



A350

## AIRCRAFT CHARACTERISTICS AIRPORT AND MAINTENANCE PLANNING

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*AIRBUS S.A.S.  
Customer Services  
Technical Data Support and Services  
31707 Blagnac Cedex  
FRANCE*

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### 1-1-0      **Introduction**

**\*\*ON A/C A350-1000 A350-900**

#### Introduction

##### 1. General

The A350 AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING (AC) manual is issued for the A350-900 and A350-1000 series aircraft to provide necessary data to airport operators, airlines and Maintenance/Repair Organizations (MRO) for airport and maintenance facilities planning.

The data given in this issue of the A350 AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING (AC) can be subject to change pending completion of the design and flight test phase. It is given for guidance only and does not constitute a contractual commitment.

This document is not customized and must not be used for training purposes.

The A350 XWB is the world's most modern and eco-efficient aircraft family that will shape the future of air travel. It is the long-range leader in the large wide-body market (300 to more than 400 seats). The A350 XWB has the latest aerodynamic design, carbon fibre fuselage and wings, and new fuel efficient Rolls-Royce-Trent XWB engines. The Trent XWB engine has the most advanced technologies. It delivers the best aircraft performance and reliability with the lowest fuel consumption and environmental impact. Together with simple and robust systems, these latest technologies lead to unmatched operational efficiency (a reduction of 25 percent in fuel burn, emissions and operating costs) and important reduction in maintenance cost.

The A350 XWB has an Airspace cabin designed by Airbus that focuses on well-being on board thanks to its quiet twin-aisle cabin and the new air management systems.

The A350 XWB gives a high level of cargo hold capability and flexibility to meet the requirements of the market. Two wide cargo doors and a cargo loading system, compatible with the lower-deck cargo containers and pallet standards let interlining operations and make the loading easier.

The A350 XWB family includes two optimal and complementary models, the baseline A350-900 and its larger sibling aircraft, the A350-1000. The two aircrafts share the best operating efficiency and an exceptional level of comfort with the Airspace cabin. Based on a clean-sheet design, the A350 XWB by its essence is a very flexible platform that delivers unrivalled levels of efficiency and comfort. It is operated on domestic, regional, long haul or ultra-long-haul services.

The A350-900 is an important member of the A350 XWB family, in-service since January 2015, that accommodates 332 passengers in a standard three-class configuration. The A350-1000 is Airbus' largest widebody aircraft in the twin-aisle category that measures nearly 74 meters nose-to-tail, has a 7 meters longer fuselage than the baseline model A350-900. It contains 40 more seats and a 40 percent larger space for premium cabin products than the A350-900. In a typical three-class configuration, the A350-1000 can accommodate a maximum of 400 passengers and made entry in-service in February 2018.

From 2018 onwards, the A350-900 comes with a better baseline. It consists of an aerodynamic performance improvement package that includes extended winglets, enhanced flap-support-fairings, wing re-twist and modified over-wing fairings and an increased Maximum Takeoff Weight (MTOW) option of 280 tonnes.

These changes enhance the A350 XWB unrivalled operational flexibility and efficiency for all market segments. The A350-900 Ultra Long Range (ULR) is the most capable variant in the A350 XWB family with a range of 9,700 nm (18,000 km). It also has a higher fuel capacity and a modified fuel system relative to the baseline (relocation of sensors and pipes). The A350-900 ULR can fly over 20 hours non-stop. It gives the highest level of comfort for passenger and crew with best economics over long distances. The inherent flexibility of the A350 XWB aircraft means that the A350-900 ULR can easily change to a standard A350-900 configuration.

Correspondence concerning this publication should be directed to:

AIRBUS S.A.S.  
Customer Services  
Technical Data Support and Services  
1 Rond Point Maurice BELLONTE  
31707 BLAGNAC CEDEX  
FRANCE

1-2-0      **Glossary****\*\*ON A/C A350-1000 A350-900**Glossary

## 1. List of Abbreviations

|      |   |
|------|---|
| A/C  | Aircraft                                  |
| ACN  | Aircraft Classification Number            |
| AMM  | Aircraft Maintenance Manual               |
| APU  | Auxiliary Power Unit                      |
| B/C  | Business Class                            |
| CBR  | California Bearing Ratio                  |
| CC   | Cargo Compartment                         |
| CG   | Center of Gravity                         |
| CLS  | Cargo Loading System                      |
| E    | Young's Modulus                           |
| ESWL | Equivalent Single Wheel Load              |
| FAA  | Federal Aviation Administration           |
| FDL  | Fuselage Datum Line                       |
| FR   | Frame                                     |
| FSTE | Full Size Trolley Equivalent              |
| FWD  | Forward                                   |
| GPU  | Ground Power Unit                         |
| GSE  | Ground Support Equipment                  |
| ICAO | International Civil Aviation Organisation |
| ISA  | International Standard Atmosphere         |
| L    | Radius of relative stiffness              |
| LCN  | Load Classification Number                |
| LD   | Load Device                               |
| LD   | Lower Deck                                |
| LH   | Left Hand                                 |
| LP   | Low Pressure                              |
| LPS  | Last Pax Seating                          |
| MAC  | Mean Aerodynamic Chord                    |
| MAX  | Maximum                                   |
| MFC  | Maximum Fuel Capacity                     |
| MIN  | Minimum                                   |
| MLG  | Main Landing Gear                         |
| NLG  | Nose Landing Gear                         |

|     |                                 |
|-----|---------------------------------|
| OAT | Outside Air Temperature         |
| PAX | Passenger                       |
| PBB | Passenger Boarding Bridge       |
| PCA | Portland Cement Association     |
| PCN | Pavement Classification Number  |
| PRM | Passenger with Reduced Mobility |
| RH  | Right Hand                      |
| ULD | Unit Load Device                |
| ULR | Ultra Long Range                |
| US  | United States                   |
| VFG | Variable Frequency Generator    |
| WV  | Weight Variant                  |
| Y/C | Economic Class                  |

## 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

#### 2-1-0 General Aircraft Characteristics Data

\*\*ON A/C A350-1000 A350-900

#### General Aircraft Characteristics Data

\*\*ON A/C A350-900

- The tables that follow give characteristics of A350-900 models, this data is applicable to each weight variant:

| Aircraft Characteristics        |                            |                            |                            |                            |                            |
|---------------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
|                                 | WV000                      | WV001                      | WV002                      | WV003                      | WV004                      |
| Maximum Taxi Weight (MTW)       | 268 900 kg<br>(592 824 lb) | 275 900 kg<br>(608 256 lb) | 272 900 kg<br>(601 642 lb) | 268 900 kg<br>(592 824 lb) | 260 900 kg<br>(575 187 lb) |
| Maximum Take-Off Weight (MTOW)  | 268 000 kg<br>(590 839 lb) | 275 000 kg<br>(606 272 lb) | 272 000 kg<br>(599 658 lb) | 268 000 kg<br>(590 839 lb) | 260 000 kg<br>(573 202 lb) |
| Maximum Landing Weight (MLW)    | 205 000 kg<br>(451 948 lb) | 207 000 kg<br>(456 357 lb) |
| Maximum Zero Fuel Weight (MZFW) | 192 000 kg<br>(423 288 lb) | 195 700 kg<br>(431 445 lb) | 194 000 kg<br>(427 697 lb) | 195 700 kg<br>(431 445 lb) | 195 700 kg<br>(431 445 lb) |

| Aircraft Characteristics       |                            |                            |                            |                            |                            |
|--------------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
|                                | WV005                      | WV006                      | WV007                      | WV008                      | WV009                      |
| Maximum Taxi Weight (MTW)      | 250 900 kg<br>(553 140 lb) | 272 900 kg<br>(601 642 lb) | 268 900 kg<br>(592 824 lb) | 240 900 kg<br>(531 094 lb) | 275 900 kg<br>(608 256 lb) |
| Maximum Take-Off Weight (MTOW) | 250 000 kg<br>(551 156 lb) | 272 000 kg<br>(599 658 lb) | 268 000 kg<br>(590 839 lb) | 240 000 kg<br>(529 110 lb) | 275 000 kg<br>(606 272 lb) |
| Maximum Landing Weight (MLW)   | 205 000 kg<br>(451 948 lb) | 207 000 kg<br>(456 357 lb) |

| Aircraft Characteristics        |                            |                            |                            |                            |                            |
|---------------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
|                                 | WV005                      | WV006                      | WV007                      | WV008                      | WV009                      |
| Maximum Zero Fuel Weight (MZFW) | 192 000 kg<br>(423 288 lb) | 195 700 kg<br>(431 445 lb) | 194 000 kg<br>(427 697 lb) | 195 700 kg<br>(431 445 lb) | 197 200 kg<br>(434 752 lb) |

| Aircraft Characteristics        |                            |                            |                            |                            |                            |
|---------------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
|                                 | WV010                      | WV011                      | WV012                      | WV013 (ULR)                | WV014                      |
| Maximum Taxi Weight (MTW)       | 280 900 kg<br>(619 279 lb) | 255 900 kg<br>(564 163 lb) | 250 900 kg<br>(553 140 lb) | 280 900 kg<br>(619 279 lb) | 235 900 kg<br>(520 071 lb) |
| Maximum Ramp Weight (MRW)       |                            |                            |                            |                            |                            |
| Maximum Take-Off Weight (MTOW)  | 280 000 kg<br>(617 295 lb) | 255 000 kg<br>(562 179 lb) | 250 000 kg<br>(551 156 lb) | 280 000 kg<br>(617 295 lb) | 235 000 kg<br>(518 087 lb) |
| Maximum Landing Weight (MLW)    | 207 000 kg<br>(456 357 lb) | 207 000 kg<br>(456 357 lb) | 207 000 kg<br>(456 357 lb) | 205 000 kg<br>(451 948 lb) | 207 000 kg<br>(456 357 lb) |
| Maximum Zero Fuel Weight (MZFW) | 195 700 kg<br>(431 445 lb) | 195 700 kg<br>(431 445 lb) | 194 000 kg<br>(427 697 lb) | 192 000 kg<br>(423 288 lb) | 195 700 kg<br>(431 445 lb) |

| Aircraft Characteristics        |                            |                            |                            |                            |                            |
|---------------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
|                                 | WV015                      | WV016                      | WV017                      | WV018                      | WV019                      |
| Maximum Taxi Weight (MTW)       | 277 900 kg<br>(612 665 lb) | 278 900 kg<br>(614 870 lb) | 210 900 kg<br>(464 955 lb) | 217 900 kg<br>(480 388 lb) | 235 900 kg<br>(520 071 lb) |
| Maximum Ramp Weight (MRW)       |                            |                            |                            |                            |                            |
| Maximum Take-Off Weight (MTOW)  | 277 000 kg<br>(610 681 lb) | 278 000 kg<br>(612 886 lb) | 210 000 kg<br>(462 971 lb) | 217 000 kg<br>(478 403 lb) | 235 000 kg<br>(518 087 lb) |
| Maximum Landing Weight (MLW)    | 205 000 kg<br>(451 948 lb) | 207 000 kg<br>(456 357 lb) | 205 000 kg<br>(451 948 lb) | 207 000 kg<br>(456 357 lb) | 205 000 kg<br>(451 948 lb) |
| Maximum Zero Fuel Weight (MZFW) | 192 000 kg<br>(423 288 lb) | 195 700 kg<br>(431 445 lb) | 195 700 kg<br>(431 445 lb) | 195 700 kg<br>(431 445 lb) | 192 000 kg<br>(423 288 lb) |

| Aircraft Characteristics        |                            |                            |
|---------------------------------|----------------------------|----------------------------|
|                                 | WV022                      | WV023                      |
| Maximum Taxi Weight (MTW)       | 280 900 kg<br>(619 279 lb) | 280 900 kg<br>(619 279 lb) |
| Maximum Ramp Weight (MRW)       |                            |                            |
| Maximum Take-Off Weight (MTOW)  | 280 000 kg<br>(617 295 lb) | 280 000 kg<br>(617 295 lb) |
| Maximum Landing Weight (MLW)    | 207 000 kg<br>(456 357 lb) | 205 000 kg<br>(451 948 lb) |
| Maximum Zero Fuel Weight (MZFW) | 194 000 kg<br>(427 697 lb) | 192 000 kg<br>(423 288 lb) |

2. The table that follows gives characteristics of A350–900 models, this data is applicable to each weight variant:

| Aircraft Characteristics                             |  |
|--|--|
| Standard Seating Capacity<br>(in a two class layout) | 315 (48 BC / 267 EC)<br>173 (80 BC / 93 EC) for A350–900 (ULR) |
| Usable Fuel Capacity<br>(density = 0.785 kg/l)       | 138 000 L<br>(36 456 USgal)                                    |
|  | 108 330 kg<br>(238 827 lb)                                     |
|  | 165 000 L<br>(43 589 USgal)<br>for A350–900 (ULR)              |
|  | 129 500 kg<br>(285 499 lb)<br>for A350–900 (ULR)               |
| Pressurized Fuselage Volume                          | 971 m <sup>3</sup><br>(34 291 ft.3)                            |
| Cockpit Volume                                       | 8.23 m <sup>3</sup><br>(291 ft.3)                              |
| Passenger Compartment Volume                         | 473.7 m <sup>3</sup><br>(16 729 ft.3)                          |

| Aircraft Characteristics |                              |   |
|--------------------------|------------------------------|---|
| Usable Volume, FWD CC    | (Based on LD3)               | 89.5 m3<br>(3 161 ft.3)<br><br>For A350-900 (ULR) configuration, the forward cargo hold is de-activated (no cargo operation is possible). |
|                          | (Based on 88" x 125" pallet) | 63.2 m3<br>(2 232 ft.3)<br><br>For A350-900 (ULR) configuration, the forward cargo hold is de-activated (no cargo operation is possible). |
|                          | (Based on 96" x 125" pallet) | 69.1 m3<br>(2 440 ft.3)<br><br>For A350-900 (ULR) configuration, the forward cargo hold is de-activated (no cargo operation is possible). |
| Usable Volume, AFT CC    | (Based on LD3)               | 71.6 m3<br>(2 529 ft.3)   |
|                          | (Based on 88" x 125" pallet) | 52.7 m3<br>(1 861 ft.3)   |
|                          | (Based on 96" x 125" pallet) | 57.6 m3<br>(2 034 ft.3)   |
| Usable Volume, Bulk CC   | (Standard)                   | 9.12 m3<br>(322 ft.3)   |
|                          | (Option 1 (Core Rack))       | 8.76 m3<br>(309 ft.3)   |
|                          | (Option 2 (IFE Rack Size 1)) | 8.34 m3<br>(295 ft.3)   |
|                          | (Option 3 (IFE Rack Size 2)) | 8.16 m3<br>(288 ft.3)   |
| Water Volume, FWD CC     |                              | 113.4 m3<br>(4 005 ft.3)  |
| Water Volume, AFT CC     |                              | 95.8 m3<br>(3 383 ft.3)   |

| Aircraft Characteristics      |                              |                                    |
|-------------------------------|------------------------------|------------------------------------|
| Water Volume, Bulk CC         | (Standard)                   | 11.4 m <sup>3</sup><br>(403 ft.3)  |
|                               | (Option 1 (Core Rack))       | 10.95 m <sup>3</sup><br>(387 ft.3) |
|                               | (Option 2 (IFE Rack Size 1)) | 10.42 m <sup>3</sup><br>(368 ft.3) |
|                               | (Option 3 (IFE Rack Size 2)) | 10.2 m <sup>3</sup><br>(360 ft.3)  |
| Maximum Water Volume, Bulk CC |                              | 11.4 m <sup>3</sup><br>(403 ft.3)  |
| Load Capacity, FWD CC         |                              | 22 000 kg<br>(48 502 lb)           |
| Load Capacity, AFT CC         |                              | 19 000 kg<br>(41 888 lb)           |
| Load Capacity, Bulk CC        |                              | 1 500 kg<br>(3 307 lb)             |

**\*\*ON A/C A350-1000**

3. The table that follows gives characteristics of A350–1000 models, this data is applicable to each weight variant:

| Aircraft Characteristics        |                            |                            |                            |                            |                            |
|---------------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
|                                 | WV000                      | WV001                      | WV002                      | WV004                      | WV005                      |
| Maximum Taxi Weight (MTW)       | 308 900 kg<br>(681 008 lb) | 311 900 kg<br>(687 622 lb) | 316 900 kg<br>(698 645 lb) | 308 900 kg<br>(681 008 lb) | 270 900 kg<br>(597 233 lb) |
| Maximum Ramp Weight (MRW)       |                            |                            |                            |                            |                            |
| Maximum Take-Off Weight (MTOW)  | 308 000 kg<br>(679 024 lb) | 311 000 kg<br>(685 638 lb) | 316 000 kg<br>(696 661 lb) | 308 000 kg<br>(679 024 lb) | 270 000 kg<br>(595 249 lb) |
| Maximum Landing Weight (MLW)    | 233 000 kg<br>(513 677 lb) | 236 000 kg<br>(520 291 lb) |
| Maximum Zero Fuel Weight (MZFW) | 220 000 kg<br>(485 017 lb) | 223 000 kg<br>(491 631 lb) |

| Aircraft Characteristics        |                            |                            |                            |                            |                            |
|---------------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
|                                 | WV006                      | WV007                      | WV009                      | WV010                      | WV011                      |
| Maximum Taxi Weight (MTW)       | 319 900 kg<br>(705 259 lb) | 260 900 kg<br>(575 187 lb) | 290 900 kg<br>(641 325 lb) | 300 900 kg<br>(663 371 lb) | 316 900 kg<br>(698 645 lb) |
| Maximum Take-Off Weight (MTOW)  | 319 000 kg<br>(703 275 lb) | 260 000 kg<br>(573 202 lb) | 290 000 kg<br>(639 341 lb) | 300 000 kg<br>(661 387 lb) | 316 000 kg<br>(696 661 lb) |
| Maximum Landing Weight (MLW)    | 236 000 kg<br>(520 291 lb) | 236 000 kg<br>(520 291 lb) | 233 000 kg<br>(513 677 lb) | 233 000 kg<br>(513 677 lb) | 233 000 kg<br>(513 677 lb) |
| Maximum Zero Fuel Weight (MZFW) | 223 000 kg<br>(491 631 lb) | 223 000 kg<br>(491 631 lb) | 220 000 kg<br>(485 017 lb) | 220 000 kg<br>(485 017 lb) | 220 000 kg<br>(485 017 lb) |

4. The table that follows gives characteristics of A350–1000 models, this data is applicable to each weight variant:

| Aircraft Characteristics                             |                              |                                      |
|--|------------------------------|--------------------------------------|
| Standard Seating Capacity<br>(in a two class layout) |                              | 369 (54 BC / 315 EC)                 |
| Usable Fuel Capacity<br>(density = 0.785 kg/l)       |                              | 158 790 L<br>(41 949 USgal)          |
|  |                              | 124 650 kg<br>(274 806 lb)           |
| Pressurized Fuselage Volume                          |                              |                                      |
| Cockpit Volume                                       |                              | 8.23 m <sup>3</sup><br>(291 ft.3)    |
| Passenger Compartment Volume                         |                              |                                      |
| Usable Volume, FWD CC                                | (Based on LD3)               | 107.4 m <sup>3</sup><br>(3 793 ft.3) |
|  | (Based on 88" x 125" pallet) | 84.3 m <sup>3</sup><br>(2 977 ft.3)  |
|  | (Based on 96" x 125" pallet) | 92.2 m <sup>3</sup><br>(3 256 ft.3)  |

| Aircraft Characteristics      |                              |  |
|-------------------------------|------------------------------|--|
| Usable Volume, AFT CC         | (Based on LD3)               | 89.5 m <sup>3</sup><br>(3 161 ft. <sup>3</sup> ) |
|                               | (Based on 88" x 125" pallet) | 63.2 m <sup>3</sup><br>(2 232 ft. <sup>3</sup> ) |
|                               | (Based on 96" x 125" pallet) | 69.1 m <sup>3</sup><br>(2 440 ft. <sup>3</sup> ) |
| Usable Volume, Bulk CC        | (Standard)                   | 9.12 m <sup>3</sup><br>(322 ft. <sup>3</sup> )   |
|                               | (Option 1 (Core Rack))       | 8.76 m <sup>3</sup><br>(309 ft. <sup>3</sup> )   |
|                               | (Option 2 (IFE Rack Size 1)) | 8.34 m <sup>3</sup><br>(295 ft. <sup>3</sup> )   |
|                               | (Option 3 (IFE Rack Size 2)) | 8.16 m <sup>3</sup><br>(288 ft. <sup>3</sup> )   |
| Water Volume, FWD CC          |                              | 138 m <sup>3</sup><br>(4 873 ft. <sup>3</sup> )  |
| Water Volume, AFT CC          |                              | 113 m <sup>3</sup><br>(3 991 ft. <sup>3</sup> )  |
| Water Volume, Bulk CC         | (Standard)                   | 11.4 m <sup>3</sup><br>(403 ft. <sup>3</sup> )   |
|                               | (Option 1 (Core Rack))       | 10.95 m <sup>3</sup><br>(387 ft. <sup>3</sup> )  |
|                               | (Option 2 (IFE Rack Size 1)) | 10.42 m <sup>3</sup><br>(368 ft. <sup>3</sup> )  |
|                               | (Option 3 (IFE Rack Size 2)) | 10.2 m <sup>3</sup><br>(360 ft. <sup>3</sup> )   |
| Maximum Water Volume, Bulk CC |                              | 11.4 m <sup>3</sup><br>(403 ft. <sup>3</sup> )   |
| Load Capacity, FWD CC         |                              | 26 500 kg<br>(58 423 lb)                         |
| Load Capacity, AFT CC         |                              | 24 500 kg<br>(54 013 lb)                         |
| Load Capacity, Bulk CC        |                              | 1 500 kg<br>(3 307 lb)                           |



2-2-0      General Aircraft Dimensions

\*\*ON A/C A350-1000 A350-900

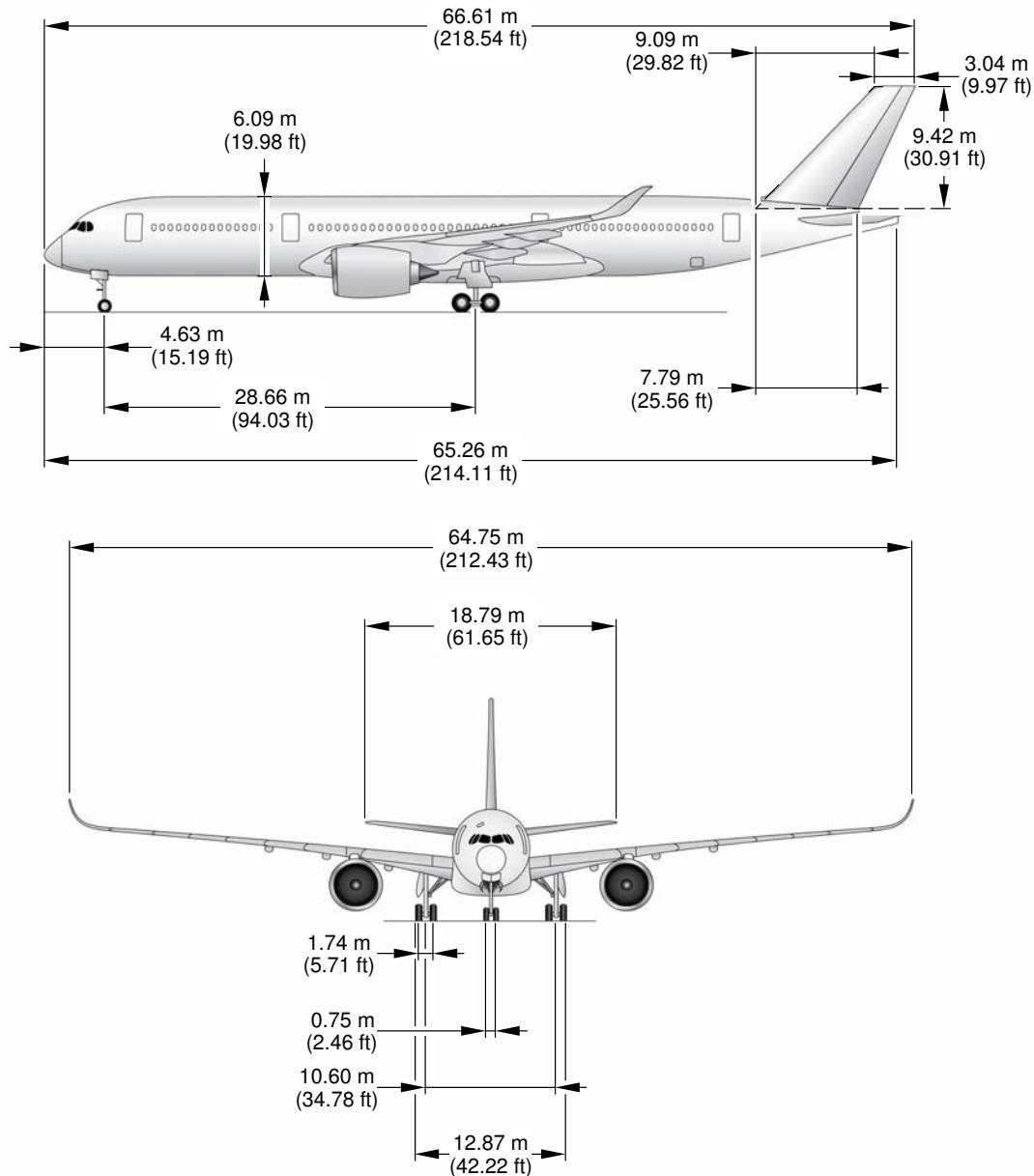
General Aircraft Dimensions

1. This section provides general aircraft dimensions.

# A350

## AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

\*\*ON A/C A350-900



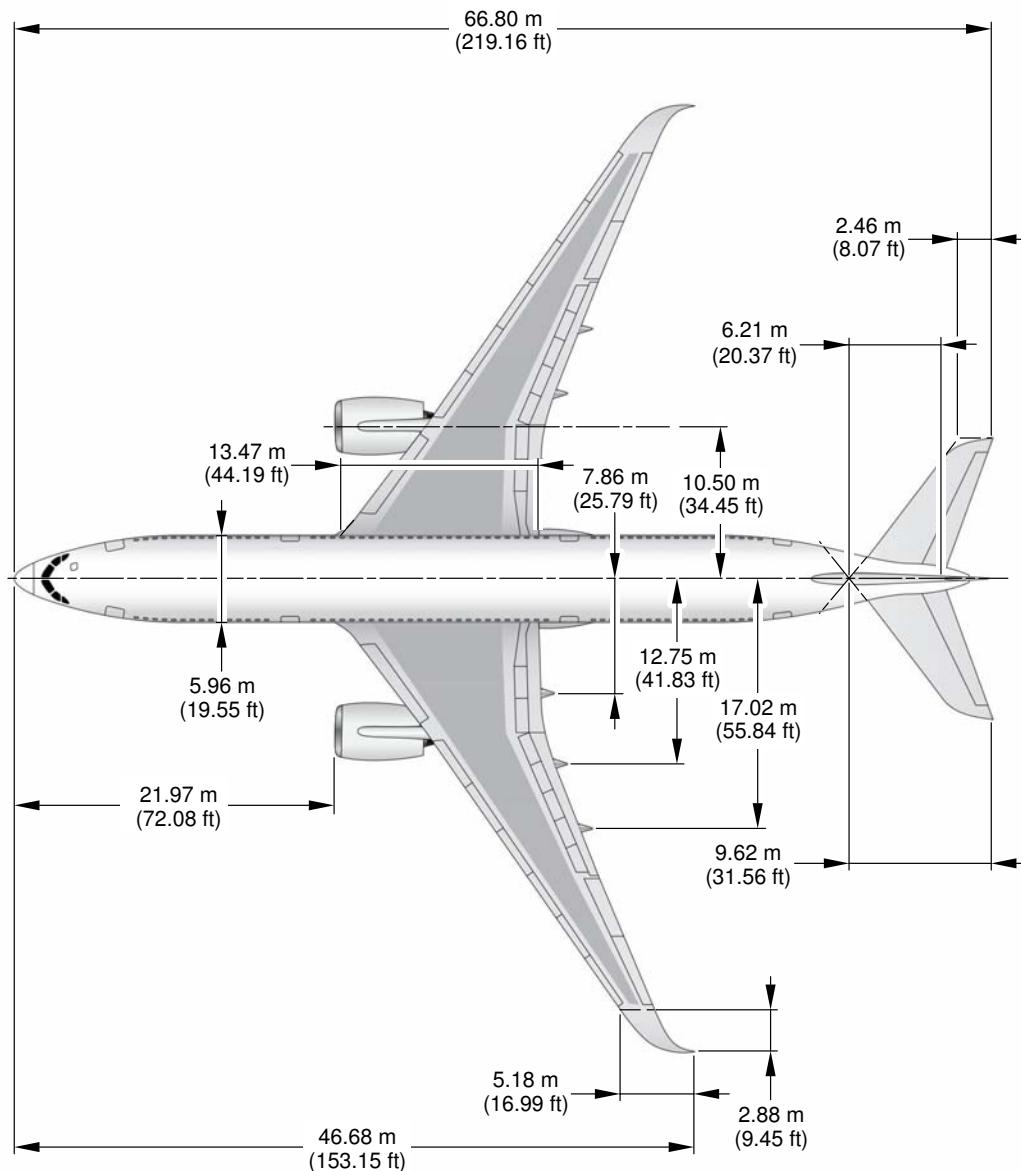
**NOTE:**

RELATED TO AIRCRAFT ATTITUDE AND WEIGHT.

P\_AC\_020200\_1\_0010001\_01\_03

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

\*\*ON A/C A350-900

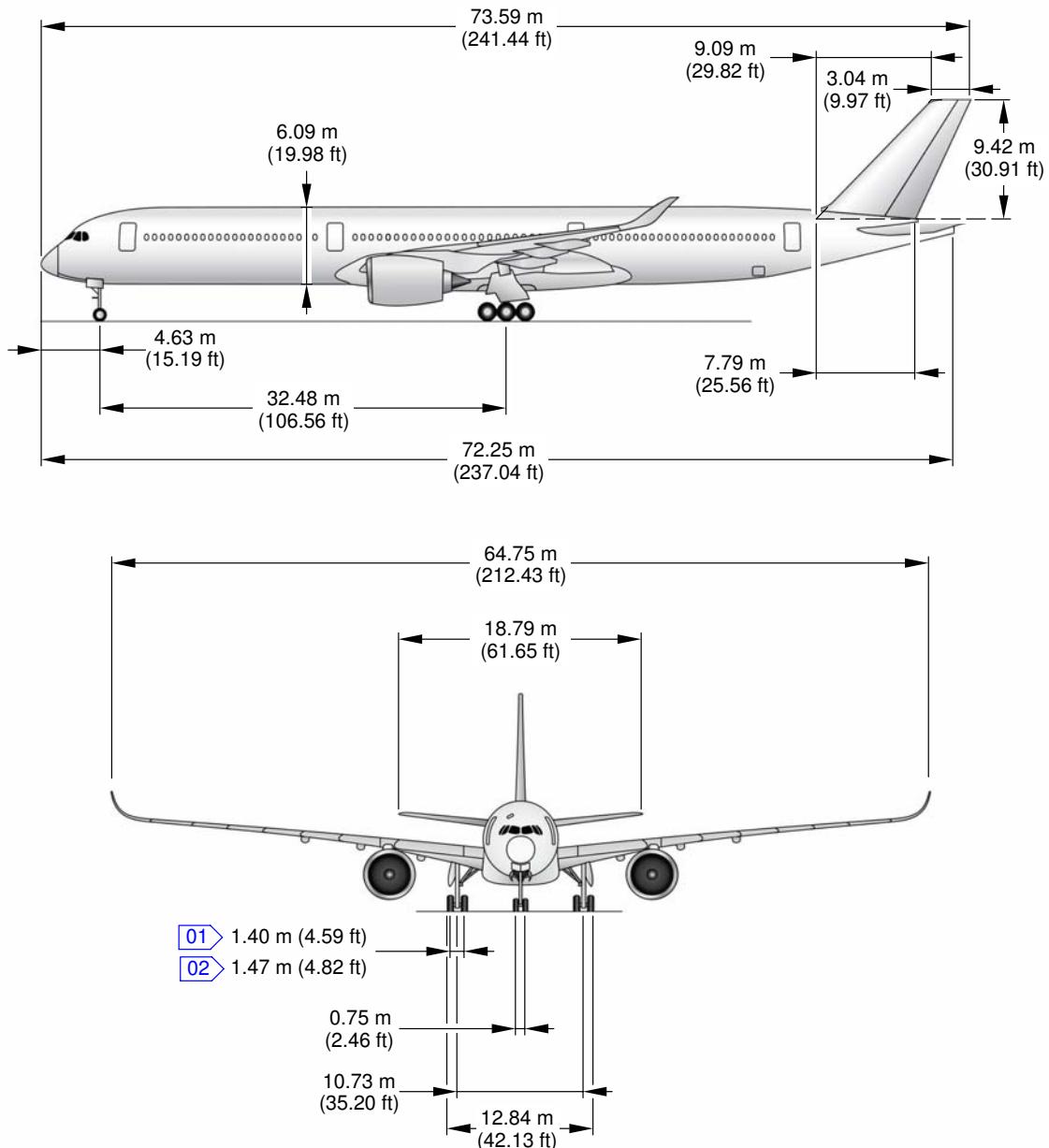

**NOTE:**

RELATED TO AIRCRAFT ATTITUDE AND WEIGHT.

P\_AC\_020200\_1\_0010001\_02\_03

General Aircraft Dimensions  
 (Sheet 2 of 2)  
 FIGURE-2-2-0-991-001-A01

\*\*ON A/C A350-1000



**NOTE:**

RELATED TO AIRCRAFT ATTITUDE AND WEIGHT.

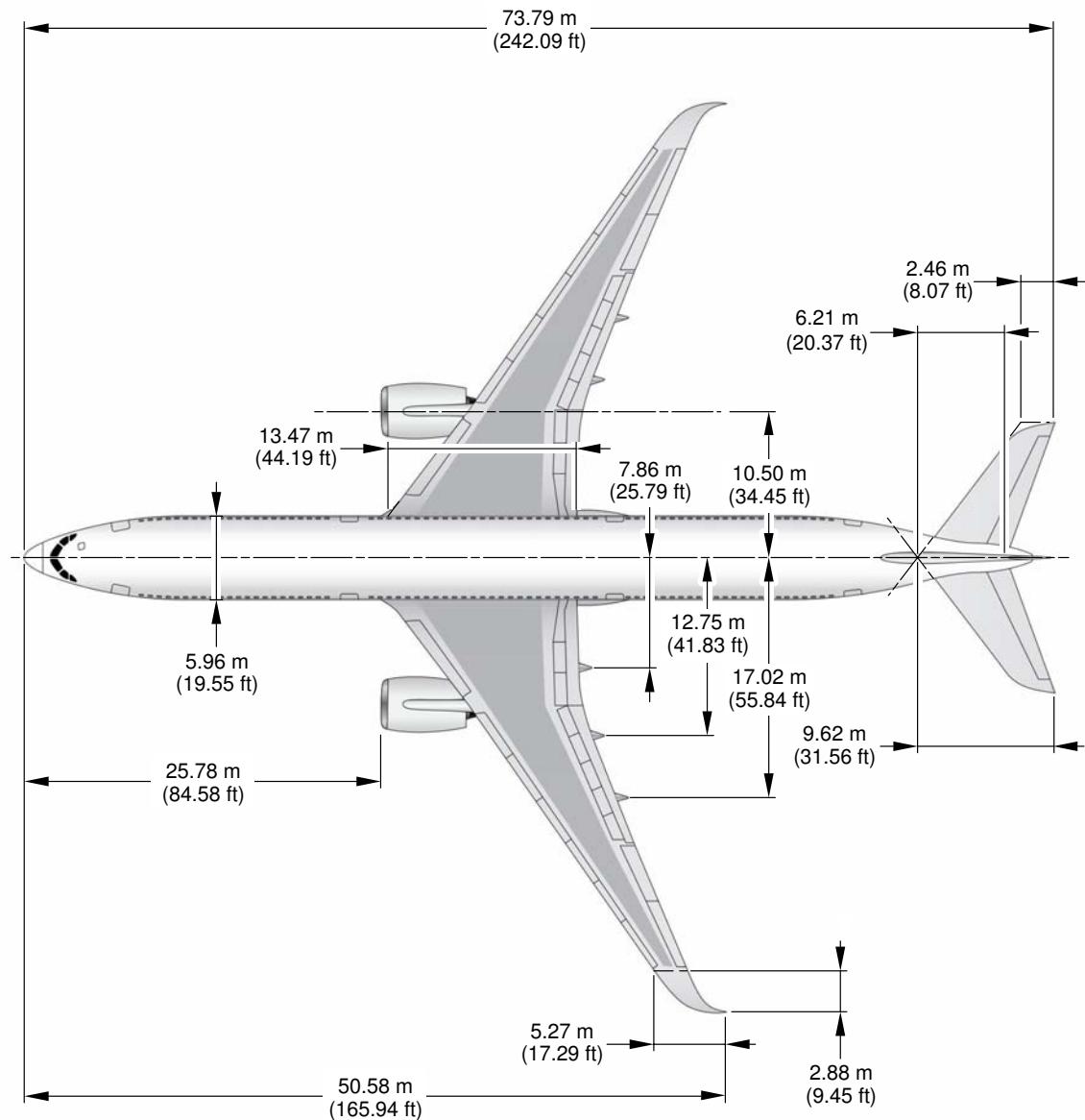
[01] FWD & AFT AXLE

[02] CENTRE AXLE

P\_AC\_020200\_1\_0020003\_01\_00

General Aircraft Dimensions  
(Sheet 1 of 2)  
FIGURE-2-2-0-991-002-C01

\*\*ON A/C A350-1000


**NOTE:**

RELATED TO AIRCRAFT ATTITUDE AND WEIGHT.

P\_AC\_020200\_1\_0020003\_02\_00

General Aircraft Dimensions  
 (Sheet 2 of 2)  
 FIGURE-2-2-0-991-002-C01

2-3-0      **Ground Clearances****\*\*ON A/C A350-1000 A350-900**Ground Clearances

1. This section provides the heights of various points of the aircraft, above the ground, for different aircraft configurations.

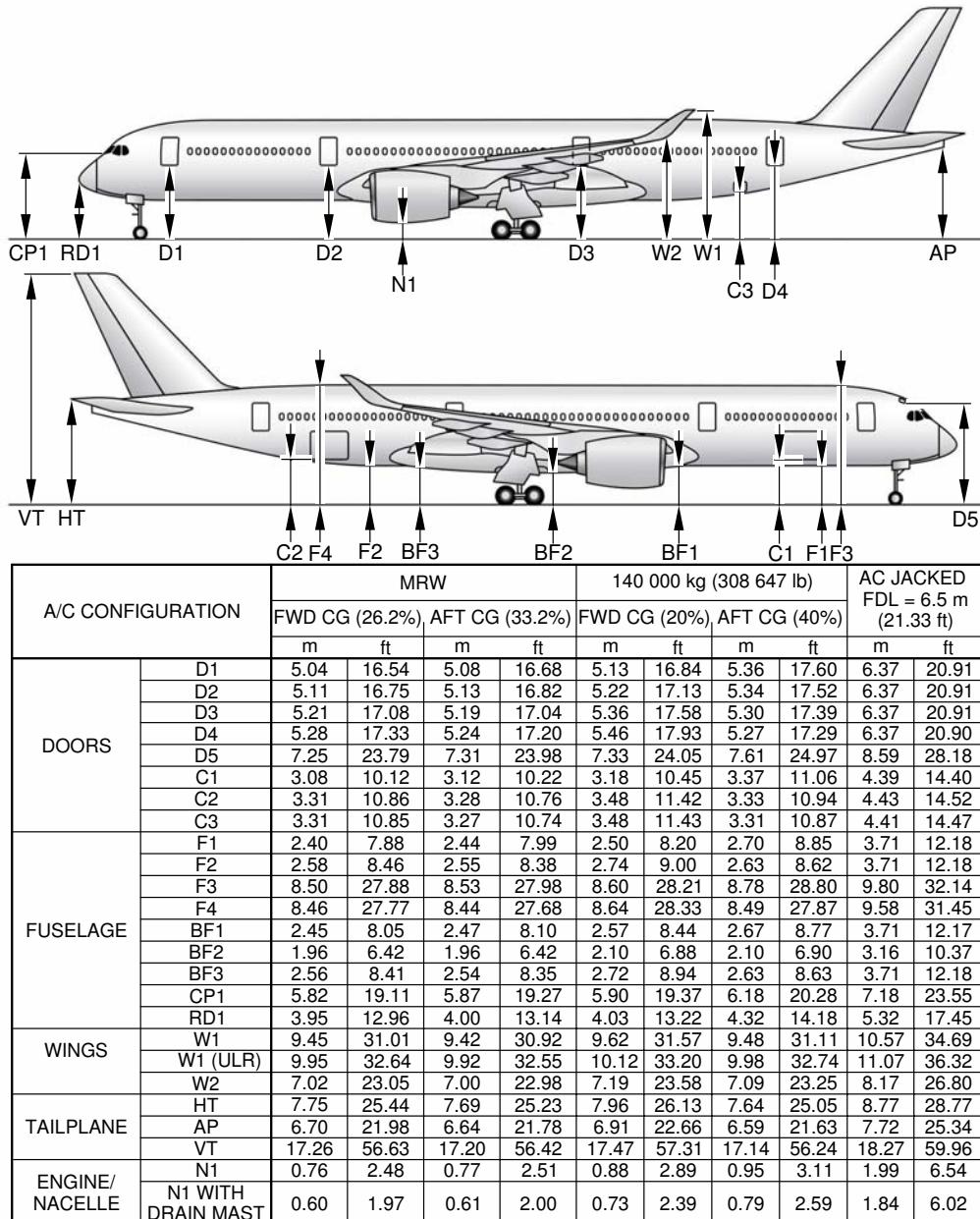
Dimensions in the tables are approximate and will vary with tire type, weight and balance and other special conditions.

The dimensions are given for:

- A light weight, for an A/C in maintenance configuration with a FWD CG and an AFT CG,
- An aircraft at MRW with a FWD CG and an AFT CG,
- Aircraft on jacks, FDL at 6.50 m (21.33 ft.).

NOTE : Passenger and cargo door ground clearances are measured from the center of the door sill and from floor level.

\*\*ON A/C A350-900


**NOTE:**

PASSENGER AND CARGO DOOR GROUND CLEARANCES ARE MEASURED FROM THE CENTER OF THE DOOR SILL AND FROM FLOOR LEVEL.

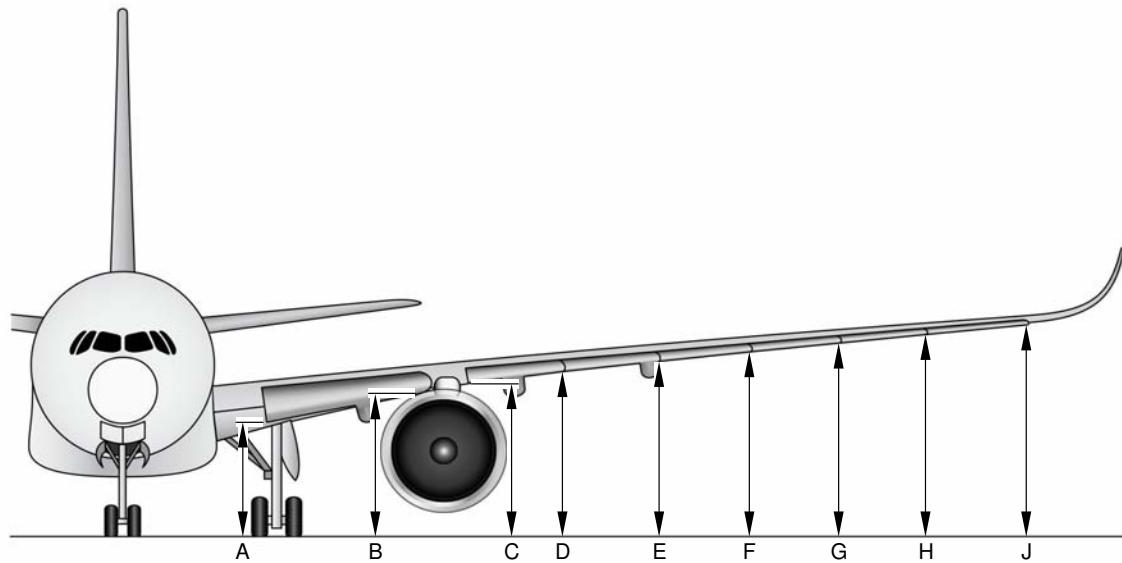
THE VALUES GIVEN IN THE TABLE DEPEND ON THE POSITION OF THE CENTER OF GRAVITY (CG) AND ON THE AIRCRAFT WEIGHT.

P\_AC\_020300\_1\_0010001\_01\_07

## Ground Clearances

FIGURE-2-3-0-991-001-A01

\*\*ON A/C A350-900



| LEADING EDGE SLATS EXTENDED |   |                |       |                |       |                         |              |       |
|-----------------------------|---|----------------|-------|----------------|-------|-------------------------|--------------|-------|
| DESCRIPTION                 |   | MRW            |       |                |       | 140 000 kg (308 647 lb) |              |       |
|                             |   | FWD CG (26.2%) |       | AFT CG (33.2%) |       | FWD CG (20%)            | AFT CG (40%) |       |
|                             |   | m              | ft    | m              | ft    | m                       | ft           | m     |
| 01 DN INBD                  | A | 3.43           | 11.24 | 3.44           | 11.28 | 3.55                    | 11.66        | 3.62  |
| 01 DN OUTBD                 | B | 4.60           | 15.08 | 4.60           | 15.09 | 4.73                    | 15.51        | 4.76  |
| SLAT 1 INBD                 | C | 4.62           | 15.17 | 4.63           | 15.18 | 4.76                    | 15.61        | 4.79  |
| SLAT 1/2                    | D | 5.00           | 16.41 | 5.00           | 16.41 | 5.14                    | 16.86        | 5.15  |
| SLAT 2/3                    | E | 5.36           | 17.57 | 5.35           | 17.56 | 5.50                    | 18.04        | 5.49  |
| SLAT 3/4                    | F | 5.70           | 18.70 | 5.69           | 18.67 | 5.85                    | 19.18        | 5.82  |
| SLAT 4/5                    | G | 6.02           | 19.74 | 6.01           | 19.71 | 6.17                    | 20.24        | 6.12  |
| SLAT 5/6                    | H | 6.32           | 20.73 | 6.31           | 20.69 | 6.47                    | 21.24        | 6.41  |
| SLAT 6 OUTBD                | J | 6.66           | 21.85 | 6.64           | 21.79 | 6.82                    | 22.37        | 6.73  |
|                             |   |                |       |                |       |                         |              | 22.08 |

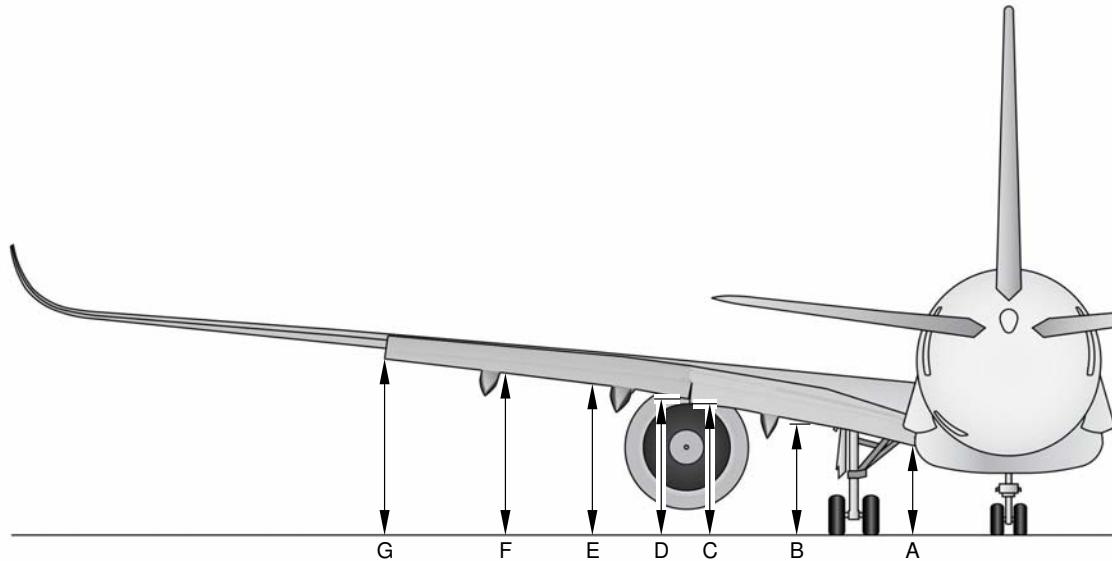
**NOTE:**

01 DN – DROOP NOSE

THE VALUES GIVEN IN THE TABLE DEPEND ON THE POSITION OF THE CENTER OF GRAVITY (CG) AND  
ON THE AIRCRAFT WEIGHT.  
P\_AC\_020300\_1\_0020001\_01\_02

Ground Clearances  
 Leading Edge Slats - Extended  
 FIGURE-2-3-0-991-002-A01

**\*\*ON A/C A350-900**



| FLAPS EXTENDED |   |                |       |                |       |                         |       |              |       |
|----------------|---|----------------|-------|----------------|-------|-------------------------|-------|--------------|-------|
| DESCRIPTION    |   | MRW            |       |                |       | 140 000 kg (308 647 lb) |       |              |       |
|                |   | FWD CG (26.2%) |       | AFT CG (33.2%) |       | FWD CG (20%)            |       | AFT CG (40%) |       |
|                |   | m              | ft    | m              | ft    | m                       | ft    | m            | ft    |
| FLAP 1 INBD    | A | 2.57           | 8.43  | 2.56           | 8.40  | 2.72                    | 8.92  | 2.68         | 8.79  |
| FLAP 1/2       | B | 3.30           | 10.82 | 3.29           | 10.79 | 3.45                    | 11.31 | 3.40         | 11.17 |
| FLAP 2 OUTBD   | C | 4.10           | 13.45 | 4.09           | 13.41 | 4.25                    | 13.94 | 4.20         | 13.79 |
| FLAP 3 INBD    | D | 4.15           | 13.62 | 4.14           | 13.58 | 4.30                    | 14.11 | 4.26         | 13.96 |
| FLAP 3/4       | E | 4.90           | 16.07 | 4.89           | 16.03 | 5.05                    | 16.57 | 4.99         | 16.39 |
| FLAP 4/5       | F | 5.44           | 17.85 | 5.42           | 17.80 | 5.60                    | 18.36 | 5.52         | 18.12 |
| FLAP 5 OUTBD   | G | 5.69           | 18.65 | 5.67           | 18.60 | 5.84                    | 19.17 | 5.76         | 18.91 |

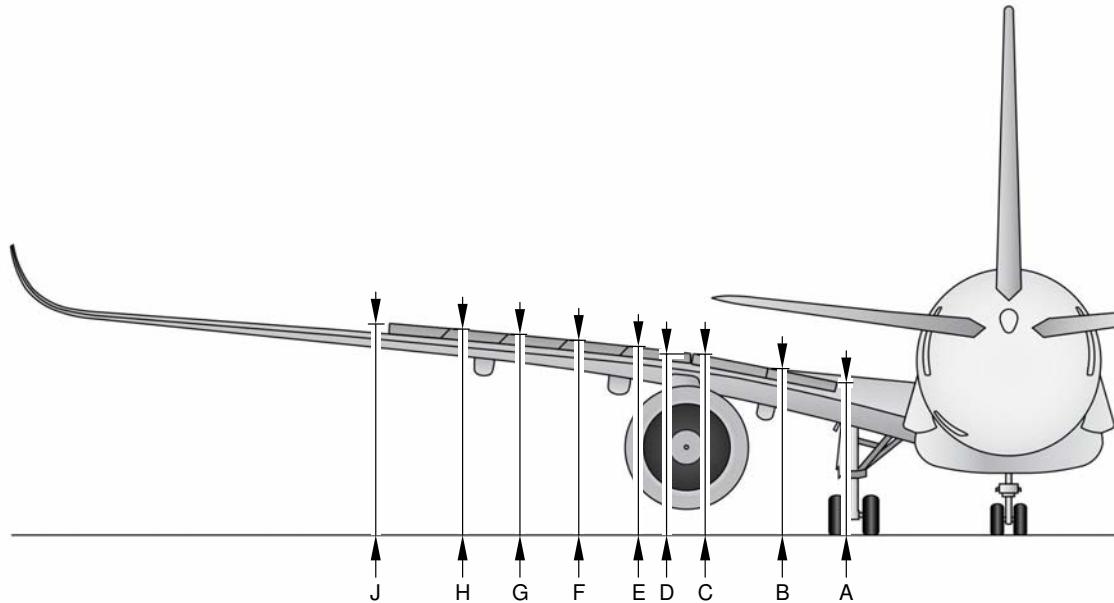
**NOTE:**

THE VALUES GIVEN IN THE TABLE DEPEND ON THE POSITION OF THE CENTER OF GRAVITY (CG) AND  
ON THE AIRCRAFT WEIGHT.

P\_AC\_020300\_1\_0030001\_01\_02

Ground Clearances  
Trailing Edge Flaps - Extended  
FIGURE-2-3-0-991-003-A01

**\*\*ON A/C A350-900**



| SPOILERS EXTENDED |    |                |       |                |       |                         |       |              |       |
|-------------------|----|----------------|-------|----------------|-------|-------------------------|-------|--------------|-------|
| DESCRIPTION       |    | MRW            |       |                |       | 140 000 kg (308 647 lb) |       |              |       |
|                   |    | FWD CG (26.2%) |       | AFT CG (33.2%) |       | FWD CG (20%)            |       | AFT CG (40%) |       |
| m                 | ft | m              | ft    | m              | ft    | m                       | ft    | m            | ft    |
| SPOILER 1 INBD    | A  | 5.03           | 16.50 | 5.02           | 16.47 | 5.17                    | 16.98 | 5.14         | 16.88 |
| SPOILER 1/2       | B  | 5.49           | 18.02 | 5.48           | 17.99 | 5.64                    | 18.50 | 5.61         | 18.40 |
| SPOILER 2 OUTBD   | C  | 5.95           | 19.51 | 5.94           | 19.48 | 6.09                    | 19.99 | 6.06         | 19.88 |
| SPOILER 3 INBD    | D  | 6.09           | 19.97 | 6.08           | 19.95 | 6.23                    | 20.45 | 6.20         | 20.35 |
| SPOILER 3/4       | E  | 6.33           | 20.77 | 6.32           | 20.74 | 6.48                    | 21.26 | 6.44         | 21.13 |
| SPOILER 4/5       | F  | 6.54           | 21.46 | 6.53           | 21.42 | 6.69                    | 21.95 | 6.64         | 21.80 |
| SPOILER 5/6       | G  | 6.73           | 22.08 | 6.72           | 22.04 | 6.88                    | 22.58 | 6.83         | 22.40 |
| SPOILER 6/7       | H  | 6.91           | 22.66 | 6.89           | 22.62 | 7.06                    | 23.16 | 7.00         | 22.96 |
| SPOILER 7 OUTBD   | J  | 7.08           | 23.23 | 7.07           | 23.19 | 7.24                    | 23.74 | 7.17         | 23.52 |

**NOTE:**

THE VALUES GIVEN IN THE TABLE DEPEND ON THE POSITION OF THE CENTER OF GRAVITY (CG) AND  
ON THE AIRCRAFT WEIGHT.

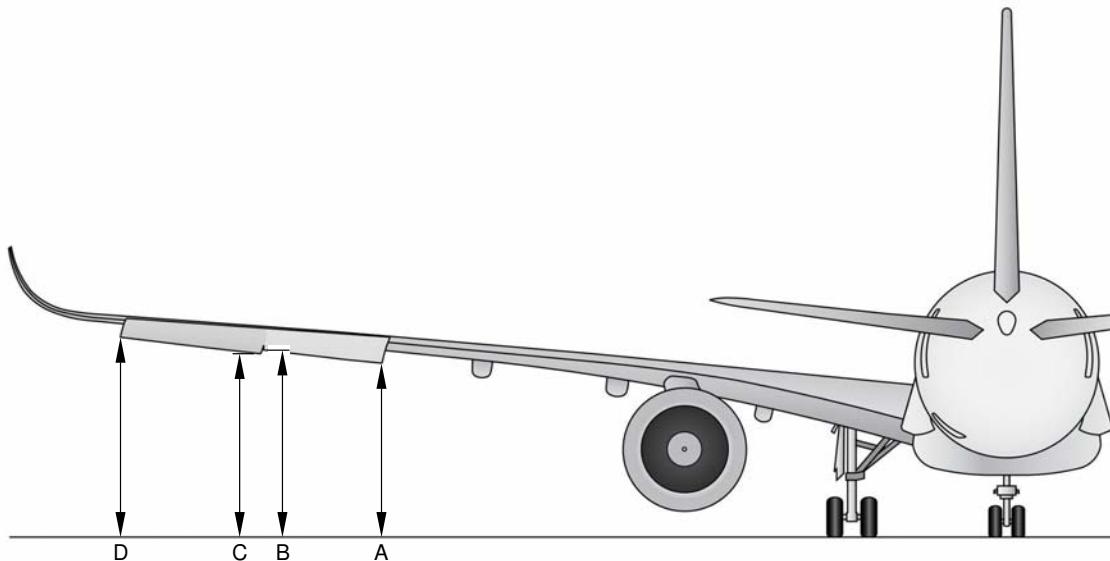
P\_AC\_020300\_1\_0040001\_01\_02

Ground Clearances

Spoilers - Extended

FIGURE-2-3-0-991-004-A01

**\*\*ON A/C A350-900**



| AILERONS DOWN   |   |                |       |                |       |                         |       |              |       |
|-----------------|---|----------------|-------|----------------|-------|-------------------------|-------|--------------|-------|
| DESCRIPTION     |   | MRW            |       |                |       | 140 000 kg (308 647 lb) |       |              |       |
|                 |   | FWD CG (26.2%) |       | AFT CG (33.2%) |       | FWD CG (20%)            |       | AFT CG (40%) |       |
|                 |   | m              | ft    | m              | ft    | m                       | ft    | m            | ft    |
| AILERON 1 INBD  | A | 5.95           | 19.51 | 5.93           | 19.46 | 6.10                    | 20.03 | 6.03         | 19.77 |
| AILERON 1 OUTBD | B | 6.36           | 20.87 | 6.34           | 20.81 | 6.52                    | 21.40 | 6.43         | 21.09 |
| AILERON 2 INBD  | C | 6.35           | 20.83 | 6.33           | 20.77 | 6.51                    | 21.36 | 6.42         | 21.05 |
| AILERON 2 OUTBD | D | 6.84           | 22.45 | 6.82           | 22.38 | 7.01                    | 22.99 | 6.90         | 22.62 |

**NOTE:**

THE VALUES GIVEN IN THE TABLE DEPEND ON THE POSITION OF THE CENTER OF GRAVITY (CG) AND  
ON THE AIRCRAFT WEIGHT.

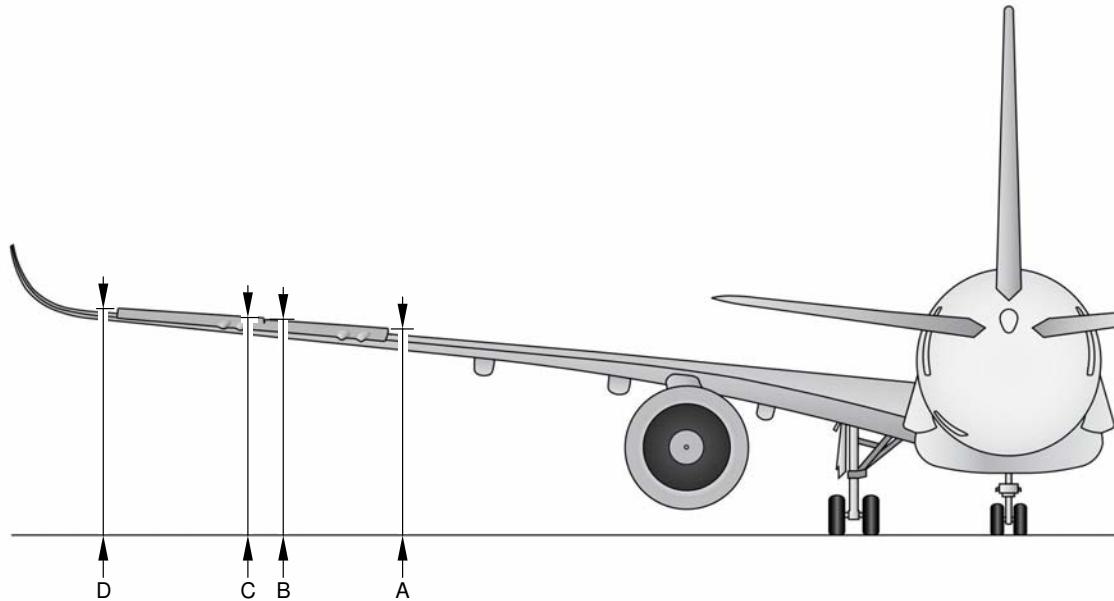
P\_AC\_020300\_1\_0050001\_01\_02

Ground Clearances

Ailerons - Down

FIGURE-2-3-0-991-005-A01

**\*\*ON A/C A350-900**



| AILERONS UP     |    |                |       |                |       |                         |       |              |       |
|-----------------|----|----------------|-------|----------------|-------|-------------------------|-------|--------------|-------|
| DESCRIPTION     |    | MRW            |       |                |       | 140 000 kg (308 647 lb) |       |              |       |
|                 |    | FWD CG (26.2%) |       | AFT CG (33.2%) |       | FWD CG (20%)            |       | AFT CG (40%) |       |
| m               | ft | m              | ft    | m              | ft    | m                       | ft    | m            | ft    |
| AILERON 1 INBD  | A  | 6.96           | 22.85 | 6.95           | 22.80 | 7.12                    | 23.36 | 7.04         | 23.11 |
| AILERON 1 OUTBD | B  | 7.21           | 23.64 | 7.19           | 23.58 | 7.37                    | 24.17 | 7.27         | 23.86 |
| AILERON 2 INBD  | C  | 7.22           | 23.68 | 7.20           | 23.61 | 7.38                    | 24.20 | 7.28         | 23.90 |
| AILERON 2 OUTBD | D  | 7.49           | 24.59 | 7.47           | 24.51 | 7.66                    | 25.12 | 7.55         | 24.76 |

**NOTE:**

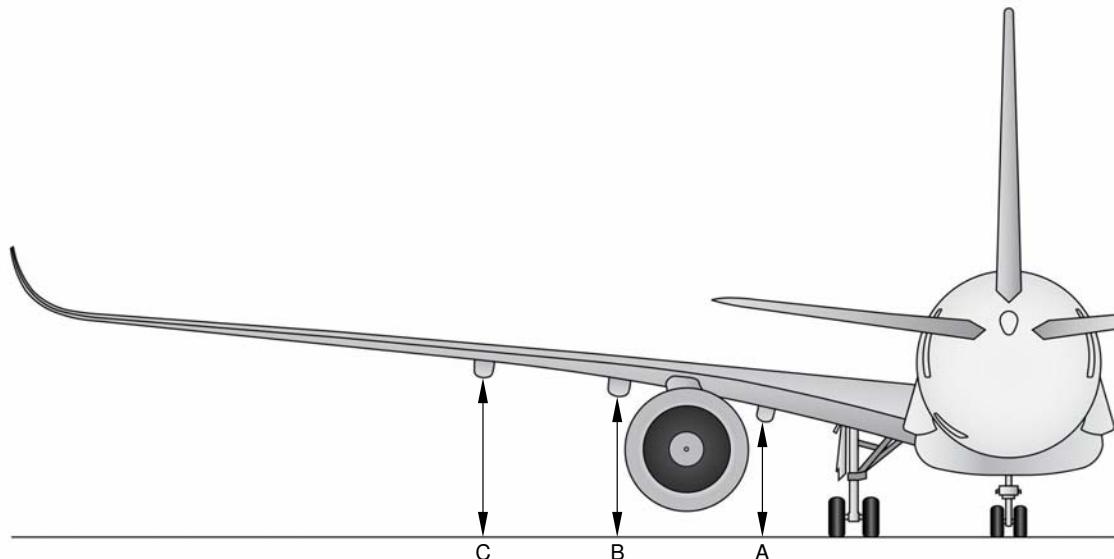
THE VALUES GIVEN IN THE TABLE DEPEND ON THE POSITION OF THE CENTER OF GRAVITY (CG) AND  
ON THE AIRCRAFT WEIGHT.  
P\_AC\_020300\_1\_0060001\_01\_02

Ground Clearances

Ailerons - Up

FIGURE-2-3-0-991-006-A01

**\*\*ON A/C A350-900**



| FLAPS TRACKS RETRACTED |   |                |       |                |       |                         |       |              |       |
|------------------------|---|----------------|-------|----------------|-------|-------------------------|-------|--------------|-------|
| DESCRIPTION            |   | MRW            |       |                |       | 140 000 kg (308 647 lb) |       |              |       |
|                        |   | FWD CG (26.2%) |       | AFT CG (33.2%) |       | FWD CG (20%)            |       | AFT CG (40%) |       |
|                        |   | m              | ft    | m              | ft    | m                       | ft    | m            | ft    |
| FLAP TRACK 1           | A | 3.75           | 12.32 | 3.75           | 12.30 | 3.90                    | 12.80 | 3.87         | 12.71 |
| FLAP TRACK 2           | B | 4.56           | 14.98 | 4.56           | 14.95 | 4.71                    | 15.46 | 4.67         | 15.34 |
| FLAP TRACK 3           | C | 5.21           | 17.08 | 5.19           | 17.04 | 5.36                    | 17.58 | 5.30         | 17.40 |

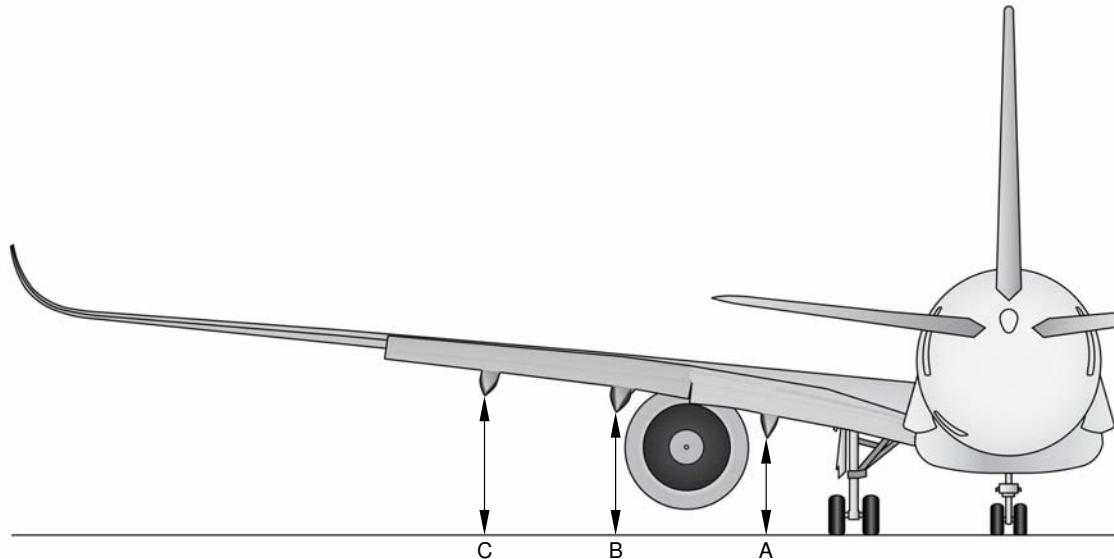
**NOTE:**

THE VALUES GIVEN IN THE TABLE DEPEND ON THE POSITION OF THE CENTER OF GRAVITY (CG) AND  
ON THE AIRCRAFT WEIGHT.

P\_AC\_020300\_1\_0070001\_01\_02

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

**\*\*ON A/C A350-900**



| FLAPS TRACKS EXTENDED |   |                |       |                |       |                         |       |              |       |
|-----------------------|---|----------------|-------|----------------|-------|-------------------------|-------|--------------|-------|
| DESCRIPTION           |   | MRW            |       |                |       | 140 000 kg (308 647 lb) |       |              |       |
|                       |   | FWD CG (26.2%) |       | AFT CG (33.2%) |       | FWD CG (20%)            |       | AFT CG (40%) |       |
|                       |   | m              | ft    | m              | ft    | m                       | ft    | m            | ft    |
| FLAP TRACK 1          | A | 2.86           | 9.38  | 2.85           | 9.34  | 3.01                    | 9.87  | 2.96         | 9.72  |
| FLAP TRACK 2          | B | 3.37           | 11.07 | 3.36           | 11.02 | 3.53                    | 11.57 | 3.47         | 11.37 |
| FLAP TRACK 3          | C | 4.04           | 13.24 | 4.02           | 13.19 | 4.19                    | 13.75 | 4.12         | 13.51 |

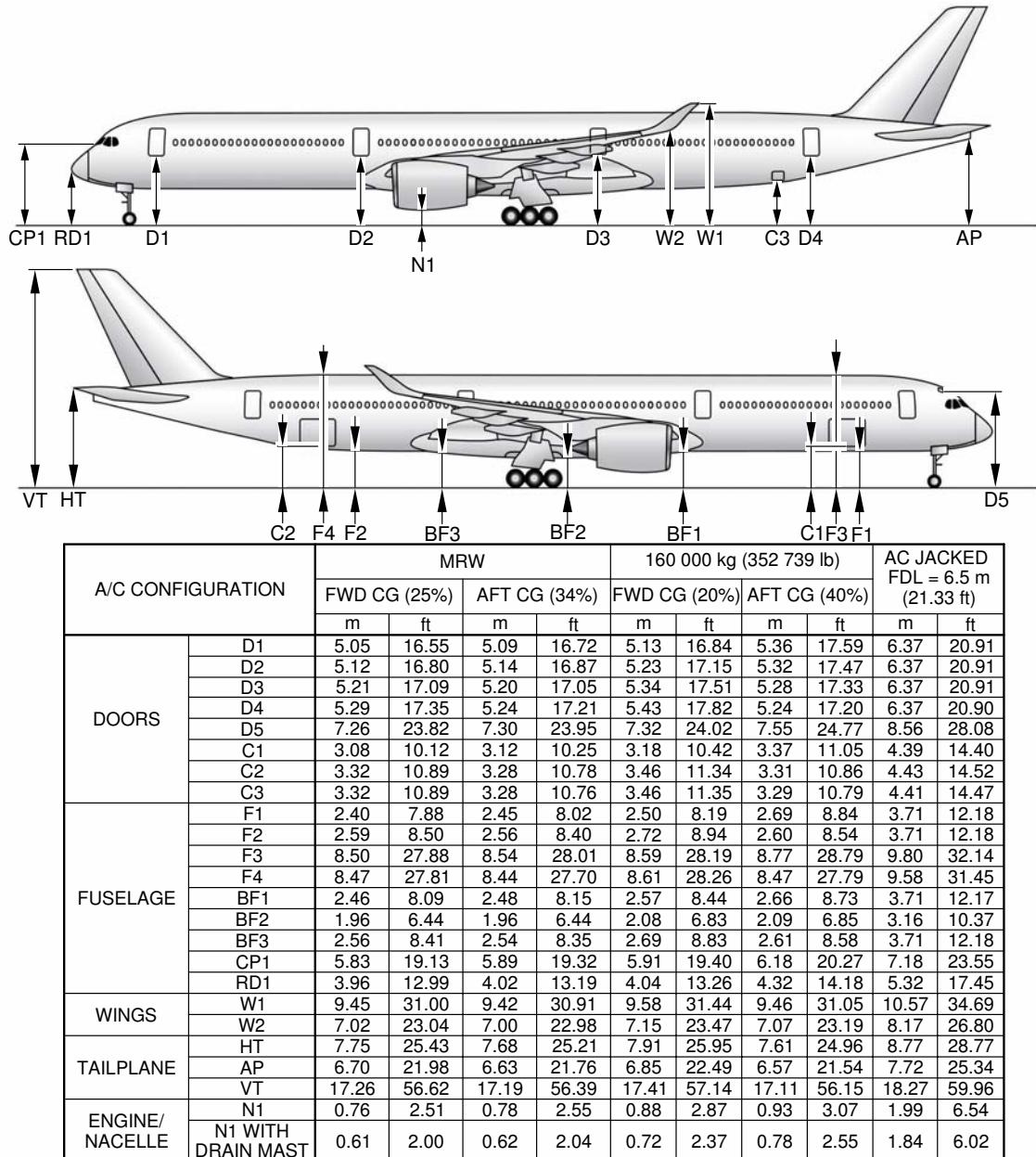
**NOTE:**

THE VALUES GIVEN IN THE TABLE DEPEND ON THE POSITION OF THE CENTER OF GRAVITY (CG) AND  
ON THE AIRCRAFT WEIGHT.

P\_AC\_020300\_1\_0080001\_01\_02

Ground Clearances  
Flap Tracks - Extended  
FIGURE-2-3-0-991-008-A01

\*\*ON A/C A350-1000


**NOTE:**

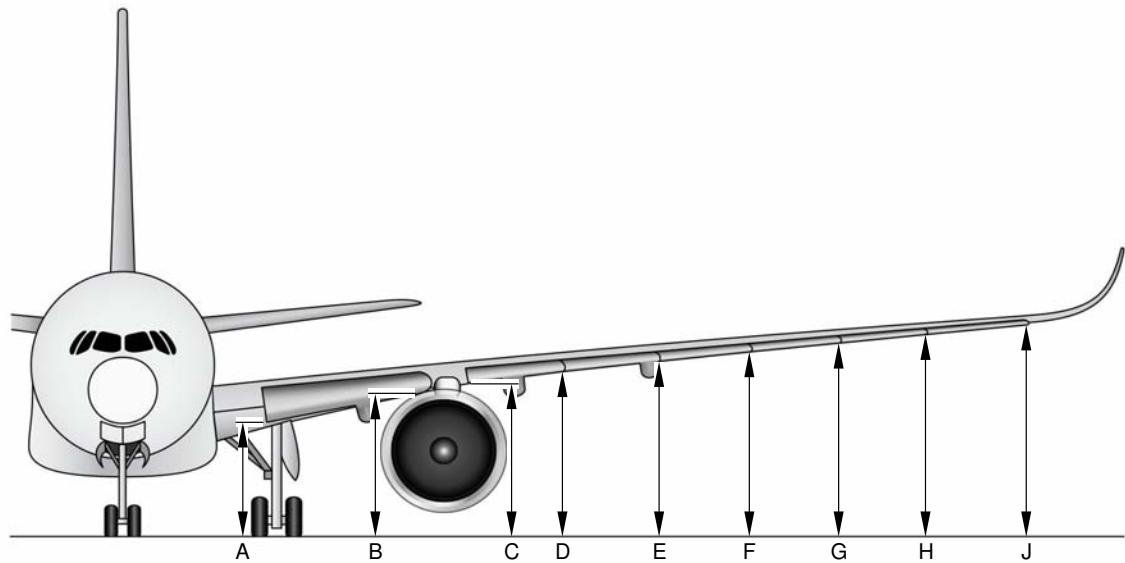
PASSENGER AND CARGO DOOR GROUND CLEARANCES ARE MEASURED FROM THE CENTER OF THE DOOR SILL AND FROM FLOOR LEVEL.

 THE VALUES GIVEN IN THE TABLE DEPEND ON THE POSITION OF THE CENTER OF GRAVITY (CG) AND ON THE AIRCRAFT WEIGHT.  
 P\_AC\_020300\_1\_0090002\_01\_02

Ground Clearances

FIGURE-2-3-0-991-009-B01

\*\*ON A/C A350-1000



| LEADING EDGE SLATS EXTENDED |   |              |       |              |       |                         |       |              |       |
|-----------------------------|---|--------------|-------|--------------|-------|-------------------------|-------|--------------|-------|
| DESCRIPTION                 |   | MRW          |       |              |       | 160 000 kg (352 739 lb) |       |              |       |
|                             |   | FWD CG (25%) |       | AFT CG (34%) |       | FWD CG (20%)            |       | AFT CG (40%) |       |
|                             |   | m            | ft    | m            | ft    | m                       | ft    | m            | ft    |
| 01> DN INBD                 | A | 3.44         | 11.28 | 3.45         | 11.32 | 3.55                    | 11.64 | 3.61         | 11.84 |
| 01> DN OUTBD                | B | 4.60         | 15.10 | 4.61         | 15.12 | 4.72                    | 15.48 | 4.75         | 15.57 |
| SLAT 1 INBD                 | C | 4.63         | 15.19 | 4.63         | 15.21 | 4.75                    | 15.57 | 4.77         | 15.65 |
| SLAT 1/2                    | D | 5.01         | 16.43 | 5.01         | 16.43 | 5.12                    | 16.81 | 5.13         | 16.84 |
| SLAT 2/3                    | E | 5.36         | 17.59 | 5.36         | 17.58 | 5.48                    | 17.98 | 5.47         | 17.96 |
| SLAT 3/4                    | F | 5.70         | 18.71 | 5.69         | 18.68 | 5.82                    | 19.11 | 5.80         | 19.03 |
| SLAT 4/5                    | G | 6.02         | 19.75 | 6.01         | 19.71 | 6.14                    | 20.15 | 6.10         | 20.02 |
| SLAT 5/6                    | H | 6.32         | 20.74 | 6.31         | 20.69 | 6.45                    | 21.15 | 6.39         | 20.97 |
| SLAT 6 OUTBD                | J | 6.66         | 21.84 | 6.64         | 21.78 | 6.79                    | 22.26 | 6.71         | 22.02 |

**NOTE:**

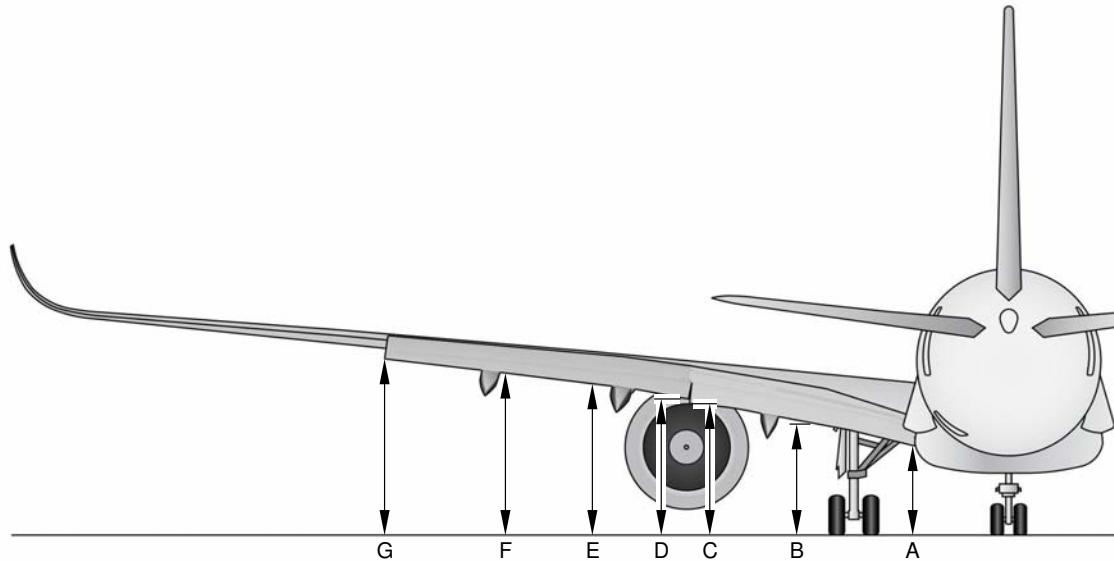
01> DN – DROOP NOSE

THE VALUES GIVEN IN THE TABLE DEPEND ON THE POSITION OF THE CENTER OF GRAVITY (CG) AND  
ON THE AIRCRAFT WEIGHT.

P\_AC\_020300\_1\_0100001\_01\_01

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

\*\*ON A/C A350-1000



| FLAPS EXTENDED |   |              |       |              |       |                         |              |      |
|----------------|---|--------------|-------|--------------|-------|-------------------------|--------------|------|
| DESCRIPTION    |   | MRW          |       |              |       | 160 000 kg (352 739 lb) |              |      |
|                |   | FWD CG (25%) |       | AFT CG (34%) |       | FWD CG (20%)            | AFT CG (40%) |      |
|                |   | m            | ft    | m            | ft    | m                       | ft           | m    |
| FLAP 1 INBD    | A | 2.57         | 8.44  | 2.56         | 8.41  | 2.69                    | 8.84         | 2.66 |
| FLAP 1/2       | B | 3.30         | 10.83 | 3.29         | 10.80 | 3.42                    | 11.23        | 3.39 |
| FLAP 2 OUTBD   | C | 4.10         | 13.45 | 4.09         | 13.42 | 4.22                    | 13.86        | 4.19 |
| FLAP 3 INBD    | D | 4.15         | 13.63 | 4.14         | 13.59 | 4.28                    | 14.03        | 4.24 |
| FLAP 3/4       | E | 4.90         | 16.08 | 4.89         | 16.04 | 5.03                    | 16.49        | 4.98 |
| FLAP 4/5       | F | 5.44         | 17.85 | 5.43         | 17.80 | 5.57                    | 18.26        | 5.51 |
| FLAP 5 OUTBD   | G | 5.69         | 18.65 | 5.67         | 18.60 | 5.81                    | 19.07        | 5.75 |

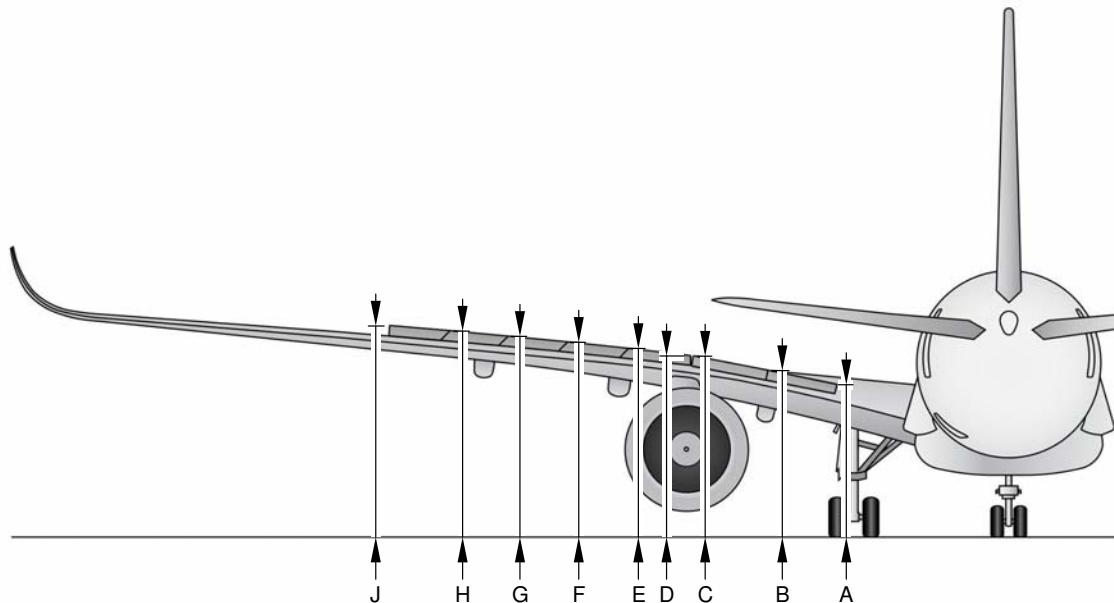
**NOTE:**

THE VALUES GIVEN IN THE TABLE DEPEND ON THE POSITION OF THE CENTER OF GRAVITY (CG) AND  
ON THE AIRCRAFT WEIGHT.

P\_AC\_020300\_1\_0110001\_01\_01

Ground Clearances  
Trailing Edge Flaps - Extended  
FIGURE-2-3-0-991-011-A01

\*\*ON A/C A350-1000



| SPOILERS EXTENDED |    |              |       |              |       |                         |       |              |       |
|-------------------|----|--------------|-------|--------------|-------|-------------------------|-------|--------------|-------|
| DESCRIPTION       |    | MRW          |       |              |       | 160 000 kg (352 739 lb) |       |              |       |
|                   |    | FWD CG (25%) |       | AFT CG (34%) |       | FWD CG (20%)            |       | AFT CG (40%) |       |
| m                 | ft | m            | ft    | m            | ft    | m                       | ft    | m            | ft    |
| SPOILER 1 INBD    | A  | 5.03         | 16.51 | 5.02         | 16.48 | 5.15                    | 16.91 | 5.13         | 16.83 |
| SPOILER 1/2       | B  | 5.49         | 18.03 | 5.49         | 18.00 | 5.62                    | 18.43 | 5.59         | 18.34 |
| SPOILER 2 OUTBD   | C  | 5.95         | 19.52 | 5.94         | 19.49 | 6.07                    | 19.92 | 6.04         | 19.83 |
| SPOILER 3 INBD    | D  | 6.09         | 19.98 | 6.08         | 19.96 | 6.21                    | 20.38 | 6.19         | 20.30 |
| SPOILER 3/4       | E  | 6.33         | 20.78 | 6.32         | 20.75 | 6.46                    | 21.18 | 6.42         | 21.08 |
| SPOILER 4/5       | F  | 6.54         | 21.46 | 6.53         | 21.43 | 6.67                    | 21.87 | 6.63         | 21.74 |
| SPOILER 5/6       | G  | 6.73         | 22.09 | 6.72         | 22.05 | 6.86                    | 22.49 | 6.81         | 22.35 |
| SPOILER 6/7       | H  | 6.91         | 22.67 | 6.90         | 22.62 | 7.03                    | 23.08 | 6.98         | 22.91 |
| SPOILER 7 OUTBD   | J  | 7.08         | 23.24 | 7.07         | 23.19 | 7.21                    | 23.65 | 7.15         | 23.46 |

**NOTE:**

THE VALUES GIVEN IN THE TABLE DEPEND ON THE POSITION OF THE CENTER OF GRAVITY (CG) AND  
ON THE AIRCRAFT WEIGHT.

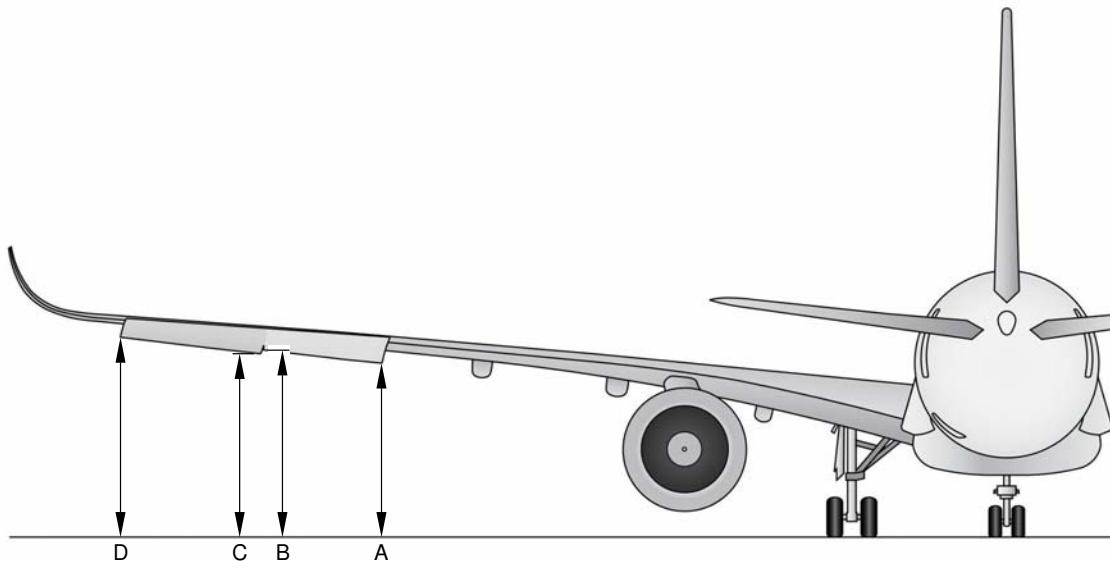
P\_AC\_020300\_1\_0120001\_01\_01

Ground Clearances

Spoilers - Extended

FIGURE-2-3-0-991-012-A01

**\*\*ON A/C A350-1000**



| AILERONS DOWN   |    |              |       |              |       |                         |       |              |       |
|-----------------|----|--------------|-------|--------------|-------|-------------------------|-------|--------------|-------|
| DESCRIPTION     |    | MRW          |       |              |       | 160 000 kg (352 739 lb) |       |              |       |
|                 |    | FWD CG (25%) |       | AFT CG (34%) |       | FWD CG (20%)            |       | AFT CG (40%) |       |
| m               | ft | m            | ft    | m            | ft    | m                       | ft    | m            | ft    |
| AILERON 1 INBD  | A  | 5.95         | 19.51 | 5.93         | 19.46 | 6.07                    | 19.93 | 6.01         | 19.72 |
| AILERON 1 OUTBD | B  | 6.36         | 20.87 | 6.34         | 20.81 | 6.49                    | 21.29 | 6.41         | 21.04 |
| AILERON 2 INBD  | C  | 6.35         | 20.83 | 6.33         | 20.77 | 6.48                    | 21.25 | 6.40         | 21.00 |
| AILERON 2 OUTBD | D  | 6.84         | 22.44 | 6.82         | 22.37 | 6.97                    | 22.87 | 6.88         | 22.57 |

**NOTE:**

THE VALUES GIVEN IN THE TABLE DEPEND ON THE POSITION OF THE CENTER OF GRAVITY (CG) AND  
ON THE AIRCRAFT WEIGHT.

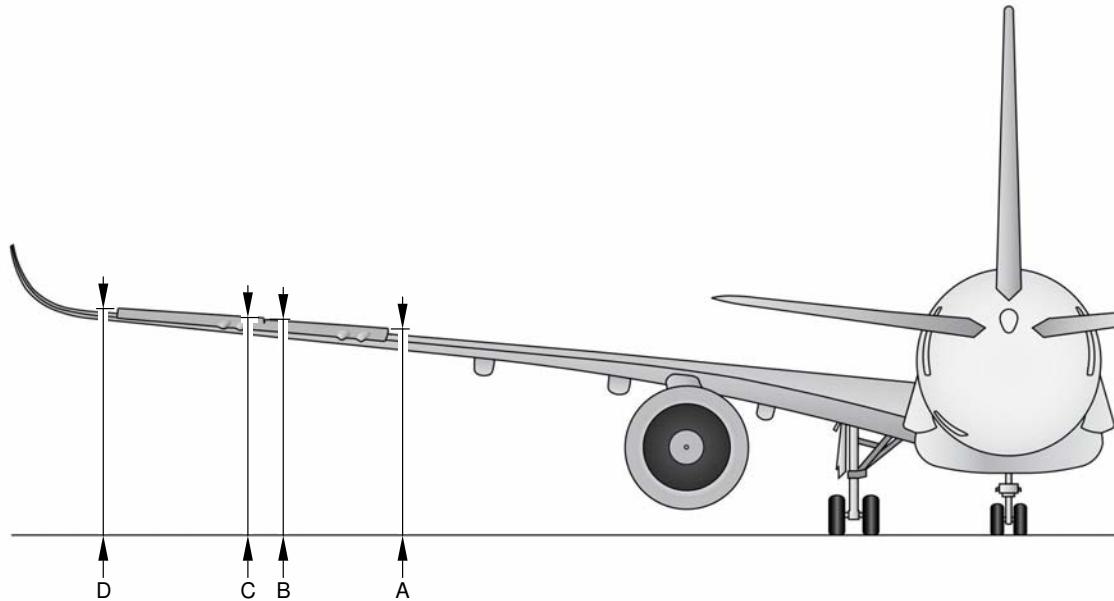
P\_AC\_020300\_1\_0130001\_01\_01

Ground Clearances

Ailerons - Down

FIGURE-2-3-0-991-013-A01

**\*\*ON A/C A350-1000**



| AILERONS UP     |   |              |       |              |       |                         |              |      |
|-----------------|---|--------------|-------|--------------|-------|-------------------------|--------------|------|
| DESCRIPTION     |   | MRW          |       |              |       | 160 000 kg (352 739 lb) |              |      |
|                 |   | FWD CG (25%) |       | AFT CG (34%) |       | FWD CG (20%)            | AFT CG (40%) |      |
|                 |   | m            | ft    | m            | ft    | m                       | ft           | m    |
| AILERON 1 INBD  | A | 6.96         | 22.85 | 6.95         | 22.80 | 7.09                    | 23.27        | 7.03 |
| AILERON 1 OUTBD | B | 7.20         | 23.64 | 7.19         | 23.58 | 7.33                    | 24.06        | 7.26 |
| AILERON 2 INBD  | C | 7.21         | 23.67 | 7.20         | 23.61 | 7.34                    | 24.09        | 7.27 |
| AILERON 2 OUTBD | D | 7.49         | 24.58 | 7.47         | 24.50 | 7.62                    | 25.01        | 7.53 |

**NOTE:**

THE VALUES GIVEN IN THE TABLE DEPEND ON THE POSITION OF THE CENTER OF GRAVITY (CG) AND  
ON THE AIRCRAFT WEIGHT.

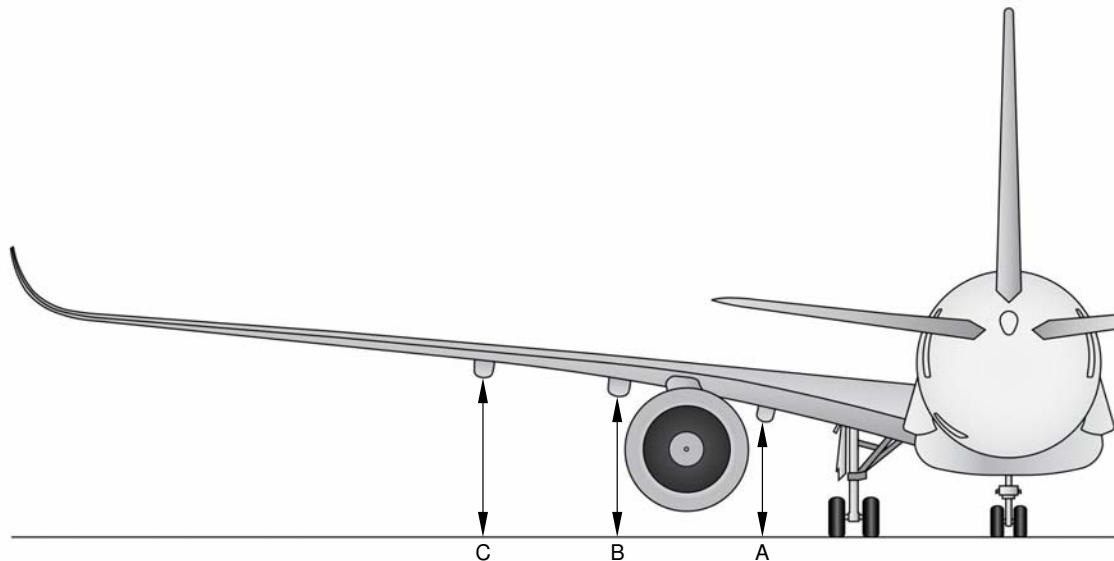
P\_AC\_020300\_1\_0140001\_01\_01

Ground Clearances

Ailerons - Up

FIGURE-2-3-0-991-014-A01

**\*\*ON A/C A350-1000**



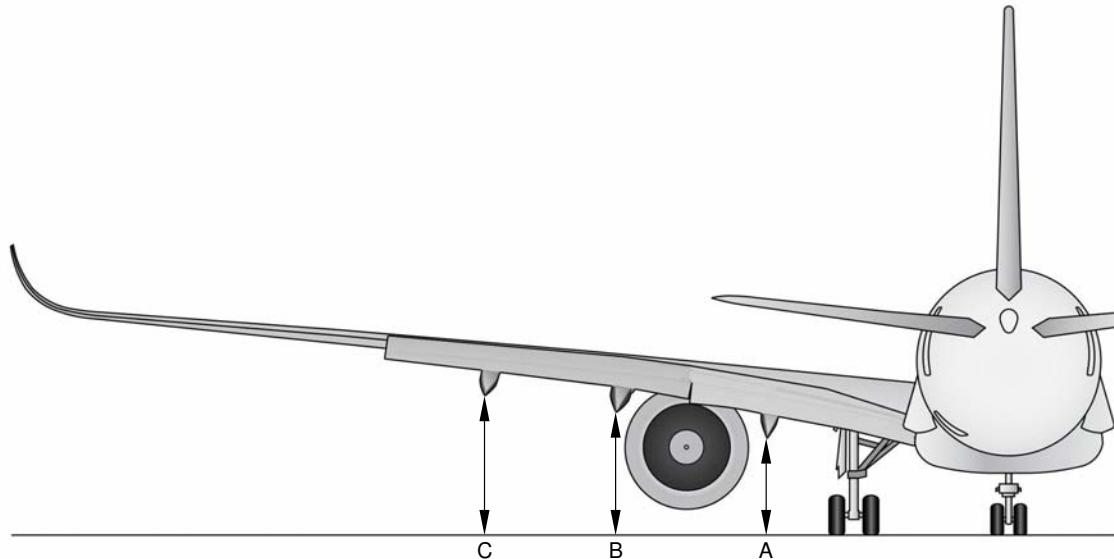
| FLAPS TRACKS RETRACTED |   |              |       |              |       |                         |              |       |
|------------------------|---|--------------|-------|--------------|-------|-------------------------|--------------|-------|
| DESCRIPTION            |   | MRW          |       |              |       | 160 000 kg (352 739 lb) |              |       |
|                        |   | FWD CG (25%) |       | AFT CG (34%) |       | FWD CG (20%)            | AFT CG (40%) |       |
|                        |   | m            | ft    | m            | ft    | m                       | ft           | m     |
| FLAP TRACK 1           | A | 3.76         | 12.33 | 3.75         | 12.31 | 3.88                    | 12.73        | 3.86  |
| FLAP TRACK 2           | B | 4.57         | 14.99 | 4.56         | 14.96 | 4.69                    | 15.39        | 4.66  |
| FLAP TRACK 3           | C | 5.21         | 17.09 | 5.20         | 17.05 | 5.33                    | 17.49        | 5.29  |
|                        |   |              |       |              |       |                         |              | 12.65 |
|                        |   |              |       |              |       |                         |              | 15.28 |
|                        |   |              |       |              |       |                         |              | 17.35 |

**NOTE:**

THE VALUES GIVEN IN THE TABLE DEPEND ON THE POSITION OF THE CENTER OF GRAVITY (CG) AND  
ON THE AIRCRAFT WEIGHT.  
P\_AC\_020300\_1\_0150001\_01\_01

Ground Clearances  
Flap Tracks - Retracted  
FIGURE-2-3-0-991-015-A01

**\*\*ON A/C A350-1000**



| FLAPS TRACKS EXTENDED |   |              |       |              |       |                         |              |       |
|-----------------------|---|--------------|-------|--------------|-------|-------------------------|--------------|-------|
| DESCRIPTION           |   | MRW          |       |              |       | 160 000 kg (352 739 lb) |              |       |
|                       |   | FWD CG (25%) |       | AFT CG (34%) |       | FWD CG (20%)            | AFT CG (40%) |       |
|                       |   | m            | ft    | m            | ft    | m                       | ft           | m     |
| FLAP TRACK 1          | A | 2.86         | 9.38  | 2.85         | 9.35  | 2.98                    | 9.79         | 2.95  |
| FLAP TRACK 2          | B | 3.37         | 11.07 | 3.36         | 11.03 | 3.50                    | 11.48        | 3.45  |
| FLAP TRACK 3          | C | 4.04         | 13.24 | 4.02         | 13.19 | 4.16                    | 13.66        | 4.10  |
|                       |   |              |       |              |       |                         |              | 9.66  |
|                       |   |              |       |              |       |                         |              | 11.32 |
|                       |   |              |       |              |       |                         |              | 13.46 |

**NOTE:**

THE VALUES GIVEN IN THE TABLE DEPEND ON THE POSITION OF THE CENTER OF GRAVITY (CG) AND  
ON THE AIRCRAFT WEIGHT.

P\_AC\_020300\_1\_0160001\_01\_01

Ground Clearances  
Flap Tracks - Extended  
FIGURE-2-3-0-991-016-A01



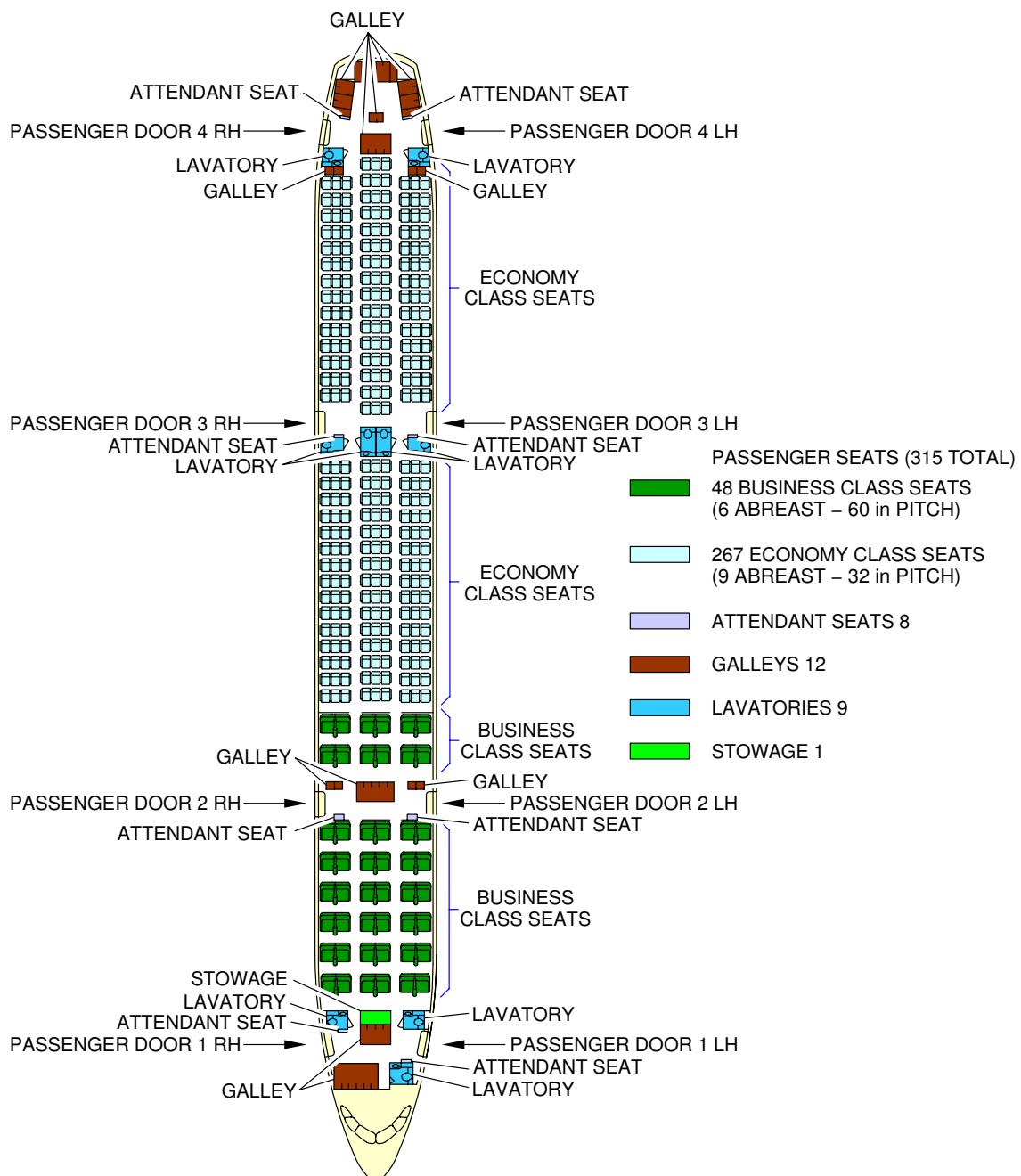
2-4-0      **Interior Arrangements - Plan View**

**\*\*ON A/C A350-1000 A350-900**

Interior Arrangements - Plan View

1. This section provides the standard configuration.

\*\*ON A/C A350-900

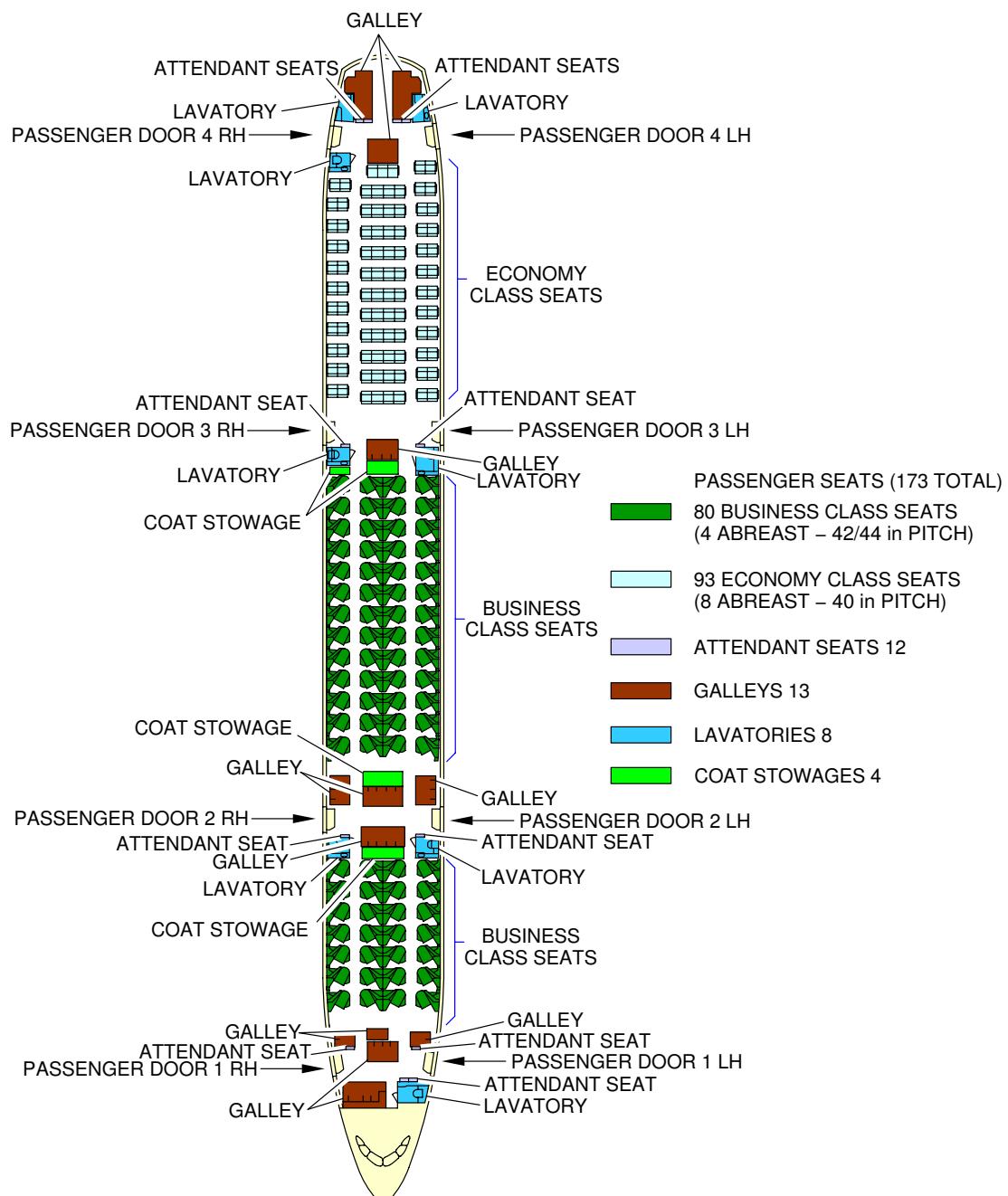


P\_AC\_020400\_1\_0010001\_01\_02

Standard Configuration  
(Sheet 1 of 2)

FIGURE-2-4-0-991-001-A01

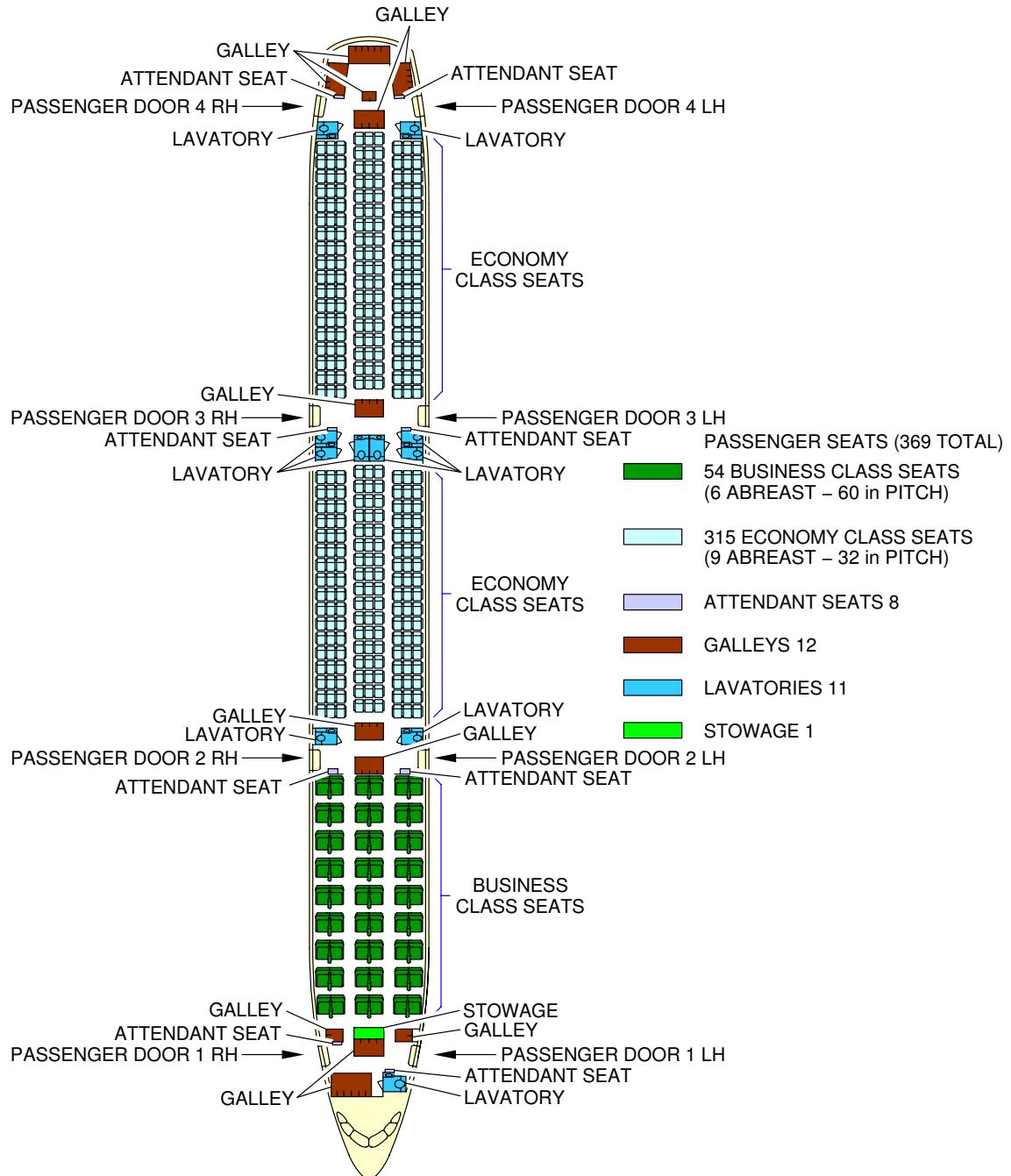
\*\*ON A/C A350-900



P\_AC\_020400\_1\_0010001\_02\_00

Standard Configuration  
Standard Configuration (ULR) (Sheet 2 of 2)  
FIGURE-2-4-0-991-001-A01

\*\*ON A/C A350-1000



P\_AC\_020400\_1\_0020001\_01\_00

Standard Configuration  
FIGURE-2-4-0-991-002-A01



2-5-0      **Interior Arrangements - Cross Section**

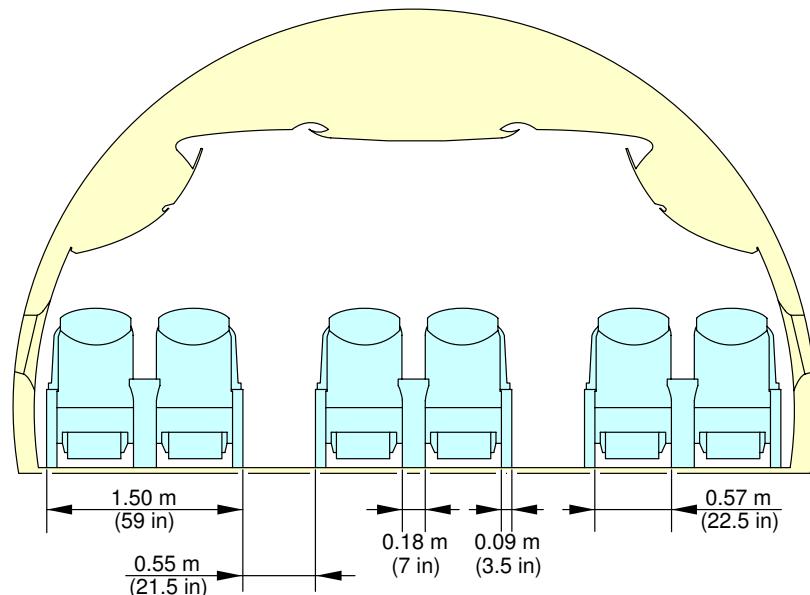
**\*\*ON A/C A350-1000 A350-900**

Interior Arrangements - Cross Section

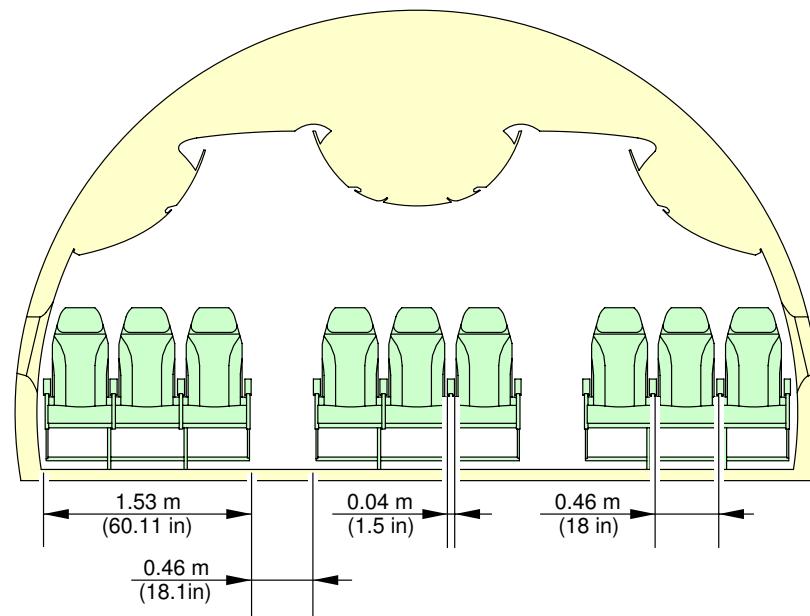
1. This section provides the typical configuration.

\*\*ON A/C A350-1000 A350-900

BUSINESS CLASS / FIRST CLASS 6 ABREAST



BASELINE ECONOMY CLASS 9 ABREAST

**NOTE:**

AISLE WIDTH MAY VARY DEPENDING ON ACTUAL CABIN  
CONFIGURATION SELECTED BY CUSTOMER

P\_AC\_020500\_1\_0010001\_01\_01

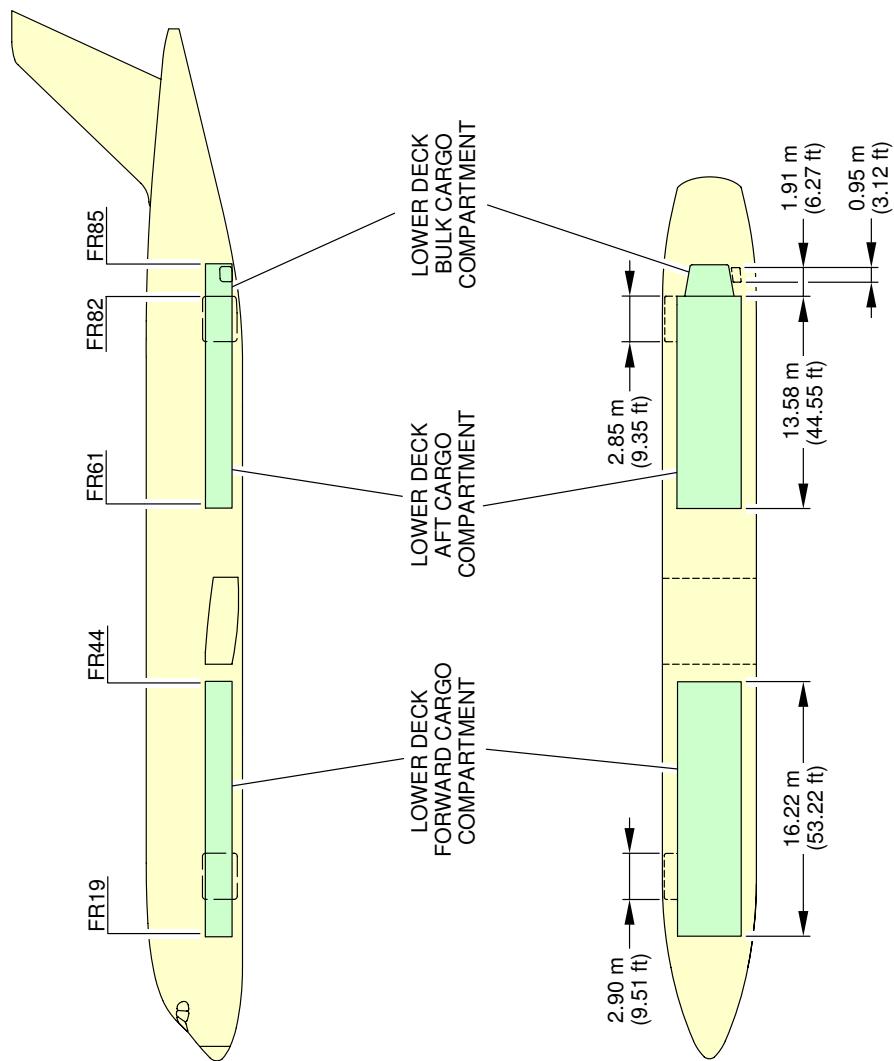
Typical Configuration  
FIGURE-2-5-0-991-001-A01

2-5-0

2-6-0      **Cargo Compartments****\*\*ON A/C A350-1000 A350-900**Cargo Compartments

1. This section provides the following data about cargo compartments:
  - Locations and dimensions,
  - Loading combinations.

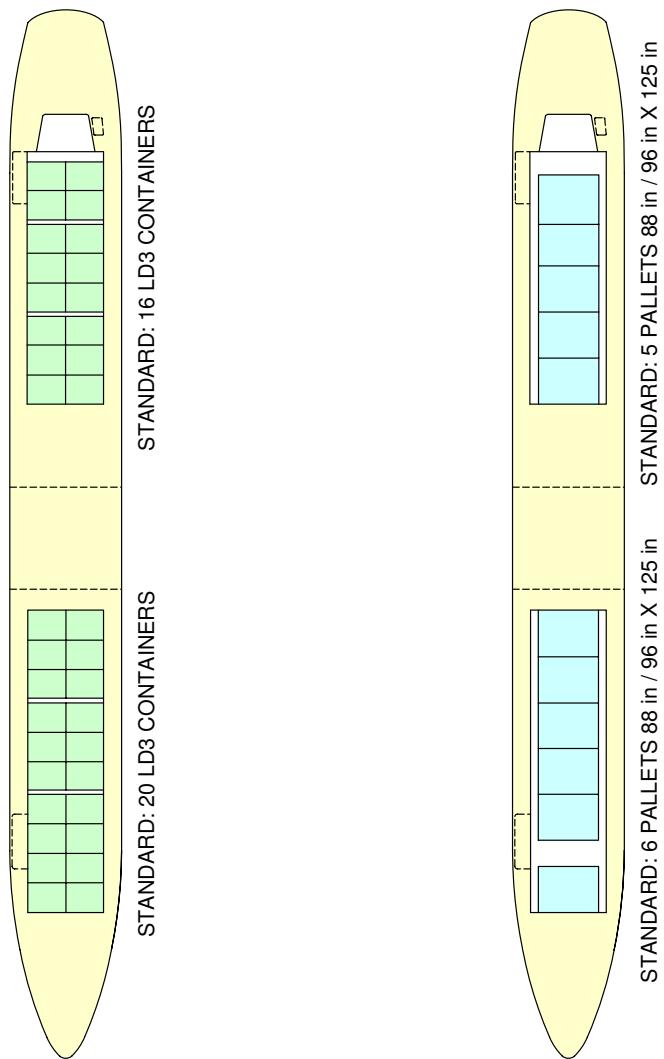
\*\*ON A/C A350-900



P\_AC\_020600\_1\_0020001\_01\_01

Cargo Compartments  
Locations and Dimensions (Sheet 1 of 2)  
FIGURE-2-6-0-991-002-A01

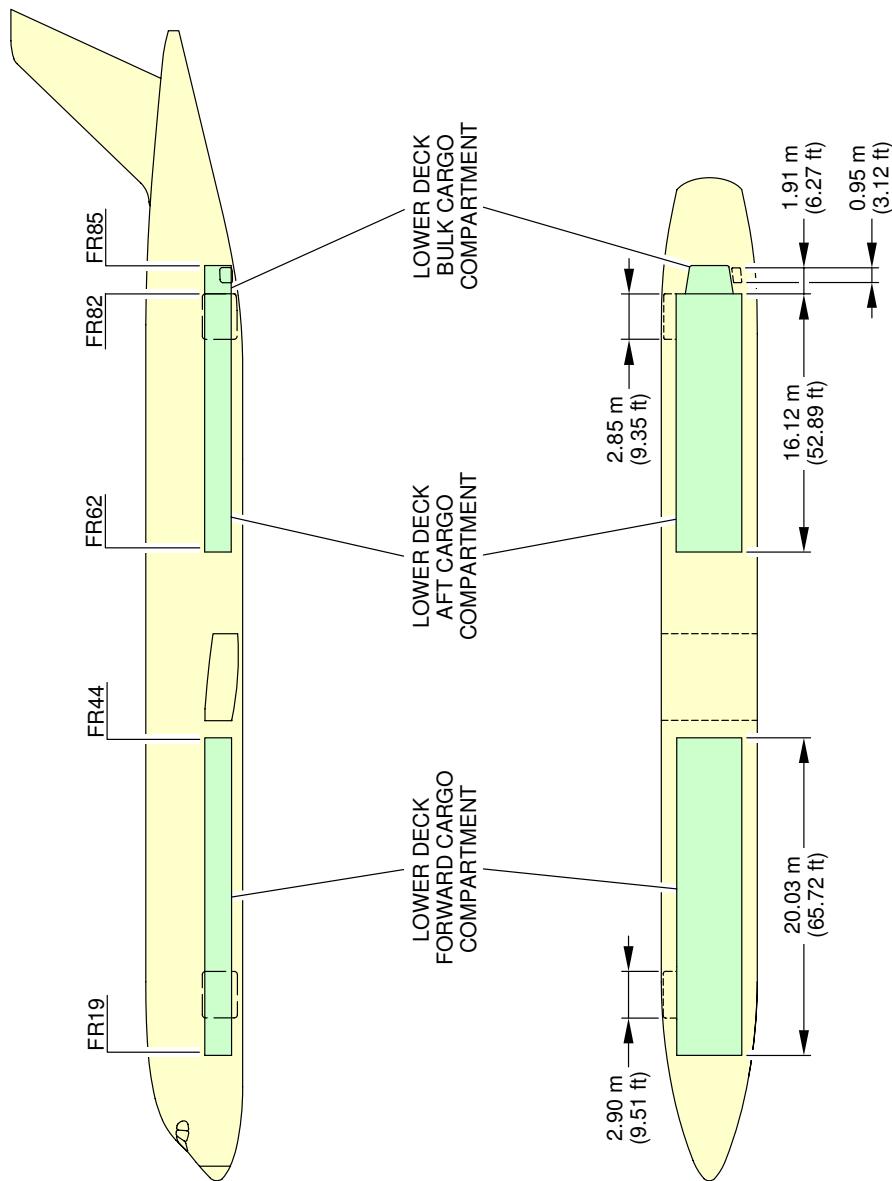
\*\*ON A/C A350-900



P\_AC\_020600\_1\_0020001\_02\_00

Cargo Compartments  
Loading Combinations (Sheet 2 of 2)  
FIGURE-2-6-0-991-002-A01

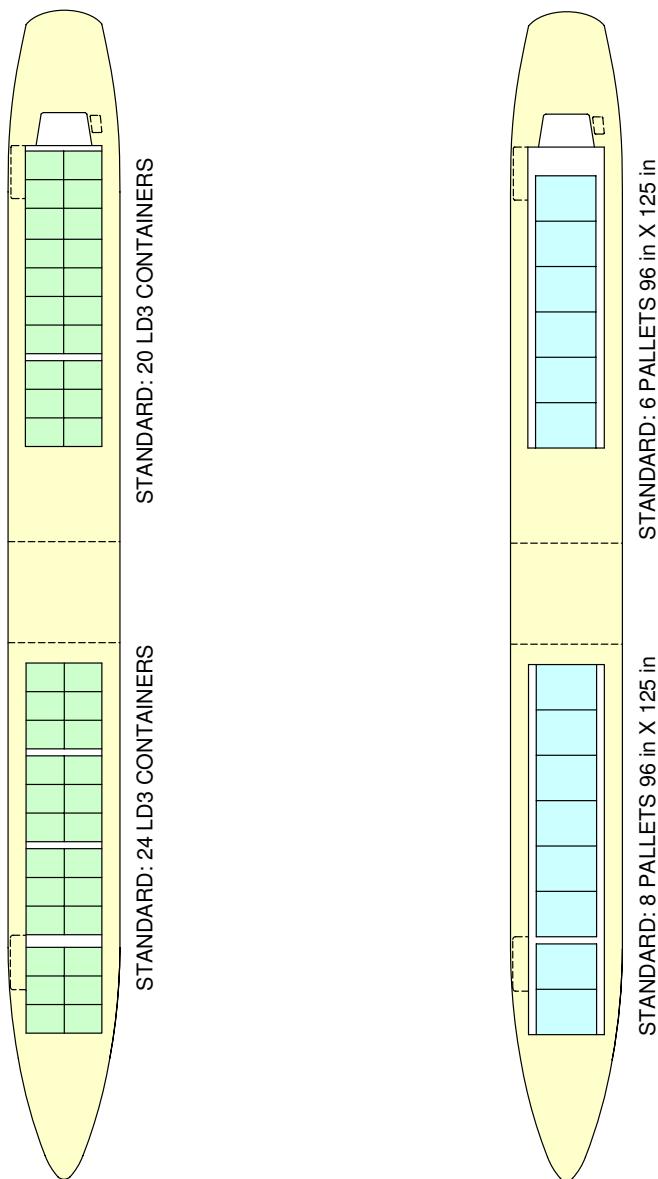
\*\*ON A/C A350-1000



P\_AC\_020600\_1\_0030001\_01\_00

Cargo Compartments  
Locations and Dimensions (Sheet 1 of 2)  
FIGURE-2-6-0-991-003-A01

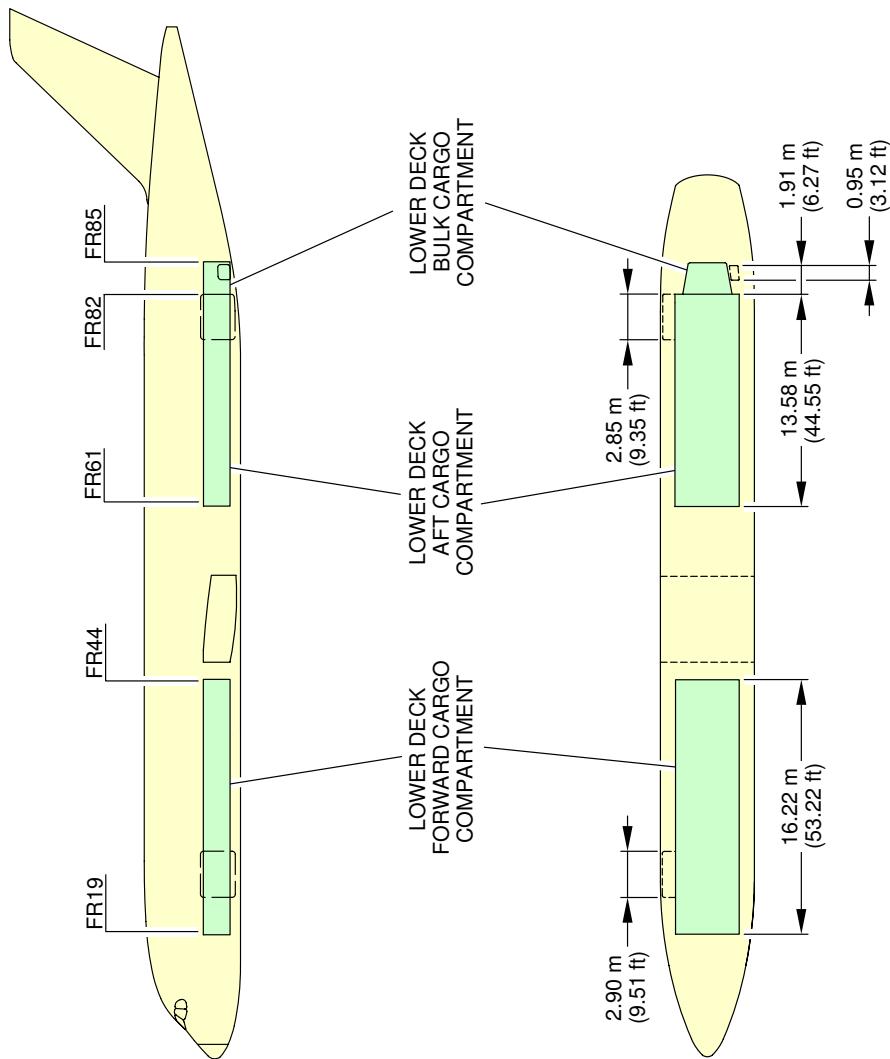
\*\*ON A/C A350-1000



P\_AC\_020600\_1\_0030001\_02\_00

Cargo Compartments  
Loading Combinations (Sheet 2 of 2)  
FIGURE-2-6-0-991-003-A01

\*\*ON A/C A350-900

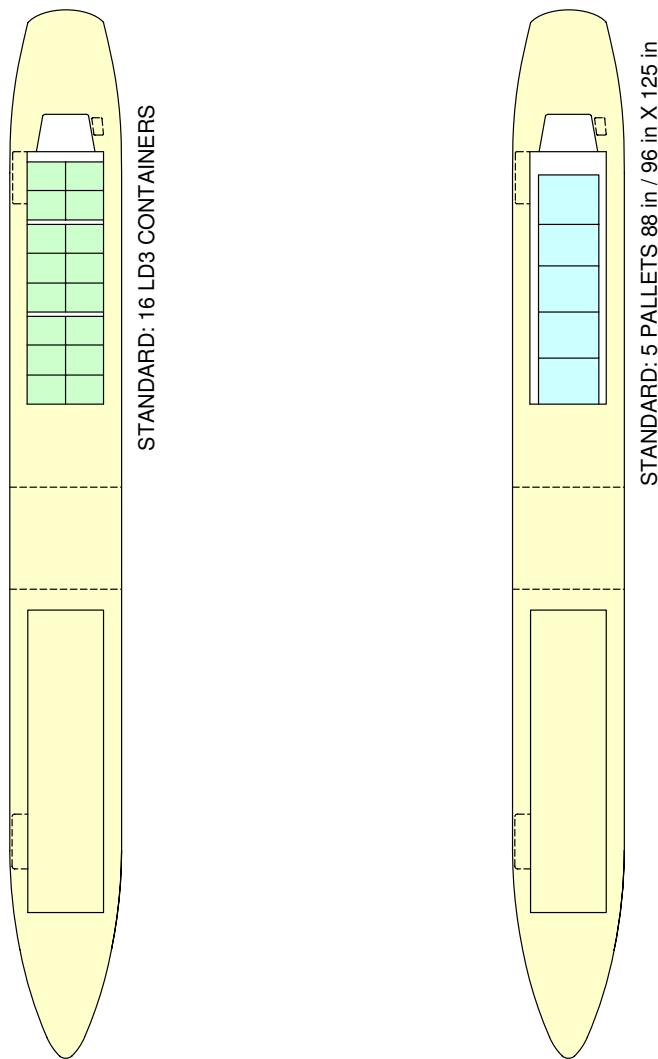

**NOTE:**

IN THE ULR CONFIGURATION BECAUSE OF THE DEACTIVATION OF THE FORWARD CARGO COMPARTMENT, NO CARGO OPERATION IS POSSIBLE.

P\_AC\_020600\_1\_0040001\_01\_00

Cargo Compartments  
 Locations and Dimensions (ULR) (Sheet 1 of 2)  
 FIGURE-2-6-0-991-004-A01

\*\*ON A/C A350-900

**NOTE:**

IN THE ULR CONFIGURATION BECAUSE OF THE DEACTIVATION OF THE FORWARD CARGO COMPARTMENT, NO CARGO OPERATION IS POSSIBLE.

P\_AC\_020600\_1\_0040001\_02\_00

Cargo Compartments  
Loading Combinations (ULR) (Sheet 2 of 2)  
FIGURE-2-6-0-991-004-A01



2-7-0      Door Clearances and Location

\*\*ON A/C A350-1000 A350-900

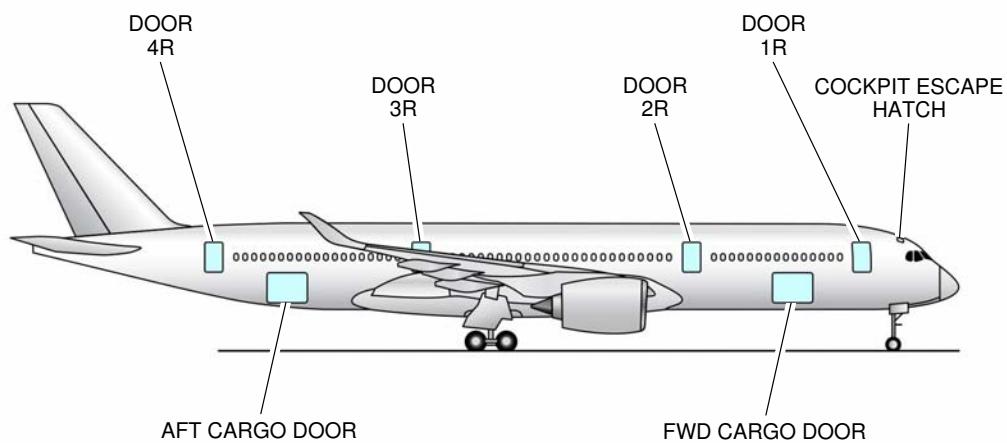
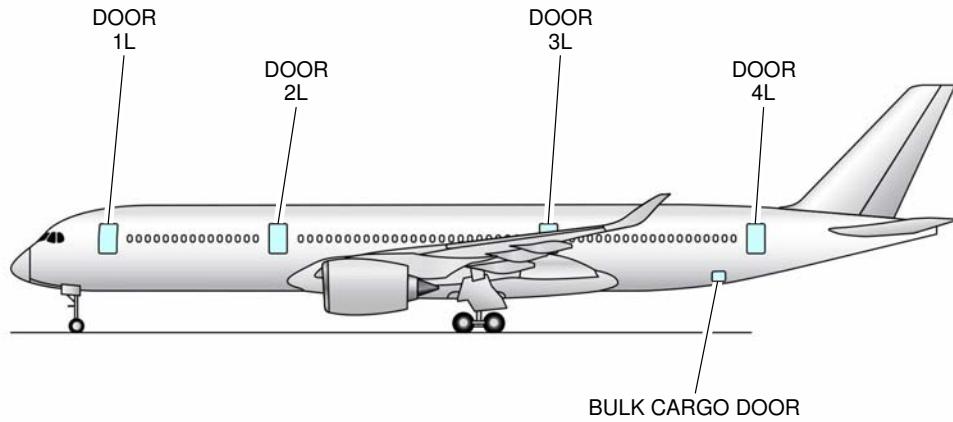
Door Clearances and Location

1. This section provides door clearances and location.

# A350

## AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

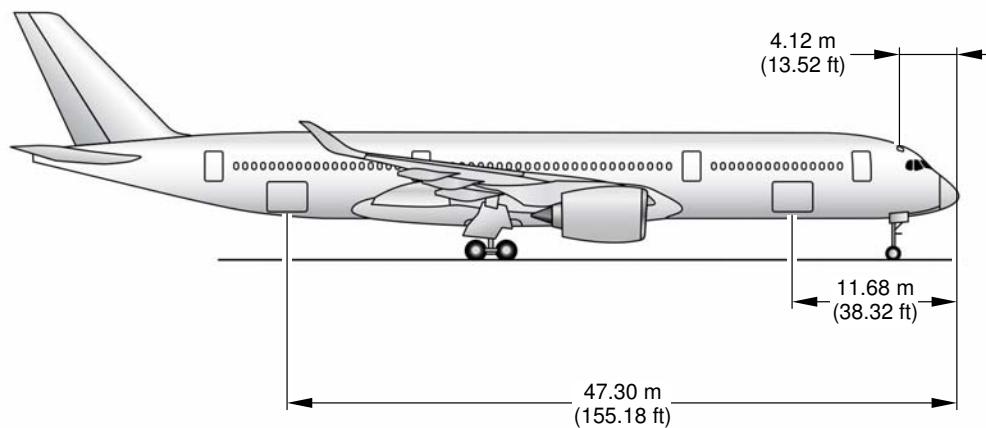
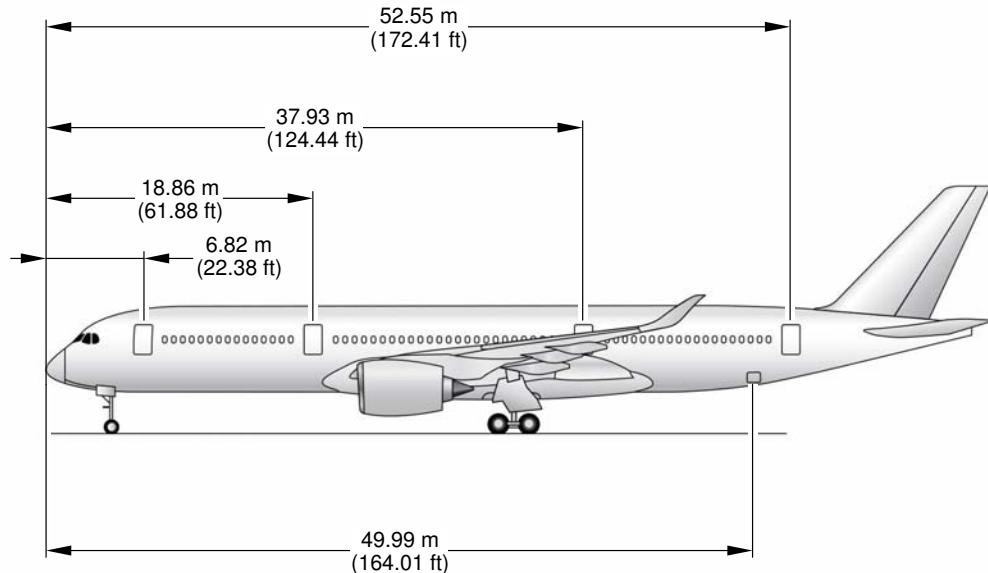
\*\*ON A/C A350-900



P\_AC\_020700\_1\_0010001\_01\_03

Door Identification and Location  
Door Identification (Sheet 1 of 2)  
FIGURE-2-7-0-991-001-A01

\*\*ON A/C A350-900



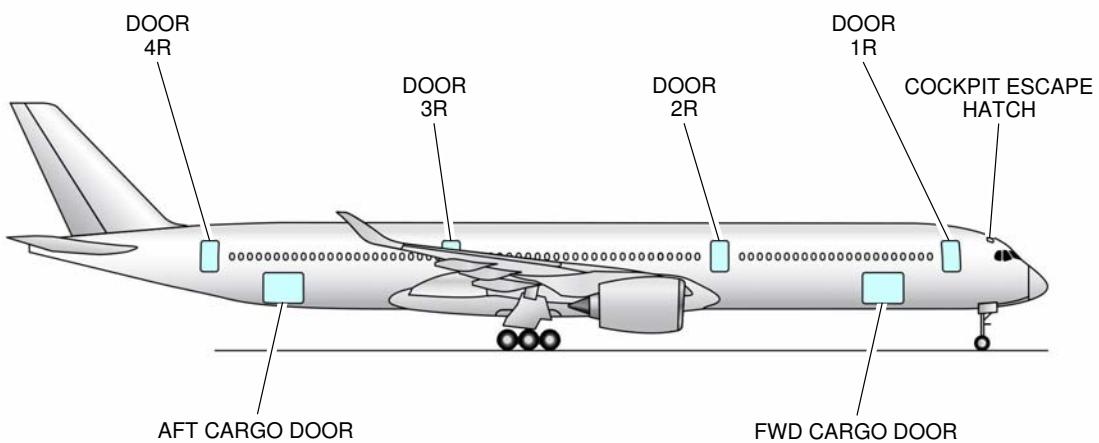
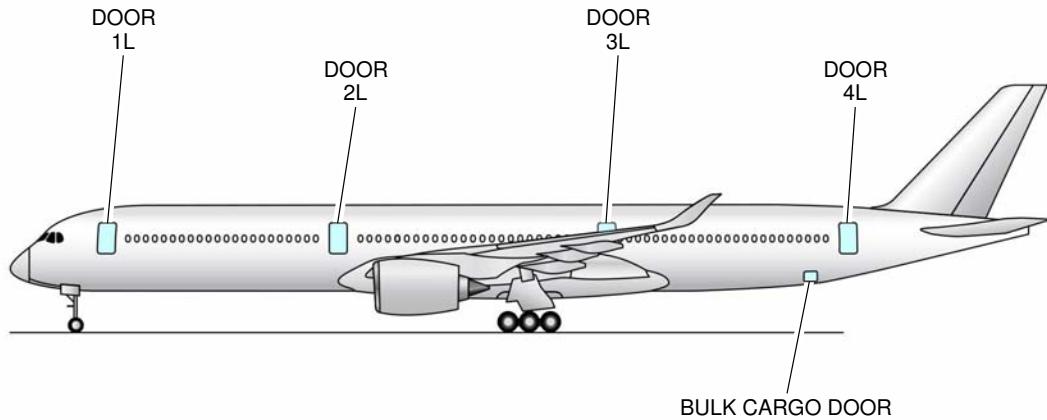
P\_AC\_020700\_1\_0010001\_02\_03

Door Identification and Location  
Door Location (Sheet 2 of 2)  
FIGURE-2-7-0-991-001-A01

# A350

## AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

\*\*ON A/C A350-1000



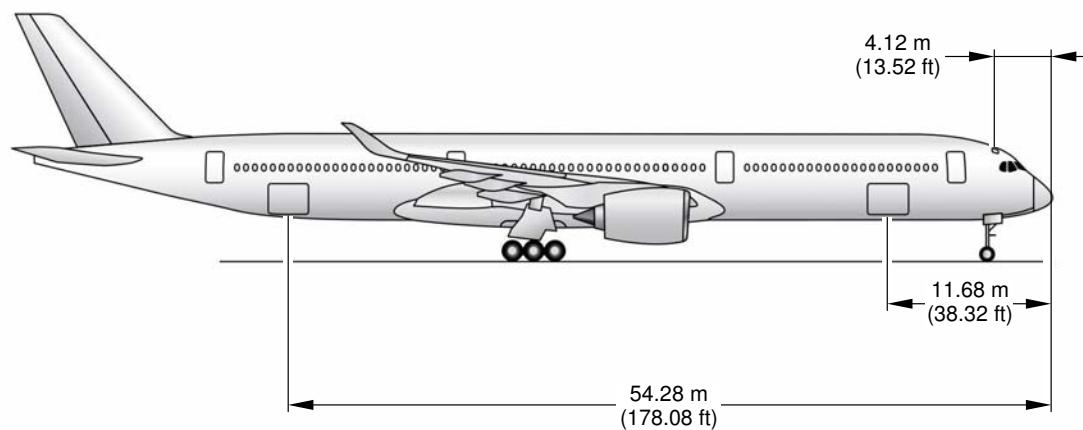
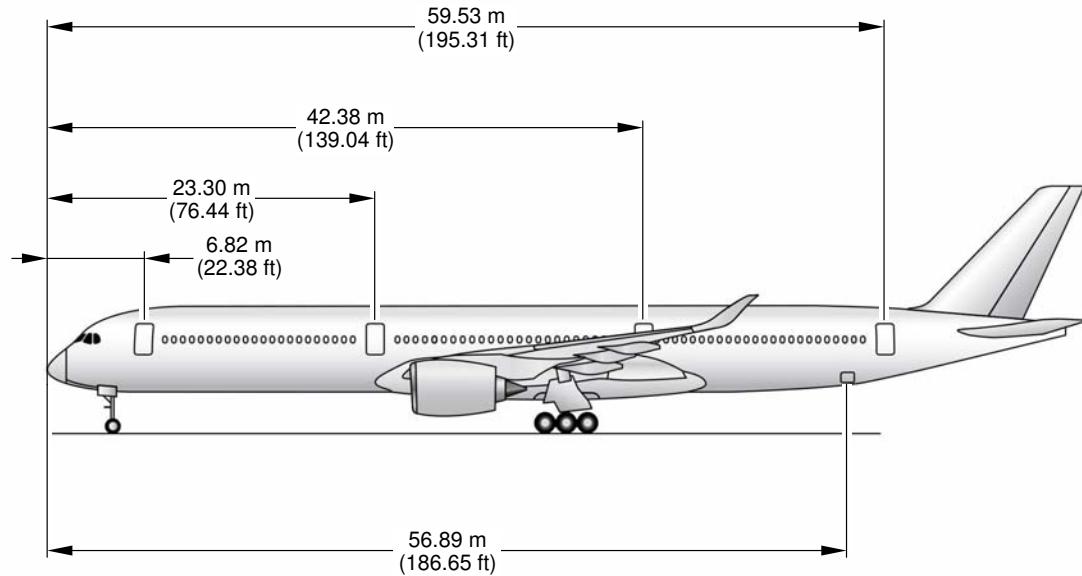
P\_AC\_020700\_1\_0010004\_01\_00

Door Identification and Location  
Door Identification (Sheet 1 of 2)  
FIGURE-2-7-0-991-001-D01

# A350

## AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

\*\*ON A/C A350-1000



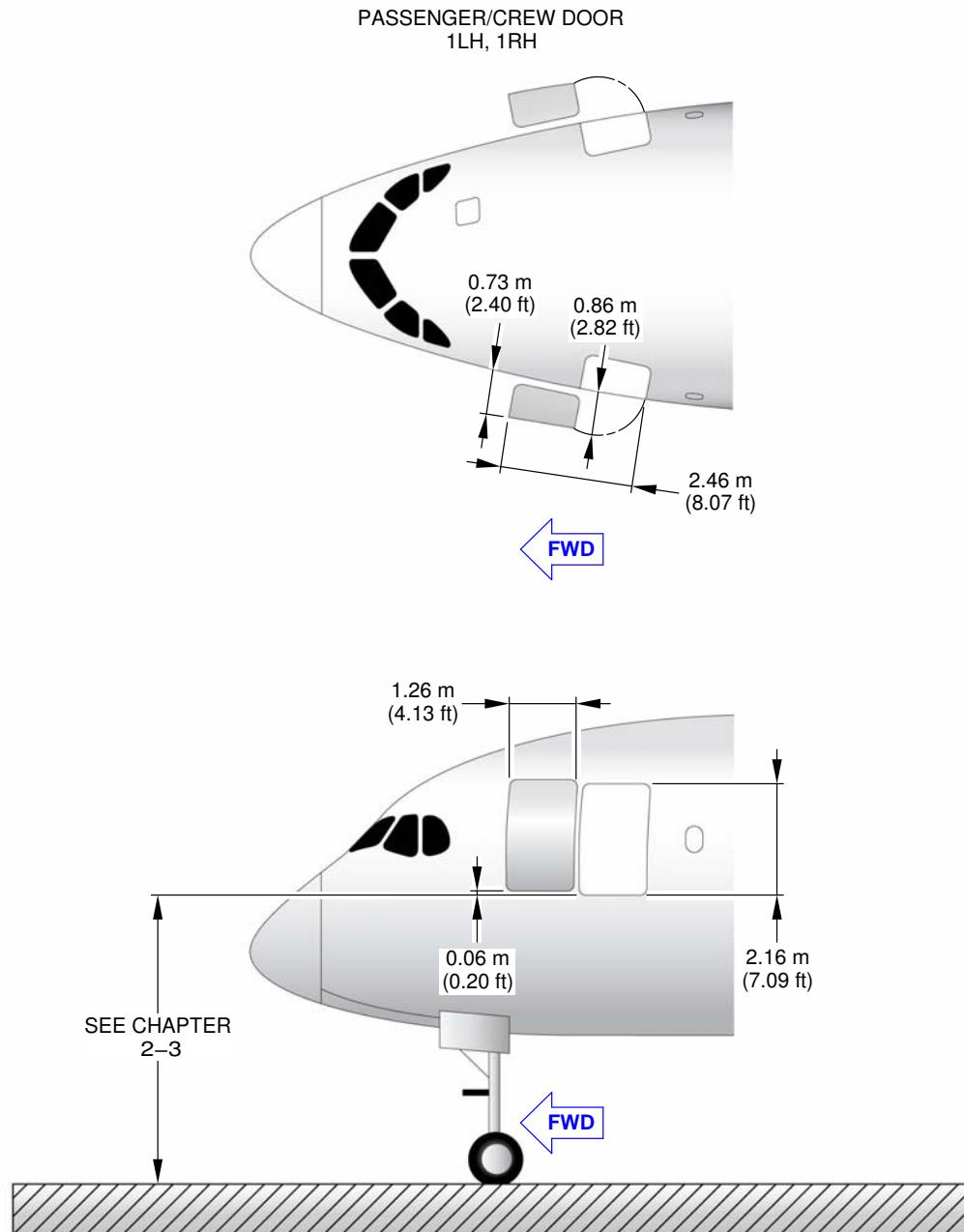
P\_AC\_020700\_1\_0010004\_02\_00

Door Identification and Location

Door Location (Sheet 2 of 2)

FIGURE-2-7-0-991-001-D01

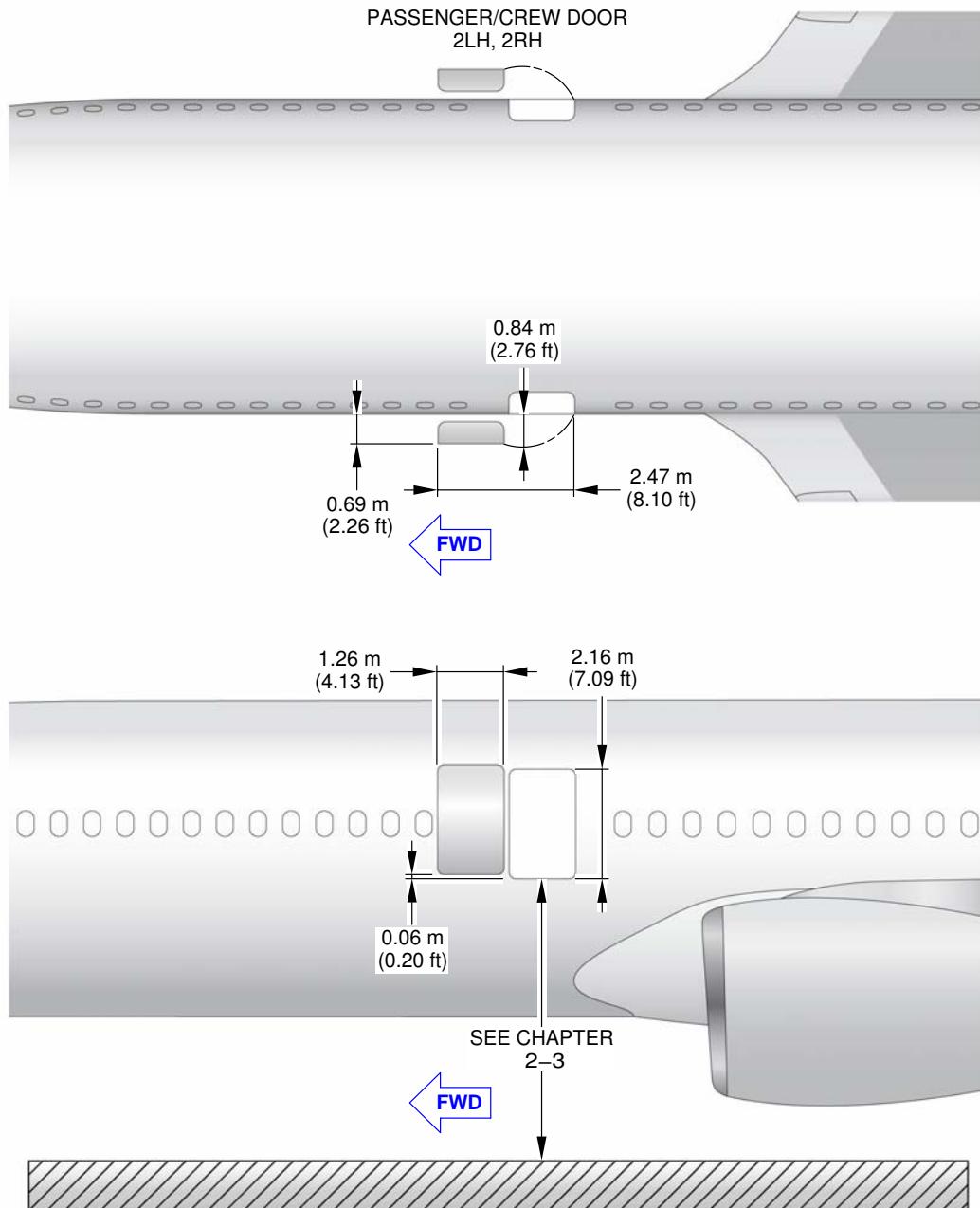
\*\*ON A/C A350-1000 A350-900



P\_AC\_020700\_1\_0020003\_01\_01

Forward Passenger/Crew Doors  
(Sheet 1 of 2)  
FIGURE-2-7-0-991-002-C01

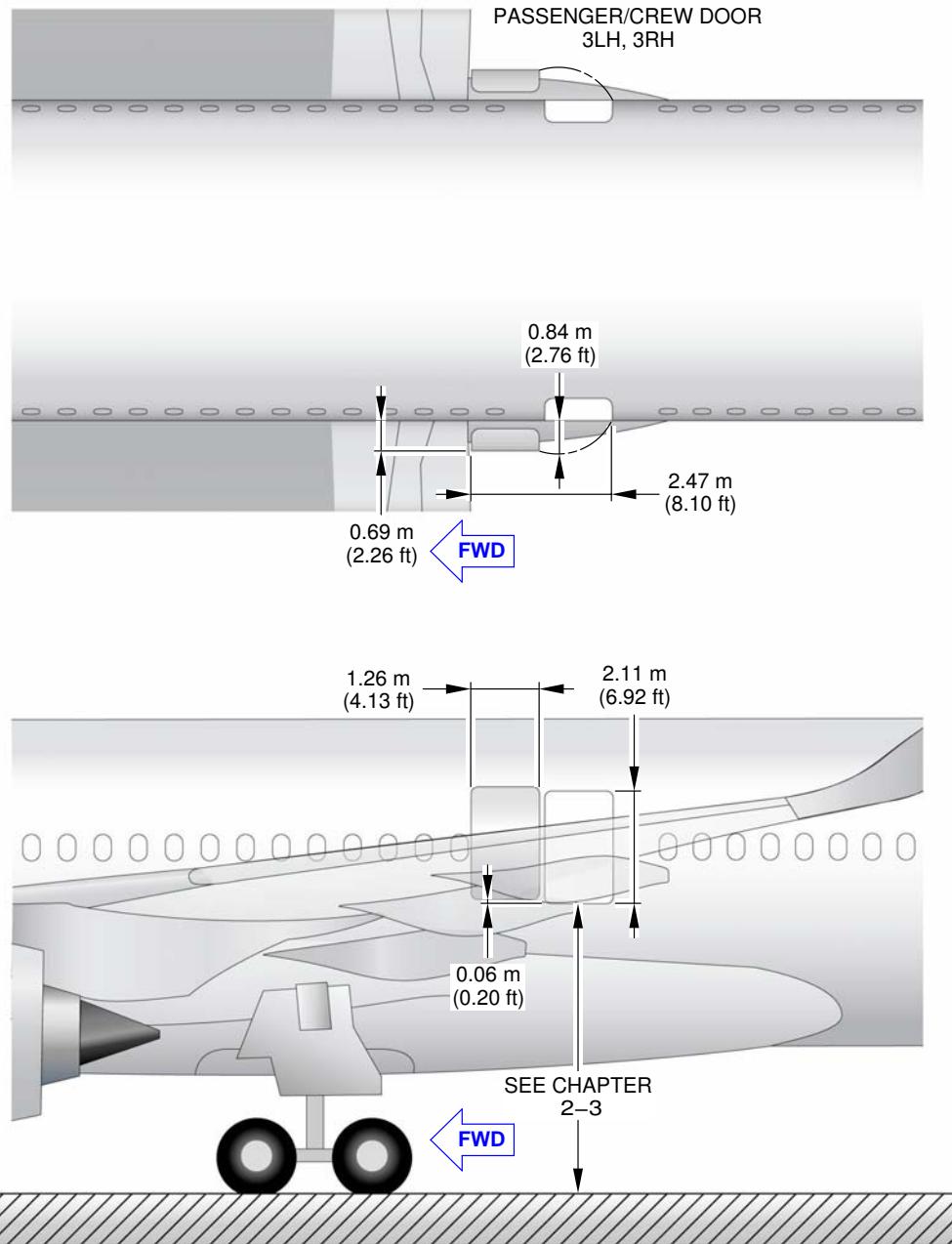
\*\*ON A/C A350-1000 A350-900



P\_AC\_020700\_1\_0020003\_02\_01

Forward Passenger/Crew Doors  
(Sheet 2 of 2)  
FIGURE-2-7-0-991-002-C01

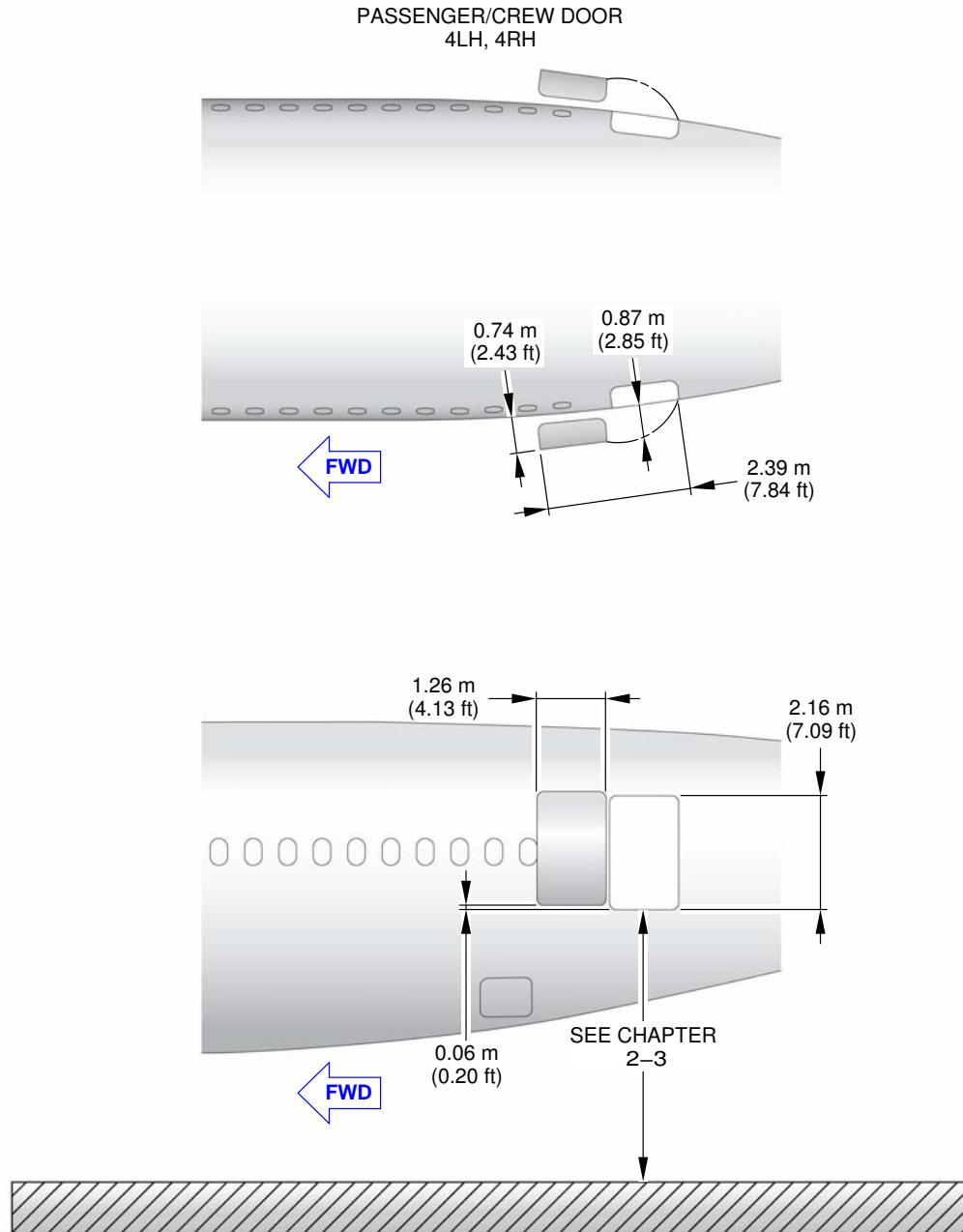
**\*\*ON A/C A350-1000 A350-900**



P\_AC\_020700\_1\_0030001\_01\_01

Aft Passenger/Crew Doors  
 (Sheet 1 of 2)  
 FIGURE-2-7-0-991-003-A01

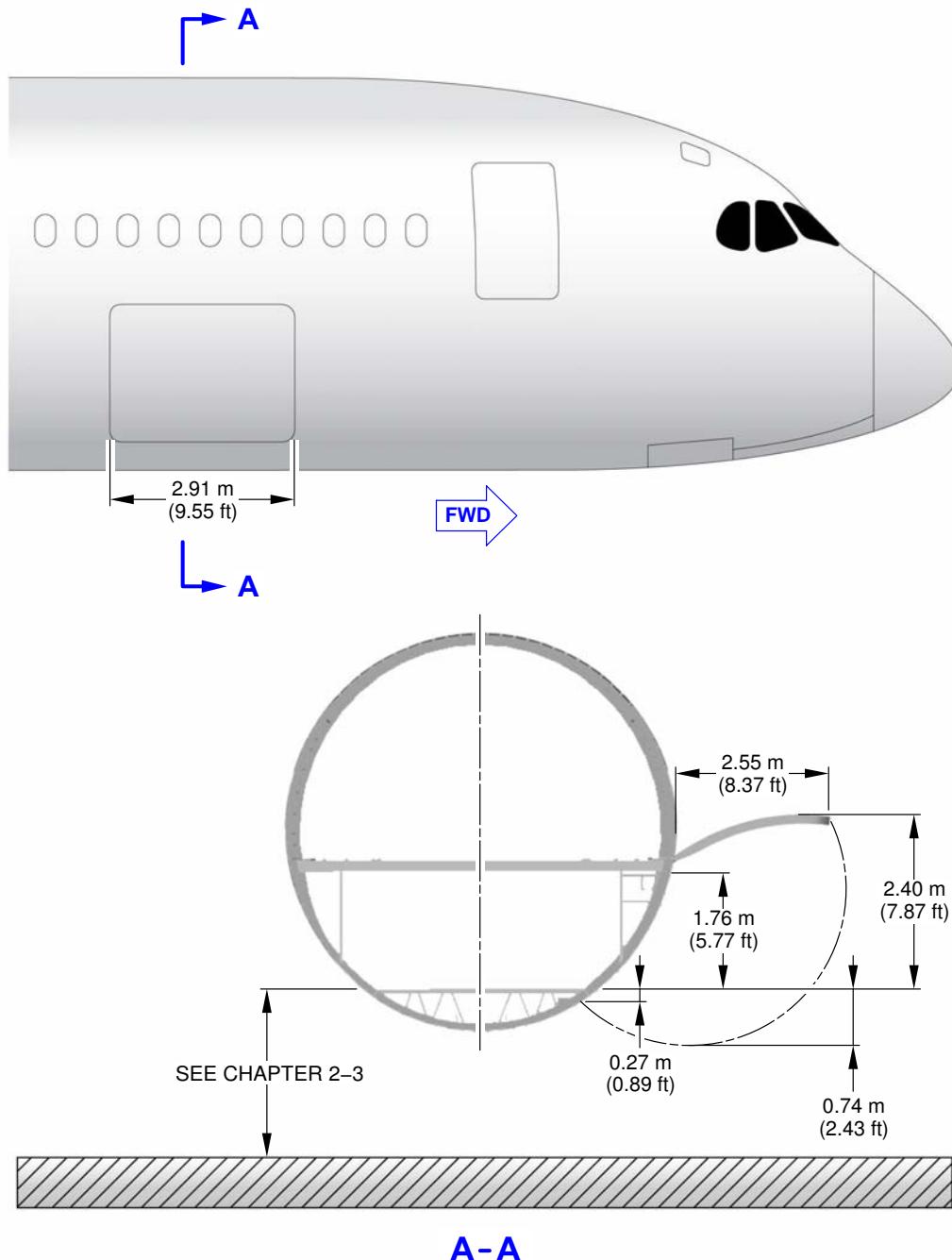
\*\*ON A/C A350-1000 A350-900



P\_AC\_020700\_1\_0030001\_02\_01

Aft Passenger/Crew Doors  
(Sheet 2 of 2)  
FIGURE-2-7-0-991-003-A01

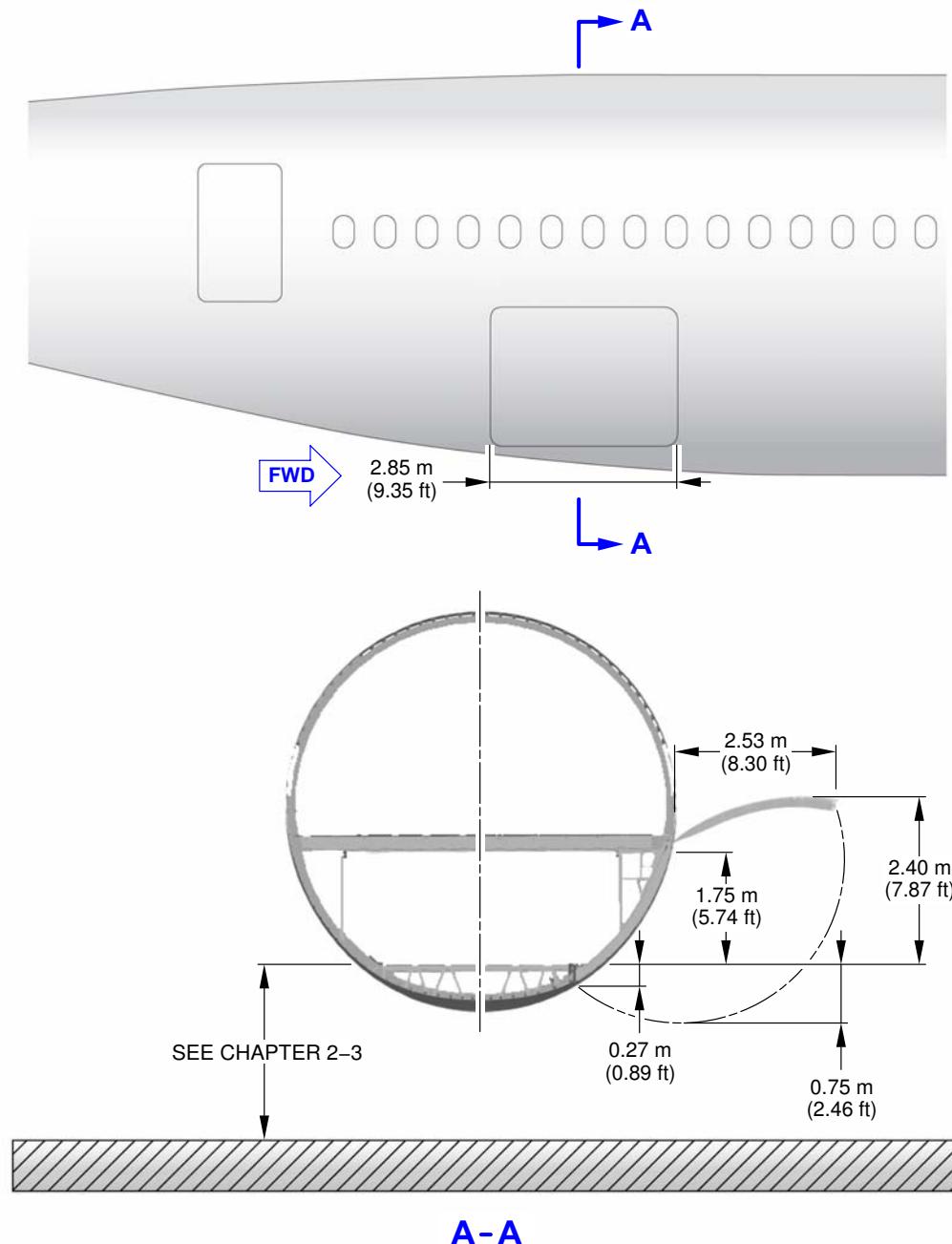
\*\*ON A/C A350-1000 A350-900



P\_AC\_020700\_1\_0040001\_01\_00

Forward Cargo Compartment Door  
FIGURE-2-7-0-991-004-A01

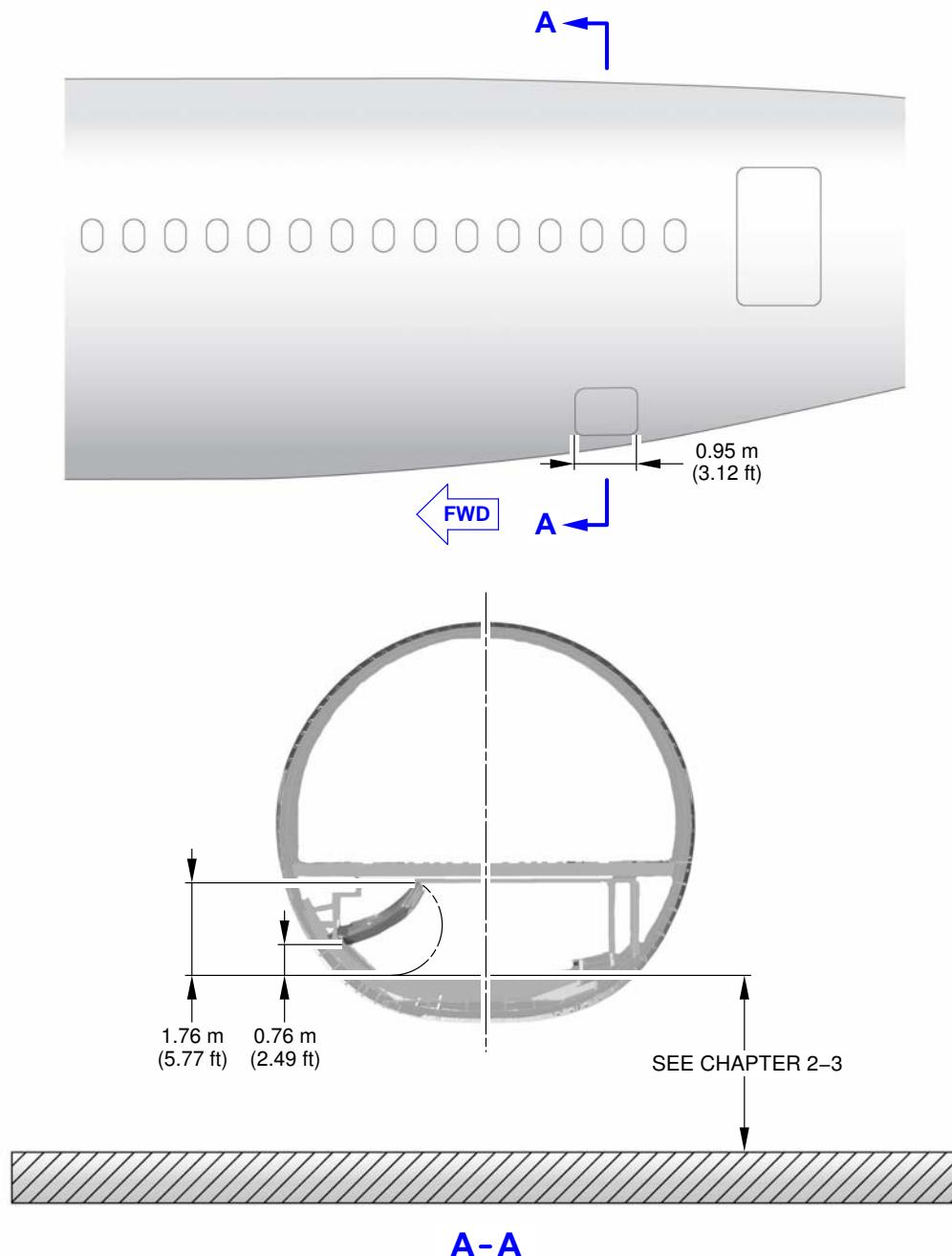
\*\*ON A/C A350-1000 A350-900



P\_AC\_020700\_1\_0050001\_01\_00

Aft Cargo Compartment Door  
FIGURE-2-7-0-991-005-A01

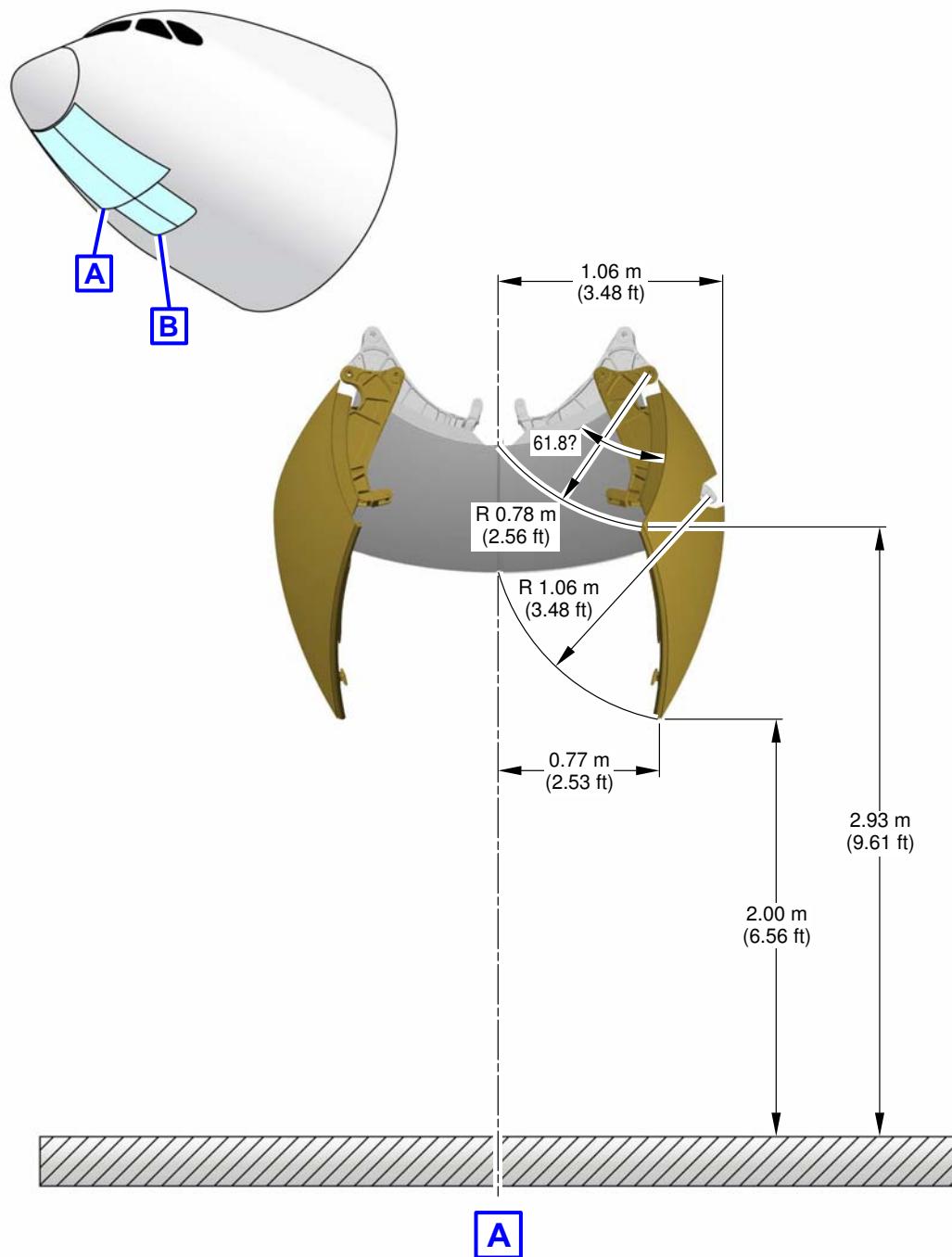
\*\*ON A/C A350-1000 A350-900



P\_AC\_020700\_1\_0060001\_01\_00

Bulk Cargo Compartment Door  
FIGURE-2-7-0-991-006-A01

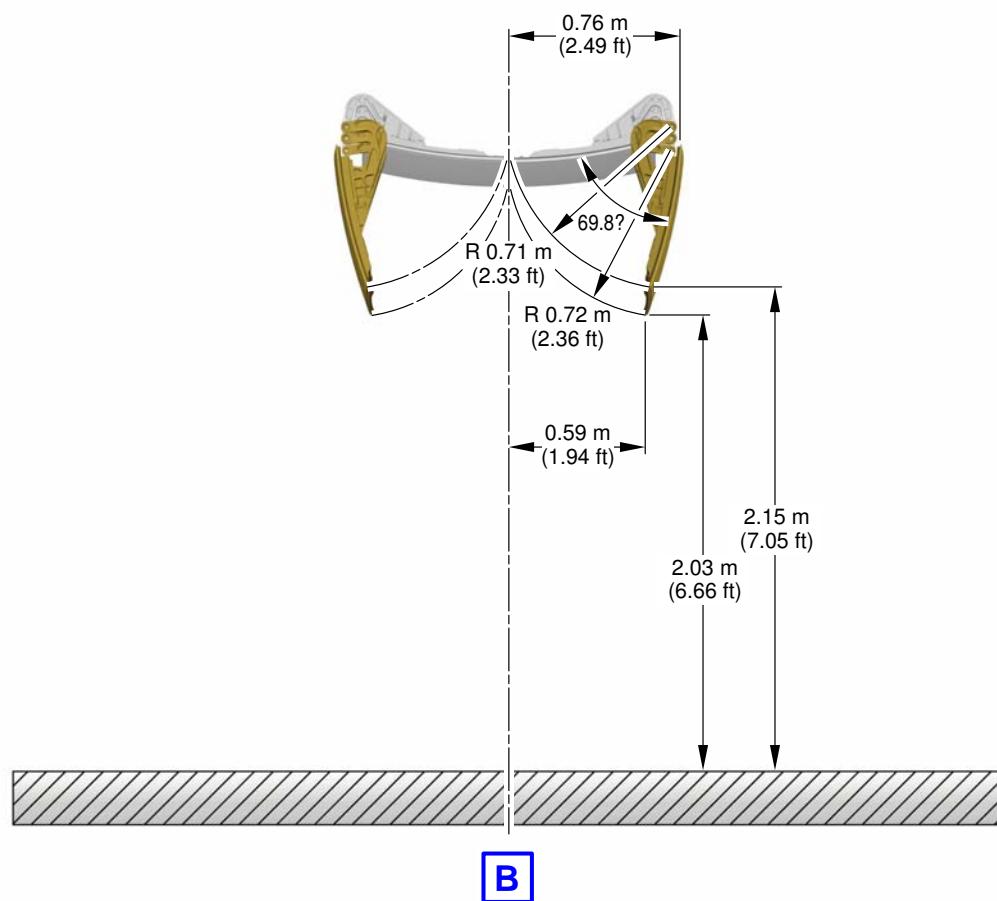
\*\*ON A/C A350-1000 A350-900



P\_AC\_020700\_1\_0070001\_01\_02

Nose Landing Gear Doors  
Forward Nose Landing Gear Doors (Sheet 1 of 2)  
FIGURE-2-7-0-991-007-A01

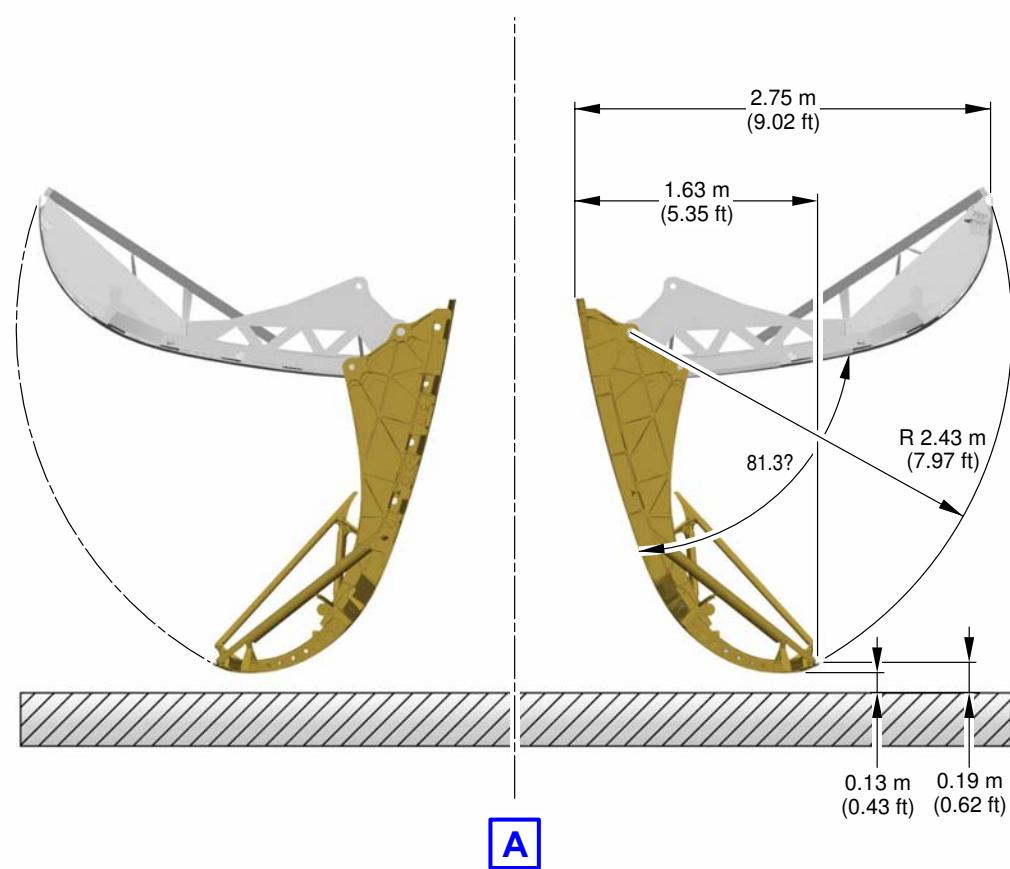
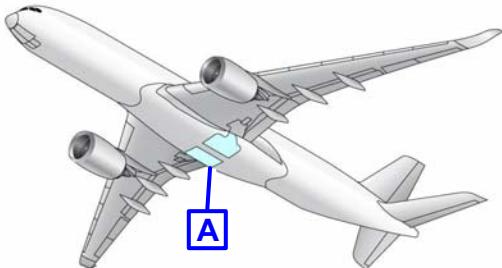
\*\*ON A/C A350-1000 A350-900



P\_AC\_020700\_1\_0070001\_02\_01

Nose Landing Gear Doors  
Aft Nose Landing Gear Doors (Sheet 2 of 2)  
FIGURE-2-7-0-991-007-A01

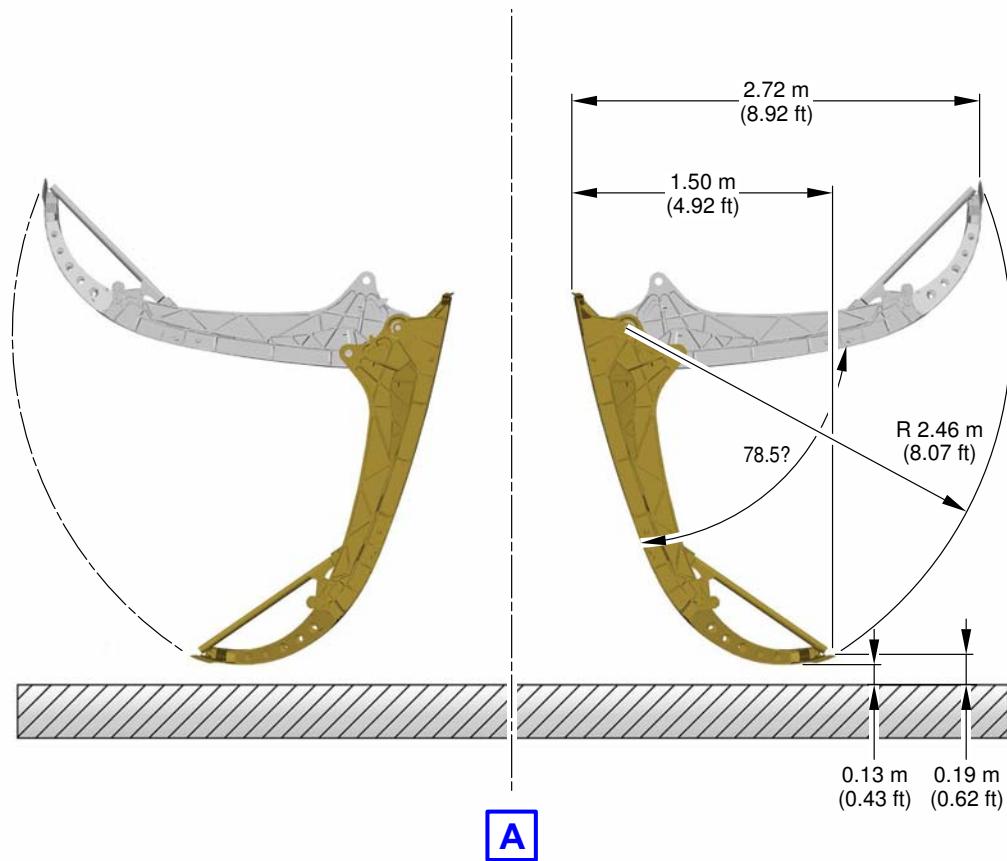
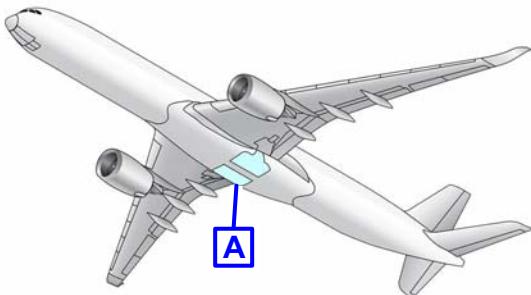
\*\*ON A/C A350-900



P\_AC\_020700\_1\_0080001\_01\_01

Main Landing Gear Doors  
FIGURE-2-7-0-991-008-A01

\*\*ON A/C A350-1000



P\_AC\_020700\_1\_0080002\_01\_01

Main Landing Gear Doors  
FIGURE-2-7-0-991-008-B01

## 2-8-0      Escape Slides

**\*\*ON A/C A350-1000 A350-900**Escape Slides

## 1. General

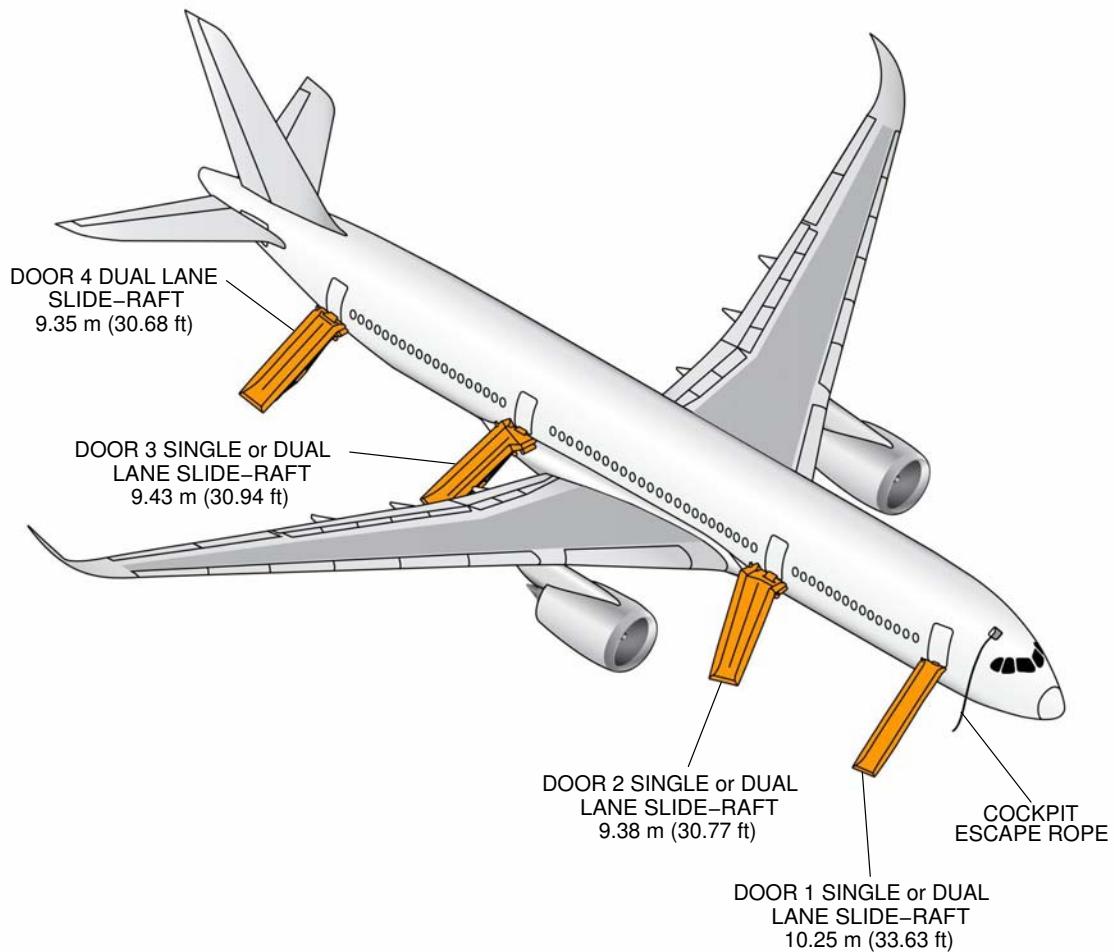
This section provides the location of cabin escape facilities and related clearances.

## 2. Location

Escape facilities are provided at the following locations:

- One cockpit escape rope is kept in a dedicated stowage compartment adjacent to the escape hatch.
- One single or dual lane slide-rafts can be installed at doors 1 to 3 (total 6).
- One dual lane slide-raft at door 4 (total two).

\*\*ON A/C A350-900

**NOTE:**

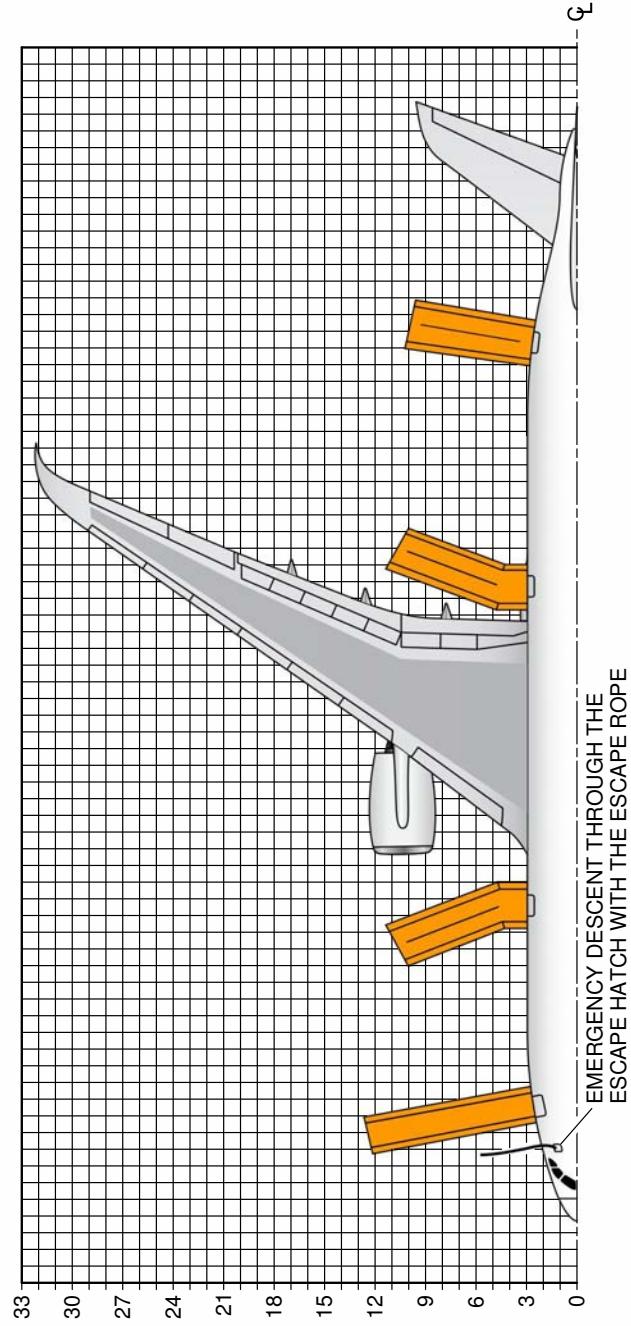
RH SHOWN, LH SYMMETRICAL.

P\_AC\_020800\_1\_0020001\_01\_02

Escape Slides  
Escape Slides - Location (Sheet 1 of 2)  
FIGURE-2-8-0-991-002-A01

\*\*ON A/C A350-900

### EMERGENCY EVACUATION



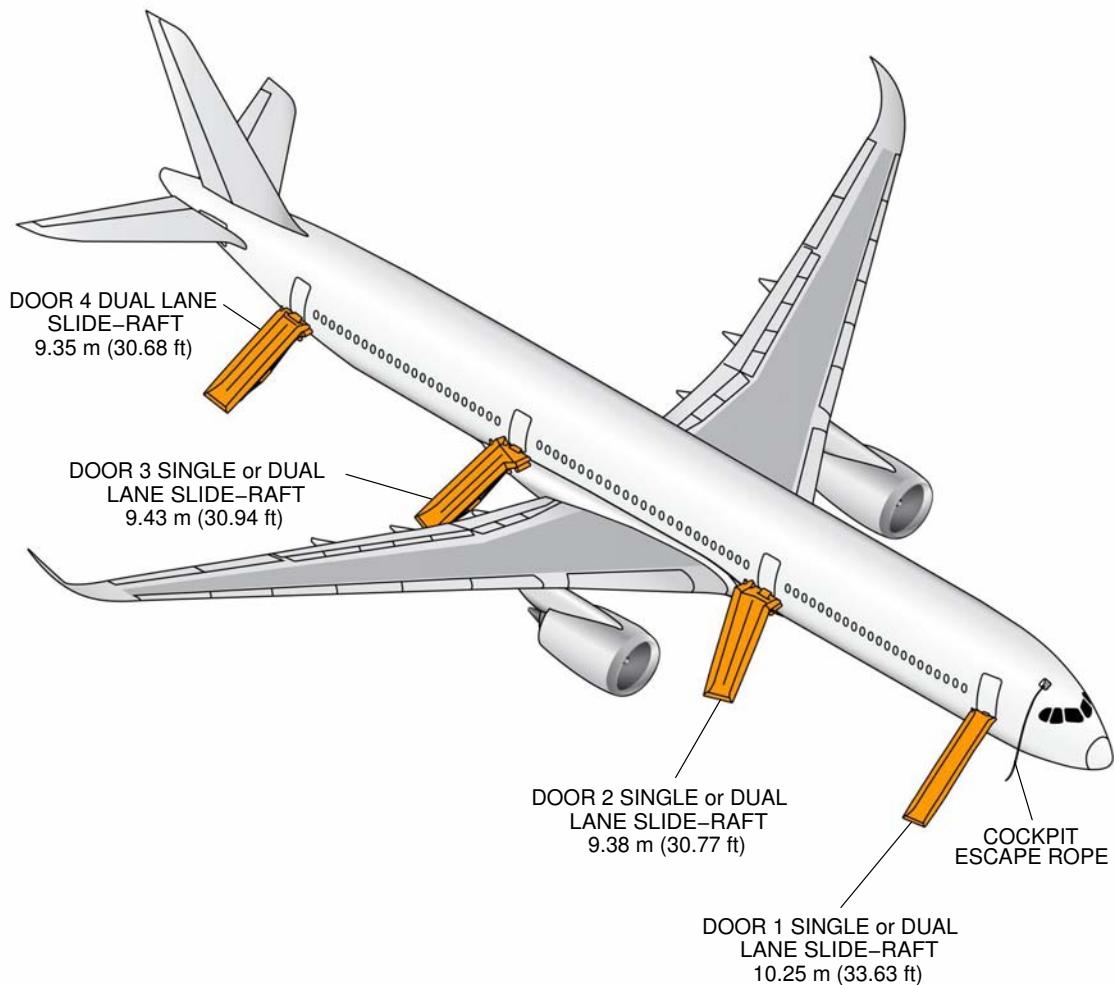
Escape Slides  
Escape Slides - Dimensions (Sheet 2 of 2)  
FIGURE-2-8-0-991-002-A01

**NOTE:**  
 - RH SHOWN, LH SYMMETRICAL.  
 - DIMENSIONS ARE APPROXIMATE.

P\_AC\_020800\_1\_0020001\_02\_01

2-8-0

\*\*ON A/C A350-1000

**NOTE:**

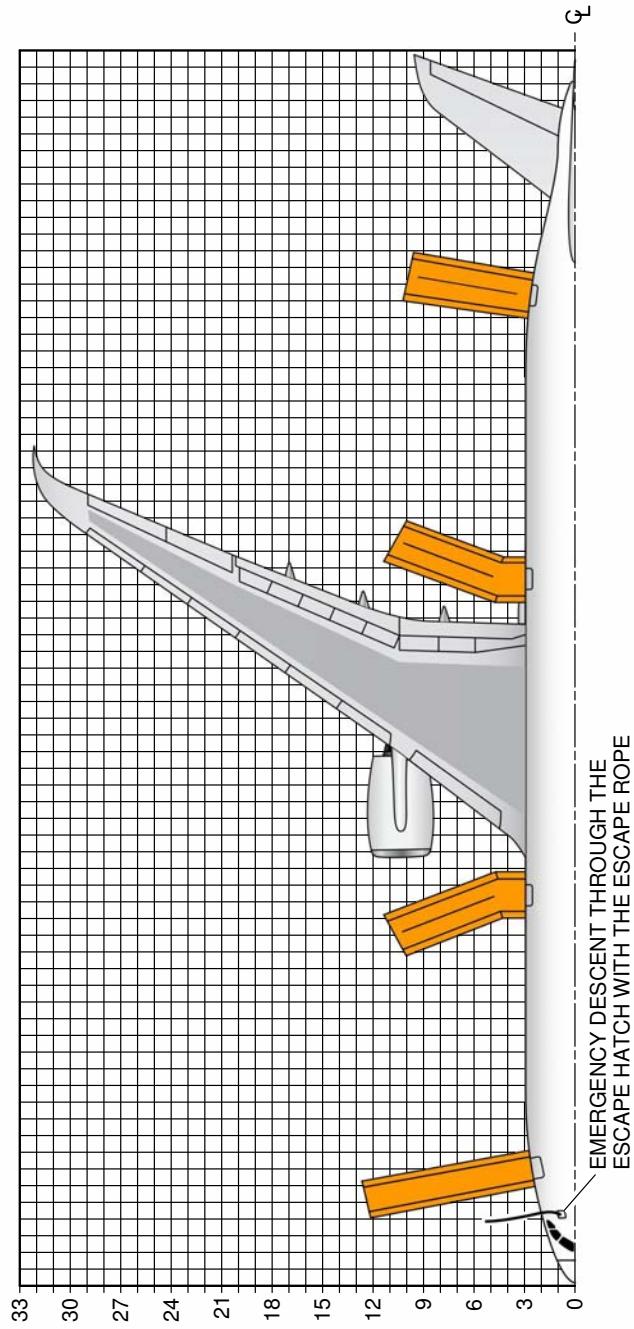
RH SHOWN, LH SYMMETRICAL.

P\_AC\_020800\_1\_0030004\_01\_01

Escape Slides  
Escape Slides - Location (Sheet 1 of 2)  
FIGURE-2-8-0-991-003-D01

\*\*ON A/C A350-1000

### EMERGENCY EVACUATION



**NOTE:**  
 - RH SHOWN, LH SYMMETRICAL.  
 - DIMENSIONS ARE APPROXIMATE.

P\_AC\_020800\_1\_0030004\_02\_00

Escape Slides  
 Escape Slides - Dimensions (Sheet 2 of 2)  
 FIGURE-2-8-0-991-003-D01

2-9-0      **Landing Gear****\*\*ON A/C A350-1000 A350-900**Landing Gear**\*\*ON A/C A350-900**

## 1. MLG System Description

The two MLGs are mounted in the LH and RH wing just outboard of the wing root within the trailing edge.

The MLGs retract sideways into bays in the fuselage. Each MLG has a four wheel twin-tandem bogie. Each MLG has one related main door operated by a single door actuator.

Each MLG has a gear uplock and a door uplock.

The MLG has a double side stay arrangement to improve load distribution on the composite wing.

Each side stay has a separate lock stay assembly to provide a positive means to lock the landing gear in the extended position for landing and ground manoeuvres.

Each MLG leg contains a single-stage oleo shock strut consisting of a sliding piston and a main fitting that is supported by the two folding side stays and pivots on the top of the main fitting for extension/retraction.

In-flight, the MLGs are retracted and locked up.

The MLG doors are closed and locked to enclose the MLG bay in flight and on the ground, opening only when the landing gear is extending or retracting.

Hydraulic power for the MLG extension/retraction comes from the green hydraulic system.

**\*\*ON A/C A350-1000**

## 2. MLG System Description

The two MLGs are mounted in the LH and RH wing just outboard of the wing root within the trailing edge.

The MLGs retract sideways into bays in the fuselage. Each MLG has a six wheel triple-tandem bogie.

Each MLG has one related main door operated by a single door actuator.

Each MLG has a gear uplock and a door uplock.

The MLG has a double side stay arrangement to improve load distribution on the composite wing.

Each side stay has a separate lock stay assembly to provide a positive means to lock the landing gear in the extended position for landing and ground manoeuvres.

Each MLG leg contains a single-stage oleo shock strut consisting of a sliding piston and a main fitting that is supported by the two folding side stays and pivots on the top of the main fitting for extension/retraction.

In-flight, the MLGs are retracted and locked up.

The MLG doors are closed and locked to enclose the MLG bay in flight and on the ground, opening only when the landing gear is extending or retracting.

Hydraulic power for the MLG extension/retraction comes from the green hydraulic system.

**\*\*ON A/C A350-1000 A350-900****3. NLG System Description**

The NLG is located in the forward lower fuselage on the aircraft centerline below the cockpit. It is forward retracting and consists of a twin wheel axle mounted on a main fitting that incorporates a single-stage oleo shock strut supported by a forward drag stay.

The NLG main fitting accommodates the steering assembly for the Nose Wheel Steering (NWS) system.

In-flight, the NLG is retracted and locked up while the four sideways opening NLG Doors are closed and locked to enclose the NLG bay.

The two forward doors are each operated by two independent door actuators.

When retracted, the NLG is held by an uplock and the two main NLG doors are held by a single door uplock assembly, containing an uplock hook for each door.

The hydraulically powered forward NLG doors are also closed after the NLG is extended.

The aft doors are mechanically driven and remain open when the NLG is extended.

Hydraulic power for the NLG extension/retraction comes from the yellow hydraulic system.

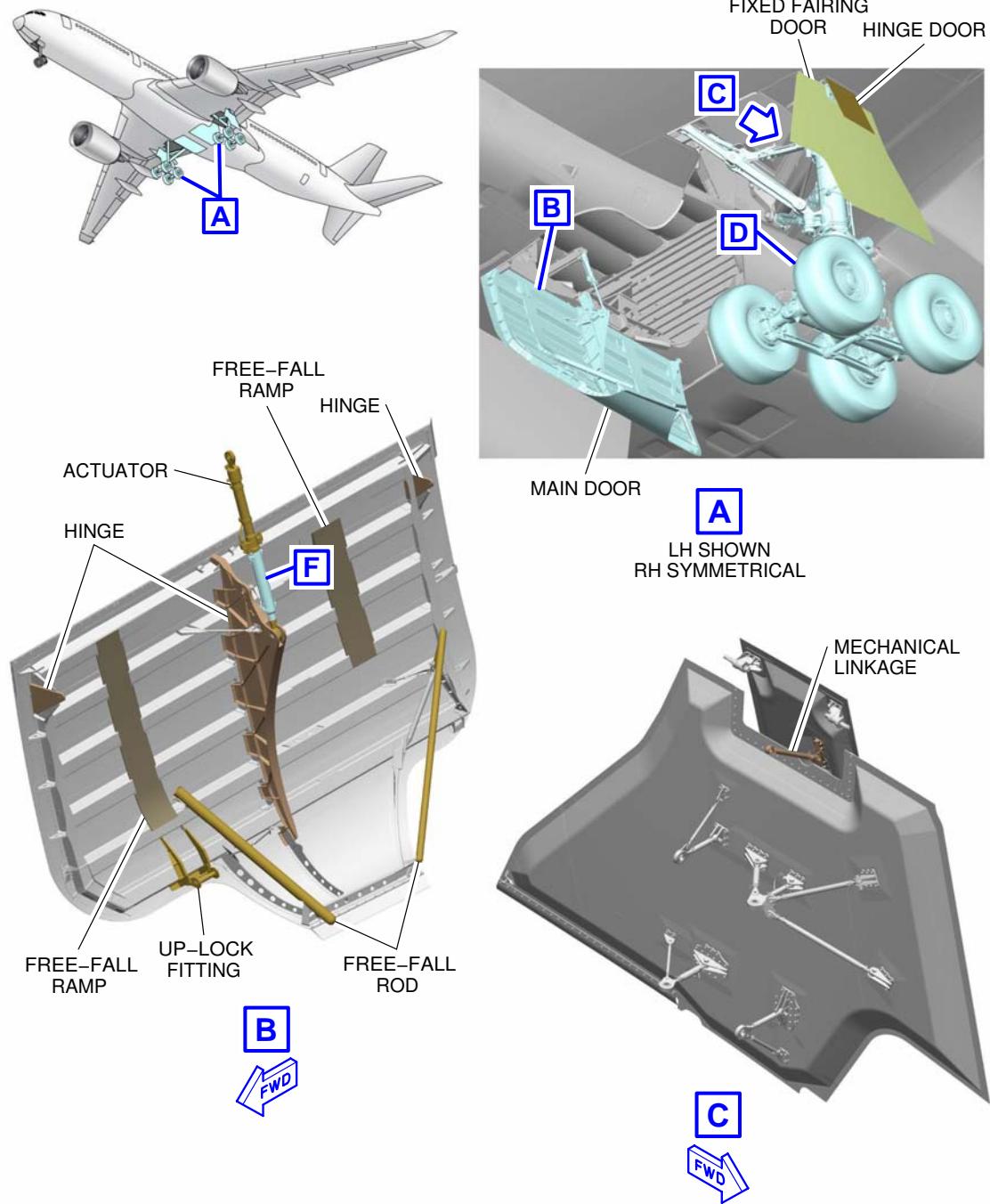
Electric power to the navigation lights can be provided through the tow truck power connector on the 2GN service panel, See FIGURE 2-9-0-991-002-A. See AC 5-4-3 for connector definition.

**4. Landing Gear Extension and Retraction System**

The Landing Gear Extension and Retraction System (LGERS) is made up of three sub-systems:

- Normal extension and retraction system, for normal extension and retraction,
- Alternate extension system, for extension in flight if the normal system is unavailable,
- Ground door opening system, to allow on-ground access to the landing gear bays for maintenance purposes.

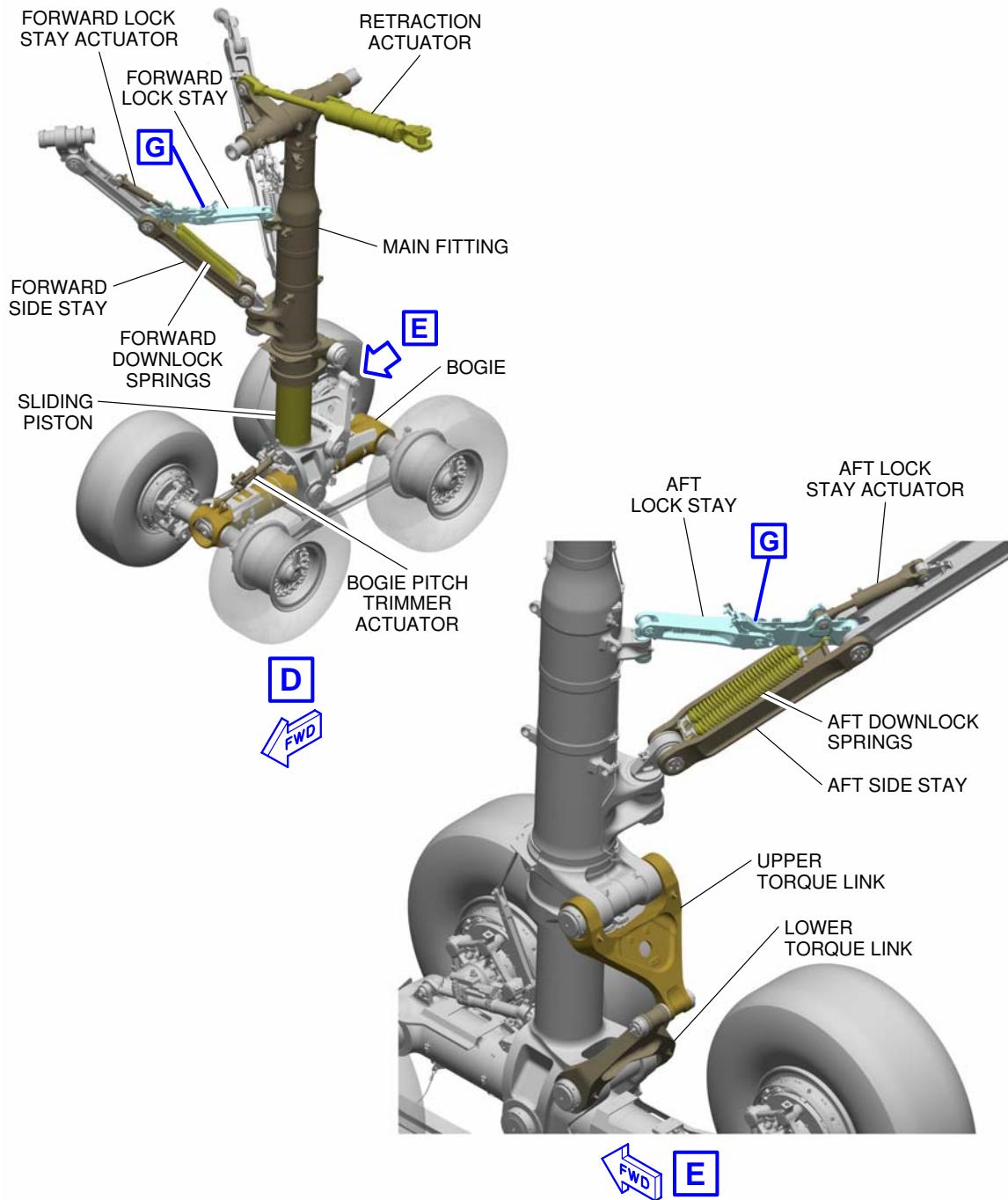
\*\*ON A/C A350-900



P\_AC\_020900\_1\_0010001\_01\_01

Main Landing Gear  
Doors Overview (Sheet 1 of 3)  
FIGURE-2-9-0-991-001-A01

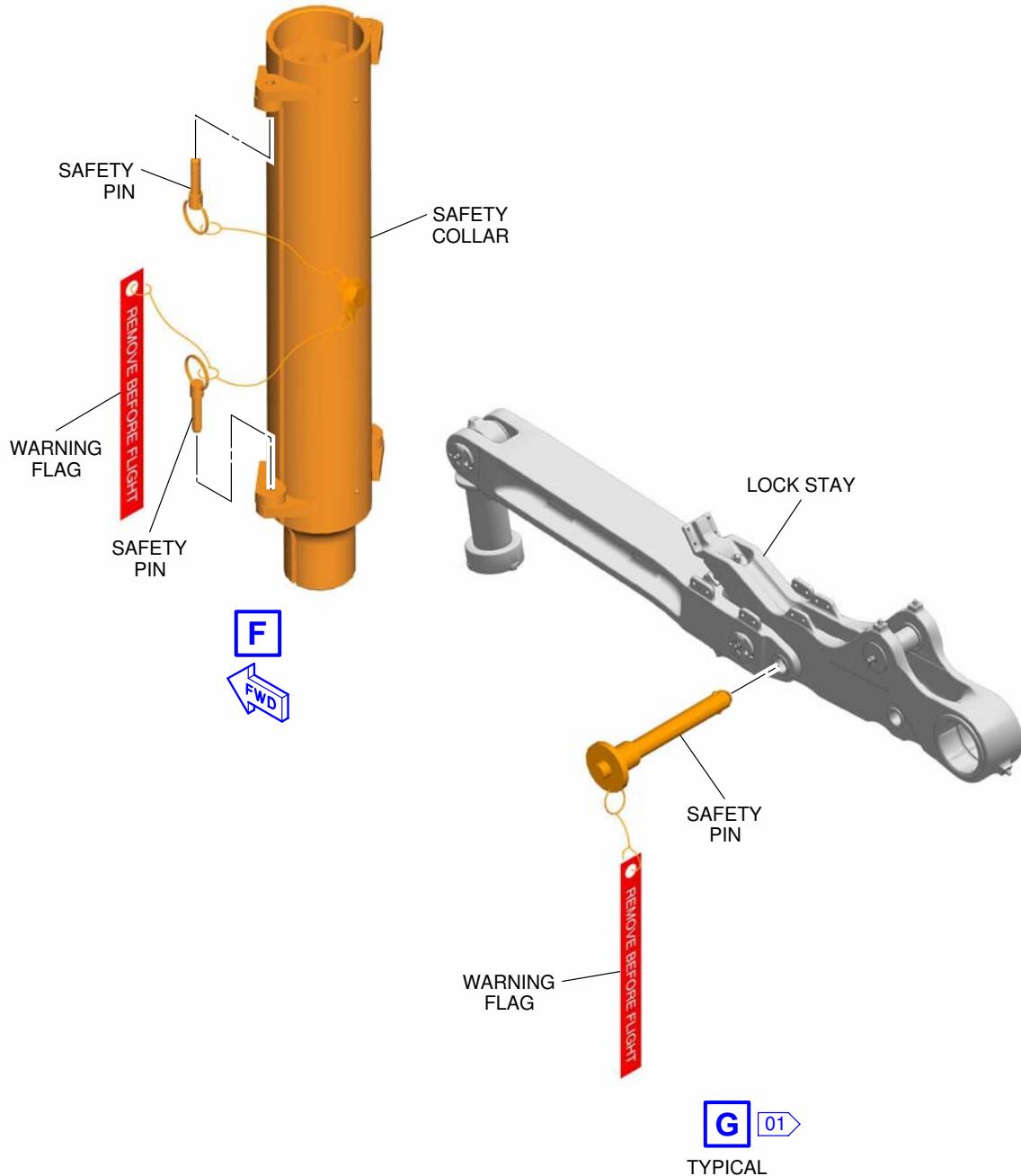
\*\*ON A/C A350-900



P\_AC\_020900\_1\_0010001\_02\_01

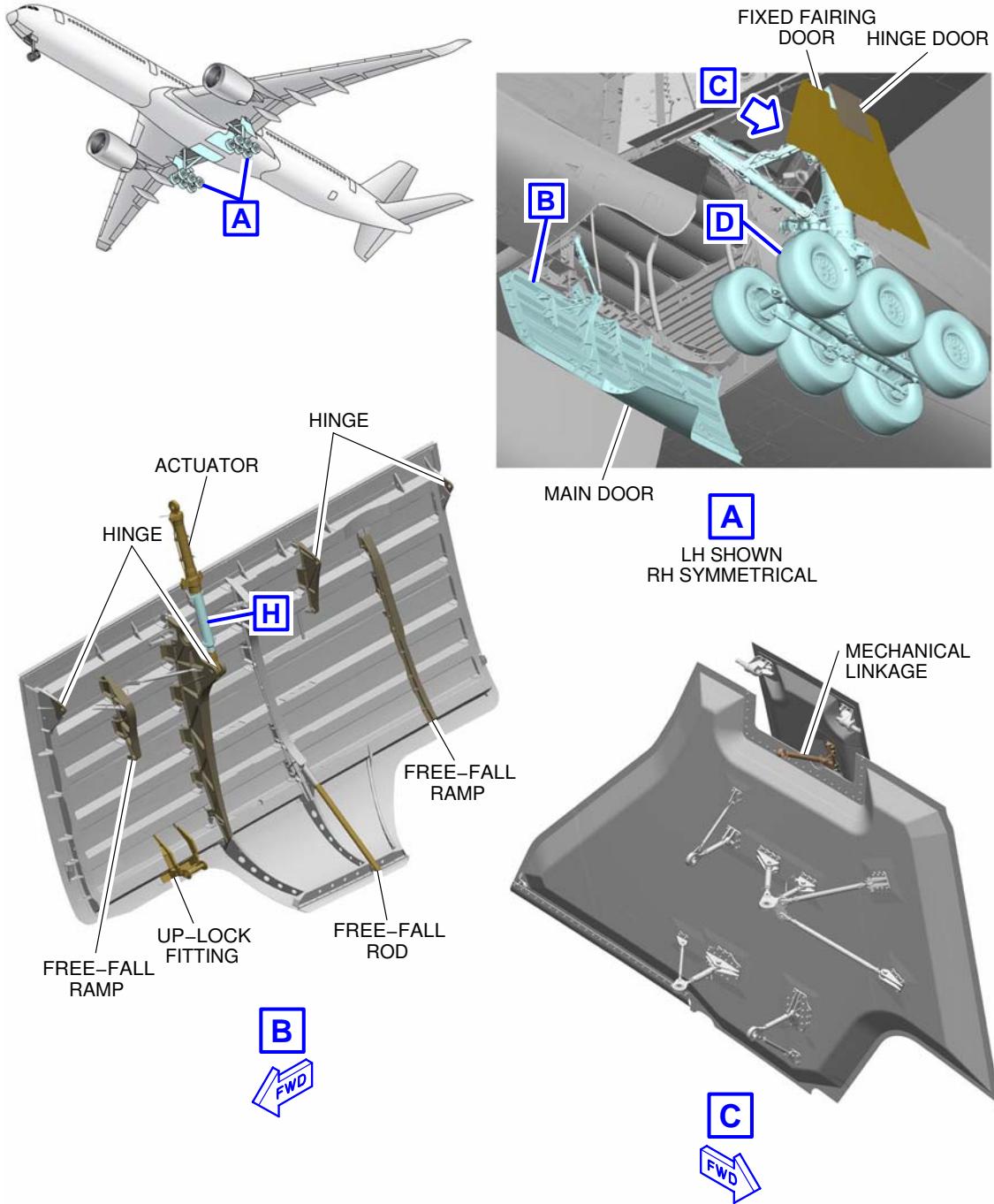
Main Landing Gear  
Overview (Sheet 2 of 3)  
FIGURE-2-9-0-991-001-A01

\*\*ON A/C A350-900



Main Landing Gear  
Safety Devices (Sheet 3 of 3)  
FIGURE-2-9-0-991-001-A01

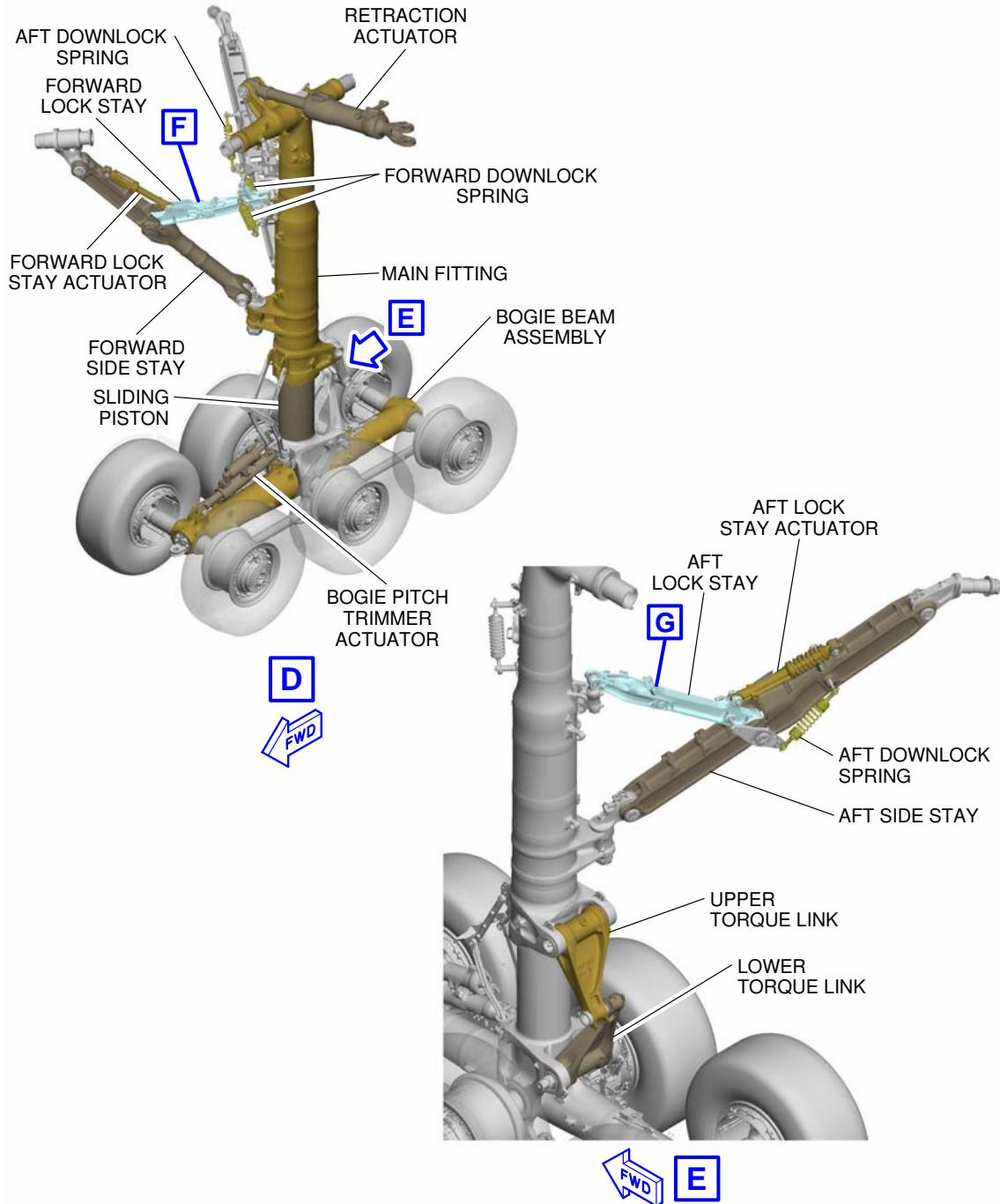
\*\*ON A/C A350-1000



P\_AC\_020900\_1\_0010002\_01\_00

Main Landing Gear  
Doors Overview (Sheet 1 of 3)  
FIGURE-2-9-0-991-001-B01

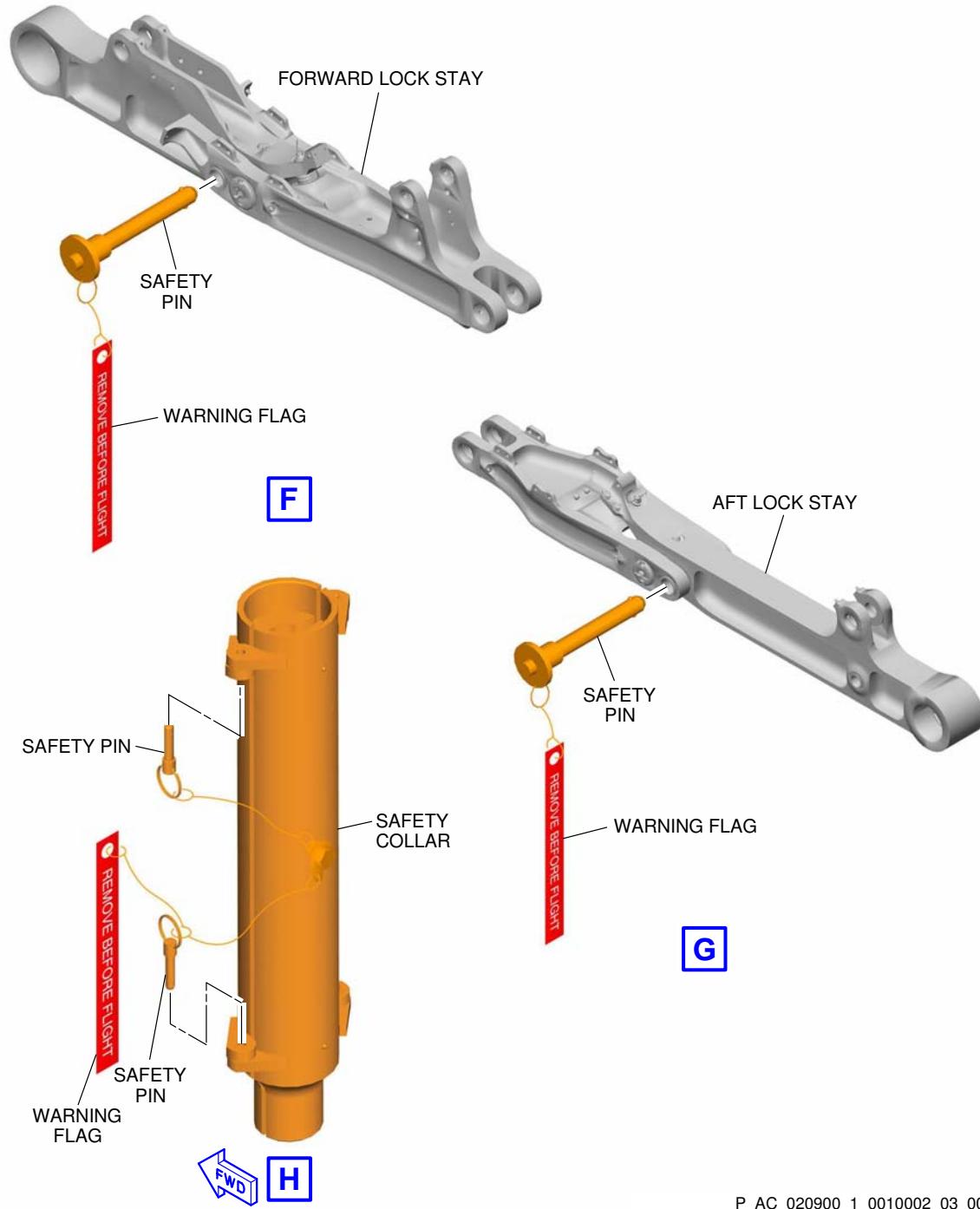
\*\*ON A/C A350-1000



P\_AC\_020900\_1\_0010002\_02\_00

Main Landing Gear  
Overview (Sheet 2 of 3)  
FIGURE-2-9-0-991-001-B01

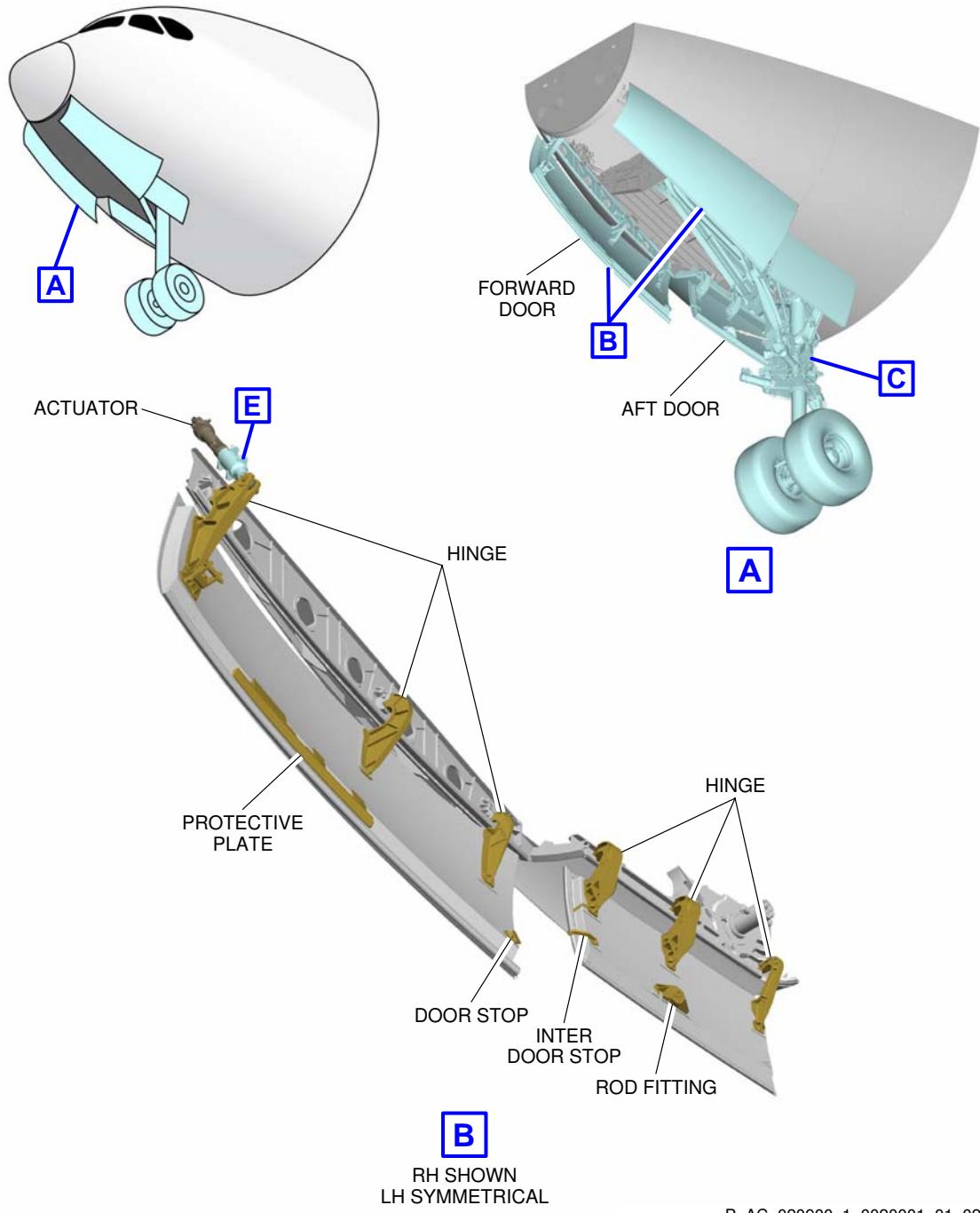
\*\*ON A/C A350-1000



P\_AC\_020900\_1\_0010002\_03\_00

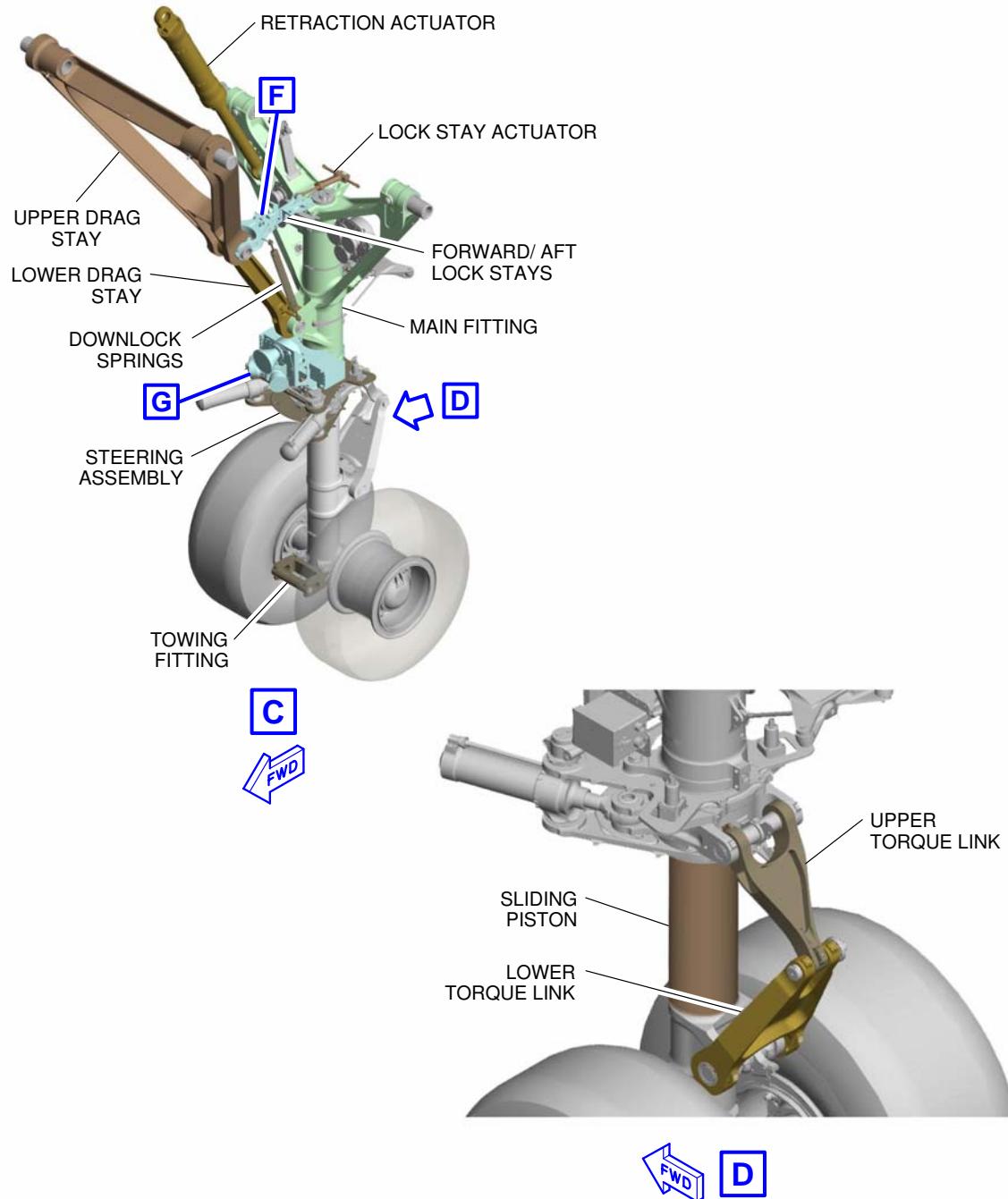
Main Landing Gear  
Safety Devices (Sheet 3 of 3)  
FIGURE-2-9-0-991-001-B01

\*\*ON A/C A350-1000 A350-900



Nose Landing Gear  
Doors Overview (Sheet 1 of 4)  
FIGURE-2-9-0-991-002-A01

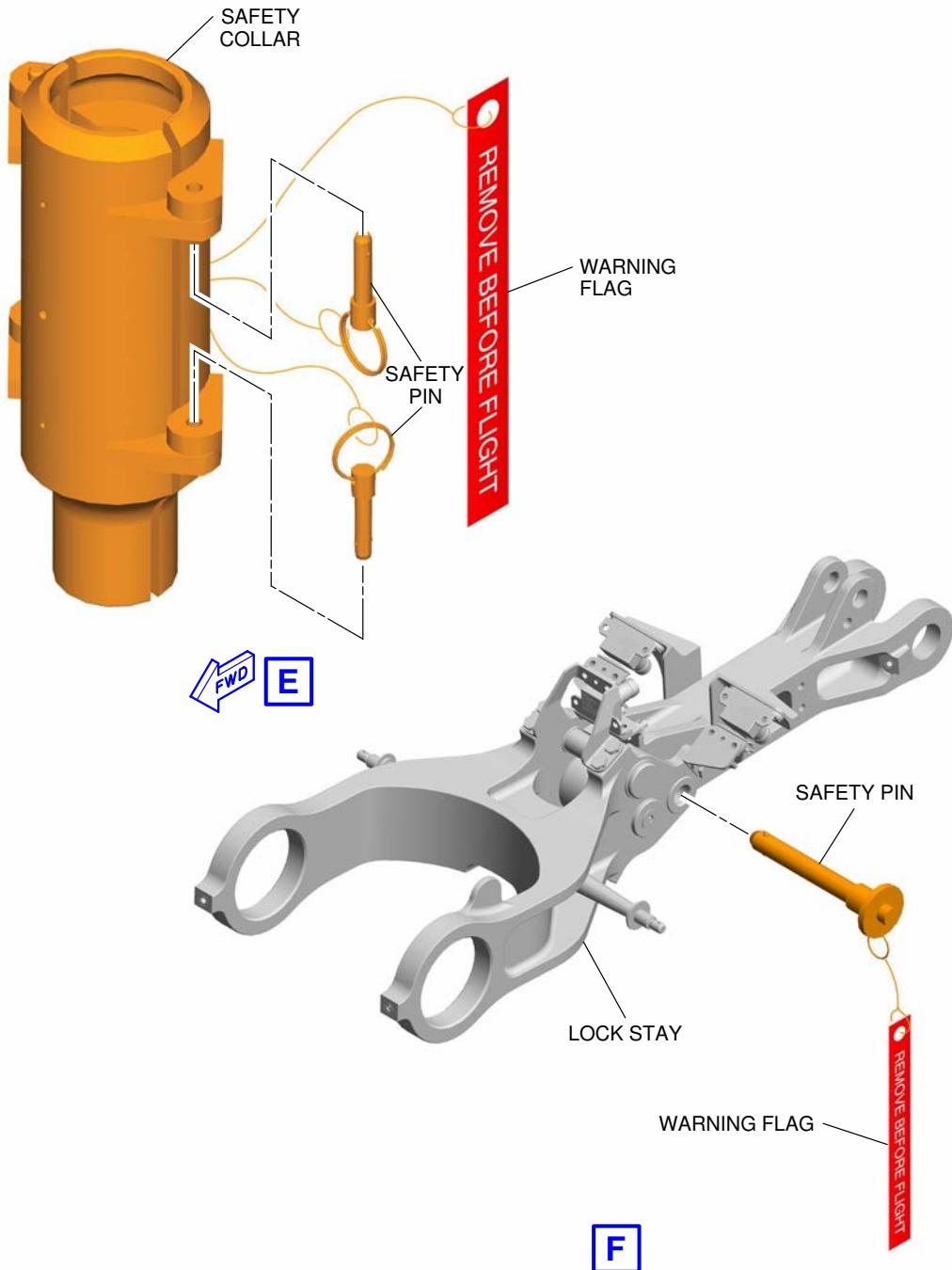
\*\*ON A/C A350-1000 A350-900



P\_AC\_020900\_1\_0020001\_02\_01

Nose Landing Gear  
Overview (Sheet 2 of 4)  
FIGURE-2-9-0-991-002-A01

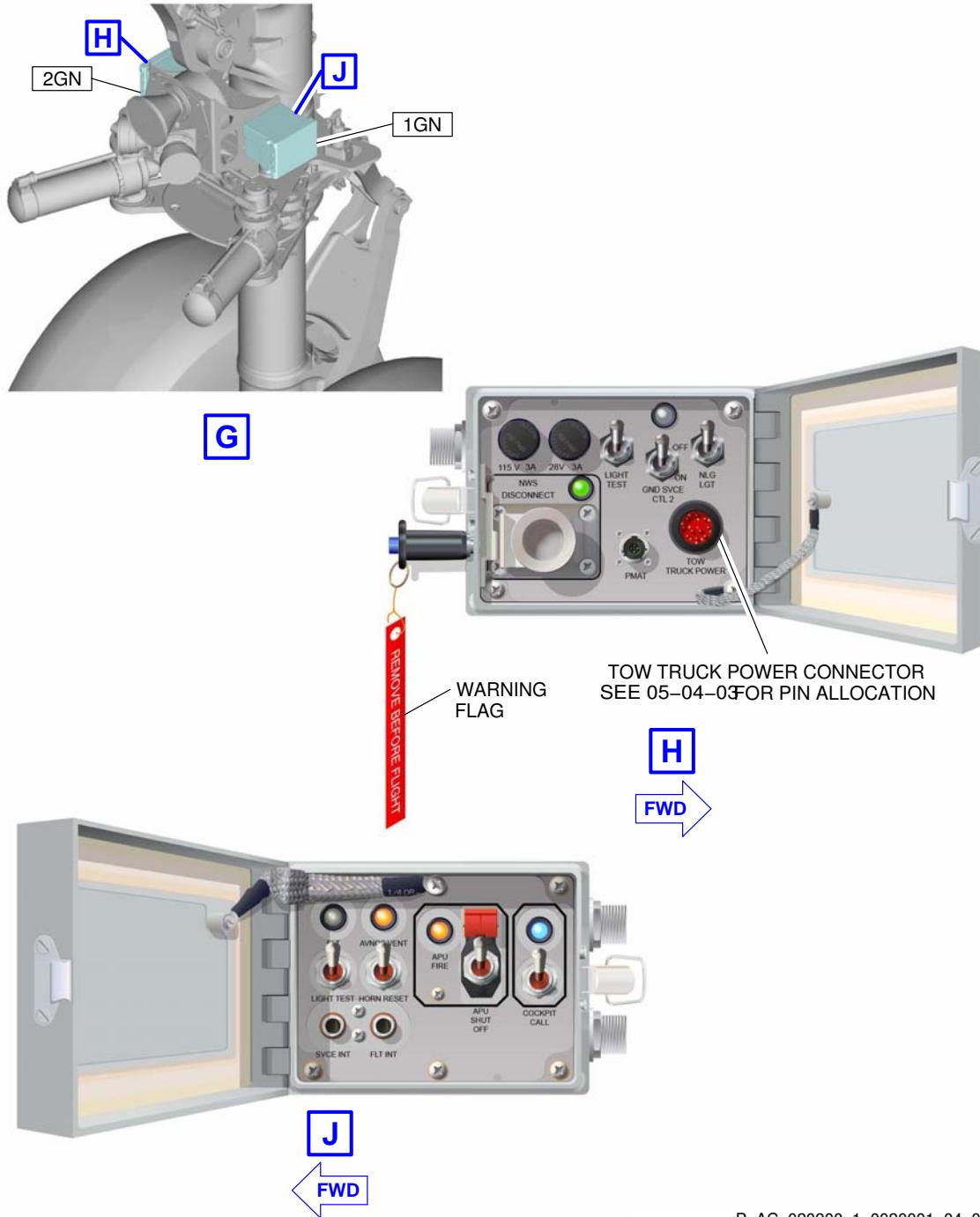
\*\*ON A/C A350-1000 A350-900



P\_AC\_020900\_1\_0020001\_03\_02

Nose Landing Gear  
Safety Devices (Sheet 3 of 4)  
FIGURE-2-9-0-991-002-A01

\*\*ON A/C A350-1000 A350-900



P\_AC\_020900\_1\_0020001\_04\_02

Nose Landing Gear  
Service Panels (Sheet 4 of 4)  
FIGURE-2-9-0-991-002-A01

## 2-9-1      Landing Gear Maintenance Pits

**\*\*ON A/C A350-1000 A350-900**Landing Gear Maintenance Pits**\*\*ON A/C A350-900**

## 1. General

The minimum maintenance pit envelopes for landing gear shock absorber maintenance are shown in Figures FIGURE 2-9-1-991-001-A, FIGURE 2-9-1-991-002-A, FIGURE 2-9-1-991-003-A and FIGURE 2-9-1-991-004-A.

The landing gears are shown with simplified gear structure.

The three envelopes show the minimum dimensions for these maintenance operations:

- Extension and retraction
- Gear removal
- Piston removal.

Pit envelopes shown represent minimum sizing required to accommodate landing gear tires and removal tooling. Dimensions for the below cases are to be added in the shown envelopes:

- Clearance allowances for working area
- Operator access
- Functional clearances
- Tooling
- Civil engineering considerations.

The maintenance pits are symmetrical about the aircraft centerline and all dimensions shown are minimum dimensions with zero clearances.

The dimensions for the pits have been determined as follows:

- The aircraft starting condition is with weight on wheels supported by jacks over the pits.
- The pit depths are then based on the shock absorbers lowering to the fully extended position plus allowances for tooling.
- The length and width of the pits allow the gear to rotate after the weight is taken off the landing gear
- The landing gear tires are in the maximum grown condition
- The MLG wheels, brakes and bogie beams are removed before the piston is removed
- The NLG wheels are removed before the piston is removed
- Both the MLG and the NLG pistons are removed vertically.

The pit depth for the MLG piston removal is based on the removal pallet support leg being installed at its maximum length (upper pin hole position).

The landing gear piston trolley for MLG and NLG may be positioned FWD or AFT of the landing gears depending on the chosen removal orientation (rotation FWD or AFT).

Dimensions for elevators and associated mechanisms must be added to those in Figures FIGURE 2-9-1-991-001-A, FIGURE 2-9-1-991-002-A, FIGURE 2-9-1-991-003-A and FIGURE 2-9-1-991-004-A.

A. Elevators

These can be either mechanical or hydraulic. They are used to:

- Permit easy movement of persons and equipment around the landing gears
- Lift and remove landing gear assemblies out of the pits.

B. Jacking

The aircraft must be in position over the pits to put the gear on the elevators. The jack must be installed and engaged with all the jacking points, AC 2-14-1 for aircraft maintenance jacking.

When lowering the elevators, the aircraft weight will be transferred from the wheels to the jacks.

The landing gears must not be in contact with the elevators during retraction/extension tests.

The aircraft must not bend when it is jacked and when its weight is off the wheels.

When tripod support jacks are used, the tripod-base circle radius must be limited because the locations required for positioning the columns are close to the sides of the pits.

**\*\*ON A/C A350-1000**

2. General

The minimum maintenance pit envelopes for landing gear shock absorber maintenance are shown in Figures FIGURE 2-9-1-991-005-B, FIGURE 2-9-1-991-006-A, FIGURE 2-9-1-991-007-A and FIGURE 2-9-1-991-008-A.

The landing gears are shown with simplified gear structure.

The three envelopes show the minimum dimensions for these maintenance operations:

- Extension and retraction
- Gear removal
- Piston removal.

Pit envelopes shown represent minimum sizing required to accommodate landing gear tires and removal tooling. Dimensions for the below cases are to be added in the shown envelopes:

- Clearance allowances for working area
- Operator access
- Functional clearances
- Tooling
- Civil engineering considerations.

The maintenance pits are symmetrical about the aircraft centerline and all dimensions shown are minimum dimensions with zero clearances.

The dimensions for the pits have been determined as follows:

- The aircraft starting condition is with weight on wheels supported by jacks over the pits.
- The pit depths are then based on the shock absorbers lowering to the fully extended position plus allowances for tooling.

- The length and width of the pits allow the gear to rotate after the weight is taken off the landing gear
- The landing gear tires are in the maximum grown condition
- The MLG wheels, brakes and bogie beams are removed before the piston is removed
- The NLG wheels are removed before the piston is removed
- Both the MLG and the NLG pistons are removed vertically.

The pit depth for the MLG piston removal is based on the removal pallet support leg being installed at its maximum length (upper pin hole position).

The landing gear piston trolley for NLG may be positioned FWD or AFT of the landing gear depending on the chosen removal orientation (rotation FWD or AFT).

The landing gear piston trolley for MLG will be positioned AFT of the landing gear, due to design of the tool.

Dimensions for elevators and associated mechanisms must be added to those in Figures FIGURE 2-9-1-991-005-B, FIGURE 2-9-1-991-006-A, FIGURE 2-9-1-991-007-A and FIGURE 2-9-1-991-008-A.

#### A. Elevators

These can be either mechanical or hydraulic. They are used to:

- Permit easy movement of persons and equipment around the landing gears
- Lift and remove landing gear assemblies out of the pits.

#### B. Jacking

The aircraft must be in position over the pits to put the gear on the elevators. The jack must be installed and engaged with all the jacking points, AC 2-14-1 for aircraft maintenance jacking.

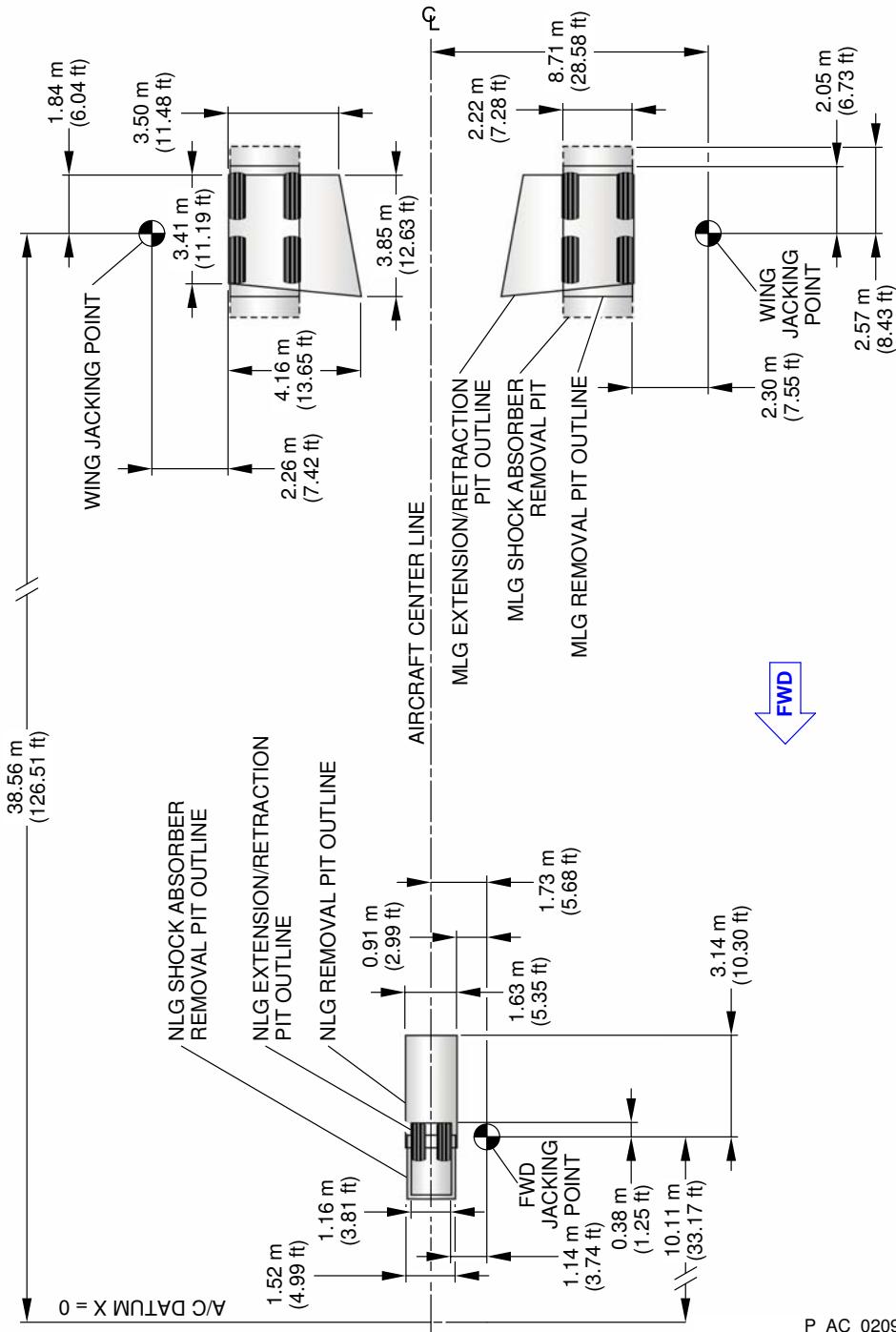
When lowering the elevators, the aircraft weight will be transferred from the wheels to the jacks.

The landing gears must not be in contact with the elevators during retraction/extension tests.

The aircraft must not bend when it is jacked and when its weight is off the wheels.

When tripod support jacks are used, the tripod-base circle radius must be limited because the locations required for positioning the columns are close to the sides of the pits.

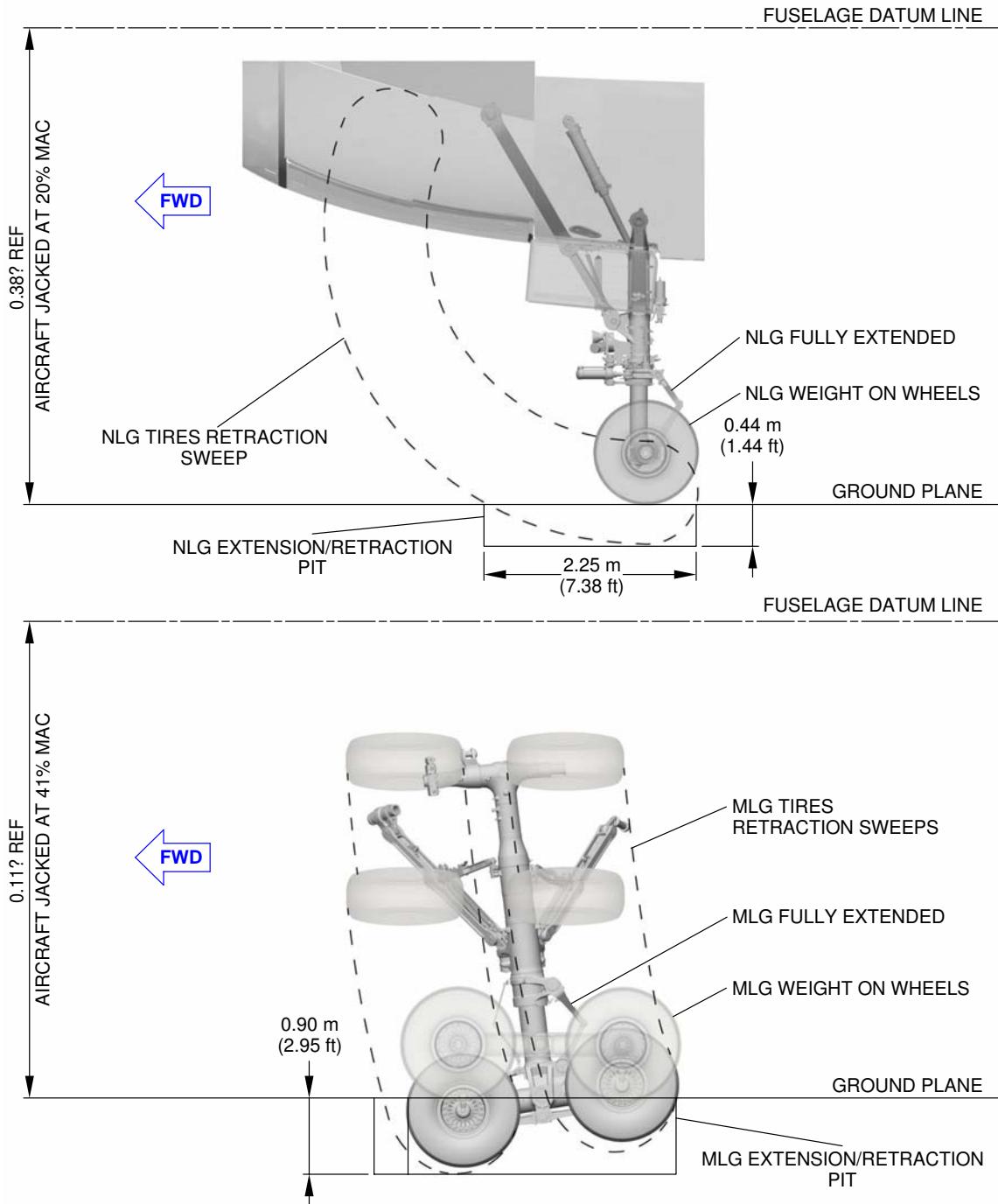
\*\*ON A/C A350-900



Maintenance Pit Envelopes  
FIGURE-2-9-1-991-001-A01

**NOTE:**  
ENVELOPES SHOWN WITH ZERO CLEARANCE TO OUTSIDE EDGE OF TIRES.

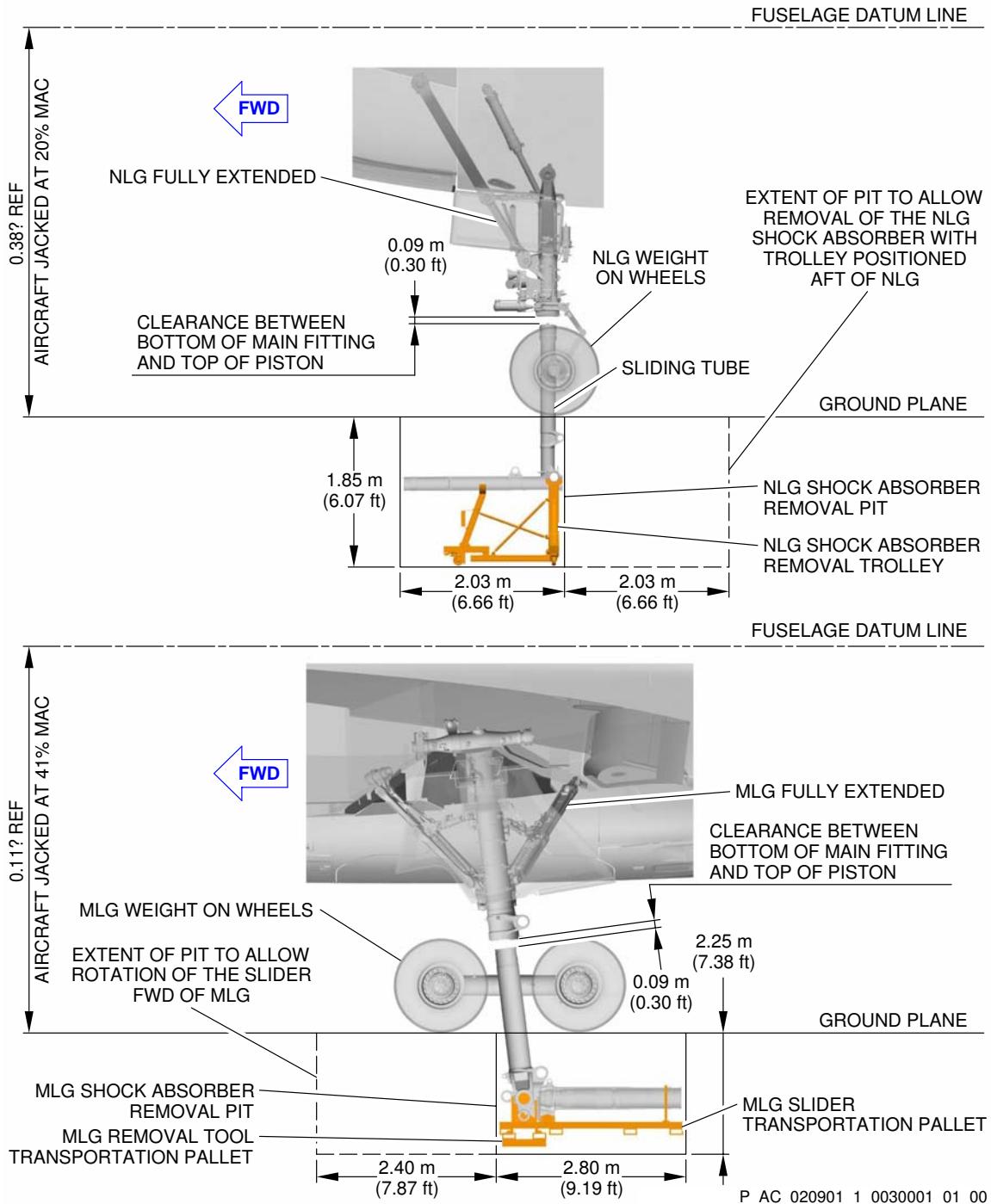
\*\*ON A/C A350-900



P\_AC\_020901\_1\_0020001\_01\_00

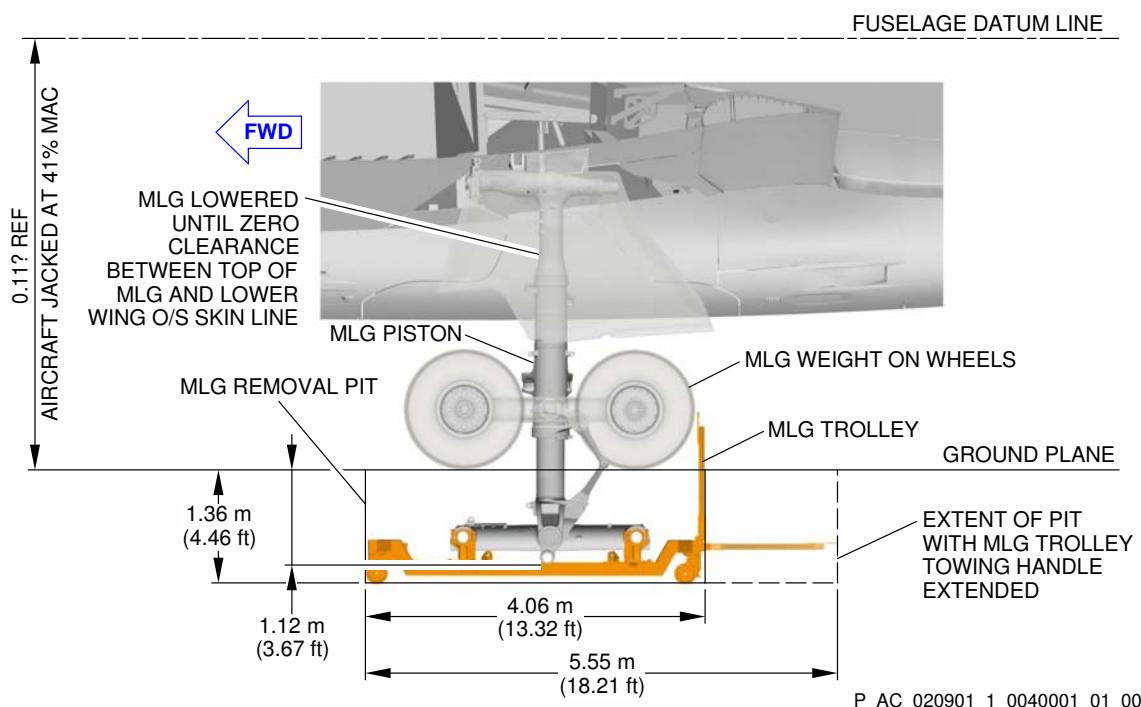
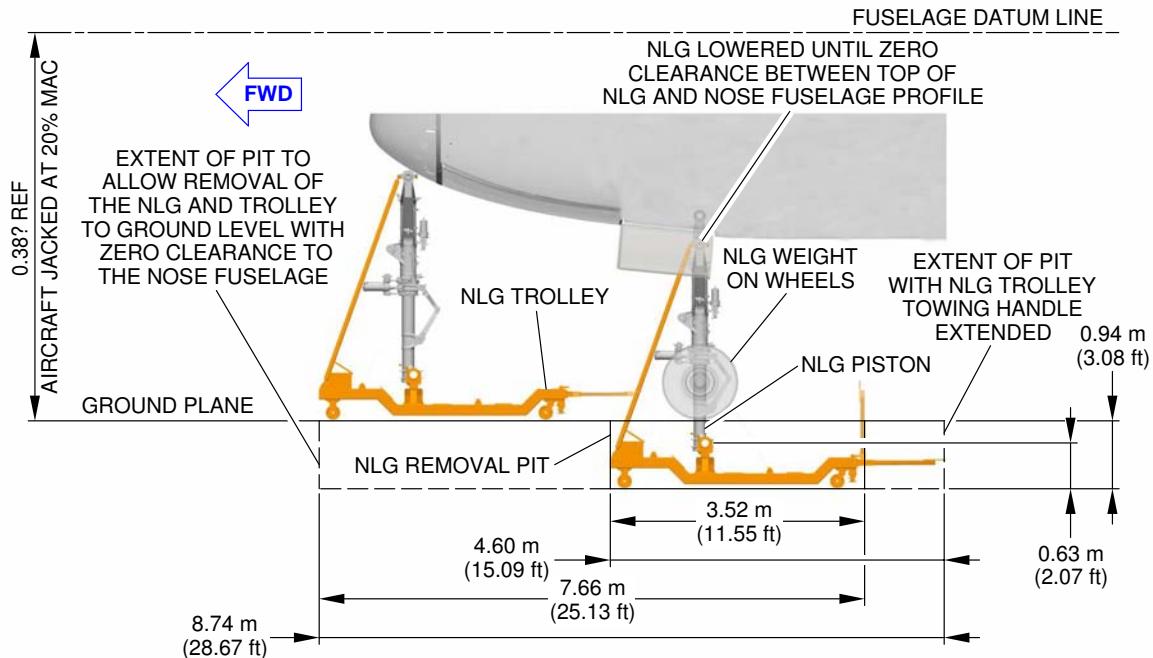
NLG/MLG Extension/Retraction Pit  
FIGURE-2-9-1-991-002-A01

\*\*ON A/C A350-900



NLG/MLG Shock Absorber Removal Pit  
FIGURE-2-9-1-991-003-A01

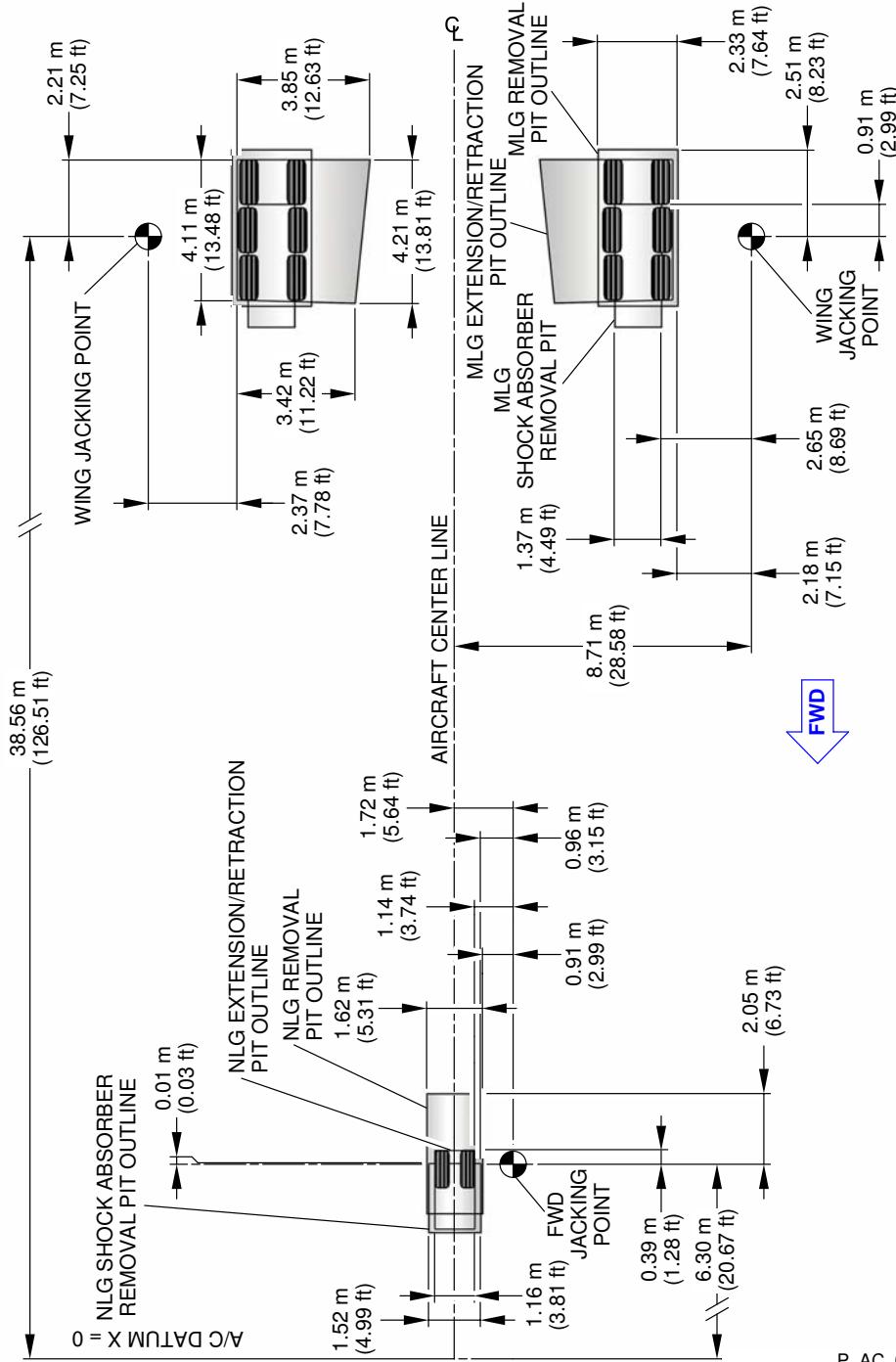
\*\*ON A/C A350-900



P\_AC\_020901\_1\_0040001\_01\_00

NLG/MLG Removal Pit  
FIGURE-2-9-1-991-004-A01

\*\*ON A/C A350-1000

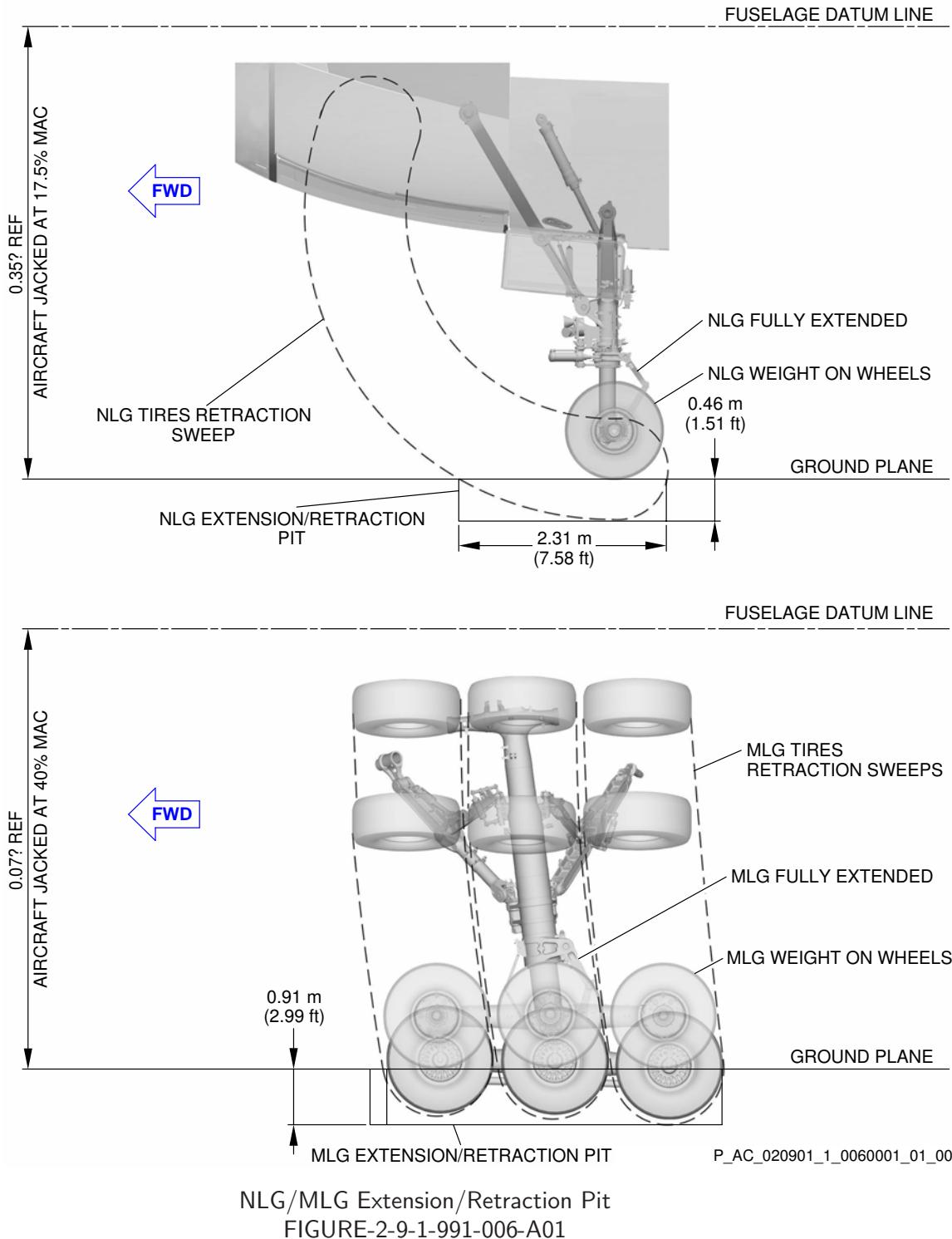


**NOTE:**  
ENVELOPES SHOWN WITH ZERO CLEARANCE TO OUTSIDE EDGE OF TIRES.

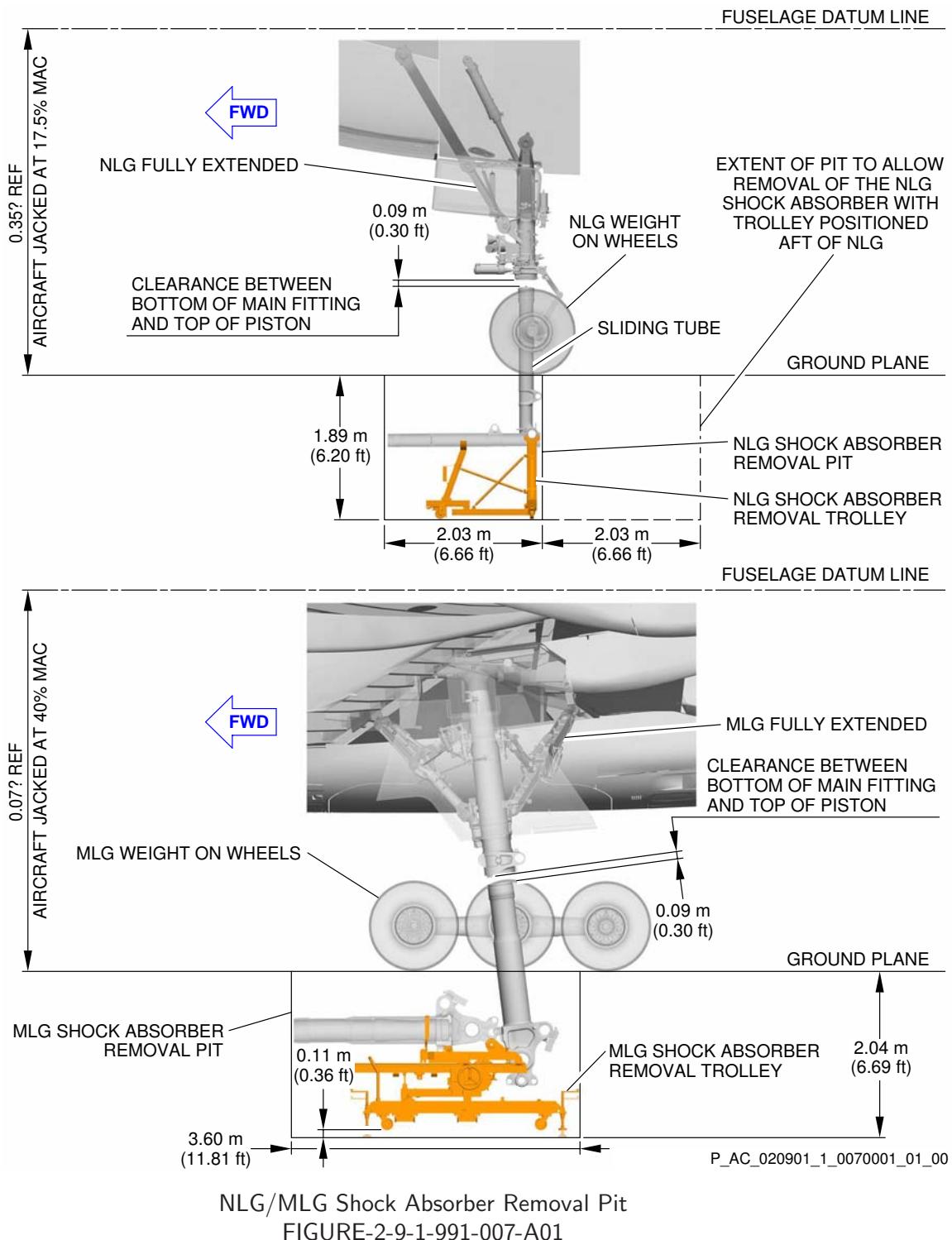
P\_AC\_020901\_1\_0050002\_01\_00

Maintenance Pit Envelopes  
FIGURE-2-9-1-991-005-B01

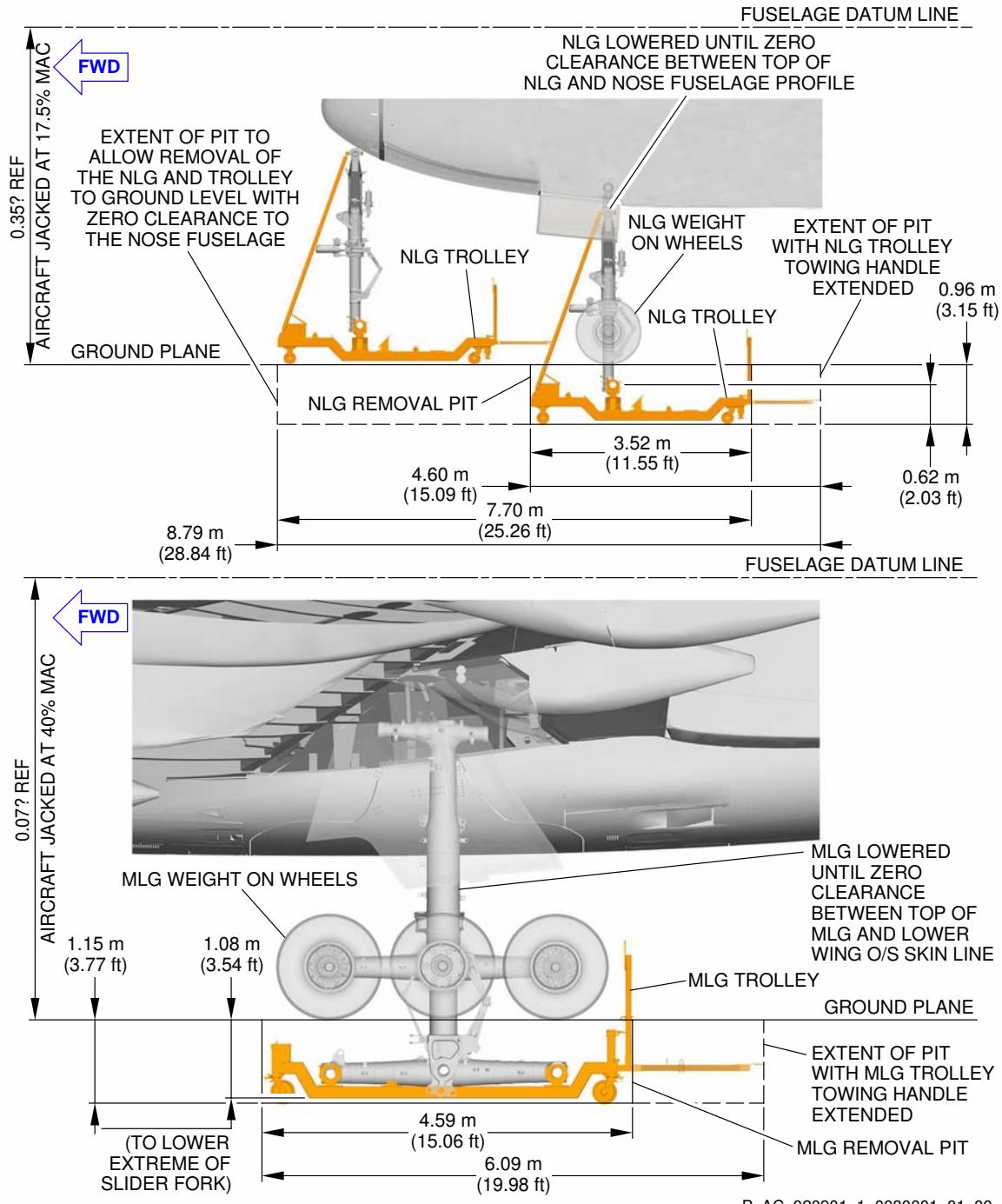
\*\*ON A/C A350-1000



\*\*ON A/C A350-1000



\*\*ON A/C A350-1000



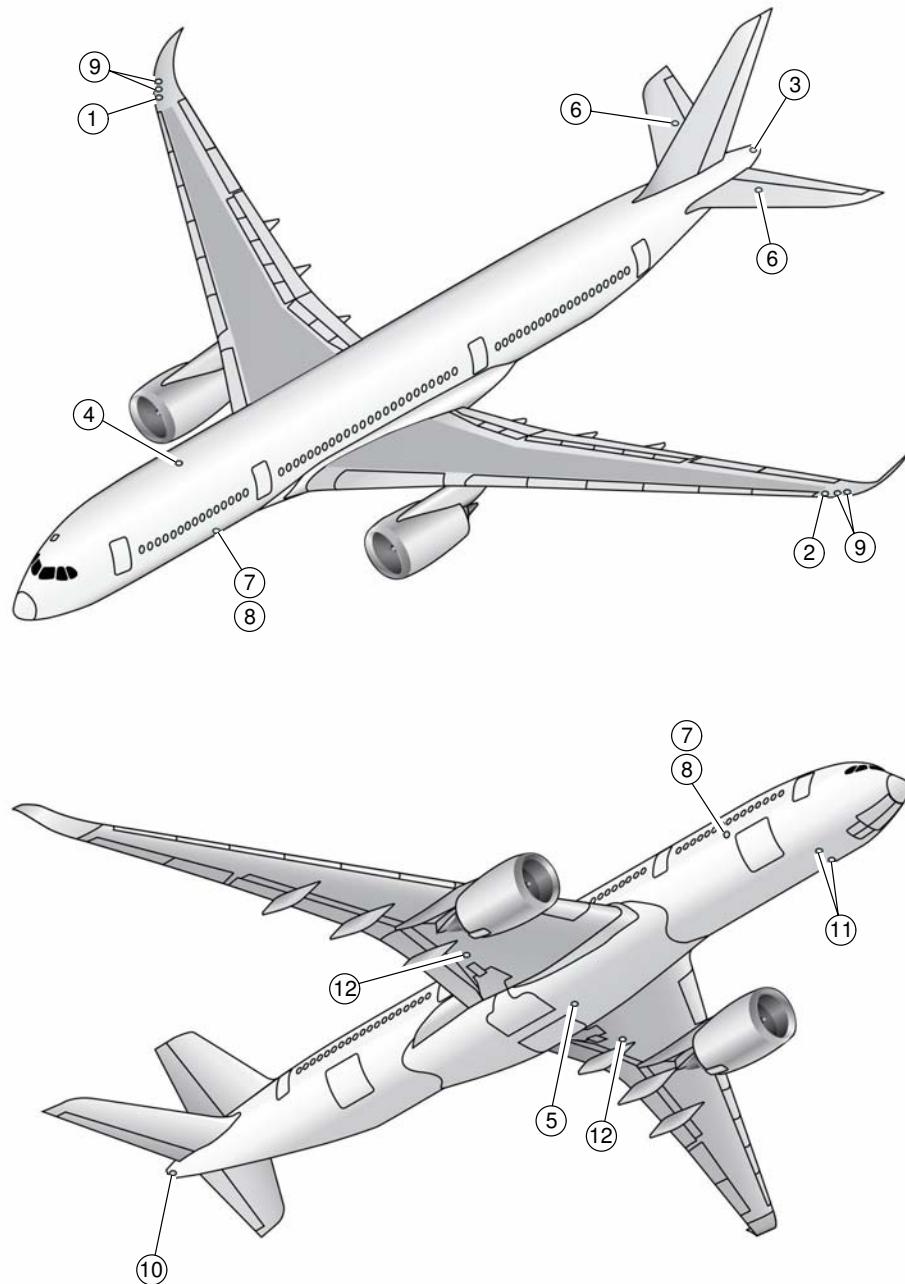
NLG/MLG Removal Pit  
FIGURE-2-9-1-991-008-A01

2-10-0      **Exterior Lighting****\*\*ON A/C A350-1000 A350-900**Exterior Lighting

1. This section provides the location of the aircraft exterior lighting.

| EXTERIOR LIGHTING |   |
|-------------------|---|
| ITEM              | DESCRIPTION                               |
| 1                 | RIGHT NAVIGATION LIGHT (GREEN)            |
| 2                 | LEFT NAVIGATION LIGHT (RED)               |
| 3                 | TAIL NAVIGATION LIGHT (WHITE)             |
| 4                 | UPPER ANTI-COLLISION LIGHT/BEACON (RED)   |
| 5                 | LOWER ANTI-COLLISION LIGHT/BEACON (RED)   |
| 6                 | LOGO LIGHTS                               |
| 7                 | ENGINE SCAN LIGHTS                        |
| 8                 | WING SCAN LIGHTS                          |
| 9                 | WING STROBE LIGHT (HIGH INTENSITY, WHITE) |
| 10                | TAIL STROBE LIGHT (HIGH INTENSITY, WHITE) |
| 11                | TAXI CAMERA LIGHTS (NLG)                  |
| 12                | TAXI CAMERA LIGHTS (MLG)                  |
| 13                | LANDING LIGHTS                            |
| 14                | RUNWAY TURN-OFF LIGHTS                    |
| 15                | TAXI LIGHTS                               |
| 16                | TAKE-OFF LIGHTS                           |
| 17                | CARGO COMPARTMENT FLOOD LIGHTS            |
| 18                | LANDING GEAR BAY/WELL LIGHTS (DOME)       |

\*\*ON A/C A350-900



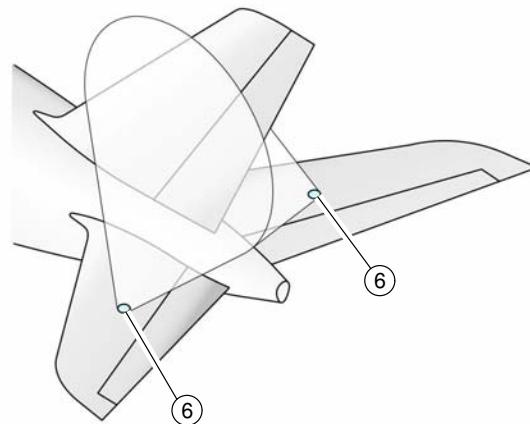
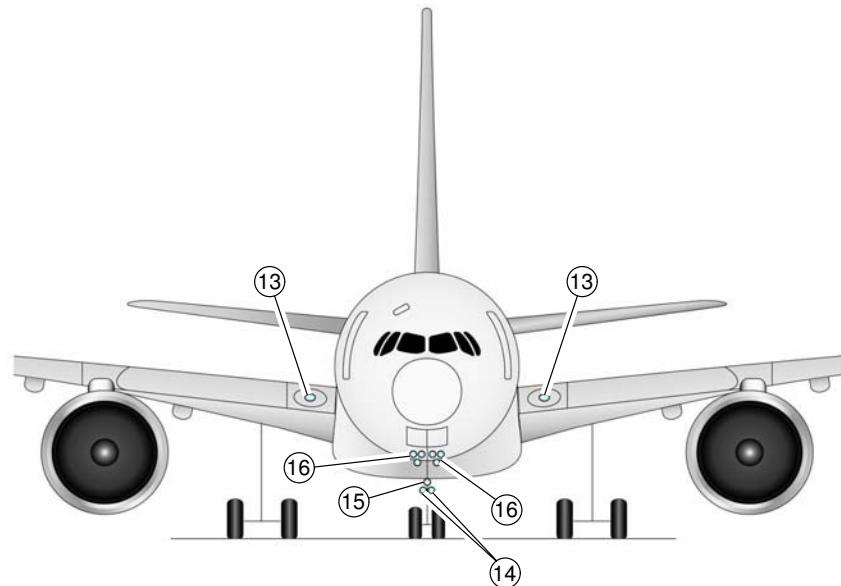
P\_AC\_021000\_1\_0010002\_01\_01

Exterior Lighting  
FIGURE-2-10-0-991-001-B01

# A350

## AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

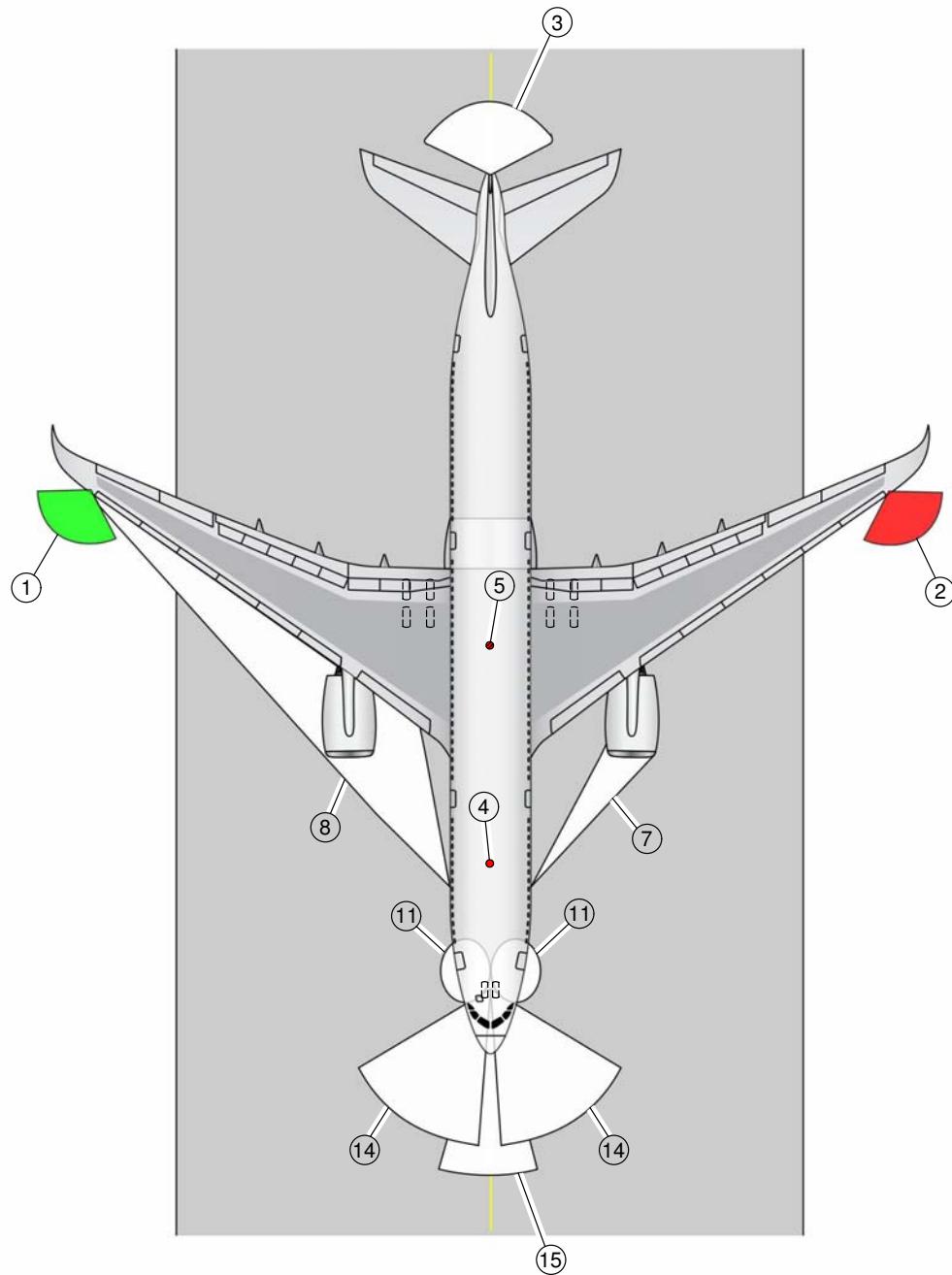
\*\*ON A/C A350-900



P\_AC\_021000\_1\_0020001\_01\_00

Exterior Lighting  
FIGURE-2-10-0-991-002-A01

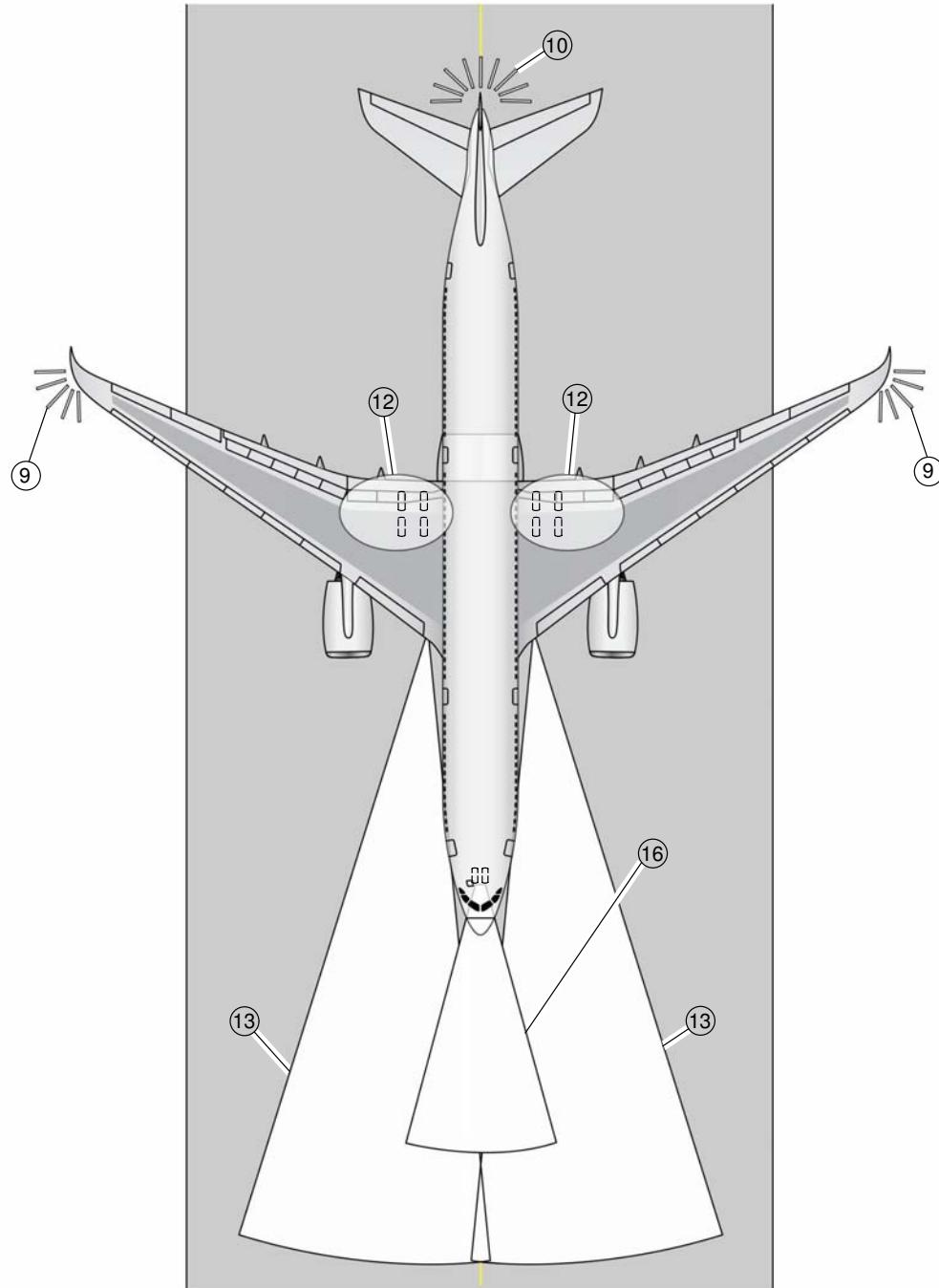
\*\*ON A/C A350-900



P\_AC\_021000\_1\_0030002\_01\_01

Exterior Lighting  
FIGURE-2-10-0-991-003-B01

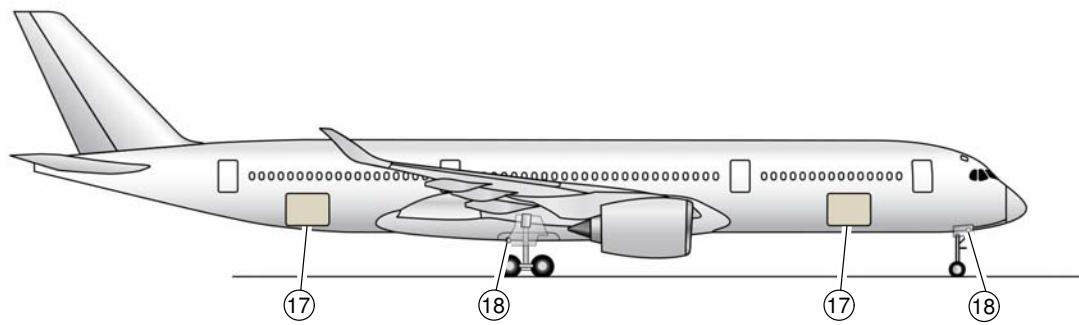
\*\*ON A/C A350-900



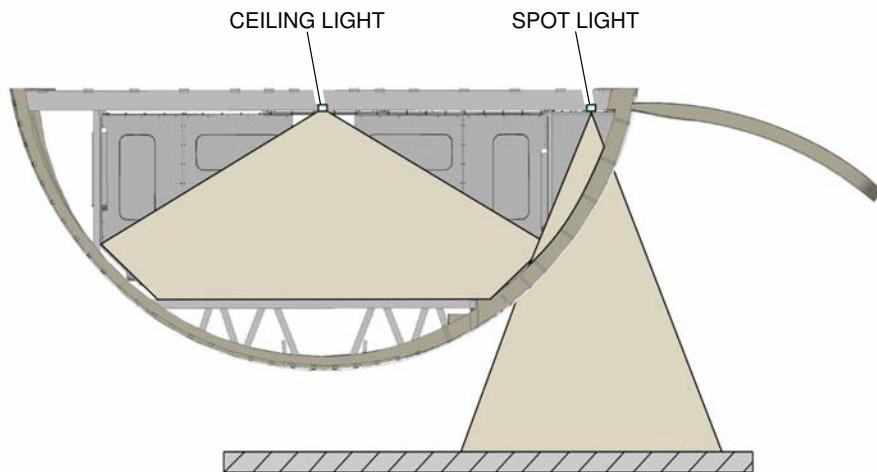
P\_AC\_021000\_1\_0040001\_01\_01

Exterior Lighting  
FIGURE-2-10-0-991-004-A01

\*\*ON A/C A350-900

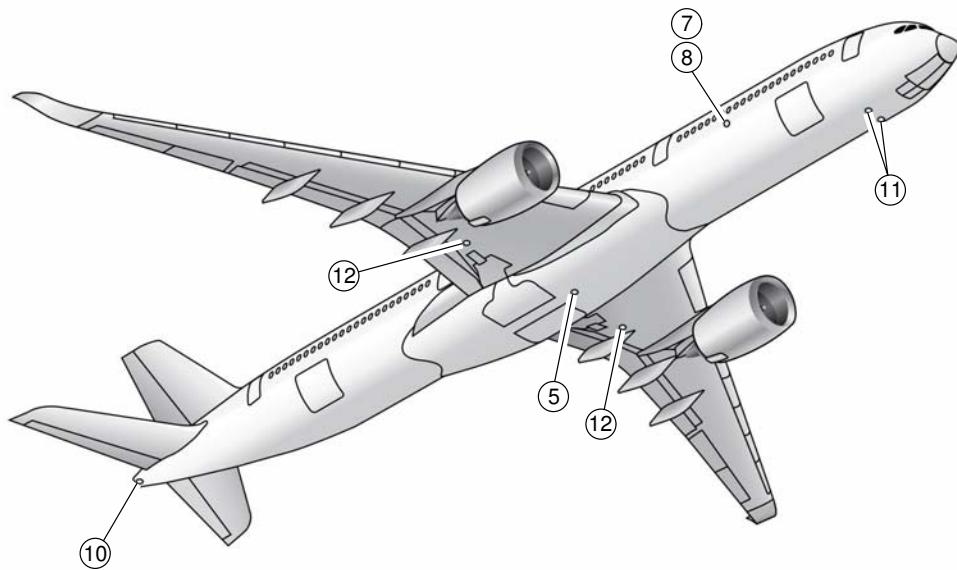
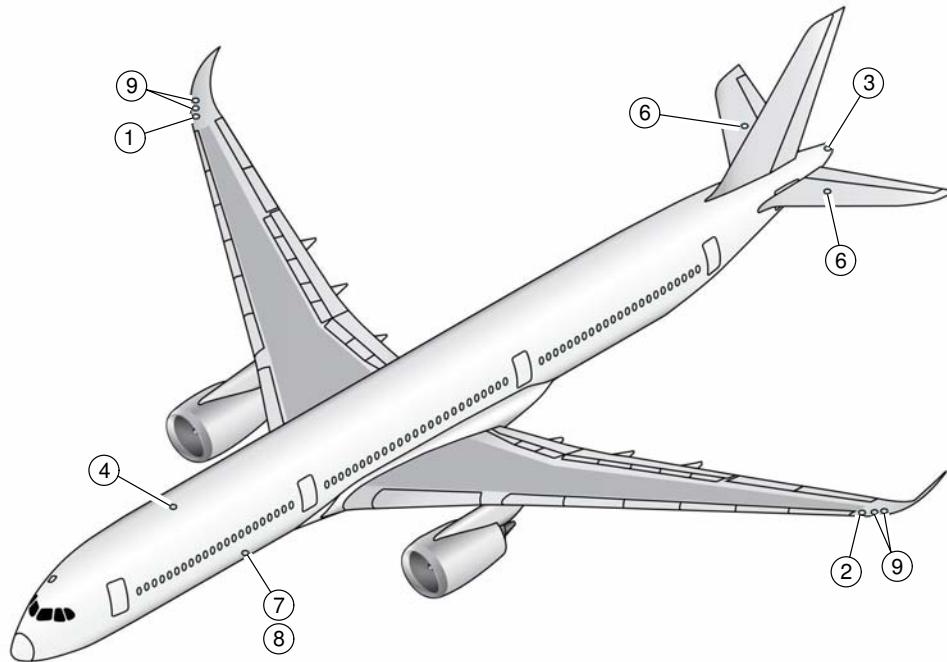


EXAMPLE FOR LIGHT N° 17



P\_AC\_021000\_1\_0050001\_01\_01

Exterior Lighting  
FIGURE-2-10-0-991-005-A01

**\*\*ON A/C A350-1000**

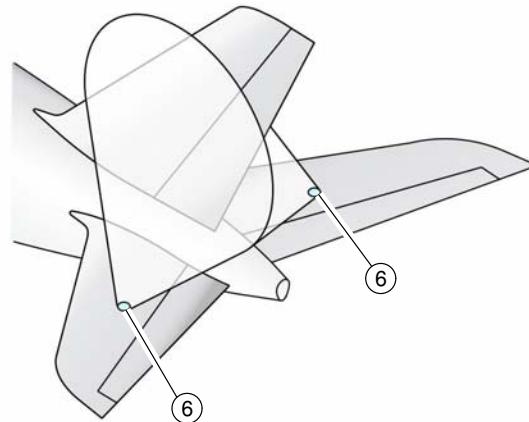
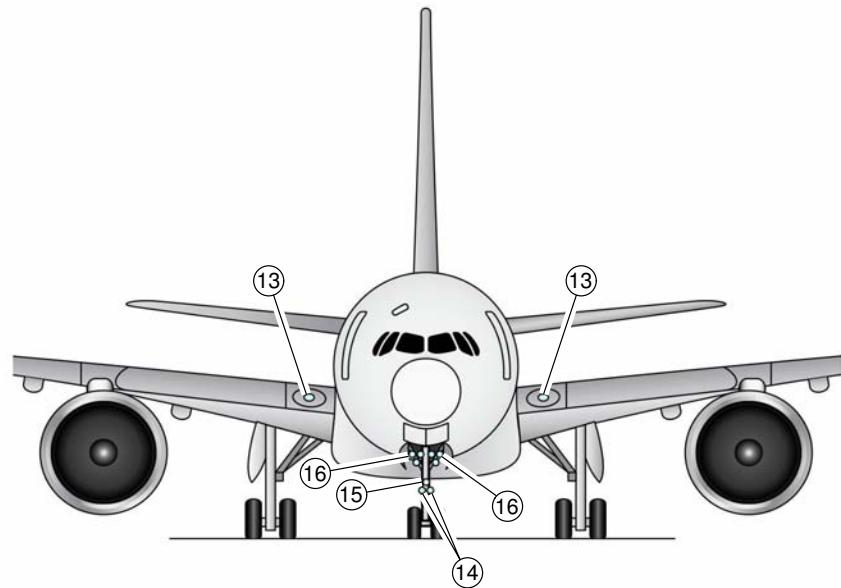
P\_AC\_021000\_1\_0060001\_01\_00

Exterior Lighting  
FIGURE-2-10-0-991-006-A01

# A350

## AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

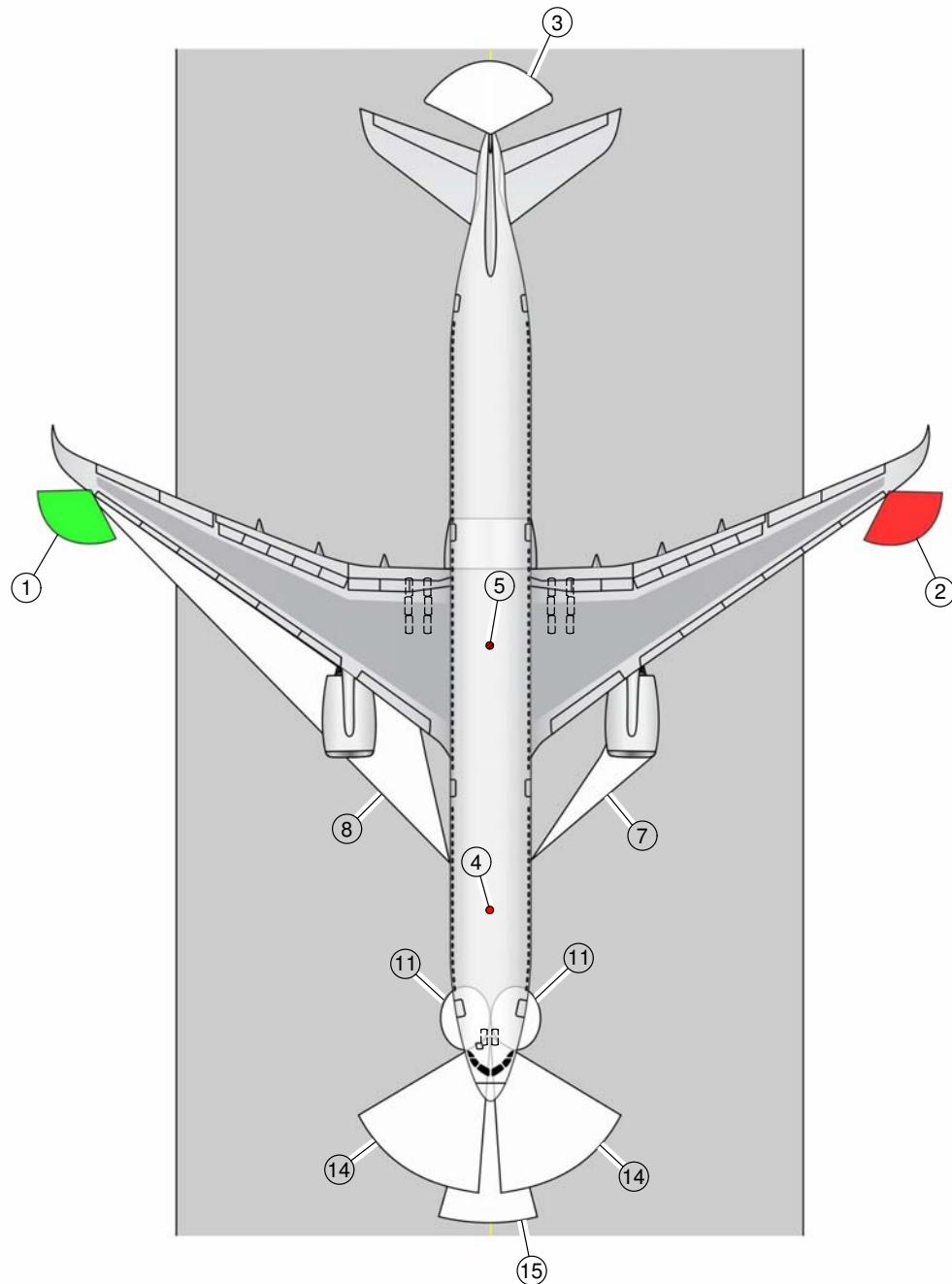
\*\*ON A/C A350-1000



P\_AC\_021000\_1\_0070001\_01\_00

Exterior Lighting  
FIGURE-2-10-0-991-007-A01

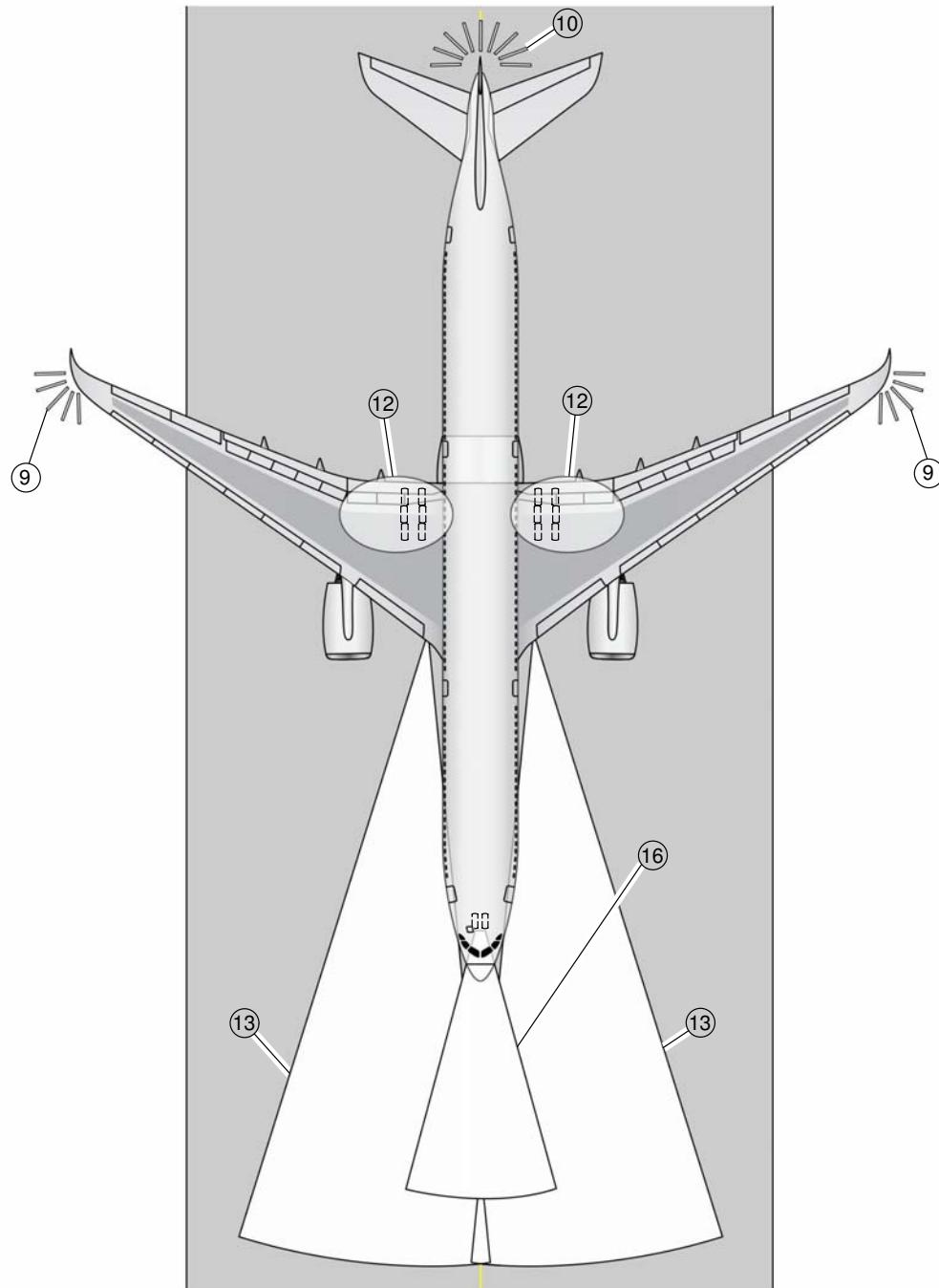
\*\*ON A/C A350-1000



P\_AC\_021000\_1\_0080001\_01\_00

Exterior Lighting  
FIGURE-2-10-0-991-008-A01

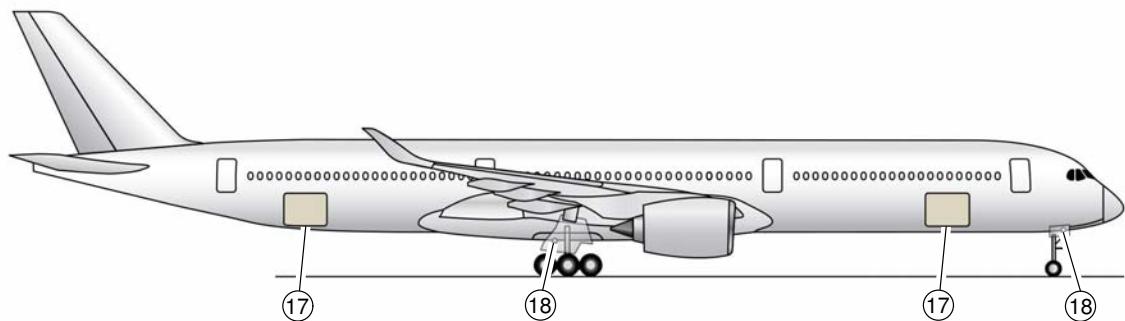
\*\*ON A/C A350-1000



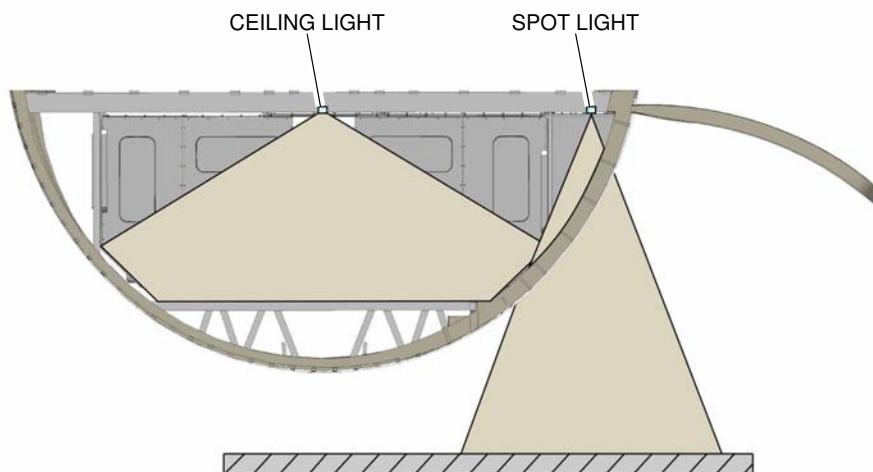
P\_AC\_021000\_1\_0090001\_01\_00

Exterior Lighting  
FIGURE-2-10-0-991-009-A01

\*\*ON A/C A350-1000



EXAMPLE FOR LIGHT N° 17



P\_AC\_021000\_1\_0100001\_01\_00

Exterior Lighting  
FIGURE-2-10-0-991-010-A01



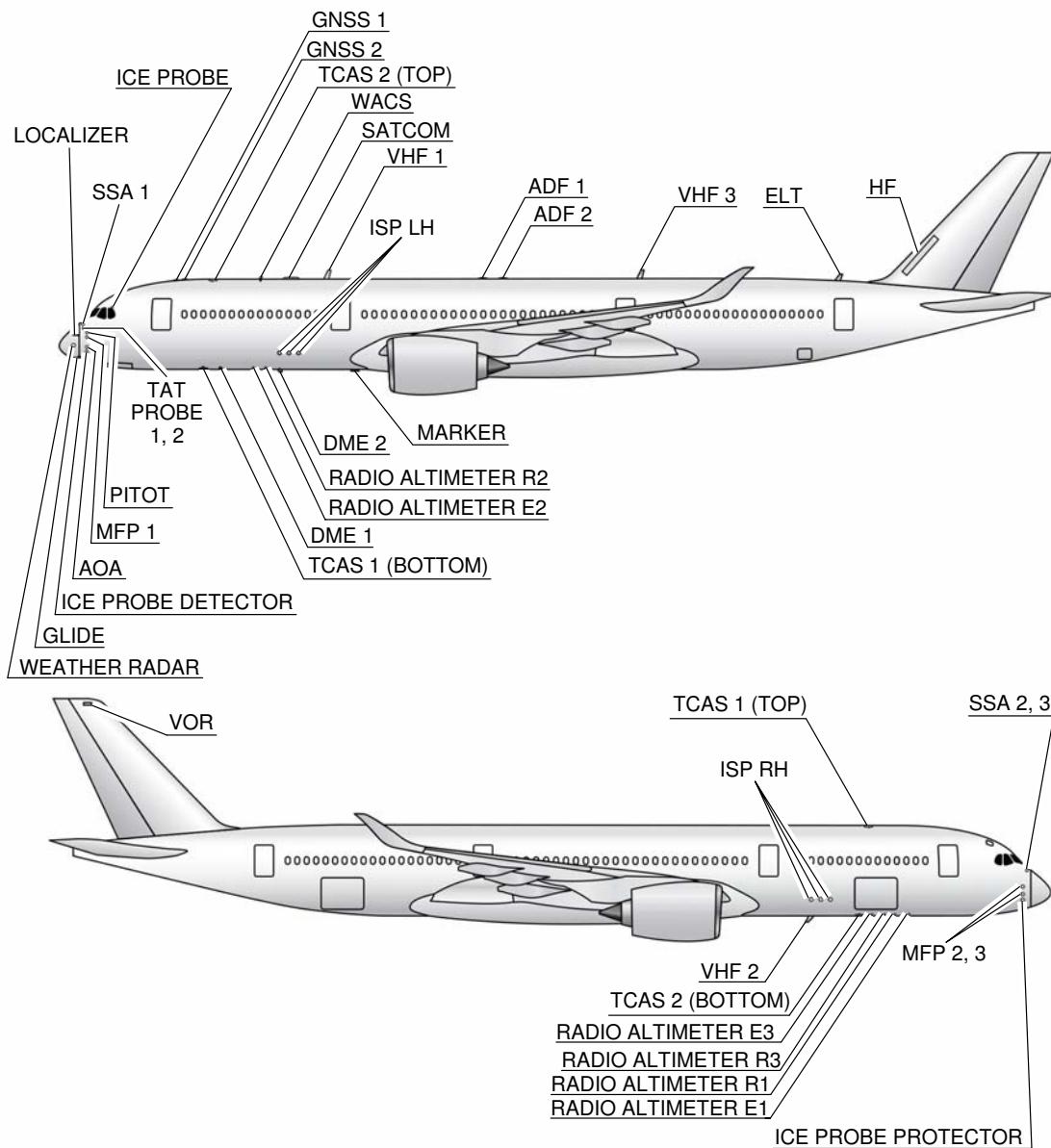
2-11-0      Antennas and Probes Location

\*\*ON A/C A350-1000 A350-900

Antennas and Probes Location

1. This section provides the location of antennas and probes.

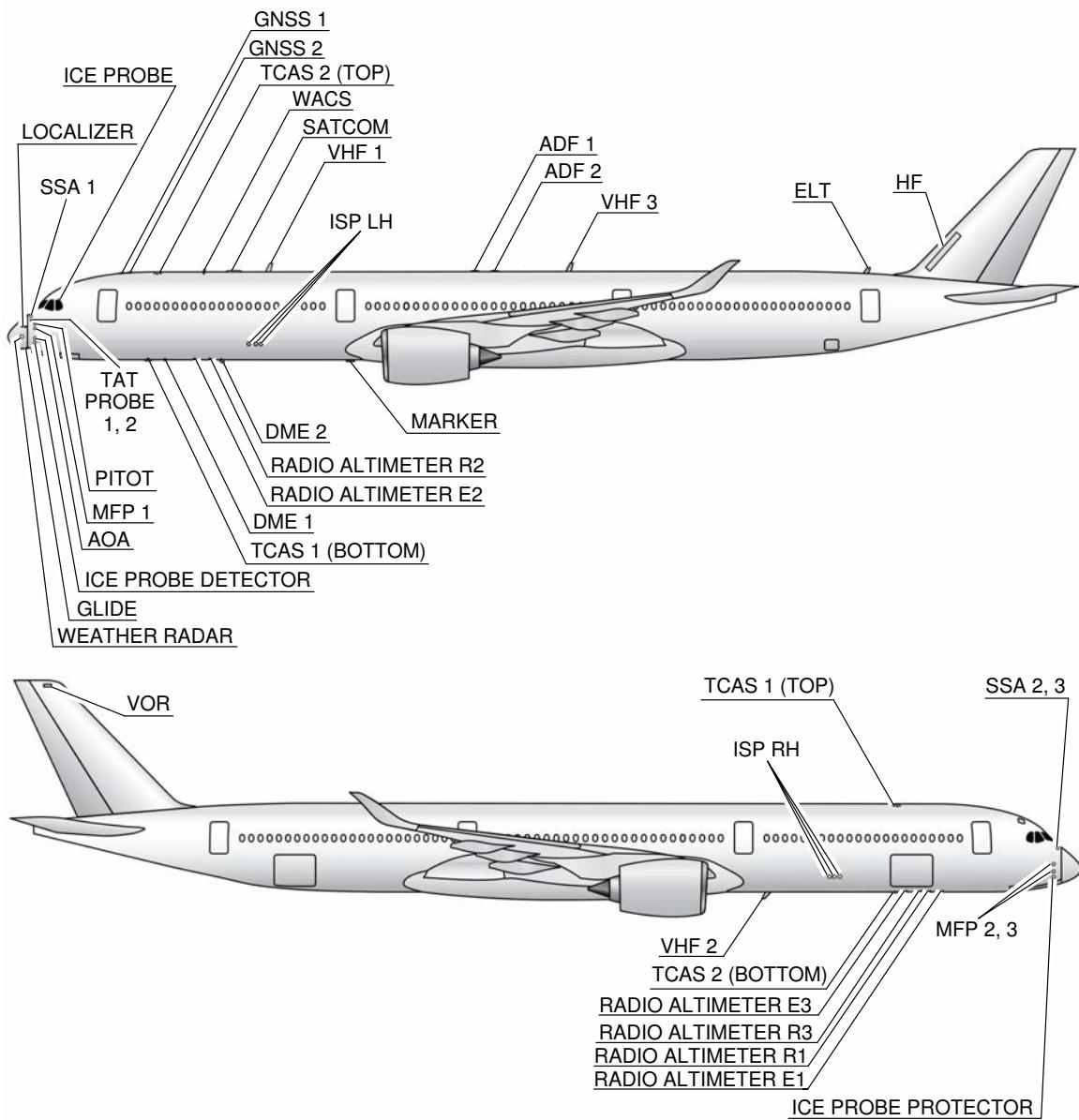
\*\*ON A/C A350-900



P\_AC\_021100\_1\_0010001\_01\_01

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

\*\*ON A/C A350-1000



P\_AC\_021100\_1\_0020001\_01\_00

Antennas and Probes Location  
FIGURE-2-11-0-991-002-A01

## 2-12-0      Engine and Nacelle

**\*\*ON A/C A350-1000 A350-900**Engine and Nacelle

## 1. Power Plant

The A350-900 and A350-1000 has two main power plants, one installed under each wing on a pylon. Each power plant can be lowered for removal from its pylon.

The power plant comprises the:

- Nacelle,
- Engine.

## 2. Nacelle

The nacelle comprises the following assemblies:

- Air intake,
- Fan cowls,
- Thrust reverser,
- Exhaust system.

## A. Fan Cowl

A power door opening system is installed to assist in opening the cowls.

The cowls have access doors for fan case-mounted components.

## B. Thrust Reverser

The engine thrust reverser consists primarily of a inner fixed structure and an outer translating sleeve.

The fan exhaust stream is reversed by the cascades and blocker doors, which form part of the translating sleeve actuated by an electrical Thrust Reverser Actuation System (TRAS).

A power door opening system is used to assist thrust reverser cowl opening.

The thrust reverser latching system is designed so that the remote latches close only when the hooks are engaged.

Means are provided to latch and secure a thrust reverser in the stowed position.

Means are provided to permit actuation of the thrust reversers without engine operation, for maintenance purposes, either using the TRAS powered by the aircraft or by manual drive with external Ground Support Equipment (GSE).

## C. Exhaust System

The exhaust system consists of a primary nozzle and a center body plug.

The exhaust system is designed to optimize aerodynamics and acoustic performance.

## 3. Engine

## A. Ignition

Each engine is equipped with a dual ignition system controlled by the FADEC.

Each engine is equipped with an automatic flame-out protection.

B. Cooling System

A nacelle cooling and ventilating system automatically provides the airflow required for cooling engine and nacelle accessories and associated structure.

C. Power Control

Forward thrust of each engine is controlled by a throttle control lever mounted on the center pedestal in the cockpit.

Thrust reverser control is by means of a separate lever for each engine.

D. Engine Master Control

Engine fuel shutoff is controlled by switches installed on the center pedestal.

E. Emergency Shutdown

Actuation of the fire controls closes the associated LP valves.

F. Indicating

Indications for each engine are displayed on the Control and Display System (CDS).

G. Oil

The propulsion system has an independent integral oil system that is able to provide the appropriate quantity of oil, at the temperature necessary for continuous propulsion system operation, for all achievable conditions within the propulsion system operating envelope.

Means are provided for gravity filling.

It is possible to visually check and replenish the engine oil level without opening the fan cowl door.

Magnetic chip detectors are installed in the lubrication system.

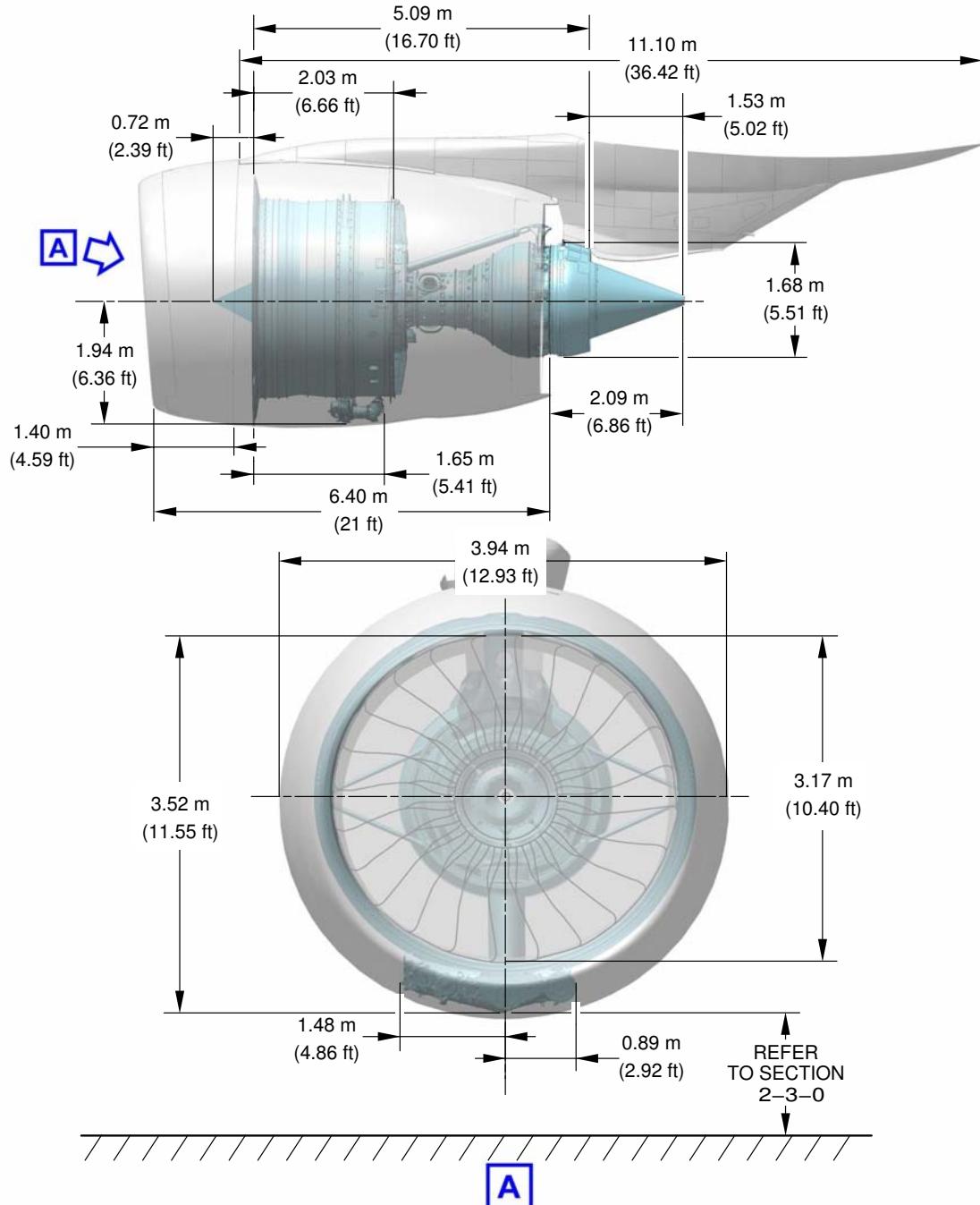
H. Starting

The engine is equipped with a pneumatic air turbine starter.

The starter can be supplied with air either from the APU, or the other engine, or an Air Start Unit (AS).

Standard types of GSE can be used.

\*\*ON A/C A350-1000 A350-900



**NOTE:**

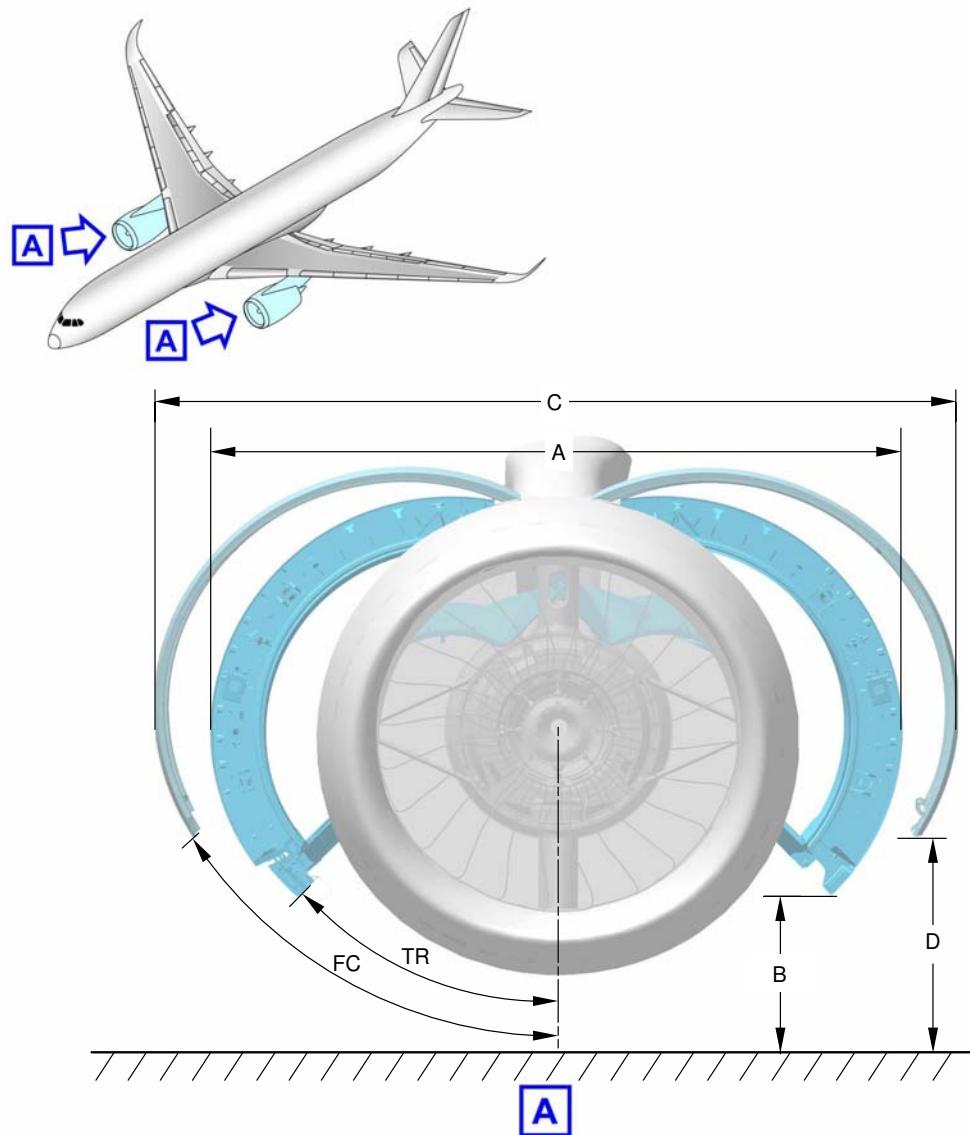
APPROXIMATE DIMENSIONS DEPENDING ON AIRCRAFT CONFIGURATION

P\_AC\_021200\_1\_0010001\_01\_00

Engine and Nacelle  
(Sheet 1 of 3)

FIGURE-2-12-0-991-001-A01

\*\*ON A/C A350-1000 A350-900



|          | A                    | B                   | C      | D                    |
|----------|----------------------|---------------------|--------|----------------------|
| TR=28.5° | 5.50 m<br>(18.04 ft) | 1.01 m<br>(3.31 ft) | FC=37° | 6.39 m<br>(20.96 ft) |

**NOTE:**

APPROXIMATE DIMENSIONS DEPENDING ON AIRCRAFT CONFIGURATION.

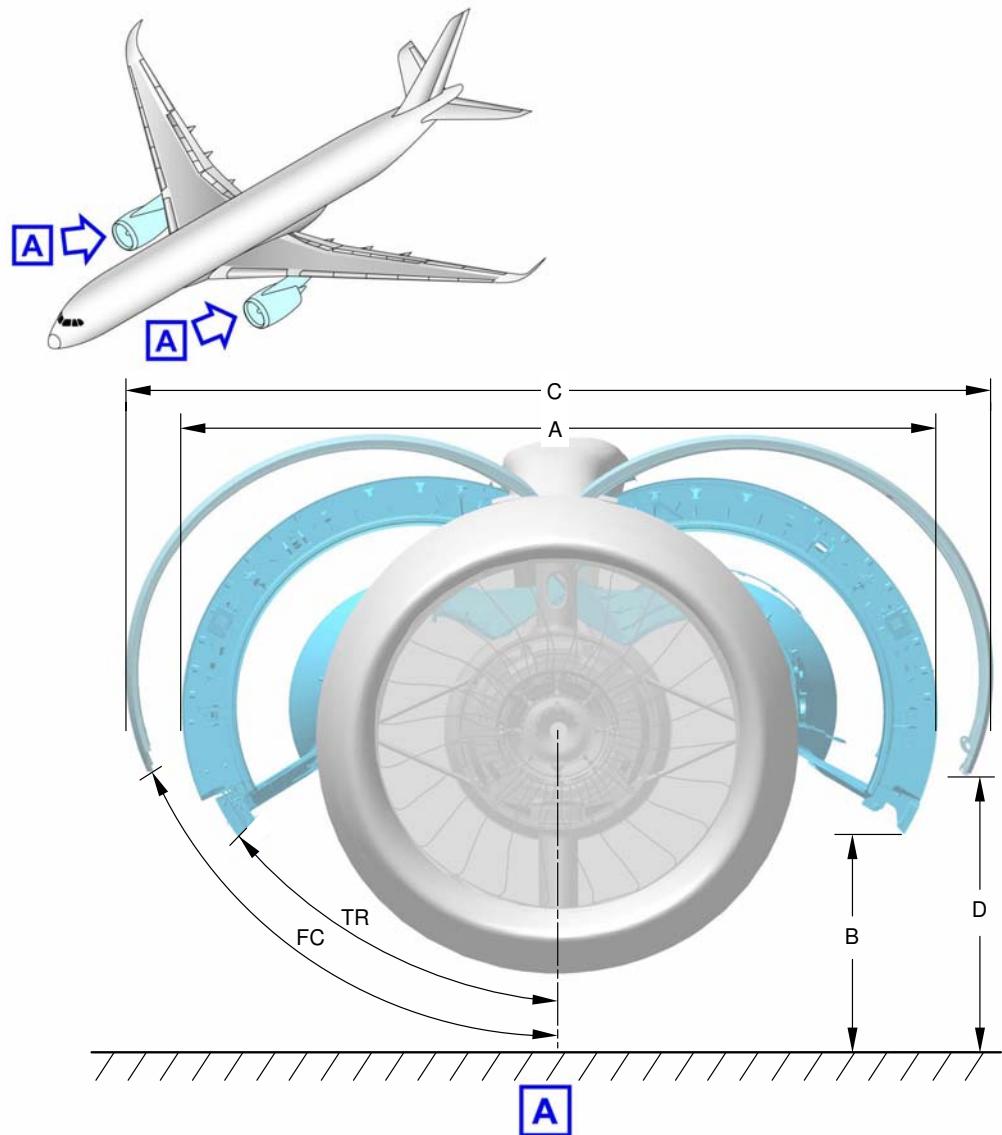
FC: FAN COWL AND TR: THRUST REVERSER

P\_AC\_021200\_1\_0010001\_02\_00

Engine and Nacelle  
(Sheet 2 of 3)

FIGURE-2-12-0-991-001-A01

\*\*ON A/C A350-1000 A350-900



|        | A                    | B                   | C      | D                    |
|--------|----------------------|---------------------|--------|----------------------|
| TR=45? | 6.42 m<br>(21.06 ft) | 1.51 m<br>(4.95 ft) | FC=50? | 7.13 m<br>(23.40 ft) |
|        |                      |                     |        | 1.81 m<br>(5.94 ft)  |

**NOTE:**

APPROXIMATE DIMENSIONS DEPENDING ON AIRCRAFT CONFIGURATION.

FC: FAN COWL AND TR: THRUST REVERSER

P\_AC\_021200\_1\_0010001\_03\_00

Engine and Nacelle  
(Sheet 3 of 3)

FIGURE-2-12-0-991-001-A01

## 2-12-1      Auxiliary Power Unit

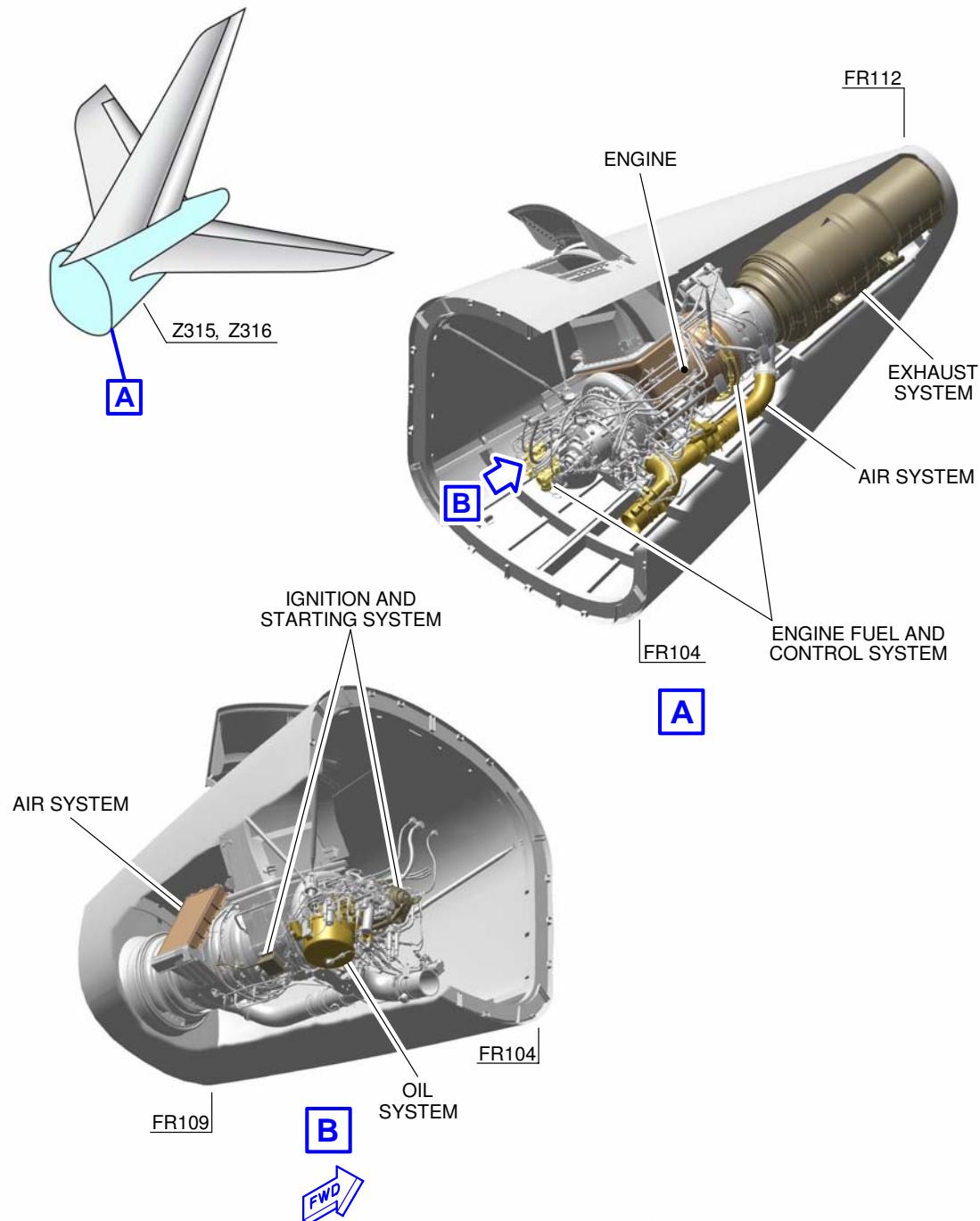
\*\*ON A/C A350-1000 A350-900

Auxiliary Power Unit

## 1. General

The Auxiliary Power Unit (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 on the top right area of the tail cone. The exhaust gases pass overboard at the end of the fuselage cone.

\*\*ON A/C A350-1000 A350-900



P\_AC\_021201\_1\_0010001\_01\_01

Auxiliary Power Unit  
FIGURE-2-12-1-991-001-A01

## 2-13-0      Leveling, Symmetry and Alignment

**\*\*ON A/C A350-1000 A350-900**Leveling, Symmetry and Alignment

## 1. Quick Leveling

There are three alternative procedures to level the aircraft:

- Quick leveling procedure with Air Data/Inertial Reference System (ADIRS),
- Quick leveling procedure with a spirit level in the passenger compartment,
- Quick leveling procedure with a spirit level in the FWD cargo compartment.

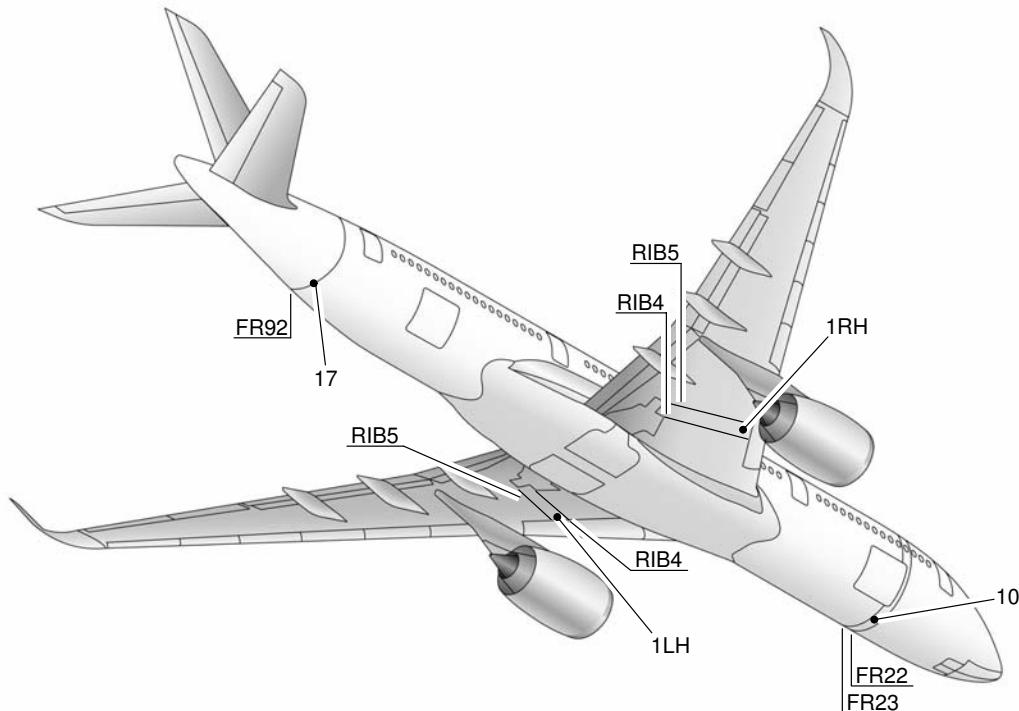
## 2. Precise Leveling

For precise leveling, it is necessary to install sighting rods in the receptacles located under the fuselage (points 10 and 17 for longitudinal leveling) and under the wings (points 1 LH and 1 RH 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.

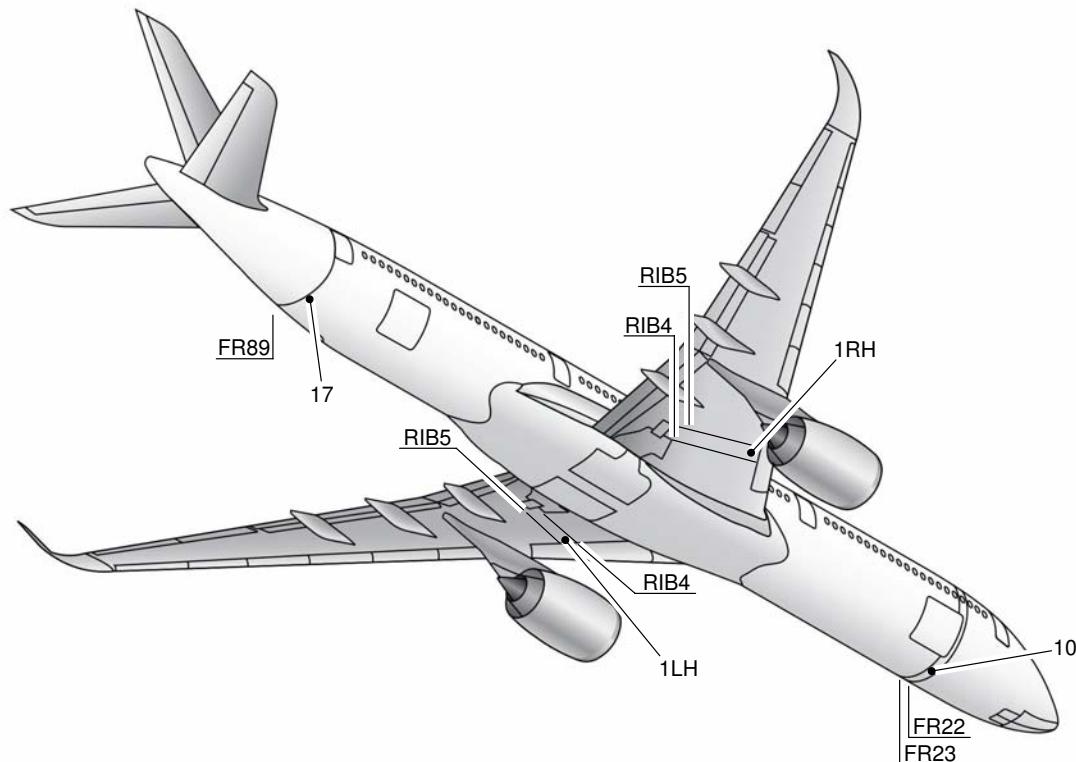
\*\*ON A/C A350-900



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Location of Leveling Points  
FIGURE-2-13-0-991-001-A01

\*\*ON A/C A350-1000



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Location of Leveling Points  
FIGURE-2-13-0-991-002-A01

## 2-14-1 Jacking for Maintenance

## \*\*ON A/C A350-1000 A350-900

Jacking for Maintenance

## \*\*ON A/C A350-900

## 1. Aircraft Jacking Points for Maintenance

## A. The A350-900 can be jacked:

- At not more than 164000 kg (361558 lb),
- Within the limits of the permissible wind speed when the aircraft is jacked outside a closed environment.

## B. Primary Jacking Points

The aircraft is provided with three primary jacking points:

- One located on the forward lower left fuselage (FR12),
- Two located under the wings (one under each wing, RIB9).

## C. Auxiliary Jacking Point (Safety Stay)

- When the aircraft is on jacks, a safety stay is placed under the fuselage at FR98 to prevent tail tipping caused by accidental displacement of the aircraft center of gravity.
- The safety point must not be used for lifting the aircraft.

## \*\*ON A/C A350-1000

## 2. Aircraft Jacking Points for Maintenance

## A. The A350-1000 can be jacked:

- At not more than 189550 kg (417887 lb),
- Within the limits of the permissible wind speed when the aircraft is jacked outside a closed environment.

## B. Primary Jacking Points

The aircraft is provided with three primary jacking points:

- One located on the forward lower left fuselage (FR12),
- Two located under the wings (one under each wing, RIB9).

## C. Auxiliary Jacking Point (Safety Stay)

- When the aircraft is on jacks, a safety stay is placed under the fuselage at FR98 to prevent tail tipping caused by accidental displacement of the aircraft center of gravity.
- The safety point must not be used for lifting the aircraft.

## \*\*ON A/C A350-1000 A350-900

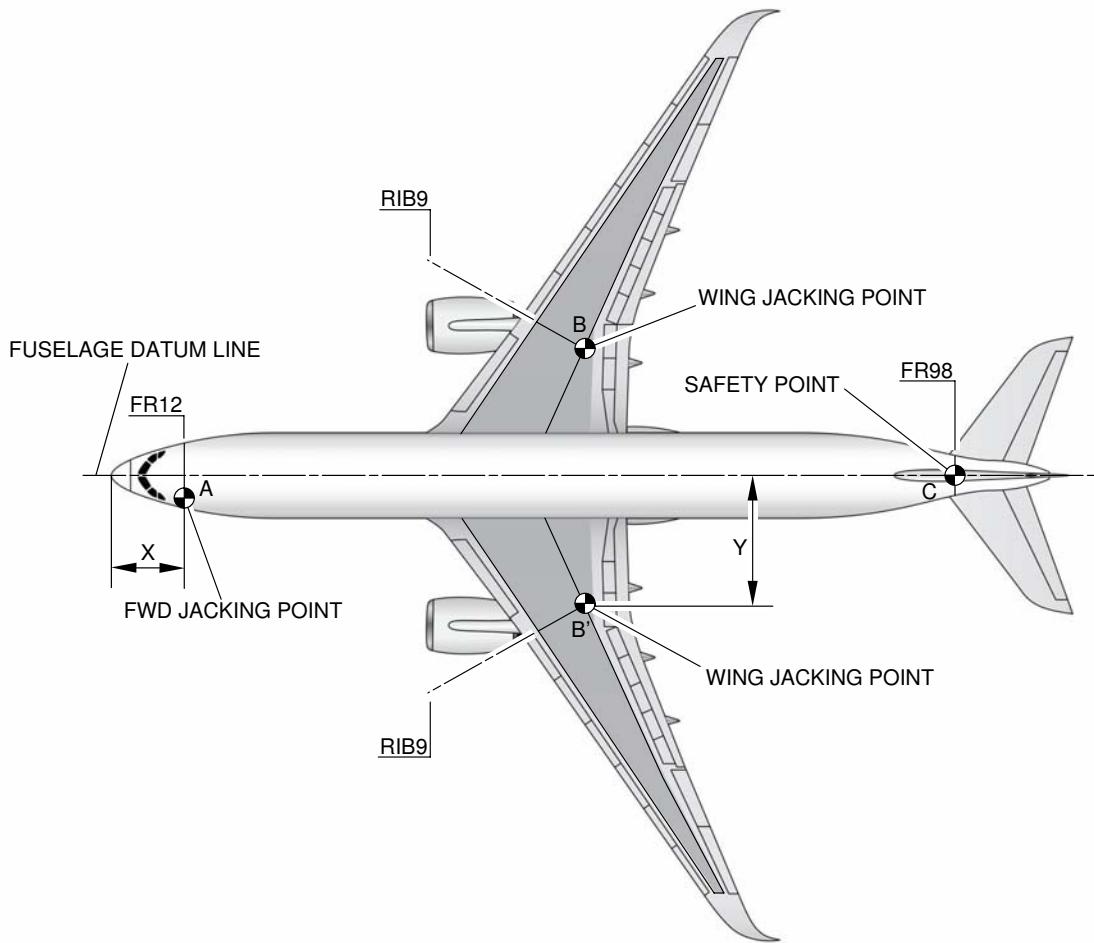
## 3. Jacks and Safety Stay

## A. Jack Design

- The maximum eligible static load given in table (FIGURE 2-14-1-991-002-B) are the maximum loads applicable on jack fittings.

- In fully retracted position (jack stroke at minimum), the height of the jacks is such that the jack may be placed beneath the aircraft under the most adverse conditions, namely, tires deflated and shock absorbers depressurized, with a sufficient clearance between the aircraft jacking point and the jack upper end.
  - The jacks stroke enables the aircraft to be jacked up so that the Fuselage Datum Line (FDL) may be positioned up to 6.50 m (21.33 ft.) from the ground to allow all required maintenance procedure and in particular, the removal/installation of the landing-gear shock absorbers.
- B. Safety Stay
- The stay stroke enables the aircraft tail to be supported up to the Fuselage Datum Line (FDL) positioned at 6.50 m (21.33 ft.) from the ground.

\*\*ON A/C A350-900



|                                  | X     |        | Y     |        | MAXIMUM LOAD ELIGIBLE<br>daN |
|----------------------------------|-------|--------|-------|--------|------------------------------|
|                                  | m     | ft     | m     | ft     |                              |
| FORWARD FUSELAGE JACKING POINT A | 4.77  | 15.65  | -1.72 | -5.64  | 17 670                       |
| WING JACKING POINT B             | 33.22 | 108.99 | 8.71  | 28.58  | 79 488                       |
| WING JACKING POINT B'            | 33.22 | 108.99 | -8.71 | -28.58 | 79 206                       |
| SAFETY STAY C                    | 58.75 | 192.75 | 0     | 0      | 7 652                        |

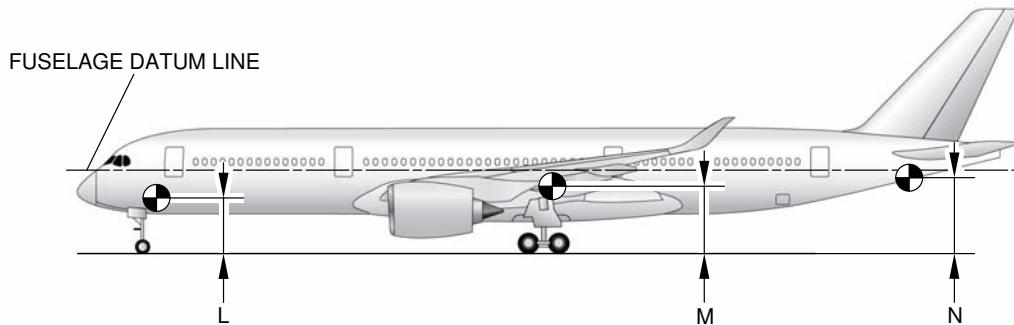
**NOTE:**

SAFETY STAY IS NOT USED FOR JACKING.

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Jacking for Maintenance  
 Jacking Points Location (Sheet 1 of 5)  
 FIGURE-2-14-1-991-001-A01

\*\*ON A/C A350-900



| CONFIGURATION   | CG POSITION<br>(% MAC) | HEIGHT |       |         |          |      |       |
|---|------------------------|--------|-------|---------|----------|------|-------|
|   |                        | L      |       | M       |          | N    |       |
|   |                        | m      | ft    | m       | ft       | m    | ft    |
| AIRCRAFT ON WHEELS, SHOCK-ABSORBER DEFLATED, TIRES DEFLATED (RH)  | 20                     | 3.08   | 10.10 | 4.69 LH | 15.39 LH | 4.91 | 16.11 |
|   | 42                     | 3.37   | 11.06 | 4.17 RH | 13.68 RH |      |       |
|   |                        |        |       | 4.67 LH | 15.32 LH | 4.64 | 15.22 |
|   |                        |        |       | 4.18 RH | 13.71 RH |      |       |
| A/C ON JACKS, FDL AT 6.50 m (21.33 ft),<br>A/C FUSELAGE PARALLEL TO THE GROUND,<br>SHOCK-ABSORBER RELAXED, CLEARANCE<br>OF MAIN GEAR WHEELS = 0.30 m (0.98 ft)<br>(STANDARD TIRES ), CLEARANCE OF<br>NOSE GEAR WHEELS = 0.85 m (2.79 ft)<br>(STANDARD TIRES ) | 20                     | 4.32   | 14.17 | 5.66    | 18.57    | 6.09 | 19.98 |
|   | 42                     | 4.32   | 14.17 | 5.66    | 18.57    | 6.09 | 19.98 |
|   |                        |        |       |         |          |      |       |
|   |                        |        |       |         |          |      |       |
| AIRCRAFT ON WHEELS<br>(STANDARD TIRES )<br>MAXIMUM JACKING WEIGHT<br>= 164 000 kg (361 558 lb)  | 20                     | 3.03   | 9.94  | 4.60    | 15.09    | 5.23 | 17.16 |
|   | 42                     | 3.31   | 10.86 | 4.59    | 15.06    | 4.96 | 16.27 |
| AIRCRAFT ON WHEELS<br>(STANDARD TIRES )<br>A/C WEIGHT = 130 727 kg (288 204 lb)   | 20                     | 3.08   | 10.10 | 4.65    | 15.26    | 5.28 | 17.32 |
|   | 42                     | 3.42   | 11.22 | 4.63    | 15.19    | 4.95 | 16.24 |

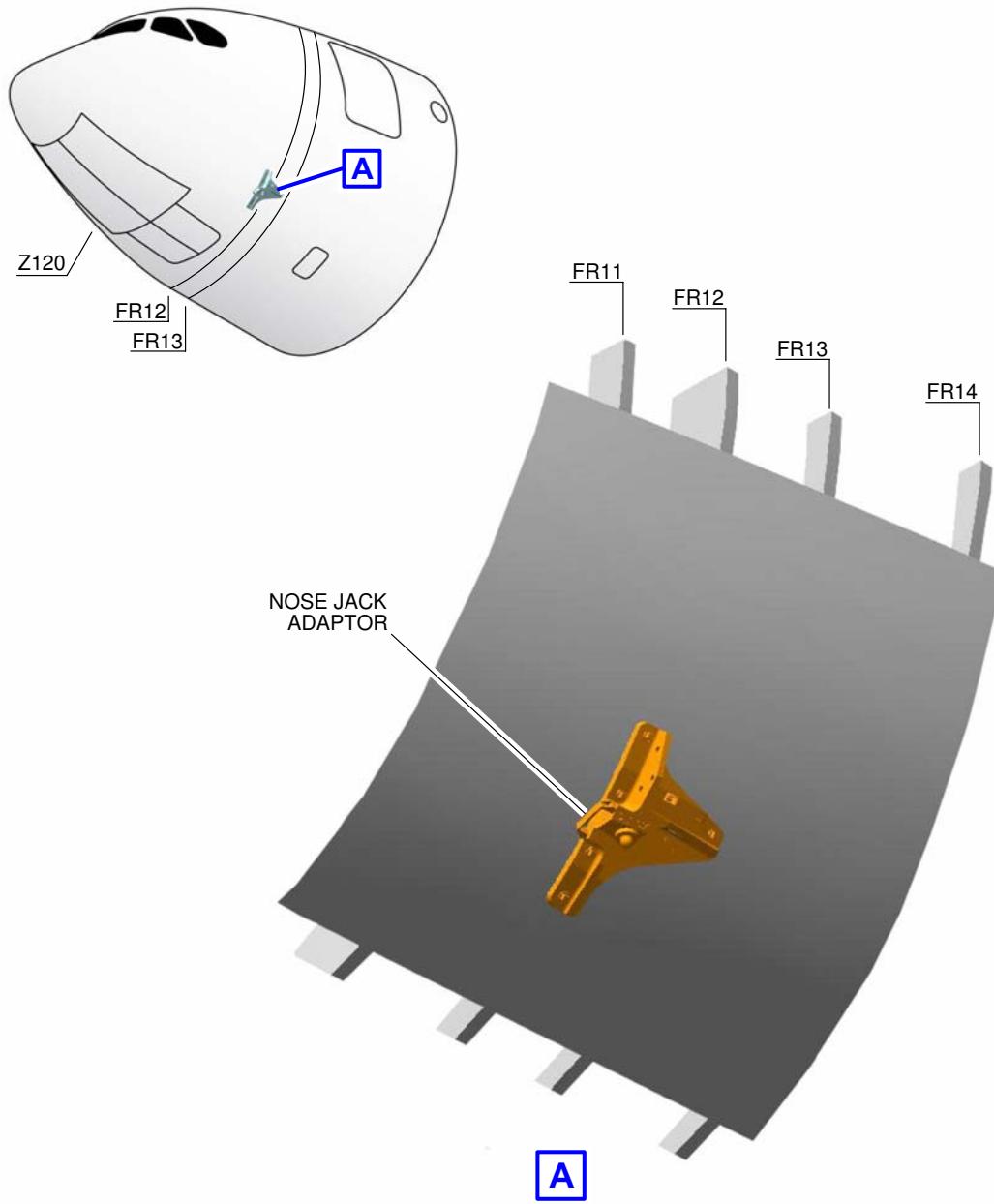
**NOTE:**

STANDARD TIRES: NOSE LANDING GEAR = 1 050 x 395 R16  
MAIN LANDING GEAR = 1 400 x 530 R23

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Jacking for Maintenance  
Jacking Dimensions (Sheet 2 of 5)  
FIGURE-2-14-1-991-001-A01

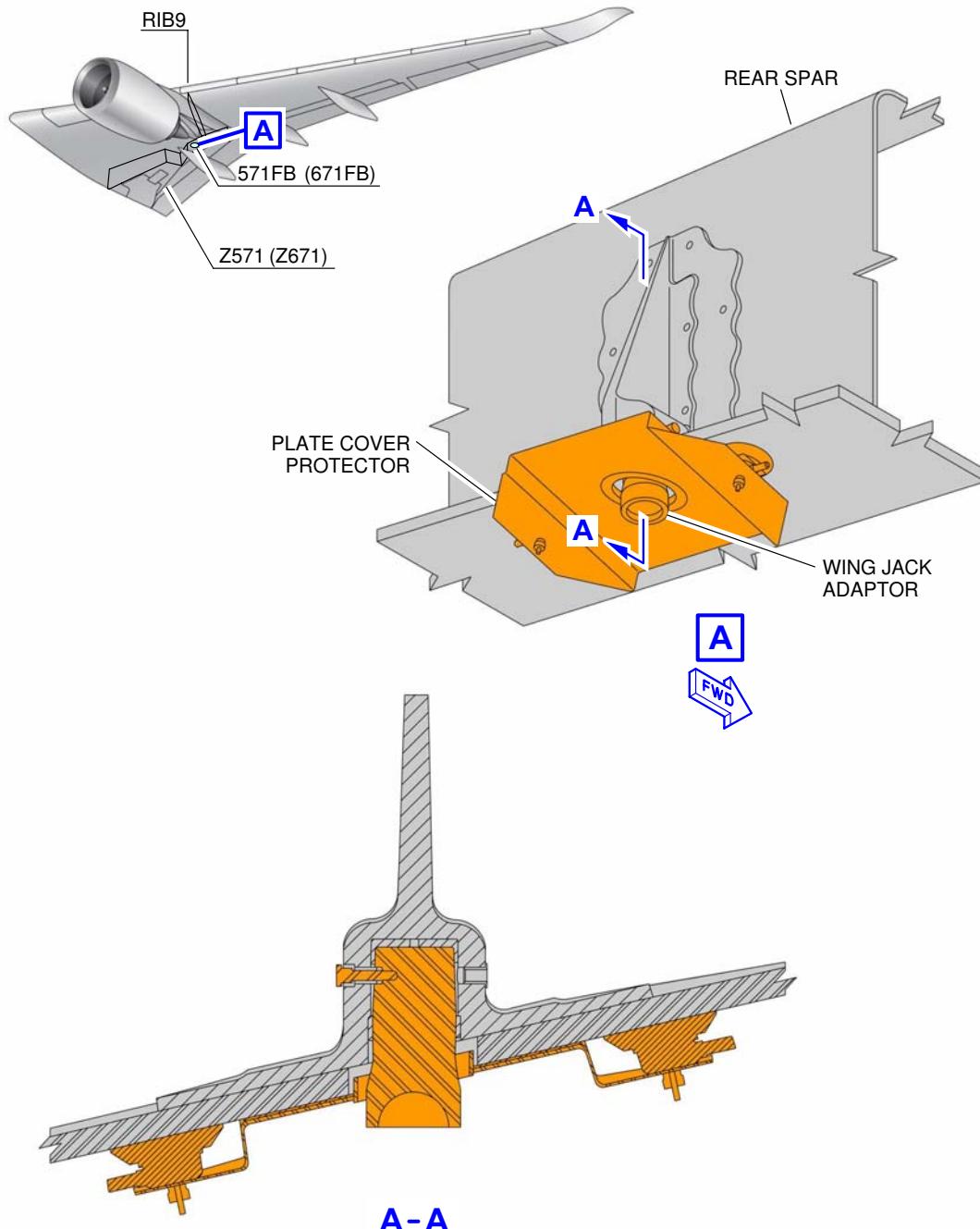
\*\*ON A/C A350-900



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Jacking for Maintenance  
Forward Jacking Point (Sheet 3 of 5)  
FIGURE-2-14-1-991-001-A01

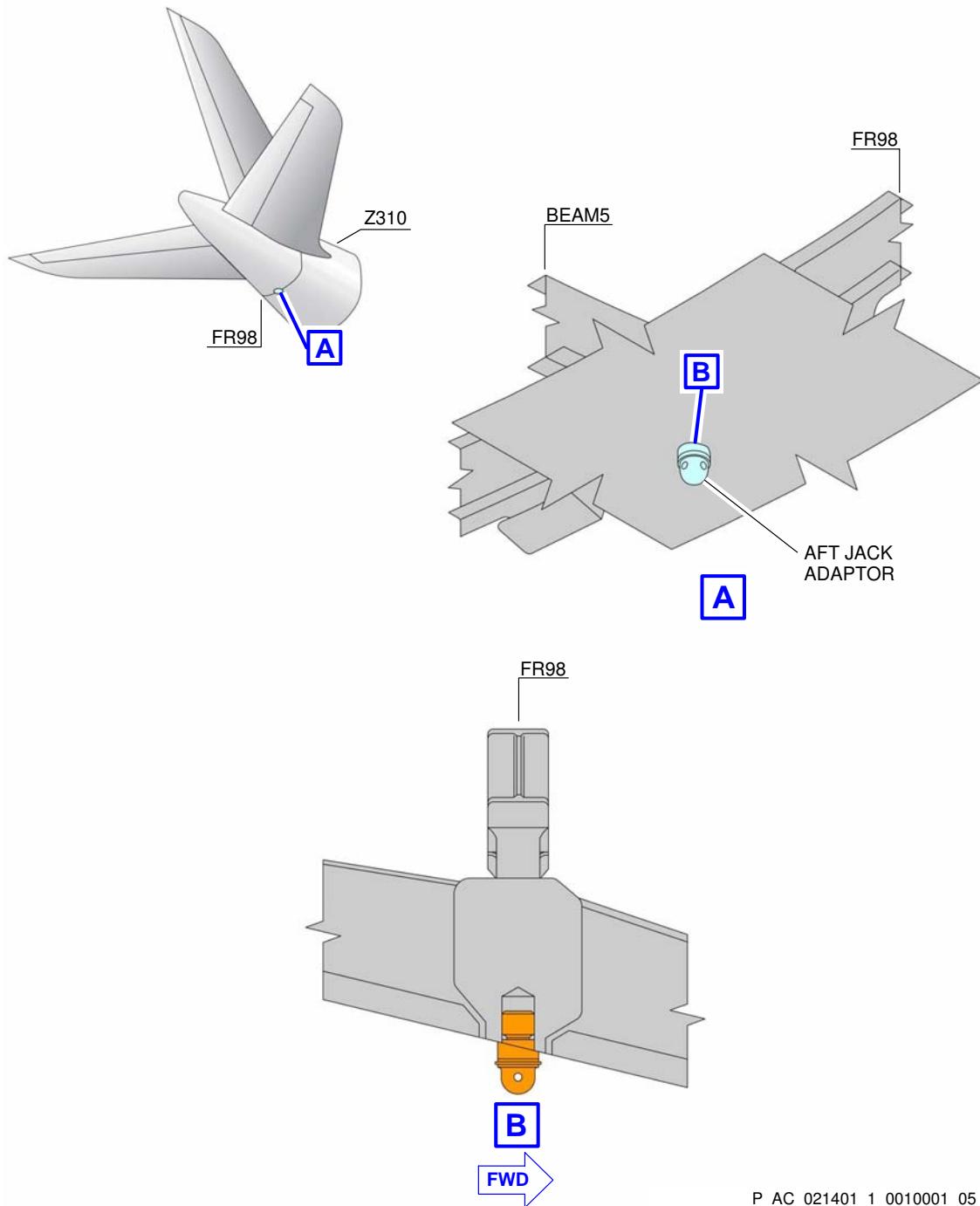
\*\*ON A/C A350-900



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Jacking for Maintenance  
Wing Jacking Point (Sheet 4 of 5)  
FIGURE-2-14-1-991-001-A01

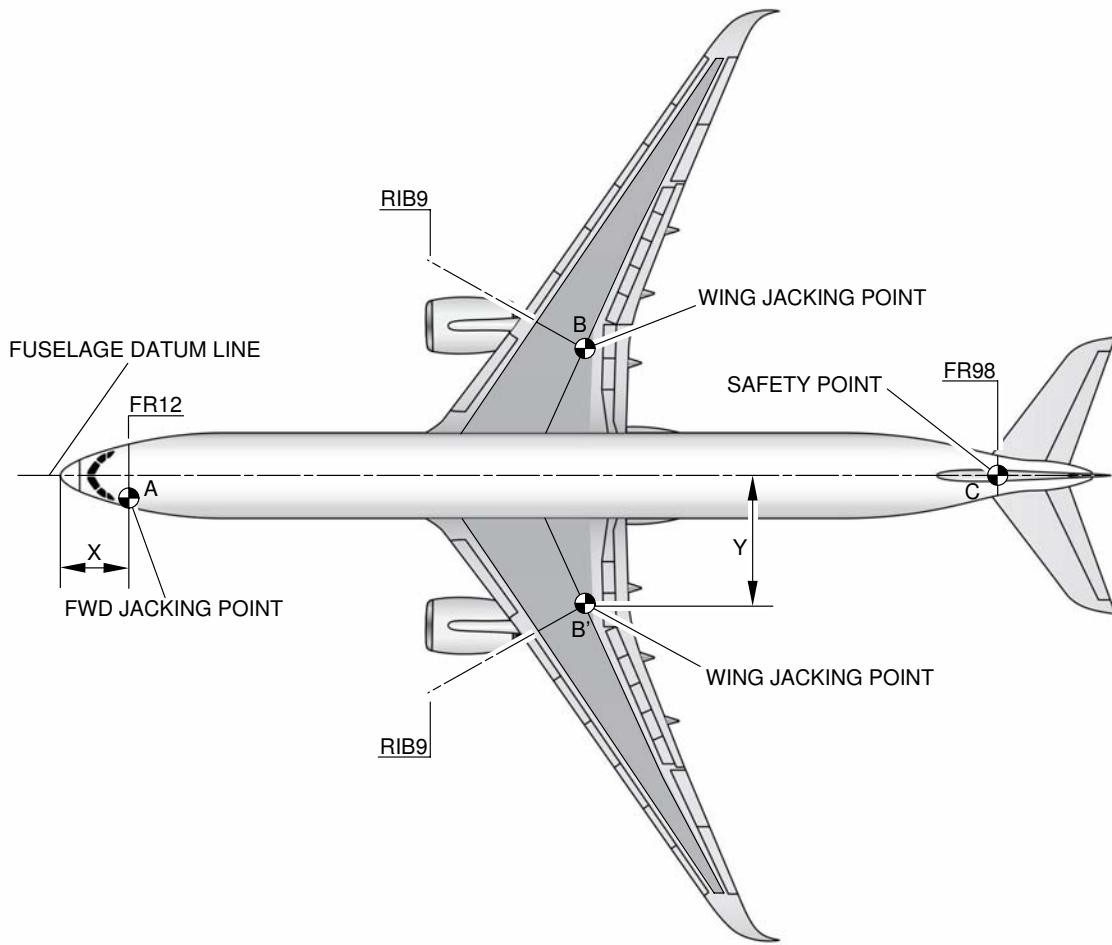
\*\*ON A/C A350-900



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Jacking for Maintenance  
Auxiliary Jacking Point - Safety (Sheet 5 of 5)  
FIGURE-2-14-1-991-001-A01

\*\*ON A/C A350-1000



|                                  | X     |        | Y     |        | MAXIMUM LOAD ELIGIBLE<br>daN |
|----------------------------------|-------|--------|-------|--------|------------------------------|
|                                  | m     | ft     | m     | ft     |                              |
| FORWARD FUSELAGE JACKING POINT A | 4.77  | 15.65  | -1.72 | -5.64  | 16 911                       |
| WING JACKING POINT B             | 37    | 121.39 | 8.71  | 28.58  | 90 764                       |
| WING JACKING POINT B'            | 37    | 121.39 | -8.71 | -28.58 | 89 247                       |
| SAFETY STAY C                    | 65.74 | 215.68 | 0     | 0      | 7 652                        |

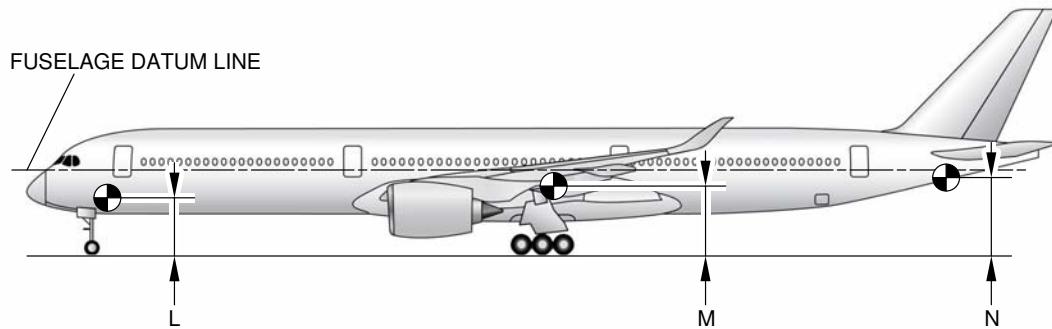
**NOTE:**

SAFETY STAY IS NOT USED FOR JACKING.

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Jacking Points Location  
FIGURE-2-14-1-991-002-B01

\*\*ON A/C A350-1000



| CONFIGURATION   | CG POSITION<br>(% MAC) | HEIGHT   |       |         |          |      |       |
|---|------------------------|----------|-------|---------|----------|------|-------|
|   |                        | L        |       | M       |          | N    |       |
|   |                        | m        | ft    | m       | ft       | m    | ft    |
| AIRCRAFT ON WHEELS, SHOCK-ABSORBER DEFLATED, TIRES DEFLATED (RH)  | 21.5                   | 3.09     | 10.14 | 4.65 LH | 15.26 LH | 4.81 | 15.78 |
|   | 4.11 RH                | 13.48 RH |       |         |          |      |       |
|   | 41.1                   | 3.33     | 10.93 | 4.64 LH | 15.22 LH | 4.59 | 15.06 |
|   | 4.11 RH                | 13.48 RH |       |         |          |      |       |
| A/C ON JACKS, FDL AT 6.50 m (21.33 ft),<br>A/C FUSELAGE PARALLEL TO THE GROUND,<br>SHOCK-ABSORBER RELAXED, CLEARANCE OF MAIN GEAR WHEELS = 1.26 m (4.13 ft)<br>(STANDARD TIRES 01), CLEARANCE OF NOSE GEAR WHEELS = 1.40 m (4.59 ft)<br>(STANDARD TIRES 01) | 21.5                   | 4.32     | 14.17 | 5.66    | 18.57    | 6.09 | 19.98 |
|   | 41.1                   | 4.32     | 14.17 | 5.66    | 18.57    | 6.09 | 19.98 |
| AIRCRAFT ON WHEELS<br>(STANDARD TIRES 01)<br>MAXIMUM JACKING WEIGHT = 189 550 kg (417 887 lb)   | 21.5                   | 3.04     | 9.97  | 4.56    | 14.96    | 5.15 | 16.90 |
|   | 41.1                   | 3.27     | 10.73 | 4.55    | 14.93    | 4.92 | 16.14 |
| AIRCRAFT ON WHEELS<br>(STANDARD TIRES 01)<br>A/C WEIGHT = 145 986 kg (321 844 lb)   | 21.5                   | 3.10     | 10.17 | 4.62    | 15.16    | 5.20 | 17.06 |
|   | 41.1                   | 3.39     | 11.12 | 4.60    | 15.09    | 4.91 | 16.11 |

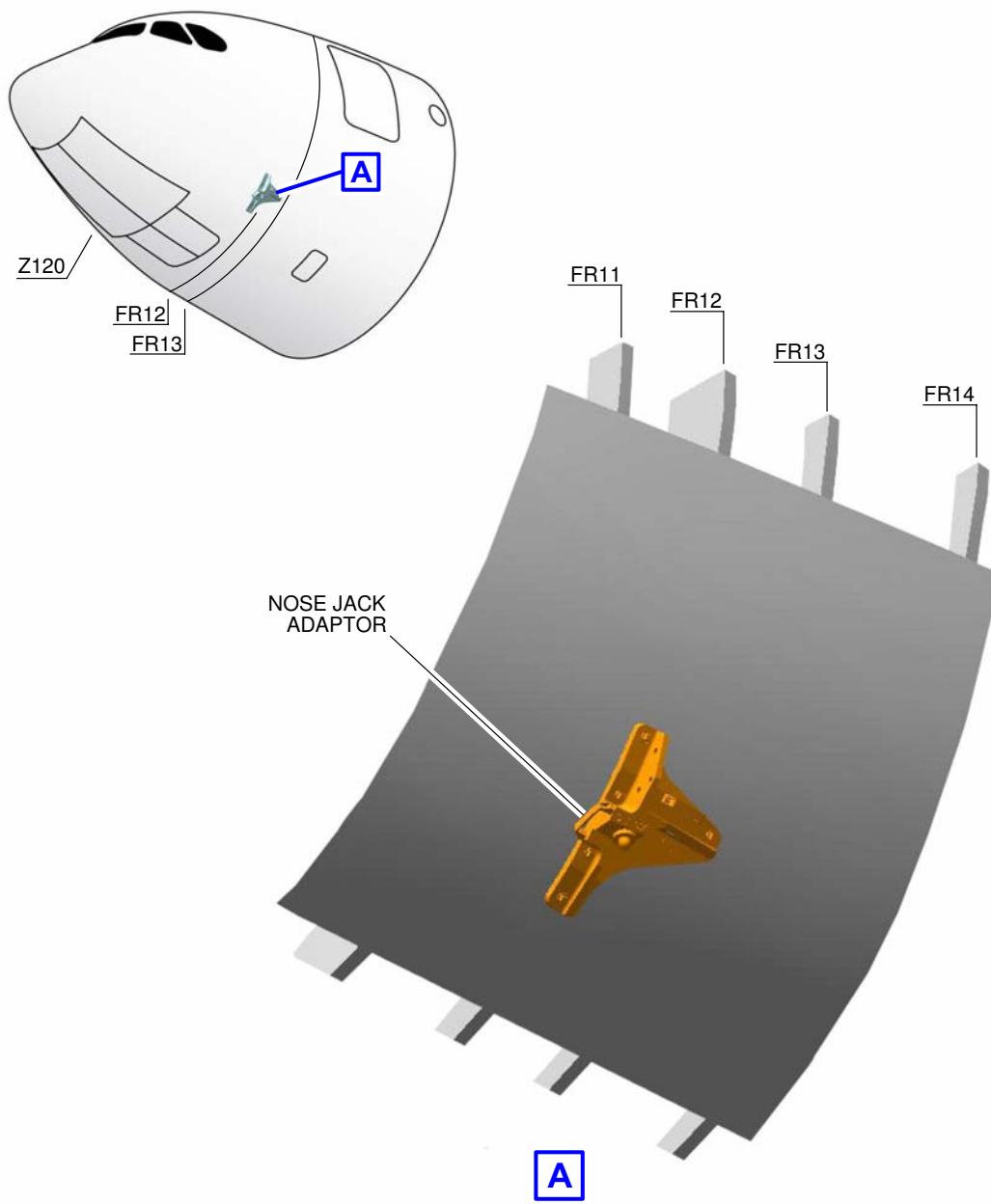
**NOTE:**

01 STANDARD TIRES: NOSE LANDING GEAR = 1 050 x 395 R16  
 MAIN LANDING GEAR = 1 400 x 530 R23

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Jacking Dimensions  
 FIGURE-2-14-1-991-003-B01

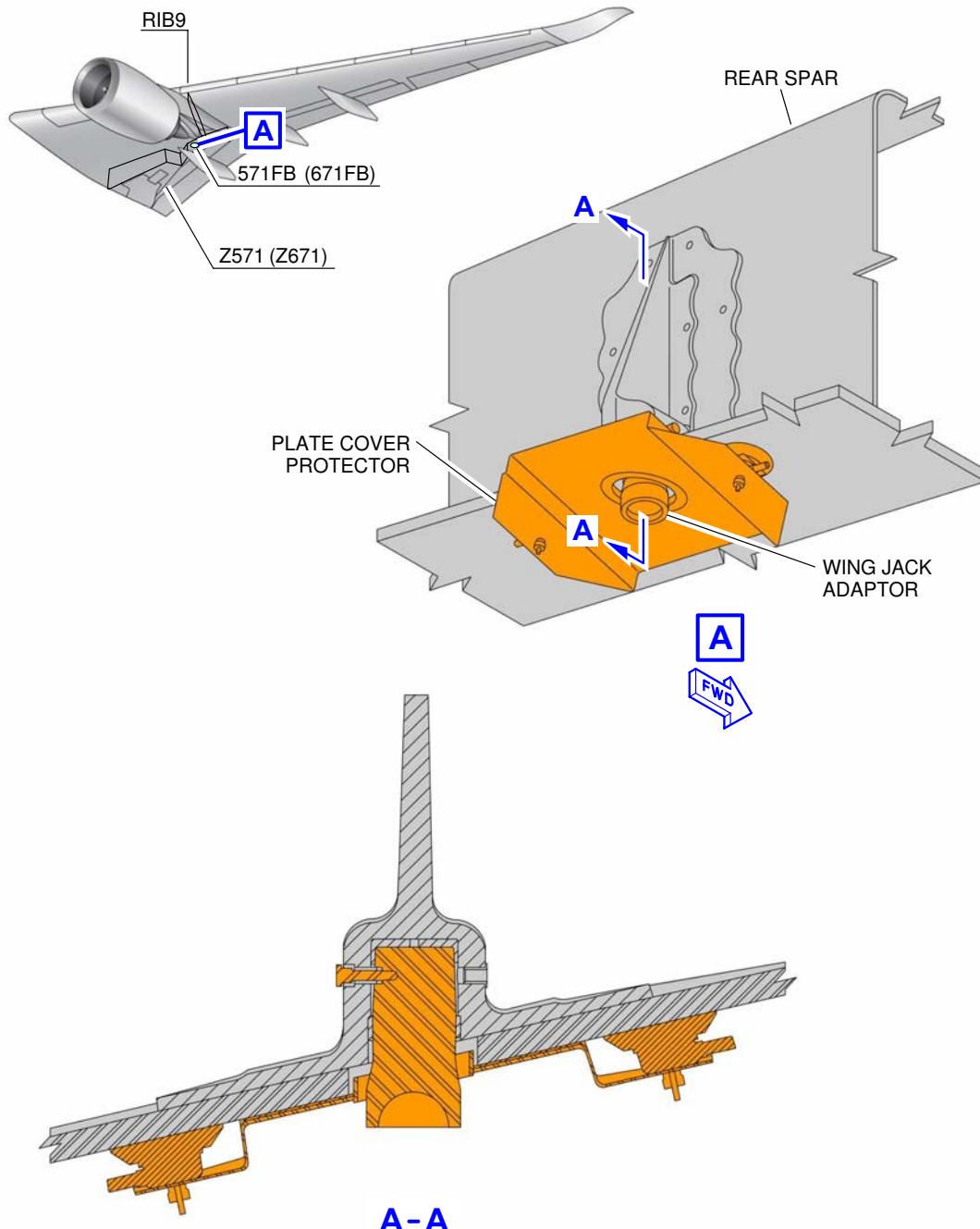
\*\*ON A/C A350-1000



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Forward Jacking Point  
FIGURE-2-14-1-991-004-B01

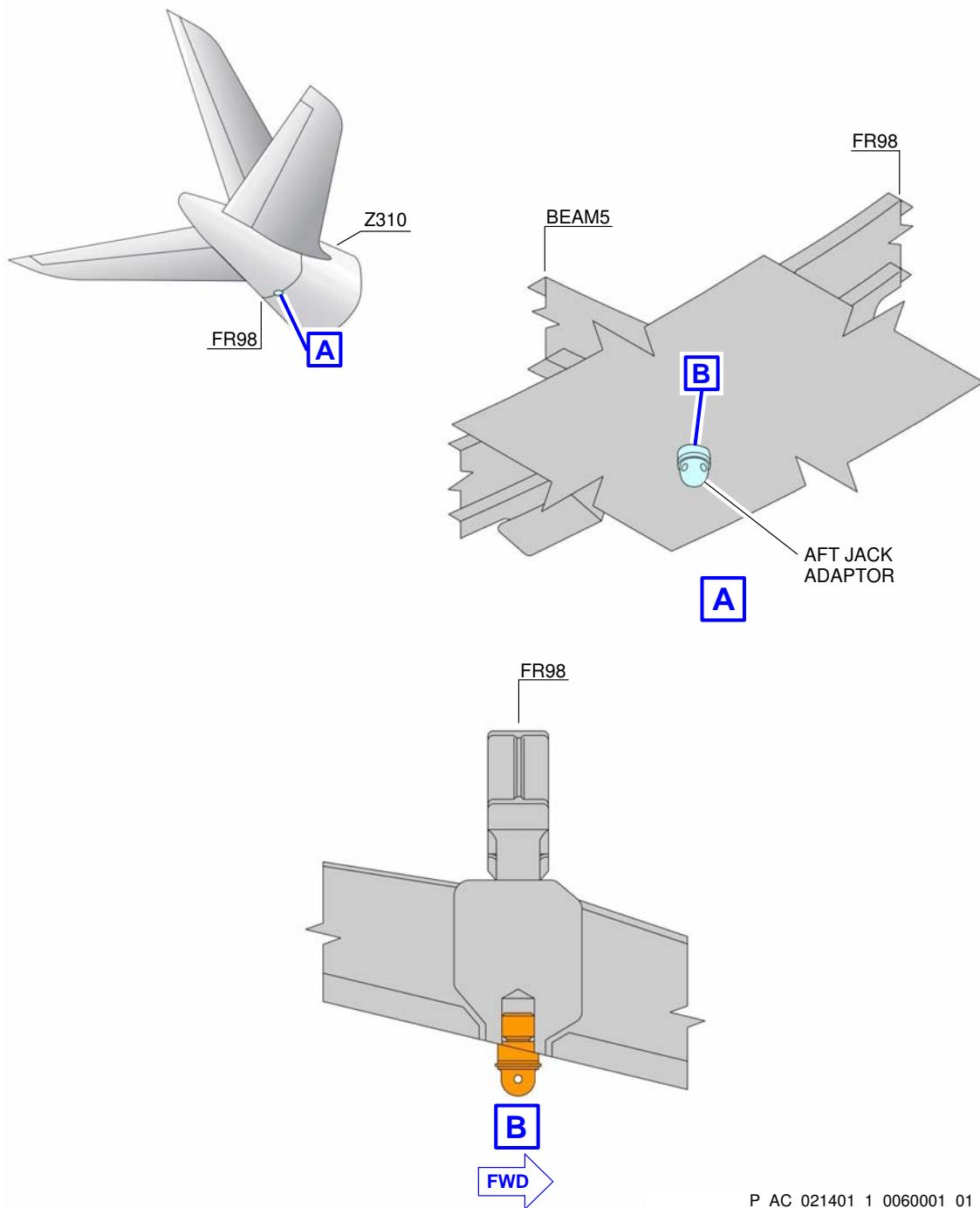
\*\*ON A/C A350-1000



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Wing Jacking Point  
FIGURE-2-14-1-991-005-A01

\*\*ON A/C A350-1000



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Auxiliary Jacking Point - Safety  
FIGURE-2-14-1-991-006-A01

## 2-14-2 Jacking of the Landing Gear

## \*\*ON A/C A350-1000 A350-900

Jacking of the Landing Gear

## 1. General

To replace either the wheel or brake unit assemblies on any of the landing gears, it is necessary to lift the landing gear with a jack.

The landing gear can be lifted by a pillar jack or with a cantilever jack.

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

## \*\*ON A/C A350-900

## 2. Nose Landing Gear (NLG)

To lift the NLG axle with a jack, a dome shaped pad is installed between the wheels.

The reaction loads at the jacking position are shown in FIGURE 2-14-2-991-002-A.

NOTE : The maximum load at NLG jacking point is 33 758 daN.

## 3. Main Landing Gear (MLG)

To lift the MLG bogie with jacks, a dome shaped pad is installed below the FWD and AFT ends of each bogie beam.

Each pair of wheels and brake units can be replaced on the end of the bogie that is lifted.

Both FWD and AFT ends of the bogie beam can be lifted together, but the bogie beam must be kept level during the lift to prevent damage.

The reaction loads at the jacking position are shown in FIGURE 2-14-2-991-003-A.

NOTE : The maximum load at each MLG jacking point is 83 892.5 daN.

## \*\*ON A/C A350-1000

## 4. Nose Landing Gear (NLG)

To lift the NLG axle with a jack, a dome shaped pad is installed between the wheels.

The reaction loads at the jacking position are shown in FIGURE 2-14-2-991-004-A.

NOTE : The maximum load at NLG jacking point is 34 609 daN.

## 5. Main Landing Gear (MLG)

To lift the MLG bogie with jacks, a dome shaped pad is installed below the FWD and AFT ends of each bogie beam.

Each pair of wheels and brake units can be replaced on the end of the bogie that is lifted. To lift the center MLG wheel off the ground, operate both the forward and aft MLG wheel-change jacks at the same time.

Both FWD and AFT ends of the bogie beam can be lifted together, but the bogie beam must be kept level during the lift to prevent damage.

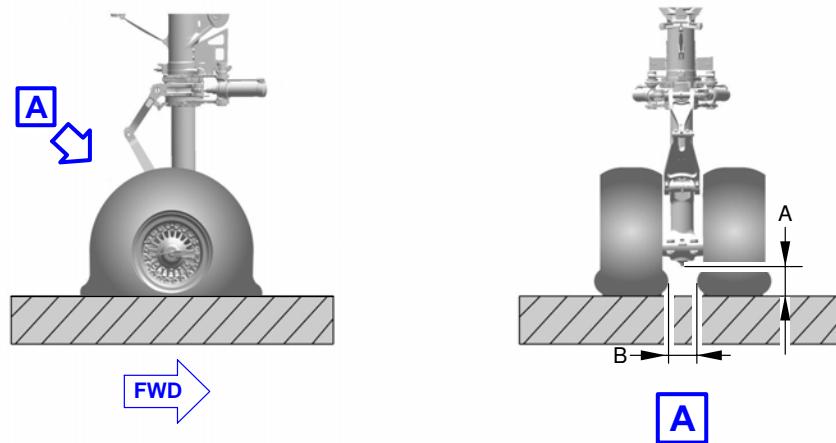
The reaction loads at the jacking position are shown in FIGURE 2-14-2-991-005-A.



AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

NOTE : The maximum load at each MLG jacking point is 95 803.5 daN.

\*\*ON A/C A350-900



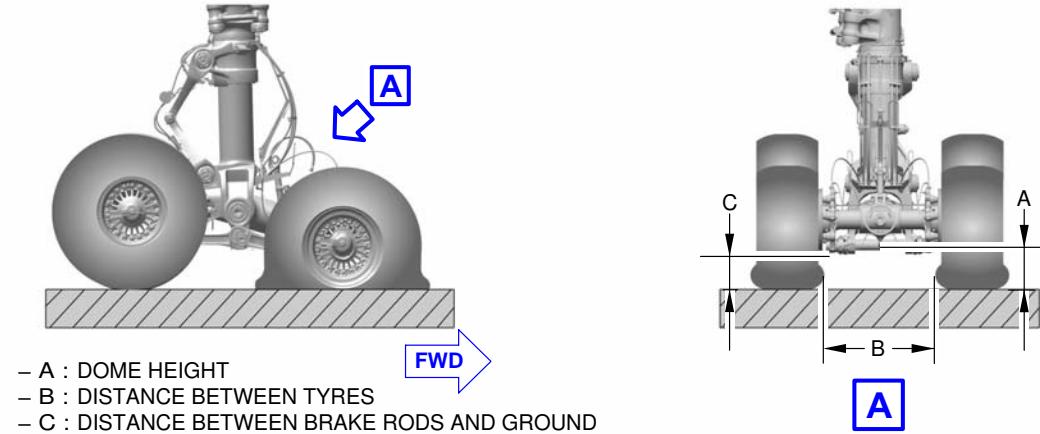
- A : DOME HEIGHT
- B : DISTANCE BETWEEN TYRES

| A350-900 NLG (1 050 x 395 R16)                               |            |            |       |       |       |       |
|--|------------|------------|-------|-------|-------|-------|
| CONFIGURATION (ASSUME ALL OTHER TYRES ON THE A/C ARE INTACT) | WEIGHT (T) | CG (% MAC) | DIM A |       | DIM B |       |
|  |            |            | mm    | in    | mm    | in    |
| 2 TYRES (NORMAL)   | MRW        | 26.2       | 291   | 11.45 | 261   | 10.27 |
| 1 FLAT TYRE  | MRW        | 26.2       | 227   | 8.93  | 214   | 8.42  |
| 2 FLAT TYRES & 50% RIM FLANGE DAMAGE                         | MLW        | 20         | 75    | 2.95  | 191   | 7.51  |
| 2 FLAT TYRES & NO RIM FLANGE DAMAGE                          | MLW        | 20         | 97    | 3.81  | 191   | 7.51  |

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Nose Landing Gear Jacking Point Heights  
FIGURE-2-14-2-991-002-A01

\*\*ON A/C A350-900

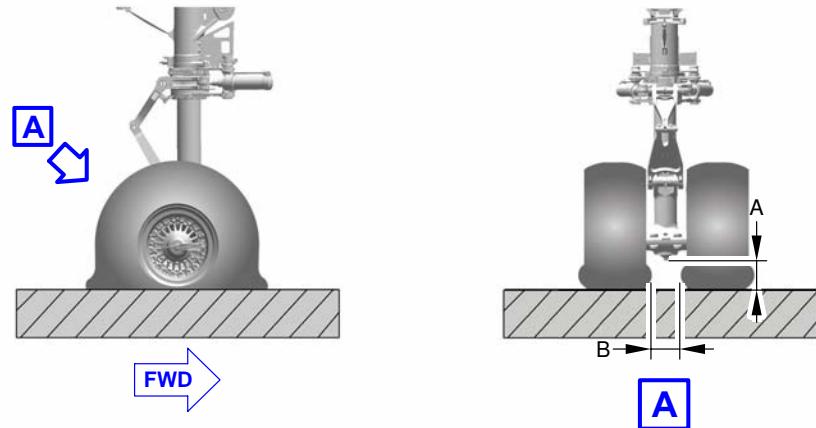


| A350-900 MLG (1 400 x 530 R23)  |               |               |              |       |              |       |              |       |              |       |              |       |              |       |
|---|---------------|---------------|--------------|-------|--------------|-------|--------------|-------|--------------|-------|--------------|-------|--------------|-------|
| CONFIGURATION<br>(ASSUME ALL OTHER<br>TYRES ON THE A/C<br>ARE INTACT) | WEIGHT<br>(T) | CG<br>(% MAC) | DIM A<br>FWD |       | DIM A<br>AFT |       | DIM B<br>FWD |       | DIM B<br>AFT |       | DIM C<br>FWD |       | DIM C<br>AFT |       |
|   |               |               | mm           | in    |
| 4 TYRES (NORMAL)  | MRW           | 33.2          | 378          | 14.88 | 378          | 14.88 | 1 029        | 40.51 | 1 036        | 40.78 | 267          | 10.51 | 267          | 10.51 |
| FWD INNER TYRE UNSERVICEABLE  | MRW           | 33.2          | 304          | 11.96 | 381          | 15.00 | 981          | 38.62 | 1 041        | 40.98 | 194          | 7.63  | 271          | 10.66 |
| FWD OUTER TYRE UNSERVICEABLE  | MRW           | 33.2          | 285          | 11.22 | 374          | 14.72 | 974          | 38.34 | 1 033        | 40.66 | 175          | 6.88  | 264          | 10.39 |
| AFT INNER TYRE UNSERVICEABLE  | MRW           | 33.2          | 381          | 15.00 | 304          | 11.96 | 1 032        | 40.62 | 983          | 38.70 | 271          | 10.66 | 193          | 7.59  |
| AFT OUTER TYRE UNSERVICEABLE  | MRW           | 33.2          | 374          | 14.72 | 285          | 11.22 | 1 025        | 40.35 | 975          | 38.38 | 264          | 10.39 | 175          | 6.88  |
| 2 FLAT FWD TYRES & 50% RIM DAMAGE                                     | MLW           | 42            | 129          | 5.07  | 404          | 15.90 | 967          | 38.07 | 1 071        | 42.16 | 18           | 0.70  | 293          | 11.53 |
| 2 FLAT AFT TYRES & 50% RIM DAMAGE                                     | MLW           | 42            | 404          | 15.90 | 129          | 5.07  | 1 060        | 41.73 | 967          | 38.07 | 293          | 11.53 | 18           | 0.70  |
| 4 FLAT TYRES & 50% RIM DAMAGE   | MLW           | 42            | 136          | 5.35  | 136          | 5.35  | 967          | 38.07 | 967          | 38.07 | 26           | 1.02  | 26           | 1.02  |
| 2 FLAT FWD TYRES & NO RIM DAMAGE                                      | MLW           | 42            | 159          | 6.25  | 403          | 15.86 | 967          | 38.07 | 1 071        | 42.16 | 48           | 1.88  | 293          | 11.53 |
| 2 FLAT AFT TYRES & NO RIM DAMAGE                                      | MLW           | 42            | 403          | 15.86 | 159          | 6.25  | 1 059        | 41.69 | 967          | 38.07 | 293          | 11.53 | 48           | 1.88  |
| 4 FLAT TYRES & NO RIM DAMAGE  | MLW           | 42            | 166          | 6.53  | 166          | 6.53  | 967          | 38.07 | 967          | 38.07 | 55           | 2.16  | 55           | 2.16  |
| TYRE CHANGE   |               |               |              |       |              |       |              |       |              |       |              |       |              |       |
| FWD MAX GROWN<br>TYRE 25 mm<br>FROM GROUND                            | MRW           | 33.2          | 541          | 21.29 | 378          | 14.88 | 1 113        | 43.81 | 1 029        | 40.51 | 431          | 16.96 | 268          | 10.55 |
| AFT MAX GROWN<br>TYRE 25 mm<br>FROM GROUND                            | MRW           | 33.2          | 378          | 14.88 | 541          | 21.29 | 1 029        | 40.51 | 1 113        | 43.81 | 268          | 10.55 | 430          | 16.92 |
| 8 FLAT TYRES &<br>50% RIM DAMAGE                                      | MRW           | 26.2          | 118          | 4.64  | 118          | 4.64  | 967          | 38.07 | 967          | 38.07 | 7            | 0.27  | 7            | 0.27  |
| 8 FLAT TYRES &<br>NO RIM DAMAGE                                       | MRW           | 26.2          | 149          | 5.86  | 149          | 5.86  | 967          | 38.07 | 967          | 38.07 | 39           | 1.53  | 39           | 1.53  |

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Main Landing Gear Jacking Point Heights  
FIGURE-2-14-2-991-003-A01

\*\*ON A/C A350-1000



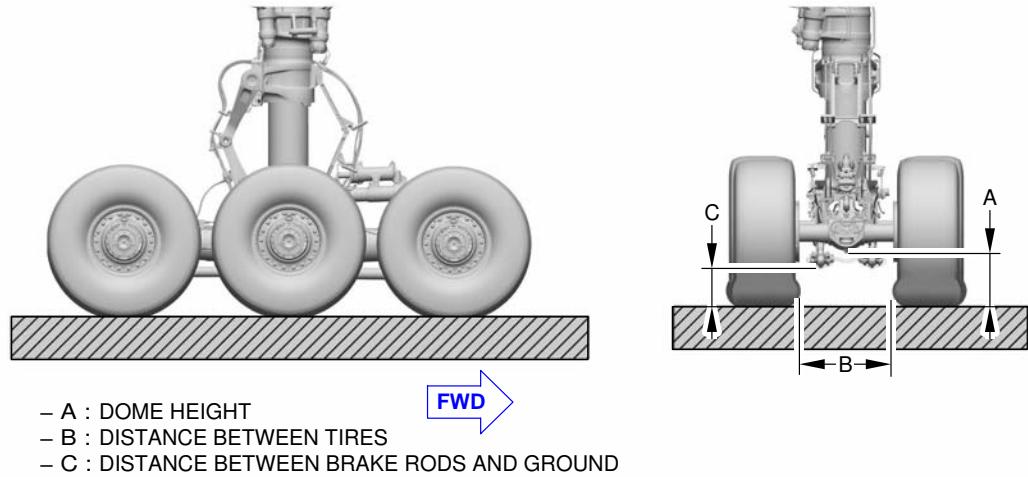
- A : DOME HEIGHT
- B : DISTANCE BETWEEN TIRES

| A350-1000 NLG (1 050x395R16)                                 |            |            |        |       |       |       |
|--|------------|------------|--------|-------|-------|-------|
| CONFIGURATION (ASSUME ALL OTHER TIRES ON THE A/C ARE INTACT) | WEIGHT (T) | CG (% MAC) | DIM A  |       | DIM B |       |
|  |            |            | mm     | in    | mm    | in    |
| 2 TIRES (NORMAL)   | MRW        | 25         | 299.47 | 11.79 | 276   | 10.87 |
| 1 FLAT TIRE  | MRW        | 25         | 251.29 | 9.89  | 236   | 9.29  |
| 2 FLAT TIRES & 50% RIM FLANGE DAMAGE                         | MLW        | 21.5       | 81.01  | 3.19  | 190.8 | 7.51  |
| 2 FLAT TIRES & NO RIM FLANGE DAMAGE                          | MLW        | 21.5       | 103.23 | 4.06  | 190.8 | 7.51  |

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Nose Landing Gear Jacking Point Heights  
FIGURE-2-14-2-991-004-A01

\*\*ON A/C A350-1000



| CONFIGURATION<br>(ASSUME ALL OTHER<br>TIRES ON THE A/C<br>ARE INTACT) | WEIGHT<br>(T) | CG<br>(% MAC) | DIM A<br>FWD |       | DIM A<br>AFT |       | DIM B<br>FWD |       | DIM B<br>AFT |       | DIM C<br>FWD |       | DIM C<br>AFT |       |
|---|---------------|---------------|--------------|-------|--------------|-------|--------------|-------|--------------|-------|--------------|-------|--------------|-------|
|   |               |               | mm           | in    |
| 6 TIRES (NORMAL)  | MRW           | 34            | 355          | 13.98 | 355          | 13.98 | 780          | 30.71 | 780          | 30.71 | 234          | 9.21  | 234          | 9.21  |
| FWD INNER TIRE UNSERVICEABLE  | MRW           | 34            | 306          | 12.05 | 367          | 14.45 | 754          | 29.69 | 790          | 31.10 | 184          | 7.24  | 246          | 9.69  |
| FWD OUTER TIRE UNSERVICEABLE  | MRW           | 34            | 299          | 11.77 | 365          | 14.37 | 752          | 29.61 | 788          | 31.02 | 178          | 7.01  | 244          | 9.61  |
| MID INNER TIRE UNSERVICEABLE  | MRW           | 34            | 342          | 13.46 | 342          | 13.46 | 771          | 30.35 | 771          | 30.35 | 220          | 8.66  | 220          | 8.66  |
| MID OUTER TIRE UNSERVICEABLE  | MRW           | 34            | 339          | 13.35 | 339          | 13.35 | 769          | 30.28 | 769          | 30.28 | 217          | 8.54  | 217          | 8.54  |
| AFT INNER TIRE UNSERVICEABLE  | MRW           | 34            | 367          | 14.45 | 306          | 12.05 | 790          | 31.10 | 754          | 29.69 | 246          | 9.69  | 184          | 7.24  |
| AFT OUTER TIRE UNSERVICEABLE  | MRW           | 34            | 365          | 14.37 | 299          | 11.77 | 788          | 31.02 | 752          | 29.61 | 244          | 9.61  | 178          | 7.01  |
| 2 FLAT FWD TIRES & 50% RIM DAMAGE                                     | MLW           | 41.1          | 127          | 5.00  | 435          | 17.13 | 722          | 28.43 | 876          | 34.49 | 6            | 0.24  | 314          | 12.36 |
| 2 FLAT MID TIRES & 50% RIM DAMAGE                                     | MLW           | 41.1          | 343          | 13.50 | 343          | 13.50 | 772          | 30.39 | 772          | 30.39 | 222          | 8.74  | 222          | 8.74  |
| 2 FLAT AFT TIRES & 50% RIM DAMAGE                                     | MLW           | 41.1          | 435          | 17.13 | 127          | 5.00  | 876          | 34.49 | 722          | 28.43 | 314          | 12.36 | 6            | 0.24  |
| 6 FLAT TIRES & 50% RIM DAMAGE   | MLW           | 41.1          | 135          | 5.31  | 135          | 5.31  | 722          | 28.43 | 722          | 28.43 | 13           | 0.51  | 13           | 0.51  |
| 2 FLAT FWD TIRES & NO RIM DAMAGE                                      | MLW           | 41.1          | 150          | 5.91  | 428          | 16.85 | 722          | 28.43 | 865          | 34.06 | 29           | 1.14  | 307          | 12.09 |
| 2 FLAT MID TIRES & NO RIM DAMAGE                                      | MLW           | 41.1          | 343          | 13.50 | 343          | 13.50 | 772          | 30.39 | 772          | 30.39 | 222          | 8.74  | 222          | 8.74  |
| 2 FLAT AFT TIRES & NO RIM DAMAGE                                      | MLW           | 41.1          | 428          | 16.85 | 150          | 5.91  | 865          | 34.06 | 722          | 28.43 | 307          | 12.09 | 29           | 1.14  |
| 6 FLAT TIRES & NO RIM DAMAGE  | MLW           | 41.1          | 157          | 6.18  | 157          | 6.18  | 722          | 28.43 | 722          | 28.43 | 36           | 1.42  | 36           | 1.42  |

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Main Landing Gear Jacking Point Heights  
(Sheet 1 of 2)

FIGURE-2-14-2-991-005-A01

\*\*ON A/C A350-1000

| A350-1000 MLG (50x20R22)  |               |               |              |       |              |       |              |       |              |       |              |       |              |       |
|---|---------------|---------------|--------------|-------|--------------|-------|--------------|-------|--------------|-------|--------------|-------|--------------|-------|
| CONFIGURATION<br>(ASSUME ALL OTHER<br>TIRES ON THE A/C<br>ARE INTACT) | WEIGHT<br>(T) | CG<br>(% MAC) | DIM A<br>FWD |       | DIM A<br>AFT |       | DIM B<br>FWD |       | DIM B<br>AFT |       | DIM C<br>FWD |       | DIM C<br>AFT |       |
|   |               |               | mm           | in    |
| TIRE CHANGE   |               |               |              |       |              |       |              |       |              |       |              |       |              |       |
| FWD MAX GROWN<br>TIRE 25 mm<br>FROM GROUND                            | MRW           | 34            | 486          | 19.13 | 332          | 13.07 | 876          | 34.49 | 765          | 30.12 | 365          | 14.37 | 211          | 8.31  |
| AFT MAX GROWN<br>TIRE 25 mm<br>FROM GROUND                            | MRW           | 34            | 332          | 13.07 | 486          | 19.13 | 765          | 30.12 | 876          | 34.49 | 211          | 8.31  | 365          | 14.37 |
| 12 FLAT TIRES &<br>50% RIM DAMAGE                                     | MRW           | 25            | 120          | 4.72  | 120          | 4.72  | 722          | 28.43 | 722          | 28.43 | 0            | 0     | 0            | 0     |
| 12 FLAT TIRES &<br>NO RIM DAMAGE                                      | MRW           | 34            | 144          | 5.67  | 144          | 5.67  | 722          | 28.43 | 722          | 28.43 | 23           | 0.91  | 23           | 0.91  |

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Main Landing Gear Jacking Point Heights

(Sheet 2 of 2)

FIGURE-2-14-2-991-005-A01

AIRCRAFT PERFORMANCE

## 3-1-0      General Information

\*\*ON A/C A350-1000 A350-900

General Information

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

| STANDARD DAY TEMPERATURES FOR THE ALTITUDES |        |                          |      |
|---|--------|--------------------------|------|
| ALTITUDE                                    |        | STANDARD DAY TEMPERATURE |      |
| FEET  | METERS | °F                       | °C   |
| 0   | 0      | 59.0                     | 15.0 |
| 2 000                                       | 610    | 51.9                     | 11.1 |
| 4 000                                       | 1 220  | 44.7                     | 7.1  |
| 6 000                                       | 1 830  | 37.6                     | 3.1  |
| 8 000                                       | 2 440  | 30.5                     | -0.8 |



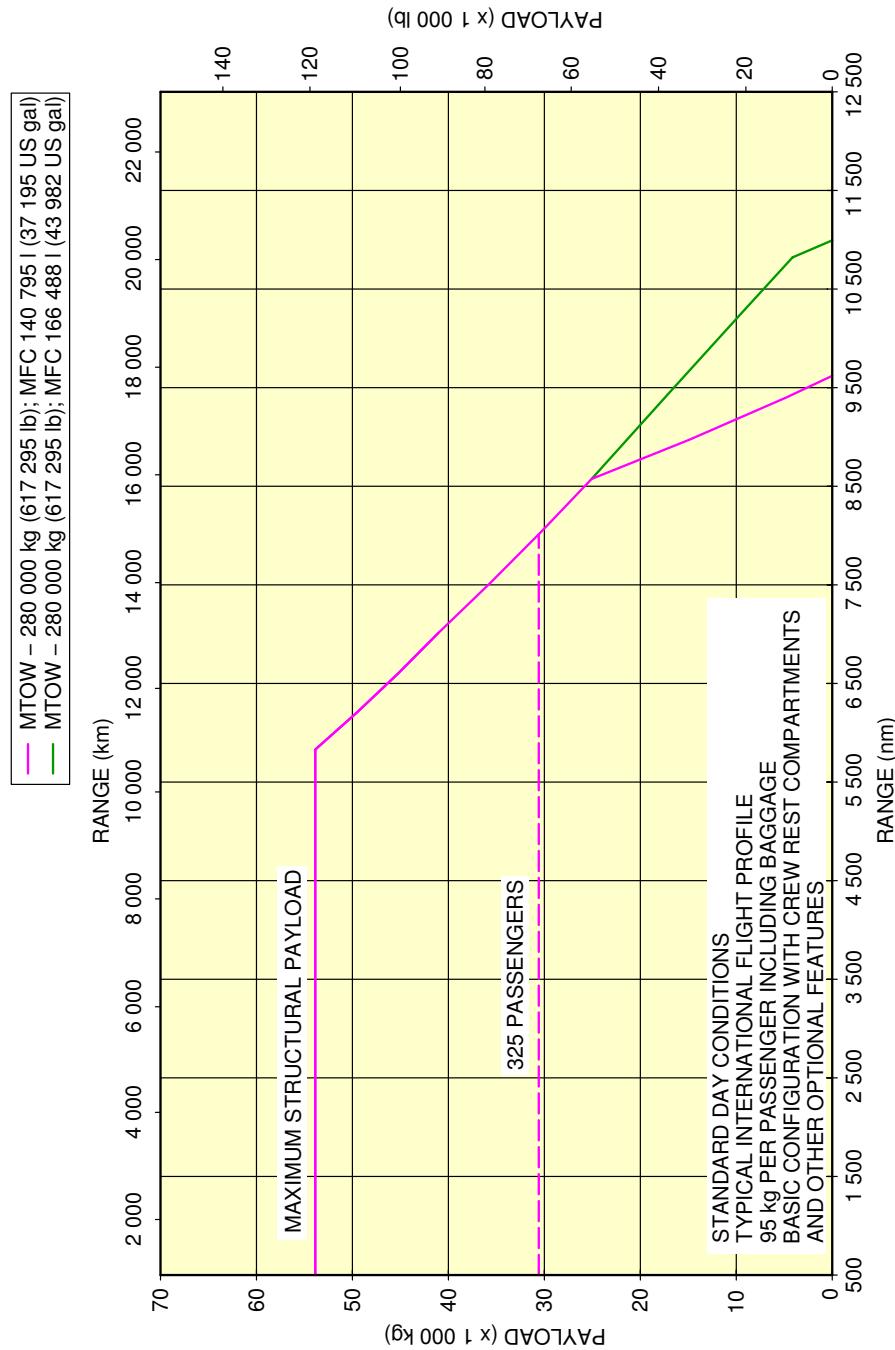
3-2-0      Payload/Range - ISA Conditions

\*\*ON A/C A350-1000 A350-900

Payload/Range - ISA Conditions

1. This section provides the payload/range at ISA conditions.

\*\*ON A/C A350-900

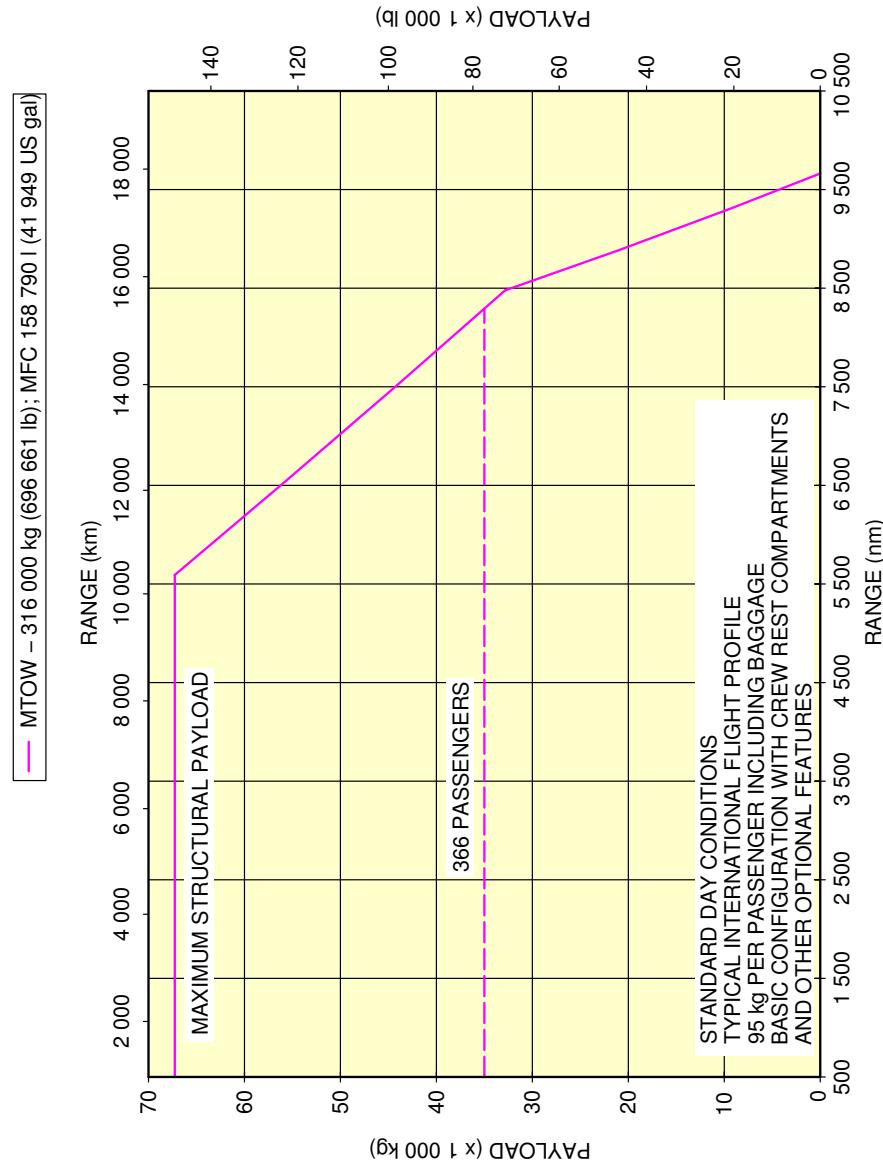


**NOTE:**  
THESE CURVES ARE GIVEN FOR INFORMATION ONLY. THE APPROVED VALUES ARE STATED  
IN THE "OPERATING MANUALS" SPECIFIC TO THE AIRLINE OPERATING THE AIRCRAFT.

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Payload/Range - ISA Conditions  
FIGURE-3-2-0-991-001-A01

\*\*ON A/C A350-1000



Payload/Range - ISA Conditions  
FIGURE-3-2-0-991-002-A01

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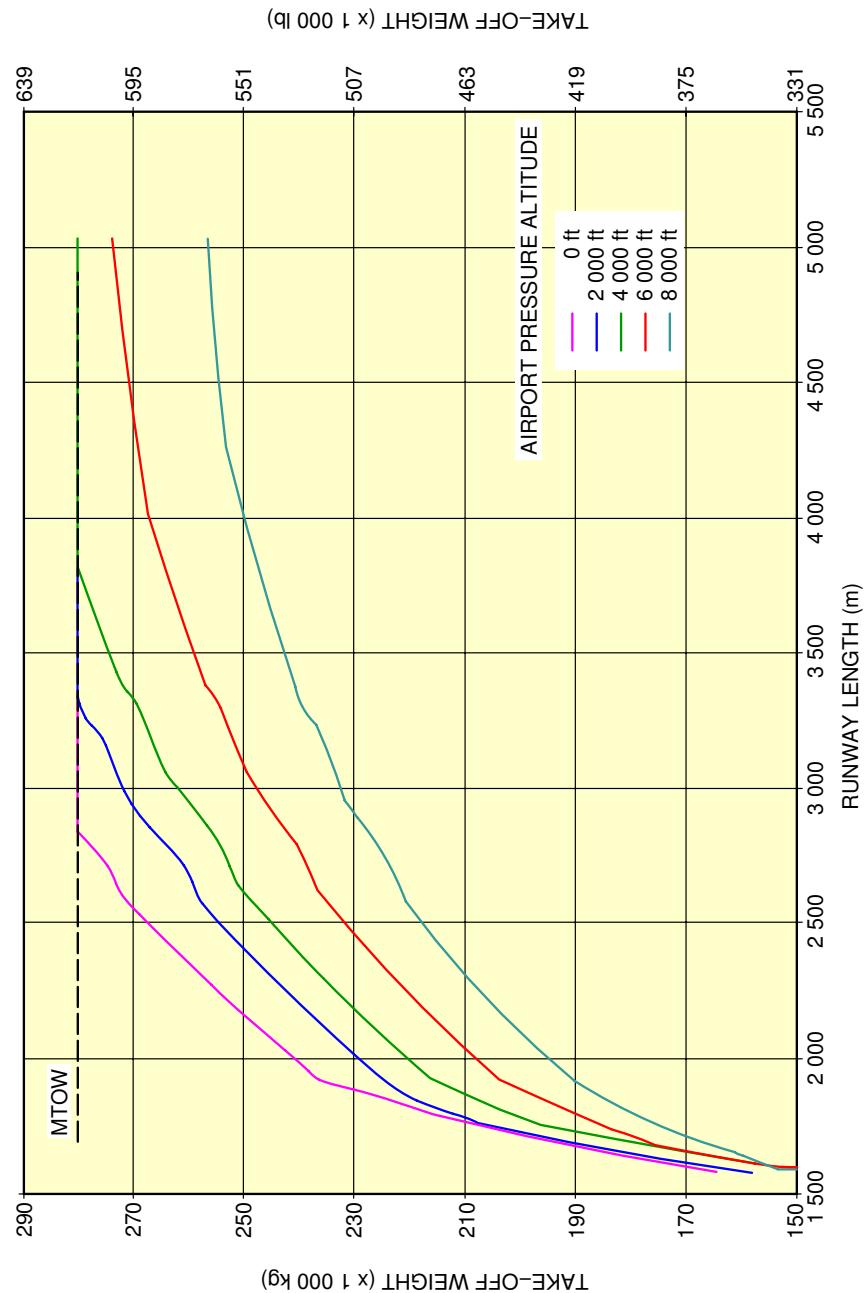
3-3-0      Take-Off Weight Limitation

**\*\*ON A/C A350-1000 A350-900**

Take-Off Weight Limitation

1. This section provides the take-off weight limitation at ISA conditions and ISA + 15 °C (ISA + 27 °F) conditions on a dry runway.

\*\*ON A/C A350-900

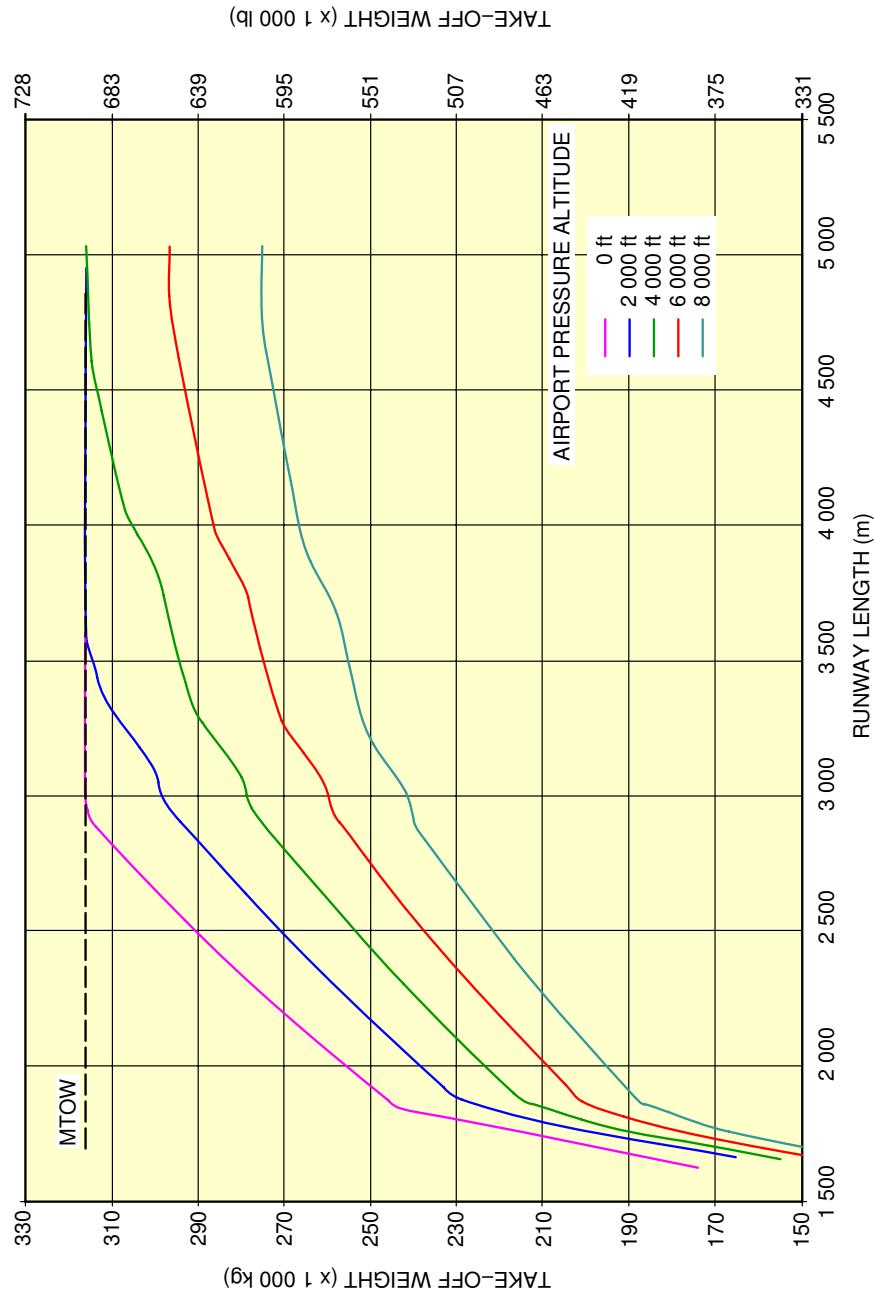


**NOTE:**  
THESE CURVES ARE GIVEN FOR INFORMATION ONLY. THE APPROVED VALUES ARE STATED  
IN THE "OPERATING MANUALS" SPECIFIC TO THE AIRLINE OPERATING THE AIRCRAFT.

ISA Conditions  
FIGURE-3-3-0-991-001-A01

P\_AC\_030300\_1\_0010001\_01\_02

\*\*ON A/C A350-1000

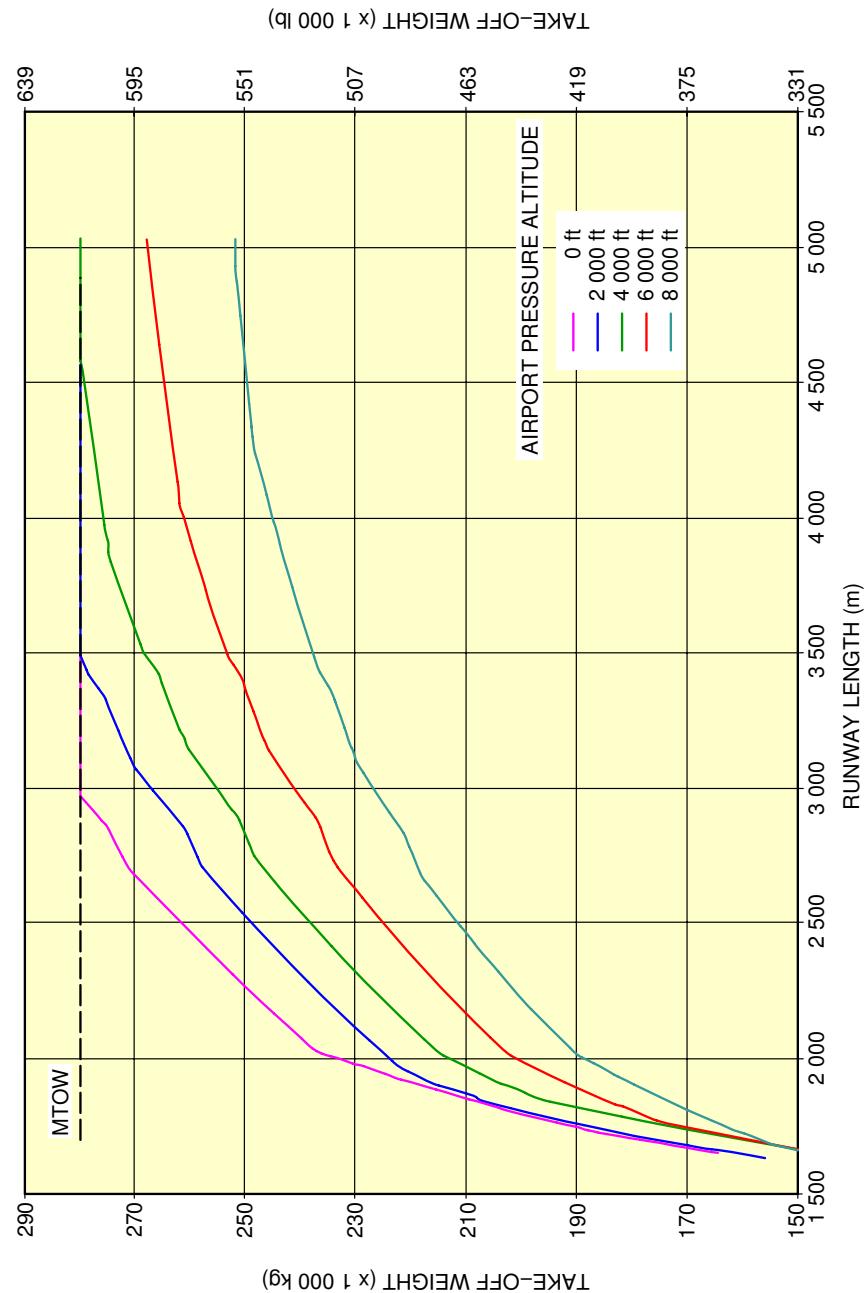


**NOTE:**  
THESE CURVES ARE GIVEN FOR INFORMATION ONLY. THE APPROVED VALUES ARE STATED  
IN THE "OPERATING MANUALS" SPECIFIC TO THE AIRLINE OPERATING THE AIRCRAFT.

ISA Conditions  
FIGURE-3-3-0-991-001-E01

P\_AC\_030300\_1\_0010005\_01\_00

\*\*ON A/C A350-900

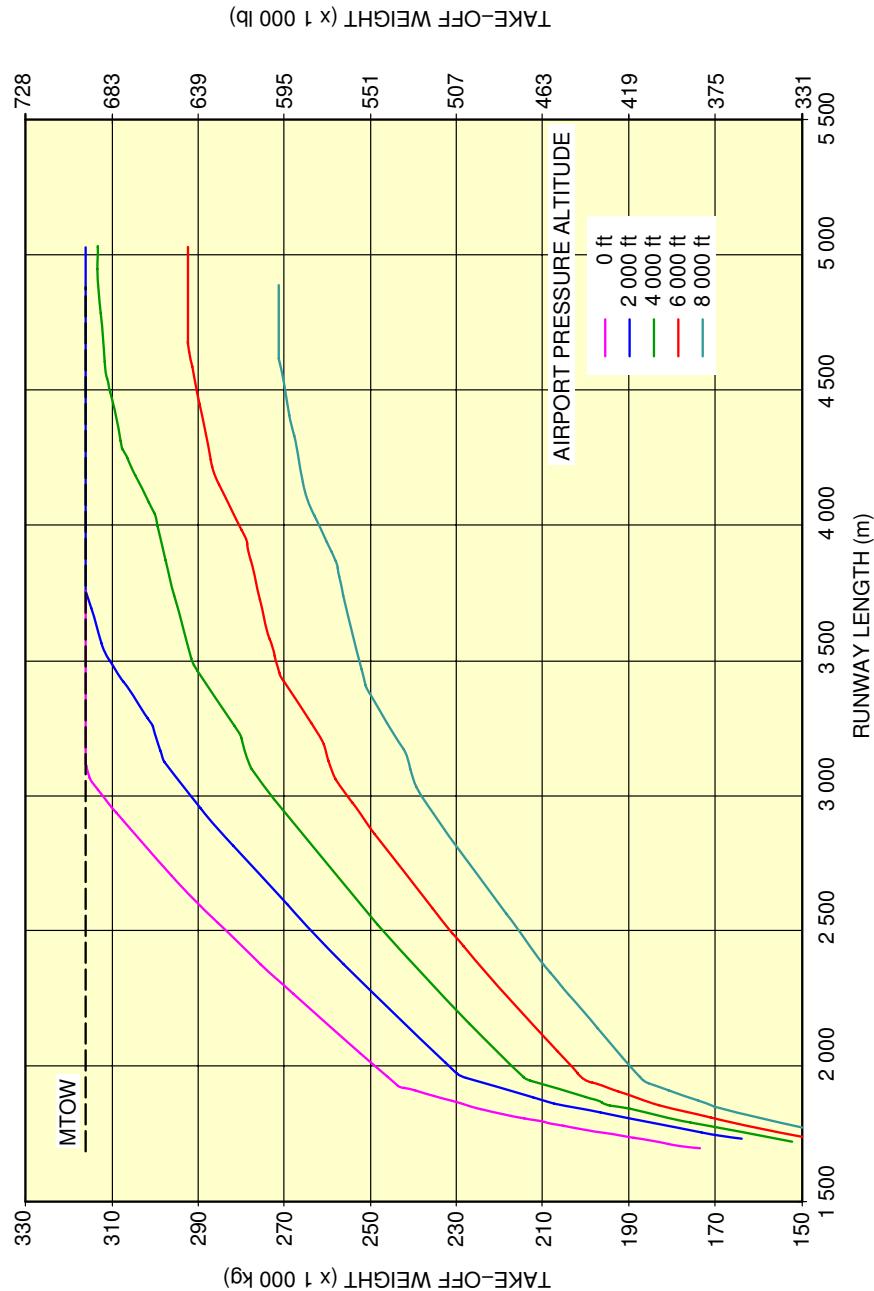


**NOTE:**  
THESE CURVES ARE GIVEN FOR INFORMATION ONLY. THE APPROVED VALUES ARE STATED  
IN THE "OPERATING MANUALS" SPECIFIC TO THE AIRLINE OPERATING THE AIRCRAFT.

ISA + 15 °C (ISA + 27 °F) Conditions  
FIGURE-3-3-0-991-002-A01

P\_AC\_030300\_1\_0020001\_01\_02

\*\*ON A/C A350-1000



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

ISA + 15 °C (ISA + 27 °F) Conditions  
FIGURE-3-3-0-991-002-B01

P\_AC\_030300\_1\_0020002\_01\_00



3-3-3      Aerodrome Reference Code

**\*\*ON A/C A350-1000 A350-900**

Aerodrome Reference Code

1. A350-900 and A350-1000 can operate on aerodromes classified as code 4E as per ICAO Aerodrome Reference Code.



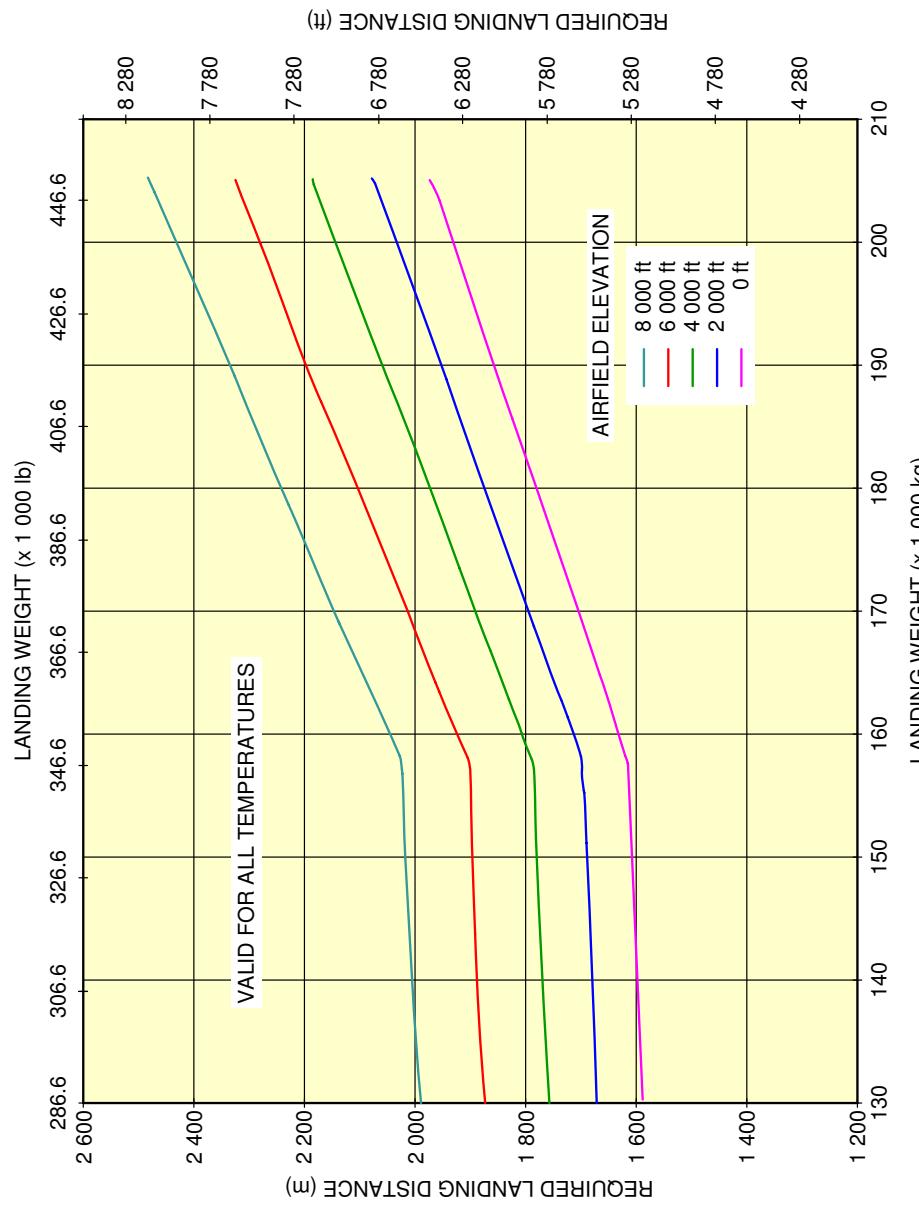
**3-4-0      Landing Field Length**

**\*\*ON A/C A350-1000 A350-900**

**Landing Field Length**

1. This section gives the landing field length on a dry runway.

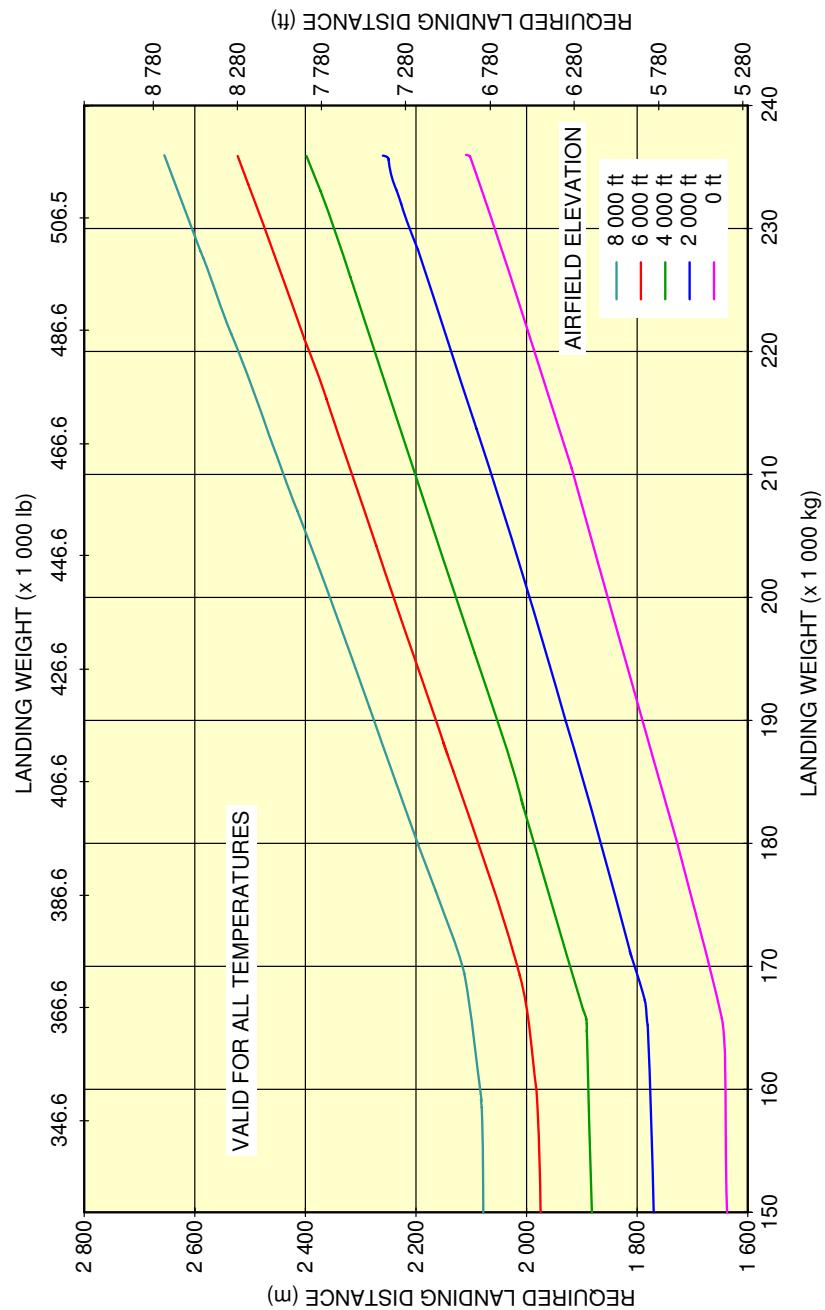
\*\*ON A/C A350-900



Landing Field Length  
FIGURE-3-4-0-991-001-A01

P\_AC\_030400\_1\_0010001\_01\_02

\*\*ON A/C A350-1000



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

P\_AC\_030400\_1\_0020002\_01\_00

Landing Field Length  
FIGURE-3-4-0-991-002-B01

## 3-5-0      Final Approach Speed

## \*\*ON A/C A350-1000 A350-900

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.

## \*\*ON A/C A350-900

2. The final approach speed is 140 kt at a MLW of 205000 kg (451948 lb) and classifies the aircraft into the Aircraft Approach Category C.

NOTE : This value is given for information only.

## \*\*ON A/C A350-1000

3. The final approach speed is 147 kt at a MLW of 236000 kg (520291 lb) and classifies the aircraft into the Aircraft Approach Category D.

NOTE : This value is given for information only.

## GROUND MANEUVERING

### 4-1-0 General Information

**\*\*ON A/C A350-1000 A350-900**

#### General Information

1. This section gives 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, gives 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.

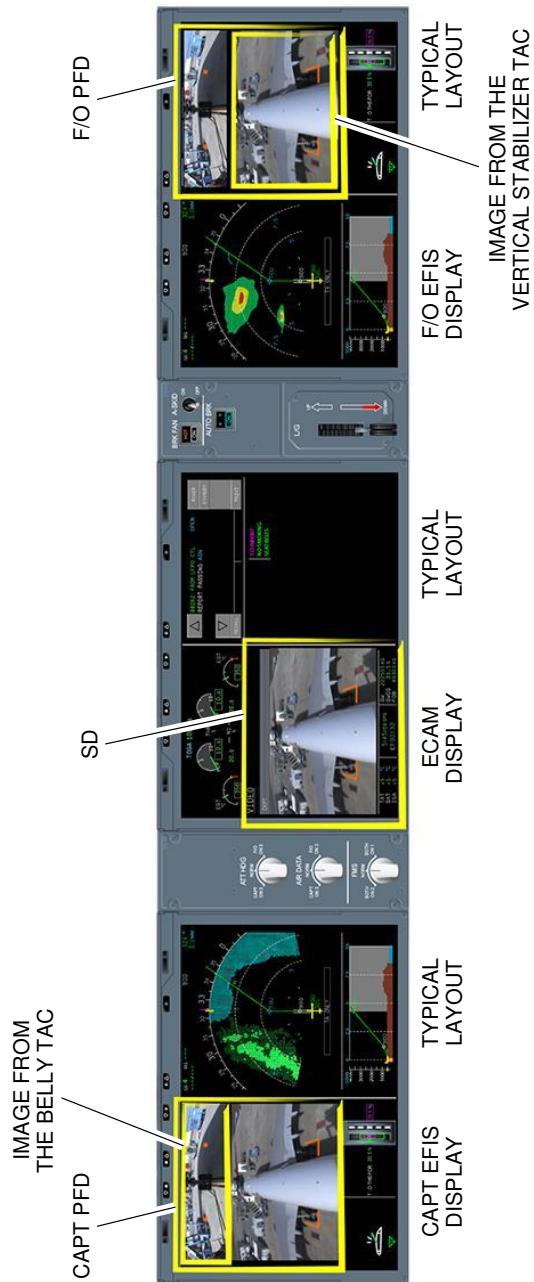
In the ground operating mode, varying airline practices may demand that more conservative turning procedures be adopted to avoid excessive tire wear and reduce possible maintenance problems. Airline operating techniques will vary in the level of performance, over a wide range of operating circumstances 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 high risk of jet blast damage. For these reasons, ground maneuvering requirements should be coordinated with the airlines in question prior to layout planning.

**NOTE :** The following chapter takes into account ICAO Annex 14 to the Convention on International Civil Aviation, Aerodromes - Volume I, Aerodrome Design and Operations, Eighth Edition, July 2018.

2. The longer wheelbase aircrafts have an additional system which supports the flight crew to manage the margins of the inner main landing gear with respect to the taxiway edge. This system is called as ETACS (External Taxi Aid Camera System) that has two cameras and gives the external view to the pilot in control on the Primary Flight Display (PFD). ETACS is a standard equipment on A350-1000 and optional on A350-900.

**NOTE :** To look outer side through the cockpit window is the primary means to find when to start turns and to make sure that the aircraft position is in relation to the ground track.

\*\*ON A/C A350-1000 A350-900



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ETACS

FIGURE-4-1-0-991-001-A01



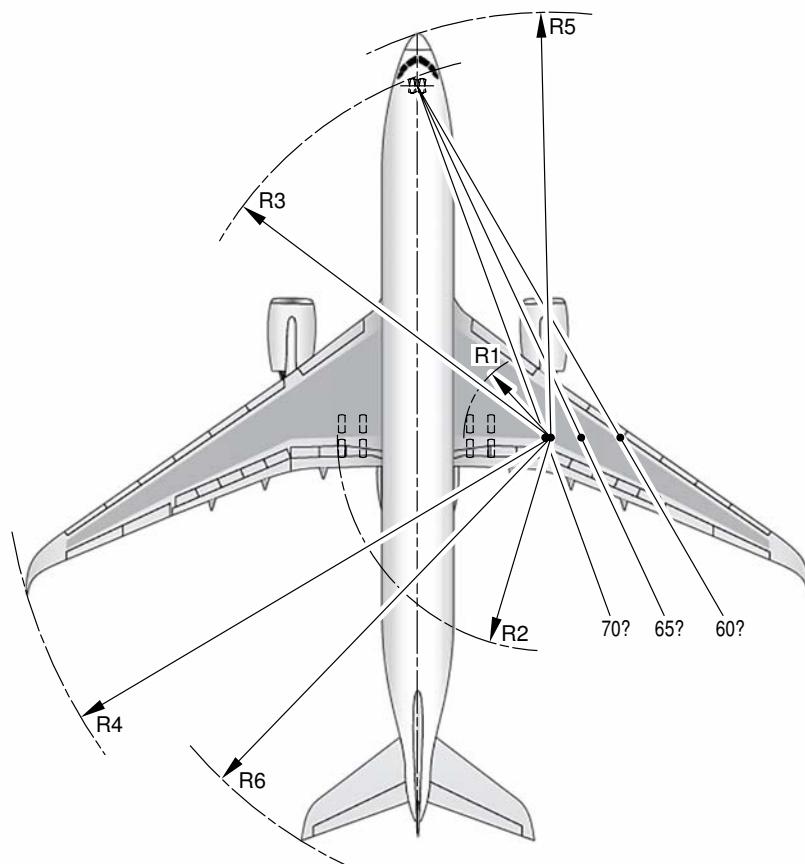
4-2-0      **Turning Radii**

**\*\*ON A/C A350-1000 A350-900**

Turning Radii

1. This section provides the turning radii.

\*\*ON A/C A350-900

**NOTE:**

FOR TURNING RADII VALUES, REFER TO SHEET 2.

P\_AC\_040200\_1\_0010001\_01\_01

Turning Radii  
(Sheet 1 of 2)

FIGURE-4-2-0-991-001-A01

\*\*ON A/C A350-900

| A350-900 TURNING RADII |                      |                                |    |         |         |        |         |         |         |
|------------------------|----------------------|--------------------------------|----|---------|---------|--------|---------|---------|---------|
| TYPE OF TURN           | STEERING ANGLE (deg) | EFFECTIVE STEERING ANGLE (deg) |    | R1 RMLG | R2 LMLG | R3 NLG | R4 WING | R5 NOSE | R6 TAIL |
| 2                      | 20                   | 19.6                           | m  | 76.3    | 86.9    | 86.0   | 113.6   | 87.1    | 96.0    |
|                        |                      |                                | ft | 250     | 285     | 282    | 373     | 286     | 315     |
| 2                      | 25                   | 24.5                           | m  | 58.7    | 69.3    | 69.6   | 96.2    | 71.2    | 79.7    |
|                        |                      |                                | ft | 193     | 227     | 228    | 316     | 233     | 262     |
| 2                      | 30                   | 29.4                           | m  | 46.7    | 57.3    | 58.9   | 84.3    | 60.8    | 69.0    |
|                        |                      |                                | ft | 153     | 188     | 193    | 277     | 199     | 226     |
| 2                      | 35                   | 34.2                           | m  | 38.0    | 48.6    | 51.5   | 75.7    | 53.7    | 61.5    |
|                        |                      |                                | ft | 125     | 159     | 169    | 248     | 176     | 202     |
| 2                      | 40                   | 39.1                           | m  | 31.1    | 41.7    | 45.9   | 68.9    | 48.5    | 55.9    |
|                        |                      |                                | ft | 102     | 137     | 151    | 226     | 159     | 183     |
| 2                      | 45                   | 43.8                           | m  | 25.7    | 36.3    | 41.8   | 63.7    | 44.7    | 51.7    |
|                        |                      |                                | ft | 84      | 119     | 137    | 209     | 147     | 170     |
| 2                      | 50                   | 48.6                           | m  | 21.1    | 31.7    | 38.6   | 59.2    | 41.8    | 48.3    |
|                        |                      |                                | ft | 69      | 104     | 127    | 194     | 137     | 158     |
| 2                      | 55                   | 53.1                           | m  | 17.4    | 28.0    | 36.2   | 55.5    | 39.6    | 45.7    |
|                        |                      |                                | ft | 57      | 92      | 119    | 182     | 130     | 150     |
| 2                      | 60                   | 57.5                           | m  | 14.1    | 24.7    | 34.3   | 52.4    | 38.0    | 43.5    |
|                        |                      |                                | ft | 46      | 81      | 113    | 172     | 125     | 143     |
| 2                      | 65                   | 61.5                           | m  | 11.4    | 22.0    | 32.9   | 49.8    | 36.7    | 41.9    |
|                        |                      |                                | ft | 37      | 72      | 108    | 163     | 121     | 137     |
| 2                      | 70                   | 65.0                           | m  | 9.2     | 19.8    | 31.9   | 47.7    | 35.9    | 40.6    |
|                        |                      |                                | ft | 30      | 65      | 105    | 156     | 118     | 133     |
| 2                      | 72 (MAX)             | 66.1                           | m  | 8.5     | 19.1    | 31.6   | 47.0    | 35.6    | 40.2    |
|                        |                      |                                | ft | 28      | 63      | 104    | 154     | 117     | 132     |

|   |          |      |    |      |      |      |      |      |      |
|---|----------|------|----|------|------|------|------|------|------|
| 1 | 50       | 49.3 | m  | 20.5 | 31.1 | 38.2 | 58.6 | 41.4 | 47.8 |
|   |          |      | ft | 67   | 102  | 125  | 192  | 136  | 157  |
| 1 | 55       | 54.1 | m  | 16.6 | 27.2 | 35.7 | 54.8 | 39.2 | 45.1 |
|   |          |      | ft | 54   | 89   | 117  | 180  | 129  | 148  |
| 1 | 60       | 58.7 | m  | 13.3 | 23.9 | 33.8 | 51.6 | 37.6 | 43.0 |
|   |          |      | ft | 43   | 78   | 111  | 169  | 123  | 141  |
| 1 | 65       | 63.2 | m  | 10.3 | 20.9 | 32.4 | 48.7 | 36.3 | 41.2 |
|   |          |      | ft | 34   | 69   | 106  | 160  | 119  | 135  |
| 1 | 70       | 67.5 | m  | 7.7  | 18.3 | 31.2 | 46.2 | 35.3 | 39.8 |
|   |          |      | ft | 25   | 60   | 103  | 152  | 116  | 130  |
| 1 | 72 (MAX) | 69.2 | m  | 6.7  | 17.3 | 30.9 | 45.3 | 35.0 | 39.2 |
|   |          |      | ft | 22   | 57   | 101  | 149  | 115  | 129  |

**NOTE:**

ABOVE 50°, AIRLINES MAY USE TYPE 1 OR TYPE 2 TURNS DEPENDING ON THE SITUATION.

TYPE 1 TURNS USE: ASYMMETRIC THRUST DURING THE WHOLE TURN;

AND DIFFERENTIAL BRAKING TO INITIATE THE TURN ONLY.

TYPE 2 TURNS USE: SYMMETRIC THRUST DURING THE WHOLE TURN;

AND NO DIFFERENTIAL BRAKING AT ALL.

IT IS POSSIBLE TO GET LOWER VALUES THAN THOSE FROM TYPE 1 BY APPLYING DIFFERENTIAL BRAKING DURING THE WHOLE TURN.

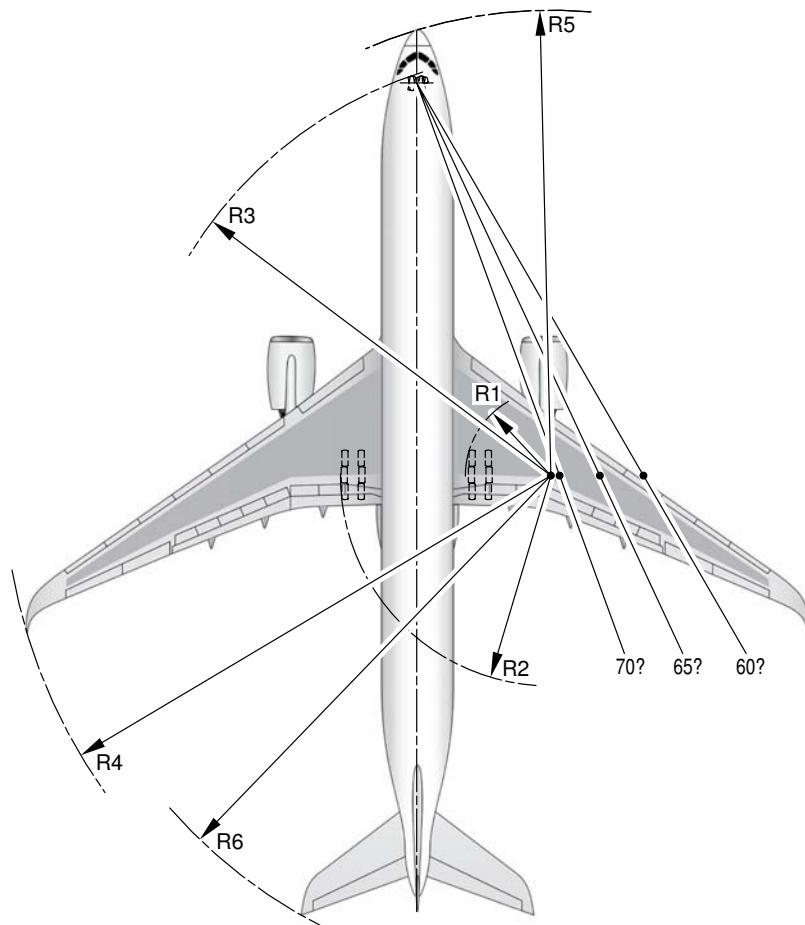
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Turning Radii  
(Sheet 2 of 2)

FIGURE-4-2-0-991-001-A01

4-2-0

\*\*ON A/C A350-1000

**NOTE:**

FOR TURNING RADII VALUES, REFER TO SHEET 2.

P\_AC\_040200\_1\_0010002\_01\_00

Turning Radii  
(Sheet 1 of 2)

FIGURE-4-2-0-991-001-B01

\*\*ON A/C A350-1000

| A350-1000 TURNING RADII |                      |                                |    |         |         |        |         |         |
|-------------------------|----------------------|--------------------------------|----|---------|---------|--------|---------|---------|
| TYPE OF TURN            | STEERING ANGLE (deg) | EFFECTIVE STEERING ANGLE (deg) |    | R1 RMLG | R2 LMLG | R3 NLG | R4 WING | R5 NOSE |
| 2                       | 20                   | 14.7                           | m  | 119.4   | 130.2   | 128.6  | 156.8   | 129.3   |
|                         |                      |                                | ft | 392     | 427     | 422    | 514     | 424     |
| 2                       | 25                   | 19.8                           | m  | 85.9    | 96.6    | 96.4   | 123.3   | 97.6    |
|                         |                      |                                | ft | 282     | 317     | 316    | 405     | 320     |
| 2                       | 30                   | 24.2                           | m  | 67.9    | 78.6    | 79.8   | 105.5   | 81.3    |
|                         |                      |                                | ft | 223     | 258     | 262    | 346     | 267     |
| 2                       | 35                   | 28.5                           | m  | 55.5    | 66.2    | 68.6   | 93.2    | 70.4    |
|                         |                      |                                | ft | 182     | 217     | 225    | 306     | 231     |
| 2                       | 40                   | 33.3                           | m  | 45.1    | 55.8    | 59.6   | 82.9    | 61.8    |
|                         |                      |                                | ft | 148     | 183     | 196    | 272     | 203     |
| 2                       | 45                   | 37.4                           | m  | 38.1    | 48.8    | 53.9   | 76.1    | 56.4    |
|                         |                      |                                | ft | 125     | 160     | 177    | 250     | 185     |
| 2                       | 50                   | 41.4                           | m  | 32.5    | 43.2    | 49.6   | 70.5    | 52.3    |
|                         |                      |                                | ft | 107     | 142     | 163    | 231     | 172     |
| 2                       | 55                   | 45.6                           | m  | 27.4    | 38.2    | 45.9   | 65.6    | 48.9    |
|                         |                      |                                | ft | 90      | 125     | 150    | 215     | 160     |
| 2                       | 60                   | 49.2                           | m  | 23.7    | 34.4    | 43.3   | 61.9    | 46.5    |
|                         |                      |                                | ft | 78      | 113     | 142    | 203     | 153     |
| 2                       | 65                   | 52.6                           | m  | 20.5    | 31.2    | 41.2   | 58.8    | 44.7    |
|                         |                      |                                | ft | 67      | 102     | 135    | 193     | 147     |
| 2                       | 70                   | 56.0                           | m  | 17.5    | 28.3    | 39.5   | 55.9    | 43.1    |
|                         |                      |                                | ft | 58      | 93      | 130    | 183     | 141     |
| 2                       | 75 (MAX)             | 63.7                           | m  | 11.7    | 22.4    | 36.5   | 50.3    | 40.4    |
|                         |                      |                                | ft | 38      | 74      | 120    | 165     | 133     |
|                         |                      |                                |    |         |         |        |         |         |

|   |          |      |    |      |      |      |      |      |      |
|---|----------|------|----|------|------|------|------|------|------|
| 1 | 50       | 45.4 | m  | 27.7 | 38.4 | 46.0 | 65.8 | 49.0 | 55.3 |
|   |          |      | ft | 91   | 126  | 151  | 216  | 161  | 182  |
| 1 | 55       | 51.2 | m  | 21.7 | 32.5 | 42.0 | 60.0 | 45.4 | 51.1 |
|   |          |      | ft | 71   | 107  | 138  | 197  | 149  | 167  |
| 1 | 60       | 56.1 | m  | 17.5 | 28.2 | 39.5 | 55.9 | 43.1 | 48.2 |
|   |          |      | ft | 57   | 92   | 129  | 183  | 141  | 158  |
| 1 | 65       | 60.6 | m  | 13.9 | 24.7 | 37.6 | 52.4 | 41.4 | 46.0 |
|   |          |      | ft | 46   | 81   | 123  | 172  | 136  | 151  |
| 1 | 70       | 65.4 | m  | 10.5 | 21.2 | 36.0 | 49.1 | 40.0 | 44.0 |
|   |          |      | ft | 34   | 70   | 118  | 161  | 131  | 144  |
| 1 | 75 (MAX) | 68.7 | m  | 8.3  | 19.0 | 35.1 | 47.0 | 39.2 | 42.8 |
|   |          |      | ft | 27   | 62   | 115  | 154  | 129  | 140  |

**NOTE:**

ABOVE 50°, AIRLINES MAY USE TYPE 1 OR TYPE 2 TURNS DEPENDING ON THE SITUATION.

TYPE 1 TURNS USE: ASYMMETRIC THRUST DURING THE WHOLE TURN;

AND DIFFERENTIAL BRAKING TO INITIATE THE TURN ONLY.

TYPE 2 TURNS USE: SYMMETRIC THRUST DURING THE WHOLE TURN;

AND NO DIFFERENTIAL BRAKING AT ALL.

IT IS POSSIBLE TO GET LOWER VALUES THAN THOSE FROM TYPE 1 BY APPLYING DIFFERENTIAL

BRAKING DURING THE WHOLE TURN.

P\_AC\_040200\_1\_0010002\_02\_00

Turning Radii

(Sheet 2 of 2)

FIGURE-4-2-0-991-001-B01



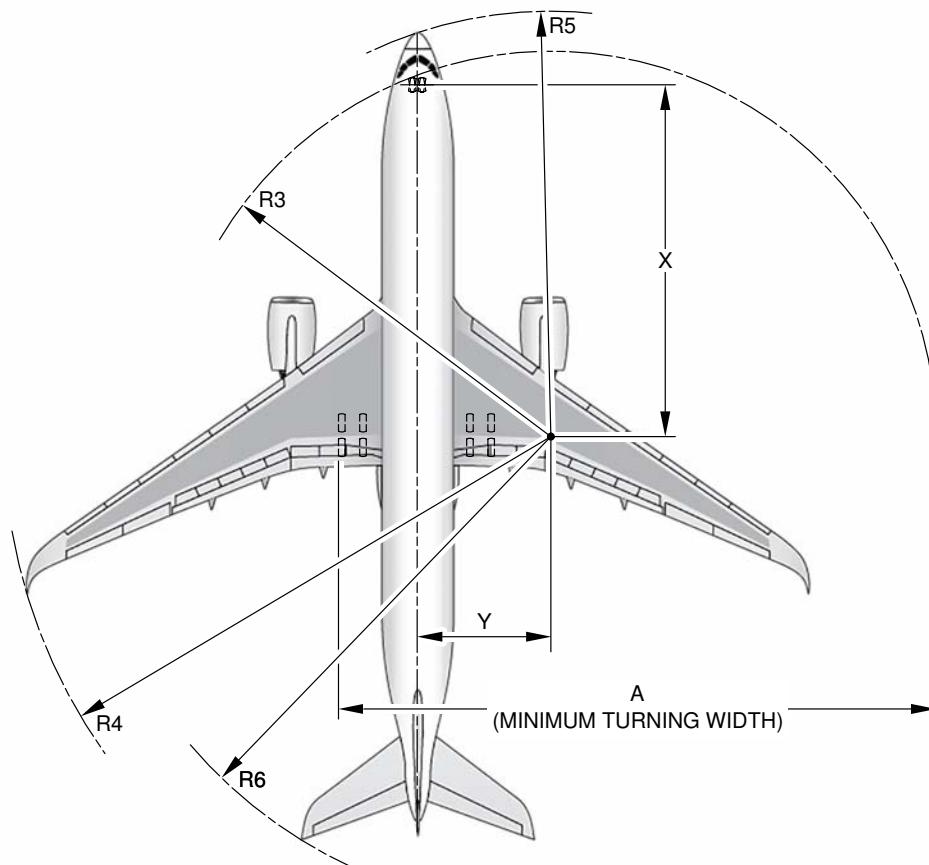
4-3-0      Minimum Turning Radii

\*\*ON A/C A350-1000 A350-900

Minimum Turning Radii

1. This section provides the minimum turning radii.

\*\*ON A/C A350-900



| A350-900 MINIMUM TURNING RADII |                      |                                |    |      |      |      |        |         |         |         |
|--------------------------------|----------------------|--------------------------------|----|------|------|------|--------|---------|---------|---------|
| TYPE OF TURN                   | STEERING ANGLE (deg) | EFFECTIVE STEERING ANGLE (deg) |    | X    | Y    | A    | R3 NLG | R4 WING | R5 NOSE | R6 TAIL |
| 1                              | 72 (MAX)             | 69.2                           | m  | 28.7 | 10.9 | 48.5 | 30.9   | 45.3    | 35.0    | 39.2    |
|                                |                      |                                | ft | 94   | 36   | 159  | 101    | 149     | 115     | 129     |
| 2                              | 72 (MAX)             | 66.1                           | m  | 28.7 | 12.7 | 51.1 | 31.6   | 47.0    | 35.6    | 40.2    |
|                                |                      |                                | ft | 94   | 42   | 168  | 104    | 154     | 117     | 132     |

**NOTE:**

TYPE 1 TURNS USE: ASYMMETRIC THRUST DURING THE WHOLE TURN;  
AND DIFFERENTIAL BRAKING TO INITIATE THE TURN ONLY.

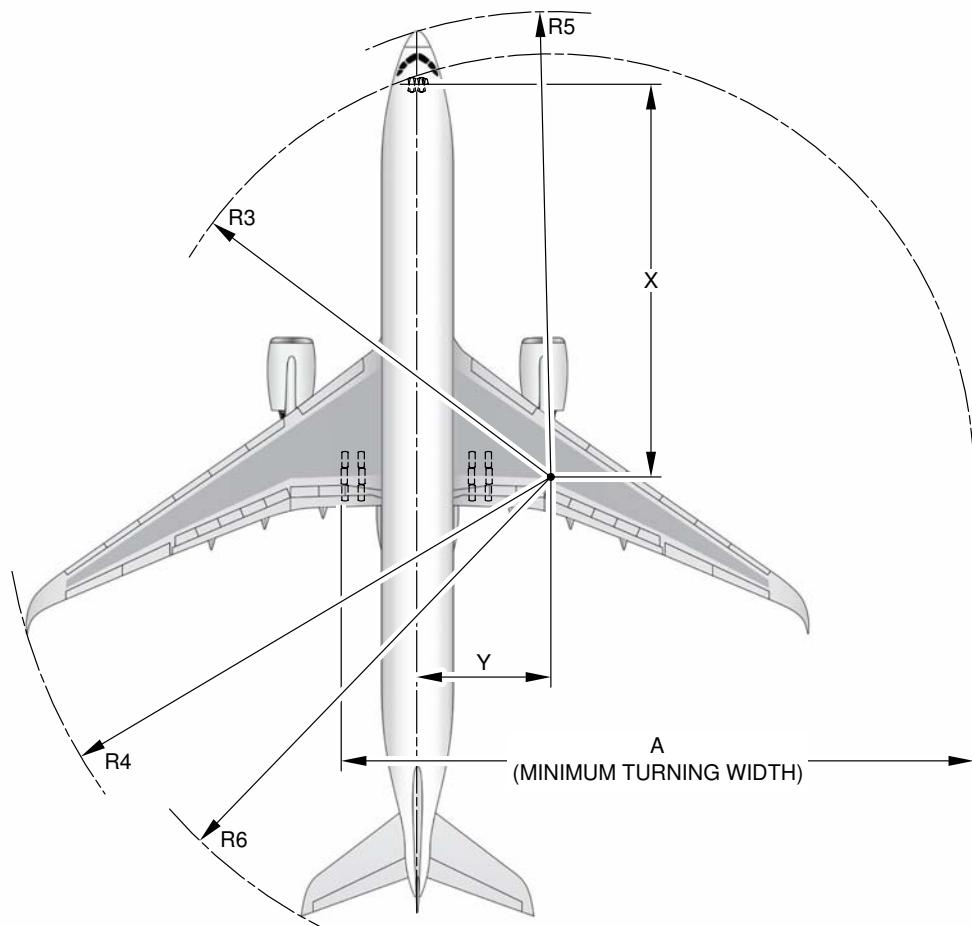
TYPE 2 TURNS USE: SYMMETRIC THRUST DURING THE WHOLE TURN;  
AND NO DIFFERENTIAL BRAKING AT ALL.

IT IS POSSIBLE TO GET LOWER VALUES THAN THOSE FROM TYPE 1 BY APPLYING DIFFERENTIAL BRAKING DURING THE WHOLE TURN.

P\_AC\_040300\_1\_0010001\_01\_01

Minimum Turning Radii  
FIGURE-4-3-0-991-001-A01

\*\*ON A/C A350-1000



| A350-1000 MINIMUM TURNING RADII |                      |                                |    |      |      |      |        |         |         |         |
|---------------------------------|----------------------|--------------------------------|----|------|------|------|--------|---------|---------|---------|
| TYPE OF TURN                    | STEERING ANGLE (deg) | EFFECTIVE STEERING ANGLE (deg) |    | X    | Y    | A    | R3 NLG | R4 WING | R5 NOSE | R6 TAIL |
| 1                               | 75 (MAX)             | 68.7                           | m  | 32.5 | 12.7 | 54.5 | 35.1   | 47.0    | 39.2    | 42.8    |
|                                 |                      |                                | ft | 107  | 42   | 179  | 115    | 154     | 129     | 140     |
| 2                               | 75 (MAX)             | 63.7                           | m  | 32.5 | 16.1 | 59.2 | 36.5   | 50.3    | 40.4    | 44.6    |
|                                 |                      |                                | ft | 107  | 53   | 194  | 120    | 165     | 133     | 146     |

**NOTE:**

TYPE 1 TURNS USE: ASYMMETRIC THRUST DURING THE WHOLE TURN;  
AND DIFFERENTIAL BRAKING TO INITIATE THE TURN ONLY.

TYPE 2 TURNS USE: SYMMETRIC THRUST DURING THE WHOLE TURN;  
AND NO DIFFERENTIAL BRAKING AT ALL.

IT IS POSSIBLE TO GET LOWER VALUES THAN THOSE FROM TYPE 1 BY APPLYING DIFFERENTIAL  
BRAKING DURING THE WHOLE TURN.

P\_AC\_040300\_1\_0010002\_01\_00

Minimum Turning Radii  
FIGURE-4-3-0-991-001-B01



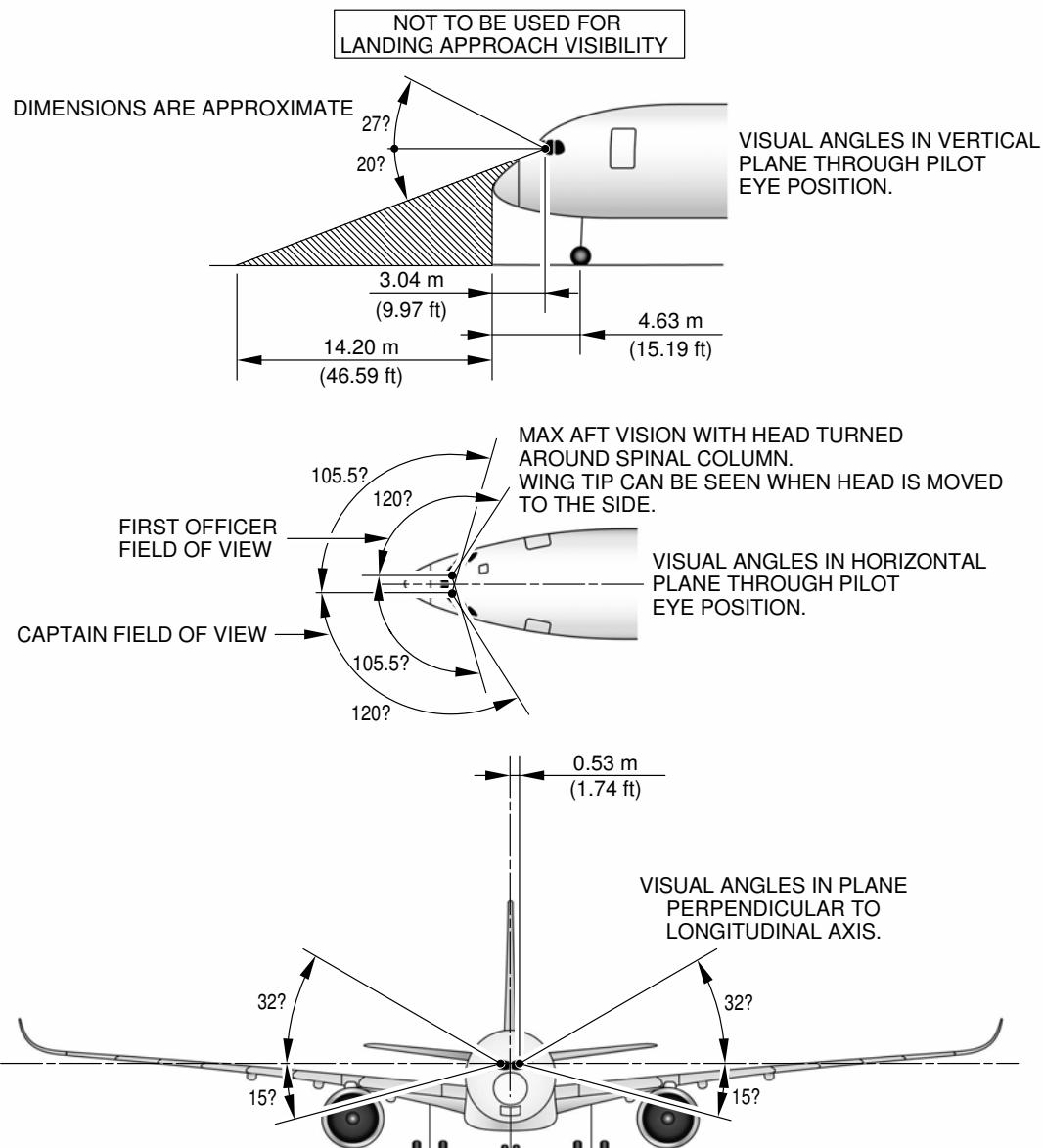
**4-4-0      Visibility from Cockpit in Static Position**

**\*\*ON A/C A350-1000 A350-900**

**Visibility from Cockpit in Static Position**

1. This section gives the visibility from cockpit in static position.

\*\*ON A/C A350-1000 A350-900



**NOTE:**

- PILOT EYE POSITION WHEN PILOT'S EYES ARE IN LINE WITH THE RED AND WHITE BALLS.

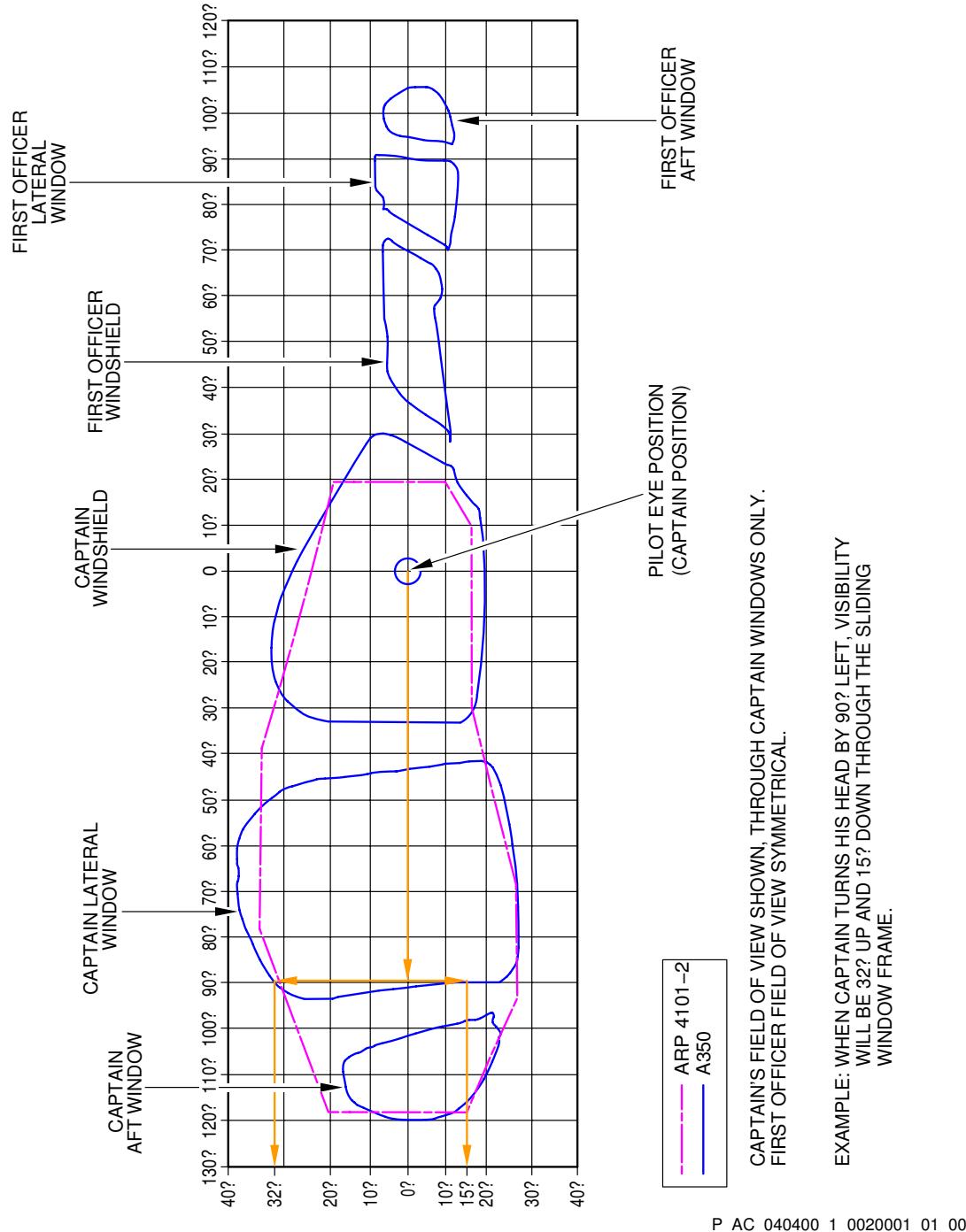


ZONE THAT CANNOT BE SEEN

P\_AC\_040400\_1\_0010001\_01\_01

Visibility from Cockpit in Static Position  
FIGURE-4-4-0-991-001-A01

\*\*ON A/C A350-1000 A350-900



P\_AC\_040400\_1\_0020001\_01\_00

Binocular Visibility Through Windows from Captain Eye Position  
FIGURE-4-4-0-991-002-A01

## 4-5-0 Runway and Taxiway Turn Paths

\*\*ON A/C A350-1000 A350-900

Introduction

1. This section provides the runway and taxiway turn paths for the following configurations:

- 90° Turn – Runway to Taxiway
- 135° Turn – Runway to Taxiway
- 180° Turn on a Runway
- 90° Turn – Taxiway to Taxiway
- 135° Turn – Taxiway to Taxiway.

The turn paths Runway to Taxiway and Taxiway to Taxiway are defined using 3 methods:

- Oversteering method,
- ETACS assisted steering method,
- Cockpit over centerline method.

The 180° Turn on runway is defined using the following method:

- 180° Turn using edge of runway method.

NOTE : The fillet design and the turn radii are as per FAA AC 150/5300-13 Change 18.



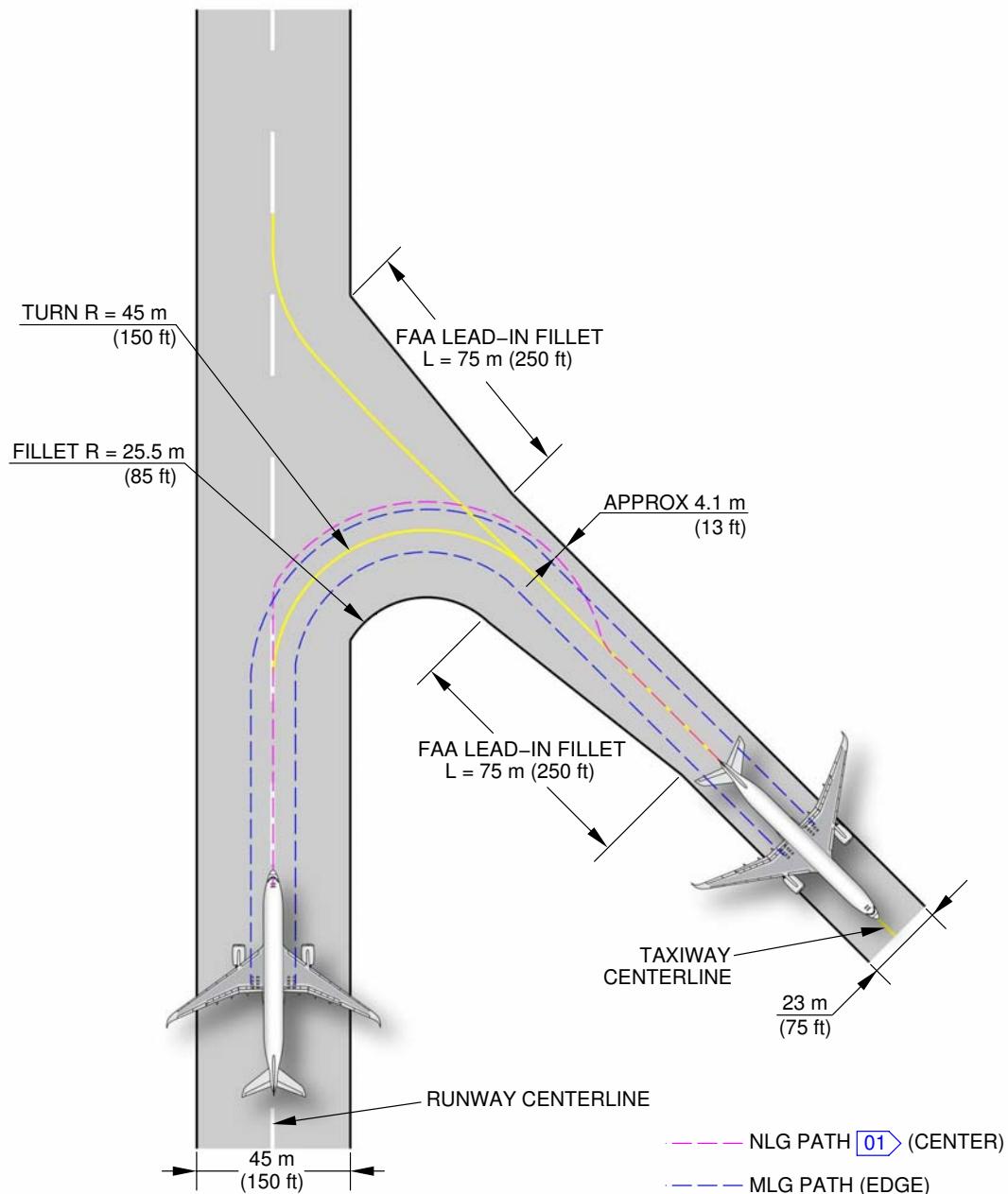
4-5-1      **135° Turn - Runway to Taxiway**

**\*\*ON A/C A350-1000 A350-900**

**135° Turn - Runway to Taxiway**

1. This section gives the 135° turn - runway to taxiway.

\*\*ON A/C A350-900



**NOTE:**

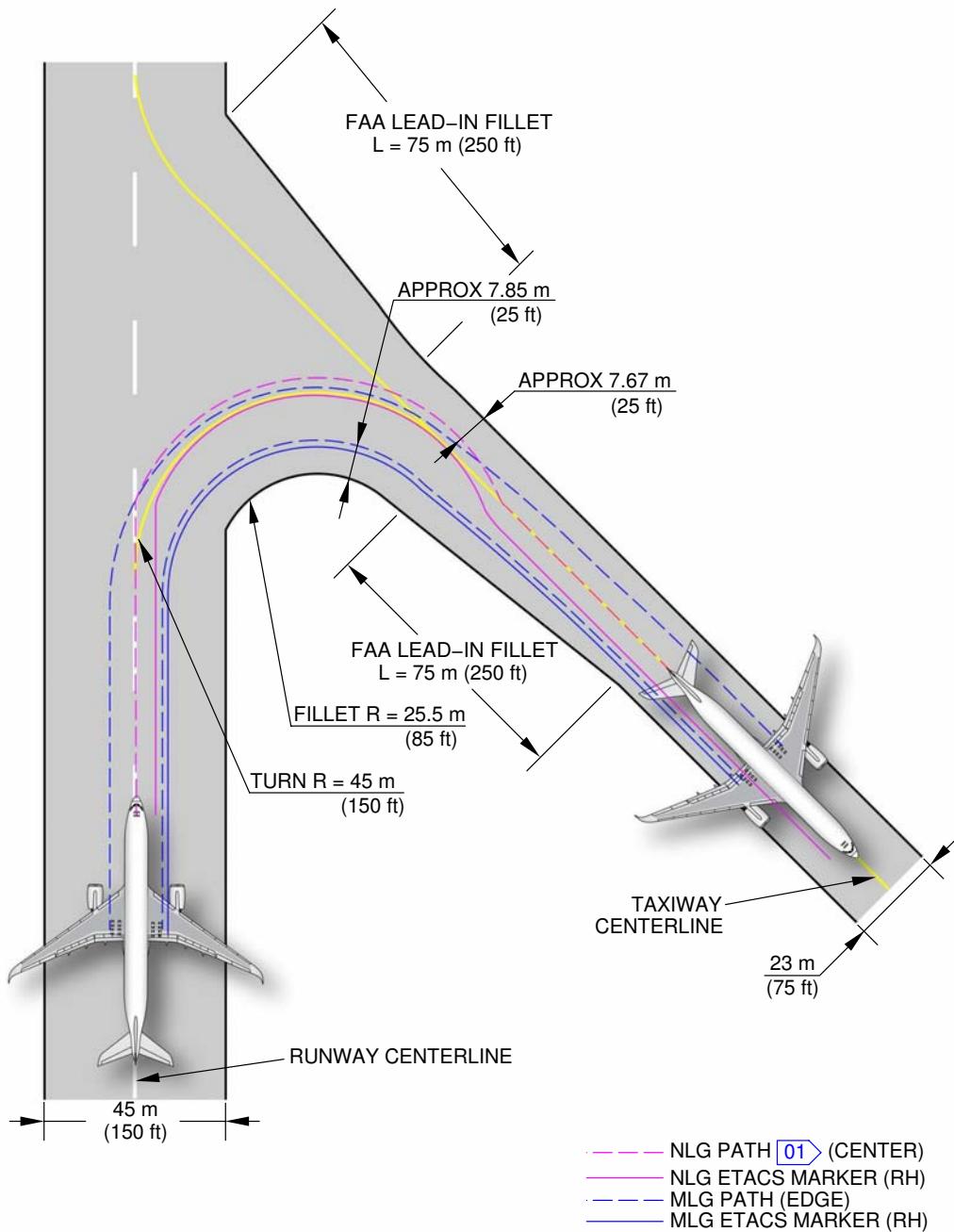
THE MLG FOLLOWS THE CENTERLINE.

[01] THE NLG EDGE MARGIN DECREASES BY 0.6 m (2 ft).

P\_AC\_040501\_1\_0010001\_01\_05

135° Turn - Runway to Taxiway  
Oversteering Method (Sheet 1 of 3)  
FIGURE-4-5-1-991-001-A01

\*\*ON A/C A350-900



**NOTE:**

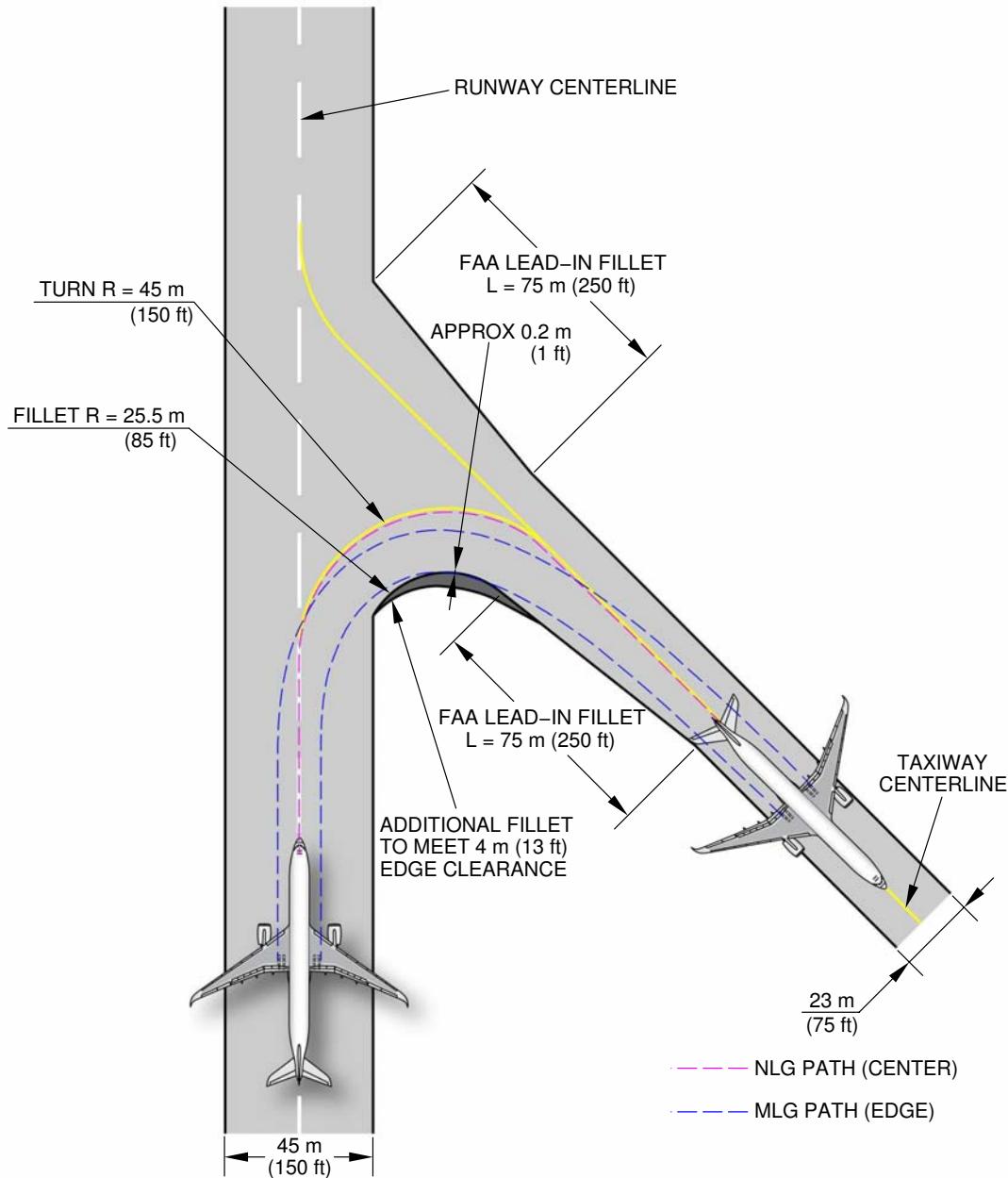
THE NLG FOLLOWS THE RH ETACS MARKER.

[01] THE NLG EDGE MARGIN DECREASES BY 0.6 m (2 ft).

P\_AC\_040501\_1\_0010001\_02\_05

135° Turn - Runway to Taxiway  
ETACS Assisted Steering Method (Sheet 2 of 3)  
FIGURE-4-5-1-991-001-A01

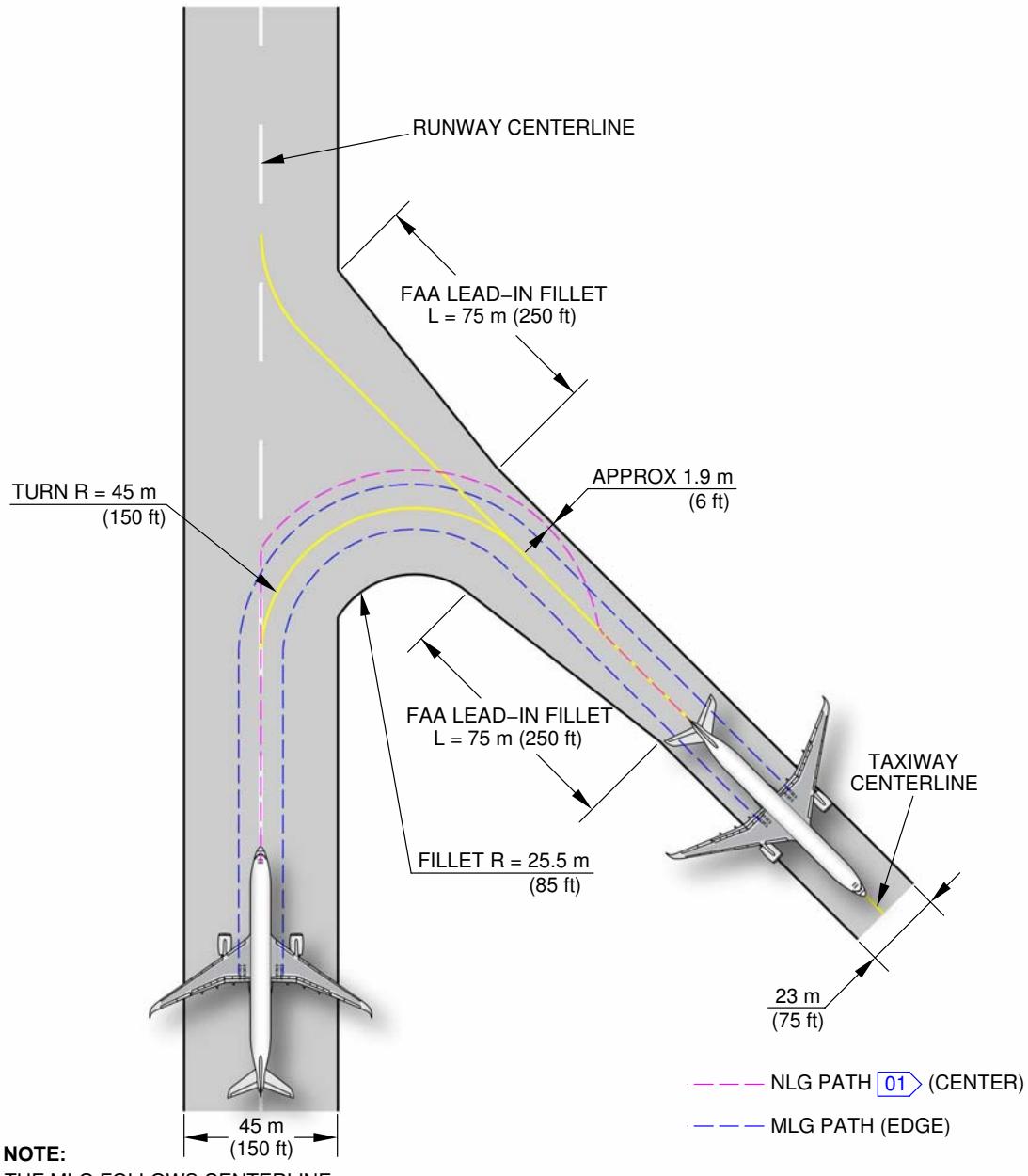
\*\*ON A/C A350-900



P\_AC\_040501\_1\_0010001\_03\_00

135° Turn - Runway to Taxiway  
 Cockpit over Centerline Method (Sheet 3 of 3)  
 FIGURE-4-5-1-991-001-A01

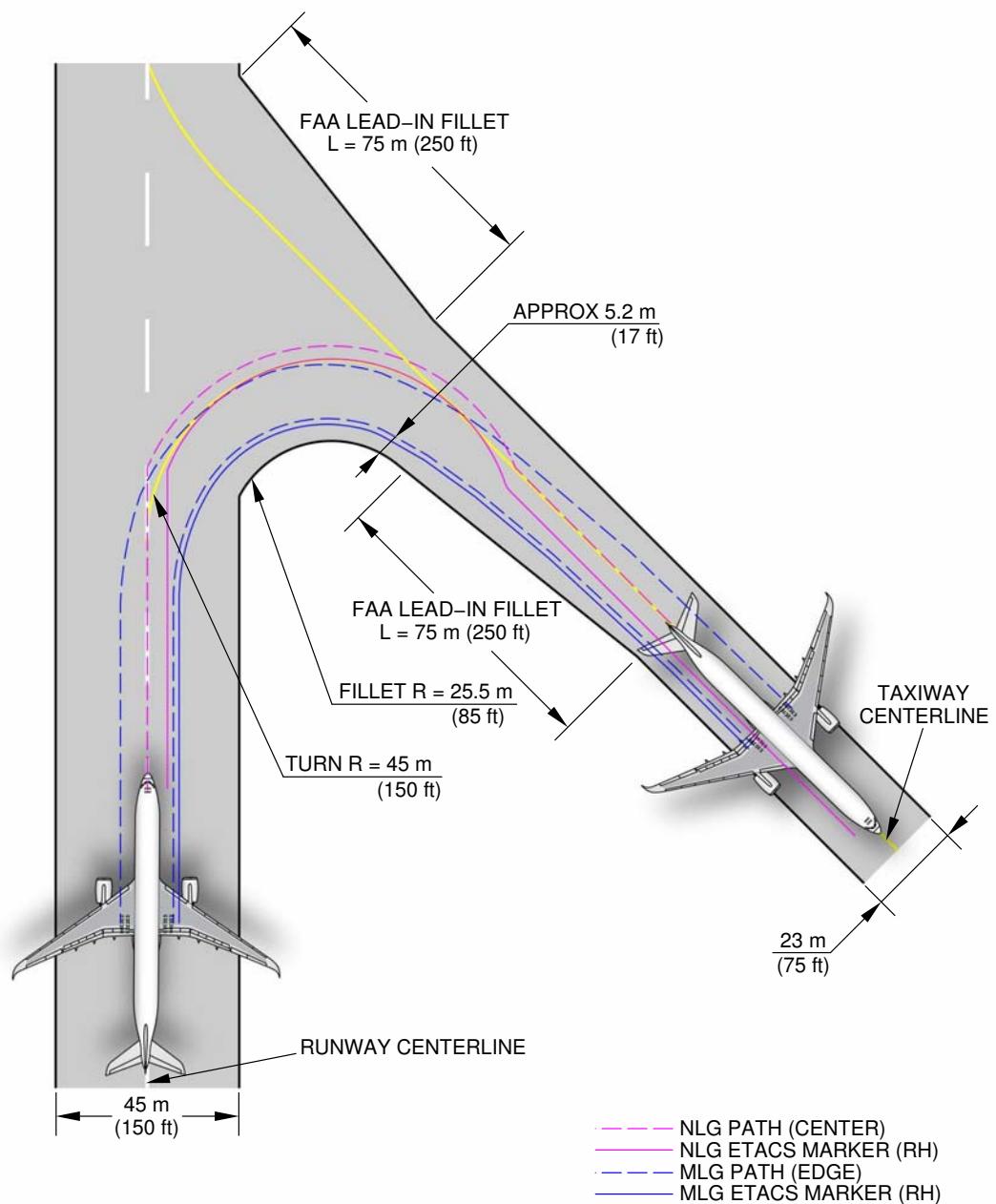
\*\*ON A/C A350-1000



135° Turn - Runway to Taxiway  
Oversteering Method (Sheet 1 of 3)  
FIGURE-4-5-1-991-002-A01

P\_AC\_040501\_1\_0020001\_01\_03

\*\*ON A/C A350-1000



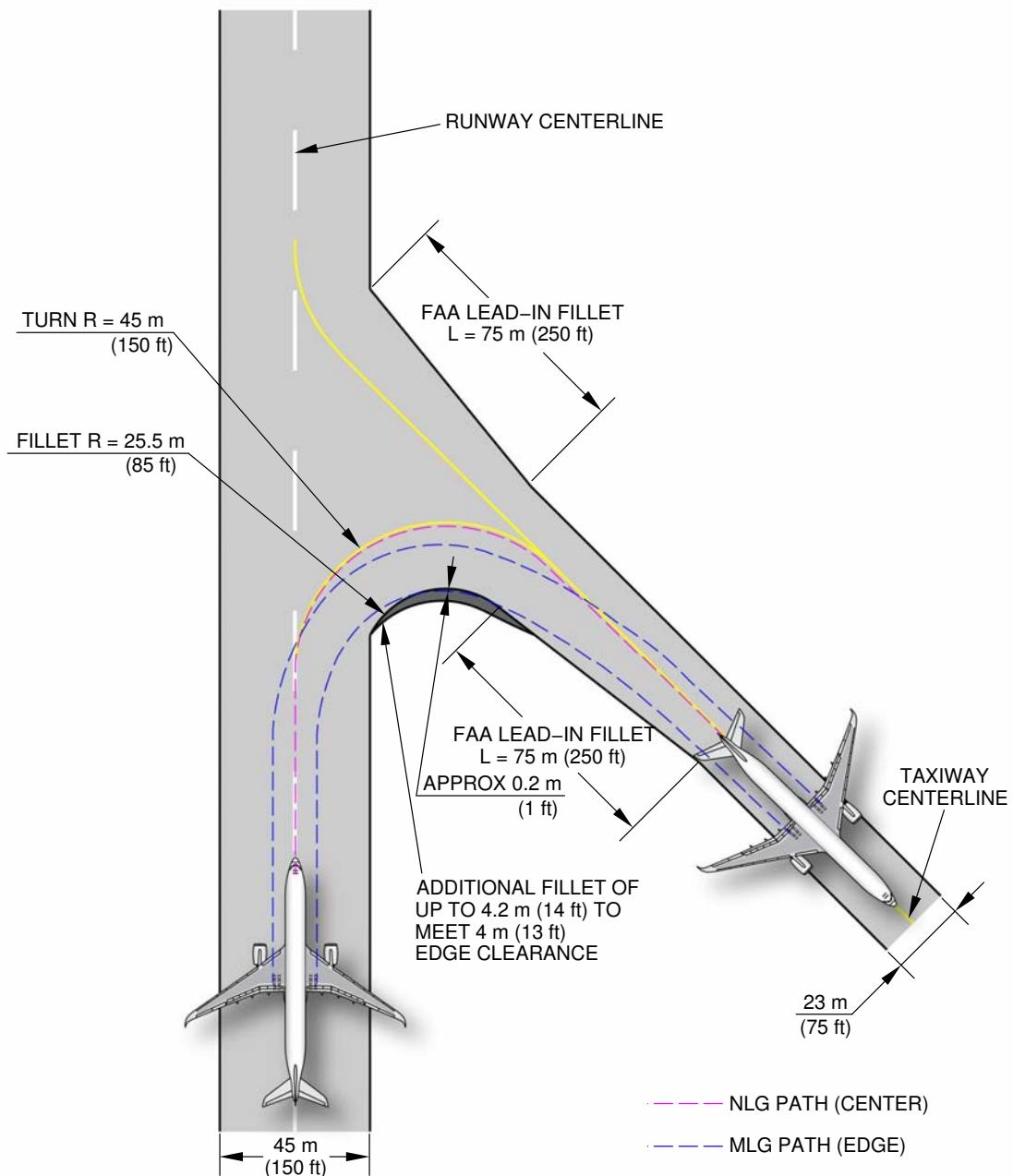
**NOTE:**

THE NLG FOLLOWS THE RH ETACS MARKER.

P\_AC\_040501\_1\_0020001\_02\_03

135° Turn - Runway to Taxiway  
ETACS Assisted Steering Method (Sheet 2 of 3)  
FIGURE-4-5-1-991-002-A01

\*\*ON A/C A350-1000



P\_AC\_040501\_1\_0020001\_03\_00

135° Turn - Runway to Taxiway  
 Cockpit over Centerline Method (Sheet 3 of 3)  
 FIGURE-4-5-1-991-002-A01



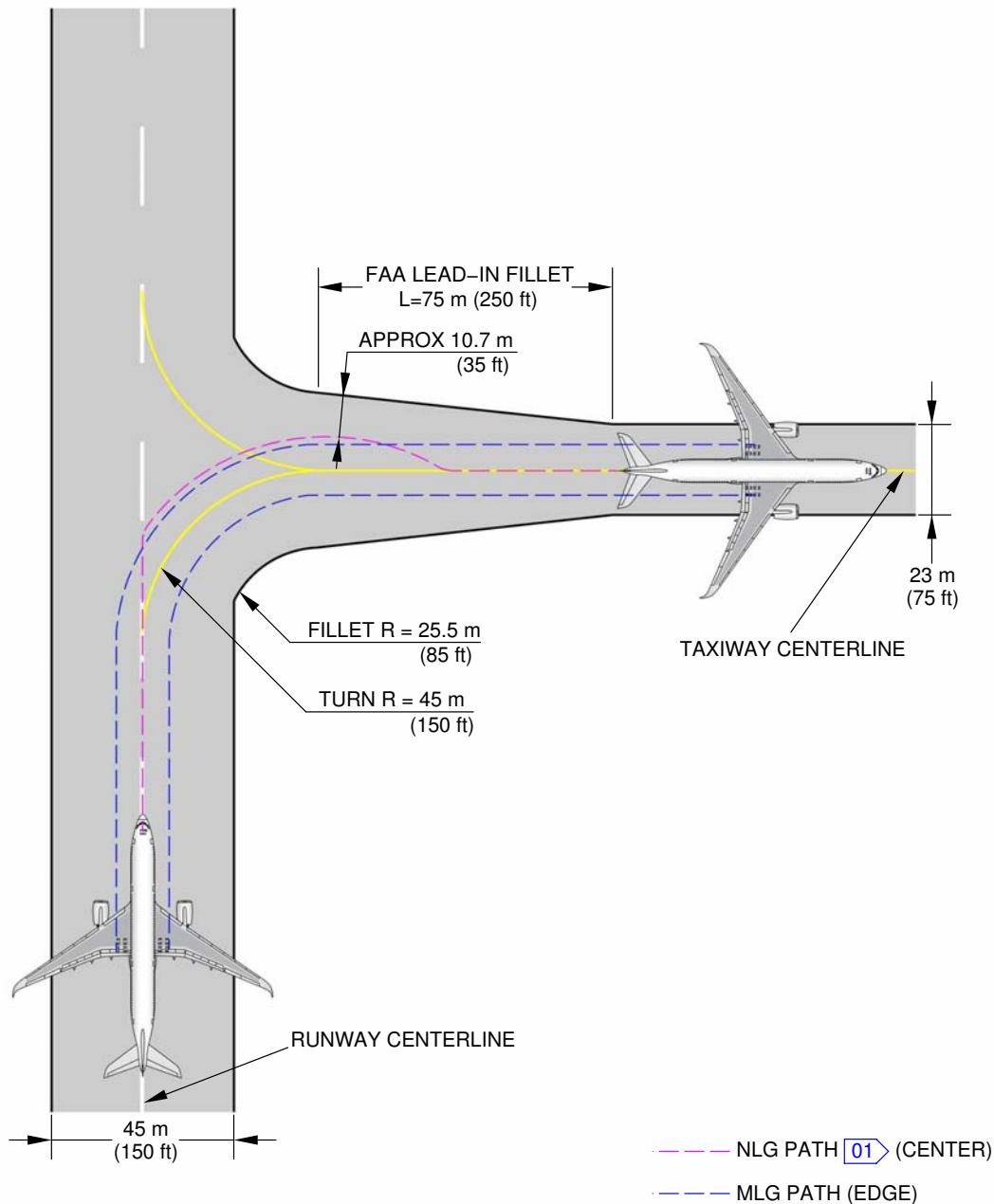
4-5-2      **90° Turn - Runway to Taxiway**

**\*\*ON A/C A350-1000 A350-900**

**90° Turn - Runway to Taxiway**

1. This section gives the 90° turn - runway to taxiway .

**\*\*ON A/C A350-900**



**NOTE:**

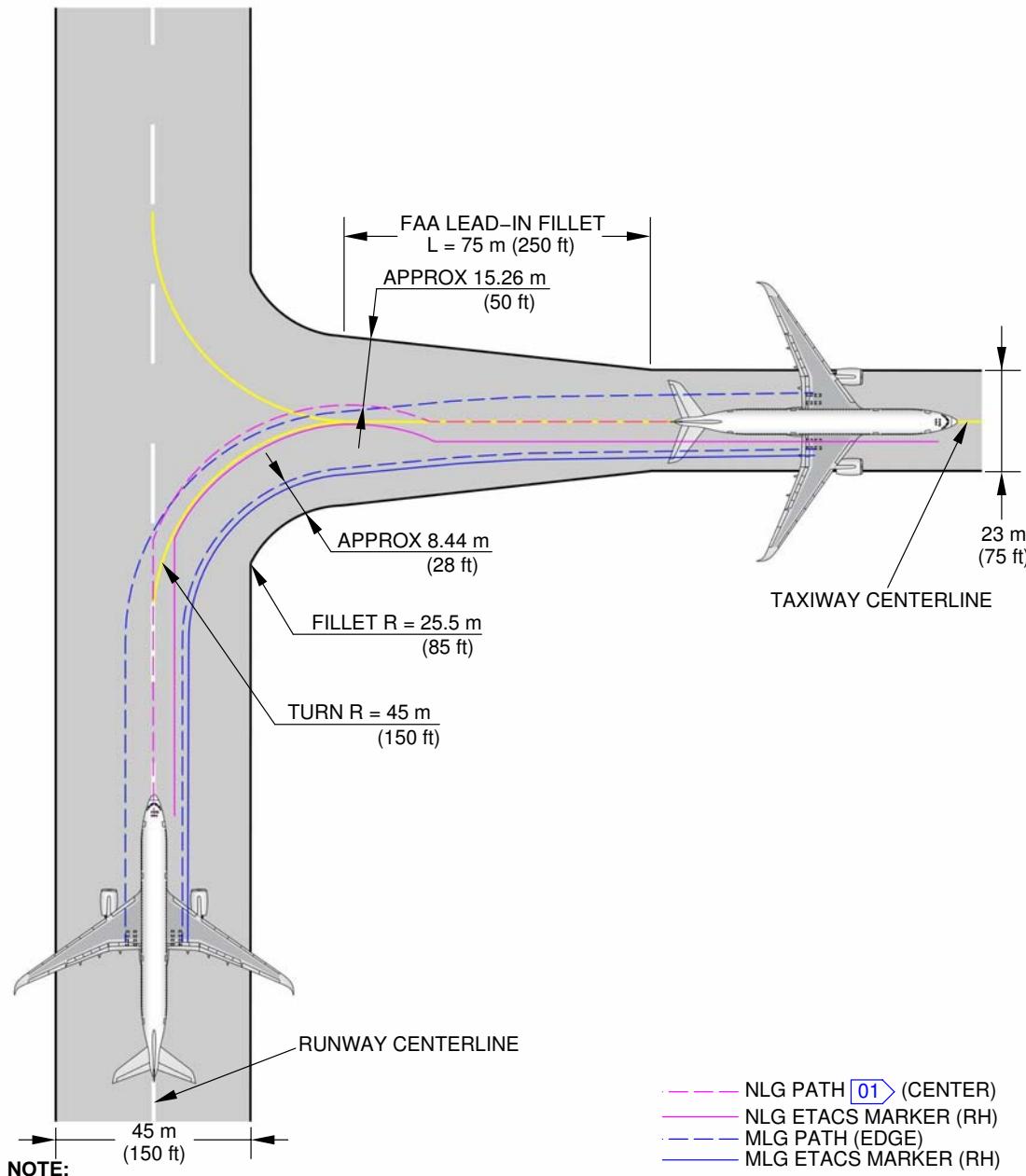
THE MLG FOLLOWS THE CENTERLINE.

01 THE NLG EDGE MARGIN DECREASES BY 0.6 m (2 ft).

P\_AC\_040502\_1\_0010002\_01\_05

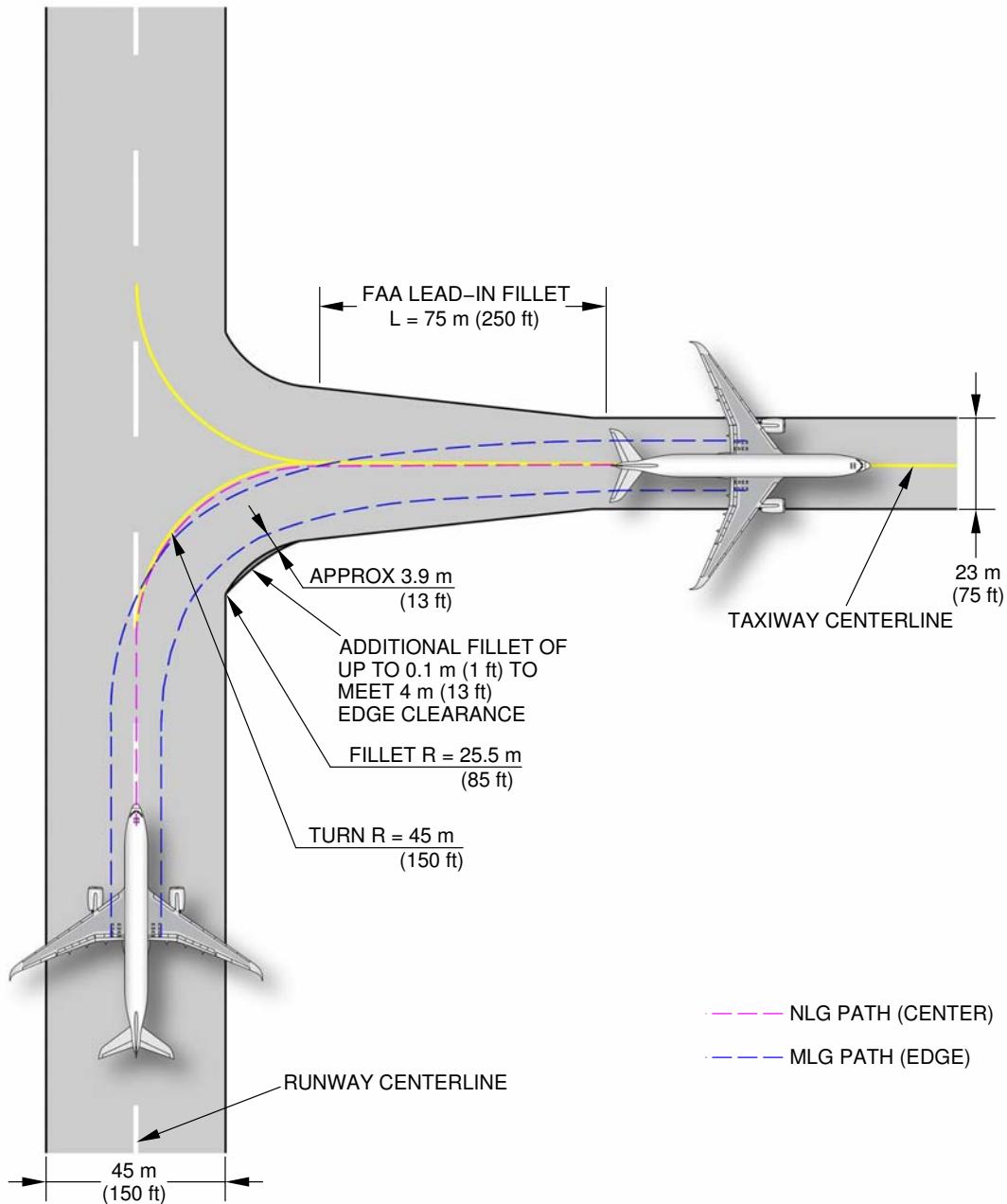
90° Turn - Runway to Taxiway  
Oversteering Method (Sheet 1 of 3)  
FIGURE-4-5-2-991-001-B01

\*\*ON A/C A350-900



90° Turn - Runway to Taxiway  
ETACS Assisted Steering Method (Sheet 2 of 3)  
FIGURE-4-5-2-991-001-B01

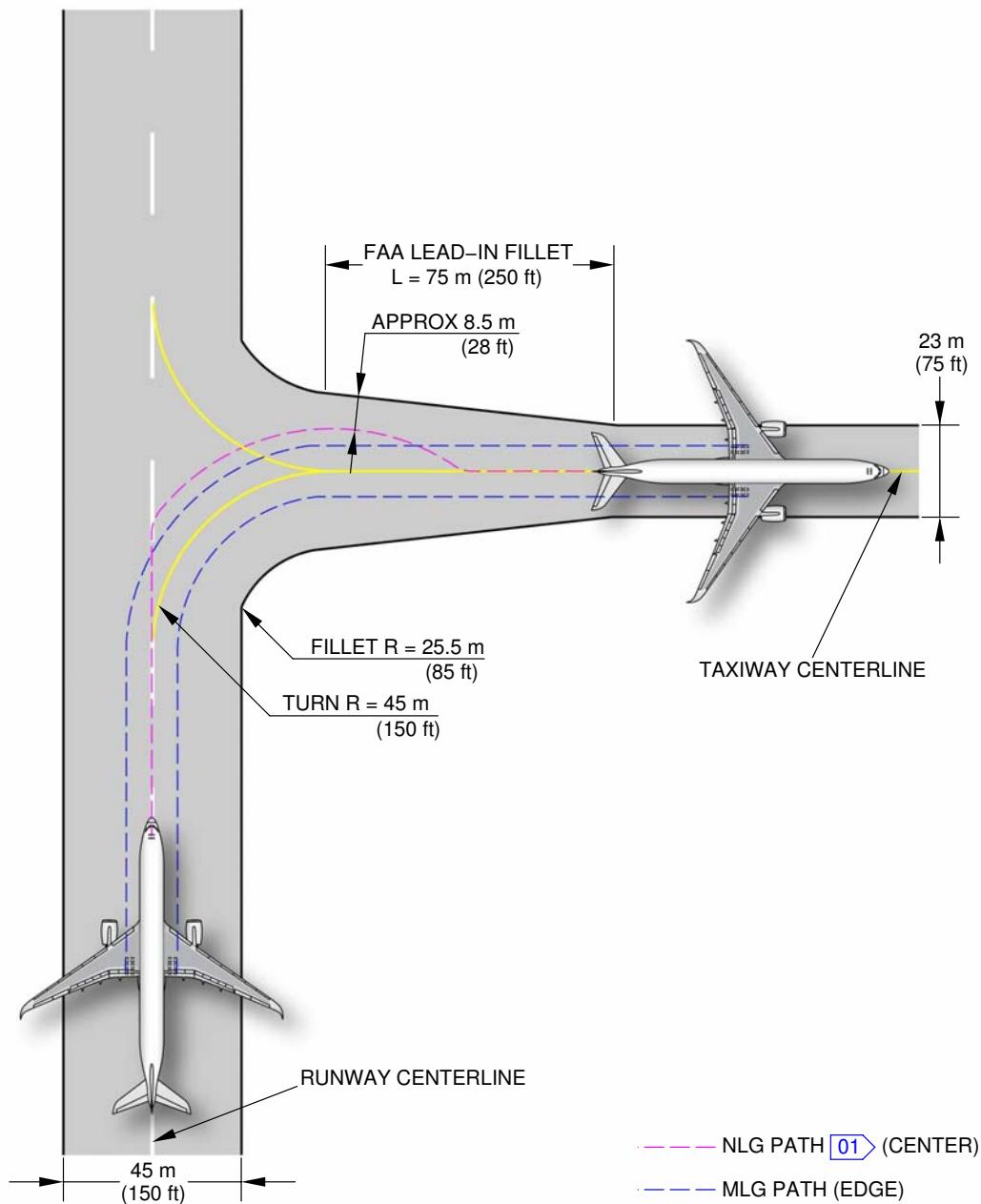
\*\*ON A/C A350-900



P\_AC\_040502\_1\_0010002\_03\_00

90° Turn - Runway to Taxiway  
Cockpit over Centerline Method (Sheet 3 of 3)  
FIGURE-4-5-2-991-001-B01

\*\*ON A/C A350-1000



**NOTE:**

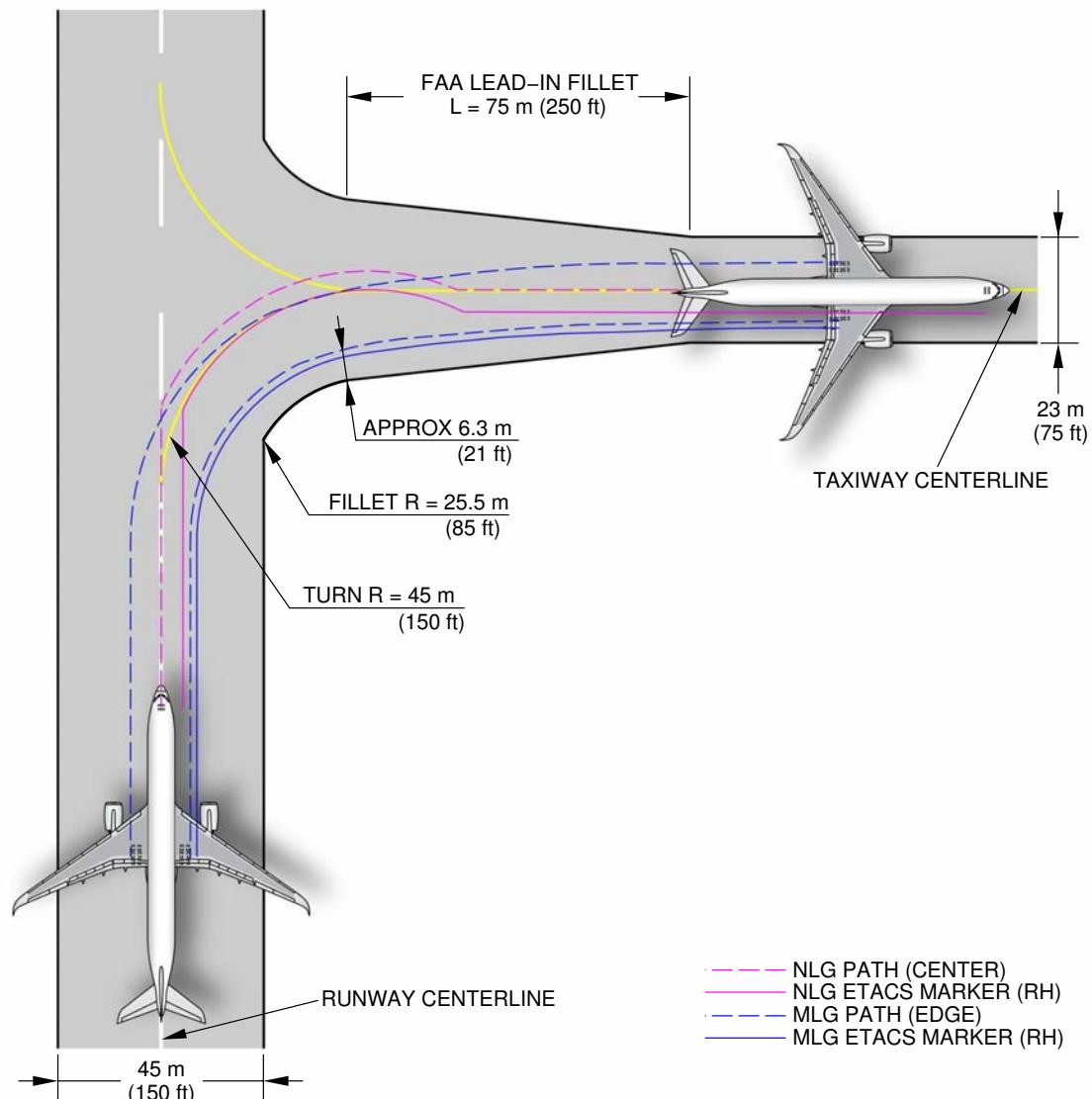
THE MLG FOLLOWS THE CENTERLINE.

[01] THE NLG EDGE MARGIN DECREASES BY 0.6 m (2 ft).

P\_AC\_040502\_1\_0020002\_01\_03

90° Turn - Runway to Taxiway  
Oversteering Method (Sheet 1 of 3)  
FIGURE-4-5-2-991-002-B01

\*\*ON A/C A350-1000



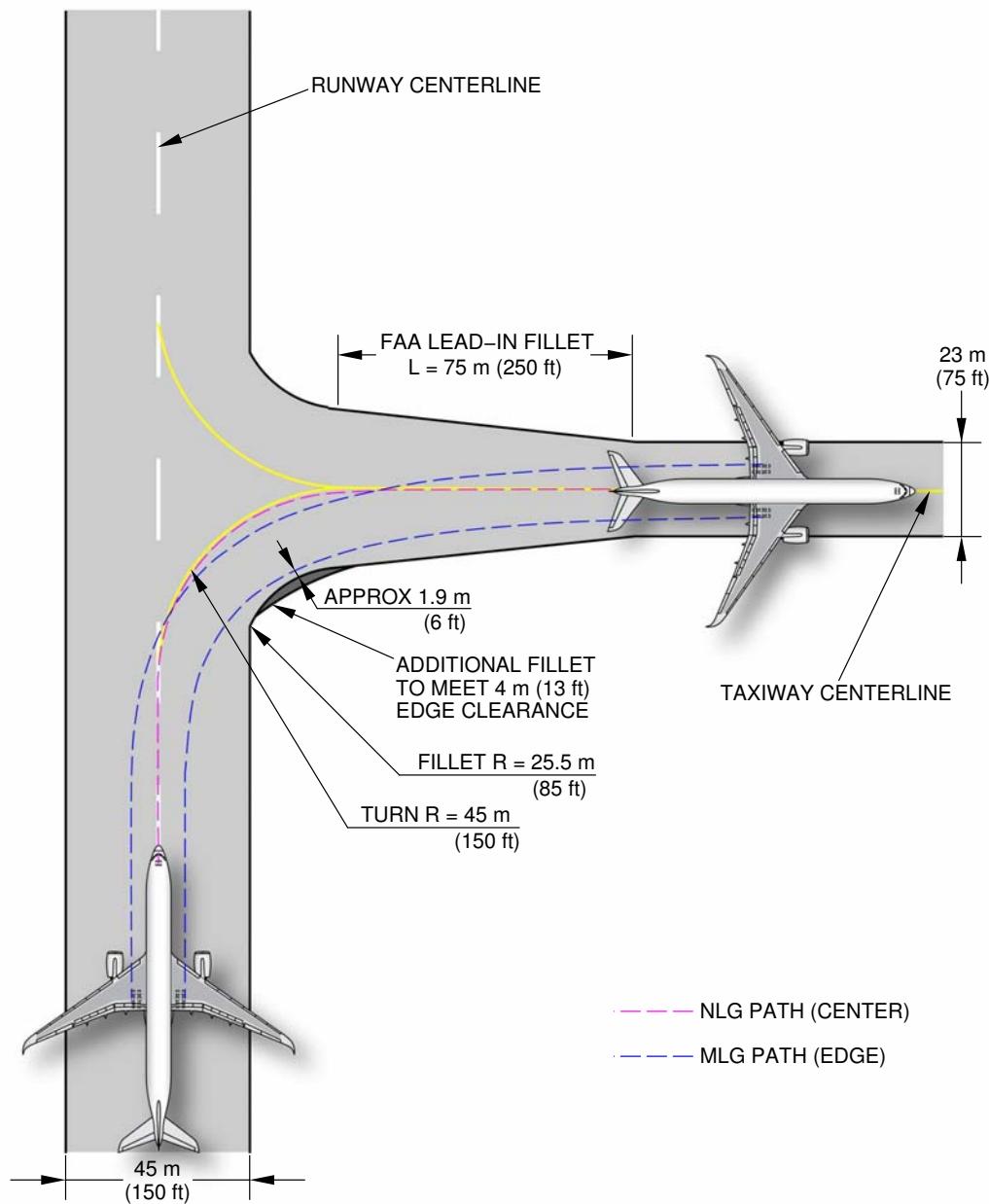
**NOTE:**

THE NLG FOLLOWS THE RH ETACS MARKER.

P\_AC\_040502\_1\_0020002\_02\_03

90° Turn - Runway to Taxiway  
 ETACS Assisted Steering Method (Sheet 2 of 3)  
 FIGURE-4-5-2-991-002-B01

\*\*ON A/C A350-1000



P\_AC\_040502\_1\_0020002\_03\_00

90° Turn - Runway to Taxiway  
Cockpit over Centerline Method (Sheet 3 of 3)  
FIGURE-4-5-2-991-002-B01



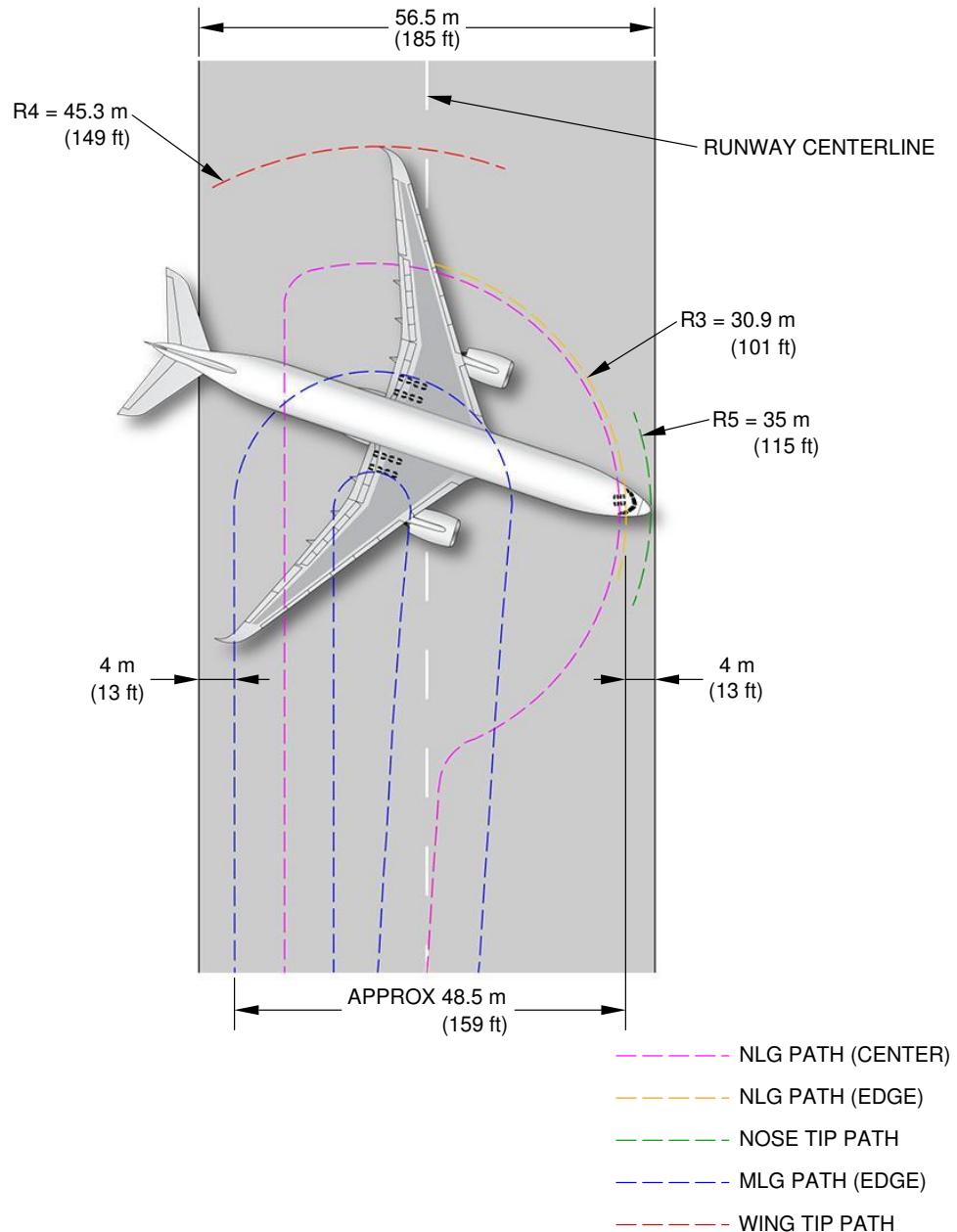
4-5-3      **180° Turn on a Runway**

**\*\*ON A/C A350-1000 A350-900**

**180° Turn on a Runway**

1. This section provides the 180° turn on a runway.

\*\*ON A/C A350-900



**NOTE:**

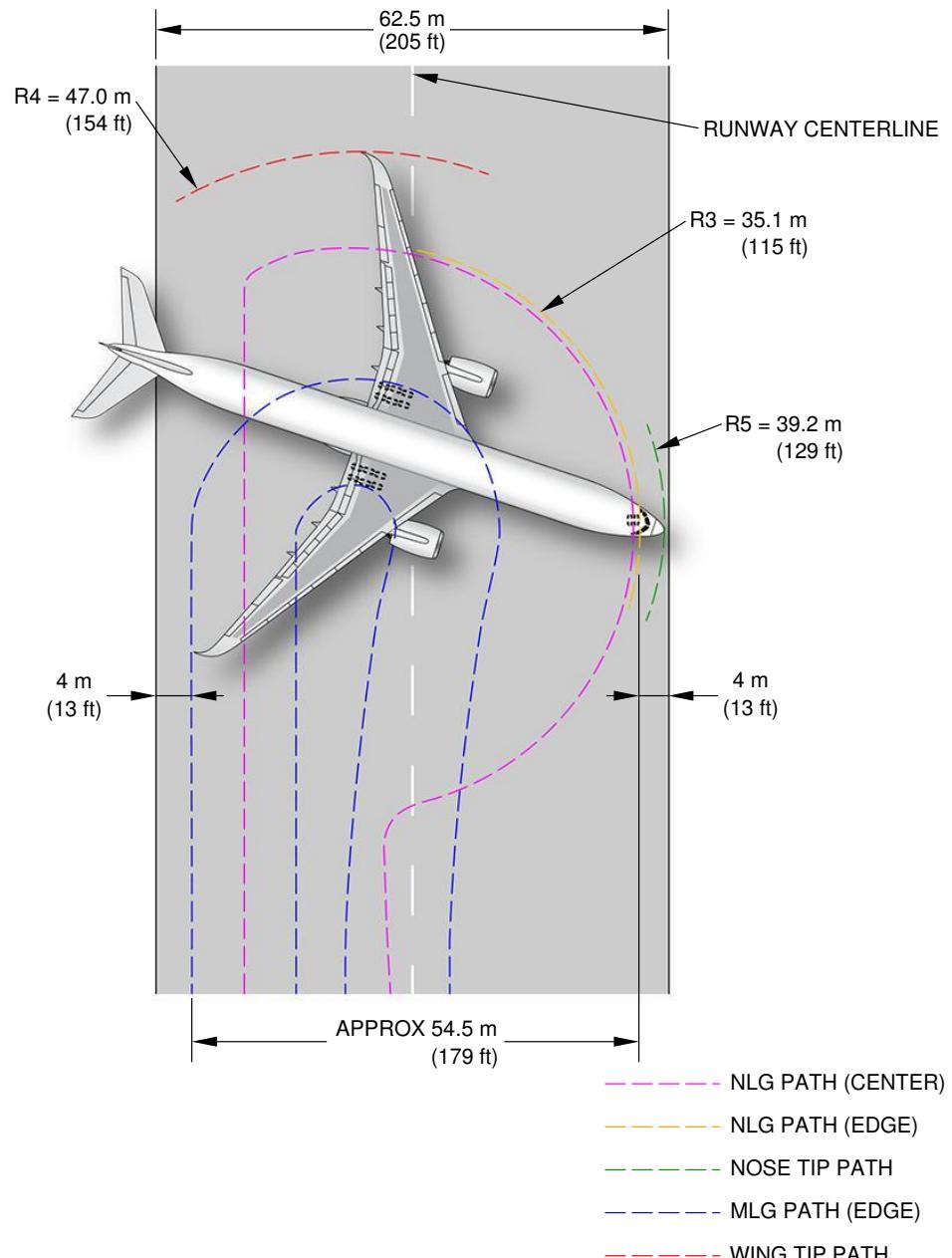
TYPE 1 VALUES.

IT IS POSSIBLE TO GET LOWER VALUES THAN THOSE FROM TYPE 1 BY APPLYING DIFFERENTIAL BRAKING DURING THE WHOLE TURN.

P\_AC\_040503\_1\_0010001\_01\_03

180° Turn on a Runway  
FIGURE-4-5-3-991-001-A01

**\*\*ON A/C A350-1000**



**NOTE:**

TYPE 1 VALUES.

IT IS POSSIBLE TO GET LOWER VALUES THAN THOSE FROM TYPE 1 BY APPLYING DIFFERENTIAL BRAKING DURING THE WHOLE TURN.

P\_AC\_040503\_1\_0020002\_01\_02

180° Turn on a Runway  
FIGURE-4-5-3-991-002-B01



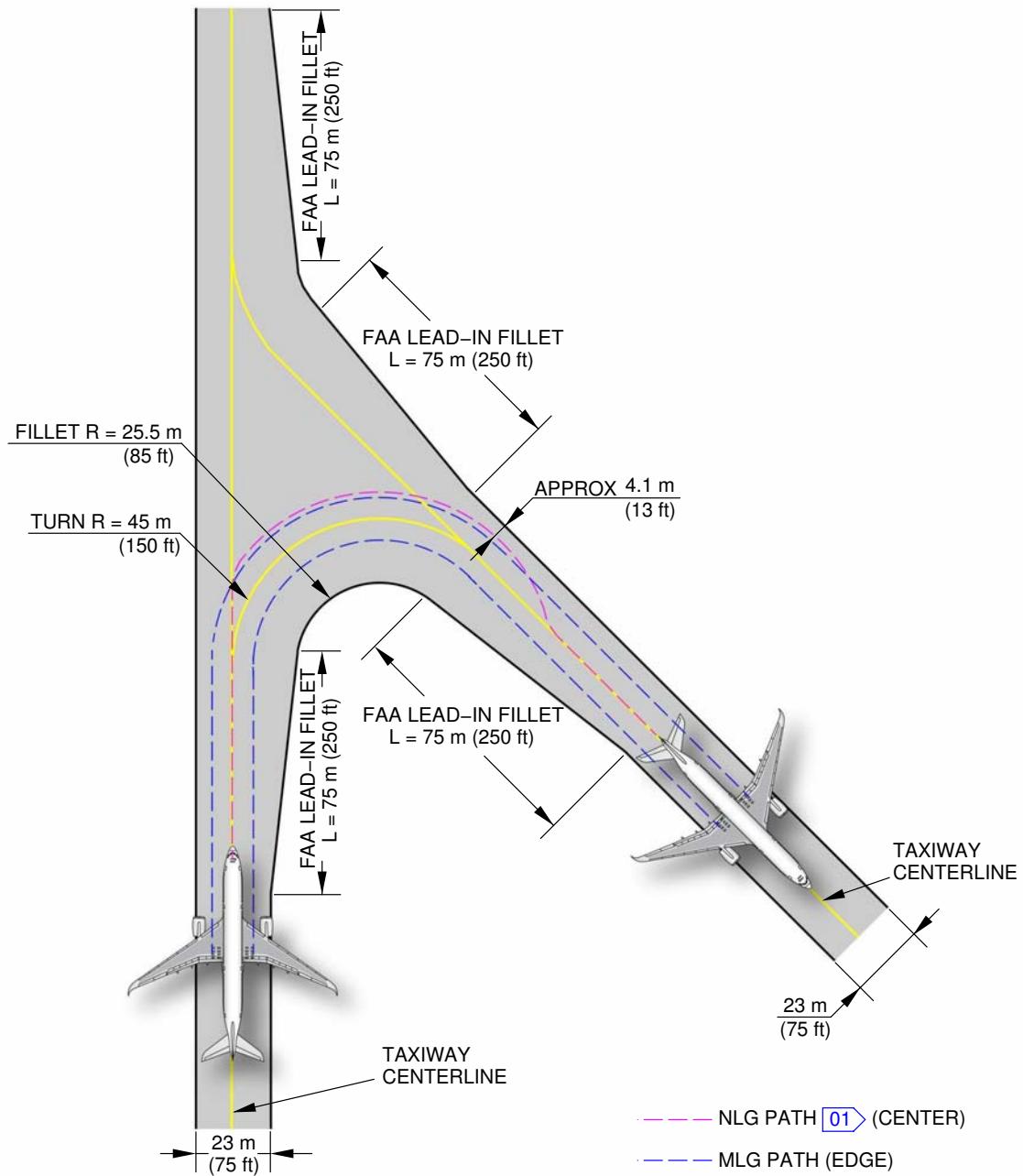
4-5-4      **135° Turn - Taxiway to Taxiway**

**\*\*ON A/C A350-1000 A350-900**

**135° Turn - Taxiway to Taxiway**

1. This section gives the 135° turn - taxiway to taxiway.

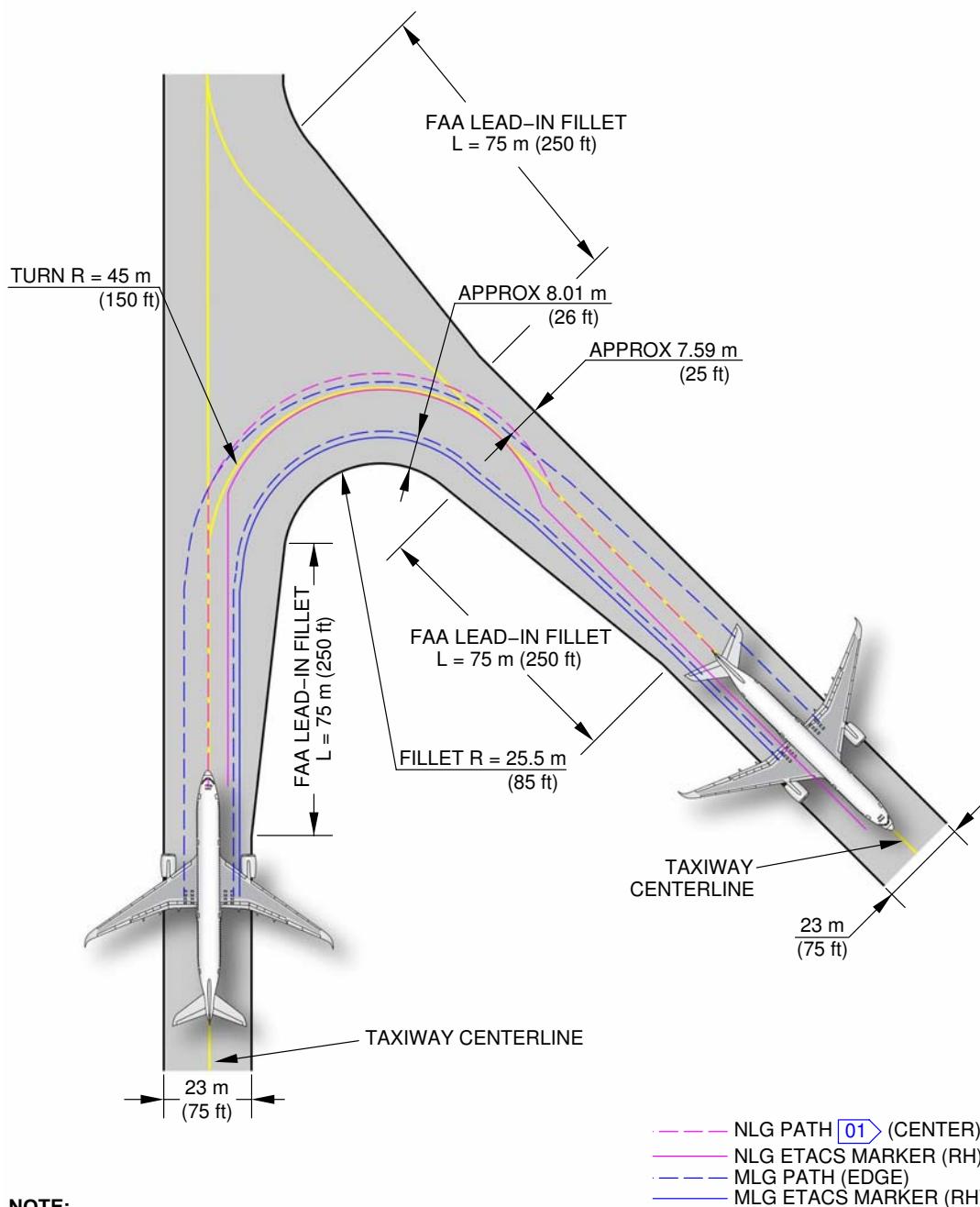
\*\*ON A/C A350-900



P\_AC\_040504\_1\_0010001\_01\_05

135° Turn - Taxiway to Taxiway  
Oversteering Method (Sheet 1 of 3)  
FIGURE-4-5-4-991-001-A01

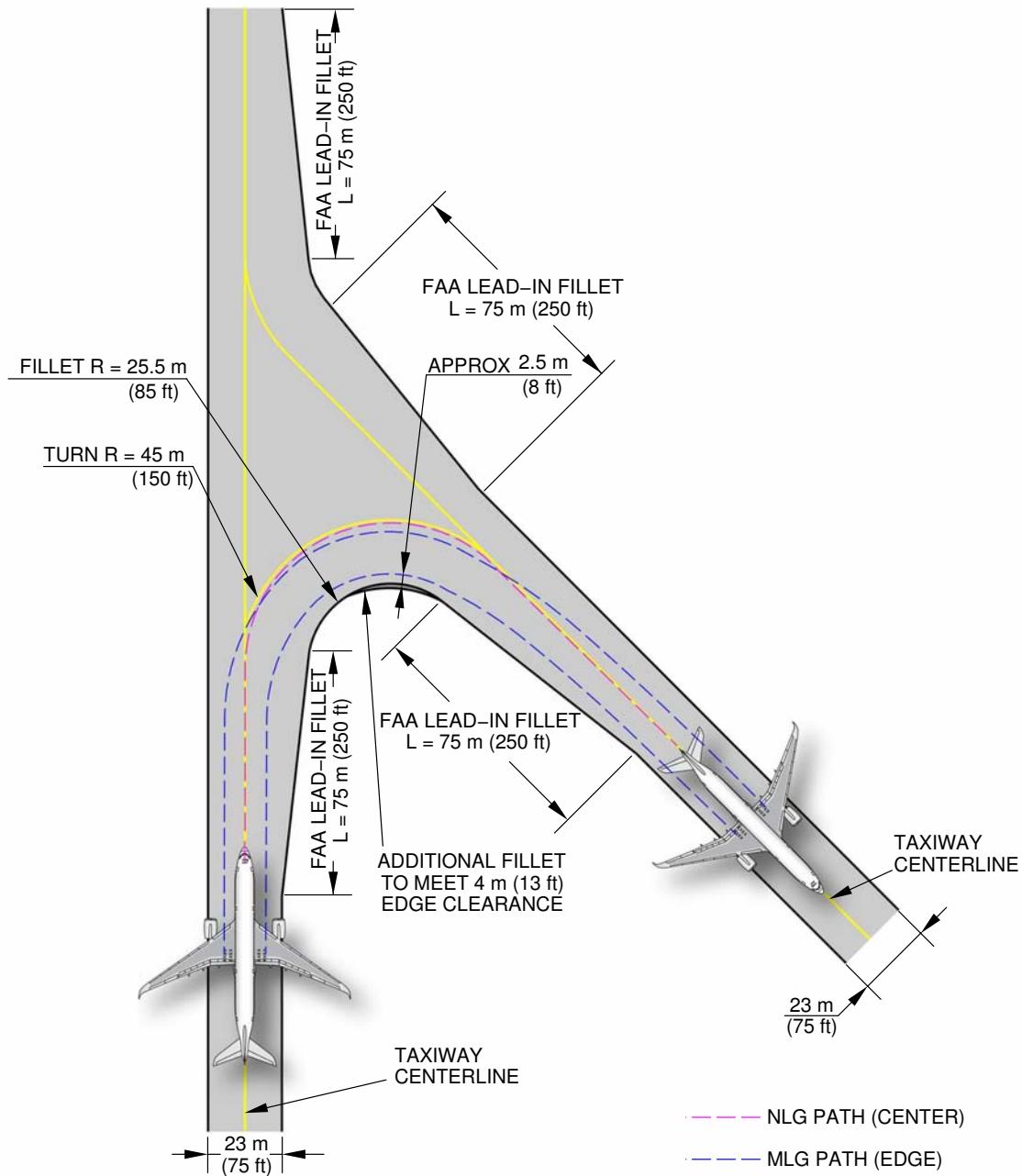
\*\*ON A/C A350-900



135° Turn - Taxiway to Taxiway  
ETACS Assisted Steering Method (Sheet 2 of 3)  
FIGURE-4-5-4-991-001-A01

P\_AC\_040504\_1\_0010001\_02\_06

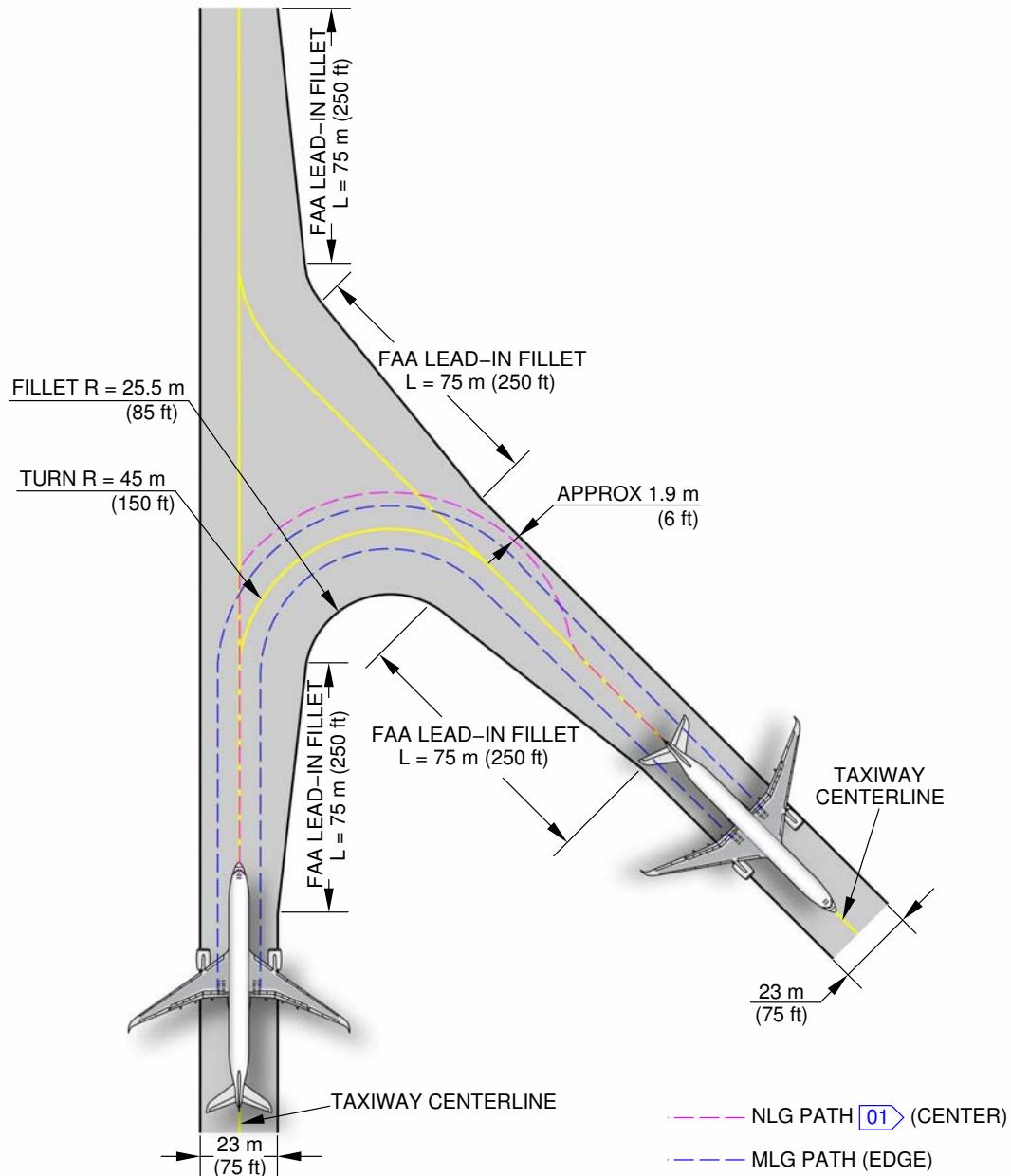
\*\*ON A/C A350-900



P\_AC\_040504\_1\_0010001\_03\_00

135° Turn - Taxiway to Taxiway  
Cockpit over Centerline Method (Sheet 3 of 3)  
FIGURE-4-5-4-991-001-A01

\*\*ON A/C A350-1000



**NOTE:**

THE MLG FOLLOWS THE CENTERLINE.

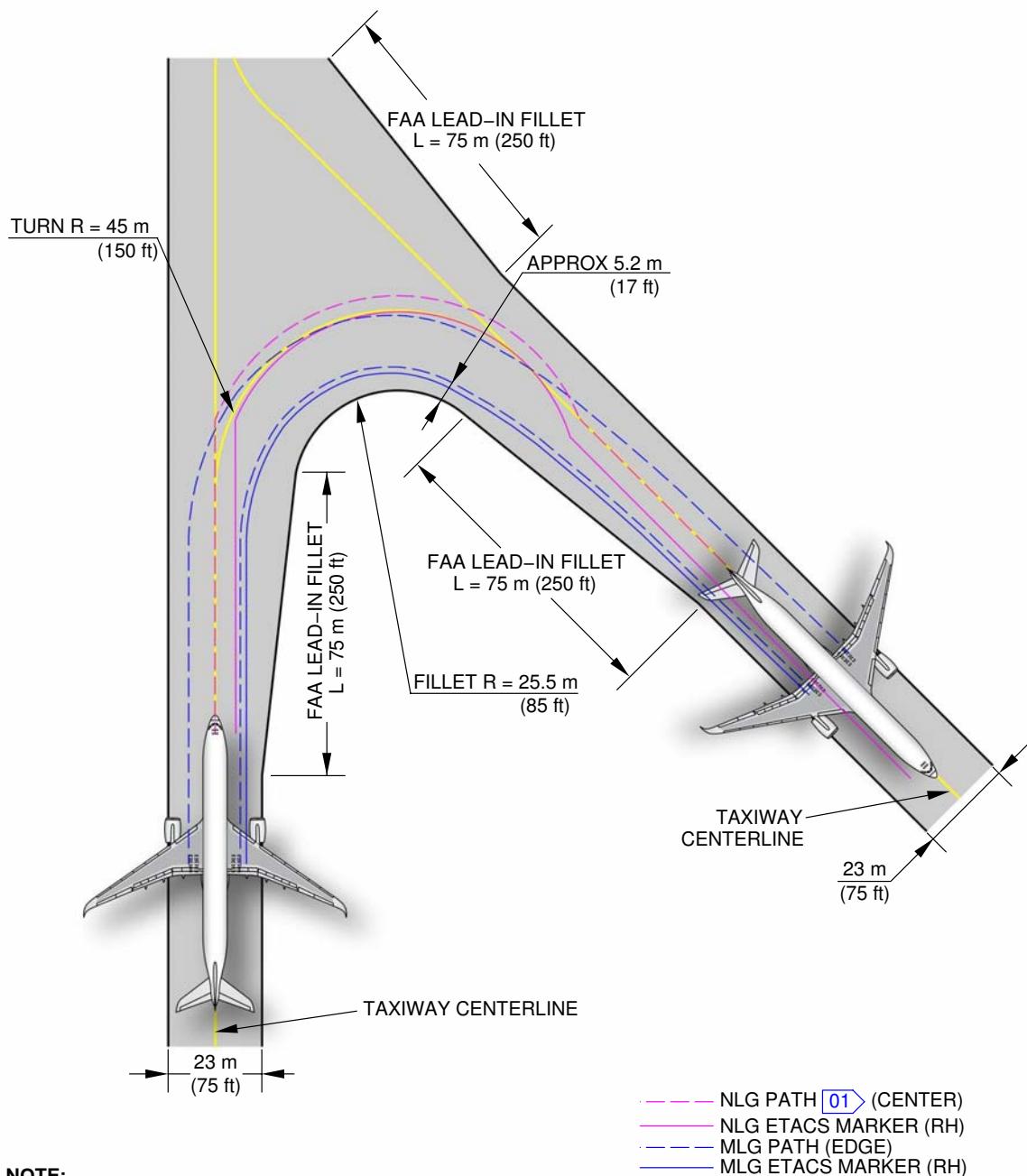
01 THE NLG EDGE MARGIN DECREASES BY 0.6 m (2 ft).

P\_AC\_040504\_1\_0020001\_01\_03

135° Turn - Taxiway to Taxiway  
Oversteering Method (Sheet 1 of 3)

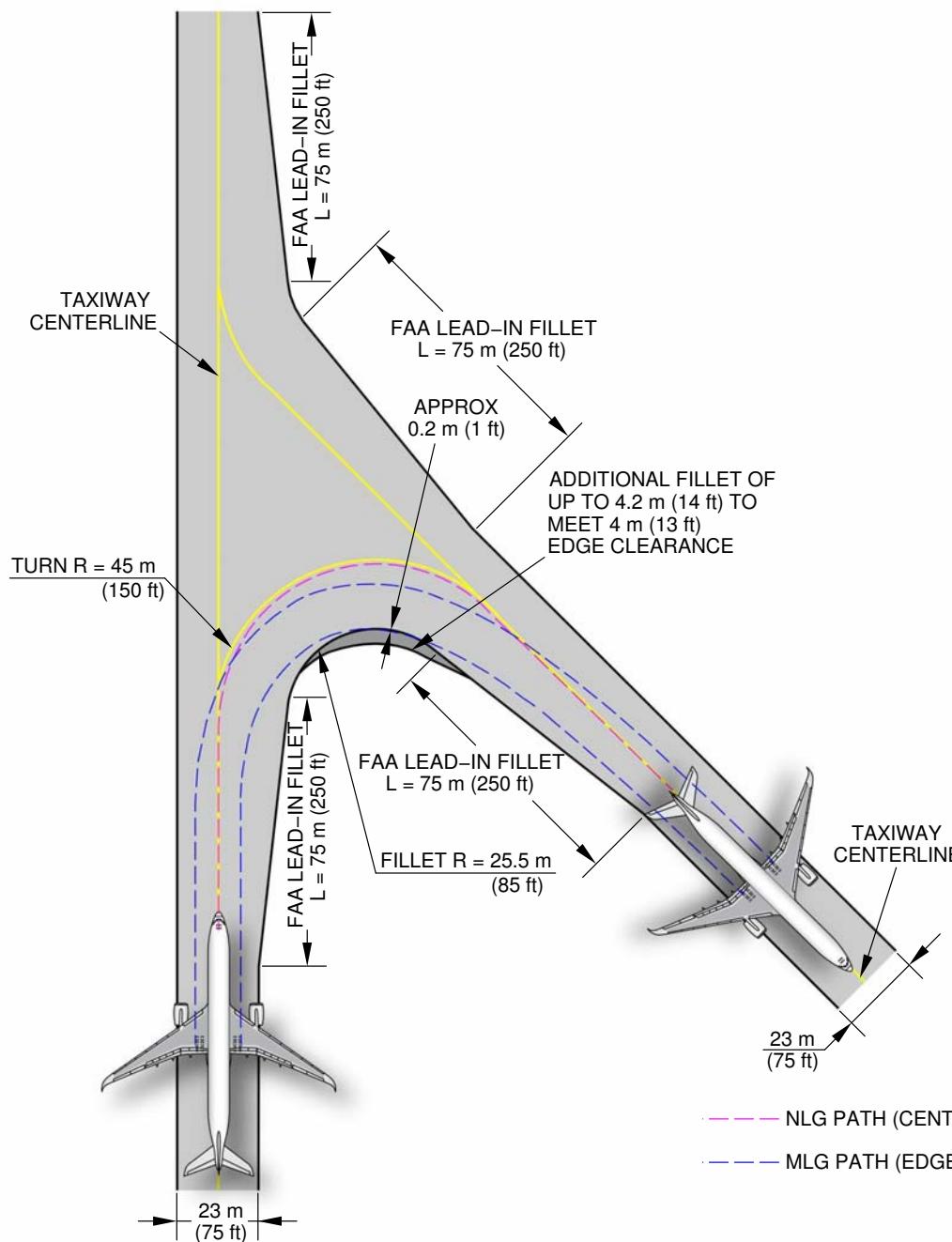
FIGURE-4-5-4-991-002-A01

\*\*ON A/C A350-1000



135° Turn - Taxiway to Taxiway  
 ETACS Assisted Steering Method (Sheet 2 of 3)  
 FIGURE-4-5-4-991-002-A01

\*\*ON A/C A350-1000



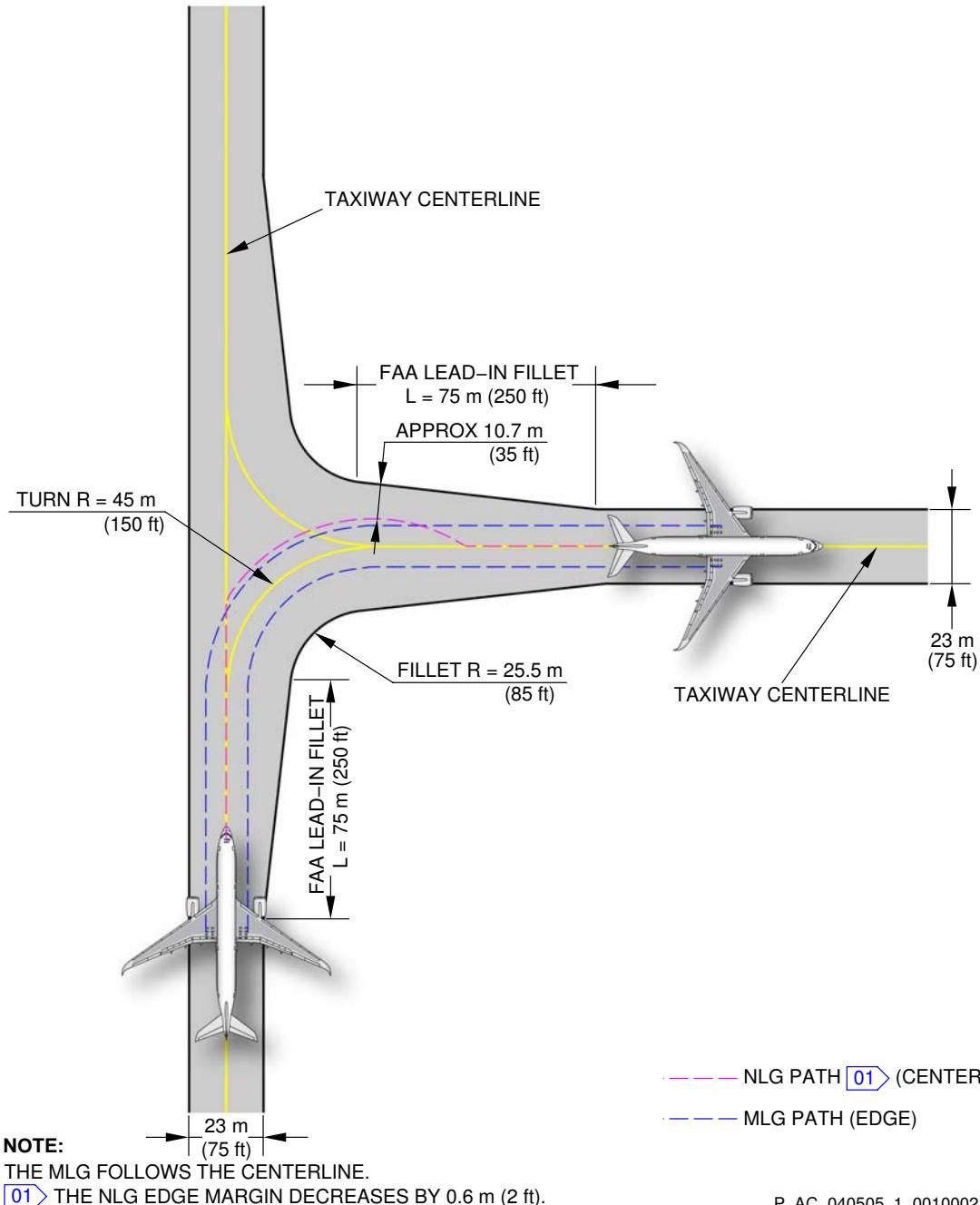
P\_AC\_040504\_1\_0020001\_03\_00

135° Turn - Taxiway to Taxiway  
Cockpit over Centerline Method (Sheet 3 of 3)  
FIGURE-4-5-4-991-002-A01

4-5-5      **90° Turn - Taxiway to Taxiway****\*\*ON A/C A350-1000 A350-900****90° Turn - Taxiway to Taxiway**

1. This section gives the 90° turn - taxiway to taxiway .

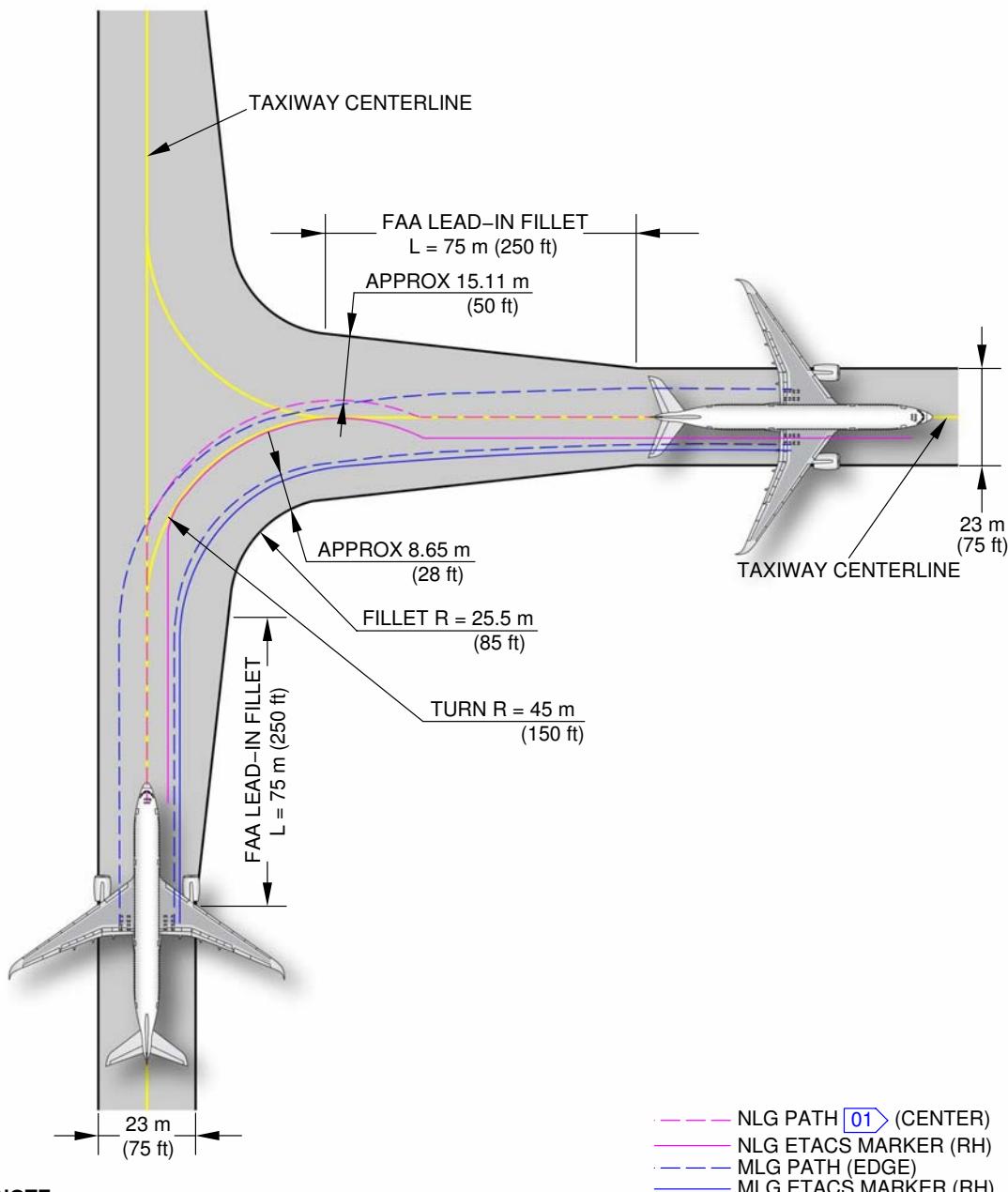
\*\*ON A/C A350-900



90° Turn - Taxiway to Taxiway  
Oversteering Method (Sheet 1 of 3)  
FIGURE-4-5-5-991-001-B01

P\_AC\_040505\_1\_0010002\_01\_05

\*\*ON A/C A350-900



**NOTE:**

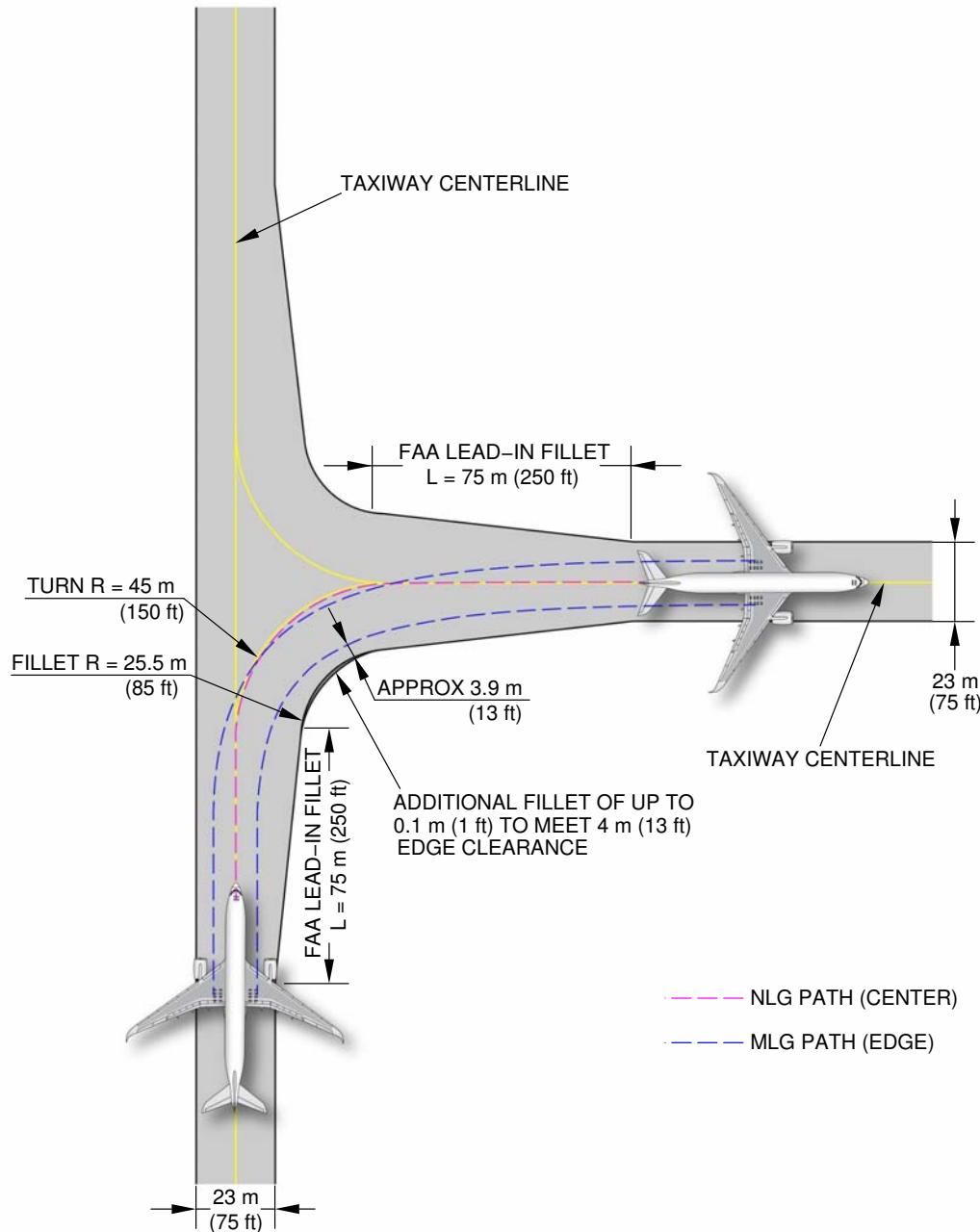
THE NLG FOLLOWS THE RH ETACS MARKER.

[01] THE NLG EDGE MARGIN DECREASES BY 0.6 m (2 ft).

P\_AC\_040505\_1\_0010002\_02\_06

90° Turn - Taxiway to Taxiway  
ETACS Assisted Steering Method (Sheet 2 of 3)  
FIGURE-4-5-5-991-001-B01

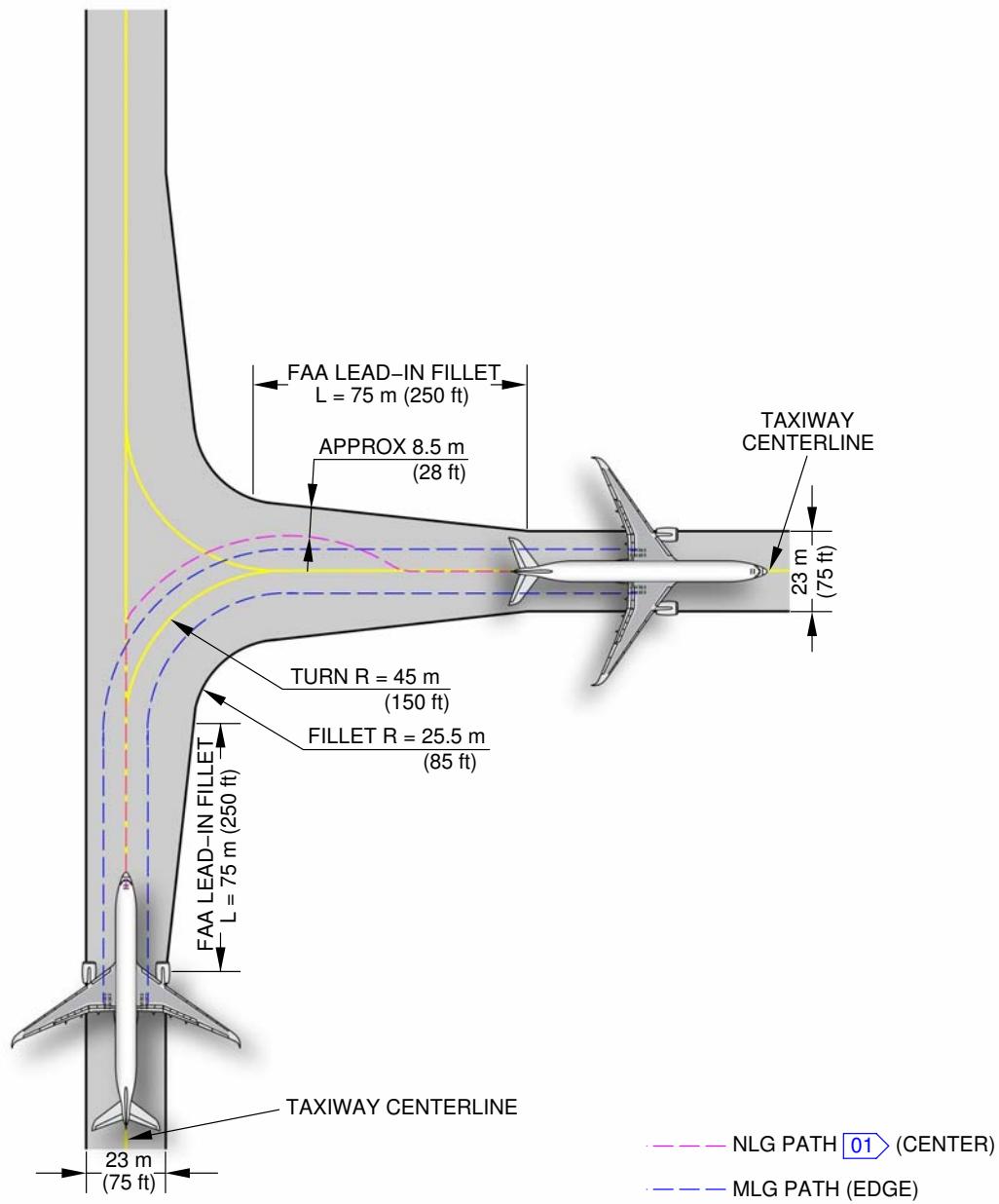
\*\*ON A/C A350-900



P\_AC\_040505\_1\_0010002\_03\_00

90° Turn - Taxiway to Taxiway  
Cockpit over Centerline Method (Sheet 3 of 3)  
FIGURE-4-5-5-991-001-B01

\*\*ON A/C A350-1000



**NOTE:**

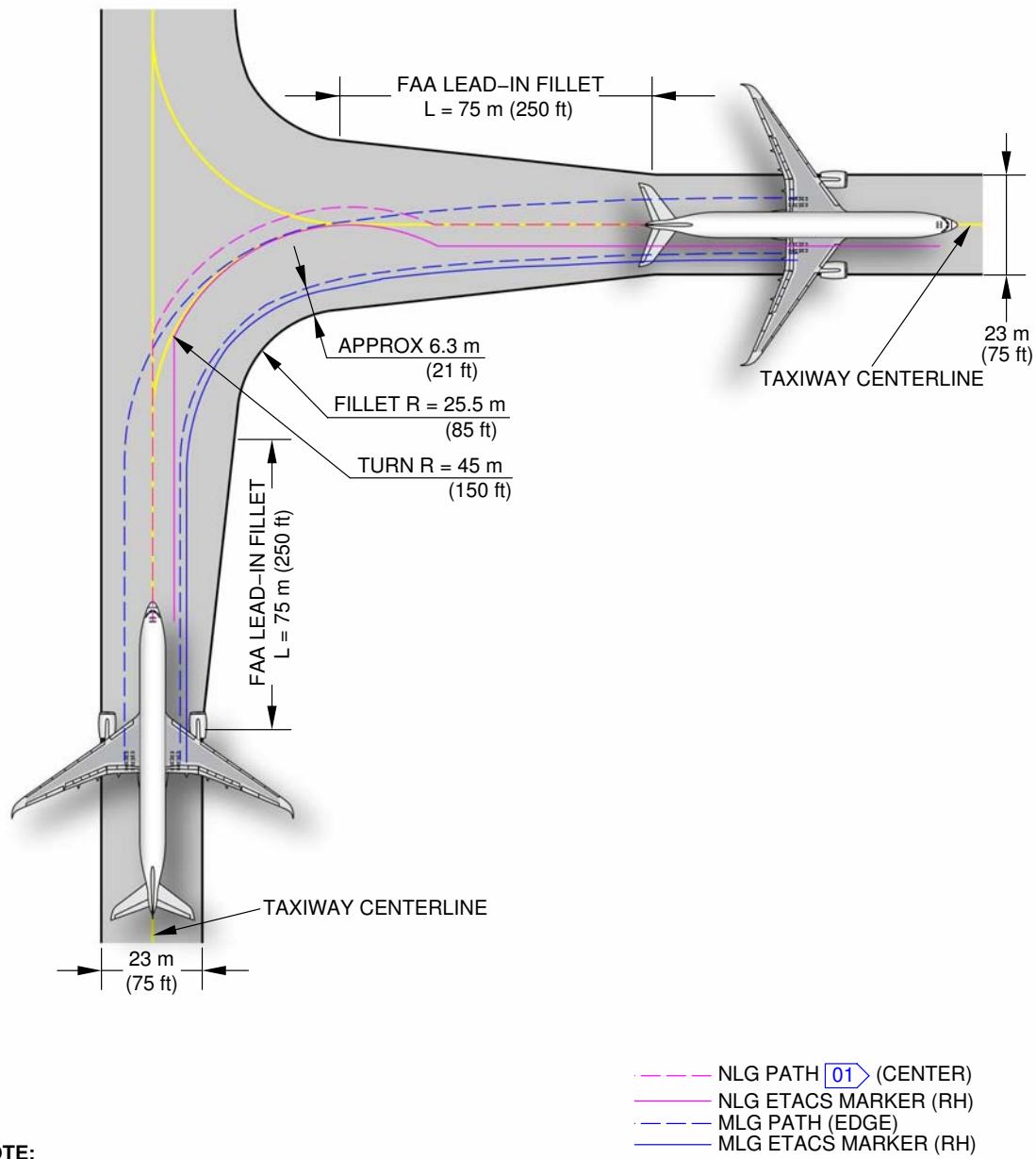
THE MLG FOLLOWS THE CENTERLINE.

[01] THE NLG EDGE MARGIN DECREASES BY 0.6 m (2 ft).

P\_AC\_040505\_1\_0020001\_01\_03

90° Turn - Taxiway to Taxiway  
Oversteering Method (Sheet 1 of 3)  
FIGURE-4-5-5-991-002-A01

\*\*ON A/C A350-1000



**NOTE:**

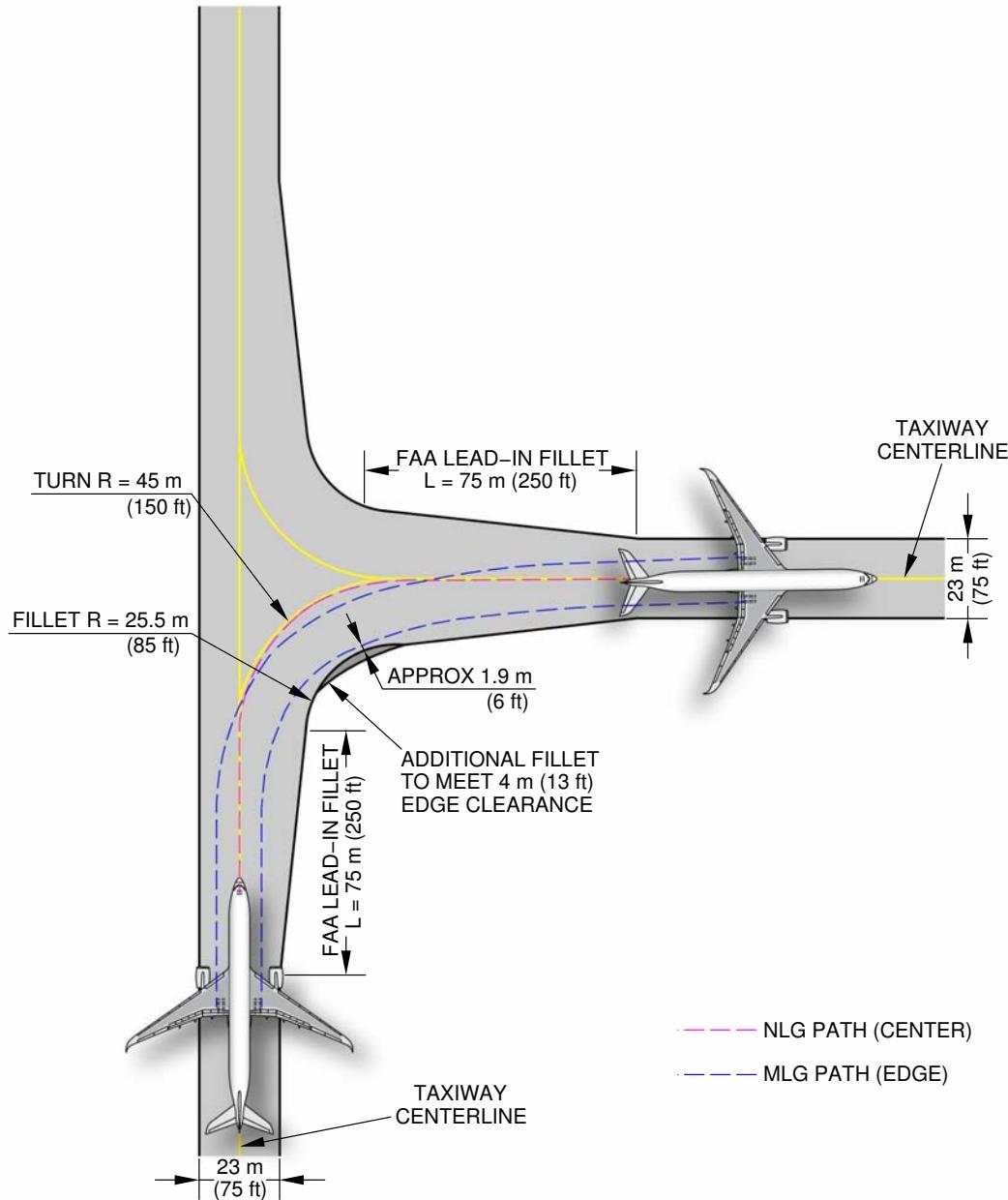
THE NLG FOLLOWS THE RH ETACS MARKER.

[01] THE NLG EDGE MARGIN DECREASES BY 0.6 m (2 ft).

P\_AC\_040505\_1\_0020001\_02\_03

90° Turn - Taxiway to Taxiway  
ETACS Assisted Steering Method (Sheet 2 of 3)  
FIGURE-4-5-5-991-002-A01

\*\*ON A/C A350-1000



P\_AC\_040505\_1\_0020001\_03\_00

90° Turn - Taxiway to Taxiway  
 Cockpit over Centerline Method (Sheet 3 of 3)  
 FIGURE-4-5-5-991-002-A01



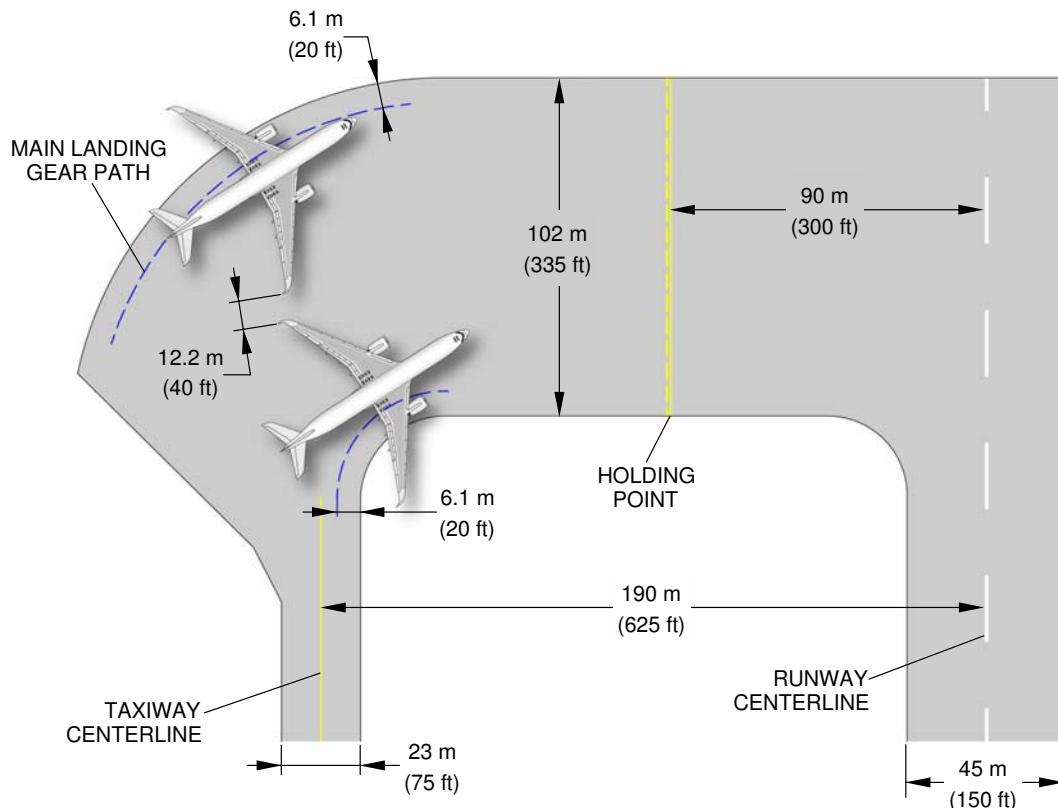
4-6-0      **Runway Holding Bay**

**\*\*ON A/C A350-1000 A350-900**

Runway Holding Bay

1. This section provides the runway holding bay.

\*\*ON A/C A350-1000 A350-900



**NOTE:**

COORDINATE WITH USING AIRCRAFT FOR SPECIFIC PLANNED OPERATING PROCEDURES.

P\_AC\_040600\_1\_0010001\_01\_00

Runway Holding Bay  
FIGURE-4-6-0-991-001-A01

## 4-7-0 Minimum Line-Up Distance Corrections

**\*\*ON A/C A350-1000 A350-900**Minimum Line-Up Distance Corrections

1. The ground maneuvers were performed using asymmetric thrust and differential braking only to initiate the turn.

Manoeuvres of this section are calculated with turn characteristics as given in chapter 4-2-0.

TODA: Take-Off Distance Available

ASDA: Acceleration-Stop Distance Available

2. 90° Turn on Runway Entry

This section provides 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 4 m (13 ft.) from the taxiway edge, and finishes with the aircraft aligned on the centerline of the runway, FIGURE 4-7-0-991-001-A.

During the turn, all the clearances must meet the minimum value of 4 m (13 ft.) for this category of aircraft as recommended in ICAO Annex 14 (Eighth Edition).

3. 180° Turn on Runway Turn Pad

This section provides 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 4 m (13 ft.) from the pavement edge, and it finishes with the aircraft aligned on the centerline of the runway, FIGURE 4-7-0-991-002-A.

During the turn, all the clearances must meet the minimum value of 4 m (13 ft.) for this category of aircraft as recommended in ICAO Annex 14 (Eighth Edition).

4. 180° Turn on Runway Width

This section provides 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 (45 m (150 ft) and 60 m (200 ft)).

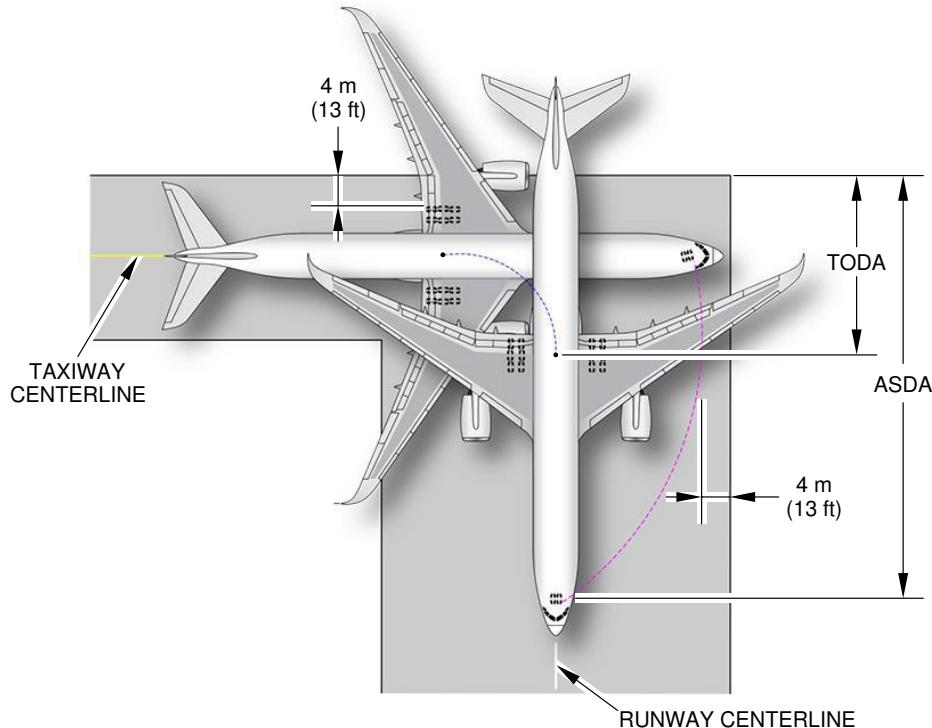
As per the standard operating procedures for the "180° turn on runway" (described in the Flight Crew Operating Manual), the aircraft is initially angled with respect to the runway centerline when starting the 180° turn, FIGURE 4-7-0-991-003-A.

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 4 m (13 ft.) for this category of aircraft as recommended in ICAO Annex 14 (Eighth Edition) .

NOTE : The minimum line-up distances may need a steering angle lower than the maximum one.

**\*\*ON A/C A350-1000 A350-900**



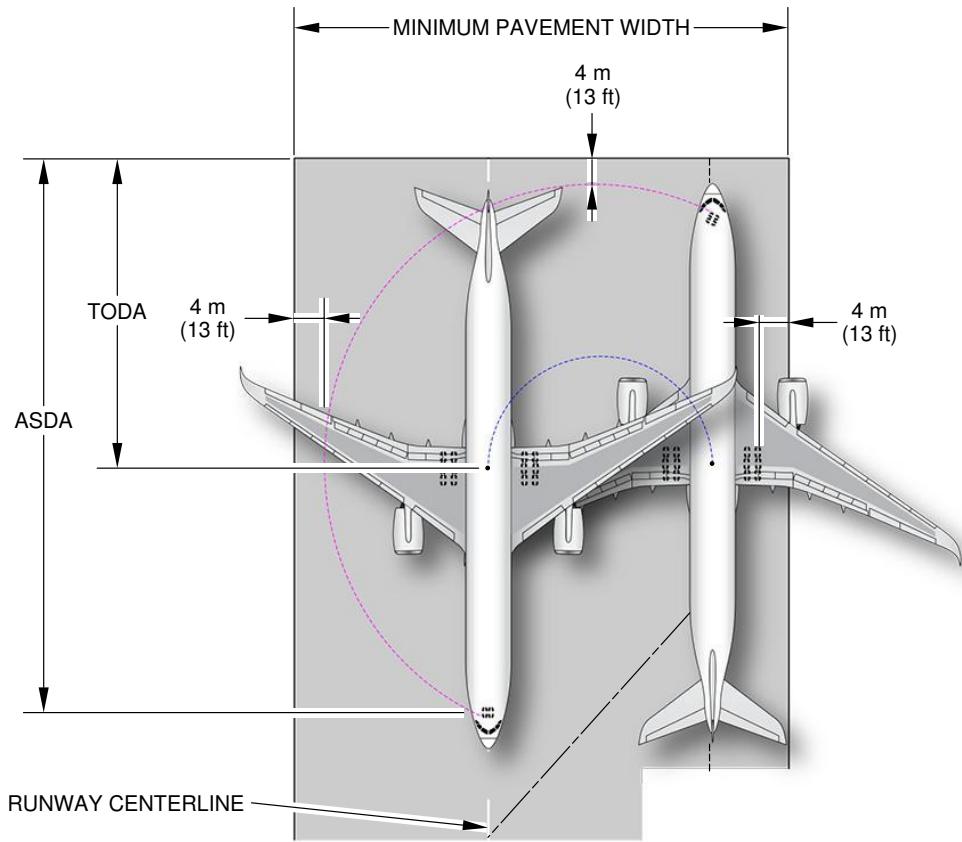
— ASDA: ACCELERATION-STOP DISTANCE AVAILABLE  
— TODA: TAKE-OFF DISTANCE AVAILABLE

| 90° TURN ON RUNWAY ENTRY |                    |                                     |         |                                     |         |                           |         |         |        |
|--------------------------|--------------------|-------------------------------------|---------|-------------------------------------|---------|---------------------------|---------|---------|--------|
| AIRCRAFT TYPE            | MAX STEERING ANGLE | 45 m (150 ft) WIDE RUNWAY           |         |                                     |         | 60 m (200 ft) WIDE RUNWAY |         |         |        |
|                          |                    | MINIMUM LINE-UP DISTANCE CORRECTION |         | MINIMUM LINE-UP DISTANCE CORRECTION |         | ON TODA                   | ON ASDA | ON TODA |        |
|                          |                    | ON TODA                             | ON ASDA | ON TODA                             | ON ASDA | ON TODA                   | ON ASDA | ON TODA |        |
| A350-900                 | 72?                | 24.3 m                              | 80 ft   | 52.9 m                              | 174 ft  | 21.3 m                    | 70 ft   | 50.0 m  | 164 ft |
| A350-1000                | 75?                | 30.6 m                              | 100 ft  | 63.1 m                              | 207 ft  | 21.4 m                    | 70 ft   | 53.9 m  | 177 ft |

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90° Turn on Runway Entry  
FIGURE-4-7-0-991-001-A01

\*\*ON A/C A350-1000 A350-900



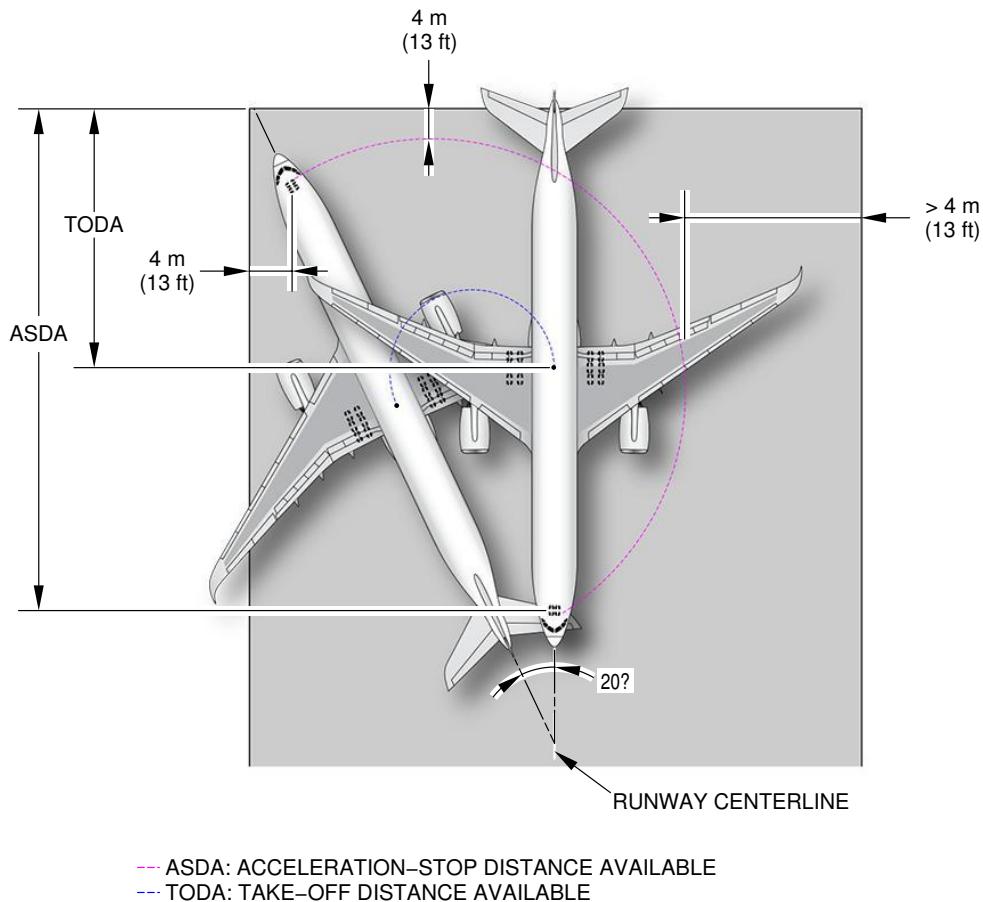
— ASDA: ACCELERATION-STOP DISTANCE AVAILABLE  
— TODA: TAKE-OFF DISTANCE AVAILABLE

| 180° TURN ON RUNWAY TURN PAD |                    |                                     |                 |                                     |                 |                           |        |  |  |                                 |  |  |  |  |  |
|------------------------------|--------------------|-------------------------------------|-----------------|-------------------------------------|-----------------|---------------------------|--------|--|--|---------------------------------|--|--|--|--|--|
| AIRCRAFT TYPE                | MAX STEERING ANGLE | 45 m (150 ft) WIDE RUNWAY           |                 |                                     |                 | 60 m (200 ft) WIDE RUNWAY |        |  |  | REQUIRED MINIMUM PAVEMENT WIDTH |  |  |  |  |  |
|                              |                    | MINIMUM LINE-UP DISTANCE CORRECTION |                 | MINIMUM LINE-UP DISTANCE CORRECTION |                 |                           |        |  |  |                                 |  |  |  |  |  |
|                              |                    | ON TODA                             | ON ASDA         | ON TODA                             | ON ASDA         |                           |        |  |  |                                 |  |  |  |  |  |
| A350-900                     | 72°                | 36.4 m   119 ft                     | 65.0 m   213 ft | 35.2 m   115 ft                     | 63.9 m   210 ft | 62.2 m                    | 204 ft |  |  |                                 |  |  |  |  |  |
| A350-1000                    | 75°                | 42.8 m   140 ft                     | 75.3 m   247 ft | 38.9 m   128 ft                     | 71.4 m   234 ft | 62.6 m                    | 205 ft |  |  |                                 |  |  |  |  |  |

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180° Turn on Runway Turn Pad  
FIGURE-4-7-0-991-002-A01

\*\*ON A/C A350-1000 A350-900



| 180° TURN ON RUNWAY WIDTH |                    |                                     |         |                                     |                 |
|---------------------------|--------------------|-------------------------------------|---------|-------------------------------------|-----------------|
| AIRCRAFT TYPE             | MAX STEERING ANGLE | 45 m (150 ft) WIDE RUNWAY           |         | 60 m (200 ft) WIDE RUNWAY           |                 |
|                           |                    | MINIMUM LINE-UP DISTANCE CORRECTION |         | MINIMUM LINE-UP DISTANCE CORRECTION |                 |
|                           |                    | ON TODA                             | ON ASDA | ON TODA                             | ON ASDA         |
| A350-900                  | 72?                |                                     |         | 49.2 m   162 ft                     | 77.9 m   256 ft |
| A350-1000                 | 75?                | NOT POSSIBLE                        |         | NOT POSSIBLE                        |                 |

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180° Turn on Runway Width  
FIGURE-4-7-0-991-003-A01



## AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

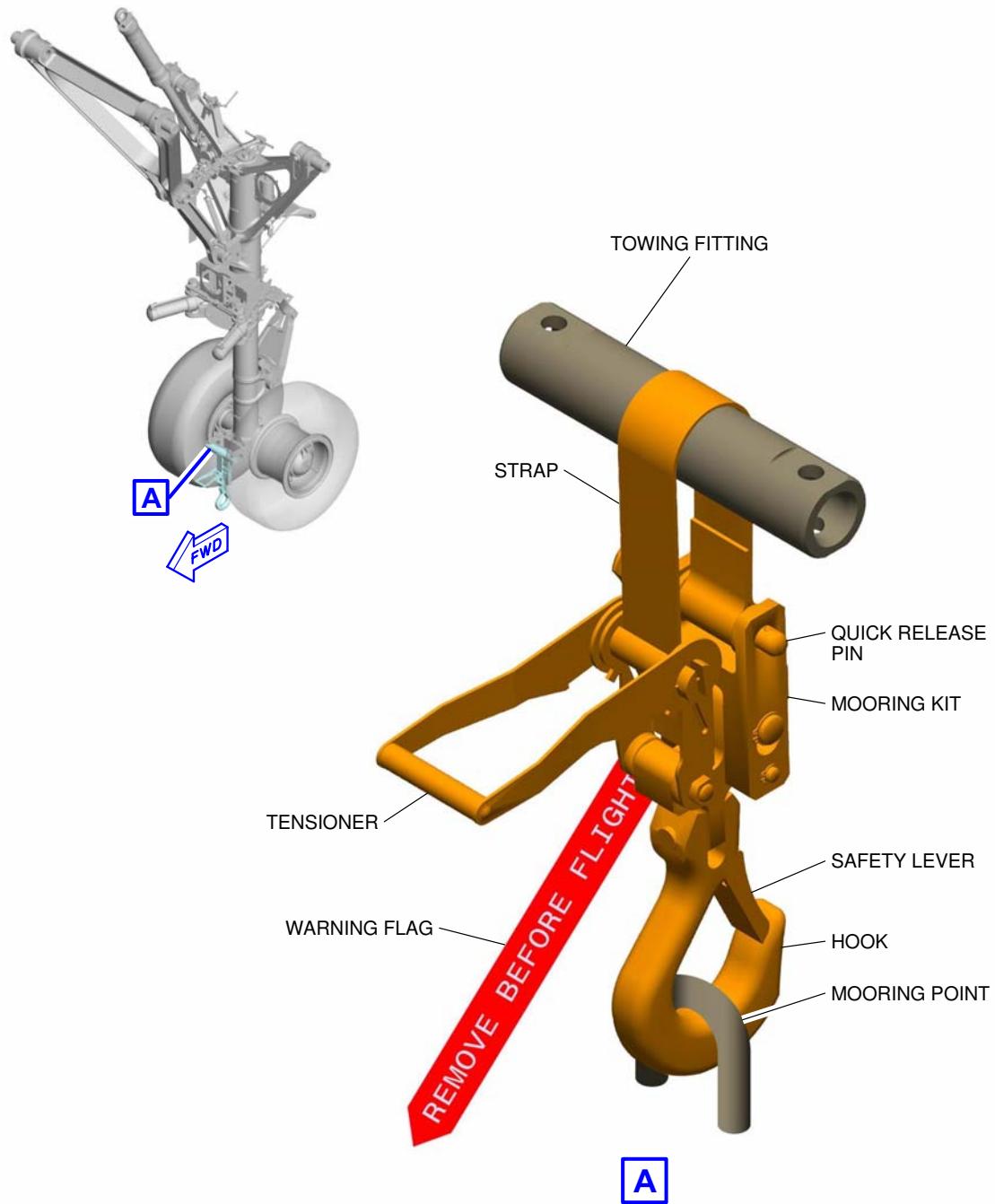
### 4-8-0      Aircraft Mooring

**\*\*ON A/C A350-1000 A350-900**

#### Aircraft Mooring

1. This section provides information on aircraft mooring.

\*\*ON A/C A350-1000 A350-900



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

TERMINAL SERVICING

## 5-1-0 Aircraft Servicing Arrangements

**\*\*ON A/C A350-1000 A350-900**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 provides the symbols used on servicing diagrams.

| GROUND SUPPORT EQUIPMENT |                                  |
|--------------------------|----------------------------------|
| AC                       | AIR CONDITIONING UNIT            |
| AS                       | AIR START UNIT                   |
| BULK                     | BULK TRAIN                       |
| CAT                      | CATERING TRUCK                   |
| CB                       | CONVEYOR BELT                    |
| CLEAN                    | CLEANING TRUCK                   |
| FUEL                     | FUEL HYDRANT DISPENSER or TANKER |
| GPU                      | GROUND POWER UNIT                |
| LDCL                     | LOWER DECK CARGO LOADER          |
| LV                       | LAVATORY VEHICLE                 |
| PBB                      | PASSENGER BOARDING BRIDGE        |
| PS                       | PASSENGER STAIRS                 |
| TOW                      | TOW TRACTOR                      |
| ULD                      | ULD TRAIN                        |
| WV                       | POTABLE WATER VEHICLE            |

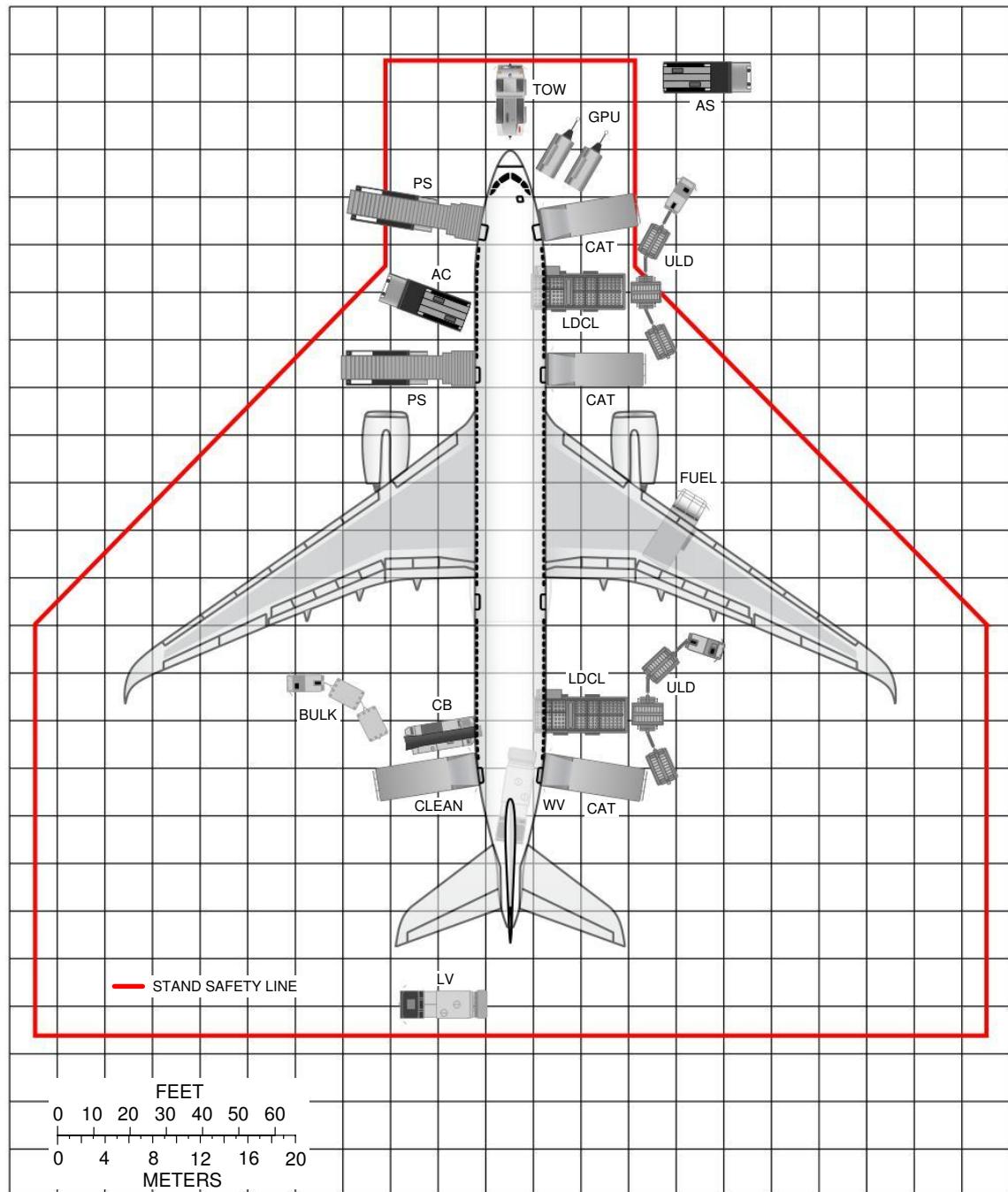
## 5-1-1      Typical Ramp Layout (Open Apron)

\*\*ON A/C A350-1000 A350-900

Typical Ramp Layout (Open Apron)

1. This section provides the typical ramp layout (Open Apron).  
The Stand Safety Line delimits the Aircraft Safety Area (minimum distance of 7.5 m (24.61 ft.) from the aircraft). No vehicle must be parked in this area before complete stop of the aircraft (wheel chocks in position on landing gears).

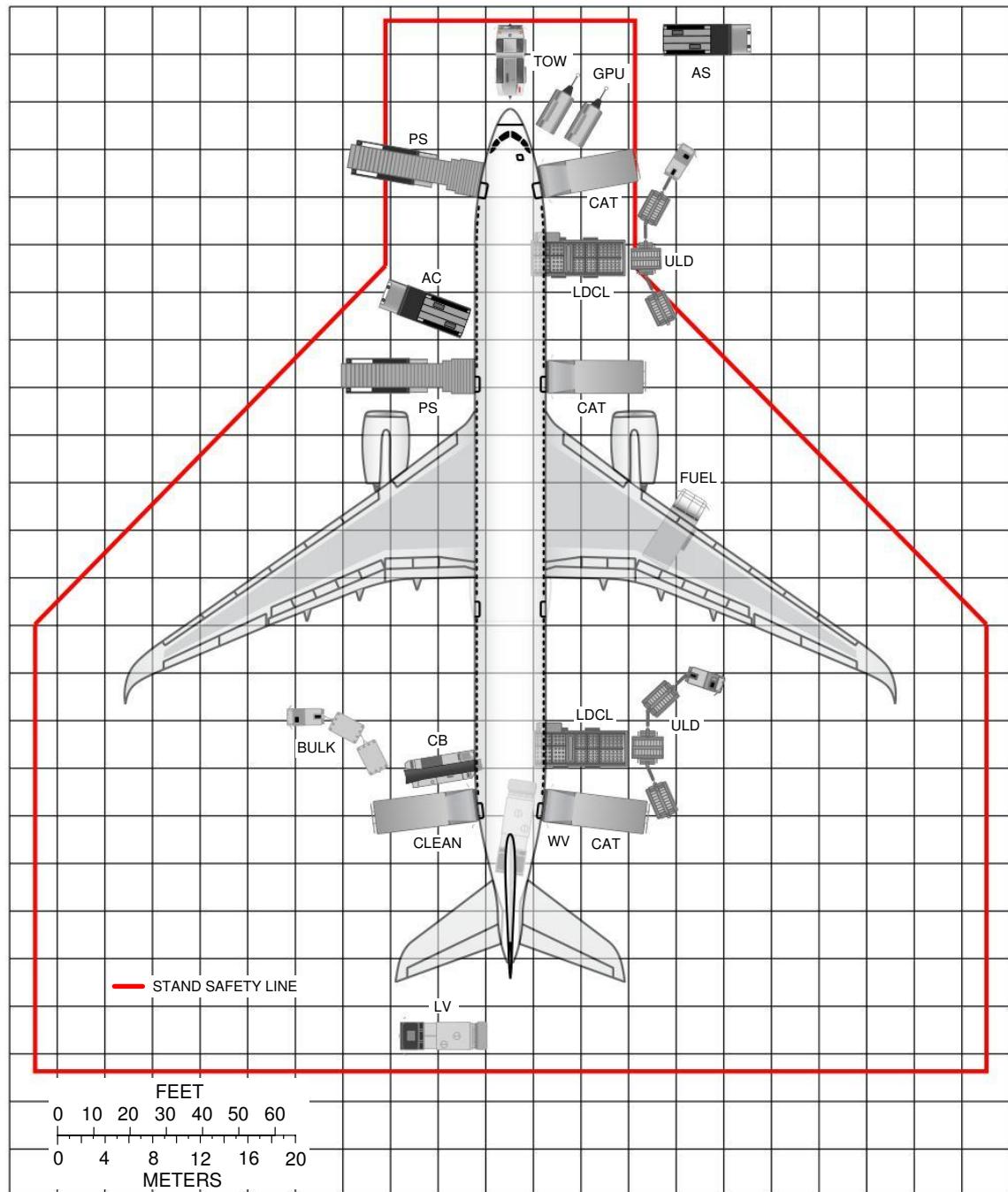
\*\*ON A/C A350-900



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Typical Ramp Layout (Open Apron)  
FIGURE-5-1-1-991-001-A01

\*\*ON A/C A350-1000



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Typical Ramp Layout (Open Apron)  
FIGURE-5-1-1-991-003-A01



5-1-2      **Typical Ramp Layout (Gate)**

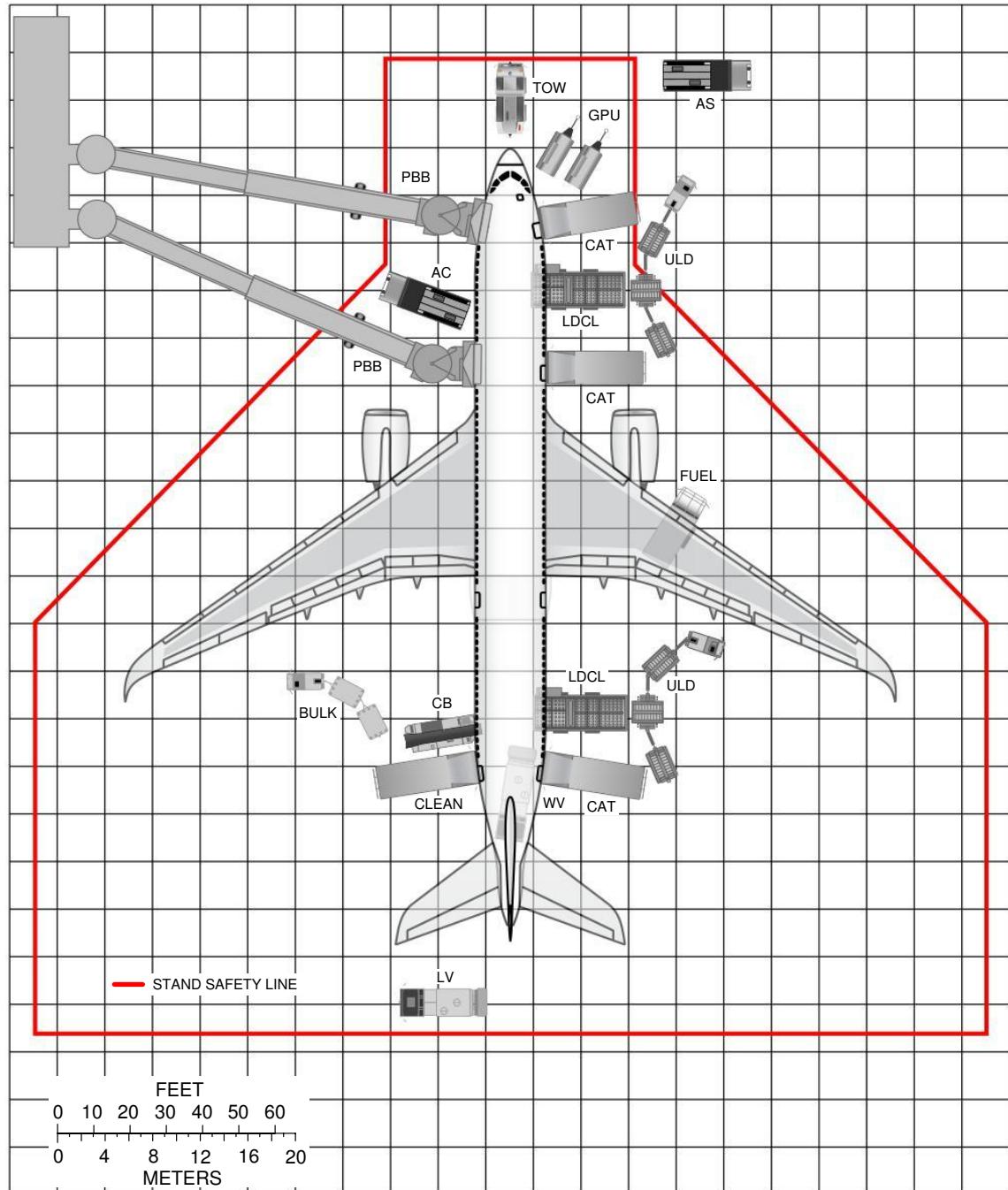
**\*\*ON A/C A350-1000 A350-900**

**Typical Ramp Layout (Gate)**

1. This section provides the baseline ramp layout (gate).

The Stand Safety Line delimits the Aircraft Safety Area (minimum distance of 7.50 m (24.61 ft.) from the aircraft). No vehicle must be parked in this area before complete stop of the aircraft (wheel chocks in position on landing gears).

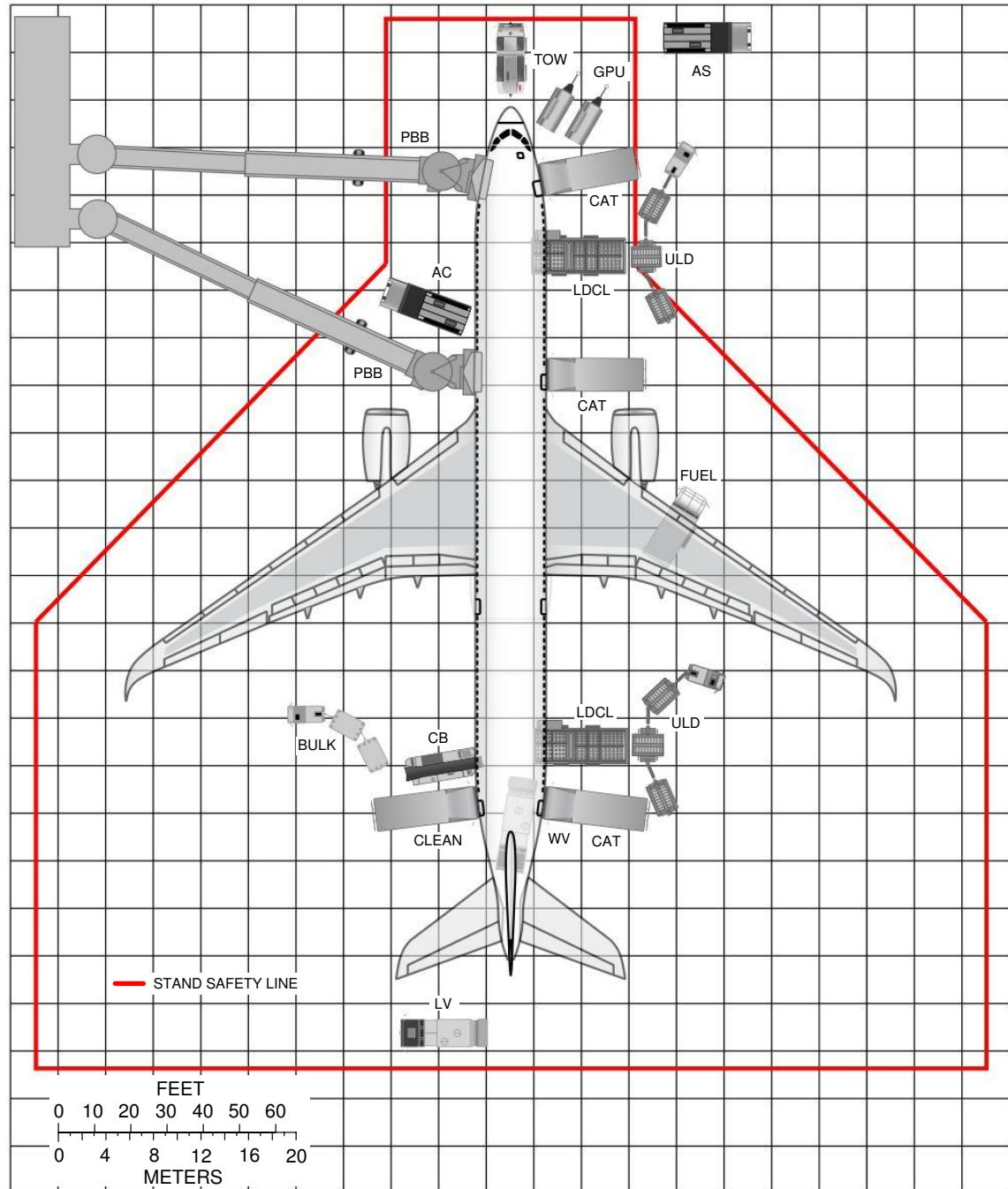
\*\*ON A/C A350-900



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Typical Ramp Layout (Gate)  
FIGURE-5-1-2-991-001-A01

**\*\*ON A/C A350-1000**



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Typical Ramp Layout (Gate)  
FIGURE-5-1-2-991-003-A01

## 5-2-0 Terminal Operations - Full Servicing Turn Round Time

## \*\*ON A/C A350-1000 A350-900

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.

## \*\*ON A/C A350-900

2. Assumptions used for full servicing turn round time chart

## A. PASSENGER HANDLING

315 pax: 48 B/C + 267 Y/C.

All passengers deplane and board the aircraft.

2 Passenger Boarding Bridges (PBB) used at doors 1L and 2L.

Equipment positioning + opening door = +3 min.

Closing door + equipment removal = +3 min.

No Passenger with Reduced Mobility (PRM) on board.

Deplaning:

- 158 pax at door 1L
- 157 pax at door 2L
- Deplaning rate = 25 pax/min per door
- Priority deplaning for premium passengers.

Boarding:

- 158 pax at door 1L
- 157 pax at door 2L
- Boarding rate = 15 pax/min per door
- Last Pax Seating (LPS) allowance + headcounting = +4 min.

## B. CARGO

2 cargo loaders + 1 belt loader.

Opening door + equipment positioning = +2.5 min.

Equipment removal + closing door = +2.5 min.

100% cargo exchange:

- FWD cargo compartment: 8 containers (LD3) + 4 (96 in) pallets
- AFT cargo compartment: 4 containers (LD3) + 4 (96 in) pallets
- Bulk compartment: 1 000 kg (2 205 lb).

Container unloading/loading times:

- Unloading = 1.2 min/container
- Loading = 1.4 min/container.

Bulk unloading/loading times:

- Unloading = 110 kg/min (243 lb/min)
- Loading = 95 kg/min (209 lb/min).

Pallet unloading/loading times:

- Unloading = 2.4 min/pallet
- Loading = 2.8 min/pallet.

**CAUTION : MAKE SURE THAT YOU REFUEL FROM ONE SIDE OF THE AIRCRAFT AT A TIME. THIS WILL PREVENT DAMAGE TO THE AIRCRAFT FUEL SYSTEM.**

C. REFUELLING

Final fuel on board: 100 000 L (26 418 USgal), 40 psi (2.76 bar), 2 hoses.

Hydrant positioning + connection = +8 min.

Disconnection + Hydrant removal = +8 min.

Refuel with pax on board allowed.

D. CLEANING

Cleaning is performed in available time.

E. CATERING

3 catering trucks for servicing galleys simultaneously at doors 1R, 2R and 4R.

Equipment positioning + opening door = +5 min.

Closing door + equipment removal = +3 min.

Full Size Trolley Equivalent (FSTE) to unload and load: 40 FSTE

- 10 FSTE at door 1R
- 7 FSTE at door 2R
- 23 FSTE at door 4R.

Time for trolley exchange = 1.5 min per FSTE.

F. GROUND HANDLING/GENERAL SERVICING

Start of operations:

- Bridges/Stairs: t0=0
- Other equipment: t = t0.

Ground Power Unit (GPU): up to 2 × 90 kVA.

Air Conditioning: up to 2 hoses.

Potable water servicing: 100% uplift, 1 060 L (280 US gal).

Waste water servicing: draining and rinsing.

3. Assumptions used for full servicing turn round time chart for ULR

A. PASSENGER HANDLING

173 pax: 80 B/C + 93 Y/C.

All passengers deplane and board the aircraft.

2 PBB used at doors 1L and 2L.

Equipment positioning + opening door = +3 min.

Closing door + equipment removal = +3 min.

No PRM on board.

Deplaning:

- 87 pax at door 1L
- 86 pax at door 2L
- Deplaning rate = 25 pax/min per door
- Priority deplaning for premium passengers.

Boarding:

- 87 pax at door 1L
- 86 pax at door 2L
- Boarding rate = 15 pax/min per door
- LPS allowance + headcounting = +4 min.

## B. CARGO

1 cargo loader + 1 belt loader.

Opening door + equipment positioning = +2.5 min.

Equipment removal + closing door = +2.5 min.

100% cargo exchange:

- FWD cargo compartment: Forward cargo hold inoperative
- AFT cargo compartment: 16 containers (LD3) or 5 pallets
- Bulk compartment: 1 000 kg (2 205 lb).

Container unloading/loading times:

- Unloading = 1.2 min/container
- Loading = 1.4 min/container.

Bulk unloading/loading times:

- Unloading = 110 kg/min (243 lb/min).
- Loading = 95 kg/min (209 lb/min).

Pallet unloading/loading times:

- Unloading = 2.4 min/pallet
- Loading = 2.8 min/pallet.

**CAUTION : MAKE SURE THAT YOU REFUEL FROM ONE SIDE OF THE AIRCRAFT AT A TIME. THIS WILL PREVENT DAMAGE TO THE AIRCRAFT FUEL SYSTEM.**

## C. REFUELLING

Final fuel on board: 165 000 L (43 589 USgal), 40 psi (2.76 bar), 2 hoses.

Hydrant positioning + connection = +8 min.

Disconnection + Hydrant removal = +8 min.

**D. CLEANING**

Cleaning is performed in available time.

**E. CATERING**

3 catering trucks for servicing galleys simultaneously at doors 1R, 2R and 4R.

Equipment positioning + opening door = +5 min.

Closing door + equipment removal = +3 min.

FSTE to unload and load: 59.5 FSTE

- 16.5 FSTE at door 1R
- 19 FSTE at door 2R
- 4 FSTE at door 3R
- 20 FSTE at door 4R.

Time for trolley exchange = 1.5 min per FSTE.

**F. GROUND HANDLING/GENERAL SERVICING**

Start of operations:

- Bridges/Stairs: t0=0
- Other equipment: t = t0.

(GPU: up to 2 × 90 kVA.

Air Conditioning: up to 2 hoses.

Waste tank, 550 L (145 USgal).

Potable water servicing: 100% uplift, 750 L (198 USgal).

**\*\*ON A/C A350-1000****4. Assumptions used for full servicing turn round time chart****A. PASSENGER HANDLING**

369 pax: 54 B/C + 315 Y/C.

All passengers deplane and board the aircraft.

2 Passenger Boarding Bridges (PBB) used at doors 1L and 2L.

Equipment positioning + opening door = +3 min.

Closing door + equipment removal = +3 min.

No Passenger with Reduced Mobility (PRM) on board.

Deplaning:

- 184 pax at door 1L
- 185 pax at door 2L
- Deplaning rate = 25 pax/min per door
- Priority deplaning for premium passengers.

Boarding:

- 54 pax at door 1L
- 315 pax at door 2L
- Boarding rate = 15 pax/min per door

- Last Pax Seating (LPS) allowance + headcounting = +4 min.

## B. CARGO

2 cargo loaders + 1 belt loader.

Opening door + equipment positioning = +2.5 min.

Equipment removal + closing door = +2.5 min.

100% cargo exchange:

- FWD cargo compartment: 6 containers (LD3) + 6 (96 in) pallets
- AFT cargo compartment: 14 containers (LD3) + 2 (96 in) pallets
- Bulk compartment: 1 000 kg (2 205 lb).

Container unloading/loading times:

- Unloading = 1.2 min/container
- Loading = 1.4 min/container.

Bulk unloading/loading times:

- Unloading = 110 kg/min (243 lb/min).
- Loading = 95 kg/min (209 lb/min).

Pallet unloading/loading times:

- Unloading = 2.4 min/pallet
- Loading = 2.8 min/pallet.

**CAUTION : MAKE SURE THAT YOU REFUEL FROM ONE SIDE OF THE AIRCRAFT AT A TIME. THIS WILL PREVENT DAMAGE TO THE AIRCRAFT FUEL SYSTEM.**

## C. REFUELLING

Final fuel on board: 100 000 L (26 418 USgal), 40 psi (2.76 bar), 2 hoses.

Hydrant positioning + connection = +8 min.

Disconnection + Hydrant removal = +8 min.

Refuel with pax on board allowed.

## D. CLEANING

Cleaning is performed in available time.

## E. CATERING

3 catering trucks for servicing galleys simultaneously at doors 1R, 2R and 4R.

Equipment positioning + opening door = +5 min.

Closing door + equipment removal = +3 min.

Full Size Trolley Equivalent (FSTE) to unload and load: 45 FSTE

- 12 FSTE at door 1R
- 8 FSTE at door 2R
- 4 FSTE at door 3R (Stowage area)
- 21 FSTE at door 4R.

Time for trolley exchange = 1.5 min per FSTE.

**F. GROUND HANDLING/GENERAL SERVICING**

Start of operations:

- Bridges/Stairs: t0=0
- Other equipment: t = t0.

Ground Power Unit (GPU): up to  $2 \times 90$  kVA.

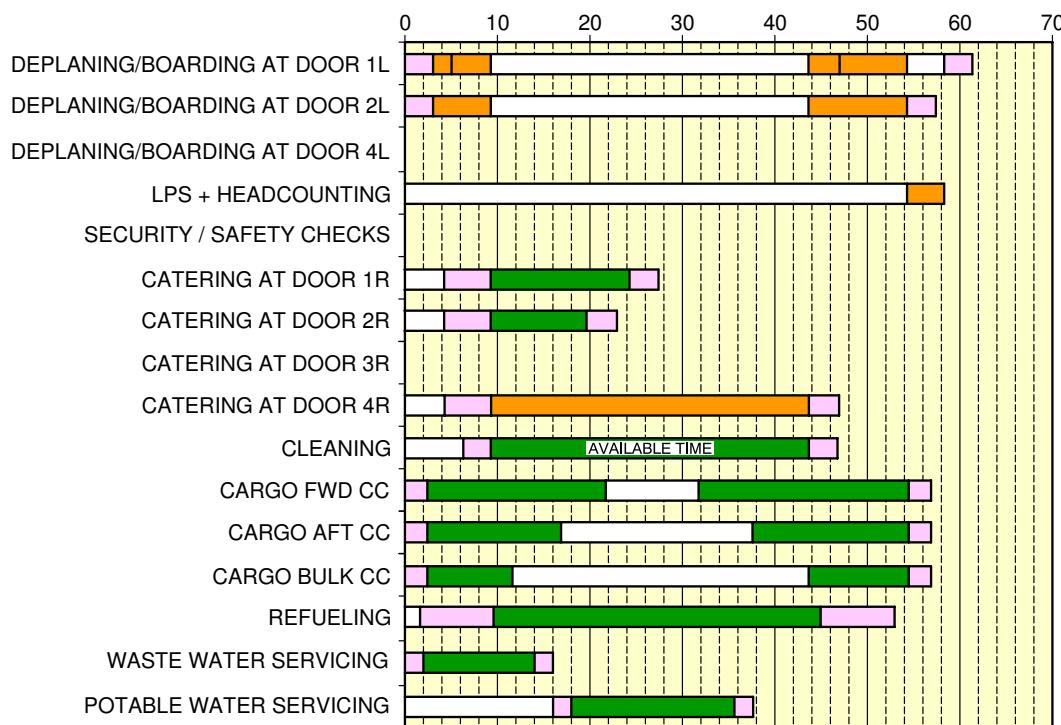
Air Conditioning: up to 2 hoses.

Potable water servicing: 100% uplift, 1 060 L (280 USgal).

Waste water servicing: draining and rinsing.

**\*\*ON A/C A350-900**

**TRT: 61 min**



 GSE POSITIONING/REMOVAL

 ACTIVITY

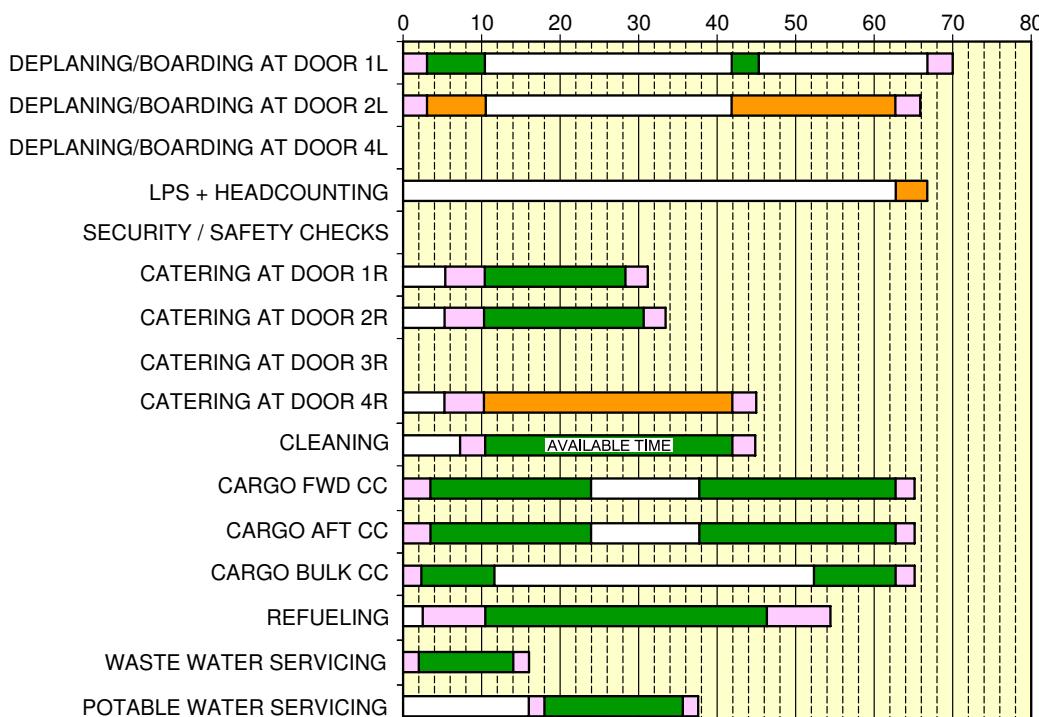
 CRITICAL PATH

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Full Servicing Turn Round Time Chart  
FIGURE-5-2-0-991-001-A01

**\*\*ON A/C A350-1000**

**TRT: 70 min**



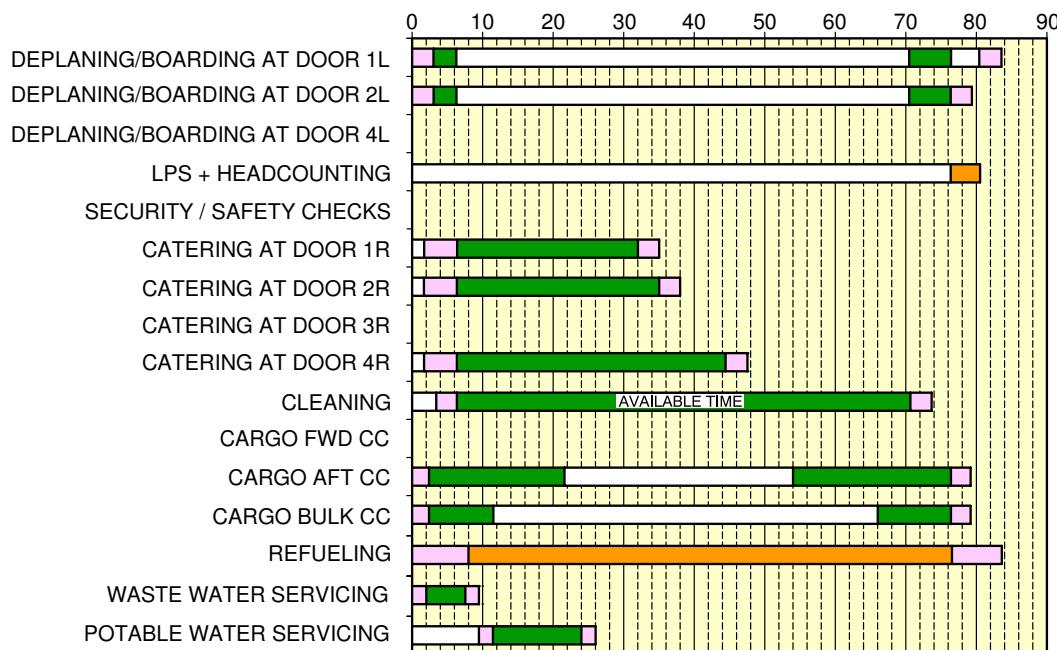
- GSE POSITIONING/REMOVAL
- ACTIVITY
- CRITICAL PATH

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Full Servicing Turn Round Time Chart  
FIGURE-5-2-0-991-004-A01

**\*\*ON A/C A350-900**

**TRT: 83 min**



- █ GSE POSITIONING/REMOVAL
- █ ACTIVITY
- █ CRITICAL PATH

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Full Servicing Turn Round Time Chart (ULR)  
FIGURE-5-2-0-991-005-A01

## 5-3-0 Terminal Operations - Transit Turn Round Time

## \*\*ON A/C A350-1000 A350-900

Terminal Operations - Transit Turn Round Time

1. This section gives a typical turn round time chart showing the typical time for ramp activities during aircraft turn round.

Actual times may change because of each operator's specific practices, resources, equipment and operating conditions.

## \*\*ON A/C A350-900

2. Assumptions used for transit turn round time chart

## A. PASSENGER HANDLING

315 pax: 48 B/C + 267 Y/C.

50% passengers deplane and board the aircraft.

1 Passenger Boarding Bridge (PBB) used at door 1L.

Equipment positioning + opening door = +3 min.

Closing door + equipment removal = +3 min.

No Passenger with Reduced Mobility (PRM) on board.

Deplaning:

- 158 pax at door 1L

- Deplaning rate = 25 pax/min per door.

Boarding:

- 158 pax at door 1L

- Boarding rate = 15 pax/min per door

- Last Pax Seating (LPS) allowance + headcounting = + 4 min.

## B. CARGO

2 cargo loaders + 1 belt loader.

Opening door + equipment positioning = +2.5 min.

Equipment removal + closing door = +2.5 min.

50% cargo exchange:

- FWD cargo compartment: 4 containers (LD3) + 2 (96 in) pallets

- AFT cargo compartment: 2 containers (LD3) + 2 (96 in) pallets

- Bulk compartment: 500 kg (1 102 lb).

Container unloading/loading times:

- Unloading = 1.2 min/container

- Loading = 1.4 min/container.

Bulk unloading/loading times:

- Unloading = 110 kg/min (243 lb/min)

- Loading = 95 kg/min (209 lb/min).

Pallet unloading/loading times:

- Unloading = 2.4 min/pallet
- Loading = 2.6 min/pallet.

#### 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:  $t_0 = 0$
- Other equipment:  $t = t_0$ .

Ground Power Unit (GPU): up to  $2 \times 90$  kVA.

Air conditioning: up to 2 hoses.

No potable water servicing.

No waste water servicing.

### \*\*ON A/C A350-1000

#### 3. Assumptions used for transit turn round time chart

##### A. PASSENGER HANDLING

369 pax: 54 B/C + 315 Y/C.

50% passengers deplane and board the aircraft.

1 Passenger Boarding Bridge (PBB) used at door 1L.

Equipment positioning + opening door = +3 min.

Closing door + equipment removal = +3 min.

No Passenger with Reduced Mobility (PRM) on board.

Deplaning:

- 184 pax at door 1L
- Deplaning rate = 25 pax/min per door.

Boarding:

- 184 pax at door 1L
- Boarding rate = 15 pax/min per door
- Last Pax Seating (LPS) allowance + headcounting = + 4 min.

**B. CARGO**

2 cargo loaders + 1 belt loader.

Opening door + equipment positioning = +2.5 min.

Equipment removal + closing door = +2.5 min.

50% cargo exchange:

- FWD cargo compartment: 3 containers (LD3) + 3 (96 in) pallets
- AFT cargo compartment: 7 containers (LD3) + 1 (96 in) pallets
- Bulk compartment: 500 kg (1 102 lb).

Container unloading/loading times:

- Unloading = 1.2 min/container
- Loading = 1.4 min/container.

Bulk unloading/loading times:

- Unloading = 110 kg/min (243 lb/min).
- Loading = 95 kg/min (209 lb/min).

Pallet unloading/loading times:

- Unloading = 2.4 min/pallet
- Loading = 2.6 min/pallet.

**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:  $t_0 = 0$
- Other equipment:  $t = t_0$ .

Ground Power Unit (GPU): up to  $2 \times 90$  kVA.

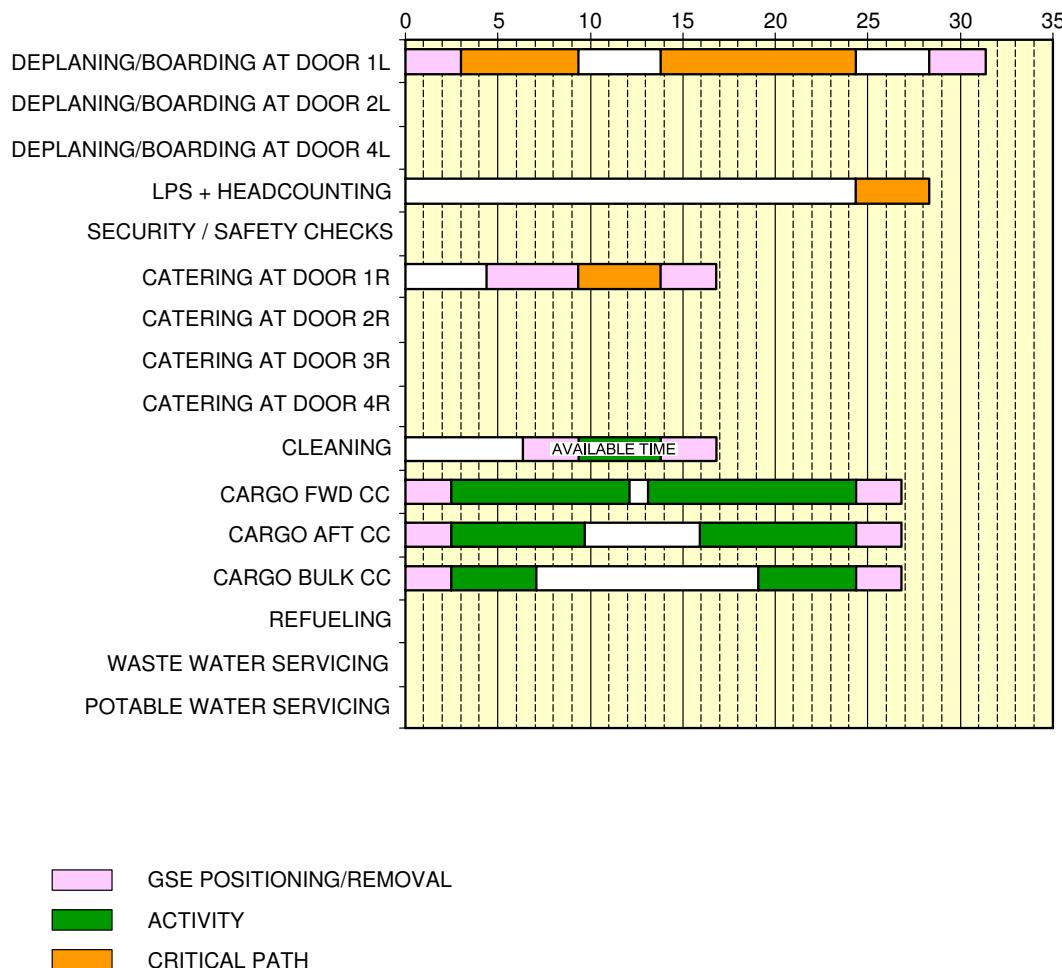
Air conditioning: up to 2 hoses.

Potable water servicing: 25% uplift, 265 L (70 USgal).

Waste water servicing: draining and rinsing.

**\*\*ON A/C A350-900**

**TRT: 31 min**

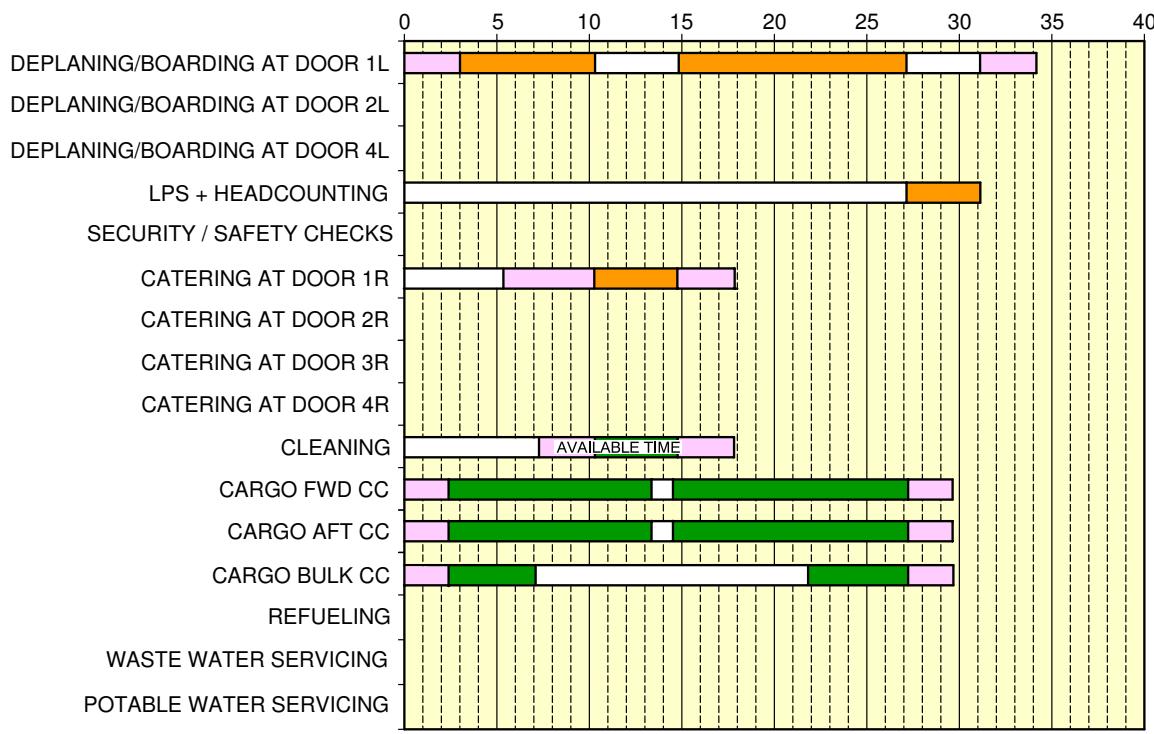


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Transit Turn Round Time Chart  
FIGURE-5-3-0-991-001-B01

\*\*ON A/C A350-1000

TRT: 34 min



- GSE POSITIONING/REMOVAL
- ACTIVITY
- CRITICAL PATH

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Transit Turn Round Time Chart  
FIGURE-5-3-0-991-002-A01



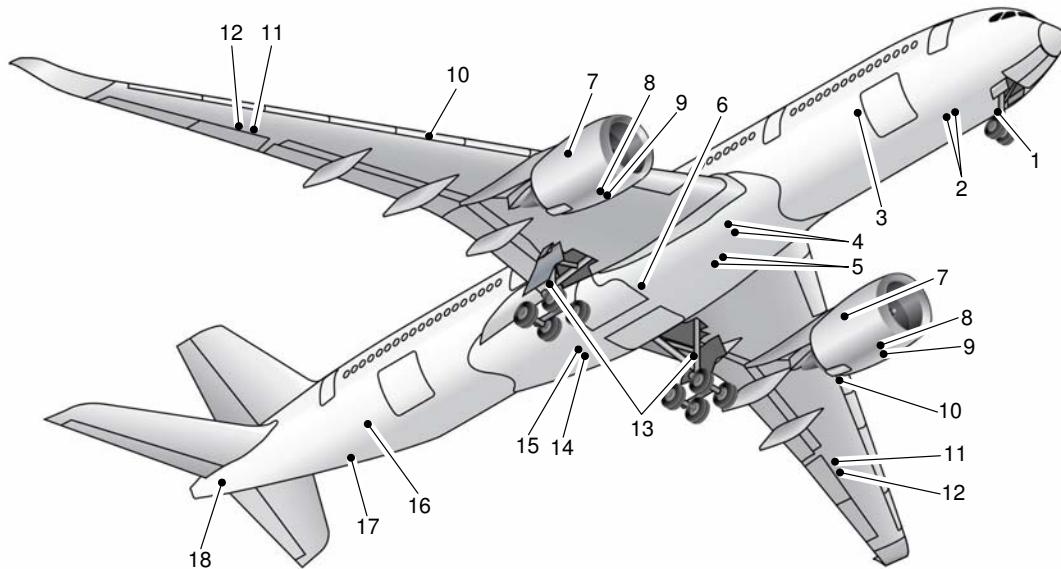
5-4-0      **Ground Service Connections Layout**

**\*\*ON A/C A350-1000 A350-900**

Ground Service Connections Layout

1. This section provides the ground service connections layout.

**\*\*ON A/C A350-900**



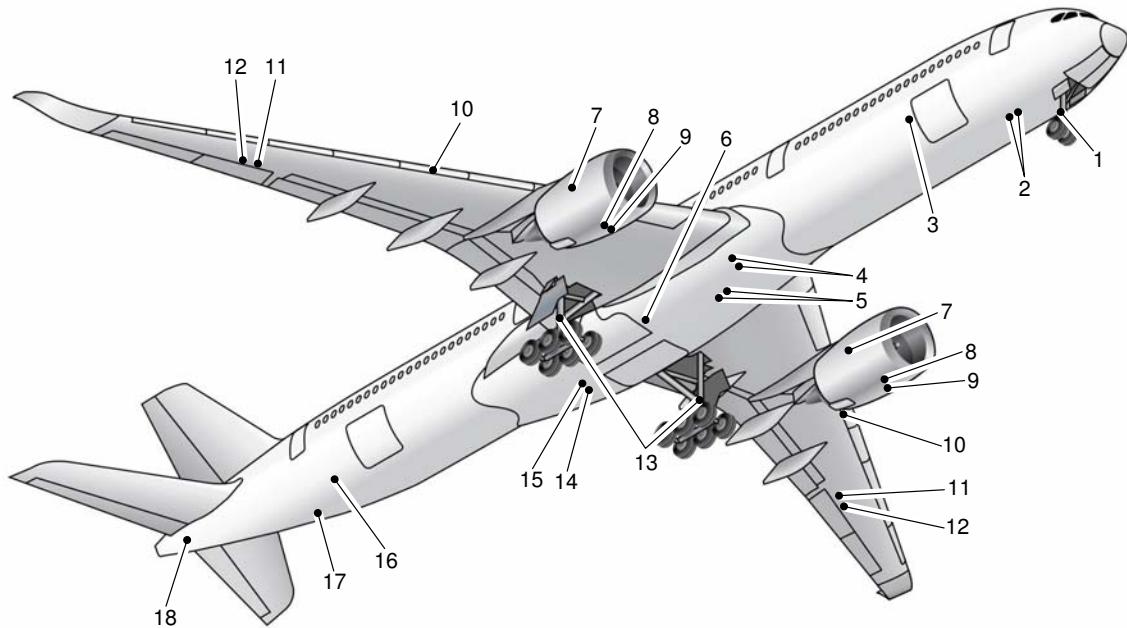
- 1 – NLG GROUNDING (EARTHING) POINT
- 2 – GROUND ELECTRICAL POWER CONNECTORS
- 3 – OXYGEN SERVICING
- 4 – LOW PRESSURE AIR PRE-CONDITIONING
- 5 – HIGH PRESSURE AIR PRE-CONDITIONING
- 6 – YELLOW HYDRAULIC-SYSTEM SERVICE PANEL
- 7 – ENGINE OIL SERVICING
- 8 – STARTER OIL SERVICING
- 9 – VFG OIL SERVICING

- 10 – REFUEL/DEFUEL COUPLINGS (OPTIONAL-LH WING)
- 11 – OVERPRESSURE PROTECTOR
- 12 – NACA FLAME ARRESTOR
- 13 – MLG GROUNDING (EARTHING) POINT
- 14 – GREEN HYDRAULIC-SYSTEM SERVICE PANEL
- 15 – REFUEL/DEFUEL CONTROL PANEL
- 16 – POTABLE WATER SERVICE PANEL
- 17 – WASTE WATER SERVICE PANEL
- 18 – APU OIL SERVICING

P\_AC\_050400\_1\_0010001\_01\_03

Ground Service Connections Layout  
FIGURE-5-4-0-991-001-A01

**\*\*ON A/C A350-1000**



- 1 – NLG GROUNDING (EARTHING) POINT
- 2 – GROUND ELECTRICAL POWER CONNECTORS
- 3 – OXYGEN SERVICING
- 4 – LOW PRESSURE AIR PRE-CONDITIONING
- 5 – HIGH PRESSURE AIR PRE-CONDITIONING
- 6 – YELLOW HYDRAULIC-SYSTEM SERVICE PANEL
- 7 – ENGINE OIL SERVICING
- 8 – STARTER OIL SERVICING
- 9 – VFG OIL SERVICING

- 10 – REFUEL/DEFUEL COUPLINGS (OPTIONAL-LH WING)
- 11 – OVERPRESSURE PROTECTOR
- 12 – NACA FLAME ARRESTOR
- 13 – MLG GROUNDING (EARTHING) POINT
- 14 – GREEN HYDRAULIC-SYSTEM SERVICE PANEL
- 15 – REFUEL/DEFUEL CONTROL PANEL
- 16 – POTABLE WATER SERVICE PANEL
- 17 – WASTE WATER SERVICE PANEL
- 18 – APU OIL SERVICING

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Ground Service Connections Layout  
FIGURE-5-4-0-991-002-A01

## 5-4-1 Grounding (Earthing) Points

\*\*ON A/C A350-1000 A350-900

Grounding (Earthing) Points

\*\*ON A/C A350-900

## 1. Grounding (Earthing) Point Locations

NOTE : The mean height from ground in the below table may change according to the CG position and aircraft weight.

|                                | DISTANCE                |                          |                       | MEAN HEIGHT<br>FROM GROUND |  |
|--------------------------------|-------------------------|--------------------------|-----------------------|----------------------------|--|
|                                | AFT OF NOSE             | FROM AIRCRAFT CENTERLINE |                       |                            |  |
|                                |                         | LH SIDE                  | RH SIDE               |                            |  |
| On Nose Landing Gear leg       | 4.42 m<br>(14.50 ft.)   |                          | 0.07 m<br>(0.23 ft.)  | 1.06 m<br>(3.48 ft.)       |  |
| On left Main Landing Gear leg  | 32.95 m<br>(108.10 ft.) | 5.59 m<br>(18.34 ft.)    |                       | 1.55 m<br>(5.09 ft.)       |  |
| On right Main Landing Gear leg | 32.95 m<br>(108.10 ft.) |                          | 5.59 m<br>(18.34 ft.) | 1.55 m<br>(5.09 ft.)       |  |

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

\*\*ON A/C A350-1000

## 2. Grounding (Earthing) Point Locations

NOTE : The mean height from ground in the below table may change according to the CG position and aircraft weight.

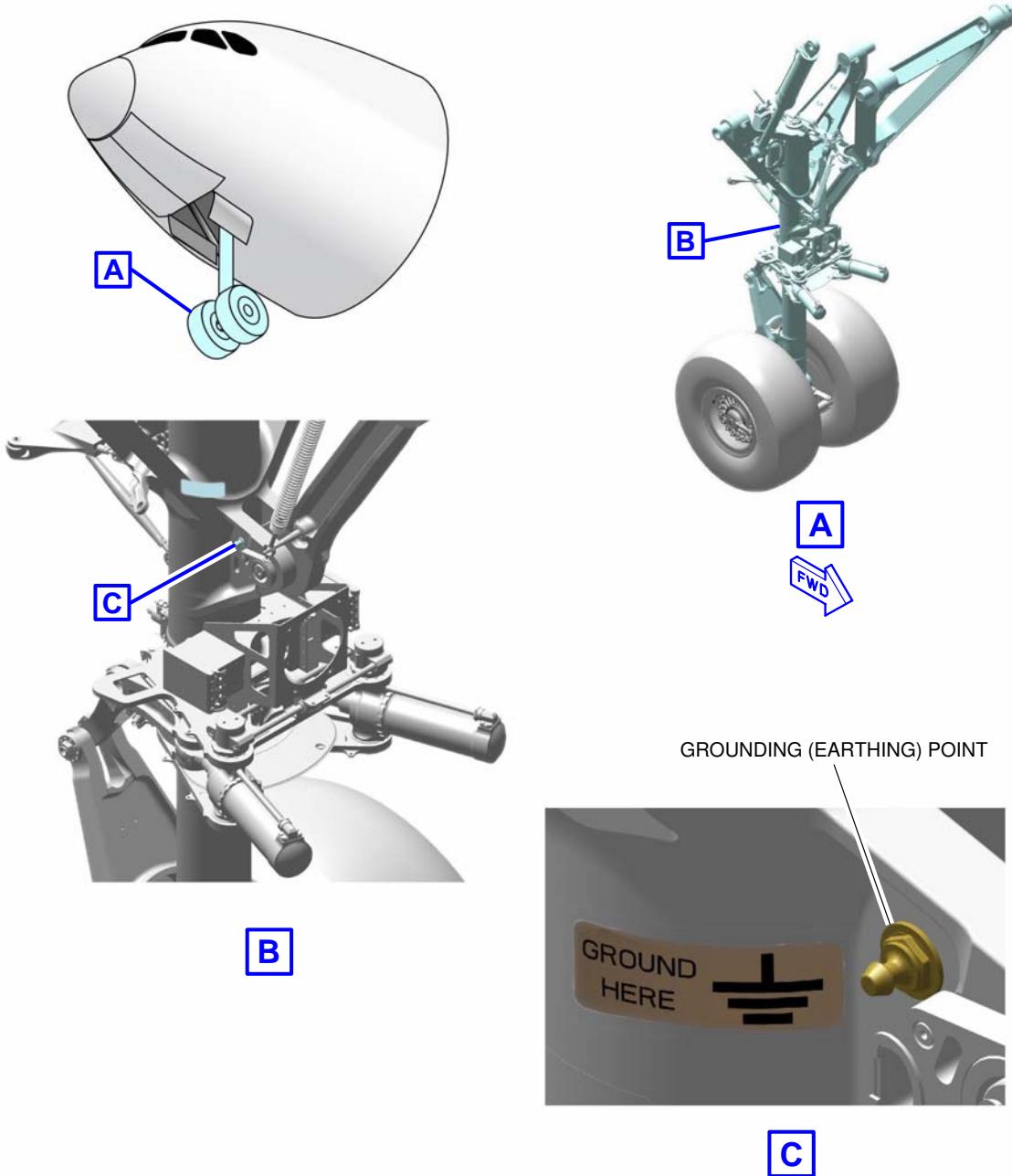
|                          | DISTANCE              |                          |                      | MEAN HEIGHT<br>FROM GROUND |  |
|--------------------------|-----------------------|--------------------------|----------------------|----------------------------|--|
|                          | AFT OF NOSE           | FROM AIRCRAFT CENTERLINE |                      |                            |  |
|                          |                       | LH SIDE                  | RH SIDE              |                            |  |
| On Nose Landing Gear leg | 4.42 m<br>(14.50 ft.) |                          | 0.07 m<br>(0.23 ft.) | 1.80 m<br>(5.91 ft.)       |  |

|                                   | DISTANCE                |                          |                       | MEAN HEIGHT<br>FROM GROUND |  |
|-----------------------------------|-------------------------|--------------------------|-----------------------|----------------------------|--|
|                                   | AFT OF NOSE             | FROM AIRCRAFT CENTERLINE |                       |                            |  |
|                                   |                         | LH SIDE                  | RH SIDE               |                            |  |
| On left Main<br>Landing Gear leg  | 36.75 m<br>(120.57 ft.) | 5.59 m<br>(18.34 ft.)    |                       | 1.55 m<br>(5.09 ft.)       |  |
| On right Main<br>Landing Gear leg | 36.75 m<br>(120.57 ft.) |                          | 5.59 m<br>(18.34 ft.) | 1.55 m<br>(5.09 ft.)       |  |

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

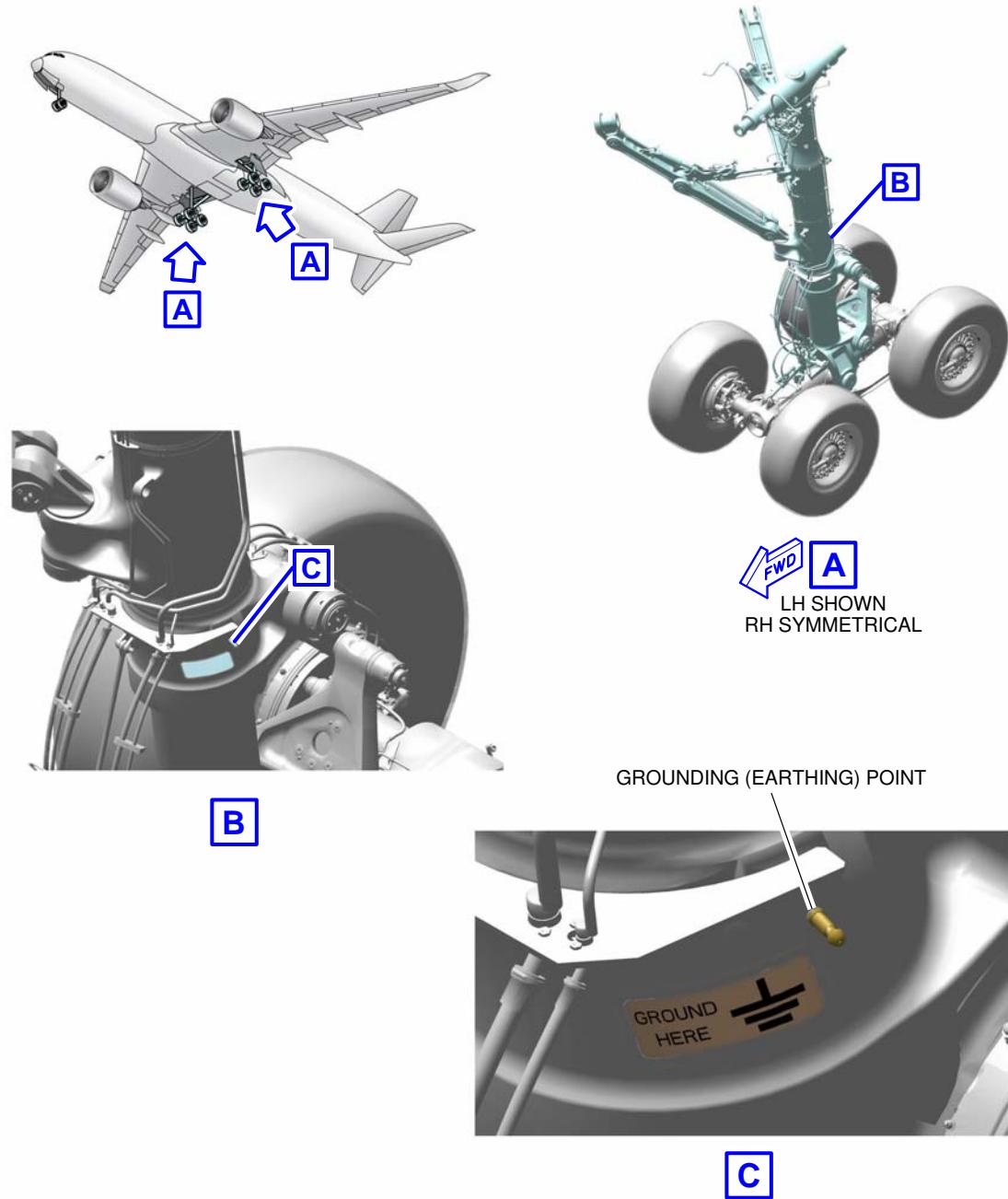
\*\*ON A/C A350-1000 A350-900



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Grounding (Earthing) Point - NLG  
FIGURE-5-4-1-991-001-A01

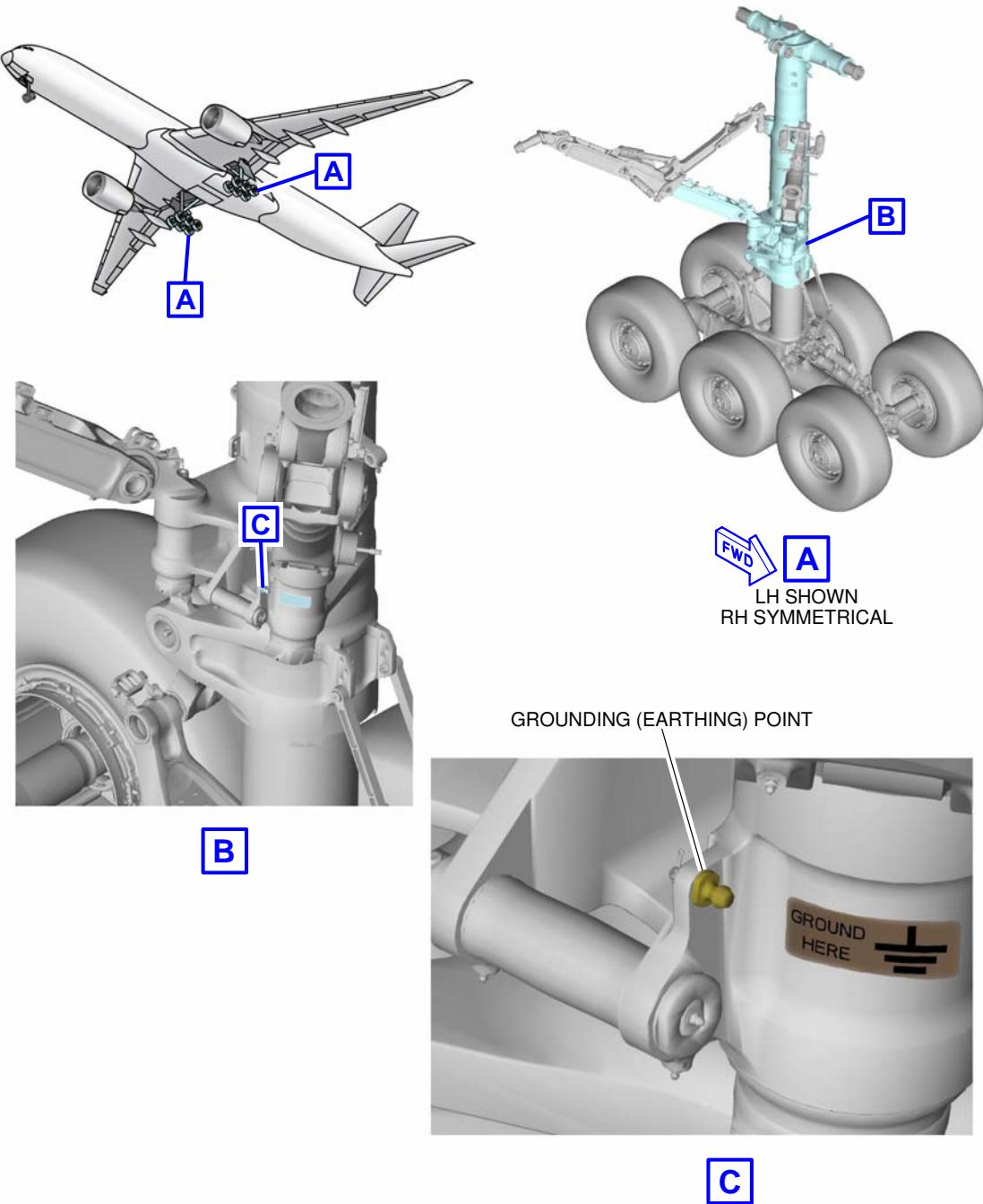
\*\*ON A/C A350-900



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Grounding (Earthing) Point - MLG  
FIGURE-5-4-1-991-002-A01

\*\*ON A/C A350-1000



Grounding (Earthing) Point - MLG  
FIGURE-5-4-1-991-003-A01

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5-4-2      **Hydraulic Servicing****\*\*ON A/C A350-1000 A350-900**Hydraulic Servicing**\*\*ON A/C A350-900**1.    **Hydraulic Servicing**

The nominal operating pressure is 344.75 bar (5000 psi).

A.    **Access**

NOTE : The mean height from ground in the below table may change according to the CG position and aircraft weight.

| ACCESS  | DISTANCE                |                          |                      | MEAN HEIGHT FROM GROUND |
|---|-------------------------|--------------------------|----------------------|-------------------------|
|   | AFT OF NOSE             | FROM AIRCRAFT CENTERLINE | LH SIDE              |                         |
| Green Ground Service Panel:<br>Access Door 197LB  | 36.37 m<br>(119.32 ft.) | 0.61 m<br>(2.00 ft.)     |                      | 2.39 m<br>(7.84 ft.)    |
| Yellow Ground Service Panel:<br>Access Door 194KB | 30.35 m<br>(99.57 ft.)  |                          | 1.51 m<br>(4.95 ft.) | 2.24 m<br>(7.35 ft.)    |

B.    **Reservoir Filling**

Centralized filling capability is on the Green ground service panel.

Filling: Ground pressurized supply or hand pump.

C.    **Ground Test**

On each ground service panel:

- One self-sealing connector (suction)
- One self-sealing connector (delivery).

**\*\*ON A/C A350-1000**2.    **Hydraulic Servicing**

The nominal operating pressure is 344.74 bar (5000 psi).

A.    **Access**

NOTE : The mean height from ground in the below table may change according to the CG position and aircraft weight.

| ACCESS  | DISTANCE                |                          |                      | MEAN HEIGHT<br>FROM GROUND |  |
|---|-------------------------|--------------------------|----------------------|----------------------------|--|
|   | AFT OF NOSE             | FROM AIRCRAFT CENTERLINE |                      |                            |  |
|   |                         | LH SIDE                  | RH SIDE              |                            |  |
| Green Ground Service Panel:<br>Access Door 197LB  | 40.18 m<br>(131.82 ft.) | 0.61 m<br>(2.00 ft.)     |                      | 2.24 m<br>(7.35 ft.)       |  |
| Yellow Ground Service Panel:<br>Access Door 194KB | 34.15 m<br>(112.04 ft.) |                          | 1.51 m<br>(4.95 ft.) | 2.12 m<br>(6.96 ft.)       |  |

B. Reservoir Filling

Centralized filling capability is on the Green ground service panel.

Filling: Ground pressurized supply or hand pump.

C. Ground Test

On each ground service panel:

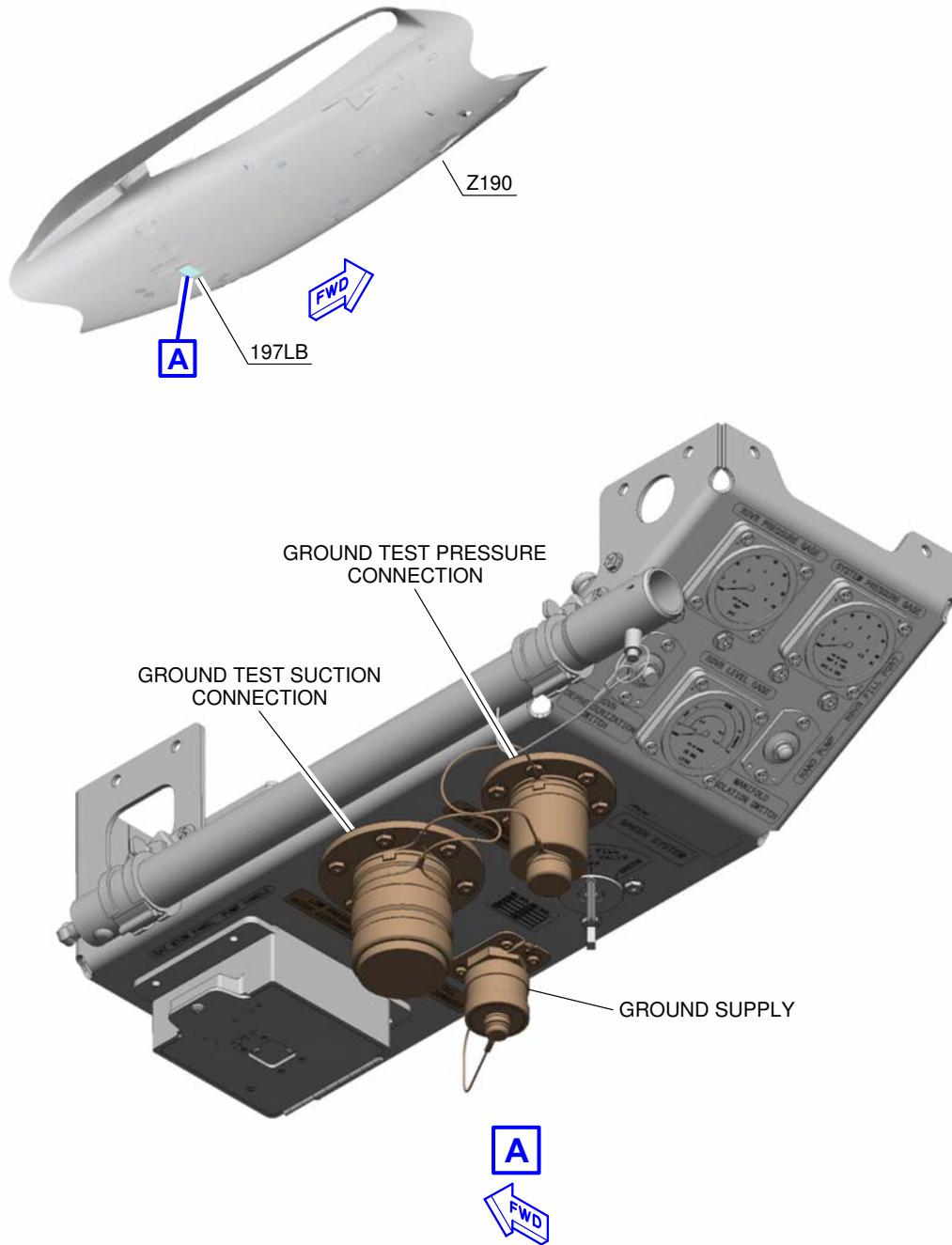
- One self-sealing connector (suction)
- One self-sealing connector (delivery).

**\*\*ON A/C A350-1000 A350-900**

3. Technical Specifications

- A. The hydraulic ground equipment must be able to start with the aircraft hydraulic circuit not pressurized.
- B. The hydraulic ground equipment must be able to permanently operate with the aircraft reservoir pressures varying between 2.0 bar (29 psi) and 5 bar (73 psi).
- C. After ground equipment shutdown, no further fluid exchange must occur between the aircraft reservoir and the ground equipment.

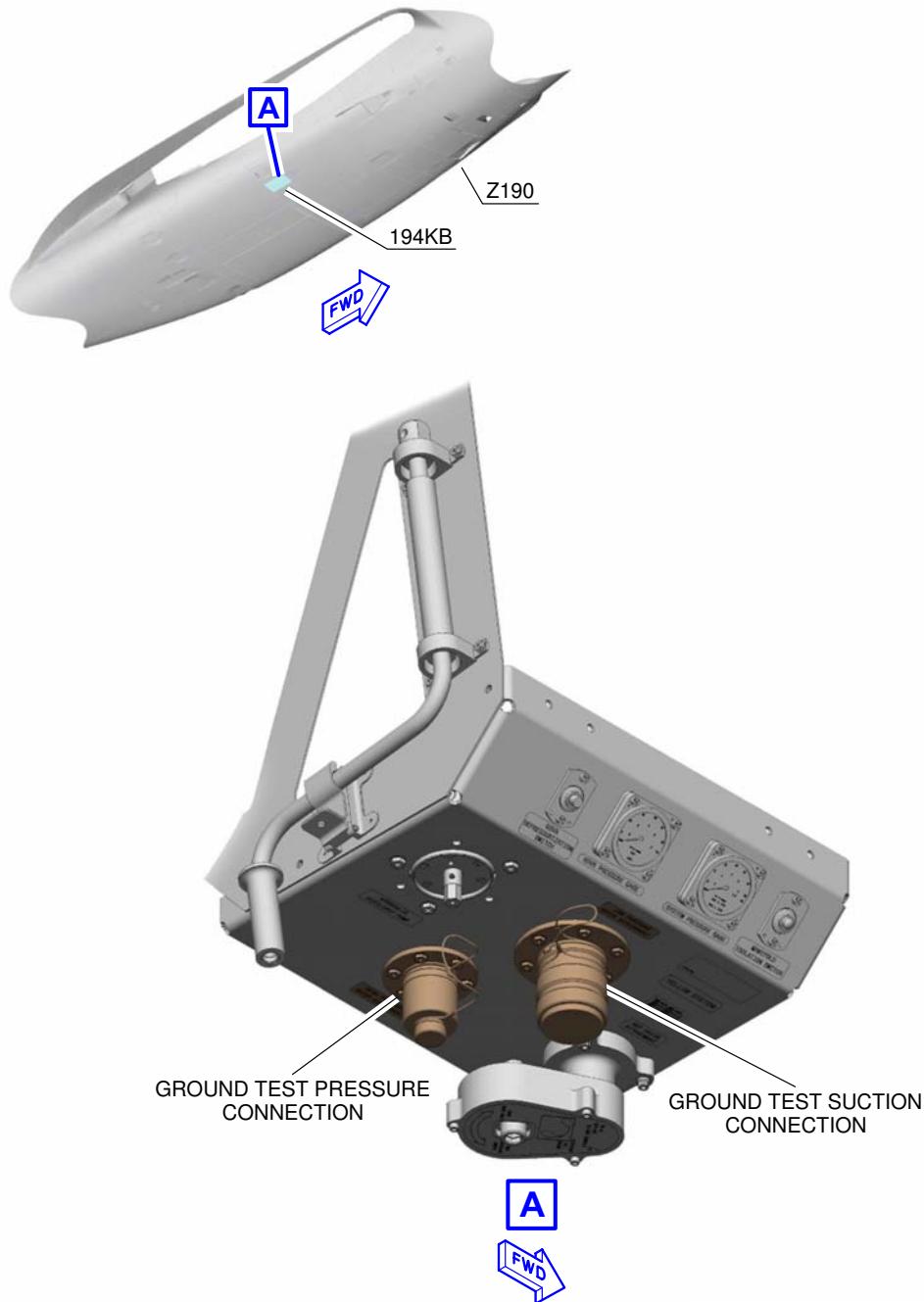
\*\*ON A/C A350-1000 A350-900



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Green Ground Service Panel  
FIGURE-5-4-2-991-001-A01

\*\*ON A/C A350-1000 A350-900



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Yellow Ground Service Panel  
FIGURE-5-4-2-991-002-A01

## 5-4-3 Electrical Servicing

**\*\*ON A/C A350-1000 A350-900**

### Electrical Servicing

#### 1. A/C External Power

**NOTE :** The mean height from ground in the below table may change according to the CG position and aircraft weight.

| ACCESS                                   | DISTANCE              |                          |                      | MEAN HEIGHT<br>FROM GROUND |  |
|--|-----------------------|--------------------------|----------------------|----------------------------|--|
|  | AFT OF NOSE           | FROM AIRCRAFT CENTERLINE |                      |                            |  |
|  |                       | LH SIDE                  | RH SIDE              |                            |  |
| A/C External Power:<br>Access Door 122AR | 6.63 m<br>(21.75 ft.) |                          | 0.91 m<br>(2.99 ft.) | 2.58 m<br>(8.46 ft.)       |  |

#### 2. Technical Specifications

- A. External Power Receptacle:
  - Two standard ISO 461 Style3 – 90 kVA each.
- B. Power Supply:
  - Three-phase, 115 V, 400 Hz.
- C. Electrical Connectors for Servicing:
  - AC outlets: HUBBELL 5258
  - DC outlets: HUBBELL 7472.

#### 3. Tow Truck Power

**NOTE :** The mean height from ground in the below table may change according to the CG position and aircraft weight.

| ACCESS                    | DISTANCE              |                          |                      | MEAN HEIGHT<br>FROM GROUND |  |
|---------------------------|-----------------------|--------------------------|----------------------|----------------------------|--|
|                           | AFT OF NOSE           | FROM AIRCRAFT CENTERLINE |                      |                            |  |
|                           |                       | LH SIDE                  | RH SIDE              |                            |  |
| NLG Service Panel:<br>2GN | 4.35 m<br>(14.27 ft.) |                          | 0.15 m<br>(0.49 ft.) | 1.8 m<br>(5.91 ft.)        |  |

#### 4. Technical Specifications

- A. Power Supply:
  - Two-Phase, 115 V, 400 Hz
  - 28V DC.
- B. Electrical Connector for Servicing:
  - Bernier, 22-11-10-13 Connector.

## C. Pin Allocation:

| Pin Identification |          |
|--------------------|----------|
| A                  | 28V DC   |
| B                  | 0V DC    |
| D                  | 115V AC  |
| E                  | 0V AC    |
| G                  | PWR SPLY |
| H                  | INT LOCK |

NOTE : The power cable should be extendable in order to guarantee fit and non-interference with nose gear nor tow vehicle during the pick-up and the towing process. The connector shall be secured against pull-out by means of straps against the nose gear.

## \*\*ON A/C A350-900

## 5. A/C Emergency Generation

NOTE : The mean height from ground in the below table may change according to the CG position and aircraft weight.

| ACCESS   | DISTANCE                |                          |         |                     | MEAN HEIGHT<br>FROM GROUND |  |
|--|-------------------------|--------------------------|---------|---------------------|----------------------------|--|
|  | AFT OF NOSE             | FROM AIRCRAFT CENTERLINE |         | RH SIDE             |                            |  |
|  |                         | LH SIDE                  | RH SIDE |                     |                            |  |
| RAT Safety-Pin<br>Installation:<br>Access Panel<br>198VR | 39.48 m<br>(129.53 ft.) |                          |         | 2.50 m<br>(8.2 ft.) | 2.91 m<br>(9.55 ft.)       |  |

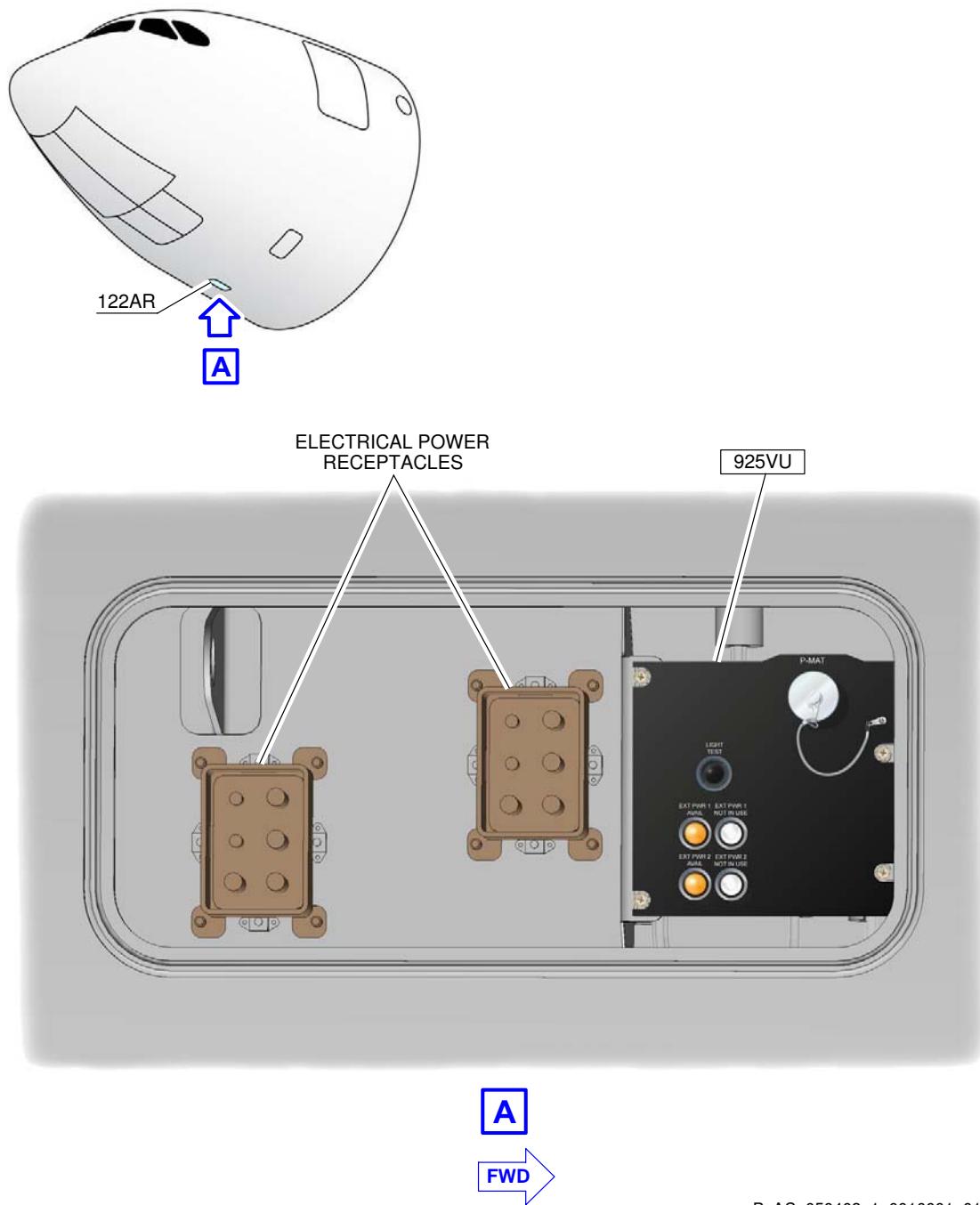
## \*\*ON A/C A350-1000

## 6. A/C Emergency Generation

NOTE : The mean height from ground in the below table may change according to the CG position and aircraft weight.

| ACCESS   | DISTANCE                |                          |         |                     | MEAN HEIGHT<br>FROM GROUND |  |
|--|-------------------------|--------------------------|---------|---------------------|----------------------------|--|
|  | AFT OF NOSE             | FROM AIRCRAFT CENTERLINE |         | RH SIDE             |                            |  |
|  |                         | LH SIDE                  | RH SIDE |                     |                            |  |
| RAT Safety-Pin<br>Installation:<br>Access Panel<br>198VR | 44.00 m<br>(144.36 ft.) |                          |         | 2.50 m<br>(8.2 ft.) | 2.91 m<br>(9.55 ft.)       |  |

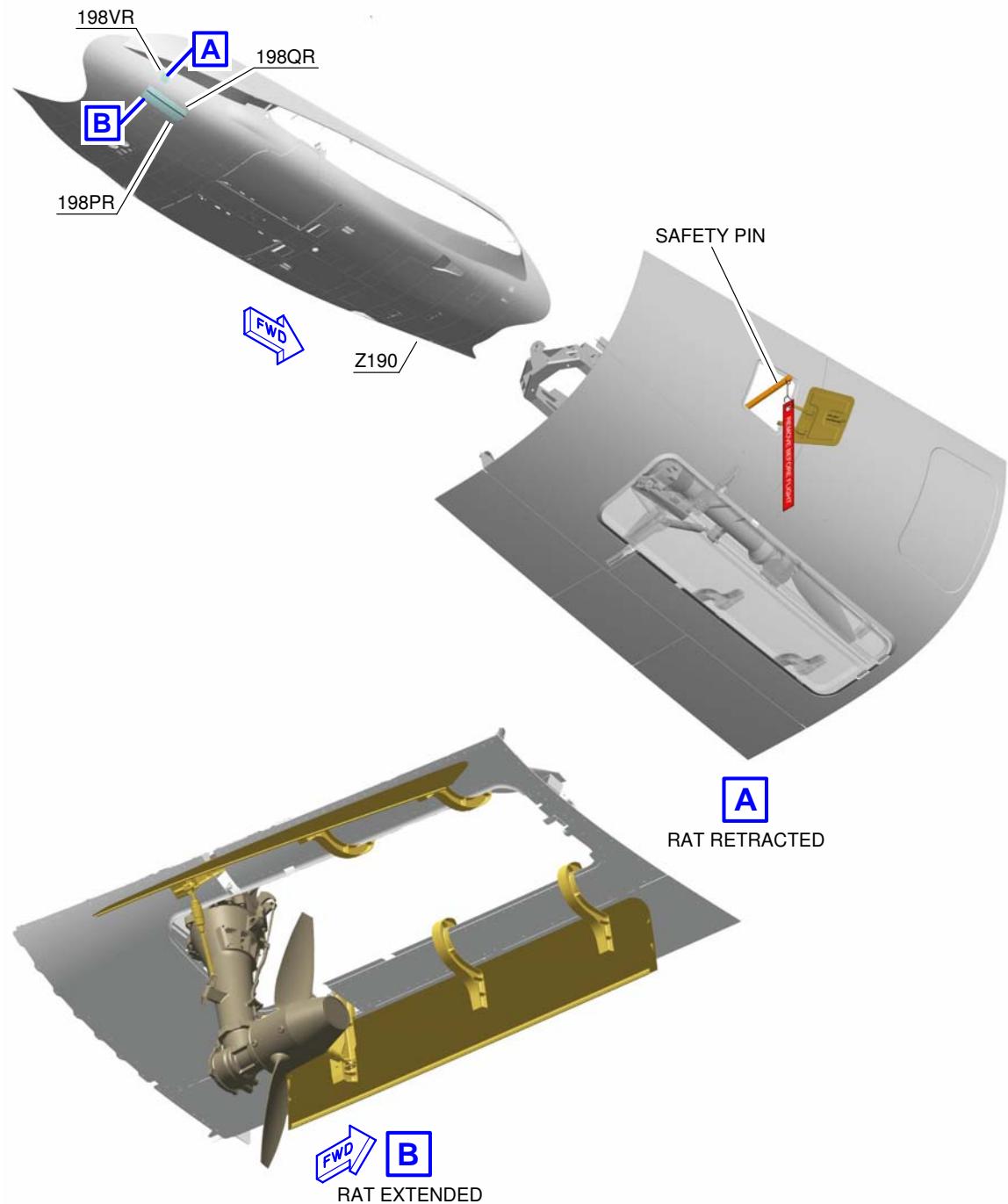
\*\*ON A/C A350-1000 A350-900



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Electrical Service Panel  
FIGURE-5-4-3-991-001-A01

\*\*ON A/C A350-1000 A350-900



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RAT

FIGURE-5-4-3-991-003-A01

## 5-4-4      Oxygen Servicing

\*\*ON A/C A350-1000 A350-900

Oxygen Servicing

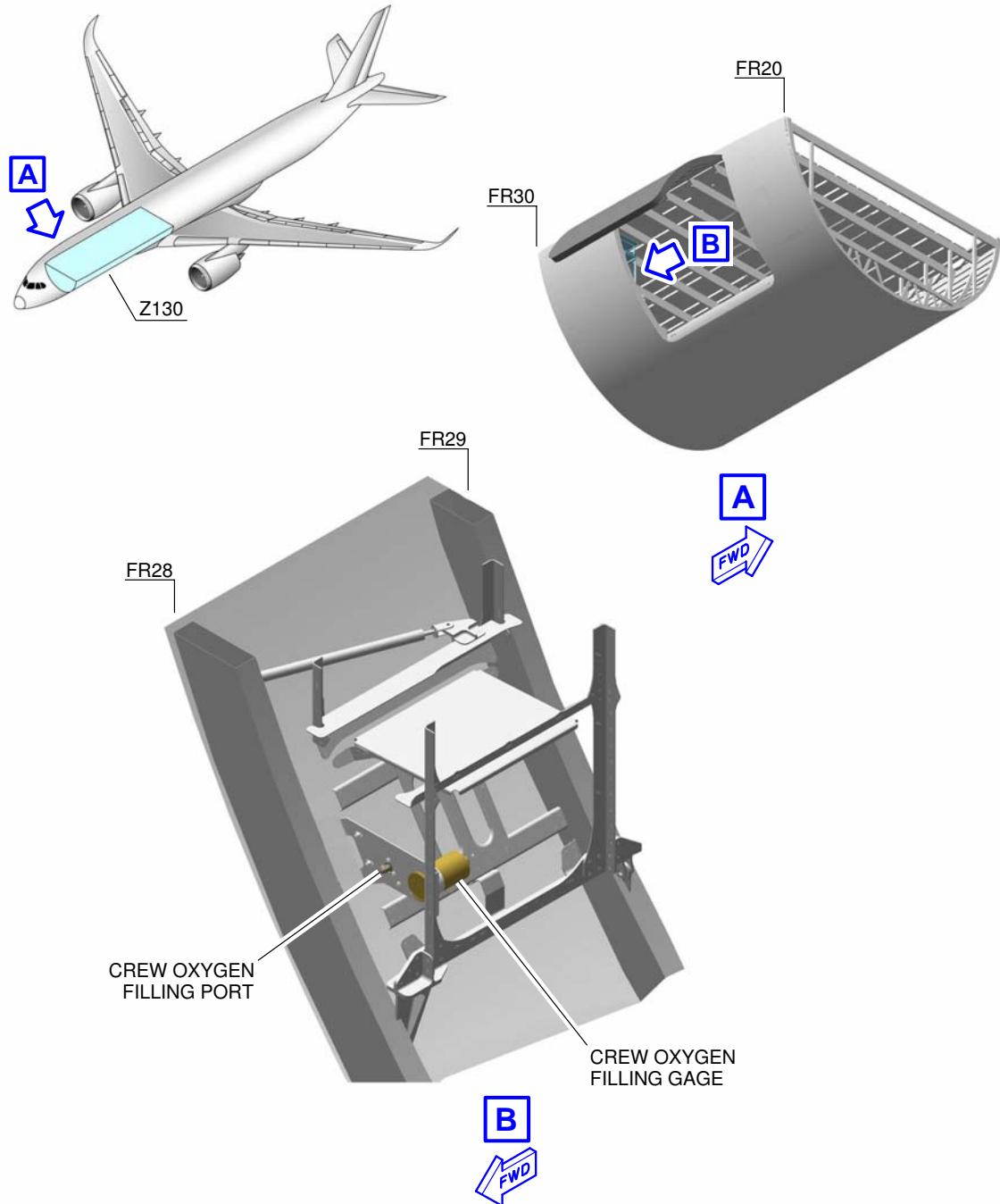
## 1. General

The A350 XWB oxygen servicing is designed to supply oxygen to the cockpit and the cabin.

## 2. Technical Specifications

- Refilling of the oxygen sources is accomplished by the replacement of the units.
- An optional filling port and associated devices can be installed at the rear triangular area of the FWD cargo door to allow in-situ flight crew oxygen replenishment.

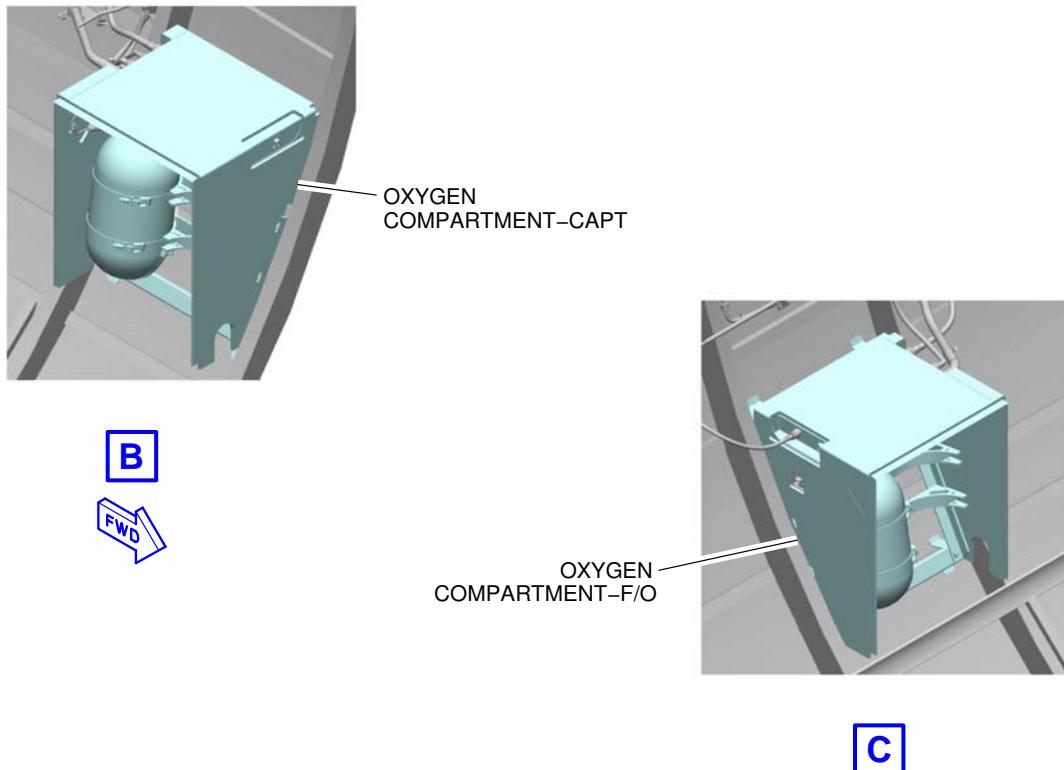
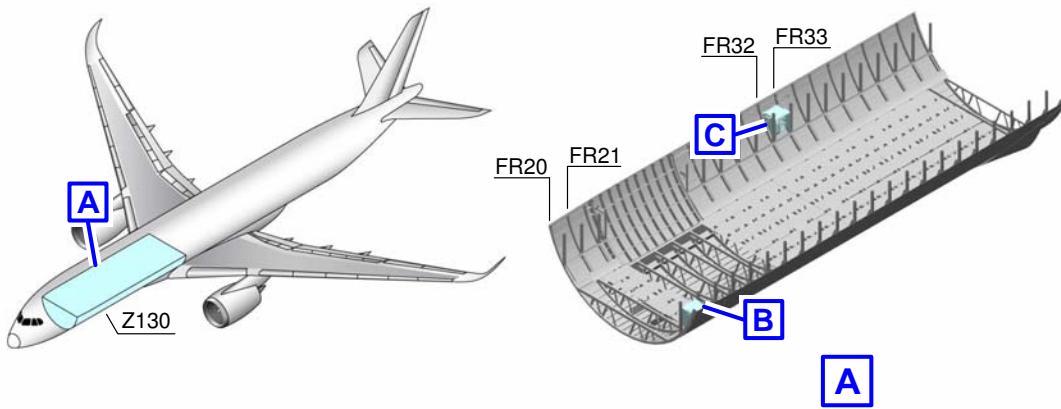
\*\*ON A/C A350-900



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Oxygen System  
FIGURE-5-4-4-991-001-A01

\*\*ON A/C A350-900



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Crew Oxygen Storage - Location  
FIGURE-5-4-4-991-002-A01

## 5-4-5 Fuel Servicing

### \*\*ON A/C A350-1000 A350-900

#### Fuel Servicing

### \*\*ON A/C A350-900

#### 1. Refuel/Defuel Control Panel

NOTE : The mean height from ground in the below table may change according to the CG position and aircraft weight.

| ACCESS  | DISTANCE                |                          |         | MEAN HEIGHT FROM GROUND |  |
|---|-------------------------|--------------------------|---------|-------------------------|--|
|   | AFT OF NOSE             | FROM AIRCRAFT CENTERLINE |         |                         |  |
|   |                         | LH SIDE                  | RH SIDE |                         |  |
| Refuel/Defuel Control Panel:<br>Access Door 197KB | 36.20 m<br>(118.77 ft.) | On centerline            |         | 2.18 m<br>(7.15 ft.)    |  |

#### 2. Refuel/Defuel Connectors

NOTE : The mean height from ground in the below table may change according to the CG position and aircraft weight.

| ACCESS   | DISTANCE                |                          |                        | MEAN HEIGHT FROM GROUND |  |
|--|-------------------------|--------------------------|------------------------|-------------------------|--|
|  | AFT OF NOSE             | FROM AIRCRAFT CENTERLINE |                        |                         |  |
|  |                         | LH SIDE                  | RH SIDE                |                         |  |
| Refuel/Defuel Coupling, Left<br>(Optional):<br>Access Door 523EB | 32.57 m<br>(106.86 ft.) | 15.83 m<br>(51.94 ft.)   |                        | 5.50 m<br>(18.04 ft.)   |  |
| Refuel/Defuel Coupling, Right:<br>Access Door 623EB              | 32.57 m<br>(106.86 ft.) |                          | 15.83 m<br>(51.94 ft.) | 5.50 m<br>(18.04 ft.)   |  |

#### A. Refuel/Defuel couplings:

- Two standard 2.5 in. ISO 45 connections on the right wing,
- Two standard 2.5 in. ISO 45 connections on the left wing (optional).

#### B. Refuel pressure:

- Maximum pressure: 3.45 bar (50 psi).

#### 3. Overpressure Protector and NACA Flame Arrestor

NOTE : The mean height from ground in the below table may change according to the CG position and aircraft weight.

| ACCESS                 | AFT OF NOSE             | FROM AIRCRAFT CENTERLINE |                        | MEAN HEIGHT FROM GROUND |
|------------------------|-------------------------|--------------------------|------------------------|-------------------------|
|                        |                         | LH SIDE                  | RH SIDE                |                         |
| Overpressure Protector | 38.24 m<br>(125.46 ft.) | 22.33 m<br>(73.26 ft.)   | 22.33 m<br>(73.26 ft.) | 6.13 m<br>(20.11 ft.)   |
| NACA Flame Arrestor    | 38.69 m<br>(126.94 ft.) | 23.07 m<br>(75.69 ft.)   | 23.07 m<br>(75.69 ft.) | 6.19 m<br>(20.31 ft.)   |

**\*\*ON A/C A350-1000**
**4. Refuel/Defuel Control Panel**

NOTE : The mean height from ground in the below table may change according to the CG position and aircraft weight.

| ACCESS  | DISTANCE                |                          |         | MEAN HEIGHT FROM GROUND |  |
|---|-------------------------|--------------------------|---------|-------------------------|--|
|   | AFT OF NOSE             | FROM AIRCRAFT CENTERLINE |         |                         |  |
|   |                         | LH SIDE                  | RH SIDE |                         |  |
| Refuel/Defuel Control Panel:<br>Access Door 197KB | 40.11 m<br>(131.59 ft.) | On centerline            |         | 2.18 m<br>(7.15 ft.)    |  |

**5. Refuel/Defuel Connectors**

NOTE : The mean height from ground in the below table may change according to the CG position and aircraft weight.

| ACCESS   | DISTANCE                |                          |                        | MEAN HEIGHT FROM GROUND |  |
|--|-------------------------|--------------------------|------------------------|-------------------------|--|
|  | AFT OF NOSE             | FROM AIRCRAFT CENTERLINE |                        |                         |  |
|  |                         | LH SIDE                  | RH SIDE                |                         |  |
| Refuel/Defuel Coupling, Left<br>(Optional):<br>Access Door 523EB | 36.49 m<br>(119.72 ft.) | 15.83 m<br>(51.94 ft.)   |                        | 5.50 m<br>(18.04 ft.)   |  |
| Refuel/Defuel Coupling, Right:<br>Access Door 623EB              | 36.49 m<br>(119.72 ft.) |                          | 15.83 m<br>(51.94 ft.) | 5.50 m<br>(18.04 ft.)   |  |

**A. Refuel/Defuel couplings:**

- Two standard 2.5 in. ISO 45 connections on the right wing,
- Two standard 2.5 in. ISO 45 connections on the left wing (optional).

**B. Refuel pressure:**

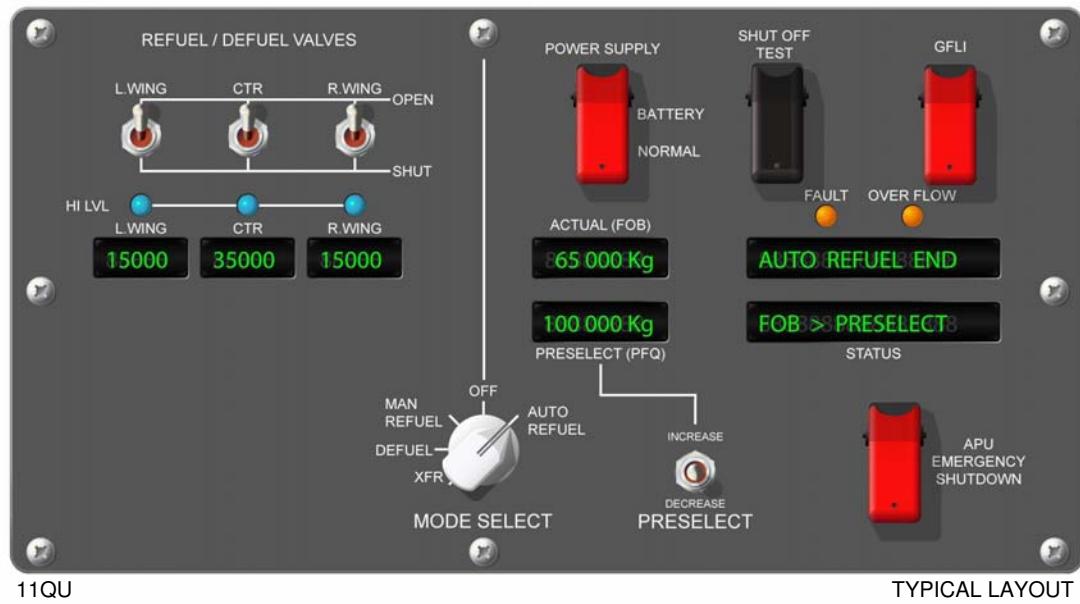
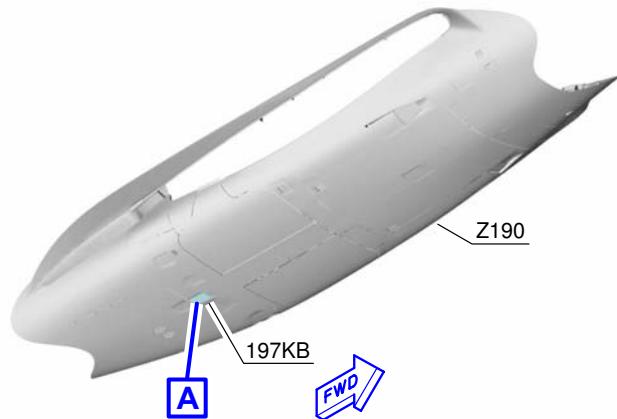
- Maximum pressure: 3.45 bar (50 psi).

## 6. Overpressure Protector and NACA Flame Arrestor

NOTE : The mean height from ground in the below table may change according to the CG position and aircraft weight.

| ACCESS                 | AFT OF NOSE             | FROM AIRCRAFT CENTERLINE |                        | MEAN HEIGHT FROM GROUND |
|------------------------|-------------------------|--------------------------|------------------------|-------------------------|
|                        |                         | LH SIDE                  | RH SIDE                |                         |
| Overpressure Protector | 42.05 m<br>(137.96 ft.) | 22.33 m<br>(73.26 ft.)   | 22.33 m<br>(73.26 ft.) | 6.13 m<br>(20.11 ft.)   |
| NACA Flame Arrestor    | 42.50 m<br>(139.44 ft.) | 23.07 m<br>(75.69 ft.)   | 23.07 m<br>(75.69 ft.) | 6.19 m<br>(20.31 ft.)   |

\*\*ON A/C A350-1000 A350-900



11QU

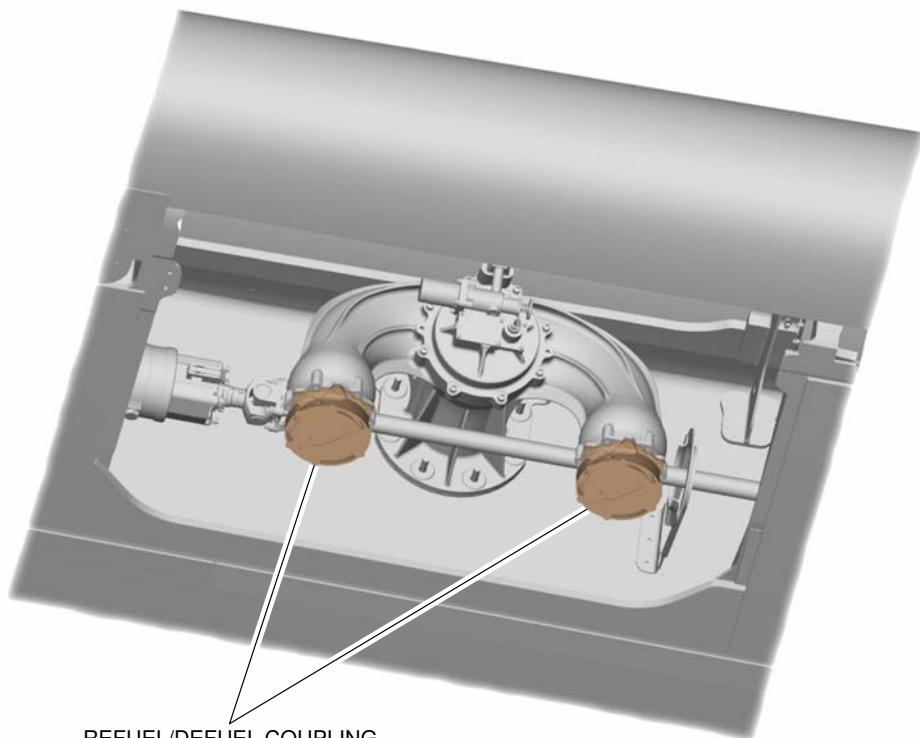
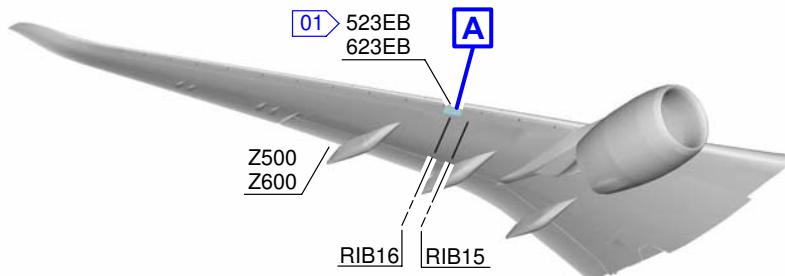
TYPICAL LAYOUT



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Refuel/Defuel Control Panel  
FIGURE-5-4-5-991-001-A01

\*\*ON A/C A350-1000 A350-900



**NOTE:**

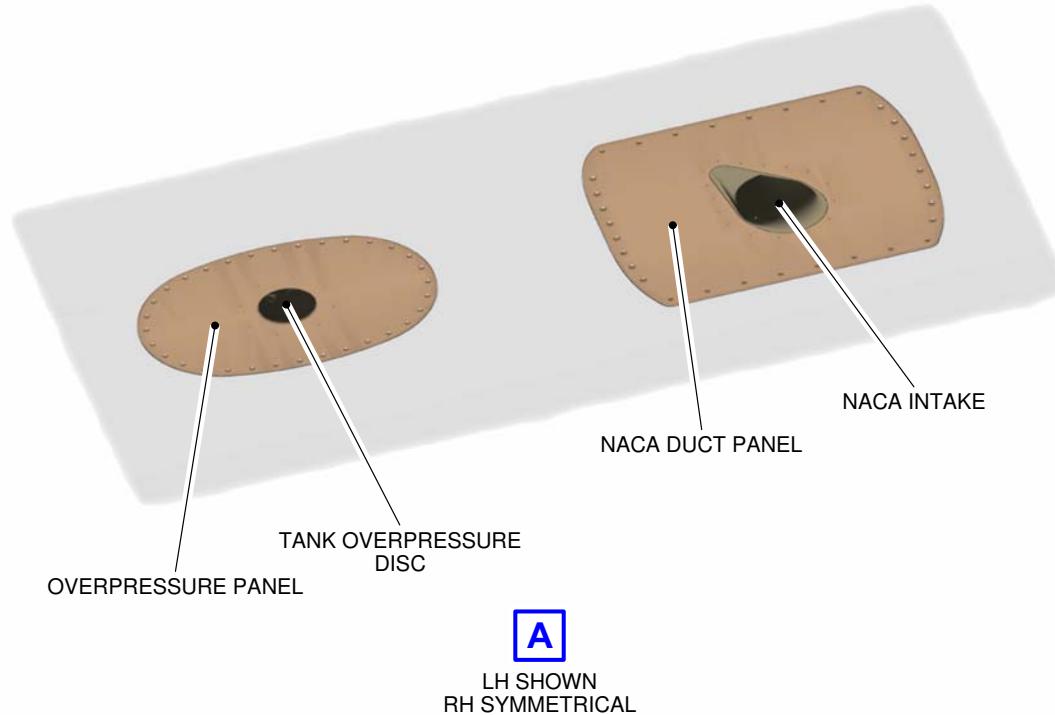
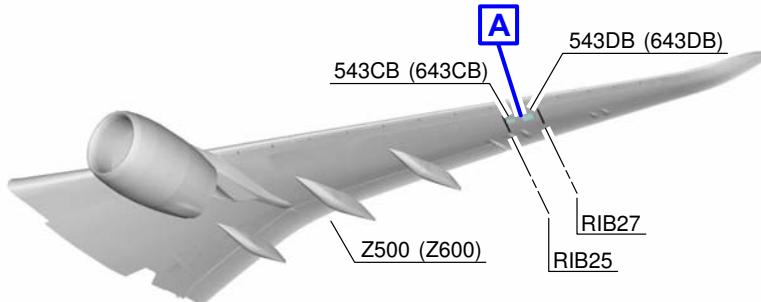
01 LH OPTIONAL

RH SHOWN  
LH SYMMETRICAL

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Refuel/Defuel Couplings  
FIGURE-5-4-5-991-002-B01

**\*\*ON A/C A350-1000 A350-900**



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Overpressure Protectors and NACA Flame Arrestor  
FIGURE-5-4-5-991-003-A01

**5-4-6 Pneumatic Servicing**

**\*\*ON A/C A350-1000 A350-900**

Pneumatic Servicing

**\*\*ON A/C A350-900**

1. Low Pressure Connectors

NOTE : The mean height from ground in the below table may change according to the CG position and aircraft weight.

| ACCESS            | DISTANCE               |                          |                      |                         |
|-------------------|------------------------|--------------------------|----------------------|-------------------------|
|                   | AFT OF NOSE            | FROM AIRCRAFT CENTERLINE |                      | MEAN HEIGHT FROM GROUND |
|                   |                        | LH SIDE                  | RH SIDE              |                         |
| Access Door 193CB | 23.58 m<br>(77.36 ft.) |                          | 1.05 m<br>(3.44 ft.) | 2.59 m<br>(8.50 ft.)    |
| Access Door 194CR | 23.58 m<br>(77.36 ft.) |                          | 1.87 m<br>(6.14 ft.) | 2.87 m<br>(9.42 ft.)    |

A. Connectors:

- Two standard 8 in. SAE AS4262 type B connections.

2. High Pressure Connectors

NOTE : The mean height from ground in the below table may change according to the CG position and aircraft weight.

| ACCESS            | DISTANCE               |                          |         |                         |
|-------------------|------------------------|--------------------------|---------|-------------------------|
|                   | AFT OF NOSE            | FROM AIRCRAFT CENTERLINE |         | MEAN HEIGHT FROM GROUND |
|                   |                        | LH SIDE                  | RH SIDE |                         |
| Access Door 193KB | 26.81 m<br>(87.96 ft.) | On Centerline            |         | 2.06 m<br>(6.76 ft.)    |

A. Connectors:

- Two standard 3 in. ISO 2026 connections.

**\*\*ON A/C A350-1000**

3. Low Pressure Connectors

NOTE : The mean height from ground in the below table may change according to the CG position and aircraft weight.

| ACCESS            | DISTANCE               |                          |                      | MEAN HEIGHT<br>FROM GROUND |  |
|-------------------|------------------------|--------------------------|----------------------|----------------------------|--|
|                   | AFT OF NOSE            | FROM AIRCRAFT CENTERLINE |                      |                            |  |
|                   |                        | LH SIDE                  | RH SIDE              |                            |  |
| Access Door 193CB | 27.39 m<br>(89.86 ft.) |                          | 1.05 m<br>(3.44 ft.) | 2.44 m<br>(8.01 ft.)       |  |
| Access Door 194CR | 27.39 m<br>(89.86 ft.) |                          | 1.86 m<br>(6.10 ft.) | 2.57 m<br>(8.43 ft.)       |  |

A. Connectors:

- Two standard 8 in. SAE AS4262 type B connections.

4. High Pressure Connectors

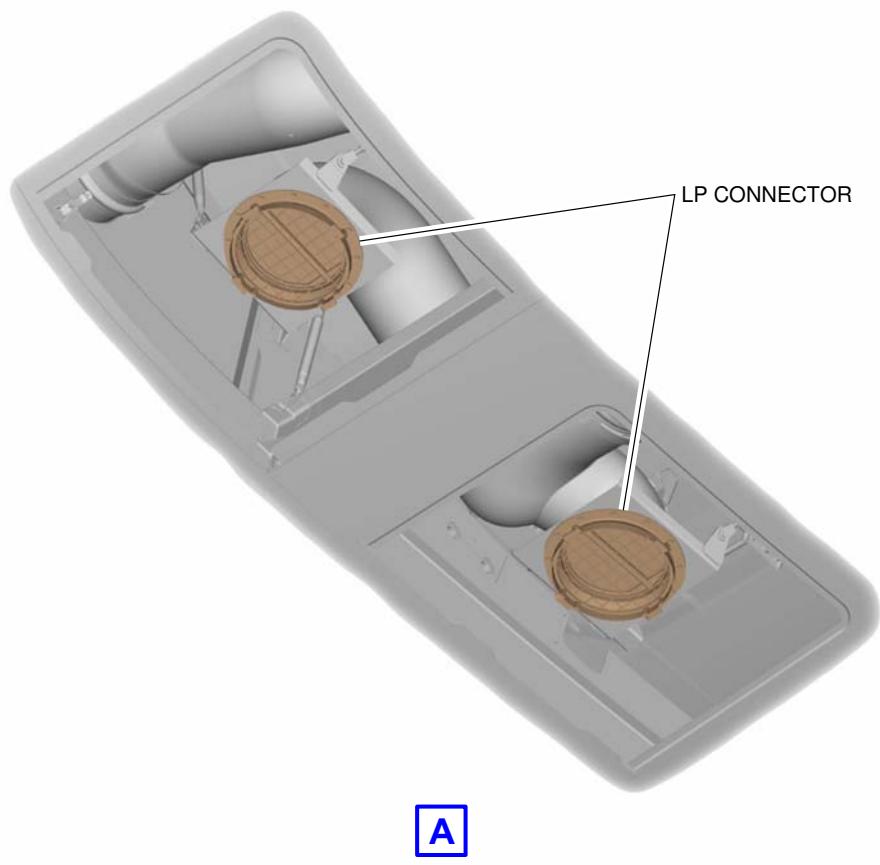
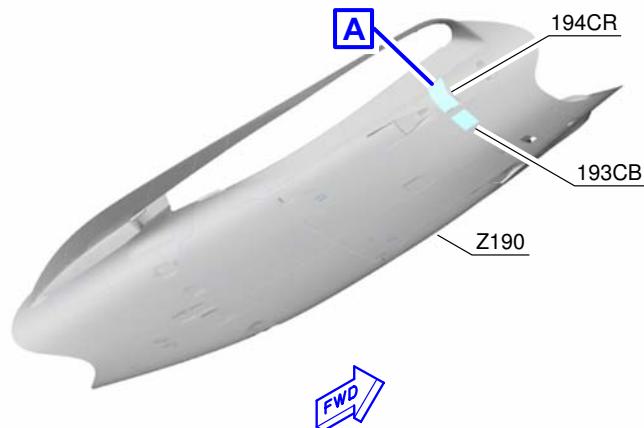
NOTE : The mean height from ground in the below table may change according to the CG position and aircraft weight.

| ACCESS            | DISTANCE                |                          |         | MEAN HEIGHT<br>FROM GROUND |  |
|-------------------|-------------------------|--------------------------|---------|----------------------------|--|
|                   | AFT OF NOSE             | FROM AIRCRAFT CENTERLINE |         |                            |  |
|                   |                         | LH SIDE                  | RH SIDE |                            |  |
| Access Door 193KB | 30.77 m<br>(100.95 ft.) | On Centerline            |         | 2.06 m<br>(6.76 ft.)       |  |

A. Connectors:

- Two standard 3 in. ISO 2026 connections.

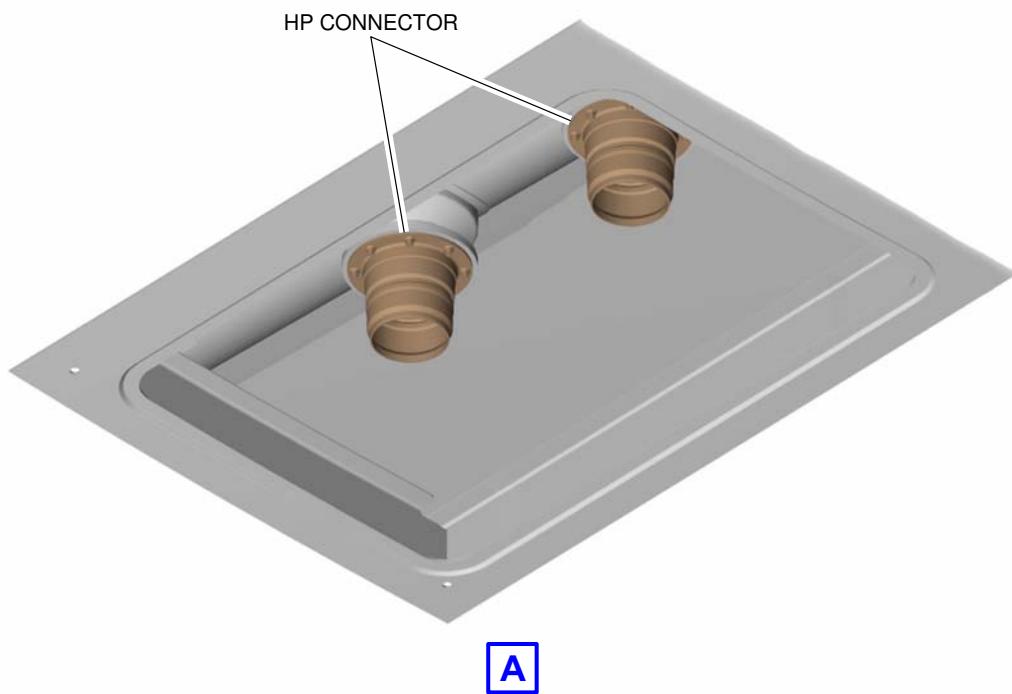
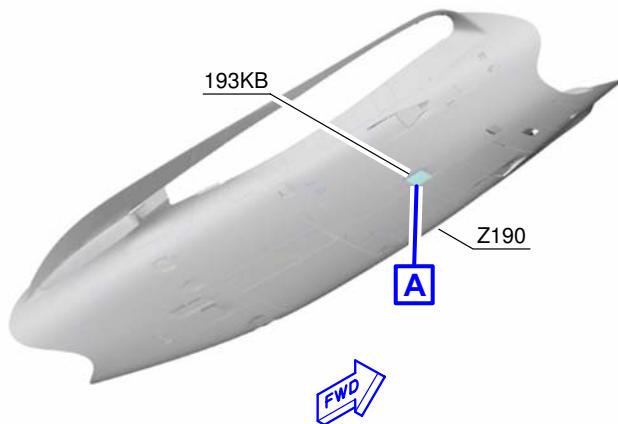
\*\*ON A/C A350-1000 A350-900



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Low Pressure Ground Connectors  
FIGURE-5-4-6-991-001-A01

\*\*ON A/C A350-1000 A350-900



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High Pressure Ground Connectors  
FIGURE-5-4-6-991-002-A01

**5-4-7 Oil Servicing**
**\*\*ON A/C A350-1000 A350-900**
Engine Oil Servicing
**\*\*ON A/C A350-900**

## 1. Engine Oil Servicing

NOTE : The mean height from ground in the below table may change according to the CG position and aircraft weight.

| ACCESS                         | DISTANCE               |                          |                        | MEAN HEIGHT FROM GROUND |  |
|--------------------------------|------------------------|--------------------------|------------------------|-------------------------|--|
|                                | AFT OF NOSE            | FROM AIRCRAFT CENTERLINE |                        |                         |  |
|                                |                        | LH SIDE                  | RH SIDE                |                         |  |
| Engine 1:<br>Access Door 415BR | 24.75 m<br>(81.20 ft.) | 8.60 m<br>(28.22 ft.)    |                        | 3.23 m<br>(10.60 ft.)   |  |
| Engine 2:<br>Access Door 425BR | 24.68 m<br>(80.97 ft.) |                          | 12.29 m<br>(40.32 ft.) | 3.23 m<br>(10.60 ft.)   |  |

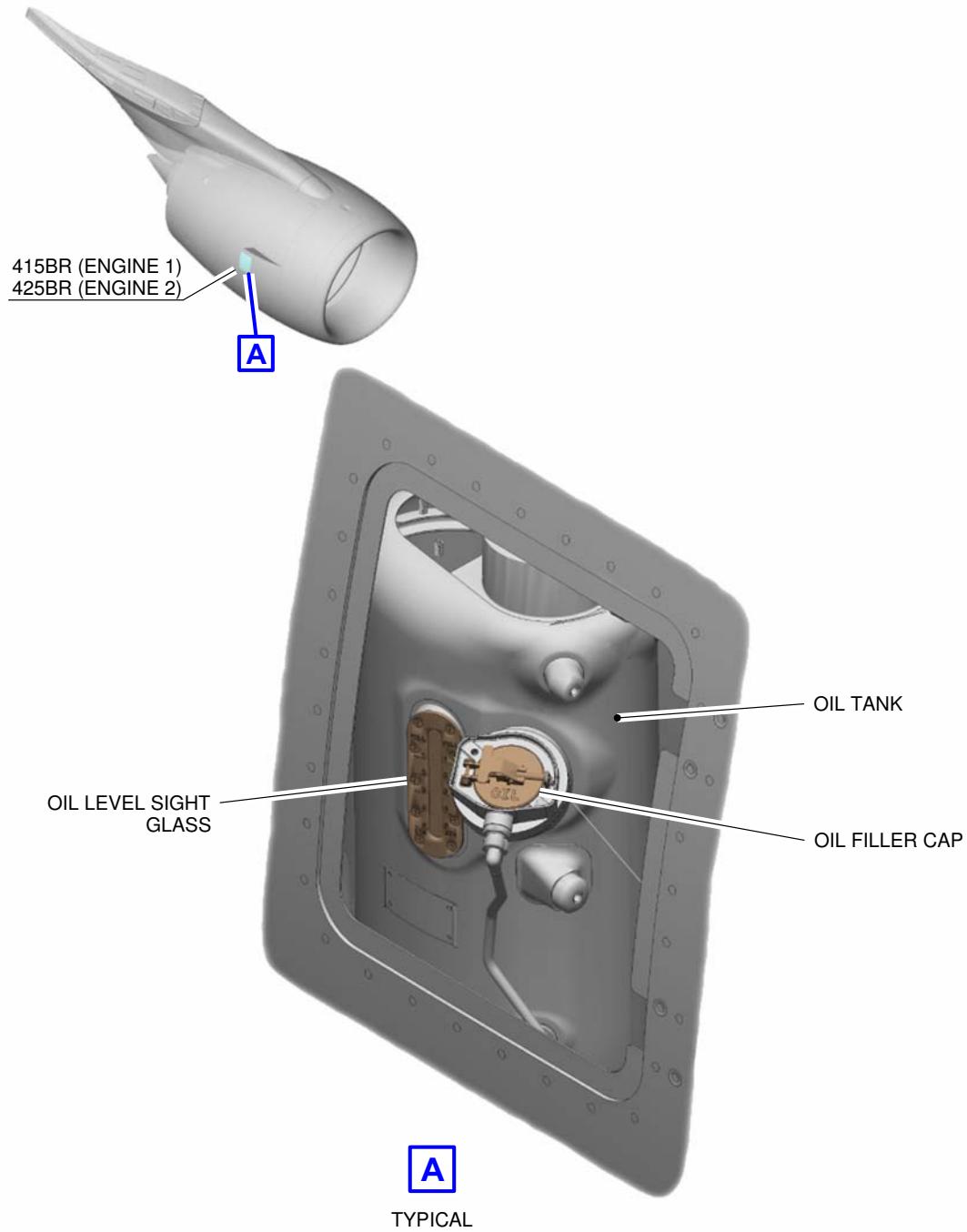
**\*\*ON A/C A350-1000**

## 2. Engine Oil Servicing

NOTE : The mean height from ground in the below table may change according to the CG position and aircraft weight.

| ACCESS                         | DISTANCE               |                          |                        | MEAN HEIGHT FROM GROUND |  |
|--------------------------------|------------------------|--------------------------|------------------------|-------------------------|--|
|                                | AFT OF NOSE            | FROM AIRCRAFT CENTERLINE |                        |                         |  |
|                                |                        | LH SIDE                  | RH SIDE                |                         |  |
| Engine 1:<br>Access Door 415BR | 28.56 m<br>(93.70 ft.) | 8.60 m<br>(28.22 ft.)    |                        | 3.23 m<br>(10.60 ft.)   |  |
| Engine 2:<br>Access Door 425BR | 28.49 m<br>(93.47 ft.) |                          | 12.29 m<br>(40.32 ft.) | 3.23 m<br>(10.60 ft.)   |  |

\*\*ON A/C A350-1000 A350-900



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Engine Oil Servicing  
FIGURE-5-4-7-991-004-A01

**\*\*ON A/C A350-1000 A350-900**VFG Oil Servicing**\*\*ON A/C A350-900**

## 1. VFG Oil Servicing

NOTE : The mean height from ground in the below table may change according to the CG position and aircraft weight.

| ACCESS                      | DISTANCE               |                          |                       | MEAN HEIGHT FROM GROUND |  |
|-----------------------------|------------------------|--------------------------|-----------------------|-------------------------|--|
|                             | AFT OF NOSE            | FROM AIRCRAFT CENTERLINE |                       |                         |  |
|                             |                        | LH SIDE                  | RH SIDE               |                         |  |
| Engine 1:<br>Fan Cowl 415AL | 24.32 m<br>(79.79 ft.) | 11.02 m<br>(36.15 ft.)   |                       | 1.22 m<br>(4.00 ft.)    |  |
| Engine 2:<br>Fan Cowl 425AL | 24.34 m<br>(79.86 ft.) |                          | 9.86 m<br>(32.35 ft.) | 1.22 m<br>(4.00 ft.)    |  |

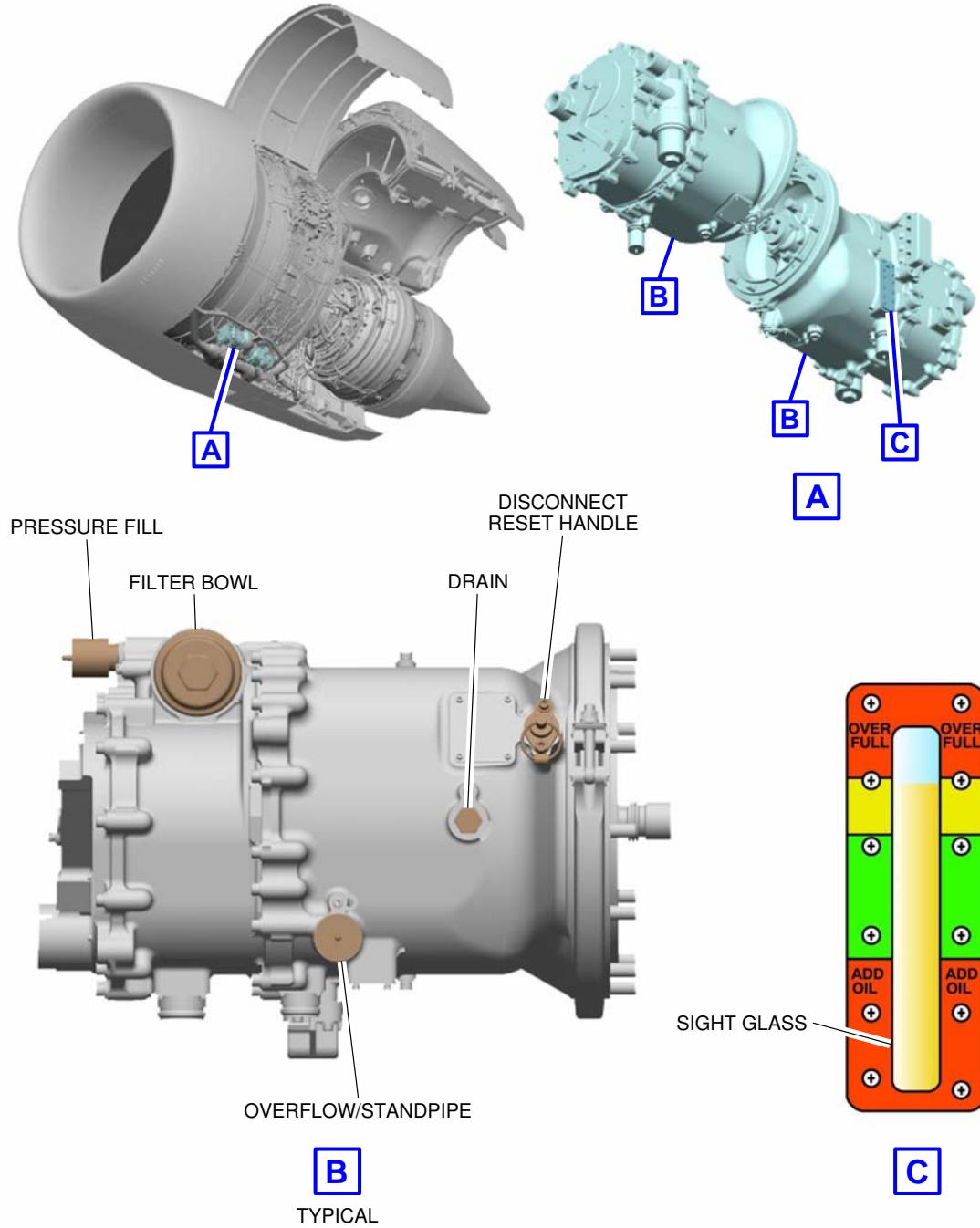
**\*\*ON A/C A350-1000**

## 2. VFG Oil Servicing

NOTE : The mean height from ground in the below table may change according to the CG position and aircraft weight.

| ACCESS                      | DISTANCE               |                          |                       | MEAN HEIGHT FROM GROUND |  |
|-----------------------------|------------------------|--------------------------|-----------------------|-------------------------|--|
|                             | AFT OF NOSE            | FROM AIRCRAFT CENTERLINE |                       |                         |  |
|                             |                        | LH SIDE                  | RH SIDE               |                         |  |
| Engine 1:<br>Fan Cowl 415AL | 28.13 m<br>(92.29 ft.) | 11.02 m<br>(36.15 ft.)   |                       | 1.22 m<br>(4.00 ft.)    |  |
| Engine 2:<br>Fan Cowl 425AL | 28.15 m<br>(92.36 ft.) |                          | 9.86 m<br>(32.35 ft.) | 1.22 m<br>(4.00 ft.)    |  |

\*\*ON A/C A350-1000 A350-900



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VFG Oil Servicing  
FIGURE-5-4-7-991-009-A01

**\*\*ON A/C A350-1000 A350-900**
Starter Oil Servicing
**\*\*ON A/C A350-900**

## 1. Starter Oil Servicing

NOTE : The mean height from ground in the below table may change according to the CG position and aircraft weight.

| ACCESS                      | DISTANCE               |                          |                        | MEAN HEIGHT<br>FROM GROUND |  |
|-----------------------------|------------------------|--------------------------|------------------------|----------------------------|--|
|                             | AFT OF NOSE            | FROM AIRCRAFT CENTERLINE |                        |                            |  |
|                             |                        | LH SIDE                  | RH SIDE                |                            |  |
| Engine 1:<br>Fan Cowl 415AL | 24.60 m<br>(80.71 ft.) | 10.57 m<br>(34.68 ft.)   |                        | 1.08 m<br>(3.54 ft.)       |  |
| Engine 2:<br>Fan Cowl 425AL | 24.60 m<br>(80.71 ft.) |                          | 10.31 m<br>(33.83 ft.) | 1.08 m<br>(3.54 ft.)       |  |

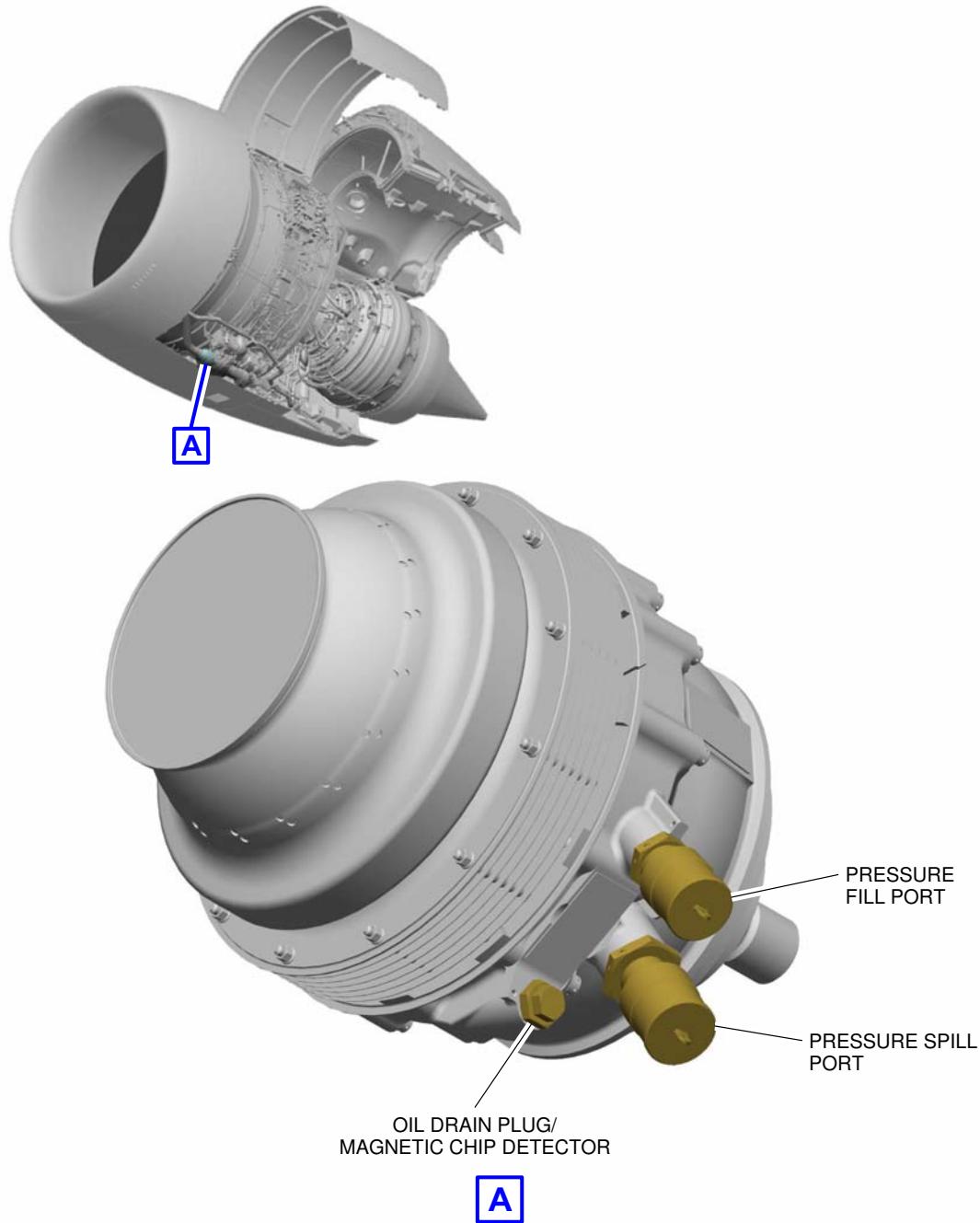
**\*\*ON A/C A350-1000**

## 2. Starter Oil Servicing

NOTE : The mean height from ground in the below table may change according to the CG position and aircraft weight.

| ACCESS                      | DISTANCE               |                          |                        | MEAN HEIGHT<br>FROM GROUND |  |
|-----------------------------|------------------------|--------------------------|------------------------|----------------------------|--|
|                             | AFT OF NOSE            | FROM AIRCRAFT CENTERLINE |                        |                            |  |
|                             |                        | LH SIDE                  | RH SIDE                |                            |  |
| Engine 1:<br>Fan Cowl 415AL | 28.41 m<br>(93.21 ft.) | 10.57 m<br>(34.68 ft.)   |                        | 1.08 m<br>(3.54 ft.)       |  |
| Engine 2:<br>Fan Cowl 425AL | 28.41 m<br>(93.21 ft.) |                          | 10.31 m<br>(33.83 ft.) | 1.08 m<br>(3.54 ft.)       |  |

\*\*ON A/C A350-1000 A350-900



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Starter Oil Servicing  
FIGURE-5-4-7-991-010-A01

**\*\*ON A/C A350-1000 A350-900**APU Oil Servicing**\*\*ON A/C A350-900**

## 1. APU Oil Servicing

NOTE : The mean height from ground in the below table may change according to the CG position and aircraft weight.

| ACCESS                    | DISTANCE                |                          |                      |                         |
|---------------------------|-------------------------|--------------------------|----------------------|-------------------------|
|                           | AFT OF NOSE             | FROM AIRCRAFT CENTERLINE |                      | MEAN HEIGHT FROM GROUND |
|                           |                         | LH SIDE                  | RH SIDE              |                         |
| APU:<br>Access Door 316BR | 62.52 m<br>(205.12 ft.) |                          | 0.48 m<br>(1.57 ft.) | 6.45 m<br>(21.16 ft.)   |

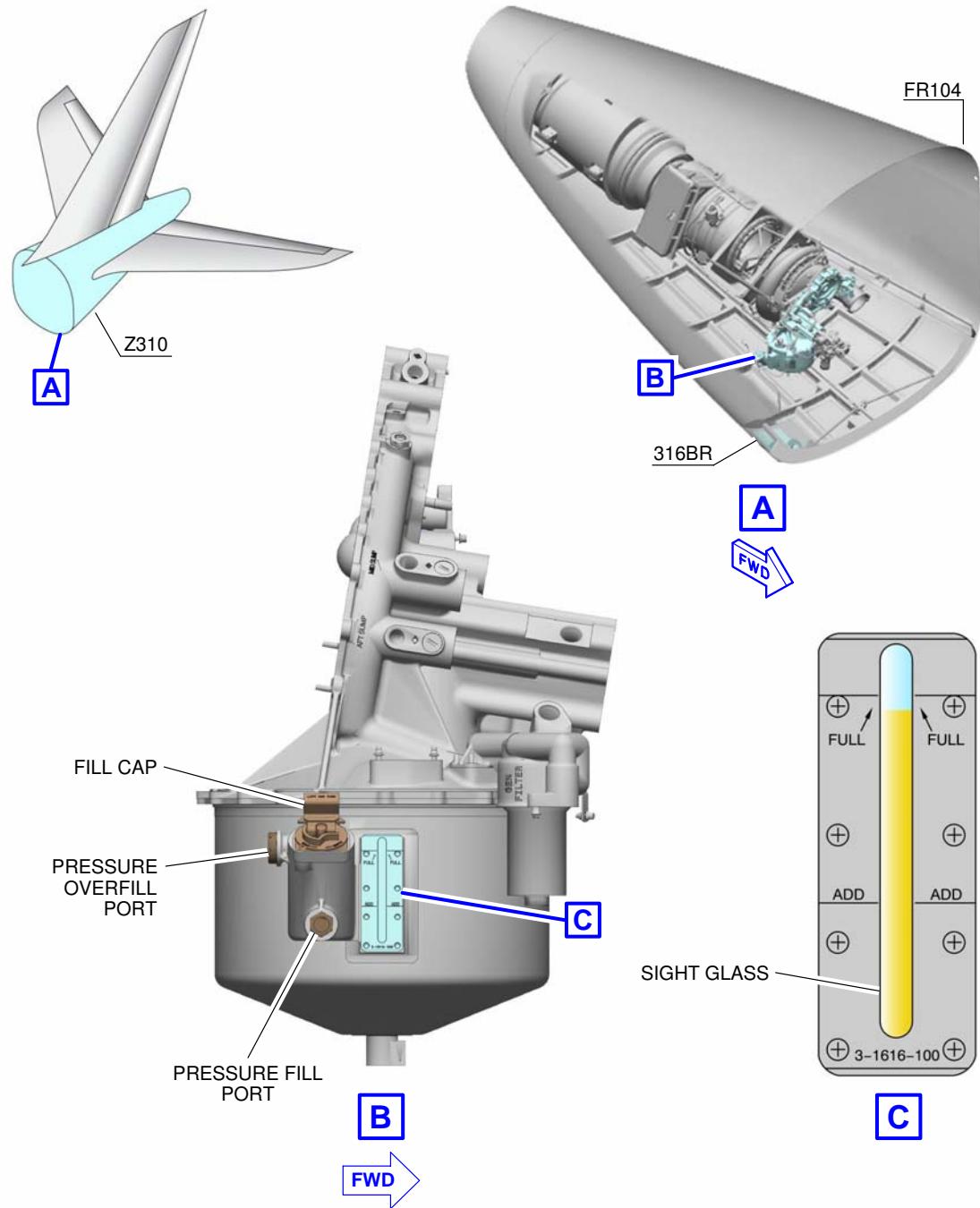
**\*\*ON A/C A350-1000**

## 2. APU Oil Servicing

NOTE : The mean height from ground in the below table may change according to the CG position and aircraft weight.

| ACCESS                    | DISTANCE                |                          |                      |                         |
|---------------------------|-------------------------|--------------------------|----------------------|-------------------------|
|                           | AFT OF NOSE             | FROM AIRCRAFT CENTERLINE |                      | MEAN HEIGHT FROM GROUND |
|                           |                         | LH SIDE                  | RH SIDE              |                         |
| APU:<br>Access Door 316BR | 69.51 m<br>(228.05 ft.) |                          | 0.48 m<br>(1.57 ft.) | 6.45 m<br>(21.16 ft.)   |

\*\*ON A/C A350-1000 A350-900



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APU Oil Servicing  
FIGURE-5-4-7-991-011-A01

## 5-4-8 Potable Water Servicing

### \*\*ON A/C A350-1000 A350-900

#### Potable Water Servicing

### \*\*ON A/C A350-900

#### 1. Potable Water Servicing

NOTE : The mean height from ground in the below table may change according to the CG position and aircraft weight.

| ACCESS   | DISTANCE                |                          |                      | MEAN HEIGHT FROM GROUND |  |
|--|-------------------------|--------------------------|----------------------|-------------------------|--|
|  | AFT OF NOSE             | FROM AIRCRAFT CENTERLINE |                      |                         |  |
|  |                         | LH SIDE                  | RH SIDE              |                         |  |
| Potable-Water Ground Service Panel:<br>Access Door 164AR | 50.20 m<br>(164.70 ft.) |                          | 1.60 m<br>(5.25 ft.) | 3.30 m<br>(10.83 ft.)   |  |

### \*\*ON A/C A350-1000

#### 2. Potable Water Servicing

NOTE : The mean height from ground in the below table may change according to the CG position and aircraft weight.

| ACCESS   | DISTANCE                |                          |                      | MEAN HEIGHT FROM GROUND |  |
|--|-------------------------|--------------------------|----------------------|-------------------------|--|
|  | AFT OF NOSE             | FROM AIRCRAFT CENTERLINE |                      |                         |  |
|  |                         | LH SIDE                  | RH SIDE              |                         |  |
| Potable-Water Ground Service Panel:<br>Access Door 164AR | 57.16 m<br>(187.53 ft.) |                          | 1.60 m<br>(5.25 ft.) | 3.30 m<br>(10.83 ft.)   |  |

### \*\*ON A/C A350-1000 A350-900

#### 3. Technical Specifications

##### A. Connectors:

- Fill/drain nipple 3/4 in. (ISO 17775).

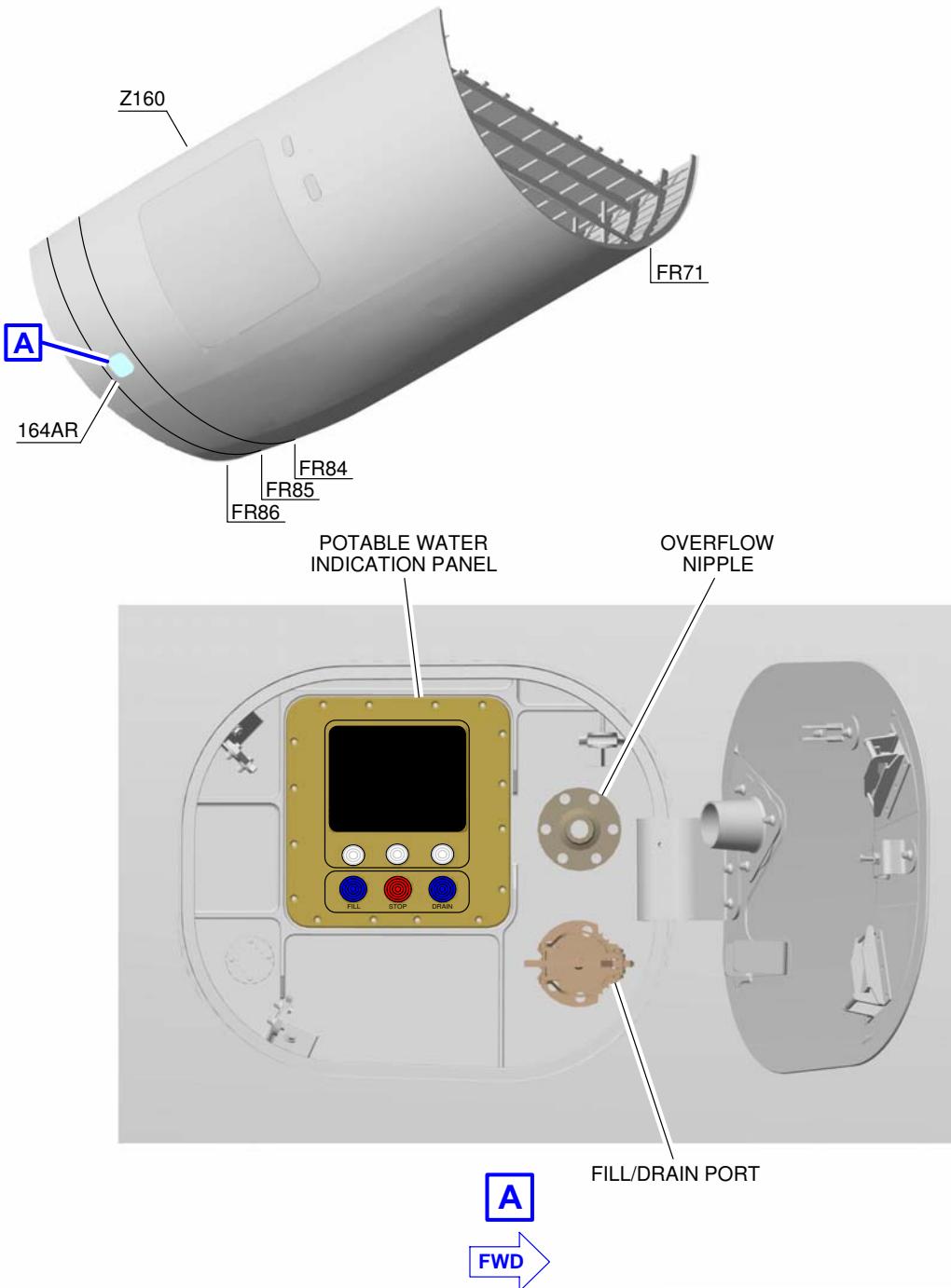
##### B. Capacity:

- Standard configuration - two tanks (530 L (140 USgal) each): 1060 L (280 USgal),
- Optional - two tanks (750 L (198 USgal) each): 1500 L (396 USgal).

## C. Filling pressure:

- Max filling pressure: 8.6 bar (125 psi).

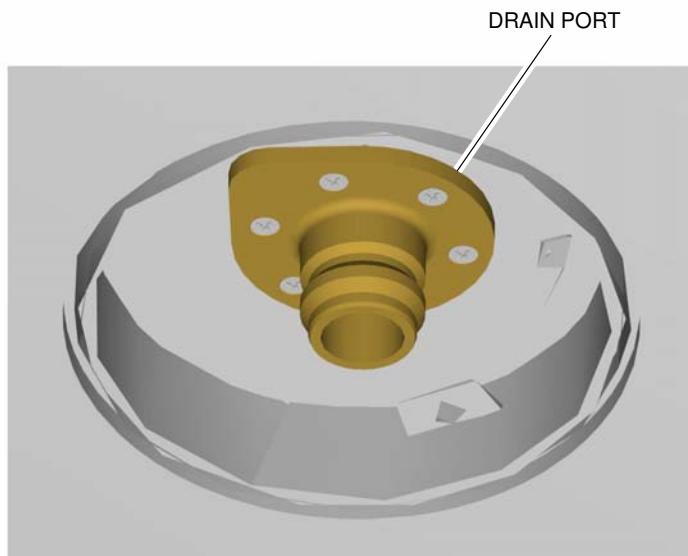
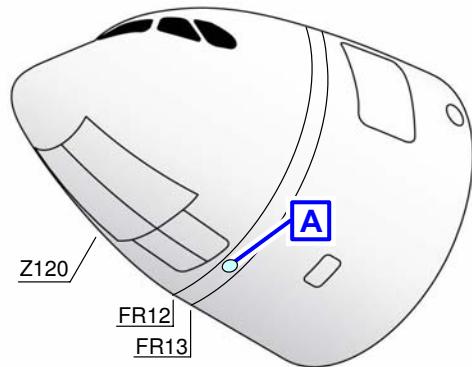
\*\*ON A/C A350-1000 A350-900



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Potable-Water Ground Service Panel  
FIGURE-5-4-8-991-005-A01

\*\*ON A/C A350-1000 A350-900

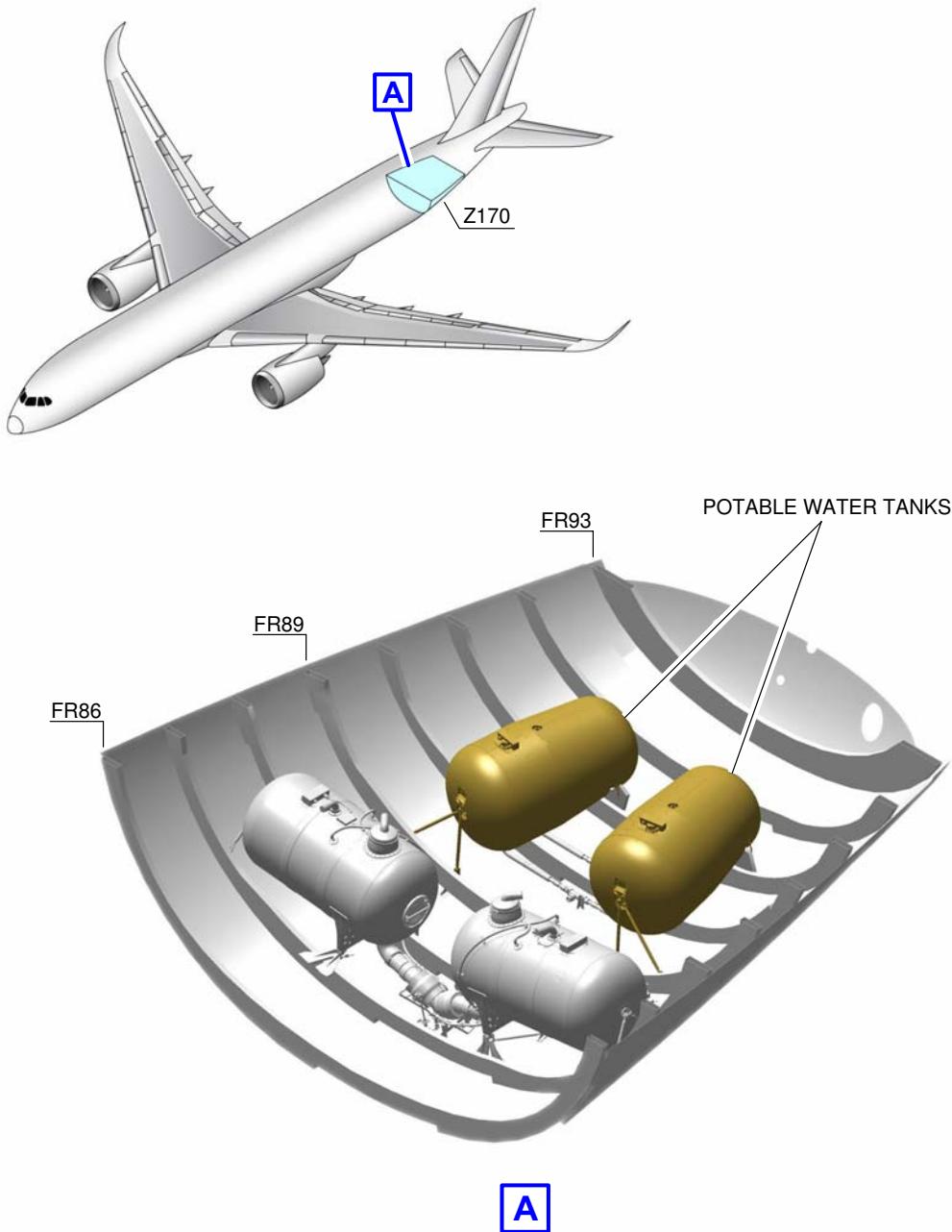


A

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Forward Drain Port  
FIGURE-5-4-8-991-006-B01

\*\*ON A/C A350-1000 A350-900



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Potable-Water Tanks Location  
FIGURE-5-4-8-991-007-A01

**5-4-9      Waste Water Servicing**

**\*\*ON A/C A350-1000 A350-900**

Waste Water Servicing

**\*\*ON A/C A350-900**

1.    Waste Water Servicing

NOTE : The mean height from ground in the below table may change according to the CG position and aircraft weight.

| ACCESS   | DISTANCE                |                          |         | MEAN HEIGHT FROM GROUND |  |
|--|-------------------------|--------------------------|---------|-------------------------|--|
|  | AFT OF NOSE             | FROM AIRCRAFT CENTERLINE |         |                         |  |
|  |                         | LH SIDE                  | RH SIDE |                         |  |
| Waste-Water Ground Service Panel:<br>Access Door 171AL | 52.21 m<br>(171.29 ft.) | On centerline            |         | 3.69 m<br>(12.11 ft.)   |  |

**\*\*ON A/C A350-1000**

2.    Waste Water Servicing

NOTE : The mean height from ground in the below table may change according to the CG position and aircraft weight.

| ACCESS   | DISTANCE                |                          |         | MEAN HEIGHT FROM GROUND |  |
|--|-------------------------|--------------------------|---------|-------------------------|--|
|  | AFT OF NOSE             | FROM AIRCRAFT CENTERLINE |         |                         |  |
|  |                         | LH SIDE                  | RH SIDE |                         |  |
| Waste-Water Ground Service Panel:<br>Access Door 171AL | 59.19 m<br>(194.19 ft.) | On centerline            |         | 3.69 m<br>(12.11 ft.)   |  |

**\*\*ON A/C A350-1000 A350-900**

3.    Technical Specifications

A. Connectors:

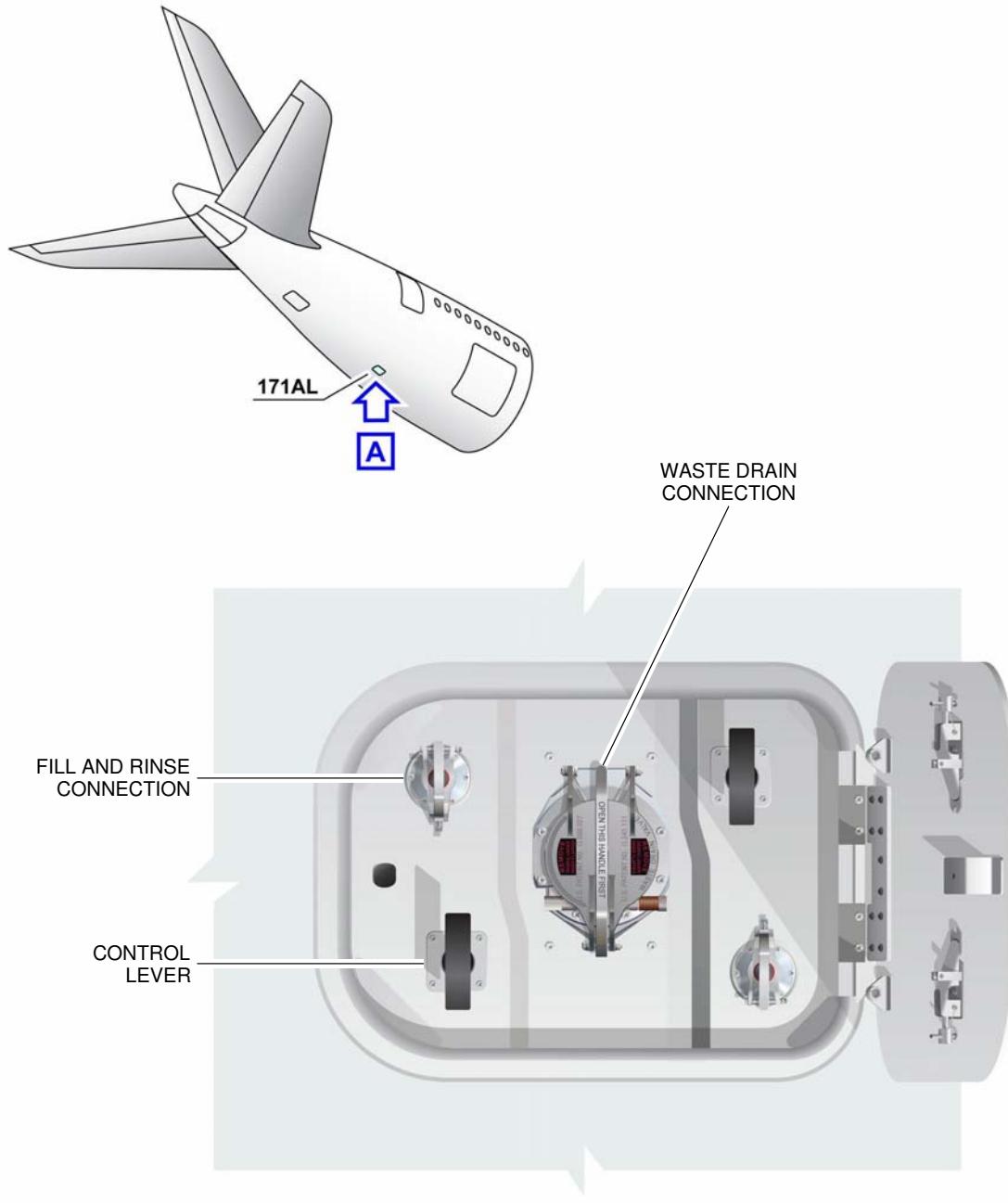
- Draining: 4 in. (ISO 17775).
- Flushing and filling: 1 in. (ISO 17775).

B. Usable waste tank capacity:

- Standard configuration - two tanks (615 L (162 USgal) each): 1230 L (325 USgal).

- C. Waste tank - Rinsing:
  - Operating pressure: 3.5 bar (50 psi).
- D. Waste tank - Precharge:
  - No precharge required.

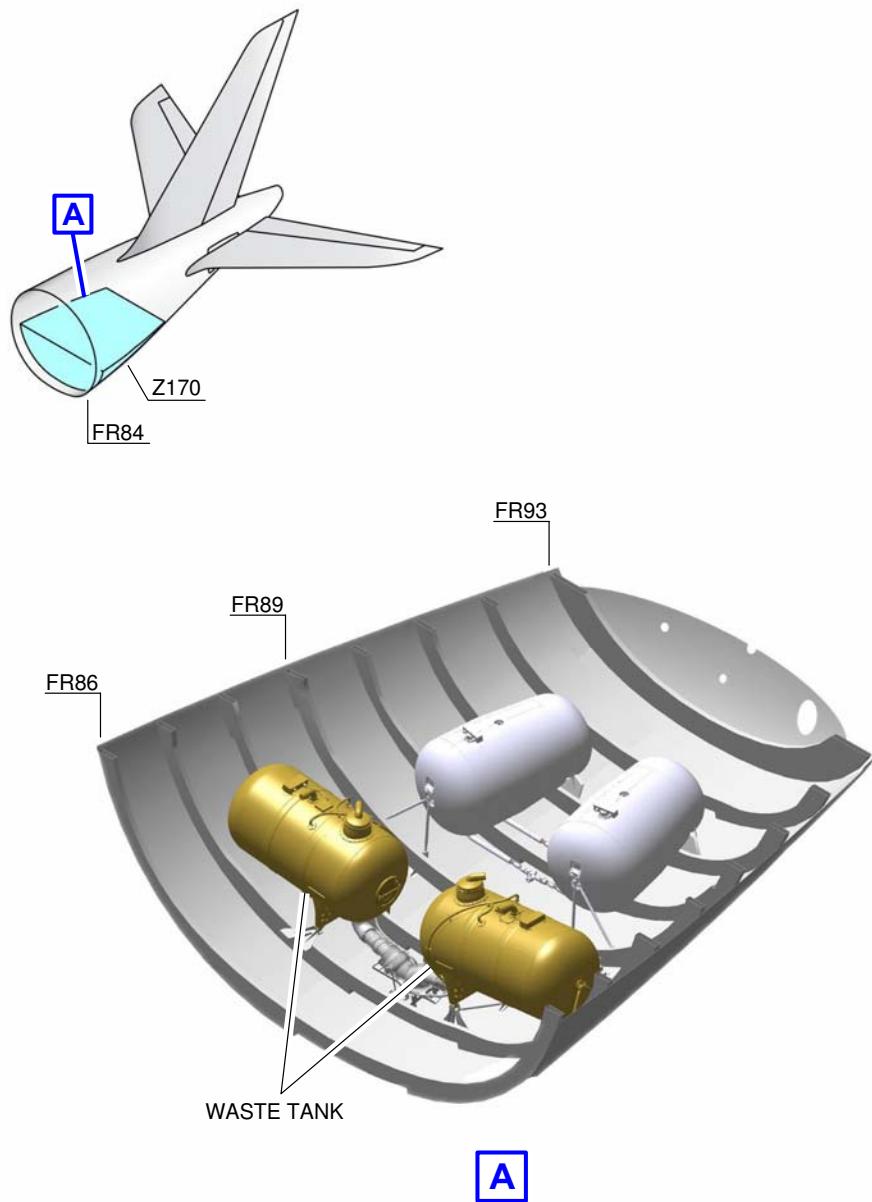
\*\*ON A/C A350-1000 A350-900



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Waste-Water Ground Service Panel  
FIGURE-5-4-9-991-001-A01

\*\*ON A/C A350-1000 A350-900



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Waste Tanks Location  
FIGURE-5-4-9-991-002-A01

**5-4-10      Cargo Control Panels**

**\*\*ON A/C A350-1000 A350-900**

Cargo Control Panels

**\*\*ON A/C A350-900**

1.    Cargo Control Panels

NOTE : The mean height from ground in the below table may change according to the CG position and aircraft weight.

| ACCESS  | DISTANCE                |                          |                      | MEAN HEIGHT<br>FROM GROUND |  |
|---|-------------------------|--------------------------|----------------------|----------------------------|--|
|   | AFT OF NOSE             | FROM AIRCRAFT CENTERLINE |                      |                            |  |
|   |                         | LH SIDE                  | RH SIDE              |                            |  |
| FWD Cargo Door<br>Control Panel:<br>Access Door 132AR | 9.59 m<br>(31.46 ft.)   |                          | 2.48 m<br>(8.14 ft.) | 3.87 m<br>(12.7 ft.)       |  |
| FWD CLS* Panel:<br>Access Door 132BR                  | 9.59 m<br>(31.46 ft.)   |                          | 2.77 m<br>(9.09 ft.) | 4.50 m<br>(14.76 ft.)      |  |
| AFT Cargo Door<br>Control Panel:<br>Access Door 152AR | 45.18 m<br>(148.23 ft.) |                          | 2.46 m<br>(8.07 ft.) | 3.80 m<br>(12.47 ft.)      |  |
| AFT CLS* Panel:<br>Access Door 152BR                  | 45.37 m<br>(148.85 ft.) |                          | 2.84 m<br>(9.32 ft.) | 4.71 m<br>(15.45 ft.)      |  |

NOTE : \* CLS - CARGO LOADING SYSTEMS

**\*\*ON A/C A350-1000**

2.    Cargo Control Panels

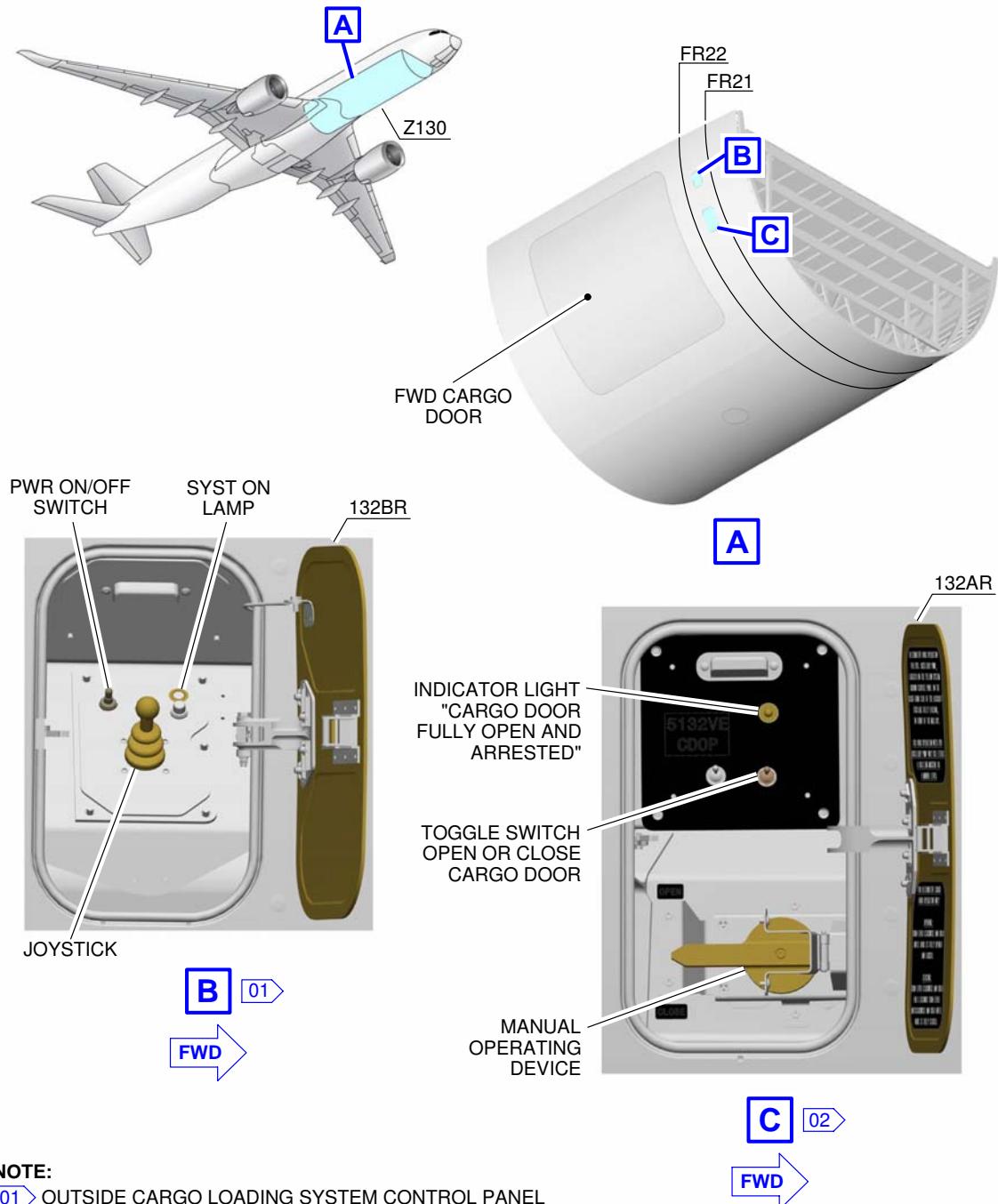
NOTE : The mean height from ground in the below table may change according to the CG position and aircraft weight.

| ACCESS  | DISTANCE              |                          |                      | MEAN HEIGHT<br>FROM GROUND |  |
|---|-----------------------|--------------------------|----------------------|----------------------------|--|
|   | AFT OF NOSE           | FROM AIRCRAFT CENTERLINE |                      |                            |  |
|   |                       | LH SIDE                  | RH SIDE              |                            |  |
| FWD Cargo Door<br>Control Panel:<br>Access Door 132AR | 9.59 m<br>(31.46 ft.) |                          | 2.48 m<br>(8.14 ft.) | 3.87 m<br>(12.70 ft.)      |  |
| FWD CLS* Panel:<br>Access Door 132BR                  | 9.59 m<br>(31.46 ft.) |                          | 2.77 m<br>(9.09 ft.) | 4.50 m<br>(14.76 ft.)      |  |

| ACCESS  | DISTANCE                |                          |                      | MEAN HEIGHT<br>FROM GROUND |  |
|---|-------------------------|--------------------------|----------------------|----------------------------|--|
|   | AFT OF NOSE             | FROM AIRCRAFT CENTERLINE |                      |                            |  |
|   |                         | LH SIDE                  | RH SIDE              |                            |  |
| AFT Cargo Door<br>Control Panel:<br>Access Door 152AR | 52.17 m<br>(171.16 ft.) |                          | 2.46 m<br>(8.07 ft.) | 3.80 m<br>(12.47 ft.)      |  |
| AFT CLS* Panel:<br>Access Door 152BR                  | 52.36 m<br>(171.78 ft.) |                          | 2.84 m<br>(9.32 ft.) | 4.71 m<br>(15.45 ft.)      |  |

NOTE : \* CLS - CARGO LOADING SYSTEMS

\*\*ON A/C A350-1000 A350-900



**NOTE:**

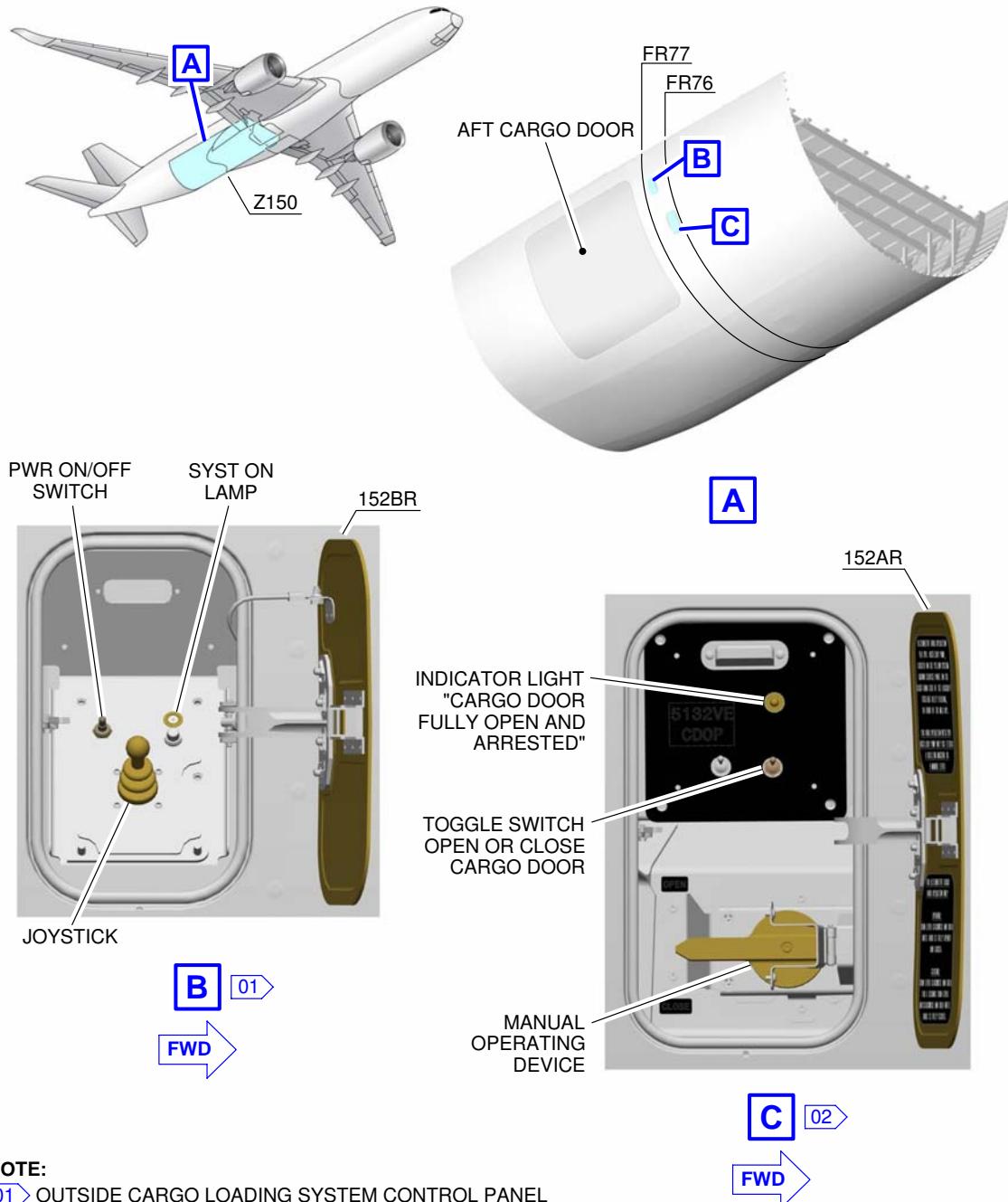
[01] OUTSIDE CARGO LOADING SYSTEM CONTROL PANEL

[02] CARGO DOOR CONTROL PANEL

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Forward Cargo Control Panels  
FIGURE-5-4-10-991-003-A01

\*\*ON A/C A350-1000 A350-900



Aft Cargo Control Panels  
FIGURE-5-4-10-991-004-A01

## 5-5-0      Engine Starting Pneumatic Requirements

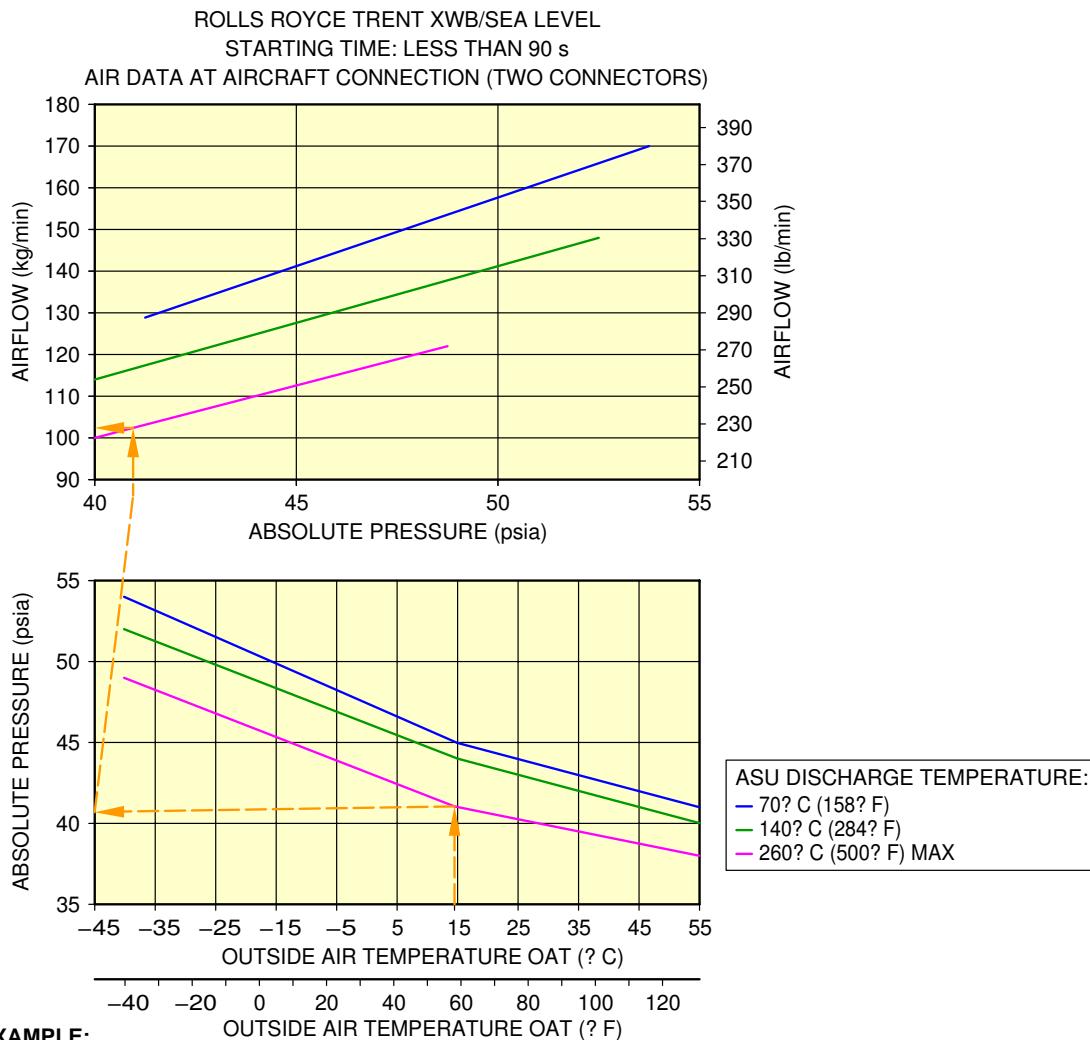
**\*\*ON A/C A350-1000 A350-900**Engine Starting Pneumatic Requirements

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 90 seconds, at sea level (0 feet), for a set of Outside Air Temperatures (OAT).

| ABBREVIATION | DEFINITION                      |
|--------------|---------------------------------|
| A/C          | Aircraft                        |
| ASU          | Air Start Unit                  |
| HPGC         | High Pressure Ground Connection |
| OAT          | Outside Air Temperature         |

- A. Air data (discharge temperature, absolute discharge pressure) are given at the HPGC.
- B. For the requirements below, the configuration with two HPGC is used. Using one connector only (for a given mass flow rate and discharge pressure from the ASU) will increase the pressure loss in the ducts of the bleed system and therefore lower the performances at the engine starter.
- C. For a given OAT the following charts are used to determine an acceptable combination for air data: discharge temperature, absolute discharge pressure and mass flow rate at the HPGC.
- D. 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.
- E. 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 A350-1000 A350-900



**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.

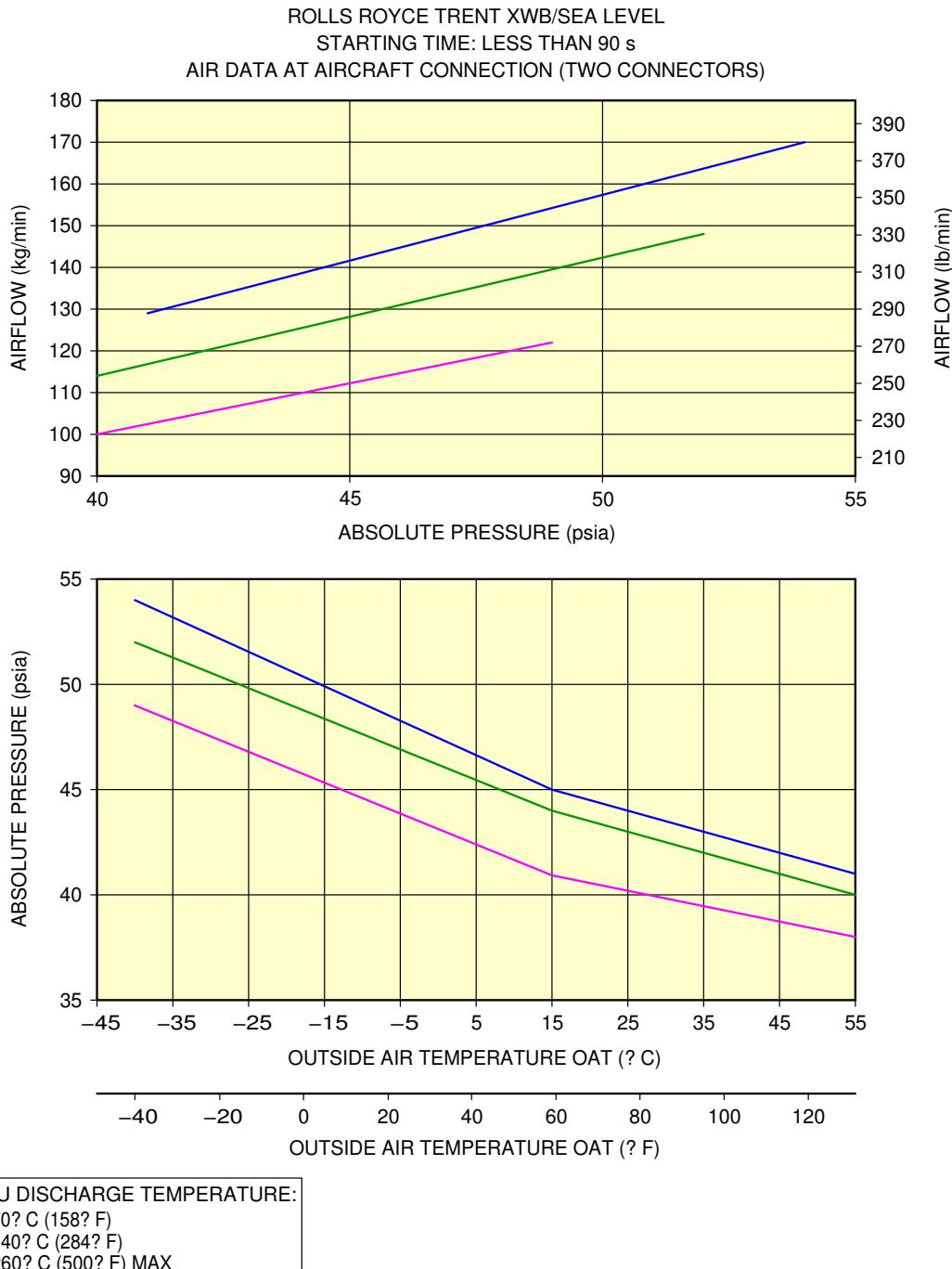
**EXAMPLE:**

FOR AN OAT OF 15°C (59°F) AND AN ASU PROVIDING A DISCHARGE TEMPERATURE OF 200°C (392°F) AT HPGC, INTERPOLATING BETWEEN THE LINES 140°C (284°F) AND 260°C (500°F) RESULTS IN:  
 - A REQUIRED PRESSURE AT HPGC OF 42.5 psia  
 - A REQUIRED AIRFLOW AT HPGC OF 114 kg/min.

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Example for Use of the Charts  
FIGURE-5-5-0-991-001-A01

\*\*ON A/C A350-1000 A350-900



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Engine Starting Pneumatic Requirements  
FIGURE-5-5-0-991-002-A01

5-6-0      **Ground Pneumatic Power Requirements****\*\*ON A/C A350-1000 A350-900**Ground Pneumatic Power Requirements

## 1. General

This section provides the time necessary to cool down or heat up the aircraft cabin to the applicable temperature (dynamic cases with aircraft empty).

| ABBREVIATION | DEFINITION               |
|--------------|--------------------------|
| A/C          | Aircraft                 |
| AHM          | Aircraft Handling Manual |
| GSE          | Ground Service Equipment |
| IFE          | In-Flight Entertainment  |
| LP           | Low Pressure             |
| OAT          | Outside Air Temperature  |
| PCA          | Pre-Conditioned Air      |

- 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 capability of a vapour-compression refrigeration system is frequently expressed on the basis of tons of refrigeration (1 ton  $\equiv$  3.5 kW), which is the rate of heat transfer in the evaporator (or the rate of heat transfer to the air passing through the evaporator). The cooling capability of the equipment (kW) is only indication and is not sufficient by itself to make sure of the performance. The air temperature and flow rate combinations at A/C inlet are the requirements that the equipment must obey to make sure this performance.

- B. The air flow rates and temperature requirements for the GSE are given for the A/C in the configuration "2 LP ducts connected".

NOTE : The maximum air flow is operated by the limitation on pressure at the ground connection.

- C. For temperatures at ground connection below 2 deg.C (35.60 deg.F) (Subfreezing), the ground equipment shall be compliant with the Airbus document "Subfreezing PCA Carts - Compliance Document for Suppliers" (contact Airbus to get 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.

**\*\*ON A/C A350-900****2. Ground Pneumatic Power Requirements**

This section provides the ground pneumatic power requirements for:

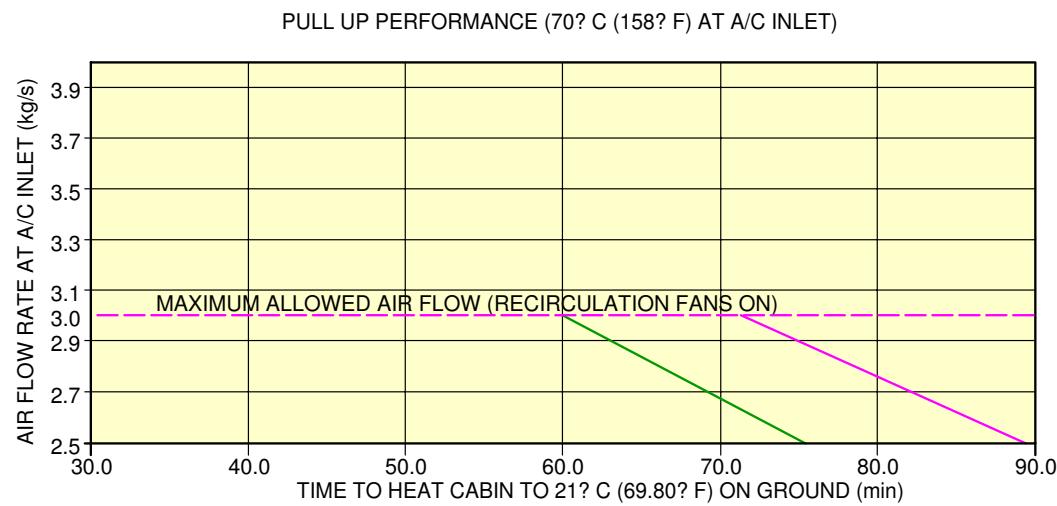
- Heating (pull up) the cabin, initially at OAT, up to 21 deg.C (69.80 deg.F) (FIGURE 5-6-0-991-001-A – Sheet 1).
- Cooling (pull down) the cabin, initially at OAT, down to 27 deg.C (80.60 deg.F) (FIGURE 5-6-0-991-001-A – Sheet 2).

**\*\*ON A/C A350-1000****3. Ground Pneumatic Power Requirements**

This section provides the ground pneumatic power requirements for:

- Heating (pull up) the cabin, initially at OAT, up to 21 deg.C (69.80 deg.F) (FIGURE 5-6-0-991-002-A – Sheet 1).
- Cooling (pull down) the cabin, initially at OAT, down to 27 deg.C (80.60 deg.F) (FIGURE 5-6-0-991-002-A – Sheet 2).

**\*\*ON A/C A350-900**

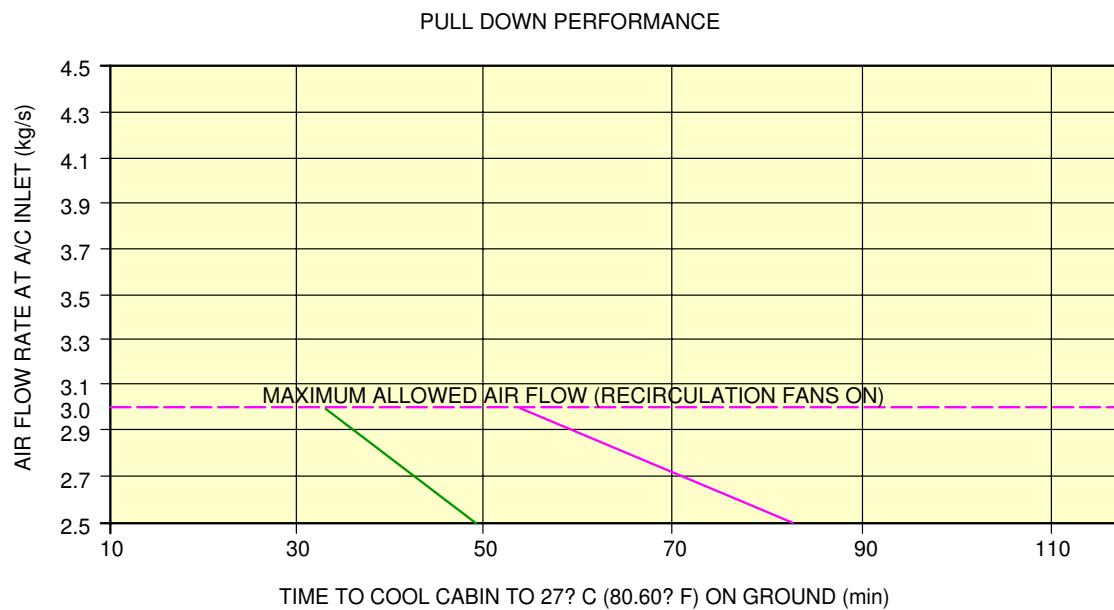


- PU1: OAT ISA -38° C (-100.40° F); A/C INLET 70° C (158° F); A/C EMPTY; IFE OFF; NO SOLAR LOAD; LIGHTS ON; RECIRCULATION FANS ON
- PU2: OAT ISA -45° C (-113° F); A/C INLET 70° C (158° F); A/C EMPTY; IFE OFF; NO SOLAR LOAD; LIGHTS ON; RECIRCULATION FANS ON

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Ground Pneumatic Power Requirements  
 Heating (Sheet 1 of 2)  
 FIGURE-5-6-0-991-001-A01

\*\*ON A/C A350-900

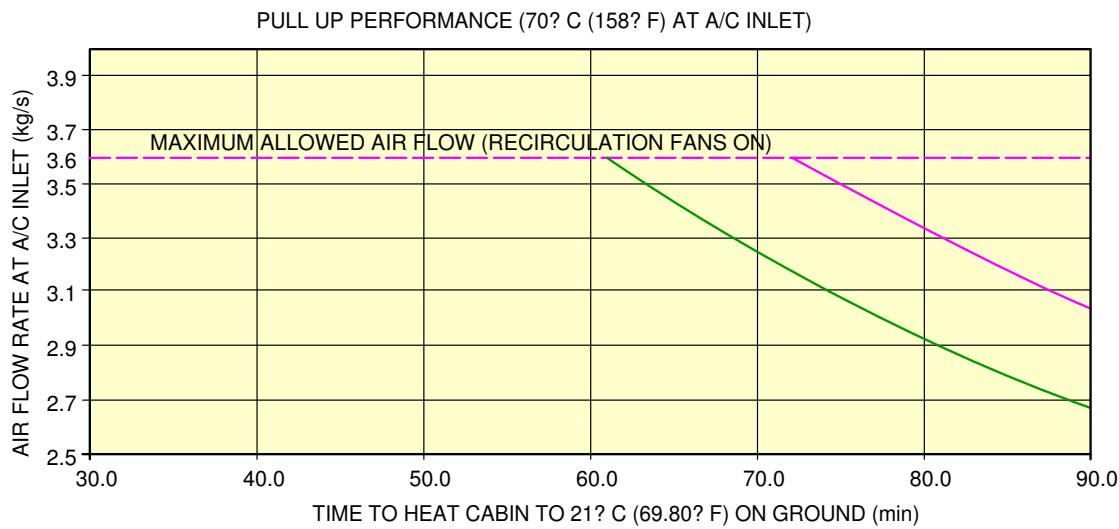


- PD4: OAT ISA 23°C (73.40°F); A/C INLET 2°C (35.60°F); A/C EMPTY; IFE OFF; SOLAR LOAD; LIGHTS ON; RECIRCULATION FANS ON
- PD5: OAT ISA 23°C (73.40°F); A/C INLET -10°C (-50°F); A/C EMPTY; IFE OFF; SOLAR LOAD; LIGHTS ON; RECIRCULATION FANS ON

P\_AC\_050600\_1\_0010001\_02\_03

Ground Pneumatic Power Requirements  
 Cooling (Sheet 2 of 2)  
 FIGURE-5-6-0-991-001-A01

\*\*ON A/C A350-1000

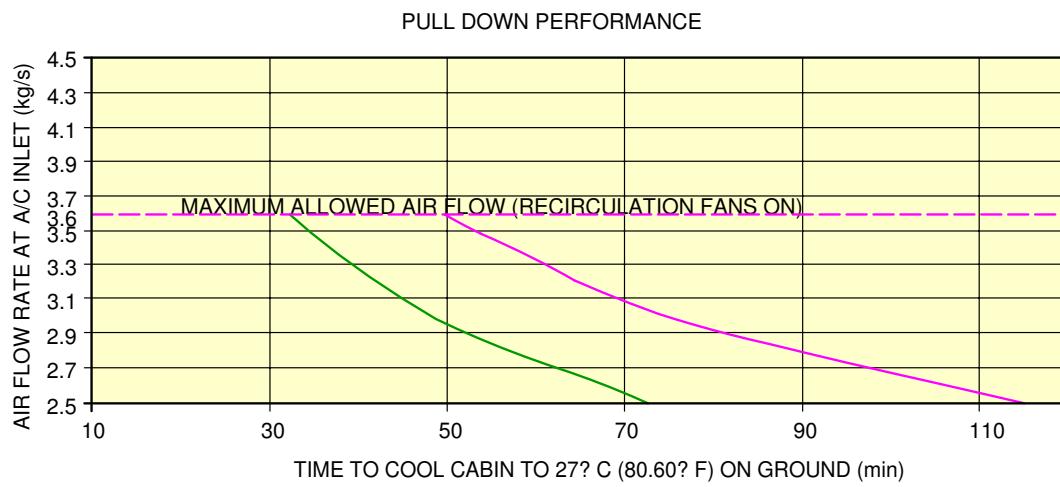


- PU1: OAT ISA -38° C (-100.40° F); A/C INLET 70° C (158° F); A/C EMPTY; IFE OFF; NO SOLAR LOAD; LIGHTS ON; RECIRCULATION FANS ON
- PU2: OAT ISA -45° C (-113° F); A/C INLET 70° C (158° F); A/C EMPTY; IFE OFF; NO SOLAR LOAD; LIGHTS ON; RECIRCULATION FANS ON

P\_AC\_050600\_1\_0020001\_01\_01

Ground Pneumatic Power Requirements  
 Heating (Sheet 1 of 2)  
 FIGURE-5-6-0-991-002-A01

\*\*ON A/C A350-1000



- PD4: OAT ISA 23° C (73.40° F); A/C INLET 2° C (35.60° F); A/C EMPTY; IFE OFF; SOLAR LOAD; LIGHTS ON; RECIRCULATION FANS ON
- PD4A: OAT ISA 23° C (73.40° F); A/C INLET -10° C (-50° F); A/C EMPTY; IFE OFF; SOLAR LOAD; LIGHTS ON; RECIRCULATION FANS ON

P\_AC\_050600\_1\_0020001\_02\_01

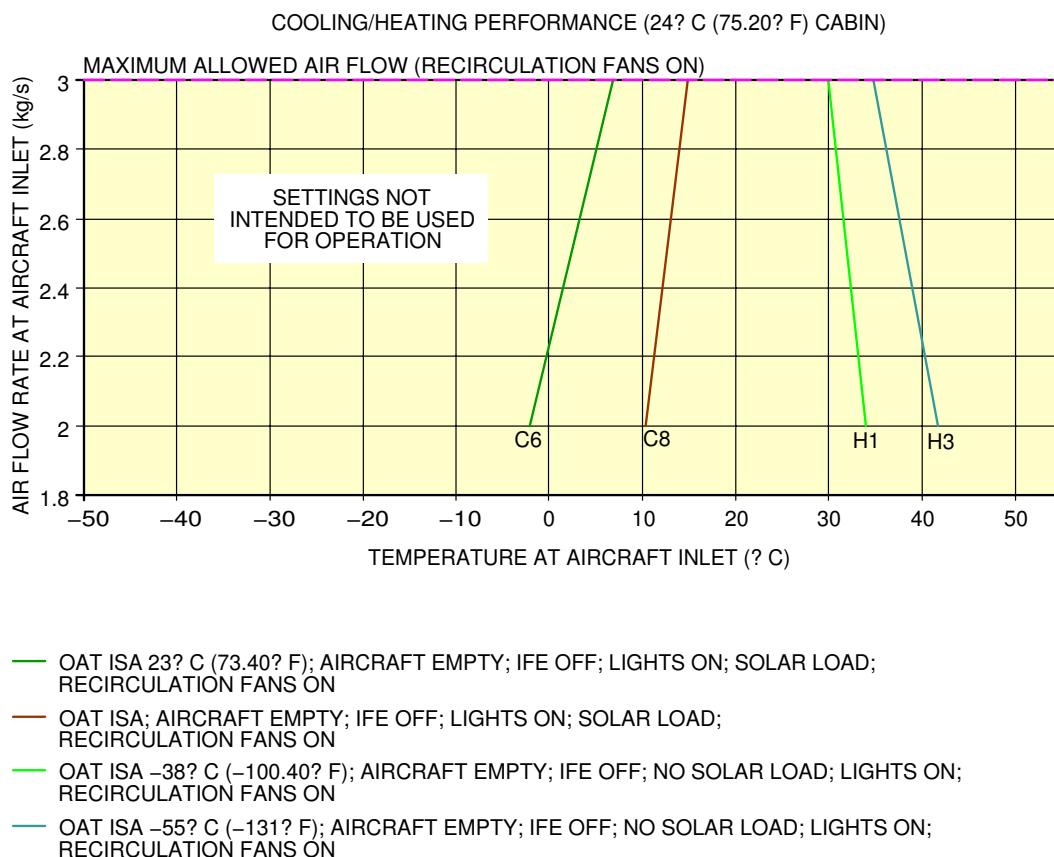
Ground Pneumatic Power Requirements  
 Cooling (Sheet 2 of 2)  
 FIGURE-5-6-0-991-002-A01

## 5-7-0      Preconditioned Airflow Requirements

**\*\*ON A/C A350-1000 A350-900**Preconditioned Airflow Requirements

1. This section gives the preconditioned airflow rate and temperature necessary to keep the cabin temperature at 24 deg.C (75.20 deg.F).  
These settings must not be used for operation (they are not alternatives for the settings given in the AMM). They are based on theoretical simulations and give the picture of a real steady state.  
The function of the air conditioning (cooling) on the ground (described in the AMM) is to keep the cabin temperature below 24 deg.C (75.20 deg.F) during the boarding-up and until the dispatch of the aircraft (thus it is not a steady state).

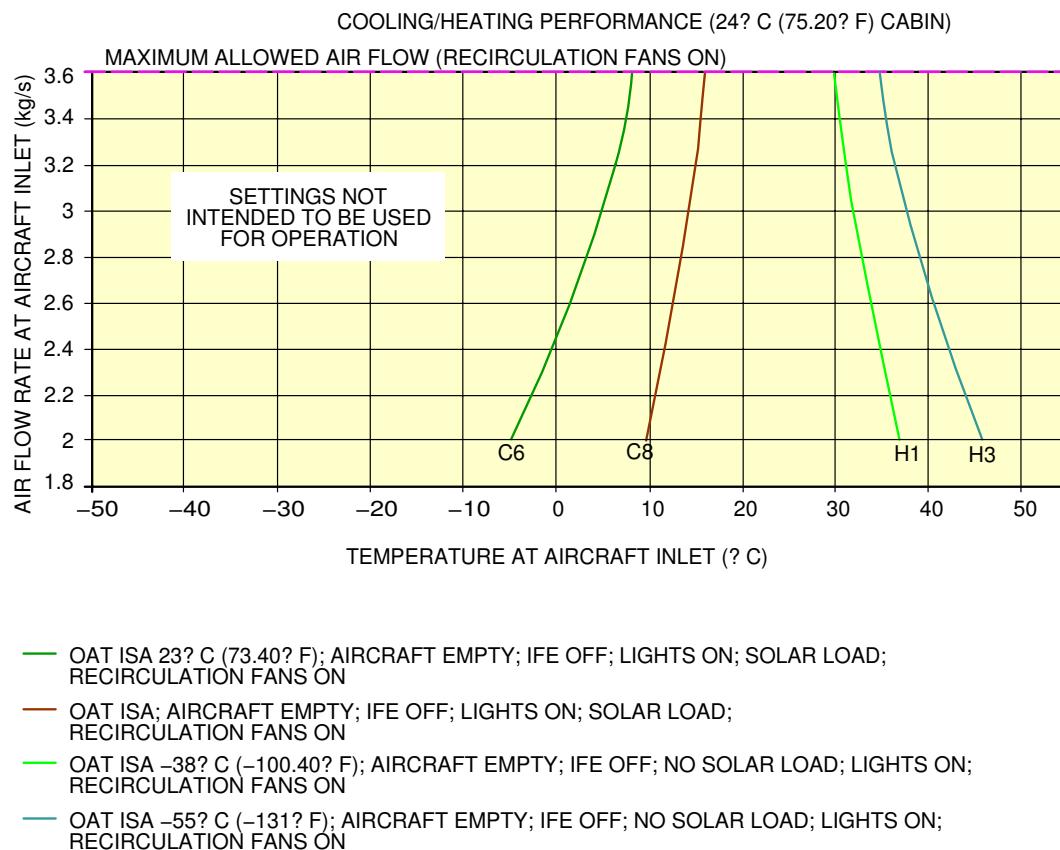
\*\*ON A/C A350-900



P\_AC\_050700\_1\_0010001\_01\_04

Preconditioned Airflow Requirements  
FIGURE-5-7-0-991-001-A01

\*\*ON A/C A350-1000



P\_AC\_050700\_1\_0020002\_01\_01

Preconditioned Airflow Requirements  
FIGURE-5-7-0-991-002-B01

5-8-0      **Ground Towing Requirements****\*\*ON A/C A350-1000 A350-900**Ground Towing Requirements

1. This section provides information on aircraft towing.

The A350 is designed with means for conventional or towbarless towing. Information/procedures can be found in chapter 9 of the Aircraft Maintenance Manual.

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.

It is possible to tow or push the aircraft, at maximum ramp weight with engines at zero or up to idle thrust, using a towbar attached to the NLG.

One towbar fitting is installed at the front of the leg (optional towing fitting for towing from the rear of the NLG available).

The main landing gears have attachment points for towing or debogging (for details, ARM 7).

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 A350 engine type with the highest idle thrust. The chart is therefore valid for all A350 models.

**2. Towbar design guidelines**

The A350 towbar requirements are identical to the towbar requirements of the long range aircraft.

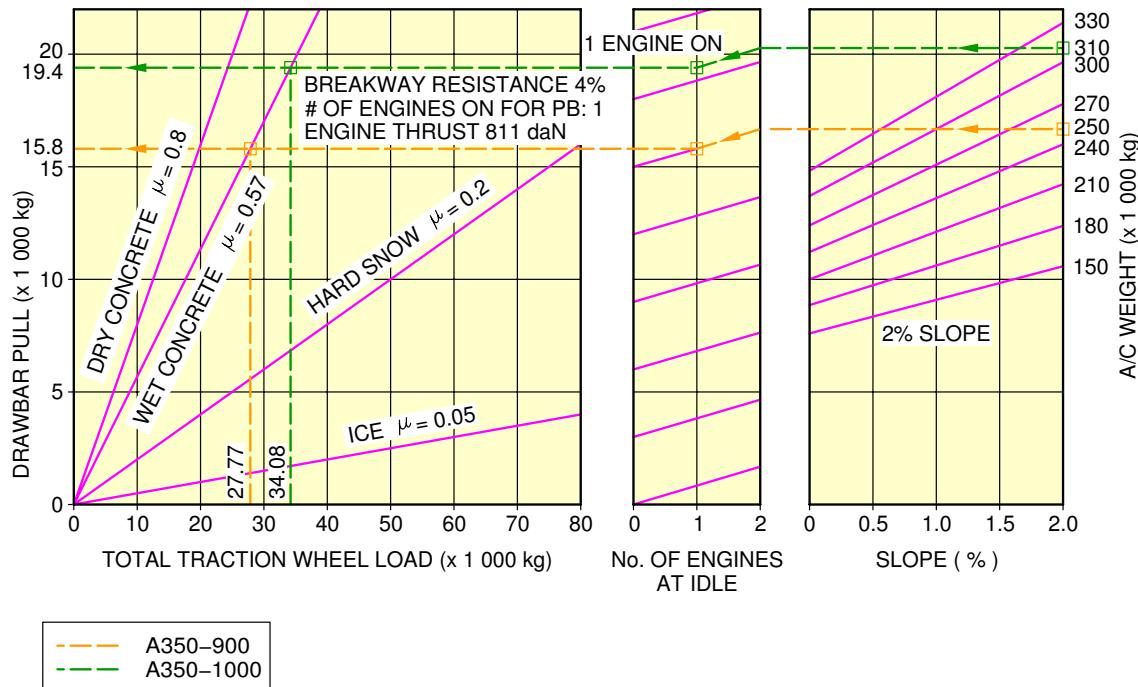
- ISO 8267-1, "Aircraft - Towbar Attachment Fitting - Interface Requirements - Part 1: Main Line Aircraft",
- ISO 9667, "Aircraft Ground Support Equipment - Towbars",
- IATA Airport Handling Manual AHM 958, "Functional Specification for an Aircraft Towbar".

A conventional type towbar is required which should be equipped with a damping system (to protect the NLG against jerks) and with towing shear pins:

- A traction shear pin calibrated at 28 620 daN (64 340 lbf),
- A torsion pin calibrated at 3 130 m.daN (277 028 lbf.in).

The towing head is designed according to ISO 8267-1, cat. III.

\*\*ON A/C A350-1000 A350-900



EXAMPLE HOW TO DETERMINE THE MASS REQUIREMENT TO TOW A A350-900 AT 250 000 kg, AT 2% SLOPE, 1 ENGINE AT IDLE AND FOR WET TARMAC CONDITIONS:

- ON THE RIGHT HAND SIDE OF THE GRAPH, CHOOSE THE RELEVANT AIRCRAFT WEIGHT (250 000 kg),
  - FROM THIS POINT DRAW A PARALLEL LINE TO THE REQUIRED SLOPE PERCENTAGE (2%),
  - 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 NUMBER 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 (15 800 kg),
  - SEARCH THE INTERSECTION WITH THE "WET CONCRETE" LINE.
- THE OBTAINED X-COORDINATE IS THE TOTAL TRACTION WHEEL LOAD (27 770 kg).

EXAMPLE HOW TO DETERMINE THE MASS REQUIREMENT TO TOW A A350-1000 AT 310 000 kg, AT 2% SLOPE, 1 ENGINE AT IDLE AND FOR WET TARMAC CONDITIONS:

- ON THE RIGHT HAND SIDE OF THE GRAPH, CHOOSE THE RELEVANT AIRCRAFT WEIGHT (310 000 kg),
  - FROM THIS POINT DRAW A PARALLEL LINE TO THE REQUIRED SLOPE PERCENTAGE (2%),
  - 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 NUMBER 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 (19 400 kg),
  - SEARCH THE INTERSECTION WITH THE "WET CONCRETE" LINE.
- THE OBTAINED X-COORDINATE IS THE TOTAL TRACTION WHEEL LOAD (34 080 kg).

**NOTE:**

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

P\_AC\_050800\_1\_0010001\_01\_03

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

## 5-9-0 De-Icing and External Cleaning

\*\*ON A/C A350-1000 A350-900

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 17 m (56 ft.).

## 2. De-Icing

| AIRCRAFT TYPE | Wing Top Surface<br>(Both Sides)                | Wingtip Devices<br>(Both Inside and<br>Outside Surfaces)<br>(Both Sides) | HTP Top Surface<br>(Both Sides)              | VTP<br>(Both Sides)                             |
|---------------|---|--|--|---|
| A350-900      | 354 m <sup>2</sup><br>(3 810 ft. <sup>2</sup> ) | 25 m <sup>2</sup><br>(269 ft. <sup>2</sup> )                             | 72 m <sup>2</sup><br>(775 ft. <sup>2</sup> ) | 102 m <sup>2</sup><br>(1 098 ft. <sup>2</sup> ) |
| A350-1000     | 370 m <sup>2</sup><br>(3 983 ft. <sup>2</sup> ) | 30 m <sup>2</sup><br>(323 ft. <sup>2</sup> )                             | 72 m <sup>2</sup><br>(775 ft. <sup>2</sup> ) | 102 m <sup>2</sup><br>(1 098 ft. <sup>2</sup> ) |

| AIRCRAFT TYPE | Fuselage Top Surface<br>(Top Third - 120° Arc)  | Nacelle and Pylon<br>(Top Third - 120° Arc)<br>(All Engines) | Total De-Iced Area                                 |
|---------------|---|--|--|
| A350-900      | 357 m <sup>2</sup><br>(3 843 ft. <sup>2</sup> ) | 56 m <sup>2</sup><br>(603 ft. <sup>2</sup> )                 | 966 m <sup>2</sup><br>(10 398 ft. <sup>2</sup> )   |
| A350-1000     | 395 m <sup>2</sup><br>(4 252 ft. <sup>2</sup> ) | 56 m <sup>2</sup><br>(603 ft. <sup>2</sup> )                 | 1 024 m <sup>2</sup><br>(11 022 ft. <sup>2</sup> ) |

NOTE : Dimensions are approximate.

## 3. External Cleaning

| AIRCRAFT TYPE | Wing Top Surface<br>(Both Sides)                | Wing Lower Surface<br>(Including Flap<br>Track Fairing)<br>(Both Sides) | Wingtip Devices<br>(Both Inside<br>and<br>Outside<br>Surfaces)<br>(Both Sides) | HTP Top Surface<br>(Both Sides)              | HTP Lower Surface<br>(Both Sides)            |
|---------------|---|---|--|--|--|
| A350-900      | 354 m <sup>2</sup><br>(3 810 ft. <sup>2</sup> ) | 384 m <sup>2</sup><br>(4 133 ft. <sup>2</sup> )                         | 25 m <sup>2</sup><br>(269 ft. <sup>2</sup> )                                   | 72 m <sup>2</sup><br>(775 ft. <sup>2</sup> ) | 72 m <sup>2</sup><br>(775 ft. <sup>2</sup> ) |
| A350-1000     | 370 m <sup>2</sup><br>(3 983 ft. <sup>2</sup> ) | 399 m <sup>2</sup><br>(4 295 ft. <sup>2</sup> )                         | 30 m <sup>2</sup><br>(323 ft. <sup>2</sup> )                                   | 72 m <sup>2</sup><br>(775 ft. <sup>2</sup> ) | 72 m <sup>2</sup><br>(775 ft. <sup>2</sup> ) |

| AIRCRAFT TYPE | VTP<br>(Both Sides)                             | Fuselage and<br>Belly Fairing                      | Nacelle and Pylon<br>(All Engines)              | Total Cleaned Area                                 |
|---------------|---|--|---|--|
| A350-900      | 102 m <sup>2</sup><br>(1 098 ft. <sup>2</sup> ) | 1 073 m <sup>2</sup><br>(11 550 ft. <sup>2</sup> ) | 166 m <sup>2</sup><br>(1 787 ft. <sup>2</sup> ) | 2 242 m <sup>2</sup><br>(24 133 ft. <sup>2</sup> ) |
| A350-1000     | 102 m <sup>2</sup><br>(1 098 ft. <sup>2</sup> ) | 1 187 m <sup>2</sup><br>(12 777 ft. <sup>2</sup> ) | 166 m <sup>2</sup><br>(1 787 ft. <sup>2</sup> ) | 2 392 m <sup>2</sup><br>(25 747 ft. <sup>2</sup> ) |

NOTE : Dimensions are approximate.

## OPERATING CONDITIONS

### 6-1-0      Engine Exhaust Velocities and Temperatures

\*\*ON A/C A350-1000 A350-900

#### Engine Exhaust Velocities and Temperatures

##### 1. General

This section provides the estimated engine exhaust-efflux velocity and temperature contours for Ground Idle, Breakaway 11% MTO, Breakaway 22% MTO and Maximum Take-Off (MTO) conditions for the A350 engines.

The contours are available for the Rolls-Royce Trent XWB-84 and Trent XWB-97 engines.

The Maximum Take-Off data are presented at the maximum thrust rating.

The Breakaway data are presented at a rating that corresponds to the minimum thrust level necessary to start the movement of the A350 at its maximum ramp weight, from a static position or when on an uphill surface with a slope of 1.5%. Breakaway thrust corresponds to 11% MTO when applied on both engines and 22% MTO when applied on a single engine (Idle thrust on the other engine).

The Idle data are directly provided by the engine manufacturer.

In the charts, the longitudinal distances are measured from the inboard engine core-nozzle exit section. The lateral distances are measured from the aircraft fuselage centerline.

The estimated efflux data are shown at ISA +15K (+15 °C), Sea Level Static and no headwind conditions.

The analysis assumes that the core and the bypass streams are fully mixed by the nozzle exit plane. The effects of on-wing installation or ground proximity are not taken into account and the ambient air is assumed to be still.

The velocity contours are presented at 50 ft/s (15 m/s), 100 ft/s (30 m/s) and 150 ft/s (46 m/s).

The temperature contours are shown at ambient temperature +10K (+10 °C), ambient temperature +20K (+20 °C) and ambient temperature +30K (+30 °C).

In the case of the velocity contours for the Maximum Take-Off operating condition, there is some coalescence of the jet plumes from the port and starboard engines, hence the contours are presented with both a plan view and a side view for twin-engine operation.

An axisymmetric view is also provided for this case, to be applied only for single engine operation. For the other figures, there is no interference between the two engine plumes in the operating conditions studied and hence the efflux can be adequately described by the axisymmetric contours of a single plume.

## 6-1-1      Engine Exhaust Velocities Contours - Ground Idle Power

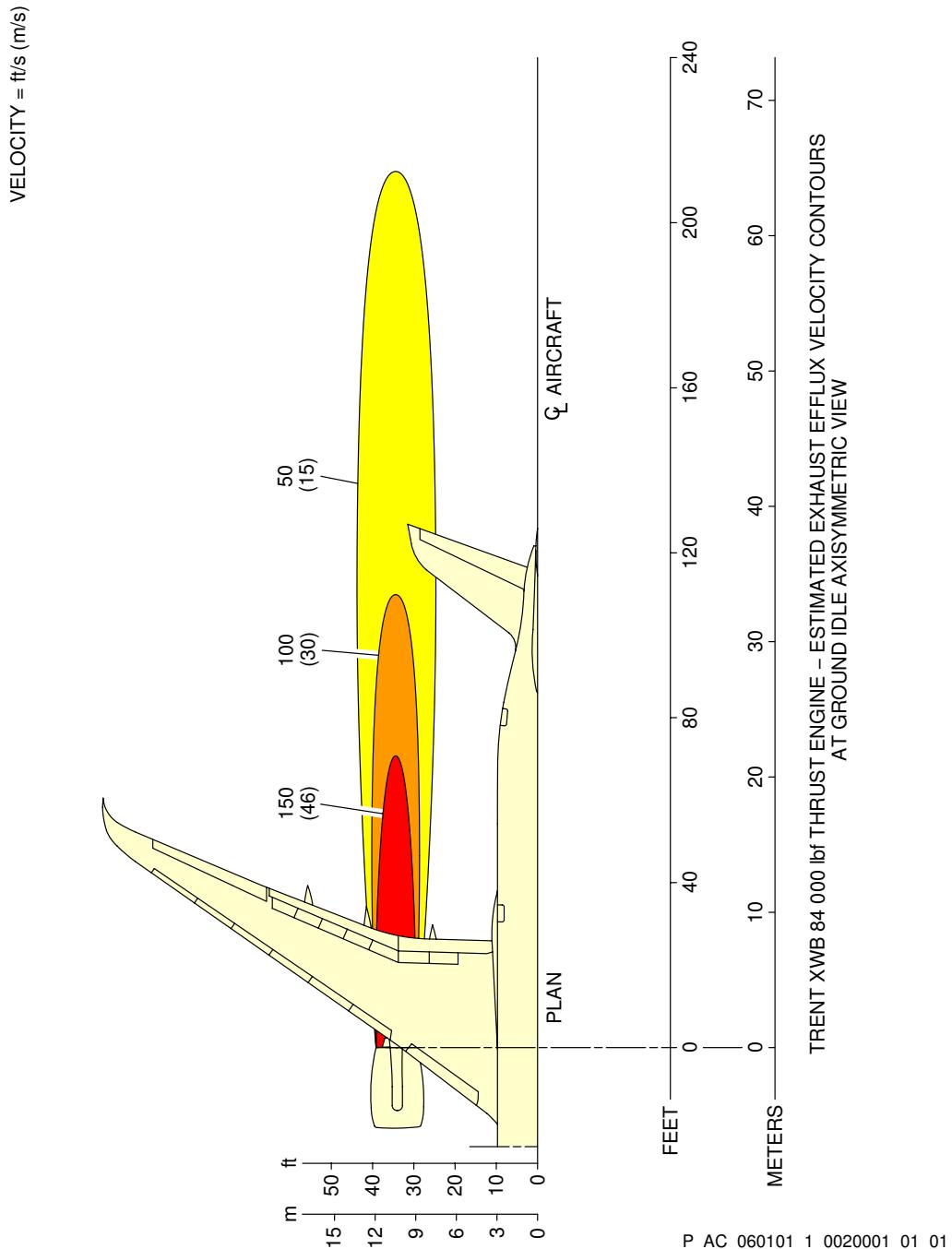
\*\*ON A/C A350-1000 A350-900

Engine Exhaust Velocities Contours - Ground Idle Power

1. This section provides engine exhaust velocities contours at ground idle power.

\*\*ON A/C A350-900

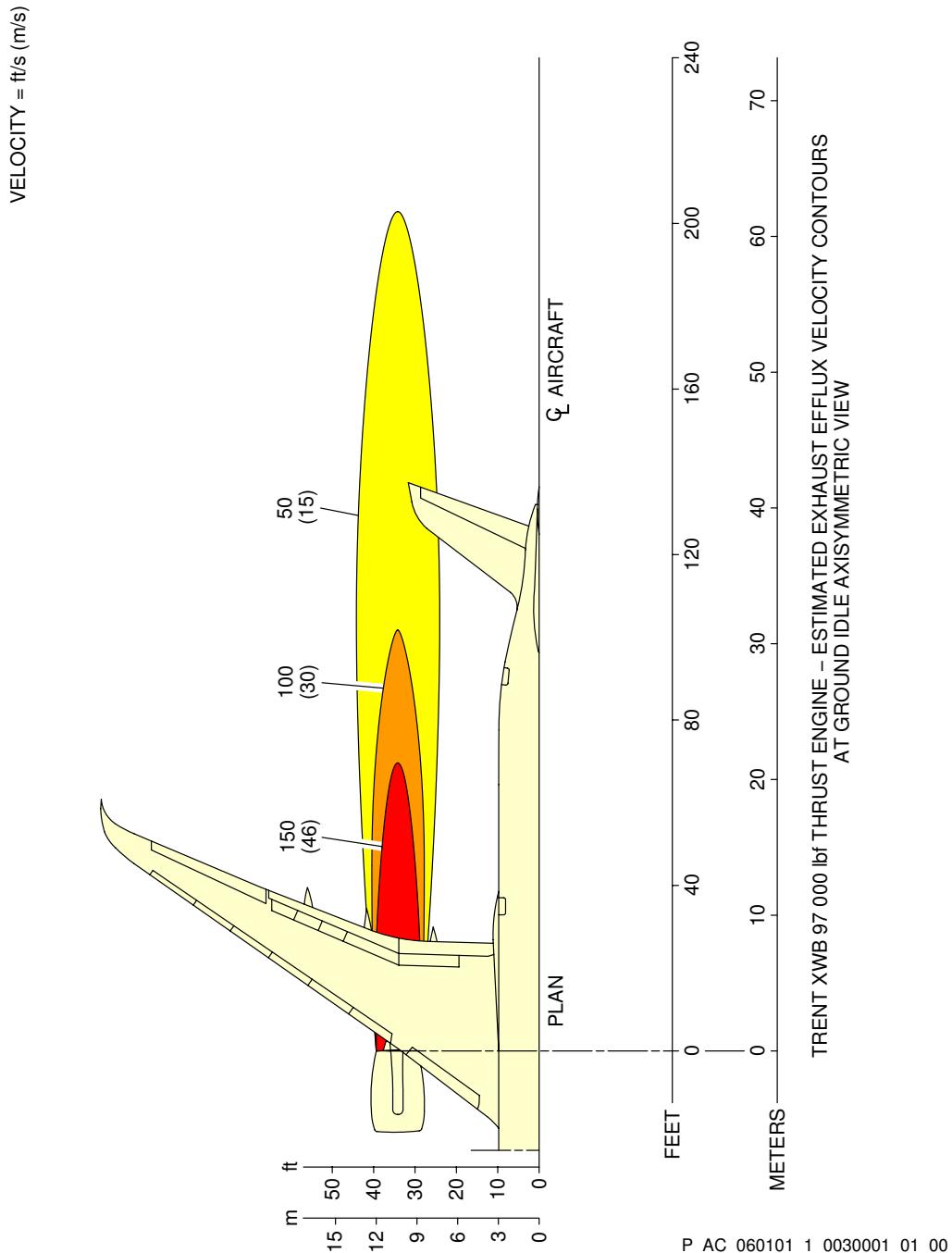
ICN-TRENTXWB-A-710000-R-K0680-02140-A-001-01



Ground Idle Power - TRENT XWB-84 Engine  
FIGURE-6-1-1-991-002-A01

\*\*ON A/C A350-1000

ICN-TRENTXWB-A-710000-R-K0680-02150-A-001-01



Ground Idle Power - TRENT XWB-97 Engine  
FIGURE-6-1-1-991-003-A01



**6-1-2      Engine Exhaust Temperatures Contours - Ground Idle Power**

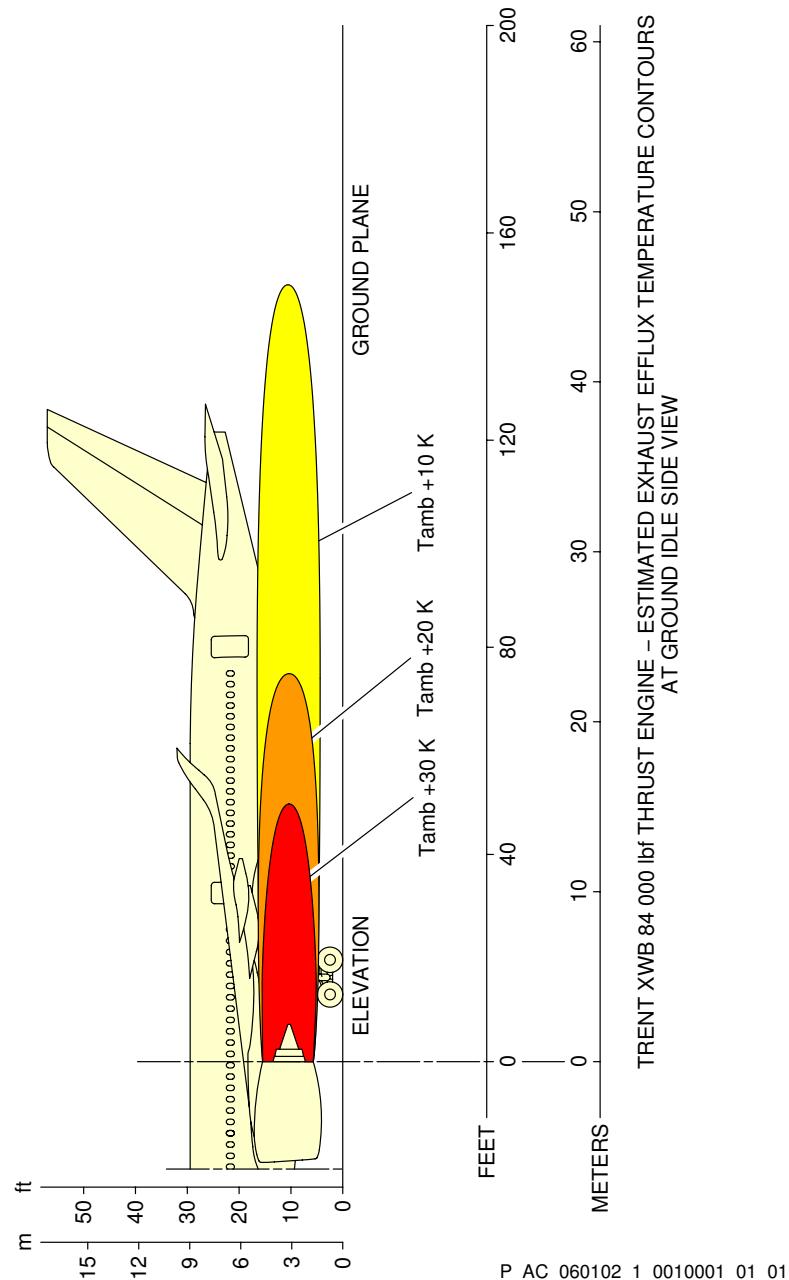
**\*\*ON A/C A350-1000 A350-900**

Engine Exhaust Temperatures Contours - Ground Idle Power

1. This section provides engine exhaust temperatures contours at ground idle power.

**\*\*ON A/C A350-900**

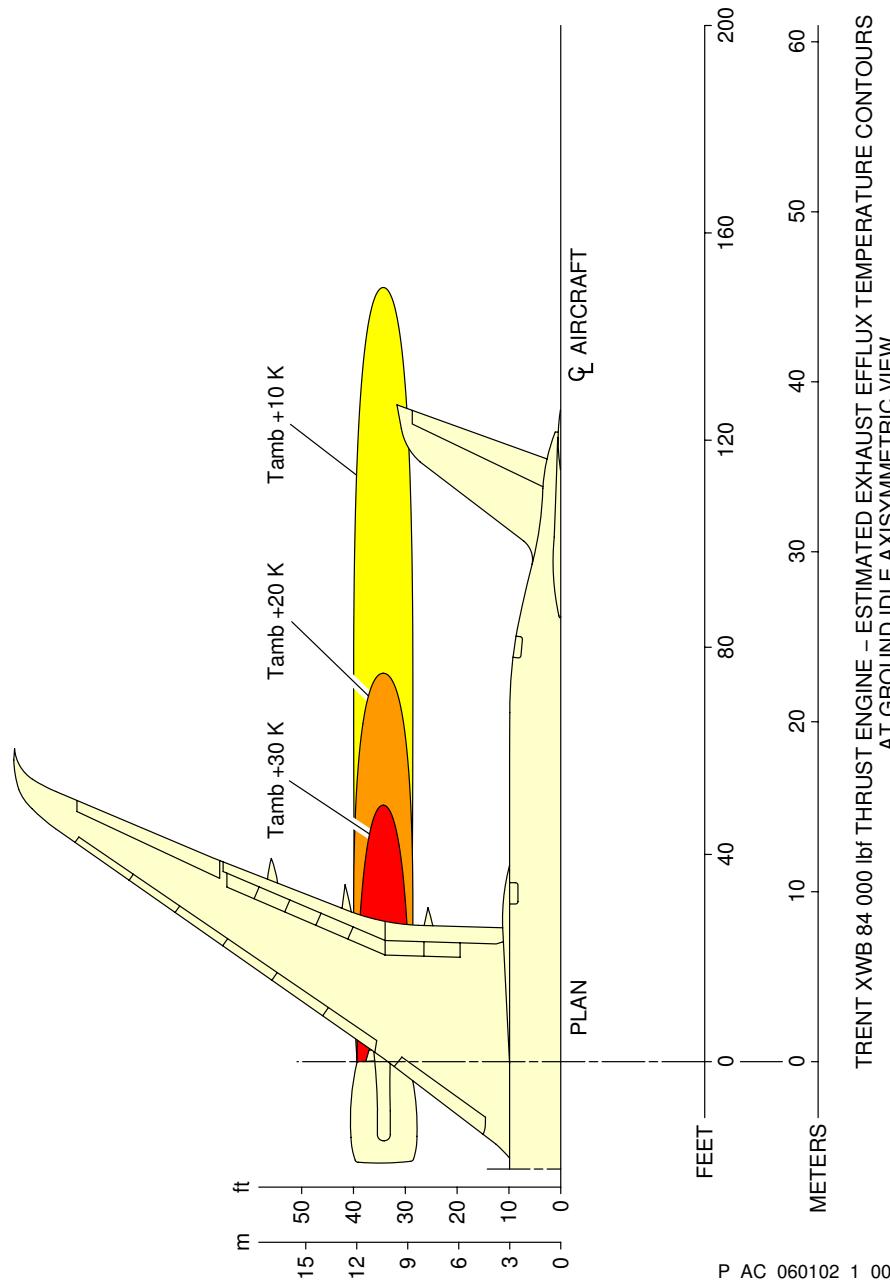
ICN-TRENTXWB-A-710000-R-K0680-02294-A-001-01



Ground Idle Power - TRENT XWB-84 Engine  
(Sheet 1 of 2)  
FIGURE-6-1-2-991-001-A01

\*\*ON A/C A350-900

ICN-TRENTXWB-A-710000-R-K0680-02141-A-001-01



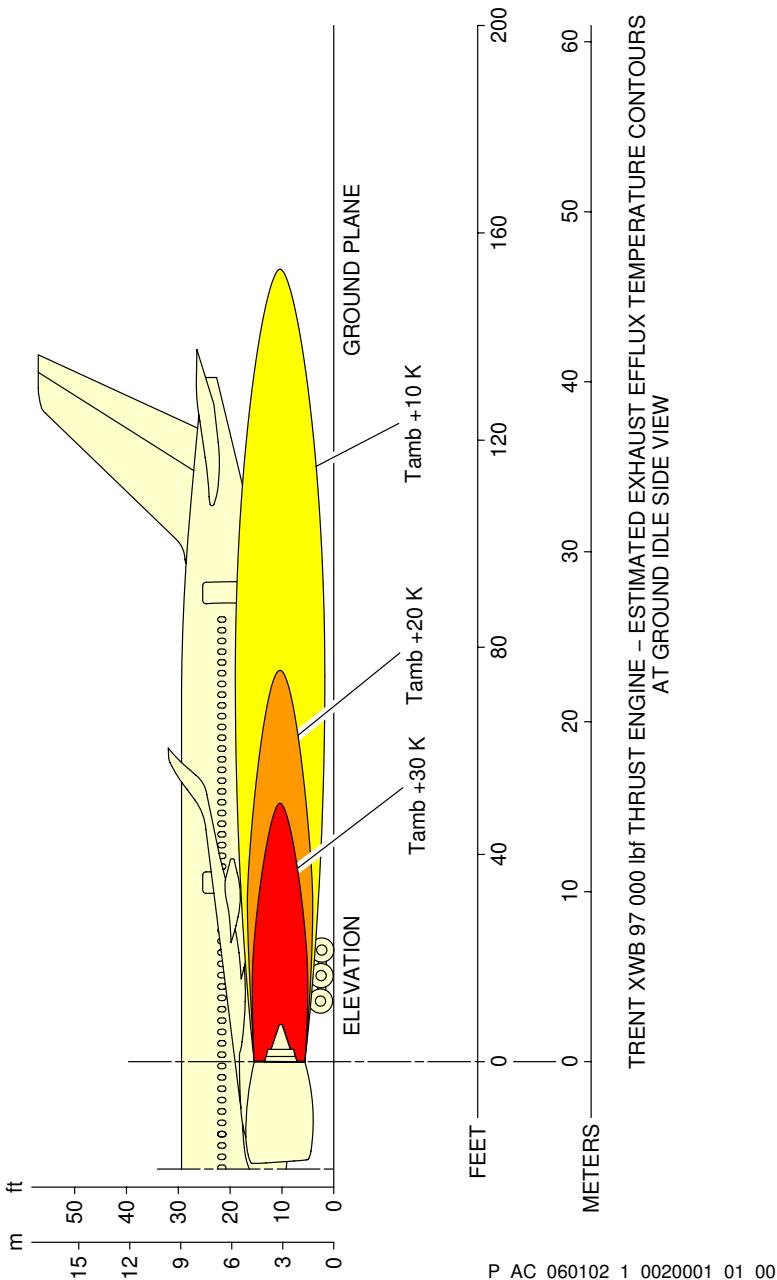
Ground Idle Power - TRENT XWB-84 Engine

(Sheet 2 of 2)

FIGURE-6-1-2-991-001-A01

**\*\*ON A/C A350-1000**

ICN-TRENTXWB-A-710000-R-K0680-02302-A-001-01



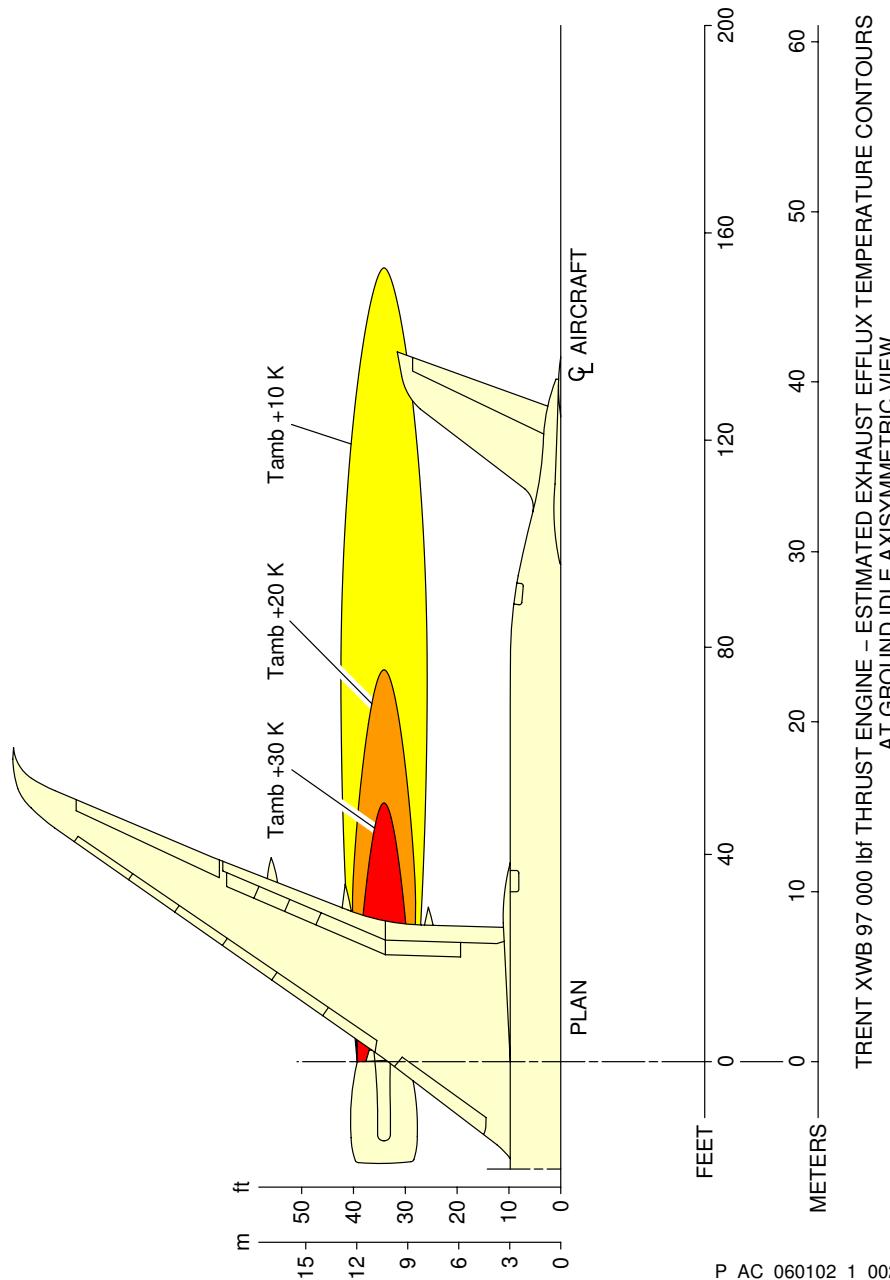
Ground Idle Power - TRENT XWB-97 Engine

(Sheet 1 of 2)

FIGURE-6-1-2-991-002-A01

\*\*ON A/C A350-1000

ICN-TRENTXWB-A-710000-R-K0680-02151-A-001-01



Ground Idle Power - TRENT XWB-97 Engine

(Sheet 2 of 2)

FIGURE-6-1-2-991-002-A01

## 6-1-3      Engine Exhaust Velocities Contours - Breakaway Power

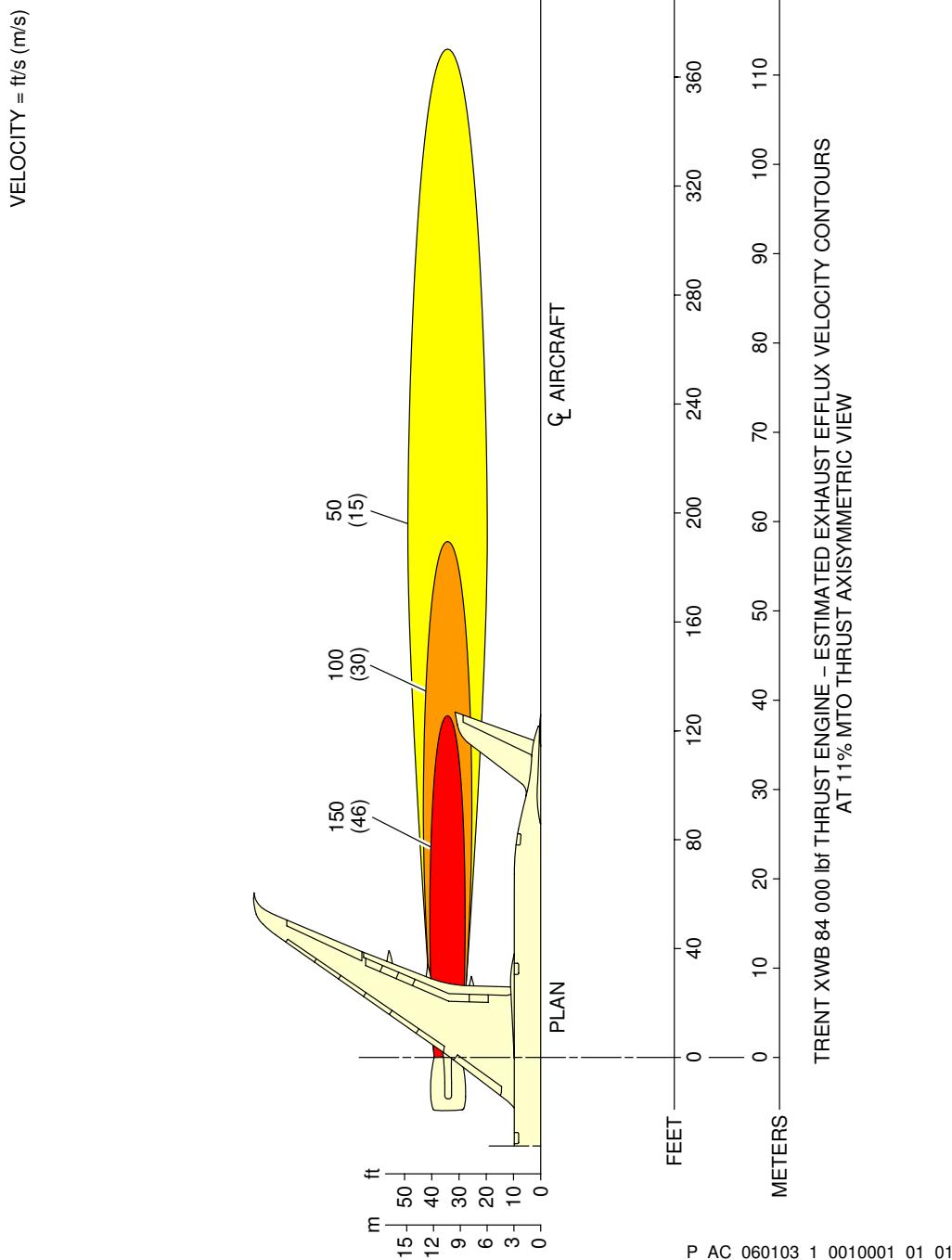
\*\*ON A/C A350-1000 A350-900

Engine Exhaust Velocities Contours - Breakaway Power

1. This section provides engine exhaust velocities contours at breakaway power.

\*\*ON A/C A350-900

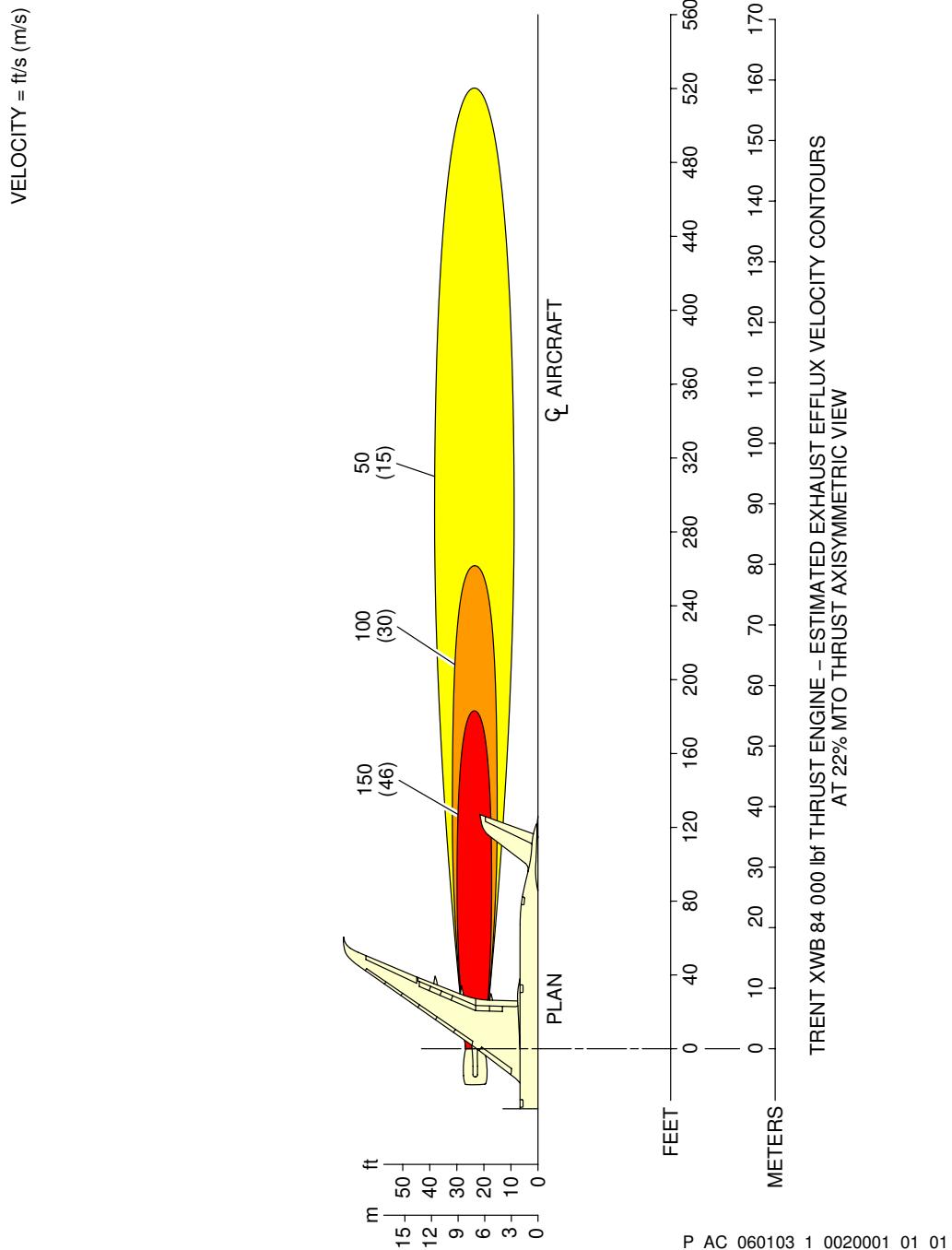
ICN-TRENTXWB-A-710000-R-K0680-02138-A-001-01



Breakaway Power (11% MTO Thrust) - TRENT XWB-84 Engine  
FIGURE-6-1-3-991-001-A01

\*\*ON A/C A350-900

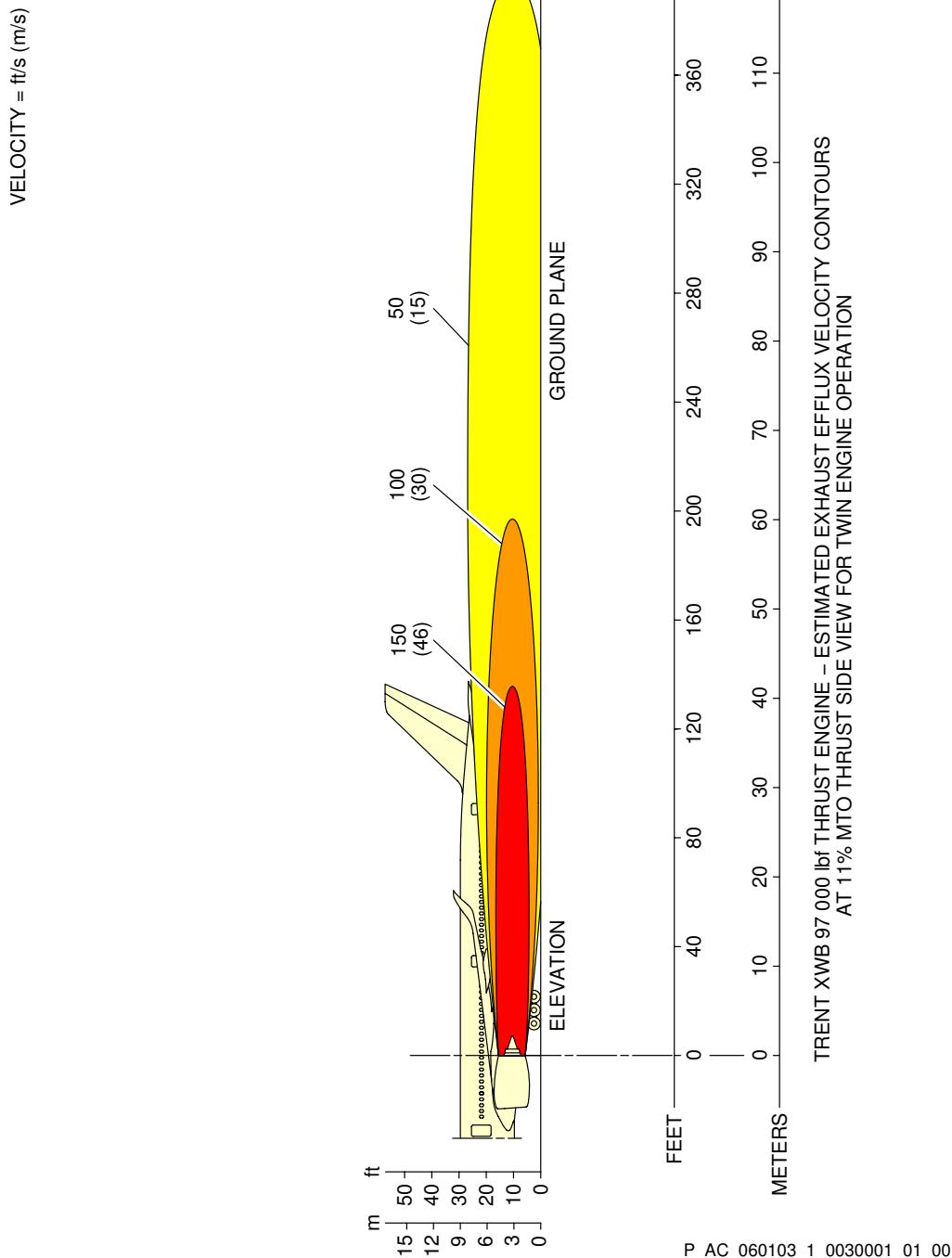
ICN-TRENTXWB-A-710000-R-K0680-02136-A-001-01



Breakaway Power (22% MTO Thrust) - TRENT XWB-84 Engine  
FIGURE-6-1-3-991-002-A01

\*\*ON A/C A350-1000

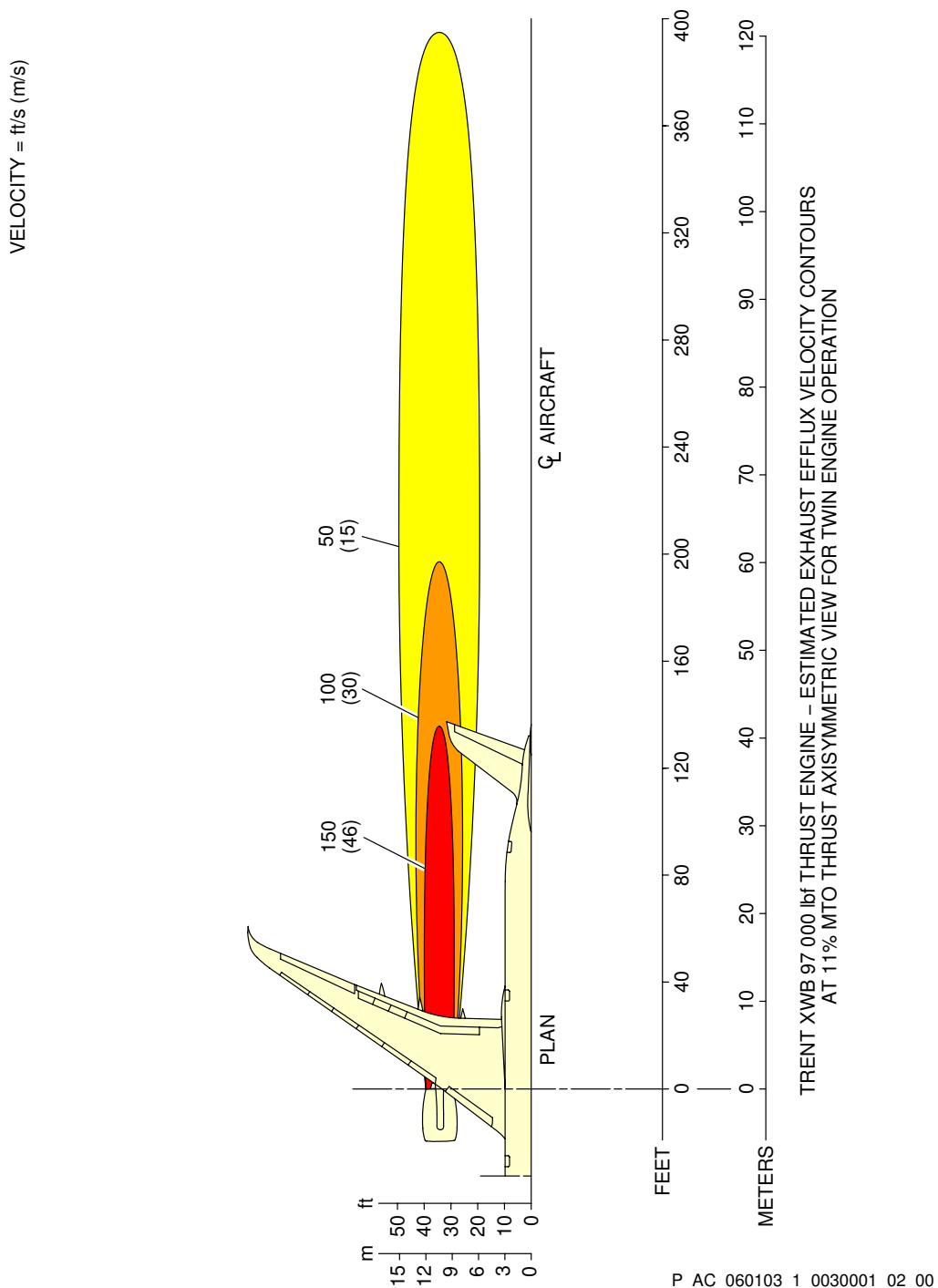
ICN-TRENTXWB-A-710000-R-K0680-02299-A-001-01



Breakaway Power (11% MTO Thrust) - TRENT XWB-97 Engine  
(Sheet 1 of 2)  
FIGURE-6-1-3-991-003-A01

\*\*ON A/C A350-1000

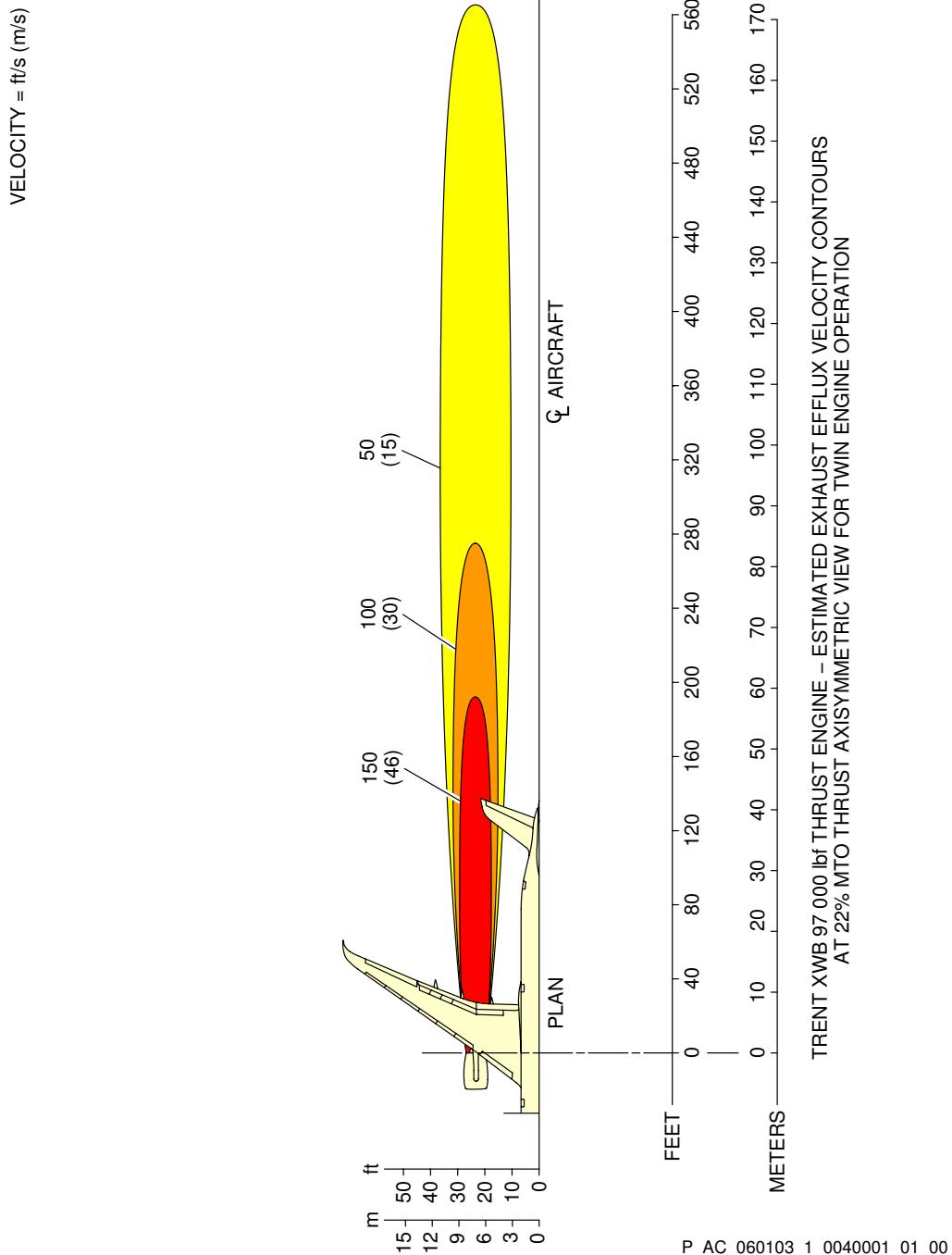
ICN-TRENTXWB-A-710000-R-K0680-02148-A-001-01



Breakaway Power (11% MTO Thrust) - TRENT XWB-97 Engine  
(Sheet 2 of 2)  
FIGURE-6-1-3-991-003-A01

\*\*ON A/C A350-1000

ICN-TRENTXWB-A-710000-R-K0680-02146-A-001-01



Breakaway Power (22% MTO Thrust) - TRENT XWB-97 Engine  
FIGURE-6-1-3-991-004-A01



**6-1-4      Engine Exhaust Temperatures Contours - Breakaway Power**

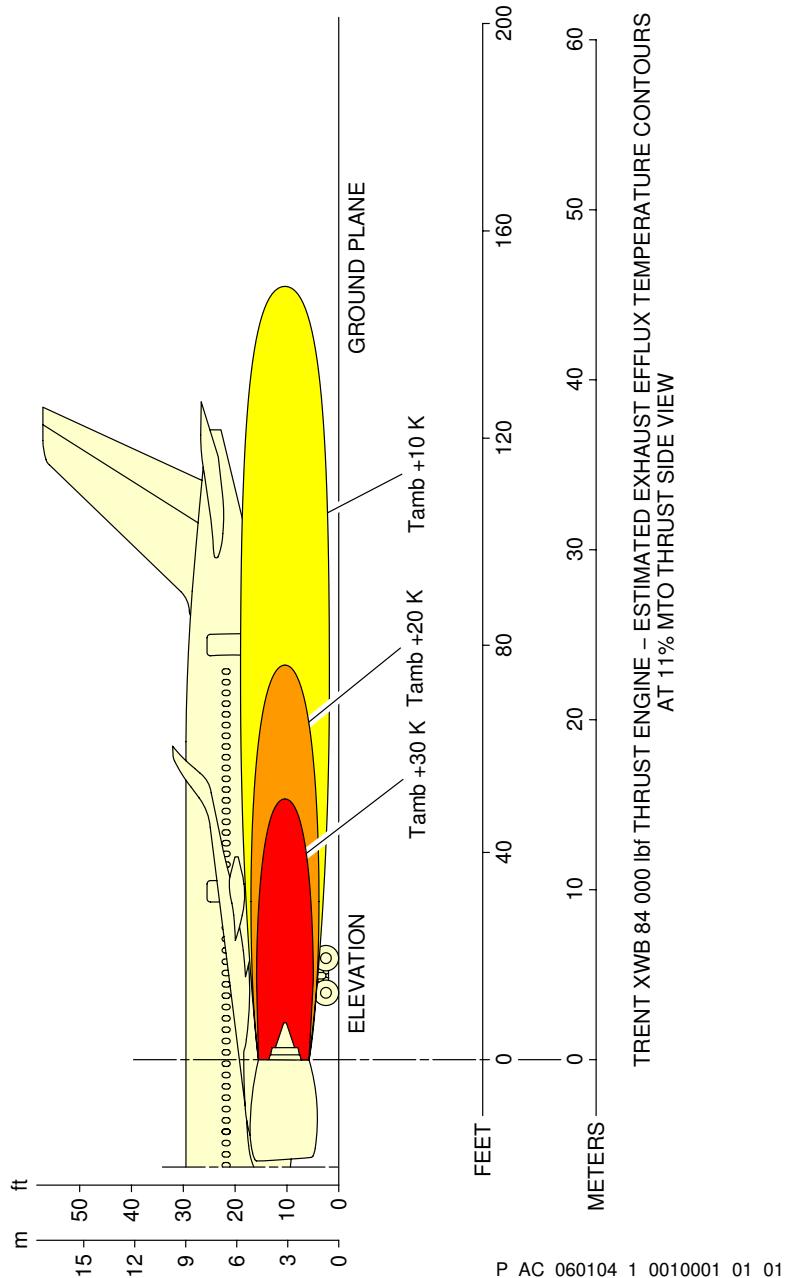
**\*\*ON A/C A350-1000 A350-900**

Engine Exhaust Temperatures Contours - Breakaway Power

1. This section provides engine exhaust temperatures contours at breakaway power.

\*\*ON A/C A350-900

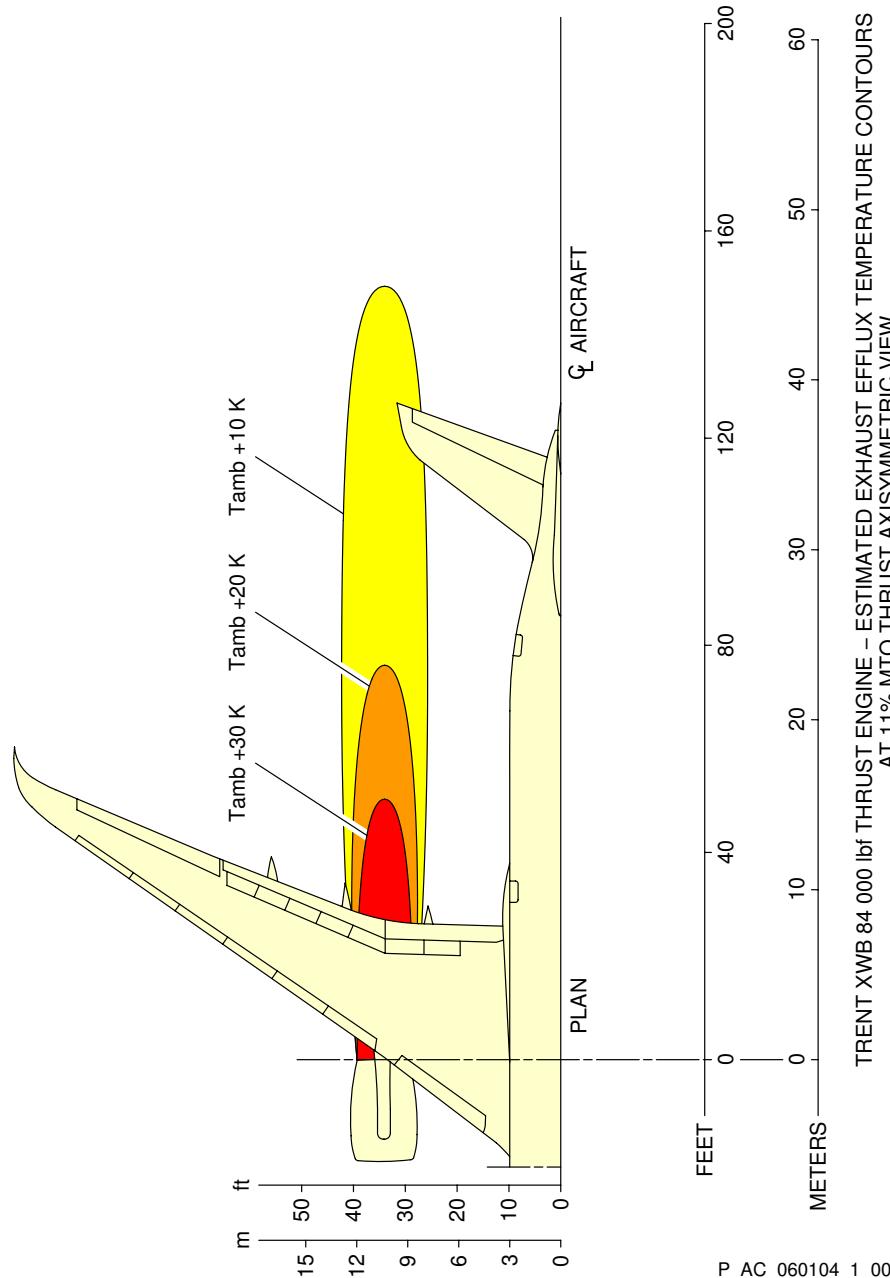
ICN-TRENTXWB-A-710000-R-K0680-02292-A-001-01



Breakaway Power (11% MTO Thrust) - TRENT XWB-84 Engine  
 (Sheet 1 of 2)  
 FIGURE-6-1-4-991-001-A01

\*\*ON A/C A350-900

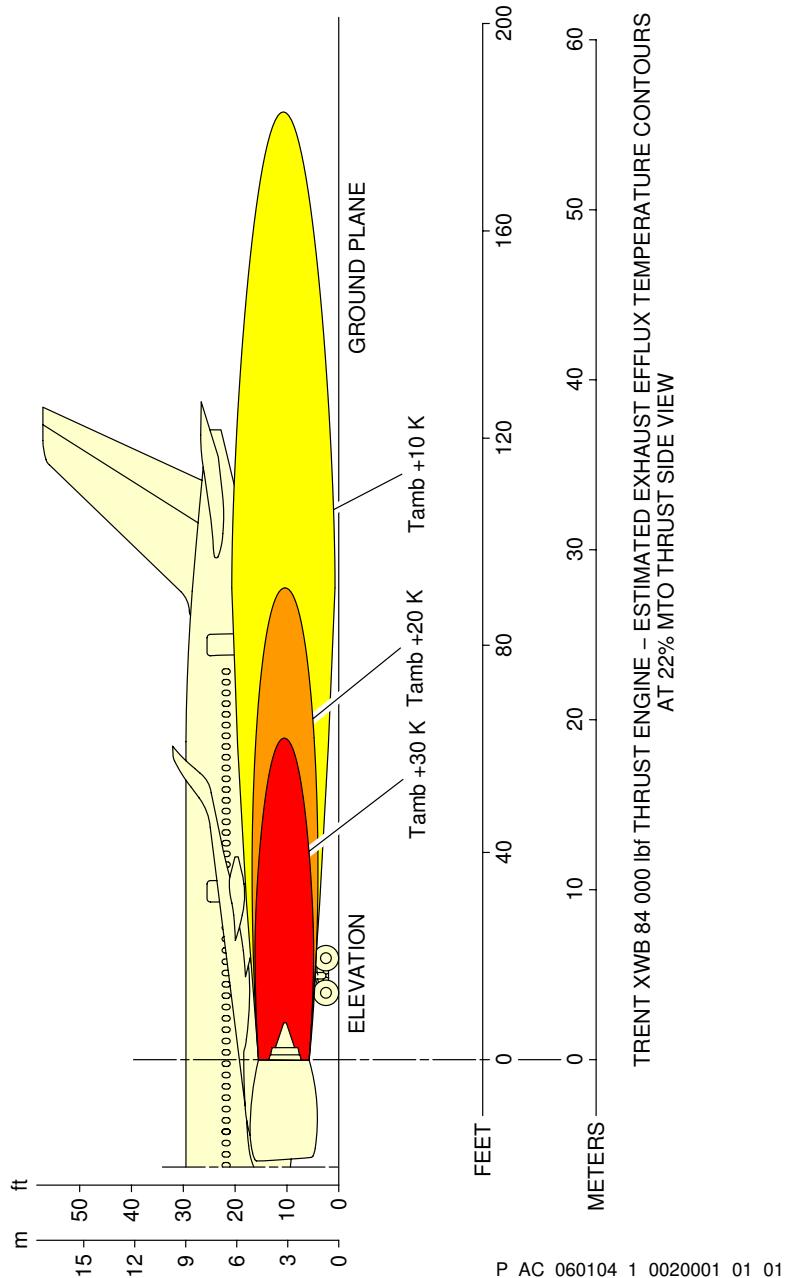
ICN-TRENTXWB-A-710000-R-K0680-02139-A-001-01



Breakaway Power (11% MTO Thrust) - TRENT XWB-84 Engine  
(Sheet 2 of 2)  
FIGURE-6-1-4-991-001-A01

\*\*ON A/C A350-900

ICN-TRENTXWB-A-710000-R-K0680-02290-A-001-01

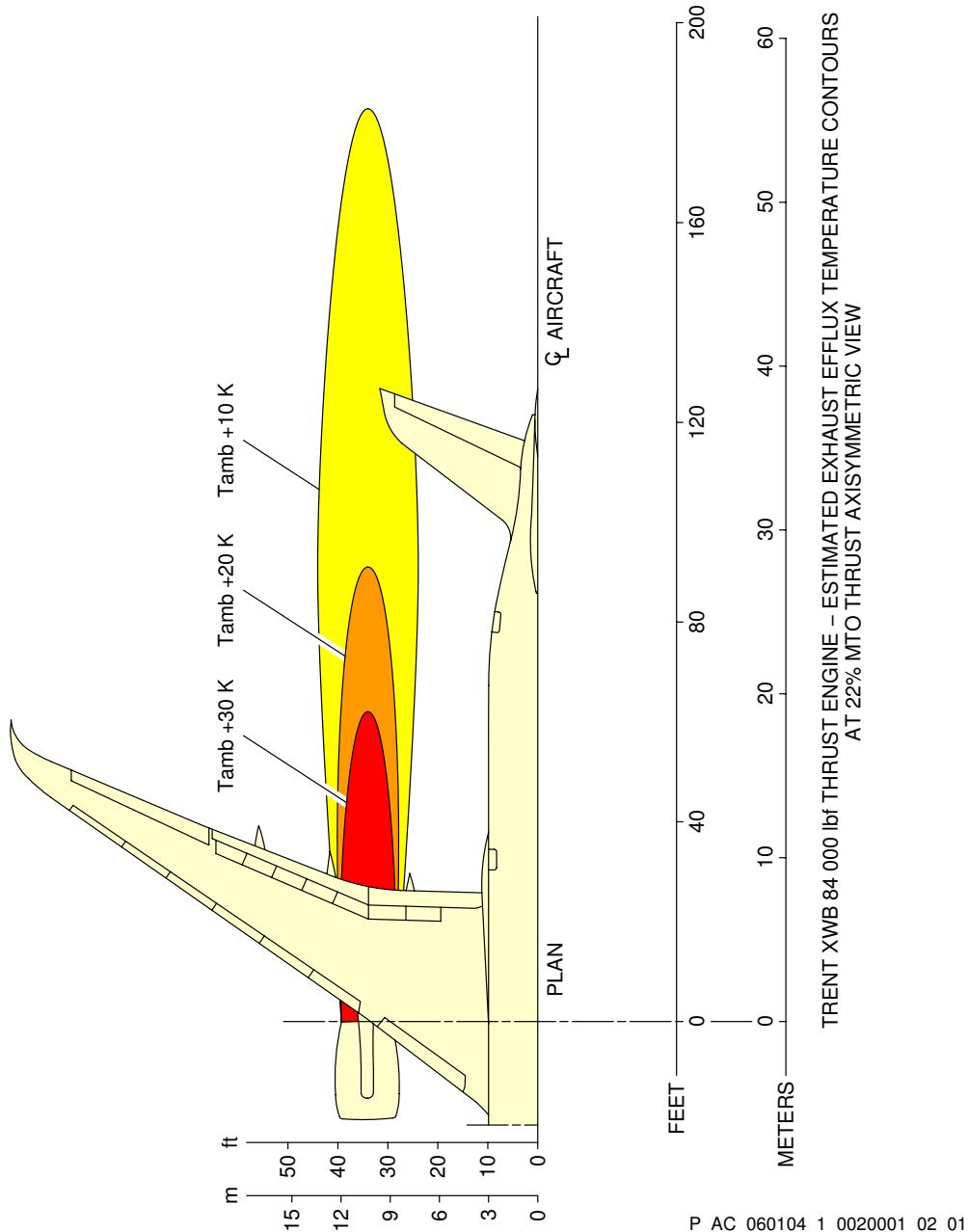


Breakaway Power (22% MTO Thrust) - TRENT XWB-84 Engine  
 (Sheet 1 of 2)

FIGURE-6-1-4-991-002-A01

\*\*ON A/C A350-900

ICN-TRENTXWB-A-710000-R-K0680-02137-A-001-01

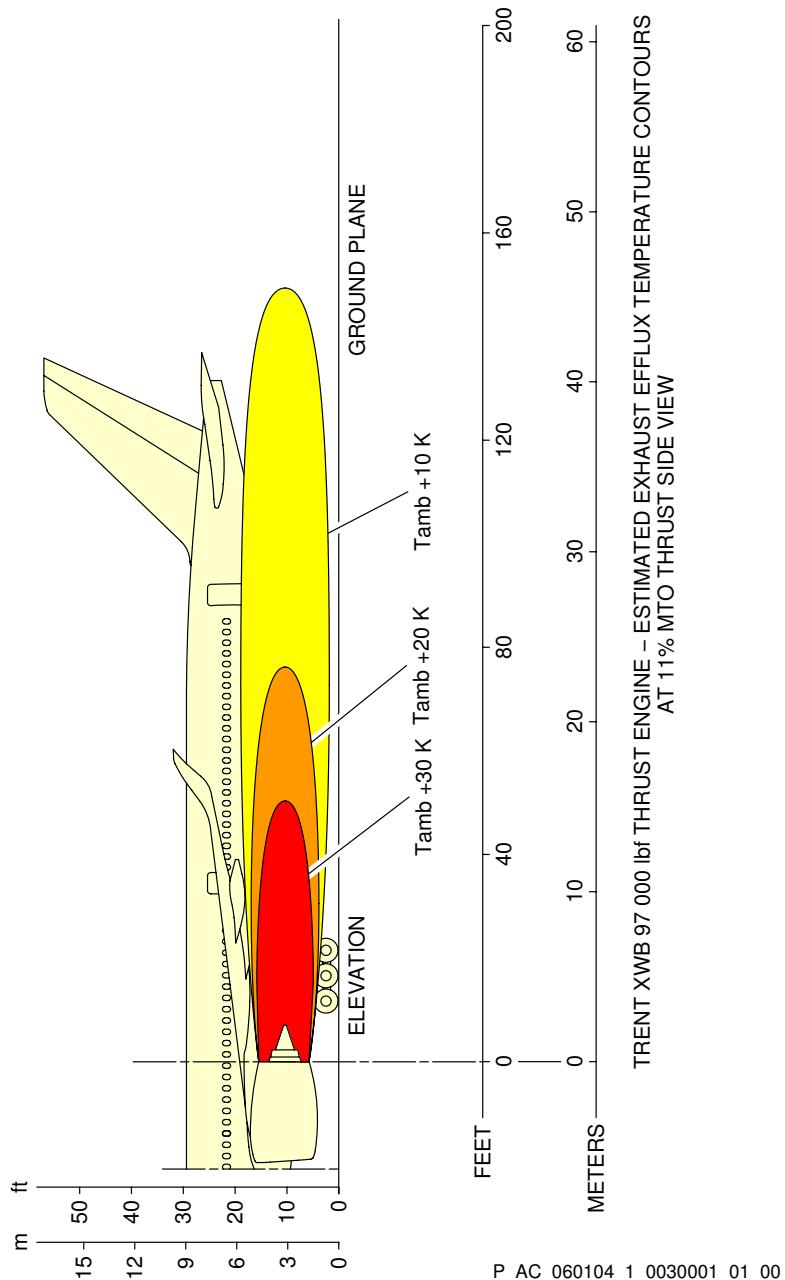


Breakaway Power (22% MTO Thrust) - TRENT XWB-84 Engine  
(Sheet 2 of 2)

FIGURE-6-1-4-991-002-A01

\*\*ON A/C A350-1000

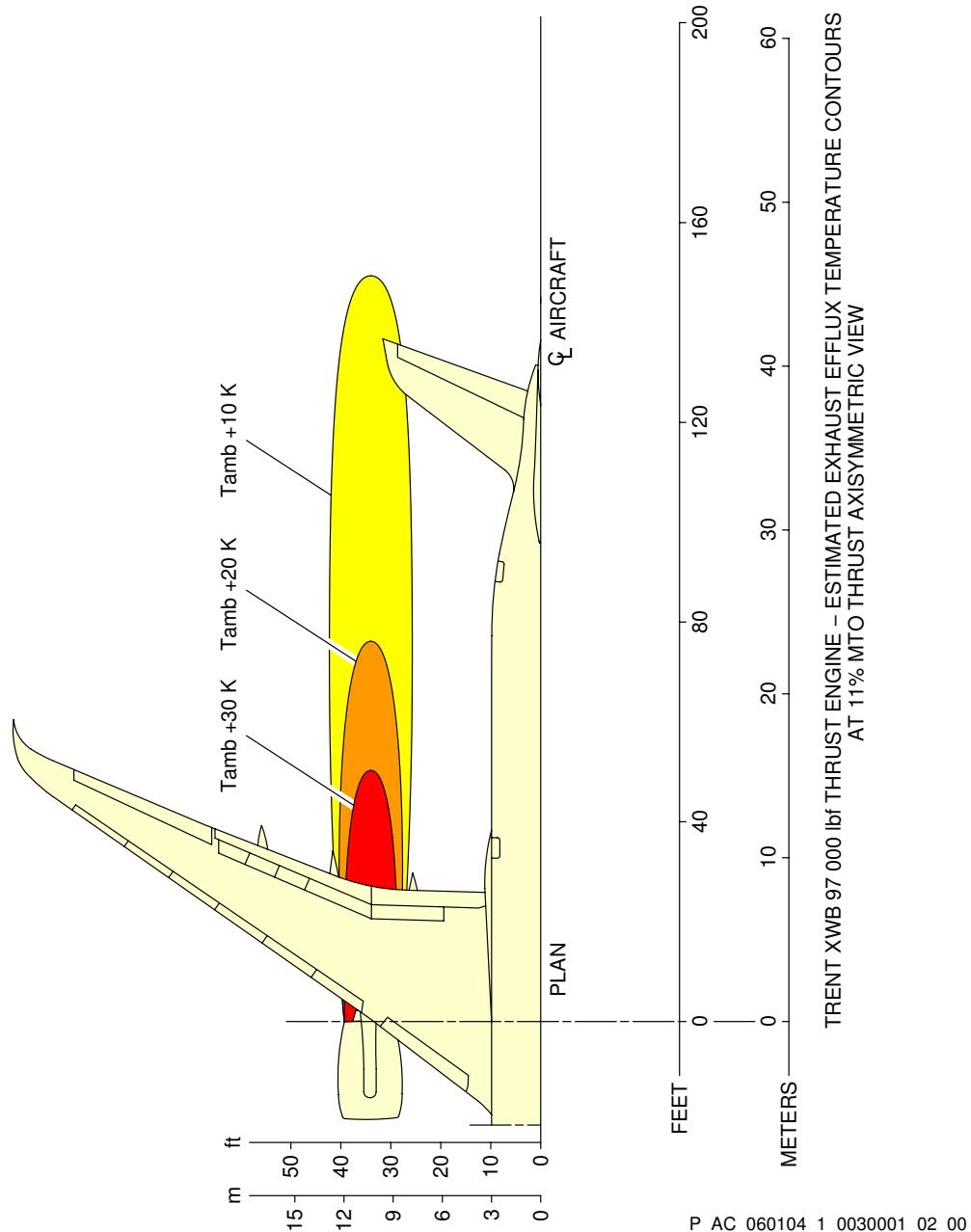
ICN-TRENTXWB-A-710000-R-K0680-02300-A-001-01



Breakaway Power (11% MTO Thrust) - TRENT XWB-97 Engine  
 (Sheet 1 of 2)  
 FIGURE-6-1-4-991-003-A01

\*\*ON A/C A350-1000

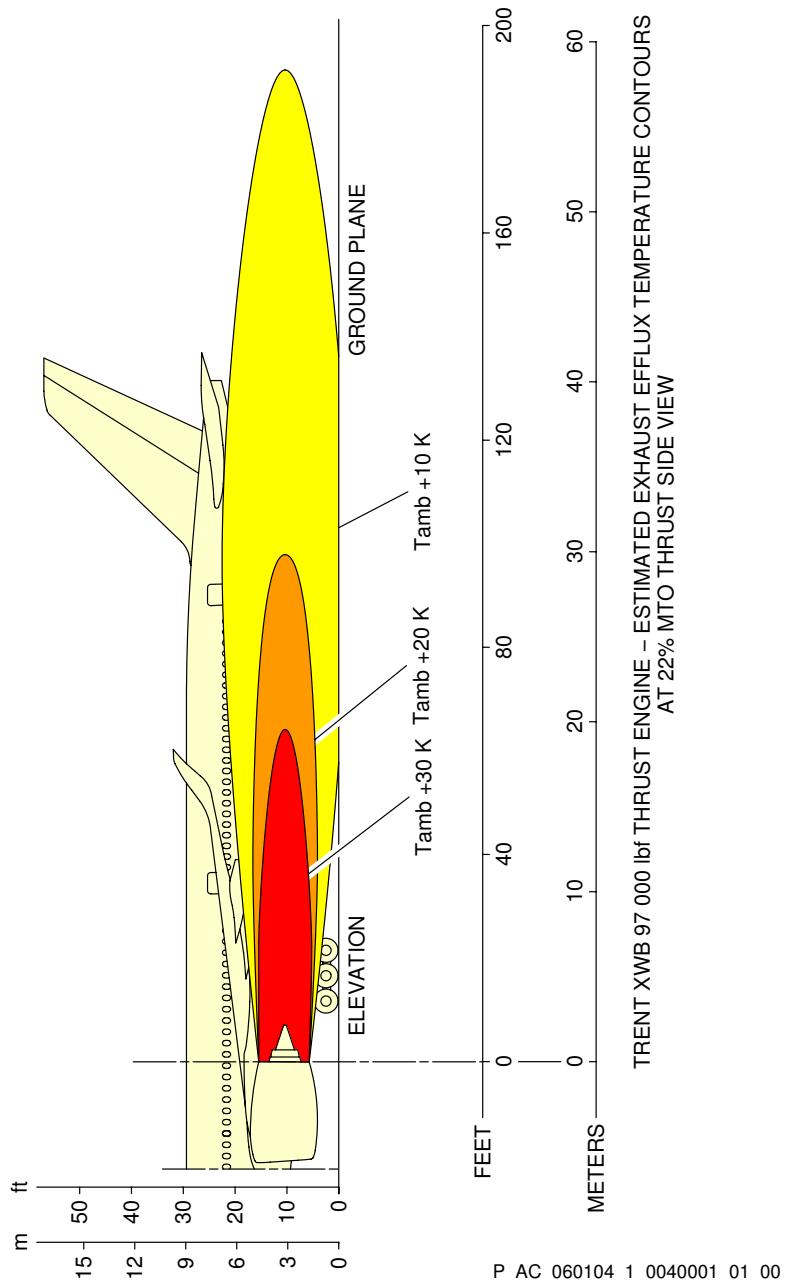
ICN-TRENTXWB-A-710000-R-K0680-02149-A-001-01



Breakaway Power (11% MTO Thrust) - TRENT XWB-97 Engine  
 (Sheet 2 of 2)  
 FIGURE-6-1-4-991-003-A01

\*\*ON A/C A350-1000

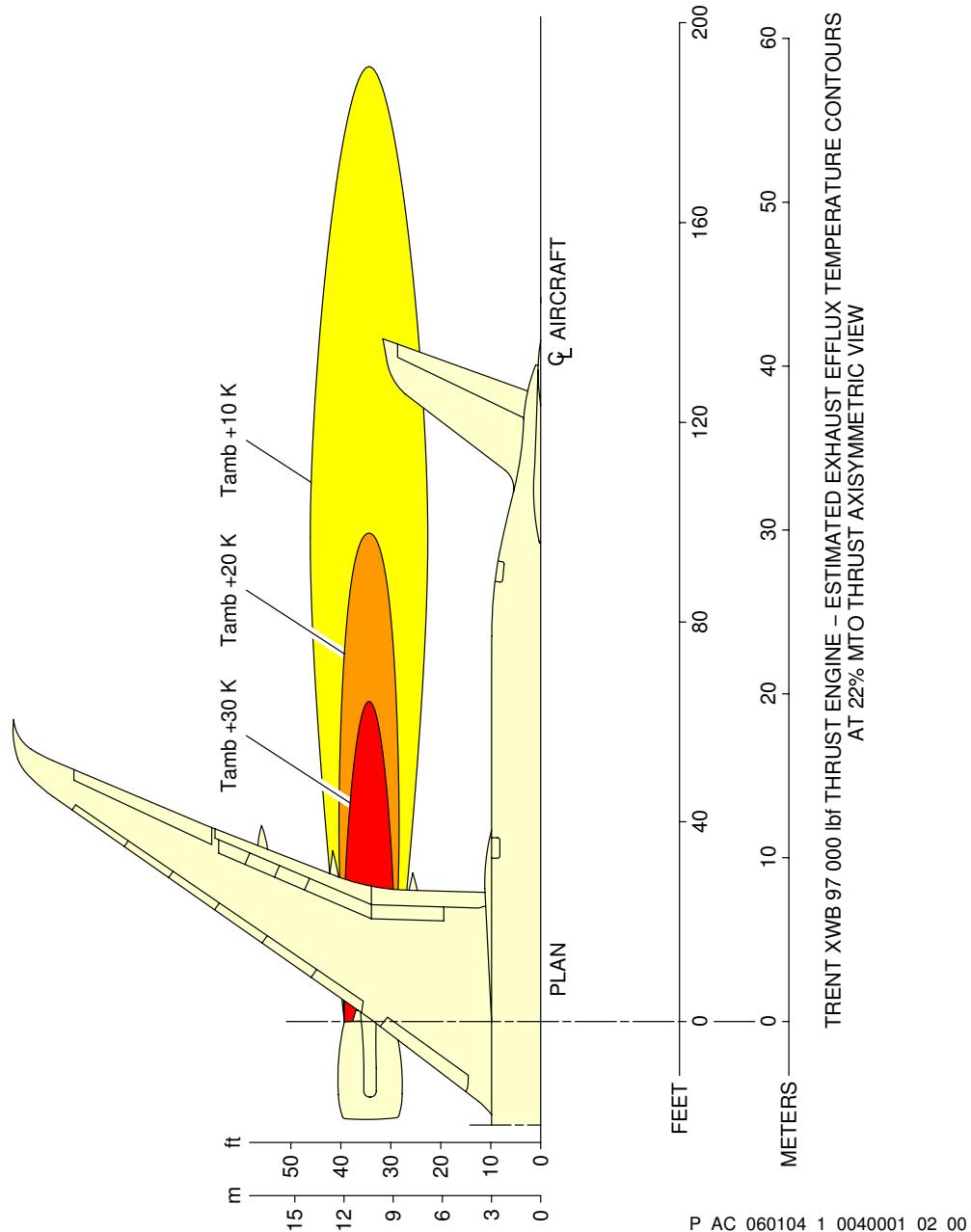
ICN-TRENTXWB-A-710000-R-K0680-02298-A-001-01



Breakaway Power (22% MTO Thrust) - TRENT XWB-97 Engine  
(Sheet 1 of 2)  
FIGURE-6-1-4-991-004-A01

\*\*ON A/C A350-1000

ICN-TRENTXWB-A-710000-R-K0680-02147-A-001-01



Breakaway Power (22% MTO Thrust) - TRENT XWB-97 Engine  
(Sheet 2 of 2)

FIGURE-6-1-4-991-004-A01



**6-1-5      Engine Exhaust Velocities Contours - Max Take-Off Power**

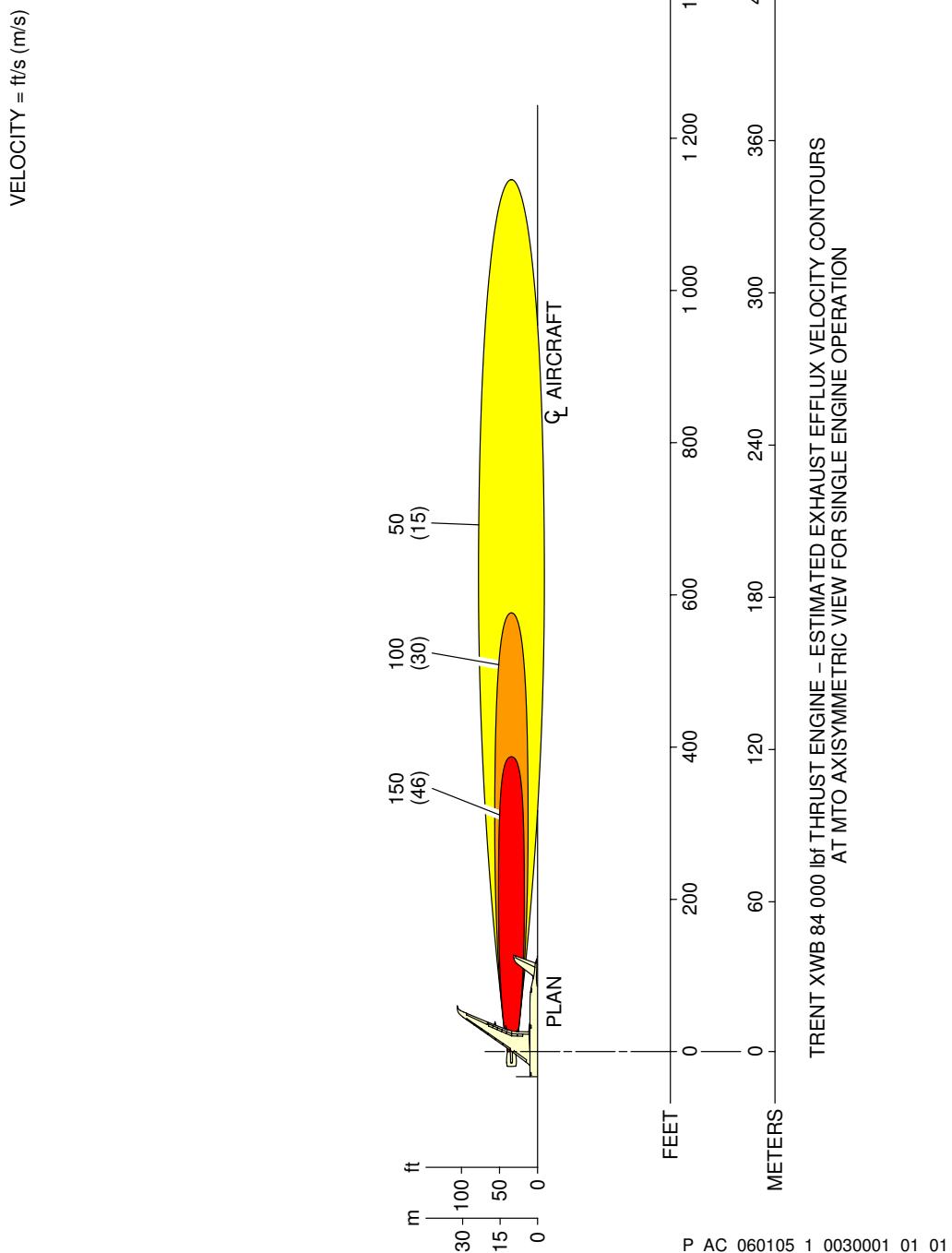
**\*\*ON A/C A350-1000 A350-900**

**Engine Exhaust Velocities Contours - Max Take-Off Power**

1. This section provides engine exhaust velocities contours at max take-off power.

\*\*ON A/C A350-900

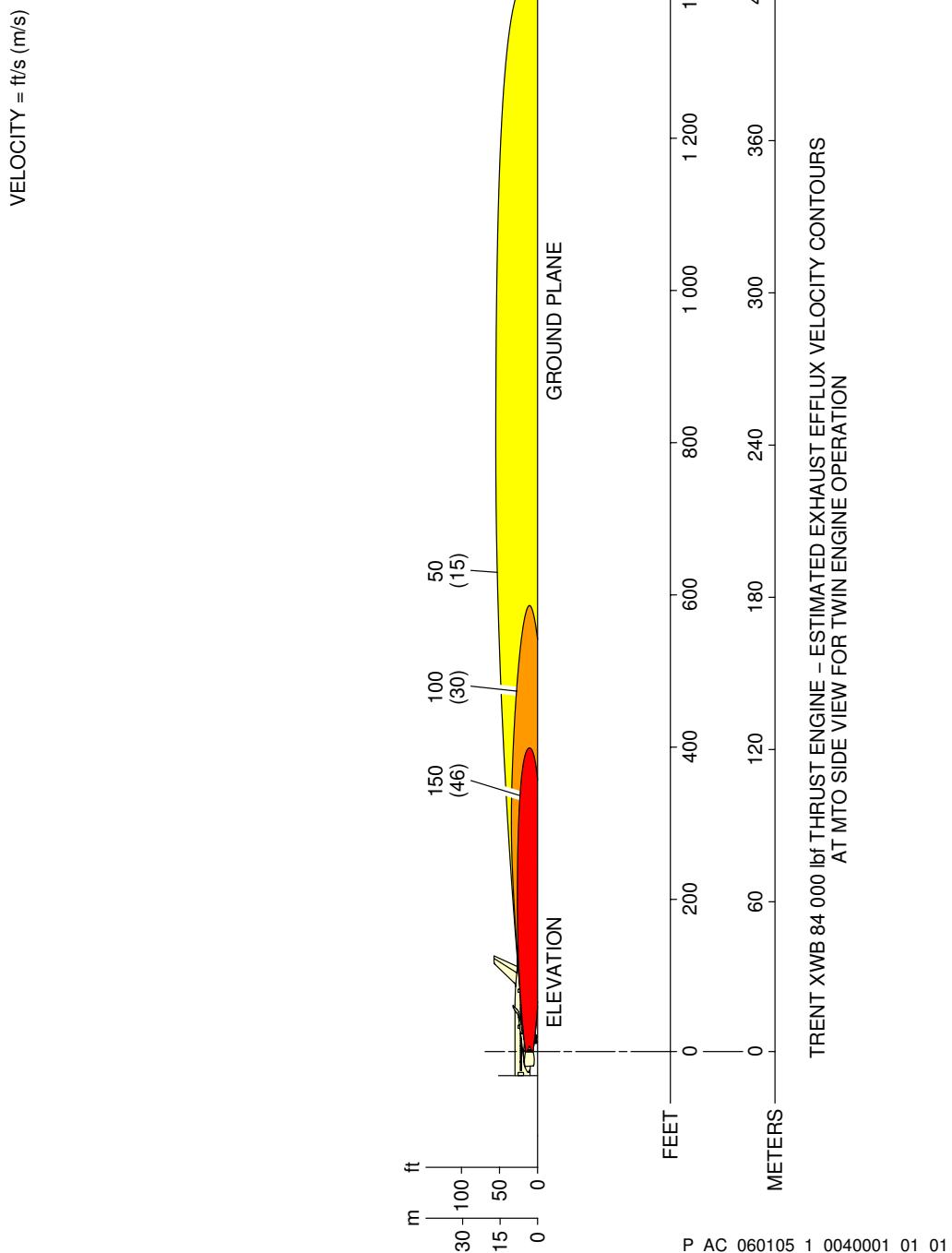
ICN-TRENTXWB-A-710000-R-K0680-02134-A-001-01



Max Take-Off Power - TRENT XWB-84 Engine (Single)  
FIGURE-6-1-5-991-003-A01

\*\*ON A/C A350-900

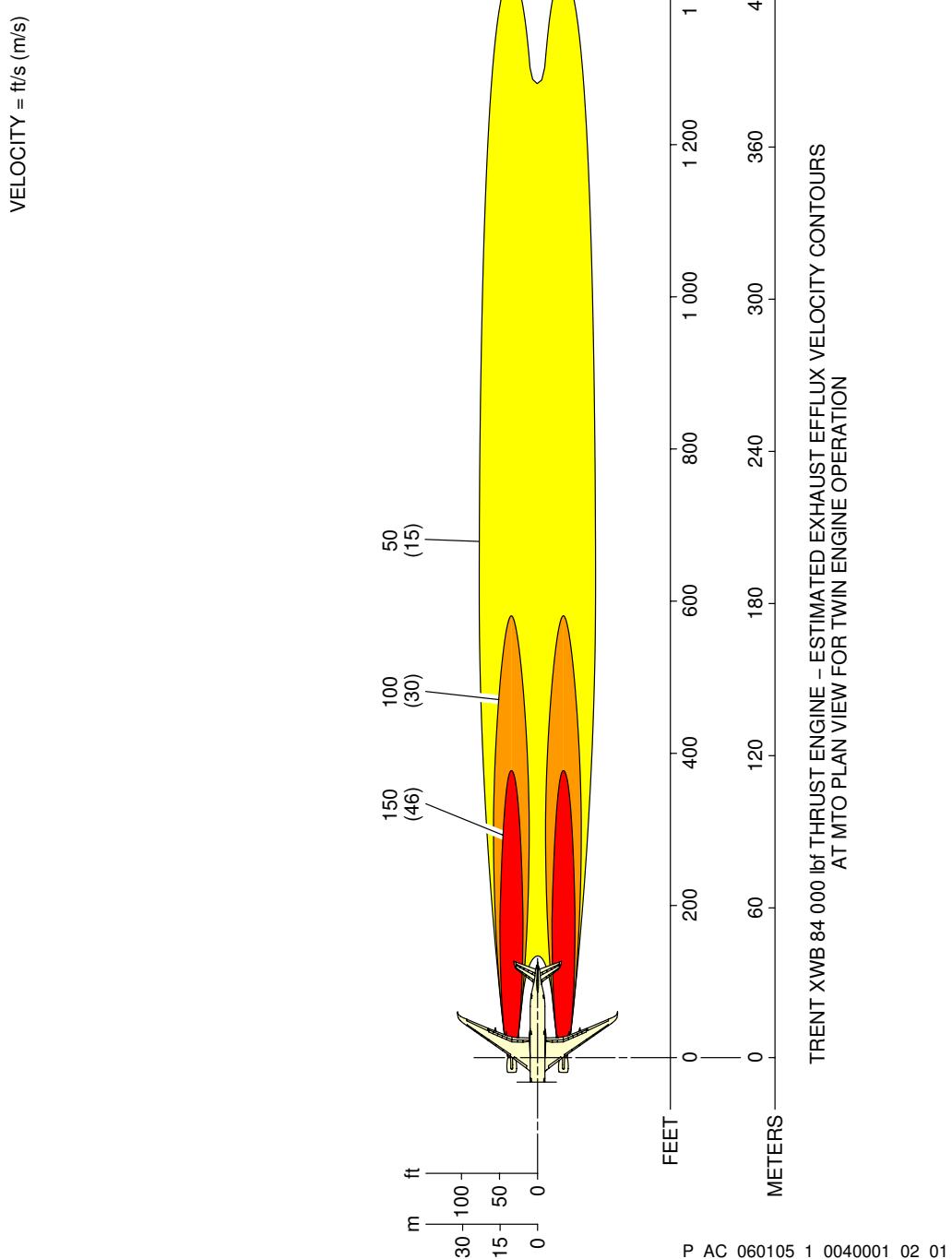
ICN-TRENTXWB-A-710000-R-K0680-02133-A-001-01



Max Take-Off Power - TRENT XWB-84 Engine (Twin)  
(Sheet 1 of 2)  
FIGURE-6-1-5-991-004-A01

\*\*ON A/C A350-900

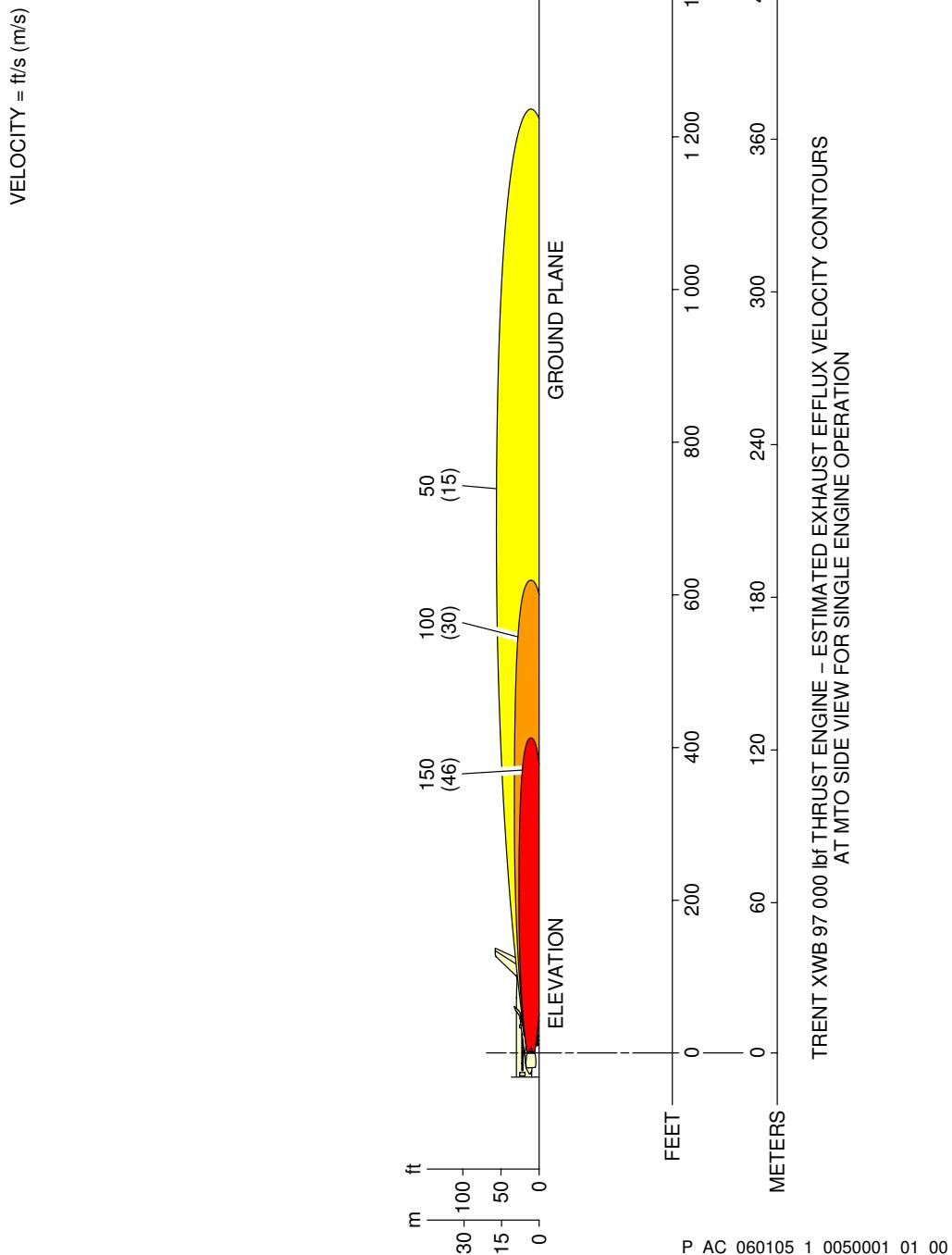
ICN-TRENTXWB-A-710000-R-K0680-02132-A-001-01



Max Take-Off Power - TRENT XWB-84 Engine (Twin)  
(Sheet 2 of 2)  
FIGURE-6-1-5-991-004-A01

\*\*ON A/C A350-1000

ICN-TRENTXWB-A-710000-R-K0680-02295-A-001-01



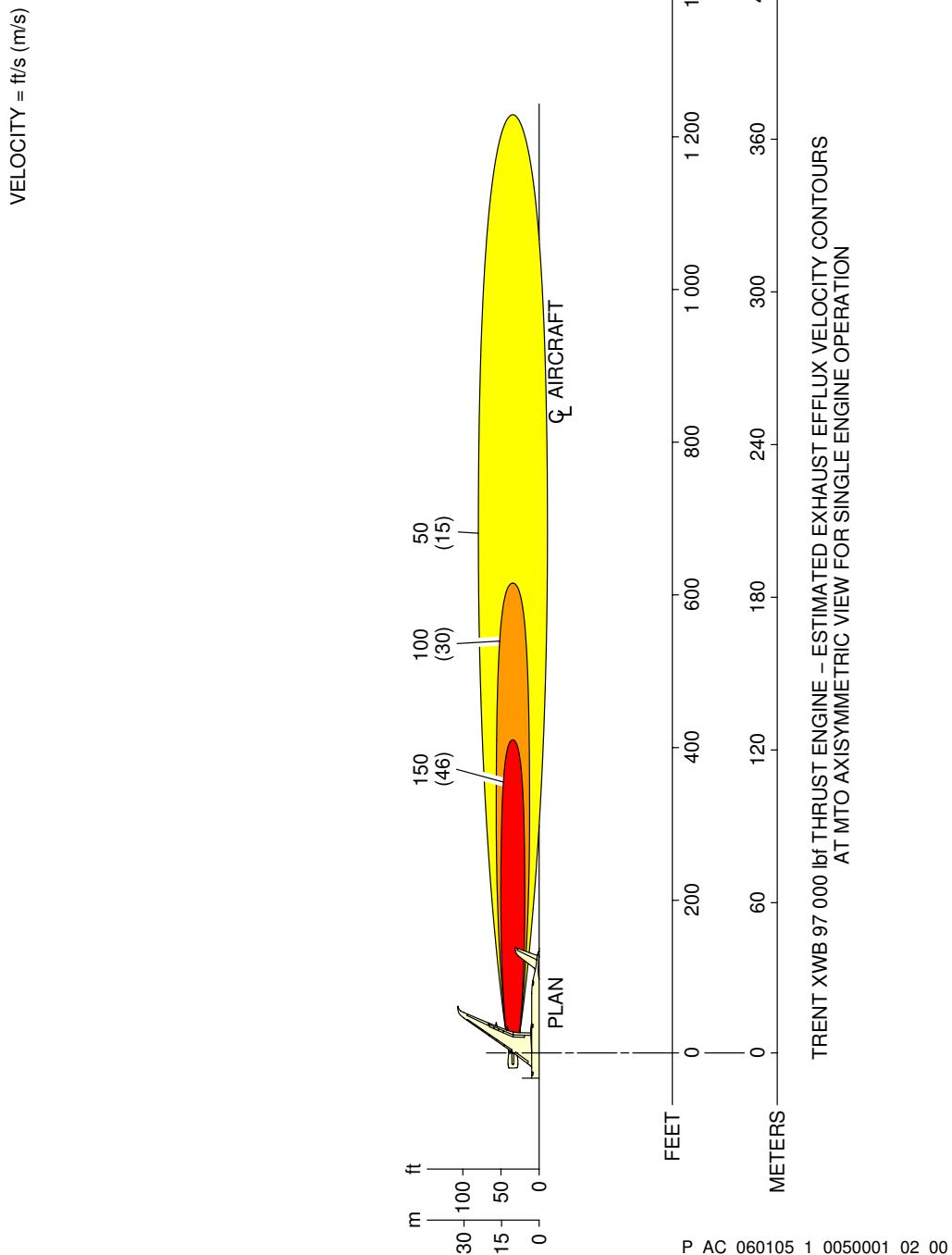
Max Take-Off Power - TRENT XWB-97 Engine (Single)

(Sheet 1 of 2)

FIGURE-6-1-5-991-005-A01

\*\*ON A/C A350-1000

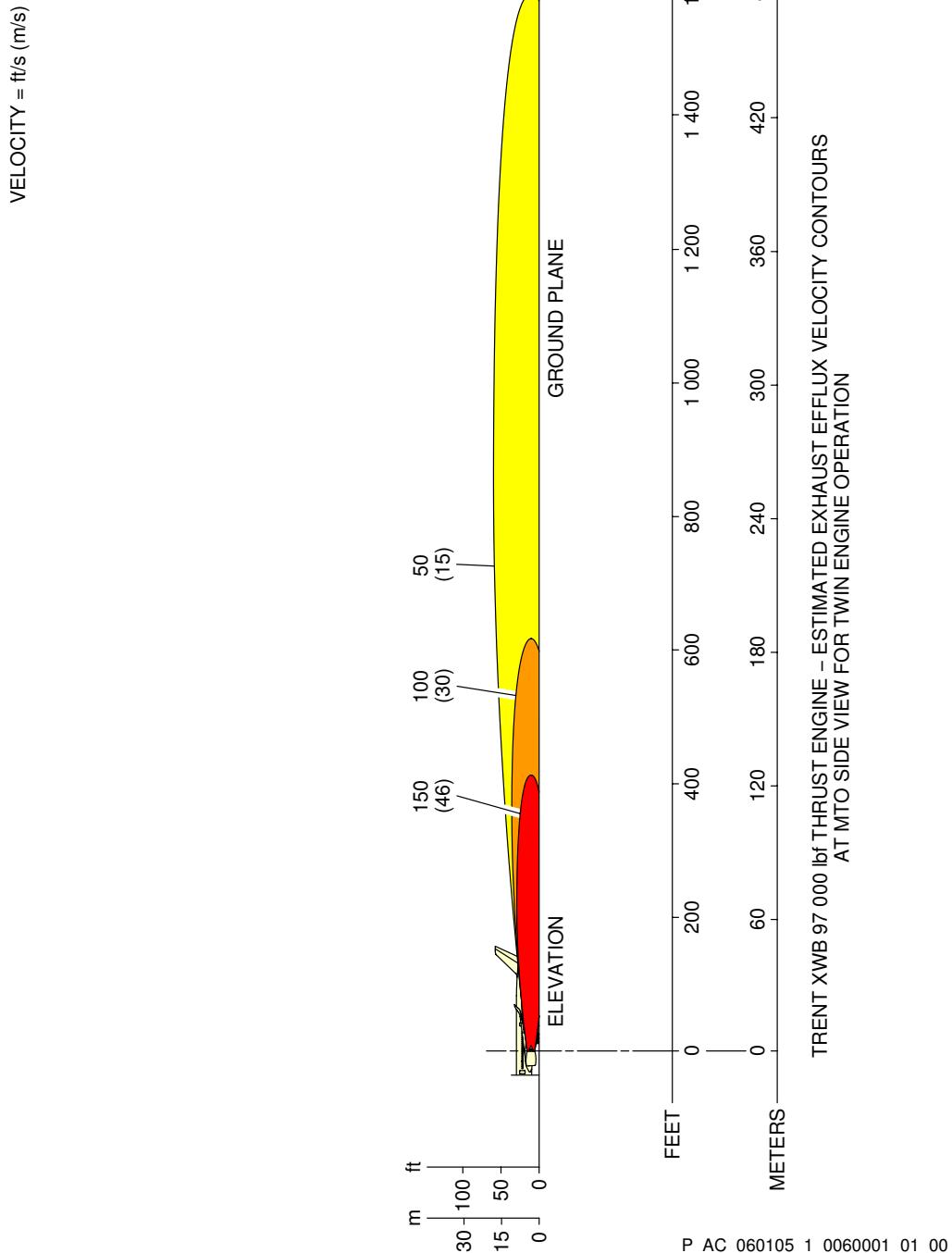
ICN-TRENTXWB-A-710000-R-K0680-02144-A-001-01



Max Take-Off Power - TRENT XWB-97 Engine (Single)  
 (Sheet 2 of 2)  
 FIGURE-6-1-5-991-005-A01

\*\*ON A/C A350-1000

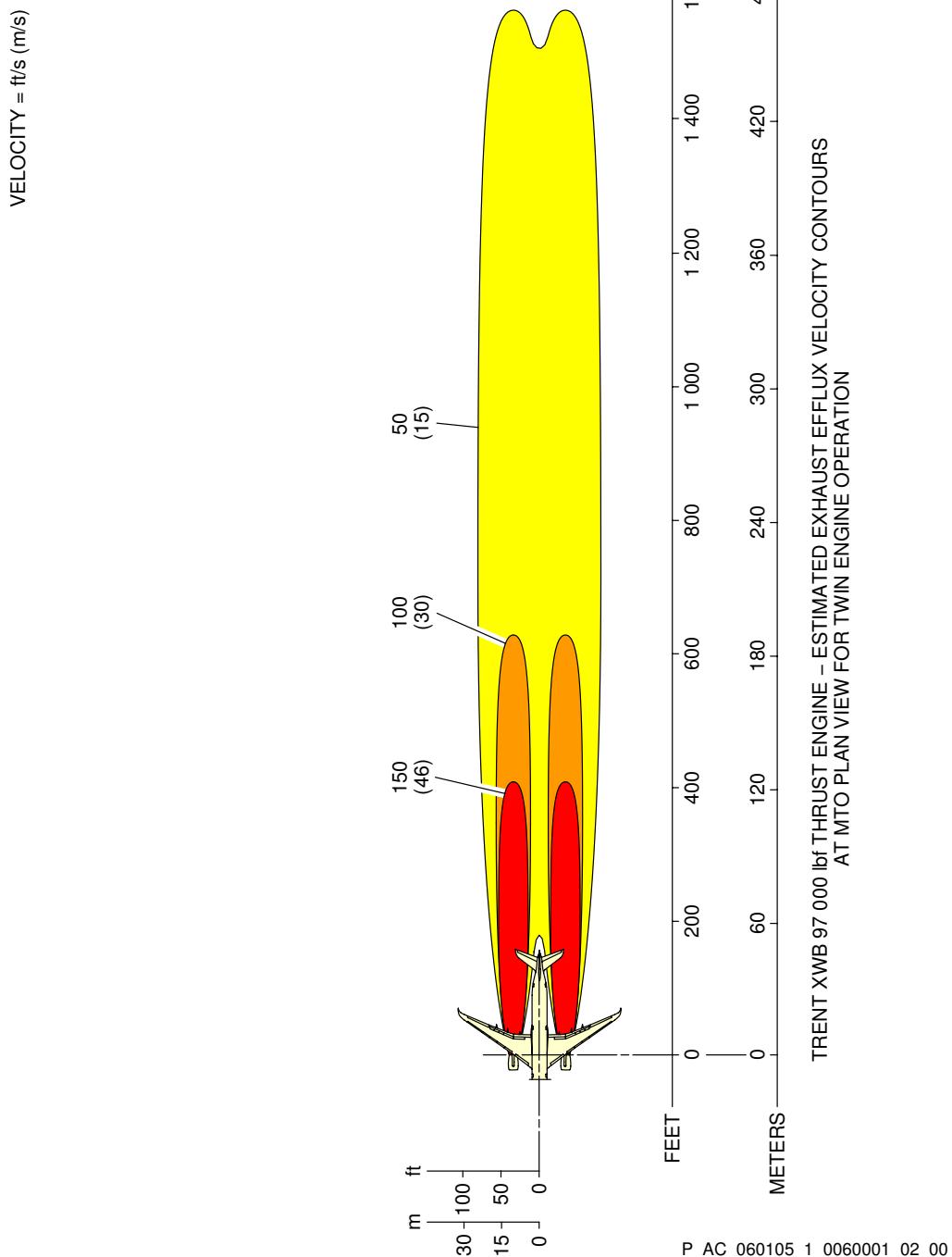
ICN-TRENTXWB-A-710000-R-K0680-02143-A-001-01



Max Take-Off Power - TRENT XWB-97 Engine (Twin)  
(Sheet 1 of 2)  
FIGURE-6-1-5-991-006-A01

\*\*ON A/C A350-1000

ICN-TRENTXWB-A-710000-R-K0680-02142-A-001-01



Max Take-Off Power - TRENT XWB-97 Engine (Twin)

(Sheet 2 of 2)

FIGURE-6-1-5-991-006-A01

## 6-1-6      Engine Exhaust Temperatures Contours - Max Take-Off Power

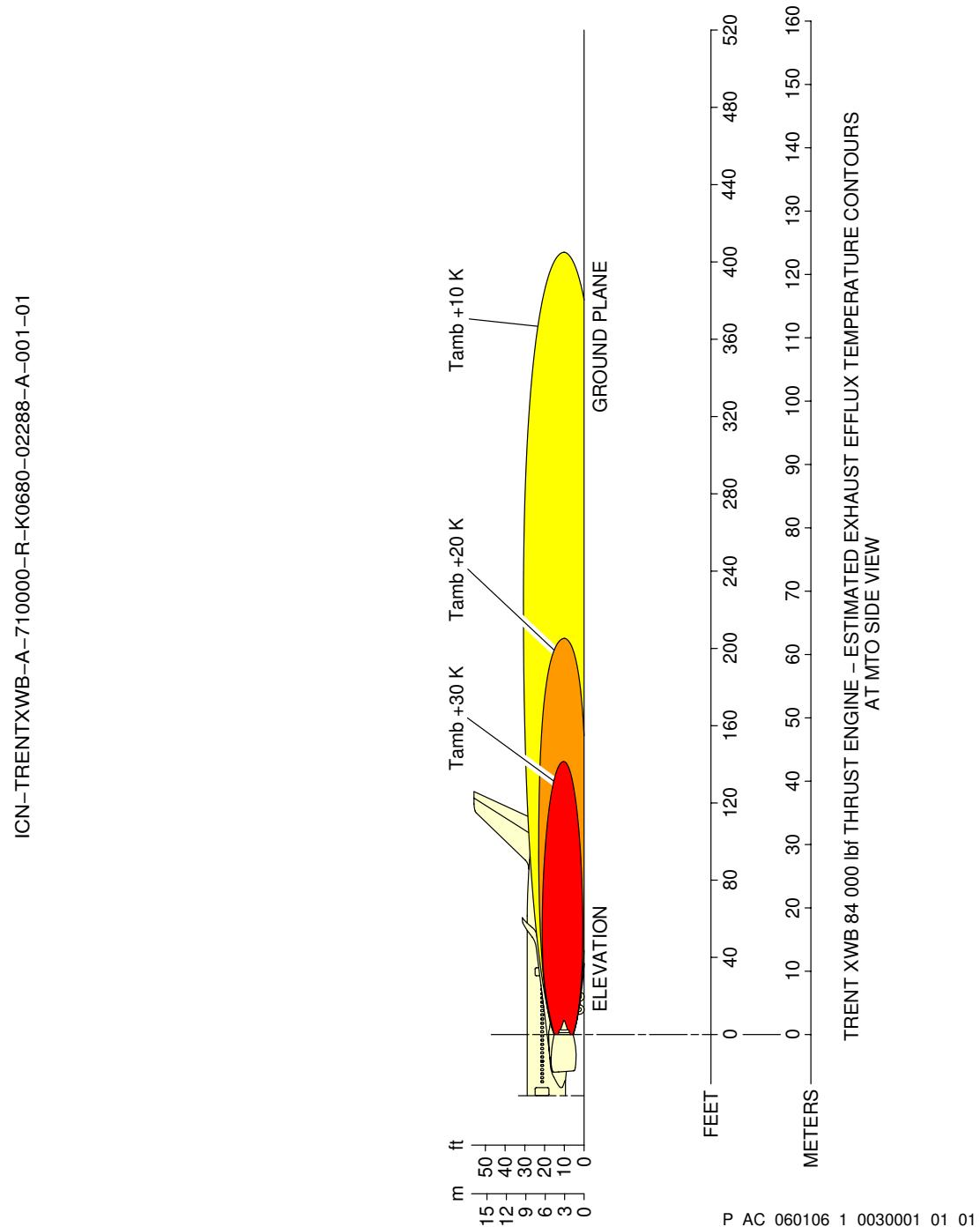
\*\*ON A/C A350-1000 A350-900

Engine Exhaust Temperatures Contours - Max Take-Off Power

1. This section provides engine exhaust temperatures contours at max take-off power.

\*\*ON A/C A350-900

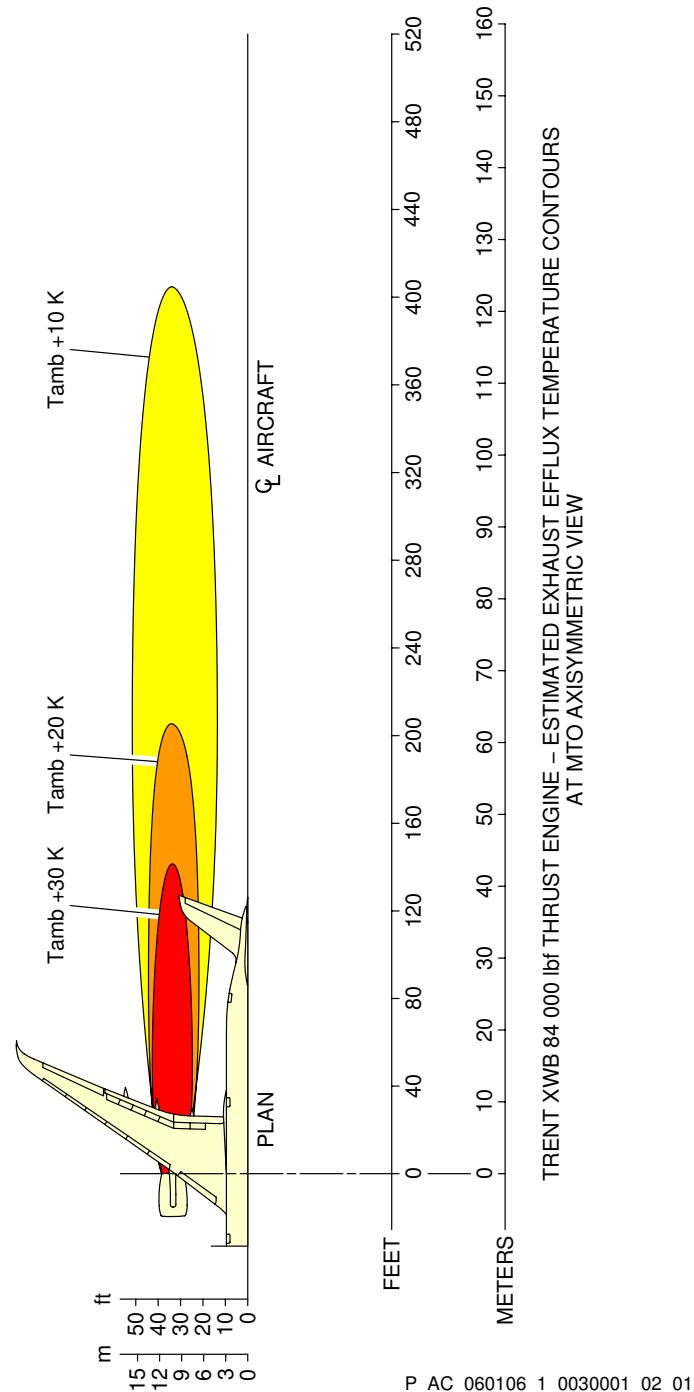
ICN-TRENTXWB-A-710000-R-K0680-02288-A-001-01



Max Take-Off Power - TRENT XWB-84 Engine  
(Sheet 1 of 2)  
FIGURE-6-1-6-991-003-A01

\*\*ON A/C A350-900

ICN-TRENTXWB-A-710000-R-K0680-02135-A-001-01



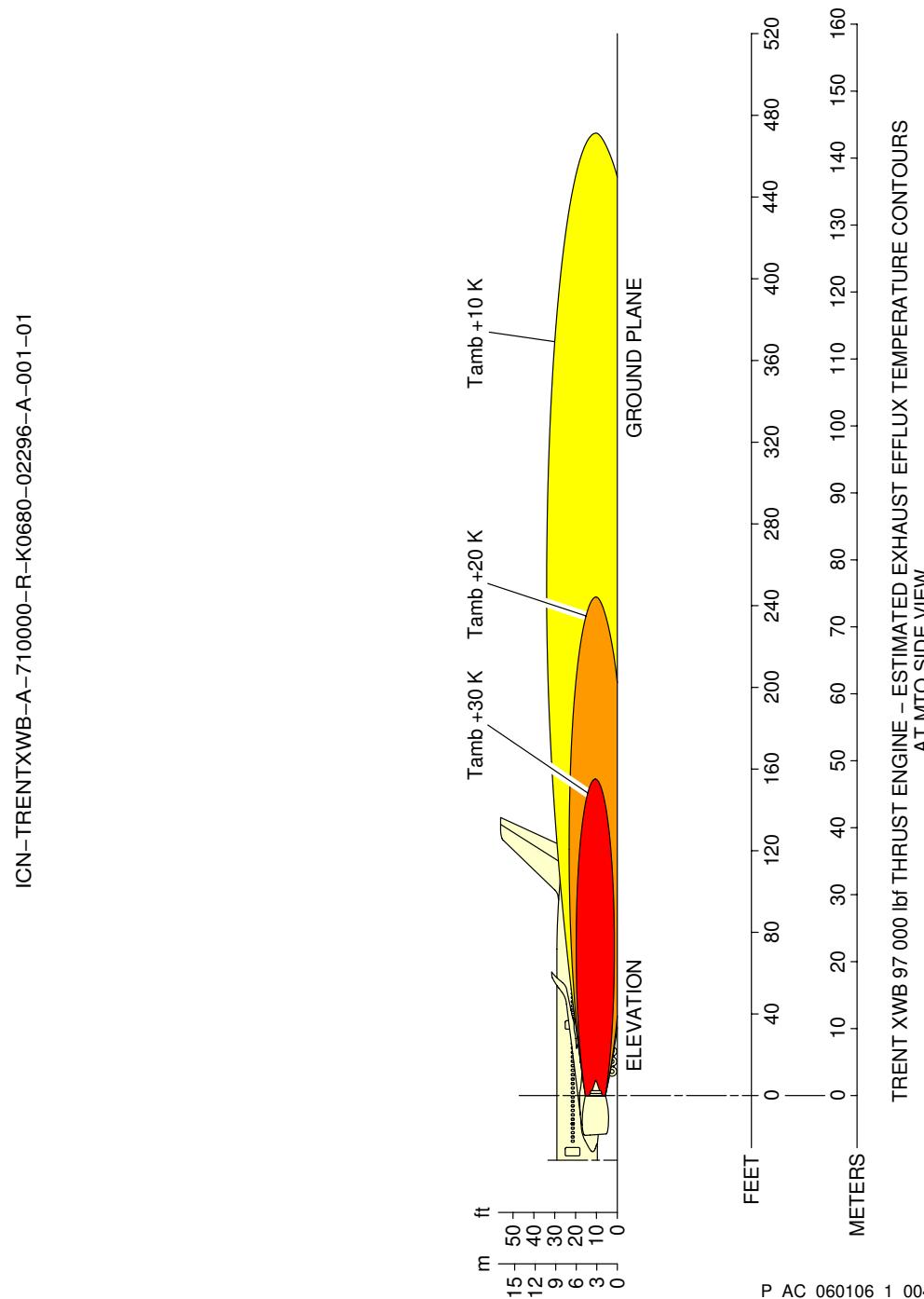
Max Take-Off Power - TRENT XWB-84 Engine

(Sheet 2 of 2)

FIGURE-6-1-6-991-003-A01

\*\*ON A/C A350-1000

ICN-TRENTXWB-A-710000-R-K0680-02296-A-001-01

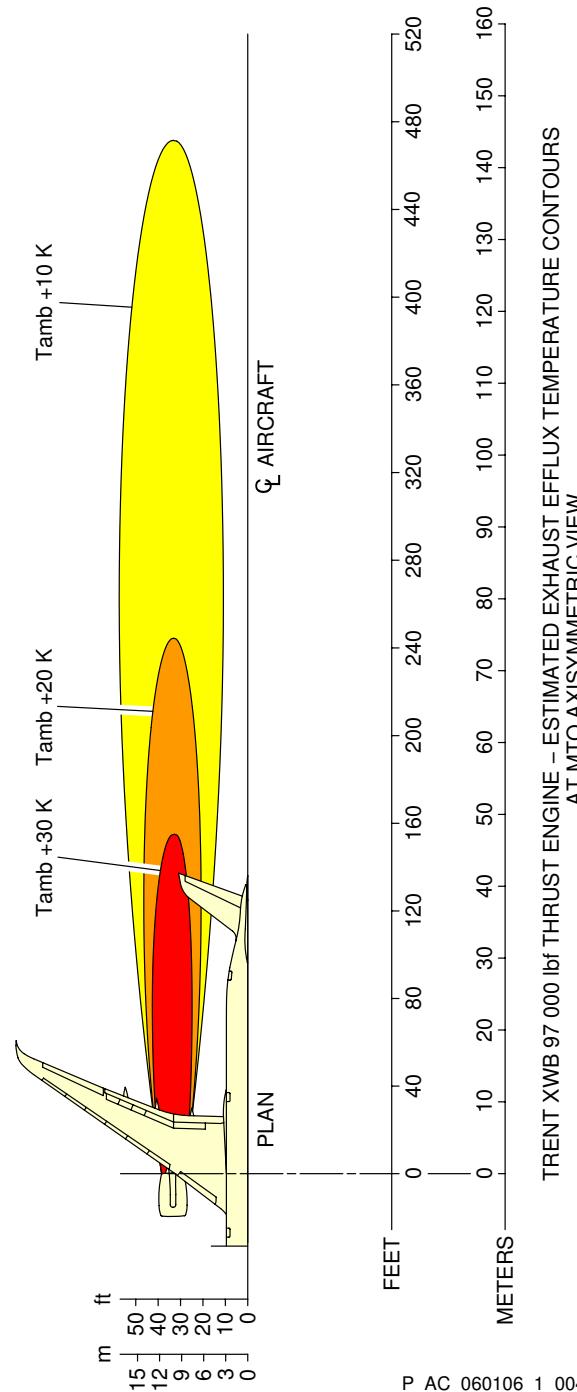


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Max Take-Off Power - TRENT XWB-97 Engine  
 (Sheet 1 of 2)  
 FIGURE-6-1-6-991-004-C01

\*\*ON A/C A350-1000

ICN-TRENTXWB-A-710000-R-K0680-02145-A-001-01



Max Take-Off Power - TRENT XWB-97 Engine  
(Sheet 2 of 2)  
FIGURE-6-1-6-991-004-C01

## 6-3-0      Danger Areas of the Engines

\*\*ON A/C A350-1000 A350-900

Danger Areas of the Engines

## 1. Danger Areas of the Engines

The intake suction danger areas, which are plotted in this chapter, correspond to very low suction velocities in order to prevent very low density objects (hat, handkerchief) from ingestion by engines.

The primary aim of those danger areas is to protect the people working around the engines.



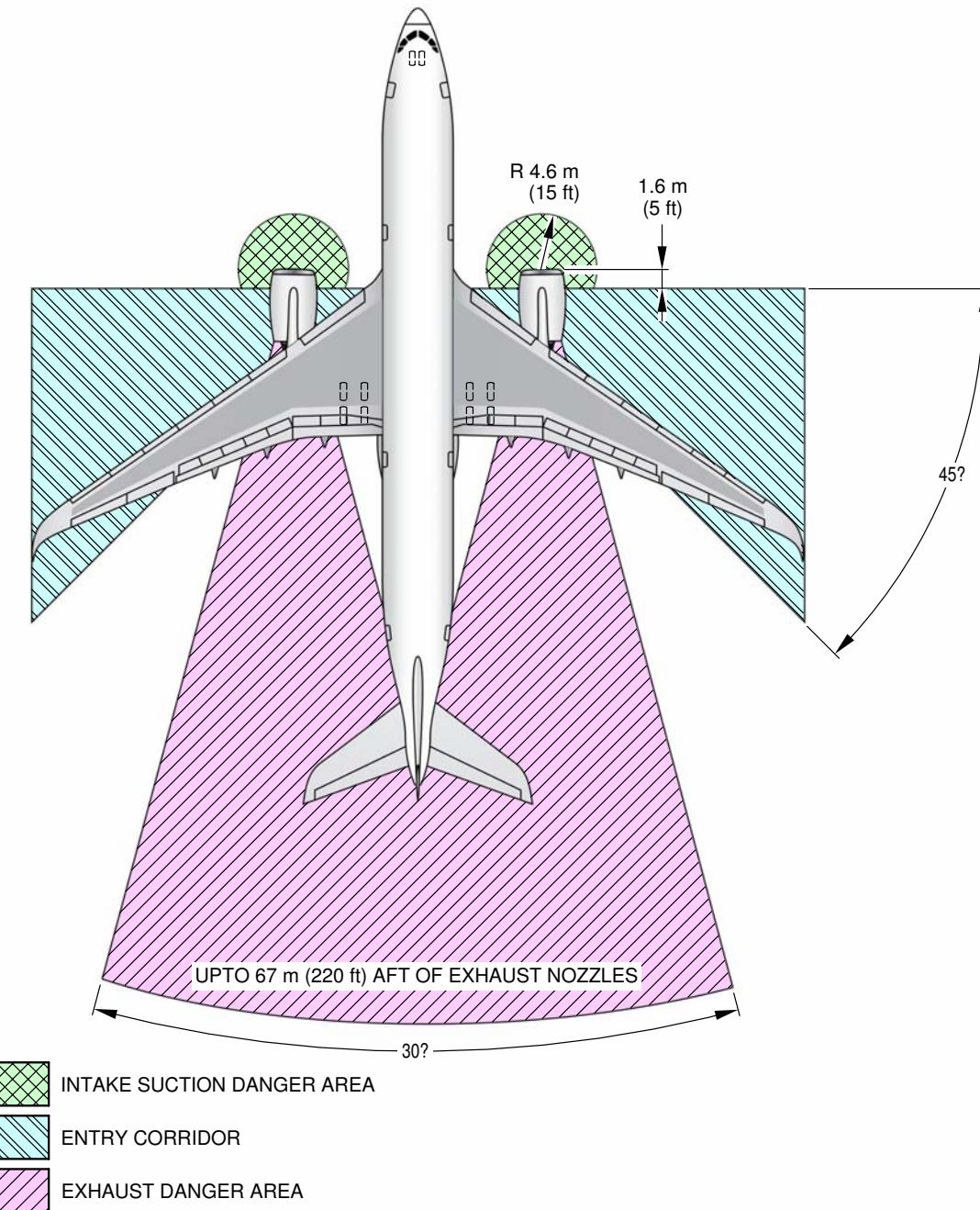
**6-3-1      Danger Areas of the Engines - Ground Idle Power**

**\*\*ON A/C A350-1000 A350-900**

**Danger Areas of the Engines - Ground Idle Power**

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

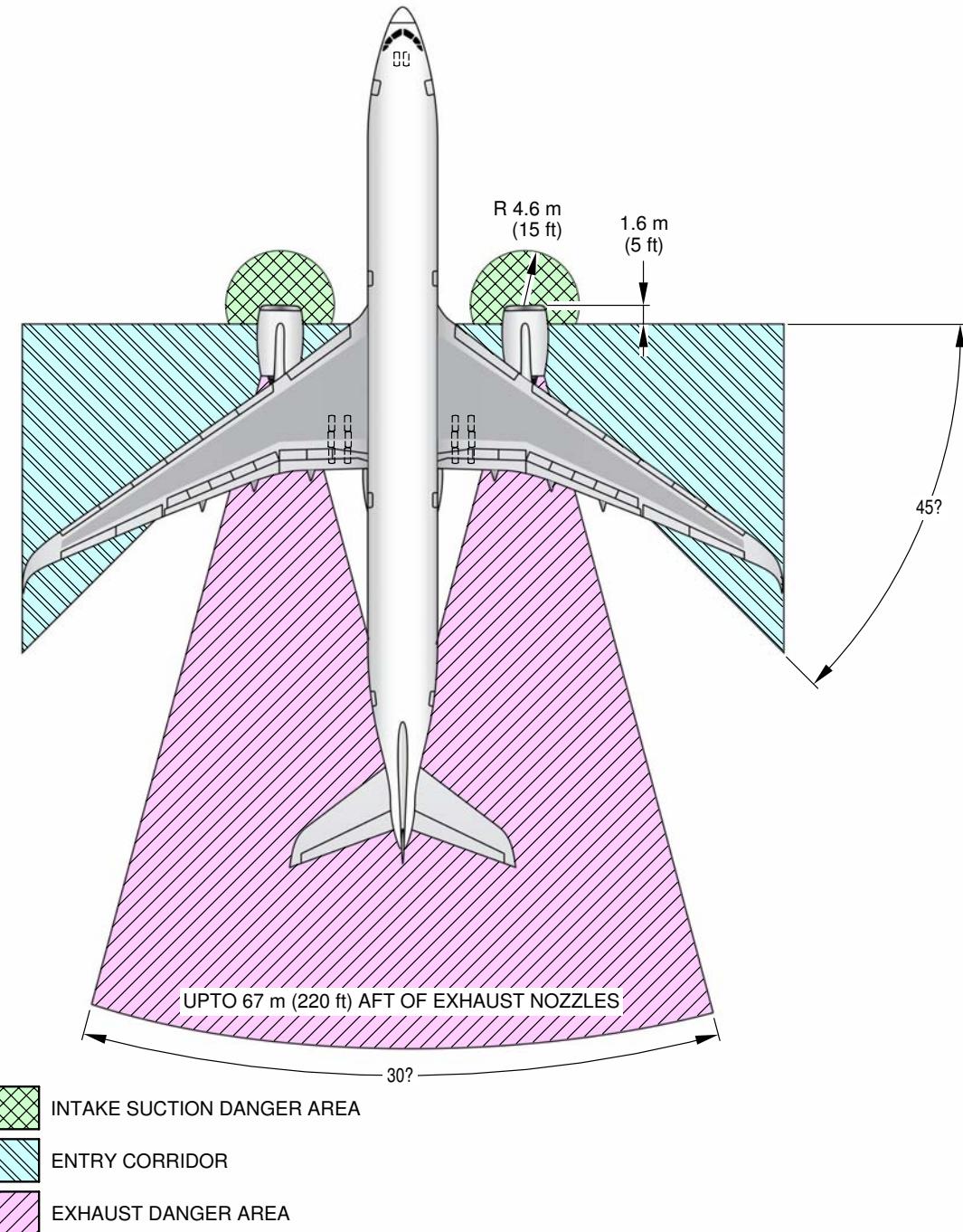
\*\*ON A/C A350-900



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Ground Idle Power - TRENT XWB-84 Engine  
FIGURE-6-3-1-991-001-A01

\*\*ON A/C A350-1000



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Ground Idle Power - TRENT XWB-97 Engine  
FIGURE-6-3-1-991-002-A01



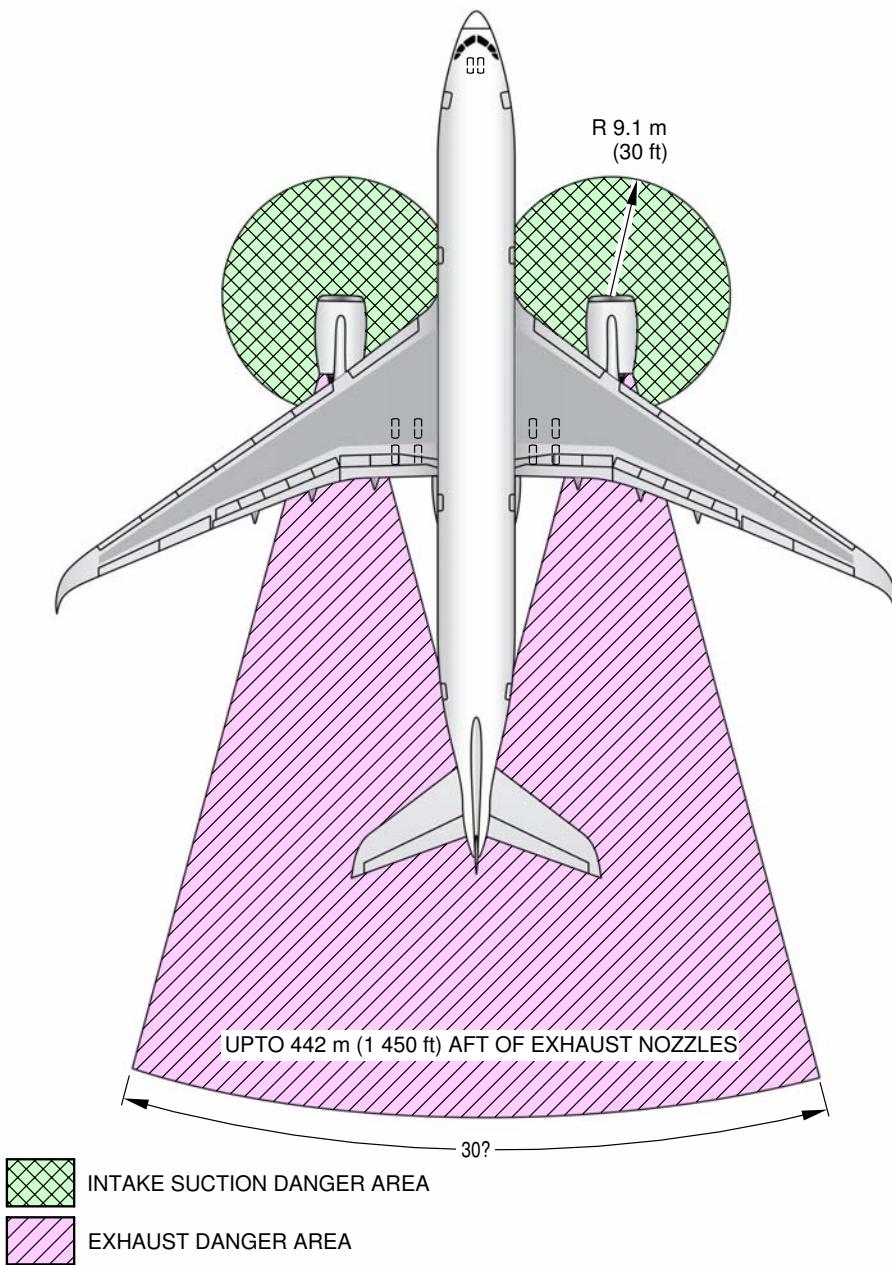
**6-3-3      Danger Areas of the Engines - Max Take-Off Power**

**\*\*ON A/C A350-1000 A350-900**

**Danger Areas of the Engines - Max Take-Off Power**

1. This section provides danger areas of the engines at maximum take-off power conditions.

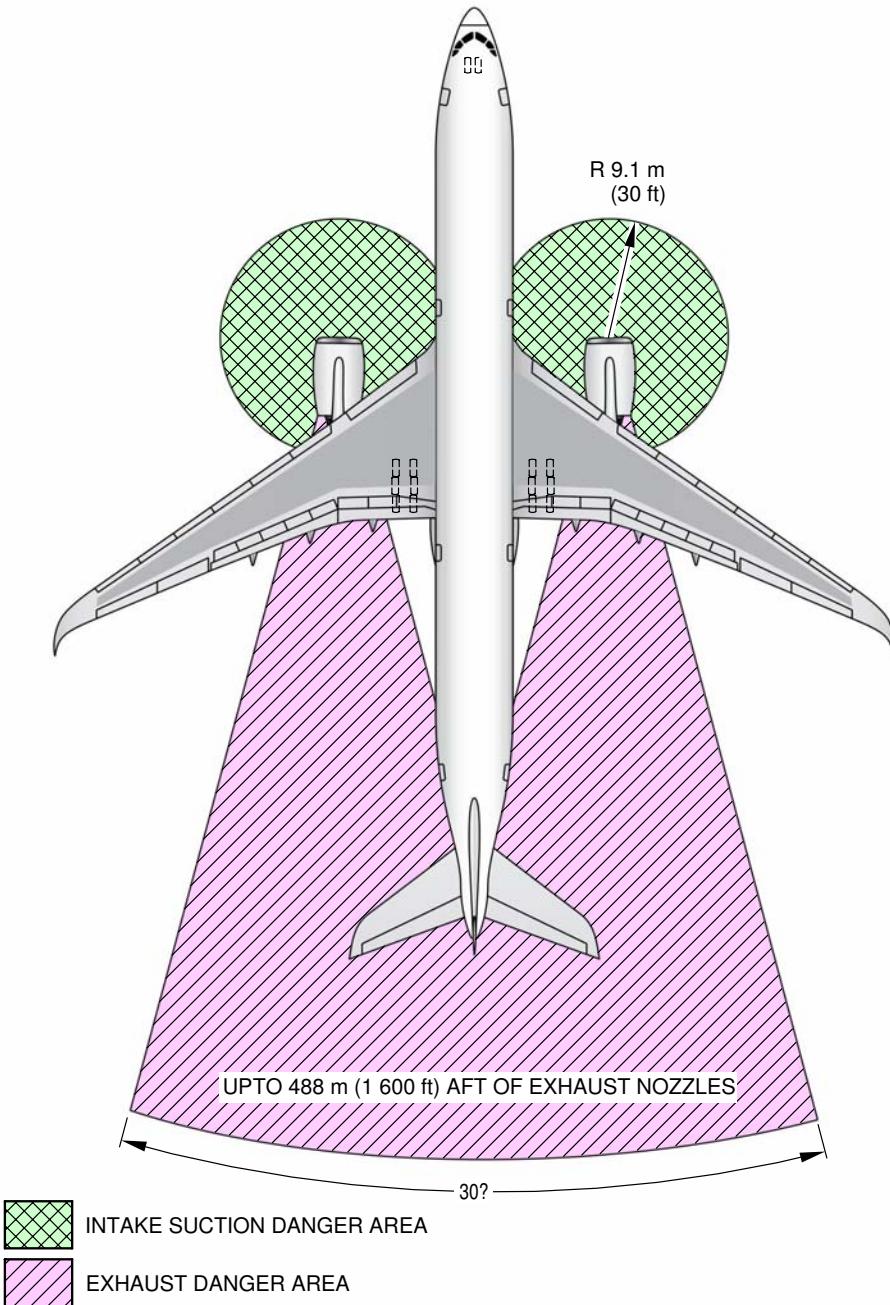
\*\*ON A/C A350-900



P\_AC\_060303\_1\_0010001\_01\_01

Max Take-Off Power - TRENT XWB-84 Engine  
FIGURE-6-3-3-991-001-A01

\*\*ON A/C A350-1000



P\_AC\_060303\_1\_0020001\_01\_00

Max Take-Off Power - TRENT XWB-97 Engine  
FIGURE-6-3-3-991-002-A01

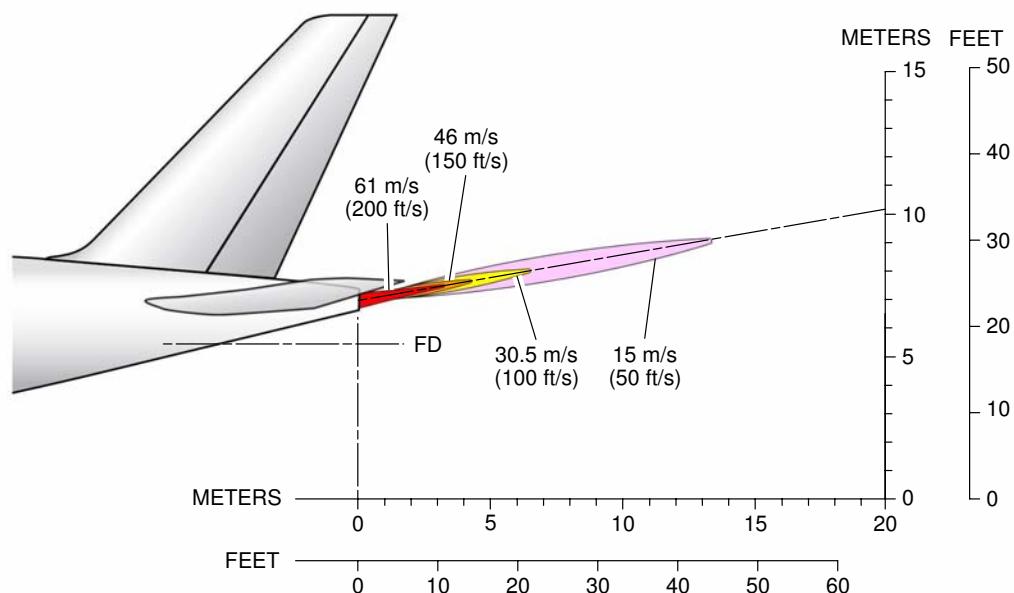
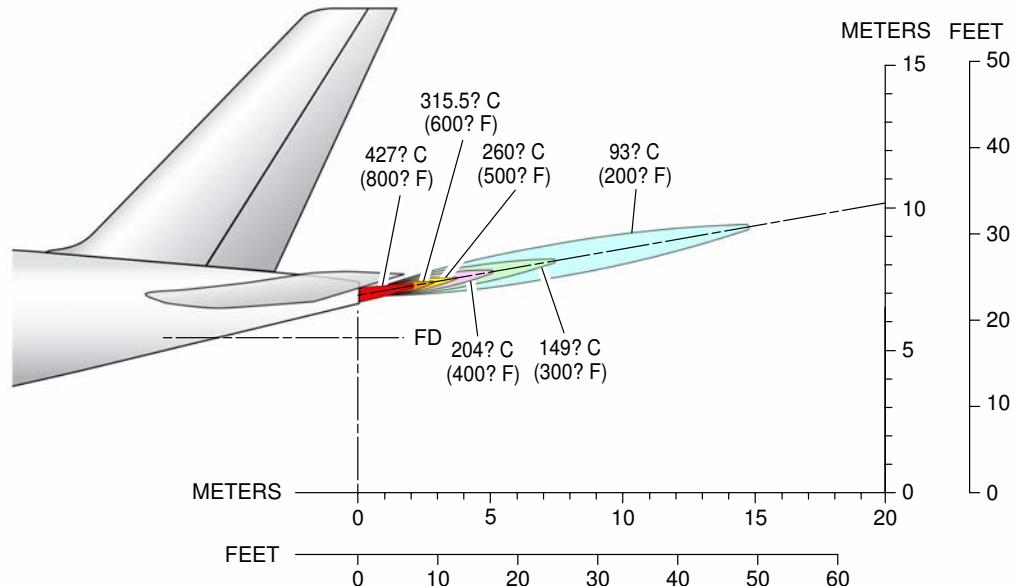
**6-4-0      APU Exhaust Velocities and Temperatures**

**\*\*ON A/C A350-1000 A350-900**

**APU Exhaust Velocities and Temperatures**

1. This section provides APU exhaust velocities and temperatures.

**\*\*ON A/C A350-1000 A350-900**



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APU Exhaust Velocities and Temperatures  
FIGURE-6-4-0-991-001-A01

## PAVEMENT DATA

### 7-1-0 General Information

**\*\*ON A/C A350-1000 A350-900**

#### 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 7-2-0 presents basic data on the landing gear footprint configuration, MRW and tire sizes and pressures.

#### Maximum Pavement Loads:

Section 7-3-0 shows maximum vertical and horizontal pavement loads for certain critical conditions at the tire-ground interfaces.

#### Landing Gear Loading on Pavement:

The curves related to the landing gear loading on pavement are not given in section 7-4-0.

Because the relationship between the aircraft weight, the center of gravity and the landing gear loading on the pavement is not strictly linear, it cannot be shown in chart format.

But you can find in section 7-3-0 the maximum vertical and horizontal pavement loads for some critical conditions at the tire/ground interfaces for all the operational weight variants of the aircraft. For questions related to landing gear loading on pavement, contact Airbus.

#### Flexible Pavement Requirements - US Army Corps of Engineers Design Method:

The flexible pavement-requirements curves as per as U.S. Army Corps of Engineers Design Method are not given in section 7-5-0 since the related data is available through free software.

Sections 7-2-0 and 7-3-0 give all the inputs data required for the use of such software.

For questions related to the flexible pavement requirements, contact Airbus.

#### Flexible Pavement Requirements - LCN Conversion Method:

The Load Classification Number (LCN) curves are not given in section 7-6-0 since the LCN system for reporting pavement strength is old and are been replaced by the ICAO recommended ACN/PCN system in 1983 and ACR/PCR system in 2020.

For questions related to the LCN system, contact Airbus.

Rigid Pavement Requirements - PCA (Portland Cement Association) Design Method:

The rigid pavement requirements curves as per as Portland Cement Association Design Method are not given in section 7-7-0 since the corresponding data is available through free software.

Sections 7-2-0 and 7-3-0 give all the inputs data required for the use of such software.

For questions related to the rigid pavement requirements, contact Airbus.

Rigid Pavement Requirements - LCN Conversion:

The Load Classification Number (LCN) curves are not given in section 7-8-0 since the LCN system for reporting pavement strength is old and are replaced by the ICAO recommended ACN/PCN system in 1983 and ACR/PCR system in 2020.

For questions related to the LCN system, contact Airbus.

ACN/PCN Reporting System:

Section 7-9-0 gives ACN data prepared according to the ACN/PCN system as referenced in ICAO Annex 14, "Aerodromes", Volume 1 "Aerodrome Design and Operations".

Eighth Edition July 2018, incorporating Amendments 1 to 14 and ICAO doc 9157, "Aerodrome Design Manual", part 3 "Pavements" Second Edition 1983.

The ACN/PCN system is applicable until November 2024.

ACN is the Aircraft Classification Number and PCN is the related Pavement Classification Number. An aircraft with 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 the PCA program PDILB for rigid pavements and S-77-1 for flexible pavements to calculate ACN values.

The airport authority must select the method of pavement analysis.

The results of their evaluation should be reported using the following format:

| PCN           |                   |   |                    |
|---------------|-------------------|---|--------------------|
| PAVEMENT TYPE | SUBGRADE CATEGORY | TIRE PRESSURE CATEGORY                            | EVALUATION METHOD  |
| R - Rigid     | A - High          | W - No pressure limit                             | T - Technical      |
| F - Flexible  | B - Medium        | X - High pressure limited to 1.75 MPa (254 psi)   | U - Using aircraft |
|               | C - Low           | Y - Medium pressure limited to 1.25 MPa (181 psi) |                    |

| PCN           |                   |  |                   |
|---------------|-------------------|--|-------------------|
| PAVEMENT TYPE | SUBGRADE CATEGORY | TIRE PRESSURE CATEGORY                       | EVALUATION METHOD |
|               | D - Ultra low     | Z - Low pressure limited to 0.5 MPa (73 psi) |                   |

Section 7-9-0 shows the aircraft ACN values.

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  $k = 150 \text{ MN/m}^3 (550 \text{ pci})$
- B. Medium Strength  $k = 80 \text{ MN/m}^3 (300 \text{ pci})$
- C. Low Strength  $k = 40 \text{ MN/m}^3 (150 \text{ pci})$
- D. Ultra Low Strength  $k = 20 \text{ MN/m}^3 (75 \text{ pci})$

#### ACR/PCR Reporting System:

Section 7-10-0 gives ACR data prepared according to the ACR/PCR system as referenced in ICAO Annex 14, "Aerodromes", Volume 1 "Aerodrome Design and Operations".

Eight Edition July 2018, incorporating Amendments 1 to 15 and ICAO doc 9157, "Aerodrome Design Manual", part 3 "Pavements" Third Edition 2021.

The ACR/PCR system is effective from November 2020 and will be applicable in November 2024.

ACR is the Aircraft Classification Rating and PCR is the related Pavement Classification Rating.

An aircraft having an ACR equal to or less than the PCR can operate without restriction on the pavement.

Numerically the ACR is two times the derived single-wheel load expressed in hundreds of kilograms. The derived single-wheel load is defined as the load on a single tire inflated to 1.50 MPa (218 psi) that would have the same pavement requirements as the aircraft.

Computationally the ACR/PCR system relies on the Linear Elastic Analysis (LEA). The ACR are computed using the official ICAO-ACR software.

States can start their own methods for PCR determination, which agree with the overall parameters of the ACR/PCR method.

The results of their evaluation should be reported using the following format:

| PCR           |  |  |                    |
|---------------|--|--|--------------------|
| PAVEMENT TYPE | SUBGRADE CATEGORY                      | TIRE PRESSURE CATEGORY   | EVALUATION METHOD  |
| R - Rigid     | A - High                               | W - No pressure limit  | T - Technical      |
| F - Flexible  | B - Medium<br>C - Low<br>D - Ultra low | X - High pressure limited to 1.75 MPa (254 psi)<br>Y - Medium pressure limited to 1.25 MPa (181 psi)<br>Z - Low pressure limited to 0.5 MPa (73 psi) | U - Using aircraft |

Section 7-10-0 shows the aircraft ACR values.

For flexible and rigid pavements, the four subgrade categories are defined based on the subgrade modulus of elasticity (E):

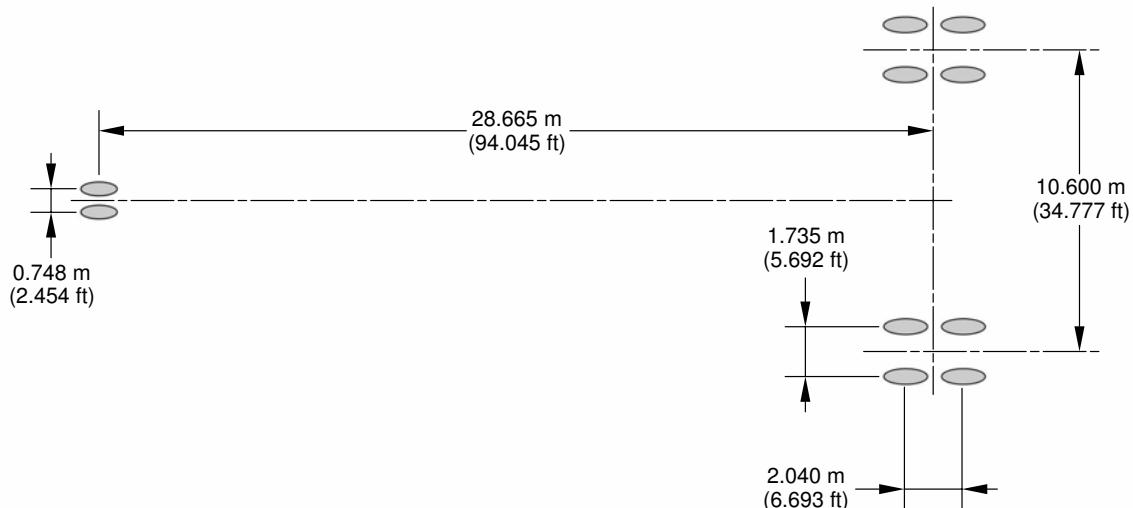
- |                       |                          |
|-----------------------|--------------------------|
| A. High Strength      | E = 200 MPa (29 008 psi) |
| B. Medium Strength    | E = 120 MPa (17 405 psi) |
| C. Low Strength       | E = 80 MPa (11 603 psi)  |
| D. Ultra Low Strength | E = 50 MPa (7 252 psi)   |

7-2-0      **Landing Gear Footprint****\*\*ON A/C A350-1000 A350-900**Landing Gear Footprint

1. This section gives data about the landing gear footprint in relation to the aircraft Maximum Ramp Weight (MRW), tire sizes and pressures.

The landing-gear footprint information is given for all the operational weight variants of the aircraft.

\*\*ON A/C A350-900



| WEIGHT VARIANT             | MAXIMUM RAMP WEIGHT     | PERCENTAGE OF WEIGHT ON MAIN GEAR GROUP | NOSE GEAR TIRE SIZE | NOSE GEAR TIRE PRESSURE | MAIN GEAR TIRE SIZE | MAIN GEAR TIRE PRESSURE |
|----------------------------|-------------------------|---|---------------------|-------------------------|---------------------|-------------------------|
| A350-900 WV000 (CG 33%)    | 268 900 kg (592 825 lb) | 93.7%                                   | 1 050x395R16 28PR   | 12.2 bar (177 psi)      | 1 400x530R23 42PR   | 16.6 bar (241 psi)      |
| A350-900 WV000 (CG 38.09%) | 268 900 kg (592 825 lb) | 95.3%                                   | 1 050x395R16 28PR   | 12.2 bar (177 psi)      | 1 400x530R23 42PR   | 16.6 bar (241 psi)      |
| A350-900 WV001 (CG 33.2%)  | 275 900 kg (608 250 lb) | 93.7%                                   | 1 050x395R16 28PR   | 12.2 bar (177 psi)      | 1 400x530R23 42PR   | 16.8 bar (244 psi)      |
| A350-900 WV001 (CG 34.83%) | 275 900 kg (608 250 lb) | 94.3%                                   | 1 050x395R16 28PR   | 12.2 bar (177 psi)      | 1 400x530R23 42PR   | 16.8 bar (244 psi)      |
| A350-900 WV002 (CG 36.39%) | 272 900 kg (601 650 lb) | 94.8%                                   | 1 050x395R16 28PR   | 12.2 bar (177 psi)      | 1 400x530R23 42PR   | 16.8 bar (244 psi)      |
| A350-900 WV002 (CG 37.07%) | 272 900 kg (601 650 lb) | 95.0%                                   | 1 050x395R16 28PR   | 12.2 bar (177 psi)      | 1 400x530R23 42PR   | 16.8 bar (244 psi)      |
| A350-900 WV003             | 268 900 kg (592 825 lb) | 95.3%                                   | 1 050x395R16 28PR   | 12.2 bar (177 psi)      | 1 400x530R23 42PR   | 16.6 bar (241 psi)      |

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Landing Gear Footprint  
(Sheet 1 of 3)

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

**\*\*ON A/C A350-900**

| WEIGHT VARIANT             | MAXIMUM RAMP WEIGHT     | PERCENTAGE OF WEIGHT ON MAIN GEAR GROUP | NOSE GEAR TIRE SIZE | NOSE GEAR TIRE PRESSURE | MAIN GEAR TIRE SIZE | MAIN GEAR TIRE PRESSURE |
|----------------------------|-------------------------|---|---------------------|-------------------------|---------------------|-------------------------|
| A350-900 WV004             | 260 900 kg (575 175 lb) | 95.7%                                   | 1 050x395R16 28PR   | 12.2 bar (177 psi)      | 1 400x530R23 42PR   | 16.6 bar (241 psi)      |
| A350-900 WV005             | 250 900 kg (553 150 lb) | 96.2%                                   | 1 050x395R16 28PR   | 12.2 bar (177 psi)      | 1 400x530R23 42PR   | 16.6 bar (241 psi)      |
| A350-900 WV006 (CG 36.4%)  | 272 900 kg (601 650 lb) | 94.8%                                   | 1 050x395R16 28PR   | 12.2 bar (177 psi)      | 1 400x530R23 42PR   | 16.8 bar (244 psi)      |
| A350-900 WV006 (CG 36.83%) | 272 900 kg (601 650 lb) | 94.9%                                   | 1 050x395R16 28PR   | 12.2 bar (177 psi)      | 1 400x530R23 42PR   | 16.8 bar (244 psi)      |
| A350-900 WV007 (CG 33%)    | 268 900 kg (592 825 lb) | 93.7%                                   | 1 050x395R16 28PR   | 12.2 bar (177 psi)      | 1 400x530R23 42PR   | 16.6 bar (241 psi)      |
| A350-900 WV007 (CG 38.1%)  | 268 900 kg (592 825 lb) | 95.3%                                   | 1 050x395R16 28PR   | 12.2 bar (177 psi)      | 1 400x530R23 42PR   | 16.6 bar (241 psi)      |
| A350-900 WV008             | 240 900 kg (531 100 lb) | 96.7%                                   | 1 050x395R16 28PR   | 12.2 bar (177 psi)      | 1 400x530R23 42PR   | 15.2 bar (220 psi)      |
| A350-900 WV009             | 275 900 kg (608 250 lb) | 93.7%                                   | 1 050x395R16 28PR   | 12.2 bar (177 psi)      | 1 400x530R23 42PR   | 16.8 bar (244 psi)      |
| A350-900 WV010             | 280 900 kg (619 275 lb) | 93.1%                                   | 1 050x395R16 28PR   | 12.2 bar (177 psi)      | 1 400x530R23 42PR   | 17.1 bar (248 psi)      |
| A350-900 WV011             | 255 900 kg (564 175 lb) | 95.9%                                   | 1 050x395R16 28PR   | 12.2 bar (177 psi)      | 1 400x530R23 42PR   | 16.6 bar (241 psi)      |
| A350-900 WV012             | 250 900 kg (553 150 lb) | 96.2%                                   | 1 050x395R16 28PR   | 12.2 bar (177 psi)      | 1 400x530R23 42PR   | 16.6 bar (241 psi)      |
| A350-900 WV013             | 280 900 kg (619 275 lb) | 93.1%                                   | 1 050x395R16 28PR   | 12.2 bar (177 psi)      | 1 400x530R23 42PR   | 17.1 bar (248 psi)      |
| A350-900 WV014             | 235 900 kg (520 075 lb) | 96.7%                                   | 1 050x395R16 28PR   | 12.2 bar (177 psi)      | 1 400x530R23 42PR   | 15.2 bar (220 psi)      |
| A350-900 WV015 (CG 31.15%) | 277 900 kg (612 675 lb) | 93.1%                                   | 1 050x395R16 28PR   | 12.2 bar (177 psi)      | 1 400x530R23 42PR   | 16.8 bar (244 psi)      |
| A350-900 WV015 (CG 33.27%) | 277 900 kg (612 675 lb) | 93.8%                                   | 1 050x395R16 28PR   | 12.2 bar (177 psi)      | 1 400x530R23 42PR   | 16.8 bar (244 psi)      |
| A350-900 WV016             | 278 900 kg (614 875 lb) | 93.6%                                   | 1 050x395R16 28PR   | 12.2 bar (177 psi)      | 1 400x530R23 42PR   | 17.1 bar (248 psi)      |
| A350-900 WV017             | 210 900 kg (464 950 lb) | 94.6%                                   | 1 050x395R16 28PR   | 12.2 bar (177 psi)      | 1 400x530R23 42PR   | 13.6 bar (197 psi)      |
| A350-900 WV018             | 217 900 kg (480 375 lb) | 94.6%                                   | 1 050x395R16 28PR   | 12.2 bar (177 psi)      | 1 400x530R23 42PR   | 13.6 bar (197 psi)      |

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Landing Gear Footprint  
(Sheet 2 of 3)

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



AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

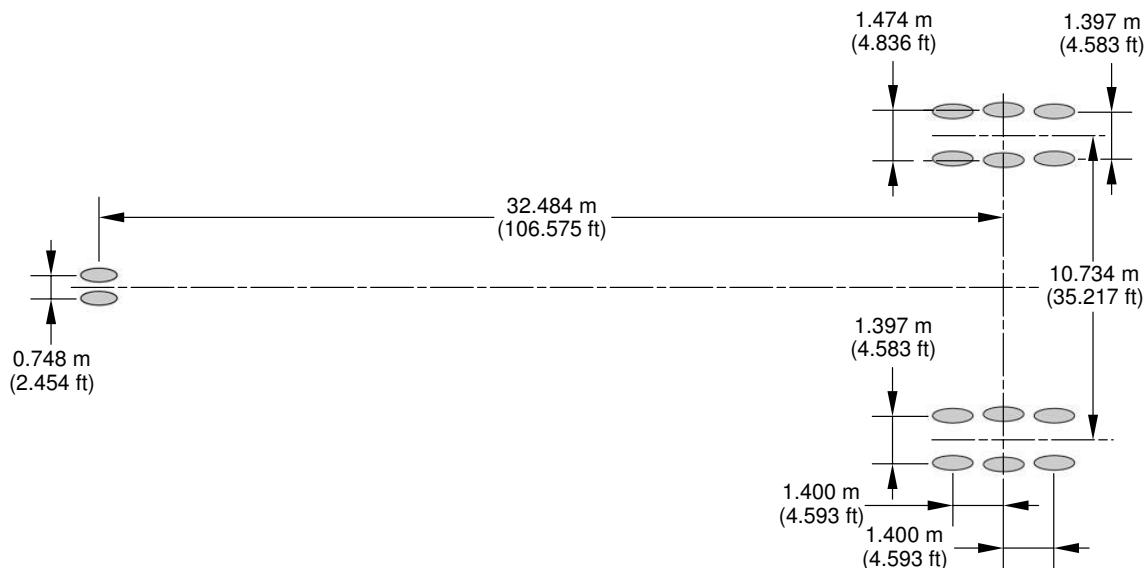
\*\*ON A/C A350-900

| WEIGHT VARIANT | MAXIMUM RAMP WEIGHT     | PERCENTAGE OF WEIGHT ON MAIN GEAR GROUP | NOSE GEAR TIRE SIZE | NOSE GEAR TIRE PRESSURE | MAIN GEAR TIRE SIZE | MAIN GEAR TIRE PRESSURE |
|----------------|-------------------------|---|---------------------|-------------------------|---------------------|-------------------------|
| A350-900 WV019 | 235 900 kg (520 075 lb) | 96.7%                                   | 1 050x395R16 28PR   | 12.2 bar (177 psi)      | 1 400x530R23 42PR   | 15.2 bar (220 psi)      |
| A350-900 WV022 | 280 900 kg (619 275 lb) | 93.1%                                   | 1 050x395R16 28PR   | 12.2 bar (177 psi)      | 1 400x530R23 42PR   | 17.1 bar (248 psi)      |
| A350-900 WV023 | 280 900 kg (619 275 lb) | 93.1%                                   | 1 050x395R16 28PR   | 12.2 bar (177 psi)      | 1 400x530R23 42PR   | 17.1 bar (248 psi)      |

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Landing Gear Footprint  
(Sheet 3 of 3)  
FIGURE-7-2-0-991-001-A01

\*\*ON A/C A350-1000



| WEIGHT VARIANT              | MAXIMUM RAMP WEIGHT     | PERCENTAGE OF WEIGHT ON MAIN GEAR GROUP | NOSE GEAR TIRE SIZE | NOSE GEAR TIRE PRESSURE | MAIN GEAR TIRE SIZE | MAIN GEAR TIRE PRESSURE |
|-----------------------------|-------------------------|---|---------------------|-------------------------|---------------------|-------------------------|
| A350-1000 WV000 (CG 35.96%) | 308 900 kg (681 000 lb) | 94.7%                                   | 1 050x395R16 28PR   | 12.2 bar (177 psi)      | 50x20R22 34PR       | 15.2 bar (220 psi)      |
| A350-1000 WV000 (CG 36.28%) | 308 900 kg (681 000 lb) | 94.8%                                   | 1 050x395R16 28PR   | 12.2 bar (177 psi)      | 50x20R22 34PR       | 15.2 bar (220 psi)      |
| A350-1000 WV001             | 311 900 kg (687 625 lb) | 94.2%                                   | 1 050x395R16 28PR   | 12.2 bar (177 psi)      | 50x20R22 34PR       | 15.2 bar (220 psi)      |
| A350-1000 WV002             | 316 900 kg (698 650 lb) | 93.3%                                   | 1 050x395R16 28PR   | 12.2 bar (177 psi)      | 50x20R22 34PR       | 15.2 bar (220 psi)      |
| A350-1000 WV004             | 308 900 kg (681 000 lb) | 94.7%                                   | 1 050x395R16 28PR   | 12.2 bar (177 psi)      | 50x20R22 34PR       | 15.2 bar (220 psi)      |
| A350-1000 WV005             | 270 900 kg (597 225 lb) | 96.2%                                   | 1 050x395R16 28PR   | 12.2 bar (177 psi)      | 50x20R22 34PR       | 15.2 bar (220 psi)      |
| A350-1000 WV006             | 319 900 kg (705 250 lb) | 93.9%                                   | 1 050x395R16 28PR   | 12.2 bar (177 psi)      | 50x20R22 36PR       | 15.6 bar (226 psi)      |
| A350-1000 WV007             | 260 900 kg (575 175 lb) | 96.2%                                   | 1 050x395R16 28PR   | 12.2 bar (177 psi)      | 50x20R22 34PR       | 13.1 bar (190 psi)      |
| A350-1000 WV009             | 290 900 kg (641 325 lb) | 95.3%                                   | 1 050x395R16 28PR   | 12.2 bar (177 psi)      | 50x20R22 34PR       | 15.2 bar (220 psi)      |
| A350-1000 WV010             | 300 900 kg (663 375 lb) | 95.0%                                   | 1 050x395R16 28PR   | 12.2 bar (177 psi)      | 50x20R22 34PR       | 15.2 bar (220 psi)      |
| A350-1000 WV011             | 316 900 kg (698 650 lb) | 93.3%                                   | 1 050x395R16 28PR   | 12.2 bar (177 psi)      | 50x20R22 34PR       | 15.2 bar (220 psi)      |

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Landing Gear Footprint  
FIGURE-7-2-0-991-002-A01

## 7-3-0      Maximum Pavement Loads

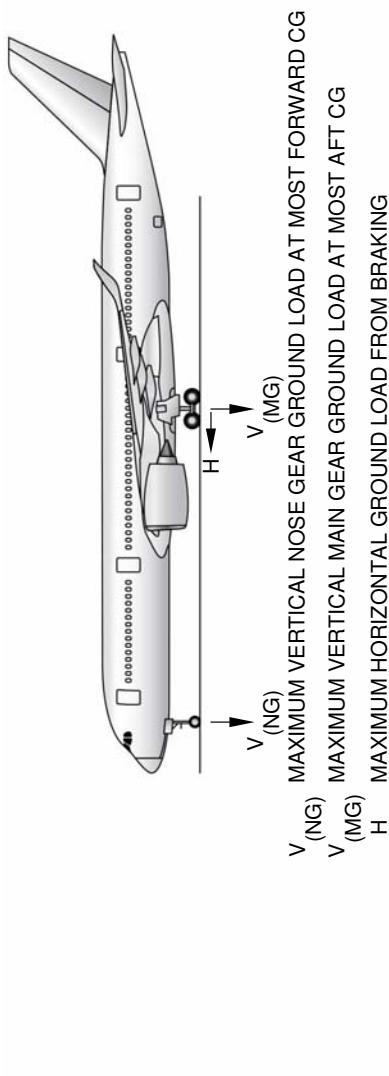
**\*\*ON A/C A350-1000 A350-900**

Maximum Pavement Loads

1. This section gives 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.

\*\*ON A/C A350-900



| 1                                | 2                          | 3                        | 4   | V <sub>(MG)</sub> (PER STRUT) | 5   | 6  |
|----------------------------------|----------------------------|--------------------------|---|-------------------------------|---|--|
| WEIGHT VARIANT                   | MAXIMUM RAMP WEIGHT        | STATIC LOAD AT FWD CG    | STATIC BRAKING AT 10 ft/s <sup>2</sup> DECELERATION | STATIC LOAD AT AFT CG         | STEADY BRAKING AT 10 ft/s <sup>2</sup> DECELERATION | H (PER STRUT)  |
| A350-900<br>WV000<br>(CG 33%)    | 268 900 kg<br>(592 825 lb) | 23 450 kg<br>(51 700 lb) | 23.4%<br>MAC (b)                                    | TBD<br><br>(277 700 lb)       | 125 960 kg<br>(277 700 lb)<br>33%<br>MAC (a)        | 41 790 kg<br>(92 125 lb)<br>(c)<br><br>100 770 kg<br>(222 150 lb)<br>(c) |
| A350-900<br>WV000<br>(CG 38.09%) | 268 900 kg<br>(592 825 lb) | 25 120 kg<br>(55 375 lb) | 23.48%<br>MAC (a)                                   | TBD<br><br>(282 525 lb)       | 128 150 kg<br>(282 525 lb)<br>38.09%<br>MAC (a)     | 41 790 kg<br>(92 125 lb)<br>(c)<br><br>102 520 kg<br>(226 025 lb)<br>(c) |
| A350-900<br>WV001<br>(CG 33.2%)  | 275 900 kg<br>(608 250 lb) | 23 450 kg<br>(51 700 lb) | 23.4%<br>MAC (b)                                    | TBD<br><br>(285 125 lb)       | 129 330 kg<br>(285 125 lb)<br>33.2%<br>MAC (a)      | 42 880 kg<br>(94 525 lb)<br>(c)<br><br>103 460 kg<br>(228 100 lb)<br>(c) |
| A350-900<br>WV001<br>(CG 34.83%) | 275 900 kg<br>(608 250 lb) | 25 090 kg<br>(55 325 lb) | 24.26%<br>MAC (a)                                   | TBD<br><br>(286 700 lb)       | 130 040 kg<br>(286 700 lb)<br>34.83%<br>MAC (a)     | 42 880 kg<br>(94 525 lb)<br>(c)<br><br>104 030 kg<br>(229 350 lb)<br>(c) |
| A350-900<br>WV002<br>(CG 36.39%) | 272 900 kg<br>(601 650 lb) | 23 450 kg<br>(51 700 lb) | 23.4%<br>MAC (b)                                    | TBD<br><br>(285 075 lb)       | 129 310 kg<br>(285 075 lb)<br>36.39%<br>MAC (a)     | 42 410 kg<br>(93 500 lb)<br>(c)<br><br>103 450 kg<br>(228 075 lb)<br>(c) |

**NOTE:**

- (a) LOADS CALCULATED USING AIRCRAFT AT MRW.
- (b) LOADS CALCULATED USING AIRCRAFT AT 250 200 kg (551 600 lb).
- (c) BRAKED MAIN GEAR.

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 Maximum Pavement Loads  
 (Sheet 1 of 4)

FIGURE-7-3-0-991-001-A01

\*\*ON A/C A350-900

| 1                          | 2                       | 3                     | 4   | V(MG) (PER STRUT)     | 5   | 6  |
|----------------------------|-------------------------|-----------------------|---|-----------------------|---|--|
| WEIGHT VARIANT             | MAXIMUM RAMP WEIGHT     | STATIC LOAD AT FWD CG | STATIC BRAKING AT 10 ft/s <sup>2</sup> DECELERATION | STATIC LOAD AT AFT CG | STEADY BRAKING AT 10 ft/s <sup>2</sup> DECELERATION | H (PER STRUT) AT INSTANTANEOUS BRAKING COEFFICIENT = 0.8 |
| A350-900 WV002 (CG 37.07%) | 272 900 kg (601 650 lb) | 25 110 kg (55 350 lb) | 23.93% MAC (a)                                      | TBD                   | 129 610 kg (285 725 lb)                             | 37.07% MAC (a)   |
| A350-900 WV003             | 268 900 kg (592 825 lb) | 23 450 kg (51 700 lb) | 23.4% MAC (b)                                       | TBD                   | 128 150 kg (282 525 lb)                             | 38.1% MAC (a)  |
| A350-900 WV004             | 260 900 kg (575 175 lb) | 23 480 kg (51 750 lb) | 24.57% MAC (a)                                      | TBD                   | 124 830 kg (275 225 lb)                             | 39.28% MAC (a)   |
| A350-900 WV005             | 250 900 kg (553 150 lb) | 23 520 kg (51 850 lb) | 23.39% MAC (a)                                      | TBD                   | 120 690 kg (266 075 lb)                             | 40.86% MAC (a)   |
| A350-900 WV006 (CG 36.4%)  | 272 900 kg (601 650 lb) | 23 450 kg (51 700 lb) | 23.4% MAC (b)                                       | TBD                   | 129 310 kg (285 100 lb)                             | 36.4% MAC (a)  |
| A350-900 WV006 (CG 36.83%) | 272 900 kg (601 650 lb) | 25 110 kg (55 350 lb) | 23.93% MAC (a)                                      | TBD                   | 129 500 kg (285 500 lb)                             | 36.83% MAC (a)   |
| A350-900 WV007 (CG 33%)    | 268 900 kg (592 825 lb) | 23 450 kg (51 700 lb) | 23.4% MAC (b)                                       | TBD                   | 125 960 kg (277 700 lb)                             | 33% MAC (a)  |
| A350-900 WV007 (CG 38.1%)  | 268 900 kg (592 825 lb) | 25 130 kg (55 400 lb) | 23.47% MAC (a)                                      | TBD                   | 128 150 kg (282 525 lb)                             | 38.1% MAC (a)  |
| A350-900 WV008             | 240 900 kg (531 100 lb) | 23 150 kg (51 050 lb) | 22.65% MAC (a)                                      | TBD                   | 116 490 kg (256 825 lb)                             | 42.4% MAC (a)  |
| A350-900 WV009             | 275 900 kg (608 250 lb) | 23 450 kg (51 700 lb) | 23.4% MAC (b)                                       | TBD                   | 129 330 kg (285 125 lb)                             | 33.2% MAC (a)  |

**NOTE:**

(a) LOADS CALCULATED USING AIRCRAFT AT MRW.

(b) LOADS CALCULATED USING AIRCRAFT AT 250 200 kg (551 600 lb).

(c) BRAKED MAIN GEAR.

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 Maximum Pavement Loads  
 (Sheet 2 of 4)

FIGURE-7-3-0-991-001-A01

7-3-0

\*\*ON A/C A350-900

| 1                          | 2                       | 3                     | V (NG)  | 4                     | V (MG) (PER STRUT)                                  | 5  | H (PER STRUT)             | 6                           |
|----------------------------|-------------------------|-----------------------|---|-----------------------|---|--|---------------------------|-----------------------------|
| WEIGHT VARIANT             | MAXIMUM RAMP WEIGHT     | STATIC LOAD AT FWD CG | STATIC BRAKING AT 10 ft/s <sup>2</sup> DECELERATION | STATIC LOAD AT AFT CG | STEADY BRAKING AT 10 ft/s <sup>2</sup> DECELERATION | AT INSTANTANEOUS BRAKING COEFFICIENT = 0.8 | H (PER STRUT)             |                             |
| A350-900 WV010             | 280 900 kg (619 275 lb) | 25 080 kg (55 275 lb) | 22.78% MAC (d)                                      | TBD                   | 130 780 kg (288 300 lb)                             | 31.2% MAC (a)                              | 43 650 kg (96 250 lb) (c) | 104 620 kg (230 650 lb) (c) |
| A350-900 WV011             | 255 900 kg (564 175 lb) | 23 510 kg (51 825 lb) | 23.98% MAC (a)                                      | TBD                   | 122 760 kg (270 650 lb)                             | 40.06% MAC (a)                             | 39 770 kg (87 675 lb) (c) | 98 210 kg (216 525 lb) (c)  |
| A350-900 WV012             | 250 900 kg (553 150 lb) | 23 520 kg (51 850 lb) | 23.39% MAC (a)                                      | TBD                   | 120 690 kg (266 075 lb)                             | 40.86% MAC (a)                             | 38 990 kg (85 950 lb) (c) | 96 550 kg (212 875 lb) (c)  |
| A350-900 WV013 (ULR)       | 280 900 kg (619 275 lb) | 25 080 kg (55 275 lb) | 22.78% MAC (d)                                      | TBD                   | 130 780 kg (288 300 lb)                             | 31.2% MAC (a)                              | 43 650 kg (96 250 lb) (c) | 104 620 kg (230 650 lb) (c) |
| A350-900 WV014             | 235 900 kg (520 075 lb) | 22 970 kg (50 625 lb) | 22.26% MAC (a)                                      | TBD                   | 114 070 kg (251 475 lb)                             | 42.4% MAC (a)                              | 36 660 kg (80 825 lb) (c) | 91 260 kg (20 200 lb) (c)   |
| A350-900 WV015 (CG 31.15%) | 277 900 kg (612 675 lb) | 23 450 kg (51 700 lb) | 23.4% MAC (b)                                       | TBD                   | 129 360 kg (285 175 lb)                             | 31.15% MAC (a)                             | 43 190 kg (95 200 lb) (c) | 103 480 kg (228 150 lb) (c) |
| A350-900 WV015 (CG 33.27%) | 277 900 kg (612 675 lb) | 25 080 kg (55 300 lb) | 24.48% MAC (a)                                      | TBD                   | 130 290 kg (287 250 lb)                             | 33.27% MAC (a)                             | 43 190 kg (95 200 lb) (c) | 104 240 kg (229 800 lb) (c) |
| A350-900 WV016             | 278 900 kg (614 875 lb) | 25 080 kg (55 275 lb) | 22.78% MAC (d)                                      | TBD                   | 130 460 kg (287 600 lb)                             | 32.58% MAC (a)                             | 43 340 kg (95 550 lb) (c) | 104 370 kg (230 075 lb) (c) |
| A350-900 WV017             | 210 900 kg (464 950 lb) | 22 060 kg (48 625 lb) | 20% MAC (a)   | TBD                   | 99 790 kg (220 000 lb)                              | 36% MAC (a)                                | 32 770 kg (72 250 lb) (c) | 79 840 kg (176 000 lb) (c)  |
| A350-900 WV018             | 217 900 kg (480 375 lb) | 20 020 kg (44 150 lb) | 24% MAC (a)   | TBD                   | 103 100 kg (227 300 lb)                             | 35.99% MAC (a)                             | 33 860 kg (74 650 lb) (c) | 82 480 kg (181 850 lb) (c)  |

**NOTE:**

- (a) LOADS CALCULATED USING AIRCRAFT AT MRW.
- (b) LOADS CALCULATED USING AIRCRAFT AT 250 200 kg (551 600 lb).
- (c) BRAKED MAIN GEAR.
- (d) LOADS CALCULATED USING AIRCRAFT AT 262 140 kg (577 900 lb).

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Maximum Pavement Loads  
 (Sheet 3 of 4)  
 FIGURE-7-3-0-991-001-A01

\*\*ON A/C A350-900

| 1              | 2                       | 3                     | V (NG)  | 4                     | V (MG) (PER STRUT)                                  | 5                 | H (PER STRUT)            | 6                           |
|----------------|-------------------------|-----------------------|---|-----------------------|---|-------------------|--------------------------|-----------------------------|
| WEIGHT VARIANT | MAXIMUM RAMP WEIGHT     | STATIC LOAD AT FWD CG | STATIC BRAKING AT 10 ft/s <sup>2</sup> DECELERATION | STATIC LOAD AT AFT CG | STEADY BRAKING AT 10 ft/s <sup>2</sup> DECELERATION | COEFFICIENT = 0.8 | AT INSTANTANEOUS BRAKING | H (PER STRUT)               |
| A350-900 WV019 | 235 900 kg (520 075 lb) | 22 970 kg (50 625 lb) | 22.26% MAC (a)                                      | TBD                   | 114 070 kg (251 475 lb)                             | 42.4% MAC (a)     | 36 660 kg (80 825 lb)    | (c) 91 260 kg (201 200 lb)  |
| A350-900 WV022 | 280 900 kg (619 275 lb) | 25 080 kg (55 275 lb) | 22.78% MAC (d)                                      | TBD                   | 130 780 kg (288 300 lb)                             | 31.2% MAC (a)     | 43 650 kg (96 250 lb)    | (c) 104 620 kg (230 650 lb) |
| A350-900 WV023 | 280 900 kg (619 275 lb) | 25 080 kg (55 275 lb) | 22.78% MAC (d)                                      | TBD                   | 130 780 kg (288 300 lb)                             | 31.2% MAC (a)     | 43 650 kg (96 250 lb)    | (c) 104 620 kg (230 650 lb) |

**NOTE:**

(a) LOADS CALCULATED USING AIRCRAFT AT MRW.

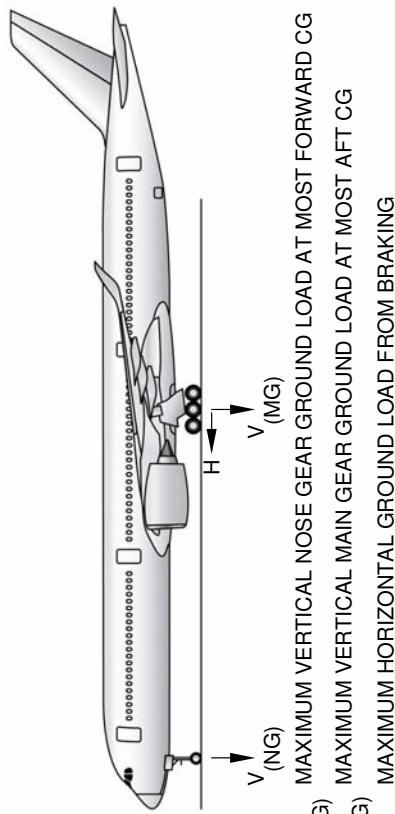
(c) BRAKED MAIN GEAR.

(d) LOADS CALCULATED USING AIRCRAFT AT 262 140 kg (577 900 lb).

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Maximum Pavement Loads  
 (Sheet 4 of 4)  
 FIGURE-7-3-0-991-001-A01

\*\*ON A/C A350-1000



| WEIGHT VARIANT                    | MAXIMUM RAMP WEIGHT        | V <sub>(NG)</sub>        |   | V <sub>(MG)</sub> (PER STRUT) |   | H(PER STRUT)      |   |
|-----------------------------------|----------------------------|--------------------------|---|-------------------------------|---|-------------------|---|
|                                   |                            | STATIC LOAD AT FWD CG    | STATIC BRAKING AT 10 ft/s <sup>2</sup> DECELERATION | STATIC LOAD AT AFT CG         | STEADY BRAKING AT 10 ft/s <sup>2</sup> DECELERATION | COEFFICIENT = 0.8 | STEADY BRAKING AT 10 ft/s <sup>2</sup> DECELERATION |
| A350-1000<br>WV000<br>(CG 35.96%) | 308 900 kg<br>(681 000 lb) | 26 560 kg<br>(58 550 lb) | 24.16%<br>MAC (a)                                   | TBD                           | 146 280 kg<br>(322 500 lb)                          | 35.96%<br>MAC (a) | 48 000 kg<br>(105 825 lb) (c)<br>(258 000 lb)       |
| A350-1000<br>WV001<br>(CG 36.28%) | 308 900 kg<br>(681 000 lb) | 28 020 kg<br>(61 775 lb) | 22.46%<br>MAC (a)                                   | TBD                           | 146 420 kg<br>(322 800 lb)                          | 36.28%<br>MAC (a) | 48 000 kg<br>(105 825 lb) (c)<br>(258 225 lb) (c)   |
| A350-1000<br>WV002                | 311 900 kg<br>(687 625 lb) | 26 570 kg<br>(58 575 lb) | 24.3%<br>MAC (b)                                    | TBD                           | 146 840 kg<br>(323 725 lb)                          | 34%<br>MAC (a)    | 48 470 kg<br>(106 850 lb) (c)<br>(258 975 lb) (c)   |
| A350-1000<br>WV004                | 316 900 kg<br>(698 650 lb) | 26 850 kg<br>(59 200 lb) | 24.6%<br>MAC (a)                                    | TBD                           | 147 770 kg<br>(325 775 lb)                          | 30.8%<br>MAC (a)  | 49 250 kg<br>(108 575 lb) (c)<br>(260 625 lb) (c)   |
| A350-1000<br>WV005                | 308 900 kg<br>(681 000 lb) | 26 560 kg<br>(58 550 lb) | 24.16%<br>MAC (a)                                   | TBD                           | 146 280 kg<br>(322 500 lb)                          | 35.96%<br>MAC (a) | 48 000 kg<br>(105 825 lb) (c)<br>(258 000 lb)       |
| A350-1000<br>WV005                | 270 900 kg<br>(597 225 lb) | 25 190 kg<br>(55 525 lb) | 21.67%<br>MAC (a)                                   | TBD                           | 130 250 kg<br>(287 150 lb)                          | 41.07%<br>MAC (a) | 42 100 kg<br>(92 825 lb) (c)<br>(229 725 lb) (c)    |

**NOTE:**

- (a) LOADS CALCULATED USING AIRCRAFT AT MRW.
- (b) LOADS CALCULATED USING AIRCRAFT AT 310 400 kg (684 325 lb).
- (c) BRAKED MAIN GEAR.

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 Maximum Pavement Loads  
 (Sheet 1 of 2)

FIGURE-7-3-0-991-002-A01

\*\*ON A/C A350-1000

| 1                  | 2                          | 3                        | 4                                       | V(MG) / PER STRUT     | 5   | 6  |
|--------------------|----------------------------|--------------------------|---|-----------------------|---|--|
| WEIGHT VARIANT     | MAXIMUM RAMP WEIGHT        | STATIC LOAD AT FWD CG    | STATIC BRAKING AT 10 ft/s? DECELERATION | STATIC LOAD AT AFT CG | STEADY BRAKING AT INSTANTANEOUS BRAKING COEFFICIENT = 0.8 | H (PER STRUT)  |
| A350-1000<br>WV006 | 319 900 kg<br>(705 250 lb) | 28 490 kg<br>(62 825 lb) | 23.05%<br>MAC (a)                       | TBD                   | 150 180 kg<br>(331 100 lb)                                | 33.05%<br>MAC (a)<br>49 710 kg<br>(109 600 lb) (c)<br>120 140 kg<br>(264 875 lb) (c) |
| A350-1000<br>WV007 | 260 900 kg<br>(575 175 lb) | 24 380 kg<br>(53 750 lb) | 21.5%<br>MAC (a)                        | TBD                   | 125 450 kg<br>(276 575 lb)                                | 41.1%<br>MAC (a)<br>40 550 kg<br>(89 375 lb) (c)<br>100 360 kg<br>(221 250 lb) (c)   |
| A350-1000<br>WV009 | 290 900 kg<br>(641 325 lb) | 25 910 kg<br>(57 125 lb) | 23.06%<br>MAC (a)                       | TBD                   | 138 680 kg<br>(305 725 lb)                                | 38.21%<br>MAC (a)<br>45 210 kg<br>(99 675 lb) (c)<br>110 940 kg<br>(244 600 lb) (c)  |
| A350-1000<br>WV010 | 300 900 kg<br>(663 375 lb) | 26 270 kg<br>(57 900 lb) | 23.69%<br>MAC (a)                       | TBD                   | 142 900 kg<br>(315 050 lb)                                | 36.93%<br>MAC (a)<br>46 760 kg<br>(103 100 lb) (c)<br>114 320 kg<br>(252 025 lb) (c) |
| A350-1000<br>WV011 | 316 900 kg<br>(698 650 lb) | 26 850 kg<br>(59 200 lb) | 24.6%<br>MAC (a)                        | TBD                   | 147 770 kg<br>(325 775 lb)                                | 30.8%<br>MAC (a)<br>49 250 kg<br>(108 575 lb) (c)<br>118 220 kg<br>(260 625 lb) (c)  |

**NOTE:**  
 (a) LOADS CALCULATED USING AIRCRAFT AT MRW.  
 (c) BRAKED MAIN GEAR.

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 Maximum Pavement Loads  
 (Sheet 2 of 2)

FIGURE-7-3-0-991-002-A01

## 7-4-0      Landing Gear Loading on Pavement

**\*\*ON A/C A350-1000 A350-900**

Landing Gear Loading on Pavement

1. The curves related to the landing gear loading on pavement are not given in section 7-4-0. Because the relationship between the aircraft weight, the center of gravity and the landing gear loading on the pavement is not strictly linear, it cannot be shown in chart format. But you can find in section 7-3-0 the maximum vertical and horizontal pavement loads for some critical conditions at the tire/ground interfaces for all the operational weight variants of the aircraft. For questions related to the landing gear loading on pavement, contact Airbus.

## 7-5-0      Flexible Pavement Requirements - US Army Corps of Engineers Design Method

**\*\*ON A/C A350-1000 A350-900**

Flexible Pavement Requirements - US Army Corps of Engineers Design Method

1. The flexible-pavement requirements curves by U.S. Army Corps of Engineers Design Method are not given in section 7-5-0 since the related data is available through free software. Sections 7-2-0 and 7-3-0 give all the inputs data required for the use of such software.

NOTE : The U.S. Army Corps of Engineers Design Method for flexible pavements is being gradually superseded by mechanistic-empirical design methods mostly relying on Linear Elastic Analysis (LEA). The number of parameters considered by such methods is not applicable for a chart format and the use of dedicated pavement-design software is necessary.  
For questions related to the flexible pavement requirements, contact Airbus.

7-6-0      **Flexible Pavement Requirements - LCN Conversion**

**\*\*ON A/C A350-1000 A350-900**

**Flexible Pavement Requirements - LCN Conversion**

1. The Load Classification Number (LCN) curves are no longer provided in section 7-6-0 since the LCN system for reporting pavement strength is obsolete, having been replaced by the ICAO recommended ACN/PCN system in 1983 and ACR/PCR system in 2020.

For questions regarding the LCN system, contact Airbus.

7-7-0      **Rigid Pavement Requirements - Portland Cement Association Design Method**

**\*\*ON A/C A350-1000 A350-900**

**Rigid Pavement Requirements - Portland Cement Association Design Method**

1. The rigid-pavement requirements curves by Portland Cement Association Design Method are not given in section 7-7-0 since the related data is available through free software.  
Sections 7-2-0 and 7-3-0 give all the inputs data required for the use of such software.

**NOTE :** The Portland Cement Association Design Method for rigid pavements is being gradually superseded by mechanistic-empirical design methods mostly relying on Finite Element Analysis (FEM). The number of parameters considered by such methods is not applicable for a chart format and the use of dedicated pavement-design software is necessary.  
For questions related to the rigid pavement requirements, contact Airbus.

7-8-0      **Rigid Pavement Requirements - LCN Conversion**

**\*\*ON A/C A350-1000 A350-900**

Rigid Pavement Requirements - LCN Conversion

1. The Load Classification Number (LCN) curves are no longer provided in section 7-8-0 since the LCN system for reporting pavement strength is obsolete, having been replaced by the ICAO recommended ACN/PCN system in 1983 and ACR/PCR system in 2020.

For questions regarding the LCN system, contact Airbus.

## 7-9-0 ACN/PCN Reporting System - Flexible and Rigid Pavements

\*\*ON A/C A350-1000 A350-900

ACN/PCN Reporting System - Flexible and Rigid Pavements

1. This section gives data about the Aircraft Classification Number (ACN) for an aircraft gross weight in relation with standard subgrade strength values for flexible and rigid pavement.

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).

2. Aircraft Classification Number - ACN table

The tables in figures (FIGURE 7-9-0-991-008-A and FIGURE 7-9-0-991-011-A) give ACN data in tabular format 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:

- $ACN = ACN_{min} + (ACN_{max} - ACN_{min}) \times (\text{Operating weight} - 140\,000\text{ kg}) / (\text{MRW} - 140\,000\text{ kg})$  for the A350-900,
- $ACN = ACN_{min} + (ACN_{max} - ACN_{min}) \times (\text{Operating Weight} - 160\,000\text{ kg}) / (\text{MRW} - 160\,000\text{ kg})$  for the A350-1000.

Please note that the interpolation error may reach 5% to 10%.

As an approximation, use a linear interpolation in order to get the aircraft weight at the pavement PCN using the following equation:

- $\text{Operating weight} = 140\,000\text{ kg} + (\text{MRW} - 140\,000\text{ kg}) \times (PCN - ACN_{min}) / (ACN_{max} - ACN_{min})$  for the A350-900,
- $\text{Operating weight} = 160\,000\text{ kg} + (\text{MRW} - 160\,000\text{ kg}) \times (PCN - ACN_{min}) / (ACN_{max} - ACN_{min})$  for the A350-1000.

With  $ACN_{max} = ACN$  calculated at the MRW in the table and with  $ACN_{min} = ACN$  calculated at 140 000 kg for the A350-900 and 160 000 kg for the A350-1000.

Please note that the interpolation error may reach up to 5%.

For questions or specific calculation regarding ACN/PCN Reporting System, contact Airbus.

\*\*ON A/C A350-900

| WEIGHT VARIANT             | ALL UP MASS (kg) | LOAD ON ONE MAIN GEAR LEG (%) | TIRE PRESSURE (MPa) | ACN FOR RIGID PAVEMENT SUBGRADES - MN/m <sup>2</sup> |           |        |              | ACN FOR FLEXIBLE PAVEMENT SUBGRADES - CBR |           |       |             |
|----------------------------|------------------|-------------------------------|---------------------|--|-----------|--------|--------------|---|-----------|-------|-------------|
|                            |                  |                               |                     | HIGH 150   | MEDIUM 80 | LOW 40 | ULTRA-LOW 20 | HIGH 15                                   | MEDIUM 10 | LOW 6 | ULTRA-LOW 3 |
| A350-900 WV000 (CG 33%)    | 268 900          | 46.8                          | 1.66                | 63   | 70        | 82     | 95           | 65  | 69        | 79    | 108         |
|                            | 140 000          | 46.8                          |                     | 32   | 33        | 35     | 40           | 30  | 31        | 33    | 40          |
| A350-900 WV000 (CG 38.09%) | 268 900          | 47.7                          | 1.66                | 64   | 72        | 83     | 97           | 67  | 71        | 81    | 111         |
|                            | 140 000          | 47.7                          |                     | 32   | 33        | 36     | 41           | 31  | 32        | 34    | 41          |
| A350-900 WV001 (CG 33.2%)  | 275 900          | 46.9                          | 1.68                | 65   | 73        | 85     | 98           | 68  | 72        | 82    | 113         |
|                            | 140 000          | 46.9                          |                     | 32   | 33        | 36     | 40           | 30  | 31        | 33    | 40          |
| A350-900 WV001 (CG 34.83%) | 275 900          | 47.1                          | 1.68                | 66   | 73        | 85     | 99           | 68  | 72        | 82    | 114         |
|                            | 140 000          | 47.1                          |                     | 32   | 33        | 36     | 40           | 30  | 31        | 34    | 41          |
| A350-900 WV002 (CG 36.39%) | 272 900          | 47.4                          | 1.68                | 65   | 73        | 85     | 98           | 68  | 72        | 82    | 113         |
|                            | 140 000          | 47.4                          |                     | 32   | 33        | 36     | 41           | 31  | 32        | 34    | 41          |
| A350-900 WV002 (CG 37.07%) | 272 900          | 47.5                          | 1.68                | 65   | 73        | 85     | 99           | 68  | 72        | 82    | 113         |
|                            | 140 000          | 47.5                          |                     | 32   | 33        | 36     | 41           | 31  | 32        | 34    | 41          |
| A350-900 WV003             | 268 900          | 47.7                          | 1.66                | 64   | 72        | 83     | 97           | 67  | 71        | 81    | 111         |
|                            | 140 000          | 47.7                          |                     | 32   | 33        | 36     | 41           | 31  | 32        | 34    | 41          |
| A350-900 WV004             | 260 900          | 47.8                          | 1.66                | 63   | 69        | 81     | 94           | 65  | 68        | 78    | 107         |
|                            | 140 000          | 47.9                          |                     | 32   | 33        | 36     | 41           | 31  | 32        | 34    | 42          |
| A350-900 WV005             | 250 900          | 48.1                          | 1.66                | 60   | 66        | 77     | 89           | 62  | 66        | 74    | 102         |
|                            | 140 000          | 48.1                          |                     | 33   | 34        | 37     | 41           | 31  | 32        | 35    | 42          |
| A350-900 WV006 (CG 36.4%)  | 272 900          | 47.4                          | 1.68                | 65   | 73        | 85     | 98           | 68  | 72        | 82    | 113         |
|                            | 140 000          | 47.4                          |                     | 32   | 33        | 36     | 41           | 31  | 32        | 34    | 41          |
| A350-900 WV006 (CG 36.83%) | 272 900          | 47.5                          | 1.68                | 65   | 73        | 85     | 99           | 68  | 72        | 82    | 113         |
|                            | 140 000          | 47.5                          |                     | 32   | 33        | 36     | 41           | 31  | 32        | 34    | 41          |
| A350-900 WV007 (CG 33%)    | 268 900          | 46.8                          | 1.66                | 63   | 70        | 82     | 95           | 65  | 69        | 79    | 108         |
|                            | 140 000          | 46.8                          |                     | 32   | 33        | 35     | 40           | 30  | 31        | 33    | 40          |
| A350-900 WV007 (CG 38.1%)  | 268 900          | 47.7                          | 1.66                | 64   | 72        | 83     | 97           | 67  | 71        | 81    | 111         |
|                            | 140 000          | 47.7                          |                     | 32   | 33        | 36     | 41           | 31  | 32        | 34    | 41          |
| A350-900 WV008             | 240 900          | 48.4                          | 1.52                | 56   | 62        | 72     | 84           | 59  | 62        | 71    | 96          |
|                            | 140 000          | 48.4                          |                     | 32   | 33        | 36     | 41           | 31  | 32        | 35    | 42          |
| A350-900 WV009             | 275 900          | 46.9                          | 1.68                | 65   | 73        | 85     | 98           | 68  | 72        | 82    | 113         |
|                            | 140 000          | 46.9                          |                     | 32   | 33        | 36     | 40           | 30  | 31        | 33    | 40          |
| A350-900 WV010             | 280 900          | 46.6                          | 1.71                | 66   | 74        | 87     | 100          | 69  | 73        | 83    | 115         |
|                            | 140 000          | 46.5                          |                     | 32   | 33        | 35     | 40           | 30  | 31        | 33    | 40          |
| A350-900 WV011             | 255 900          | 48.0                          | 1.66                | 61   | 68        | 79     | 91           | 63  | 67        | 76    | 104         |
|                            | 140 000          | 48.0                          |                     | 33   | 33        | 36     | 41           | 31  | 32        | 34    | 42          |
| A350-900 WV012             | 250 900          | 48.1                          | 1.66                | 60   | 66        | 77     | 89           | 62  | 66        | 74    | 102         |
|                            | 140 000          | 48.1                          |                     | 33   | 34        | 37     | 41           | 31  | 32        | 35    | 42          |
| A350-900 WV013 (ULR)       | 280 900          | 46.6                          | 1.71                | 66   | 74        | 87     | 100          | 69  | 73        | 83    | 115         |
|                            | 140 000          | 46.5                          |                     | 32   | 33        | 35     | 40           | 30  | 31        | 33    | 40          |
| A350-900 WV014             | 235 900          | 48.4                          | 1.52                | 55   | 60        | 70     | 81           | 57  | 61        | 69    | 93          |
|                            | 140 000          | 48.4                          |                     | 32   | 33        | 36     | 41           | 31  | 32        | 35    | 42          |
| A350-900 WV015 (CG 31.15%) | 277 900          | 46.5                          | 1.68                | 65   | 73        | 85     | 98           | 68  | 72        | 82    | 113         |
|                            | 140 000          | 46.5                          |                     | 32   | 32        | 35     | 40           | 30  | 31        | 33    | 40          |
| A350-900 WV015 (CG 33.27%) | 277 900          | 46.9                          | 1.68                | 66   | 74        | 86     | 99           | 68  | 72        | 83    | 114         |
|                            | 140 000          | 46.9                          |                     | 32   | 33        | 36     | 40           | 30  | 31        | 33    | 40          |
| A350-900 WV016             | 278 900          | 46.8                          | 1.71                | 66   | 74        | 86     | 100          | 68  | 73        | 83    | 114         |
|                            | 140 000          | 46.8                          |                     | 32   | 33        | 36     | 40           | 30  | 31        | 33    | 40          |

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## ACN Table

(Sheet 1 of 2)

FIGURE-7-9-0-991-008-A01

**\*\*ON A/C A350-900**

| WEIGHT VARIANT | ALL UP MASS (kg) | LOAD ON ONE MAIN GEAR LEG (%) | TIRE PRESSURE (MPa) | ACN FOR RIGID PAVEMENT SUBGRADES - MN/m <sup>2</sup> |           |        |               | ACN FOR FLEXIBLE PAVEMENT SUBGRADES - CBR |           |       |              |
|----------------|------------------|-------------------------------|---------------------|--|-----------|--------|---------------|---|-----------|-------|--------------|
|                |                  |                               |                     | HIGH 150   | MEDIUM 80 | LOW 40 | ULTRA -LOW 20 | HIGH 15                                   | MEDIUM 10 | LOW 6 | ULTRA -LOW 3 |
| A350-900 WV017 | 210 900          | 47.3                          | 1.36                | 45   | 49        | 56     | 66            | 48  | 51        | 57    | 76           |
|                | 140 000          | 47.3                          |                     | 30   | 31        | 34     | 38            | 30  | 31        | 34    | 41           |
| A350-900 WV018 | 217 900          | 47.3                          | 1.36                | 47   | 51        | 59     | 69            | 50  | 53        | 60    | 79           |
|                | 140 000          | 47.3                          |                     | 30   | 31        | 34     | 38            | 30  | 31        | 34    | 41           |
| A350-900 WV019 | 235 900          | 48.4                          | 1.52                | 55   | 60        | 70     | 81            | 57  | 61        | 69    | 93           |
|                | 140 000          | 48.4                          |                     | 32   | 33        | 36     | 41            | 31  | 32        | 35    | 42           |
| A350-900 WV022 | 280 900          | 46.6                          | 1.71                | 66   | 74        | 87     | 100           | 69  | 73        | 83    | 115          |
|                | 140 000          | 46.5                          |                     | 32   | 33        | 35     | 40            | 30  | 31        | 33    | 40           |
| A350-900 WV023 | 280 900          | 46.6                          | 1.71                | 66   | 74        | 87     | 100           | 69  | 73        | 83    | 115          |
|                | 140 000          | 46.5                          |                     | 32   | 33        | 35     | 40            | 30  | 31        | 33    | 40           |

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ACN Table  
(Sheet 2 of 2)  
FIGURE-7-9-0-991-008-A01

**\*\*ON A/C A350-1000**

| WEIGHT VARIANT              | ALL UP MASS (kg) | LOAD ON ONE MAIN GEAR LEG (%) | TIRE PRESSURE (MPa) | ACN FOR RIGID PAVEMENT SUBGRADES – MN/m? |           |        |              | ACN FOR FLEXIBLE PAVEMENT SUBGRADES – CBR |           |       |             |
|-----------------------------|------------------|-------------------------------|---------------------|--|-----------|--------|--------------|---|-----------|-------|-------------|
|                             |                  |                               |                     | HIGH 150                                 | MEDIUM 80 | LOW 40 | ULTRA-LOW 20 | HIGH 15                                   | MEDIUM 10 | LOW 6 | ULTRA-LOW 3 |
| A350-1000 WV000 (CG 35.96%) | 308 900          | 47.4                          | 1.52                | 57                                       | 72        | 93     | 112          | 55  | 61        | 76    | 105         |
|                             | 160 000          | 47.4                          |                     | 27                                       | 28        | 34     | 42           | 23  | 25        | 28    | 38          |
| A350-1000 WV000 (CG 36.28%) | 308 900          | 47.4                          | 1.52                | 57                                       | 73        | 93     | 113          | 55  | 61        | 76    | 105         |
|                             | 160 000          | 47.4                          |                     | 27                                       | 28        | 34     | 42           | 23  | 25        | 28    | 39          |
| A350-1000 WV001             | 311 900          | 47.1                          | 1.52                | 57                                       | 73        | 93     | 113          | 55  | 62        | 76    | 105         |
|                             | 160 000          | 47.1                          |                     | 27                                       | 27        | 33     | 42           | 23  | 25        | 28    | 38          |
| A350-1000 WV002             | 316 900          | 46.6                          | 1.52                | 58                                       | 74        | 94     | 114          | 56  | 62        | 77    | 106         |
|                             | 160 000          | 46.6                          |                     | 27                                       | 27        | 33     | 41           | 23  | 24        | 28    | 38          |
| A350-1000 WV004             | 308 900          | 47.4                          | 1.52                | 57                                       | 72        | 93     | 112          | 55  | 61        | 76    | 105         |
|                             | 160 000          | 47.4                          |                     | 27                                       | 28        | 34     | 42           | 23  | 25        | 28    | 38          |
| A350-1000 WV005             | 270 900          | 48.1                          | 1.52                | 48                                       | 60        | 77     | 95           | 47  | 52        | 63    | 89          |
|                             | 160 000          | 48.1                          |                     | 28                                       | 28        | 34     | 43           | 24  | 25        | 29    | 39          |
| A350-1000 WV006             | 319 900          | 46.9                          | 1.56                | 60                                       | 76        | 97     | 117          | 57  | 64        | 79    | 109         |
|                             | 160 000          | 46.9                          |                     | 27                                       | 27        | 33     | 42           | 23  | 25        | 28    | 38          |
| A350-1000 WV007             | 260 900          | 48.1                          | 1.31                | 43                                       | 54        | 70     | 87           | 44  | 49        | 59    | 84          |
|                             | 160 000          | 48.1                          |                     | 26                                       | 27        | 33     | 42           | 23  | 25        | 29    | 39          |
| A350-1000 WV009             | 290 900          | 47.7                          | 1.52                | 53                                       | 66        | 85     | 104          | 51  | 57        | 70    | 97          |
|                             | 160 000          | 47.7                          |                     | 28                                       | 28        | 34     | 42           | 23  | 25        | 29    | 39          |
| A350-1000 WV010             | 300 900          | 47.5                          | 1.52                | 55                                       | 70        | 89     | 109          | 53  | 59        | 73    | 101         |
|                             | 160 000          | 47.5                          |                     | 27                                       | 28        | 34     | 42           | 23  | 25        | 29    | 39          |
| A350-1000 WV011             | 316 900          | 46.6                          | 1.52                | 58                                       | 74        | 94     | 114          | 56  | 62        | 77    | 106         |
|                             | 160 000          | 46.6                          |                     | 27                                       | 27        | 33     | 41           | 23  | 24        | 28    | 38          |

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ACN Table  
FIGURE-7-9-0-991-011-A01

## 7-10-0      ACR/PCR Reporting System - Flexible and Rigid Pavements

\*\*ON A/C A350-1000 A350-900

ACR/PCR Reporting System - Flexible and Rigid Pavements

1. The ACR/PCR system has been developed by the ICAO to overcome the deficiencies of the ACN/PCN system. Significant advances in pavement design methods had occurred since its development in the late 1970s early 1980s, leading to inconsistencies with the pavement-strength-rating system.

The ACR/PCR system entails new procedures for the determination of both the ACR and the PCR that are consistent with the current pavement design procedures. This allows to capture the effects of the improved characteristics of new pavement materials as well as modern landing gear configurations, thus leading to an improved accuracy.

This section gives data about the Aircraft Classification Rating (ACR) for the maximum ramp weight in relation with standard subgrade strength values for flexible and rigid pavement.

To determine the ACR at other aircraft gross weight, use the official ICAO-ACR software.

NOTE : An aircraft with an ACR equal to or less than the reported PCR can operate on that pavement, subject to any limitation on the tire pressure. (Ref: ICAO Aerodrome Design Manual, Part 3, Third Edition 2020).

2. Aircraft Classification Rating - ACR Table

The table FIGURE 7-10-0-991-001-A and FIGURE 7-10-0-991-002-B provide ACR data in tabular format for all the operational weight variants of the aircraft.

For questions or specific calculation related to ACR/PCR reporting system, contact Airbus.

\*\*ON A/C A350-900

| AIRCRAFT TYPE              | ALL UP MASS (kg) | LOAD ON ONE MAIN GEAR LEG (%) | TIRE PRESSURE (MPa) | ACR FOR RIGID PAVEMENT SUBGRADES – MPa |            |        |              | ACR FOR FLEXIBLE PAVEMENT SUBGRADES – MPa |            |        |              |
|----------------------------|------------------|-------------------------------|---------------------|--|------------|--------|--------------|---|------------|--------|--------------|
|                            |                  |                               |                     | HIGH 200                               | MEDIUM 120 | LOW 80 | ULTRA-LOW 50 | HIGH 200                                  | MEDIUM 120 | LOW 80 | ULTRA-LOW 50 |
| A350-900 WV000 (CG 33%)    | 268 900          | 46.8                          | 1.66                | 700                                    | 800        | 880    | 990          | 660                                       | 670        | 720    | 850          |
| A350-900 WV000 (CG 38.09%) | 268 900          | 47.7                          | 1.66                | 720                                    | 810        | 910    | 1 020        | 670                                       | 690        | 730    | 870          |
| A350-900 WV001 (CG 33.2%)  | 275 900          | 46.9                          | 1.68                | 730                                    | 830        | 920    | 1 030        | 680                                       | 690        | 740    | 890          |
| A350-900 WV001 (CG 34.83%) | 275 900          | 47.1                          | 1.68                | 740                                    | 830        | 930    | 1 040        | 690                                       | 700        | 750    | 890          |
| A350-900 WV002 (CG 36.39%) | 272 900          | 47.4                          | 1.68                | 730                                    | 830        | 920    | 1 030        | 680                                       | 690        | 740    | 890          |
| A350-900 WV002 (CG 37.07%) | 272 900          | 47.5                          | 1.68                | 730                                    | 830        | 920    | 1 040        | 680                                       | 700        | 750    | 890          |
| A350-900 WV003             | 268 900          | 47.7                          | 1.66                | 720                                    | 810        | 910    | 1 020        | 670                                       | 690        | 730    | 870          |
| A350-900 WV004             | 260 900          | 47.8                          | 1.66                | 700                                    | 790        | 870    | 980          | 660                                       | 670        | 710    | 840          |
| A350-900 WV005             | 250 900          | 48.1                          | 1.66                | 670                                    | 750        | 830    | 940          | 630                                       | 640        | 680    | 800          |
| A350-900 WV006 (CG 36.4%)  | 272 900          | 47.4                          | 1.68                | 730                                    | 830        | 920    | 1 030        | 680                                       | 690        | 740    | 890          |
| A350-900 WV006 (CG 36.83%) | 272 900          | 47.5                          | 1.68                | 730                                    | 830        | 920    | 1 030        | 680                                       | 700        | 740    | 890          |
| A350-900 WV007 (CG 33%)    | 268 900          | 46.8                          | 1.66                | 700                                    | 800        | 880    | 990          | 660                                       | 670        | 720    | 850          |
| A350-900 WV007 (CG 38.1%)  | 268 900          | 47.7                          | 1.66                | 720                                    | 810        | 910    | 1 020        | 670                                       | 690        | 730    | 870          |
| A350-900 WV008             | 240 900          | 48.4                          | 1.52                | 620                                    | 700        | 780    | 880          | 600                                       | 610        | 650    | 750          |
| A350-900 WV009             | 275 900          | 46.9                          | 1.68                | 730                                    | 830        | 920    | 1 030        | 680                                       | 690        | 740    | 890          |
| A350-900 WV010             | 280 900          | 46.6                          | 1.71                | 750                                    | 840        | 940    | 1 050        | 690                                       | 700        | 760    | 900          |
| A350-900 WV011             | 255 900          | 48.0                          | 1.66                | 680                                    | 770        | 850    | 960          | 650                                       | 650        | 700    | 820          |

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ACR Table  
(Sheet 1 of 2)  
FIGURE-7-10-0-991-001-A01

**\*\*ON A/C A350-900**

| AIRCRAFT TYPE              | ALL UP MASS (kg) | LOAD ON ONE MAIN GEAR LEG (%) | TIRE PRESSURE (MPa) | ACR FOR RIGID PAVEMENT SUBGRADES – MPa |            |        |              | ACR FOR FLEXIBLE PAVEMENT SUBGRADES – MPa |            |        |              |
|----------------------------|------------------|-------------------------------|---------------------|--|------------|--------|--------------|---|------------|--------|--------------|
|                            |                  |                               |                     | HIGH 200                               | MEDIUM 120 | LOW 80 | ULTRA-LOW 50 | HIGH 200                                  | MEDIUM 120 | LOW 80 | ULTRA-LOW 50 |
| A350-900 WV012             | 250 900          | 48.1                          | 1.66                | 670                                    | 750        | 830    | 940          | 630                                       | 640        | 680    | 800          |
| A350-900 WV013 (ULR)       | 280 900          | 46.6                          | 1.71                | 750                                    | 840        | 940    | 1 050        | 690                                       | 700        | 760    | 900          |
| A350-900 WV014             | 235 900          | 48.4                          | 1.52                | 600                                    | 680        | 760    | 850          | 590                                       | 600        | 630    | 730          |
| A350-900 WV015 (CG 31.15%) | 277 900          | 46.5                          | 1.68                | 730                                    | 830        | 920    | 1 030        | 680                                       | 690        | 740    | 890          |
| A350-900 WV015 (CG 33.27%) | 277 900          | 46.9                          | 1.68                | 740                                    | 840        | 930    | 1 040        | 690                                       | 700        | 750    | 900          |
| A350-900 WV016             | 278 900          | 46.8                          | 1.71                | 740                                    | 840        | 930    | 1 050        | 690                                       | 700        | 750    | 900          |
| A350-900 WV017             | 210 900          | 47.3                          | 1.36                | 490                                    | 550        | 610    | 700          | 500                                       | 510        | 530    | 600          |
| A350-900 WV018             | 217 900          | 47.3                          | 1.36                | 510                                    | 570        | 640    | 730          | 510                                       | 530        | 550    | 630          |
| A350-900 WV019             | 235 900          | 48.4                          | 1.52                | 600                                    | 680        | 760    | 850          | 590                                       | 600        | 630    | 730          |
| A350-900 WV022             | 280 900          | 46.6                          | 1.71                | 750                                    | 840        | 940    | 1 050        | 690                                       | 700        | 760    | 900          |
| A350-900 WV023             | 280 900          | 46.6                          | 1.71                | 750                                    | 840        | 940    | 1 050        | 690                                       | 700        | 760    | 900          |

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ACR Table  
(Sheet 2 of 2)  
FIGURE-7-10-0-991-001-A01

\*\*ON A/C A350-1000

| AIRCRAFT TYPE               | ALL UP MASS (kg) | LOAD ON ONE MAIN GEAR LEG (%) | TIRE PRESSURE (MPa) | ACR FOR RIGID PAVEMENT SUBGRADES – MPa |            |        |               | ACR FOR FLEXIBLE PAVEMENT SUBGRADES – MPa |            |        |               |
|-----------------------------|------------------|-------------------------------|---------------------|--|------------|--------|---------------|---|------------|--------|---------------|
|                             |                  |                               |                     | HIGH 200                               | MEDIUM 120 | LOW 80 | ULTRA –LOW 50 | HIGH 200                                  | MEDIUM 120 | LOW 80 | ULTRA –LOW 50 |
| A350-1000 WV000 (CG 35.96%) | 308 900          | 47.4                          | 1.52                | 660                                    | 840        | 990    | 1 160         | 510                                       | 550        | 670    | 1 010         |
| A350-1000 WV000 (CG 36.28%) | 308 900          | 47.4                          | 1.52                | 660                                    | 840        | 990    | 1 160         | 510                                       | 550        | 670    | 1 010         |
| A350-1000 WV001             | 311 900          | 47.1                          | 1.52                | 660                                    | 850        | 1 000  | 1 160         | 510                                       | 550        | 670    | 1 020         |
| A350-1000 WV002             | 316 900          | 46.6                          | 1.52                | 670                                    | 850        | 1 010  | 1 170         | 520                                       | 560        | 680    | 1 030         |
| A350-1000 WV004             | 308 900          | 47.4                          | 1.52                | 660                                    | 840        | 990    | 1 160         | 510                                       | 550        | 670    | 1 010         |
| A350-1000 WV005             | 270 900          | 48.1                          | 1.52                | 550                                    | 690        | 820    | 970           | 450                                       | 480        | 550    | 810           |
| A350-1000 WV006             | 319 900          | 46.9                          | 1.56                | 700                                    | 880        | 1 040  | 1 200         | 530                                       | 570        | 700    | 1 070         |
| A350-1000 WV007             | 260 900          | 48.1                          | 1.31                | 490                                    | 620        | 750    | 900           | 420                                       | 450        | 510    | 740           |
| A350-1000 WV009             | 290 900          | 47.7                          | 1.52                | 600                                    | 770        | 910    | 1 060         | 480                                       | 510        | 610    | 910           |
| A350-1000 WV010             | 300 900          | 47.5                          | 1.52                | 640                                    | 810        | 950    | 1 110         | 500                                       | 530        | 640    | 970           |
| A350-1000 WV011             | 316 900          | 46.6                          | 1.52                | 670                                    | 850        | 1 010  | 1 170         | 520                                       | 560        | 680    | 1 030         |

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ACR Table  
FIGURE-7-10-0-991-002-B01



**SCALED DRAWINGS**

8-0-0      Scaled Drawings

\*\*ON A/C A350-1000 A350-900

**Scaled Drawings**

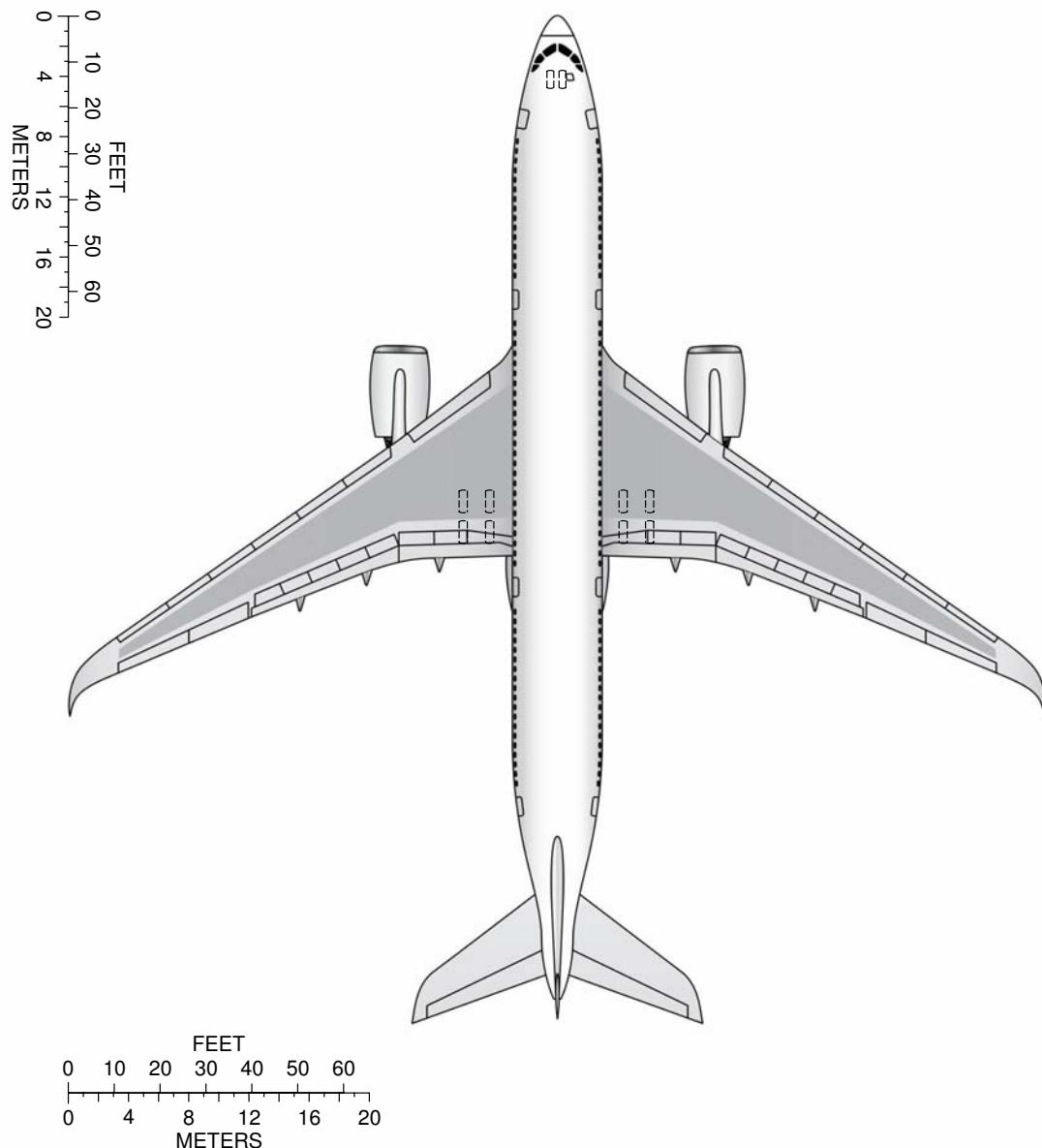
1. This section provides the scaled drawings.

**NOTE** : When printing this drawing, make sure to adjust for proper scaling.

# A350

## AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

\*\*ON A/C A350-900



**NOTE:**

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

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Scaled Drawings  
FIGURE-8-0-0-991-001-A01

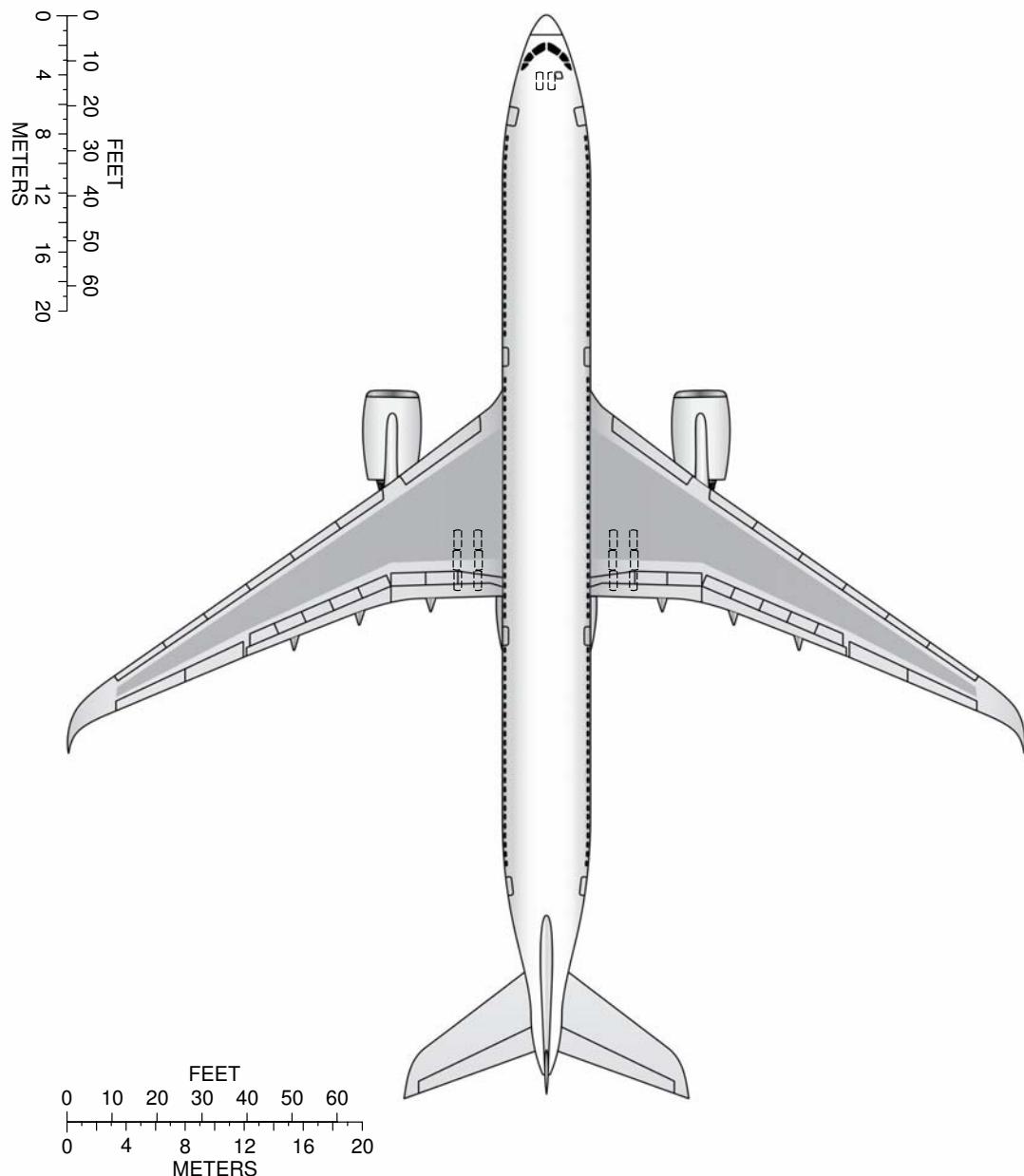
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# A350

## AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

\*\*ON A/C A350-1000



**NOTE:**

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

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Scaled Drawings  
FIGURE-8-0-0-991-002-A01

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### AIRCRAFT RESCUE AND FIRE FIGHTING

10-0-0      Aircraft Rescue and Fire Fighting

\*\*ON A/C A350-1000 A350-900

#### 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 A350-900

**AIRBUS**

**A350-900**

# **Aircraft Rescue and Fire Fighting Chart ARFC**

**NOTE:**  
**THIS CHART GIVES THE GENERAL LAYOUT OF THE A350-900 STANDARD VERSION.**  
**THE NUMBER AND ARRANGEMENT OF THE INDIVIDUAL ITEMS VARY WITH THE CUSTOMERS.**  
**FIGURES CONTAINED IN THIS POSTER ARE AVAILABLE SEPARATELY IN THE CHAPTER 10 OF THE**  
**"AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING" DOCUMENT.**

ISSUED BY:

AIRBUS S.A.S.  
CUSTOMER SERVICES  
TECHNICAL DATA SUPPORT AND SERVICES  
31707 BLAGNAC CEDEX  
FRANCE

REVISION DATE: MAY 2021  
REFERENCE : P\_RF\_000000\_1\_A350900  
SHEET 1/2

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Front Page  
FIGURE-10-0-0-991-001-A01

**10-0-0**

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\*\*ON A/C A350-1000

**AIRBUS**

**A350-1000**

# Aircraft Rescue and Fire Fighting Chart ARFC

NOTE:

THIS CHART GIVES THE GENERAL LAYOUT OF THE A350-1000 STANDARD VERSION.  
THE NUMBER AND ARRANGEMENT OF THE INDIVIDUAL ITEMS VARY WITH THE CUSTOMERS.  
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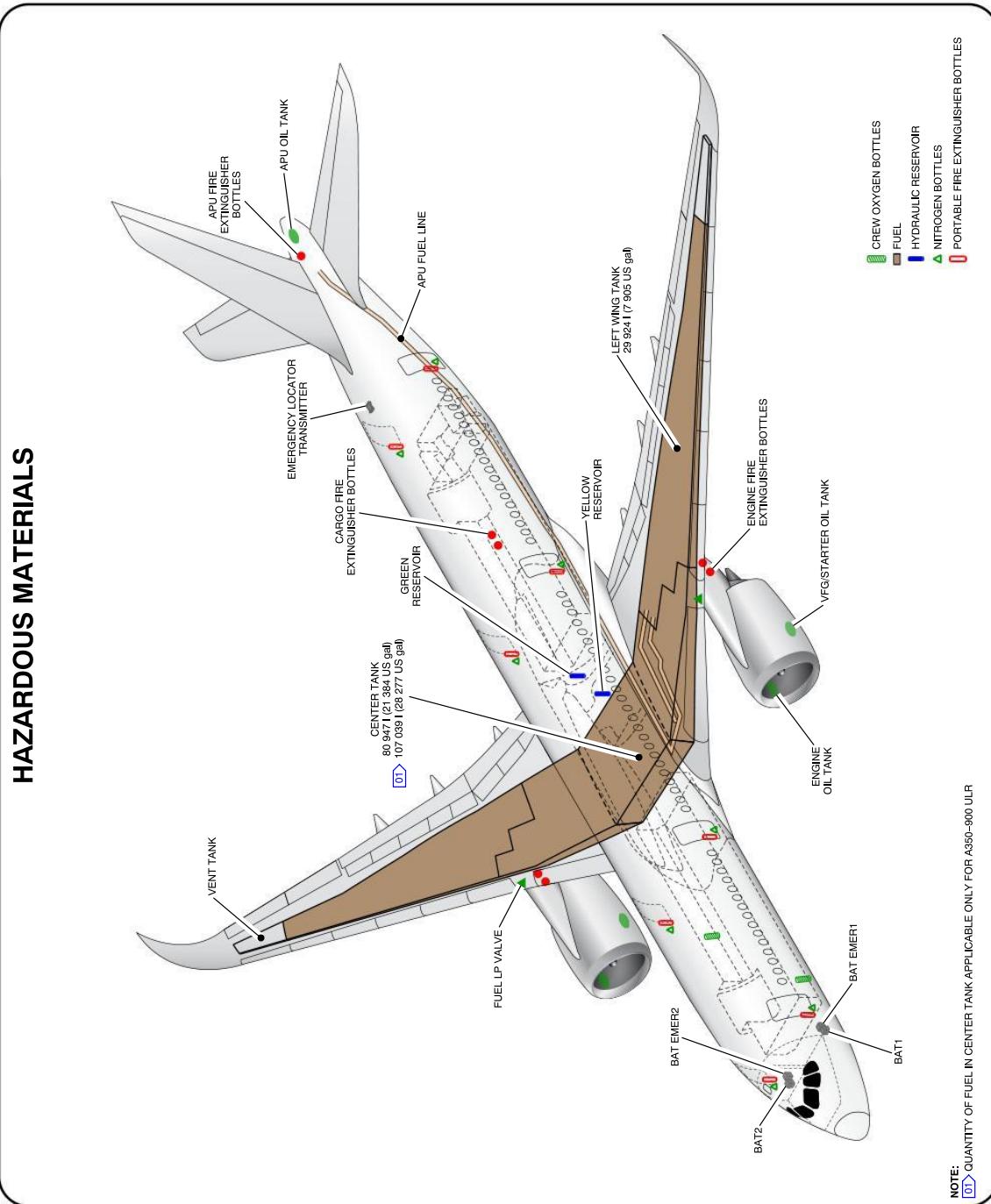
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Front Page  
FIGURE-10-0-0-991-001-C01

**10-0-0**

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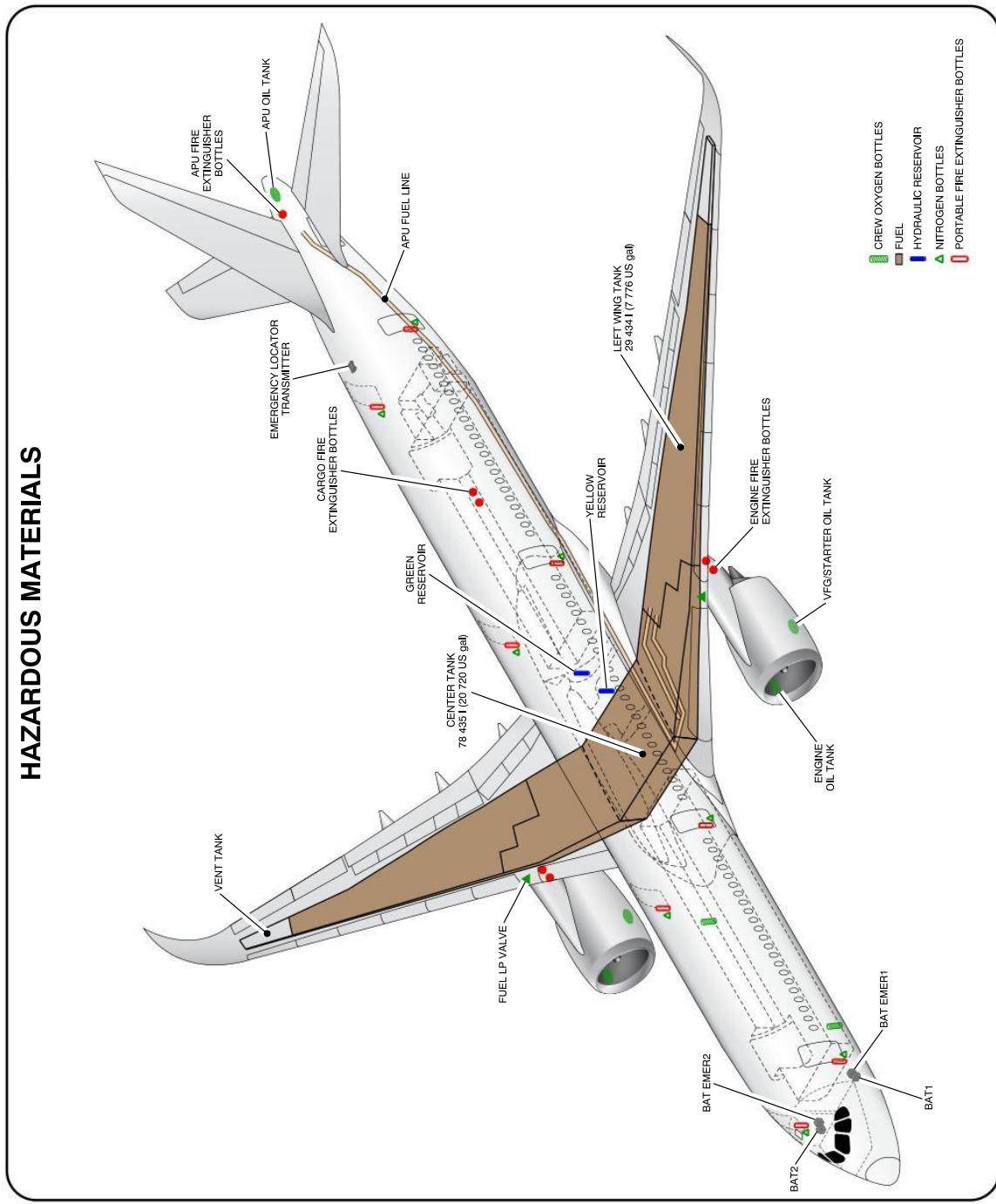
\*\*ON A/C A350-900



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Highly Flammable and Hazardous Materials and Components  
FIGURE-10-0-0-991-003-A01

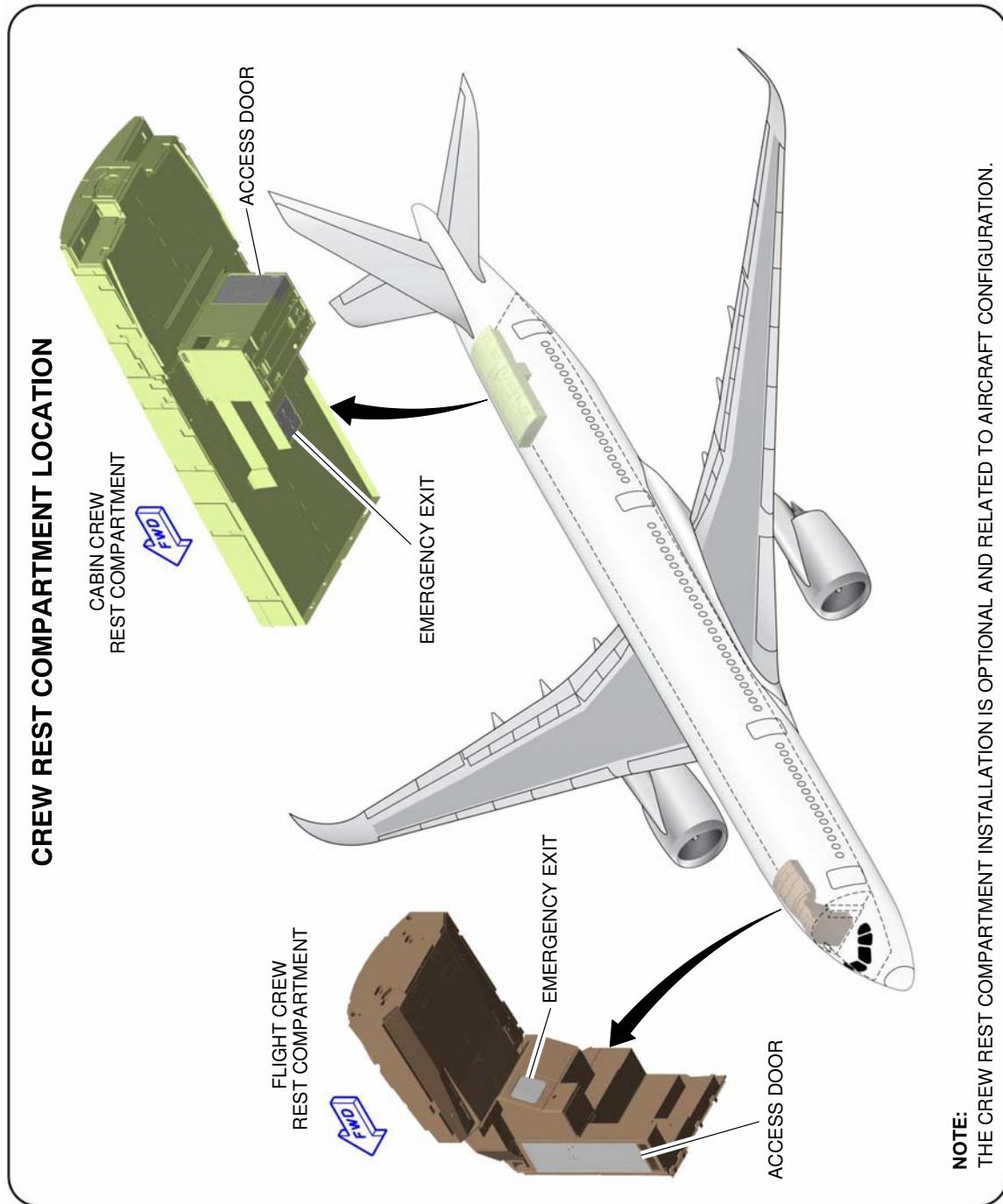
\*\*ON A/C A350-1000

**HAZARDOUS MATERIALS**


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Highly Flammable and Hazardous Materials and Components  
FIGURE-10-0-0-991-003-B01

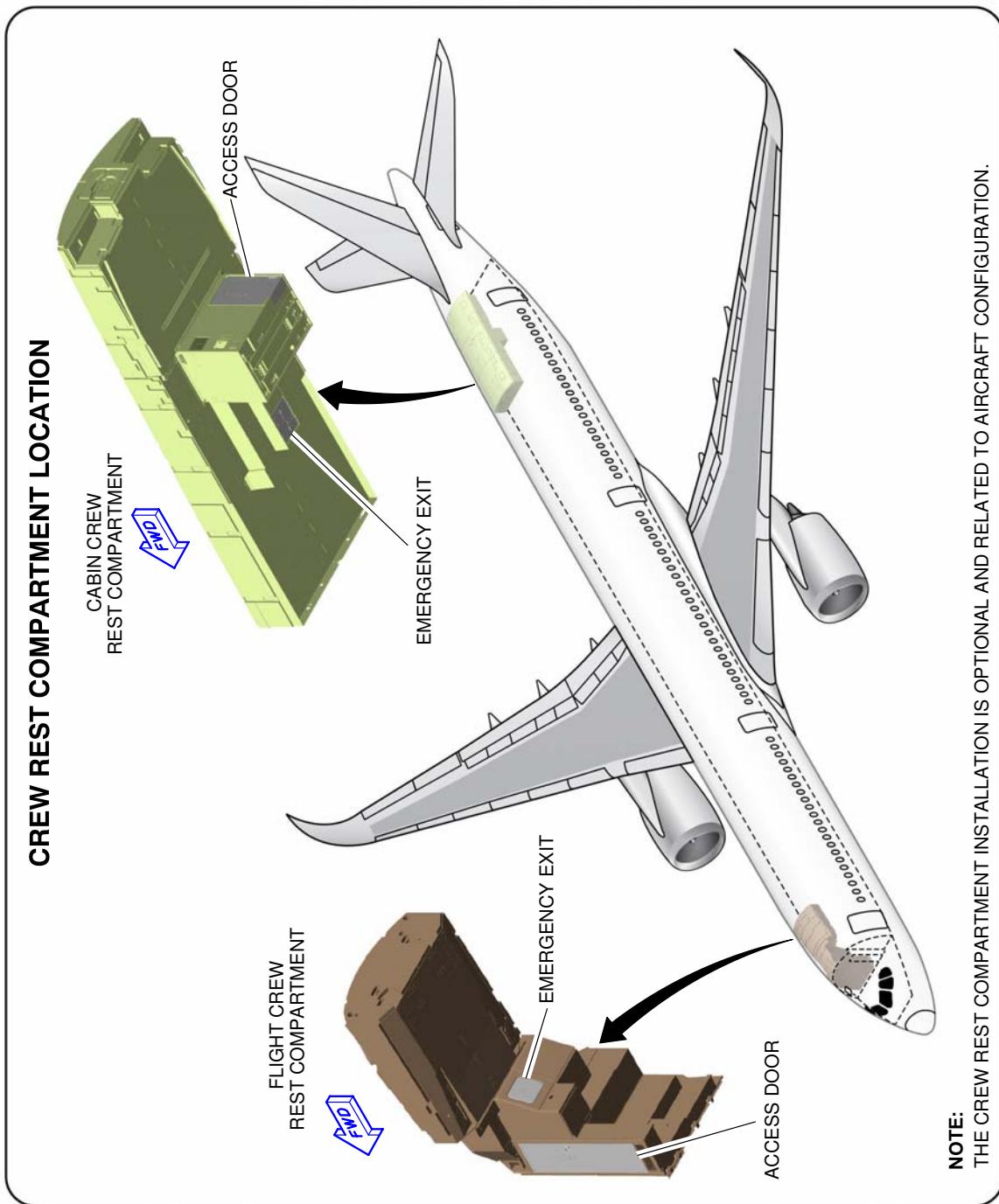
\*\*ON A/C A350-900



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Crew Rest Compartments Location  
FIGURE-10-0-0-991-004-A01

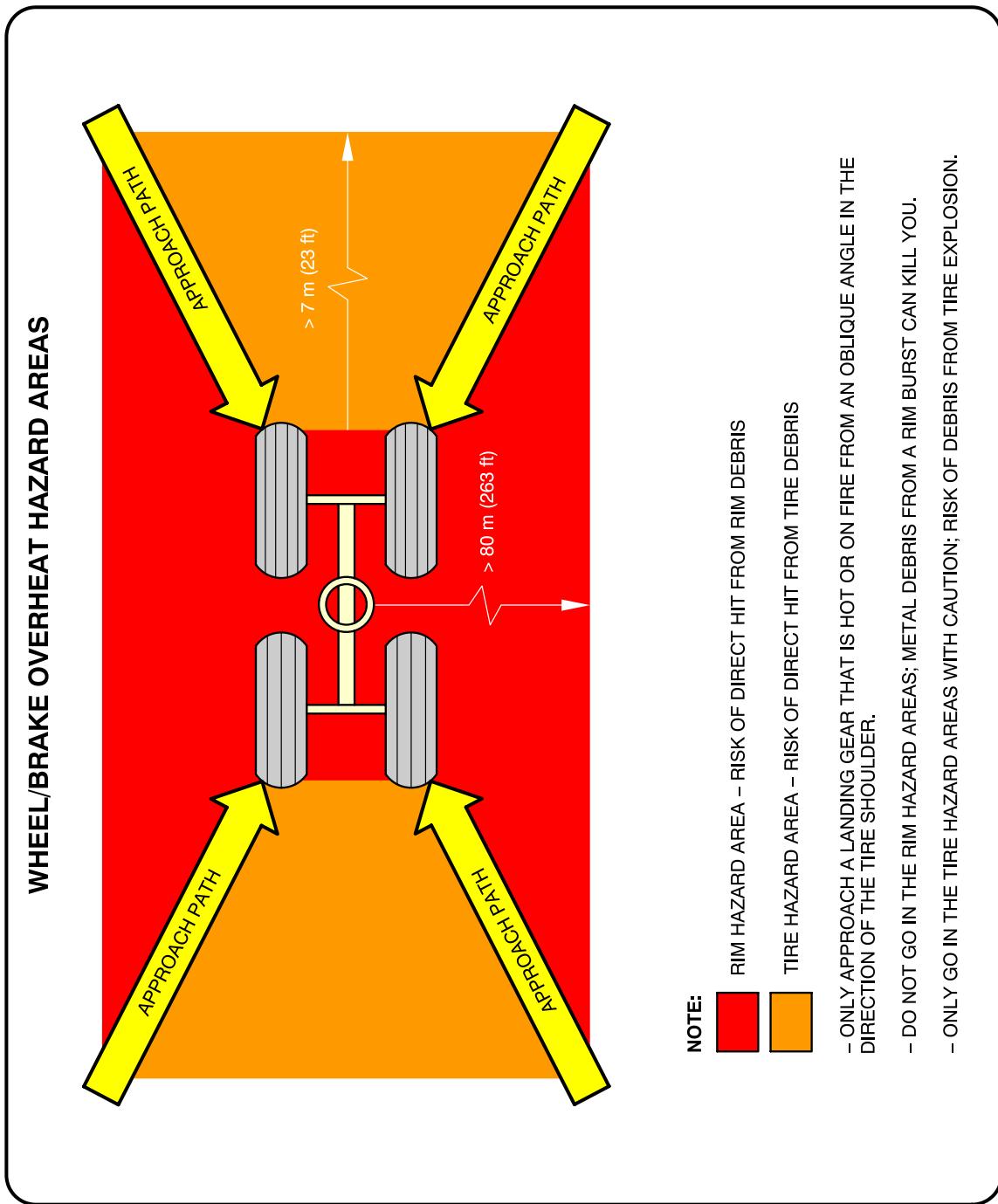
\*\*ON A/C A350-1000



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Crew Rest Compartments Location  
FIGURE-10-0-0-991-004-B01

\*\*ON A/C A350-900



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Wheel/Brake Overheat  
Wheel Safety Area (Sheet 1 of 2)  
FIGURE-10-0-0-991-005-A01

\*\*ON A/C A350-900

## 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 ( $>800^{\circ}\text{C}$ ), 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 CO<sub>2</sub>. THESE COOLING AGENTS (AND ESPECIALLY CO<sub>2</sub>, 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 TO EXTINGUISH 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.

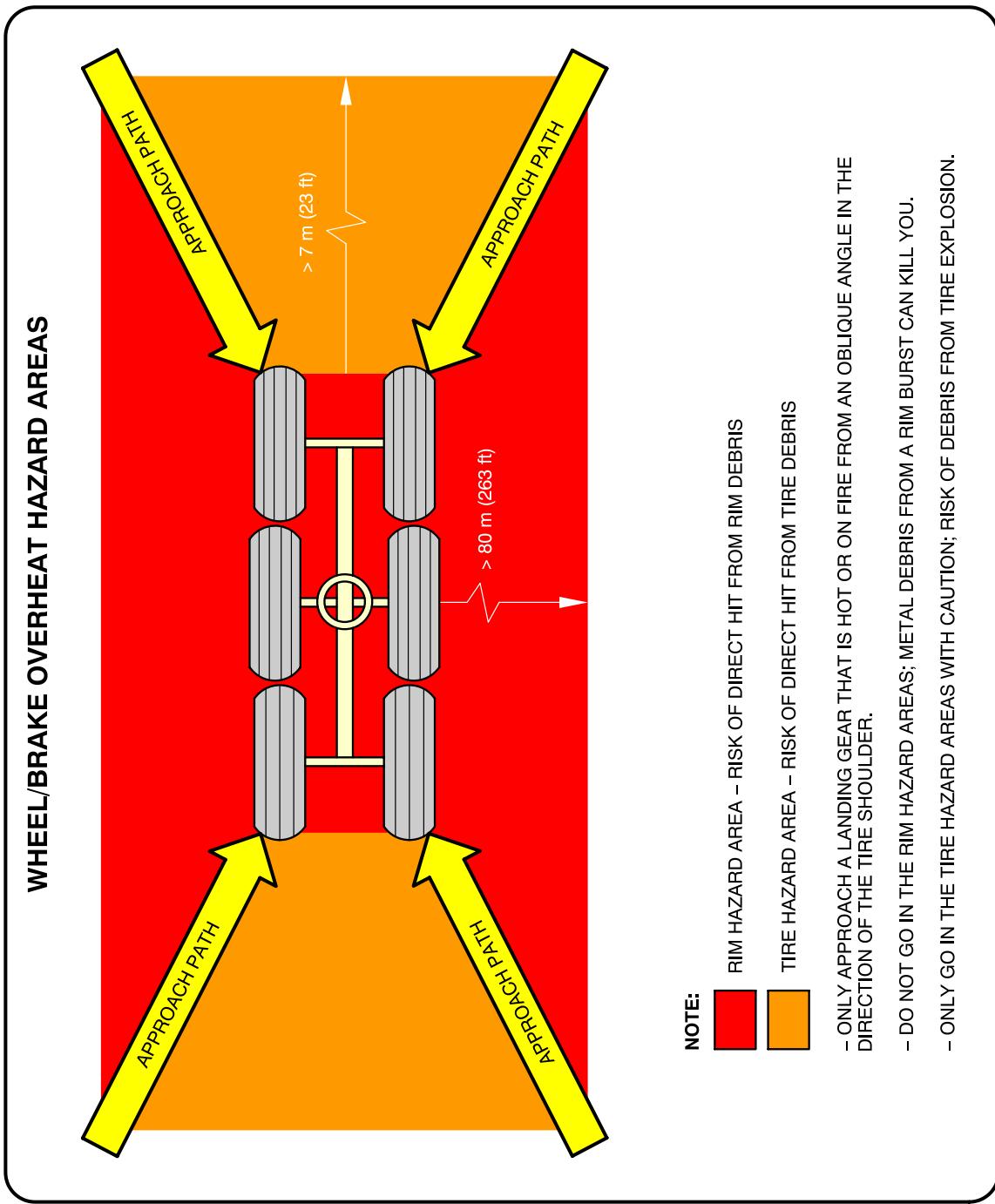
### 1 - IMMEDIATELY STOP THE FIRE:

- A) APPROACH THE LANDING GEAR WITH EXTREME CAUTION 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.

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Wheel/Brake Overheat  
Recommendations (Sheet 2 of 2)  
FIGURE-10-0-0-991-005-A01

\*\*ON A/C A350-1000



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Wheel/Brake Overheat  
Wheel Safety Area (Sheet 1 of 2)  
FIGURE-10-0-0-991-005-B01

\*\*ON A/C A350-1000

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**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.
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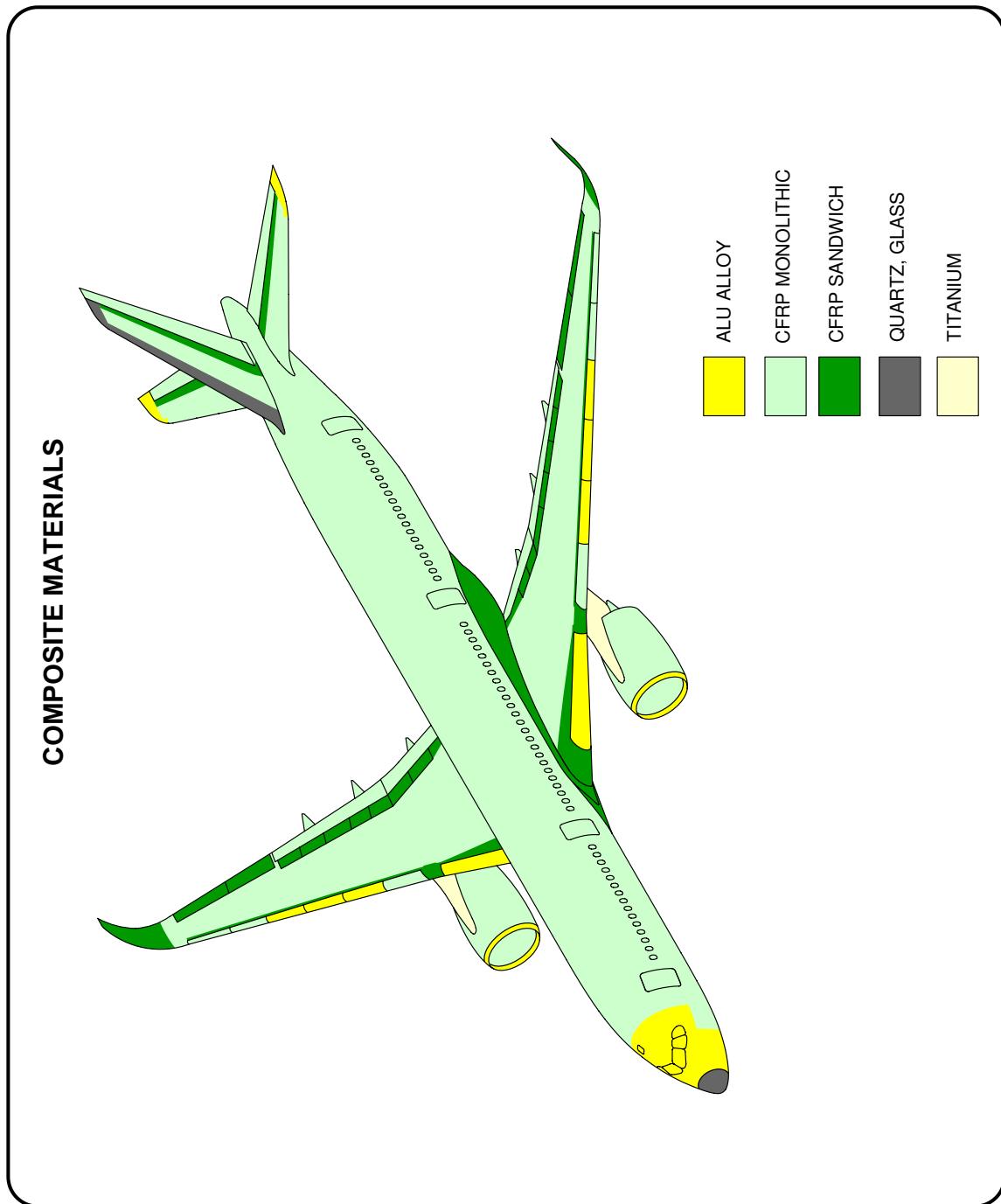
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Wheel/Brake Overheat  
Recommendations (Sheet 2 of 2)  
FIGURE-10-0-0-991-005-B01

\*\*ON A/C A350-900



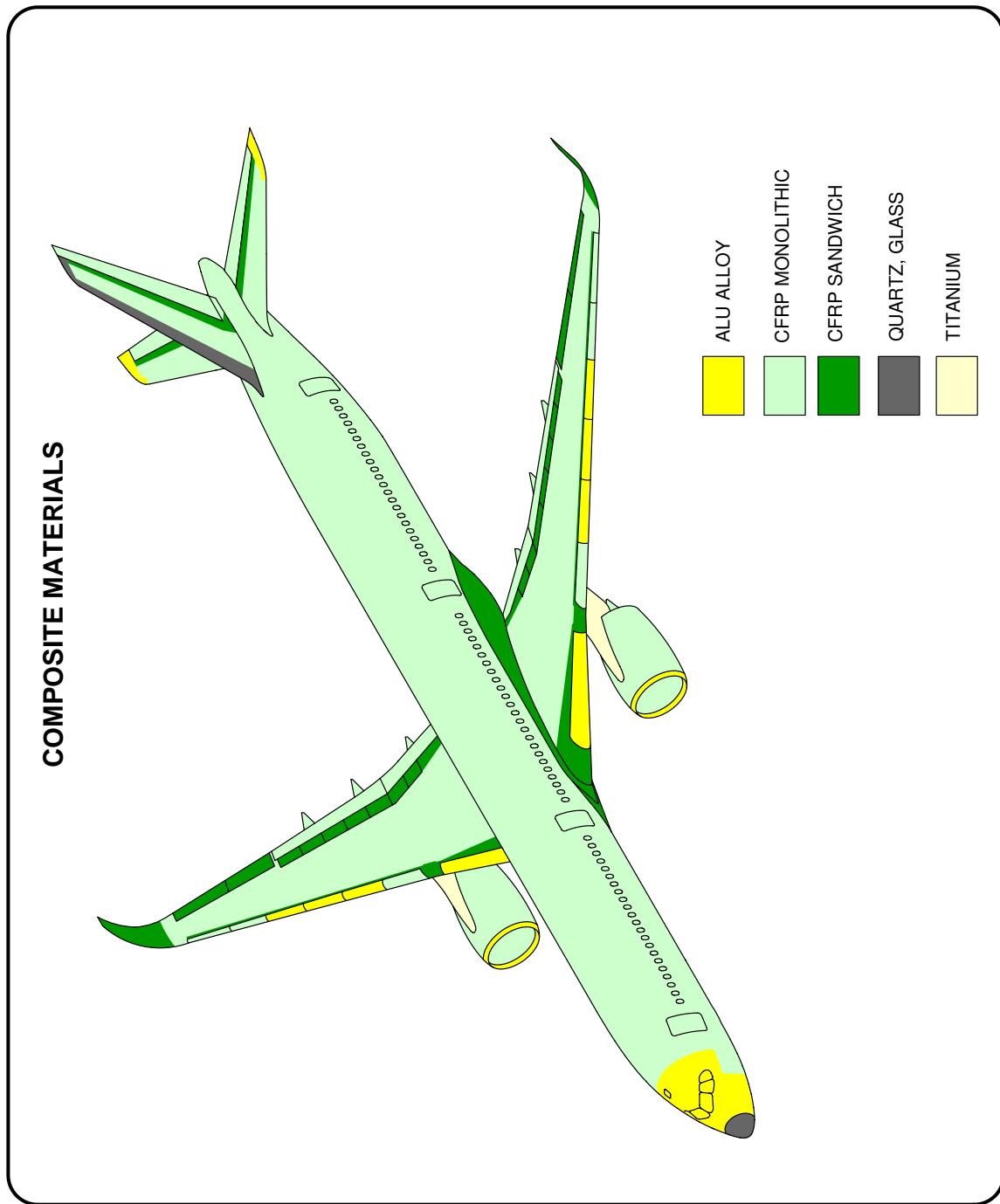
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Composite Materials Location  
FIGURE-10-0-0-991-006-A01

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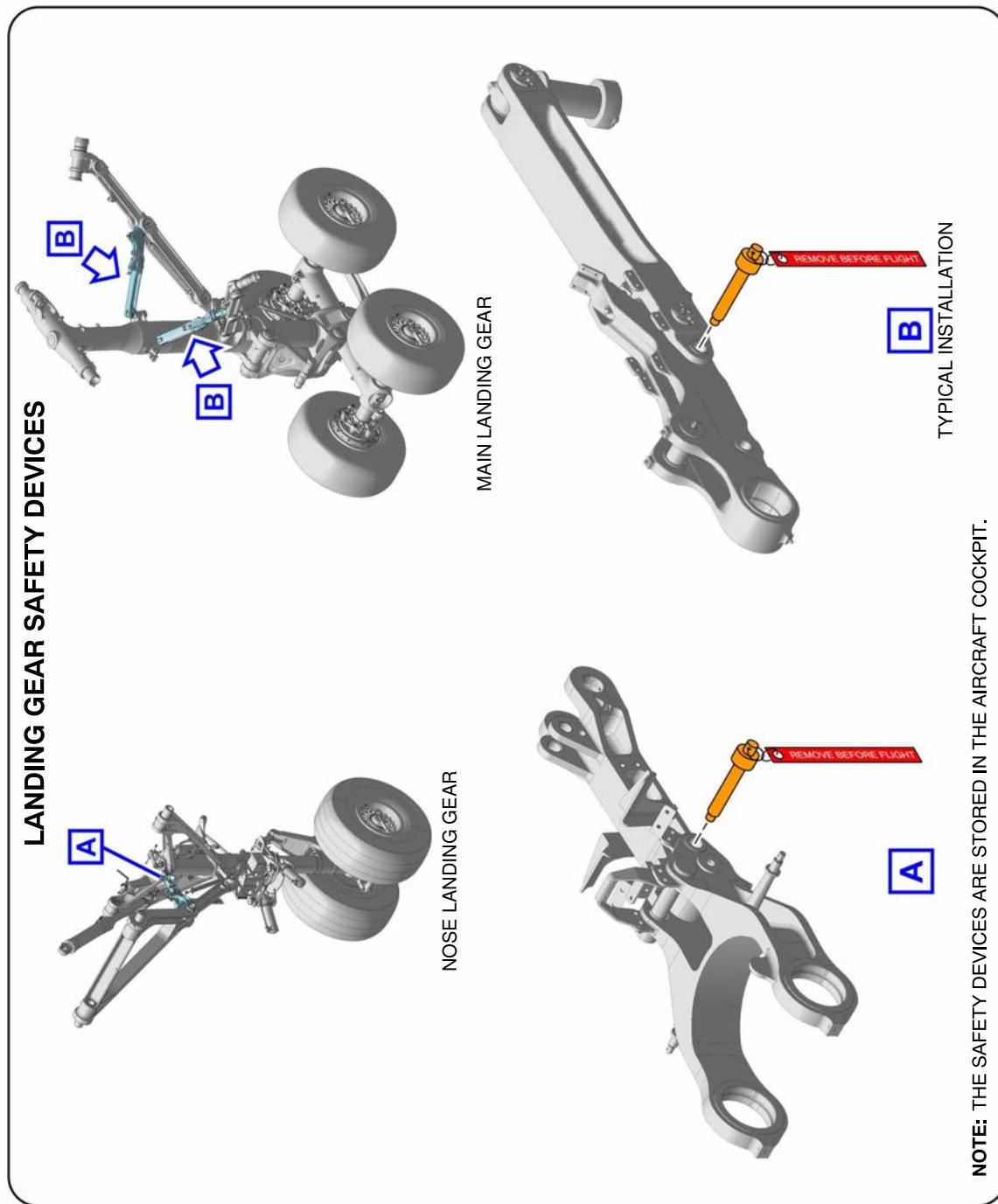
\*\*ON A/C A350-1000



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Composite Materials Location  
FIGURE-10-0-0-991-006-B01

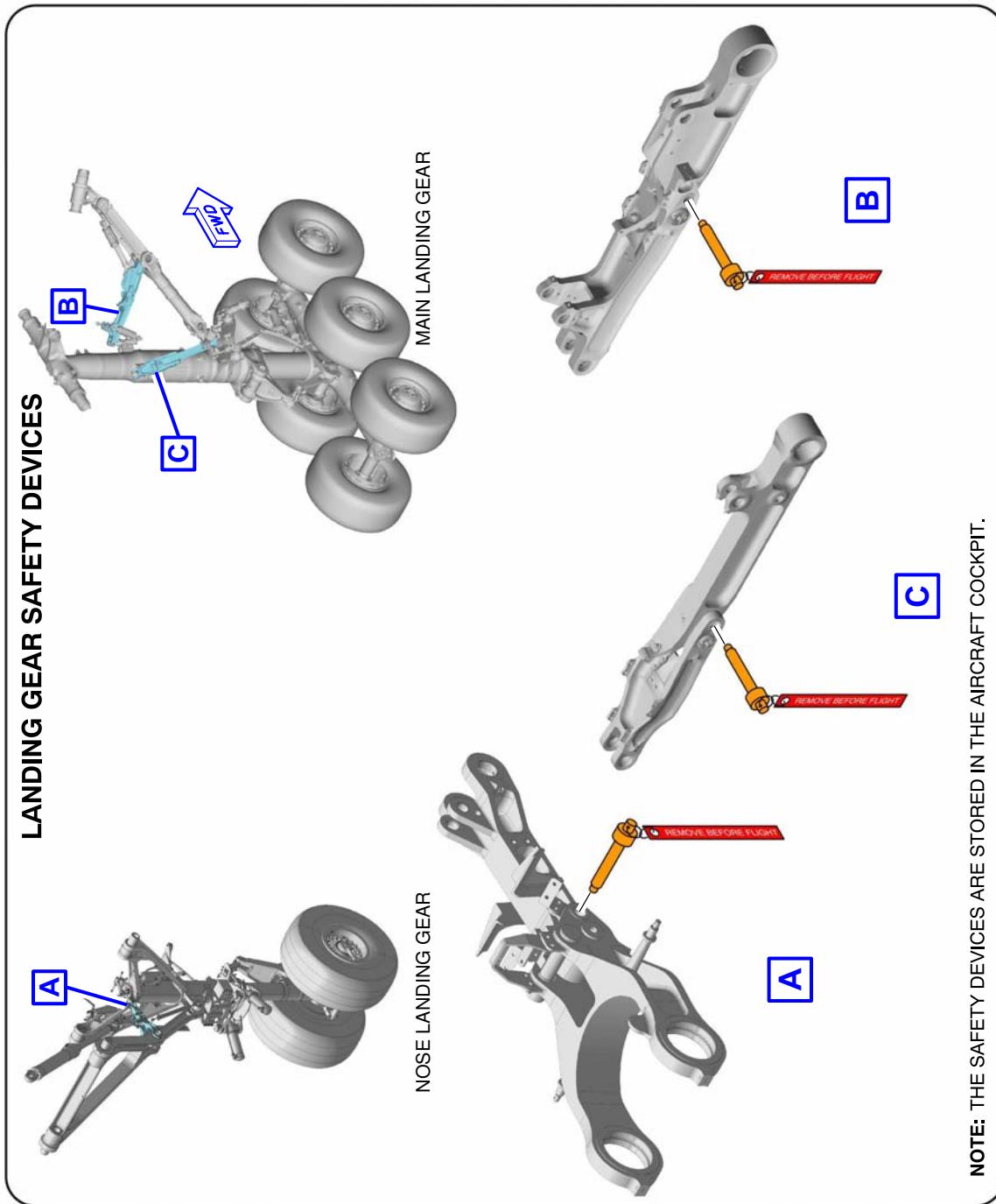
\*\*ON A/C A350-900



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Ground Lock Safety Devices  
FIGURE-10-0-0-991-007-A01

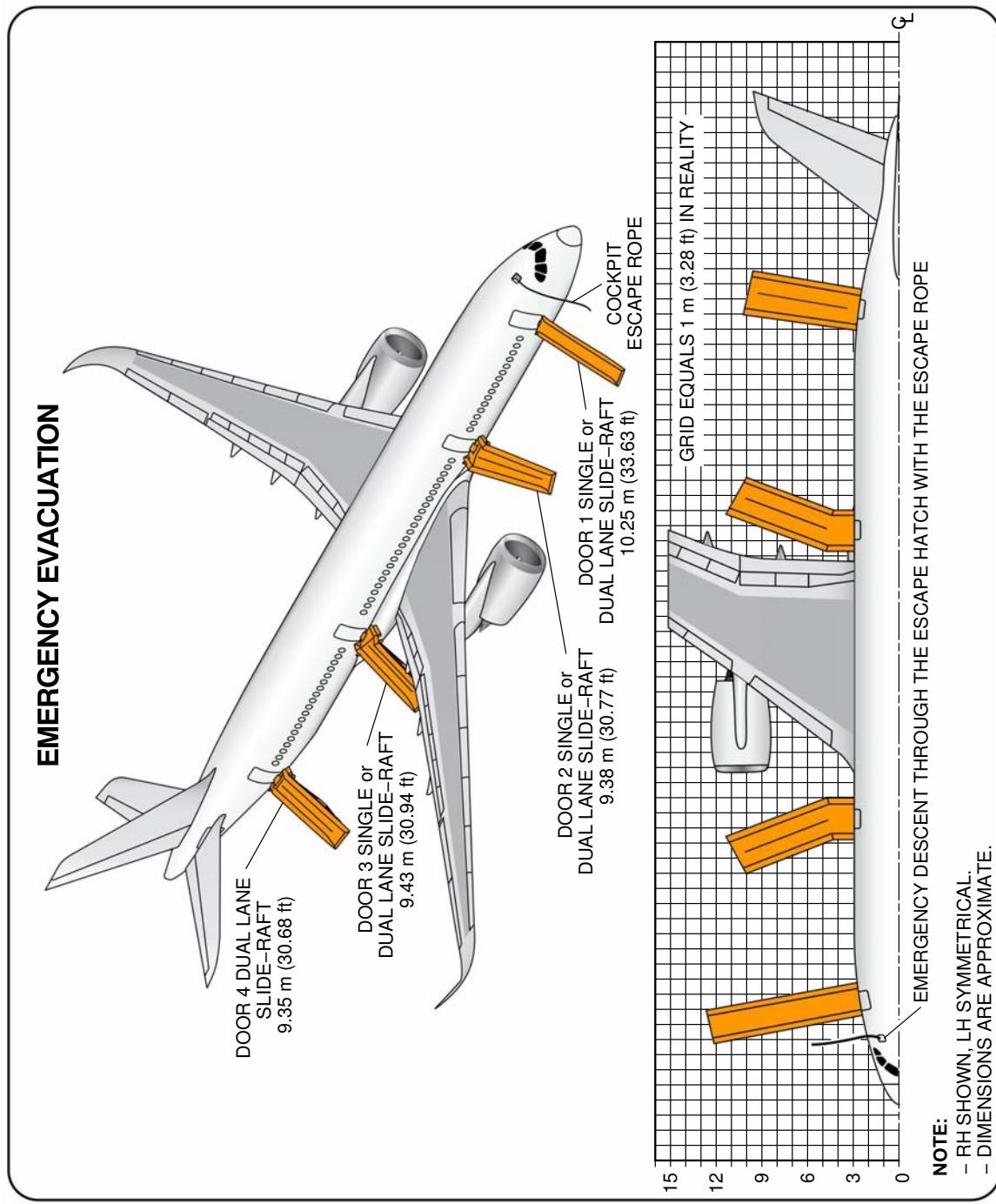
\*\*ON A/C A350-1000



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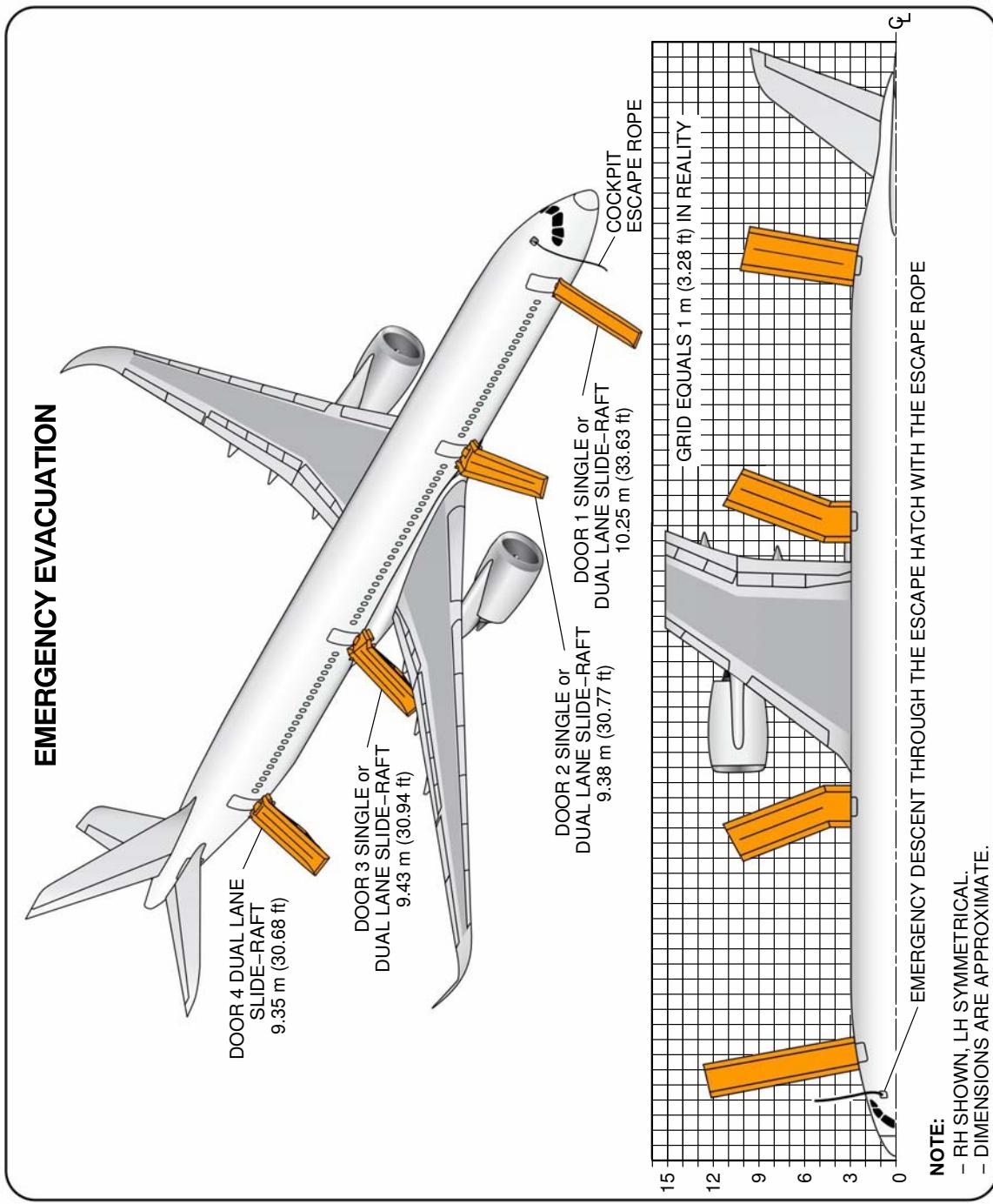
Ground Lock Safety Devices  
FIGURE-10-0-0-991-007-B01

\*\*ON A/C A350-900



Emergency Evacuation Devices  
FIGURE-10-0-0-991-008-A01

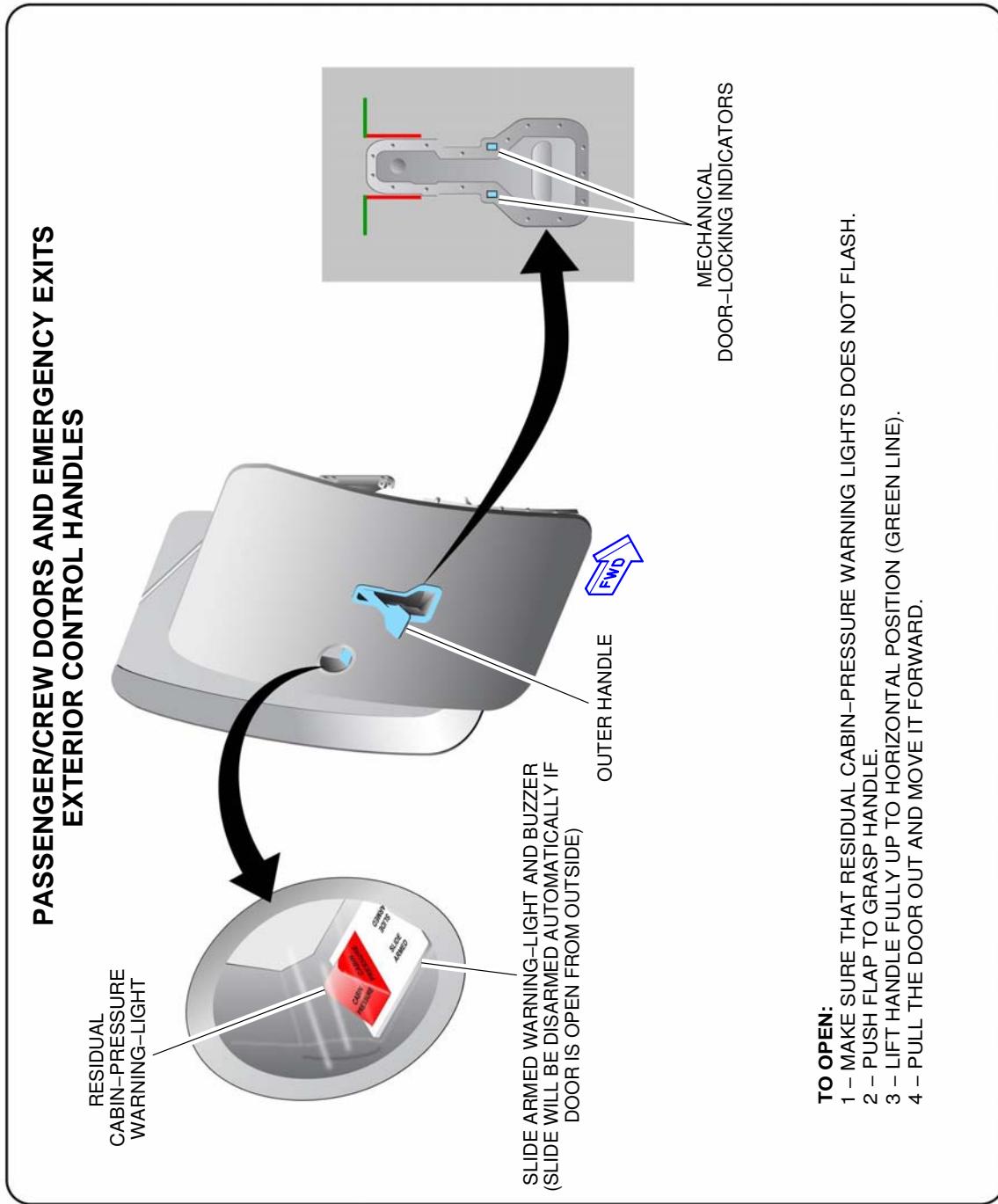
\*\*ON A/C A350-1000



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Emergency Evacuation Devices  
FIGURE-10-0-0-991-008-B01

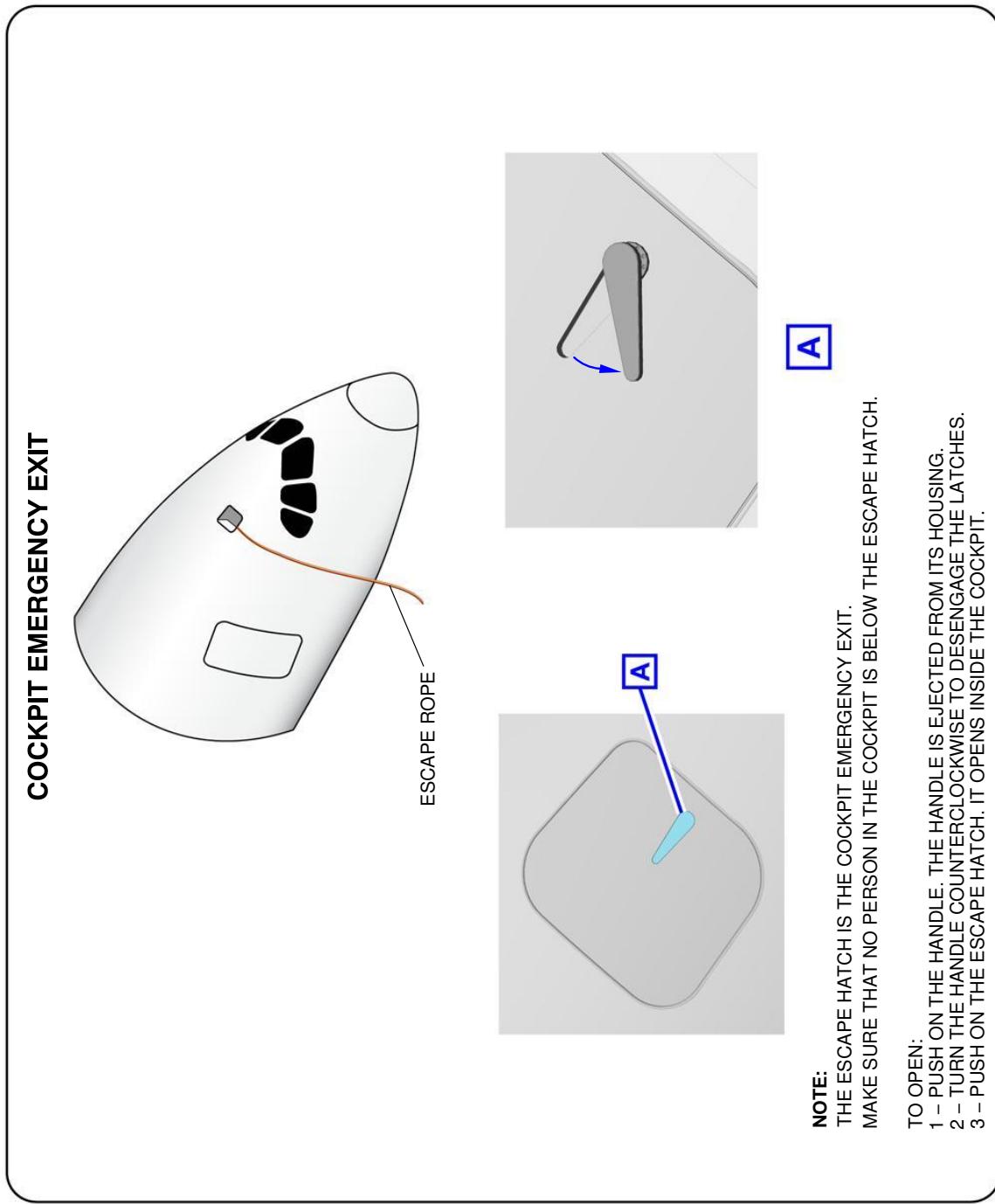
\*\*ON A/C A350-1000 A350-900



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Pax/Crew Doors and Emergency Exits  
FIGURE-10-0-0-991-009-A01

\*\*ON A/C A350-1000 A350-900



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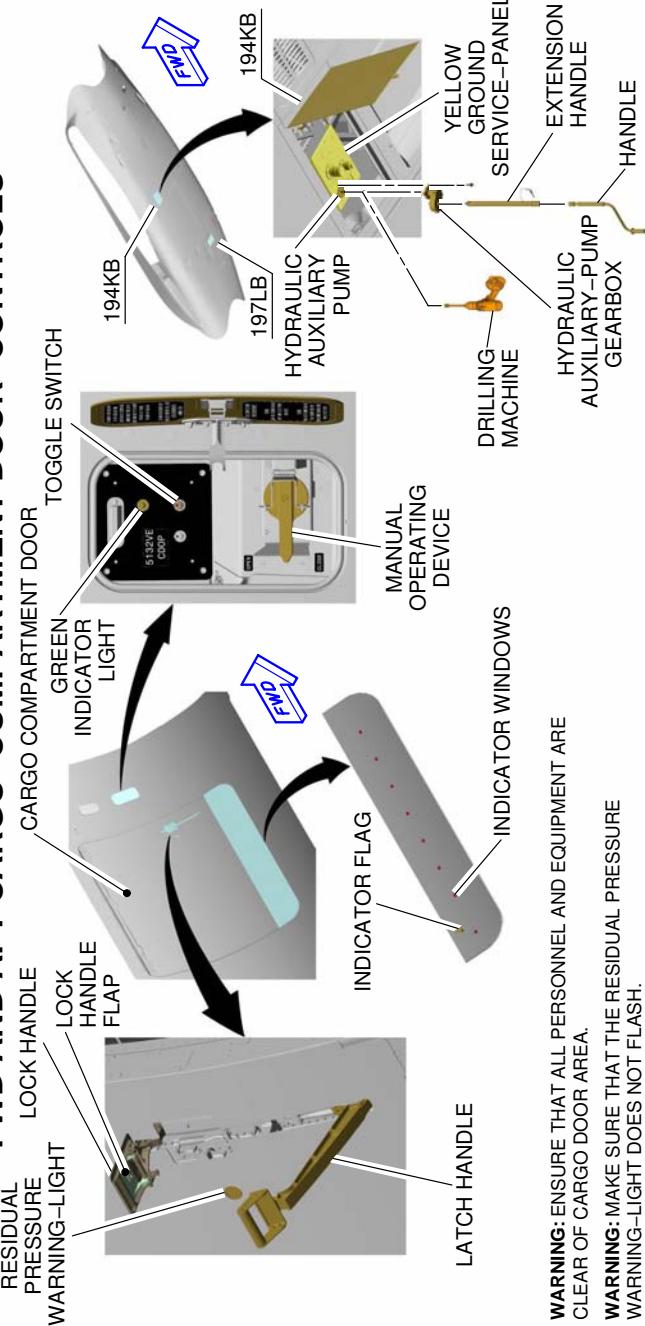
Cockpit Emergency Exit  
FIGURE-10-0-0-991-010-A01

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\*\*ON A/C A350-1000 A350-900

## FWD AND AFT CARGO-COMPARTMENT DOOR-CONTROLS



### MANUAL OPERATION

#### NOTE:

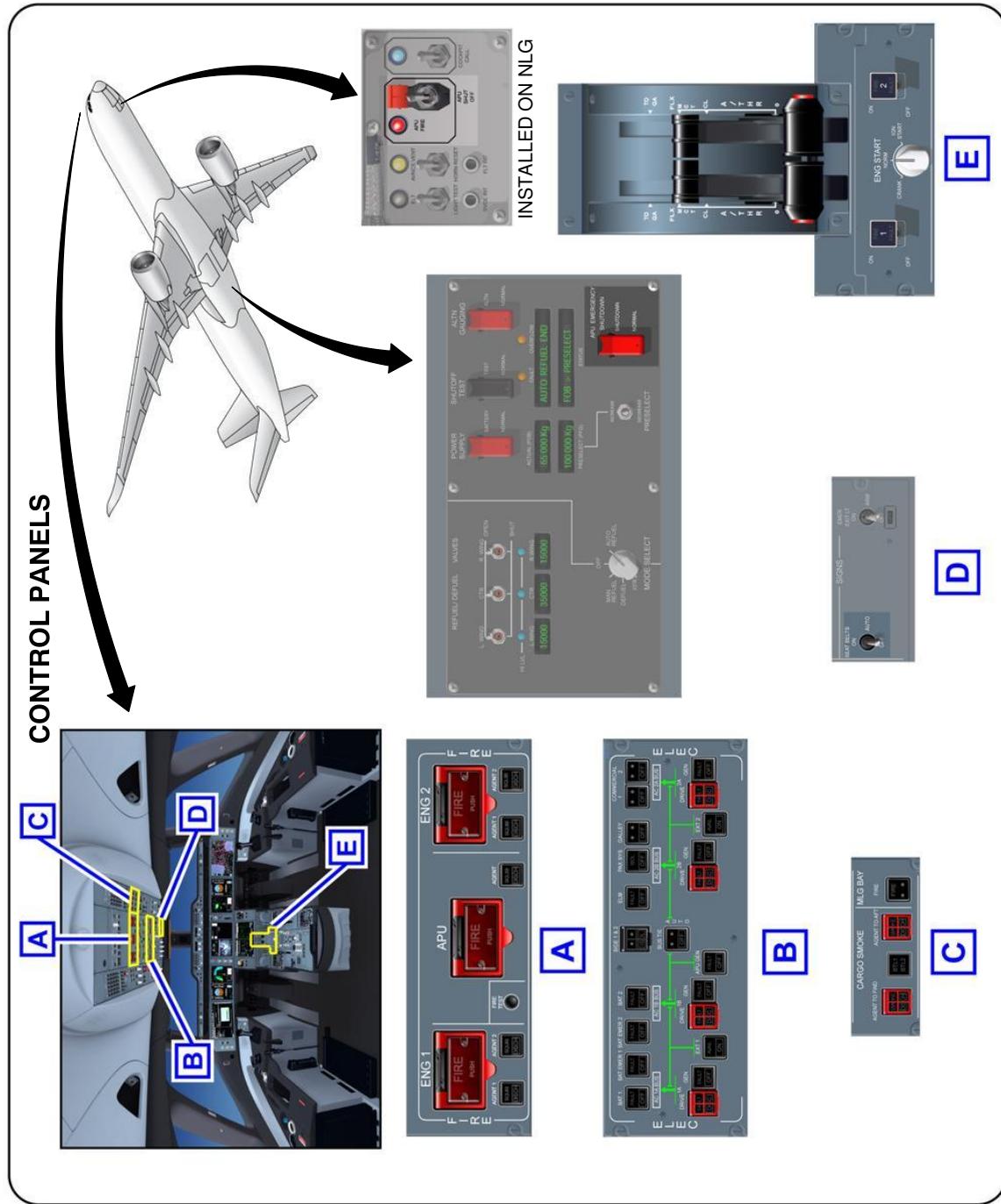
- TWO OPERATORS ARE NECESSARY FOR THIS OPERATION.  
 1 – DO OPERATIONS 1 AND 2 OF THE "NORMAL OPERATION" PROCEDURE.  
 2 – ON THE YELLOW GROUND SERVICE-PANEL, DO STEP (A) OR (B):  
 (A) CONNECT A DRILLING MACHINE (WITH SOCKET DIAMETER 12 mm).  
 (B) ATTACH THE HYDRAULIC AUXILIARY-PUMP GEARBOX TO THE  
 HYDRAULIC AUXILIARY PUMP. CONNECT THE HANDLE (STORED ON  
 194KB) AND THE EXTENSION HANDLE (STORED ON 197LB) WITH  
 THE HYDRAULIC AUXILIARY-PUMP GEARBOX.

- 3 – OPERATE THE HYDRAULIC AUXILIARY-PUMP GEARBOX  
 (AT NOT MORE THAN 100 RPM).  
 4 – TURN THE MANUAL OPERATING DEVICE TO THE "OPEN" POSITION  
 (CLOCKWISE) AND HOLD IT UNTIL THE GREEN INDICATOR LIGHT  
 COMES ON (CARGO DOOR FULLY OPEN AND LOCKED).  
 5 – RELEASE THE MANUAL OPERATING DEVICE.  
 6 – STOP THE OPERATION OF THE HYDRAULIC AUXILIARY PUMP.

- 1 – PUSH THE LOCK HANDLE FLAP IN AND PULL THE LOCK  
 HANDLE TO THE "UNLOCKED" POSITION (OUT AND UP).  
 2 – QUICKLY AND FULLY PULL THE LATCH HANDLE DOWN WITH  
 A CONTINUOUS MOVEMENT (OUT AND DOWN).  
 3 – MAKE SURE THAT THE INDICATOR FLAG COMES OUT AND  
 YOU CAN SEE THE RED INDICATION THROUGH THE EIGHT  
 INDICATOR WINDOWS.  
 4 – PUSH THE TOGGLE SWITCH ON THE DOOR OPERATION  
 PANEL TO THE "OPEN" POSITION AND HOLD IT UNTIL  
 THE GREEN INDICATOR LIGHT COMES ON (CARGO DOOR  
 FULLY OPEN AND LOCKED).  
 5 – RELEASE THE TOGGLE SWITCH.

FWD and AFT Lower Deck Cargo Doors  
 FIGURE-10-0-0-991-011-A01

\*\*ON A/C A350-1000 A350-900



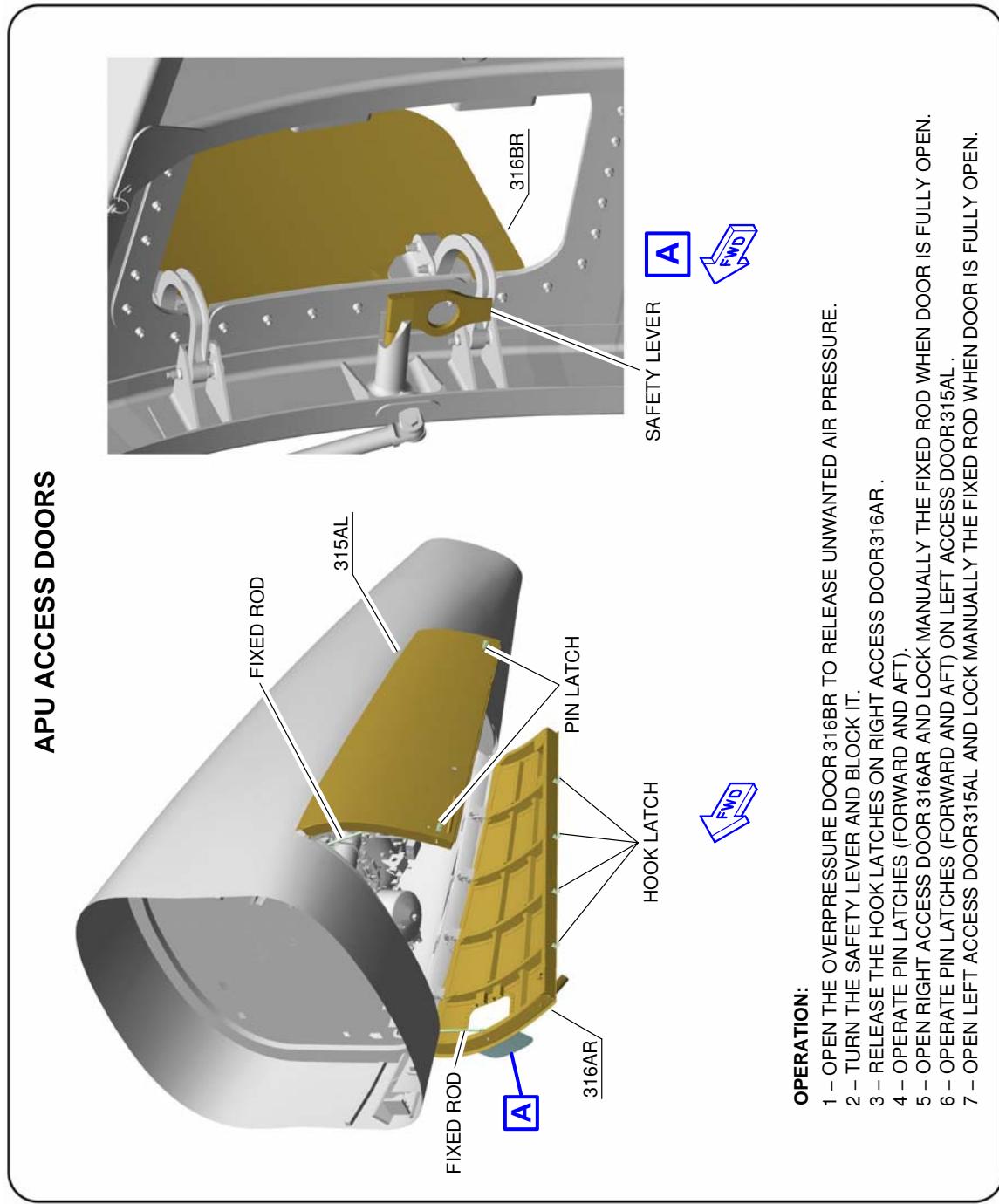
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Control Panels  
FIGURE-10-0-0-991-012-A01

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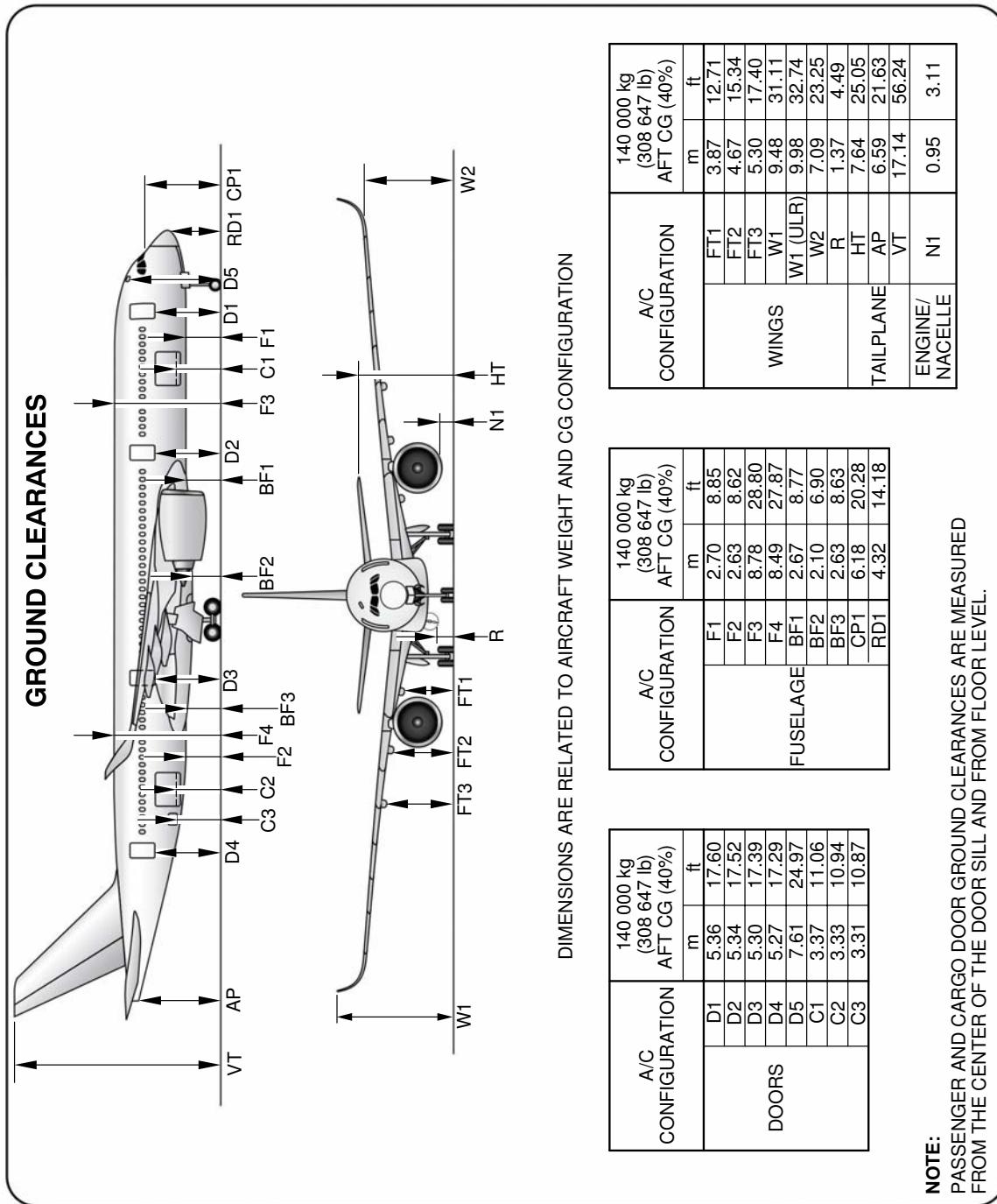
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APU Compartment Access  
FIGURE-10-0-0-991-015-A01

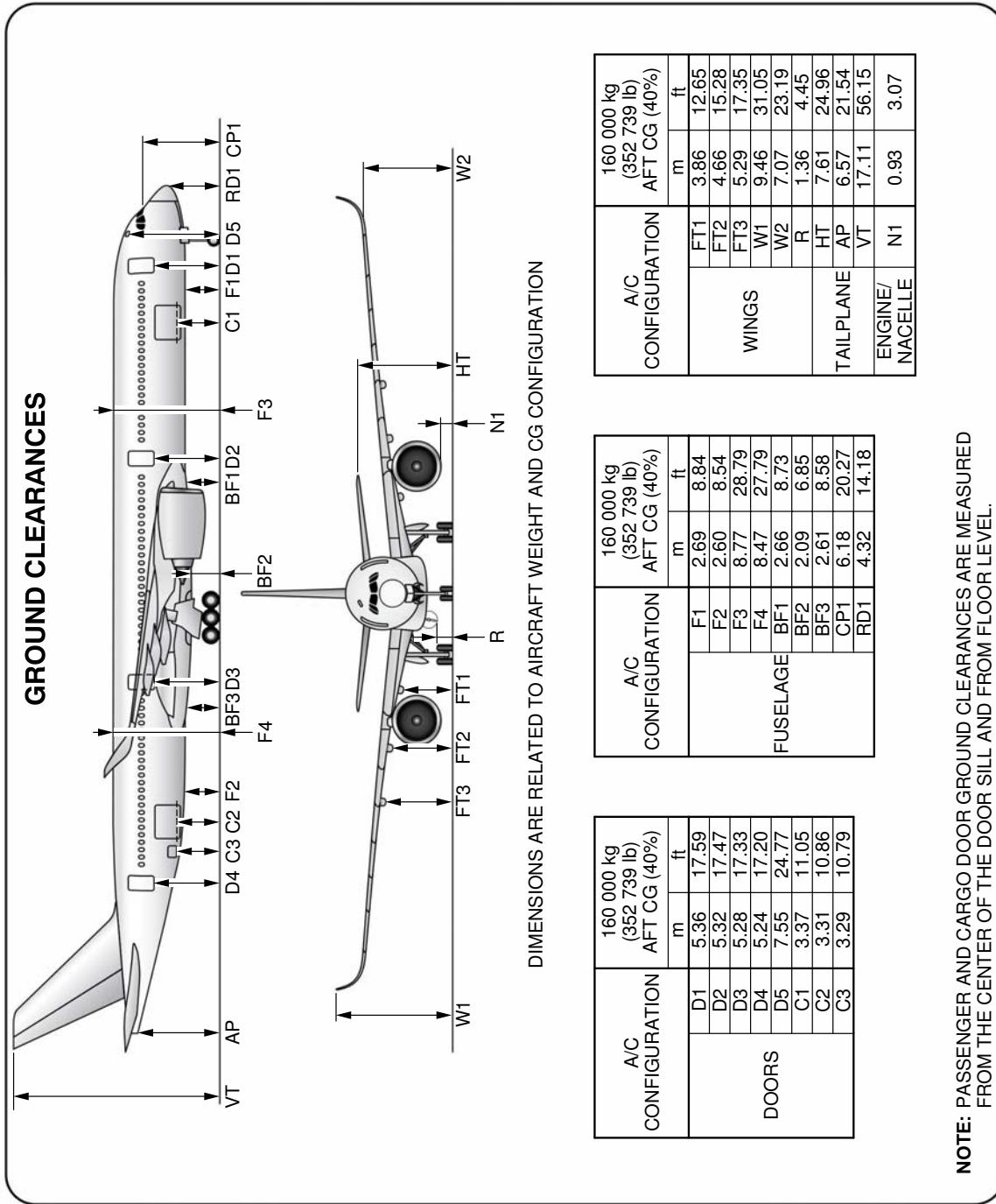
\*\*ON A/C A350-900



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Aircraft Ground Clearances  
FIGURE-10-0-0-991-016-A01

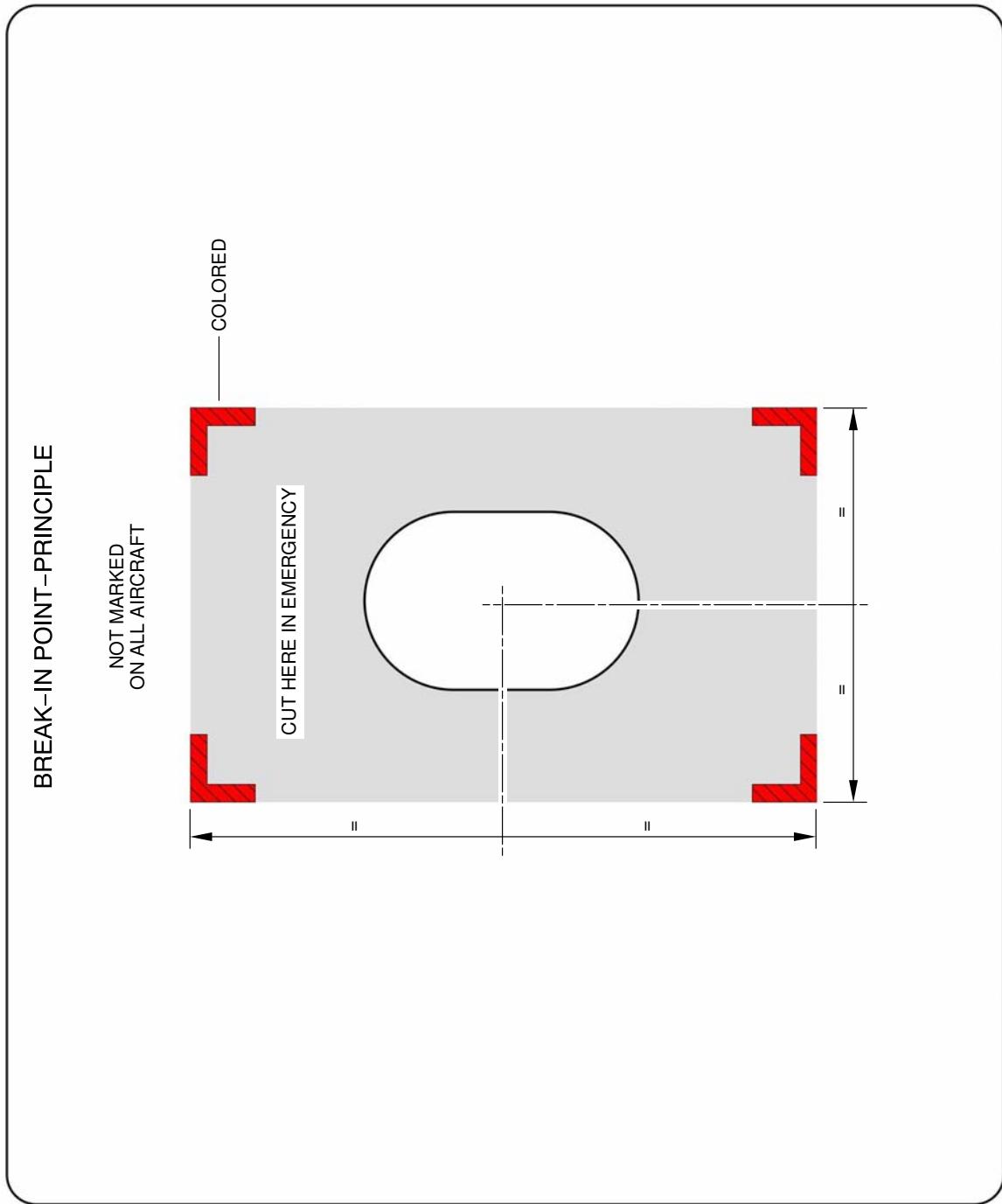
\*\*ON A/C A350-1000



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Aircraft Ground Clearances  
FIGURE-10-0-0-991-016-B01

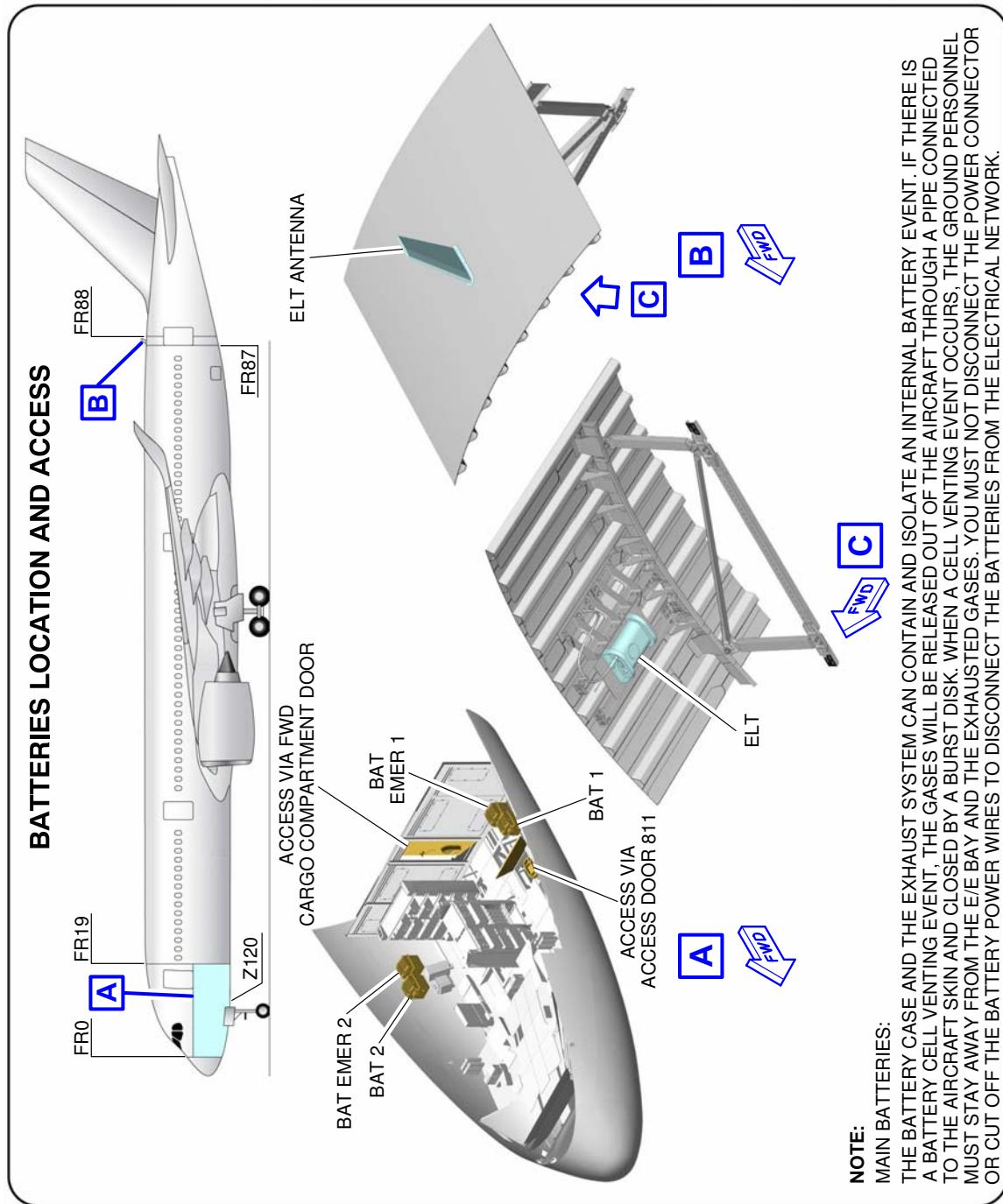
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Structural Break-in Points  
FIGURE-10-0-0-991-017-A01

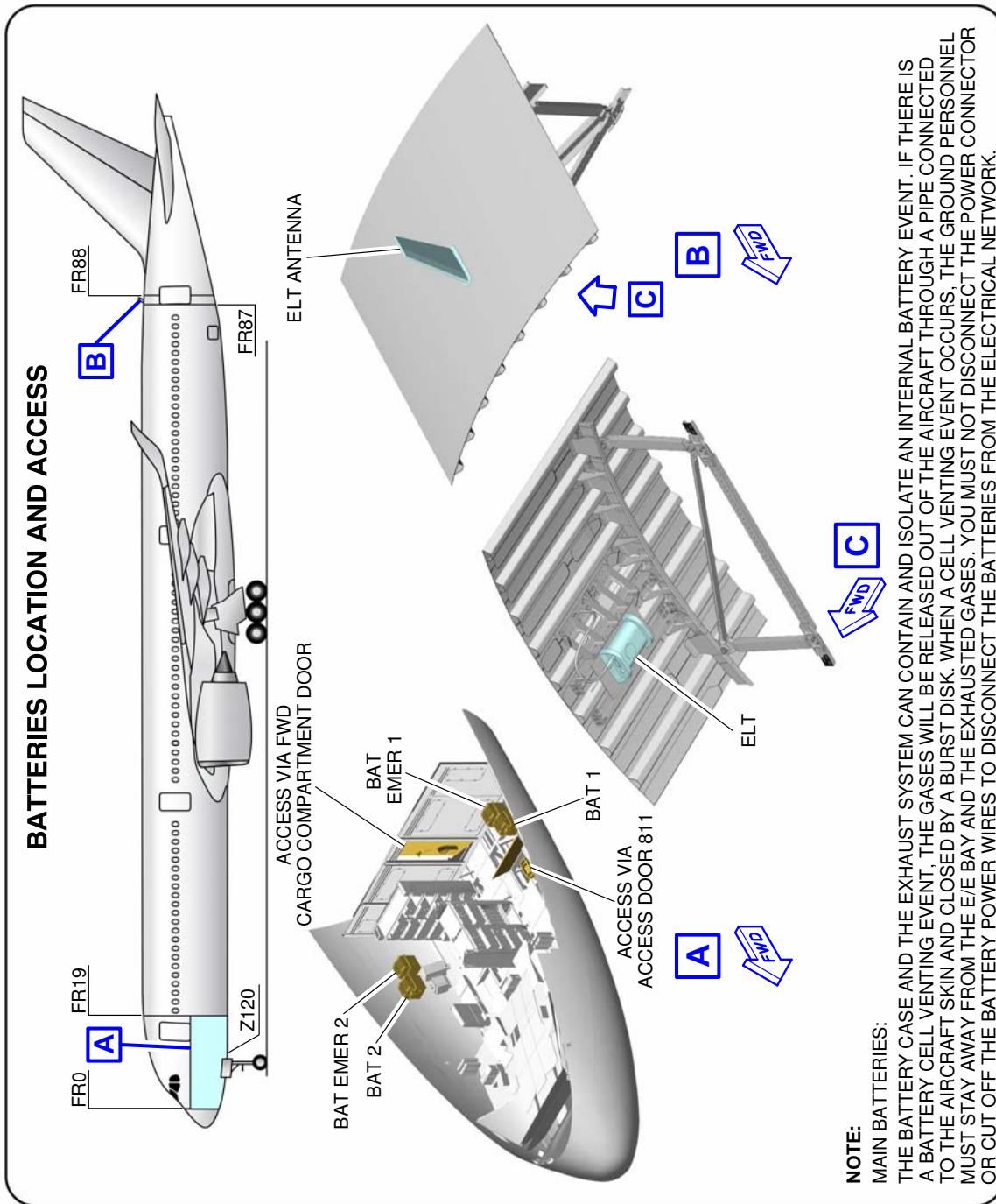
\*\*ON A/C A350-900



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Batteries Location and Access  
FIGURE-10-0-0-991-018-A01

\*\*ON A/C A350-1000



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Batteries Location and Access  
FIGURE-10-0-0-991-018-B01