-991-020-A and FIGURE 2-9-0-991-021-A.

All dimensions shown are minimum dimensions with zero clearances.

The dimensions for the pits have been determined as follows:
- The length and width of the pits allow the gear to rotate as the weight is taken off the landing gear.
- The depth of the pits allows the shock absorber to be removed when all the weight is taken off the landing gear.

Dimensions for elevators and associated mechanisms must be added to those in FIGURE 2-9-0-991-020-A and FIGURE 2-9-0-991-021-A.
**ON A/C A318-100**

<table>
<thead>
<tr>
<th>A</th>
<th>m</th>
<th>ft</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.52</td>
<td>1.71</td>
<td>1.17</td>
</tr>
<tr>
<td>1.17</td>
<td>3.84</td>
<td></td>
</tr>
</tbody>
</table>

DIM QUOTED IS WITH WHEELS REMOVED AND 33 mm (1.31 in) CLEARANCE AT JACKING DOME.

NOTE:
1. REPRESENTS TOP OF MECHANICAL OR HYDRAULIC ELEVATOR WITH AIRCRAFT WEIGHT SUPPORTED AND LANDING GEAR SHOCK ABSORBERS EXTENDED.
2. REPRESENTS TOP OF MECHANICAL OR HYDRAULIC ELEVATOR SHOWN WITH ZERO CLEARANCE LOWERED FOR SHOCK ABSORBER REMOVAL.

Landing Gear Maintenance Pits
Maintenance Pit Envelopes
FIGURE-2-9-0-991-021-A01
2-10-0 Exterior Lighting

**ON A/C A318-100

Exterior Lighting

1. General

   This section provides the location of the aircraft exterior lighting.

<table>
<thead>
<tr>
<th>ITEM</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>RIGHT NAVIGATION LIGHT (GREEN)</td>
</tr>
<tr>
<td>2</td>
<td>TAIL NAVIGATION LIGHT (WHITE)</td>
</tr>
<tr>
<td>3</td>
<td>LEFT NAVIGATION LIGHT (RED)</td>
</tr>
<tr>
<td>4</td>
<td>RETRACTABLE LANDING LIGHT</td>
</tr>
<tr>
<td>5</td>
<td>RUNWAY TURN OFF LIGHT</td>
</tr>
<tr>
<td>6</td>
<td>TAXI LIGHT</td>
</tr>
<tr>
<td>7</td>
<td>TAKE-OFF LIGHT</td>
</tr>
<tr>
<td>8</td>
<td>LOGO LIGHT</td>
</tr>
<tr>
<td>9</td>
<td>UPPER ANTI-COLLISION LIGHT/BEACON (RED)</td>
</tr>
<tr>
<td>10</td>
<td>LOWER ANTI-COLLISION LIGHT/BEACON (RED)</td>
</tr>
<tr>
<td>11</td>
<td>WING STROBE LIGHT (HIGH INTENSITY, WHITE)</td>
</tr>
<tr>
<td>12</td>
<td>TAIL STROBE LIGHT (HIGH INTENSITY, WHITE)</td>
</tr>
<tr>
<td>13</td>
<td>WING/ENGINE SCAN LIGHT</td>
</tr>
<tr>
<td>14</td>
<td>WHEEL WELL LIGHT (DOME)</td>
</tr>
<tr>
<td>15</td>
<td>CARGO COMPARTMENT FLOOD LIGHT</td>
</tr>
</tbody>
</table>
**ON A/C A318-100

Exterior Lighting
FIGURE-2-10-0-991-001-A01
**ON A/C A318-100

Exterior Lighting
FIGURE-2-10-0-991-002-A01
Exterior Lighting
FIGURE-2-10-0-991-003-A01
**ON A/C A318-100

EXAMPLE FOR LIGHT N° 15

CEILING LIGHT
SPOT LIGHT
GROUND

Exterior Lighting
FIGURE-2-10-0-991-017-A01
2-11-0 Antennas and Probes Location

**ON A/C A318-100

Antennas and Probes Location

1. This section gives the location of antennas and probes.
**ON A/C A318-100**

WEATHER RADAR
EMERGENCY STATIC PROBE
AOA SENSOR(3) STBY
ATC(4)

GPS(2)
VHF(1)

LOC
GLIDE
DME(1)

TAT PROBE
PITOT PROBE(3)
PITOT PROBE(1)

ATC(1)
STATIC PROBE(2)

TCAS TOP
AOA SENSOR(1)

DME BOTTOM
DME(2)

MARKER
TCAS BOTTOM

RADIO ALTIMETER(2)

VHF(3)
HF

EMERGENCY STATIC PROBE

ELT

VOR

ATC(3)

ADF(1)
AOA SENSOR(2)

TAT PROBE
PITOT PROBE(2)

ATC(2)
STATIC PROBE(1)
STATIC PROBE(2)

NOTE: DEPENDING ON AIRCRAFT CONFIGURATION

Antennas and Probes
Location
FIGURE-2-11-0-991-001-A01

N_AC_021100_1_0010101_01_00
2-12-0    Power Plant

**ON A/C A318-100

Auxiliary Power Unit

1. General

The APU is installed at the rear part of the fuselage in the tail cone. An air intake system with a
flap-type door is installed in front of the APU compartment. The exhaust gases pass overboard at the
end of the fuselage cone.

2. Controls and Indication

The primary APU controls and indications are installed on the overhead panel, on the center pedestal
and on the center instrument panel. Additionally, an external APU panel is installed on the nose
landing gear to initiate an APU emergency shutdown.
**ON A/C A318-100**

Auxiliary Power Unit
Access Doors
FIGURE-2-12-0-991-001-A01
**ON A/C A318-100

Auxiliary Power Unit
General Layout
FIGURE-2-12-0-991-002-A01
**ON A/C A318-100**

**Engine and Nacelle**

1. Engine and Nacelle - CFM Engine
   A. Engine

   The engine is a dual-rotor, variable stator, high bypass ratio turbofan powerplant for subsonic services. The principal modules of the engine are:
   - low pressure compressor (fan stator and fan rotor)
   - high pressure compressor
   - turbine frame
   - combustion chamber
   - high pressure turbine
   - low pressure turbine
   - accessory drives (gear box).

   The 9 stage high pressure compressor is driven by 1 stage high pressure turbine, and the integrated front fan and booster is driven by 4 stage low pressure turbine. An annular combustor converts fuel and compressor discharge air into energy to provide engine thrust part through primary exhaust and to drive the turbines. The accessory drive system extracts energy from the high pressure rotor to drive the engine accessories and the engine mounted aircraft accessories. Reverse thrust for braking the aircraft after landing is supplied by an integrated system which acts on the fan discharge airflow.

   B. Nacelle

   The cowl encloses the periphery of the engine so as to form the engine nacelle. Each engine is housed in a nacelle suspended from a pylon attached to the wing lower surface. The nacelle consists of the demountable powerplant, the fan cowl, and the thrust reverser cowl.

   The nacelle installation is designed to provide cooling and ventilation air for engine accessories mounted along the fan and core casing. The nacelle provides:
   - protection for the engine and the accessories
   - airflow around the engine during its operation
   - lighting protection
   - HIRF and EMI attenuation.

2. Engine and Nacelle - PW Engine
   A. Engine

   The engine is a two spool, axial flow, high bypass ratio turbofan powerplant for subsonic service. The main modules of the engine are:
   - compressor section
   - combustion section
- turbine section
- accessory drives (gear box) section.

The four stage Low Pressure Compressor (LPC) is driven by a three stage Low Pressure Turbine (LPT) and the six stage High Pressure Compressor (HPC) by a single stage High Pressure Turbine (HPT).

The PW6000 incorporates a Full Authority Digital Engine Control (FADEC) which governs all engine functions, including power management.

B. Nacelle

The cowls enclose the periphery of the engine so as to form the engine nacelle. Each engine is housed in a nacelle suspended from a pylon attached below the wing.

The nacelle installation is designed to provide cooling and ventilation air for engine accessories mounted along the fan and core casing. The nacelle provides:
- protection for the engine and the accessories
- airflow around the engine during its operation
- lighting protection
- HIRF and EMI attenuation.
**ON A/C A318-100

Power Plant Handling
Major Dimensions - CFM56 Series Engine
FIGURE-2-12-0-991-011-A01
**ON A/C A318-100**

**ENGINE AIR INLET COWL**

- **A**
  - Distance from the Nose: 8.8 m (28.9 in)
  - 0.93 m (3.1 ft)
  - 1.3 m (4.3 ft)
  - 1.2 m (3.9 ft)

- **B**
  - Distance from the Nose: 2.3 m (7.5 ft)
  - 1.6 m (5.2 ft)

- **C**
  - Distance from the Nose: 0.33 m (1.1 ft)

- **D**
  - Distance from the Nose: 1.2 m (3.9 ft)

**FAN COWL**

- Centerbody: 0.57 m (1.9 ft)
- Engine Air Inlet Cowl: 2.07 m (6.8 ft)
- Blocker Door Extended: 1.9 m (6.2 ft)
- 1.2 m (3.9 ft)

**PRIMARY NOZZLE**

- 1.2 m (3.9 ft)
- 1.8 m (5.9 ft)

**DISTANCE FROM THE NOSE**

- 6°
- 8.8 m (28.9 in)
- 0.93 m (3.1 ft)
- 1.3 m (4.3 ft)
- 1.2 m (3.9 ft)

**Power Plant Handling**

Major Dimensions - CFM56 Series Engine

FIGURE-2-12-0-991-012-A01
**ON A/C A318-100

NOTE: APPROXIMATE DIMENSIONS.

<table>
<thead>
<tr>
<th>m (ft)</th>
<th>$\alpha$</th>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>VIEW COWLING AFT</td>
<td>42°27</td>
<td>1.8 (5.9)</td>
<td>1.5 (4.9)</td>
<td>1.3 (4.3)</td>
</tr>
<tr>
<td></td>
<td>55°15</td>
<td>2.0 (6.6)</td>
<td>1.8 (5.9)</td>
<td>1.7 (5.6)</td>
</tr>
<tr>
<td>VIEW COWLING FWD</td>
<td>40°40</td>
<td>1.8 (5.9)</td>
<td>1.4 (4.6)</td>
<td>1.3 (4.3)</td>
</tr>
<tr>
<td></td>
<td>52°56</td>
<td>2.0 (6.6)</td>
<td>1.7 (5.6)</td>
<td>1.6 (5.2)</td>
</tr>
</tbody>
</table>

Power Plant Handling
Fan Cows - CFM56 Series Engine
FIGURE-2-12-0-991-013-A01
CAUTION
DO NOT ACTUATE SLATS:
- WITH THRUST REVERSER COWLS 45° OPEN POSITION
- WITH BLOCKER DOORS OPEN AND THRUST REVERSER COWLS AT 35° AND 45° OPEN POSITION.

NOTE: APPROXIMATE DIMENSIONS.

Power Plant Handling
Thrust Reverser Cowls - CFM56 Series Engine
FIGURE-2-12-0-991-014-A01
**ON A/C A318-100**

Power Plant Handling
Major Dimensions - PW 6000 Series Engine
FIGURE-2-12-0-991-015-A01
**ON A/C A318-100**

<table>
<thead>
<tr>
<th></th>
<th>W</th>
<th>U</th>
<th>V</th>
</tr>
</thead>
<tbody>
<tr>
<td>A−A</td>
<td>2 m</td>
<td>0.9 m</td>
<td>1.05 m</td>
</tr>
<tr>
<td>B−B</td>
<td>2.08 m</td>
<td>0.96 m</td>
<td>1.07 m</td>
</tr>
<tr>
<td>C−C</td>
<td>1.63 m</td>
<td>0.76 m</td>
<td>0.81 m</td>
</tr>
<tr>
<td>D−D</td>
<td>1.12 m</td>
<td>0.56 m</td>
<td>0.56 m</td>
</tr>
</tbody>
</table>

**NOTE:** ALL SIZES GIVEN ON THIS ILLUSTRATION ARE APPROXIMATE
**ON A/C A318-100

**NOTE:** APPROXIMATE DIMENSIONS. ONLY MAIN DIMENSIONS SHOWN.

<table>
<thead>
<tr>
<th>$\theta$</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>27°</td>
<td>3.05 m</td>
<td>0.90 m</td>
<td>D + 0.2 m</td>
<td>SEE CHAPTER 2-3</td>
</tr>
<tr>
<td></td>
<td>(10 ft)</td>
<td>(2.95 ft)</td>
<td>(D + 0.7 ft)</td>
<td></td>
</tr>
<tr>
<td>53°</td>
<td>3.85 m</td>
<td>1.65 m</td>
<td>D + 0.84 m</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(12.63 ft)</td>
<td>(5.41 ft)</td>
<td>(D + 2.8 ft)</td>
<td></td>
</tr>
</tbody>
</table>

Power Plant Handling
Fan Cowls - PW 6000 Series Engine
FIGURE-2-12-0-991-017-A01
**ON A/C A318-100**

![Diagram of aircraft structure](image)

<table>
<thead>
<tr>
<th>θ</th>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>45°</td>
<td>3.5 m (11.48 ft)</td>
<td>1.1 m (3.6 ft)</td>
<td>1.08 m (3.5 ft)</td>
</tr>
</tbody>
</table>

Power Plant Handling
Thrust Reverser Halves - PW 6000 Series Engine
FIGURE-2-12-0-991-018-A01
2-13-0  Leveling, Symmetry and Alignment

**ON A/C A318-100

Leveling, Symmetry and Alignment

1. Quick Leveling
   - There are three alternative procedures to level the aircraft:
     - Quick leveling procedure with Air Data/Inertial Reference Unit (ADIRU).
     - Quick leveling procedure with a spirit level in the passenger compartment.
     - Quick leveling procedure with a spirit level in the FWD cargo compartment.

2. Precise Leveling
   - For precise leveling, it is necessary to install sighting rods in the receptacles located under the fuselage (points 11 and 12 for longitudinal leveling) and under the wings (points 2LH and 2RH for lateral leveling) and use a sighting tube. With the aircraft on jacks, adjust the jacks until the reference marks on the sighting rods are aligned in the sighting plane (aircraft level).

3. Symmetry and Alignment Check
   - Possible deformation of the aircraft is measured by photogrammetry.
Location of the Leveling Points
FIGURE-2-13-0-991-001-A01
AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

2-14-0 Jacking

**ON A/C A318-100

Jacking for Maintenance

1. Aircraft Jacking Points for Maintenance
   A. General
      (1) The A318 can be jacked:
         - At not more than 53 000 kg (116 845 lb),
         - Within the limits of the permissible wind speed when the aircraft is not in a closed environment.
   B. Primary Jacking Points
      (1) The aircraft is provided with three primary jacking points:
         - One located under the forward fuselage (FR8),
         - Two located under the wings (one under each wing, located at the intersection of RIB9 and the datum of the rear spar).
      (2) Three jack adapters are used as intermediary parts between the aircraft and the jacks:
         - One male spherical jack adapter of 19 mm (0.75 in) radius, forming part of the aircraft structure (FR8),
         - Two wing jack pads (one attached to each wing at RIB9 with 2 bolts) for the location of the jack adaptor.
         Wing jack pads are ground equipment.
   C. Auxiliary Jacking Points (Safety Stay)
      (1) When the aircraft is on jacks, it is recommended that a safety stay be placed under the fuselage, between FR73 and FR74, to prevent tail tipping caused by accidental displacement of the center of gravity.
      (2) The safety stay must not be used to lift the aircraft.
      (3) A male spherical ball pad with a 19 mm (0.75 in) radius, forming part of the aircraft structure, is provided for using the safety stay.

2. Jacks and Safety Stay
   A. Jack Design
      (1) The maximum permitted loads given in the table in FIGURE 2-14-0-991-001-A are the maximum loads applicable on jack fittings.
      (2) In the fully retracted position (jack stroke at minimum), the height of the jack is such that the jack may be placed beneath the aircraft in the most adverse conditions, namely, tires deflated and shock absorbers depressurized. In addition, there must be a clearance of approximately 50 mm (1.97 in) between the aircraft jacking point and the jack upper end.
(3) The lifting jack stroke enables the aircraft to be jacked up so that the fuselage longitudinal datum line (aircraft center line) is parallel to the ground, with a clearance of 100 mm (3.94 in) between the main landing gear wheels and the ground. This enables the landing gear extension/retraction tests to be performed.
**ON A/C A318-100

**

**SAFETY STAY**

**WING JACKING POINT**  
**C**

**FORWARD FUSELAGE JACKING POINT**  
**A**

**WING JACKING POINT**  
**B**

**FR73**

**FR74**

**FR8**

**RIB9**

**SAFETY STAY**

**WING JACKING POINT**  
**B'**

**WING JACKING POINT**  
**FR8**

**FWD JACKING POINT**  
**A**

**RIB9**

**NOTE:**  
SAFETY STAY IS NOT USED FOR JACKING.

<table>
<thead>
<tr>
<th></th>
<th>X</th>
<th>Y</th>
<th>MAXIMUM LOAD ELIGIBLE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>m</td>
<td>ft</td>
<td>daN</td>
</tr>
<tr>
<td>FORWARD FUSELAGE JACKING POINT</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>2.74</td>
<td>8.99</td>
<td>6 800</td>
</tr>
<tr>
<td>WING JACKING POINT</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>15.18</td>
<td>49.80</td>
<td>28 500</td>
</tr>
<tr>
<td>B'</td>
<td>15.18</td>
<td>49.80</td>
<td>28 500</td>
</tr>
<tr>
<td>SAFETY STAY</td>
<td>26.44</td>
<td>86.75</td>
<td>2 000</td>
</tr>
</tbody>
</table>

Jacking for Maintenance  
Jacking Point Locations  
FIGURE-2-14-0-991-001-A01

N_AC_021400_1_0010101_01_02

Page 3
Feb 01/19
**ON A/C A318-100

Jacking for Maintenance
Forward Jacking Point
FIGURE-2-14-0-991-003-A01
AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A318-100

Jacking for Maintenance
Wing Jacking Points
FIGURE-2-14-0-991-056-A01
**ON A/C A318-100

Jacking for Maintenance
Safety Stay
FIGURE-2-14-0-991-057-A01
**ON A/C A318-100**

### TYPICAL JACK INSTALLATION SHOWN

<table>
<thead>
<tr>
<th>CONFIGURATION</th>
<th>DESCRIPTION</th>
<th>DISTANCE BETWEEN JACKING/SAFETY POINTS AND THE GROUND</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>L (FORWARD JACK)</td>
</tr>
<tr>
<td>- AIRCRAFT ON WHEELS</td>
<td>- NLG SHOCK ABSORBER DEFLATED AND NLG TIRES FLAT</td>
<td>1 565 mm (61.61 in)</td>
</tr>
<tr>
<td></td>
<td>- MLG STANDARD TIRES, WITH STANDARD SHOCK ABSORBERS</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- TIRES FLAT SHOCK ABSORBERS DEFLATED</td>
<td>1 660 mm (65.35 in)</td>
</tr>
<tr>
<td></td>
<td>- STANDARD TIRES STANDARD SHOCK ABSORBERS</td>
<td>1 851 mm (72.87 in)</td>
</tr>
<tr>
<td>- AIRCRAFT ON JACKS (FORWARD JACK AND WING JACKS)</td>
<td>- FUSELAGE DATUM LINE PARALLEL TO THE GROUND</td>
<td>2 554 mm (100.55 in)</td>
</tr>
<tr>
<td></td>
<td>- MLG SHOCK ABSORBERS EXTENDED WITH WHEEL CLEARANCE OF 120 mm (4.72 in) FOR MLG RETRACTION OR EXTENSION</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- MLG SHOCK ABSORBERS EXTENDED WITH WHEEL CLEARANCE OF 770 mm (30.31 in) FOR REPLACEMENT OF THE MLG</td>
<td>3 204 mm (126.14 in)</td>
</tr>
<tr>
<td>- AIRCRAFT ON FORWARD JACK</td>
<td>- MLG WHEELS ON THE GROUND</td>
<td>2 395 mm (94.29 in)</td>
</tr>
<tr>
<td></td>
<td>STANDARD TIRES NLG SHOCK ABSORBERS EXTENDED WITH WHEEL CLEARANCE OF 60 mm (2.36 in) FOR MLG RETRACTION OR EXTENSION</td>
<td></td>
</tr>
</tbody>
</table>

**NOTE:**
The SAFETY STAY IS NOT USED FOR JACKING.
**ON A/C A318-100**

Jacking of the Landing Gear

1. General

   Landing gear jacking will be required to lift the landing gear wheels off the ground.

   **NOTE**: You can lift the aircraft at Maximum Ramp Weight (MRW).

   **NOTE**: The load at each jacking position is the load required to give a 25.4 mm (1 in) clearance between the ground and the tire.

2. Main Gear Jacking

   The main gears are normally jacked up by placing a jack directly under the ball pad.

   The ball spherical radius is 19 mm (0.75 in).

   It is also possible to jack the main gear using a cantilever jack.

   The reactions at each of the jacking points are shown in the table, see FIGURE 2-14-0-991-058-A.

3. Nose Gear Jacking

   For nose gear jacking, a 19 mm (0.75 in) radius ball pad is fitted under the lower end of the shock-absorber sliding tube. Jacking can be accomplished either by placing a jack directly under the ball pad, or using an adapter fitting provided with an identical ball pad.

   The reactions at each of the jacking points are shown in the table, see FIGURE 2-14-0-991-058-A.
NOTE: TWIN WHEEL TRACK IS 927 mm (36.5 in).
THE FLAT TIRES VIEW SHOWS THE MINIMUM HEIGHT TO ENGAGE JACK WITH 2 FLAT TIRES.
THE INFLATED TIRES VIEW SHOWS THE JACKING HEIGHT TO GIVE 25 mm (1 in)
CLEARANCE BETWEEN THE TIRE AND GROUND.
**ON A/C A318-100

Jacking of the Landing Gear
MLG Jacking with Cantilever Jack - Twin Wheels
FIGURE-2-14-0-991-013-A01
**ON A/C A318-100

THE FLAT TIRES VIEW SHOWS THE MINIMUM HEIGHT TO ENGAGE JACK WITH 2 FLAT TIRES.

THE INFLATED TIRES VIEW SHOWS THE JACKING HEIGHT TO GIVE 25 mm (1 in)
CLEARANCE BETWEEN THE TIRE AND GROUND.

NOTE: THE FLAT TIRES VIEW SHOWS THE MINIMUM HEIGHT TO ENGAGE JACK WITH 2 FLAT TIRES.
THE INFLATED TIRES VIEW SHOWS THE JACKING HEIGHT TO GIVE 25 mm (1 in)
CLEARANCE BETWEEN THE TIRE AND GROUND.

Jacking of the Landing Gear
NLG Jacking - Point Location
FIGURE-2-14-0-991-015-A01
**ON A/C A318-100**

<table>
<thead>
<tr>
<th>A318–100 WV005</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MAXIMUM DESIGN TAXI WEIGHT (MTW)</strong></td>
<td>68 400 kg (150 796 lb)</td>
</tr>
<tr>
<td><strong>MAXIMUM DESIGN TAKE-OFF WEIGHT (MTOW)</strong></td>
<td>68 000 kg (149 914 lb)</td>
</tr>
<tr>
<td><strong>MAXIMUM LOAD VALUE TO BE APPLIED ON NLG JACKING POINT</strong></td>
<td>11 400 kg (25 133 lb)</td>
</tr>
<tr>
<td><strong>NUMBER OF JACKING POINTS ON ONE MLG</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>MAXIMUM LOAD VALUE TO BE APPLIED ON MLG JACKING POINT (LEFT OR RIGHT)</strong></td>
<td>30 500 kg (67 241 lb)</td>
</tr>
</tbody>
</table>

Jacking of the Landing Gear
Maximum Load Capacity to Lift Each Jacking Point
FIGURE-2-14-0-991-058-A01
**ON A/C A318-100

1. Standard day temperatures for the altitudes shown are tabulated below:

<table>
<thead>
<tr>
<th>Altitude</th>
<th>Standard Day Temperatures for the Altitudes</th>
</tr>
</thead>
<tbody>
<tr>
<td>FEET</td>
<td>METERS</td>
</tr>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2 000</td>
<td>610</td>
</tr>
<tr>
<td>4 000</td>
<td>1 220</td>
</tr>
<tr>
<td>6 000</td>
<td>1 830</td>
</tr>
<tr>
<td>8 000</td>
<td>2 440</td>
</tr>
</tbody>
</table>
3-2-1 Payload / Range - ISA Conditions

**ON A/C A318-100

Payload/Range - ISA Conditions

1. This section provides the payload/range at ISA conditions.
**ON A/C A318-100

Payload/Range - ISA Conditions

FIGURE-3-2-1-991-012-A01
3-3-1 Take-off Weight Limitation - ISA Conditions

**ON A/C A318-100

Take-Off Weight Limitation - ISA Conditions

1. This section gives the take-off weight limitation at ISA conditions.
**ON A/C A318-100**

NOTE: THESE CURVES ARE GIVEN FOR INFORMATION ONLY. THE APPROVED VALUES ARE STATED IN THE "OPERATING MANUALS" SPECIFIC TO THE AIRLINE OPERATING THE AIRCRAFT.

Take-Off Weight Limitation - ISA Conditions
CFM56 Series Engine
FIGURE-3-3-1-991-001-A01
NOTE: THESE CURVES ARE GIVEN FOR INFORMATION ONLY
THE APPROVED VALUES ARE STATED IN THE "OPERATING
MANUALS" SPECIFIC TO THE AIRLINE OPERATING THE AIRCRAFT.

Take-Off Weight Limitation - ISA Conditions
PW 6000 Series Engine
FIGURE-3-3-1-991-002-A01
3-3-2 Take-off Weight Limitation - ISA +15°C (+59°F) Conditions

**ON A/C A318-100**

Take-Off Weight Limitation - ISA +15°C (+27°F) Conditions

1. This section gives the take-off weight limitation at ISA +15°C (+27°F) conditions.
NOTE: THESE CURVES ARE GIVEN FOR INFORMATION ONLY
THE APPROVED VALUES ARE STATED IN THE "OPERATING
MANUALS" SPECIFIC TO THE AIRLINE OPERATING THE AIRCRAFT.

Take-Off Weight Limitation - ISA +15 °C (+27 °F) Conditions
CFM56 Series Engine
FIGURE-3-3-2-991-001-A01
Take-Off Weight Limitation - ISA +15 °C (+27 °F) Conditions
PW 6000 Series Engine
FIGURE-3-3-2-991-002-A01
A318 Aerodrome Reference Code

**ON A/C A318-100**

Aerodrome Reference Code

1. A318-100 is classified as code 3C as per ICAO Aerodrome Reference Code.
3-4-1 Landing Field Length - ISA Conditions

**ON A/C A318-100

Landing Field Length – ISA Conditions

1. This section provides the landing field length.
**ON A/C A318-100

NOTE:
THESE CURVES ARE GIVEN FOR INFORMATION ONLY.
THE APPROVED VALUES ARE STATED IN THE "OPERATING
MANUALS" SPECIFIC TO THE AIRLINE OPERATING THE AIRCRAFT.

Landing Field Length - ISA Conditions
CFM56-5B Series Engine
FIGURE-3-4-1-991-001-A01
**ON A/C A318-100

NOTE:
THESE CURVES ARE GIVEN FOR INFORMATION ONLY.
THE APPROVED VALUES ARE STATED IN THE "OPERATING
MANUALS" SPECIFIC TO THE AIRLINE OPERATING THE AIRCRAFT.

Landing Field Length - ISA Conditions
PW 6000 Series Engine
FIGURE-3-4-1-991-002-A01

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3-5-0 Final Approach Speed

**ON A/C A318-100

Final Approach Speed

1. This section provides the final approach speed. It is defined as the indicated airspeed at threshold in the landing configuration, at the certificated maximum flap setting and Maximum Landing Weight (MLW), in standard atmospheric conditions. The approach speed is used to classify the aircraft into an Aircraft Approach Category, a grouping of aircraft based on the indicated airspeed at threshold.

2. The final approach speed is 121 kt at a MLW of 57 500 kg (126 766 lb) and classifies the aircraft into the Aircraft Approach Category C.

**NOTE**: This value is given for information only.
4-1-0 General Information

**ON A/C A318-100**

General Information

1. This section provides aircraft turning capability and maneuvering characteristics.

For ease of presentation, this data has been determined from the theoretical limits imposed by the geometry of the aircraft, and where noted, provides for a normal allowance for tire slippage. As such, it reflects the turning capability of the aircraft in favorable operating circumstances. This data should only be used as a guideline for the method of determination of such parameters and for the maneuvering characteristics of this aircraft type.

In ground operating mode, varying airline practices may demand that more conservative turning procedures be adopted to avoid excessive tire wear and reduce possible maintenance problems. Airline operating techniques will vary in the level of performance, over a wide range of operating circumstances throughout the world. Variations from standard aircraft operating patterns may be necessary to satisfy physical constraints within the maneuvering area, such as adverse grades, limited area or a high risk of jet blast damage. For these reasons, ground maneuvering requirements should be coordinated with the airlines in question prior to layout planning.
4-2-0 Turning Radii

**ON A/C A318-100

Turning Radii

1. This section provides the turning radii.
NOTE: FOR STEERING DIMENSION TABLE SEE SHEET 2.

TURN TYPE:
1. ASYMMETRIC THRUST DIFFERENTIAL BRAKING
   (PIVOTTING ON ONE MAIN GEAR).
2. SYMMETRIC THRUST NO BRAKING.
Turning Radii, No Slip Angle

(Sheet 2)

FIGURE-4-2-0-991-002-A01
4-3-0 Minimum Turning Radii

**ON A/C A318-100

Minimum Turning Radii

1. This section provides the minimum turning radii.
**ON A/C A318-100

NOTE: NOSE GEAR RADIi TRACK R3, MEASURED FROM OUTSIDE FACE OF TIRE. MODEL 100 TURN DIMENSION SHOWN. THEORETICAL CENTER OF TURN FOR MINIMUM TURNING RADIUS. SLOW CONTINUOUS TURNING. APPROXIMATELY IDLE THRUST ON BOTH ENGINES. NO DIFFERENTIAL BRAKING. DRY SURFACE.

<table>
<thead>
<tr>
<th>TYPE OF TURN</th>
<th>STEERING ANGLE (DEG)</th>
<th>EFFECTIVE STEERING ANGLE</th>
<th>Y</th>
<th>A</th>
<th>R3 NLG</th>
<th>R4 WING TIP FENCE</th>
<th>R5 NOSE</th>
<th>R6 THS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>75 (MAX)</td>
<td>71.8°</td>
<td>m</td>
<td>3.4</td>
<td>19.0</td>
<td>10.9</td>
<td>20.9</td>
<td>15.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>ft</td>
<td>11</td>
<td>62</td>
<td>36</td>
<td>68</td>
<td>51</td>
</tr>
<tr>
<td>2</td>
<td>75 (MAX)</td>
<td>70.3°</td>
<td>m</td>
<td>3.7</td>
<td>19.4</td>
<td>11.0</td>
<td>21.2</td>
<td>15.8</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>ft</td>
<td>12</td>
<td>64</td>
<td>36</td>
<td>69</td>
<td>52</td>
</tr>
</tbody>
</table>

NOTE: IT IS POSSIBLE TO GET LOWER VALUES THAN THOSE FROM TYPE 1 BY APPLYING DIFFERENTIAL BRAKING DURING THE WHOLE TURN.
Visibility from Cockpit in Static Position

**ON A/C A318-100

Visibility from Cockpit in Static Position

1. This section gives the visibility from cockpit in static position.
**ON A/C A318-100**

**VISUAL ANGLES IN VERTICAL PLANE THROUGH PILOT EYE POSITION.**

- 30°
- 20°
- 10.14 m (33 ft 3.24 in)
- 2.41 m (7 ft 10.92 in)
- 4.56 m (14 ft 11.52 in)
- 5.07 m (16 ft 7.56 in)

**NOT TO BE USED FOR LANDING APPROACH VISIBILITY**

**VISUAL ANGLES IN HORIZONTAL PLANE THROUGH PILOT EYE POSITION.**

- MAX AFT VISION WITH HEAD TURNED AROUND SPINAL COLUMN. WING TIP CAN BE SEEN WHEN HEAD IS MOVED TO THE SIDE.

**VISUAL ANGLES IN PLANE PERPENDICULAR TO LONGITUDINAL AXIS.**

**NOTE:**
- PILOT EYE POSITION WHEN PILOT’S EYES ARE IN LINE WITH THE RED AND WHITE BALLS.
- ZONE THAT CANNOT BE SEEN

Visibility from Cockpit in Static Position

**FIGURE-4-4-0-991-001-A01**
**ON A/C A318-100

Binocular Visibility Through Windows from Captain Eye Position

FIGURE-4-4-0-991-005-A01
Runway and Taxiway Turn Paths

**ON A/C A318-100

Runway and Taxiway Turn Paths

1. Runway and Taxiway Turn Paths.
4-5-1 135° Turn - Runway to Taxiway

**ON A/C A318-100

135° Turn - Runway to Taxiway

1. This section gives the 135° turn - runway to taxiway.
**ON A/C A318-100

135° Turn - Runway to Taxiway
Cockpit Over Centerline Method
FIGURE-4-5-1-991-001-A01
**ON A/C A318-100

NOTE:
FAA GROUP III FACILITIES.

135° Turn - Runway to Taxiway
Judgemental Oversteering Method
FIGURE-4-5-1-991-011-A01
**ON A/C A318-100**

90° Turn – Runway to Taxiway

1. This section gives the 90° turn - runway to taxiway.
**ON A/C A318-100

NOTE:
FAA GROUP III FACILITIES.

90° Turn - Runway to Taxiway
Cockpit Over Centerline Method
FIGURE-4-5-2-991-001-A01
90° Turn - Runway to Taxiway
Judgemental Oversteering Method
FIGURE-4-5-2-991-008-A01

NOTE:
FAA GROUP III FACILITIES.
4-5-3  180° Turn on a Runway

**ON A/C A318-100

180° Turn on a Runway

1. This section provides the 180° turn on a runway.
**ON A/C A318-100

180° Turn on a Runway

Edge of Runway Method (Sheet 1 of 2)

FIGURE-4-5-3-991-005-A01

NOTE:
TYPE 1 VALUES.
180° Turn on a Runway
Center of Runway Method (Sheet 2 of 2)
FIGURE-4-5-3-991-005-A01

NOTE:
TYPE 1 VALUES.

N_AC_040503_1_0050102_01_02
135° Turn - Taxiway to Taxiway

**ON A/C A318-100**

135° Turn - Taxiway to Taxiway

1. This section gives the 135° turn - taxiway to taxiway.
135° Turn - Taxiway to Taxiway
Cockpit Over Centerline Method (Sheet 1 of 2)
FIGURE-4-5-4-991-001-A01

NOTE:
FAA GROUP III FACILITIES.
**ON A/C A318-100

NOTE:
FAA GROUP III FACILITIES.

135° Turn - Taxiway to Taxiway
Judgemental Oversteering Method (Sheet 2 of 2)
FIGURE-4-5-4-991-001-A01
**ON A/C A318-100**

90° Turn – Taxiway to Taxiway

1. This section gives the 90° turn - taxiway to taxiway.
**ON A/C A318-100

NOTE:
FAA GROUP III FACILITIES.

90° Turn - Taxiway to Taxiway
Cockpit Over Centerline Method (Sheet 1 of 2)
FIGURE-4-5-5-991-001-A01
**ON A/C A318-100

90° Turn - Taxiway to Taxiway
Judgemental Oversteering Method (Sheet 2 of 2)
FIGURE-4-5-5-991-001-A01
4-6-0 Runway Holding Bay (Apron)

**ON A/C A318-100

Runway Holding Bay (Apron)

1. This section gives the runway holding bay (Apron).
**ON A/C A318-100

Runway Holding Bay (Apron)
FIGURE-4-6-0-991-001-A01
4-7-0 Minimum Line-Up Distance Corrections

**ON A/C A318-100**

Minimum Line-Up Distance Corrections

1. The ground maneuvers were performed using asymmetric thrust and differential braking only to initiate the turn.
   TODA: Take-Off Distance Available
   ASDA: Acceleration-Stop Distance Available

2. 90° Turn on Runway Entry
   This section gives the minimum line-up distance correction for a 90° turn on runway entry. This maneuver consists in a 90° turn at minimum turn radius. It starts with the edge of the MLG at a distance of 3 m (10 ft) from the taxiway edge, and finishes with the aircraft aligned on the centerline of the runway, see FIGURE 4-7-0-991-014-A.
   During the turn, all the clearances must meet the minimum value of 3 m (10 ft) for this category of aircraft as recommended in ICAO Annex 14.

3. 180° Turn on Runway Turn Pad
   This section gives the minimum line-up distance correction for a 180° turn on the runway turn pad. This maneuver consists in a 180° turn at minimum turn radius on a runway turn pad with standard ICAO geometry.
   It starts with the edge of the MLG at a distance of 3 m (10 ft) from the pavement edge, and it finishes with the aircraft aligned on the centerline of the runway, see FIGURE 4-7-0-991-015-A.
   During the turn, all the clearances must meet the minimum value of 3 m (10 ft) for this category of aircraft as recommended in ICAO Annex 14.

4. 180° Turn on Runway Width
   This section gives the minimum line-up distance correction for a 180° turn on the runway width. For this maneuver, the pavement width is considered to be the runway width, which is a frozen parameter (30 m (100 ft), 45 m (150 ft) and 60 m (200 ft)).
   As per the standard operating procedures for the "180° turn on runway" (described in the Flight Crew Operating Manual), the aircraft is initially angled with respect to the runway centerline when starting the 180° turn, see FIGURE 4-7-0-991-016-A.
   The value of this angle depends on the aircraft type and is mentioned in the FCOM.
   During the turn, all the clearances must meet the minimum value of 3 m (10 ft) for this category of aircraft as recommended in ICAO Annex 14.
**ON A/C A318-100**

**ASDA: ACCELERATION–STOP DISTANCE AVAILABLE**
**TODA: TAKE-OFF DISTANCE AVAILABLE**

<table>
<thead>
<tr>
<th>AIRCRAFT TYPE</th>
<th>MAX STEERING ANGLE</th>
<th>30 m (100 ft)</th>
<th>45 m (150 ft)</th>
<th>60 m (200 ft)</th>
<th>MINIMUM LINE-UP DISTANCE CORRECTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>A318</td>
<td>75°</td>
<td>10.8 m</td>
<td>35 ft</td>
<td>21.1 m</td>
<td>69 ft</td>
</tr>
</tbody>
</table>

Minimum Line-Up Distance Corrections

90° Turn on Runway Entry

FIGURE-4-7-0-991-014-A01
**ON A/C A318-100**

**Minimum Line-Up Distance Corrections**

180° Turn on Runway Turn Pad

**FIGURE-4-7-0-991-015-A01**

<table>
<thead>
<tr>
<th>AIRCRAFT TYPE</th>
<th>MAX STEERING ANGLE</th>
<th>30 m (100 ft)</th>
<th>45 m (150 ft)</th>
<th>60 m (200 ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A318</td>
<td>75°</td>
<td>14.1 ft</td>
<td>46 ft</td>
<td>24.4 ft</td>
</tr>
</tbody>
</table>

ASDA: ACCELERATION–STOP DISTANCE AVAILABLE

TODA: TAKE-OFF DISTANCE AVAILABLE
**ON A/C A318-100**

Minimum Line-Up Distance Corrections

180° Turn on Runway Width

FIGURE-4-7-0-991-016-A01

<table>
<thead>
<tr>
<th>AIRCRAFT TYPE</th>
<th>MAX STEERING ANGLE</th>
<th>MINIMUM LINE-UP DISTANCE CORRECTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>A318</td>
<td>75°</td>
<td>ON TODA: 30 m (100 ft) / 46 ft, ON ASDA: 24.4 m / 80 ft</td>
</tr>
</tbody>
</table>

ASDA: ACCELERATION-STOP DISTANCE AVAILABLE
TODA: TAKE-OFF DISTANCE AVAILABLE

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4-8-0 Aircraft Mooring

**ON A/C A318-100

Aircraft Mooring

1. This section provides information on aircraft mooring.
**ON A/C A318-100

Aircraft Mooring
FIGURE-4-8-0-991-001-A01

[Diagram of aircraft mooring system with labeled parts A and B]

TOWING FITTING
GROUND ANCHOR
TOWING FITTING
FWD
**ON A/C A318-100**

### Aircraft Servicing Arrangements

1. This section provides typical ramp layouts, showing the various GSE items in position during typical turn-round scenarios.

   These ramp layouts show typical arrangements only. Each operator will have its own specific requirements/regulations for positioning and operation on the ramp.

   This table gives the symbols used on servicing diagrams.

<table>
<thead>
<tr>
<th>Ground Support Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>AC</td>
</tr>
<tr>
<td>AS</td>
</tr>
<tr>
<td>BULK</td>
</tr>
<tr>
<td>CAT</td>
</tr>
<tr>
<td>CB</td>
</tr>
<tr>
<td>CLEAN</td>
</tr>
<tr>
<td>FUEL</td>
</tr>
<tr>
<td>GPU</td>
</tr>
<tr>
<td>LDCL</td>
</tr>
<tr>
<td>LV</td>
</tr>
<tr>
<td>PBB</td>
</tr>
<tr>
<td>PS</td>
</tr>
<tr>
<td>TOW</td>
</tr>
<tr>
<td>ULD</td>
</tr>
<tr>
<td>WV</td>
</tr>
</tbody>
</table>
5-1-2 Typical Ramp Layout - Open Apron

**ON A/C A318-100

Typical Ramp Layout - Open Apron

1. This section gives the typical servicing arrangement for pax version (Open Apron).

   The Stand Safety Line delimits the Aircraft Safety Area (minimum distance 7.5 m from the aircraft). No vehicle must be parked in this area before complete stop of the aircraft (wheel chocks in position on landing gears).
**ON A/C A318-100

Typical Ramp Layout
Open Apron - Bulk Loading
FIGURE-5-1-2-991-001-A01
5-1-3 Typical Ramp Layout - Gate

**ON A/C A318-100

Typical Ramp Layout - Gate

1. This section give the typical servicing arrangement for pax version (Passenger Bridge).

   The Stand Safety Line delimits the Aircraft Safety Area (minimum distance of 7.5 m from the aircraft). No vehicle must be parked in this area before complete stop of the aircraft (wheel chocks in position on landing gears).
**ON A/C A318-100

Typical Ramp Layout

Gate

FIGURE-5-1-3-991-004-A01
5-2-0 Terminal Operations - Full Servicing Turn Round Time Chart

**ON A/C A318-100**

Terminal Operations - Full Servicing Turn Round Time

1. This section provides a typical turn round time chart showing the typical time for ramp activities during aircraft turn round.
   
   Actual times may vary due to each operator’s specific practices, resources, equipment and operating conditions.

2. Assumptions used for full servicing turn round time chart

   A. PASSENGER HANDLING
      
      107 pax: 8 F/C + 99 Y/C.
      
      All passengers deplane and board the aircraft.
      
      1 Passenger Boarding Bridge (PBB) used at door 1L.
      
      Equipment positioning + opening door = +2 min.
      
      Closing door + equipment removal = +1.5 min.
      
      No Passenger with Reduced Mobility (PRM) on board.

      Deplaning:
      - 107 pax at door 1L
      - Deplaning rate = 20 pax/min per door
      - Priority deplaning for premium passengers.

      Boarding:
      - 107 pax at door 1L
      - Boarding rate = 12 pax/min per door
      - Last Pax Seating allowance (LPS) + headcounting = +2 min.

   B. CARGO
      
      2 belt loaders.
      
      Opening door + equipment positioning = +2 min.
      
      Equipment removal + closing door = +1.5 min.

      100% cargo exchange (baggage only):
      
      An average 15 kg (33 lb) per pax is assumed.
      
      - FWD cargo compartment: 800 kg (1 764 lb)
      - AFT cargo compartment: 800 kg (1 764 lb).

      Bulk unloading/loading times:
      - Unloading = 150 kg/min (331 lb/min)
      - Loading = 120 kg/min (265 lb/min).

   C. REFUELING
      
      20 000 l (5 283 US gal) at 50 psig (3.45 bars-rel), one hose (right wing).
Dispenser positioning/removal + connection/disconnection times = +2.5 min.

D. CLEANING
Cleaning is performed in available time.

E. CATERING
1 catering truck for servicing galleys sequentially at doors 1R and 4R.
Equipment positioning + opening door = +2 min.
Closing door + equipment removal = +1.5 min.
Time to drive from one door to the other = +2 min.

Full Size Trolley Equivalent (FSTE) to unload and load: 8 FSTE
- 4 FSTE at door 1R
- 4 FSTE at door 4R.
Time for trolley exchange = 1.2 min per FSTE.

F. GROUND HANDLING/GENERAL SERVICING
Start of operations:
- Bridges/stairs: t0 = 0
- Other equipment: t = t0 + 1 min.

Ground Power Unit (GPU): up to 90 kVA.
Air conditioning: one hose.
Potable water servicing: 100% uplift, 200 l (53 US gal).
Toilet servicing: draining + rinsing.
TRT: 35 min

- DEPLANING/BOARDING AT DOOR 1L
- LPS + HEADCOUNTING
- CATERING AT DOOR 1R
- CATERING AT DOOR 4R
- CLEANING
- CARGO AFT CC
- CARGO FWD CC
- REFUELING
- WASTE WATER SERVICING
- POTABLE WATER SERVICE

GSE POSITIONING/REMOVAL
ACTIVITY
CRITICAL PATH

Full Servicing Turn Round Time Chart
FIGURE-5-2-0-991-004-A01
**ON A/C A318-100**

**Terminal Operations - Outstation Turn Round Time**

1. This section provides a typical turn round time chart showing the typical time for ramp activities during aircraft turn round. Actual times may vary due to each operator’s specific practices, resources, equipment and operating conditions.

2. Assumptions used for outstation turn round time chart

   **A. PASSENGER HANDLING**
   132 pax (all Y/C).
   All passengers deplane and board the aircraft.
   2 stairways used at doors 1L and 4L.
   Equipment positioning + opening door = +2 min.
   Closing door + equipment removal = +1.5 min.
   No Passenger with Reduced Mobility (PRM) on board.

   Deplaning:
   - 66 pax at door 1L
   - 66 pax at door 4L
   - Deplaning rate = 18 pax/min per door.

   Boarding:
   - 66 pax at door 1L
   - 66 pax at door 4L
   - Boarding rate = 12 pax/min per door
   - Last Pax Seating allowance (LPS) + headcounting = +2 min.

   **B. CARGO**
   2 belt loaders.
   Opening door + equipment positioning = +2 min.
   Equipment removal + closing door = +1.5 min.

   100% cargo exchange (baggage only):
   An average 15 kg (33 lb) per pax is assumed.
   - FWD cargo compartment: 990 kg (2 183 lb)
   - AFT cargo compartment: 990 kg (2 183 lb).

   Bulk unloading/loading times:
   - Unloading = 120 kg/min (265 lb/min)
   - Loading = 100 kg/min (220 lb/min).
C. REFUELING
   No refueling.

D. CLEANING
   Cleaning is performed in available time.

E. CATERING
   One catering truck for servicing the galleys as required.

F. GROUND HANDLING/GENERAL SERVICING
   Start of operations:
   - Bridges/stairs: \( t_0 = 0 \)
   - Other equipment: \( t = t_0 \).

   Ground Power Unit (GPU): up to 90 kVA.
   Air conditioning: one hose.
   No potable water servicing.
   No toilet servicing.
TRT: 21 min

**ON A/C A318-100**

Outstation Turn Round Time Chart
FIGURE-5-3-0-991-001-A01
5-4-1  Ground Service Connections

**ON A/C A318-100

Ground Service Connections Layout

1. This section provides the ground service connections layout.
**ON A/C A318-100

1 – GROUND ELECTRICAL POWER CONNECTOR
2 – NLG GROUNDING (EARTHING) POINT
3 – POTABLE WATER DRAIN PANEL
4 – LOW PRESSURE AIR PRE–CONDITIONING
5 – HIGH PRESSURE AIR PRE–CONDITIONING
6 – REFUEL/DEFUEL INTEGRATED PANEL
7 – IDG/STARTER OIL SERVICING
8 – ENGINE OIL SERVICING*
9 – OVERPRESSURE PROTECTOR
10 – REFUEL/DEFUEL COUPLINGS (OPTIONAL–LH WING)
11 – OVERWING REFUEL (IF INSTALLED)
12 – NACA VENT INTAKE
13 – YELLOW HYDRAULIC–SYSTEM SERVICE PANEL
14 – BLUE HYDRAULIC–SYSTEM SERVICE PANEL
15 – ACCUMULATOR CHARGING (GREEN SYSTEM) AND RESERVOIR DRAIN (GREEN SYSTEM)
16 – GREEN HYDRAULIC–SYSTEM SERVICE PANEL
17 – MLG GROUNDING (EARTHING) POINT
18 – WASTE WATER SERVICE PANEL
19 – POTABLE WATER SERVICE PANEL
20 – APU OIL SERVICING

NOTE:
* FOR THE PW 6000 ENGINE, THE ENGINE OIL SERVICING POINTS (8) ARE LOCATED SYMMETRICALLY ON THE RH SIDE OF EACH ENGINE.
THE ENGINE OIL SERVICING POINTS (8) ARE SHOWN FOR THE CFM 56 ENGINE.

Ground Service Connections Layout
FIGURE-5-4-1-991-001-A01

N_AC_050401_1_0010101_01_02
5-4-2 Grounding Points

**ON A/C A318-100

Grounding (Earthing) Points

1. Grounding (Earthing) Points

<table>
<thead>
<tr>
<th>DISTANCE FROM AIRCRAFT CENTERLINE</th>
<th>MEAN HEIGHT FROM GROUND</th>
</tr>
</thead>
<tbody>
<tr>
<td>AFT OF NOSE</td>
<td>LH SIDE</td>
</tr>
<tr>
<td>On Nose Landing Gear leg:</td>
<td>5.07 m</td>
</tr>
<tr>
<td>On left Main Landing Gear leg:</td>
<td>15.32 m</td>
</tr>
<tr>
<td>On right Main Landing Gear leg:</td>
<td>15.32 m</td>
</tr>
</tbody>
</table>

A. The grounding (earthing) stud on each landing gear leg is designed for use with a clip-on connector (such as Appleton TGR).

B. The grounding (earthing) studs are used to connect the aircraft to an approved ground (earth) connection on the ramp or in the hangar for:
   - Refuel/defuel operations,
   - Maintenance operations,
   - Bad weather conditions.

NOTE: In all other conditions, the electrostatic discharge through the tire is sufficient.

If the aircraft is on jacks for retraction and extension checks or for the removal/installation of the landing gear, the grounding (earthing) alternative points (if installed) are:
   - In the hole on the avionics-compartment lateral right door-frame (on FR14),
   - On the engine nacelles,
   - Adjacent to the high-pressure connector,
   - On the wing upper surfaces.
**ON A/C A318-100

Ground Service Connections
Grounding (Earthing) Points - Landing Gear
FIGURE-5-4-2-991-001-A01
**ON A/C A318-100

FOR SPECIFICATIONS REFER TO FLIGHT MANUAL

NOTE: R SIDE SYMMETRICAL

Ground Service Connections
Grounding (Earthing) Points - Wing (If Installed)
FIGURE-5-4-2-991-002-A01

5-4-2
Ground Service Connections
Grounding (Earthing) Point - Avionics Compartment Door-Frame
FIGURE-5-4-2-991-009-A01
Ground Service Connections
Grounding (Earthing) Point - Engine Air Intake (If Installed)
FIGURE-5-4-2-991-010-A01
## Hydraulic System

**ON A/C A318-100**

### Hydraulic Servicing

1. **Access**

<table>
<thead>
<tr>
<th>ACCESS</th>
<th>DISTANCE FROM AIRCRAFT CENTERLINE</th>
<th>MEAN HEIGHT FROM GROUND</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AFT OF NOSE</td>
<td>LH SIDE</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Green System: Access Door 197CB</td>
<td>16.43 m (53.90 ft)</td>
<td>1.27 m (4.17 ft)</td>
</tr>
<tr>
<td>Yellow System: Access Door 198CB</td>
<td>16.43 m (53.90 ft)</td>
<td>1.27 m (4.17 ft)</td>
</tr>
<tr>
<td>Blue System: Access Door 197EB</td>
<td>16.96 m (55.64 ft)</td>
<td>1.27 m (4.17 ft)</td>
</tr>
</tbody>
</table>

2. **Reservoir Pressurization**

<table>
<thead>
<tr>
<th>ACCESS</th>
<th>DISTANCE FROM AIRCRAFT CENTERLINE</th>
<th>MEAN HEIGHT FROM GROUND</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AFT OF NOSE</td>
<td>LH SIDE</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Access Door 195BB</td>
<td>13.20 m (43.31 ft)</td>
<td>0.25 m (0.82 ft)</td>
</tr>
</tbody>
</table>

3. **Accumulator Charging**

    Four MIL-PRF-6164 connections:

<table>
<thead>
<tr>
<th>ACCESS</th>
<th>DISTANCE FROM AIRCRAFT CENTERLINE</th>
<th>MEAN HEIGHT FROM GROUND</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AFT OF NOSE</td>
<td>LH SIDE</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yellow System Accumulator: Access Door 196BB</td>
<td>13.20 m (43.31 ft)</td>
<td>0.25 m (0.82 ft)</td>
</tr>
</tbody>
</table>
### 4. Reservoir Filling

Centralized filling capability on the Green System ground service panel:

<table>
<thead>
<tr>
<th>ACCESS</th>
<th>DISTANCE</th>
<th>MEAN HEIGHT FROM GROUND</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AFT OF NOSE</td>
<td>FROM AIRCRAFT CENTERLINE</td>
</tr>
<tr>
<td></td>
<td></td>
<td>LH SIDE</td>
</tr>
<tr>
<td>Green System Accumulator:</td>
<td>Access Door 197CB</td>
<td>16.43 m (53.90 ft)</td>
</tr>
</tbody>
</table>

Filling: Ground pressurized supply or hand pump.

### 5. Reservoir Drain

Three 3/8 in. self-sealing connections:

<table>
<thead>
<tr>
<th>ACCESS</th>
<th>DISTANCE</th>
<th>MEAN HEIGHT FROM GROUND</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AFT OF NOSE</td>
<td>FROM AIRCRAFT CENTERLINE</td>
</tr>
<tr>
<td></td>
<td></td>
<td>LH SIDE</td>
</tr>
<tr>
<td>Yellow System:</td>
<td>Access Door 196BB</td>
<td>13.20 m (43.31 ft)</td>
</tr>
<tr>
<td>Green System:</td>
<td>Left MLG Door</td>
<td>14.30 m (46.92 ft)</td>
</tr>
</tbody>
</table>
## Blue System:

<table>
<thead>
<tr>
<th>ACCESS</th>
<th>DISTANCE FROM AIRCRAFT CENTERLINE</th>
<th>MEAN HEIGHT FROM GROUND</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AFT OF NOSE</td>
<td>LH SIDE</td>
</tr>
<tr>
<td>Blue System: Access Door 197EB</td>
<td>16.96 m (55.64 ft)</td>
<td>1.27 m (4.17 ft)</td>
</tr>
</tbody>
</table>

**NOTE:** The drain valve is on the Blue System ground service panel for the reservoir of the Blue Hydraulic system. The drain valve is on the reservoir for the Green and Yellow Hydraulic Systems.

6. **Ground Test**

On each ground service panel:
- One self-sealing connector (suction).
- One self-sealing connector (delivery).
**ON A/C A318-100

Ground Service Connections
Green System Ground Service Panel
FIGURE-5-4-3-991-004-A01
**ON A/C A318-100**

Ground Service Connections
Blue System Ground Service Panel
FIGURE-5-4-3-991-005-A01
Ground Service Connections
Yellow System Ground Service Panel
FIGURE-5-4-3-991-006-A01
**ON A/C A318-100

Ground Service Connections
RAT
FIGURE-5-4-3-991-007-A01
5-4-4 Electrical System

**ON A/C A318-100**

Electrical System

1. Electrical System
   This chapter provides data related to the location of the ground service connections.

<table>
<thead>
<tr>
<th>ACCESS</th>
<th>DISTANCE FROM AIRCRAFT CENTERLINE</th>
<th>MEAN HEIGHT FROM GROUND</th>
</tr>
</thead>
<tbody>
<tr>
<td>A/C External Power:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Access Door 121AL</td>
<td>(AFT OF NOSE)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LH SIDE</td>
<td>RH SIDE</td>
</tr>
<tr>
<td></td>
<td>2.55 m</td>
<td>On centerline</td>
</tr>
<tr>
<td></td>
<td>(8.37 ft)</td>
<td></td>
</tr>
</tbody>
</table>

   **NOTE**: Distances are approximate.

2. Technical Specifications
   A. External Power Receptacle:
      - One receptacle according to MS 90362-3 (without shield MS 17845-1) – 90 kVA.
      **NOTE**: Make sure that for connectors featuring micro switches, the connector is chamfered to properly engage in the receptacle.

   B. Power Supply:
      - Three-phase, 115/200V, 400 Hz.

   C. Electrical Connectors for Servicing:
      - AC outlets: HUBBELL 5258
      - DC outlets: HUBBELL 7472.
Ground Service Connections
External Power Receptacles
FIGURE-5-4-4-991-001-A01
## Oxygen System

**ON A/C A318-100**

### Oxygen System

1. Oxygen System

<table>
<thead>
<tr>
<th>ACCESS</th>
<th>DISTANCE FROM AIRCRAFT CENTERLINE</th>
<th>MEAN HEIGHT FROM GROUND</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AFT OF NOSE</td>
<td>LH SIDE</td>
</tr>
<tr>
<td>Oxygen Replenishment: Access Door 812</td>
<td>3.45 m (11.32 ft)</td>
<td>1.15 m (3.77 ft)</td>
</tr>
</tbody>
</table>

2. Technical Specifications
   - One 3/8 in. MIL-DTL 7891 standard service connection.

**NOTE**: External charging in the avionics compartment.
**ON A/C A318-100

Ground Service Connections
Oxygen System
FIGURE-5-4-5-991-001-A01
5-4-6 Fuel System

**ON A/C A318-100

Fuel System

1. Refuel/Defuel Control Panel

<table>
<thead>
<tr>
<th>ACCESS</th>
<th>AFT OF NOSE</th>
<th>POSITION FROM AIRCRAFT CENTERLINE</th>
<th>MEAN HEIGHT FROM GROUND</th>
</tr>
</thead>
<tbody>
<tr>
<td>Refuel/Defuel Integrated Panel: Access Door 192MB</td>
<td>14.01 m (45.96 ft)</td>
<td>-</td>
<td>1.8 m (5.91 ft)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1.8 m (5.91 ft)</td>
</tr>
</tbody>
</table>

2. Refuel/Defuel Connectors

<table>
<thead>
<tr>
<th>ACCESS</th>
<th>AFT OF NOSE</th>
<th>POSITION FROM AIRCRAFT CENTERLINE</th>
<th>MEAN HEIGHT FROM GROUND</th>
</tr>
</thead>
<tbody>
<tr>
<td>Refuel/Defuel Coupling, Left: Access Panel 522HB (Optional)</td>
<td>15.2 m (49.87 ft)</td>
<td>9.83 m (32.25 ft)</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3.65 m (11.98 ft)</td>
</tr>
<tr>
<td>Refuel/Defuel Coupling, Right: Access Panel 622HB</td>
<td>15.2 m (49.87 ft)</td>
<td>-</td>
<td>9.83 m (32.25 ft)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3.65 m (11.98 ft)</td>
</tr>
<tr>
<td>Overwing Gravity-Refuel Cap</td>
<td>16.71 m (54.82 ft)</td>
<td>12.4 m (40.68 ft)</td>
<td>12.4 m (40.68 ft)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3.7 m (12.14 ft)</td>
</tr>
</tbody>
</table>

A. Refuel/Defuel Couplings:
- Right wing: one standard ISO 45, 2.5 in.
- Left wing: one optional standard ISO 45, 2.5 in.

B. Refuel Pressure:
- Maximum pressure: 3.45 bar (50 psi).

C. Average Flow Rate:
- 1250 l/min (330 US gal/min).
3. Overpressure Protectors and NACA Vent Intake

<table>
<thead>
<tr>
<th>ACCESS</th>
<th>DISTANCE</th>
<th>AFT OF NOSE</th>
<th>POSITION FROM AIRCRAFT CENTERLINE</th>
<th>MEAN HEIGHT FROM GROUND</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>LH SIDE</td>
<td>RH SIDE</td>
</tr>
<tr>
<td>Surge Tank Overpressure-Protector: Access Panel 550CB (650CB)</td>
<td></td>
<td>17.96 m</td>
<td>14.9 m</td>
<td>14.9 m</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(58.92 ft)</td>
<td>(48.88 ft)</td>
<td>(48.88 ft)</td>
</tr>
<tr>
<td>Inner Cell Overpressure-Protector: Access Panel 540HB (640HB)</td>
<td></td>
<td>16.5 m</td>
<td>9.19 m</td>
<td>9.19 m</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(54.14 ft)</td>
<td>(30.15 ft)</td>
<td>(30.15 ft)</td>
</tr>
<tr>
<td>NACA Vent Intake: Access Panel 550AB (650AB)</td>
<td></td>
<td>17.4 m</td>
<td>13.7 m</td>
<td>13.7 m</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(57.09 ft)</td>
<td>(44.95 ft)</td>
<td>(44.95 ft)</td>
</tr>
</tbody>
</table>

**NOTE**: Distances are approximate.
NOTE: STANDARD CONFIGURATION OF REFUEL/DEFUEL PANEL.

Ground Service Connections
Refuel/Defuel Control Panel
FIGURE-5-4-6-991-001-A01
Ground Service Connections
Refuel/Defuel Couplings
FIGURE-5-4-6-991-002-A01
Ground Service Connections
Overwing Gravity-Refuel Cap (If Installed)
FIGURE-5-4-6-991-003-A01
**ON A/C A318-100

**NOTE:**
LH SHOWN, RH SYMMETRICAL

Ground Service Connections
Overpressure Protectors and NACA Vent Intake
FIGURE-5-4-6-991-004-A01

Page 6
Feb 01/19
5-4-7 Pneumatic System

**ON A/C A318-100**

Pneumatic System

1. **High Pressure Air Connector**

<table>
<thead>
<tr>
<th>ACCESS</th>
<th>DISTANCE FROM AIRCRAFT CENTERLINE</th>
<th>MEAN HEIGHT FROM GROUND</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AFT OF NOSE</td>
<td>LH SIDE</td>
</tr>
<tr>
<td>HP Connector: Access Door 191DB</td>
<td>10.43 m (34.22 ft)</td>
<td>0.84 m (2.76 ft)</td>
</tr>
</tbody>
</table>

A. Connector:
   - One standard 3 in. ISO 2026 connection.

2. **Low Pressure Air Connector**

<table>
<thead>
<tr>
<th>ACCESS</th>
<th>DISTANCE FROM AIRCRAFT CENTERLINE</th>
<th>MEAN HEIGHT FROM GROUND</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AFT OF NOSE</td>
<td>LH SIDE</td>
</tr>
<tr>
<td>LP Connector: Access Door 191CB</td>
<td>9.9 m (32.48 ft)</td>
<td>1.11 m (3.64 ft)</td>
</tr>
</tbody>
</table>

A. Connector:
   - One standard 8 in. SAE AS4262 connection.
**ON A/C A318-100

Ground Service Connections
LP and HP Ground Connectors
FIGURE-5-4-7-991-001-A01
5-4-8 Oil System

**ON A/C A318-100

Oil System

1. **Engine Oil Replenishment for CFM56 Series Engine (See FIGURE 5-4-8-991-003-A):**
   One gravity filling cap and one pressure filling connection per engine.

<table>
<thead>
<tr>
<th>ACCESS</th>
<th>Engine Oil Gravity Filling Cap:</th>
<th>ENGINE 1 (LH)</th>
<th>ENGINE 2 (RH)</th>
<th>MEAN HEIGHT FROM GROUND</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access door: 437BL (LH), 447BL (RH)</td>
<td>12.30 m (40.35 ft)</td>
<td>6.63 m (21.75 ft)</td>
<td>4.82 m (15.81 ft)</td>
<td>1.46 m (4.79 ft)</td>
</tr>
<tr>
<td>Engine Oil Pressure Filling Port:</td>
<td>12.20 m (40.03 ft)</td>
<td>6.49 m (21.29 ft)</td>
<td>4.74 m (15.55 ft)</td>
<td>1.42 m (4.66 ft)</td>
</tr>
</tbody>
</table>

**NOTE:** Distances are approximate.

A. **Tank capacity:**
   - Full level: 19.60 l (5 US gal),
   - Usable: 9.46 l (3 US gal).

B. **Maximum delivery pressure required:** 1.72 bar (25 psi).
   **Maximum delivery flow required:** 180 l/h (48 US gal/h).

2. **IDG Oil Replenishment for CFM56 Series Engine (See FIGURE 5-4-8-991-004-A):**
   One pressure filling connection per engine.

<table>
<thead>
<tr>
<th>ACCESS</th>
<th>IDG Oil Pressure Filling Connection:</th>
<th>ENGINE 1 (LH)</th>
<th>ENGINE 2 (RH)</th>
<th>MEAN HEIGHT FROM GROUND</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access door: 438AR (LH), 448AR (RH)</td>
<td>11.40 m (37.40 ft)</td>
<td>6.90 m (22.64 ft)</td>
<td>5.52 m (18.11 ft)</td>
<td>0.68 m (2.23 ft)</td>
</tr>
</tbody>
</table>

**NOTE:** Distances are approximate.

A. **IDG oil tank capacity:** 5 l (1 US gal).
B. Maximum servicing pressure: 0.34 bar (5 psi) to 2.76 bar (40 psi) at the IDG inlet.

3. Starter Oil Replenishment for CFM56 Series Engine (See FIGURE 5-4-8-991-005-A):
   One gravity filling cap per engine.

<table>
<thead>
<tr>
<th>ACCESS</th>
<th>DISTANCE FROM AIRCRAFT CENTERLINE</th>
<th>MEAN HEIGHT FROM GROUND</th>
</tr>
</thead>
<tbody>
<tr>
<td>Starter Oil Filling Connection:</td>
<td>AFT OF NOSE ENGINE 1 (LH) ENGINE 2 (RH)</td>
<td></td>
</tr>
<tr>
<td>10.40 m (34.12 ft)</td>
<td>5.30 m (17.39 ft) 6.20 m (20.34 ft)</td>
<td>0.76 m (2.49 ft)</td>
</tr>
</tbody>
</table>

**NOTE**: Distances are approximate.

A. Tank capacity: 0.8 l (0.21 US gal).

4. Engine Oil Replenishment for PW 6000 Series Engine (See FIGURE 5-4-8-991-006-A):
   One gravity filling cap per engine.

<table>
<thead>
<tr>
<th>ACCESS</th>
<th>DISTANCE FROM AIRCRAFT CENTERLINE</th>
<th>MEAN HEIGHT FROM GROUND</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engine Oil Gravity Filling Cap:</td>
<td>AFT OF NOSE ENGINE 1 (LH) ENGINE 2 (RH)</td>
<td></td>
</tr>
<tr>
<td>Access door: 438BR (LH), 448BR (RH)</td>
<td>10.16 m (33.33 ft) 4.80 m (15.75 ft) 6.63 m (21.75 ft)</td>
<td>1.80 m (5.91 ft)</td>
</tr>
</tbody>
</table>

**NOTE**: Distances are approximate.

A. Tank capacity:
   - Full level: 18.36 l (5 US gal),
   - Usable: 23.50 l (6 US gal),
   - Engine oil tank capacity: 18.36 l (5 US gal).

5. IDG Oil Replenishment for PW 6000 Series Engine (See FIGURE 5-4-8-991-007-A):
   One pressure filling connection per engine.
### IDG Oil Pressure Filling Connection:
- Access door: 438DR (LH), 448DR (RH)

<table>
<thead>
<tr>
<th>ACCESS</th>
<th>DISTANCE FROM AIRCRAFT CENTERLINE</th>
<th>MEAN HEIGHT FROM GROUND</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AFT OF NOSE</td>
<td>ENGINE 1 (LH)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10.00 m (32.81 ft)</td>
</tr>
</tbody>
</table>

**NOTE:** Distances are approximate.

A. Distances are approximate.
- Tank capacity: 6.28 l (2 US gal),
- Maximum servicing pressure: 2.41 bar (35 psi).

6. Starter Oil Replenishment for PW 6000 Series Engine (See FIGURE 5-4-8-991-008-A):
   One gravity filling cap per engine.

<table>
<thead>
<tr>
<th>ACCESS</th>
<th>DISTANCE FROM AIRCRAFT CENTERLINE</th>
<th>MEAN HEIGHT FROM GROUND</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AFT OF NOSE</td>
<td>ENGINE 1 (LH)</td>
</tr>
<tr>
<td>Starter Oil Filling Connection:</td>
<td></td>
<td>10.16 m (33.33 ft)</td>
</tr>
</tbody>
</table>

**NOTE:** Distances are approximate.

A. Tank capacity: 0.35 l (0.09 US gal).

7. APU Oil System (See FIGURE 5-4-8-991-009-A):
   APU oil gravity filling cap.

<table>
<thead>
<tr>
<th>ACCESS</th>
<th>DISTANCE FROM AIRCRAFT CENTERLINE</th>
<th>MEAN HEIGHT FROM GROUND</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AFT OF NOSE</td>
<td>ENGINE 1 (LH)</td>
</tr>
<tr>
<td>GTCP 36-300</td>
<td></td>
<td>29.37 m (96.36 ft)</td>
</tr>
<tr>
<td>APS 3200</td>
<td></td>
<td>29.37 m (96.36 ft)</td>
</tr>
<tr>
<td>131-9</td>
<td></td>
<td>29.27 m (96.03 ft)</td>
</tr>
</tbody>
</table>
NOTE: Distances are approximate.

A. Tank capacity (usable):
   - APU type GTCP 36-300: 6.20 l (2 US gal),
   - APU type APS 3200: 5.40 l (1 US gal),
Ground Service Connections
Engine Oil Tank – CFM56 Series Engine
FIGURE-5-4-8-991-003-A01
**ON A/C A318-100**

1. PRESSURE FILL VALVE
2. CASE DRAIN PLUG
3. DUST CAP
4. DUST CAP
5. OVERFLOW DRAIN VALVE

NOTE:

A. If the oil level is above the yellow band, oil servicing is required.

B. If the oil level is within the green and yellow bands, oil servicing is not required.

C. If the oil level is below the green band, oil servicing is required.

Ground Service Connections
IDG Oil Tank – CFM56 Series Engine
FIGURE-5-4-8-991-004-A01
Ground Service Connections
Starter Oil Tank – CFM56 Series Engine
FIGURE-5-4-8-991-005-A01
**ON A/C A318-100**

Ground Service Connections
Engine Oil Tank – PW6000 Series Engine
FIGURE-5-4-8-991-006-A01
Ground Service Connections
IDG Oil Tank – PW6000 Series Engine
FIGURE-5-4-8-991-007-A01
Ground Service Connections
Starter Oil Tank – PW6000 Series Engine
FIGURE-5-4-8-991-008-A01
**ON A/C A318-100**

Ground Service Connections
APU Oil Tank
FIGURE-5-4-8-991-009-A01
5-4-9 Potable Water System

**ON A/C A318-100

Potable Water System

1. Potable Water Ground Service Panels

<table>
<thead>
<tr>
<th>ACCESS</th>
<th>DISTANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AFT OF NOSE</td>
</tr>
<tr>
<td></td>
<td>LH SIDE</td>
</tr>
<tr>
<td>Potable-Water Service Panel: Access Door 171AL</td>
<td>25.2 m (82.68 ft)</td>
</tr>
<tr>
<td>Potable-Water Drain Panel: Access Door 133AL</td>
<td>11.4 m (37.4 ft)</td>
</tr>
</tbody>
</table>

**NOTE**: Distances are approximate.

2. Technical Specifications

A. Connectors:
   (1) On the potable-water service panel (Access Door 171AL)
       - One ground air-pressure connector.
   (2) On the potable-water drain panel (Access Door 133AL)
       - Drain Nipple 3/4 in. (ISO 17775).

B. Usable capacity:
   - Standard configuration - one tank: 200 l (53 US gal).

C. Filling pressure:
   - 3.45 bar (50 psi).

D. Typical flow rate:
   - 50 l/min (13 US gal/min).
Ground Service Connections
Potable Water Ground Service Panels
FIGURE-5-4-9-991-029-A01
**ON A/C A318-100

Ground Service Connections
Potable Water Tank Location
FIGURE-5-4-9-991-030-A01
5-4-10 Waste Water System

**ON A/C A318-100

Vacuum Toilet System

1. Vacuum Toilet System

<table>
<thead>
<tr>
<th>ACCESS</th>
<th>DISTANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AFT OF NOSE</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Waste-Water</td>
<td>25.2 m</td>
</tr>
<tr>
<td>Ground Service Panel:</td>
<td>(82.67 ft)</td>
</tr>
<tr>
<td>Access door 172AR</td>
<td></td>
</tr>
</tbody>
</table>

NOTE: Distances are approximate.

2. Technical Specifications

A. Connectors:
   - Draining: 4 in. (ISO 17775).
   - Flushing and filling: 1 in. (ISO 17775).

B. Usable waste tank capacity:
   - Standard configuration - one tank: 177 l (47 US gal).

C. Waste tank - Rinsing:
   - Operating pressure: 3.45 bar (50 psi).

D. Waste tank - Precharge:
   - 10 l (3 US gal).
Ground Service Connections
Waste Water Ground Service Panel
FIGURE-5-4-10-991-001-A01
Ground Service Connections
Waste Tank Location
FIGURE-5-4-10-991-004-A01
**ON A/C A318-100**

Engine Starting Pneumatic Requirements

1. The purpose of this section is to provide the minimum air data requirements at the aircraft connection, needed to start the engine within no more than 60 seconds, at sea level (0 feet), for a set of Outside Air Temperatures (OAT).

<table>
<thead>
<tr>
<th>ABBREVIATION</th>
<th>DEFINITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>A/C</td>
<td>Aircraft</td>
</tr>
<tr>
<td>ASU</td>
<td>Air Start Unit</td>
</tr>
<tr>
<td>HPGC</td>
<td>High Pressure Ground Connection</td>
</tr>
<tr>
<td>OAT</td>
<td>Outside Air Temperature</td>
</tr>
</tbody>
</table>

A. Air data (discharge temperature, absolute discharge pressure) are given at the HPGC.

B. For a given OAT the following charts are used to determine an acceptable combination for air discharge temperature, absolute discharge pressure and mass flow rate.

C. This section addresses requirements for the ASU only, and is not representative of the start performance of the aircraft using the APU or engine cross bleed procedure.

D. To protect the A/C, the charts feature, if necessary:
   - The maximum discharge pressure at the HPGC
   - The maximum discharge temperature at the HPGC.
ON A/C A318-100

EXAMPLE:

FOR AN OAT OF 30° C (86° F) AND AN ASU PROVIDING A DISCHARGE TEMPERATURE OF 150° C (302° F) AT HPGC:

- THE REQUIRED PRESSURE AT HPGC IS 41 psia
- THE REQUIRED AIRFLOW AT A/C CONNECTION IS 57.5 kg/min.

NOTE:

IN CASE THE ACTUAL DISCHARGE TEMPERATURE OF THE ASU DIFFERS SUBSTANTIALLY FROM THE ONES GIVEN IN THE CHARTS, A SIMPLE INTERPOLATION (LINEAR) IS SUFFICIENT TO DETERMINE THE REQUIRED AIR DATA.

Example for Use of the Charts

FIGURE-5-5-0-991-005-A01
PW 6000 SERIES/SEA LEVEL
STARTING TIME: LESS THAN 60 s
AIR DATA AT AIRCRAFT CONNECTION

Engine Starting Pneumatic Requirements
PW 6000 Series Engine
FIGURE-5-5-0-991-006-A01
Engine Starting Pneumatic Requirements
CFM56 Series Engine
FIGURE-5-5-0-991-007-A01
5-6-0 Ground Pneumatic Power Requirements

**ON A/C A318-100**

Ground Pneumatic Power Requirements

1. General
   This section describes the required performance for the ground equipment to maintain the cabin temperature at 27 °C (80.6 °F) for the cooling or 21 °C (69.8 °F) for heating cases after boarding (Section 5.7 - steady state), and provides the time needed to cool down or heat up the aircraft cabin to the required temperature (Section 5.6 - dynamic cases with aircraft empty).

<table>
<thead>
<tr>
<th>ABBREVIATION</th>
<th>DEFINITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>A/C</td>
<td>Aircraft</td>
</tr>
<tr>
<td>AHM</td>
<td>Aircraft Handling Manual</td>
</tr>
<tr>
<td>AMM</td>
<td>Aircraft Maintenance Manual</td>
</tr>
<tr>
<td>GC</td>
<td>Ground Connection</td>
</tr>
<tr>
<td>GSE</td>
<td>Ground Service Equipment</td>
</tr>
<tr>
<td>IFE</td>
<td>In-Flight Entertainment</td>
</tr>
<tr>
<td>OAT</td>
<td>Outside Air Temperature</td>
</tr>
<tr>
<td>PCA</td>
<td>Pre-Conditioned Air</td>
</tr>
</tbody>
</table>

A. The air flow rates and temperature requirements for the GSE, provided in Sections 5.6 and 5.7, are given at A/C ground connection.

   **NOTE**: The cooling capacity of the equipment (kW) is only indicative and is not sufficient by itself to ensure the performance (outlet temperature and flow rate combinations are the requirements needed for ground power). An example of cooling capacity calculation is given in Section 5.7.

   **NOTE**: The maximum air flow is driven by pressure limitation at the ground connection.

B. For temperatures at ground connection below 2 °C (35.6 °F) (Subfreezing), the ground equipment shall be compliant with the Airbus document "Subfreezing PCA Carts - Compliance Document for Suppliers" (contact Airbus to obtain this document) defining all the requirements with which Subfreezing Pre-Conditioning Air equipment must comply to allow its use on Airbus aircraft. These requirements are in addition to the functional specifications included in the IATA AHM997.

2. Ground Pneumatic Power Requirements
   This section provides the ground pneumatic power requirements for:
   - Heating (pull up) the cabin, initially at OAT, up to 21 °C (69.8 °F) (see FIGURE 5-6-0-991-001-A)
   - Cooling (pull down) the cabin, initially at OAT, down to 27 °C (80.6 °F) (see FIGURE 5-6-0-991-002-A).
**ON A/C A318-100**

PULL UP PERFORMANCE

![Graph](image)

TIME TO HEAT CABIN TO +21°C (+69.8°F) ON GROUND (min)

- OAT ISA: −38°C (−36.4°F)
- GC INLET: +70°C (+158°F)
- EMPTY CABIN
- IFE OFF
- NO SOLAR LOAD
- LIGHTS ON
- GALLEYS OFF
- RECIRCULATION FANS ON

Ground Pneumatic Power Requirements

Heating

FIGURE-5-6-0-991-001-A01
**ON A/C A318-100**

**PULL DOWN PERFORMANCE**

- **MAXIMUM AIRFLOW**
- **AIRFLOW AT GC (kg/s)**
- **AIRFLOW AT GC (lb/s)**

**TIME TO COOL CABIN TO +27° C (+80.6° F) ON GROUND (min)**

**Ground Pneumatic Power Requirements**

**Cooling**

**FIGURE-5-6-0-991-002-A01**
Preconditioned Airflow Requirements

**ON A/C A318-100**

Preconditioned Airflow Requirements

1. This section provides the preconditioned airflow rate and temperature needed to maintain the cabin temperature at 27 ºC (80.6 ºF) for the cooling or 21 ºC (69.8 ºF) for the heating cases.

   These settings are not intended to be used for operation (they are not a substitute for the settings given in the AMM). They are based on theoretical simulations and give the picture of a real steady state.

   The purpose of the air conditioning (cooling) operation (described in the AMM) is to maintain the cabin temperature below 27 ºC (80.6 ºF) during boarding (therefore it is not a steady state).
Preconditioned Airflow Requirements

FIGURE-5-7-0-991-001-A01
5-8-0 Ground Towing Requirements

**ON A/C A318-100

Ground Towing Requirements

1. This section provides information on aircraft towing. This aircraft is designed with means for conventional or towbarless towing. Information/procedures can be found for both in AMM 09. Status on towbarless towing equipment qualification can be found in ISI 09.11.00001.

   **NOTE**: The NLG steering deactivation pin has the same design for all Airbus programs.

   One towbar fitting is installed at the front of the leg. The main landing gears have attachment points for towing or debogging (for details, refer ARM 07).

   This section shows the chart to determine the drawbar pull and tow tractor mass requirements as a function of the following physical characteristics:
   - Aircraft weight,
   - Number of engines at idle,
   - Slope.
   The chart is based on the engine type with the highest idle thrust level.

2. Towbar design guidelines

   The aircraft towbar shall comply with the following standards:
   - ISO 8267-1, "Aircraft - Towbar Attachment Fitting - Interface Requirements - Part 1: Main Line Aircraft",
   - SAE AS 1614, "Main Line Aircraft Towbar Attach Fitting Interface",
   - SAE ARP 1915, "Aircraft Towbar",
   - ISO 9667, "Aircraft Ground Support Equipment - Towbar - Connection to Aircraft and Tractor",
   - EN 12312-7, "Aircraft Ground Support Equipment - Specific Requirements - Part 7: Aircraft Movement Equipment",
   - IATA Airport Handling Manual AHM 958, "Functional Specification for an Aircraft Towbar".

   A conventional type towbar is required which should be equipped with a damping system (to protect the nose gear against jerks) and with towing shear pins:
   - A traction shear pin calibrated at 9 425 daN (21 188 lbf),
   - A torsion pin calibrated at 826 m.daN (6 092 lbf.ft).

   The towing head is designed according to ISO 8267-1, cat. I.
**ON A/C A318-100**

EXAMPLE HOW TO DETERMINE THE MASS REQUIREMENT TO TOW A A318 AT 60 000 kg, AT 1.5% SLOPE, 1 ENGINE AT IDLE AND FOR WET TAMMAC CONDITIONS:

- ON THE RIGHT HAND SIDE OF THE GRAPH, CHOOSE THE RELEVANT AIRCRAFT WEIGHT (60 000 kg).
- FROM THIS POINT DRAW A PARALLEL LINE TO THE REQUIRED SLOPE PERCENTAGE (1.5%).
- FROM THIS POINT OBTAINED DRAW A STRAIGHT HORIZONTAL LINE UNTIL No. OF ENGINES AT IDLE = 2.
- FROM THIS POINT DRAW A PARALLEL LINE TO THE REQUESTED No. OF ENGINES (1).
- FROM THIS POINT DRAW A STRAIGHT HORIZONTAL LINE TO THE DRAWBAR PULL AXIS.
- THE Y-COORDINATE OBTAINED IS THE NECESSARY DRAWBAR PULL FOR THE TRACTOR (3 900 kg).
- SEARCH THE INTERSECTION WITH THE "WET CONCRETE" LINE.
- THE OBTAINED X-COORDINATE IS THE TOTAL TRACTION WHEEL LOAD (6 890 kg).

NOTE:
USE A TRACTOR WITH A LIMITED DRAWBAR PULL TO PREVENT LOADS ABOVE THE TOW-BAR SHEAR-PIN CAPACITY.

Ground Towing Requirements
FIGURE-5-8-0-991-001-A01
5-9-0 De-Icing and External Cleaning

**ON A/C A318-100**

De-Icing and External Cleaning

1. De-Icing and External Cleaning on Ground
   The mobile equipment for aircraft de-icing and external cleaning must be capable of reaching heights up to approximately 13 m (43 ft).

2. De-Icing

<table>
<thead>
<tr>
<th>AIRCRAFT TYPE</th>
<th>Wing Top Surface (Both Sides)</th>
<th>Wingtip Devices (Both Inside and Outside Surfaces) (Both Sides)</th>
<th>HTP Top Surface (Both Sides)</th>
<th>VTP (Both Sides)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>m²</td>
<td>ft²</td>
<td>m²</td>
<td>ft²</td>
</tr>
<tr>
<td>A318</td>
<td>100</td>
<td>1 076</td>
<td>2</td>
<td>22</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>AIRCRAFT TYPE</th>
<th>Fuselage Top Surface (Top Third - 120° Arc)</th>
<th>Nacelle and Pylon (Top Third - 120° Arc) (All Engines)</th>
<th>Total De-Iced Area</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>m²</td>
<td>ft²</td>
<td>m²</td>
</tr>
<tr>
<td>A318</td>
<td>112</td>
<td>1 206</td>
<td>24</td>
</tr>
</tbody>
</table>

**NOTE**: Dimensions are approximate.

3. External Cleaning

<table>
<thead>
<tr>
<th>AIRCRAFT TYPE</th>
<th>Wing Top Surface (Both Sides)</th>
<th>Wing Lower Surface (Including Flap Track Fairing) (Both Sides)</th>
<th>Wingtip Devices (Both Inside and Outside Surfaces) (Both Sides)</th>
<th>HTP Top Surface (Both Sides)</th>
<th>HTP Lower Surface (Both Sides)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>m²</td>
<td>ft²</td>
<td>m²</td>
<td>ft²</td>
<td>m²</td>
</tr>
<tr>
<td>A318</td>
<td>100</td>
<td>1 076</td>
<td>103</td>
<td>1 109</td>
<td>2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>AIRCRAFT TYPE</th>
<th>VTP (Both Sides)</th>
<th>Fuselage and Belly Fairing</th>
<th>Nacelle and Pylon (All Engines)</th>
<th>Total Cleaned Area</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>m²</td>
<td>ft²</td>
<td>m²</td>
<td>ft²</td>
</tr>
<tr>
<td>A318</td>
<td>46</td>
<td>495</td>
<td>343</td>
<td>3 692</td>
</tr>
</tbody>
</table>

**NOTE**: Dimensions are approximate.
**Operating Conditions**

6-1-0 Engine Exhaust Velocities and Temperatures

**ON A/C A318-100**

**Engine Exhaust Velocities and Temperatures**

1. General
   This section provides the estimated engine exhaust efflux velocities and temperatures contours for Ground Idle, Breakaway and Maximum Take-Off (MTO) conditions.
6-1-1 Engine Exhaust Velocities Contours - Ground Idle Power

**ON A/C A318-100

Engine Exhaust Velocities Contours – Ground Idle Power

1. This section provides engine exhaust velocities contours at ground idle power.
**ON A/C A318-100

Engine Exhaust Velocities
Ground Idle Power – CFM56 Series Engine
FIGURE-6-1-1-991-001-A01
Engine Exhaust Velocities
Ground Idle Power – PW 6000 Series Engine
FIGURE-6-1-1-991-002-A01
6-1-2 Engine Exhaust Temperatures Contours - Ground Idle Power

**ON A/C A318-100

Engine Exhaust Temperatures Contours - Ground Idle Power

1. This section provides engine exhaust temperatures contours at ground idle power.
**ON A/C A318-100

Engine Exhaust Temperatures
Ground Idle Power – CFM56 Series Engine
FIGURE-6-1-2-991-001-A01
Engine Exhaust Temperatures
Ground Idle Power – PW 6000 Series Engine
FIGURE-6-1-2-991-002-A01
6-1-3 Engine Exhaust Velocities Contours - Breakaway Power

**ON A/C A318-100

Engine Exhaust Velocities Contours - Breakaway Power

1. This section provides engine exhaust velocities contours at breakaway power.
**ON A/C A318-100

Engine Exhaust Velocities
Breakaway Power – CFM56 Series Engine
FIGURE-6-1-3-991-001-A01
Engine Exhaust Velocities
Breakaway Power – PW 6000 Series Engine
FIGURE-6-1-3-991-002-A01
6-1-4 Engine Exhaust Temperatures Contours - Breakaway Power

**ON A/C A318-100**

**Engine Exhaust Temperatures Contours - Breakaway Power**

1. This section provides engine exhaust temperatures contours at breakaway power.
**ON A/C A318-100

Engine Exhaust Temperatures
Breakaway Power – CFM56 Series Engine
FIGURE-6-1-4-991-001-A01
**ON A/C A318-100**

Engine Exhaust Temperatures
Breakaway Power – PW 6000 Series Engine
FIGURE-6-1-4-991-002-A01
6-1-5 Engine Exhaust Velocities Contours - Takeoff Power

**ON A/C A318-100

Engine Exhaust Velocities Contours – Takeoff Power

1. This section provides engine exhaust velocities contours at takeoff power.
Engine Exhaust Velocities
Takeoff Power – CFM56 Series Engine
FIGURE-6-1-5-991-001-A01
**ON A/C A318-100

Engine Exhaust Velocities
Takeoff Power – PW 6000 Series Engine
FIGURE-6-1-5-991-002-A01
Engine Exhaust Temperatures Contours - Takeoff Power

**ON A/C A318-100

1. This section provides engine exhaust temperatures contours at takeoff power.
**ON A/C A318-100**

Engine Exhaust Temperatures
Takeoff Power – CFM56 Series Engine
FIGURE-6-1-6-991-001-A01

6-1-6
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**ON A/C A318-100

Engine Exhaust Temperatures
Takeoff Power – PW 6000 Series Engine
FIGURE-6-1-6-991-002-A01
6-3-0 Danger Areas of Engines

**ON A/C A318-100

Danger Areas of Engines

1. Danger Areas of the Engines
   
   A. The danger areas of the engines shown below are given in the normalized format:
   
   - Entry corridors are only available at ground idle.
   - Do not go into the areas between the engines.
   - The exhaust danger areas are given for 0 kt headwind (if not specified otherwise).
6-3-1 Ground Idle Power

**ON A/C A318-100**

Ground Idle Power

1. This section provides danger areas of the engines at ground idle power conditions.
DANGER AREA

INLET SUCTION
DANGER AREA

ENTRY CORRIDOR

EXHAUST WAKE DANGER AREA

TO 55 m (180 ft) AFT OF COMMON NOZZLE ASSEMBLY (CNA) INCLUDES CROSS WIND EFFECT

NOTE:

Danger Areas of the Engines
CFM56 Series Engine
FIGURE-6-3-1-991-001-A01
**ON A/C A318-100

TO 61 m (200 ft) AFT OF COMMON NOZZLE ASSEMBLY (CNA)
INCLUDES CROSS WIND EFFECT

NOTE:

<table>
<thead>
<tr>
<th>Color</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green</td>
<td>INTAKE SUCTION DANGER AREA</td>
</tr>
<tr>
<td>Blue</td>
<td>ENTRY CORRIDOR</td>
</tr>
<tr>
<td>Pink</td>
<td>EXHAUST DANGER AREA</td>
</tr>
</tbody>
</table>

Danger Areas of the Engines
PW 6000 Series Engine
FIGURE-6-3-1-991-002-A01
6-3-3 Max Take Off Power

**ON A/C A318-100

Take Off Power

1. This section provides danger areas of the engines at max. take off conditions.
**ON A/C A318-100

INTAKE SUCTION DANGER AREA

EXHAUST WAKE DANGER

NOTE:

TO 275 m (900 ft) AFT OF COMMON NOZZLE ASSEMBLY (CNA)
INCLUDES CROSS WIND EFFECT

Danger Areas of the Engines
CFM56 Series Engine
FIGURE-6-3-3-991-015-A01
**ON A/C A318-100

NOTE:
- Intake Suction Danger Area
- Exhaust Wake Danger

Danger Areas of the Engines
PW 6000 Series Engine
FIGURE-6-3-3-991-018-A01
6-4-1 APU

**ON A/C A318-100

APU - APIC & GARRETT

1. This section gives APU exhaust velocities and temperatures.
Exhaust Velocities and Temperatures
APU – APIC & GARRETT
FIGURE-6-4-1-991-001-A01
PAVEMENT DATA

7-1-0 General Information

**ON A/C A318-100

General Information

1. A brief description of the pavement charts that follow will help in airport planning.

   To aid in the interpolation between the discrete values shown, each aircraft configuration is shown with a minimum range of five loads on the Main Landing Gear (MLG).

   All curves on the charts represent data at a constant specified tire pressure with:
   - The aircraft loaded to the Maximum Ramp Weight (MRW),
   - The CG at its maximum permissible aft position.

Pavement requirements for commercial aircraft are derived from the static analysis of loads imposed on the MLG struts.

Landing Gear Footprint:
Section 07-02-00 presents basic data on the landing gear footprint configuration, MRW and tire sizes and pressures.

Maximum Pavement Loads:
Section 07-03-00 shows maximum vertical and horizontal pavement loads for certain critical conditions at the tire-ground interfaces.

Landing Gear Loading on Pavement:
Section 07-04-00 contains charts to find these loads throughout the stability limits of the aircraft at rest on the pavement.
These MLG loads are used as the point of entry to the pavement design charts which follow, interpolating load values where necessary.

Flexible Pavement Requirements - US Army Corps of Engineers Design Method:
The report was prepared by the "U.S. Army Corps Engineers Waterways Experiment Station, Soils and Pavement Laboratory, Vicksburg, Mississippi".
The line showing 10 000 coverages is used to calculate the Aircraft Classification Number (ACN).

Flexible Pavement Requirements - LCN Conversion Method:
The Load Classification Number (LCN) curves are no longer provided in section 07-06-00 since the LCN system for reporting pavement strength is obsolete, having been replaced by the ICAO recommended ACN/PCN system in 1983. For questions regarding the LCN system, contact Airbus.

Rigid Pavement Requirements - PCA (Portland Cement Association) Design Method:
Section 07-07-00 gives the rigid pavement design curves that have been prepared with the use of the Westergaard Equation.
This is in general accordance with the procedures outlined in the Portland Cement Association publications, "Design of Concrete Airport Pavement", 1973 and "Computer Program for Airport Pavement Design" (Program PDILB), 1967 both by Robert G. Packard.

Rigid Pavement Requirements - LCN Conversion:
The Load Classification Number (LCN) curves are no longer provided in section 07-08-00 since the LCN system for reporting pavement strength is obsolete, having been replaced by the ICAO recommended ACN/PCN system in 1983. For questions regarding the LCN system, contact Airbus.

ACN/PCN Reporting System:
The ACN/PCN system provides a standardized international aircraft/pavement rating system replacing the various S, T, TT, LCN, AUW, ISWL, etc., rating systems used throughout the world. ACN is the Aircraft Classification Number and PCN is the corresponding Pavement Classification Number.
An aircraft having an ACN less than or equal to the PCN can operate without restriction on the pavement.
Numerically the ACN is two times the derived single wheel load expressed in thousands of kilograms. The derived single wheel load is defined as the load on a single tire inflated to 1.25 MPa (181 psi) that would have the same pavement requirements as the aircraft.
Computationally the ACN/PCN system uses PCA program PDILB for rigid pavements and S-77-1 for flexible pavements to calculate ACN values.

The Airport Authority must decide on the method of pavement analysis and the results of their evaluation shown as follows:

<table>
<thead>
<tr>
<th>PCN</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>PAVEMENT TYPE</th>
<th>SUBGRADE CATEGORY</th>
<th>TIRE PRESSURE CATEGORY</th>
<th>EVALUATION METHOD</th>
</tr>
</thead>
<tbody>
<tr>
<td>R – Rigid</td>
<td>A – High</td>
<td>W – No pressure limit</td>
<td>T – Technical</td>
</tr>
<tr>
<td>F – Flexible</td>
<td>B – Medium</td>
<td>X – High pressure limited to 1.75 MPa (254 psi)</td>
<td>U – Using Aircraft</td>
</tr>
<tr>
<td>PCN</td>
<td>PAVEMENT TYPE</td>
<td>SUBGRADE CATEGORY</td>
<td>TIRE PRESSURE CATEGORY</td>
</tr>
<tr>
<td>-----</td>
<td>---------------</td>
<td>-------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>C</td>
<td>Low</td>
<td></td>
<td>Y – Medium pressure limited to 1.25 MPa (181 psi)</td>
</tr>
<tr>
<td>D</td>
<td>Ultra Low</td>
<td></td>
<td>Z – Low pressure limited to 0.5 MPa (73 psi)</td>
</tr>
</tbody>
</table>

For flexible pavements, the four subgrade categories (CBR) are:

- A. High Strength        CBR 15
- B. Medium Strength      CBR 10
- C. Low Strength          CBR 6
- D. Ultra Low Strength    CBR 3

For rigid pavements, the four subgrade categories (k) are:

- A. High Strength         \( k = 150 \text{ MN/m}^3 \) (550 pci)
- B. Medium Strength       \( k = 80 \text{ MN/m}^3 \) (300 pci)
- C. Low Strength           \( k = 40 \text{ MN/m}^3 \) (150 pci)
- D. Ultra Low Strength     \( k = 20 \text{ MN/m}^3 \) (75 pci)
7-2-0 Landing Gear Footprint

**ON A/C A318-100

Landing Gear Footprint

1. This section provides data about the landing gear footprint in relation to the aircraft MRW and tire sizes and pressures.

   The landing-gear footprint information is given for all the operational weight variants of the aircraft.
**ON A/C A318-100**

<table>
<thead>
<tr>
<th>WEIGHT VARIANT</th>
<th>MAXIMUM RAMP WEIGHT</th>
<th>PERCENTAGE OF WEIGHT ON MAIN GEAR GROUP</th>
<th>NOSE GEAR TIRE SIZE</th>
<th>NOSE GEAR TIRE PRESSURE</th>
<th>MAIN GEAR TIRE SIZE</th>
<th>MAIN GEAR TIRE PRESSURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>A318–100 WV000</td>
<td>59 400 kg (130 950 lb)</td>
<td>89.7%</td>
<td>30x8.8R15 (30x8.8–15)</td>
<td>12.8 bar (186 psi)</td>
<td>46x17R20 (46x16–20)</td>
<td>11.4 bar (165 psi)</td>
</tr>
<tr>
<td>A318–100 WV001</td>
<td>61 900 kg (136 475 lb)</td>
<td>89.2%</td>
<td>30x8.8R15 (30x8.8–15)</td>
<td>12.8 bar (186 psi)</td>
<td>46x17R20 (46x16–20)</td>
<td>11.4 bar (165 psi)</td>
</tr>
<tr>
<td>A318–100 WV002</td>
<td>63 400 kg (139 775 lb)</td>
<td>89.0%</td>
<td>30x8.8R15 (30x8.8–15)</td>
<td>12.8 bar (186 psi)</td>
<td>46x17R20 (46x16–20)</td>
<td>11.4 bar (165 psi)</td>
</tr>
<tr>
<td>A318–100 WV003</td>
<td>64 900 kg (143 075 lb)</td>
<td>89.0%</td>
<td>30x8.8R15 (30x8.8–15)</td>
<td>13.5 bar (196 psi)</td>
<td>46x17R20 (46x16–20)</td>
<td>12.4 bar (180 psi)</td>
</tr>
<tr>
<td>A318–100 WV004</td>
<td>66 400 kg (146 375 lb)</td>
<td>89.0%</td>
<td>30x8.8R15 (30x8.8–15)</td>
<td>13.5 bar (196 psi)</td>
<td>46x17R20 (46x16–20)</td>
<td>12.4 bar (180 psi)</td>
</tr>
<tr>
<td>A318–100 WV005</td>
<td>68 400 kg (150 800 lb)</td>
<td>89.0%</td>
<td>30x8.8R15 (30x8.8–15)</td>
<td>13.5 bar (196 psi)</td>
<td>46x17R20 (46x16–20)</td>
<td>12.4 bar (180 psi)</td>
</tr>
<tr>
<td>A318–100 WV006</td>
<td>56 400 kg (124 350 lb)</td>
<td>90.2%</td>
<td>30x8.8R15 (30x8.8–15)</td>
<td>12.3 bar (178 psi)</td>
<td>46x17R20 (46x16–20)</td>
<td>10.2 bar (148 psi)</td>
</tr>
<tr>
<td>A318–100 WV007</td>
<td>61 400 kg (135 375 lb)</td>
<td>89.3%</td>
<td>30x8.8R15 (30x8.8–15)</td>
<td>12.8 bar (186 psi)</td>
<td>46x17R20 (46x16–20)</td>
<td>11.4 bar (165 psi)</td>
</tr>
<tr>
<td>A318–100 WV008</td>
<td>64 400 kg (141 975 lb)</td>
<td>89.0%</td>
<td>30x8.8R15 (30x8.8–15)</td>
<td>13.5 bar (196 psi)</td>
<td>46x17R20 (46x16–20)</td>
<td>12.4 bar (180 psi)</td>
</tr>
<tr>
<td>A318–100 WV009</td>
<td>66 400 kg (146 375 lb)</td>
<td>89.0%</td>
<td>30x8.8R15 (30x8.8–15)</td>
<td>13.5 bar (196 psi)</td>
<td>46x17R20 (46x16–20)</td>
<td>12.4 bar (180 psi)</td>
</tr>
<tr>
<td>A318–100 WV010</td>
<td>68 400 kg (150 800 lb)</td>
<td>89.0%</td>
<td>30x8.8R15 (30x8.8–15)</td>
<td>13.5 bar (196 psi)</td>
<td>46x17R20 (46x16–20)</td>
<td>12.4 bar (180 psi)</td>
</tr>
</tbody>
</table>

Landing Gear Footprint

FIGURE-7-2-0-991-001-A01

N_AC_0702002_1_0010101_01_03
7-3-0 Maximum Pavement Loads

**ON A/C A318-100

Maximum Pavement Loads

1. This section provides maximum vertical and horizontal pavement loads for some critical conditions at the tire-ground interfaces. The maximum pavement loads are given for all the operational weight variants of the aircraft.
### Aircraft Characteristics - Airport and Maintenance Planning

**ON A/C A318-100**

**Maximum Pavement Loads**

<table>
<thead>
<tr>
<th>WEIGHT VARIANT</th>
<th>MAXIMUM RAMP WEIGHT</th>
<th>STATIC LOAD AT FWD CG</th>
<th>STATIC BRAKING AT 10 ft/s² DECELERATION</th>
<th>STATIC LOAD AT AFT CG</th>
<th>STEADY BRAKING AT 10 ft/s² DECELERATION</th>
<th>AT INSTANTANEOUS BRAKING COEFFICIENT = 0.8</th>
</tr>
</thead>
<tbody>
<tr>
<td>A318−100 WV000</td>
<td>59 400 kg (130 950 lb)</td>
<td>10 840 kg (23 900 lb)</td>
<td>15 % MAC (a)</td>
<td>16 850 kg (37 150 lb)</td>
<td>26 650 kg (58 750 lb)</td>
<td>33.9 % MAC (a)</td>
</tr>
<tr>
<td>A318−100 WV001</td>
<td>61 900 kg (136 475 lb)</td>
<td>11 290 kg (24 900 lb)</td>
<td>15 % MAC (a)</td>
<td>17 540 kg (38 675 lb)</td>
<td>27 620 kg (60 200 lb)</td>
<td>32.7 % MAC (a)</td>
</tr>
<tr>
<td>A318−100 WV002</td>
<td>63 400 kg (139 775 lb)</td>
<td>11 560 kg (25 475 lb)</td>
<td>15 % MAC (a)</td>
<td>17 950 kg (39 750 lb)</td>
<td>28 200 kg (62 175 lb)</td>
<td>32 % MAC (a)</td>
</tr>
<tr>
<td>A318−100 WV003</td>
<td>64 900 kg (143 075 lb)</td>
<td>11 500 kg (25 350 lb)</td>
<td>16.2 % MAC (a)</td>
<td>18 040 kg (39 775 lb)</td>
<td>28 870 kg (63 850 lb)</td>
<td>32 % MAC (a)</td>
</tr>
<tr>
<td>A318−100 WV004</td>
<td>66 400 kg (146 375 lb)</td>
<td>11 490 kg (25 325 lb)</td>
<td>15 % MAC (b)</td>
<td>17 820 kg (39 275 lb)</td>
<td>29 540 kg (65 125 lb)</td>
<td>32 % MAC (a)</td>
</tr>
<tr>
<td>A318−100 WV005</td>
<td>68 400 kg (150 800 lb)</td>
<td>11 490 kg (25 325 lb)</td>
<td>15 % MAC (b)</td>
<td>17 810 kg (39 250 lb)</td>
<td>30 430 kg (67 100 lb)</td>
<td>32 % MAC (a)</td>
</tr>
</tbody>
</table>

**V(NG)** MAXIMUM VERTICAL NOSE GEAR GROUND LOAD AT FWD CG

**V(MG)** MAXIMUM VERTICAL MAIN GEAR GROUND LOAD AT AFT CG

**H** MAXIMUM HORIZONTAL GROUND LOAD FROM BRAKING

**NOTE:**

(a) LOADS CALCULATED USING AIRCRAFT AT MRW.

(b) LOADS CALCULATED USING AIRCRAFT AT 63 000 kg (138 900 lb).
**ON A/C A318-100**

NOTE:

(a) LOADS CALCULATED USING AIRCRAFT AT MRW.

(b) LOADS CALCULATED USING AIRCRAFT AT 63 000 kg (138 900 lb).

### Maximum Pavement Loads

<table>
<thead>
<tr>
<th>WEIGHT VARIANT</th>
<th>MAXIMUM RAMP WEIGHT</th>
<th>Static Load at FWD CG</th>
<th>Static Braking at 10 ft/s² Deceleration</th>
<th>Static Load at AFT CG</th>
<th>Steady Braking at 10 ft/s² Deceleration</th>
<th>AT INSTANTANEOUS BRAKING COEFFICIENT = 0.8</th>
</tr>
</thead>
<tbody>
<tr>
<td>A318–100 WV006</td>
<td>56 400 kg (124 350 lb)</td>
<td>10 550 kg (23 250 lb)</td>
<td>14 % MAC (a)</td>
<td>16 270 kg (35 875 lb)</td>
<td>25 430 kg (56 075 lb)</td>
<td>8 760 kg (19 325 lb)</td>
</tr>
<tr>
<td>A318–100 WV007</td>
<td>61 400 kg (135 375 lb)</td>
<td>11 200 kg (24 700 lb)</td>
<td>15 % MAC (a)</td>
<td>17 400 kg (38 350 lb)</td>
<td>27 430 kg (60 475 lb)</td>
<td>9 540 kg (21 025 lb)</td>
</tr>
<tr>
<td>A318–100 WV008</td>
<td>64 400 kg (141 975 lb)</td>
<td>11 520 kg (25 400 lb)</td>
<td>15.8 % MAC (a)</td>
<td>18 010 kg (39 700 lb)</td>
<td>28 640 kg (63 150 lb)</td>
<td>10 010 kg (22 075 lb)</td>
</tr>
<tr>
<td>A318–100 WV009</td>
<td>66 400 kg (146 375 lb)</td>
<td>11 490 kg (25 325 lb)</td>
<td>15 % MAC (b)</td>
<td>17 820 kg (39 275 lb)</td>
<td>29 540 kg (65 125 lb)</td>
<td>10 320 kg (22 750 lb)</td>
</tr>
<tr>
<td>A318–100 WV010</td>
<td>68 400 kg (150 800 lb)</td>
<td>11 490 kg (25 325 lb)</td>
<td>15 % MAC (b)</td>
<td>17 810 kg (39 250 lb)</td>
<td>30 430 kg (67 100 lb)</td>
<td>10 630 kg (23 425 lb)</td>
</tr>
</tbody>
</table>
Landing Gear Loading on Pavement

**ON A/C A318-100**

Landing Gear Loading on Pavement

1. Landing Gear Loading on Pavement

   This section provides data about the landing gear loading on pavement. The MLG loading on pavement graphs are given for the weight variants that produce (at the MRW and maximum aft CG) the lowest MLG load and the highest MLG load for each type of aircraft.

   Example, see FIGURE 7-4-0-991-001-A, calculation of the total weight on the MLG for:
   - An aircraft with a MRW of 56 400 kg (124 350 lb),
   - The aircraft gross weight is 48 000 kg (105 825 lb),
   - A percentage of weight on the MLG of 90.2% (percentage of weight on the MLG at MRW and maximum aft CG).
   The total weight on the MLG group is 43 280 kg (95 425 lb).

   **NOTE**: The CG in the figure title is the CG used for ACN/LCN calculation.
**ON A/C A318-100**

Landing Gear Loading on Pavement
WV006, MRW 56 400 kg, CG 35%
FIGURE-7-4-0-991-001-A01
**On A/C A318-100**

Landing Gear Loading on Pavement
WV005, MRW 68,400 kg, CG 32%

FIGURE-7-4-0-991-002-A01
7-5-0  Flexible Pavement Requirements - U.S. Army Corps of Engineers Design Method

**ON A/C A318-100

Flexible Pavement Requirements - US Army Corps of Engineers Design Method

1. This section provides data about the flexible pavement requirements.
   The flexible pavement requirement graphs are given at standard tire pressure for the weight variants producing (at the MRW and maximum aft CG) the lowest MLG load and the highest MLG load for each type of aircraft.
   They are calculated with the US Army Corps of Engineers Design Method.
   To find a flexible pavement thickness, you must know the Subgrade Strength (CBR), the annual departure level and the weight on one MLG.
   The line that shows 10,000 coverages is used to calculate the Aircraft Classification Number (ACN).
   The procedure that follows is used to develop flexible pavement design curves:
   - With the scale for pavement thickness at the bottom and the scale for CBR at the top, a random line is made to show 10,000 coverages,
   - A plot is then made of the incremental values of the weight on the MLG,
   - Annual departure lines are made based on the load lines of the weight on the MLG that is shown on the graph.

Example, see FIGURE 7-5-0-991-001-A, calculation of the thickness of the flexible pavement for MLG:
- An aircraft with a MRW of 56,400 kg (124,350 lb),
- A "CBR" value of 10,
- An annual departure level of 3,000,
- The load on one MLG of 20,000 kg (44,100 lb).
The required flexible pavement thickness is 40.3 cm (16 in).

NOTE: The CG in the figure title is the CG used for ACN calculation.
**AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING**

**A318**

**ON A/C A318-100**

![Diagram of subgrade strength and flexible pavement requirements](image)

**Flexible Pavement Requirements**

WV006, MRW 56 400 kg, CG 35 %

**FIGURE-7-5-0-991-001-A01**

**Page 2**

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**ON A/C A318-100**

SUBGRADE STRENGTH – CBR

<table>
<thead>
<tr>
<th>Thickness (cm)</th>
<th>Thickness (in)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>0.39</td>
</tr>
<tr>
<td>15</td>
<td>0.59</td>
</tr>
<tr>
<td>20</td>
<td>0.78</td>
</tr>
<tr>
<td>30</td>
<td>1.18</td>
</tr>
<tr>
<td>40</td>
<td>1.57</td>
</tr>
<tr>
<td>60</td>
<td>2.36</td>
</tr>
<tr>
<td>80</td>
<td>3.15</td>
</tr>
</tbody>
</table>

WEIGHT ON ONE MAIN LANDING GEAR
- 30 430 kg (67 075 lb)
- 25 000 kg (55 125 lb)
- 20 000 kg (44 100 lb)
- 15 000 kg (33 075 lb)
- 10 000 kg (22 050 lb)

10 000 COVERAGES USED FOR ACN CALCULATIONS
ALPHA FACTOR = 0.9

MAXIMUM POSSIBLE MAIN GEAR LOAD AT MAXIMUM RAMP WEIGHT AND AFT CG

ANNUAL DEPARTURES:
- 1 200
- 2 000
- 3 000
- 6 000
- 15 000
- 25 000
- 50 000

20 YEAR PAVEMENT LIFE

FLEXIBLE PAVEMENT THICKNESS
46x17R20 (46x16–20) TIRES
TIRE PRESSURE CONSTANT AT 12.4 bar (180 psi)

Flexible Pavement Requirements
WV005, WV010, MRW 68 400 kg, CG 32 %
FIGURE-7-5-0-991-002-A01
Flexible Pavement Requirements - LCN Conversion

1. The Load Classification Number (LCN) curves are no longer provided in section 07-06-00 since the LCN system for reporting pavement strength is obsolete, having been replaced by the ICAO recommended ACN/PCN system in 1983. For questions regarding the LCN system, contact Airbus.
7-7-0  Rigid Pavement Requirements - Portland Cement Association Design Method

**ON A/C A318-100**

Rigid Pavement Requirements - Portland Cement Association Design Method

1. This section provides data about the rigid pavement requirements for the PCA (Portland Cement Association) design method.

The rigid pavement requirement graphs are given at standard tire pressure for the weight variants producing (at the MRW and maximum aft CG) the lowest MLG load and the highest MLG load for each A/C type.

They are calculated with the PCA design method.

To find a rigid pavement thickness, you must know the Subgrade Modulus (k), the permitted working stress and the weight on one MLG.

The procedure that follows is used to develop rigid pavement design curves:

- With the scale for pavement thickness on the left and the scale for permitted working stress on the right, a random load line is made. This represents the MLG maximum weight to be shown,
- A plot is then made of all values of the subgrade modulus (k values),
- More load lines for the incremental values of the weight on the MLG are made based on the curve for \( k = 150 \text{ MN/m}^3 \), which is already shown on the graph.

Example, see FIGURE 7-7-0-991-003-A, calculation of the thickness of the rigid pavement for the MLG:

- An aircraft with a MRW of 56 400 kg (124 350 lb),
- A k value of 150 MN/m\(^3\) (550 lbf/in\(^3\)),
- A permitted working stress of 31.64 kg/cm\(^2\) (450 lb/in\(^2\)),
- The load on one MLG is 20 000 kg (44 100 lb).

The required rigid pavement thickness is 181 mm (7 in).

**NOTE**: The CG in the figure title is the CG used for ACN calculation.
Rigid Pavement Requirements
WV006, MRW 56 400 kg, CG 35 %
FIGURE-7-7-0-991-003-A01

NOTE: THE VALUES OBTAINED BY USING THE MAXIMUM LOAD REFERENCE LINE AND ANY VALUES FOR \( k \) ARE EXACT.
FOR LOADS LESS THAN MAXIMUM, THE CURVES ARE EXACT FOR \( k = 80 \text{ MN/m}^2 \) BUT DEVIATE SLIGHTLY FOR ANY OTHER VALUES OF \( k \).

REFERENCE: "DESIGN OF CONCRETE AIRPORT PAVEMENTS" AND "COMPUTER PROGRAM FOR AIRPORT PAVEMENT DESIGN - PROGRAM PDILB" PORTLAND CEMENT ASSOCIATION.
**ON A/C A318-100**

Rigid Pavement Requirements
WV005, WV010, MRW 68 400 kg, CG 32 %

FIGURE-7-7-0-991-004-A01

NOTE:
The values obtained by using the maximum load reference line and any values for k are exact.
For loads less than maximum, the curves are exact for \( k = 80 \text{ MN/m}^3 \) but deviate slightly for any other values of k.

REFERENCE:
"Design of Concrete Airport Paveiments" and "Computer Program for Airport Pavement Design - Program PDILB" Portland Cement Association.
Rigid Pavement Requirements - LCN Conversion

**ON A/C A318-100

Rigid Pavement Requirements - LCN Conversion

1. The Load Classification Number (LCN) curves are no longer provided in section 07-08-00 since the LCN system for reporting pavement strength is obsolete, having been replaced by the ICAO recommended ACN/PCN system in 1983.

For questions regarding the LCN system, contact Airbus.
7-9-0 ACN/PCN Reporting System - Flexible and Rigid Pavements

**ON A/C A318-100

Aircraft Classification Number - Flexible and Rigid Pavements

1. This section provides data about the Aircraft Classification Number (ACN) for an aircraft gross weight in relation to a subgrade strength value for flexible and rigid pavement. The flexible and rigid pavement requirement graphs are given at standard tire pressure for the weight variants producing (at the MRW and maximum aft CG) the lowest MLG load and the highest MLG load for each type of aircraft. To find the ACN of an aircraft on flexible and rigid pavement, you must know the aircraft gross weight and the subgrade strength.

**NOTE**: An aircraft with an ACN equal to or less than the reported PCN can operate on that pavement, subject to any limitation on the tire pressure. (Ref: ICAO Aerodrome Design Manual, Part 3, Chapter 1, Second Edition 1983).

Example, see FIGURE 7-9-0-991-002-A (sheet 1), calculation of the ACN for flexible pavement for:
- An aircraft with a MRW of 56 400 kg (124 350 lb),
- An aircraft gross weight of 50 000 kg (110 225 lb),
- A low subgrade strength (code C).
The ACN for flexible pavement is 26.

Example, see FIGURE 7-9-0-991-002-A (sheet 2), calculation of the ACN for rigid pavement for:
- An aircraft with a MRW of 56 400 kg (124 350 lb),
- An aircraft gross weight of 50 000 kg (110 225 lb),
- A medium subgrade strength (code B).
The ACN for rigid pavement is 26.

2. Aircraft Classification Number - ACN table

The table in FIGURE 7-9-0-991-001-A provide ACN data in tabular format similar to the one used by ICAO in the "Aerodrome Design Manual Part 3, Pavements - Edition 1983" for all the operational weight variants of the aircraft.

As an approximation, use a linear interpolation in order to get the ACN at the required operating weight using the following equation:
- \[ ACN = ACN \text{ min} + (ACN \text{ max} - ACN \text{ min}) \times (\text{Operating weight} - 39 000 \text{ kg})/(\text{MRW} - 39 000 \text{ kg}) \]

As an approximation, also use a linear interpolation in order to get the aircraft weight at the pavement PCN using the following equation:
- \[ \text{Operating weight} = 39 000 \text{ kg} + (\text{MRW} - 39 000 \text{ kg}) \times (\text{PCN} - ACN \text{ min})/(ACN \text{ max} - ACN \text{ min}) \]

With ACN max: ACN calculated at the MRW in the table and with ACN min: ACN calculated at 39 000 kg.
NOTE: The CG in the figure title is the CG used for ACN calculation.
<table>
<thead>
<tr>
<th>WEIGHT VARIANT</th>
<th>ALL UP MASS (kg)</th>
<th>LOAD ON ONE MAIN GEAR LEG (%)</th>
<th>TIRE PRESSURE (MPa)</th>
<th>ACN FOR RIGID PAVEMENT SUBGRADES – MN/m³</th>
<th>ACN FOR FLEXIBLE PAVEMENT SUBGRADES – CBR</th>
</tr>
</thead>
<tbody>
<tr>
<td>A318−100 WV00</td>
<td>59 400</td>
<td>44.9</td>
<td>1.14</td>
<td>30  32  34  36  28  29  32  37</td>
<td></td>
</tr>
<tr>
<td>A318−100 WV01</td>
<td>61 900</td>
<td>44.6</td>
<td>1.14</td>
<td>31  33  36  37  29  30  33  38</td>
<td></td>
</tr>
<tr>
<td>A318−100 WV02</td>
<td>63 400</td>
<td>44.5</td>
<td>1.14</td>
<td>32  34  36  38  30  31  34  39</td>
<td></td>
</tr>
<tr>
<td>A318−100 WV03</td>
<td>64 900</td>
<td>44.5</td>
<td>1.24</td>
<td>34  36  38  40  31  32  35  41</td>
<td></td>
</tr>
<tr>
<td>A318−100 WV04</td>
<td>66 400</td>
<td>44.5</td>
<td>1.24</td>
<td>35  37  39  41  32  33  36  42</td>
<td></td>
</tr>
<tr>
<td>A318−100 WV05</td>
<td>68 400</td>
<td>44.5</td>
<td>1.24</td>
<td>36  38  41  43  33  34  37  43</td>
<td></td>
</tr>
<tr>
<td>A318−100 WV06</td>
<td>56 400</td>
<td>45.1</td>
<td>1.02</td>
<td>27  29  32  33  26  27  30  35</td>
<td></td>
</tr>
<tr>
<td>A318−100 WV07</td>
<td>61 400</td>
<td>44.7</td>
<td>1.14</td>
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<td></td>
</tr>
<tr>
<td>A318−100 WV08</td>
<td>64 400</td>
<td>44.5</td>
<td>1.24</td>
<td>34  36  38  40  31  32  35  40</td>
<td></td>
</tr>
<tr>
<td>A318−100 WV09</td>
<td>66 400</td>
<td>44.5</td>
<td>1.24</td>
<td>35  37  39  41  32  33  36  42</td>
<td></td>
</tr>
</tbody>
</table>

Aircraft Classification Number
ACN Table
FIGURE-7-9-0-991-001-A01
AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A318-100

AIRCRAFT CLASSIFICATION NUMBER (ACN)

TIRE PRESSURE CONSTANT AT 10.2 bar (148 psi)

46x17R20 (46x16−20) TIRES

ACN WAS DETERMINED AS REFERENCED IN ICAO AERODROME DESIGN MANUAL PART 3 CHAPTER 1. SECOND EDITION 1983.

SEE SECTION 7−4−0.

AIRCRAFT GROSS WEIGHT

C − CBR 6 (LOW)

B − CBR 10 (MEDIUM)

A − CBR 15 (HIGH)

SUBGRADE STRENGTH

D − CBR 3 (ULTRA LOW)

ALPHA FACTOR = 0.9

Aircraft Classification Number

Flexible Pavement - WV006, MRW 56 400 kg, CG 35 % (Sheet 1 of 2)

FIGURE-7-9-0-991-002-A01
**ON A/C A318-100

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

AIRCRAFT CLASSIFICATION NUMBER (ACN)

TIRE PRESSURE CONSTANT AT 10.2 bar (148 psi)

46x17R20 (46x16−20) TIRES

ACN WAS DETERMINED AS REFERENCED IN ICAO AERODROME DESIGN MANUAL PART 3, CHAPTER 1, SECOND EDITION 1983. SEE SECTION 7−4−0.

AIRCRAFT GROSS WEIGHT

C − k = 40 MN/m³  (LOW)

B − k = 80 MN/m³  (MEDIUM)

A − k = 150 MN/m³  (HIGH)

SUBGRADE STRENGTH

D − k = 20 MN/m³  (ULTRA LOW)

N_AC_070900_1_0020102_01_00

Aircraft Classification Number

Rigid Pavement - WV006, MRW 56 400 kg, CG 35 % (Sheet 2 of 2)

FIGURE-7-9-0-991-002-A01
**ON A/C A318-100

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

AIRCRAFT CLASSIFICATION NUMBER (ACN)

TIRE PRESSURE CONSTANT AT 12.4 bar (180 psi)

46x17R20 (46x16−20) TIRES

ACN WAS DETERMINED AS REFERENCED IN ICAO AERODROME DESIGN MANUAL PART 3
CHAPTER 1, SECOND EDITION 1983.
SEE SECTION 7−4−0.

AIRCRAFT GROSS WEIGHT

(x 1 000 lb)

α − CBR 6 (LOW)
B − CBR 10 (MEDIUM)
C − CBR 15 (HIGH)
D − CBR 3 (ULTRA LOW)

SUBGRADE STRENGTH

ALPHA FACTOR = 0.9

N_AC_070900_1_0030101_01_00

Aircraft Classification Number
Flexible Pavement - WV005, WV010, MRW 68 400 kg, CG 32 % (Sheet 1 of 2)
FIGURE-7-9-0-991-003-A01

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**ON A/C A318-100

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

AIRCRAFT CLASSIFICATION NUMBER (ACN)

TIRE PRESSURE CONSTANT AT 12.4 bar (180 psi)

46x17R20 (46x16−20) TIRES

ACN WAS DETERMINED AS REFERENCED IN ICAO AERODROME DESIGN MANUAL PART 3

CHAPTER 1, SECOND EDITION 1983.

SEE SECTION 7−4−0.

AIRCRAFT GROSS WEIGHT

(x 1000 lb)

SUBGRADE STRENGTH

D − k = 20 MN/m³ (ULTRA LOW)

C − k = 40 MN/m³ (LOW)

B − k = 80 MN/m³ (MEDIUM)

A − k = 150 MN/m³ (HIGH)

Rigid Pavement - WV005, WV010, MRW 68 400 kg, CG 32 % (Sheet 2 of 2)

FIGURE-7-9-0-991-003-A01

Aircraft Classification Number

N_AC_070900_1_0030102_01_00

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Scaled Drawings

1. This section provides the scaled drawings.

**NOTE**: When printing this drawing, make sure to adjust for proper scaling.
**ON A/C A318-100**

NOTE: WHEN PRINTING THIS DRAWING, MAKE SURE TO ADJUST FOR PROPER SCALING.

Scaled Drawing

FIGURE-8-0-0-991-001-A01
AIRCRAFT RESCUE AND FIRE FIGHTING

**ON A/C A318-100**

Aircraft Rescue and Fire Fighting

1. Aircraft Rescue and Fire Fighting Charts
   This section provides data related to aircraft rescue and fire fighting.
   The figures contained in this section are the figures that are in the Aircraft Rescue and Fire Fighting Charts poster available for download on AIRBUSWorld and the Airbus website.
AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A318-100

A318

Aircraft Rescue and Fire Fighting Chart (ARFC)

Front Page

FIGURE-10-0-0-991-001-A01

Page 2

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Highly Flammable and Hazardous Materials and Components

FIGURE-10-0-0-991-002-A01
**ON A/C A318-100

Batteries Location and Access
FIGURE-10-0-0-991-055-A01
Wheel/Brake Overheat
Wheel Safety Area (Sheet 1 of 2)
FIGURE-10-0-0-991-003-A01
BRAKE OVERHEAT AND LANDING GEAR FIRE

WARNING: BE VERY CAREFUL WHEN THERE IS A BRAKE OVERHEAT AND/OR LANDING GEAR FIRE. THERE IS A RISK OF TIRE EXPLOSION AND/OR WHEEL RIM BURST THAT CAN CAUSE DEATH OR INJURY. MAKE SURE THAT YOU OBEY THE SAFETY PRECAUTIONS THAT FOLLOW.

THE PROCEDURES THAT FOLLOW GIVE RECOMMENDATIONS AND SAFETY PRECAUTIONS FOR THE COOLING OF VERY HOT BRAKES AFTER ABNORMAL OPERATIONS SUCH AS A REJECTED TAKE-OFF OR OVERWEIGHT LANDING. FOR THE COOLING OF BRAKES AFTER NORMAL TAXI-IN, REFER TO YOUR COMPANY PROCEDURES.

BRAKE OVERHEAT:

1 - GET THE BRAKE TEMPERATURE FROM THE COCKPIT OR USE A REMOTE MEASUREMENT TECHNIQUE. THE REAL TEMPERATURE OF THE BRAKES CAN BE MUCH HIGHER THAN THE TEMPERATURE SHOWN ON THE ECAM. NOTE: AT HIGH TEMPERATURES (>800°C), THERE IS A RISK OF WARPING OF THE LANDING GEAR STRUTS AND AXLES.

2 - APPROACH THE LANDING GEAR WITH EXTREME CAUTION AND FROM AN OBLIQUE ANGLE IN THE DIRECTION OF THE TIRE SHOULDER. DO NOT GO INTO THE RIM HAZARD AREA AND ONLY GO IN THE TIRE HAZARD AREA WITH CAUTION. (REF FIG. WHEEL/ BRAKE OVERHEAT HAZARD AREAS). IF POSSIBLE, STAY IN A VEHICLE.

3 - LOOK AT THE CONDITION OF THE TIRES: IF THE TIRES ARE STILL INFLATED (FUSE PLUGS NOT MELTED), THERE IS A RISK OF TIRE EXPLOSION AND RIM BURST. DO NOT USE COOLING FANS BECAUSE THEY CAN PREVENT OPERATION OF THE FUSE PLUGS.

4 - USE WATER MIST TO DECREASE THE TEMPERATURE OF THE COMPLETE WHEEL AND BRAKE ASSEMBLY. USE A TECHNIQUE THAT PREVENTS SUDDEN COOLING. SUDDEN COOLING CAN CAUSE WHEEL CRACKS OR RIM BURST. DO NOT APPLY WATER, FOAM OR CO2. THESE COOLING AGENTS (AND ESPECIALLY CO2, WHICH HAS A VERY STRONG COOLING EFFECT) CAN CAUSE THERMAL SHOCKS AND BURST OF HOT PARTS.

LANDING GEAR FIRE:

CAUTION: AIRBUS RECOMMENDS THAT YOU DO NOT USE DRY POWDERS OR DRY CHEMICALS ON HOT BRAKES OR LANDING GEAR FIRES. THESE AGENTS CAN CHANGE INTO SOLID OR ENAMELED DEPOSITS. THEY CAN DECREASE THE SPEED OF HEAT DISSIPATION WITH A POSSIBLE RISK OF PERMANENT STRUCTURAL DAMAGE TO THE BRAKES, WHEELS OR WHEEL AXLES.

1 - IMMEDIATELY STOP THE FIRE:

A) APPROACH THE LANDING GEAR WITH EXTREME CAUTION AND FROM AN OBLIQUE ANGLE IN THE DIRECTION OF THE TIRE SHOULDER. DO NOT GO INTO THE RIM HAZARD AREA AND ONLY GO IN THE TIRE HAZARD AREA WITH CAUTION. IF POSSIBLE, STAY IN A VEHICLE.

B) USE LARGE AMOUNTS OF WATER, WATER MIST; IF THE FUEL TANKS ARE AT RISK, USE FOAM. USE A TECHNIQUE THAT PREVENTS SUDDEN COOLING. SUDDEN COOLING CAN CAUSE WHEEL CRACKS OR RIM BURST.

C) DO NOT USE FANS OR BLOWERS.
L/G Ground Lock Safety Devices
FIGURE-10-0-991-005-A01

NOTE: THE SAFETY DEVICES ARE STORED IN THE AIRCRAFT COCKPIT.
**ON A/C A318-100**

Pax/Crew Doors

FIGURE-10-0-0-991-007-A01

1. Make sure that residual pressure warning light is off.
2. Push flap to hold handle.
3. Lift handle fully up to horizontal green line.
4. Pull the door out and move it forward.

Pax/Crew Doors

FIGURE-10-0-0-991-007-A01
Emergency Exit Hatch

**ON A/C A318-100

1. Push red marked flush panel in.
2. Push hatch in and remove it.

FIGURE-10-0-0991-008-A01
**WARNING:** ENSURE THAT ALL PERSONNEL AND EQUIPMENT ARE CLEAR OF CARGO DOOR AREA.

1. PUSH THE DOOR HANDLE FLAP IN TO RELEASE THE DOOR HANDLE FROM THE CATCH OF THE DOOR STRUCTURE.
2. PULL THE DOOR HANDLE AWAY AND UP FROM THE DOOR STRUCTURE TO THE FULLY "UNLOCKED" POSITION. YOU CAN SEE A RED MARK THROUGH ALL THE INDICATION WINDOWS.
3. OPEN THE ACCESS DOOR 134AR/154AR BELOW THE FUSELAGE TO GET ACCESS TO THE SELECTOR.
4. MOVE THE SELECTOR TO THE "OPEN" POSITION AND HOLD IT UNTIL THE GREEN INDICATOR LIGHT COMES ON. (DOOR FULLY OPEN AND LOCKED)
5. RELEASE THE SELECTOR.

**NOTE:** TWO OPERATORS ARE REQUIRED FOR THIS OPERATION MODE.

1. DO THE OPERATIONS 1 TO 3 AS FOR "NORMAL OPERATION".
2. MOVE THE SELECTOR OF THE CONTROL PANEL TO THE "OPEN" POSITION AND HOLD IT DURING OPERATION OF THE HAND PUMP.
3. IN THE BELLY FAIRING AREA, OPEN THE ACCESS PANEL 198CB OF THE YELLOW GROUND SERVICE PANEL.
4. SET THE LEVER OF THE ELECTRO-MANUAL SELECTOR VALVE TO THE HAND PUMP POSITION.
5. INSTALL THE HAND PUMP LEVER ON THE HAND PUMP AND OPERATE IT UNTIL THE CARGO DOOR IS FULLY OPENED. (YOU CAN FEEL THE FORCE INCREASE ON THE HAND PUMP LEVER).
**ON A/C A318-100

APU Access Door

FIGURE-10-0-0-991-013-A01
**ON A/C A318-100**

![Aircraft Ground Clearances Diagram](image)