AIRBUS

A350

AIRCRAFT CHARACTERISTICS
AIRPORT AND MAINTENANCE PLANNING

AC

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Revision No. 8 - May 01/20

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****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.

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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**

1. 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) Maximum Ramp Weight (MRW)	268 900 kg (592 824 lb)	275 900 kg (608 256 lb)	272 900 kg (601 642 lb)	268 900 kg (592 824 lb)	260 900 kg (575 187 lb)
Maximum Take-Off Weight (MTOW)	268 000 kg (590 839 lb)	275 000 kg (606 272 lb)	272 000 kg (599 658 lb)	268 000 kg (590 839 lb)	260 000 kg (573 202 lb)
Maximum Landing Weight (MLW)	205 000 kg (451 948 lb)	207 000 kg (456 357 lb)	207 000 kg (456 357 lb)	207 000 kg (456 357 lb)	207 000 kg (456 357 lb)
Maximum Zero Fuel Weight (MZFW)	192 000 kg (423 288 lb)	195 700 kg (431 445 lb)	194 000 kg (427 697 lb)	195 700 kg (431 445 lb)	195 700 kg (431 445 lb)

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

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

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

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

Aircraft Characteristics		
	WV022	WV023
Maximum Taxi Weight (MTW) Maximum Ramp Weight (MRW)	280 900 kg (619 279 lb)	280 900 kg (619 279 lb)
Maximum Take-Off Weight (MTOW)	280 000 kg (617 295 lb)	280 000 kg (617 295 lb)
Maximum Landing Weight (MLW)	207 000 kg (456 357 lb)	205 000 kg (451 948 lb)
Maximum Zero Fuel Weight (MZFW)	194 000 kg (427 697 lb)	192 000 kg (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 (in a two class layout)	315 (48 BC / 267 EC) 173 (80 BC / 93 EC) for A350–900 (ULR)
Usable Fuel Capacity (density = 0.785 kg/l)	138 000 L (36 456 USgal)
	108 330 kg (238 827 lb)
	165 000 L (43 589 USgal) for A350–900 (ULR)
	129 500 kg (285 499 lb) for A350–900 (ULR)
Pressurized Fuselage Volume	971 m3 (34 291 ft.3)
Cockpit Volume	8.23 m3 (291 ft.3)
Passenger Compartment Volume	473.7 m3 (16 729 ft.3)
Usable Volume, FWD CC (Based on LD3)	86.7 m3 (3 062 ft.3)
	For A350–900 (ULR) configuration, the forward cargo hold is de-activated (no cargo operation is possible).
Usable Volume, AFT CC (Based on LD3)	69.3 m3 (2 447 ft.3)

Aircraft Characteristics	
Usable Volume, Bulk CC	11.4 m3 (403 ft.3)
Water Volume, FWD CC	113.4 m3 (4 005 ft.3)
Water Volume, AFT CC	95.8 m3 (3 383 ft.3)
Water Volume, Bulk CC	13.4 m3 (473 ft.3)

****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) Maximum Ramp Weight (MRW)	308 900 kg (681 008 lb)	311 900 kg (687 622 lb)	316 900 kg (698 645 lb)	308 900 kg (681 008 lb)	270 900 kg (597 233 lb)
Maximum Take-Off Weight (MTOW)	308 000 kg (679 024 lb)	311 000 kg (685 638 lb)	316 000 kg (696 661 lb)	308 000 kg (679 024 lb)	270 000 kg (595 249 lb)
Maximum Landing Weight (MLW)	233 000 kg (513 677 lb)	236 000 kg (520 291 lb)	236 000 kg (520 291 lb)	236 000 kg (520 291 lb)	236 000 kg (520 291 lb)
Maximum Zero Fuel Weight (MZFW)	220 000 kg (485 017 lb)	223 000 kg (491 631 lb)	223 000 kg (491 631 lb)	223 000 kg (491 631 lb)	223 000 kg (491 631 lb)

Aircraft Characteristics				
	WV007	WV009	WV010	WV011
Maximum Taxi Weight (MTW) Maximum Ramp Weight (MRW)	260 900 kg (575 187 lb)	290 900 kg (641 325 lb)	300 900 kg (663 371 lb)	316 900 kg (698 645 lb)
Maximum Take-Off Weight (MTOW)	260 000 kg (573 202 lb)	290 000 kg (639 341 lb)	300 000 kg (661 387 lb)	316 000 kg (696 661 lb)
Maximum Landing Weight (MLW)	236 000 kg (520 291 lb)	233 000 kg (513 677 lb)	233 000 kg (513 677 lb)	233 000 kg (513 677 lb)

Aircraft Characteristics				
	WV007	WV009	WV010	WV011
Maximum Zero Fuel Weight (MZFW)	223 000 kg (491 631 lb)	220 000 kg (485 017 lb)	220 000 kg (485 017 lb)	220 000 kg (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 (in a two class layout)	369 (54 BC / 315 EC)
Usable Fuel Capacity (density = 0.785 kg/l)	156 000 L (41 212 USgal)
	122 460 kg (269 978 lb)
Pressurized Fuselage Volume	
Cockpit Volume	8.23 m3 (291 ft.3)
Passenger Compartment Volume	
Usable Volume, FWD CC (Based on LD3)	104 m3 (3 673 ft.3)
Usable Volume, AFT CC (Based on LD3)	86.7 m3 (3 062 ft.3)
Usable Volume, Bulk CC	11.4 m3 (403 ft.3)
Water Volume, FWD CC	138 m3 (4 873 ft.3)
Water Volume, AFT CC	113 m3 (3 991 ft.3)
Water Volume, Bulk CC	13.4 m3 (473 ft.3)

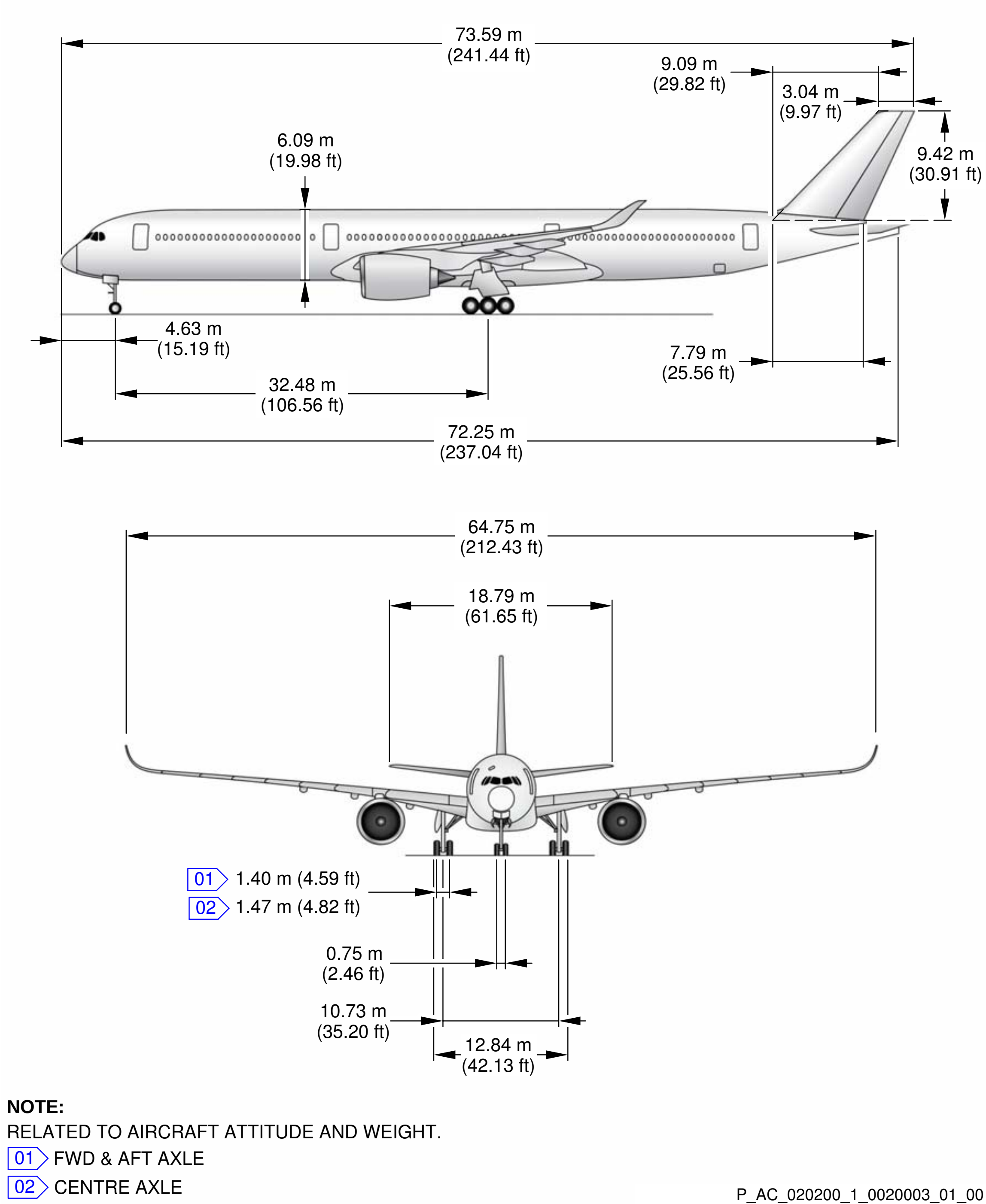
2-2-0 General Aircraft Dimensions

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

General Aircraft Dimensions

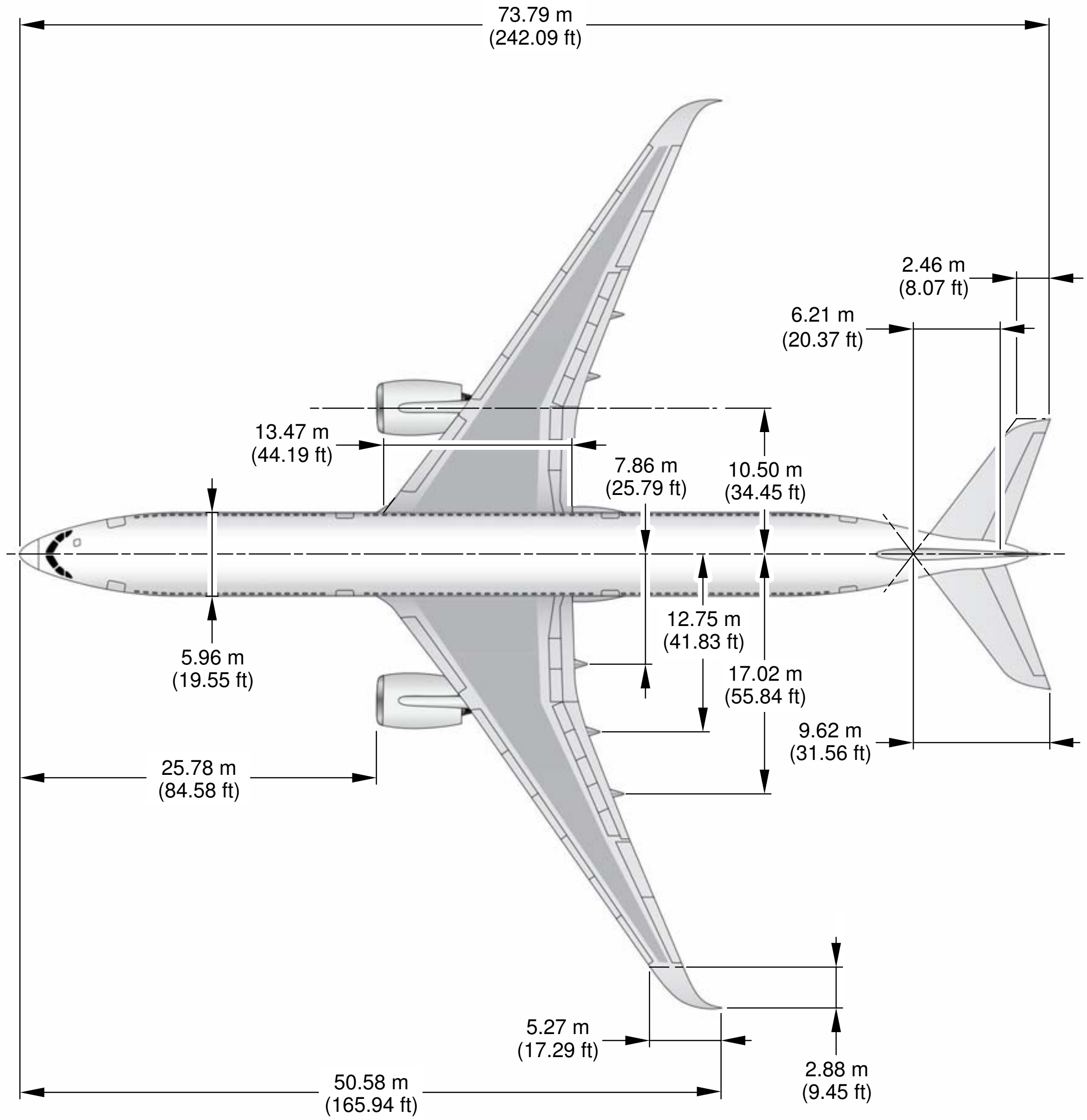
1. This section provides general aircraft dimensions.

**ON A/C A350-1000



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

**ON A/C A350-1000

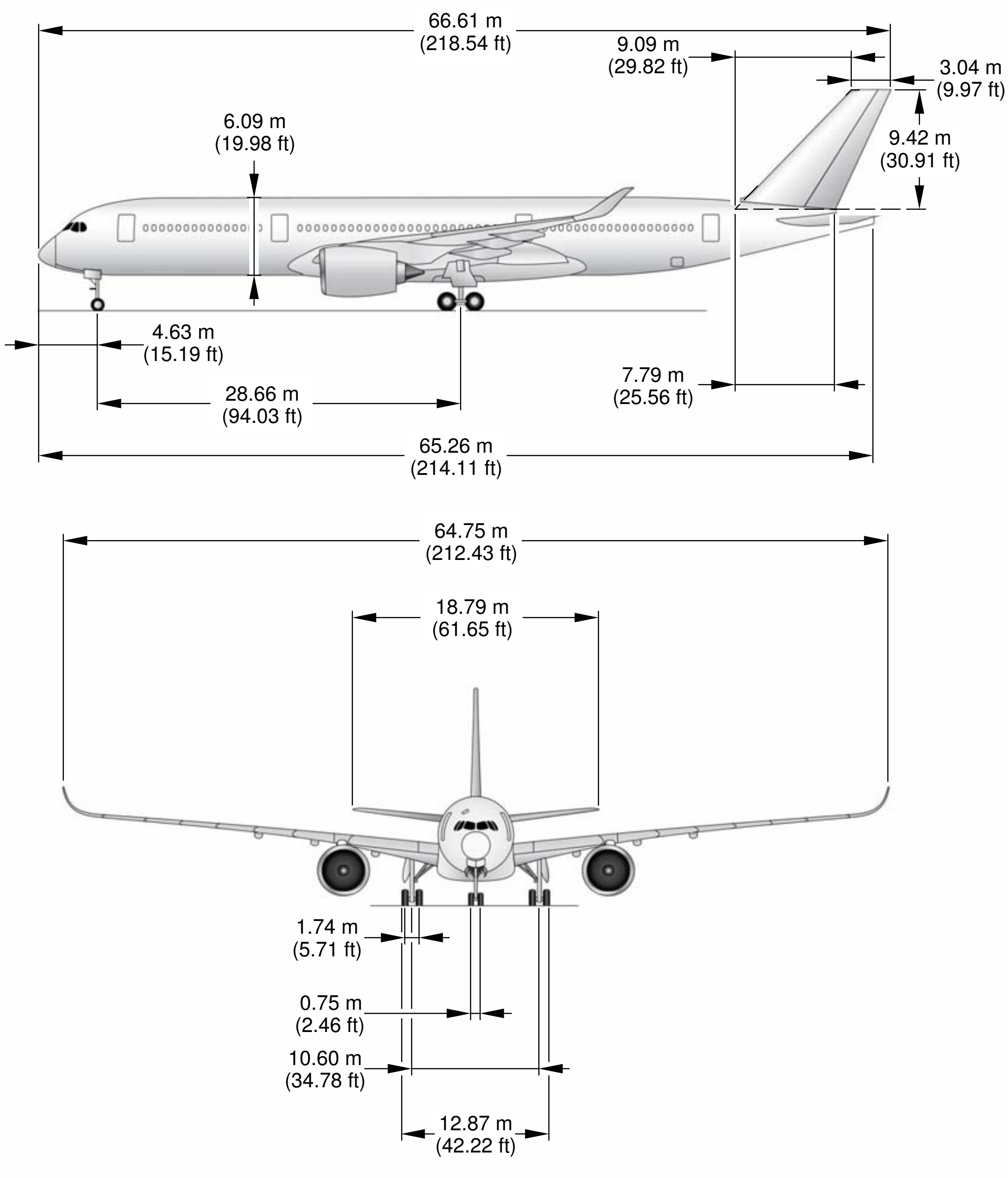


NOTE:
RELATED TO AIRCRAFT ATTITUDE AND WEIGHT.

P_AC_020200_1_0020003_02_00

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

**ON A/C A350-900

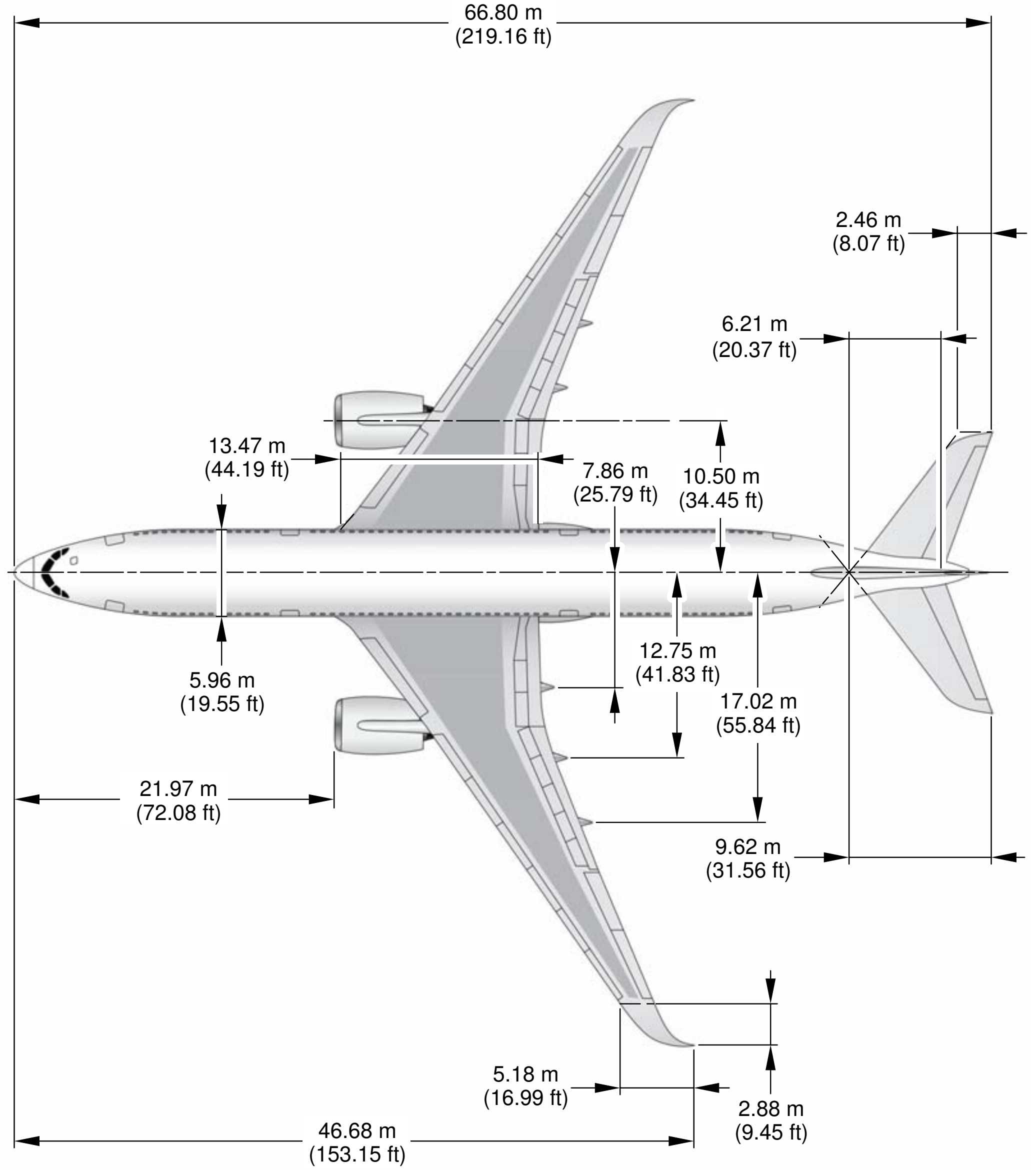


NOTE:
RELATED TO AIRCRAFT ATTITUDE AND WEIGHT.

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

2-3-0 Ground Clearances

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

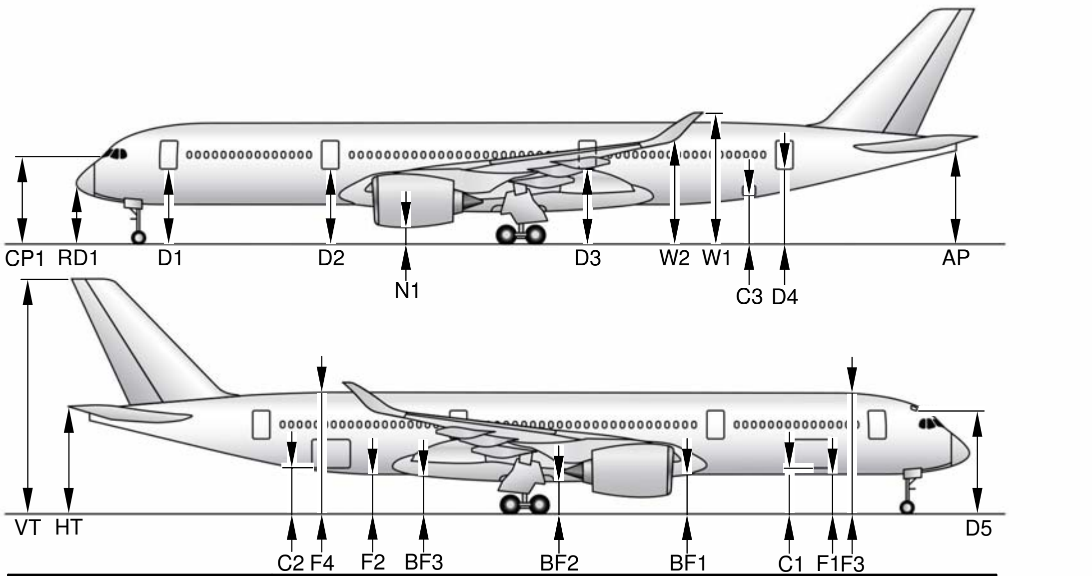
Ground Clearances

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



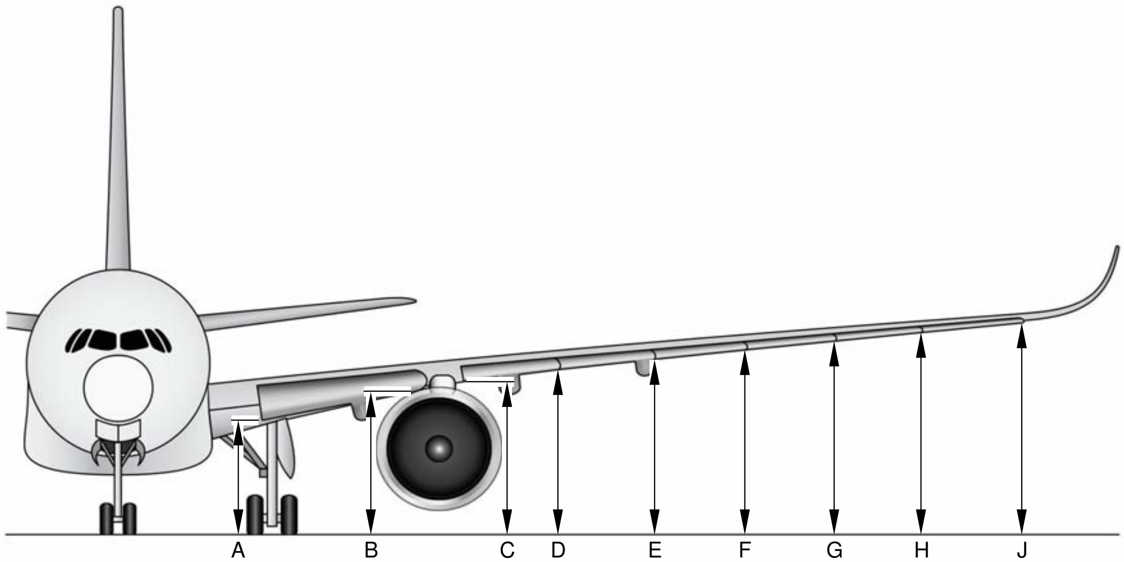
A/C CONFIGURATION		MRW				140 000 kg (308 647 lb)				AC JACKED FDL = 6.5 m (21.33 ft)	
		FWD CG (26.2%)		AFT CG (33.2%)		FWD CG (20%)		AFT CG (40%)			
		m	ft	m	ft	m	ft	m	ft	m	ft
DOORS	D1	5.04	16.54	5.08	16.68	5.13	16.84	5.36	17.60	6.37	20.91
	D2	5.11	16.75	5.13	16.82	5.22	17.13	5.34	17.52	6.37	20.91
	D3	5.21	17.08	5.19	17.04	5.36	17.58	5.30	17.39	6.37	20.91
	D4	5.28	17.33	5.24	17.20	5.46	17.93	5.27	17.29	6.37	20.90
	D5	7.25	23.79	7.31	23.98	7.33	24.05	7.61	24.97	8.59	28.18
	C1	3.08	10.12	3.12	10.22	3.18	10.45	3.37	11.06	4.39	14.40
	C2	3.31	10.86	3.28	10.76	3.48	11.42	3.33	10.94	4.43	14.52
	C3	3.31	10.85	3.27	10.74	3.48	11.43	3.31	10.87	4.41	14.47
FUSELAGE	F1	2.40	7.88	2.44	7.99	2.50	8.20	2.70	8.85	3.71	12.18
	F2	2.58	8.46	2.55	8.38	2.74	9.00	2.63	8.62	3.71	12.18
	F3	8.50	27.88	8.53	27.98	8.60	28.21	8.78	28.80	9.80	32.14
	F4	8.46	27.77	8.44	27.68	8.64	28.33	8.49	27.87	9.58	31.45
	BF1	2.45	8.05	2.47	8.10	2.57	8.44	2.67	8.77	3.71	12.17
	BF2	1.96	6.42	1.96	6.42	2.10	6.88	2.10	6.90	3.16	10.37
	BF3	2.56	8.41	2.54	8.35	2.72	8.94	2.63	8.63	3.71	12.18
	CP1	5.82	19.11	5.87	19.27	5.90	19.37	6.18	20.28	7.18	23.55
	RD1	3.95	12.96	4.00	13.14	4.03	13.22	4.32	14.18	5.32	17.45
WINGS	W1	9.45	31.01	9.42	30.92	9.62	31.57	9.48	31.11	10.57	34.69
	W1 (ULR)	9.95	32.64	9.92	32.55	10.12	33.20	9.98	32.74	11.07	36.32
	W2	7.02	23.05	7.00	22.98	7.19	23.58	7.09	23.25	8.17	26.80
TAILPLANE	HT	7.75	25.44	7.69	25.23	7.96	26.13	7.64	25.05	8.77	28.77
	AP	6.70	21.98	6.64	21.78	6.91	22.66	6.59	21.63	7.72	25.34
	VT	17.26	56.63	17.20	56.42	17.47	57.31	17.14	56.24	18.27	59.96
ENGINE/ NACELLE	N1	0.76	2.48	0.77	2.51	0.88	2.89	0.95	3.11	1.99	6.54
	N1 WITH DRAIN MAST	0.60	1.97	0.61	2.00	0.73	2.39	0.79	2.59	1.84	6.02

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	ft
01 DN INBD	A	3.43	11.24	3.44	11.28	3.55	11.66	3.62	11.88
01 DN OUTBD	B	4.60	15.08	4.60	15.09	4.73	15.51	4.76	15.62
SLAT 1 INBD	C	4.62	15.17	4.63	15.18	4.76	15.61	4.79	15.70
SLAT 1/2	D	5.00	16.41	5.00	16.41	5.14	16.86	5.15	16.89
SLAT 2/3	E	5.36	17.57	5.35	17.56	5.50	18.04	5.49	18.01
SLAT 3/4	F	5.70	18.70	5.69	18.67	5.85	19.18	5.82	19.08
SLAT 4/5	G	6.02	19.74	6.01	19.71	6.17	20.24	6.12	20.08
SLAT 5/6	H	6.32	20.73	6.31	20.69	6.47	21.24	6.41	21.02
SLAT 6 OUTBD	J	6.66	21.85	6.64	21.79	6.82	22.37	6.73	22.08

NOTE:

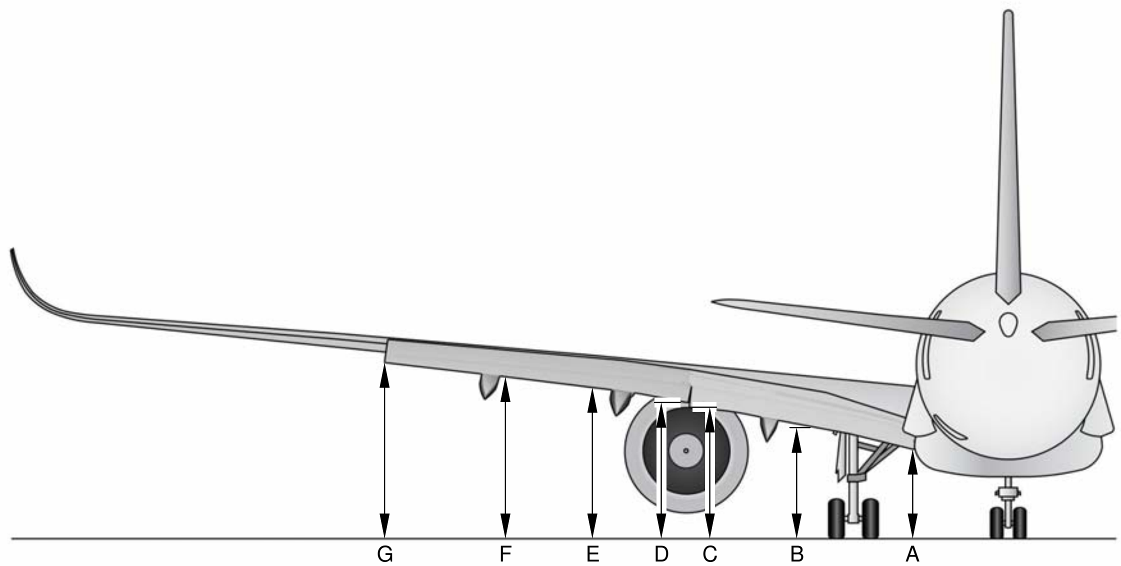
01 DN – DROOP NOSE

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**



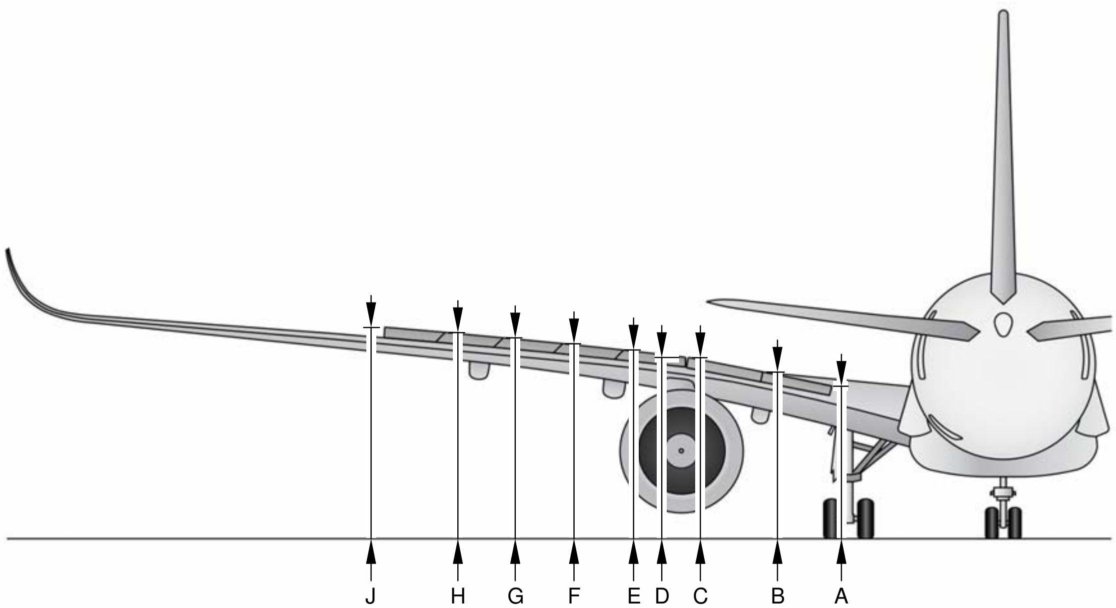
FLAPS EXTENDED									
DESCRIPTION		MRW				140 000 kg (308 647 lb)			
		FWD CG (26.2%)		AFT CG (33.2%)		FWD CG (20%)		AFT CG (40%)	
		m	ft	m	ft	m	ft	m	ft
FLAP 1 INBD	A	2.57	8.43	2.56	8.40	2.72	8.92	2.68	8.79
FLAP 1/2	B	3.30	10.82	3.29	10.79	3.45	11.31	3.40	11.17
FLAP 2 OUTBD	C	4.10	13.45	4.09	13.41	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



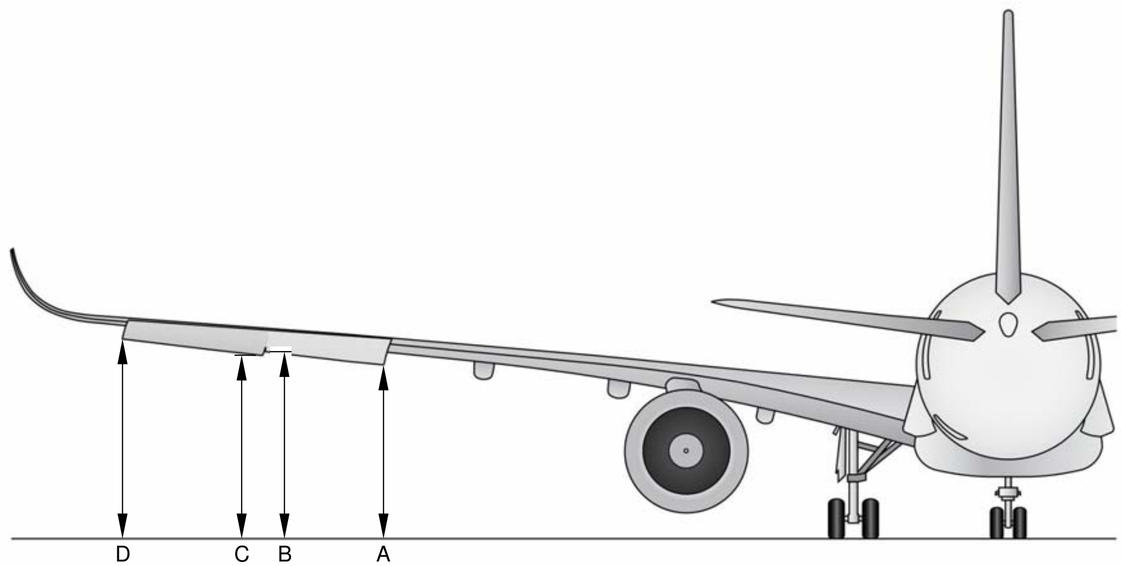
SPOILERS EXTENDED									
DESCRIPTION		MRW				140 000 kg (308 647 lb)			
		FWD CG (26.2%)		AFT CG (33.2%)		FWD CG (20%)		AFT CG (40%)	
		m	ft	m	ft	m	ft	m	ft
SPOILER 1 INBD	A	5.03	16.50	5.02	16.47	5.17	16.98	5.14	16.88
SPOILER 1/2	B	5.49	18.02	5.48	17.99	5.64	18.50	5.61	18.40
SPOILER 2 OUTBD	C	5.95	19.51	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



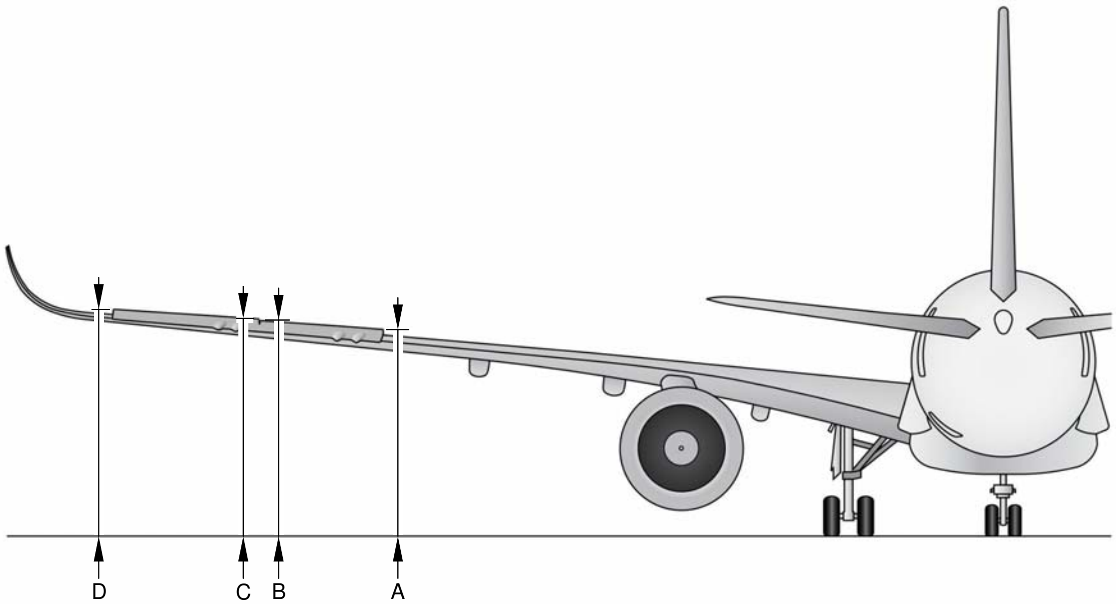
AILERONS DOWN									
DESCRIPTION		MRW				140 000 kg (308 647 lb)			
		FWD CG (26.2%)		AFT CG (33.2%)		FWD CG (20%)		AFT CG (40%)	
		m	ft	m	ft	m	ft	m	ft
AILERON 1 INBD	A	5.95	19.51	5.93	19.46	6.10	20.03	6.03	19.77
AILERON 1 OUTBD	B	6.36	20.87	6.34	20.81	6.52	21.40	6.43	21.09
AILERON 2 INBD	C	6.35	20.83	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



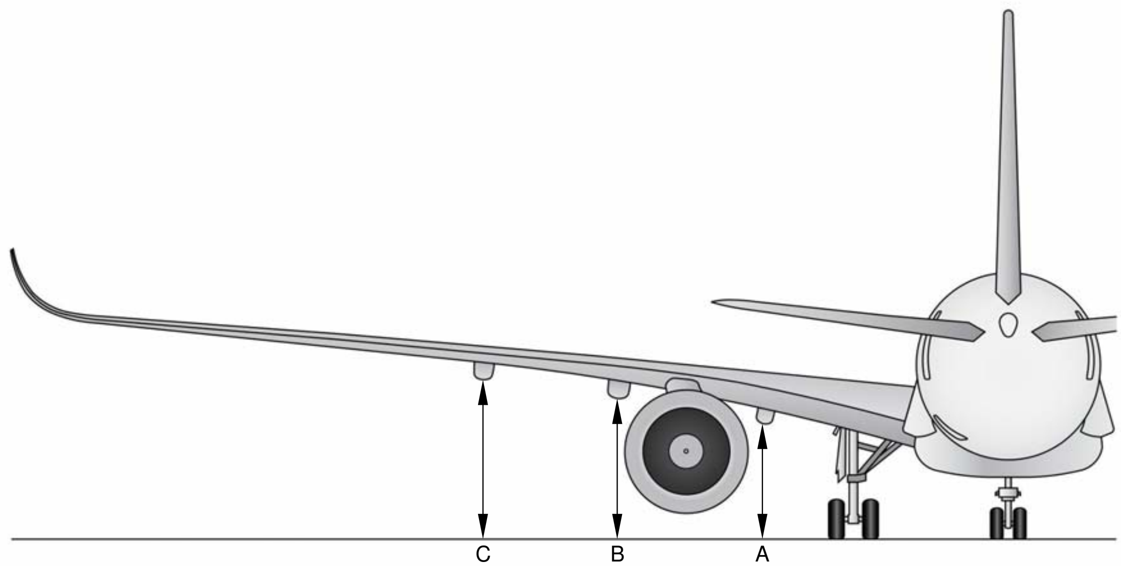
AILERONS UP									
DESCRIPTION		MRW				140 000 kg (308 647 lb)			
		FWD CG (26.2%)		AFT CG (33.2%)		FWD CG (20%)		AFT CG (40%)	
		m	ft	m	ft	m	ft	m	ft
AILERON 1 INBD	A	6.96	22.85	6.95	22.80	7.12	23.36	7.04	23.11
AILERON 1 OUTBD	B	7.21	23.64	7.19	23.58	7.37	24.17	7.27	23.86
AILERON 2 INBD	C	7.22	23.68	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



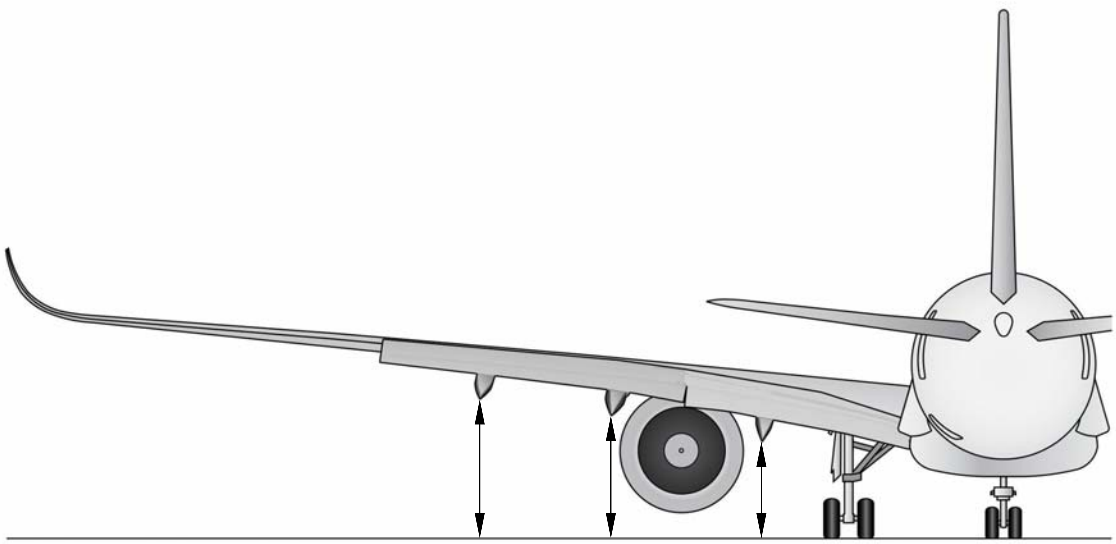
FLAPS TRACKS RETRACTED									
DESCRIPTION		MRW				140 000 kg (308 647 lb)			
		FWD CG (26.2%)		AFT CG (33.2%)		FWD CG (20%)		AFT CG (40%)	
		m	ft	m	ft	m	ft	m	ft
FLAP TRACK 1	A	3.75	12.32	3.75	12.30	3.90	12.80	3.87	12.71
FLAP TRACK 2	B	4.56	14.98	4.56	14.95	4.71	15.46	4.67	15.34
FLAP TRACK 3	C	5.21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



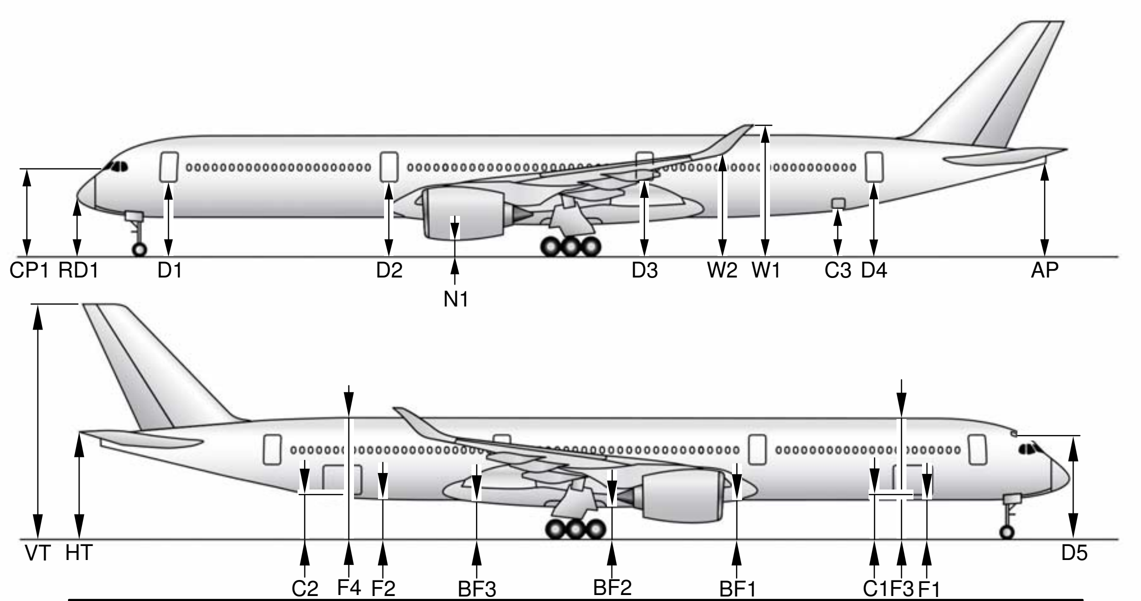
FLAPS TRACKS EXTENDED									
DESCRIPTION		MRW				140 000 kg (308 647 lb)			
		FWD CG (26.2%)		AFT CG (33.2%)		FWD CG (20%)		AFT CG (40%)	
		m	ft	m	ft	m	ft	m	ft
FLAP TRACK 1	A	2.86	9.38	2.85	9.34	3.01	9.87	2.96	9.72
FLAP TRACK 2	B	3.37	11.07	3.36	11.02	3.53	11.57	3.47	11.37
FLAP TRACK 3	C	4.04	13.24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



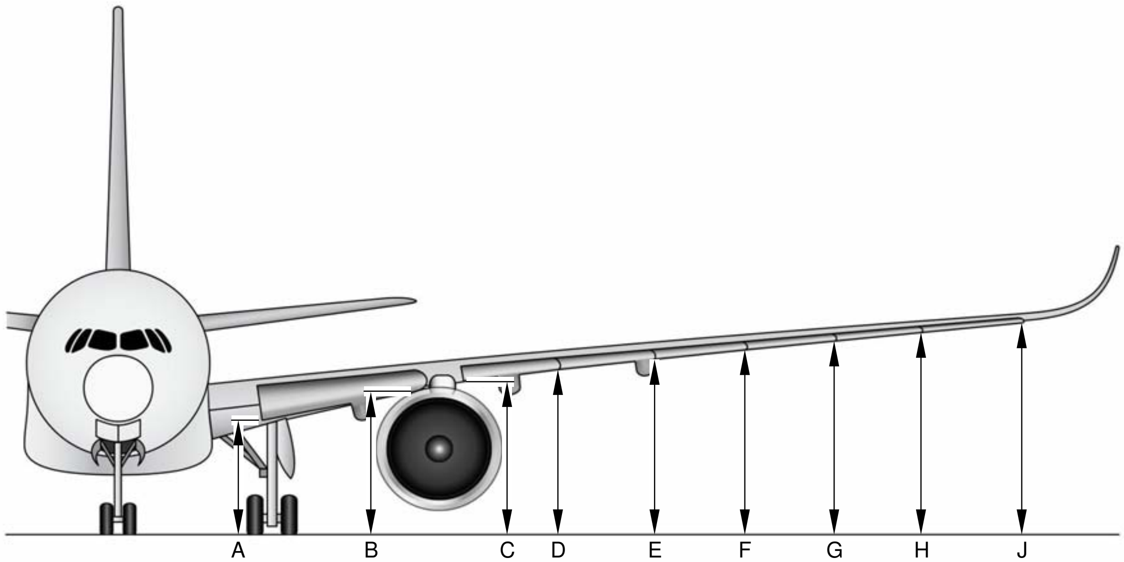
A/C CONFIGURATION		MRW				160 000 kg (352 739 lb)				AC JACKED FDL = 6.5 m (21.33 ft)	
		FWD CG (25%)		AFT CG (34%)		FWD CG (20%)		AFT CG (40%)			
		m	ft	m	ft	m	ft	m	ft	m	ft
DOORS	D1	5.05	16.55	5.09	16.72	5.13	16.84	5.36	17.59	6.37	20.91
	D2	5.12	16.80	5.14	16.87	5.23	17.15	5.32	17.47	6.37	20.91
	D3	5.21	17.09	5.20	17.05	5.34	17.51	5.28	17.33	6.37	20.91
	D4	5.29	17.35	5.24	17.21	5.43	17.82	5.24	17.20	6.37	20.90
	D5	7.26	23.82	7.30	23.95	7.32	24.02	7.55	24.77	8.56	28.08
	C1	3.08	10.12	3.12	10.25	3.18	10.42	3.37	11.05	4.39	14.40
	C2	3.32	10.89	3.28	10.78	3.46	11.34	3.31	10.86	4.43	14.52
	C3	3.32	10.89	3.28	10.76	3.46	11.35	3.29	10.79	4.41	14.47
FUSELAGE	F1	2.40	7.88	2.45	8.02	2.50	8.19	2.69	8.84	3.71	12.18
	F2	2.59	8.50	2.56	8.40	2.72	8.94	2.60	8.54	3.71	12.18
	F3	8.50	27.88	8.54	28.01	8.59	28.19	8.77	28.79	9.80	32.14
	F4	8.47	27.81	8.44	27.70	8.61	28.26	8.47	27.79	9.58	31.45
	BF1	2.46	8.09	2.48	8.15	2.57	8.44	2.66	8.73	3.71	12.17
	BF2	1.96	6.44	1.96	6.44	2.08	6.83	2.09	6.85	3.16	10.37
	BF3	2.56	8.41	2.54	8.35	2.69	8.83	2.61	8.58	3.71	12.18
	CP1	5.83	19.13	5.89	19.32	5.91	19.40	6.18	20.27	7.18	23.55
	RD1	3.96	12.99	4.02	13.19	4.04	13.26	4.32	14.18	5.32	17.45
WINGS	W1	9.45	31.00	9.42	30.91	9.58	31.44	9.46	31.05	10.57	34.69
	W2	7.02	23.04	7.00	22.98	7.15	23.47	7.07	23.19	8.17	26.80
TAILPLANE	HT	7.75	25.43	7.68	25.21	7.91	25.95	7.61	24.96	8.77	28.77
	AP	6.70	21.98	6.63	21.76	6.85	22.49	6.57	21.54	7.72	25.34
	VT	17.26	56.62	17.19	56.39	17.41	57.14	17.11	56.15	18.27	59.96
ENGINE/ NACELLE	N1	0.76	2.51	0.78	2.55	0.88	2.87	0.93	3.07	1.99	6.54
	N1 WITH DRAIN MAST	0.61	2.00	0.62	2.04	0.72	2.37	0.78	2.55	1.84	6.02

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



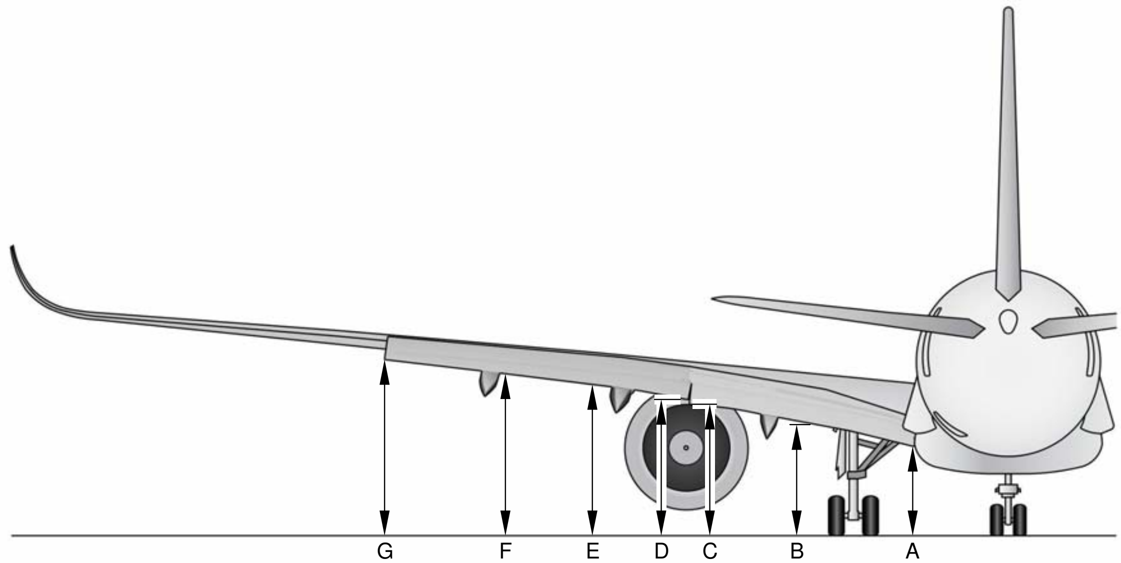
LEADING EDGE SLATS EXTENDED									
DESCRIPTION		MRW				160 000 kg (352 739 lb)			
		FWD CG (25%)		AFT CG (34%)		FWD CG (20%)		AFT CG (40%)	
		m	ft	m	ft	m	ft	m	ft
01 DN INBD	A	3.44	11.28	3.45	11.32	3.55	11.64	3.61	11.84
01 DN OUTBD	B	4.60	15.10	4.61	15.12	4.72	15.48	4.75	15.57
SLAT 1 INBD	C	4.63	15.19	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



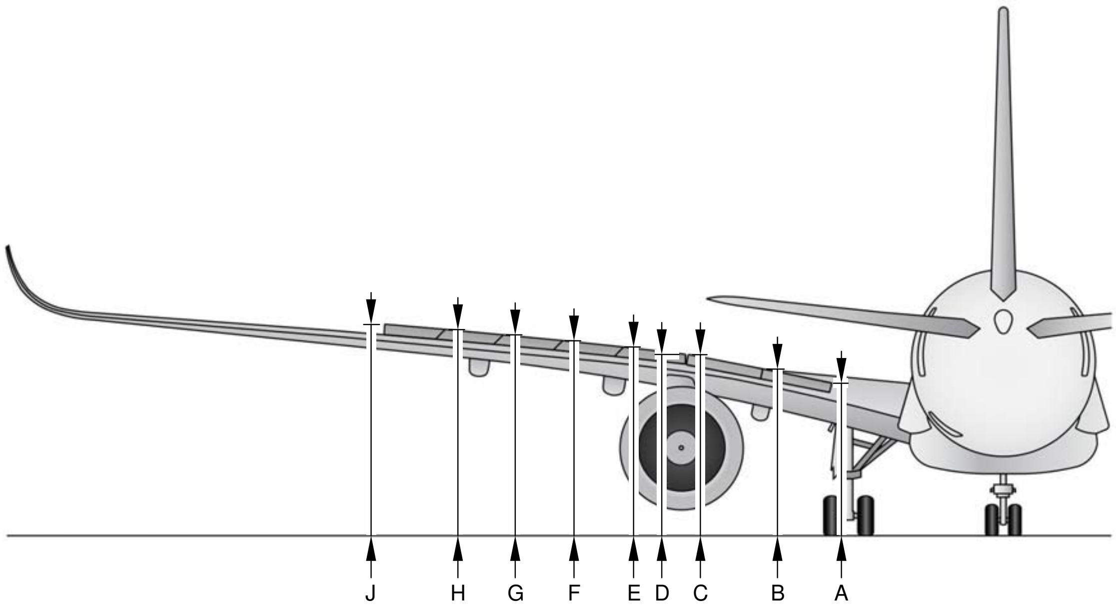
FLAPS EXTENDED									
DESCRIPTION		MRW				160 000 kg (352 739 lb)			
		FWD CG (25%)		AFT CG (34%)		FWD CG (20%)		AFT CG (40%)	
		m	ft	m	ft	m	ft	m	ft
FLAP 1 INBD	A	2.57	8.44	2.56	8.41	2.69	8.84	2.66	8.73
FLAP 1/2	B	3.30	10.83	3.29	10.80	3.42	11.23	3.39	11.12
FLAP 2 OUTBD	C	4.10	13.45	4.09	13.42	4.22	13.86	4.19	13.74
FLAP 3 INBD	D	4.15	13.63	4.14	13.59	4.28	14.03	4.24	13.91
FLAP 3/4	E	4.90	16.08	4.89	16.04	5.03	16.49	4.98	16.33
FLAP 4/5	F	5.44	17.85	5.43	17.80	5.57	18.26	5.51	18.07
FLAP 5 OUTBD	G	5.69	18.65	5.67	18.60	5.81	19.07	5.75	18.86

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



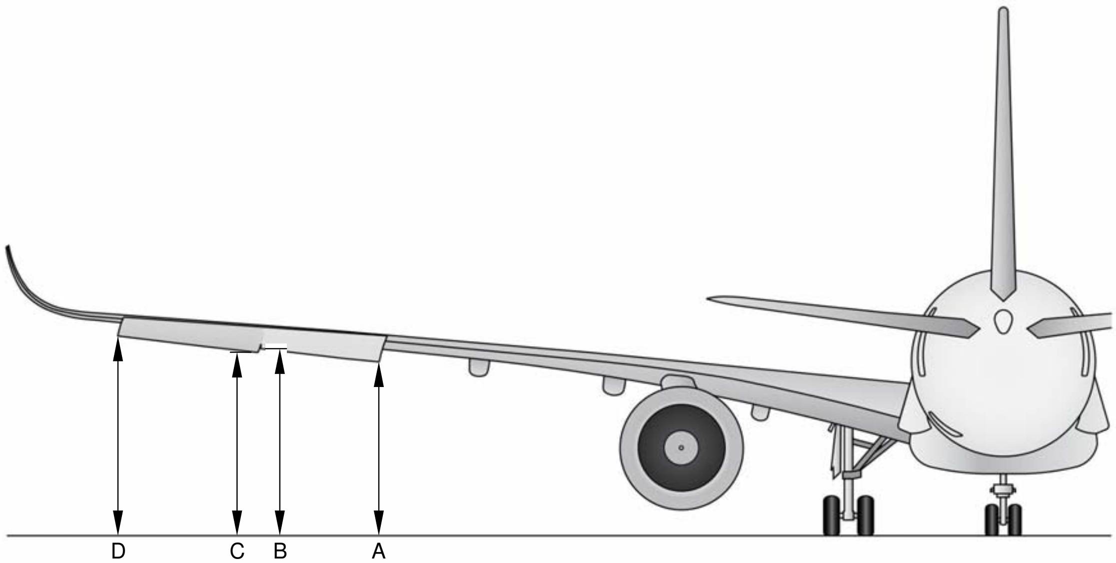
SPOILERS EXTENDED									
DESCRIPTION		MRW				160 000 kg (352 739 lb)			
		FWD CG (25%)		AFT CG (34%)		FWD CG (20%)		AFT CG (40%)	
		m	ft	m	ft	m	ft	m	ft
SPOILER 1 INBD	A	5.03	16.51	5.02	16.48	5.15	16.91	5.13	16.83
SPOILER 1/2	B	5.49	18.03	5.49	18.00	5.62	18.43	5.59	18.34
SPOILER 2 OUTBD	C	5.95	19.52	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**



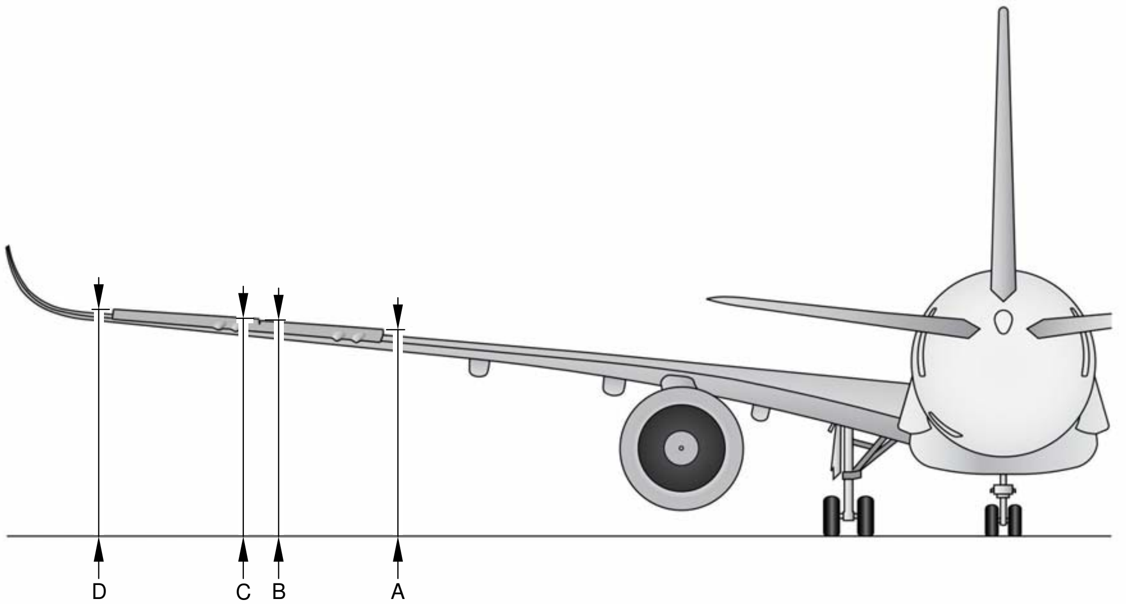
AILERONS DOWN									
DESCRIPTION		MRW				160 000 kg (352 739 lb)			
		FWD CG (25%)		AFT CG (34%)		FWD CG (20%)		AFT CG (40%)	
		m	ft	m	ft	m	ft	m	ft
AILERON 1 INBD	A	5.95	19.51	5.93	19.46	6.07	19.93	6.01	19.72
AILERON 1 OUTBD	B	6.36	20.87	6.34	20.81	6.49	21.29	6.41	21.04
AILERON 2 INBD	C	6.35	20.83	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



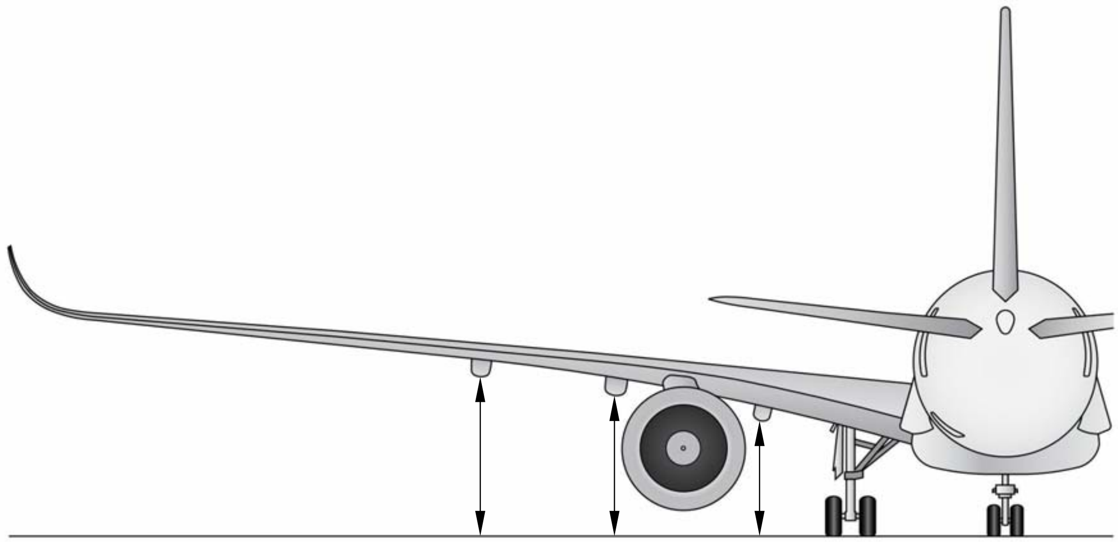
AILERONS UP									
DESCRIPTION		MRW				160 000 kg (352 739 lb)			
		FWD CG (25%)		AFT CG (34%)		FWD CG (20%)		AFT CG (40%)	
		m	ft	m	ft	m	ft	m	ft
AILERON 1 INBD	A	6.96	22.85	6.95	22.80	7.09	23.27	7.03	23.06
AILERON 1 OUTBD	B	7.20	23.64	7.19	23.58	7.33	24.06	7.26	23.81
AILERON 2 INBD	C	7.21	23.67	7.20	23.61	7.34	24.09	7.27	23.84
AILERON 2 OUTBD	D	7.49	24.58	7.47	24.50	7.62	25.01	7.53	24.70

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



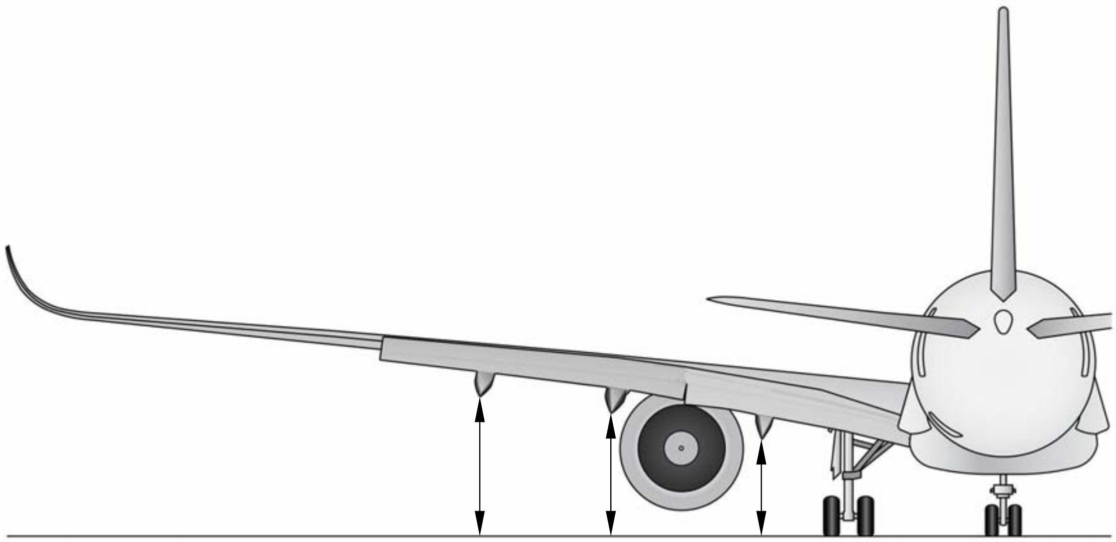
FLAPS TRACKS RETRACTED									
DESCRIPTION		MRW				160 000 kg (352 739 lb)			
		FWD CG (25%)		AFT CG (34%)		FWD CG (20%)		AFT CG (40%)	
		m	ft	m	ft	m	ft	m	ft
FLAP TRACK 1	A	3.76	12.33	3.75	12.31	3.88	12.73	3.86	12.65
FLAP TRACK 2	B	4.57	14.99	4.56	14.96	4.69	15.39	4.66	15.28
FLAP TRACK 3	C	5.21	17.09	5.20	17.05	5.33	17.49	5.29	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	ft
FLAP TRACK 1	A	2.86	9.38	2.85	9.35	2.98	9.79	2.95	9.66
FLAP TRACK 2	B	3.37	11.07	3.36	11.03	3.50	11.48	3.45	11.32
FLAP TRACK 3	C	4.04	13.24	4.02	13.19	4.16	13.66	4.10	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

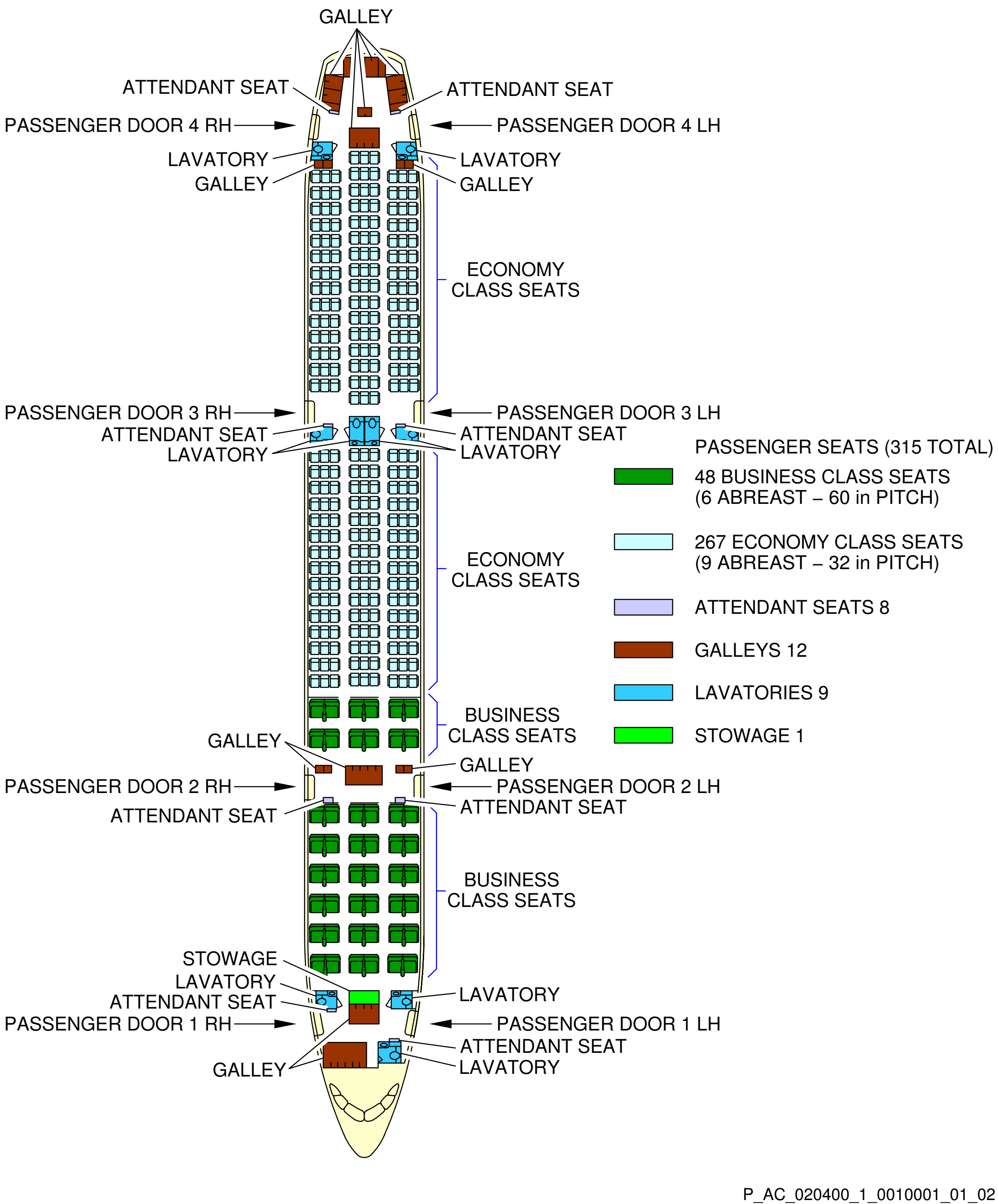
2-4-0 Interior Arrangements - Plan View

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

Interior Arrangements - Plan View

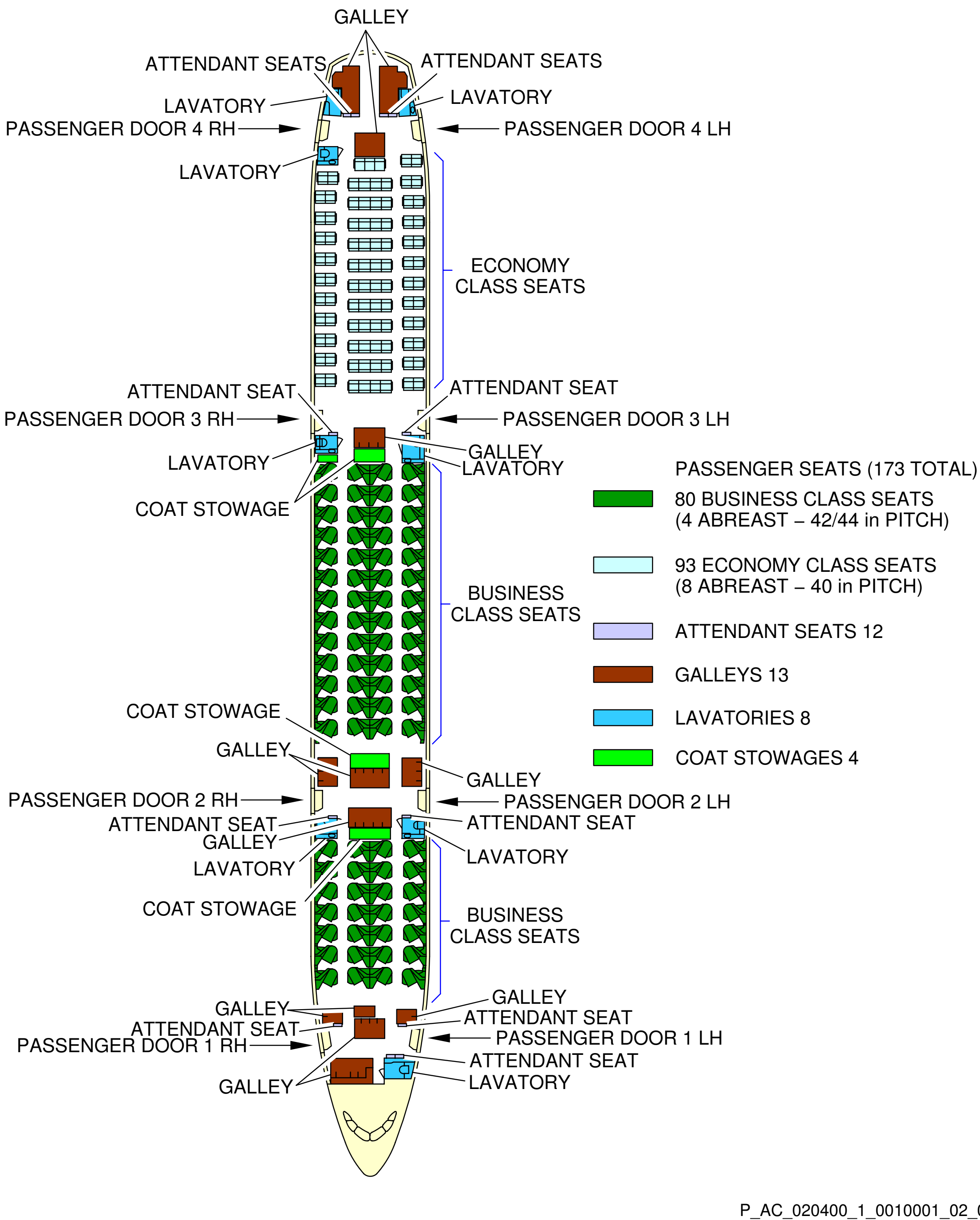
1. This section provides the standard configuration.

**ON A/C A350-900



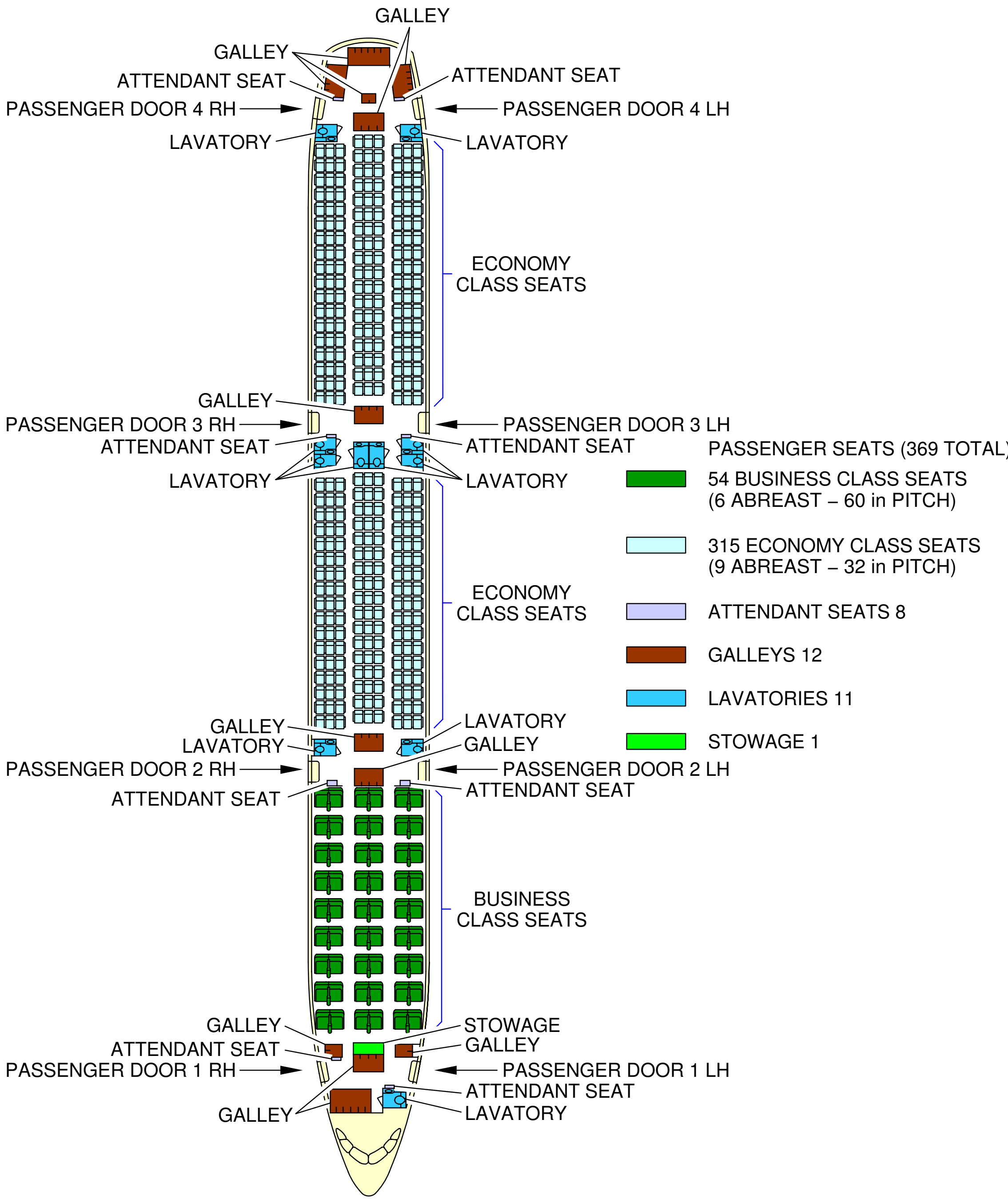
Standard Configuration
(Sheet 1 of 2)
FIGURE-2-4-0-991-001-A01

**ON A/C A350-900



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

**ON A/C A350-1000



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

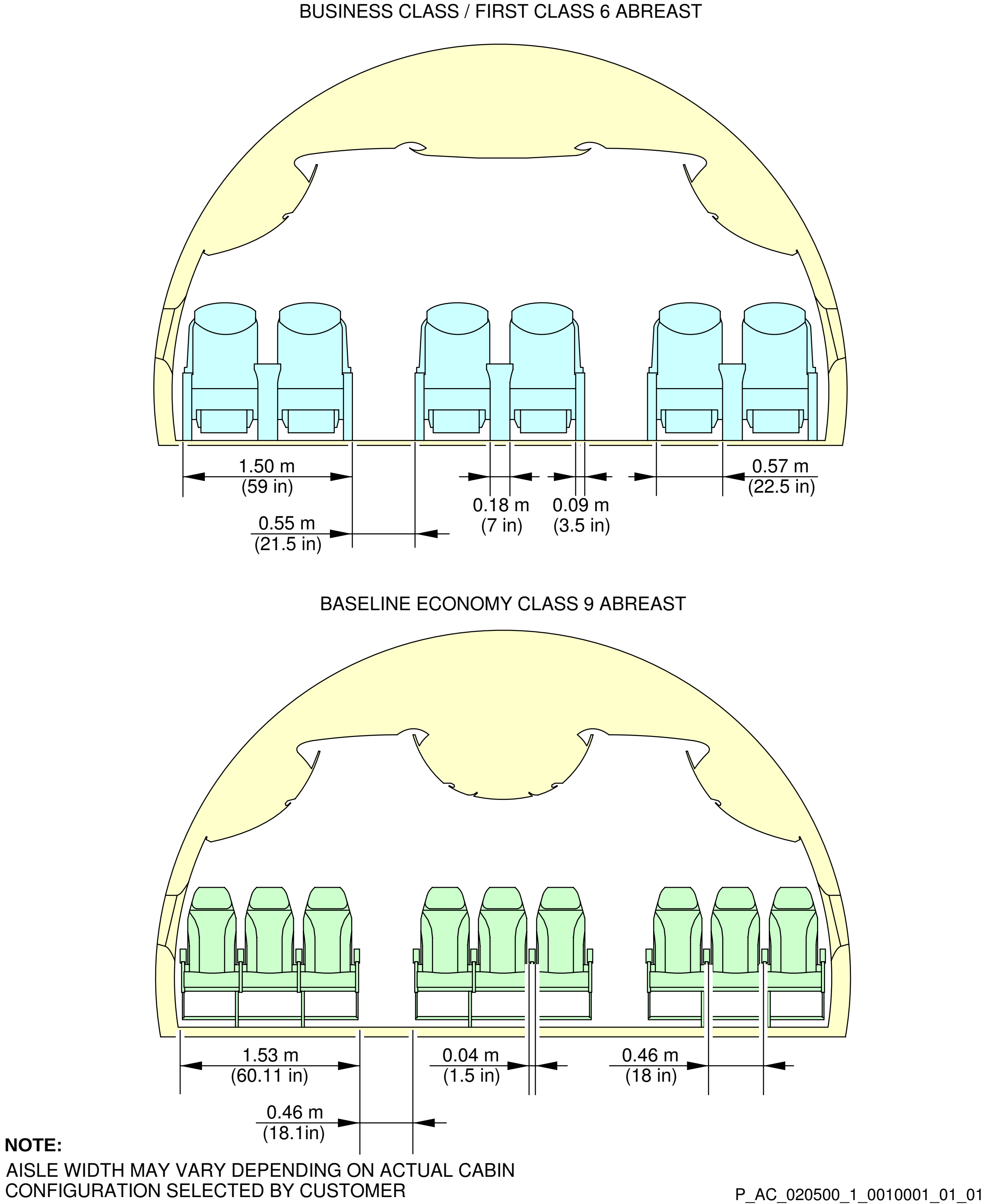
2-5-0 Interior Arrangements - Cross Section

****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



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

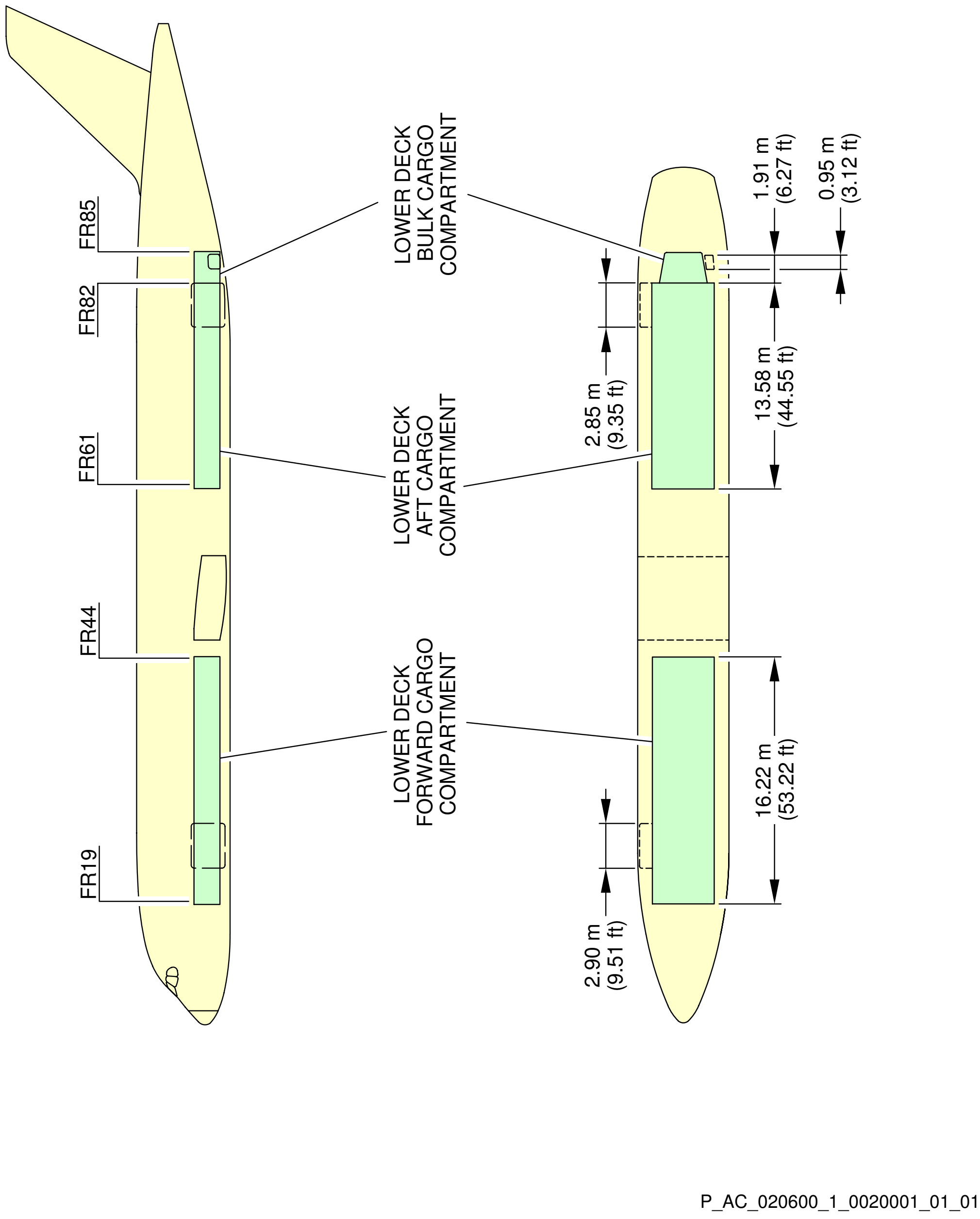
2-6-0 Cargo Compartments

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

Cargo Compartments

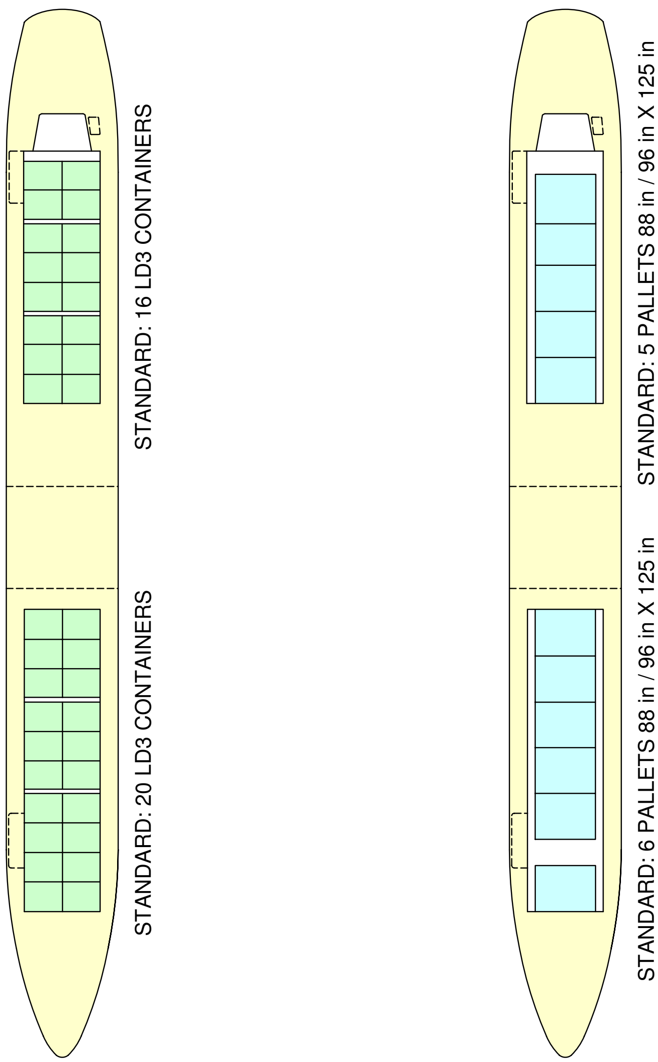
1. This section provides the following data about cargo compartments:
   - Locations and dimensions,
   - Loading combinations.

**ON A/C A350-900



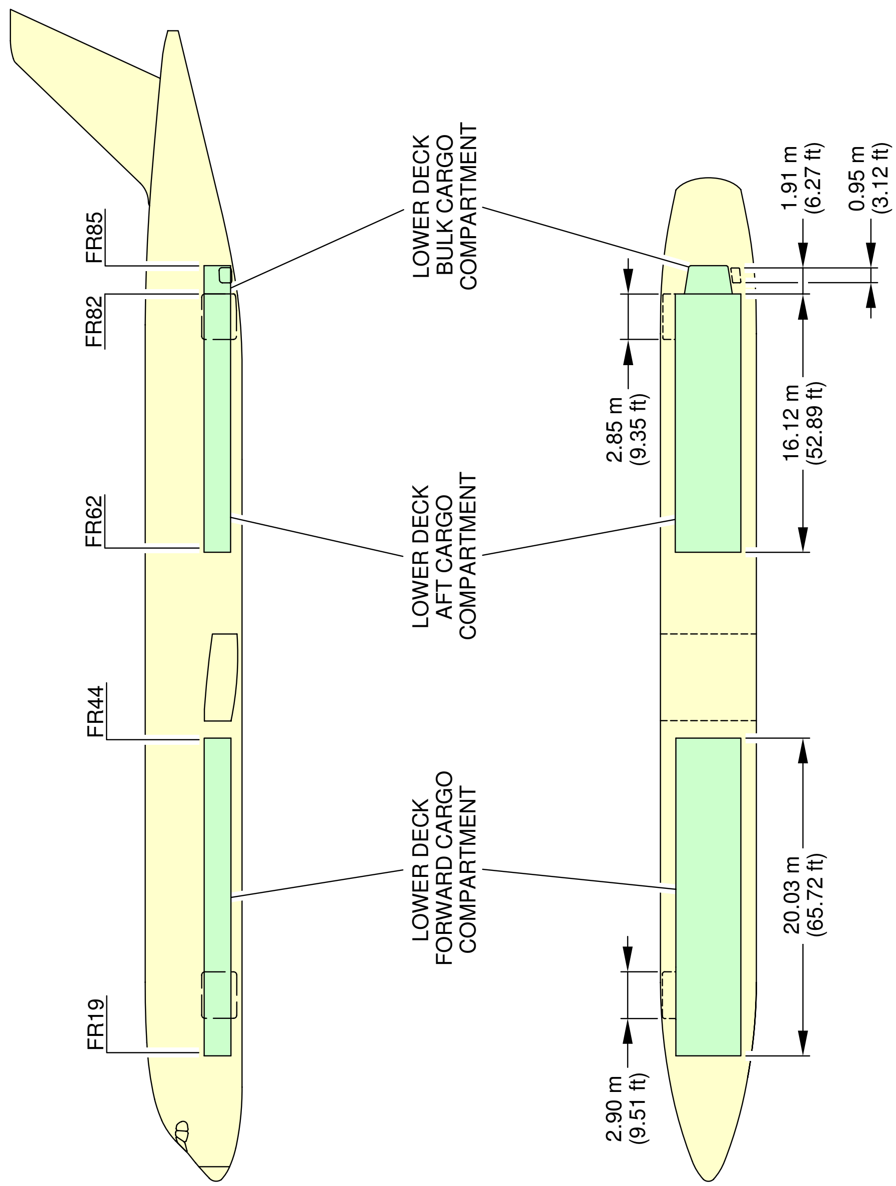
Cargo Compartments
Locations and Dimensions (Sheet 1 of 2)
FIGURE-2-6-0-991-002-A01

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



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

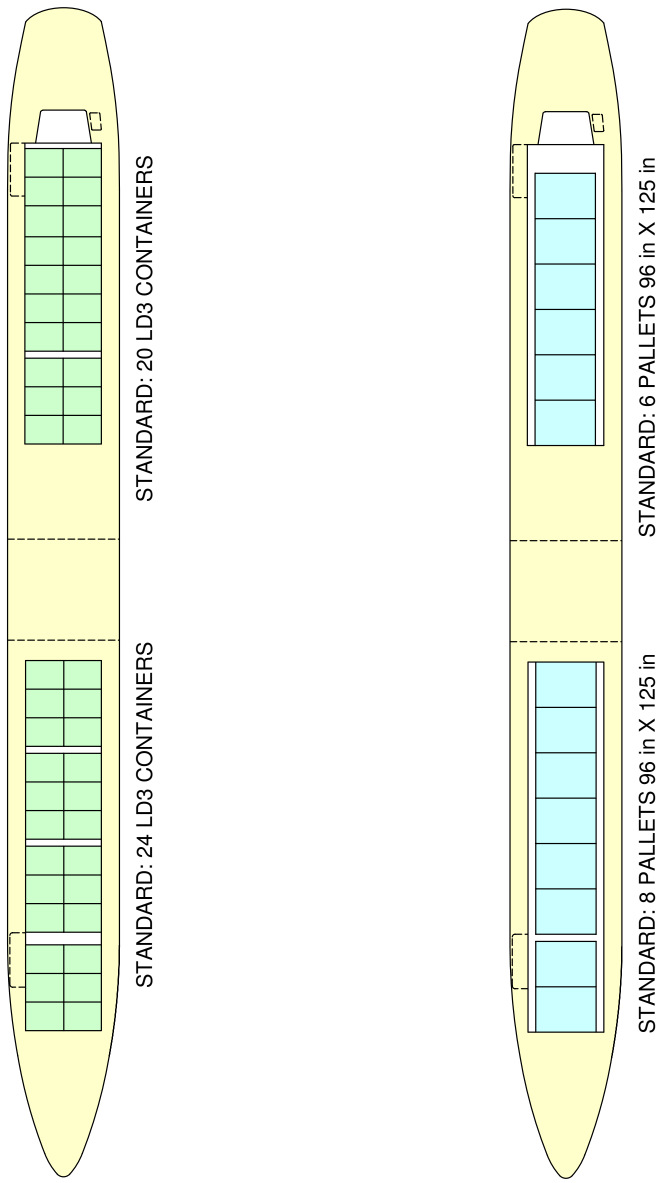
****ON A/C A350-1000**



P_AC_020600_1_0030001_01_00

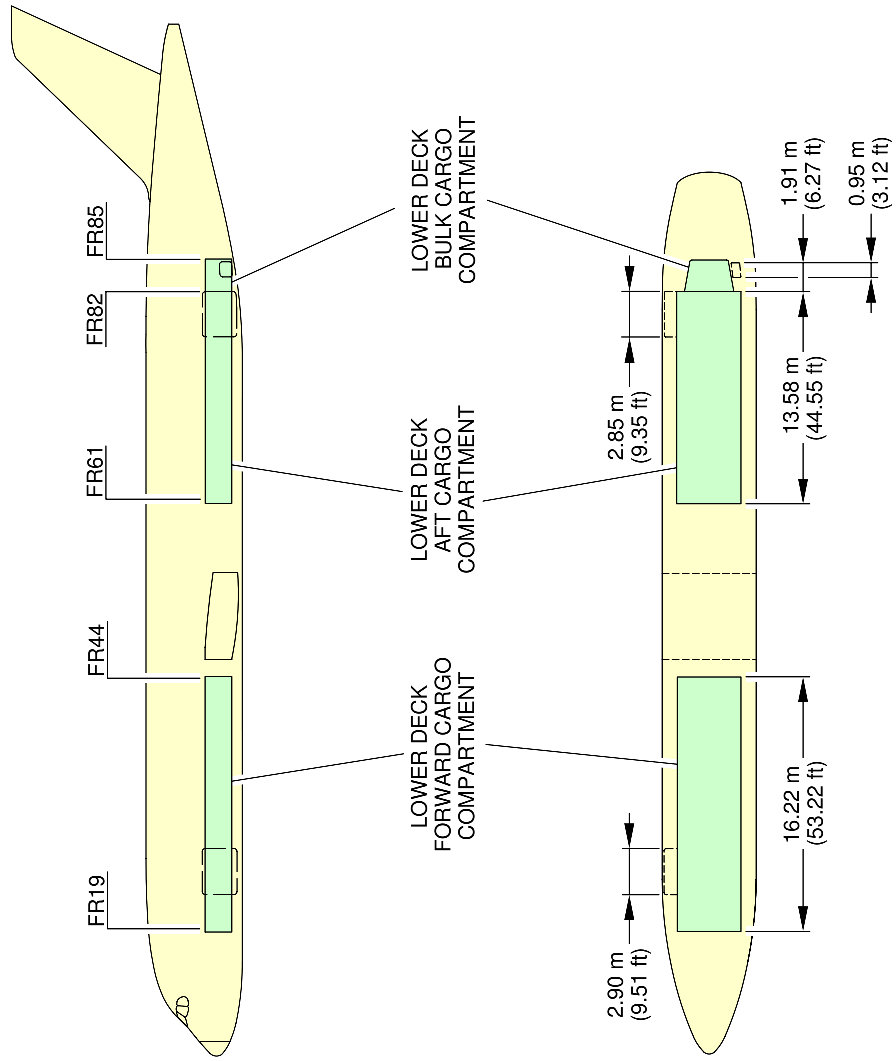
Cargo Compartments
Locations and Dimensions (Sheet 1 of 2)
FIGURE-2-6-0-991-003-A01

**ON A/C A350-1000



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

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

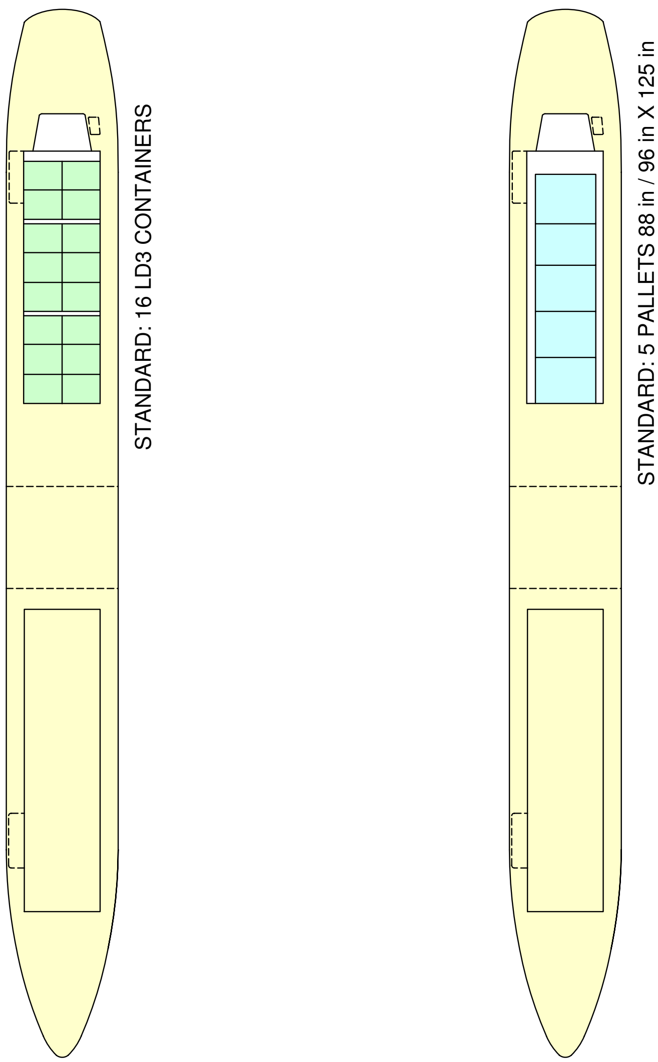


NOTE:
IN THE ULR CONFIGURATION BECAUSE OF THE DEACTIVATION OF THE FORWARD CARGO COMPARTMENT, NO CARGO OPERATION IS POSSIBLE.

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

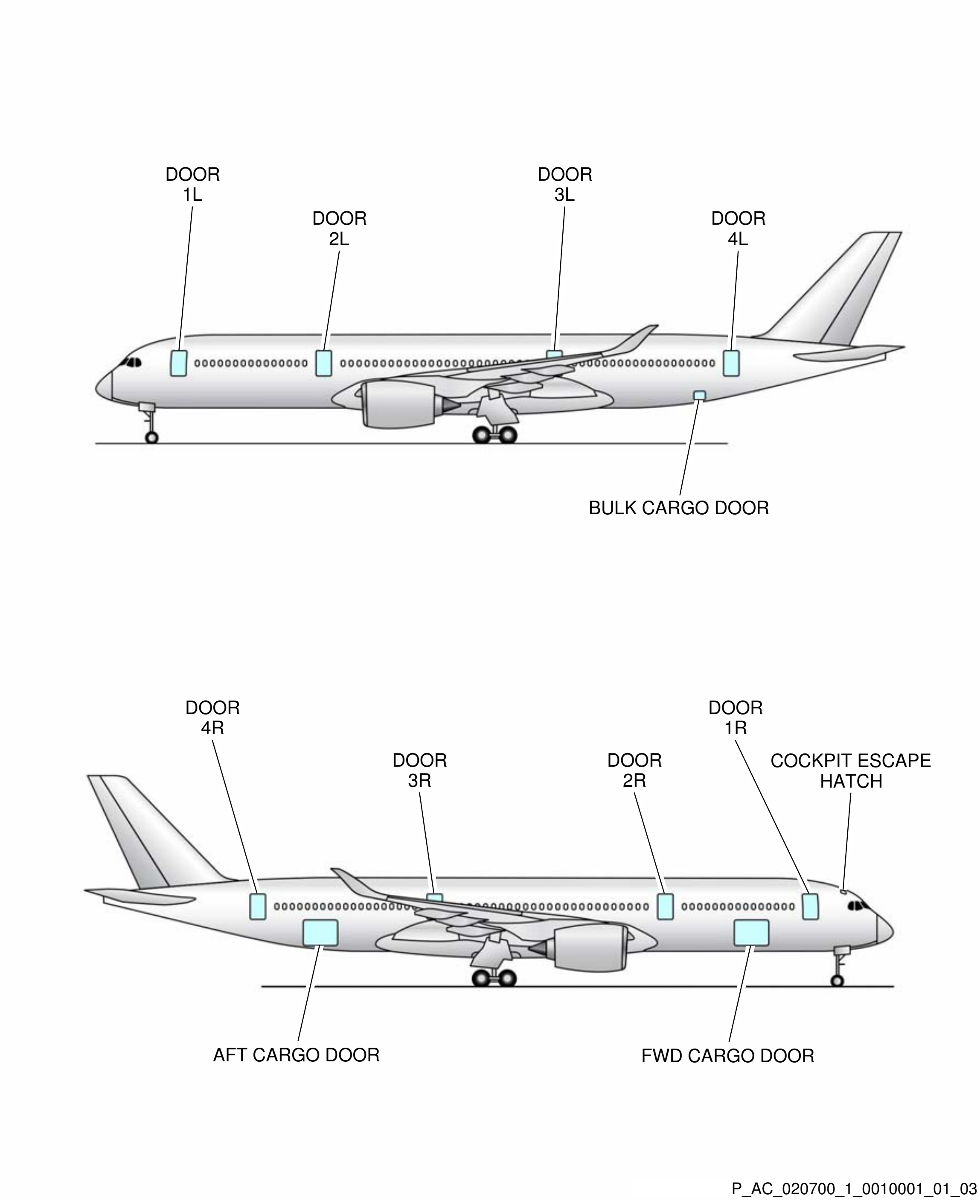
2-7-0 Door Clearances and Location

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

Door Clearances and Location

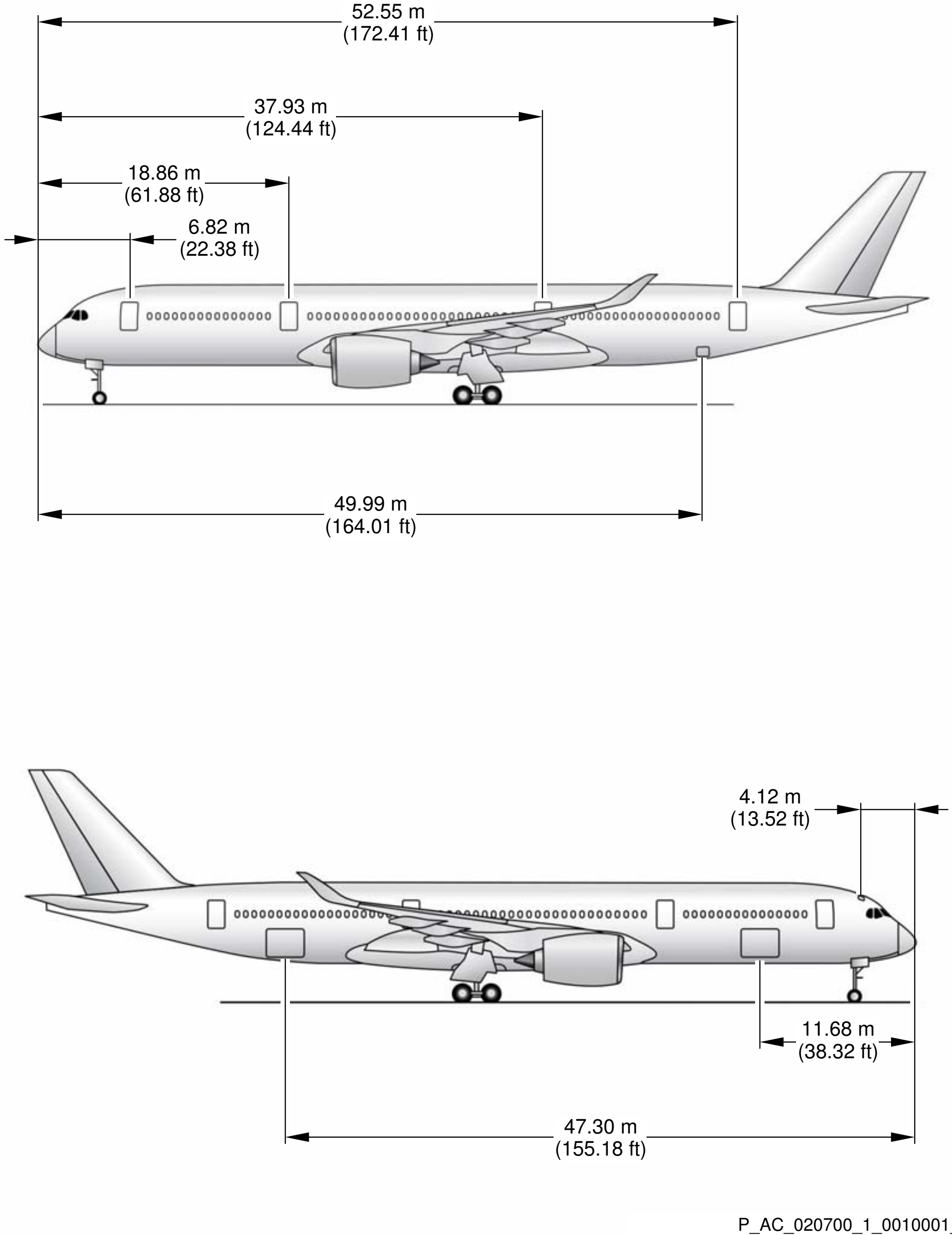
1. This section provides door clearances and location.

**ON A/C A350-900



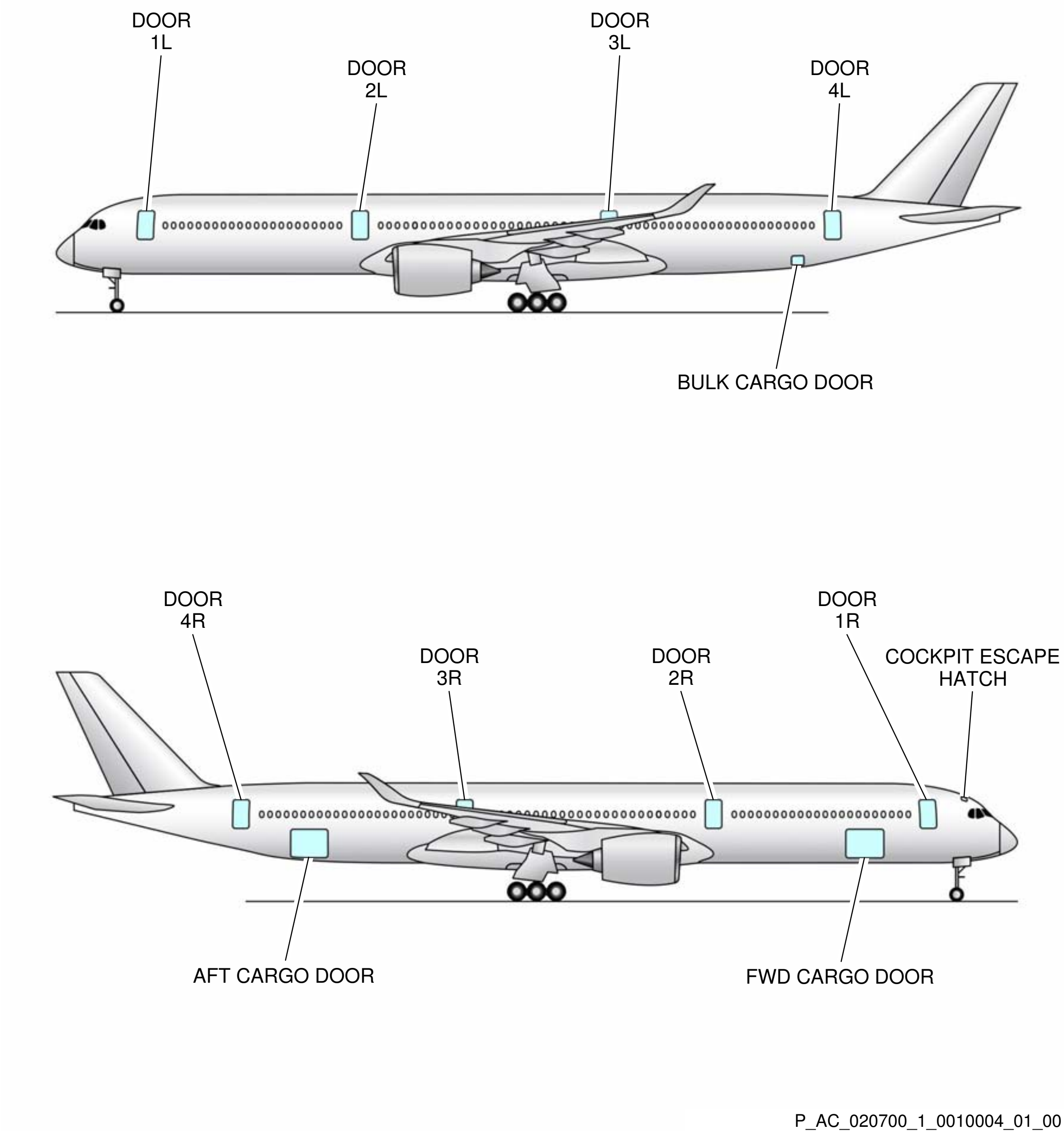
Door Identification and Location
Door Identification (Sheet 1 of 2)
FIGURE-2-7-0-991-001-A01

**ON A/C A350-900



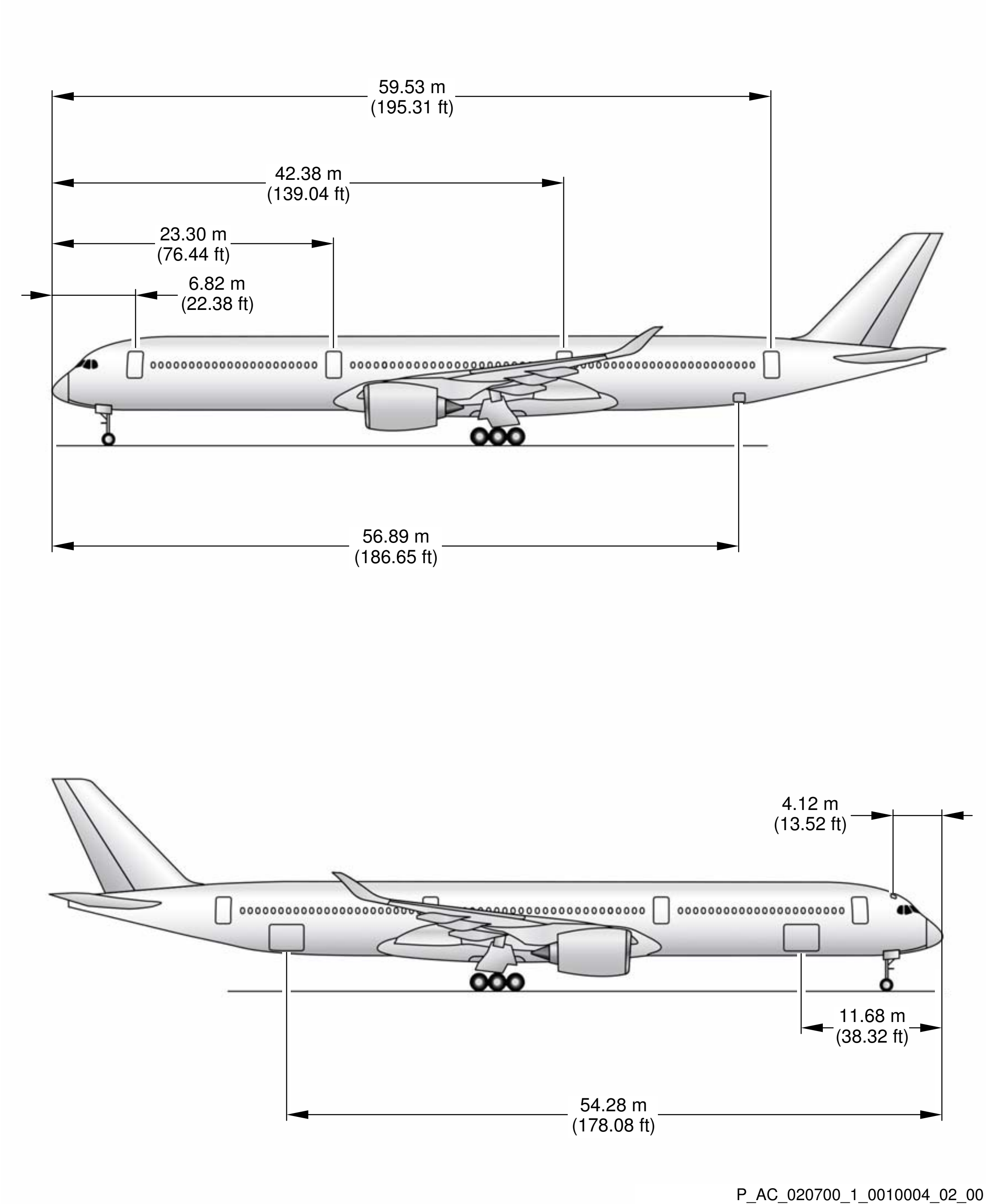
Door Identification and Location
Door Location (Sheet 2 of 2)
FIGURE-2-7-0-991-001-A01

**ON A/C A350-1000



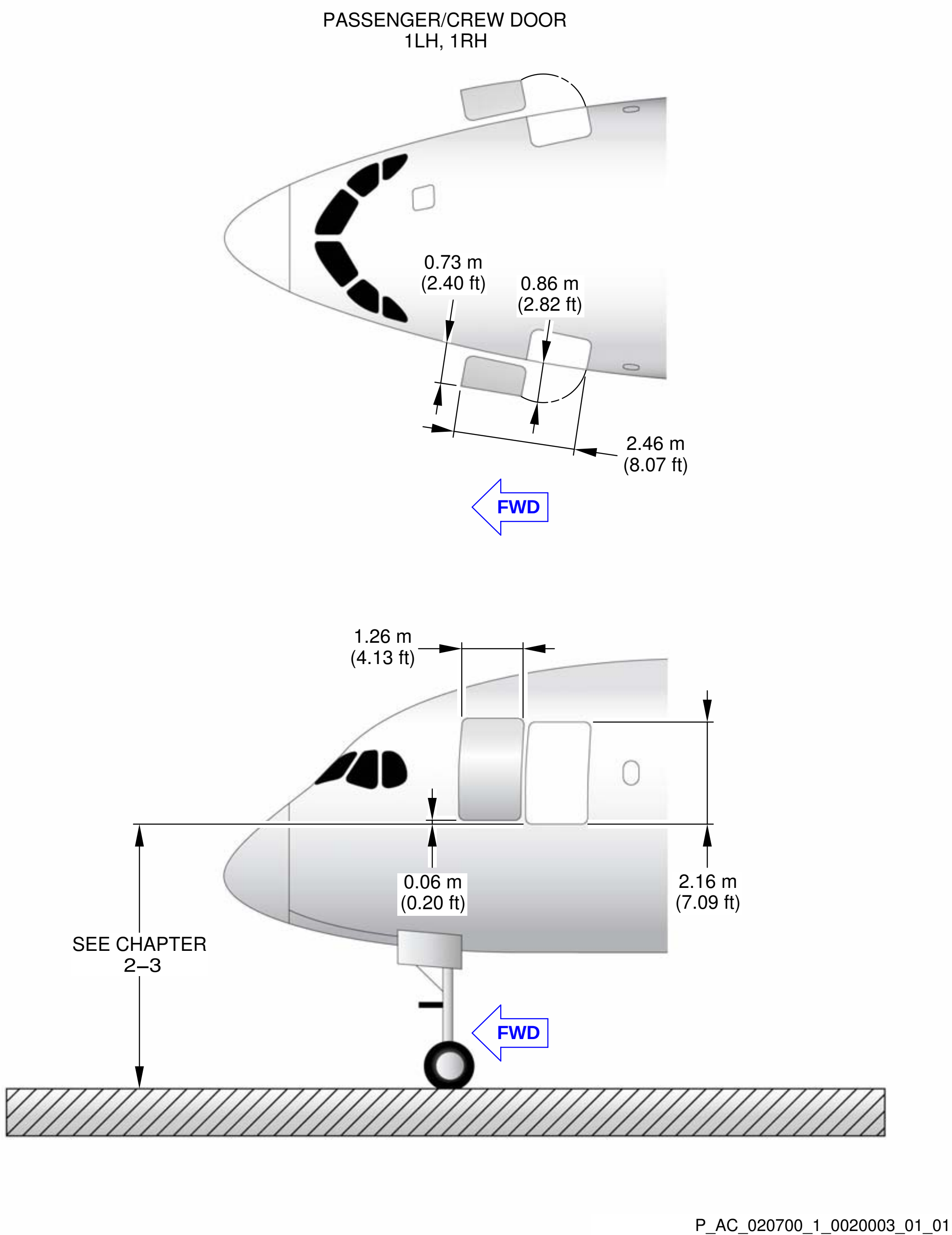
Door Identification and Location
Door Identification (Sheet 1 of 2)
FIGURE-2-7-0-991-001-D01

**ON A/C A350-1000



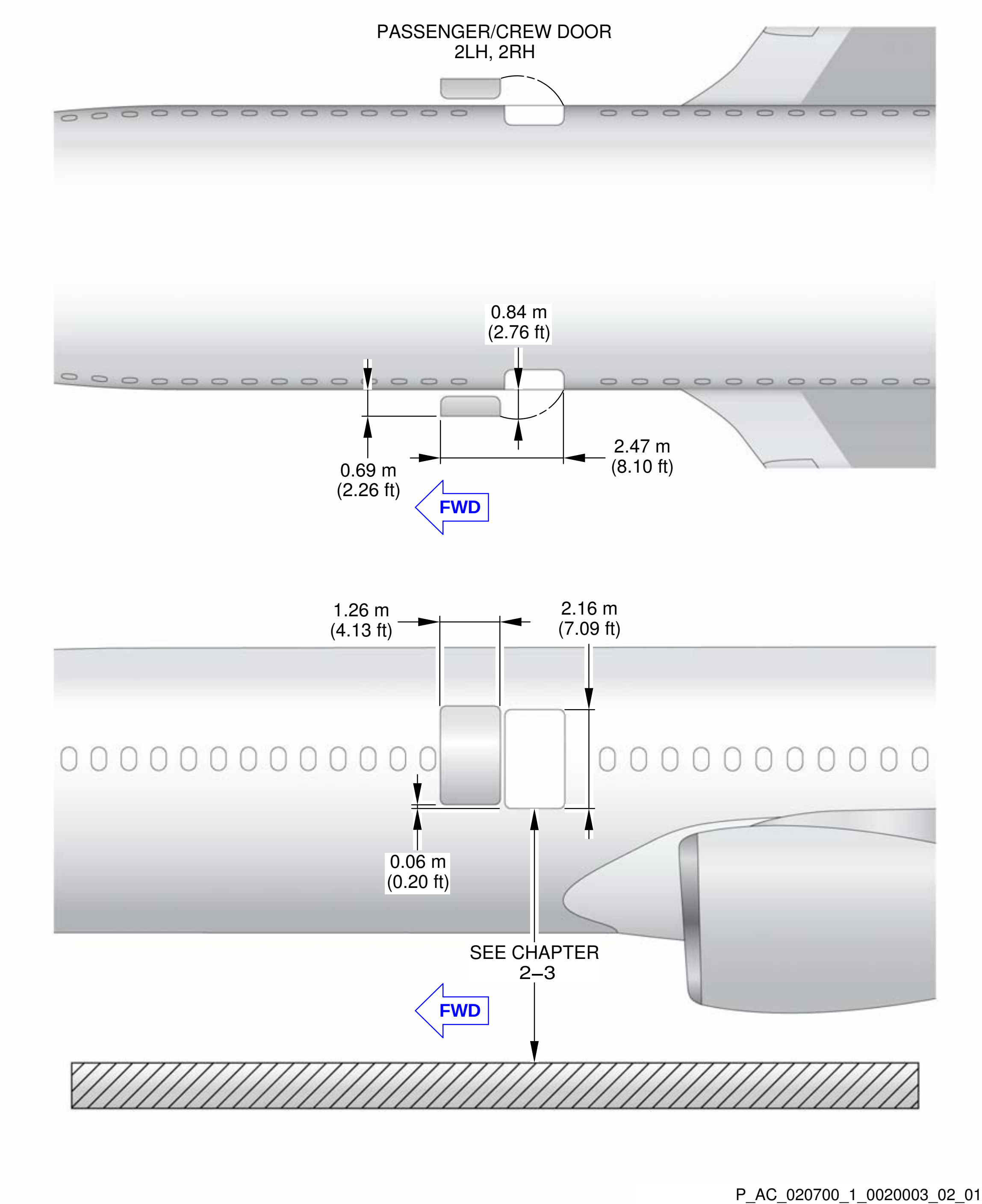
Door Identification and Location
Door Location (Sheet 2 of 2)
FIGURE-2-7-0-991-001-D01

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



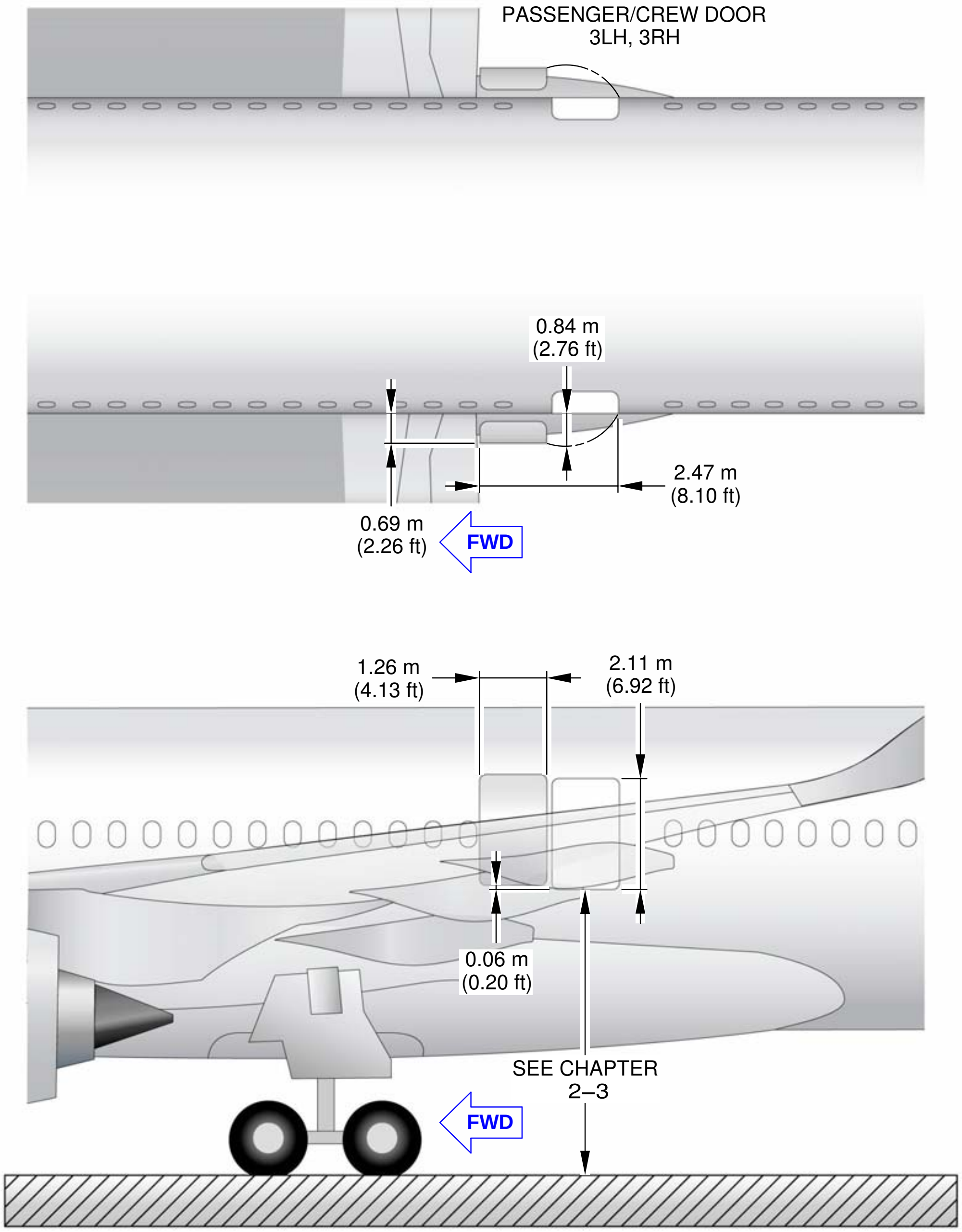
Forward Passenger/Crew Doors
(Sheet 1 of 2)
FIGURE-2-7-0-991-002-C01

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



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

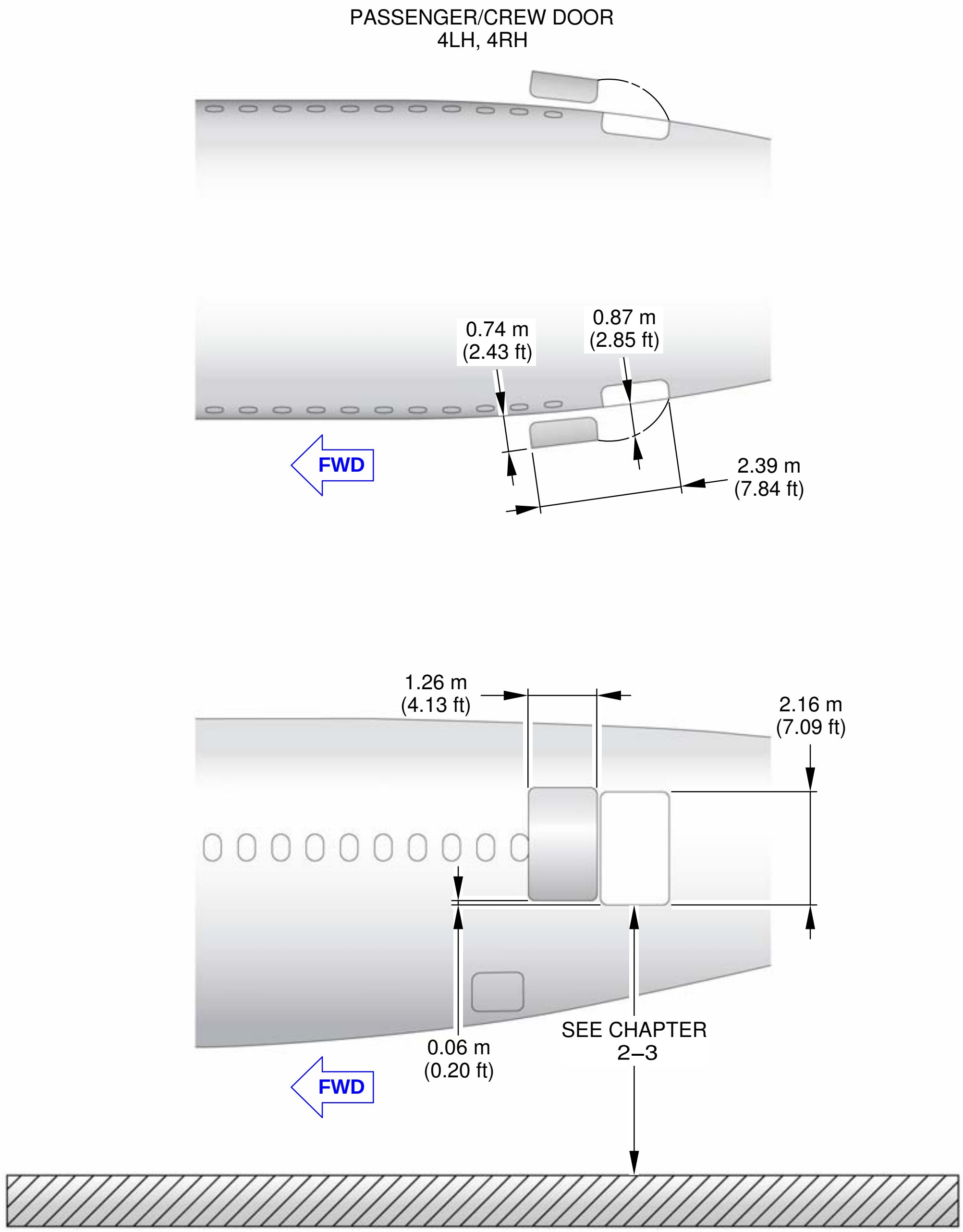
**ON A/C A350-1000 A350-900



P_AC_020700_1_0030001_01_01

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

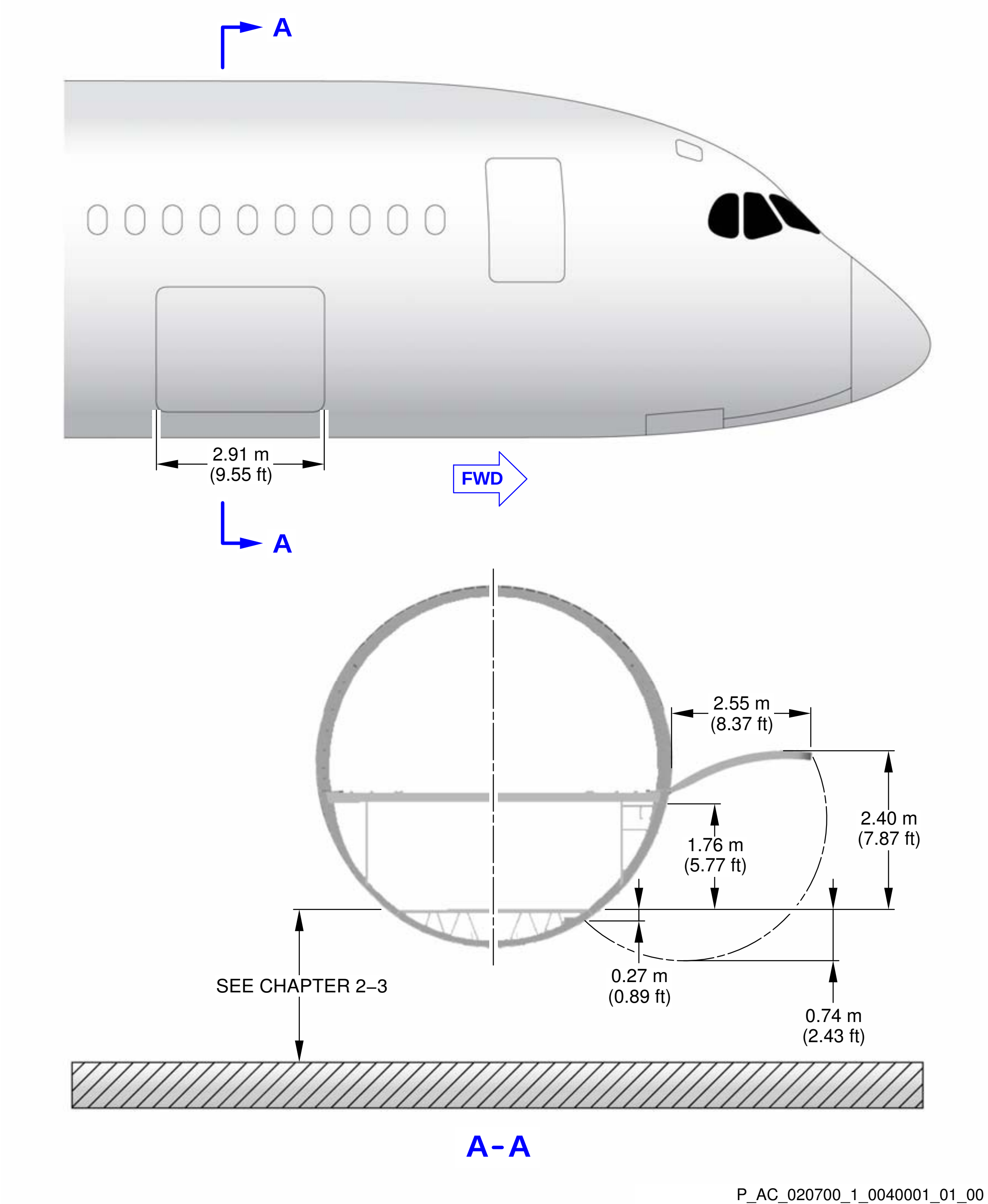
**ON A/C A350-1000 A350-900



P_AC_020700_1_0030001_02_01

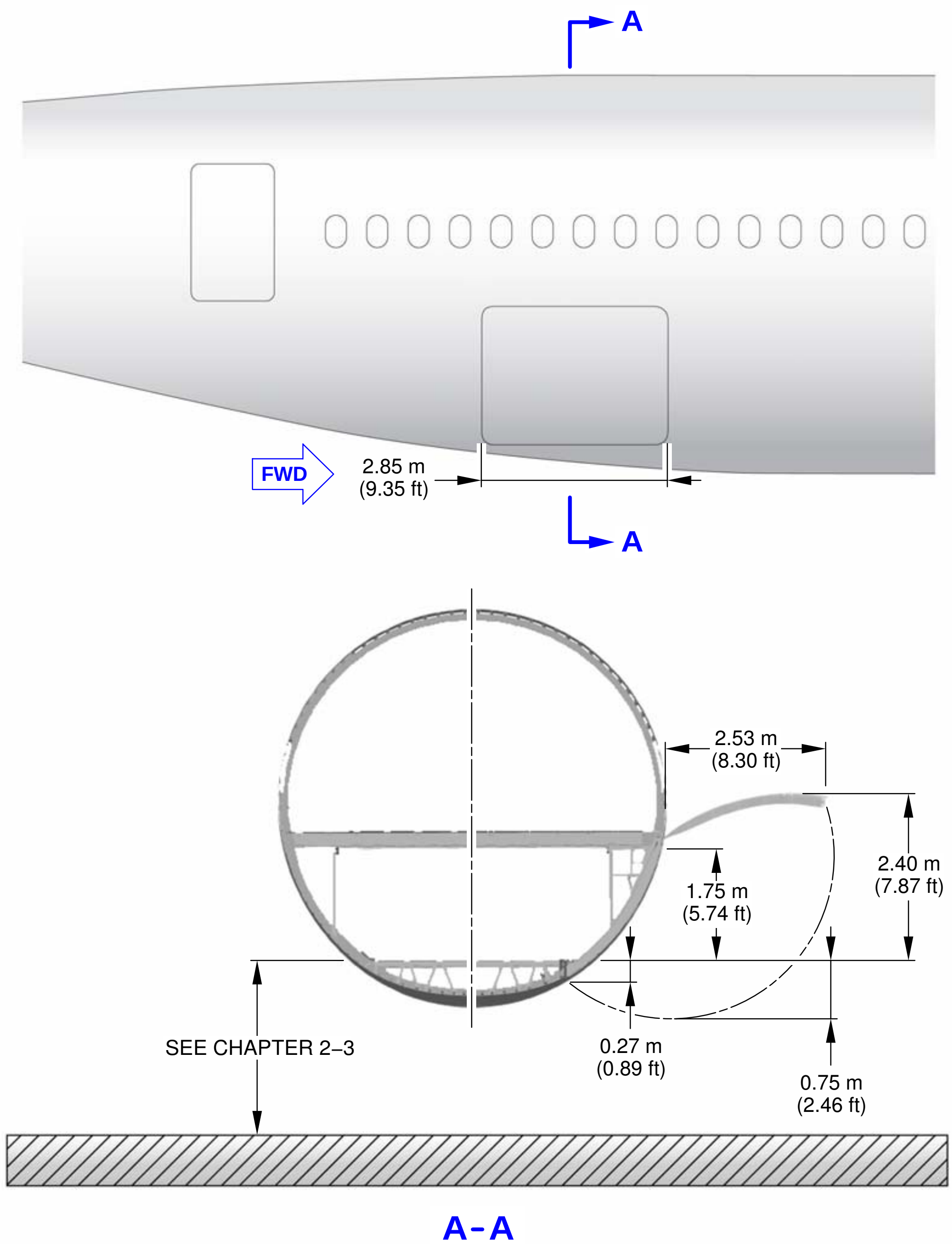
Aft Passenger/Crew Doors
(Sheet 2 of 2)
FIGURE-2-7-0-991-003-A01

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



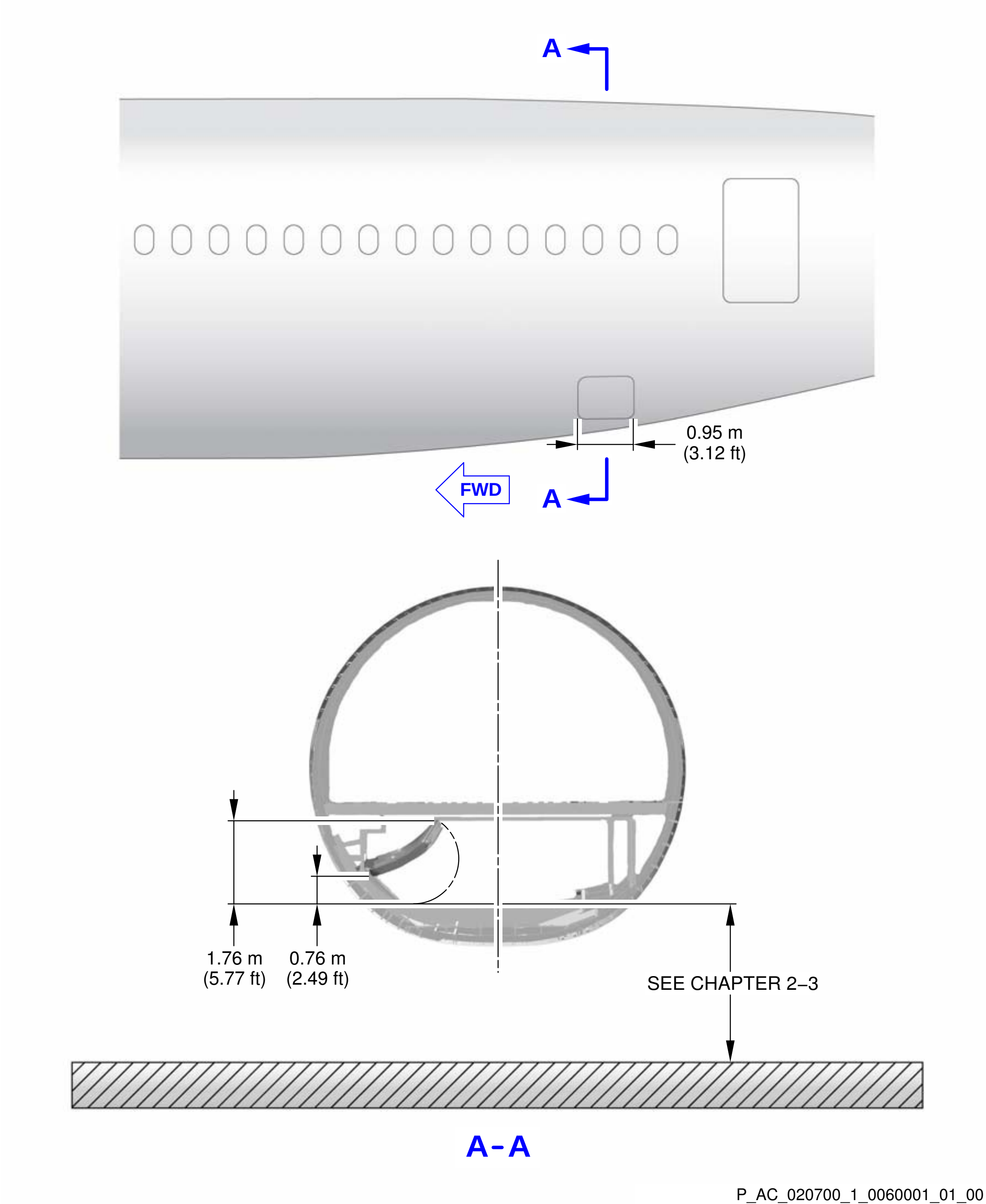
Forward Cargo Compartment Door
FIGURE-2-7-0-991-004-A01

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



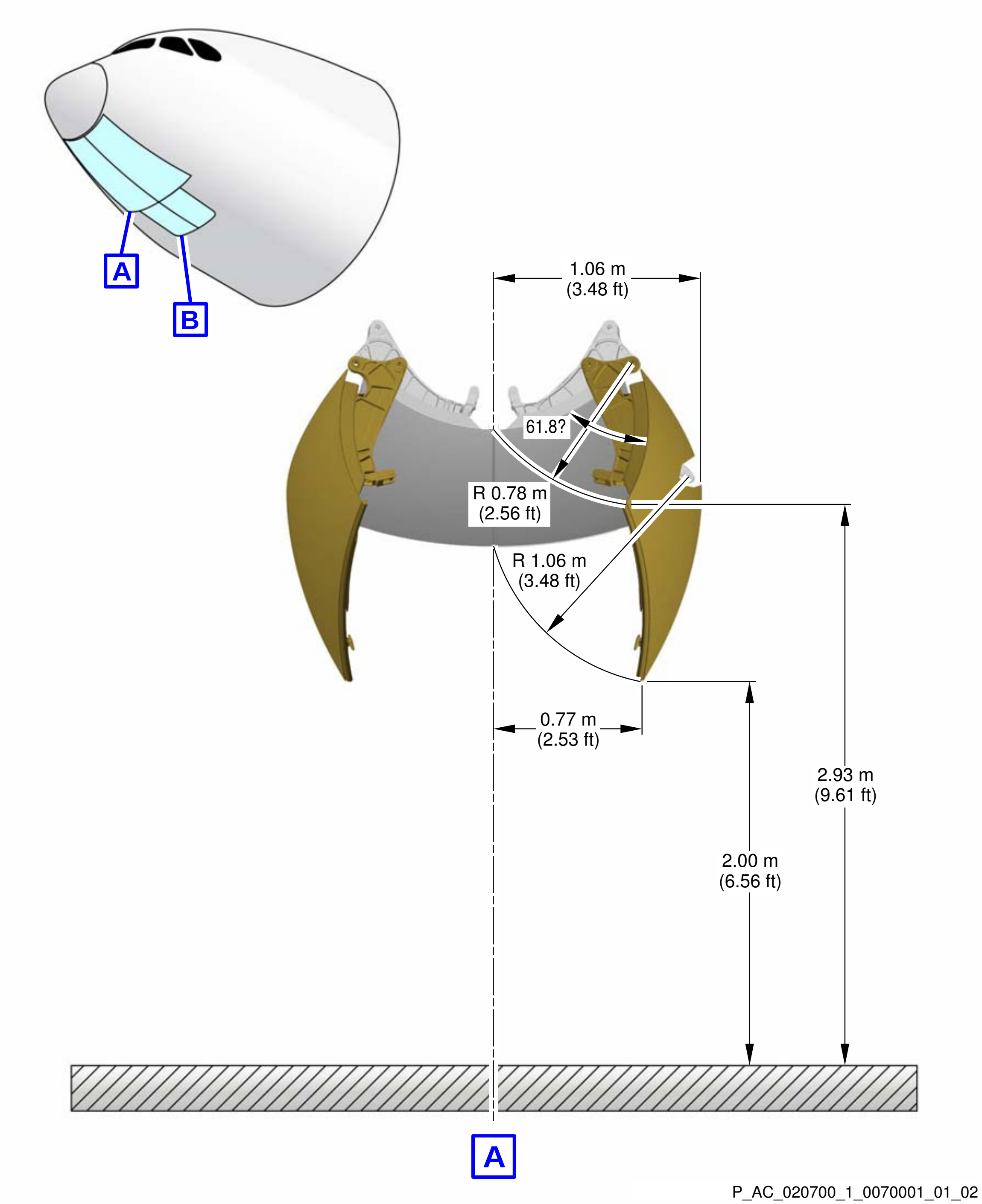
Aft Cargo Compartment Door
FIGURE-2-7-0-991-005-A01

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



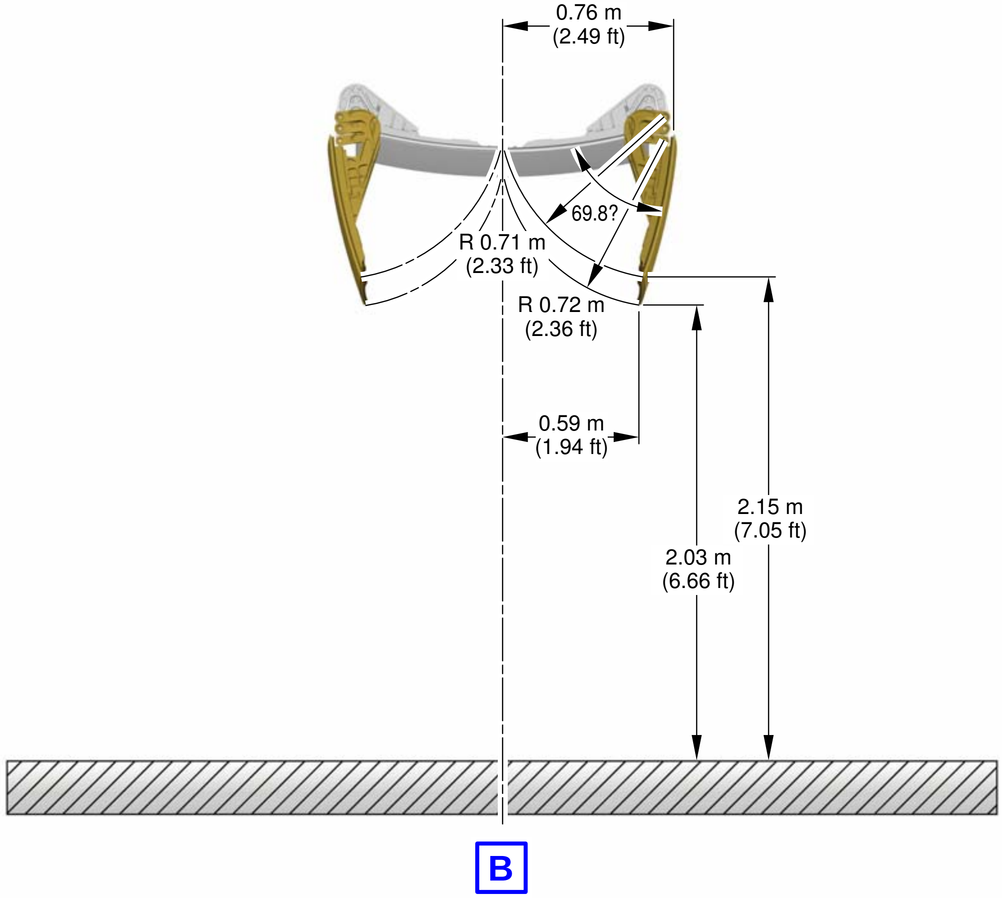
Bulk Cargo Compartment Door
FIGURE-2-7-0-991-006-A01

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



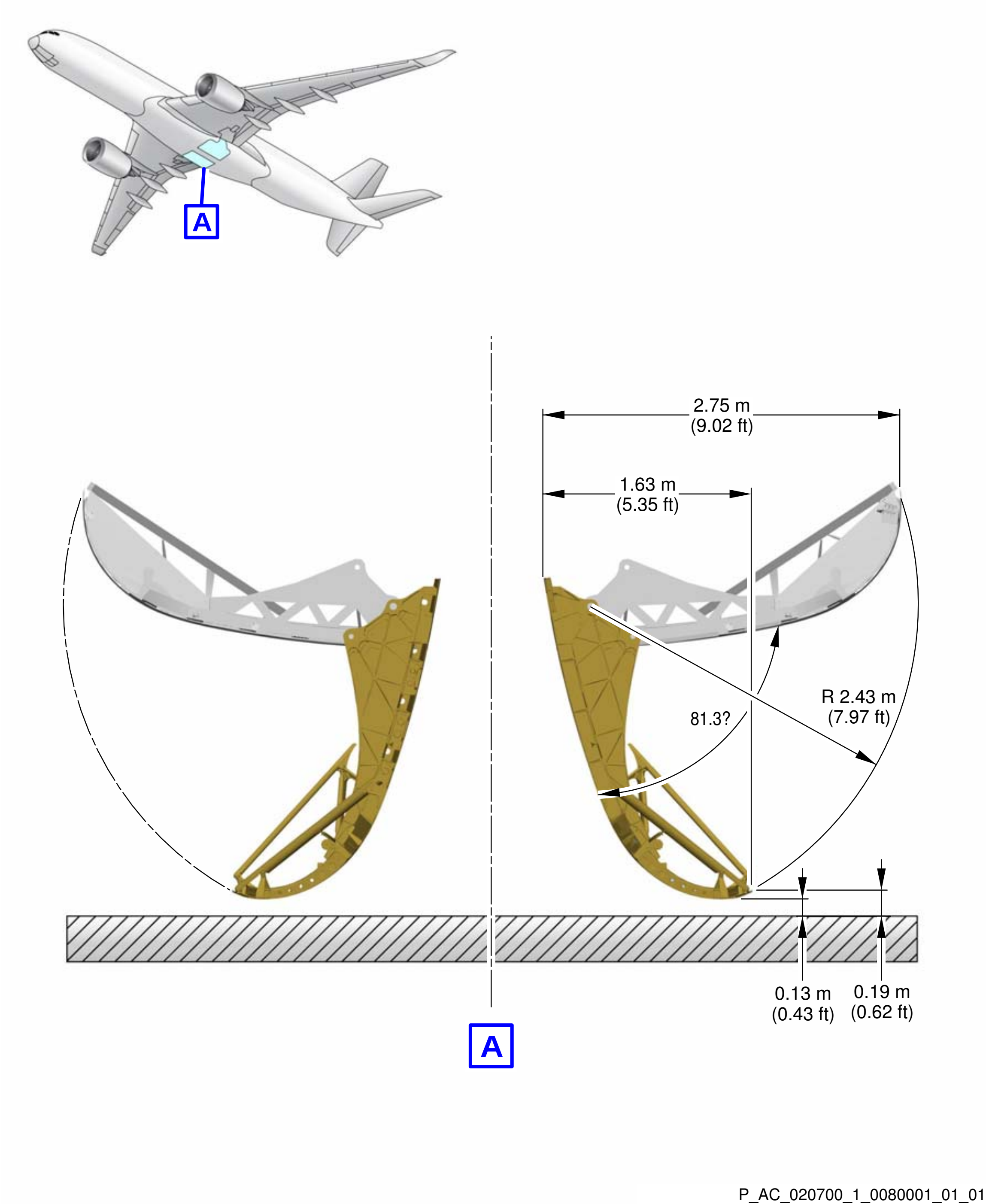
Nose Landing Gear Doors
Forward Nose Landing Gear Doors (Sheet 1 of 2)
FIGURE-2-7-0-991-007-A01

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



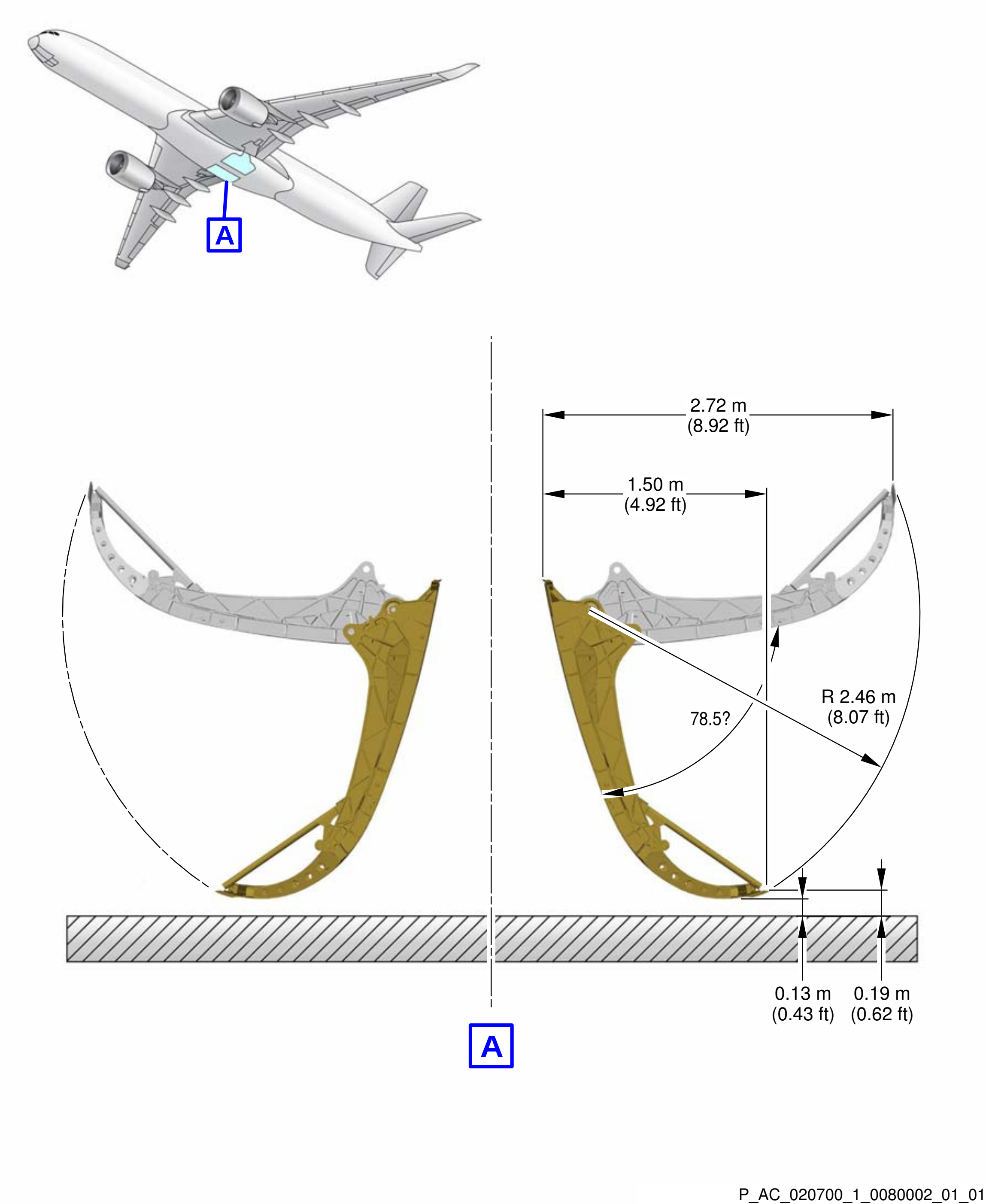
Nose Landing Gear Doors
Aft Nose Landing Gear Doors (Sheet 2 of 2)
FIGURE-2-7-0-991-007-A01

**ON A/C A350-900



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

**ON A/C A350-1000



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

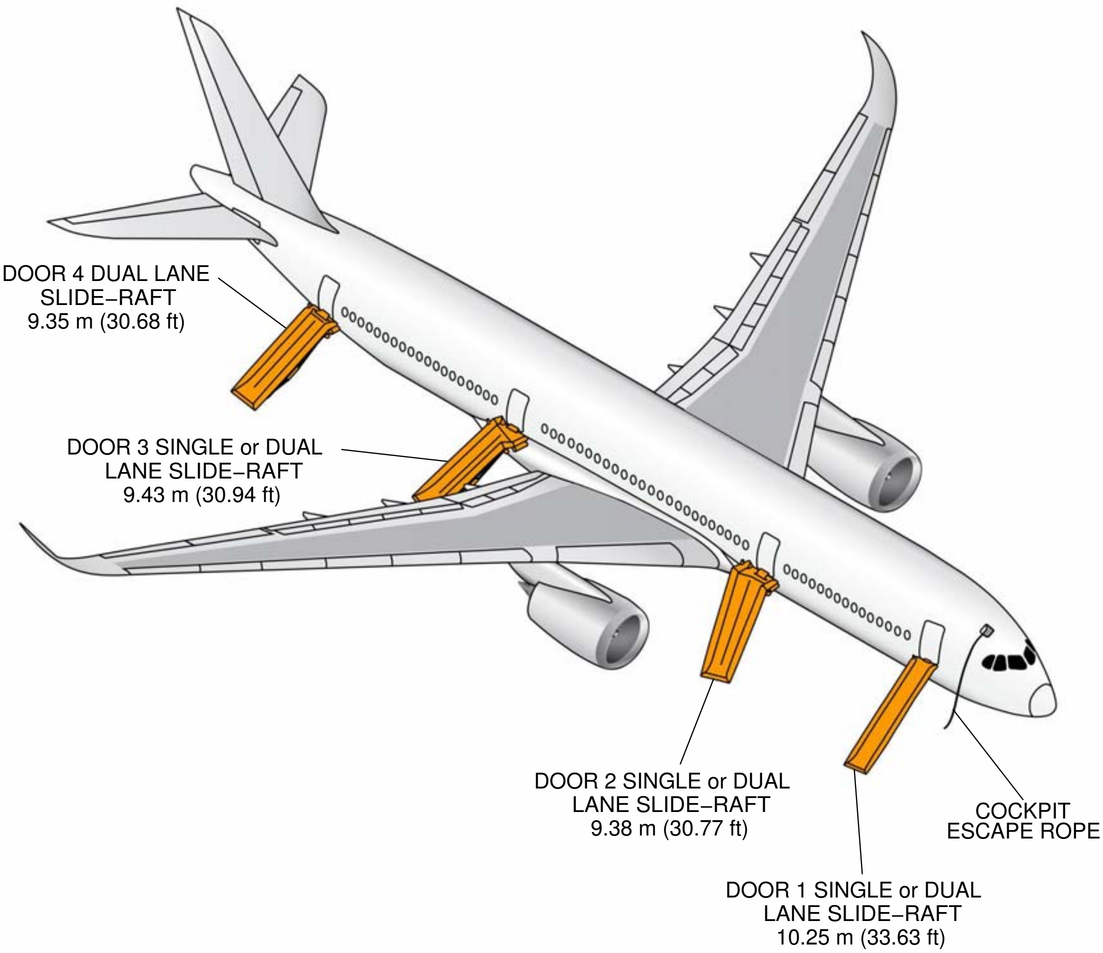
2-8-0 Escape Slides

****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

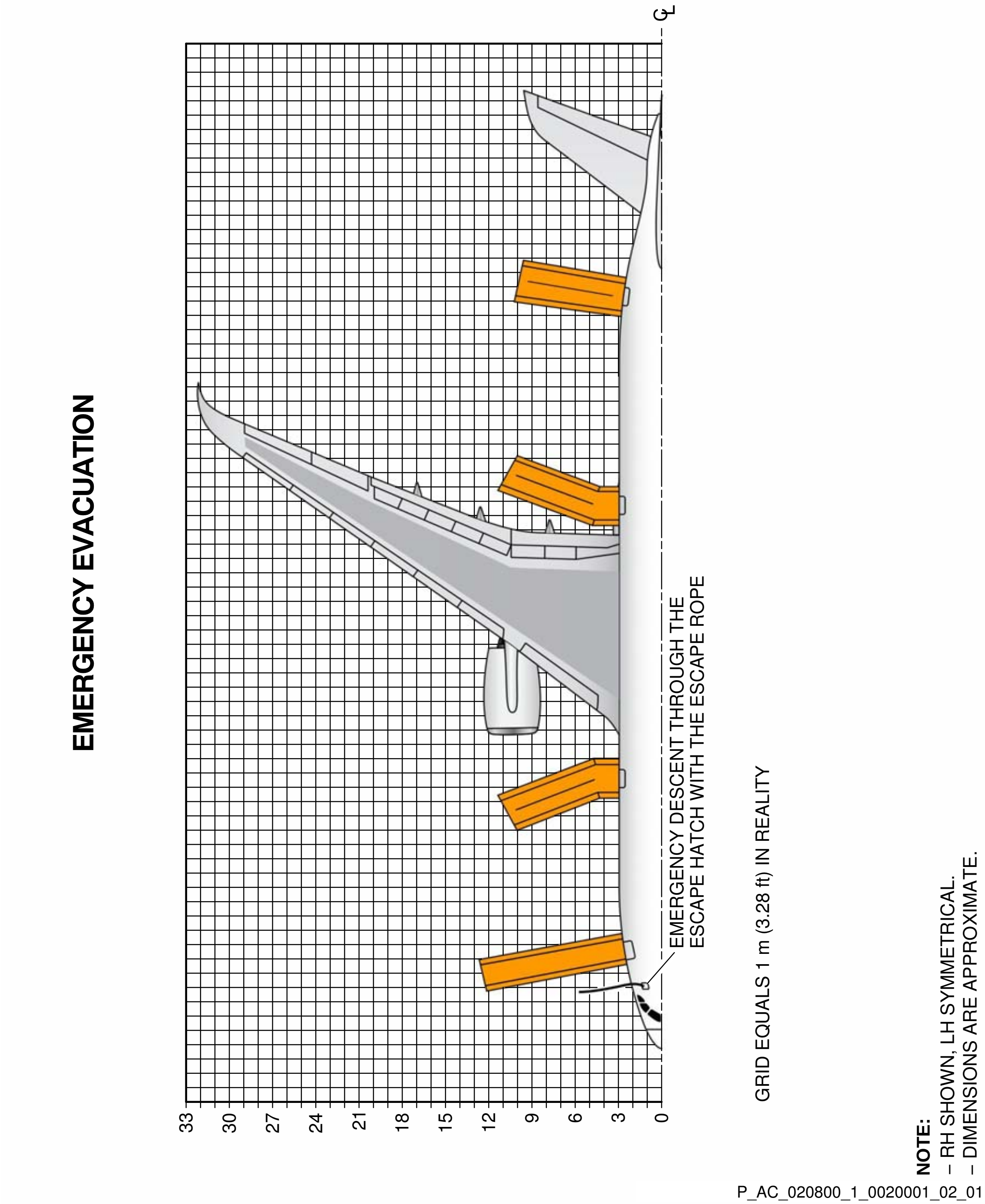


NOTE:
RH SHOWN, LH SYMMETRICAL.

P_AC_020800_1_0020001_01_02

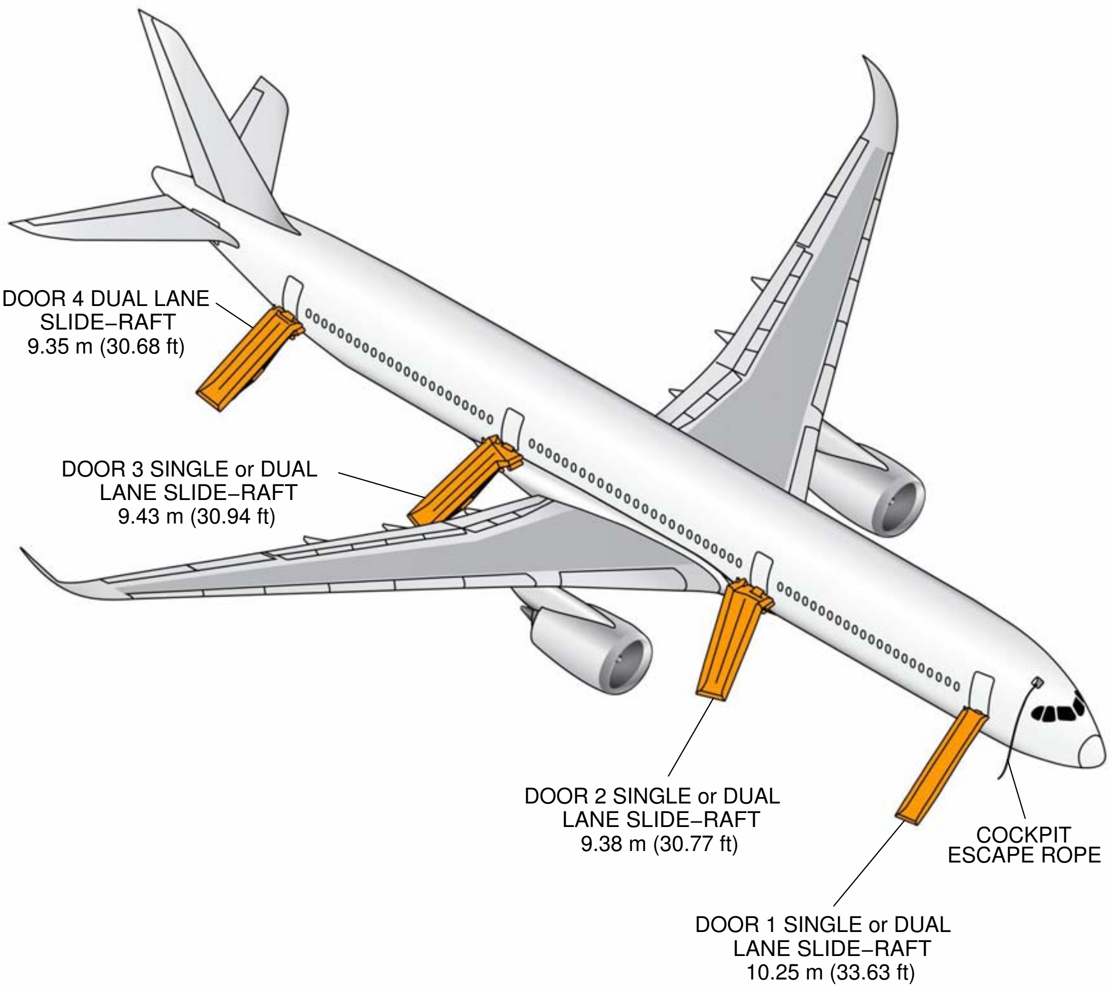
Escape Slides
Escape Slides - Location (Sheet 1 of 2)
FIGURE-2-8-0-991-002-A01

**ON A/C A350-900



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

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

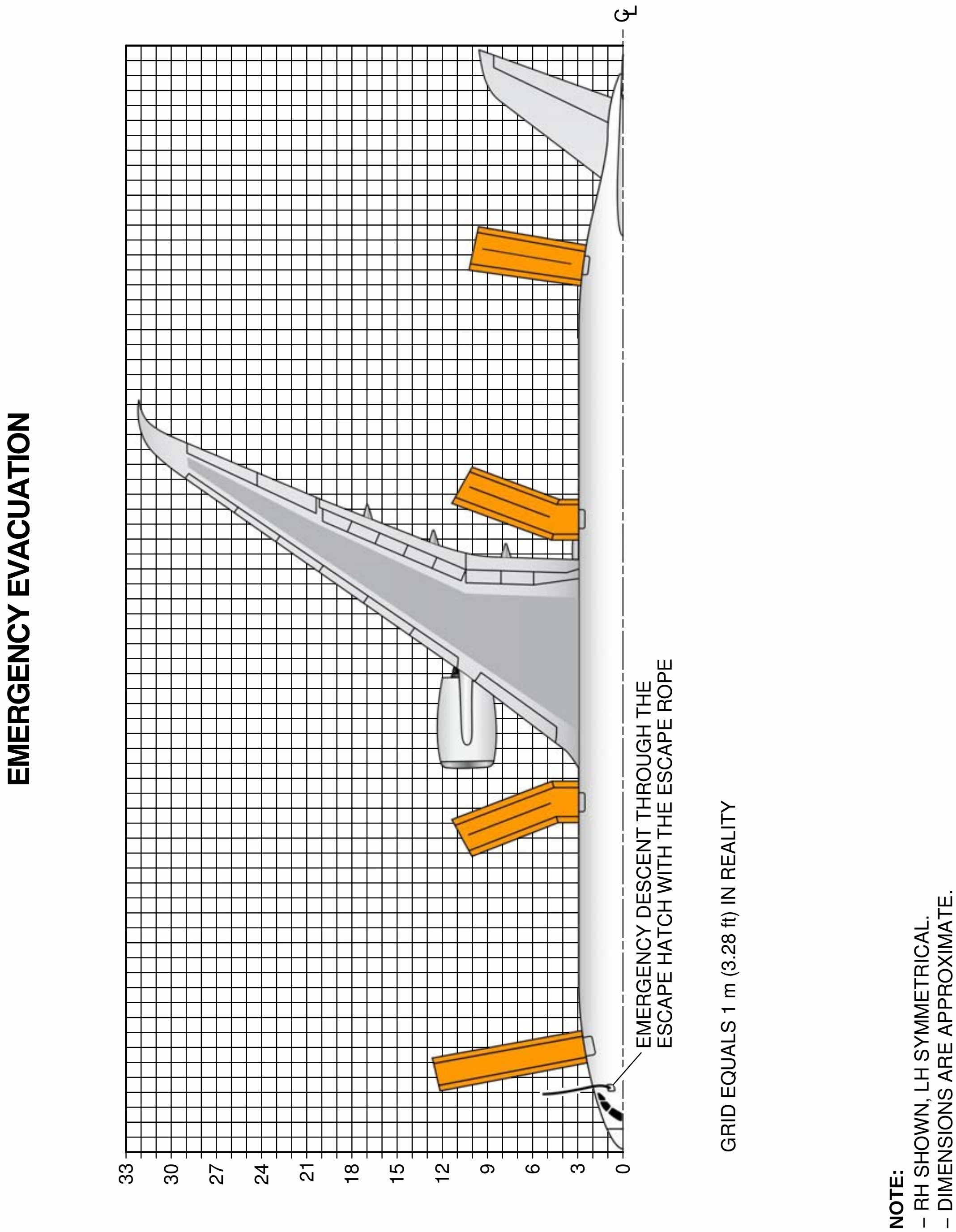


NOTE:
RH SHOWN, LH SYMMETRICAL.

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



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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**

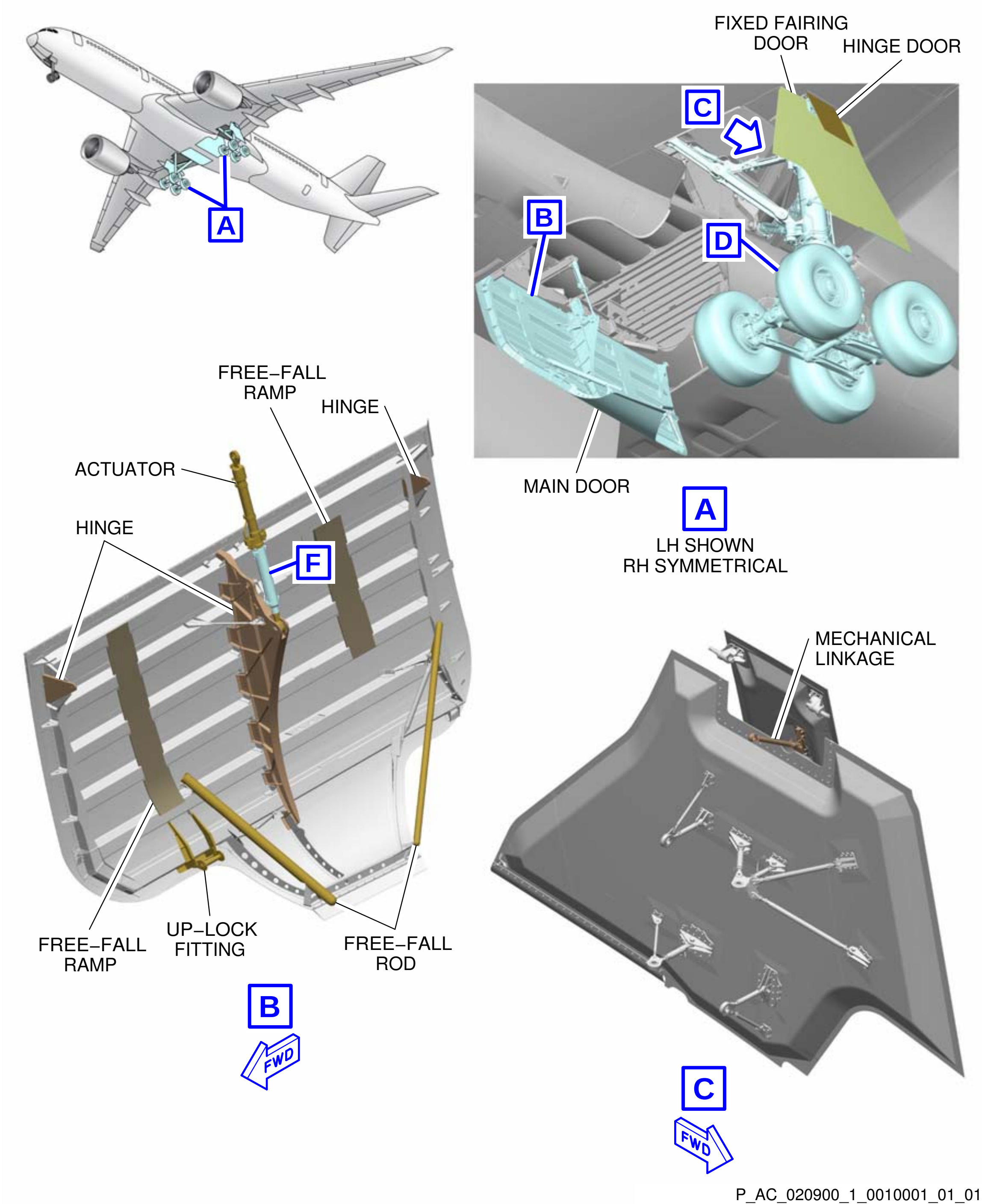
2. MLG System Description
   The two MLGs are mounted in the LH and RH wing just outboard of the wing root within the trailing edge.
   The MLGs retract sideways into bays in the fuselage. Each MLG has a six wheel triple-tandem bogie.
   Each MLG has one related main door operated by a single door actuator.
   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.

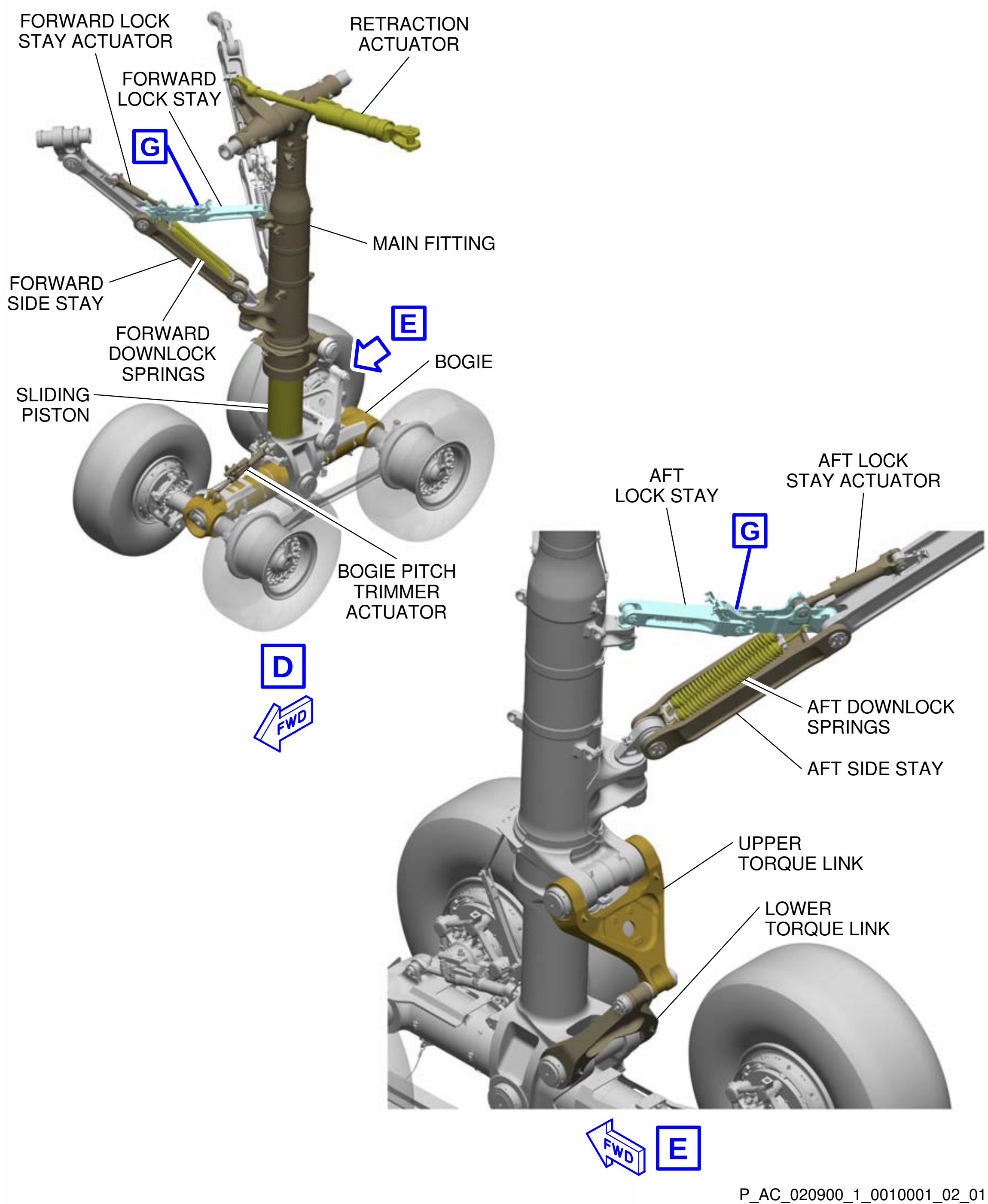
4. Landing Gear Extension and Retraction System
The Landing Gear Extension and Retraction System (LGERS) is made up of three sub-systems:
   - Normal extension and retraction system, for normal extension and retraction,
   - Alternate extension system, for extension in flight if the normal system is unavailable,
   - Ground door opening system, to allow on-ground access to the landing gear bays for maintenance purposes.

**ON A/C A350-900



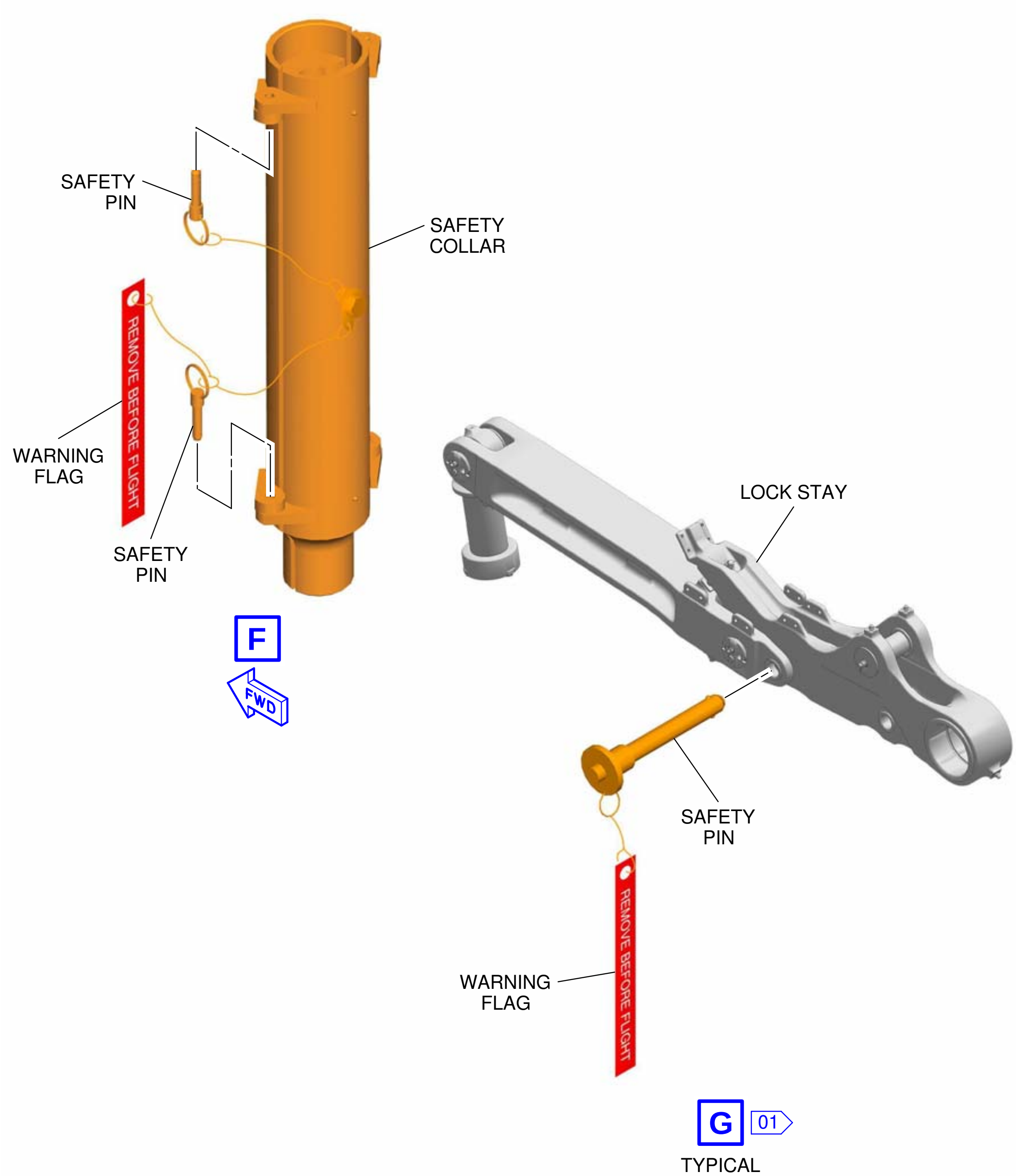
Main Landing Gear
Doors Overview (Sheet 1 of 3)
FIGURE-2-9-0-991-001-A01

**ON A/C A350-900



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

**ON A/C A350-900



NOTE:
01 FORWARD LOCK STAY SHOWN, AFT SIMILAR

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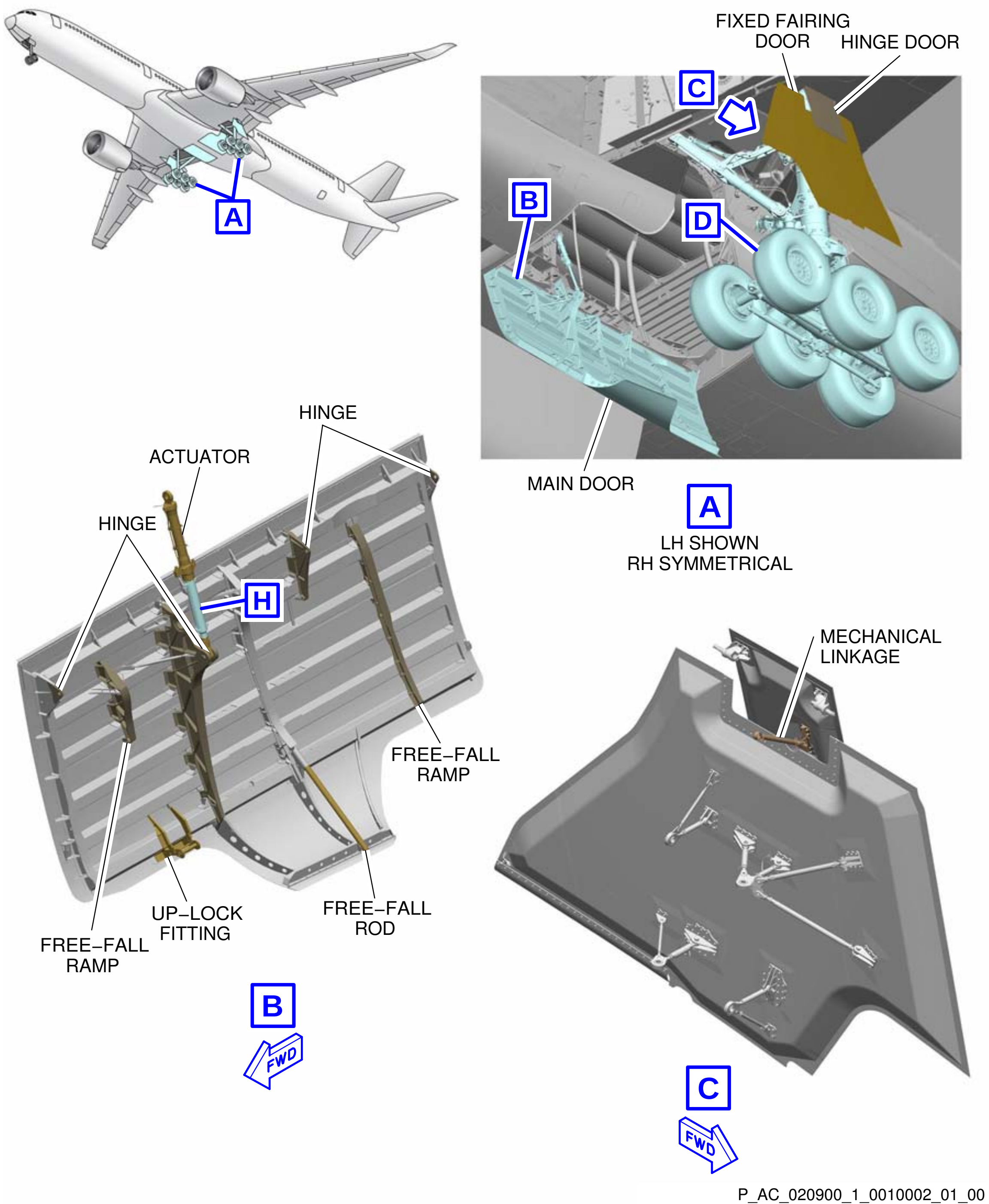
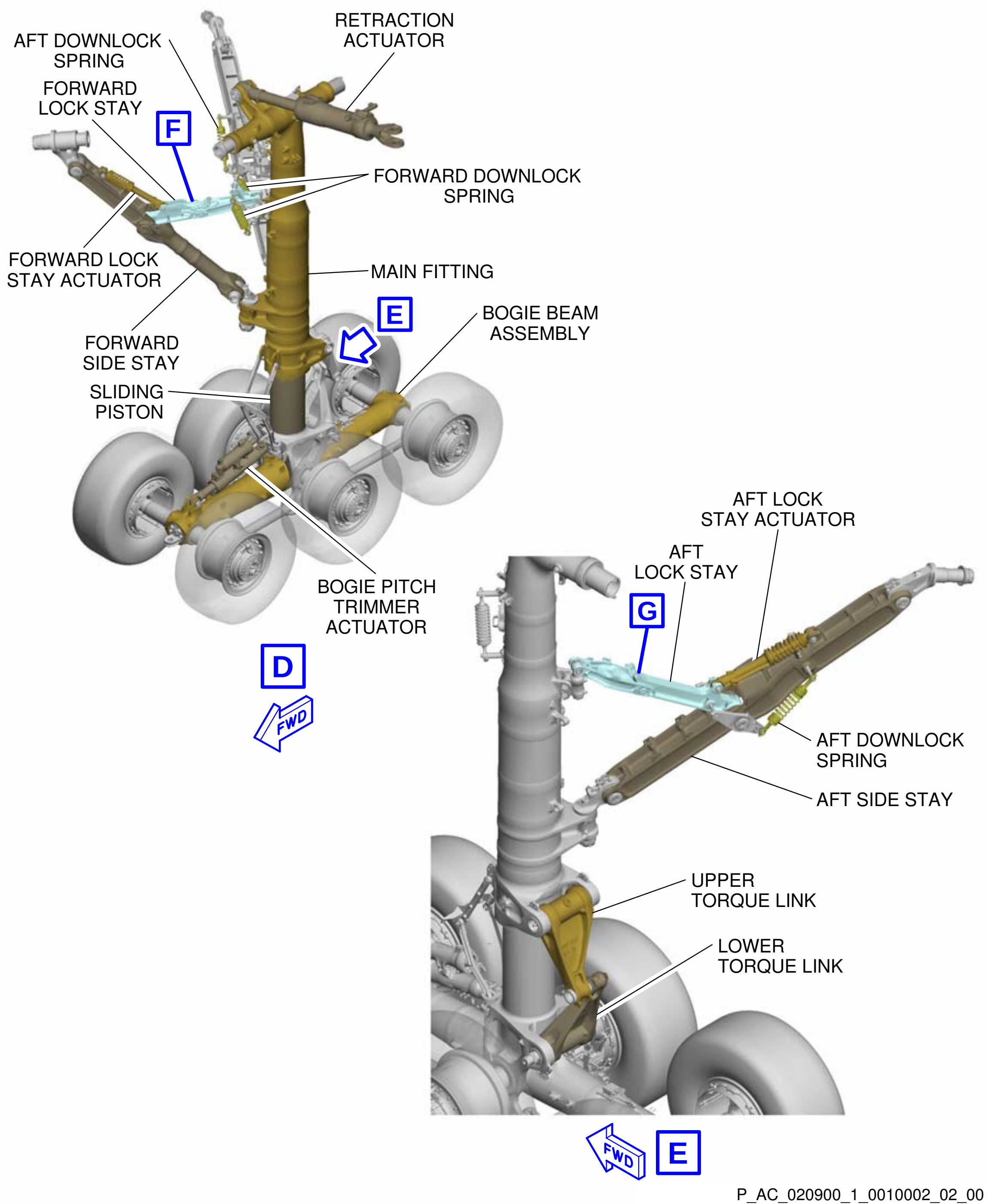
Main Landing Gear
Safety Devices (Sheet 3 of 3)
FIGURE-2-9-0-991-001-A01

**ON A/C A350-1000



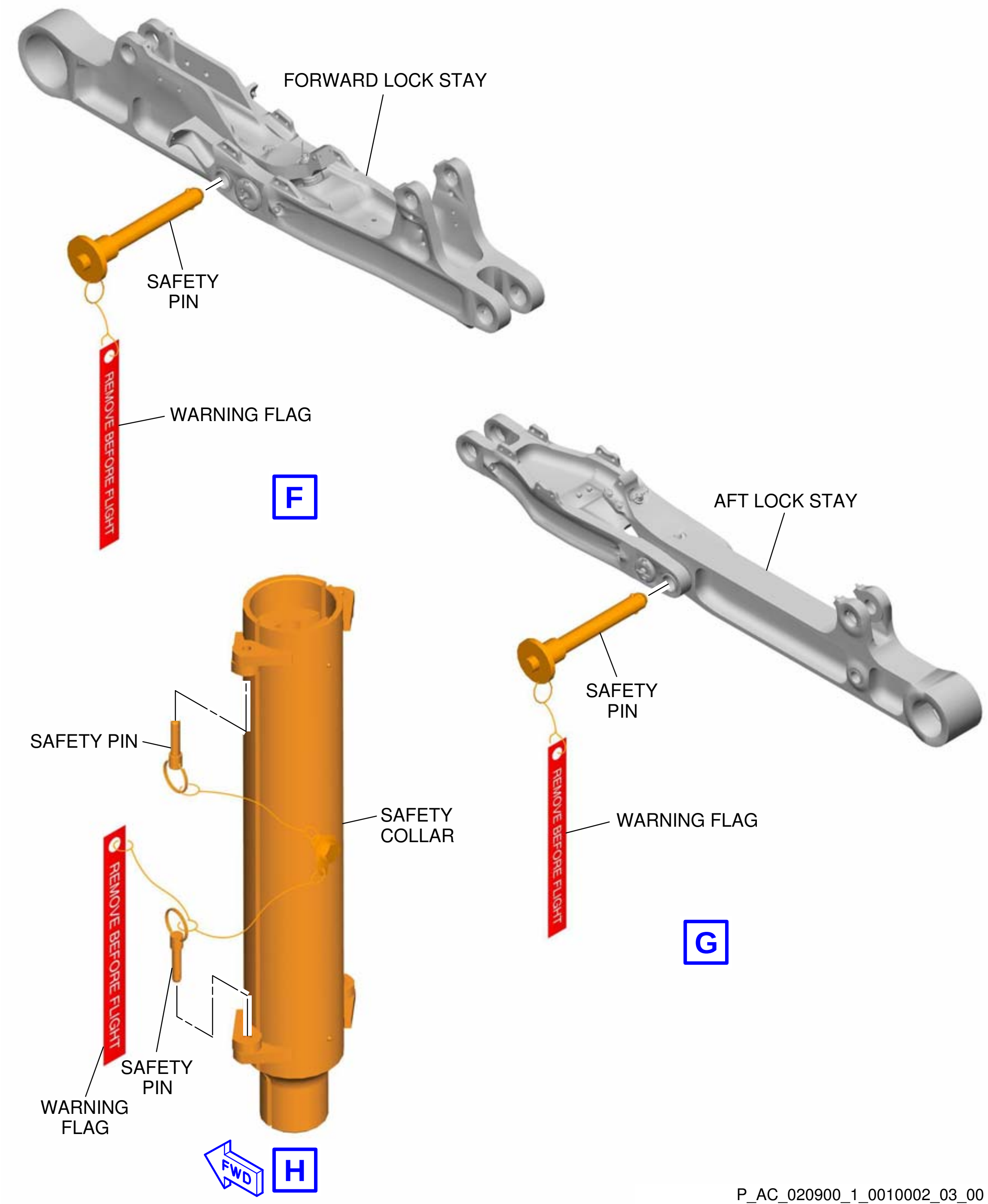
Main Landing Gear
Doors Overview (Sheet 1 of 3)
FIGURE-2-9-0-991-001-B01

**ON A/C A350-1000



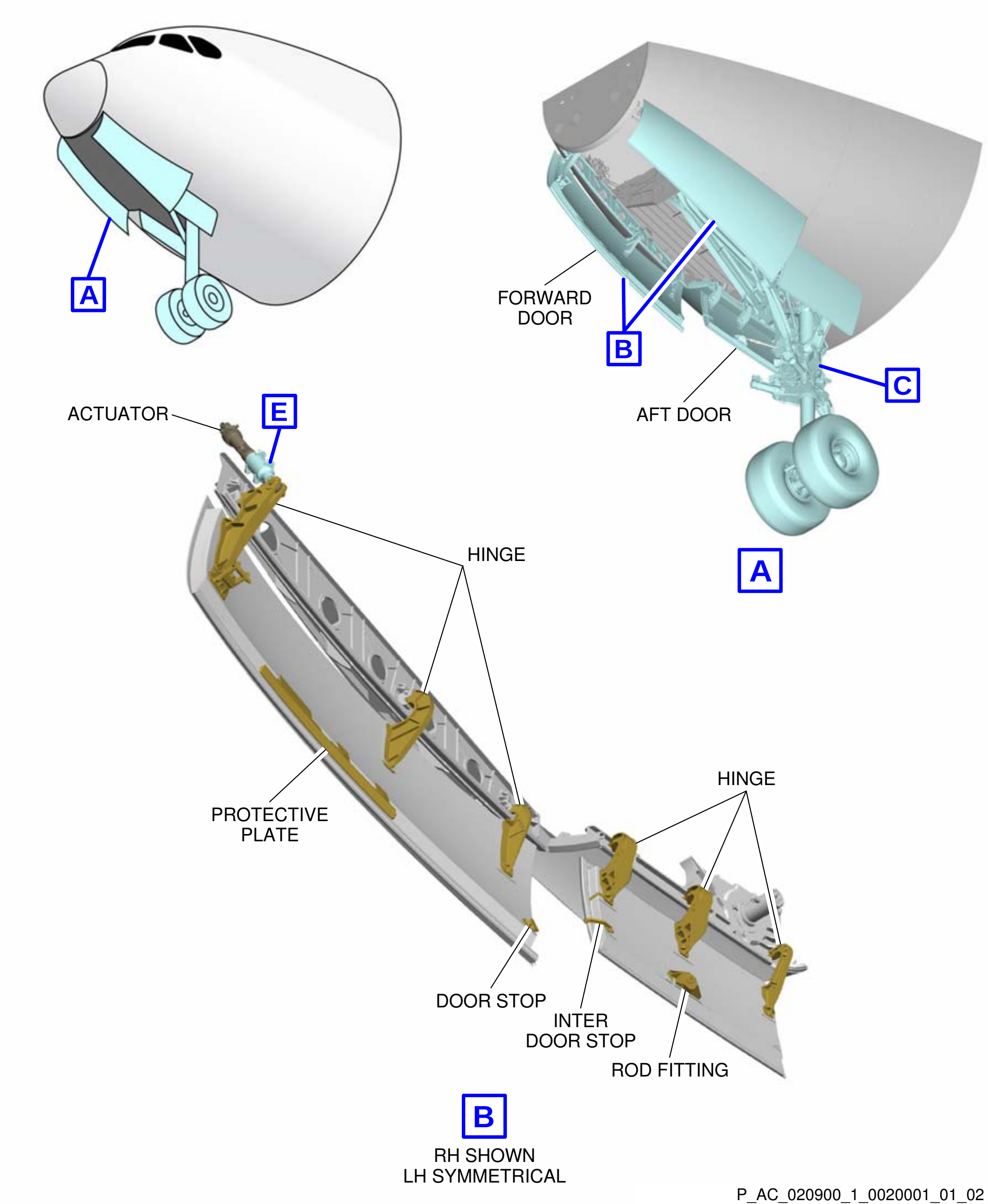
Main Landing Gear
Overview (Sheet 2 of 3)
FIGURE-2-9-0-991-001-B01

**ON A/C A350-1000



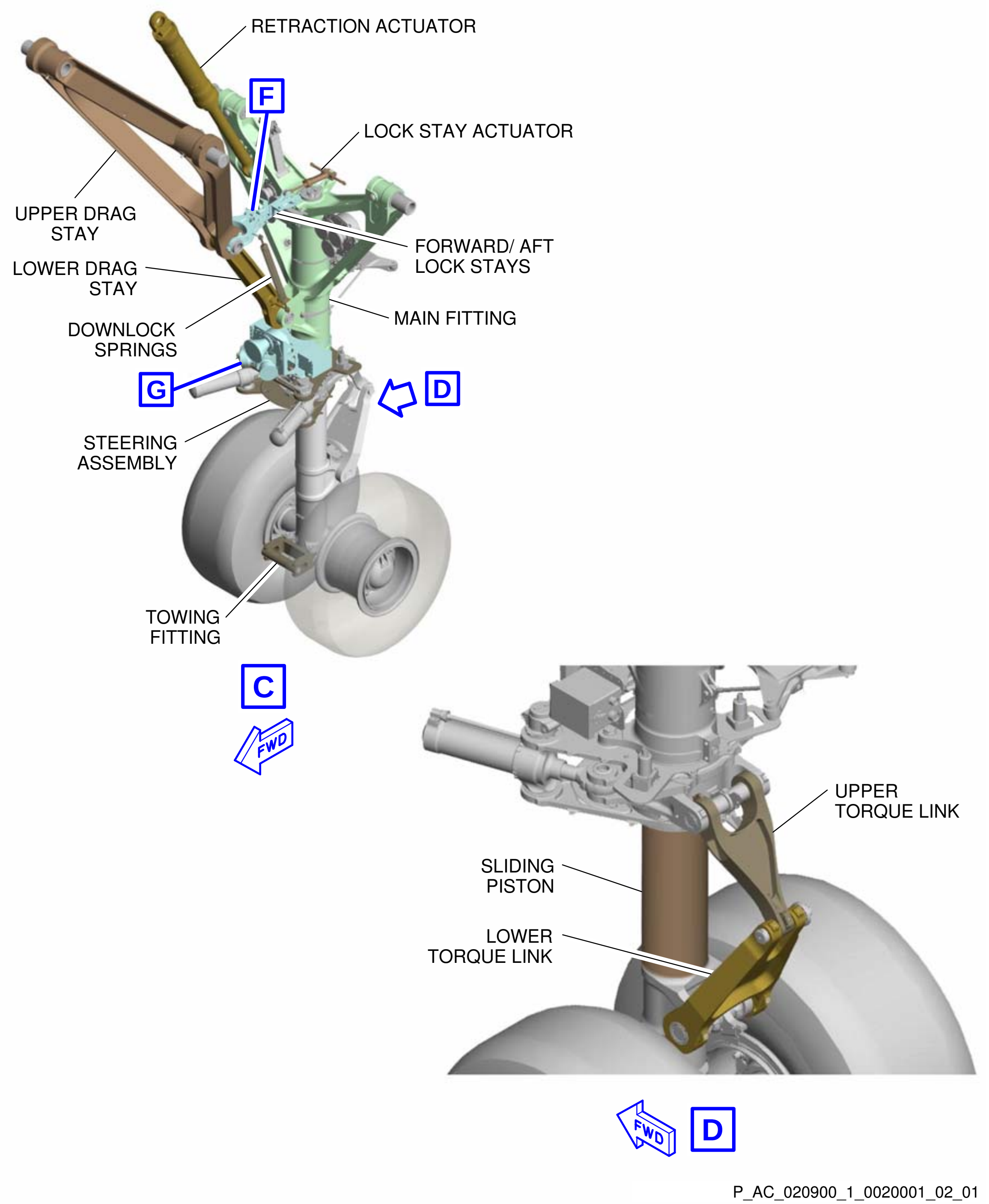
Main Landing Gear
Safety Devices (Sheet 3 of 3)
FIGURE-2-9-0-991-001-B01

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



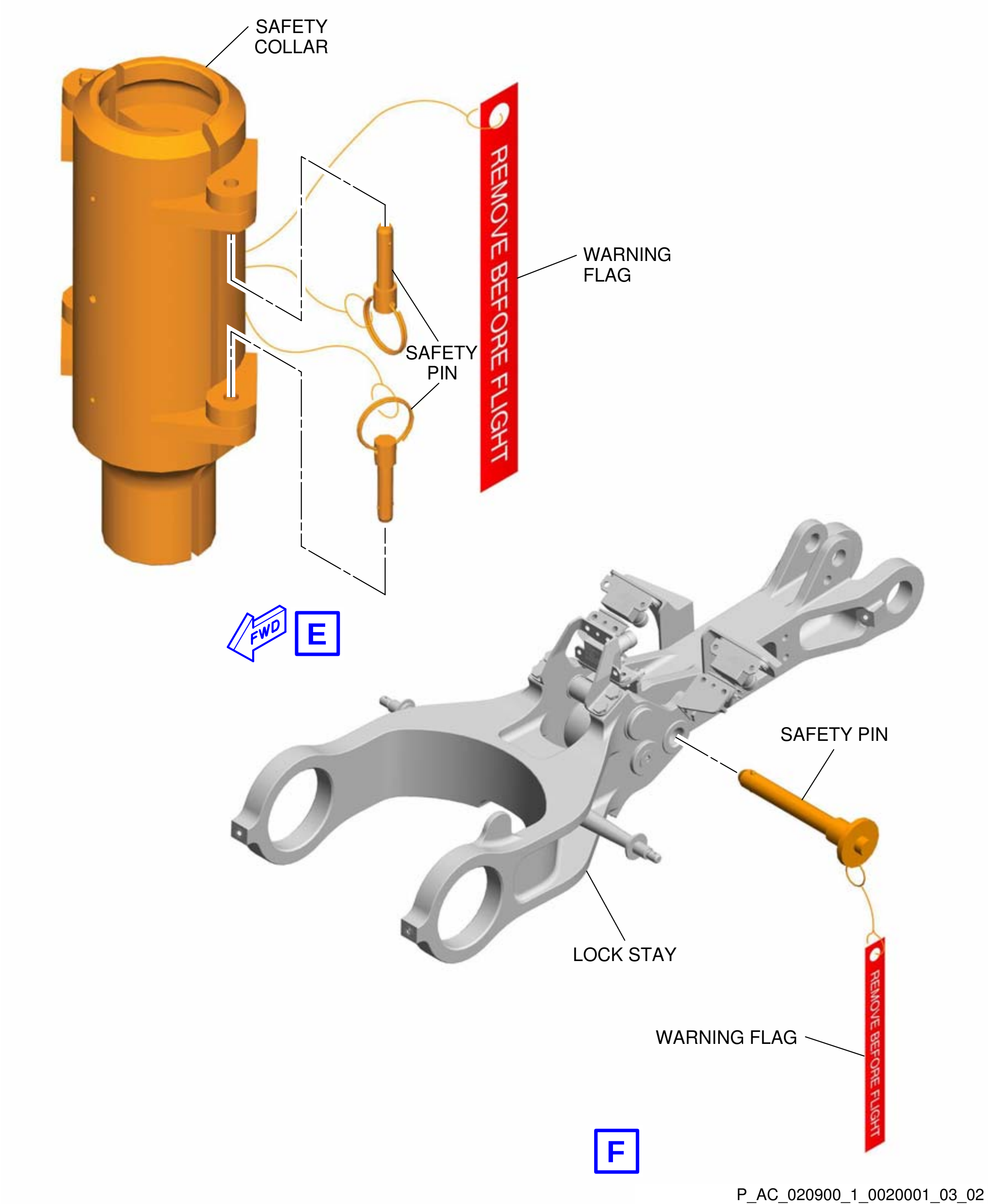
Nose Landing Gear
Doors Overview (Sheet 1 of 4)
FIGURE-2-9-0-991-002-A01

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



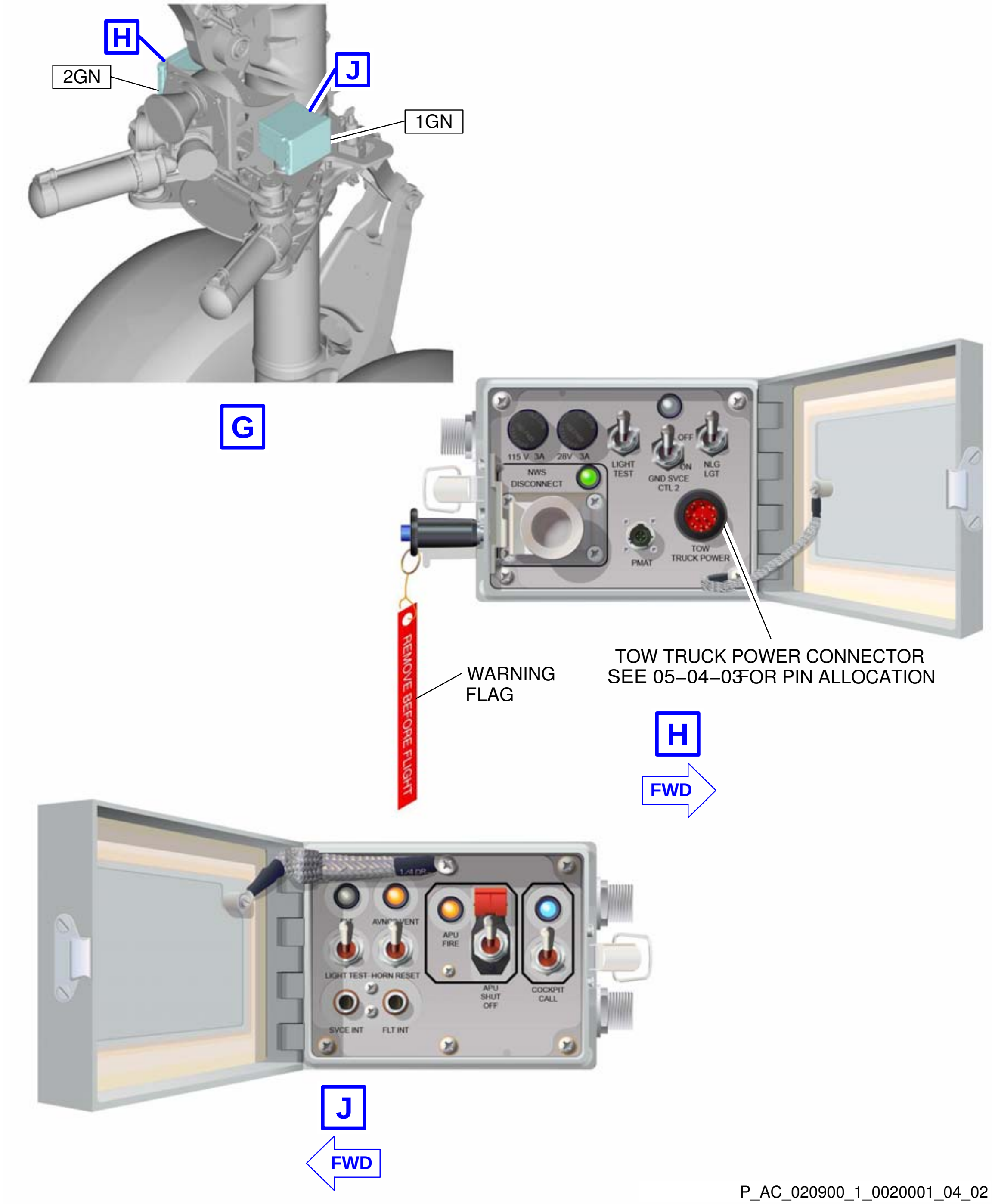
Nose Landing Gear
Overview (Sheet 2 of 4)
FIGURE-2-9-0-991-002-A01

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



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

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



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.

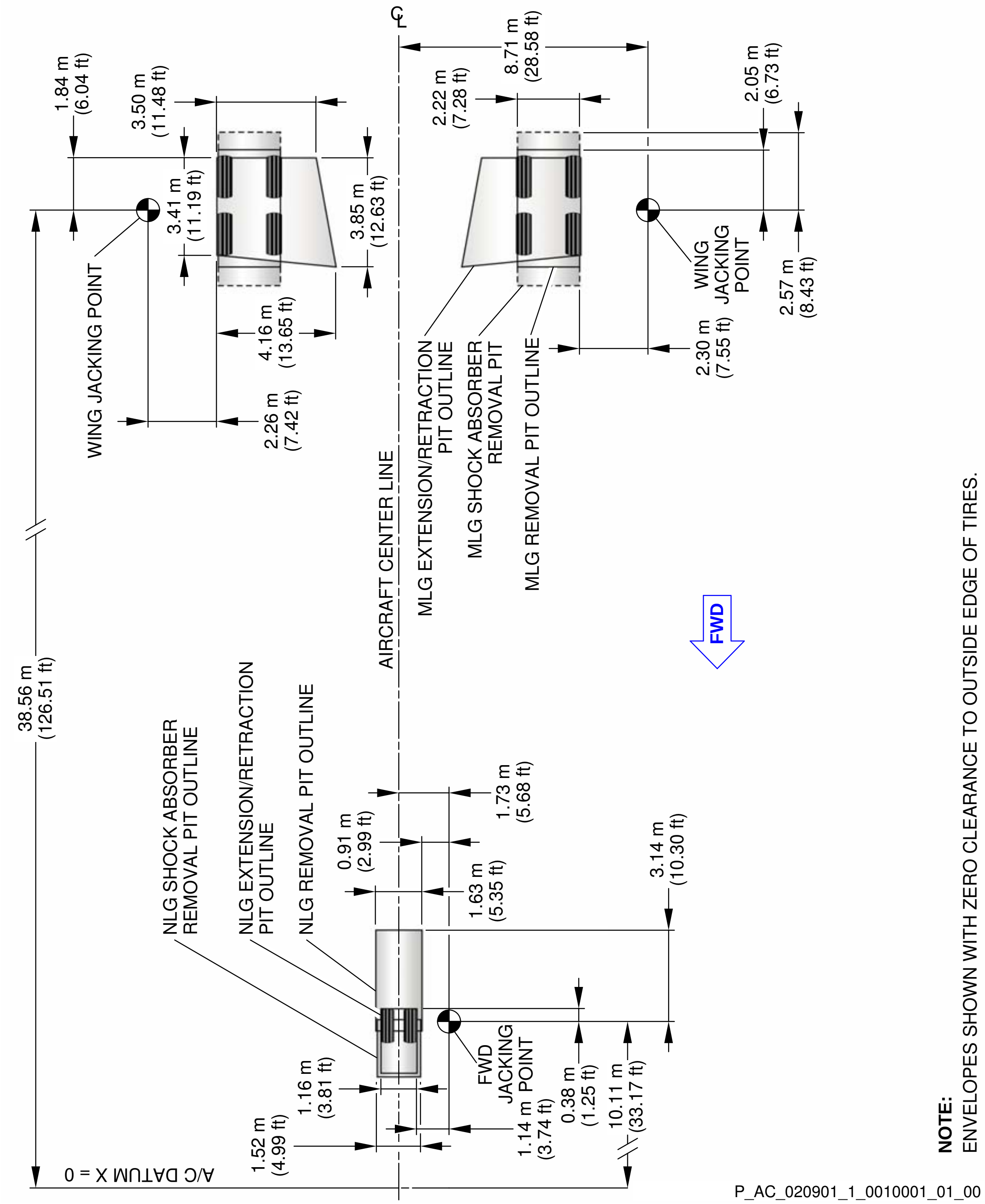
A. Elevators

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

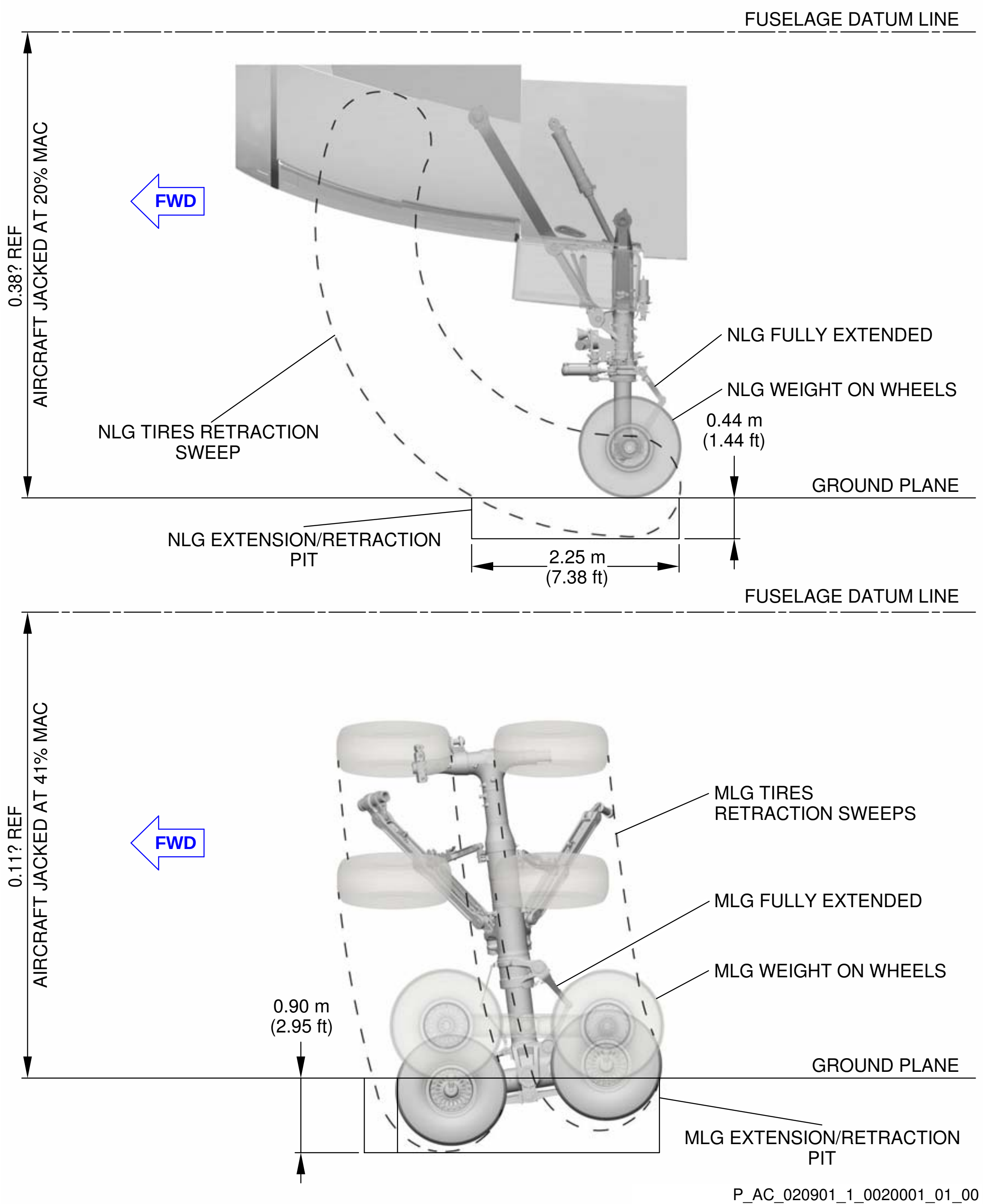
The aircraft must be in position over the pits to put the gear on the elevators. The jack must be installed and engaged with all the jacking points, AC 2-14-1 for aircraft maintenance jacking.
When lowering the elevators, the aircraft weight will be transferred from the wheels to the jacks.
The landing 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



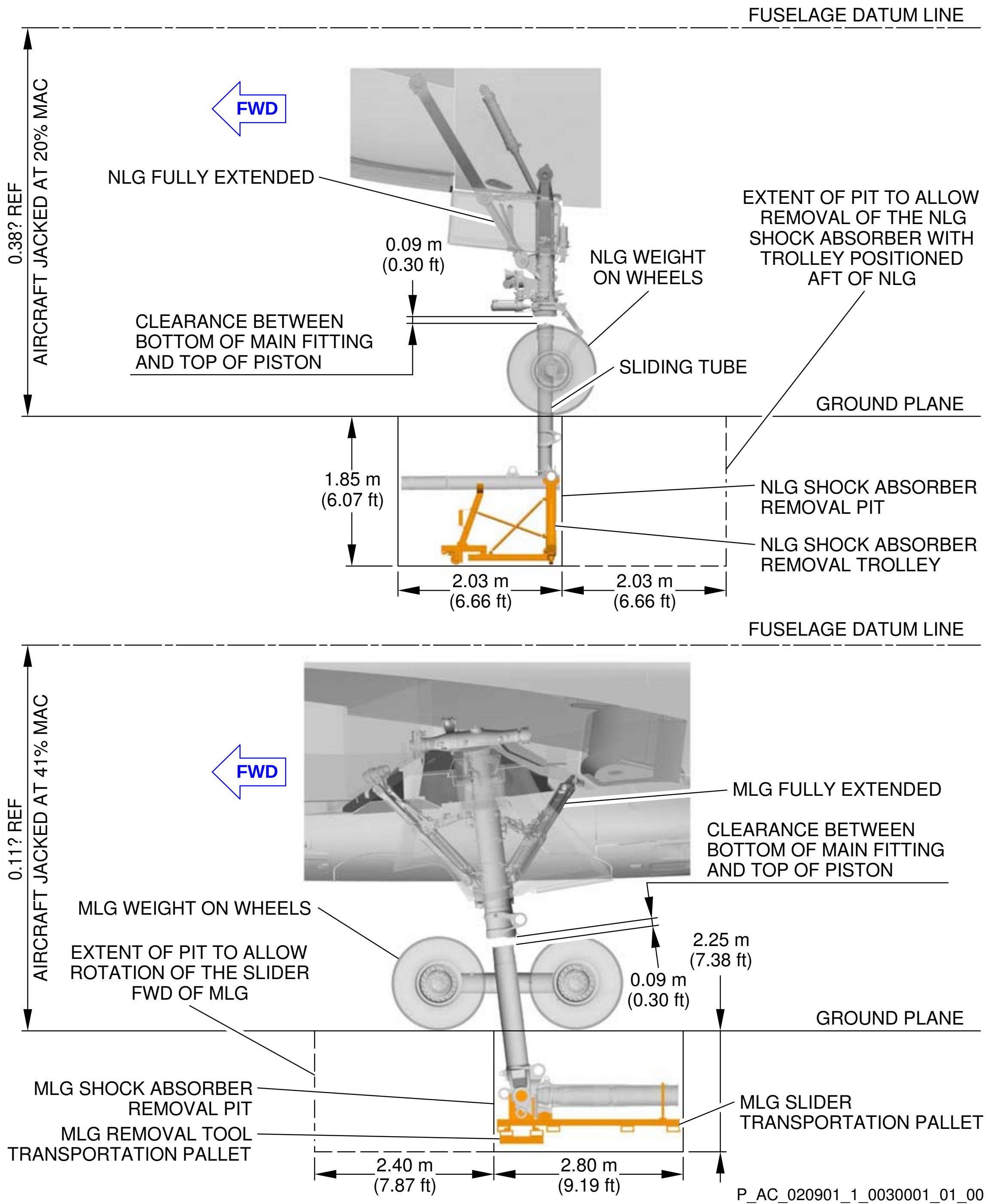
Maintenance Pit Envelopes
FIGURE-2-9-1-991-001-A01

**ON A/C A350-900



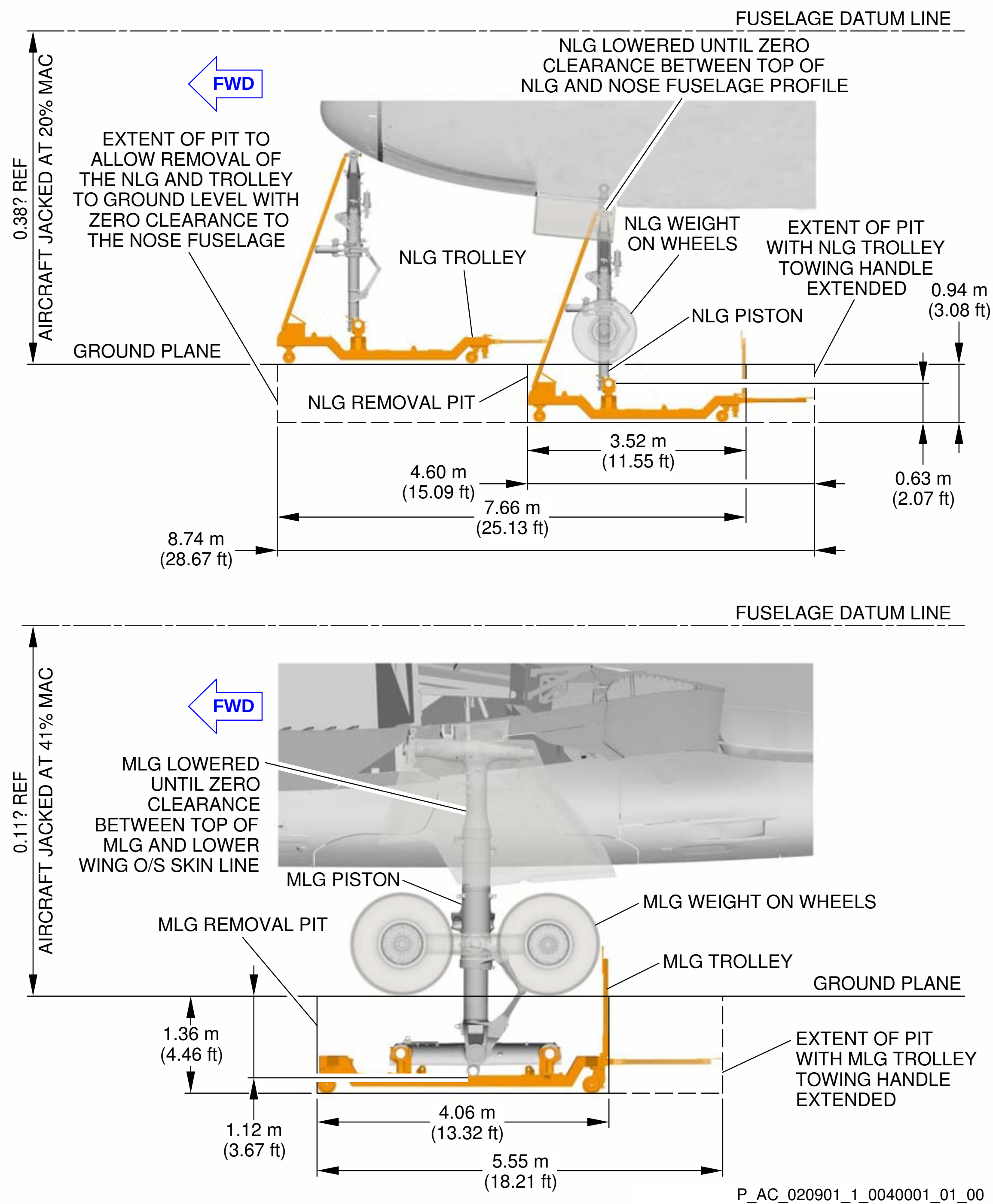
NLG/MLG Extension/Retraction Pit
FIGURE-2-9-1-991-002-A01

**ON A/C A350-900



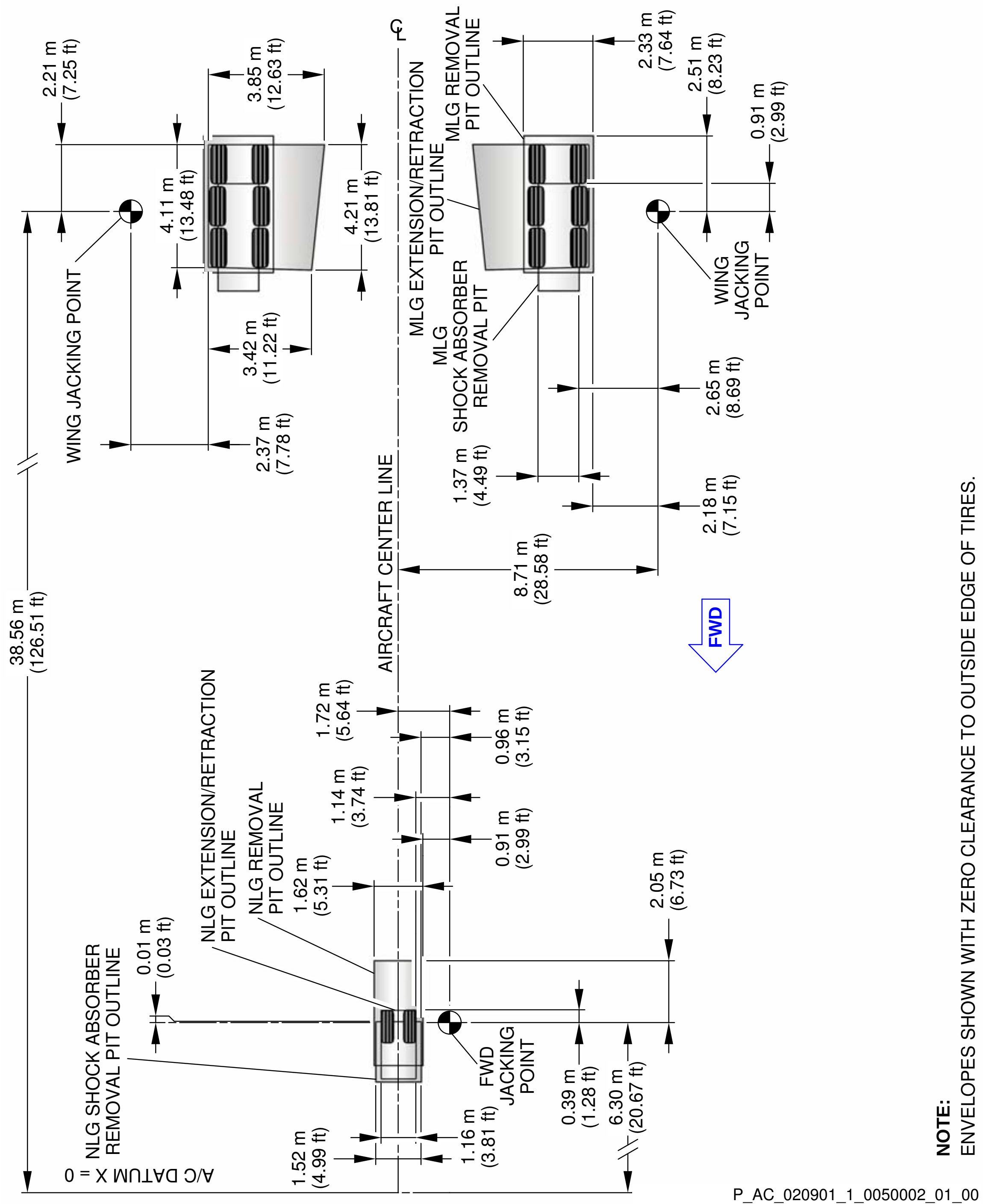
NLG/MLG Shock Absorber Removal Pit
FIGURE-2-9-1-991-003-A01

**ON A/C A350-900



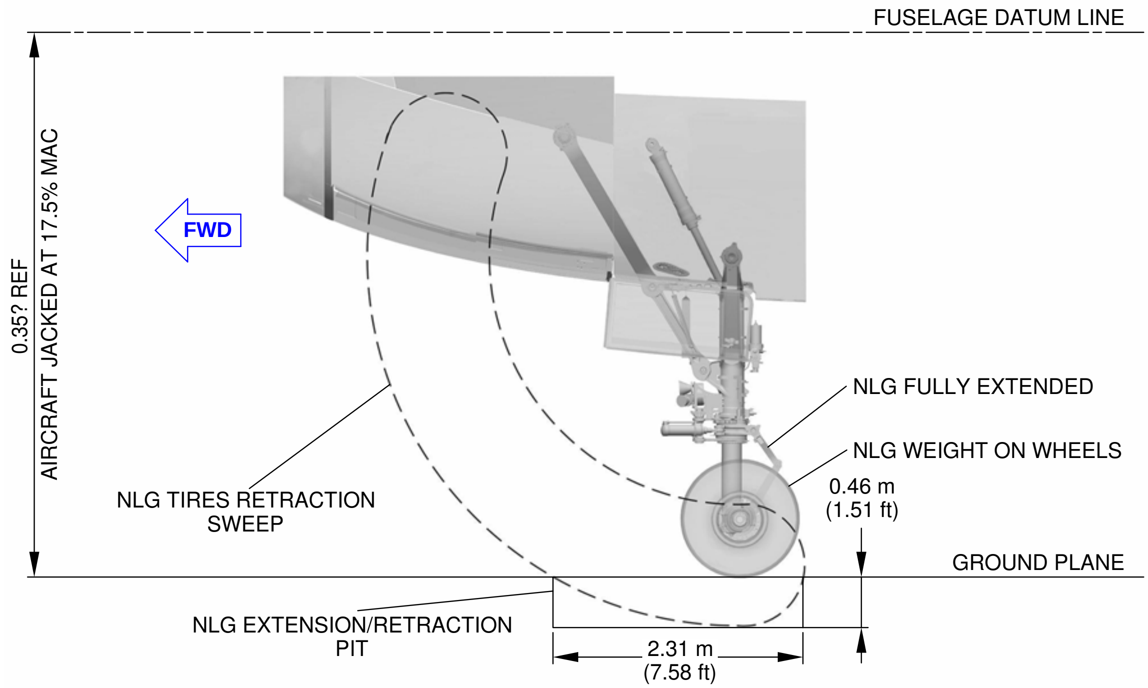
NLG/MLG Removal Pit
FIGURE-2-9-1-991-004-A01

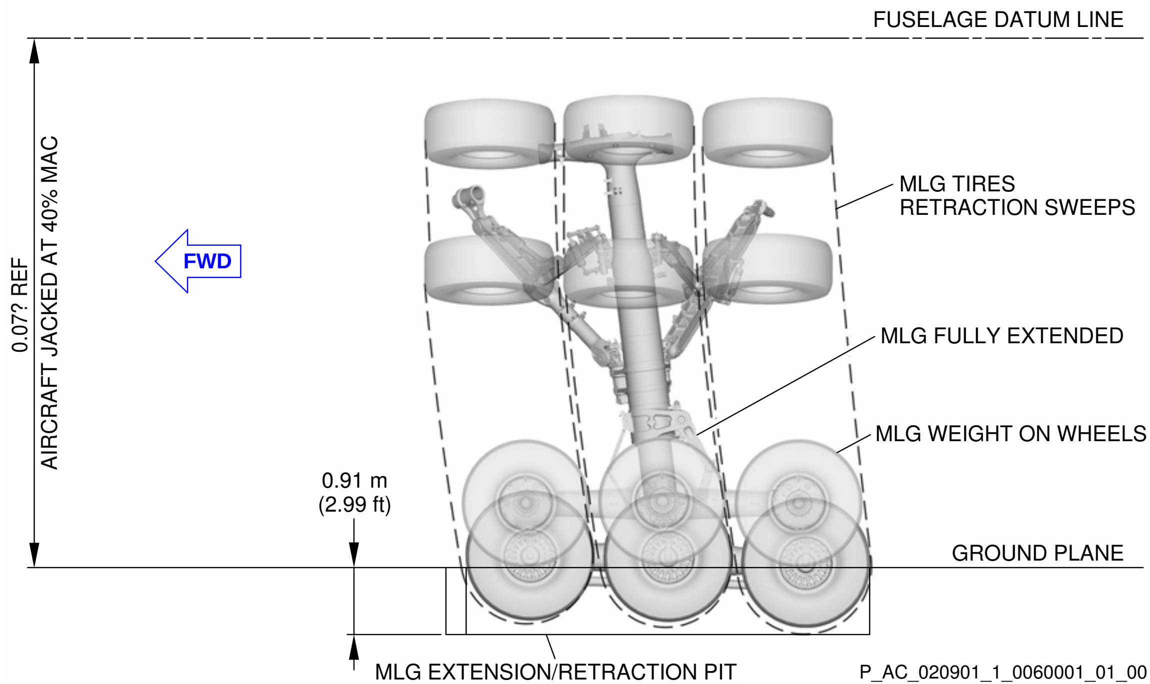
**ON A/C A350-1000



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

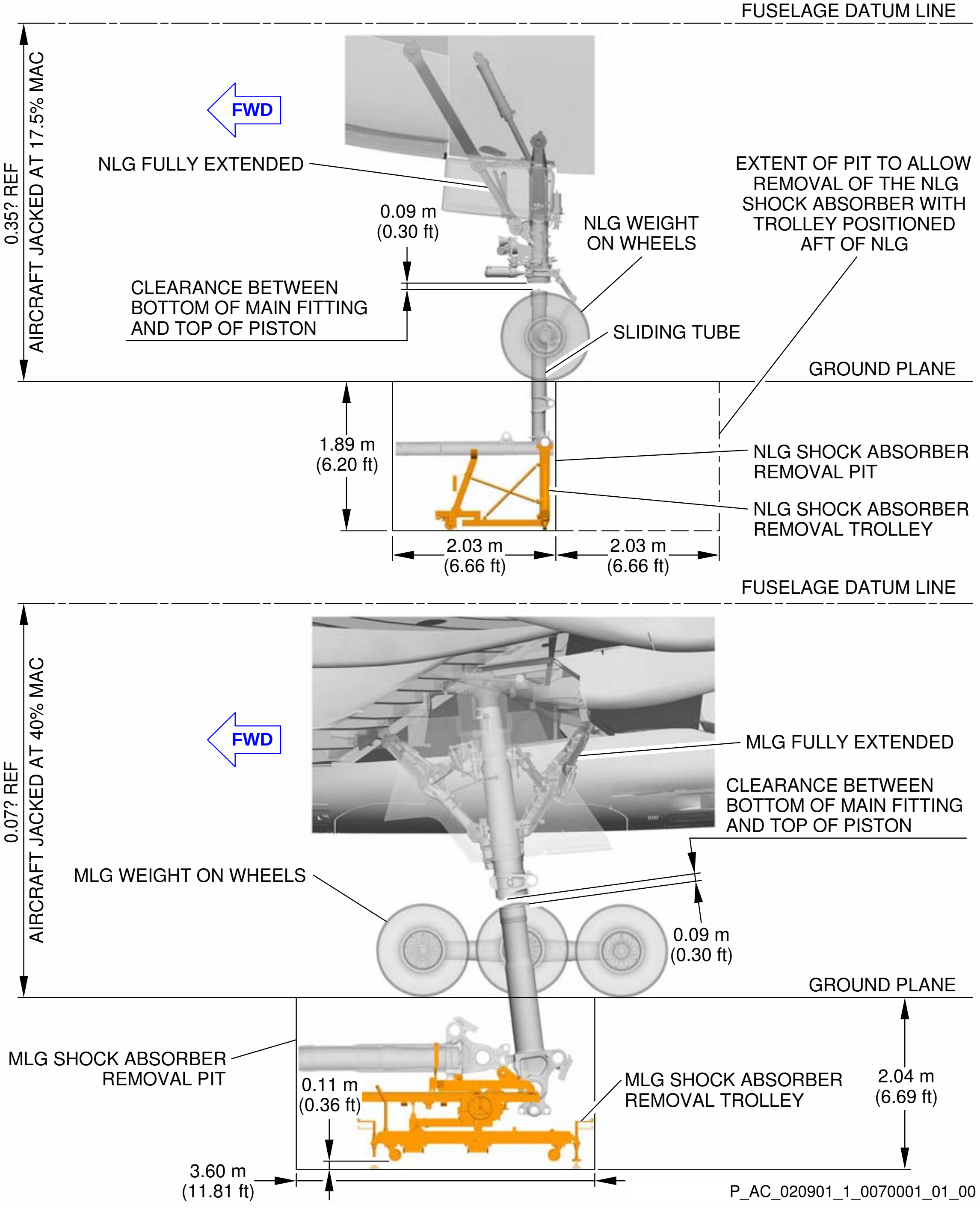
**ON A/C A350-1000





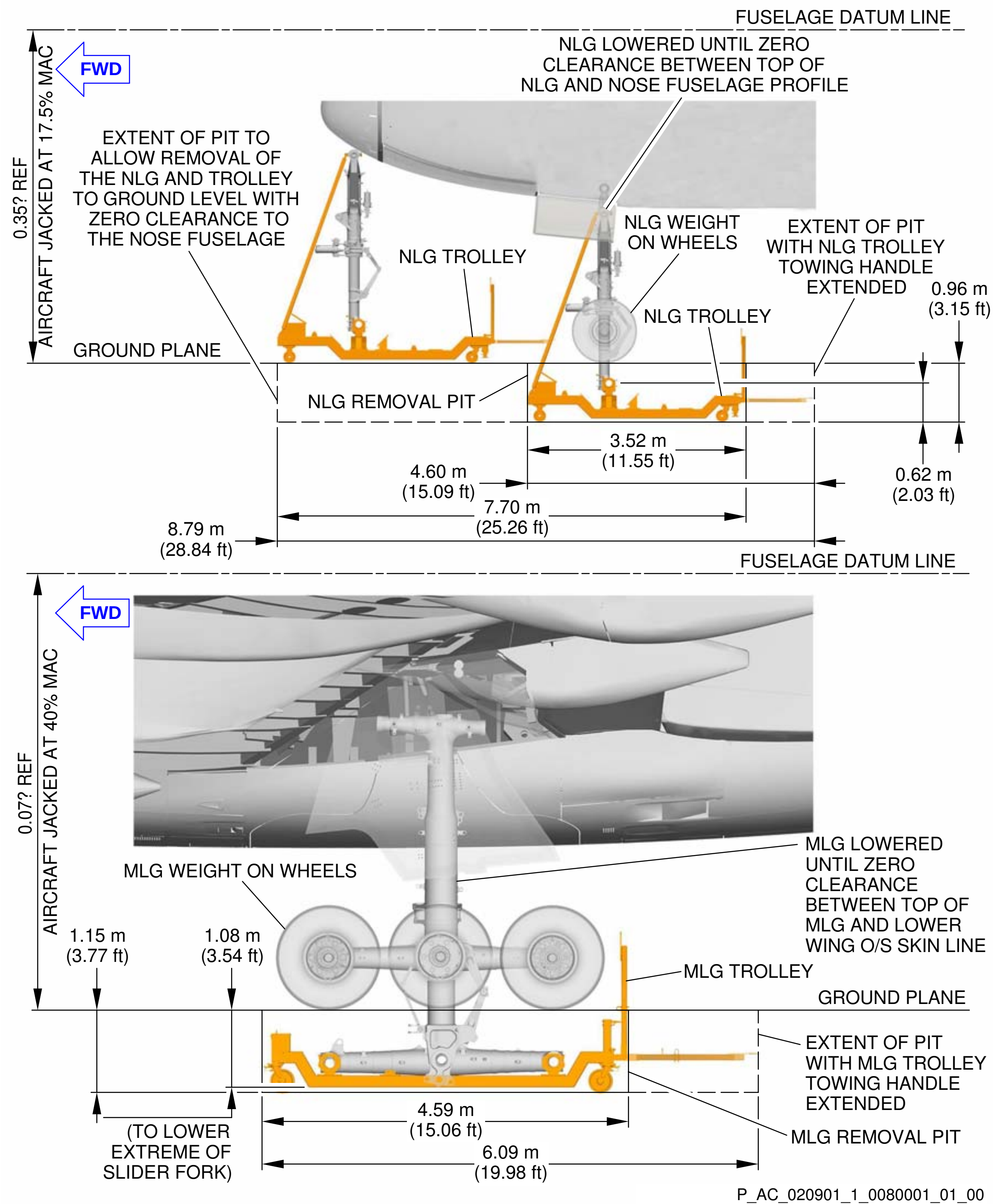
NLG/MLG Extension/Retraction Pit
FIGURE-2-9-1-991-006-A01

**ON A/C A350-1000



NLG/MLG Shock Absorber Removal Pit
FIGURE-2-9-1-991-007-A01

**ON A/C A350-1000



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

2-10-0 Exterior Lighting

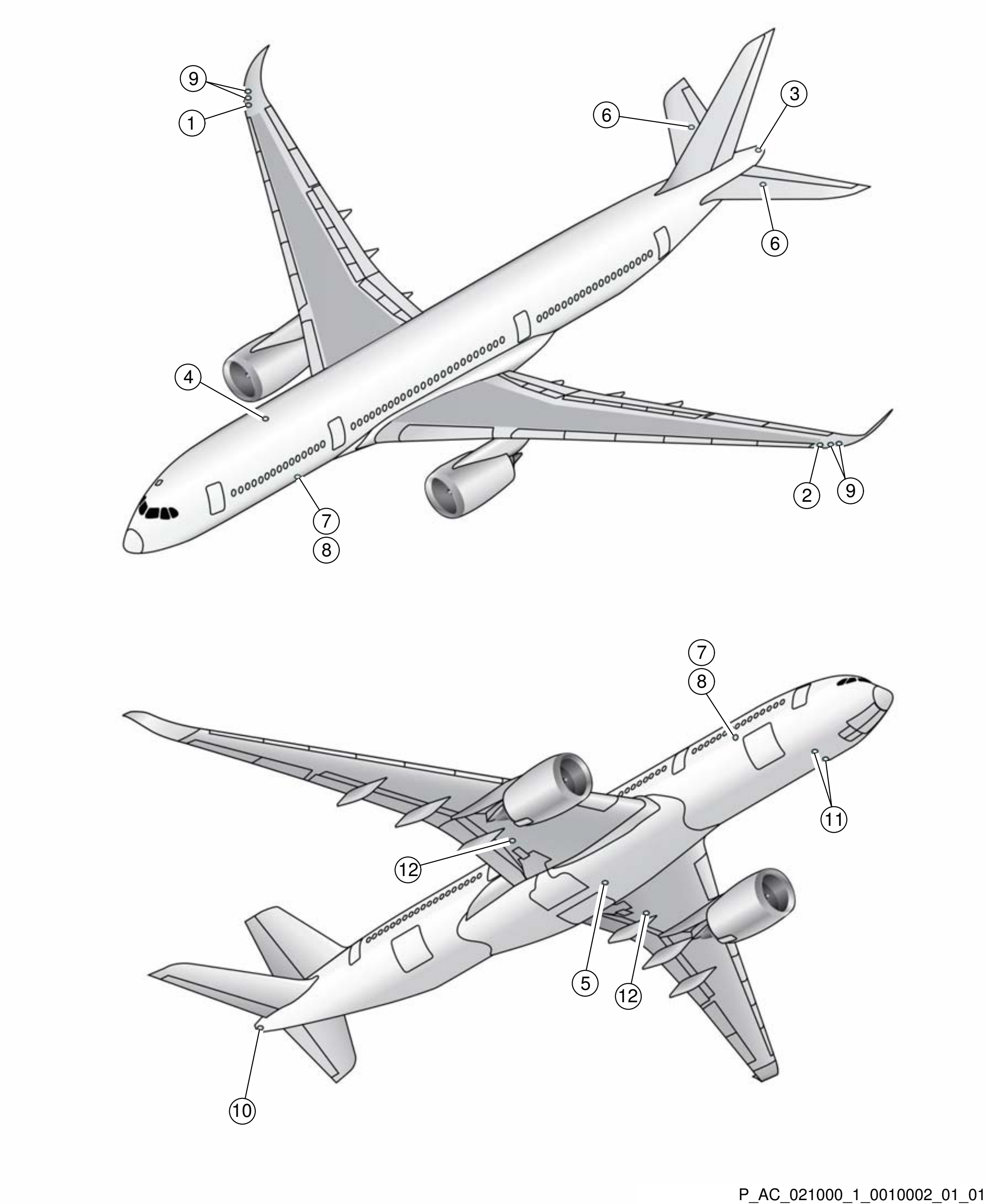
****ON A/C A350-1000 A350-900**

Exterior Lighting

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

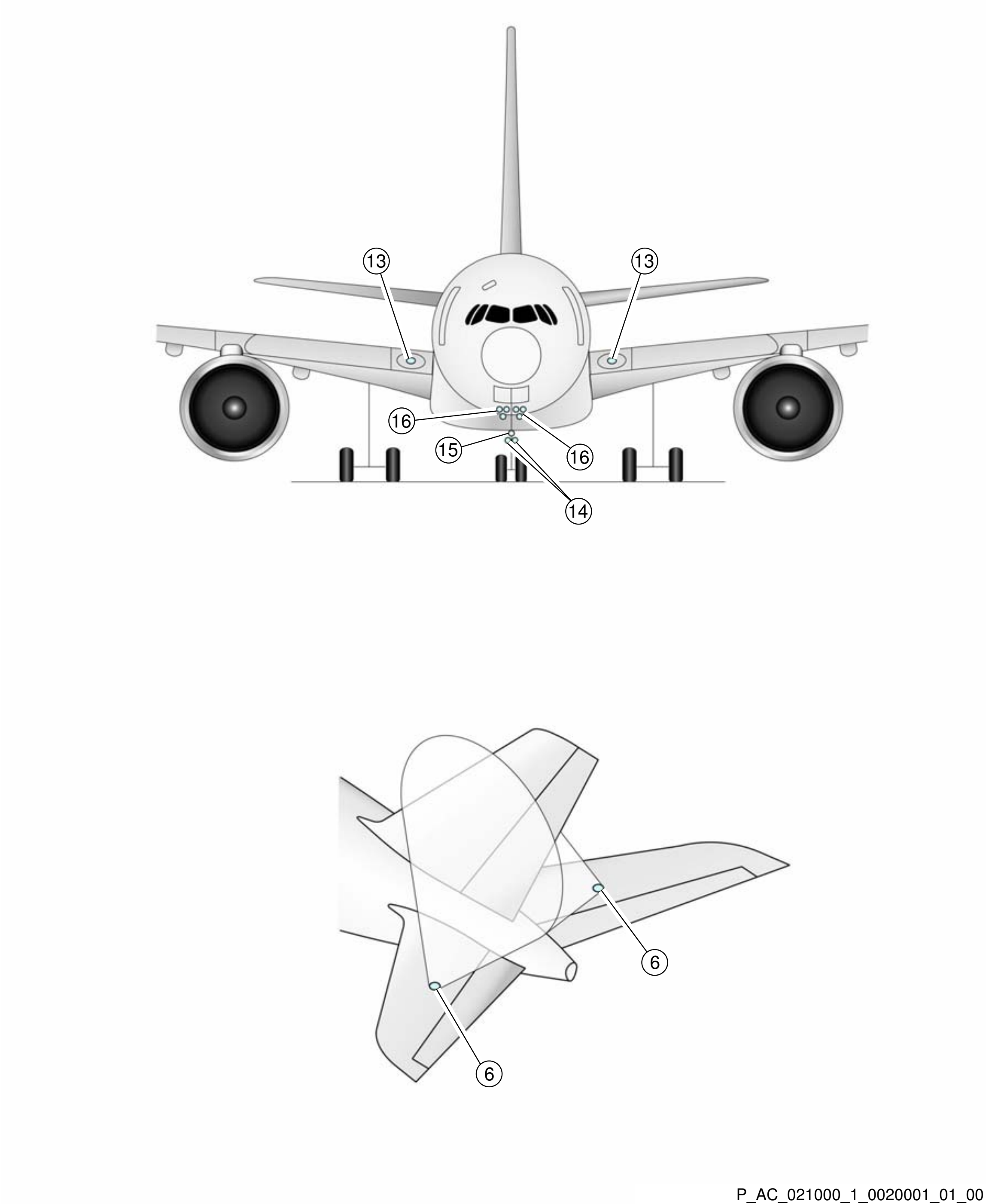
EXTERIOR LIGHTING	
ITEM	DESCRIPTION
1	RIGHT NAVIGATION LIGHT (GREEN)
2	LEFT NAVIGATION LIGHT (RED)
3	TAIL NAVIGATION LIGHT (WHITE)
4	UPPER ANTI-COLLISION LIGHT/BEACON (RED)
5	LOWER ANTI-COLLISION LIGHT/BEACON (RED)
6	LOGO LIGHTS
7	ENGINE SCAN LIGHTS
8	WING SCAN LIGHTS
9	WING STROBE LIGHT (HIGH INTENSITY, 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



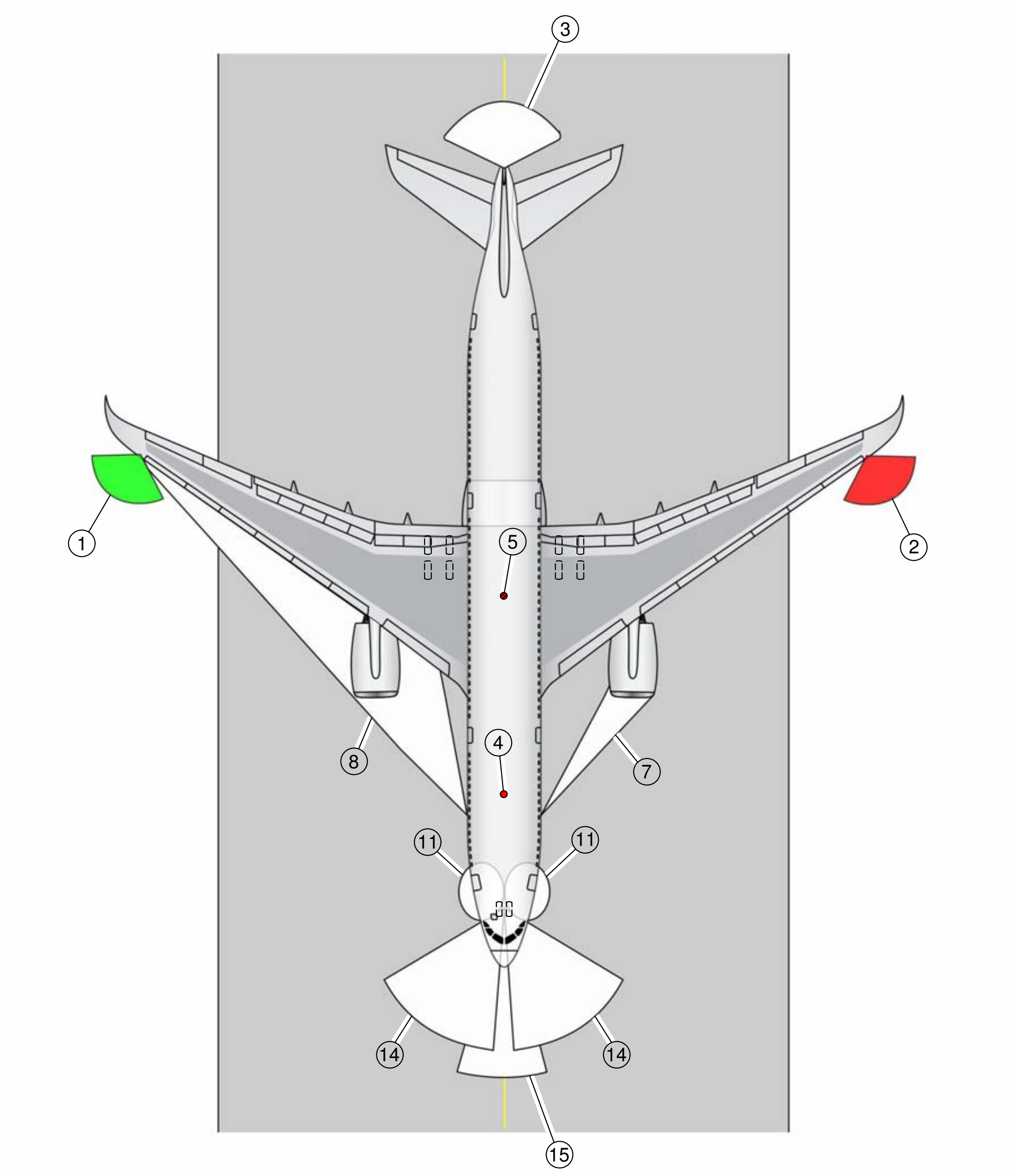
Exterior Lighting
FIGURE-2-10-0-991-001-B01

**ON A/C A350-900



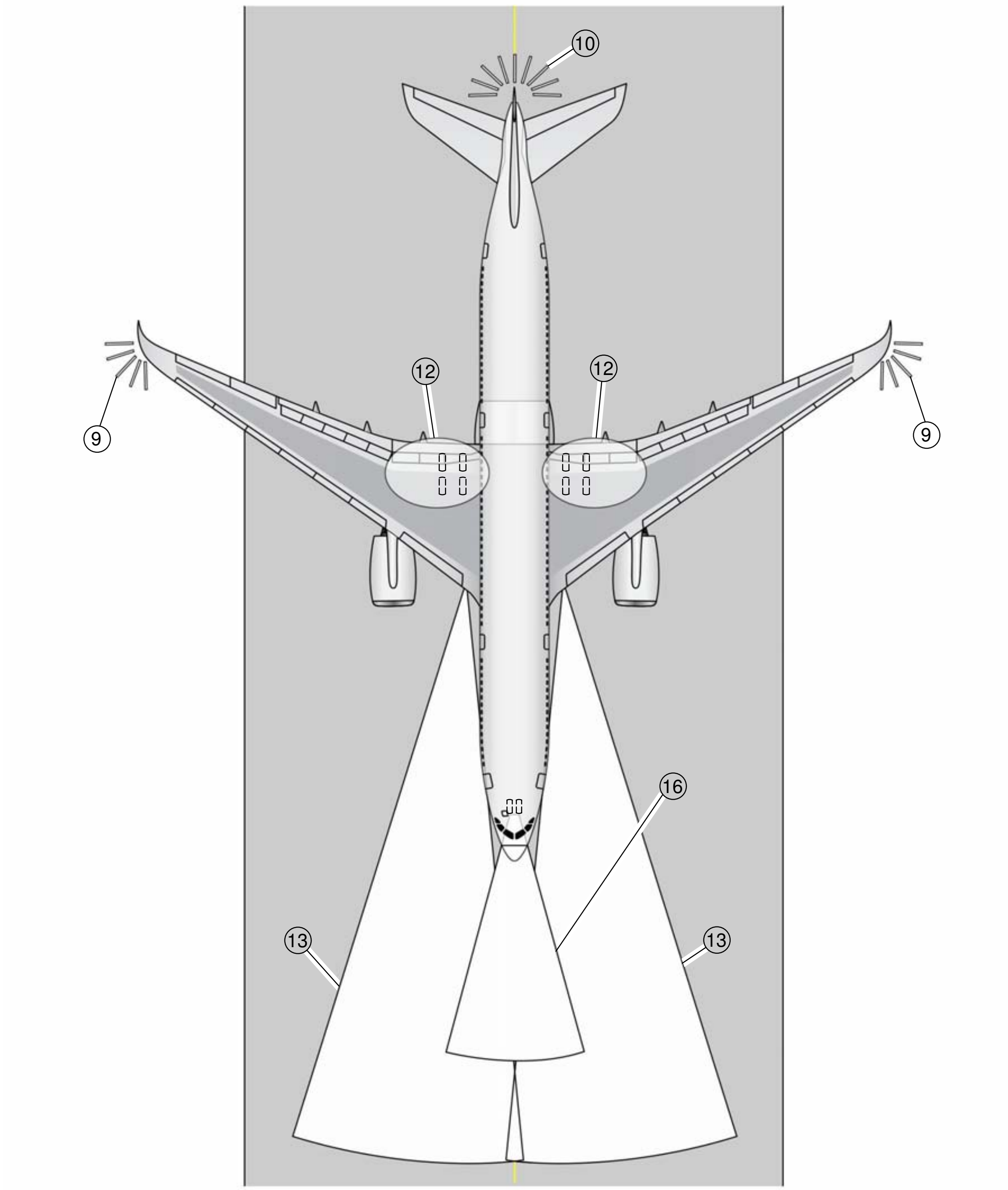
Exterior Lighting
FIGURE-2-10-0-991-002-A01

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



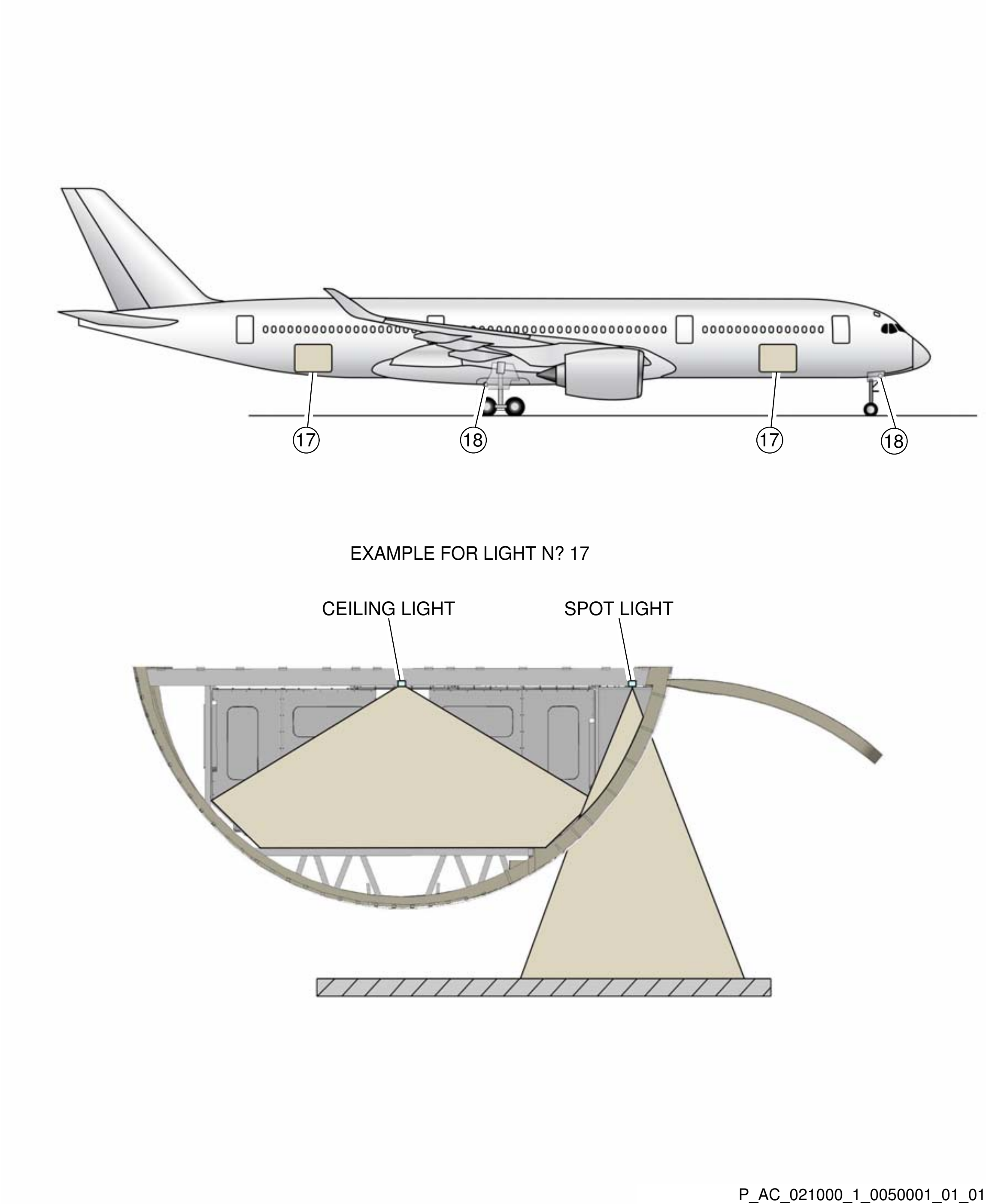
Exterior Lighting
FIGURE-2-10-0-991-003-B01

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



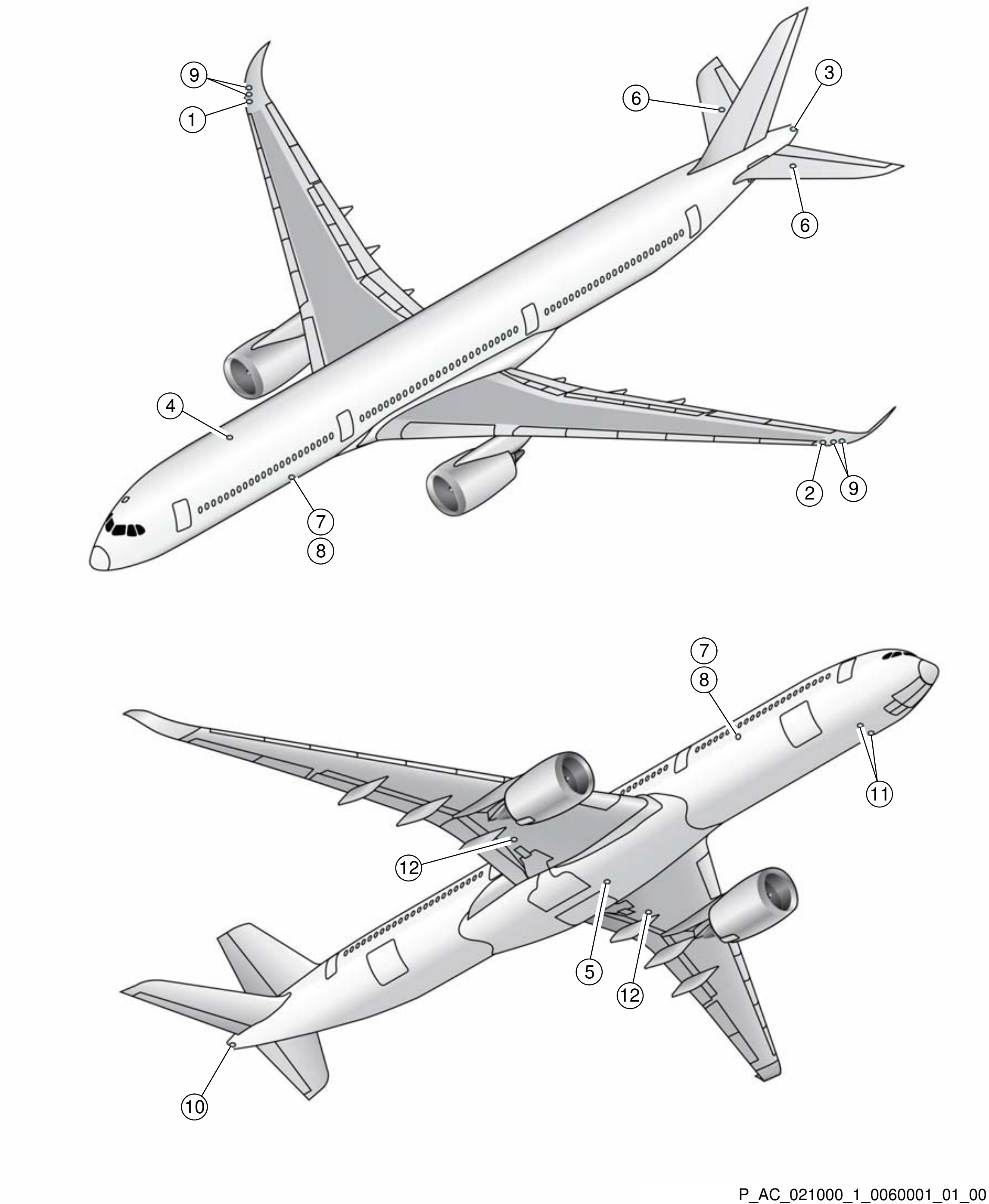
Exterior Lighting
FIGURE-2-10-0-991-004-A01

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



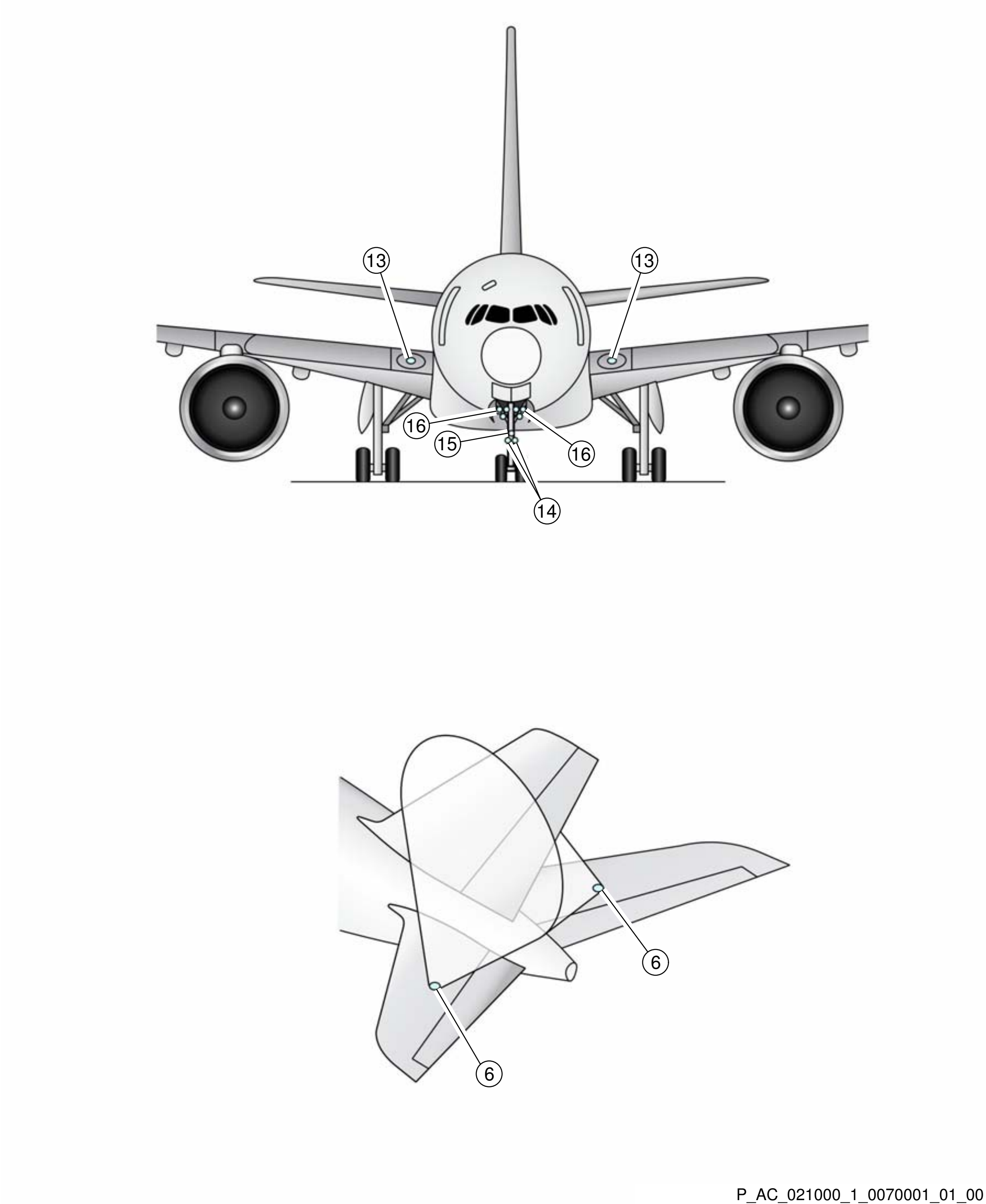
Exterior Lighting
FIGURE-2-10-0-991-005-A01

**ON A/C A350-1000



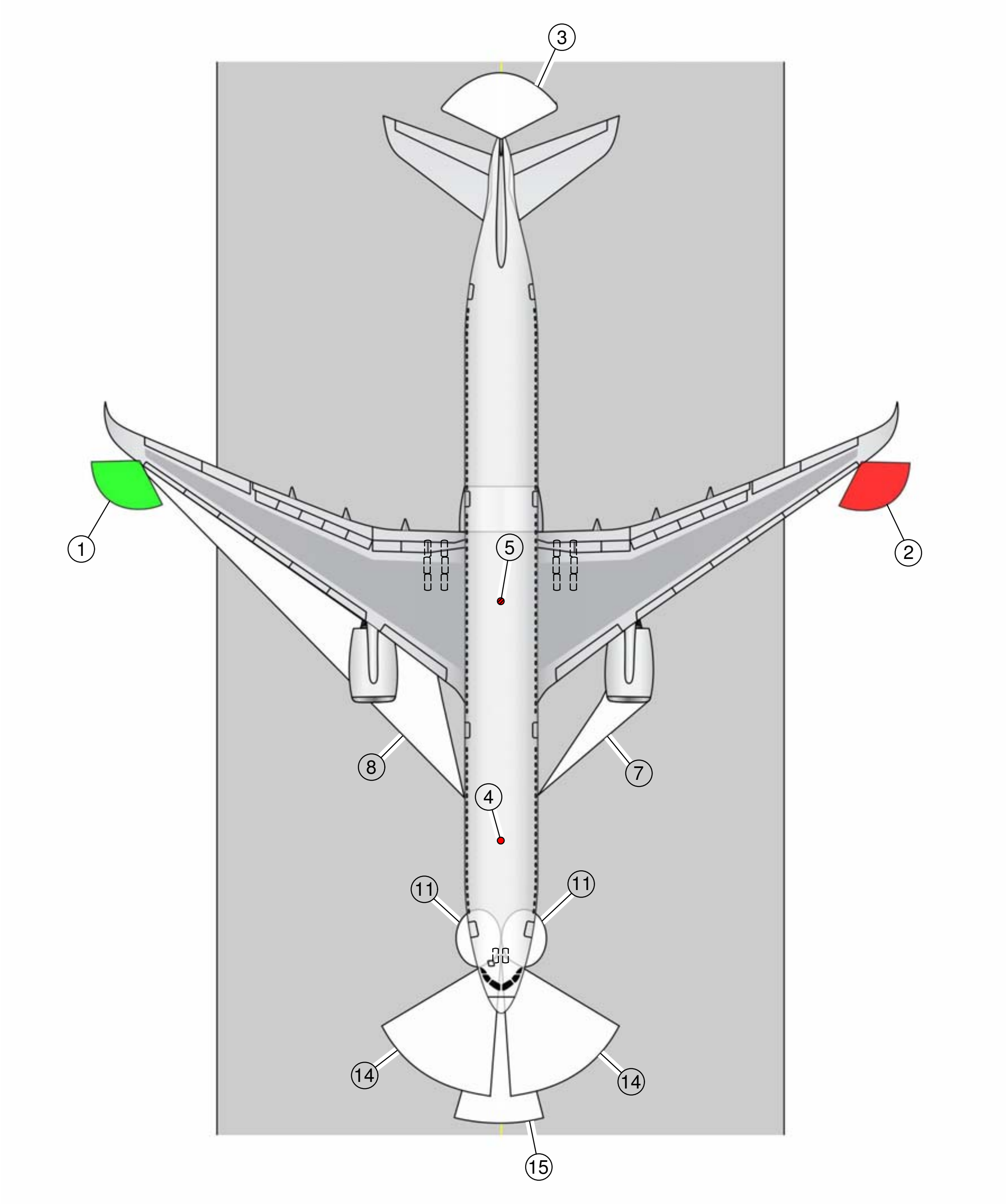
Exterior Lighting
FIGURE-2-10-0-991-006-A01

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



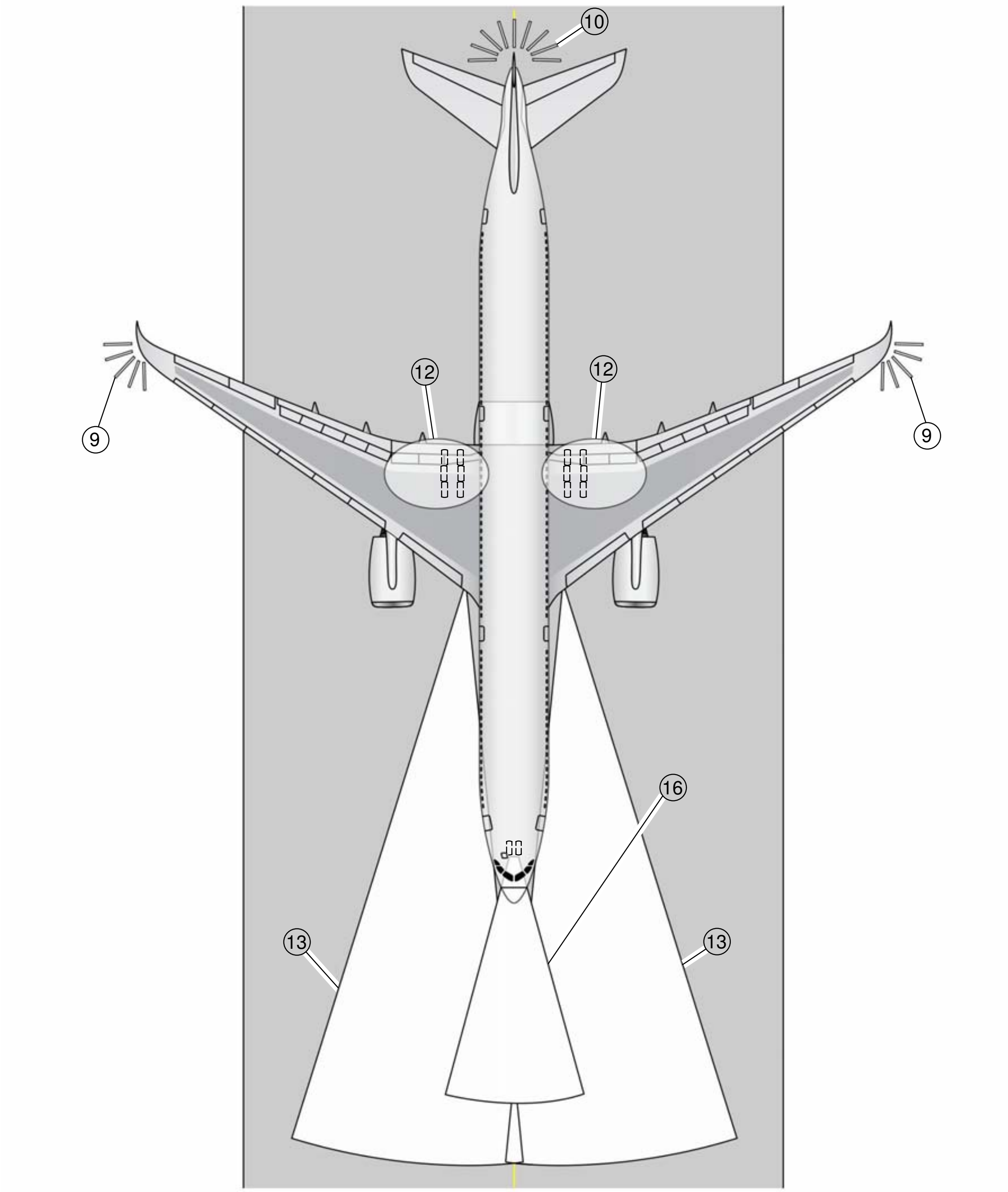
Exterior Lighting
FIGURE-2-10-0-991-007-A01

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



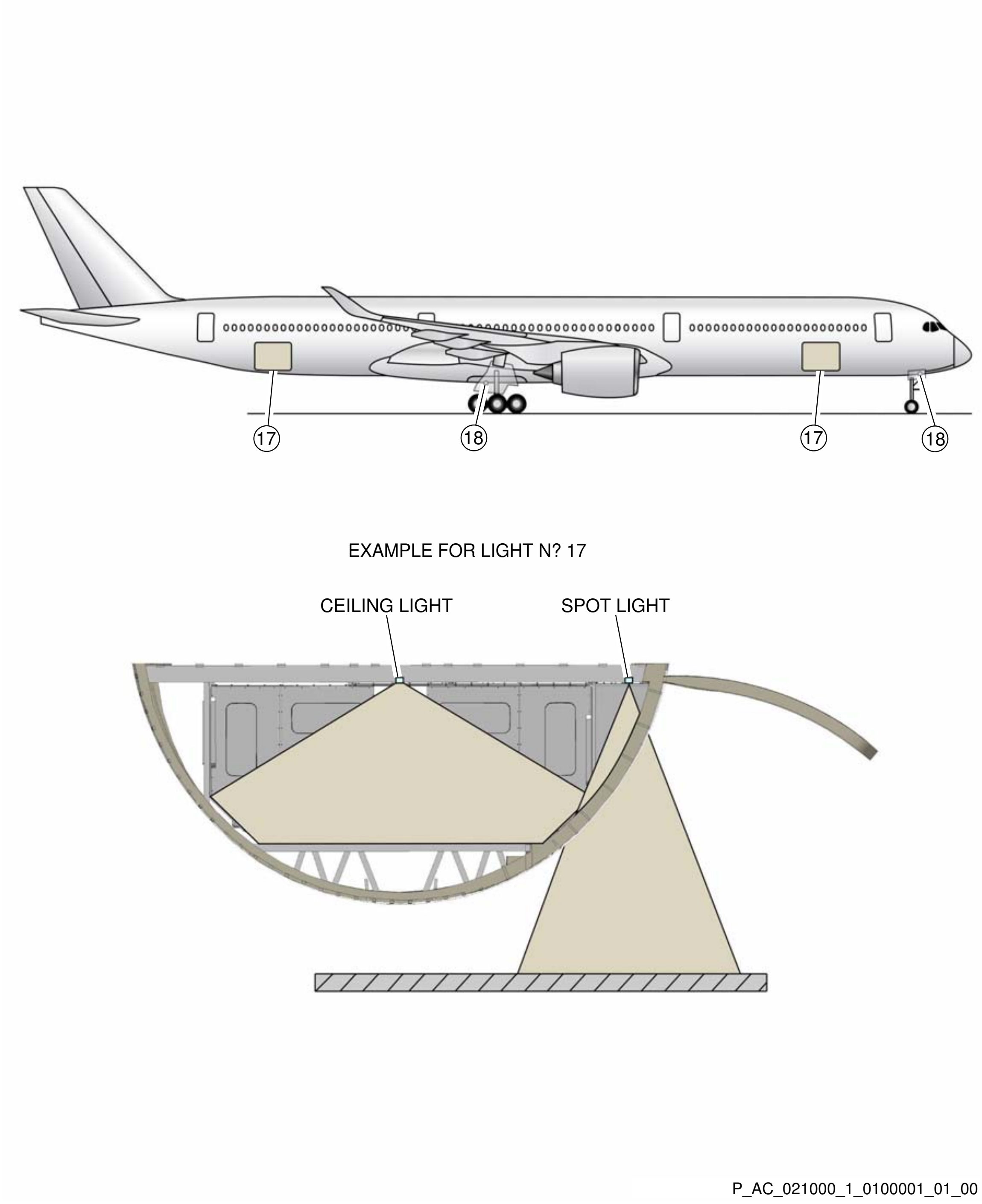
Exterior Lighting
FIGURE-2-10-0-991-008-A01

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



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

**ON A/C A350-1000



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

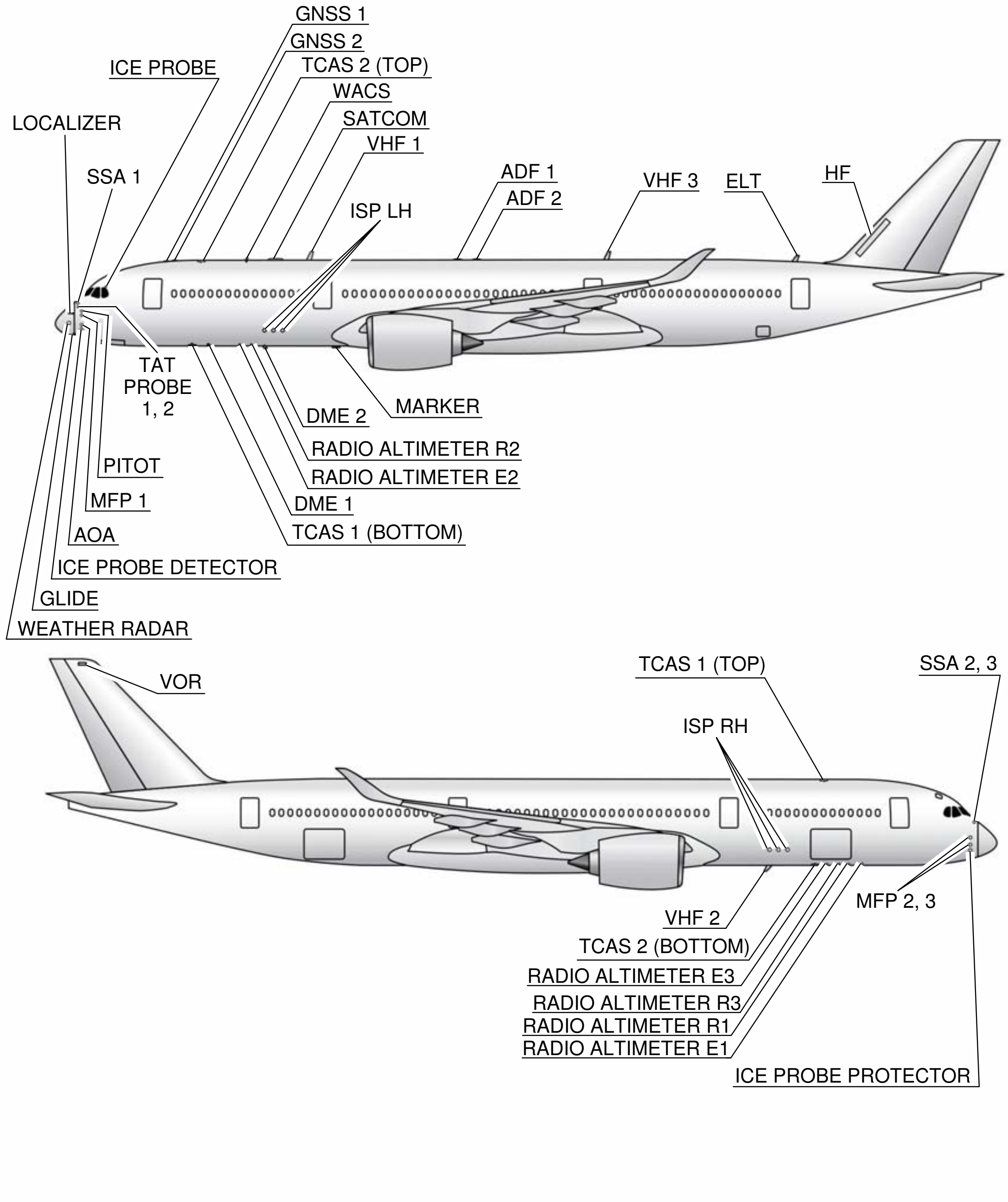
2-11-0 Antennas and Probes Location

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

Antennas and Probes Location

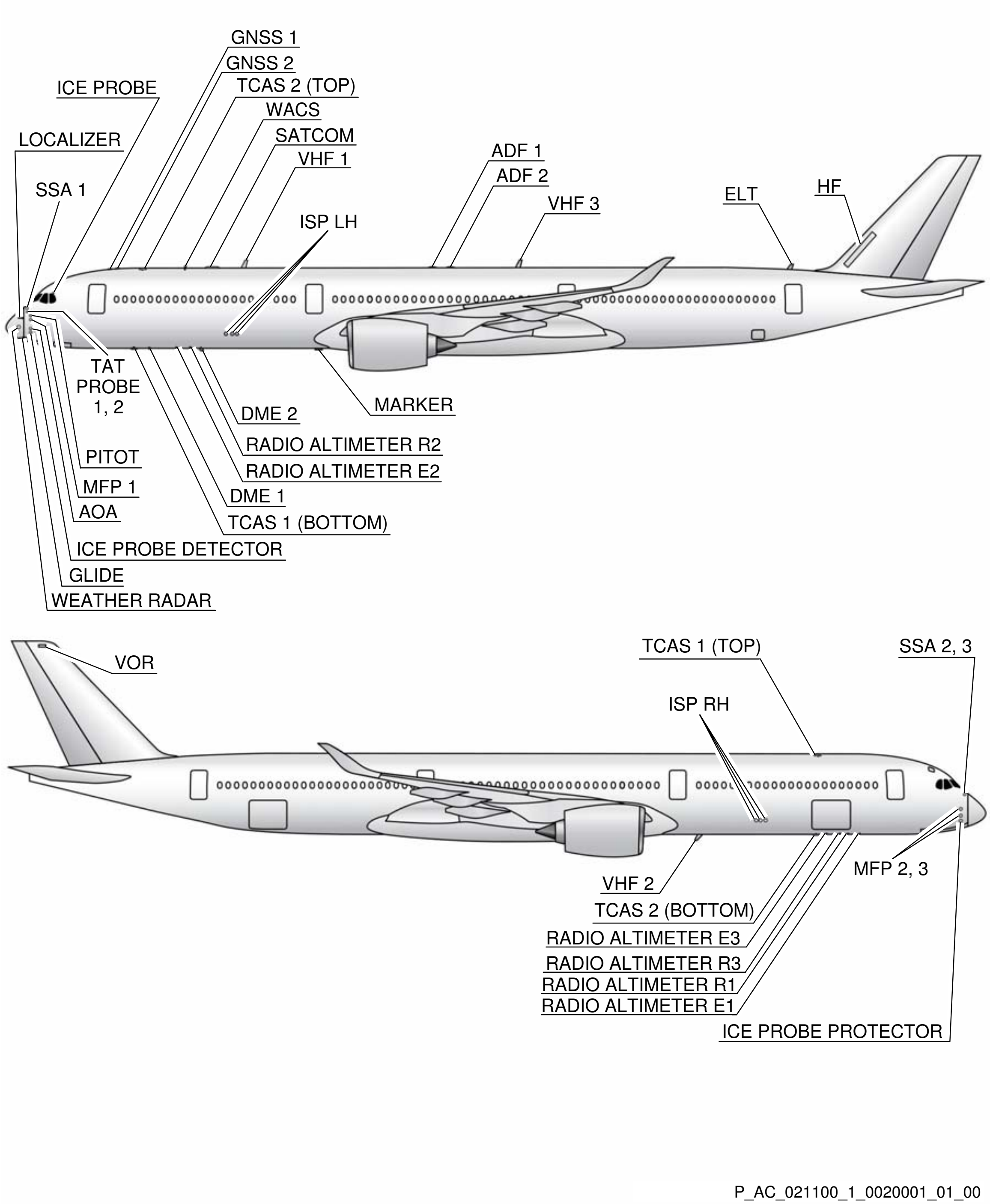
1. This section provides the location of antennas and probes.

**ON A/C A350-900



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

**ON A/C A350-1000



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.

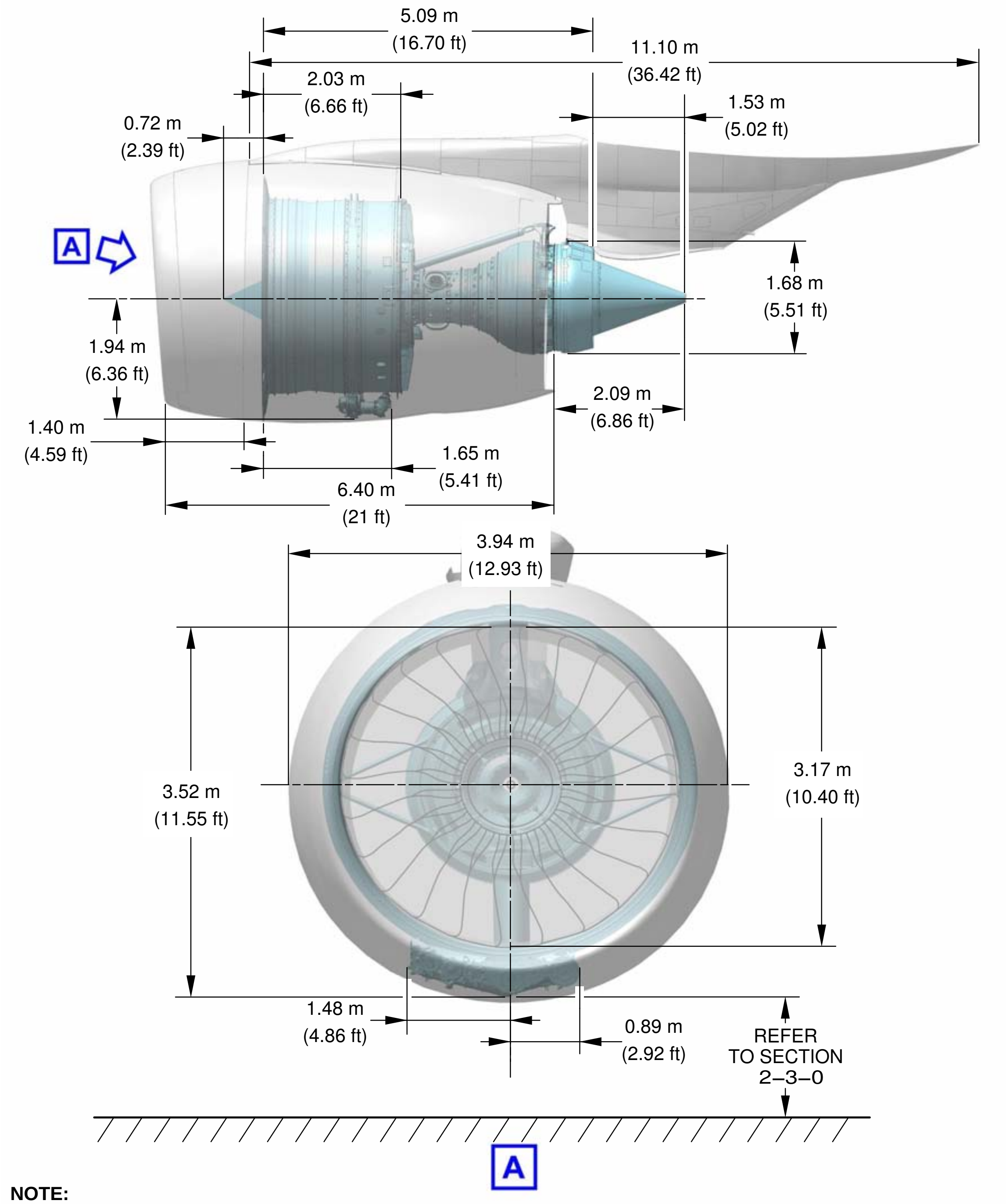
E. Emergency Shutdown
Actuation of the fire controls closes the associated LP valves.

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

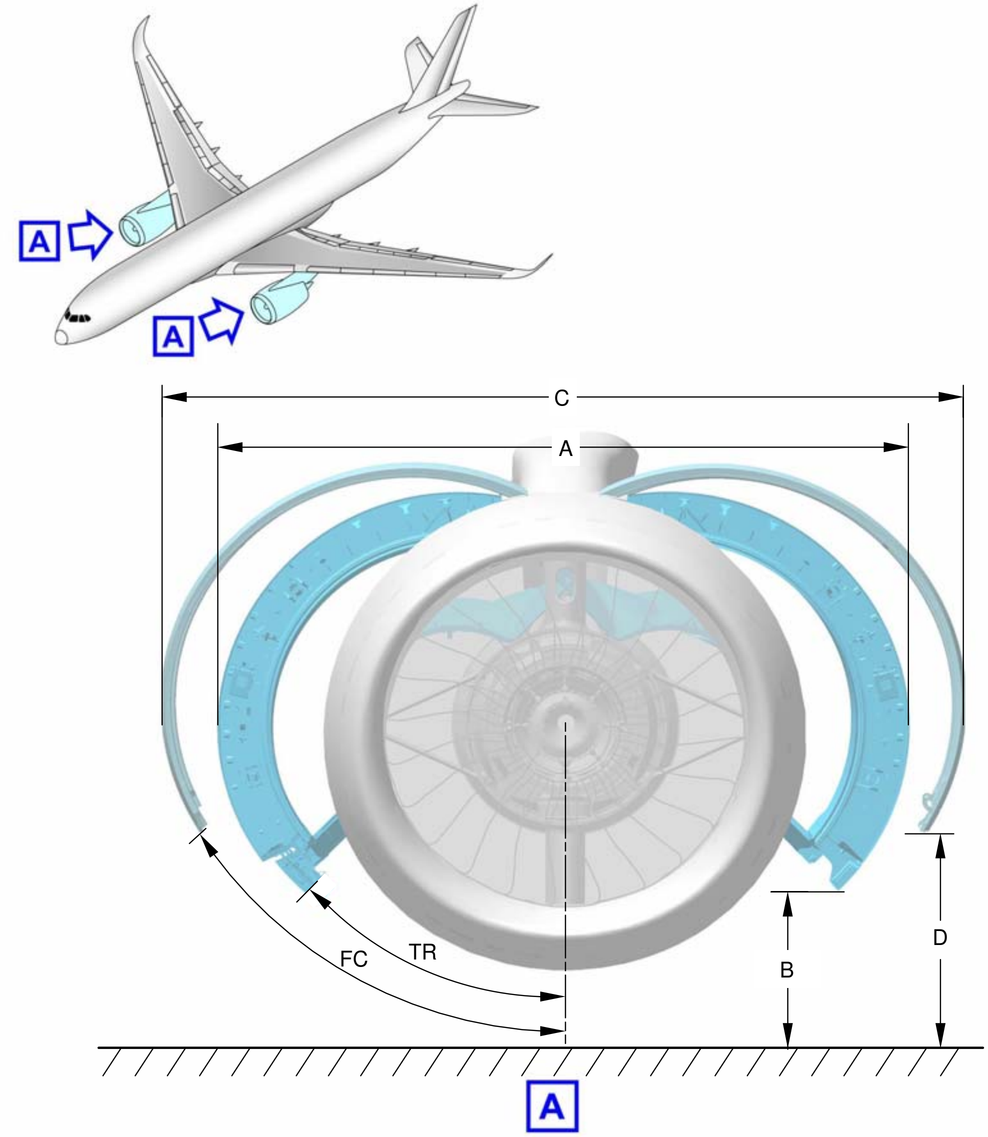


NOTE:
APPROXIMATE DIMENSIONS DEPENDING ON AIRCRAFT CONFIGURATION

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
TR=28.5°	5.50 m (18.04 ft)	1.01 m (3.31 ft)

	C	D
FC=37°	6.39 m (20.96 ft)	1.28 m (4.20 ft)

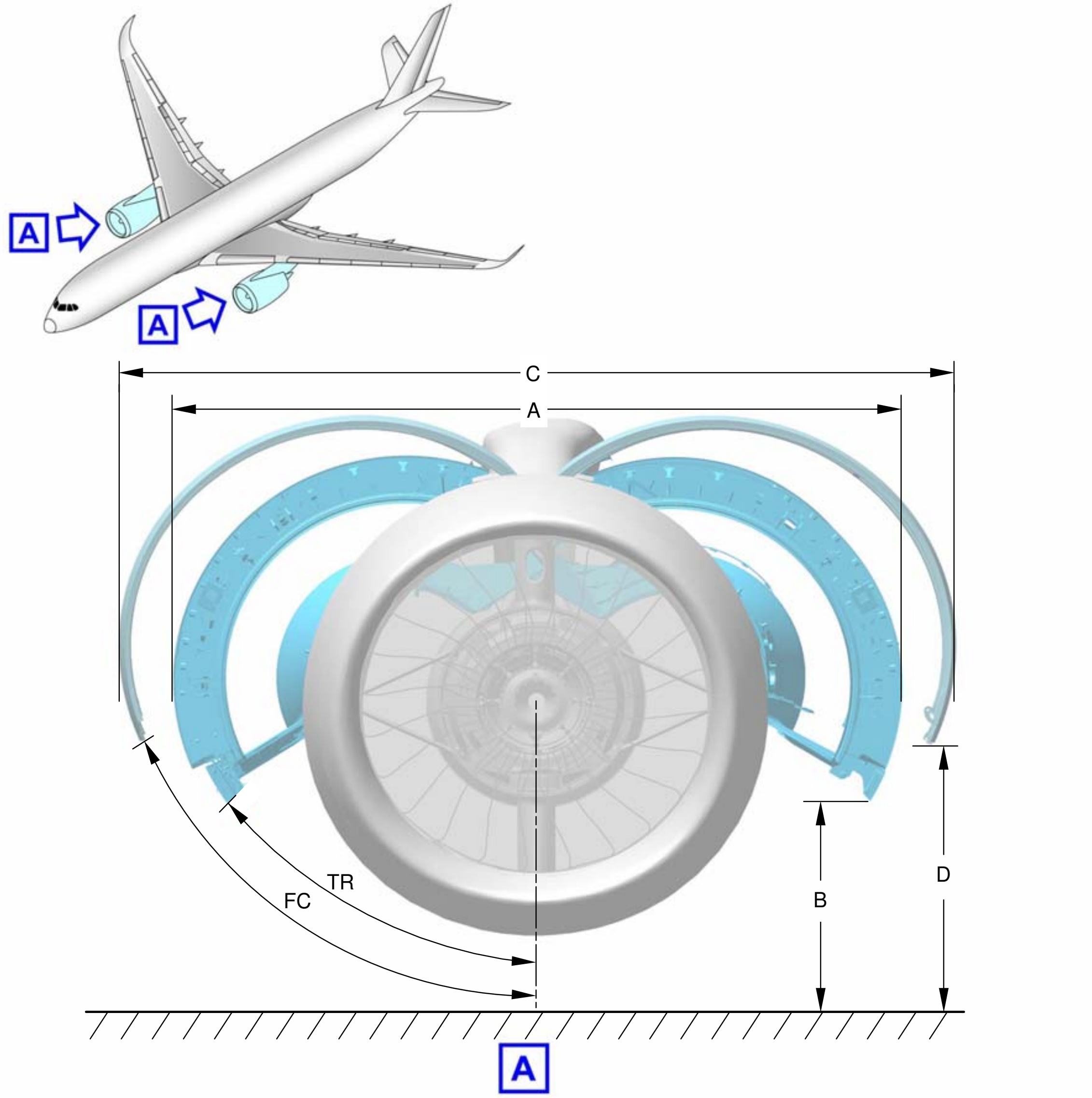
NOTE:
APPROXIMATE DIMENSIONS DEPENDING ON AIRCRAFT CONFIGURATION.

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
TR=45?	6.42 m (21.06 ft)	1.51 m (4.95 ft)

	C	D
FC=50?	7.13 m (23.40 ft)	1.81 m (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

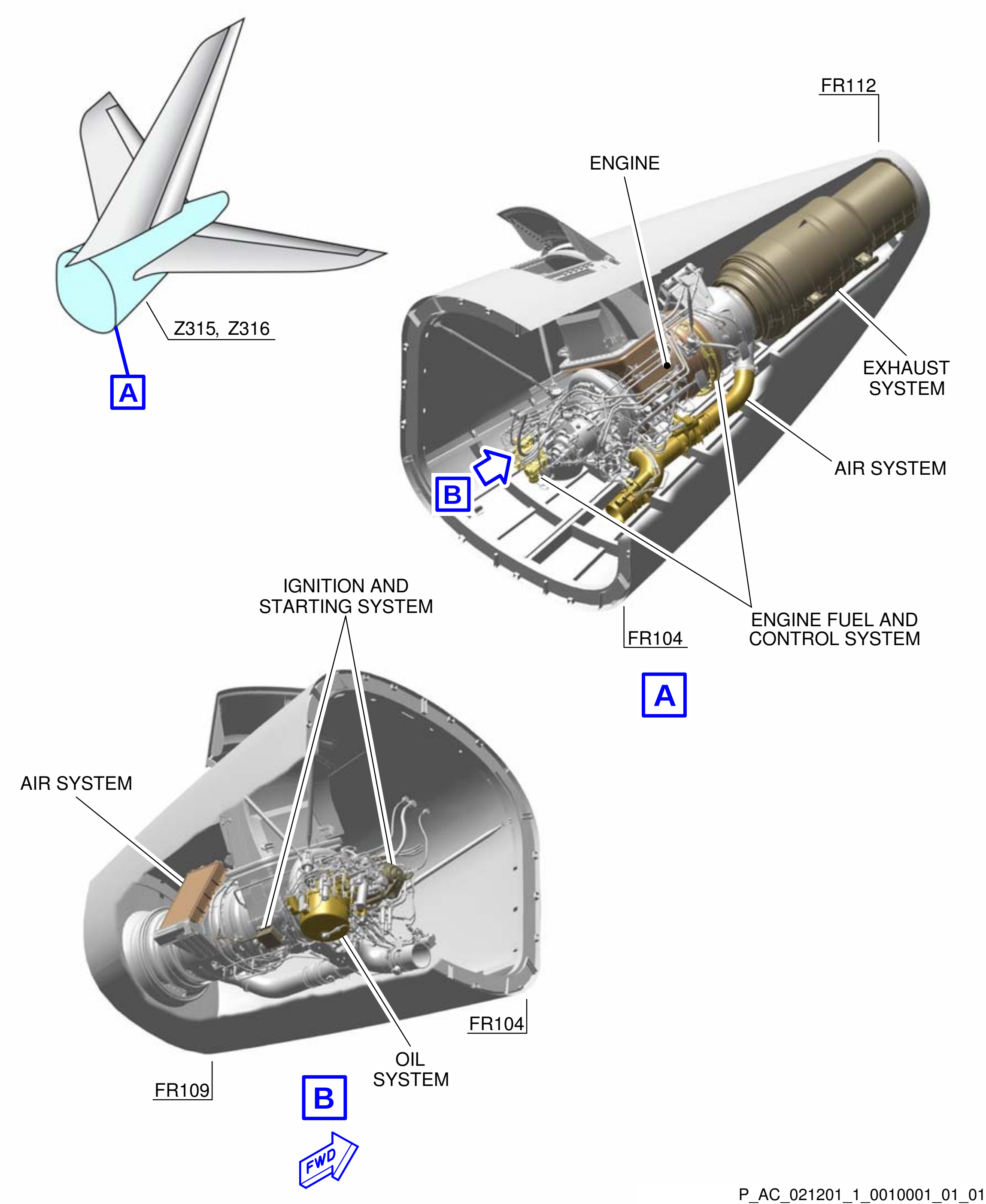
2-12-1 Auxiliary Power Unit

****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



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

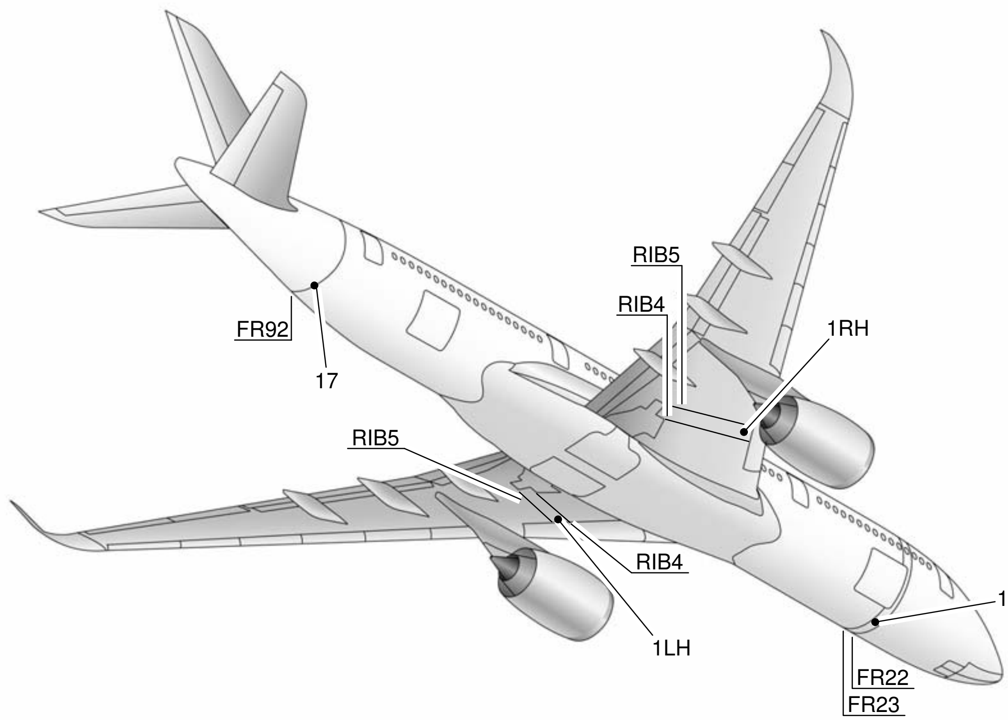
2-13-0 Leveling, Symmetry and Alignment

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

Leveling, Symmetry and Alignment

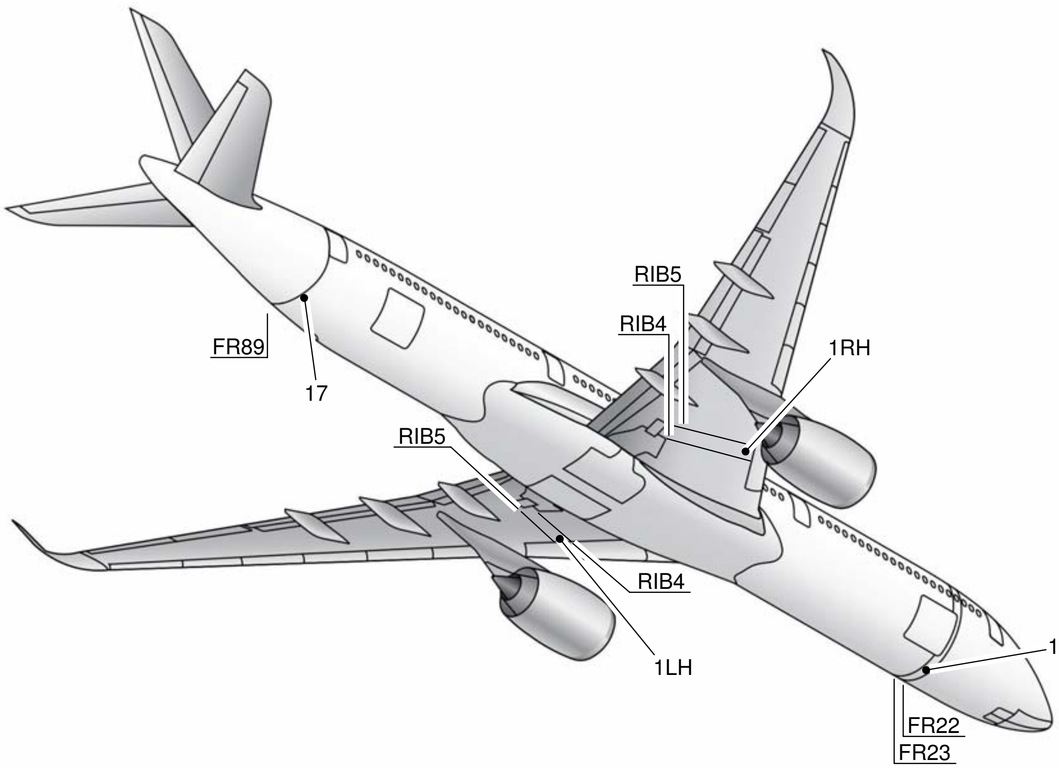
1. Quick Leveling
   There are three alternative procedures to level the aircraft:
   - Quick leveling procedure with Air Data/Inertial Reference System (ADIRS),
   - Quick leveling procedure with a spirit level in the passenger compartment,
   - Quick leveling procedure with a spirit level in the FWD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



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**

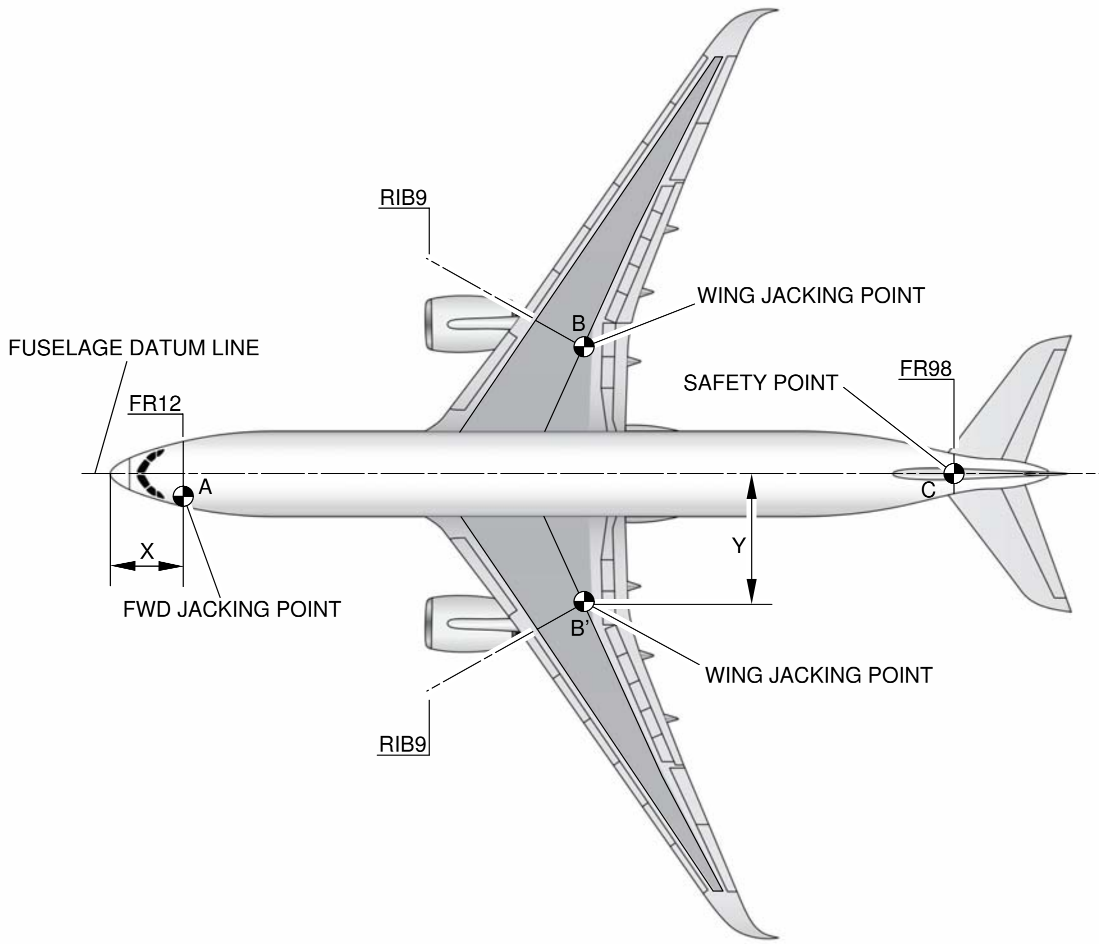
3. Jacks and Safety Stay
   A. Jack Design
      - The maximum eligible static load given in table (FIGURE 2-14-1-991-002-B) are the maximum loads applicable on jack fittings.

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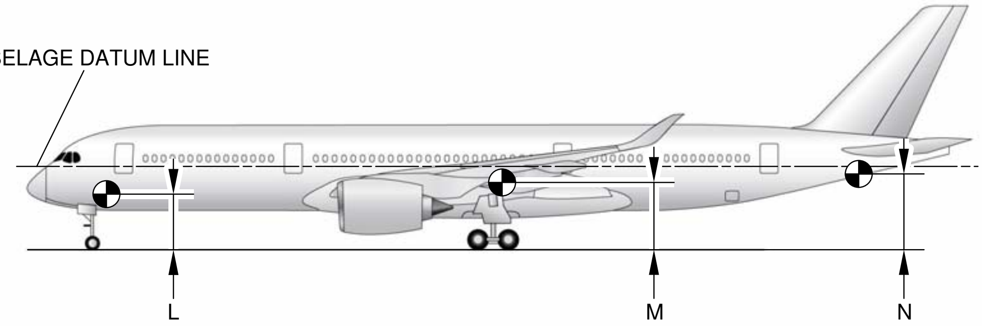
Jacking for Maintenance
Jacking Points Location (Sheet 1 of 5)
FIGURE-2-14-1-991-001-A01

**ON A/C A350-900



CONFIGURATION	CG POSITION (% MAC)	HEIGHT L m	HEIGHT L ft	HEIGHT M m	HEIGHT M ft	HEIGHT N m	HEIGHT N ft
AIRCRAFT ON WHEELS, SHOCK–ABSORBER DEFLATED, TIRES DEFLATED (RH)	20	3.08	10.10	4.69 LH 4.17 RH	15.39 LH 13.68 RH	4.91	16.11
	42	3.37	11.06	4.67 LH 4.18 RH	15.32 LH 13.71 RH	4.64	15.22
A/C ON JACKS, FDL AT 6.50 m (21.33 ft), A/C FUSELAGE PARALLEL TO THE GROUND, SHOCK–ABSORBER RELAXED, CLEARANCE OF MAIN GEAR WHEELS = 0.30 m (0.98 ft) (STANDARD TIRES 01), CLEARANCE OF NOSE GEAR WHEELS = 0.85 m (2.79 ft) (STANDARD TIRES 01)	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 (STANDARD TIRES 01) MAXIMUM JACKING WEIGHT = 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 (STANDARD TIRES 01) 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:

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

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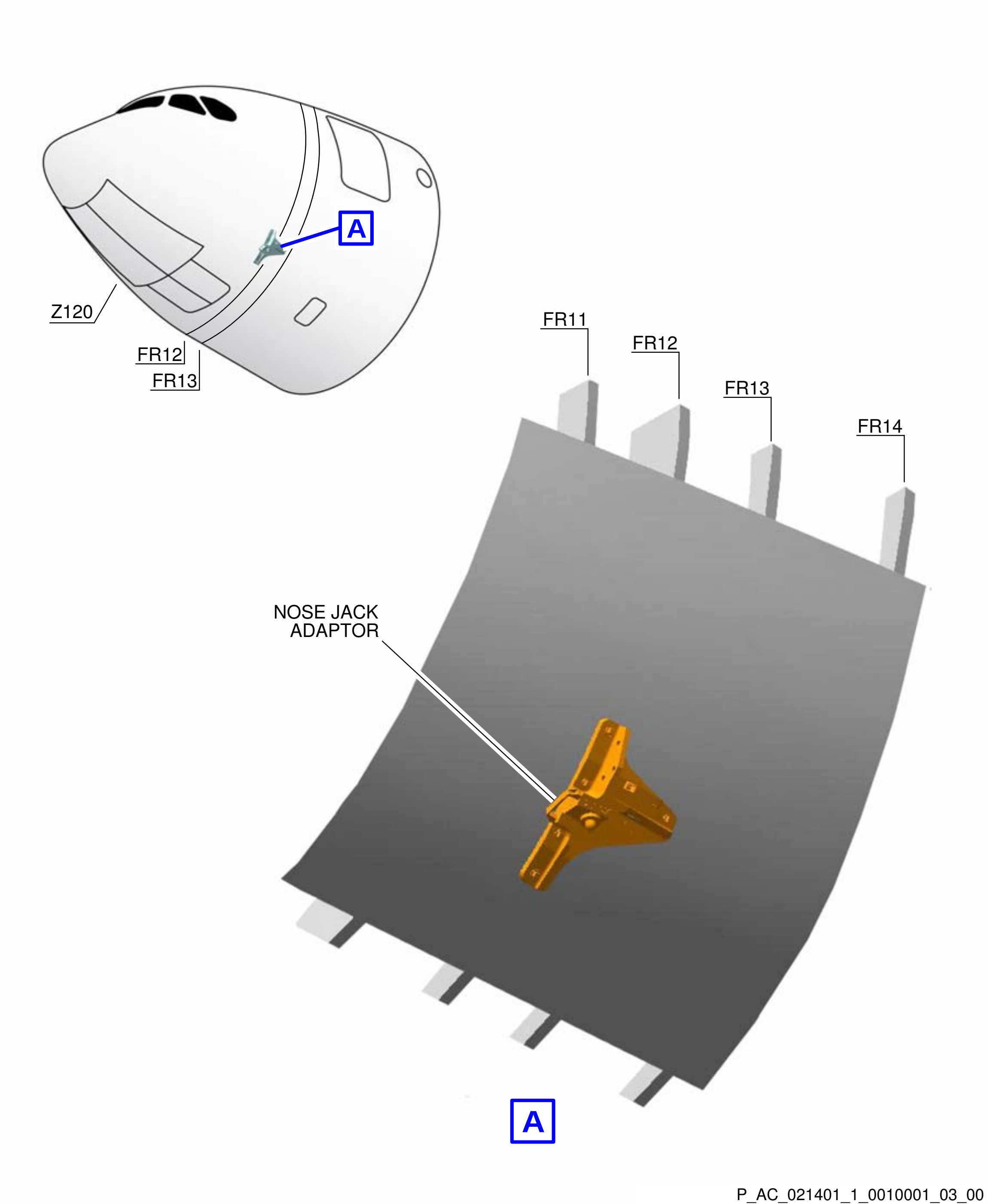
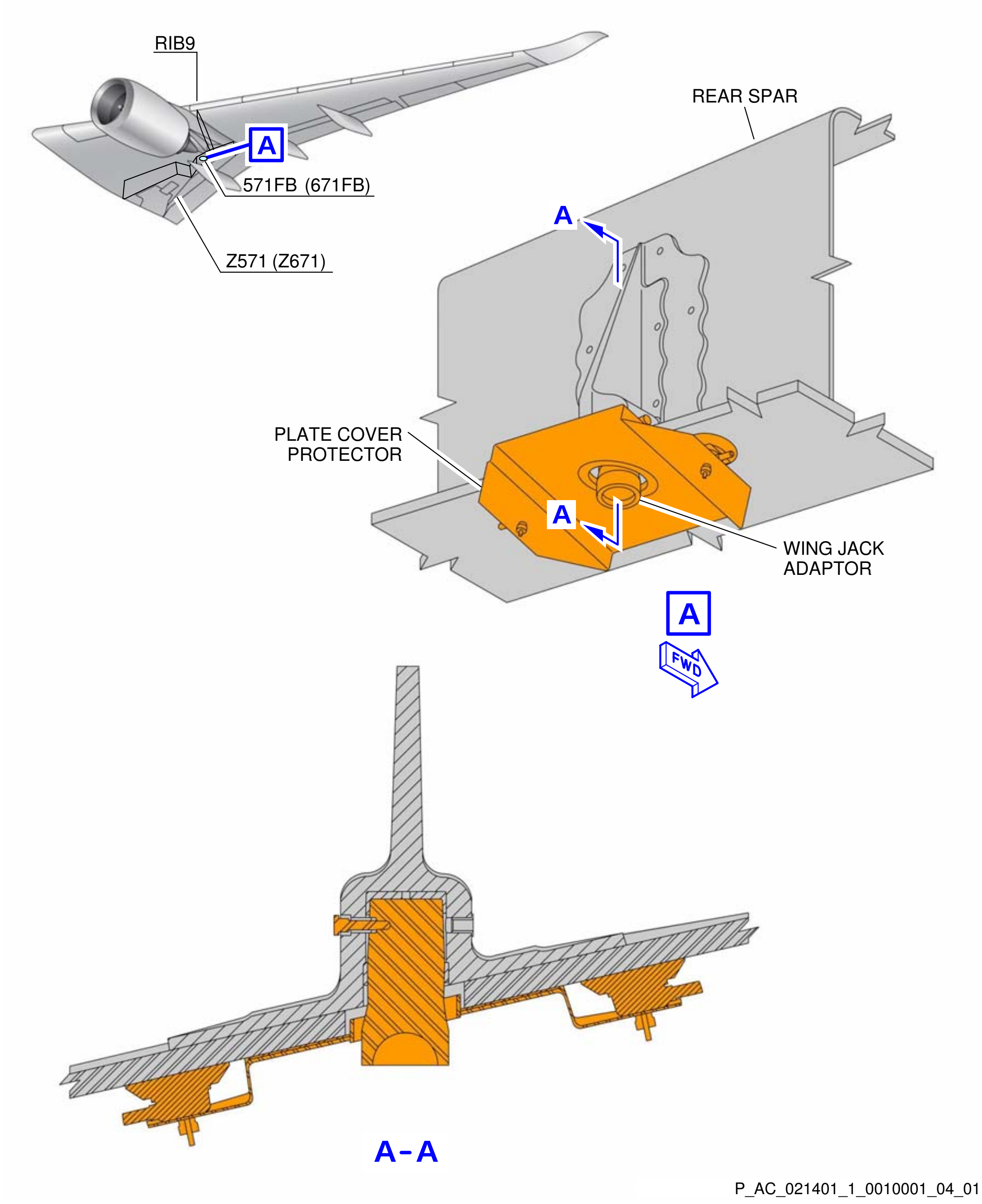
Jacking for Maintenance
Jacking Dimensions (Sheet 2 of 5)
FIGURE-2-14-1-991-001-A01

**ON A/C A350-900



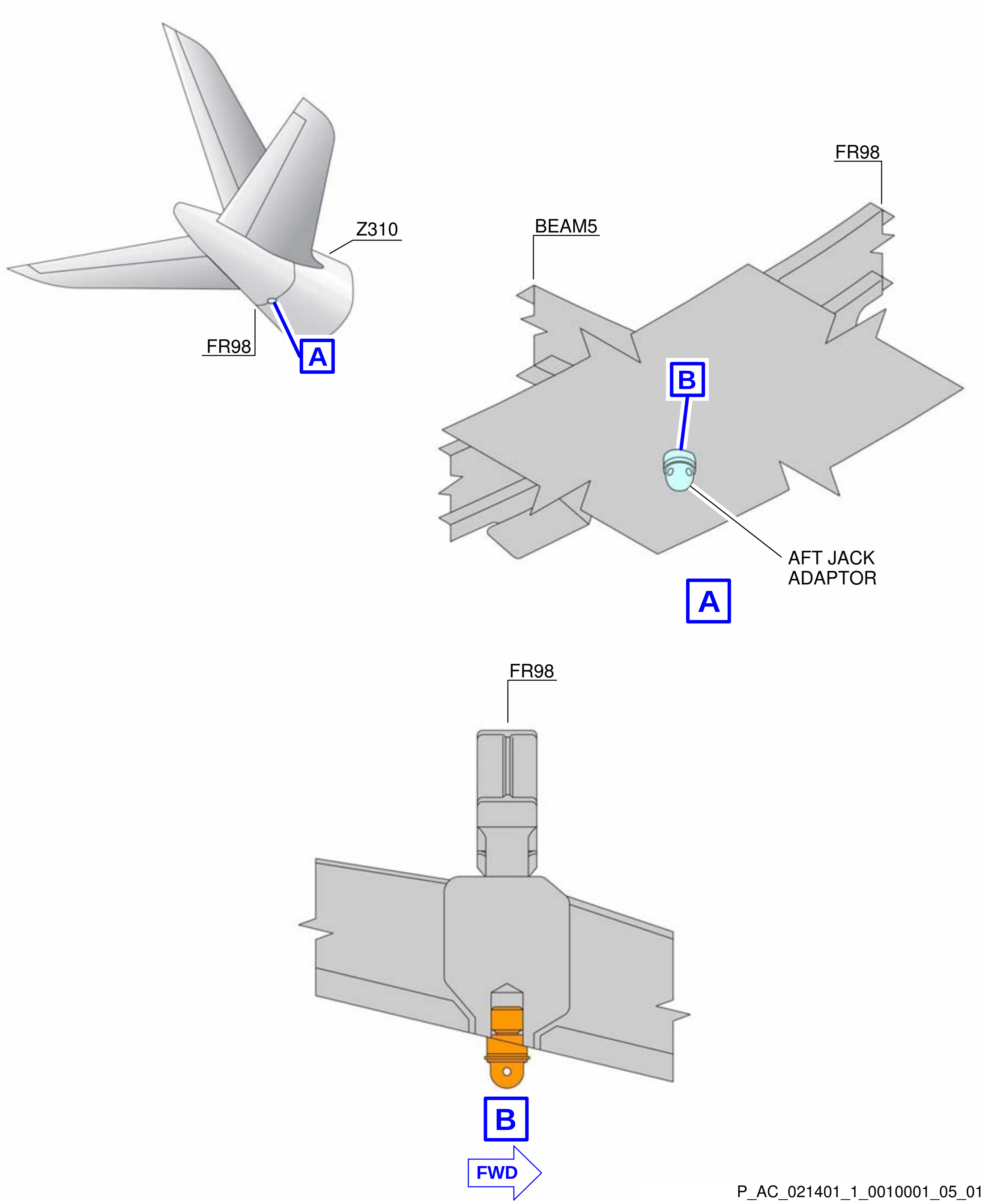
Jacking for Maintenance
Forward Jacking Point (Sheet 3 of 5)
FIGURE-2-14-1-991-001-A01

**ON A/C A350-900



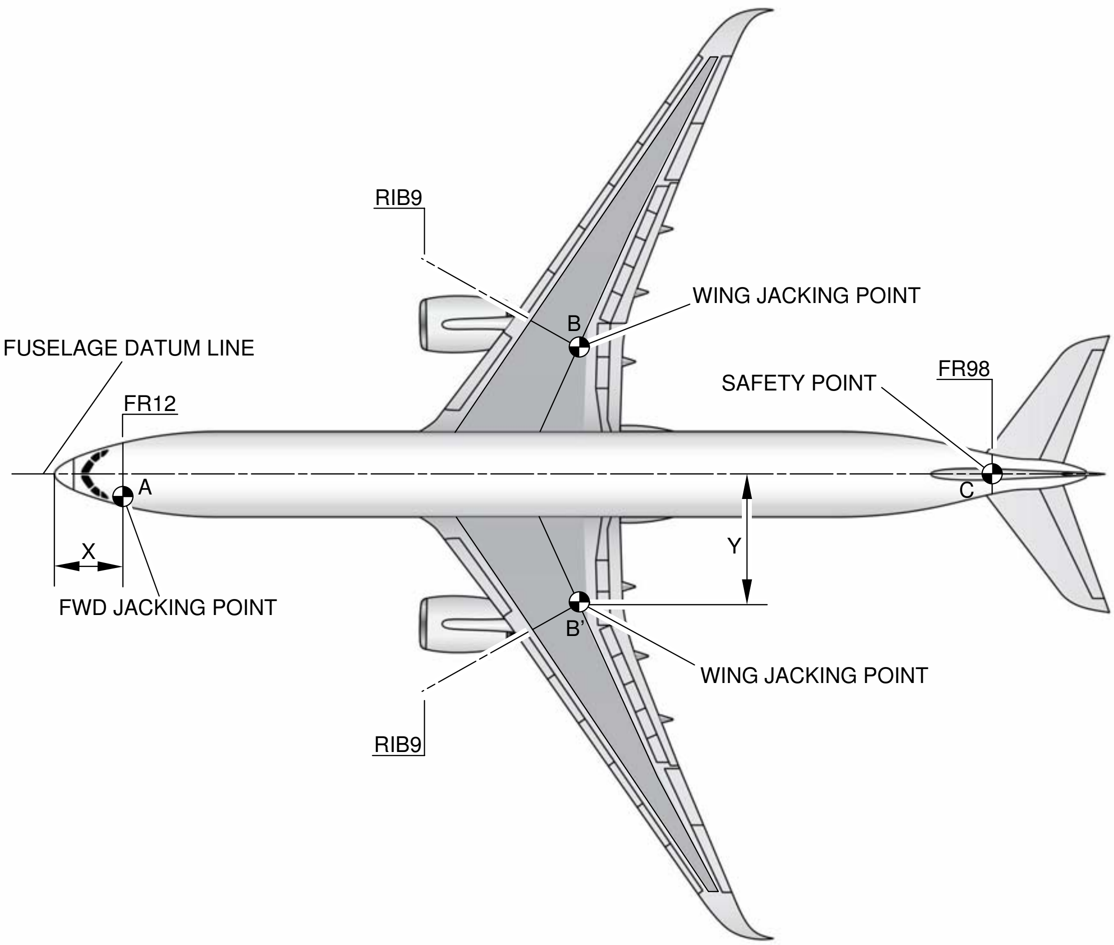
Jacking for Maintenance
Wing Jacking Point (Sheet 4 of 5)
FIGURE-2-14-1-991-001-A01

**ON A/C A350-900



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
	m	ft	m	ft	daN
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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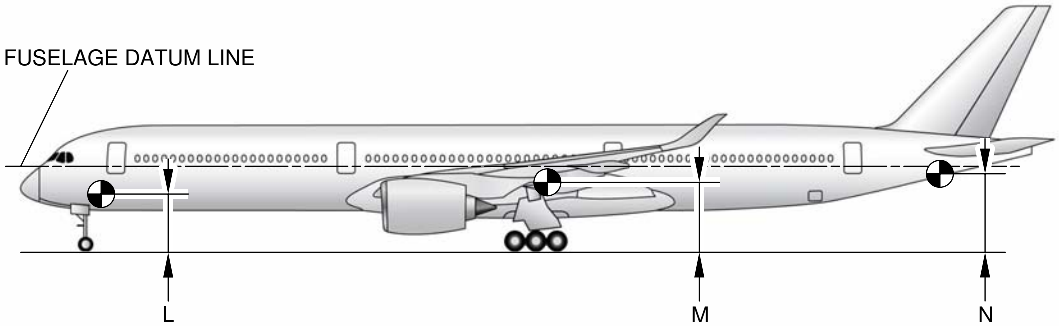
Jacking Points Location
FIGURE-2-14-1-991-002-B01

**ON A/C A350-1000



<table>
<tr><th rowspan="3">CONFIGURATION</th><th rowspan="3">CG POSITION (% MAC)</th><th colspan="6">HEIGHT</th></tr>
<tr><th colspan="2">L</th><th colspan="2">M</th><th colspan="2">N</th></tr>
<tr><th>m</th><th>ft</th><th>m</th><th>ft</th><th>m</th><th>ft</th></tr>
<tr><td rowspan="2">AIRCRAFT ON WHEELS, SHOCK–ABSORBER DEFLATED, TIRES DEFLATED (RH)</td><td>21.5</td><td>3.09</td><td>10.14</td><td>4.65 LH
4.11 RH</td><td>15.26 LH
13.48 RH</td><td>4.81</td><td>15.78</td></tr>
<tr><td>41.1</td><td>3.33</td><td>10.93</td><td>4.64 LH
4.11 RH</td><td>15.22 LH
13.48 RH</td><td>4.59</td><td>15.06</td></tr>
<tr><td rowspan="2">A/C ON JACKS, FDL AT 6.50 m (21.33 ft), A/C FUSELAGE PARALLEL TO THE GROUND, SHOCK–ABSORBER RELAXED, CLEARANCE OF MAIN GEAR WHEELS = 1.26 m (4.13 ft) (STANDARD TIRES 01), CLEARANCE OF NOSE GEAR WHEELS = 1.40 m (4.59 ft) (STANDARD TIRES 01)</td><td>21.5</td><td>4.32</td><td>14.17</td><td>5.66</td><td>18.57</td><td>6.09</td><td>19.98</td></tr>
<tr><td>41.1</td><td>4.32</td><td>14.17</td><td>5.66</td><td>18.57</td><td>6.09</td><td>19.98</td></tr>
<tr><td rowspan="2">AIRCRAFT ON WHEELS (STANDARD TIRES 01) MAXIMUM JACKING WEIGHT = 189 550 kg (417 887 lb)</td><td>21.5</td><td>3.04</td><td>9.97</td><td>4.56</td><td>14.96</td><td>5.15</td><td>16.90</td></tr>
<tr><td>41.1</td><td>3.27</td><td>10.73</td><td>4.55</td><td>14.93</td><td>4.92</td><td>16.14</td></tr>
<tr><td rowspan="2">AIRCRAFT ON WHEELS (STANDARD TIRES 01) A/C WEIGHT = 145 986 kg (321 844 lb)</td><td>21.5</td><td>3.10</td><td>10.17</td><td>4.62</td><td>15.16</td><td>5.20</td><td>17.06</td></tr>
<tr><td>41.1</td><td>3.39</td><td>11.12</td><td>4.60</td><td>15.09</td><td>4.91</td><td>16.11</td></tr>
</table>

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

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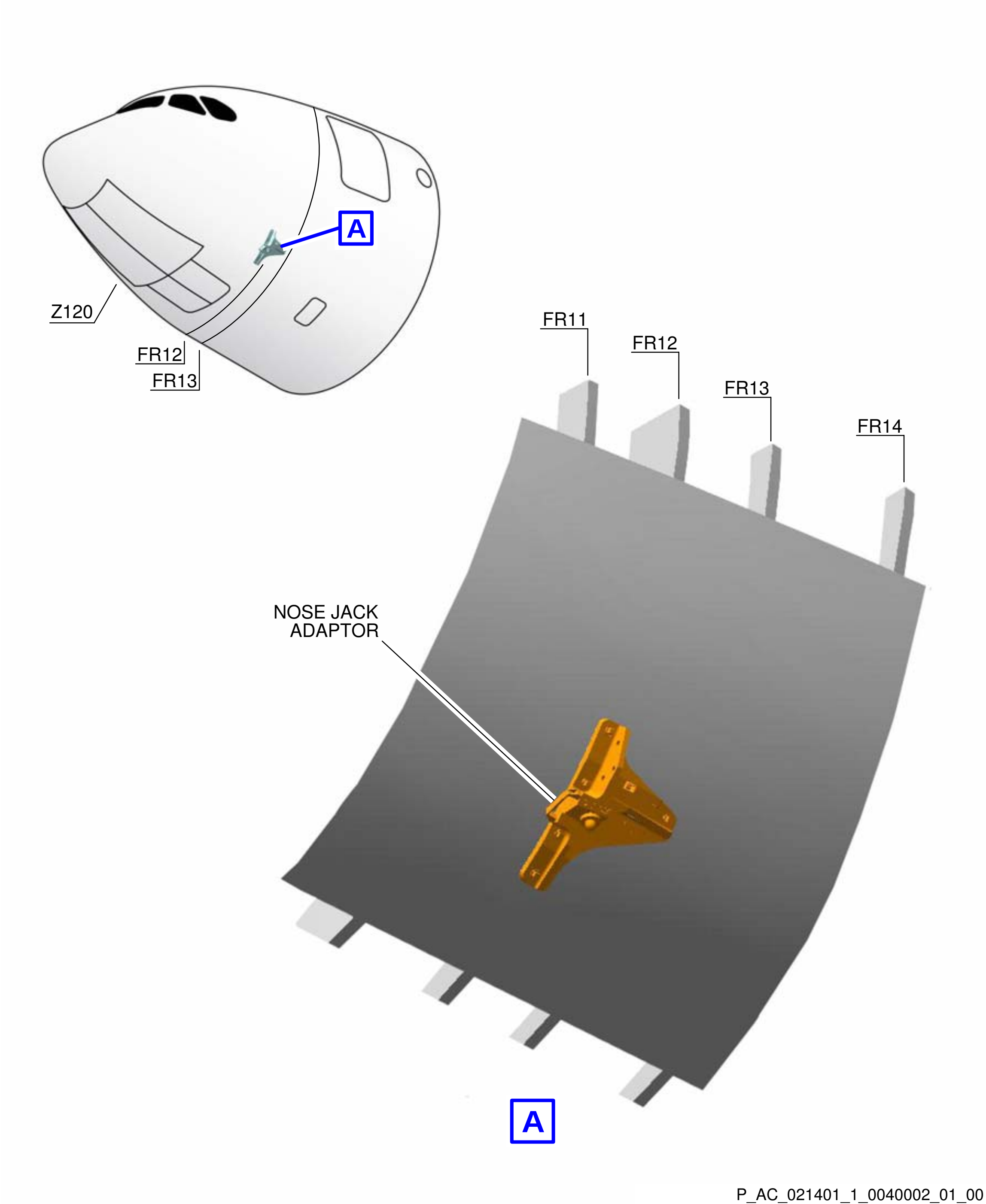
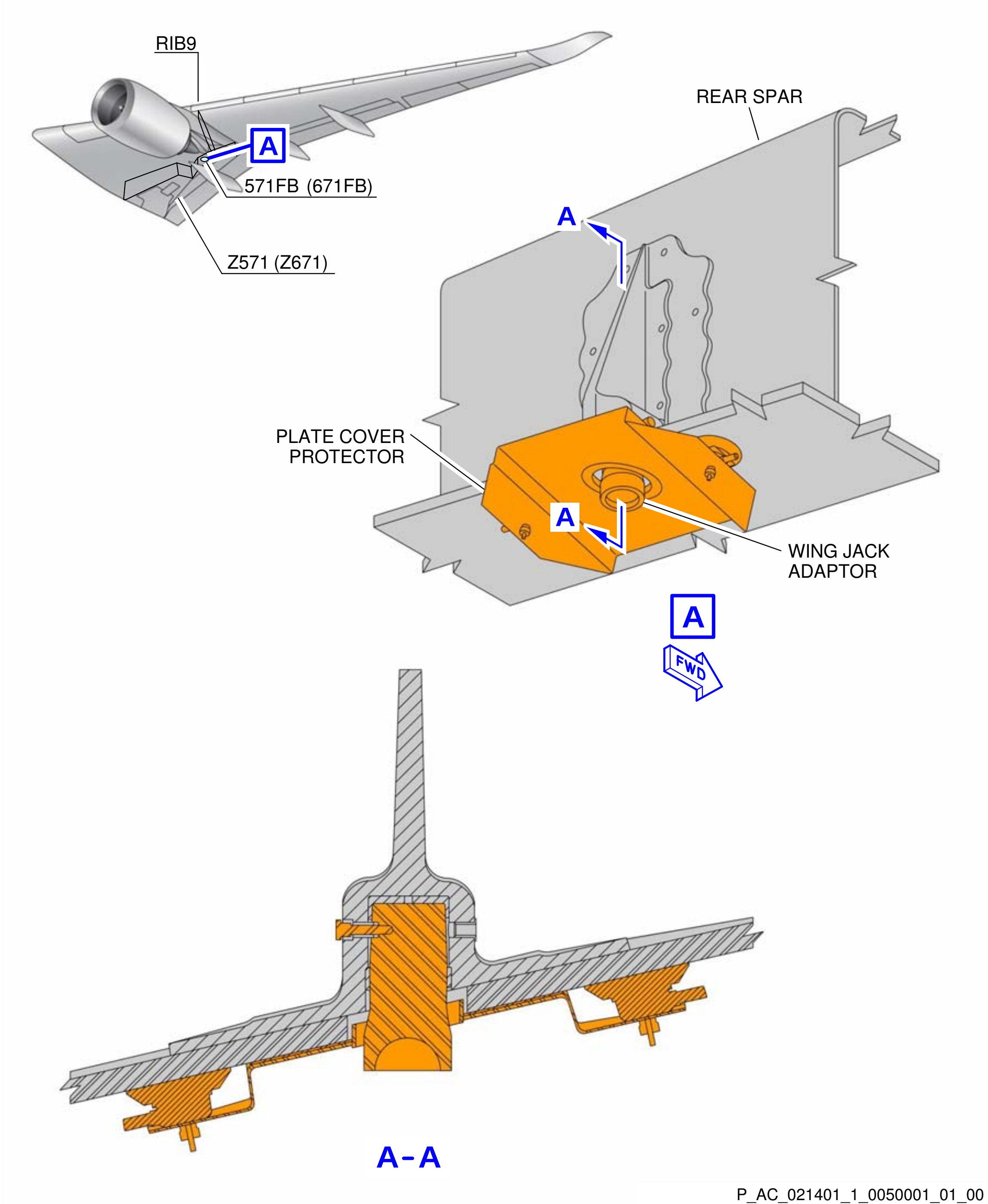
Jacking Dimensions
FIGURE-2-14-1-991-003-B01

**ON A/C A350-1000



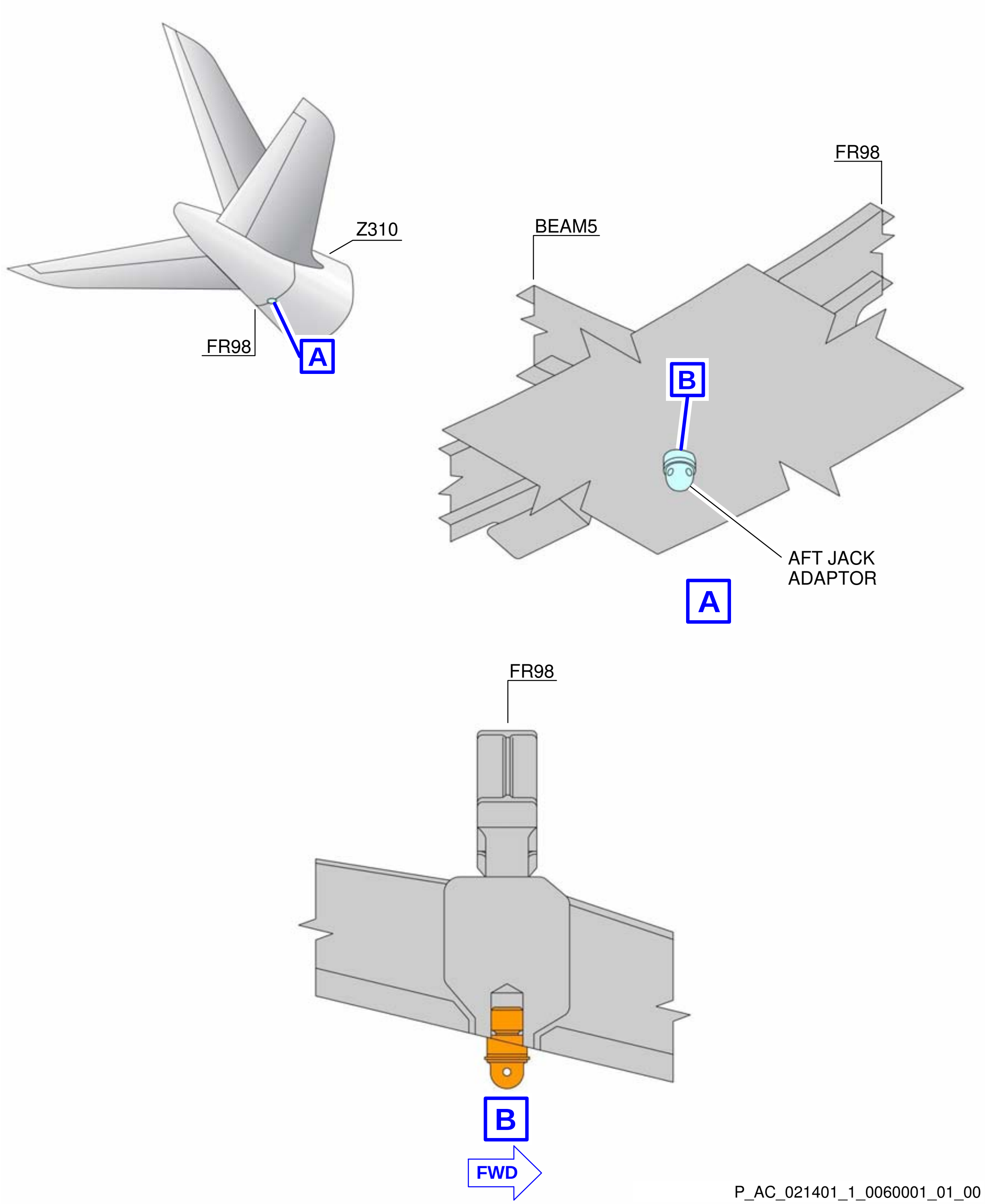
Forward Jacking Point
FIGURE-2-14-1-991-004-B01

**ON A/C A350-1000



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

**ON A/C A350-1000



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.

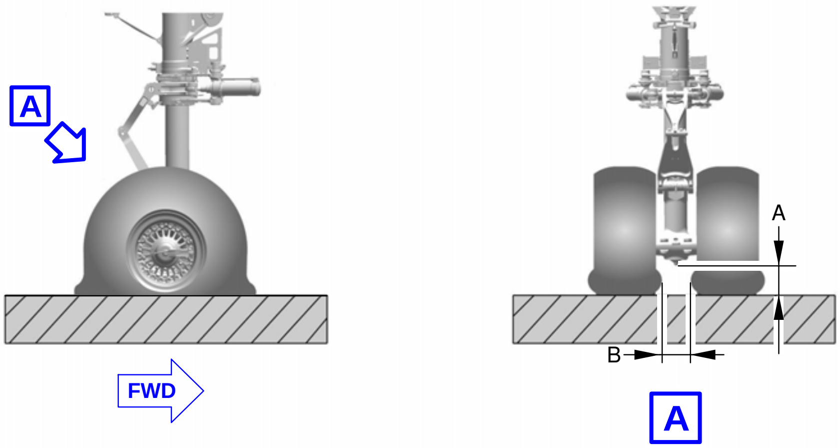
****ON A/C A350-1000**

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.

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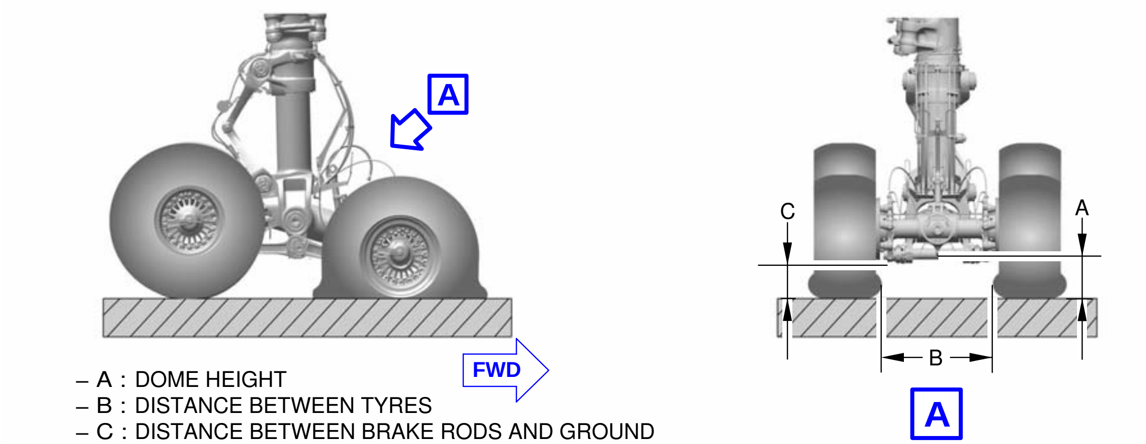
Nose Landing Gear Jacking Point Heights
FIGURE-2-14-2-991-002-A01

**ON A/C A350-900



A350–900 MLG (1 400 x 530 R23)														
CONFIGURATION (ASSUME ALL OTHER TYRES ON THE A/C ARE INTACT)	WEIGHT (T)	CG (% MAC)	DIM A FWD		DIM A AFT		DIM B FWD		DIM B AFT		DIM C FWD		DIM C AFT	
			mm	in	mm	in	mm	in	mm	in	mm	in	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 TYRE 25 mm 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 TYRE 25 mm 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 & 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 & 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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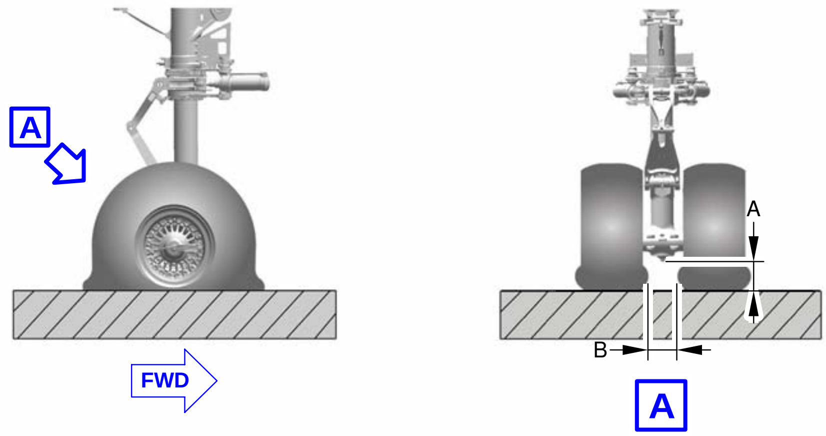
Main Landing Gear Jacking Point Heights
FIGURE-2-14-2-991-003-A01

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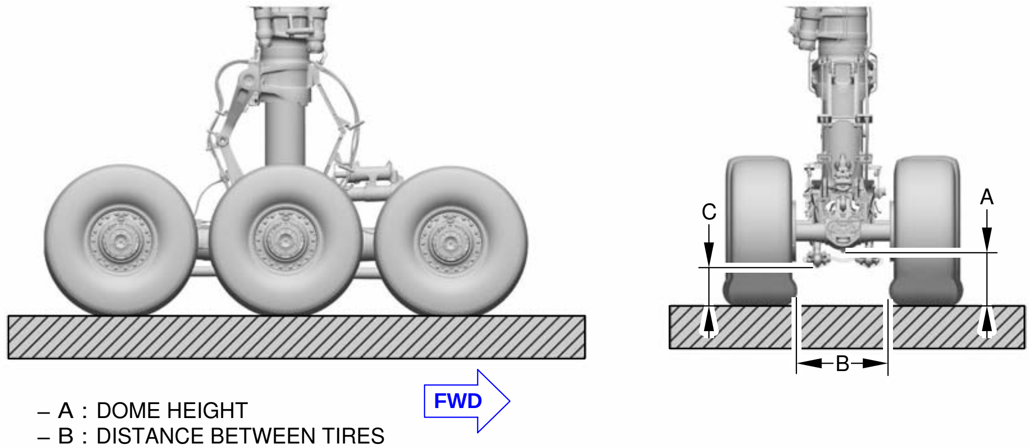
Nose Landing Gear Jacking Point Heights
FIGURE-2-14-2-991-004-A01

**ON A/C A350-1000



– A : DOME HEIGHT
– B : DISTANCE BETWEEN TIRES
– C : DISTANCE BETWEEN BRAKE RODS AND GROUND

A350–1000 MLG (50x20R22)														
CONFIGURATION (ASSUME ALL OTHER TIRES ON THE A/C ARE INTACT)	WEIGHT (T)	CG (% MAC)	DIM A FWD		DIM A AFT		DIM B FWD		DIM B AFT		DIM C FWD		DIM C AFT	
			mm	in	mm	in	mm	in	mm	in	mm	in	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 (ASSUME ALL OTHER TIRES ON THE A/C ARE INTACT)	WEIGHT (T)	CG (% MAC)	DIM A FWD		DIM A AFT		DIM B FWD		DIM B AFT		DIM C FWD		DIM C AFT	
			mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
TIRE CHANGE														
FWD MAX GROWN TIRE 25 mm 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 TIRE 25 mm 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 & 50% RIM DAMAGE	MRW	25	120	4.72	120	4.72	722	28.43	722	28.43	0	0	0	0
12 FLAT TIRES & 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

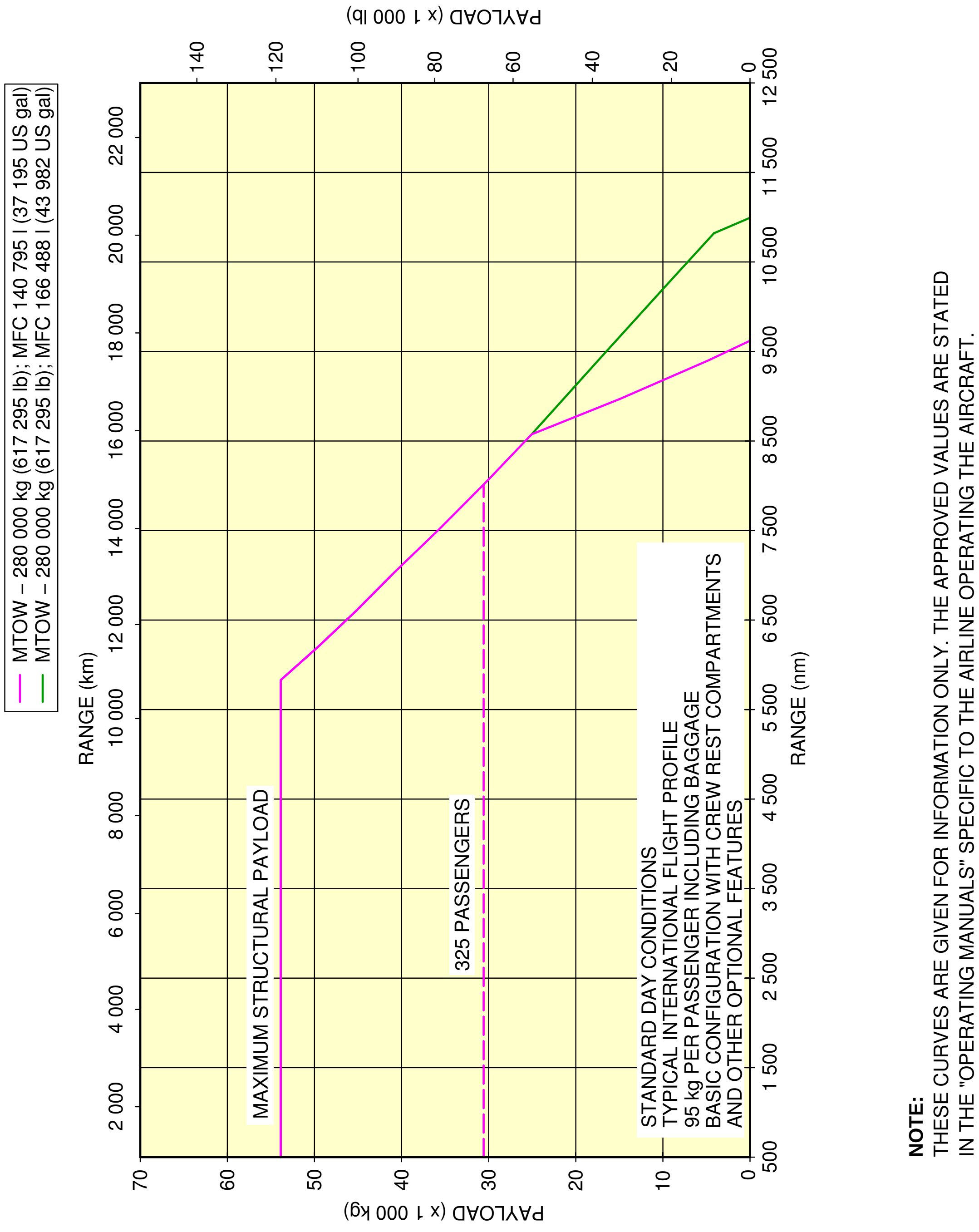
3-2-0 Payload/Range - ISA Conditions

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



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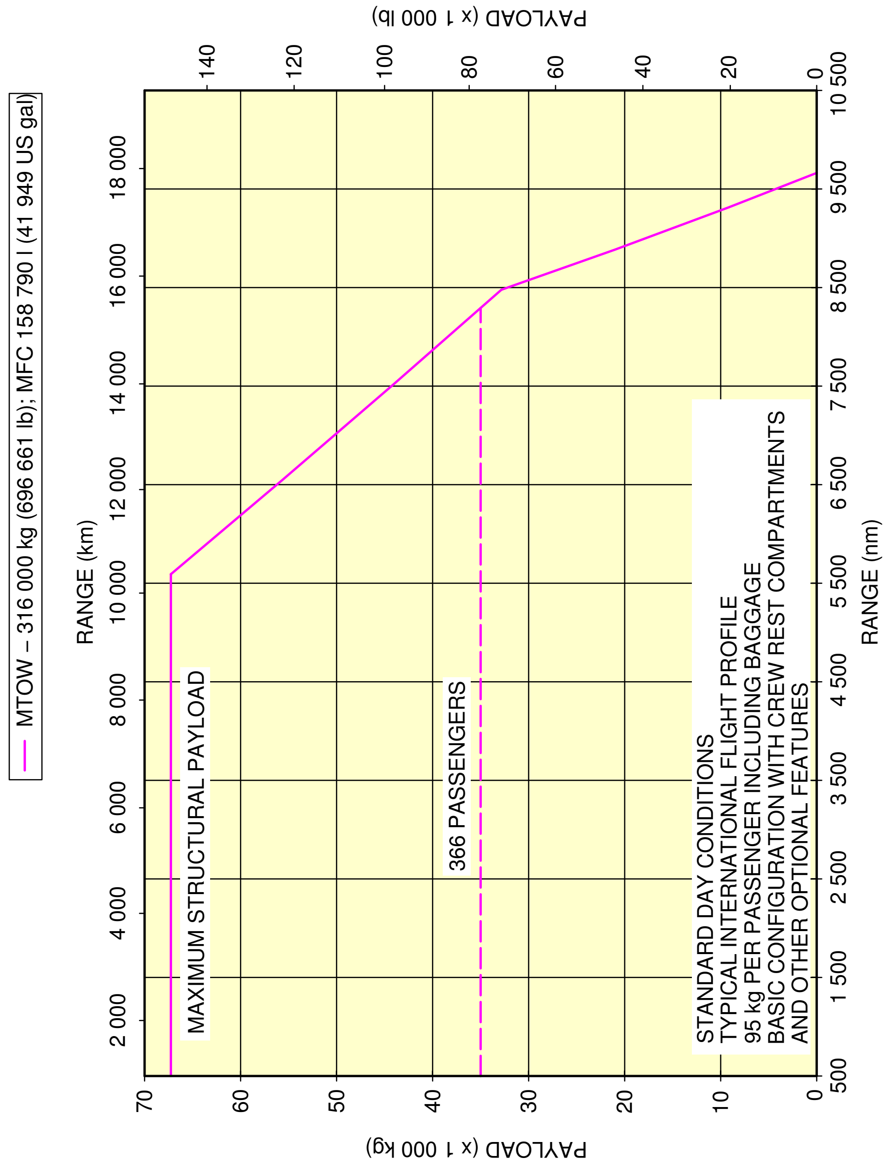
Payload/Range - ISA Conditions
FIGURE-3-2-0-991-001-A01

****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.

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

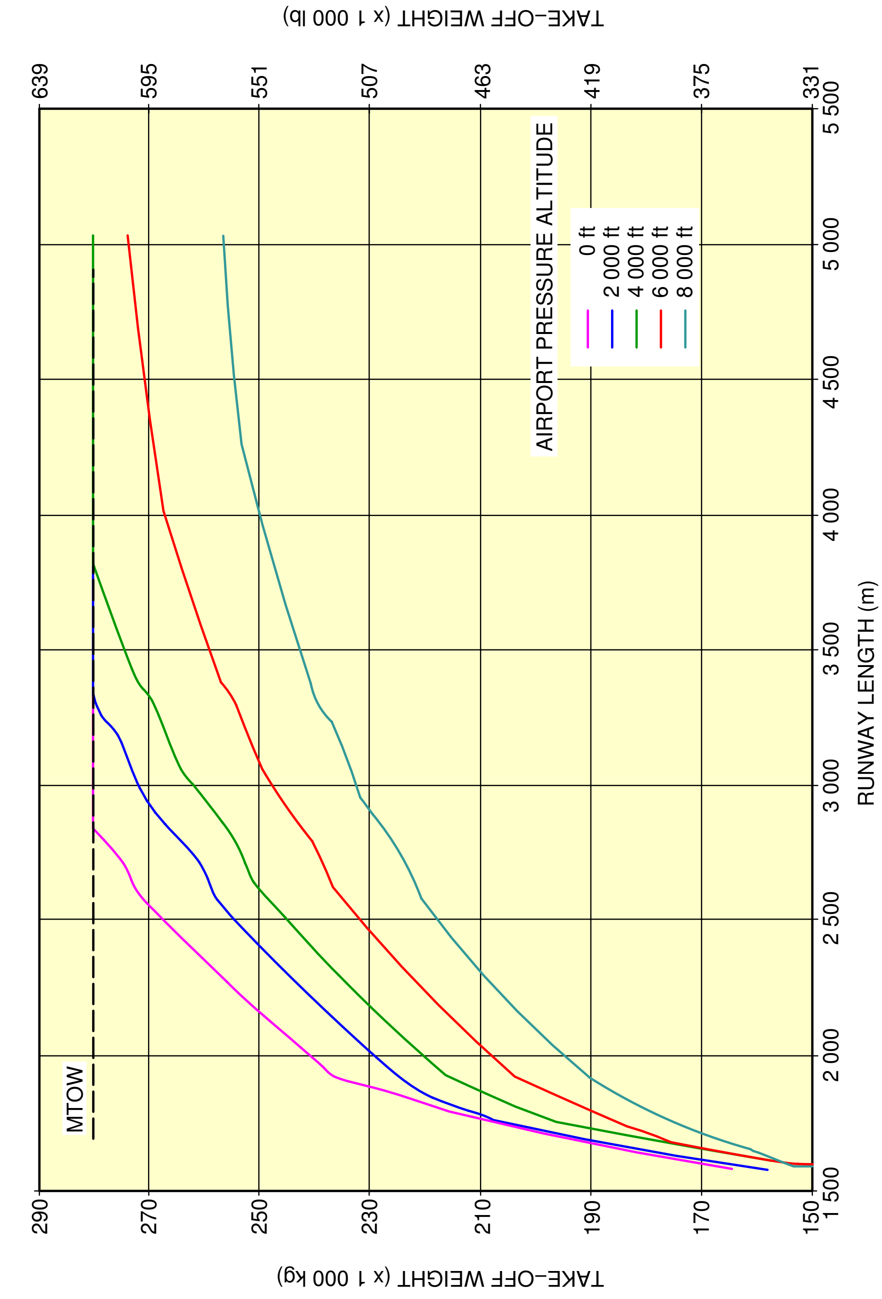
3-3-0 Take-Off Weight Limitation

****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.

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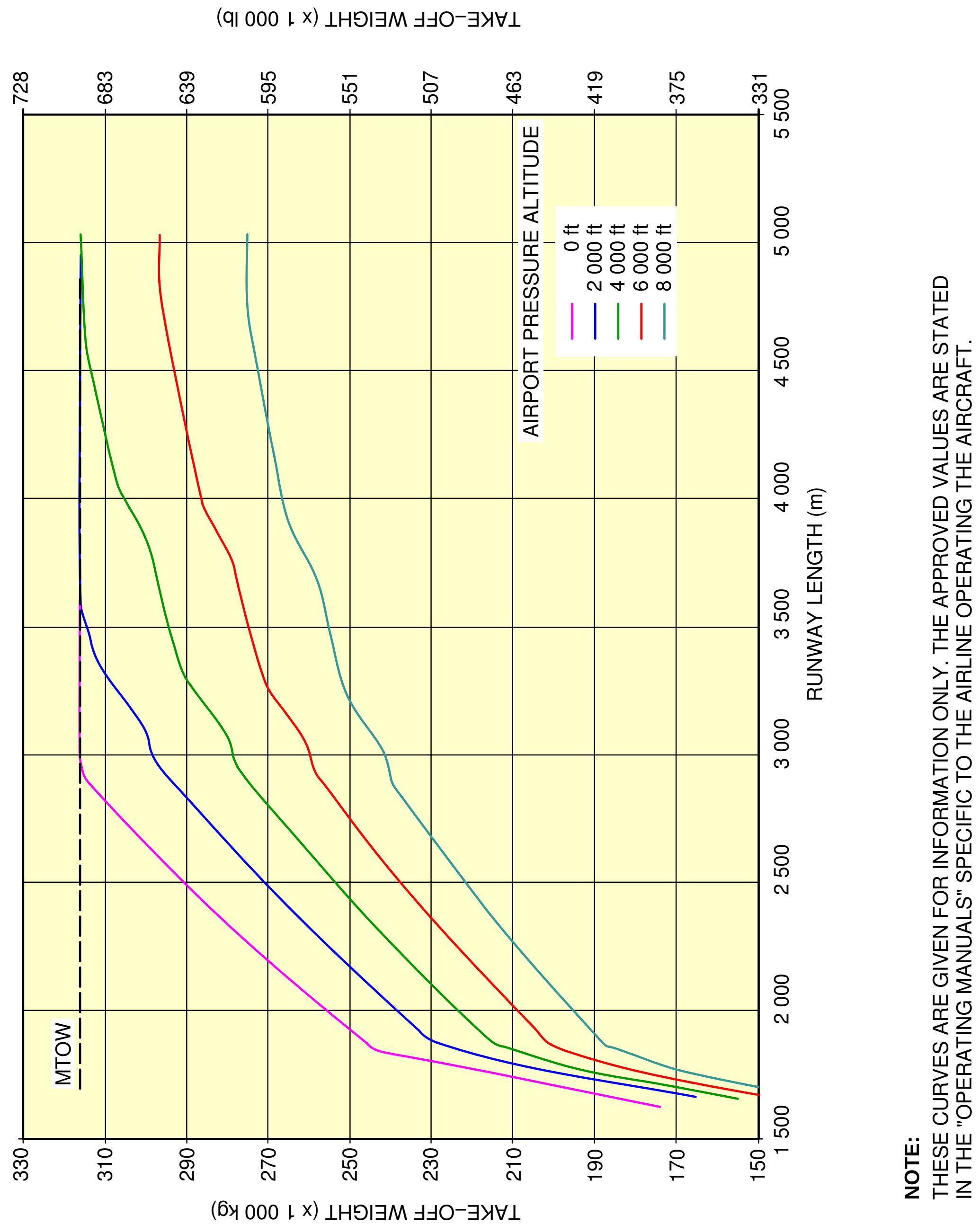
ISA Conditions
FIGURE-3-3-0-991-001-A01

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



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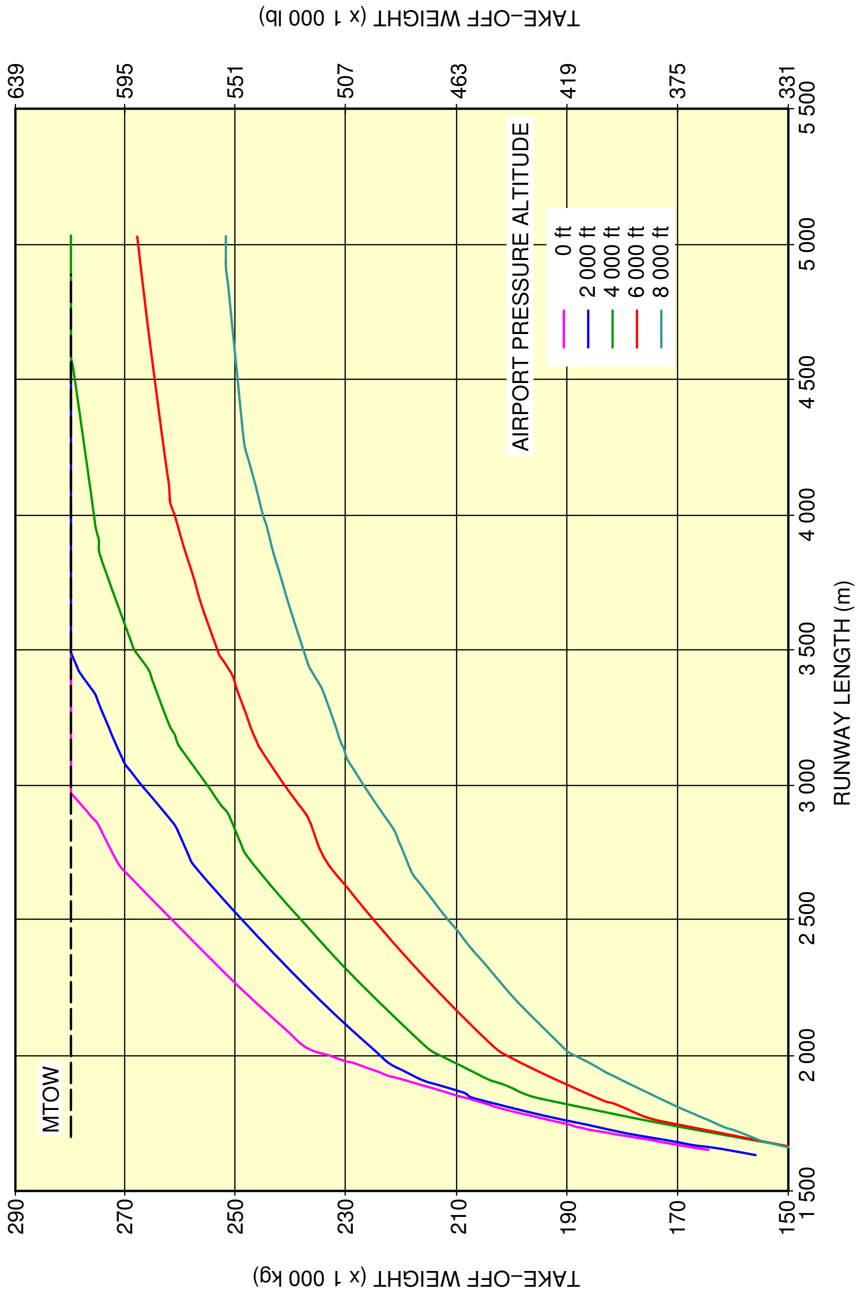
ISA Conditions
FIGURE-3-3-0-991-001-E01

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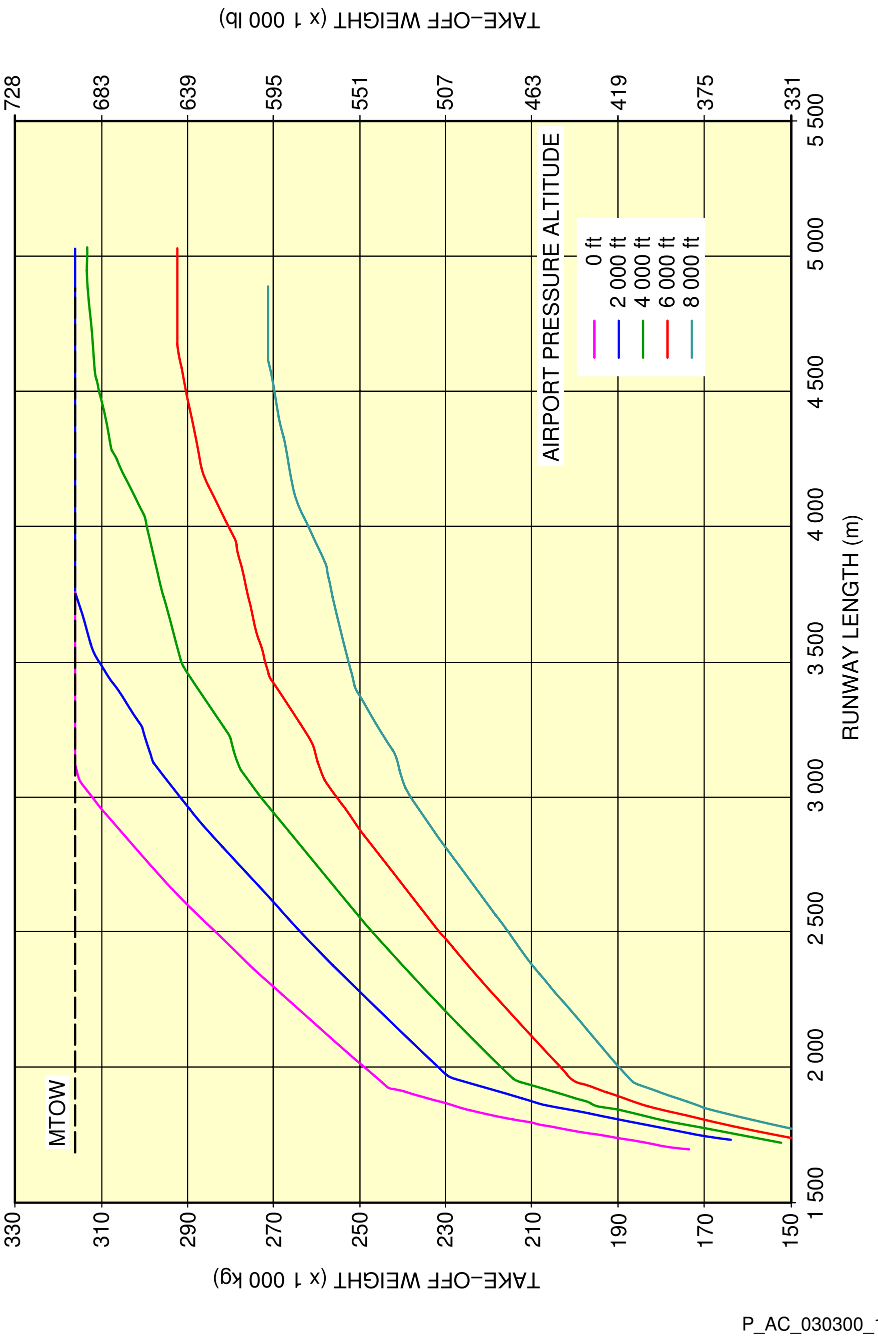
ISA + 15 °C (ISA + 27 °F) Conditions
FIGURE-3-3-0-991-002-A01

****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.

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

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.

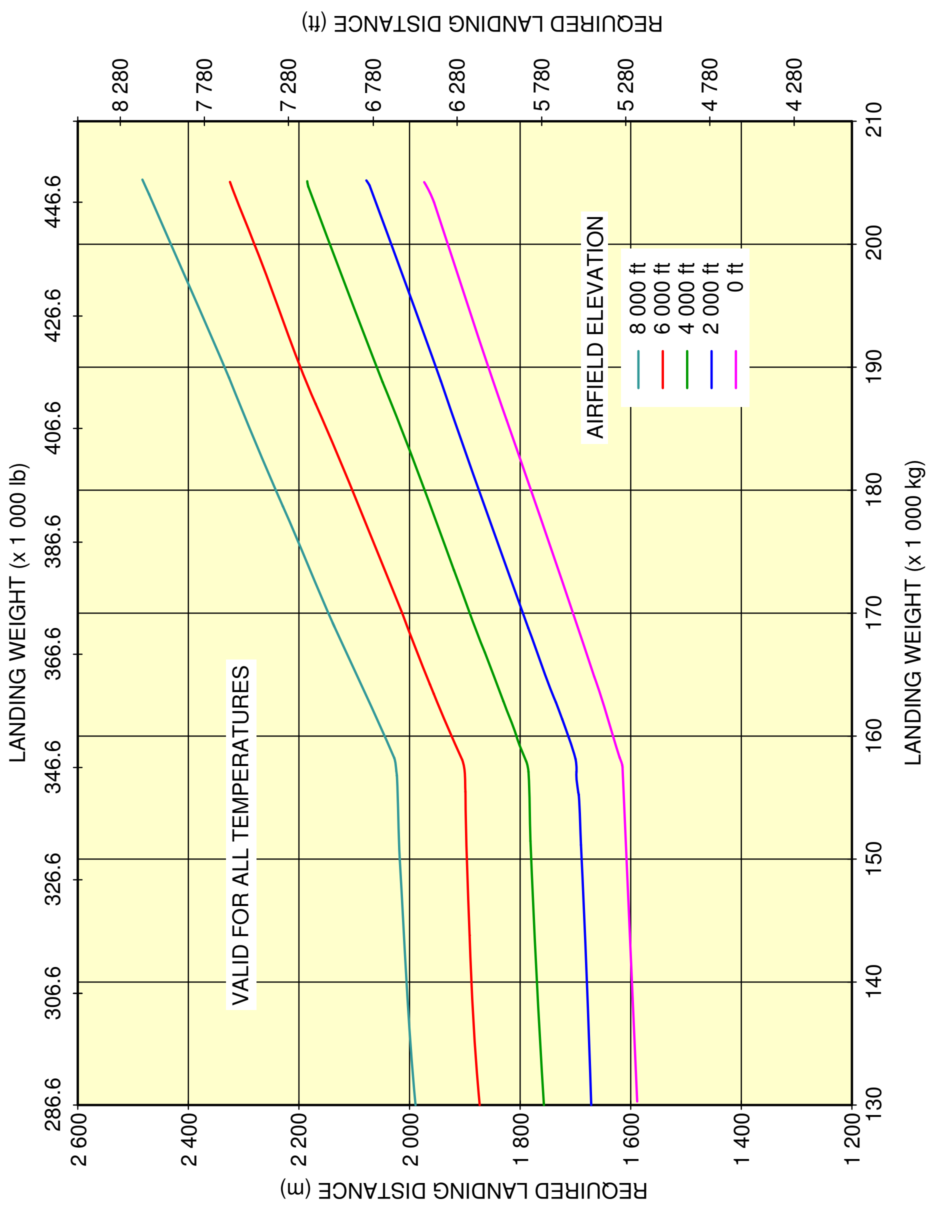
3-4-0 Landing Field Length

****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**



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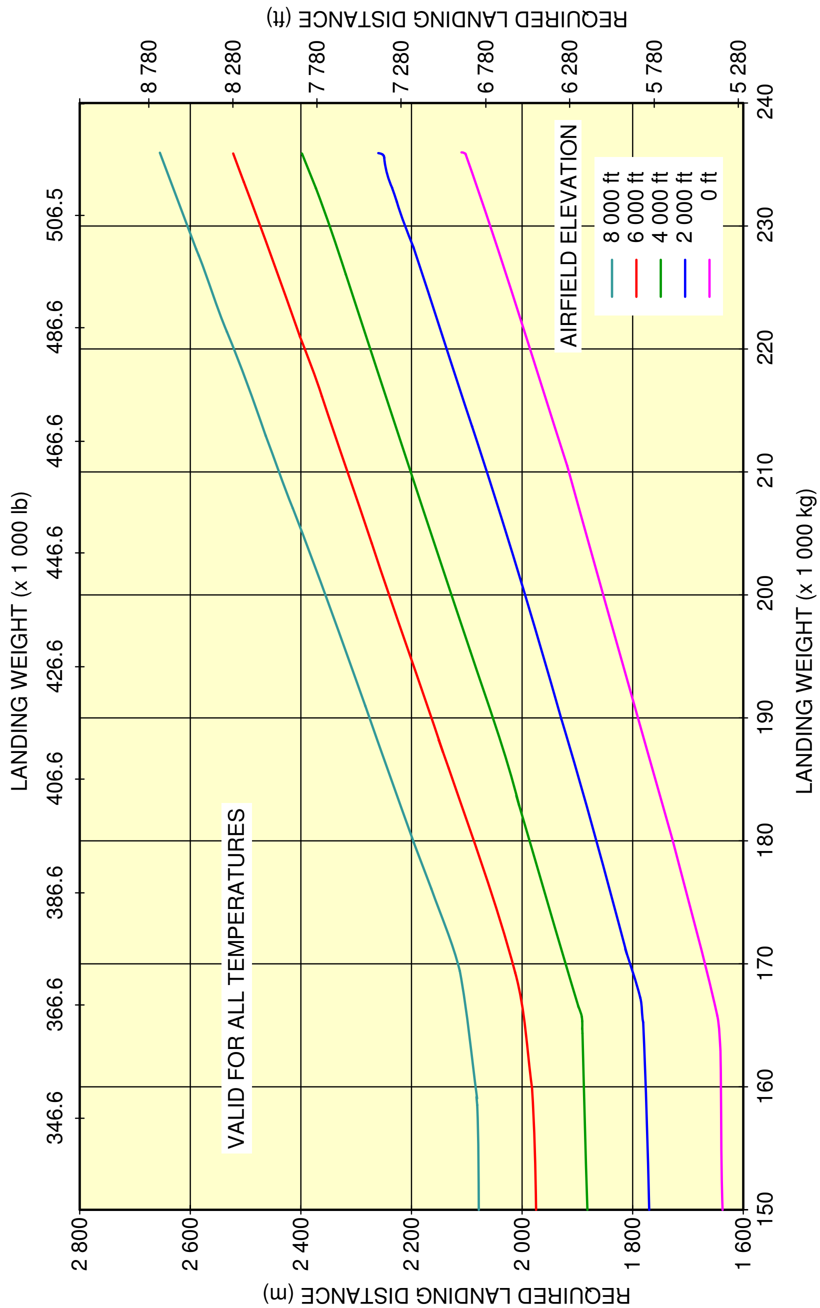
Landing Field Length
FIGURE-3-4-0-991-001-A01

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

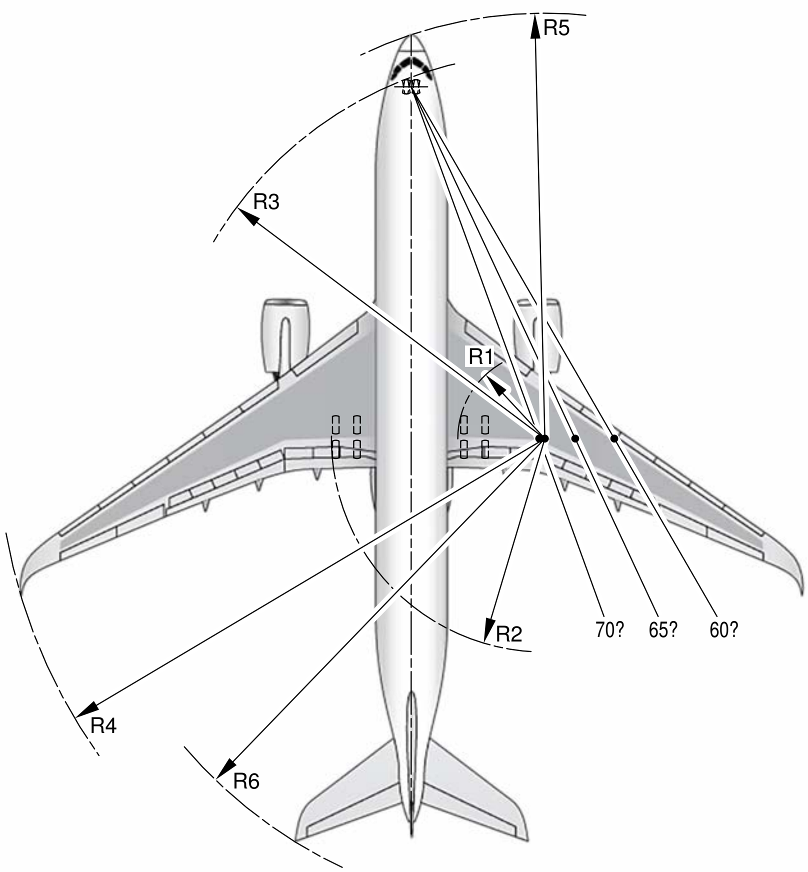
4-2-0 Turning Radii

****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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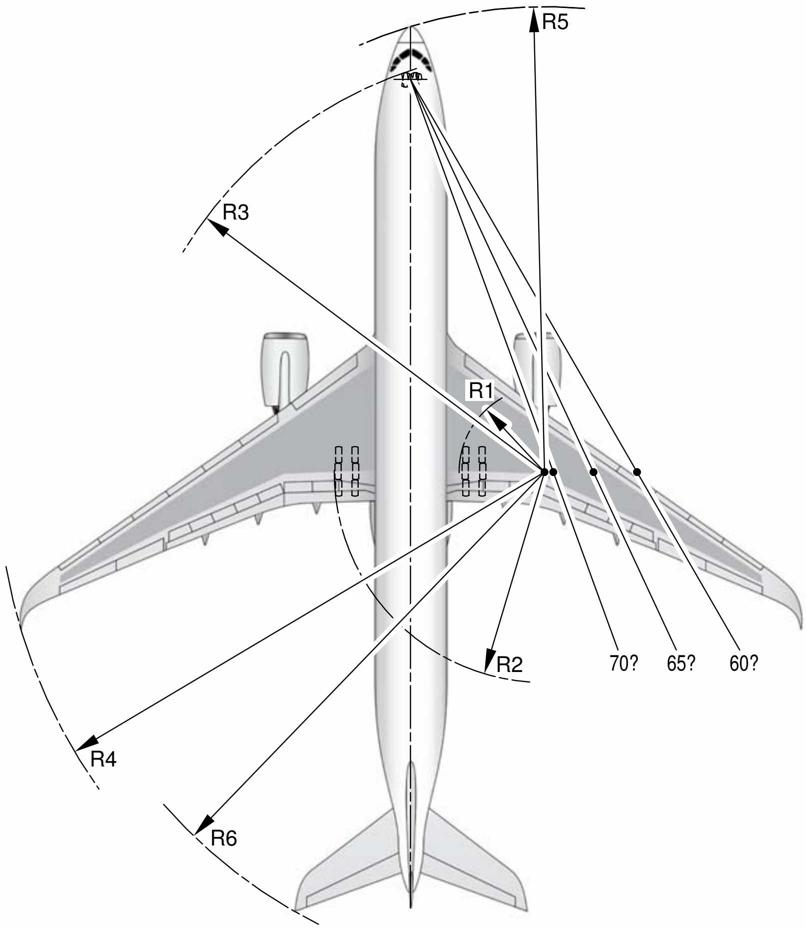
Turning Radii
(Sheet 2 of 2)
FIGURE-4-2-0-991-001-A01

**ON A/C A350-1000



NOTE:
FOR TURNING RADII VALUES, REFER TO SHEET 2.

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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	R6 TAIL
2	20	14.7	m	119.4	130.2	128.6	156.8	129.3	138.2
			ft	392	427	422	514	424	453
2	25	19.8	m	85.9	96.6	96.4	123.3	97.6	106.2
			ft	282	317	316	405	320	348
2	30	24.2	m	67.9	78.6	79.8	105.5	81.3	89.5
			ft	223	258	262	346	267	294
2	35	28.5	m	55.5	66.2	68.6	93.2	70.4	78.3
			ft	182	217	225	306	231	257
2	40	33.3	m	45.1	55.8	59.6	82.9	61.8	69.3
			ft	148	183	196	272	203	227
2	45	37.4	m	38.1	48.8	53.9	76.1	56.4	63.5
			ft	125	160	177	250	185	208
2	50	41.4	m	32.5	43.2	49.6	70.5	52.3	59.0
			ft	107	142	163	231	172	194
2	55	45.6	m	27.4	38.2	45.9	65.6	48.9	55.2
			ft	90	125	150	215	160	181
2	60	49.2	m	23.7	34.4	43.3	61.9	46.5	52.4
			ft	78	113	142	203	153	172
2	65	52.6	m	20.5	31.2	41.2	58.8	44.7	50.2
			ft	67	102	135	193	147	165
2	70	56.0	m	17.5	28.3	39.5	55.9	43.1	48.2
			ft	58	93	130	183	141	158
2	75 (MAX)	63.7	m	11.7	22.4	36.5	50.3	40.4	44.6
			ft	38	74	120	165	133	146
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.

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Turning Radii
(Sheet 2 of 2)
FIGURE-4-2-0-991-001-B01

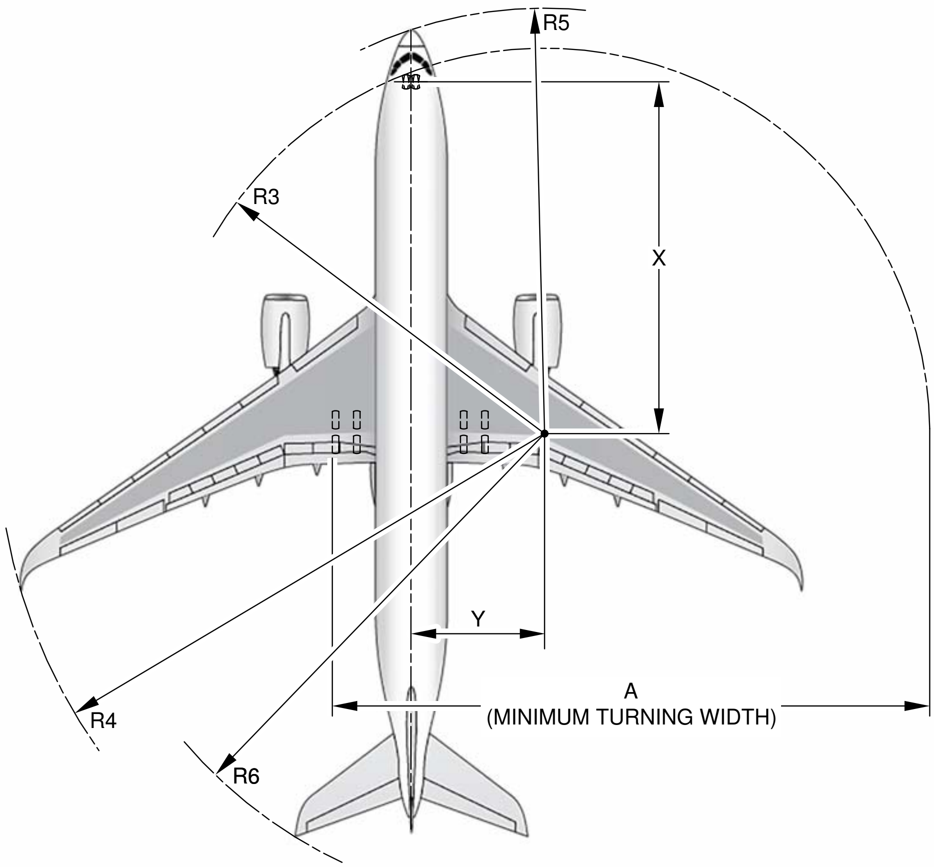
4-3-0 Minimum Turning Radii

****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.

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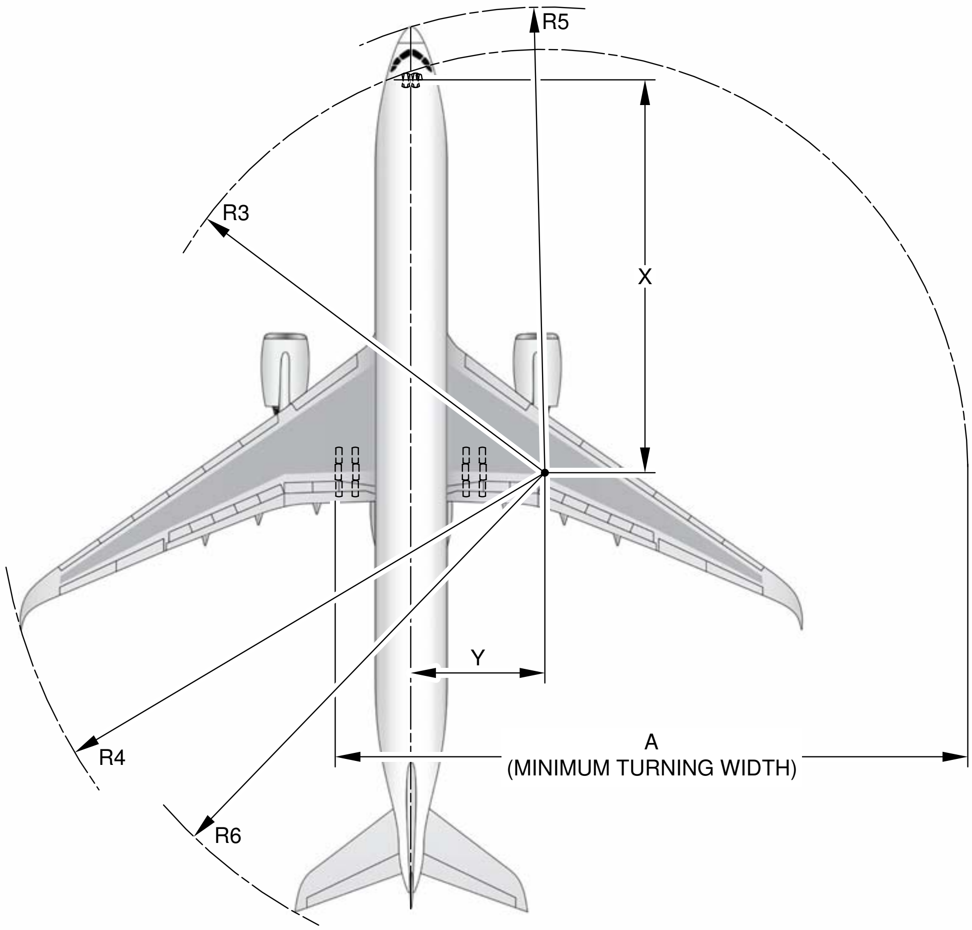
Minimum Turning Radii
FIGURE-4-3-0-991-001-A01

**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.

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

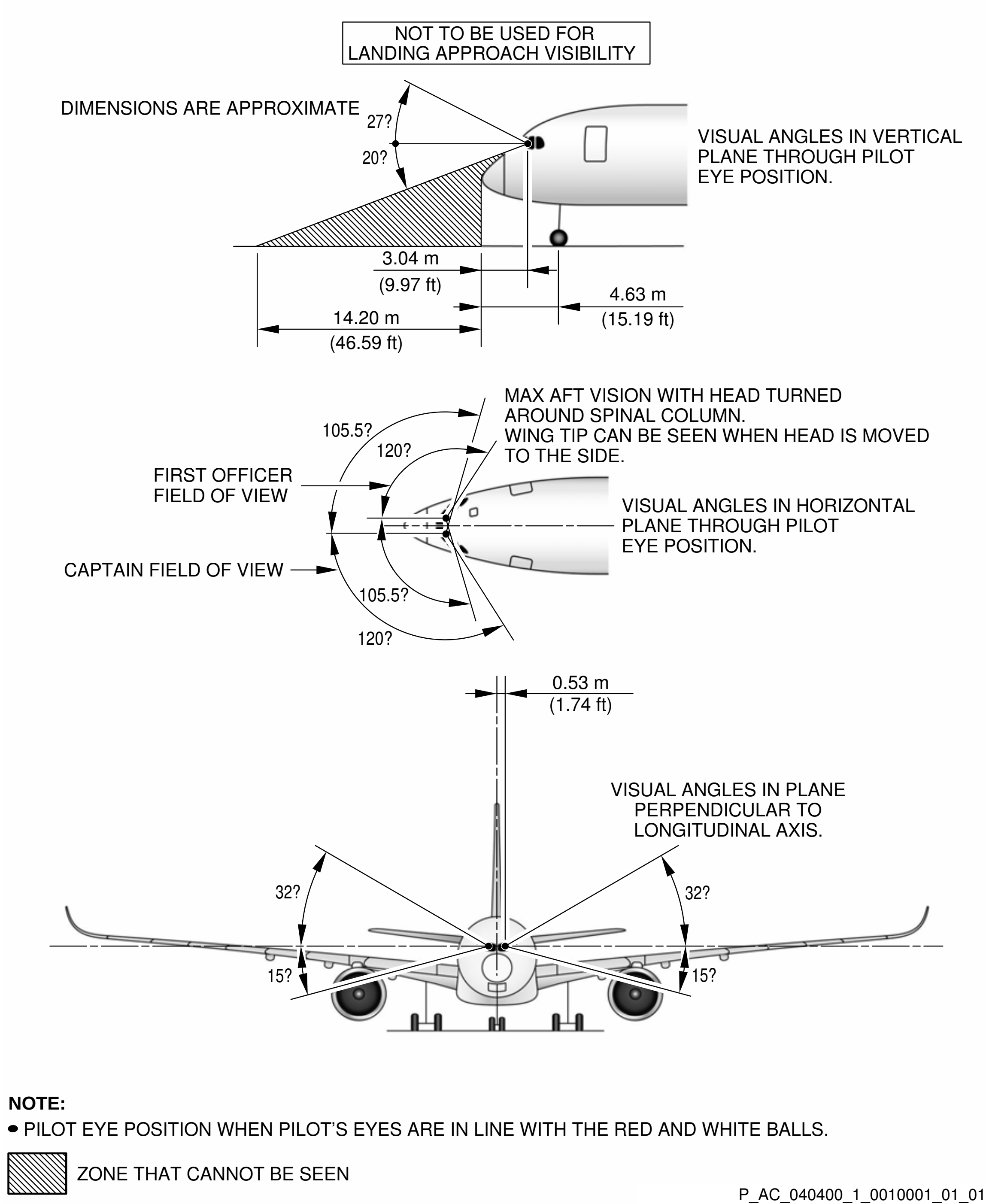
4-4-0 Visibility from Cockpit in Static Position

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

Visibility from Cockpit in Static Position

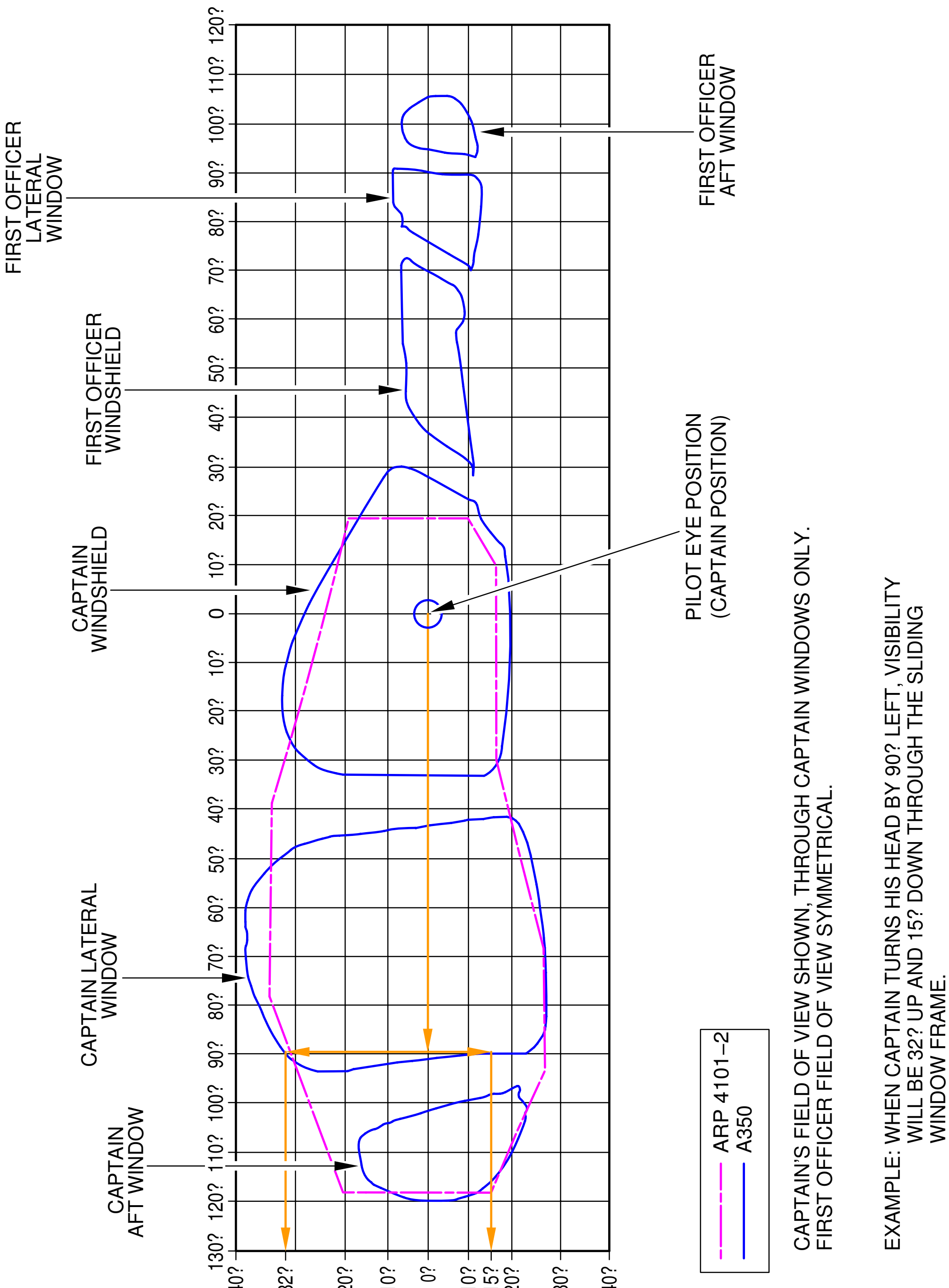
1. This section gives the visibility from cockpit in static position.

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



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

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



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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 2 methods:
   - Oversteering 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.

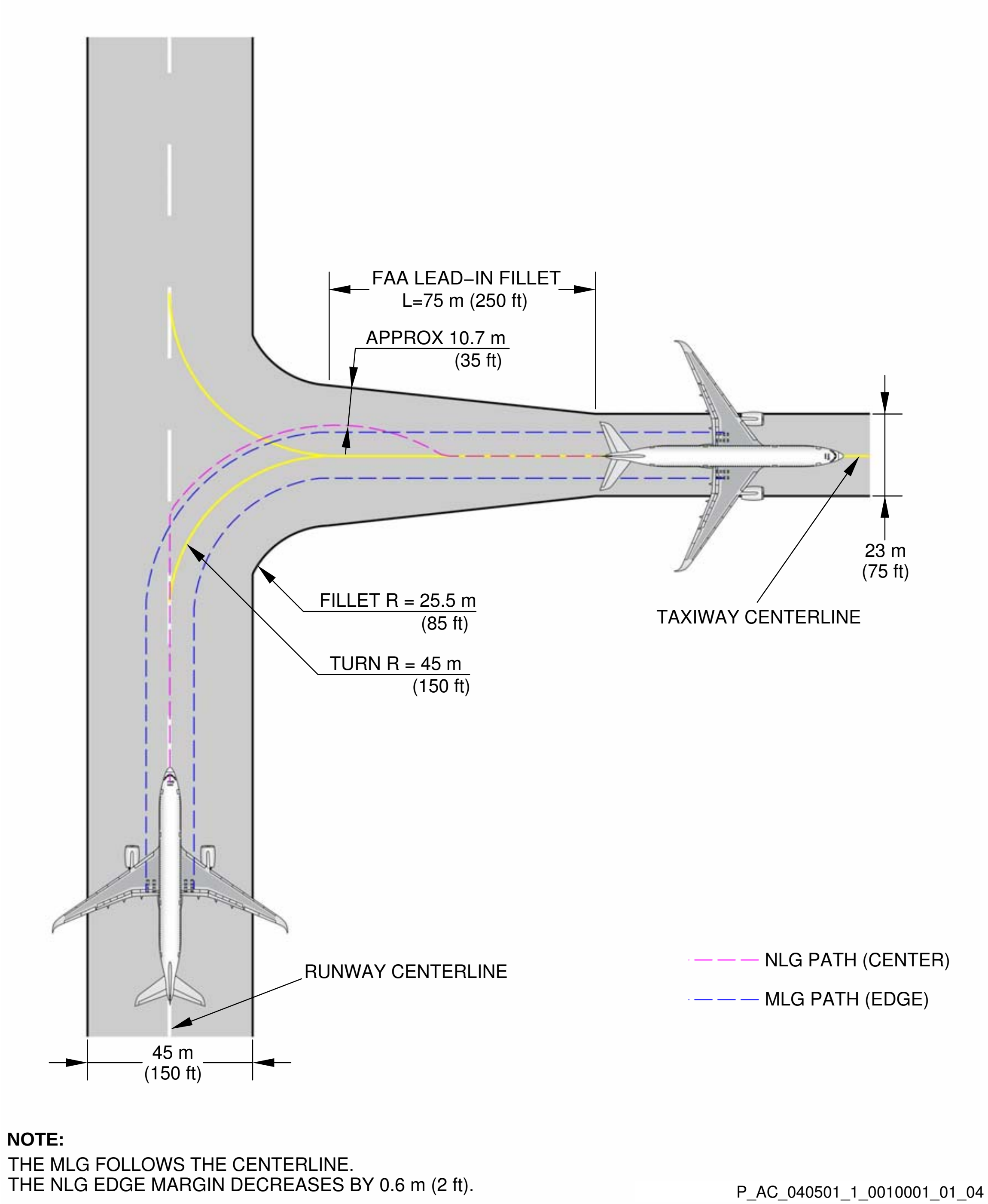
4-5-1 90° Turn - Runway to Taxiway

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

<u>90° Turn - Runway to Taxiway</u>

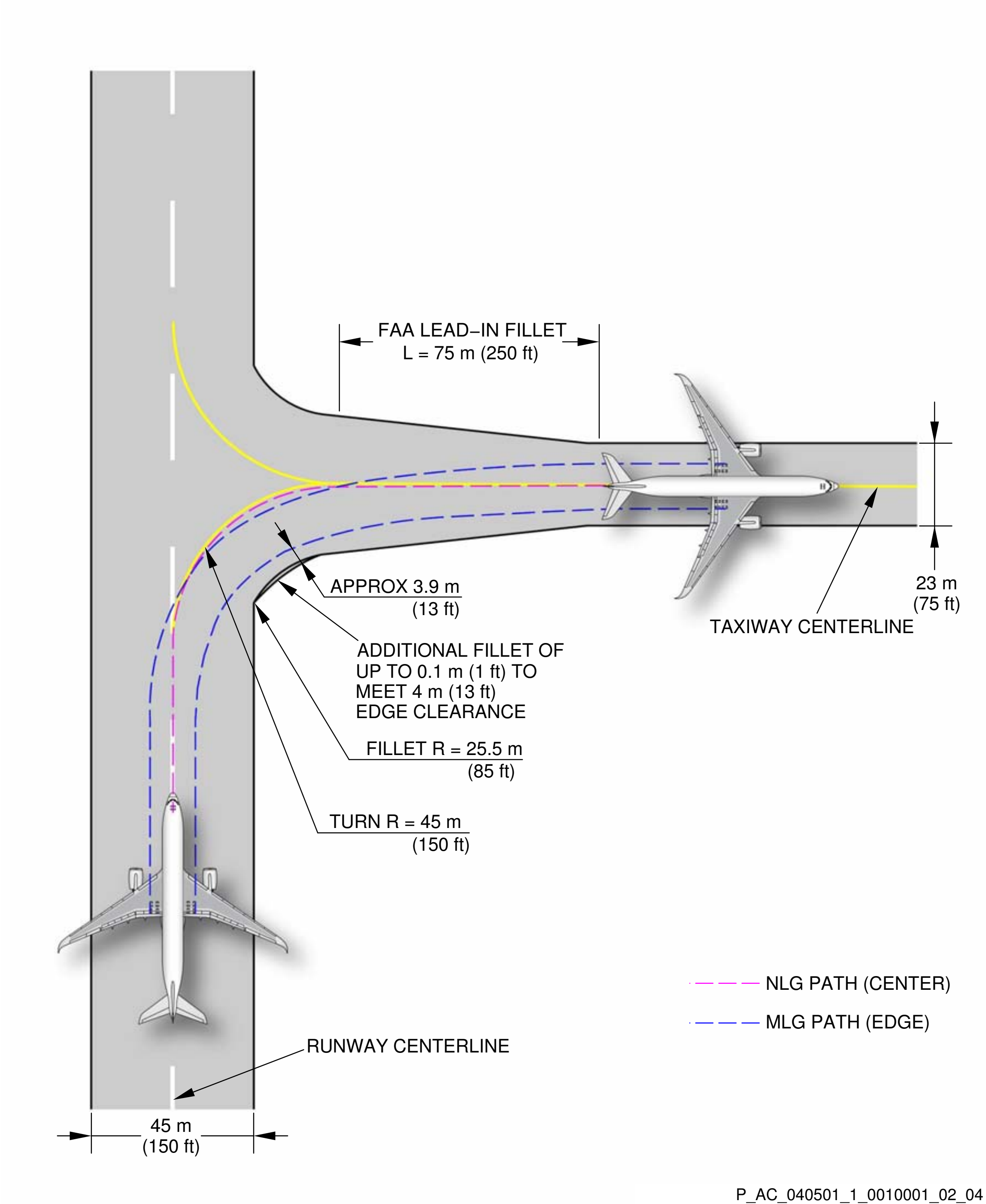
1. This section gives the 90° turn - runway to taxiway.

**ON A/C A350-900



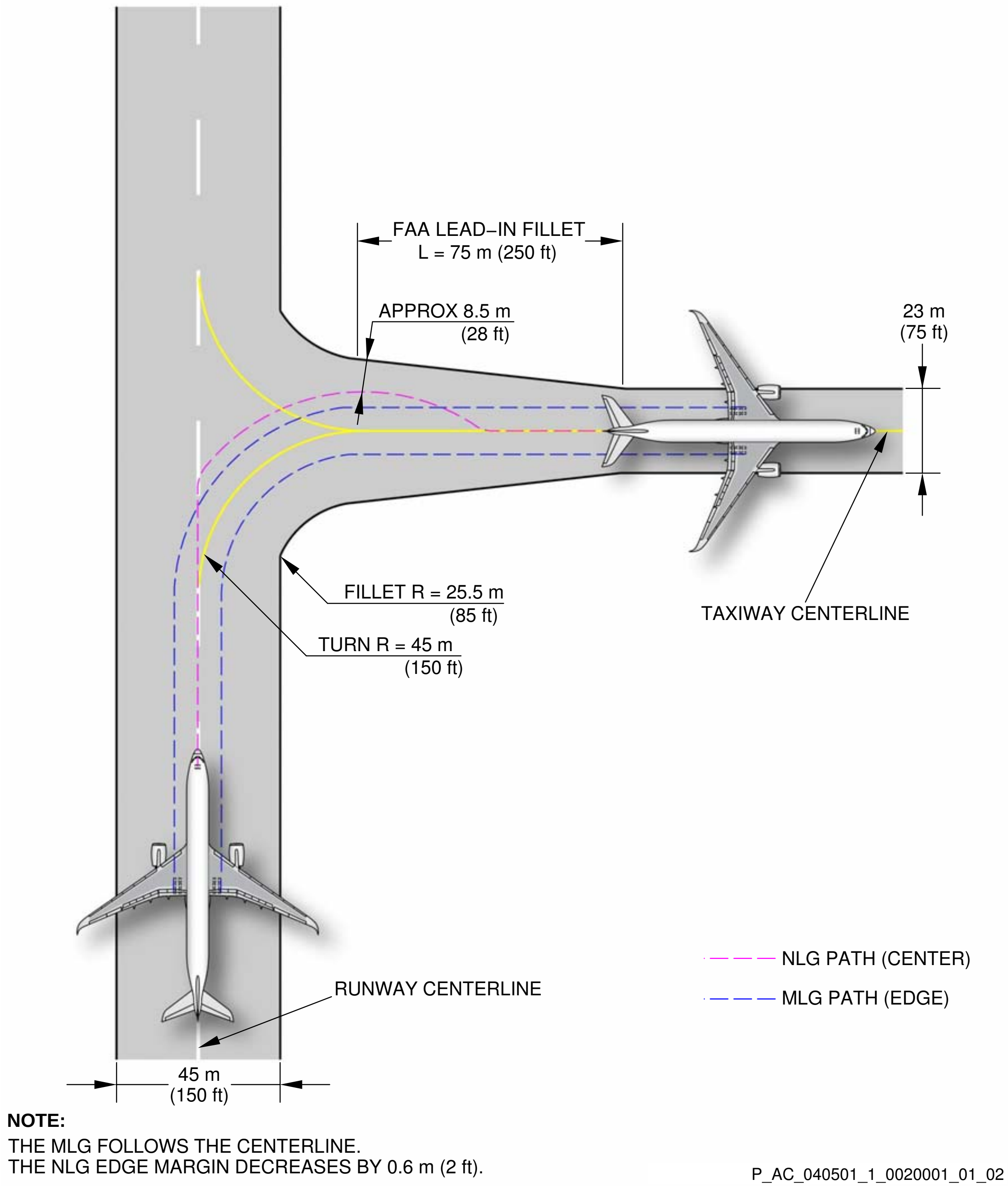
90° Turn - Runway to Taxiway
Oversteering Method (Sheet 1 of 2)
FIGURE-4-5-1-991-001-A01

**ON A/C A350-900



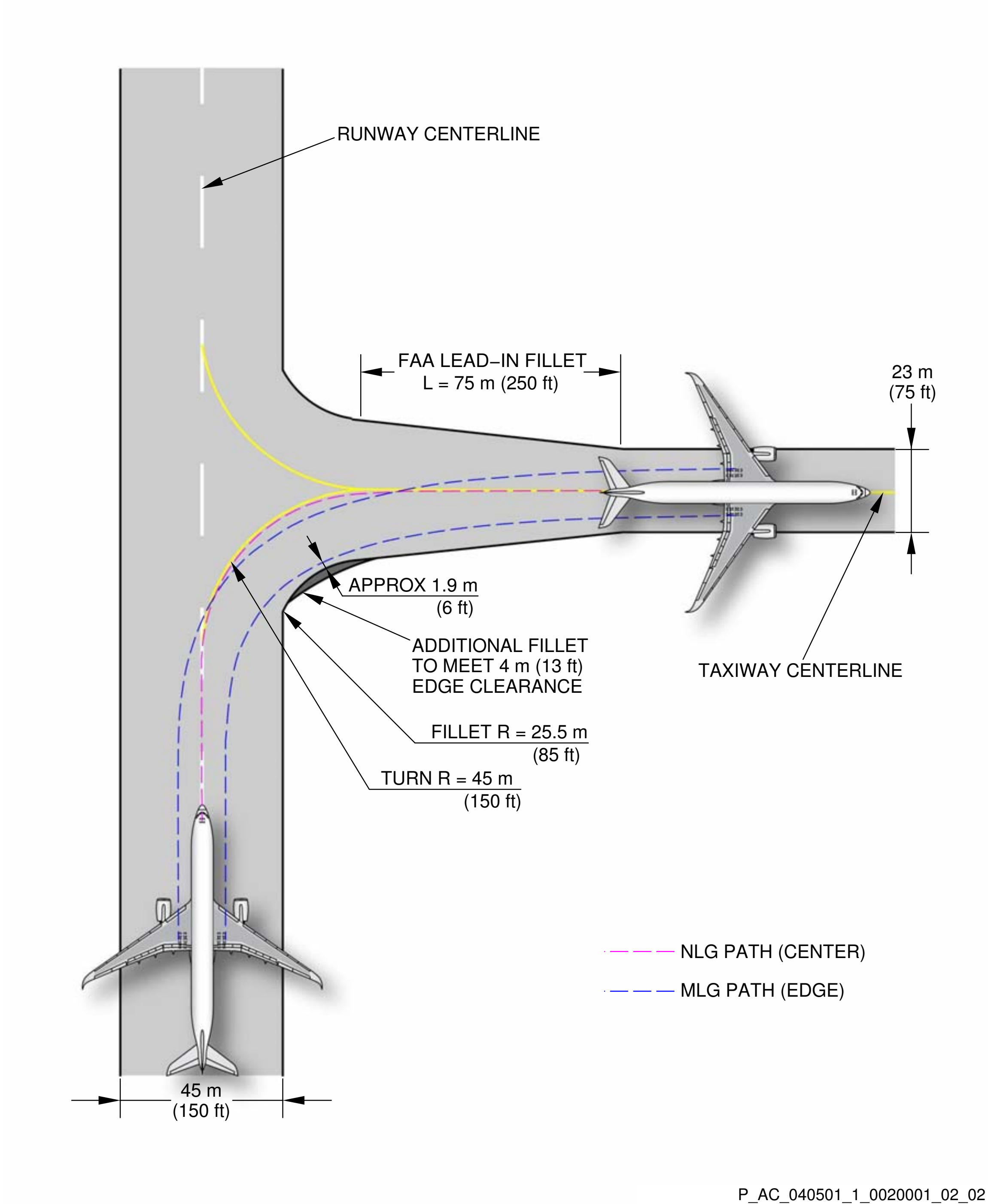
90° Turn - Runway to Taxiway
Cockpit over Centerline Method (Sheet 2 of 2)
FIGURE-4-5-1-991-001-A01

**ON A/C A350-1000



90° Turn - Runway to Taxiway
Oversteering Method (Sheet 1 of 2)
FIGURE-4-5-1-991-002-A01

**ON A/C A350-1000



90° Turn - Runway to Taxiway
Cockpit over Centerline Method (Sheet 2 of 2)
FIGURE-4-5-1-991-002-A01

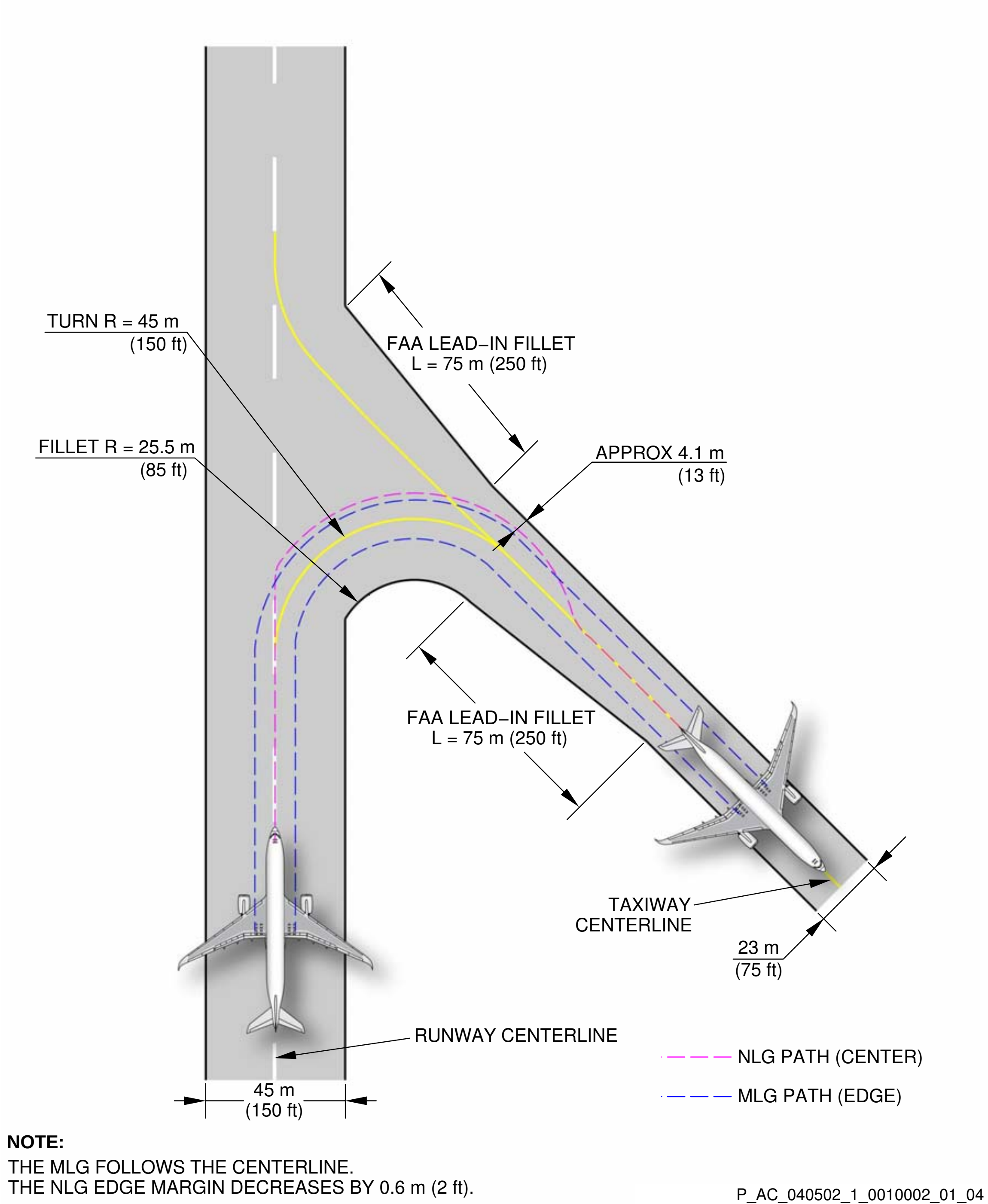
4-5-2 135° Turn - Runway to Taxiway

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

135° Turn - Runway to Taxiway

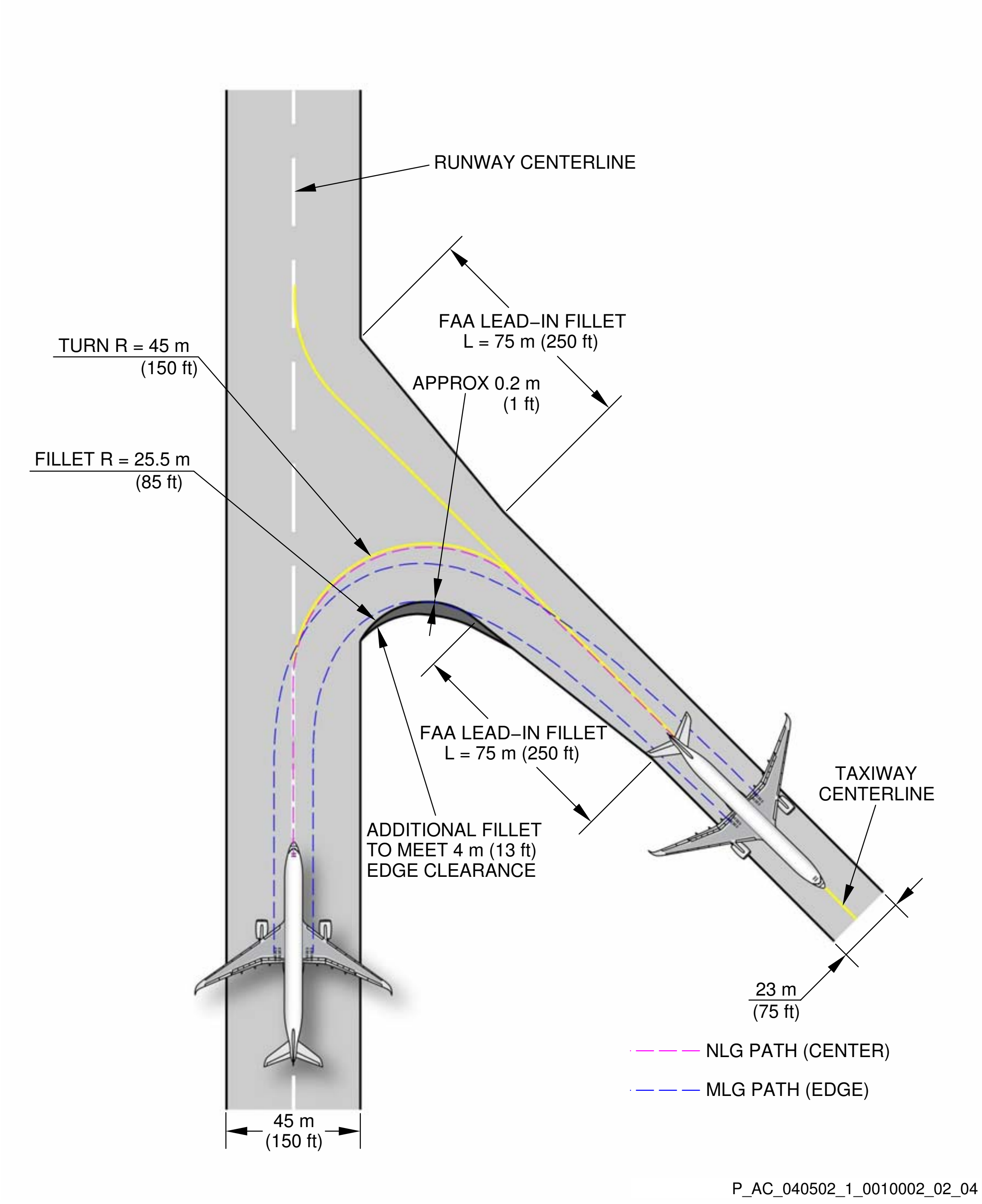
1. This section gives the 135° turn - runway to taxiway .

**ON A/C A350-900



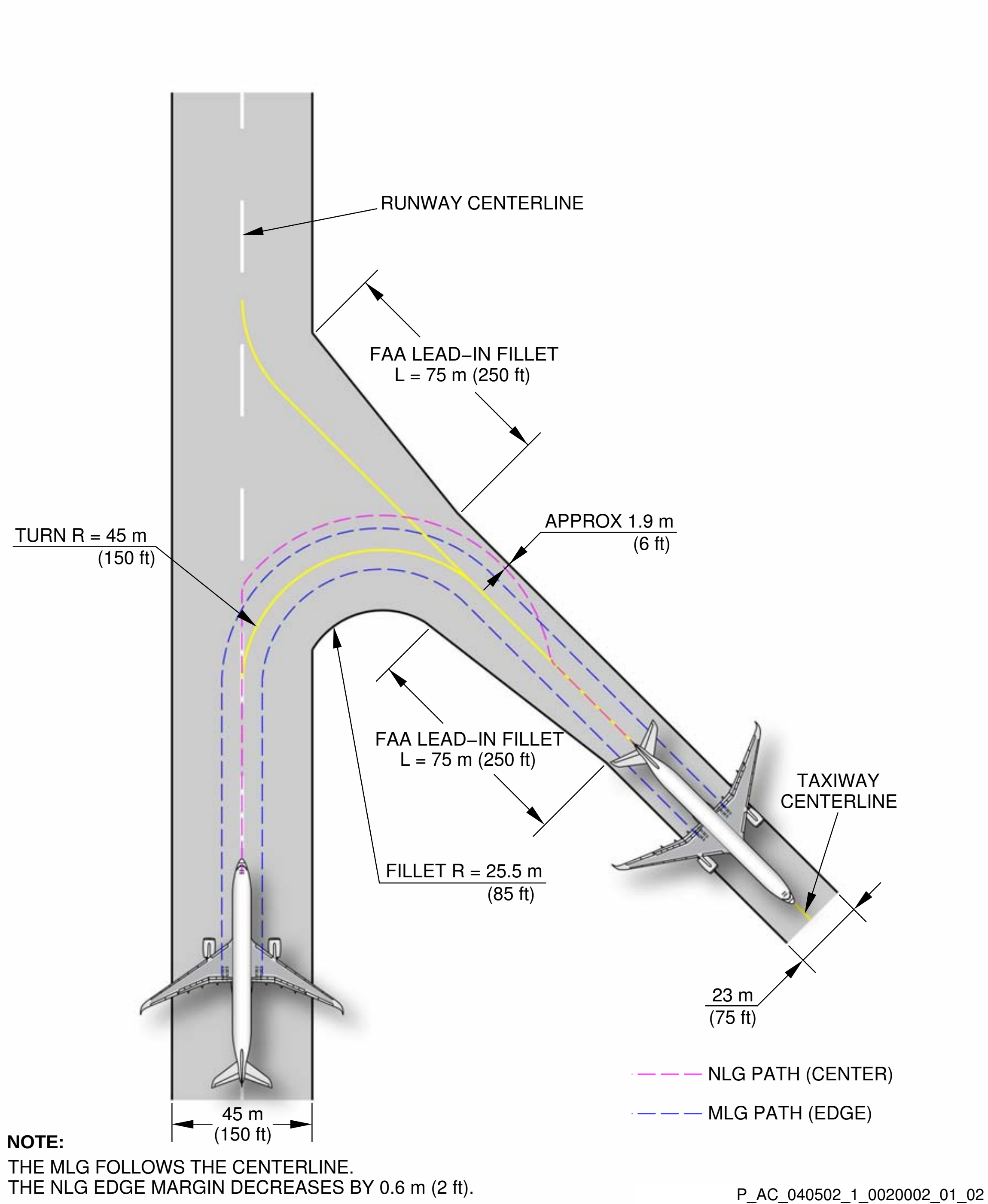
135° Turn - Runway to Taxiway
Oversteering Method (Sheet 1 of 2)
FIGURE-4-5-2-991-001-B01

**ON A/C A350-900



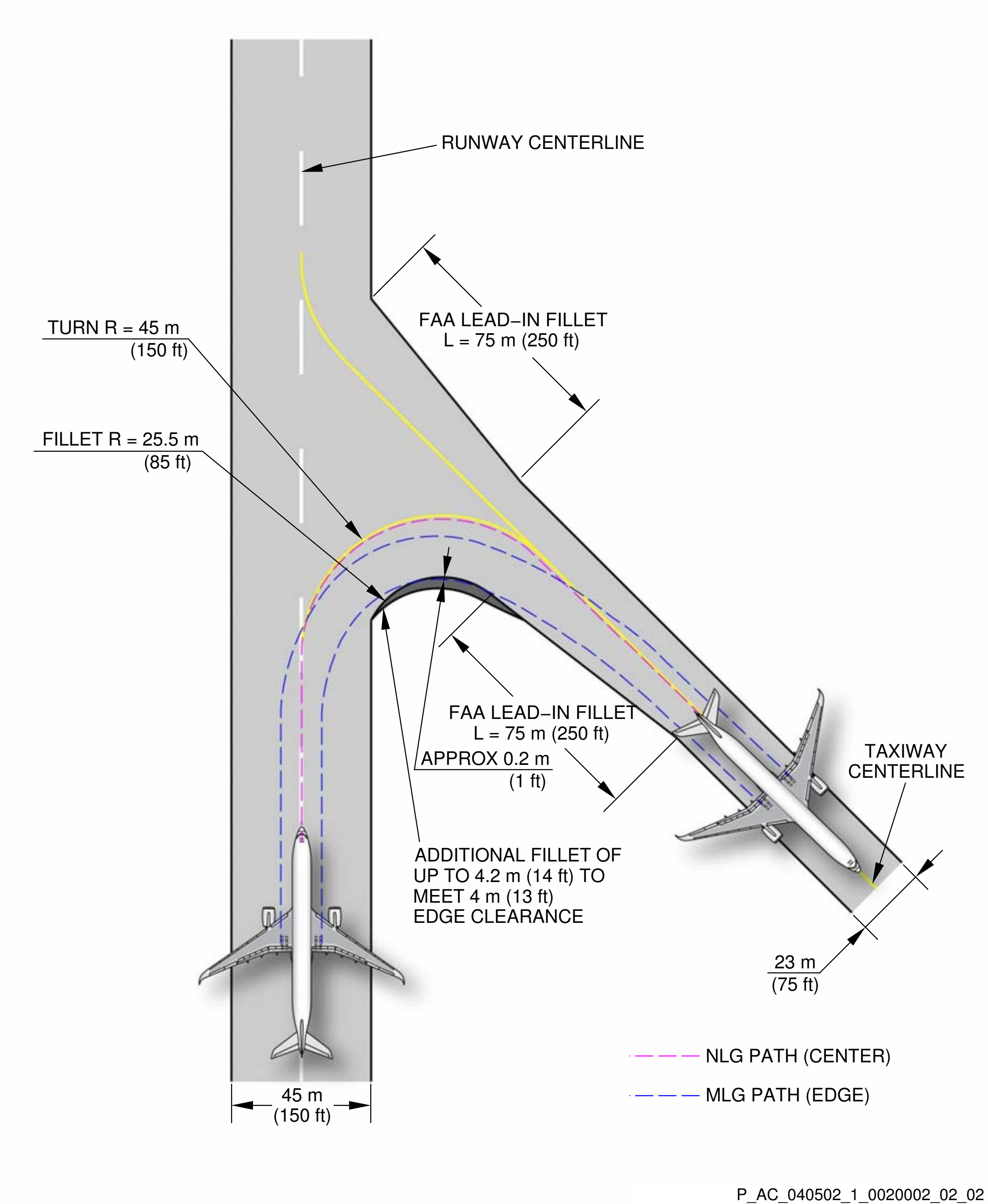
135° Turn - Runway to Taxiway
Cockpit over Centerline Method (Sheet 2 of 2)
FIGURE-4-5-2-991-001-B01

**ON A/C A350-1000



135° Turn - Runway to Taxiway
Oversteering Method (Sheet 1 of 2)
FIGURE-4-5-2-991-002-B01

**ON A/C A350-1000



135° Turn - Runway to Taxiway
Cockpit over Centerline Method (Sheet 2 of 2)
FIGURE-4-5-2-991-002-B01

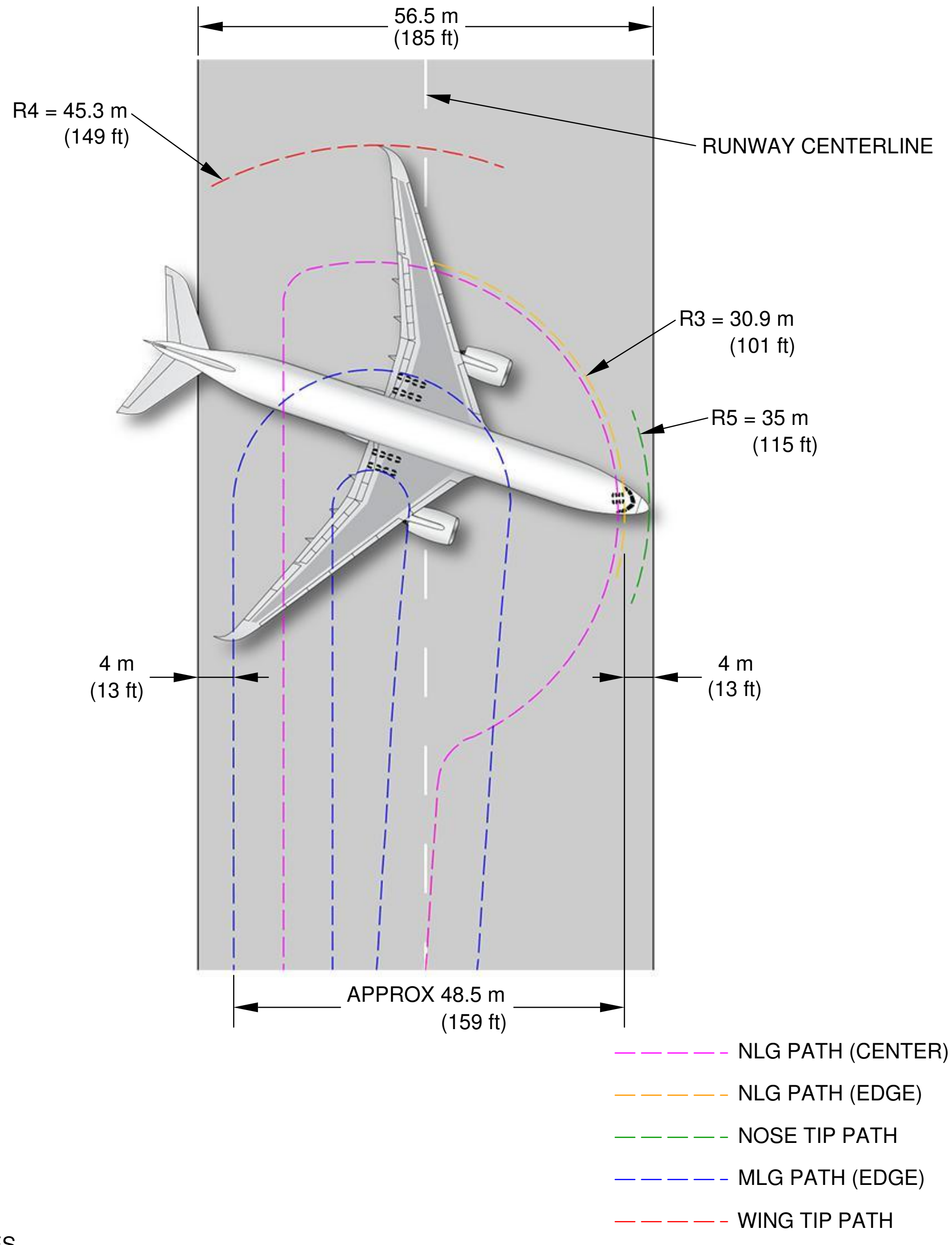
4-5-3 180° Turn on a Runway

****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.

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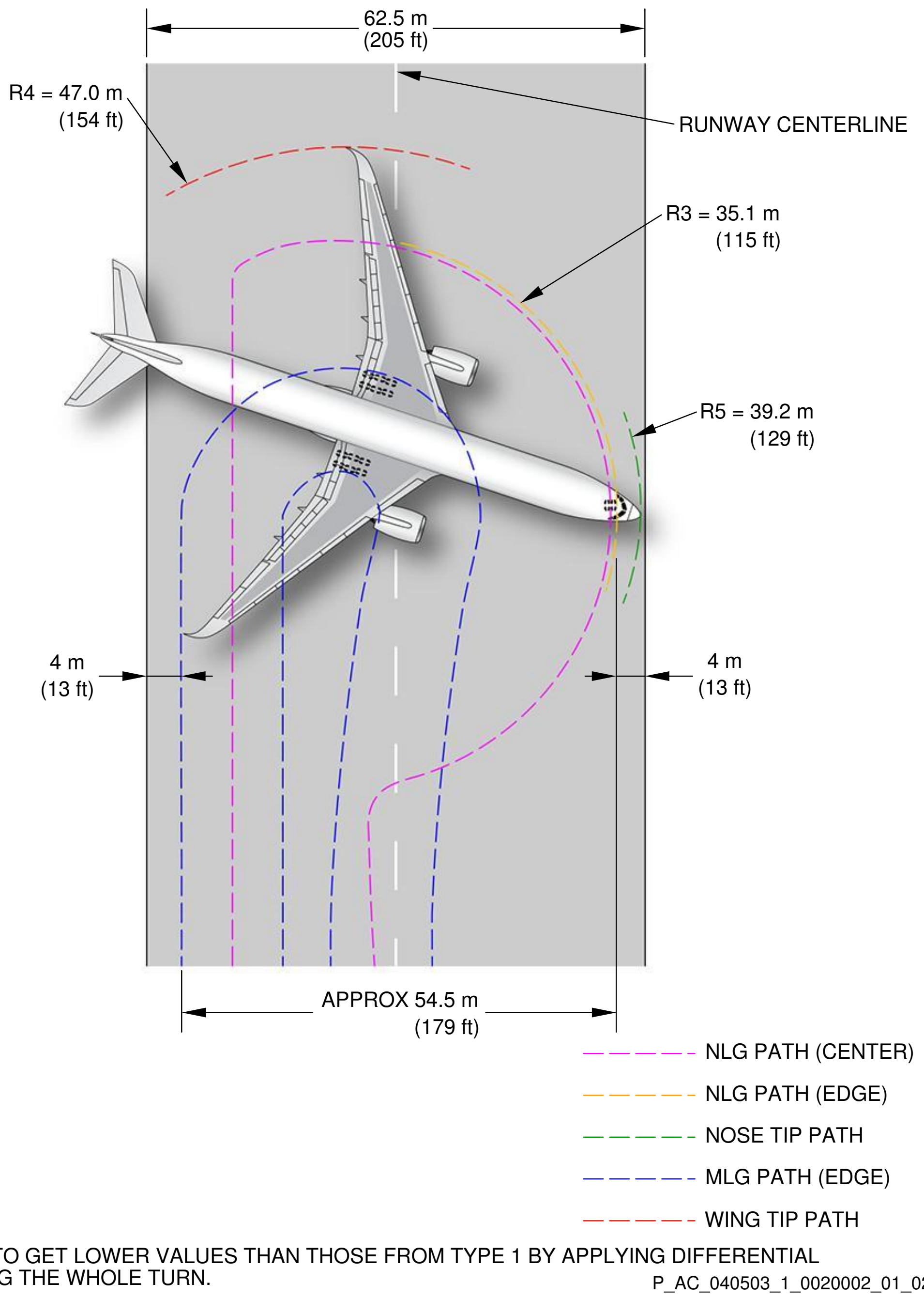
180° Turn on a Runway
FIGURE-4-5-3-991-001-A01

**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

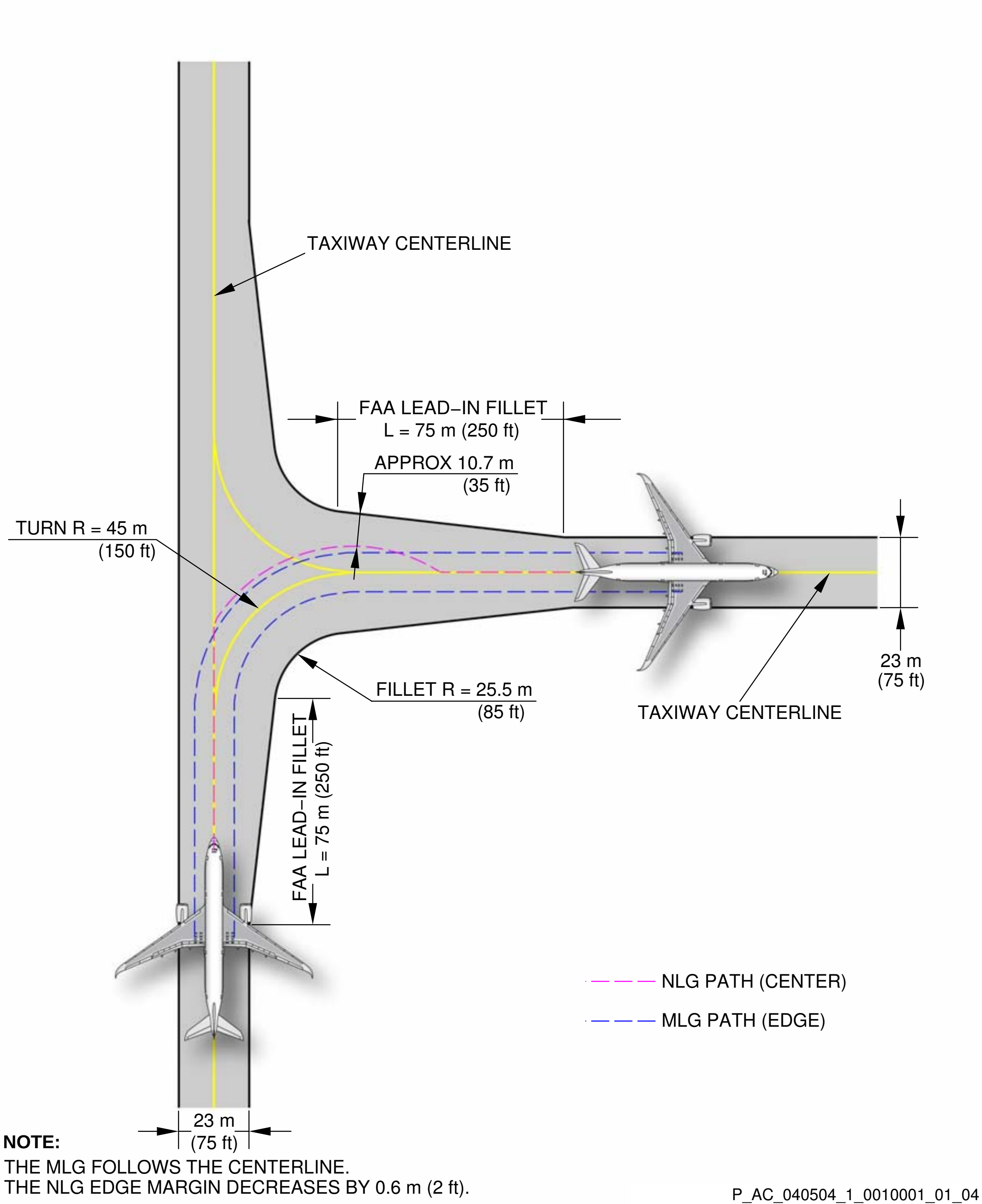
4-5-4 90° Turn - Taxiway to Taxiway

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

90° Turn - Taxiway to Taxiway

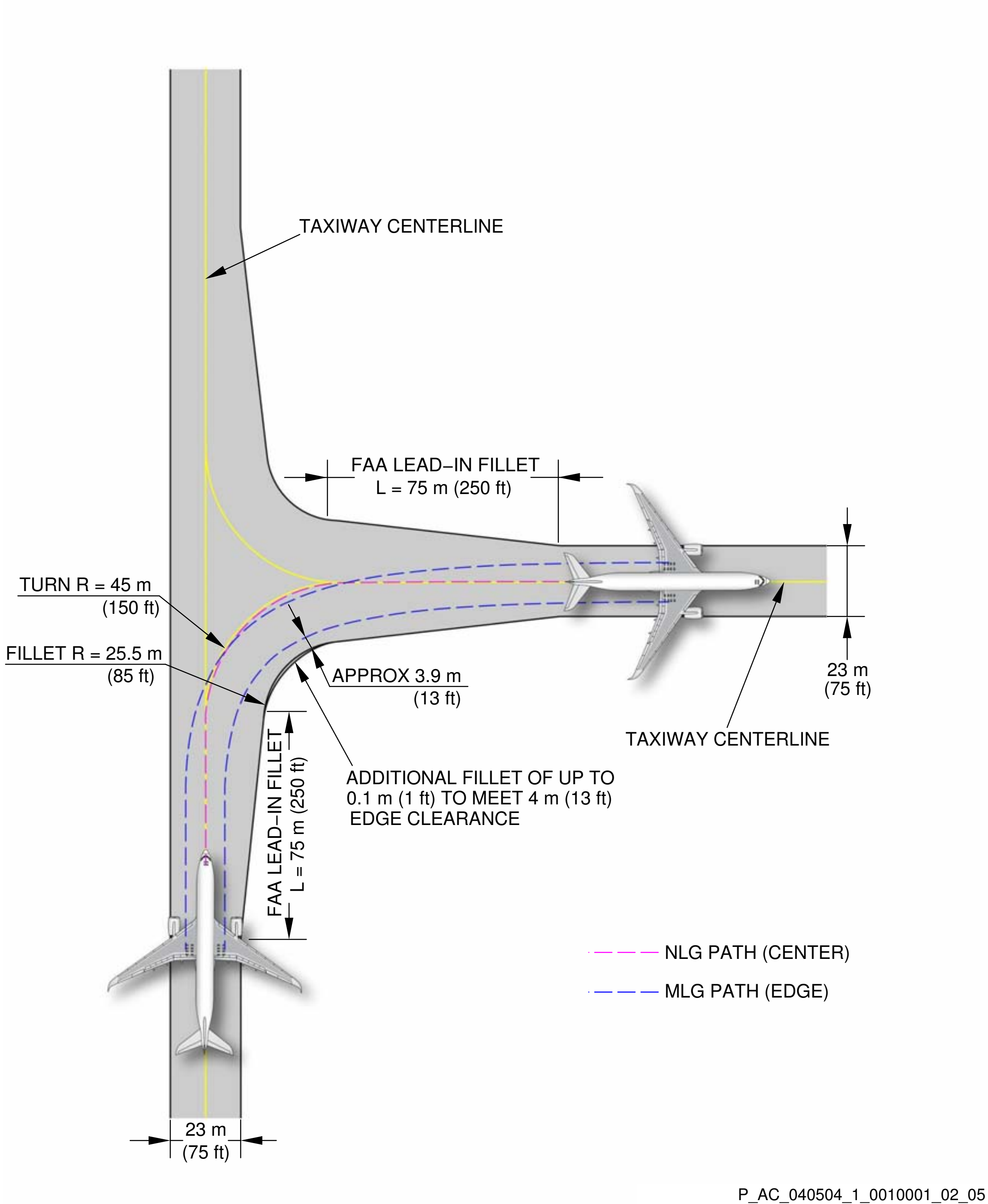
1. This section gives the 90° turn - taxiway to taxiway.

**ON A/C A350-900



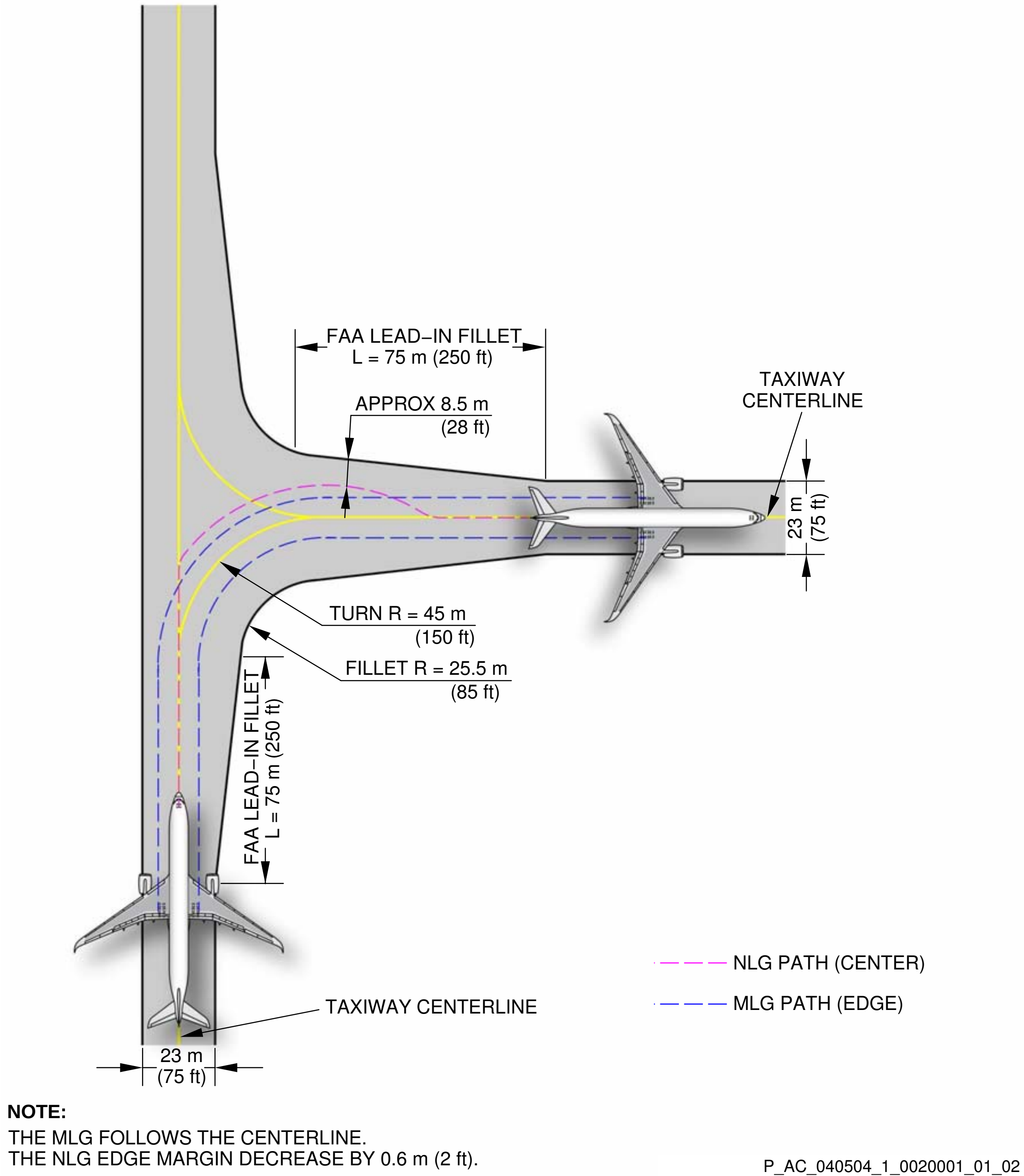
90° Turn - Taxiway to Taxiway
Oversteering Method (Sheet 1 of 2)
FIGURE-4-5-4-991-001-A01

**ON A/C A350-900



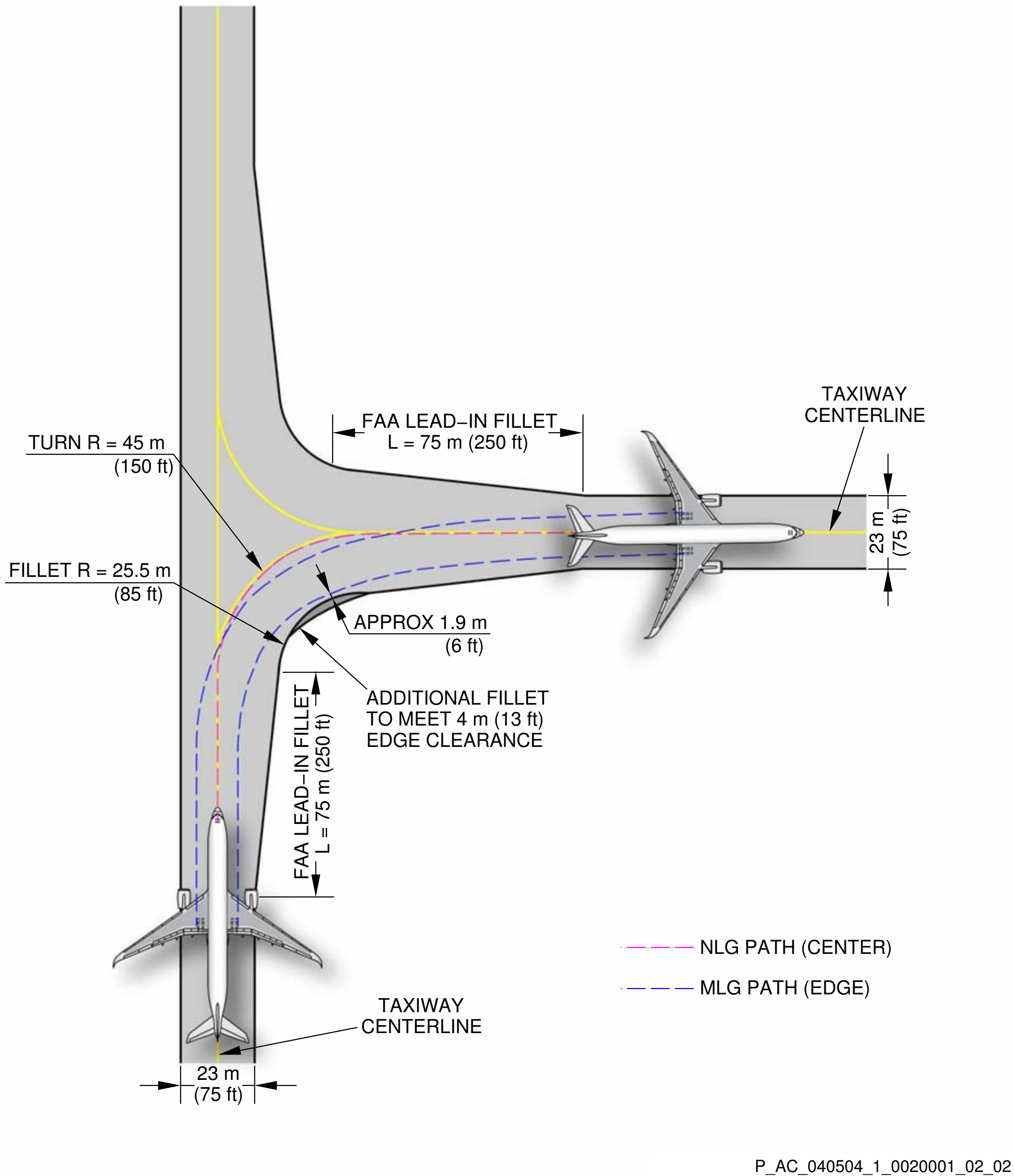
90° Turn - Taxiway to Taxiway
Cockpit over Centerline Method (Sheet 2 of 2)
FIGURE-4-5-4-991-001-A01

**ON A/C A350-1000



90° Turn - Taxiway to Taxiway
Oversteering Method (Sheet 1 of 2)
FIGURE-4-5-4-991-002-A01

**ON A/C A350-1000



90° Turn - Taxiway to Taxiway
Cockpit over Centerline Method (Sheet 2 of 2)
FIGURE-4-5-4-991-002-A01

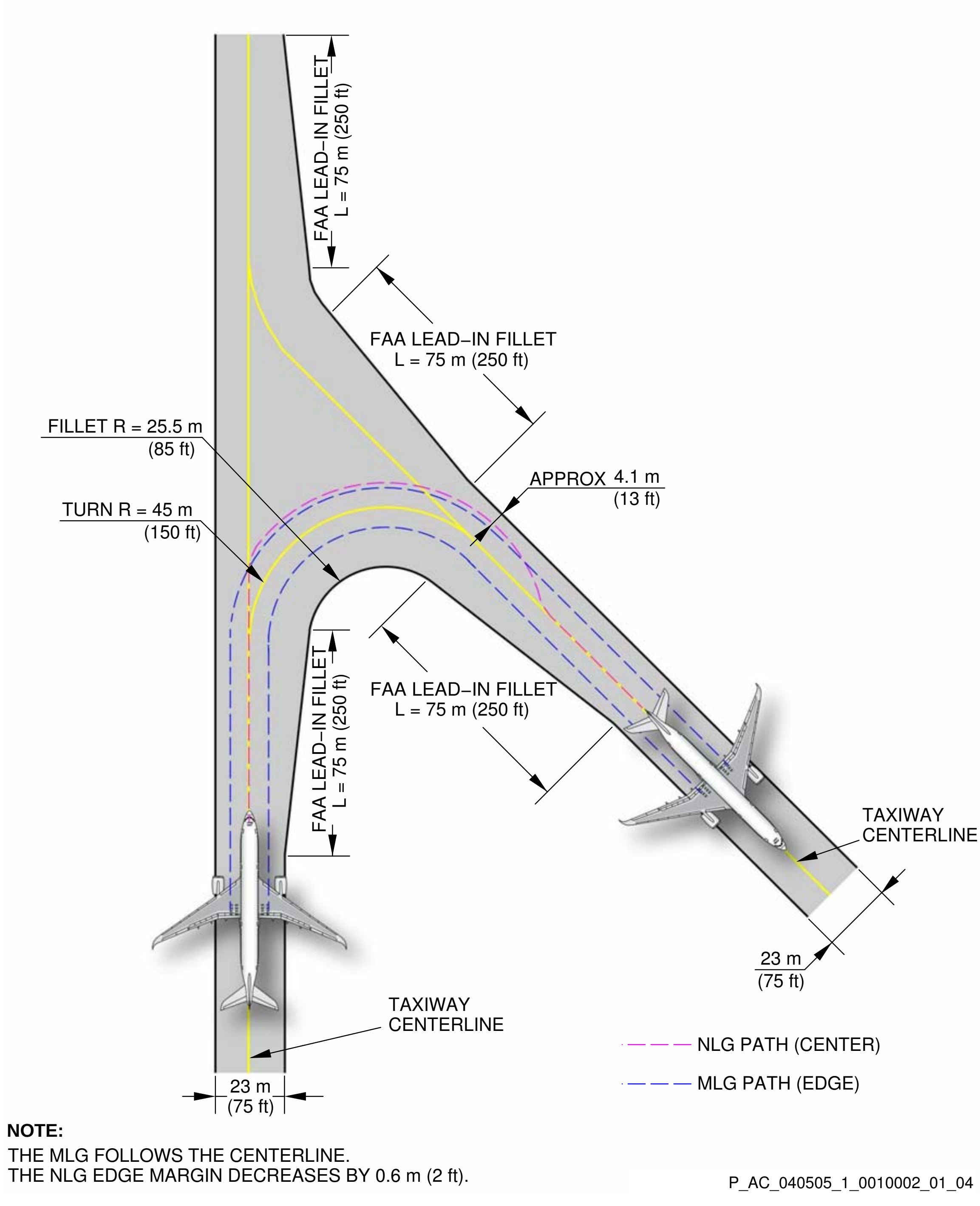
4-5-5 135° Turn - Taxiway to Taxiway

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

135° Turn - Taxiway to Taxiway

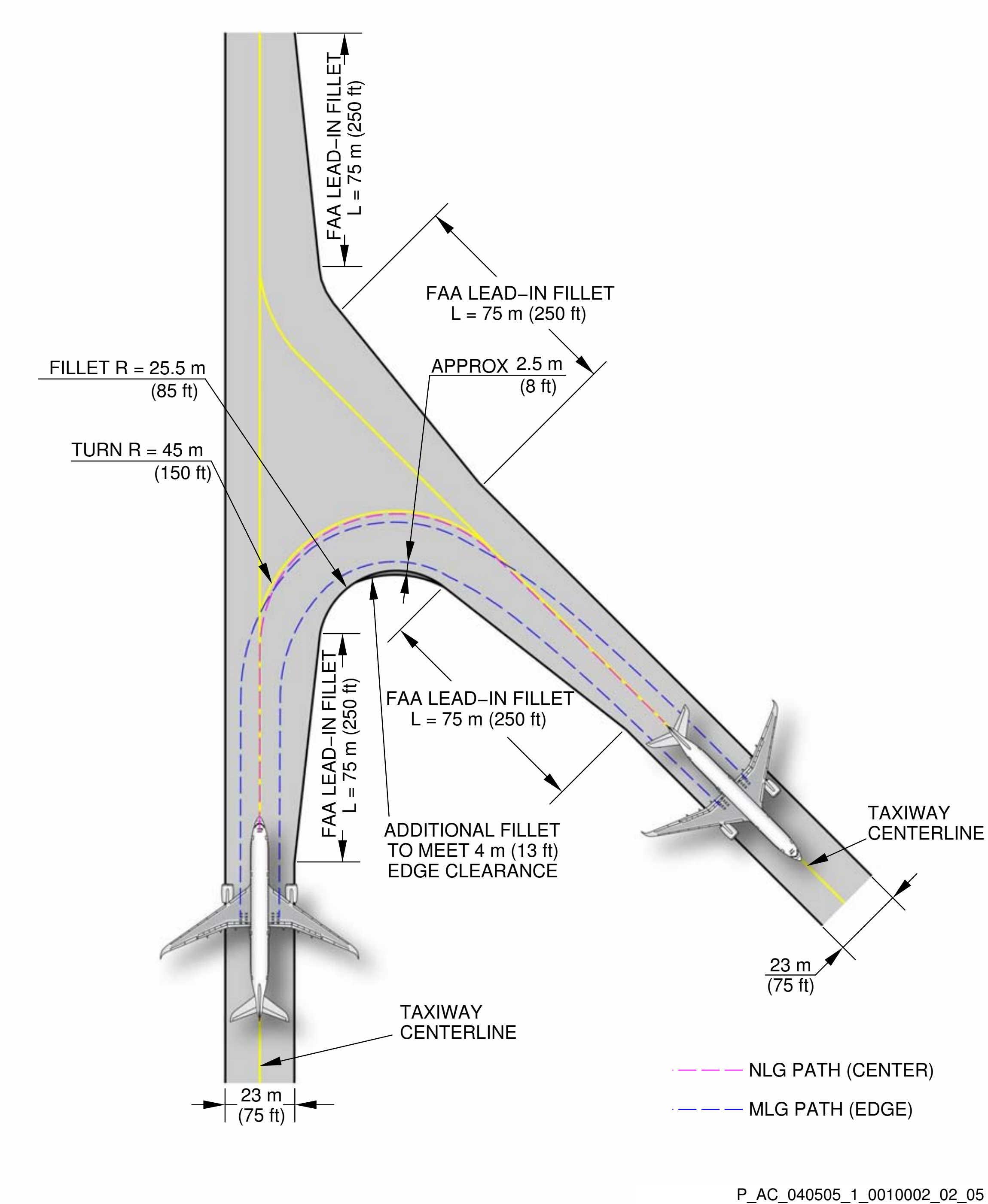
1. This section gives the 135° turn - taxiway to taxiway .

**ON A/C A350-900



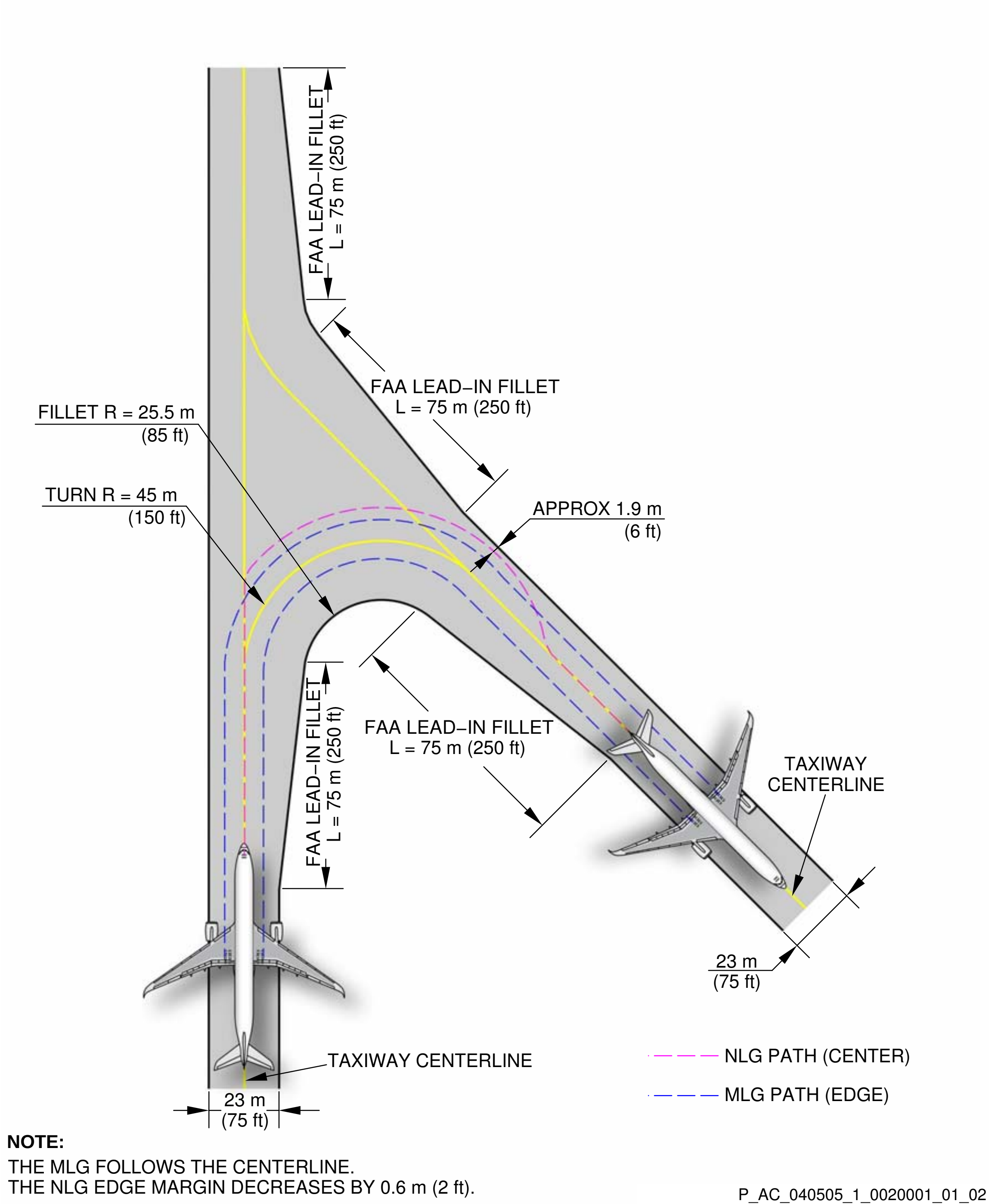
135° Turn - Taxiway to Taxiway
Oversteering Method (Sheet 1 of 2)
FIGURE-4-5-5-991-001-B01

**ON A/C A350-900



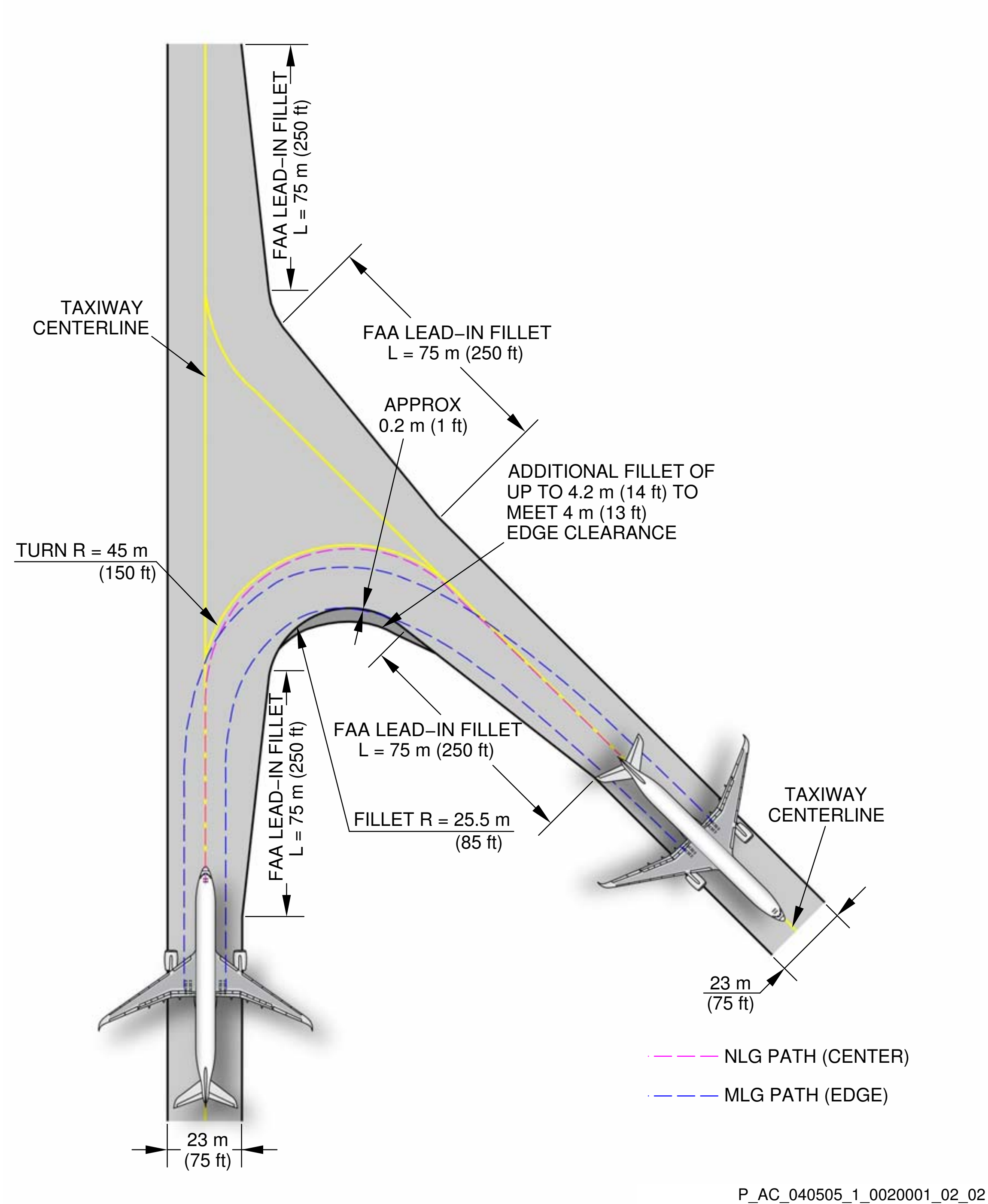
135° Turn - Taxiway to Taxiway
Cockpit over Centerline Method (Sheet 2 of 2)
FIGURE-4-5-5-991-001-B01

**ON A/C A350-1000



135° Turn - Taxiway to Taxiway
Oversteering Method (Sheet 1 of 2)
FIGURE-4-5-5-991-002-A01

**ON A/C A350-1000



135° Turn - Taxiway to Taxiway
Cockpit over Centerline Method (Sheet 2 of 2)
FIGURE-4-5-5-991-002-A01

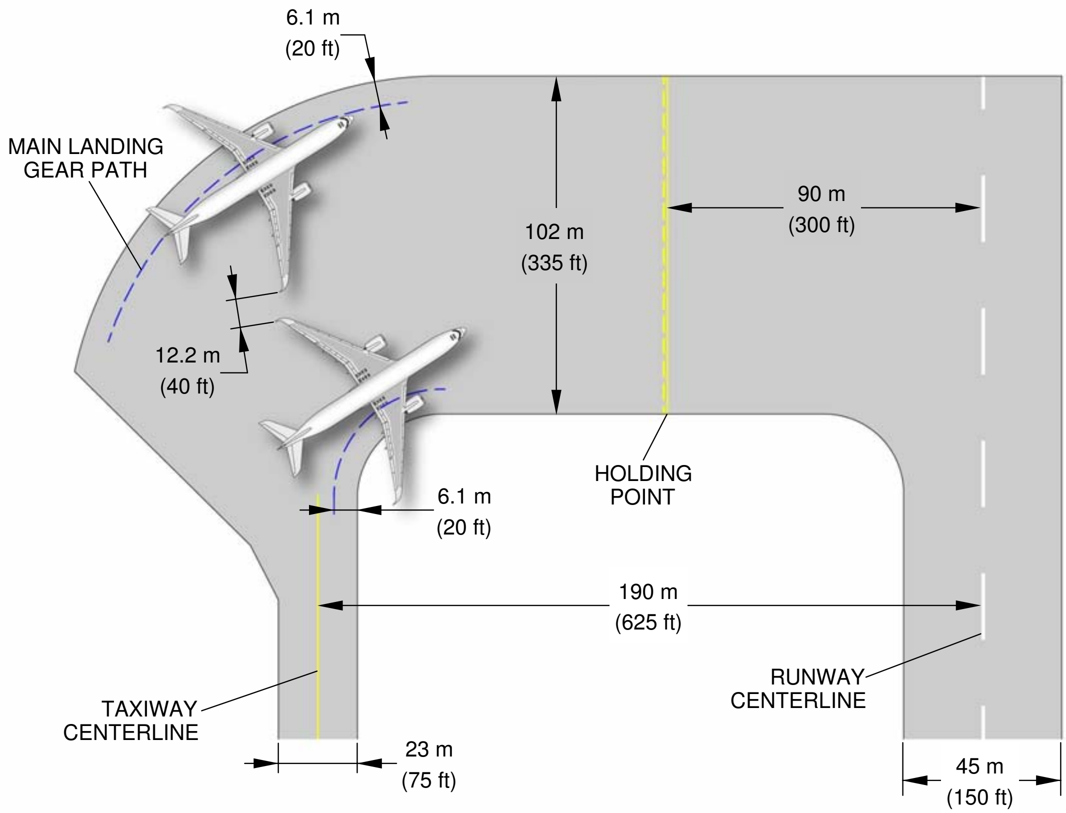
4-6-0 Runway Holding Bay

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.

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

4-7-0 Minimum Line-Up Distance Corrections

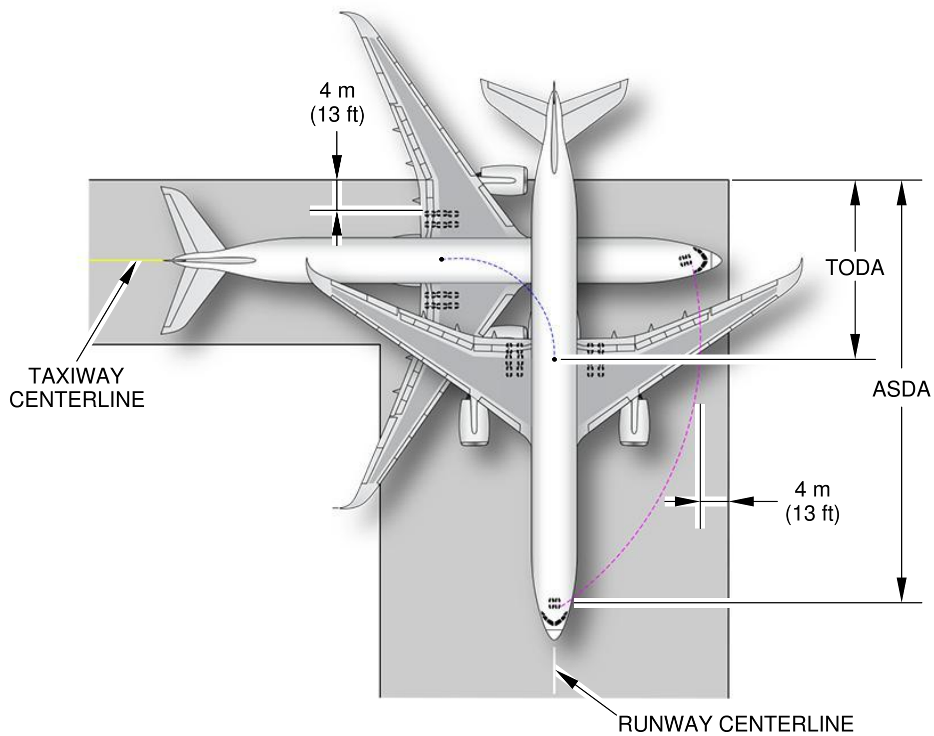
****ON A/C A350-1000 A350-900**

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



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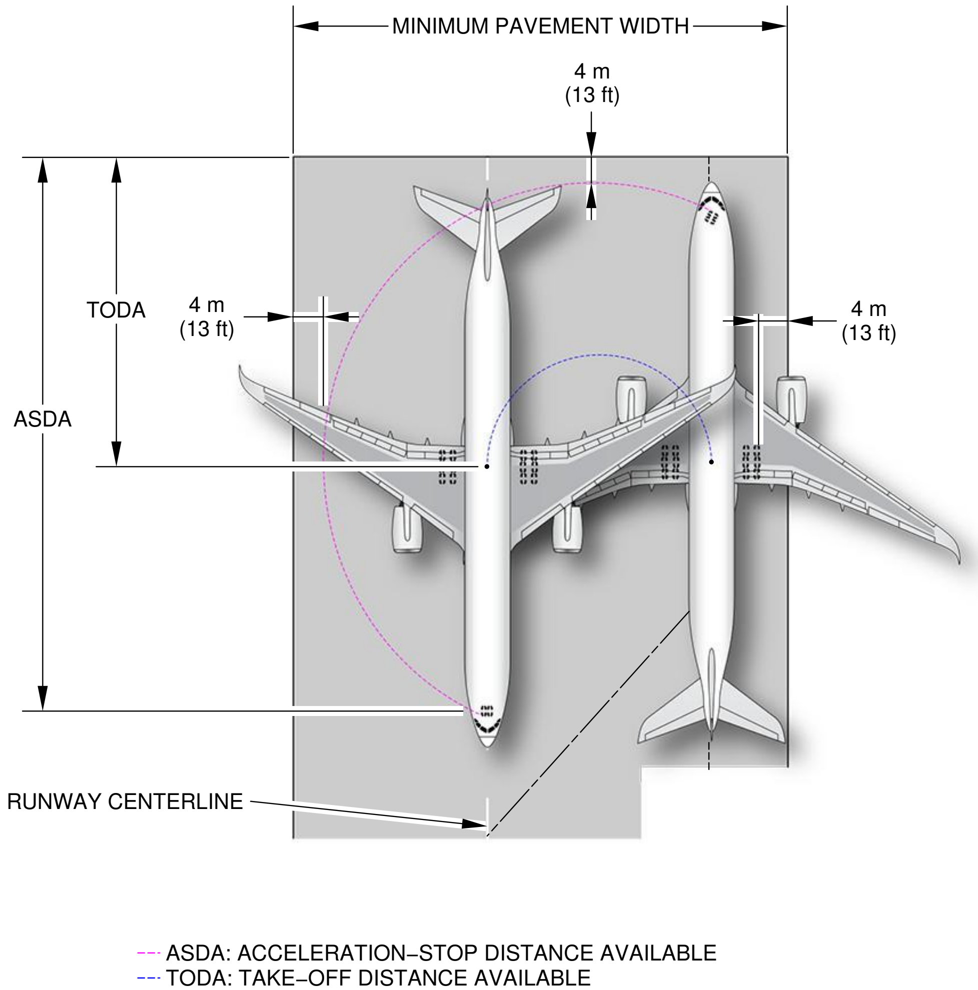
90˚ Turn on Runway Entry
FIGURE-4-7-0-991-001-A01

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



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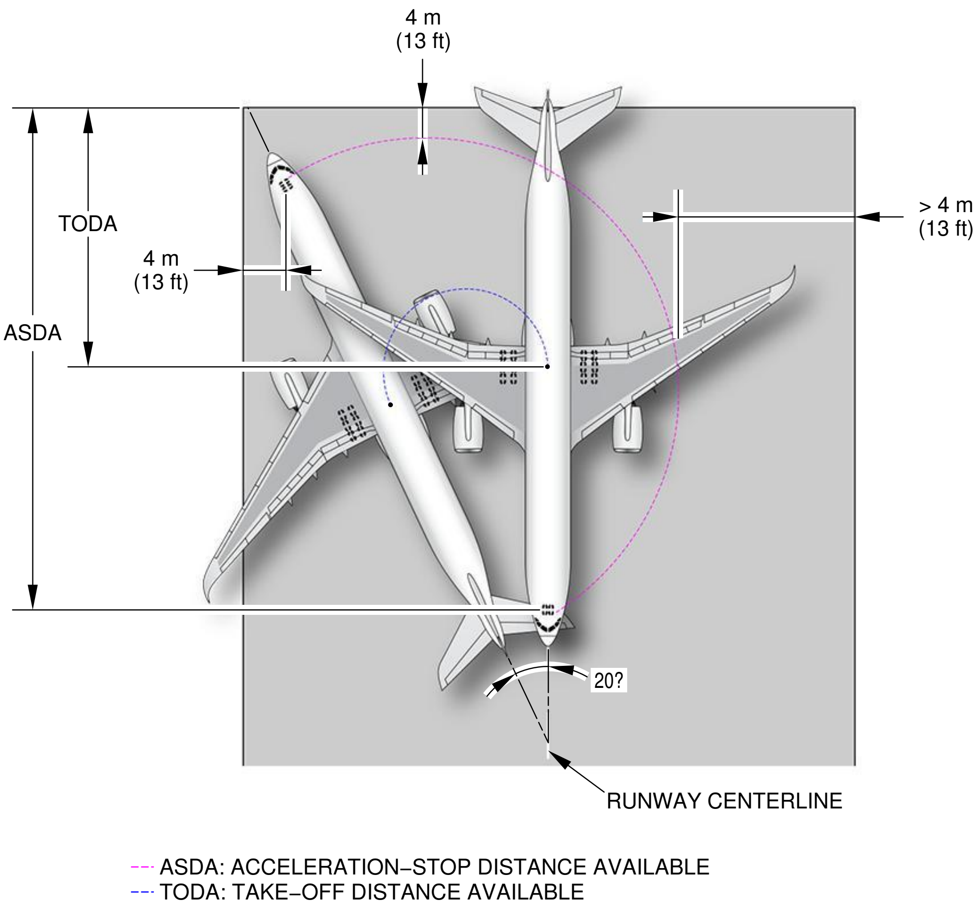
180 ° Turn on Runway Turn Pad
FIGURE-4-7-0-991-002-A01

**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?	NOT POSSIBLE		49.2 m / 162 ft	77.9 m / 256 ft
A350–1000	75?			NOT POSSIBLE	

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

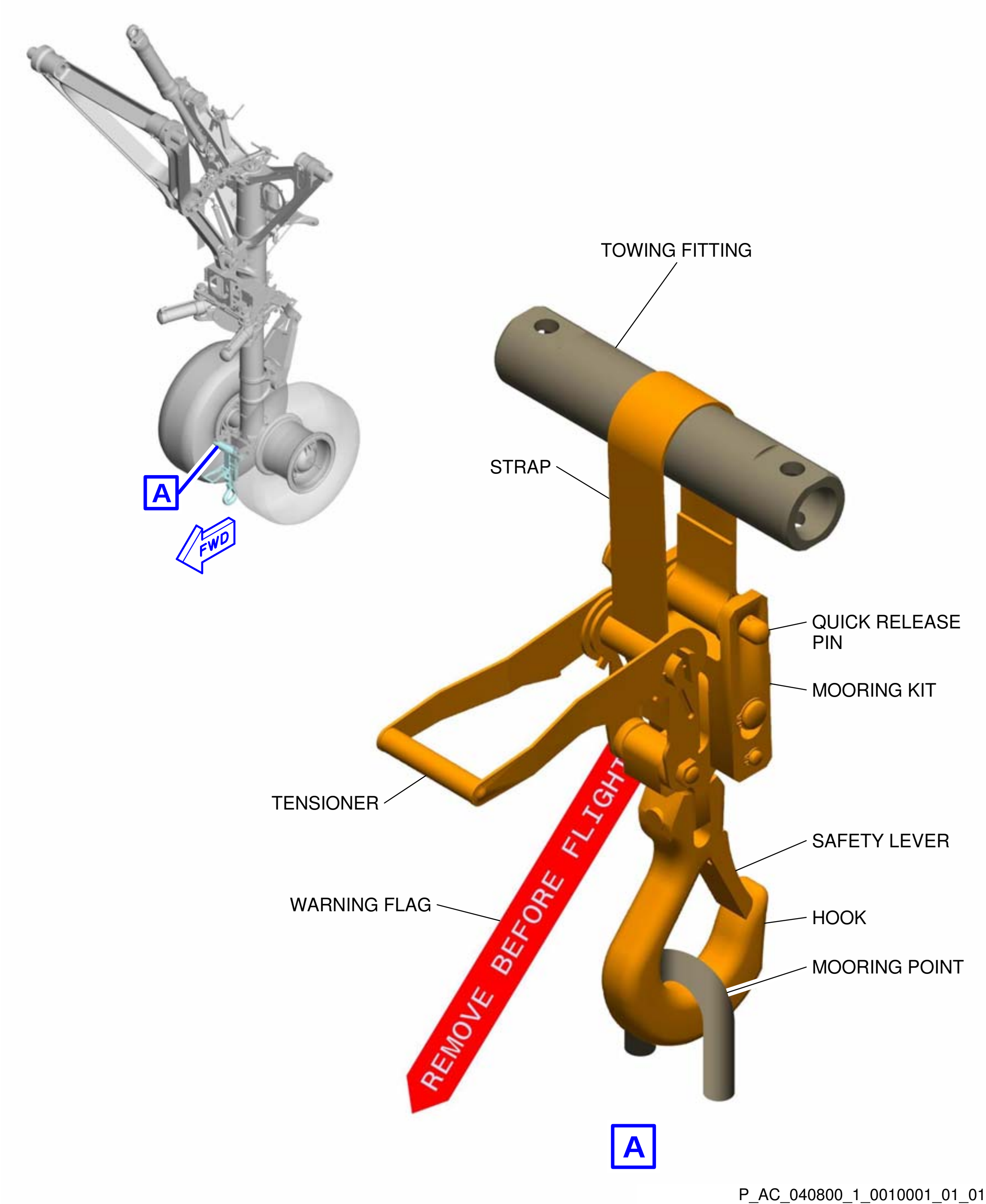
4-8-0 Aircraft Mooring

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

Aircraft Mooring

1. This section provides information on aircraft mooring.

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



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

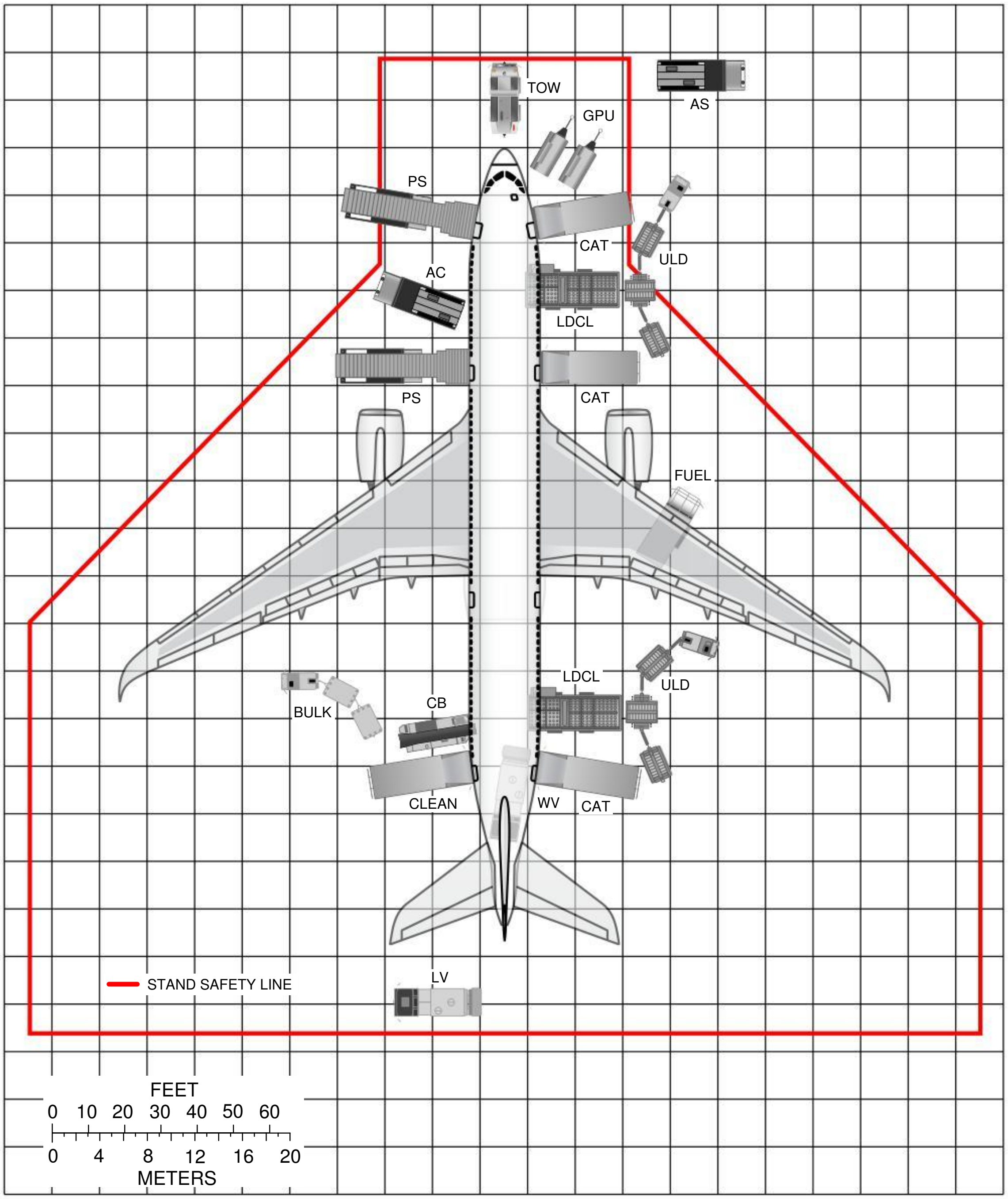
5-1-1 Typical Ramp Layout (Open Apron)

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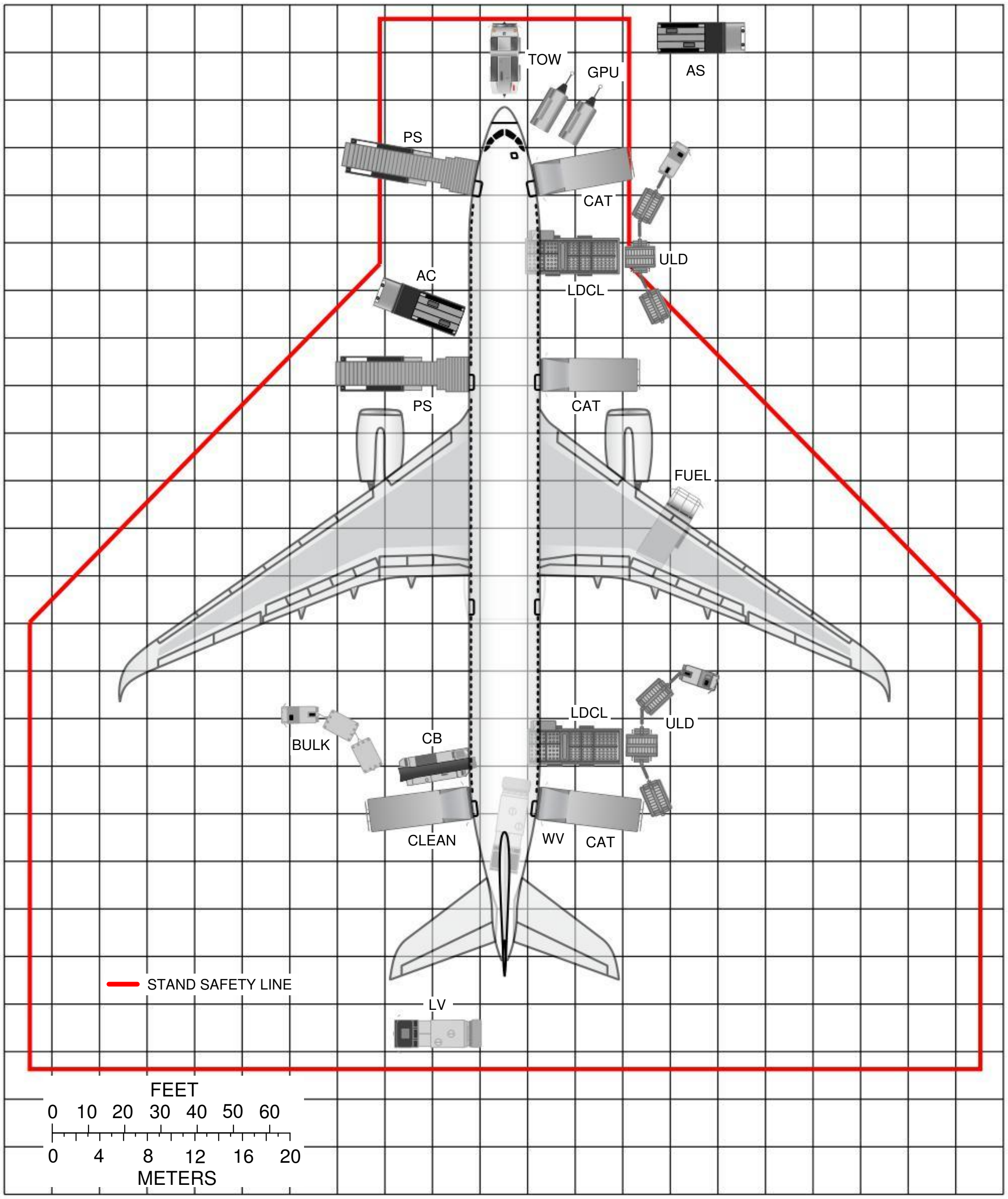
Typical Ramp Layout (Open Apron)
FIGURE-5-1-1-991-001-A01

**ON A/C A350-1000



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

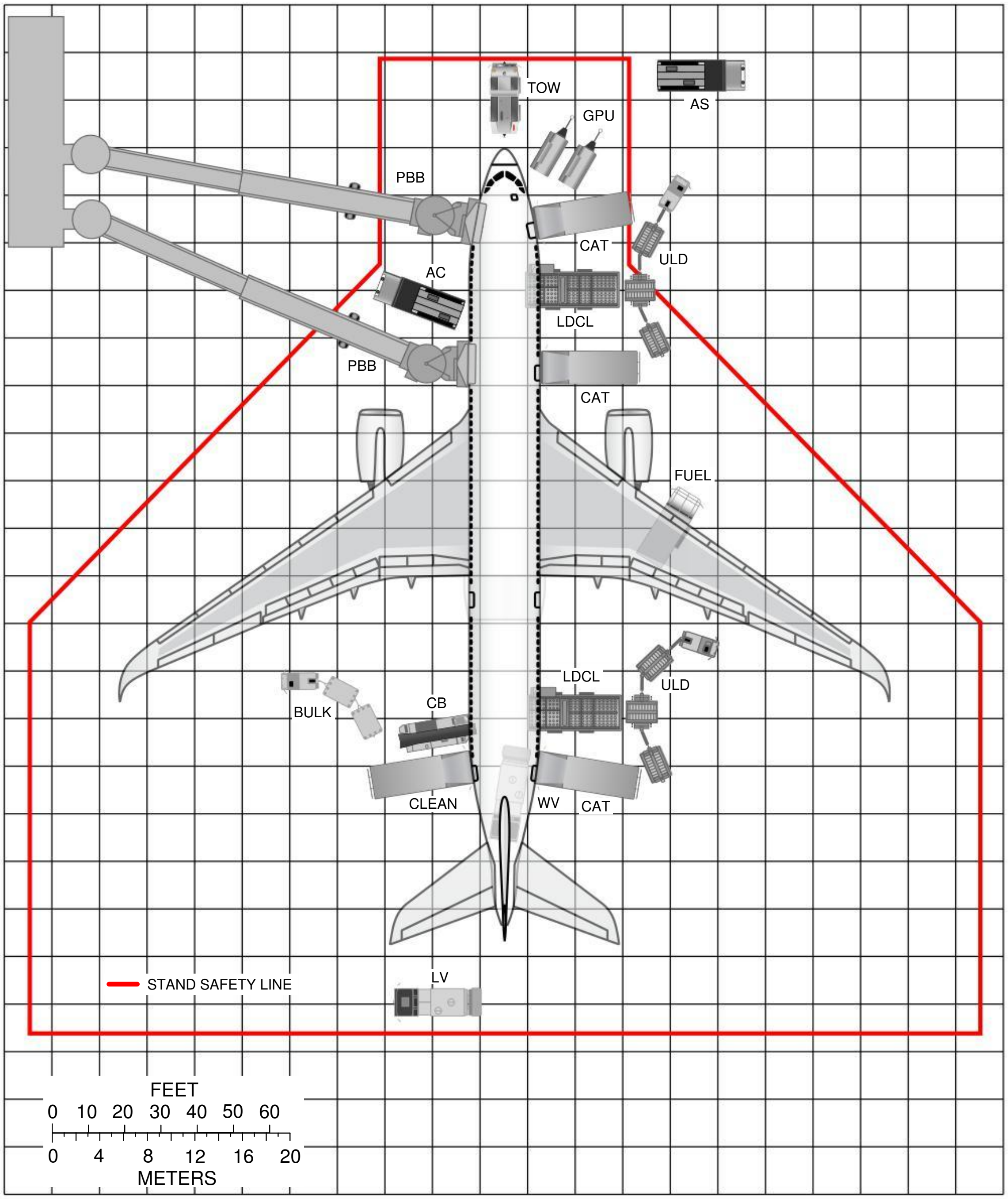
5-1-2 Typical Ramp Layout (Gate)

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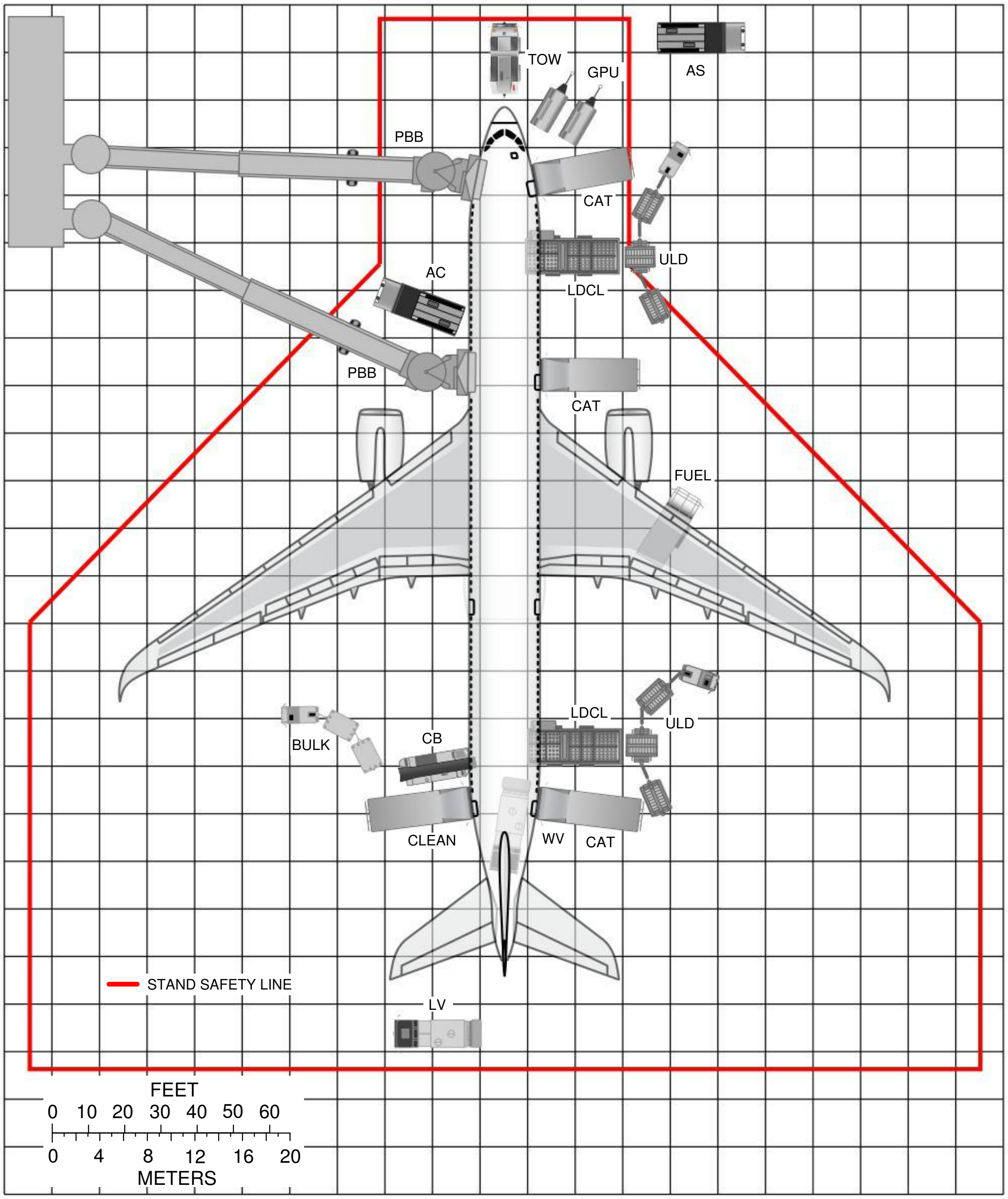
Typical Ramp Layout (Gate)
FIGURE-5-1-2-991-001-A01

**ON A/C A350-1000



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.

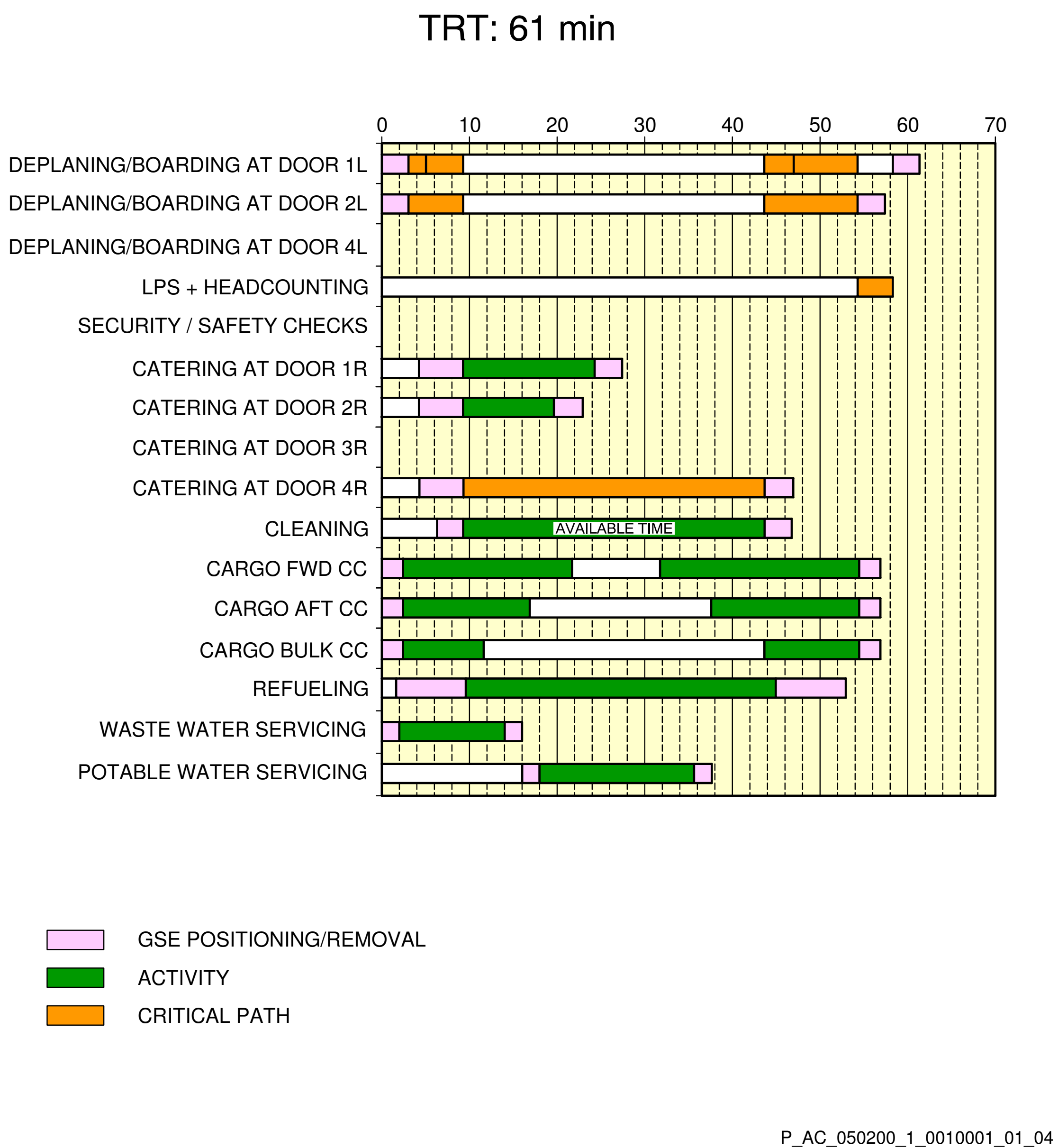
Ground Power Unit (GPU): up to 2 × 90 kVA.

Air Conditioning: up to 2 hoses.

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

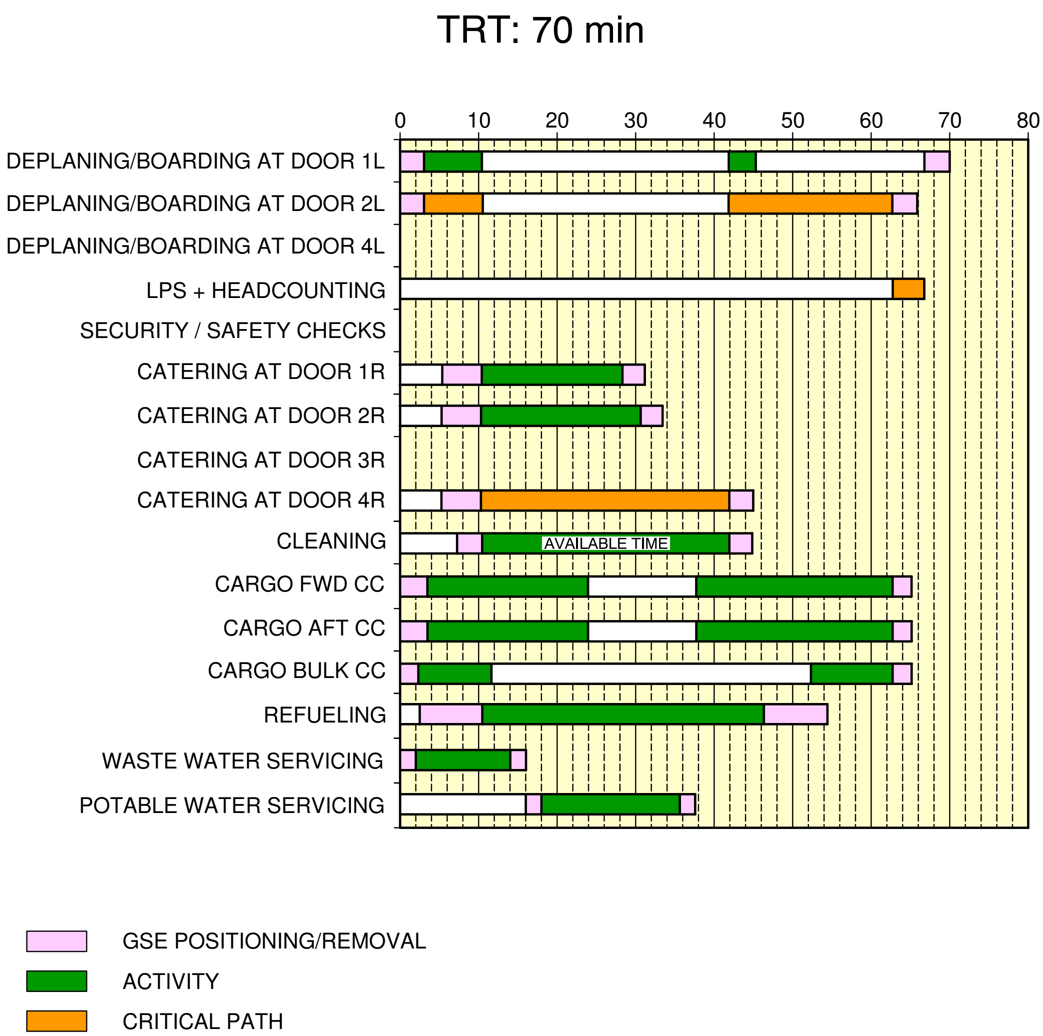
Waste water servicing: draining and rinsing.

**ON A/C A350-900



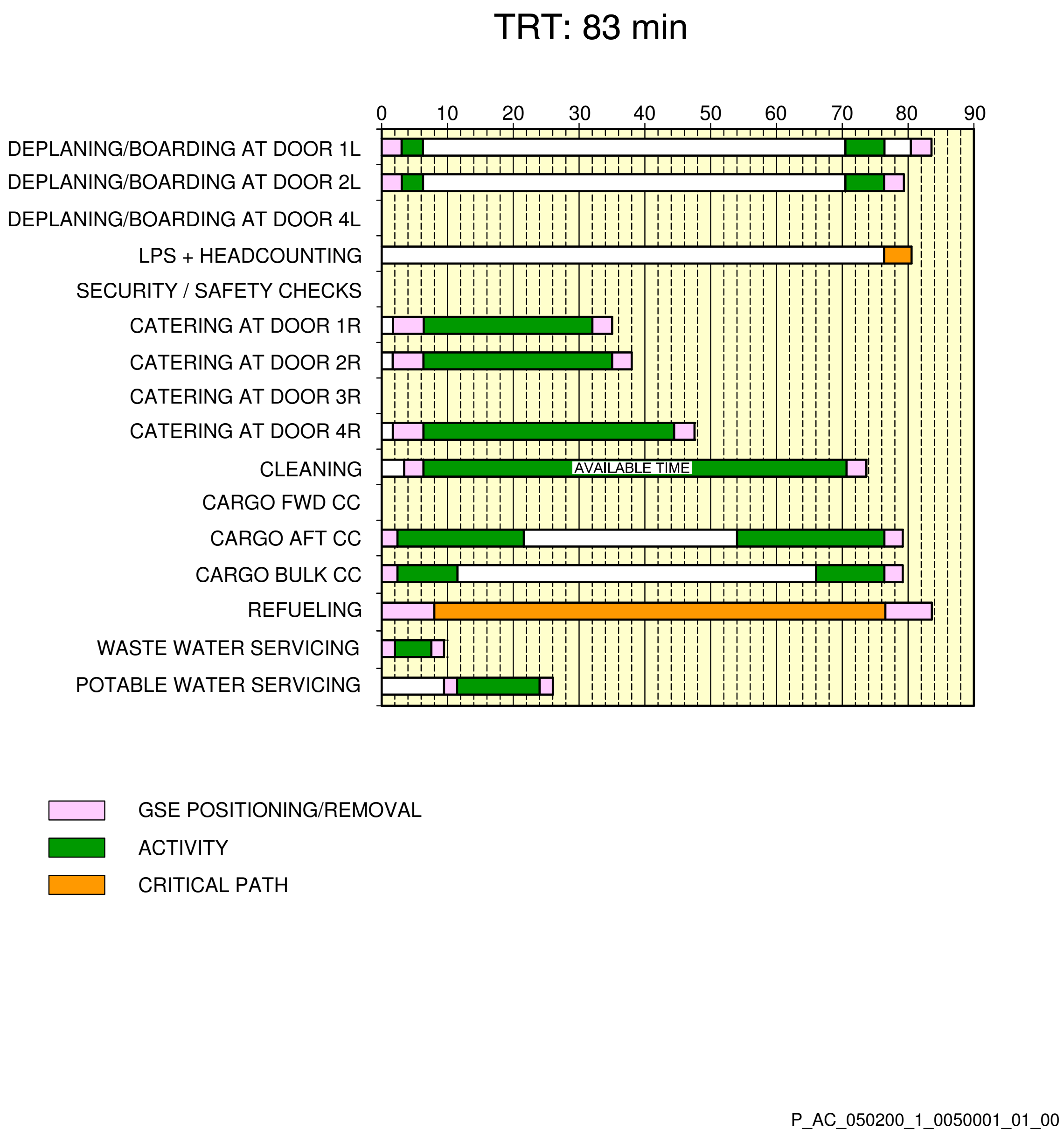
Full Servicing Turn Round Time Chart
FIGURE-5-2-0-991-001-A01

**ON A/C A350-1000



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

**ON A/C A350-900



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: t0 = 0
- Other equipment: t = t0.

Ground Power Unit (GPU): up to 2 × 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

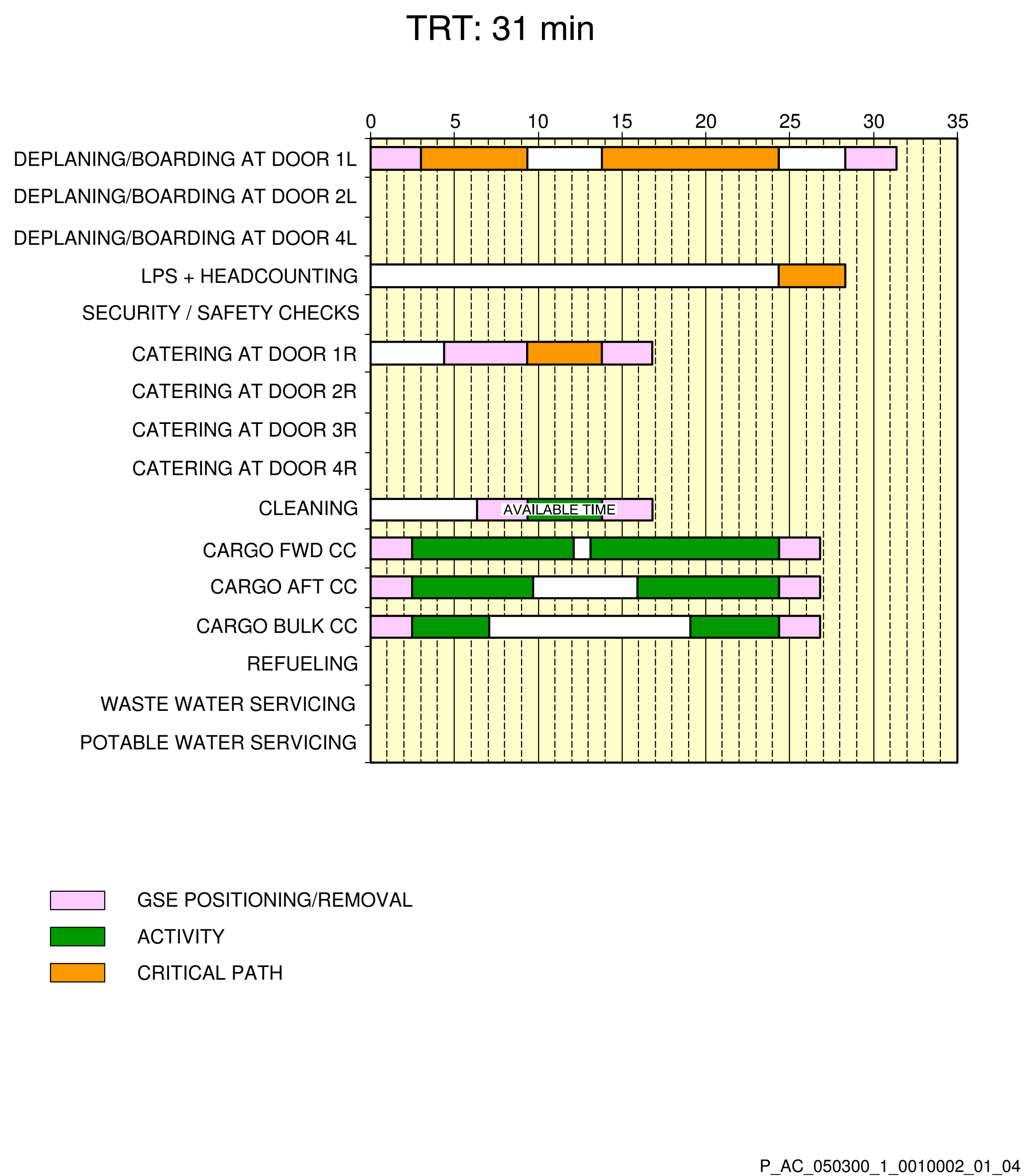
One catering truck for servicing the galleys as required.

F. GROUND HANDLING/GENERAL SERVICING

Start of operations:
- Bridges: t0 = 0
- Other equipment: t = t0.

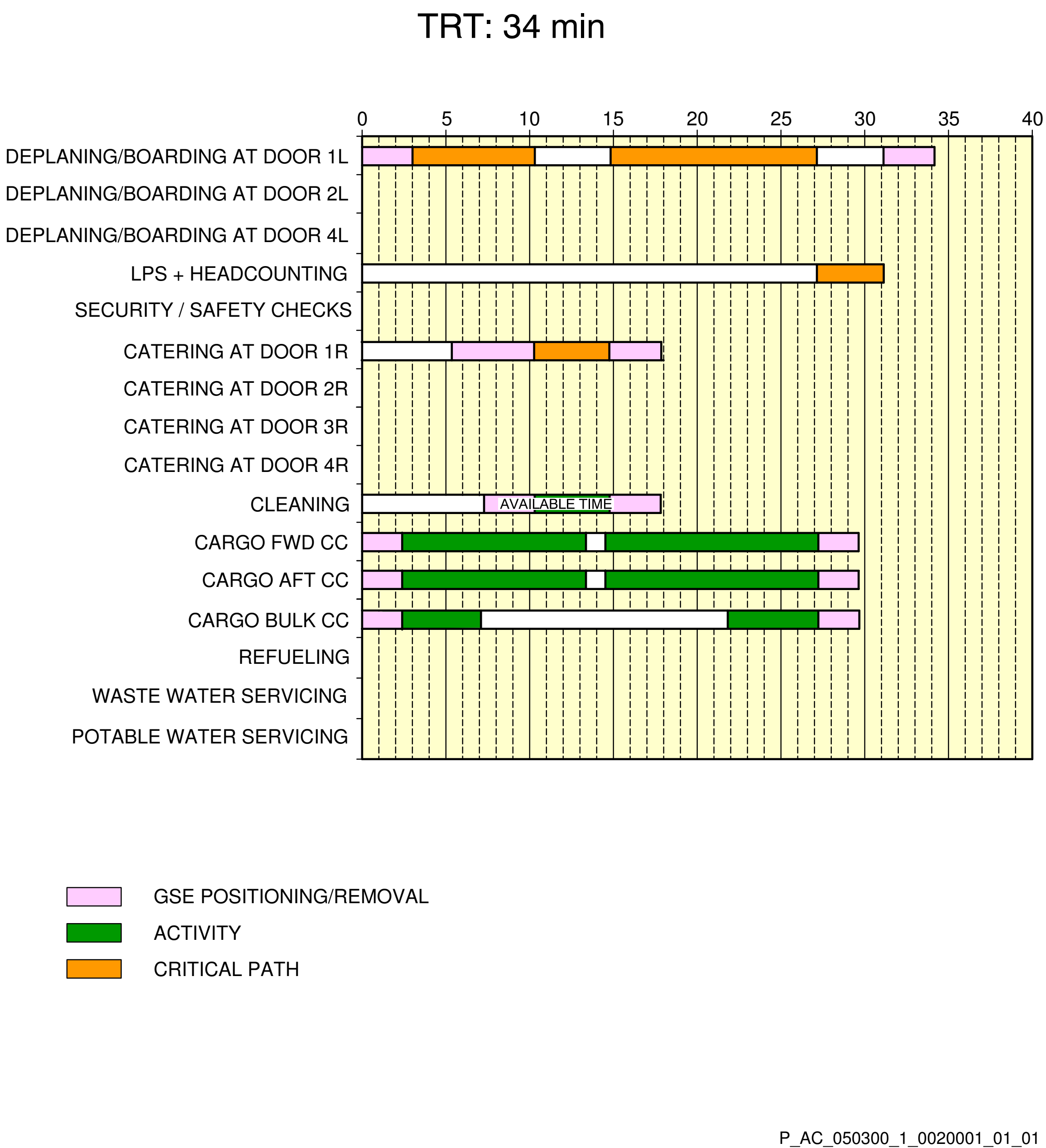
Ground Power Unit (GPU): up to 2 × 90 kVA.
Air conditioning: up to 2 hoses.
Potable water servicing: 25% uplift, 265 L (70 USgal).
Waste water servicing: draining and rinsing.

**ON A/C A350-900



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

**ON A/C A350-1000



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

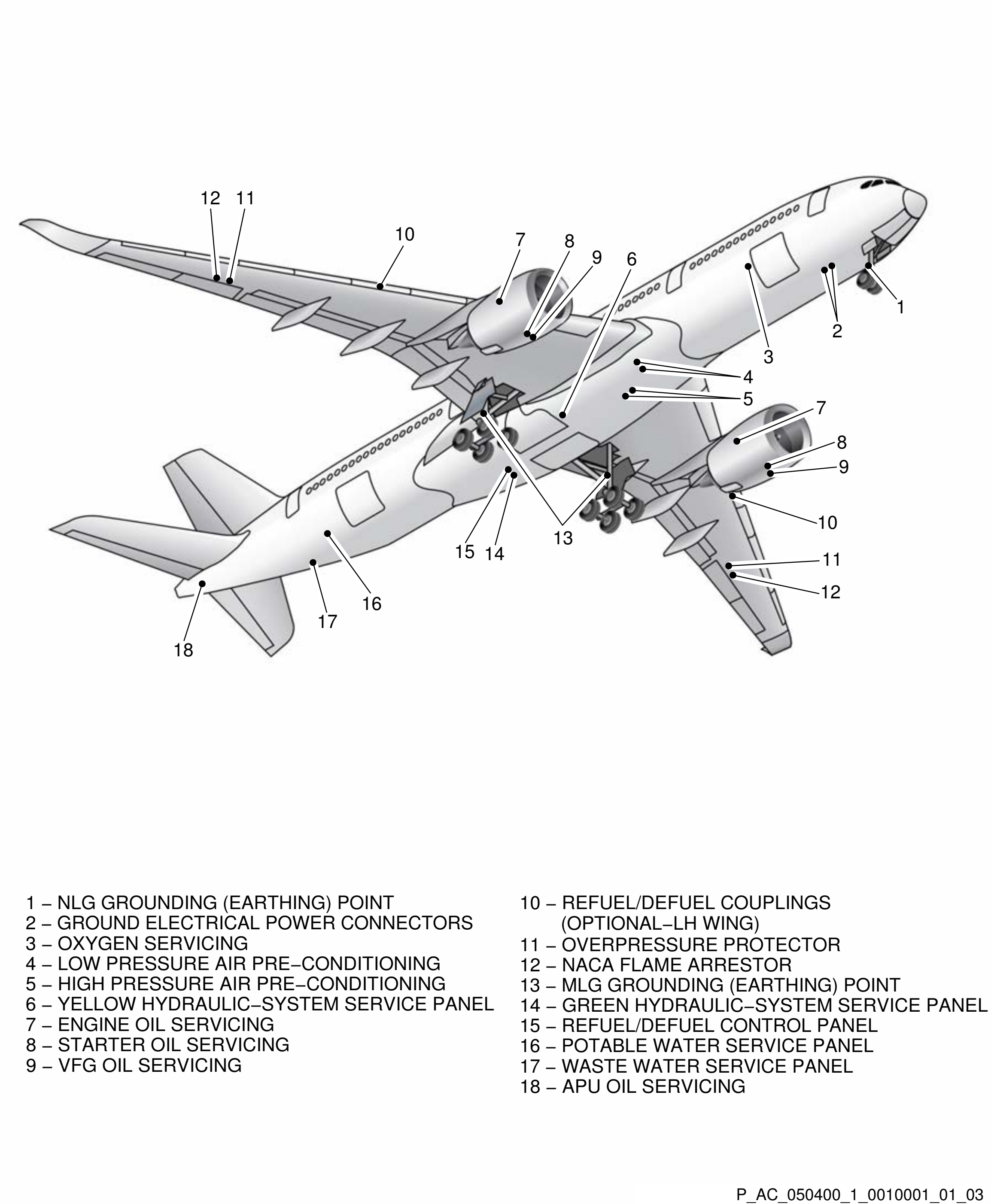
5-4-0 Ground Service Connections Layout

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

Ground Service Connections Layout

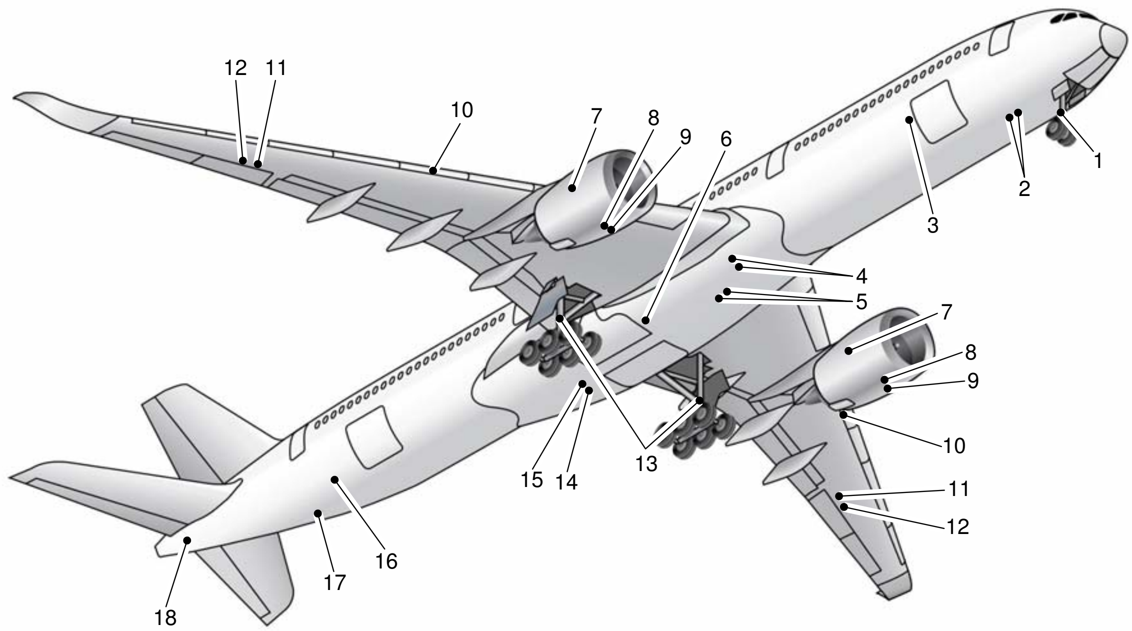
1. This section provides the ground service connections layout.

**ON A/C A350-900



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			
	AFT OF NOSE	FROM AIRCRAFT CENTERLINE		MEAN HEIGHT FROM GROUND
		LH SIDE	RH SIDE	
On Nose Landing Gear leg	4.42 m (14.50 ft.)		0.07 m (0.23 ft.)	1.06 m (3.48 ft.)
On left Main Landing Gear leg	32.95 m (108.10 ft.)	5.59 m (18.34 ft.)		1.55 m (5.09 ft.)
On right Main Landing Gear leg	32.95 m (108.10 ft.)		5.59 m (18.34 ft.)	1.55 m (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			
	AFT OF NOSE	FROM AIRCRAFT CENTERLINE		MEAN HEIGHT FROM GROUND
		LH SIDE	RH SIDE	
On Nose Landing Gear leg	4.42 m (14.50 ft.)		0.07 m (0.23 ft.)	1.80 m (5.91 ft.)

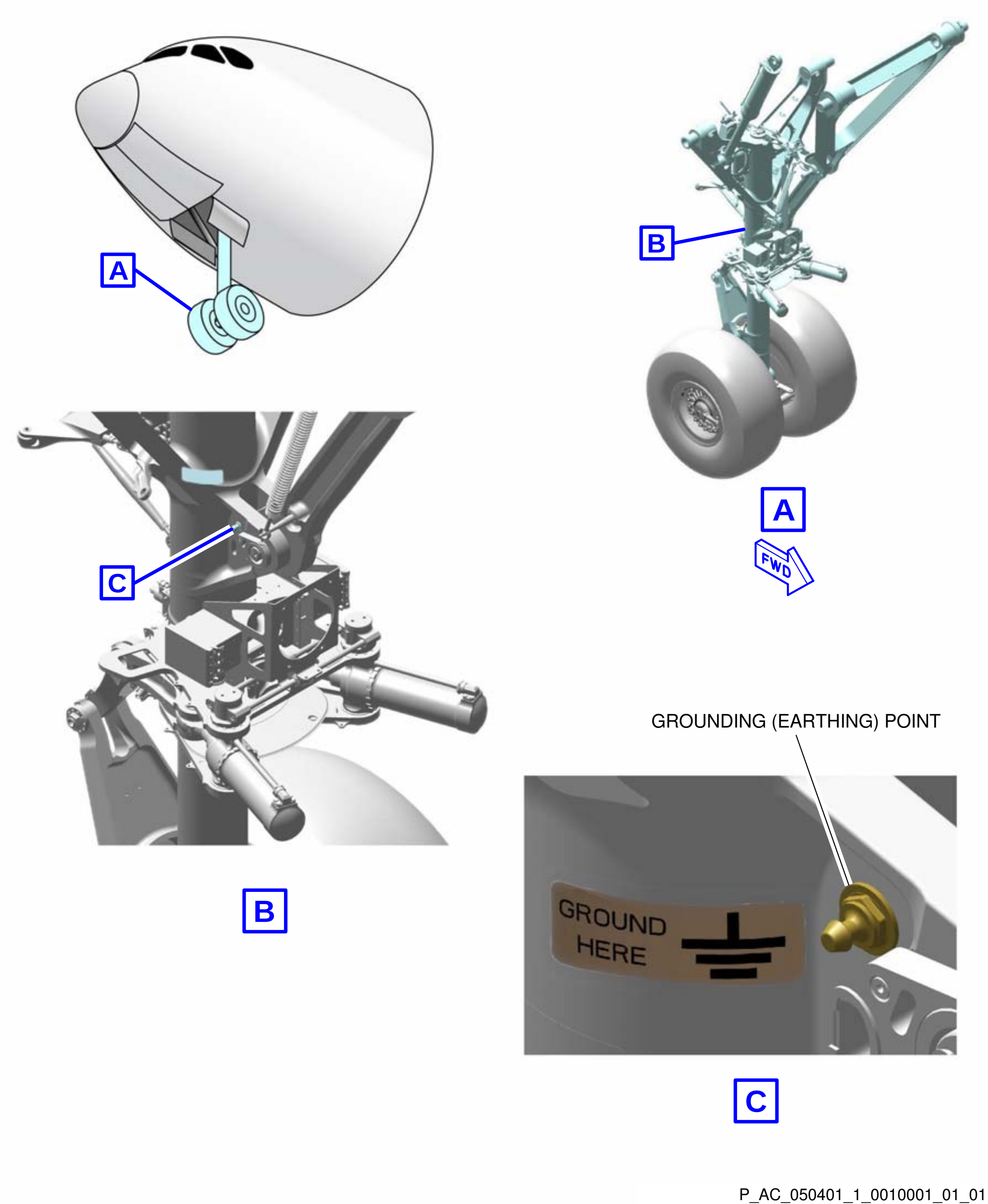
	DISTANCE			
	AFT OF NOSE	FROM AIRCRAFT CENTERLINE		MEAN HEIGHT FROM GROUND
		LH SIDE	RH SIDE	
On left Main Landing Gear leg	36.75 m (120.57 ft.)	5.59 m (18.34 ft.)		1.55 m (5.09 ft.)
On right Main Landing Gear leg	36.75 m (120.57 ft.)		5.59 m (18.34 ft.)	1.55 m (5.09 ft.)

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.

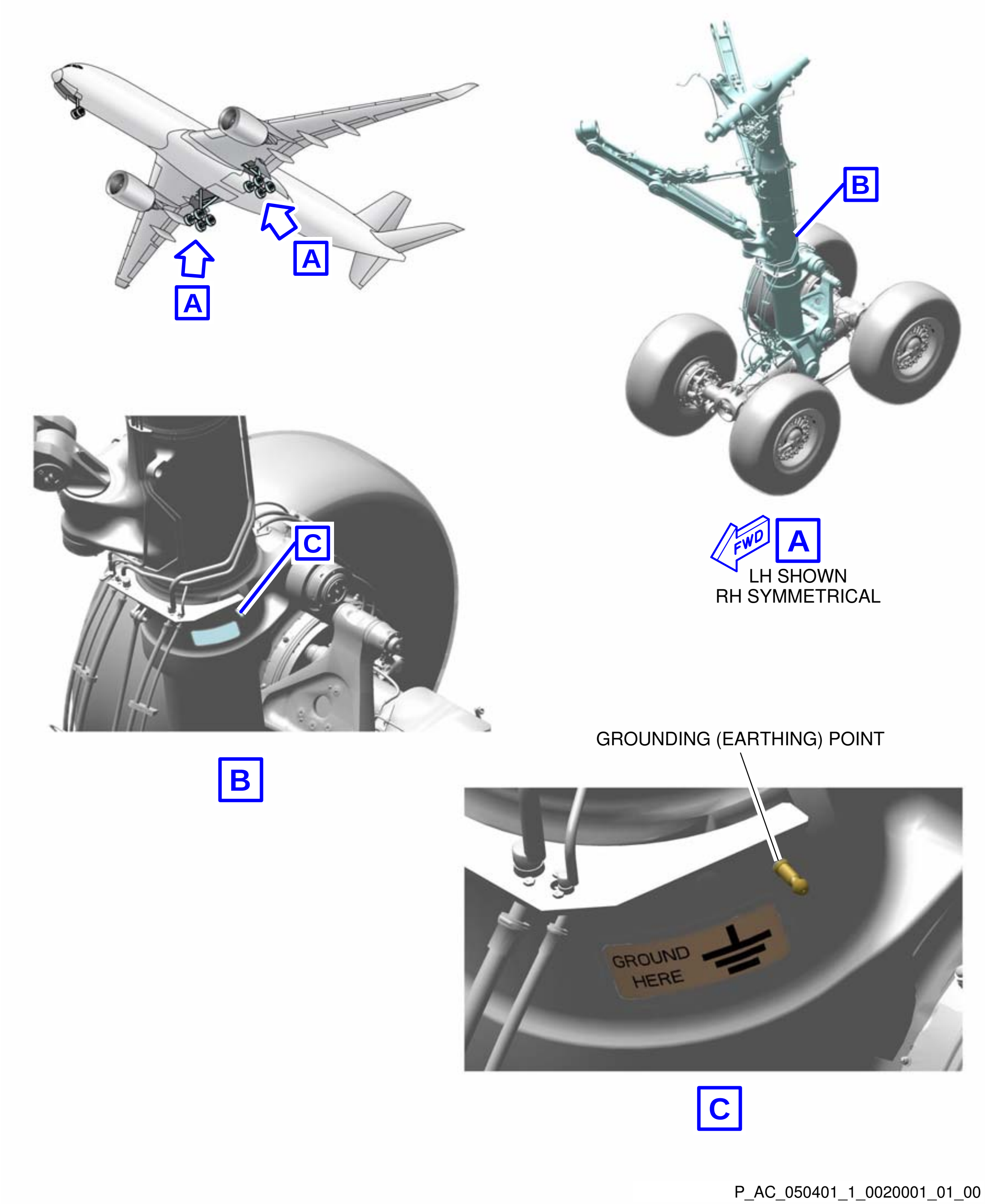
NOTE : In all other conditions, the electrostatic discharge through the tire is sufficient.

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



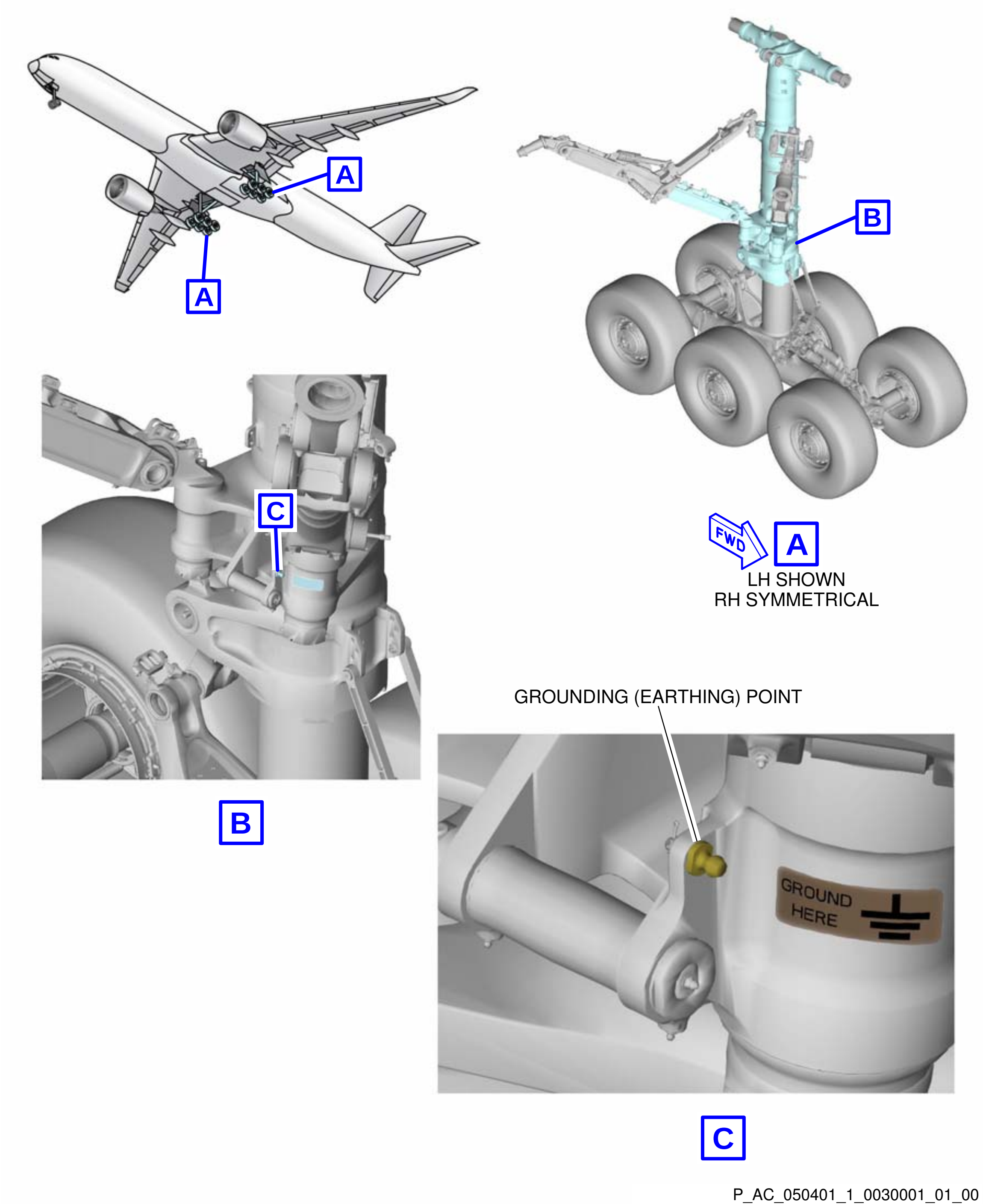
Grounding (Earthing) Point - NLG
FIGURE-5-4-1-991-001-A01

**ON A/C A350-900



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

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			
	AFT OF NOSE	FROM AIRCRAFT CENTERLINE		MEAN HEIGHT FROM GROUND
		LH SIDE	RH SIDE	
Green Ground Service Panel: Access Door 197LB	36.37 m (119.32 ft.)	0.61 m (2.00 ft.)		2.39 m (7.84 ft.)
Yellow Ground Service Panel: Access Door 194KB	30.35 m (99.57 ft.)		1.51 m (4.95 ft.)	2.24 m (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			
	AFT OF NOSE	FROM AIRCRAFT CENTERLINE		MEAN HEIGHT FROM GROUND
		LH SIDE	RH SIDE	
Green Ground Service Panel: Access Door 197LB	40.18 m (131.82 ft.)	0.61 m (2.00 ft.)		2.24 m (7.35 ft.)
Yellow Ground Service Panel: Access Door 194KB	34.15 m (112.04 ft.)		1.51 m (4.95 ft.)	2.12 m (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**

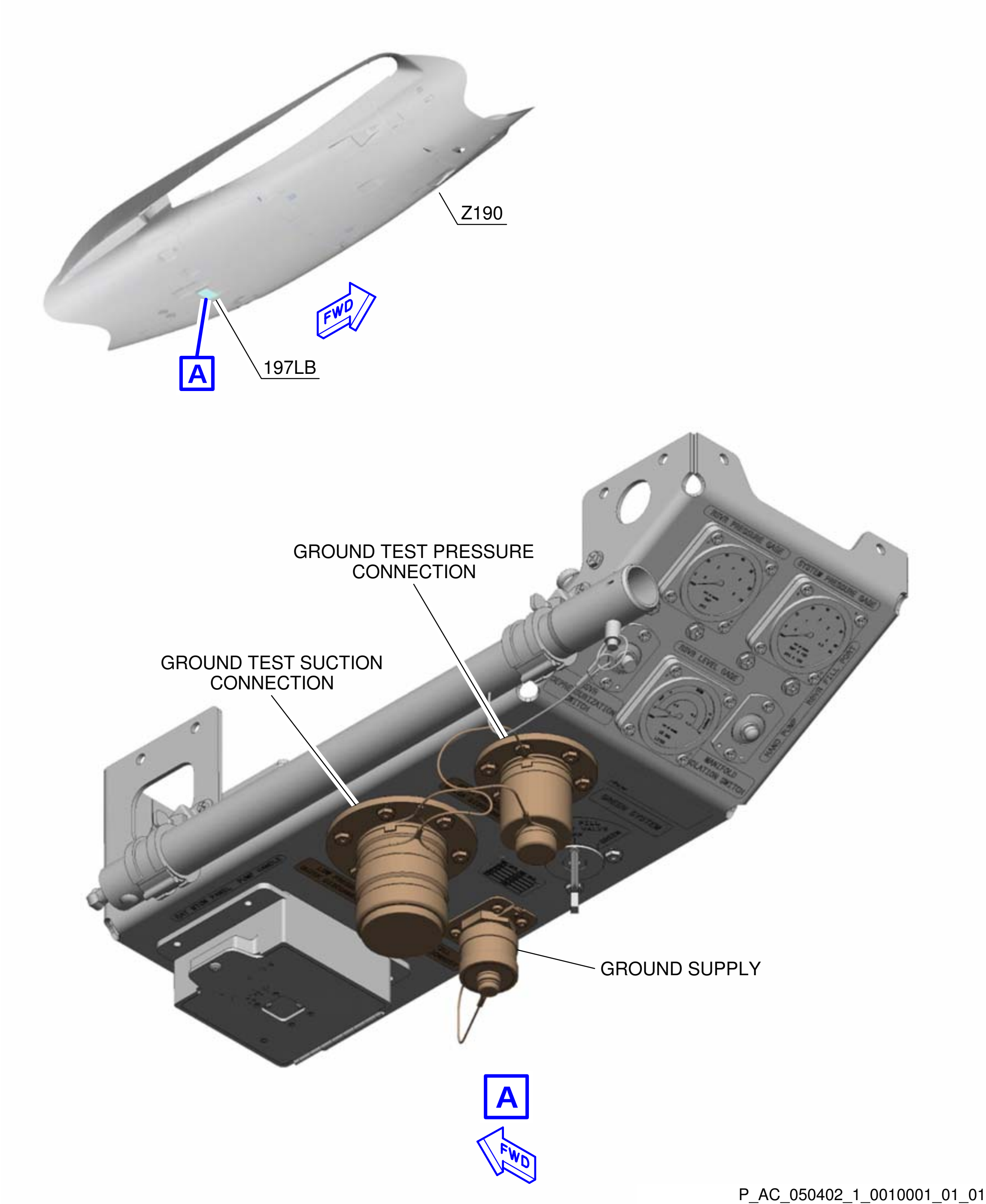
3. Technical Specifications

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).

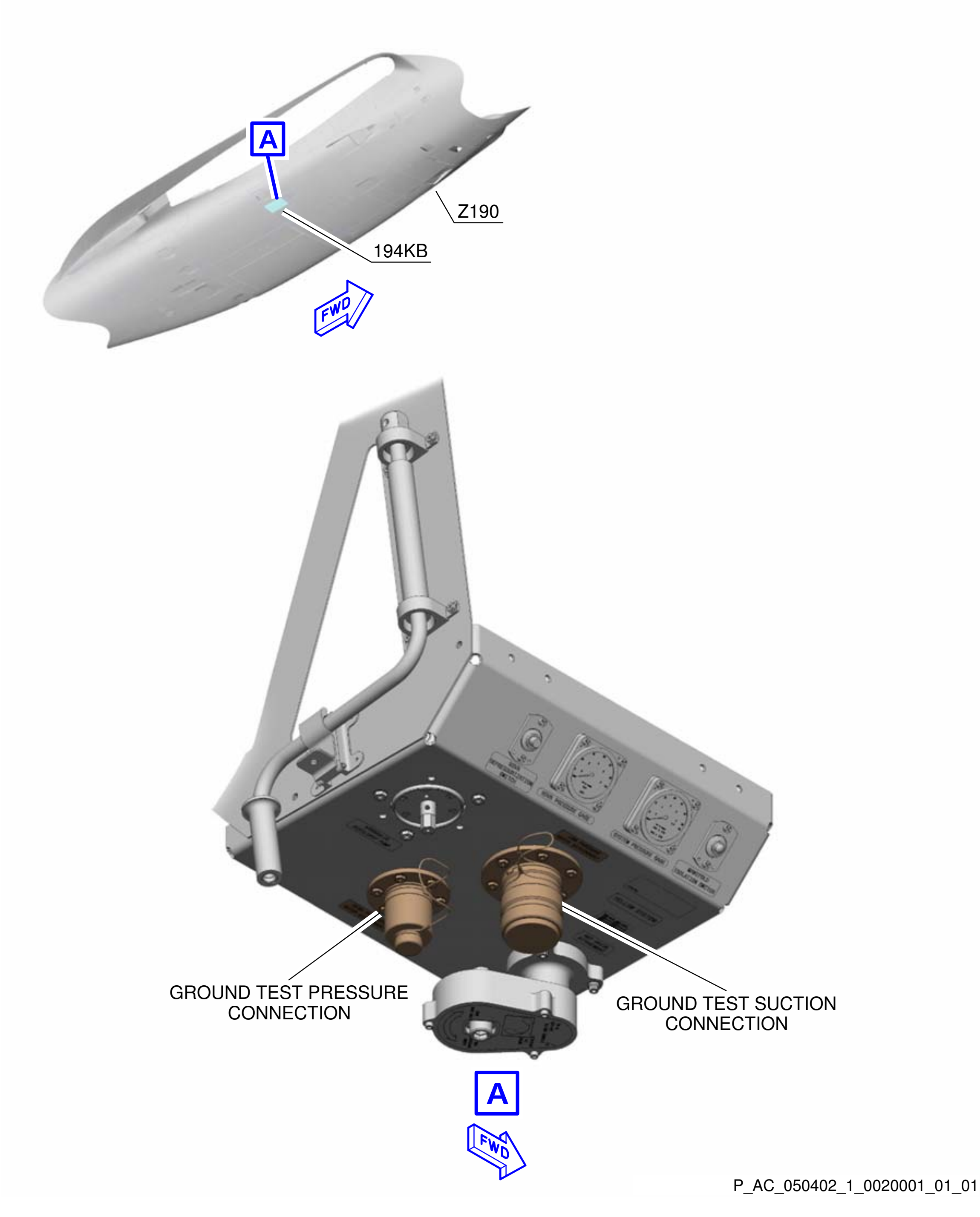
C. After ground equipment shutdown, no further fluid exchange must occur between the aircraft reservoir and the ground equipment.

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



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

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



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			
	AFT OF NOSE	FROM AIRCRAFT CENTERLINE		MEAN HEIGHT FROM GROUND
		LH SIDE	RH SIDE	
A/C External Power: Access Door 122AR	6.63 m (21.75 ft.)		0.91 m (2.99 ft.)	2.58 m (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			
	AFT OF NOSE	FROM AIRCRAFT CENTERLINE		MEAN HEIGHT FROM GROUND
		LH SIDE	RH SIDE	
NLG Service Panel: 2GN	4.35 m (14.27 ft.)		0.15 m (0.49 ft.)	1.8 m (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 INT LOCK
H	

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

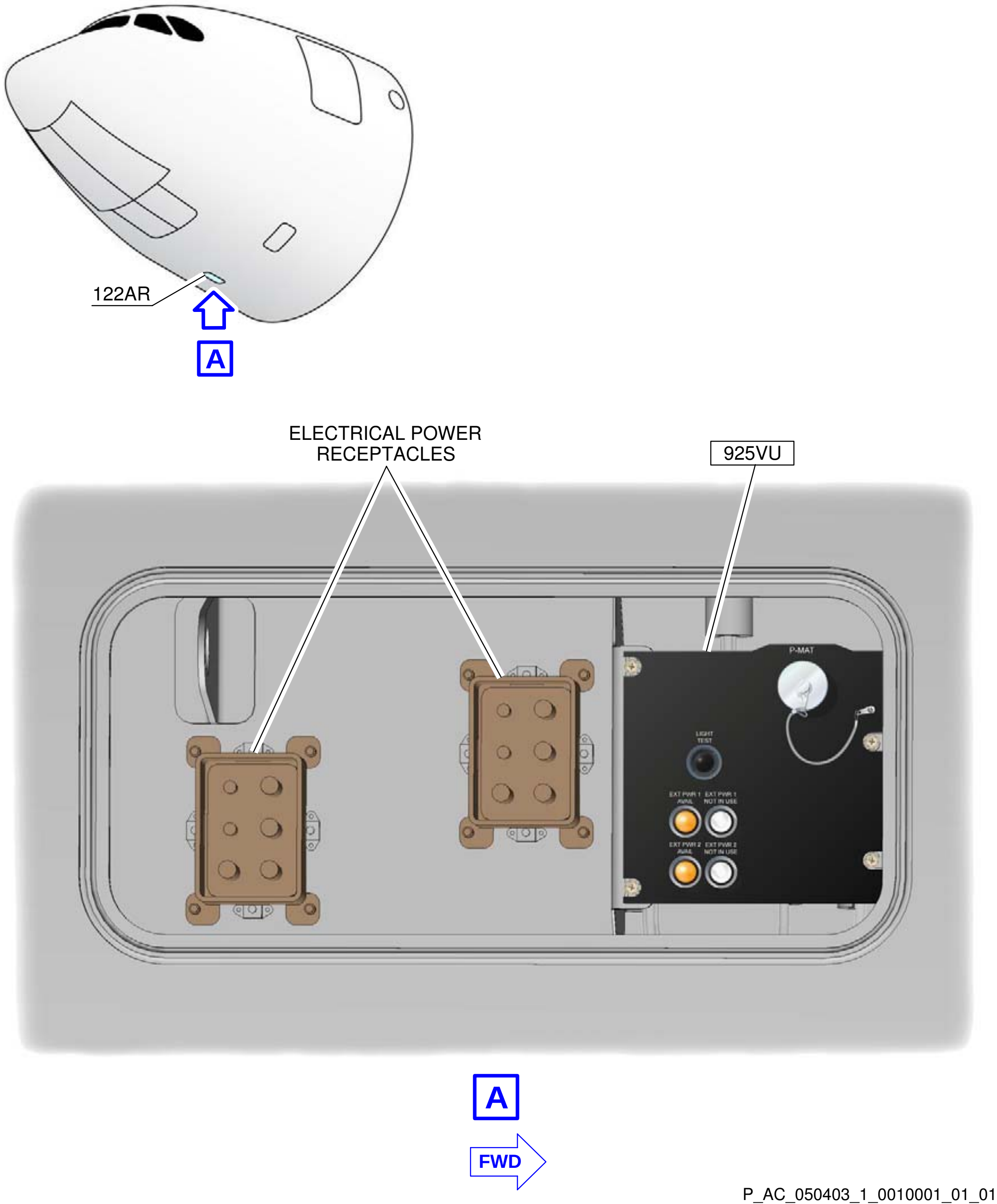
****ON A/C A350-1000**

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.

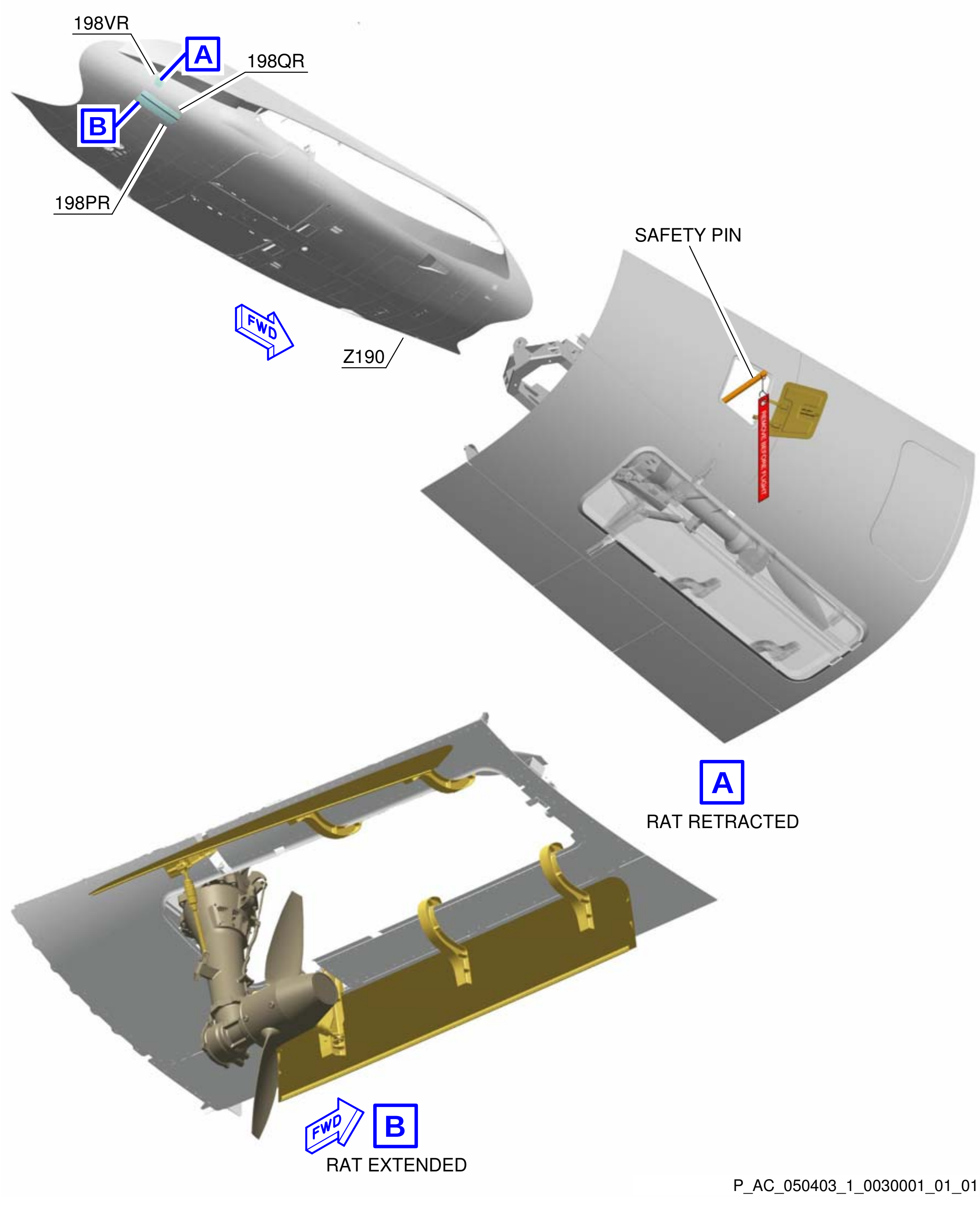
ACCESS	DISTANCE			
	AFT OF NOSE	FROM AIRCRAFT CENTERLINE		MEAN HEIGHT FROM GROUND
		LH SIDE	RH SIDE	
RAT Safety-Pin Installation: Access Panel 198VR	44.00 m (144.36 ft.)		2.50 m (8.2 ft.)	2.91 m (9.55 ft.)

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



Electrical Service Panel
FIGURE-5-4-3-991-001-A01

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



RAT
FIGURE-5-4-3-991-003-A01

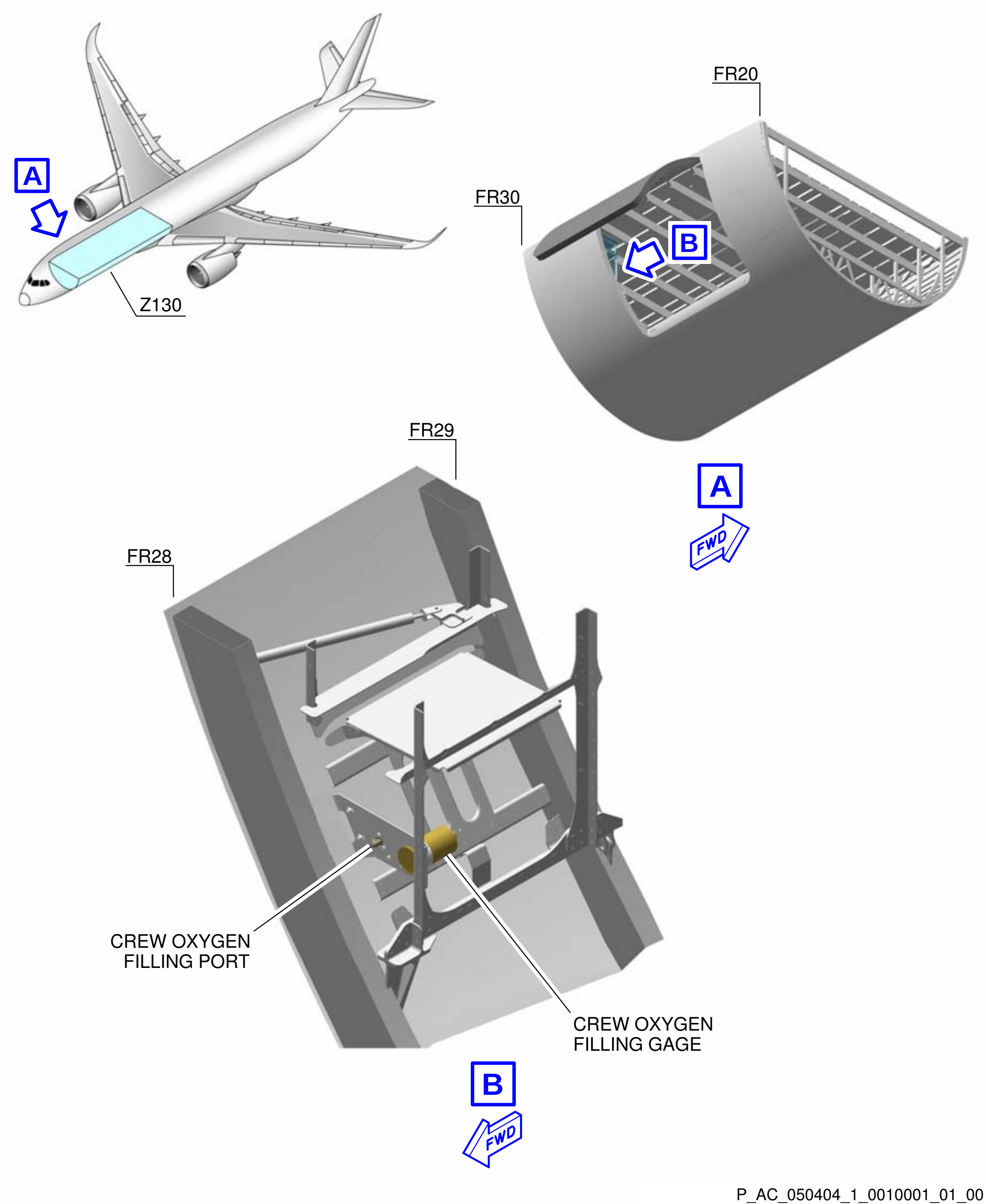
5-4-4 Oxygen Servicing

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

Oxygen Servicing

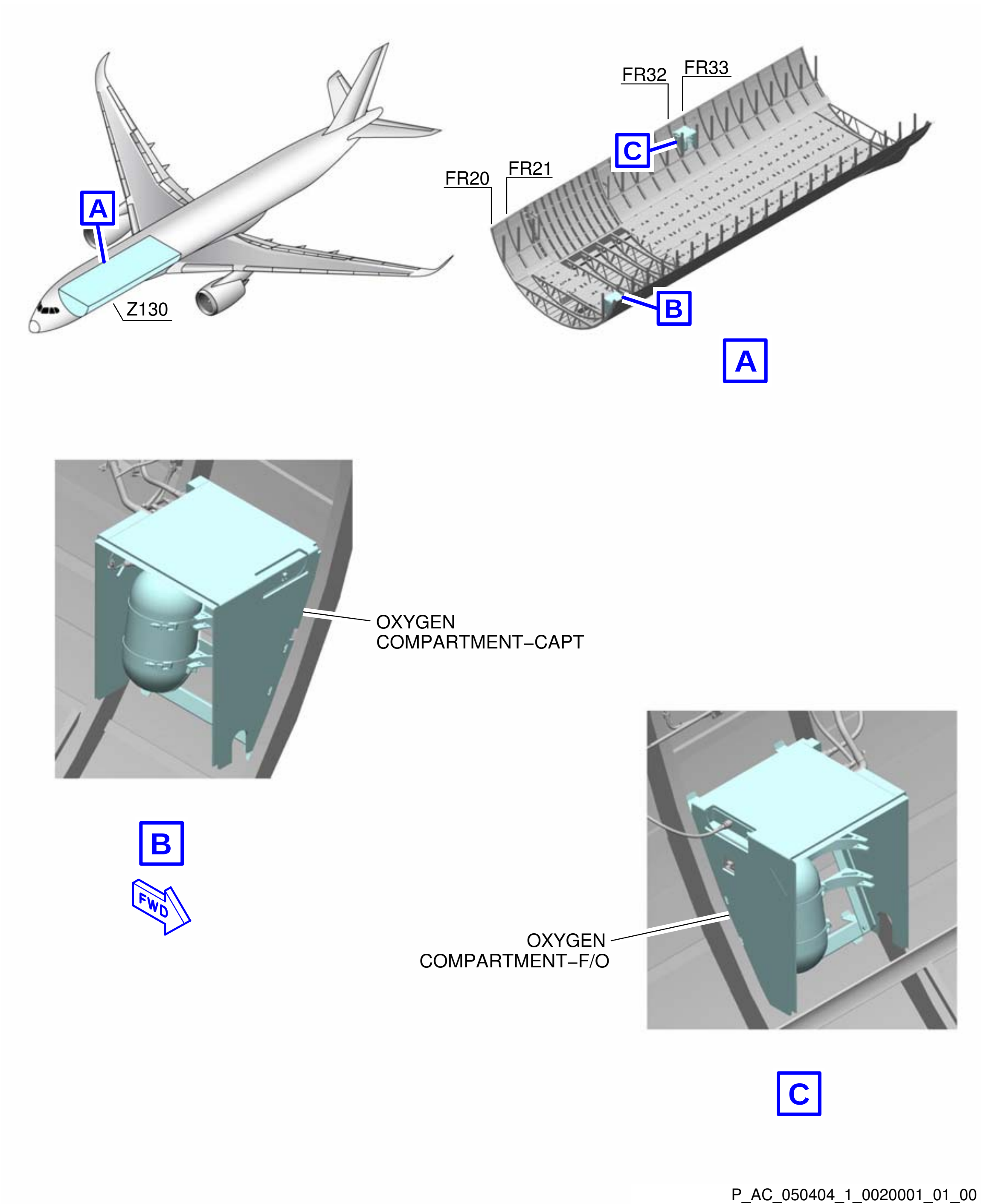
1. General
   The A350 XWB oxygen servicing is designed to supply oxygen to the cockpit and the cabin.
2. Technical Specifications
   - Refilling of the oxygen sources is accomplished by the replacement of the units.
   - An optional filling port and associated devices can be installed at the rear triangular area of the FWD cargo door to allow in-situ flight crew oxygen replenishment.

**ON A/C A350-900



Oxygen System
FIGURE-5-4-4-991-001-A01

**ON A/C A350-900



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			
	AFT OF NOSE	FROM AIRCRAFT CENTERLINE		MEAN HEIGHT FROM GROUND
		LH SIDE	RH SIDE	
Refuel/Defuel Control Panel: Access Door 197KB	36.20 m (118.77 ft.)	On centerline		2.18 m (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			
	AFT OF NOSE	FROM AIRCRAFT CENTERLINE		MEAN HEIGHT FROM GROUND
		LH SIDE	RH SIDE	
Refuel/Defuel Coupling, Left (Optional): Access Door 523EB	32.57 m (106.86 ft.)	15.83 m (51.94 ft.)		5.50 m (18.04 ft.)
Refuel/Defuel Coupling, Right: Access Door 623EB	32.57 m (106.86 ft.)		15.83 m (51.94 ft.)	5.50 m (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 (125.46 ft.)	22.33 m (73.26 ft.)	22.33 m (73.26 ft.)	6.13 m (20.11 ft.)
NACA Flame Arrestor	38.69 m (126.94 ft.)	23.07 m (75.69 ft.)	23.07 m (75.69 ft.)	6.19 m (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			
	AFT OF NOSE	FROM AIRCRAFT CENTERLINE		MEAN HEIGHT FROM GROUND
		LH SIDE	RH SIDE	
Refuel/Defuel Control Panel: Access Door 197KB	40.11 m (131.59 ft.)	On centerline		2.18 m (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			
	AFT OF NOSE	FROM AIRCRAFT CENTERLINE		MEAN HEIGHT FROM GROUND
		LH SIDE	RH SIDE	
Refuel/Defuel Coupling, Left (Optional): Access Door 523EB	36.49 m (119.72 ft.)	15.83 m (51.94 ft.)		5.50 m (18.04 ft.)
Refuel/Defuel Coupling, Right: Access Door 623EB	36.49 m (119.72 ft.)		15.83 m (51.94 ft.)	5.50 m (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).

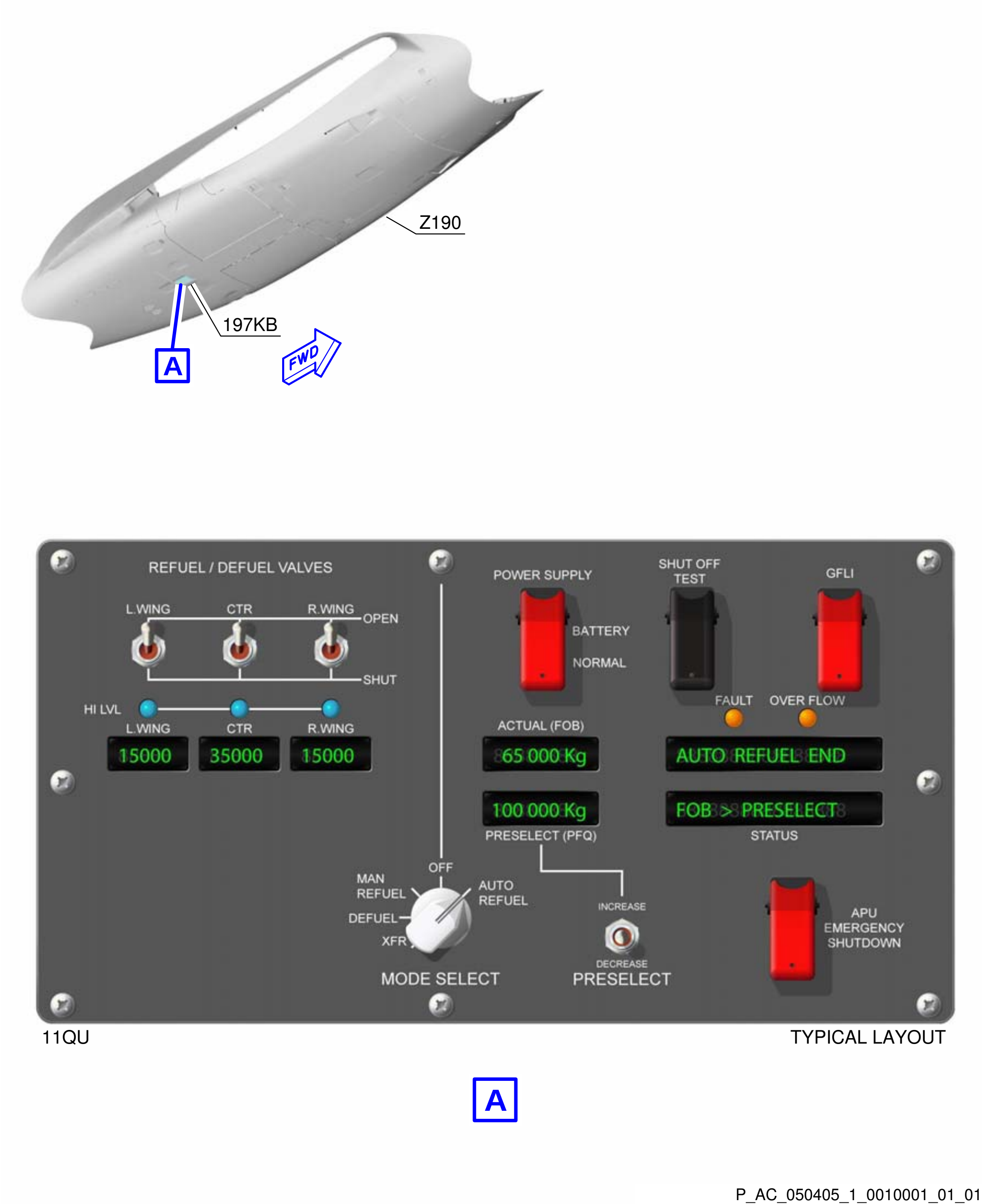
B. Refuel pressure:
- Maximum pressure: 3.45 bar (50 psi).

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.

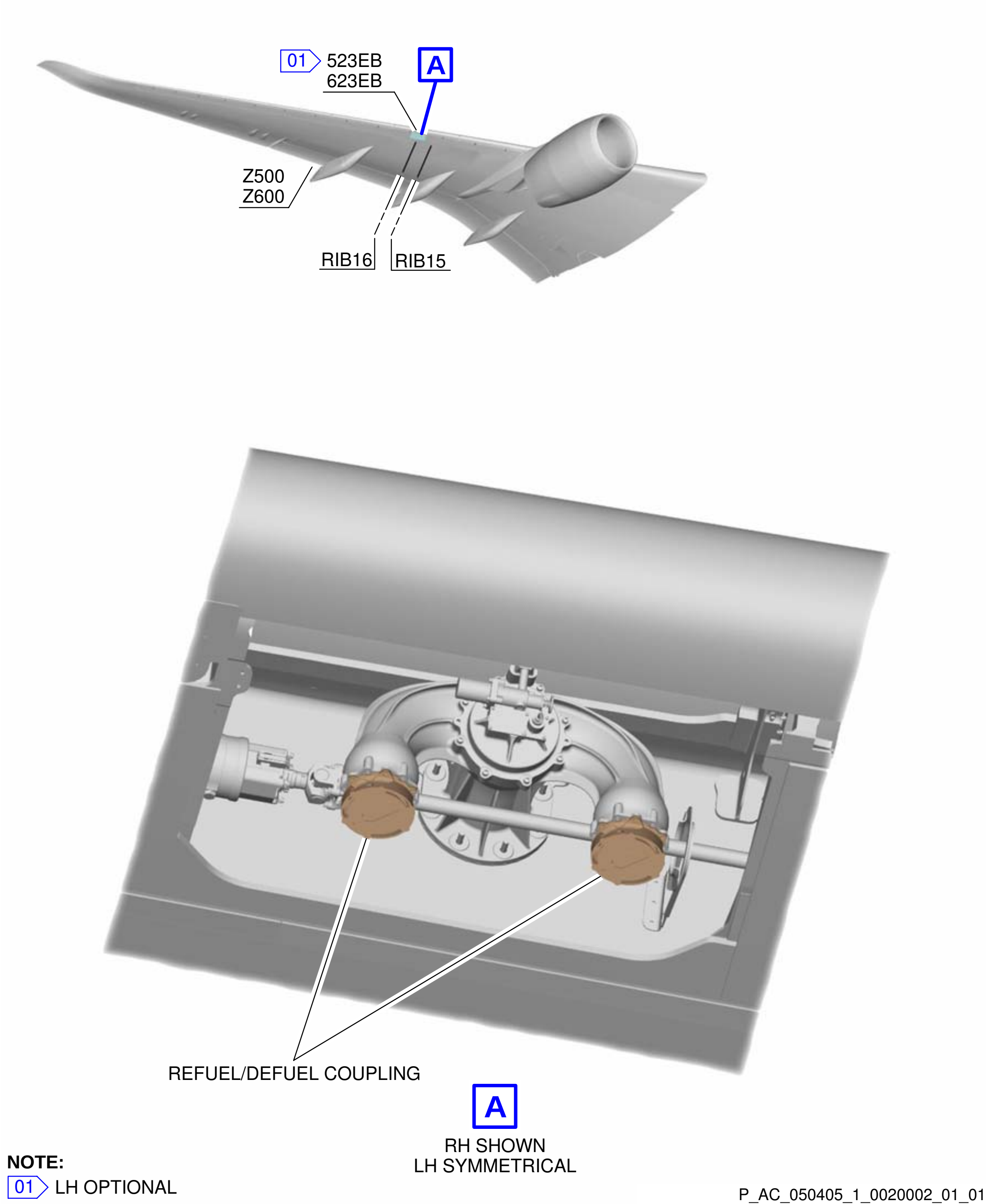
ACCESS	AFT OF NOSE	FROM AIRCRAFT CENTERLINE		MEAN HEIGHT FROM GROUND
		LH SIDE	RH SIDE	
Overpressure Protector	42.05 m (137.96 ft.)	22.33 m (73.26 ft.)	22.33 m (73.26 ft.)	6.13 m (20.11 ft.)
NACA Flame Arrestor	42.50 m (139.44 ft.)	23.07 m (75.69 ft.)	23.07 m (75.69 ft.)	6.19 m (20.31 ft.)

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



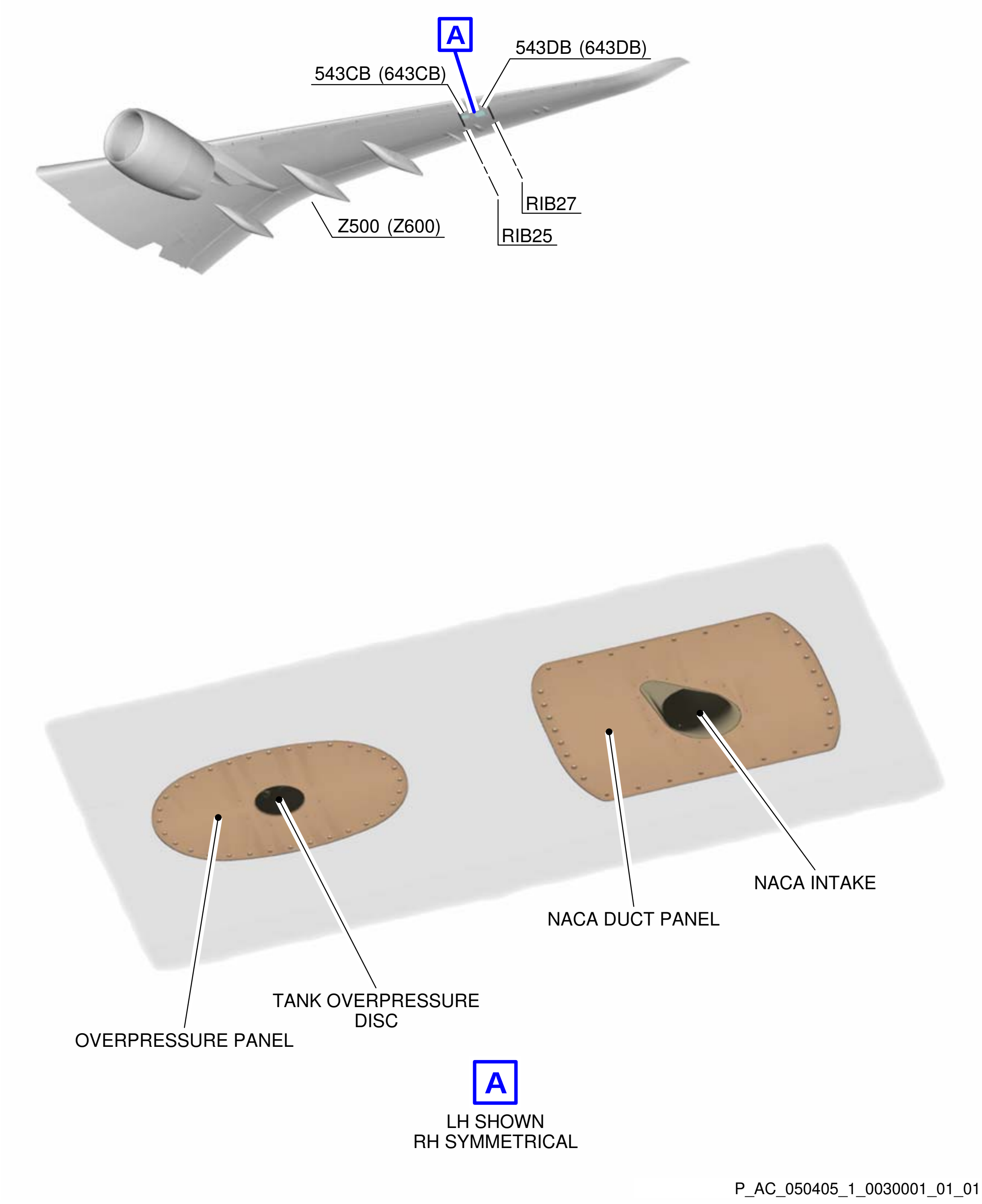
Refuel/Defuel Control Panel
FIGURE-5-4-5-991-001-A01

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



Refuel/Defuel Couplings
FIGURE-5-4-5-991-002-B01

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



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.

<table>
<tr><th rowspan="3">ACCESS</th><th colspan="4">DISTANCE</th></tr>
<tr><th rowspan="2">AFT OF NOSE</th><th colspan="2">FROM AIRCRAFT CENTERLINE</th><th rowspan="2">MEAN HEIGHT FROM GROUND</th></tr>
<tr><th>LH SIDE</th><th>RH SIDE</th></tr>
<tr><td>Access Door 193CB</td><td>23.58 m (77.36 ft.)</td><td></td><td>1.05 m (3.44 ft.)</td><td>2.59 m (8.50 ft.)</td></tr>
<tr><td>Access Door 194CR</td><td>23.58 m (77.36 ft.)</td><td></td><td>1.87 m (6.14 ft.)</td><td>2.87 m (9.42 ft.)</td></tr>
</table>

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.

<table>
<tr><th rowspan="3">ACCESS</th><th colspan="4">DISTANCE</th></tr>
<tr><th rowspan="2">AFT OF NOSE</th><th colspan="2">FROM AIRCRAFT CENTERLINE</th><th rowspan="2">MEAN HEIGHT FROM GROUND</th></tr>
<tr><th>LH SIDE</th><th>RH SIDE</th></tr>
<tr><td>Access Door 193KB</td><td>26.81 m (87.96 ft.)</td><td colspan="2">On Centerline</td><td>2.06 m (6.76 ft.)</td></tr>
</table>

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			
	AFT OF NOSE	FROM AIRCRAFT CENTERLINE		MEAN HEIGHT FROM GROUND
		LH SIDE	RH SIDE	
Access Door 193CB	27.39 m (89.86 ft.)		1.05 m (3.44 ft.)	2.44 m (8.01 ft.)
Access Door 194CR	27.39 m (89.86 ft.)		1.86 m (6.10 ft.)	2.57 m (8.43 ft.)

A. Connectors:
- Two standard 8 in. SAE AS4262 type B connections.

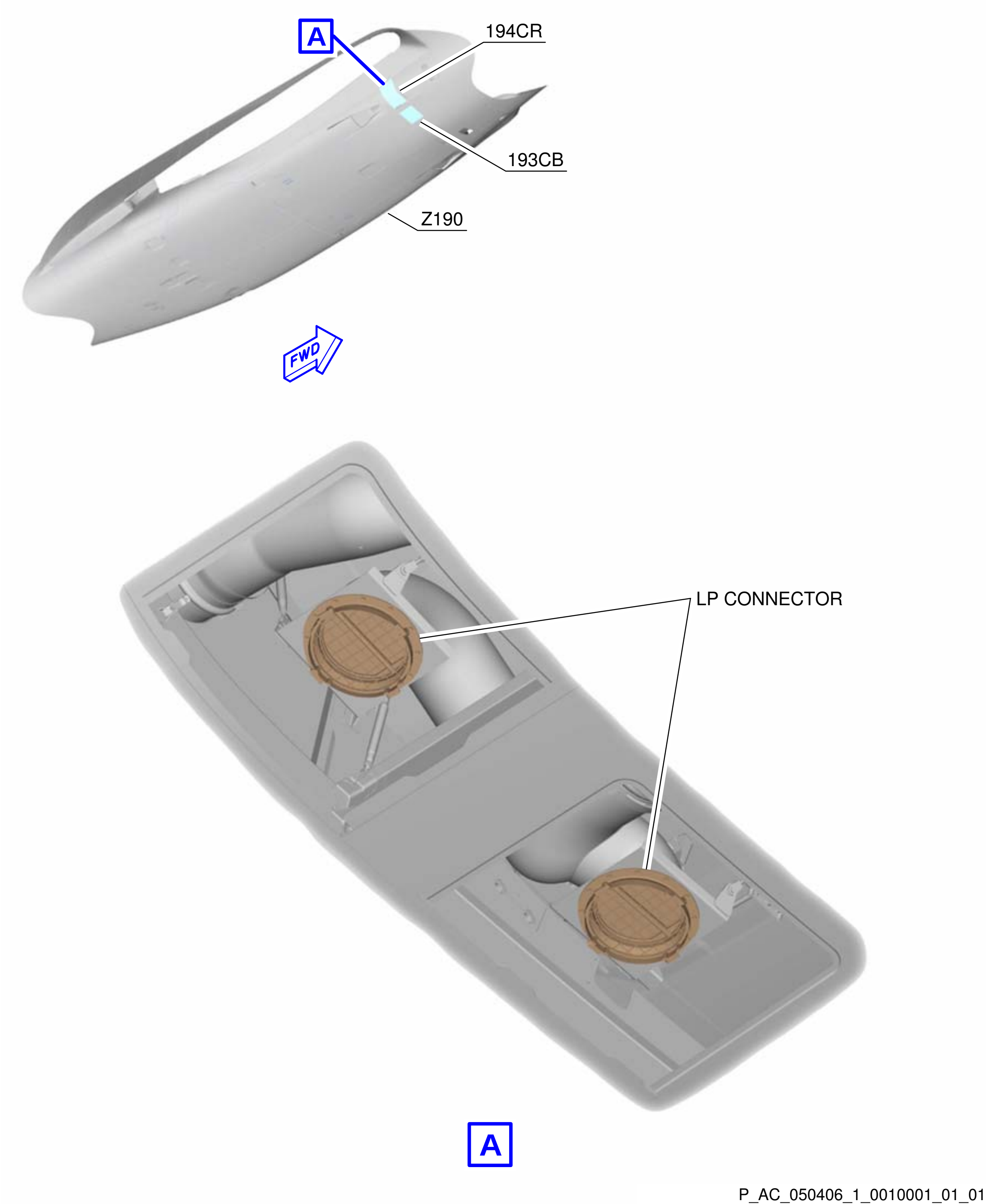
4. High Pressure Connectors

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

ACCESS	DISTANCE			
	AFT OF NOSE	FROM AIRCRAFT CENTERLINE		MEAN HEIGHT FROM GROUND
		LH SIDE	RH SIDE	
Access Door 193KB	30.77 m (100.95 ft.)	On Centerline		2.06 m (6.76 ft.)

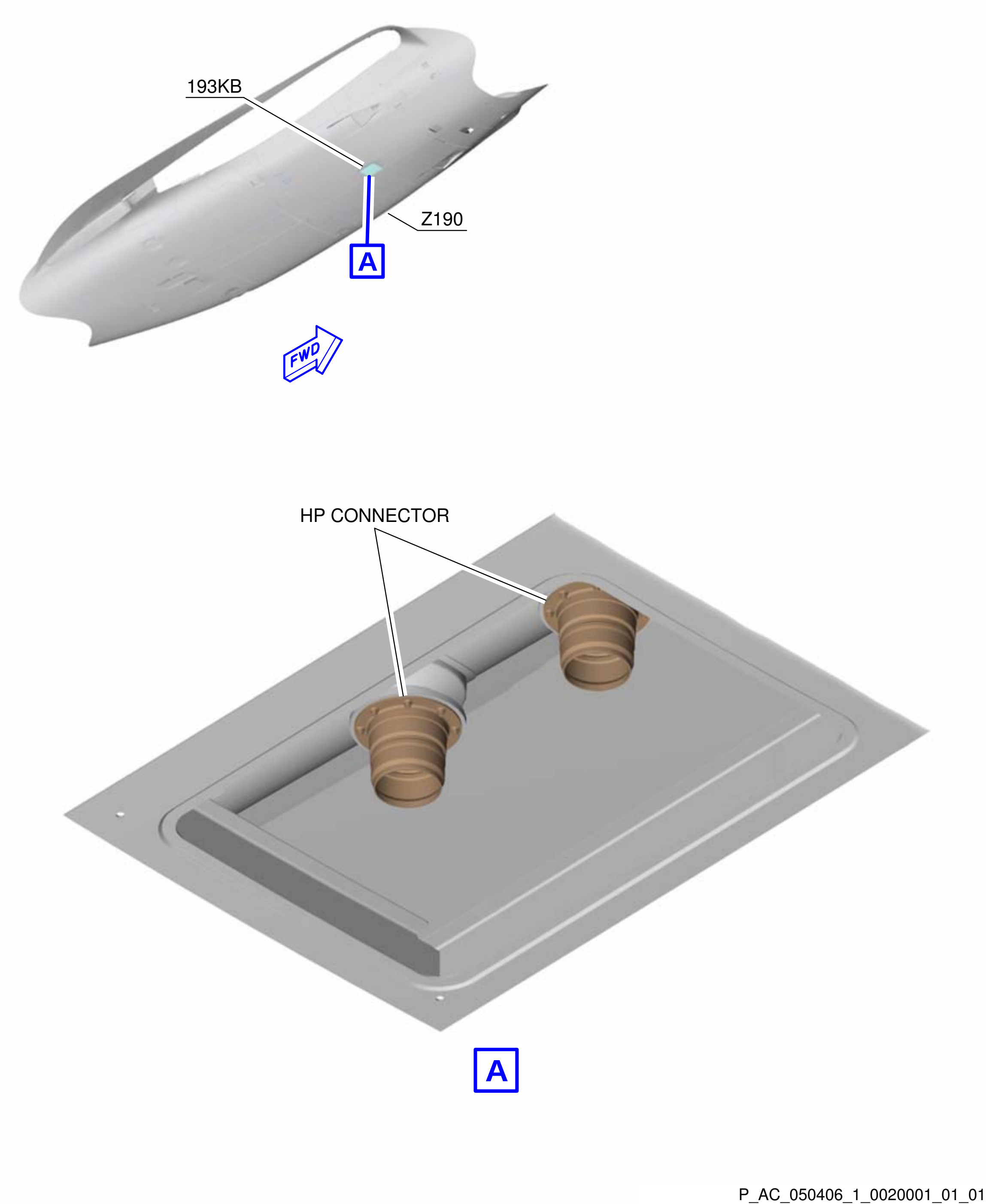
A. Connectors:
- Two standard 3 in. ISO 2026 connections.

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



Low Pressure Ground Connectors
FIGURE-5-4-6-991-001-A01

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



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			
	AFT OF NOSE	FROM AIRCRAFT CENTERLINE		MEAN HEIGHT FROM GROUND
		LH SIDE	RH SIDE	
Engine 1: Access Door 415BR	24.75 m (81.20 ft.)	8.60 m (28.22 ft.)		3.23 m (10.60 ft.)
Engine 2: Access Door 425BR	24.68 m (80.97 ft.)		12.29 m (40.32 ft.)	3.23 m (10.60 ft.)

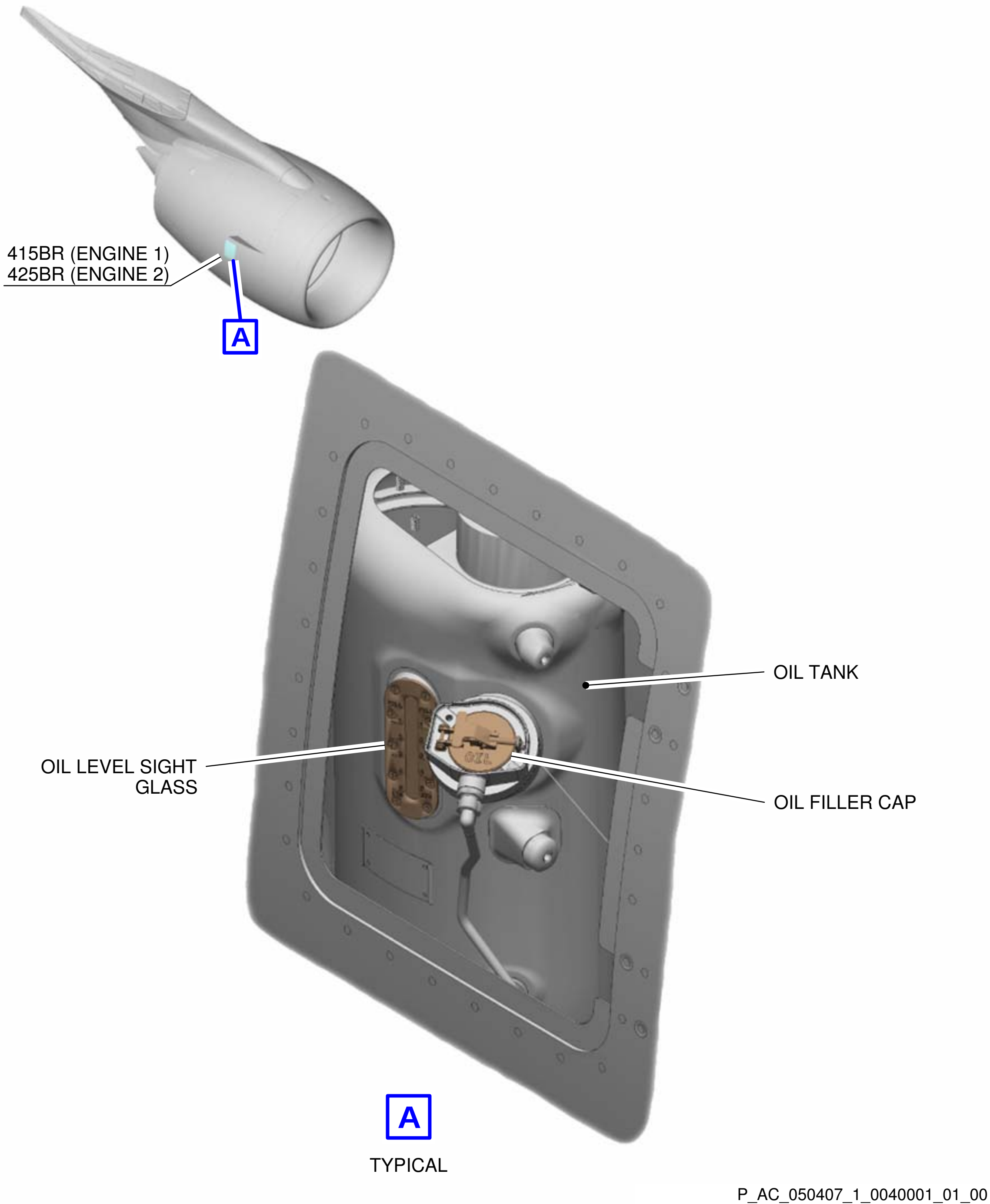
****ON A/C A350-1000**

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			
	AFT OF NOSE	FROM AIRCRAFT CENTERLINE		MEAN HEIGHT FROM GROUND
		LH SIDE	RH SIDE	
Engine 1: Access Door 415BR	28.56 m (93.70 ft.)	8.60 m (28.22 ft.)		3.23 m (10.60 ft.)
Engine 2: Access Door 425BR	28.49 m (93.47 ft.)		12.29 m (40.32 ft.)	3.23 m (10.60 ft.)

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



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			
	AFT OF NOSE	FROM AIRCRAFT CENTERLINE		MEAN HEIGHT FROM GROUND
		LH SIDE	RH SIDE	
Engine 1: Fan Cowl 415AL	24.32 m (79.79 ft.)	11.02 m (36.15 ft.)		1.22 m (4.00 ft.)
Engine 2: Fan Cowl 425AL	24.34 m (79.86 ft.)		9.86 m (32.35 ft.)	1.22 m (4.00 ft.)

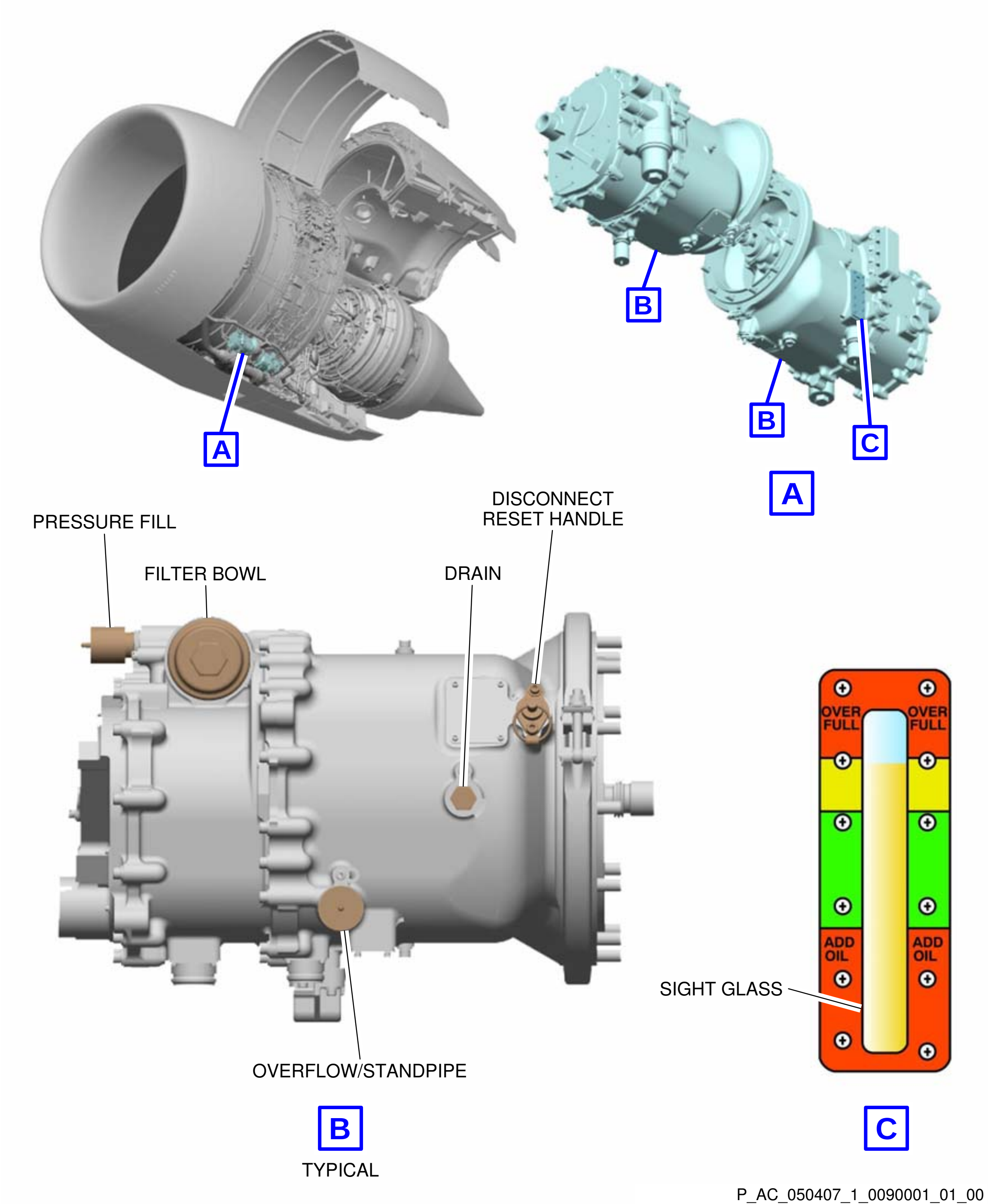
****ON A/C A350-1000**

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			
	AFT OF NOSE	FROM AIRCRAFT CENTERLINE		MEAN HEIGHT FROM GROUND
		LH SIDE	RH SIDE	
Engine 1: Fan Cowl 415AL	28.13 m (92.29 ft.)	11.02 m (36.15 ft.)		1.22 m (4.00 ft.)
Engine 2: Fan Cowl 425AL	28.15 m (92.36 ft.)		9.86 m (32.35 ft.)	1.22 m (4.00 ft.)

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



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			
	AFT OF NOSE	FROM AIRCRAFT CENTERLINE		MEAN HEIGHT FROM GROUND
		LH SIDE	RH SIDE	
Engine 1: Fan Cowl 415AL	24.60 m (80.71 ft.)	10.57 m (34.68 ft.)		1.08 m (3.54 ft.)
Engine 2: Fan Cowl 425AL	24.60 m (80.71 ft.)		10.31 m (33.83 ft.)	1.08 m (3.54 ft.)

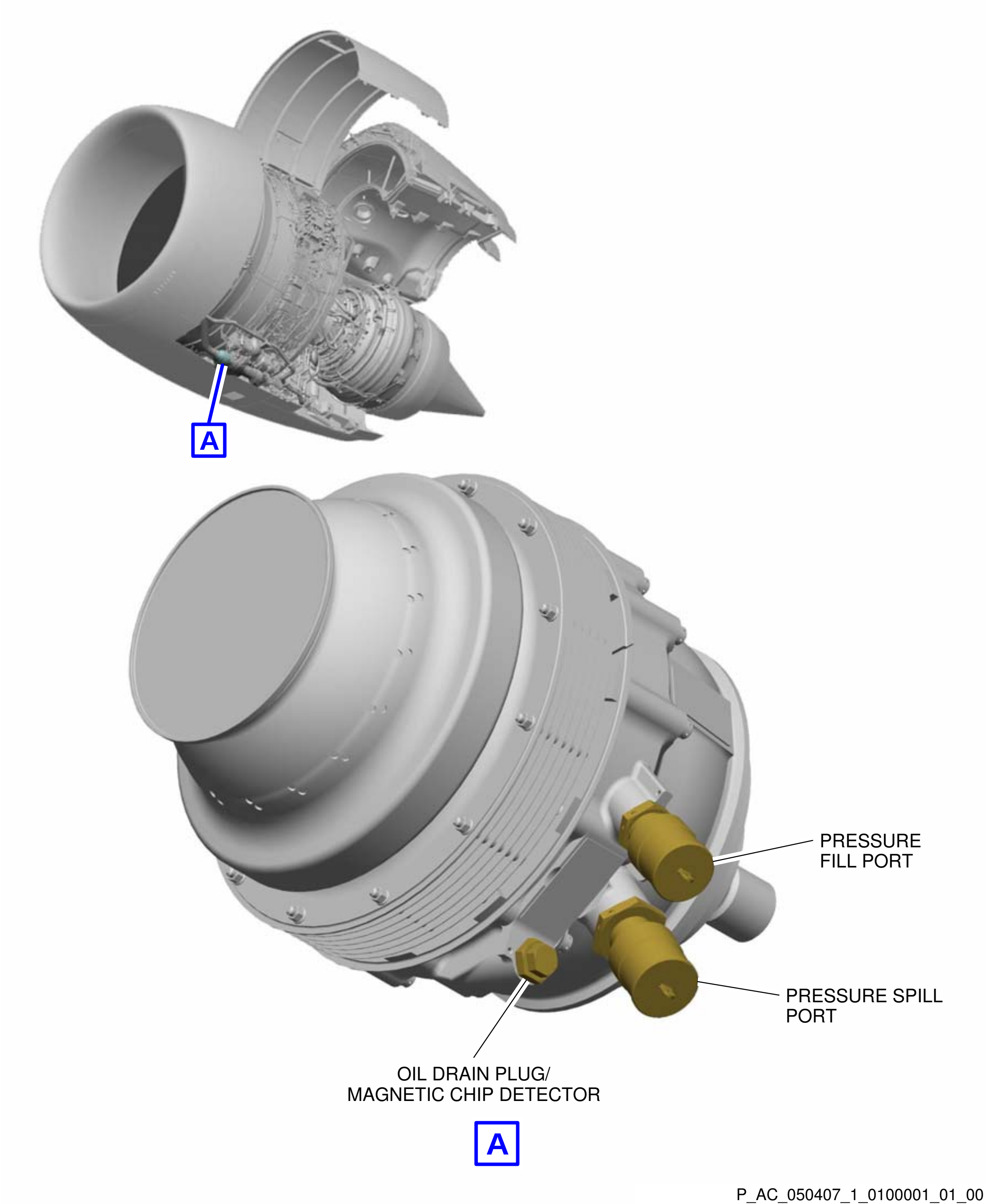
****ON A/C A350-1000**

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			
	AFT OF NOSE	FROM AIRCRAFT CENTERLINE		MEAN HEIGHT FROM GROUND
		LH SIDE	RH SIDE	
Engine 1: Fan Cowl 415AL	28.41 m (93.21 ft.)	10.57 m (34.68 ft.)		1.08 m (3.54 ft.)
Engine 2: Fan Cowl 425AL	28.41 m (93.21 ft.)		10.31 m (33.83 ft.)	1.08 m (3.54 ft.)

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



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.

<table>
<tr><th rowspan="3">ACCESS</th><th colspan="4">DISTANCE</th></tr>
<tr><th rowspan="2">AFT OF NOSE</th><th colspan="2">FROM AIRCRAFT CENTERLINE</th><th rowspan="2">MEAN HEIGHT FROM GROUND</th></tr>
<tr><th>LH SIDE</th><th>RH SIDE</th></tr>
<tr><td>APU:
Access Door 316BR</td><td>62.52 m
(205.12 ft.)</td><td></td><td>0.48 m
(1.57 ft.)</td><td>6.45 m
(21.16 ft.)</td></tr>
</table>

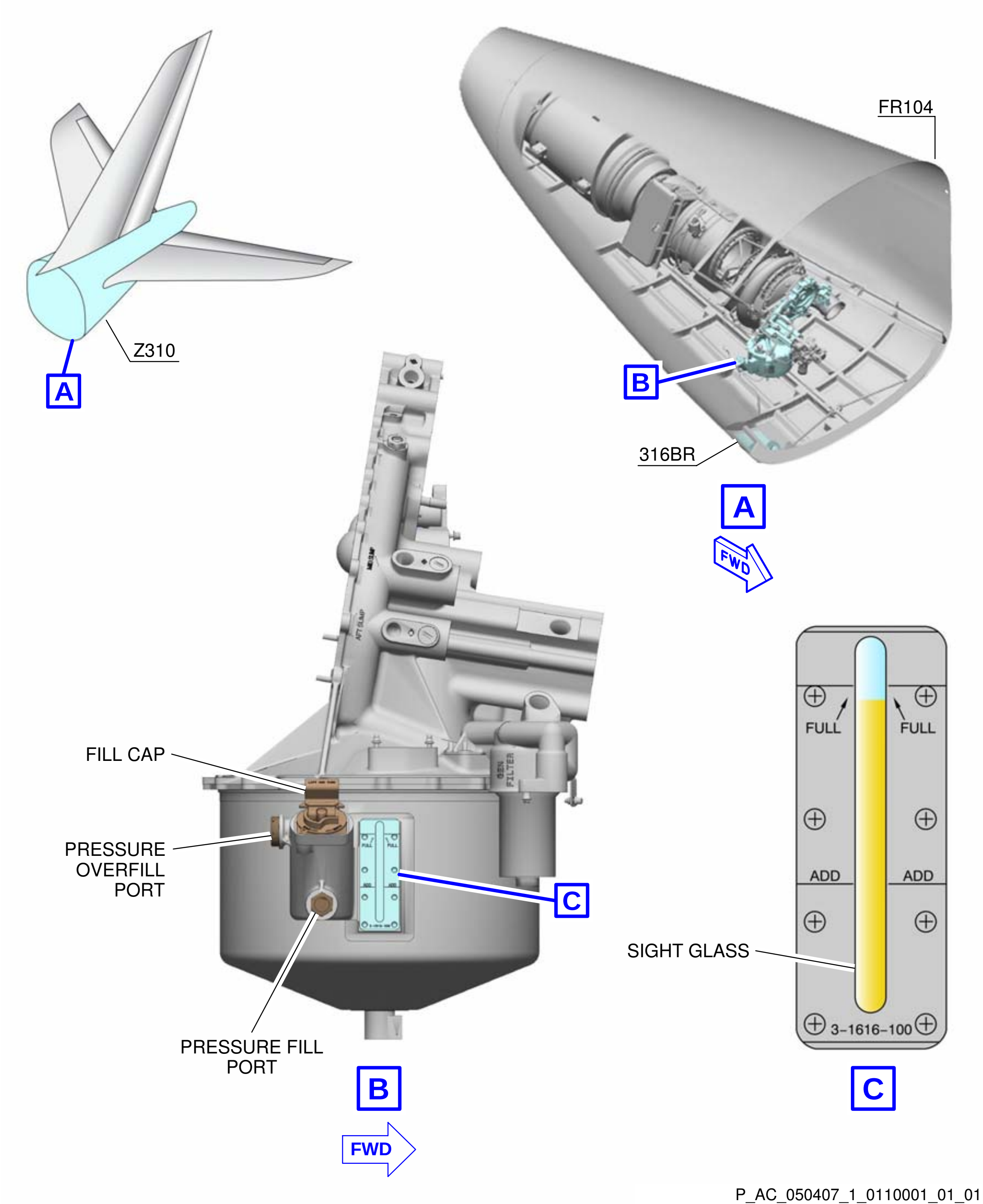
****ON A/C A350-1000**

2. APU Oil Servicing

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

<table>
<tr><th rowspan="3">ACCESS</th><th colspan="4">DISTANCE</th></tr>
<tr><th rowspan="2">AFT OF NOSE</th><th colspan="2">FROM AIRCRAFT CENTERLINE</th><th rowspan="2">MEAN HEIGHT FROM GROUND</th></tr>
<tr><th>LH SIDE</th><th>RH SIDE</th></tr>
<tr><td>APU:
Access Door 316BR</td><td>69.51 m
(228.05 ft.)</td><td></td><td>0.48 m
(1.57 ft.)</td><td>6.45 m
(21.16 ft.)</td></tr>
</table>

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



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			
	AFT OF NOSE	FROM AIRCRAFT CENTERLINE		MEAN HEIGHT FROM GROUND
		LH SIDE	RH SIDE	
Potable-Water Ground Service Panel: Access Door 164AR	50.20 m (164.70 ft.)		1.60 m (5.25 ft.)	3.30 m (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			
	AFT OF NOSE	FROM AIRCRAFT CENTERLINE		MEAN HEIGHT FROM GROUND
		LH SIDE	RH SIDE	
Potable-Water Ground Service Panel: Access Door 164AR	57.16 m (187.53 ft.)		1.60 m (5.25 ft.)	3.30 m (10.83 ft.)

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

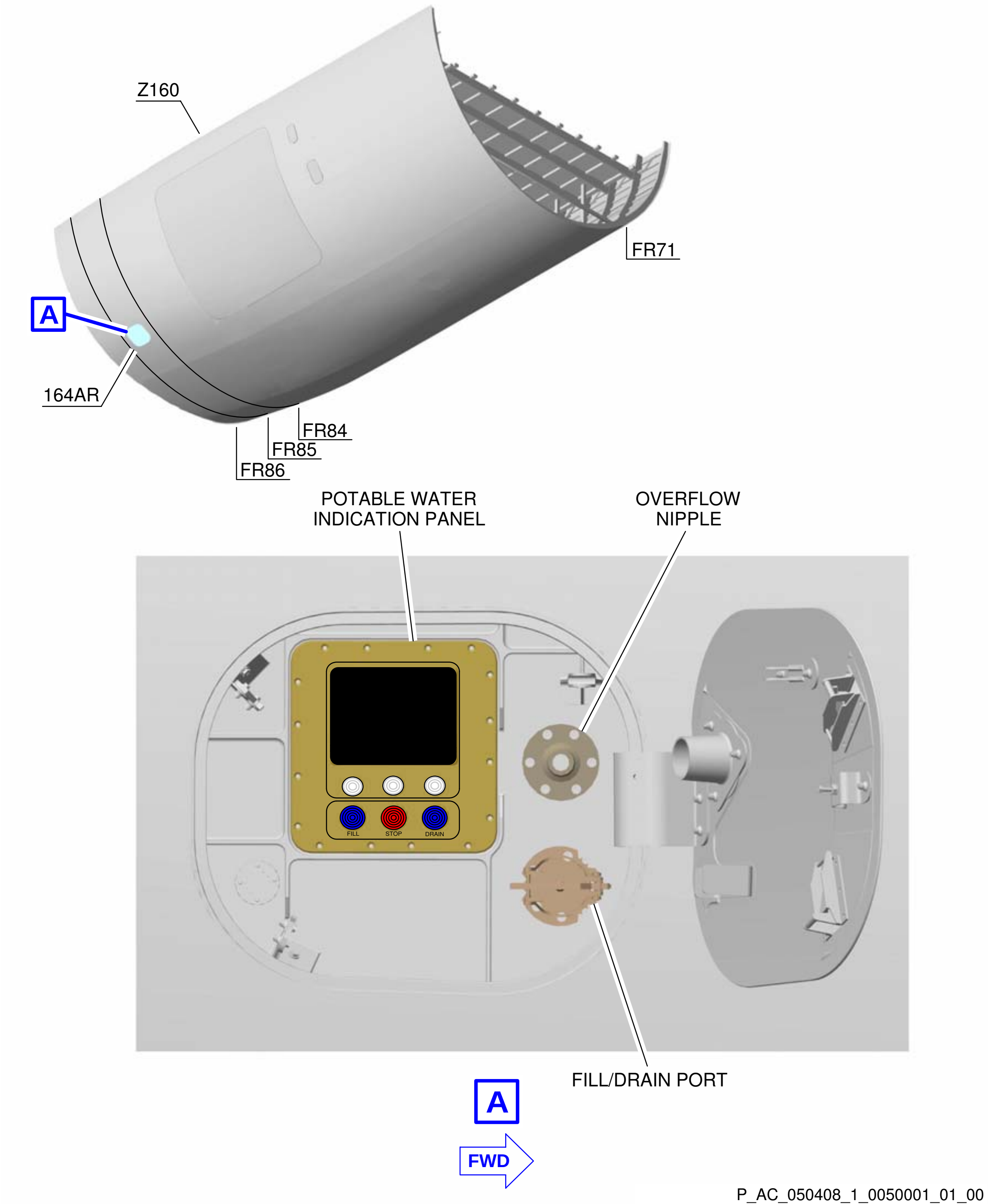
3. Technical Specifications

   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).

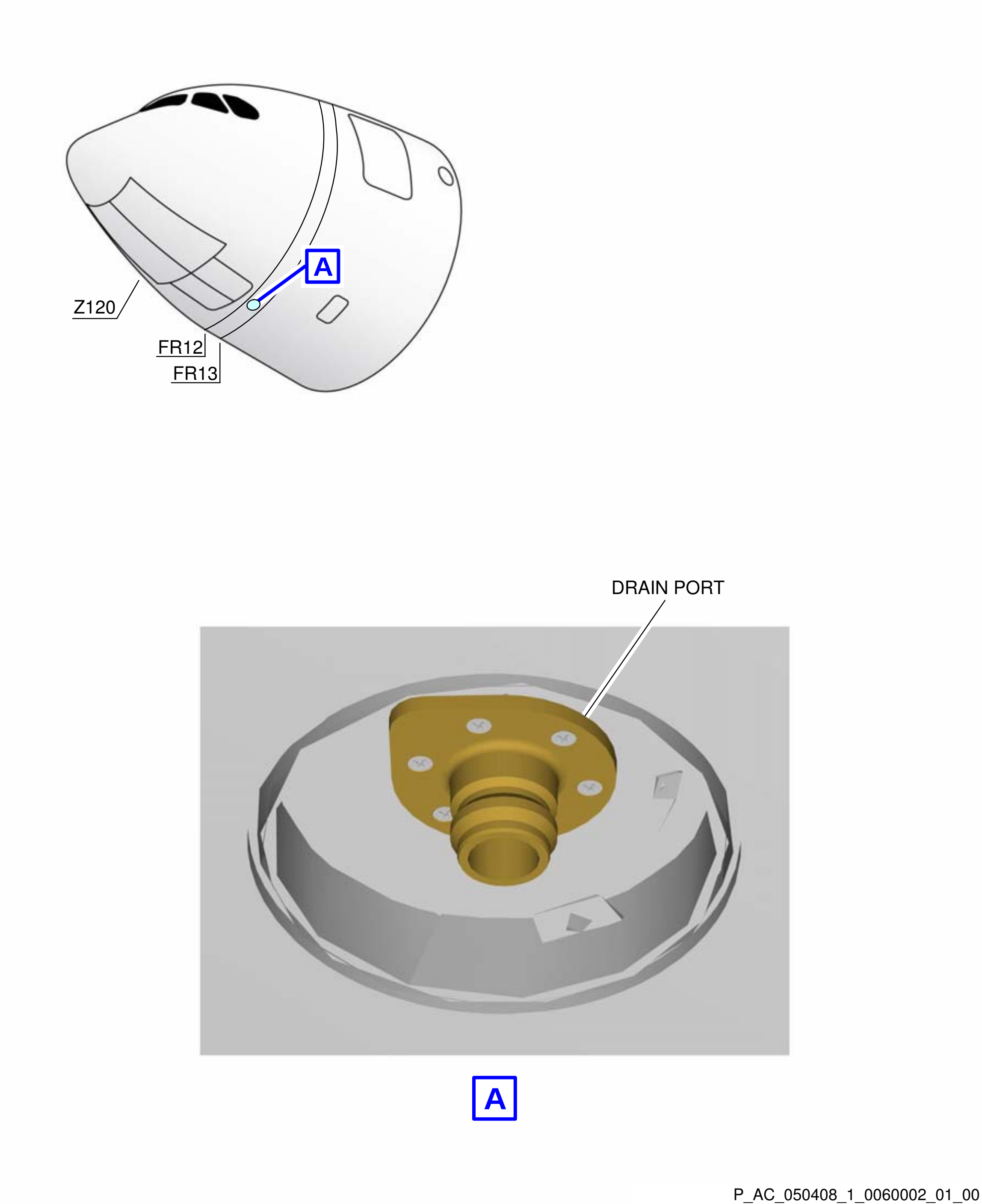
C. Filling pressure:
- Max filling pressure: 8.6 bar (125 psi).

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



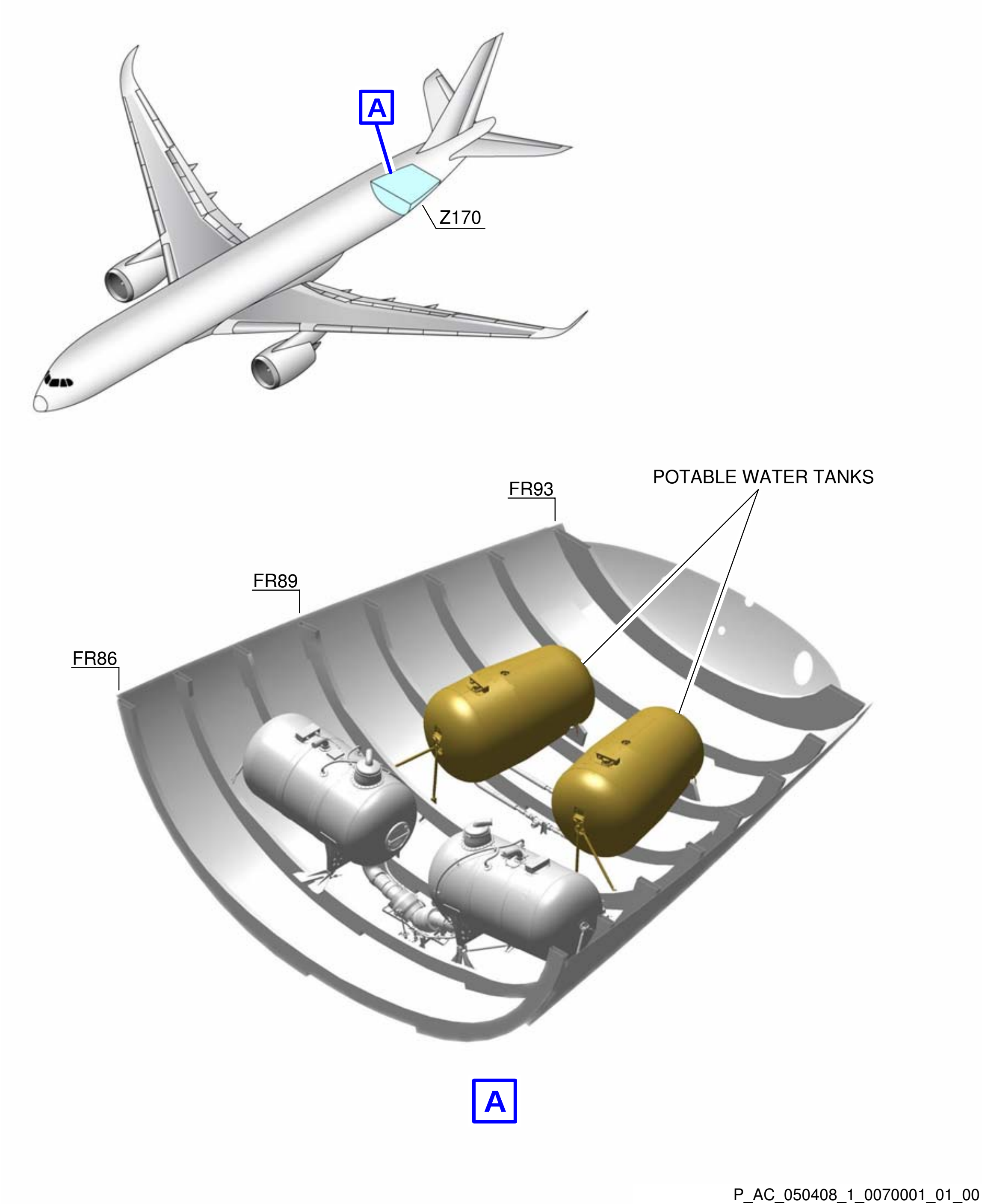
Potable-Water Ground Service Panel
FIGURE-5-4-8-991-005-A01

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



Forward Drain Port
FIGURE-5-4-8-991-006-B01

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



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			
	AFT OF NOSE	FROM AIRCRAFT CENTERLINE		MEAN HEIGHT FROM GROUND
		LH SIDE	RH SIDE	
Waste-Water Ground Service Panel: Access Door 171AL	52.21 m (171.29 ft.)	On centerline		3.69 m (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			
	AFT OF NOSE	FROM AIRCRAFT CENTERLINE		MEAN HEIGHT FROM GROUND
		LH SIDE	RH SIDE	
Waste-Water Ground Service Panel: Access Door 171AL	59.19 m (194.19 ft.)	On centerline		3.69 m (12.11 ft.)

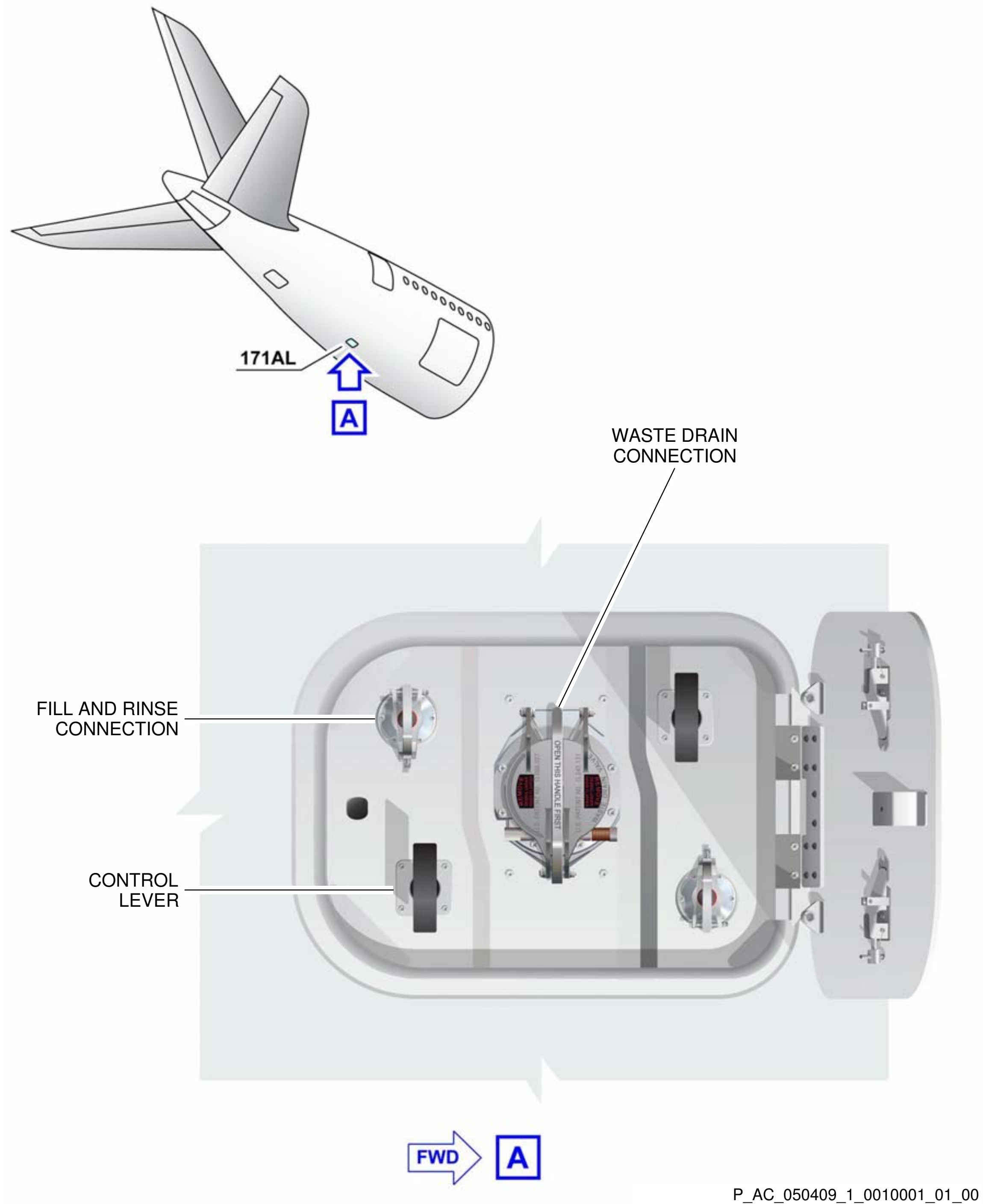
****ON A/C A350-1000 A350-900**

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).

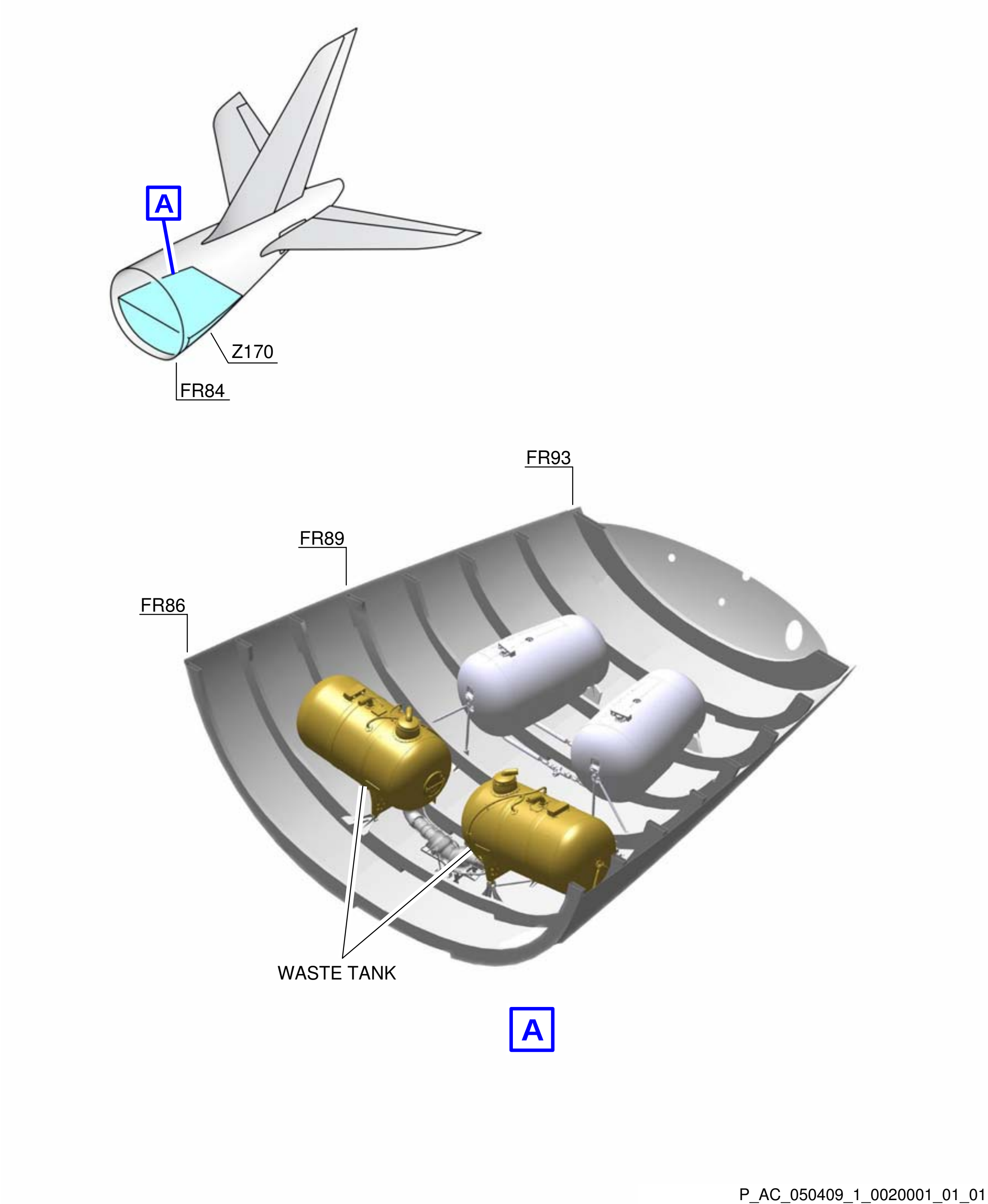
D. Waste tank - Precharge:
   - No precharge required.

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



Waste-Water Ground Service Panel
FIGURE-5-4-9-991-001-A01

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



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			
	AFT OF NOSE	FROM AIRCRAFT CENTERLINE		MEAN HEIGHT FROM GROUND
		LH SIDE	RH SIDE	
FWD Cargo Door Control Panel: Access Door 132AR	9.59 m (31.46 ft.)		2.48 m (8.14 ft.)	3.87 m (12.7 ft.)
FWD CLS* Panel: Access Door 132BR	9.59 m (31.46 ft.)		2.77 m (9.09 ft.)	4.50 m (14.76 ft.)
AFT Cargo Door Control Panel: Access Door 152AR	45.18 m (148.23 ft.)		2.46 m (8.07 ft.)	3.80 m (12.47 ft.)
AFT CLS* Panel: Access Door 152BR	45.37 m (148.85 ft.)		2.84 m (9.32 ft.)	4.71 m (15.45 ft.)

NOTE : * CLS - CARGO LOADING SYSTEMS

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

2. Cargo Control Panels

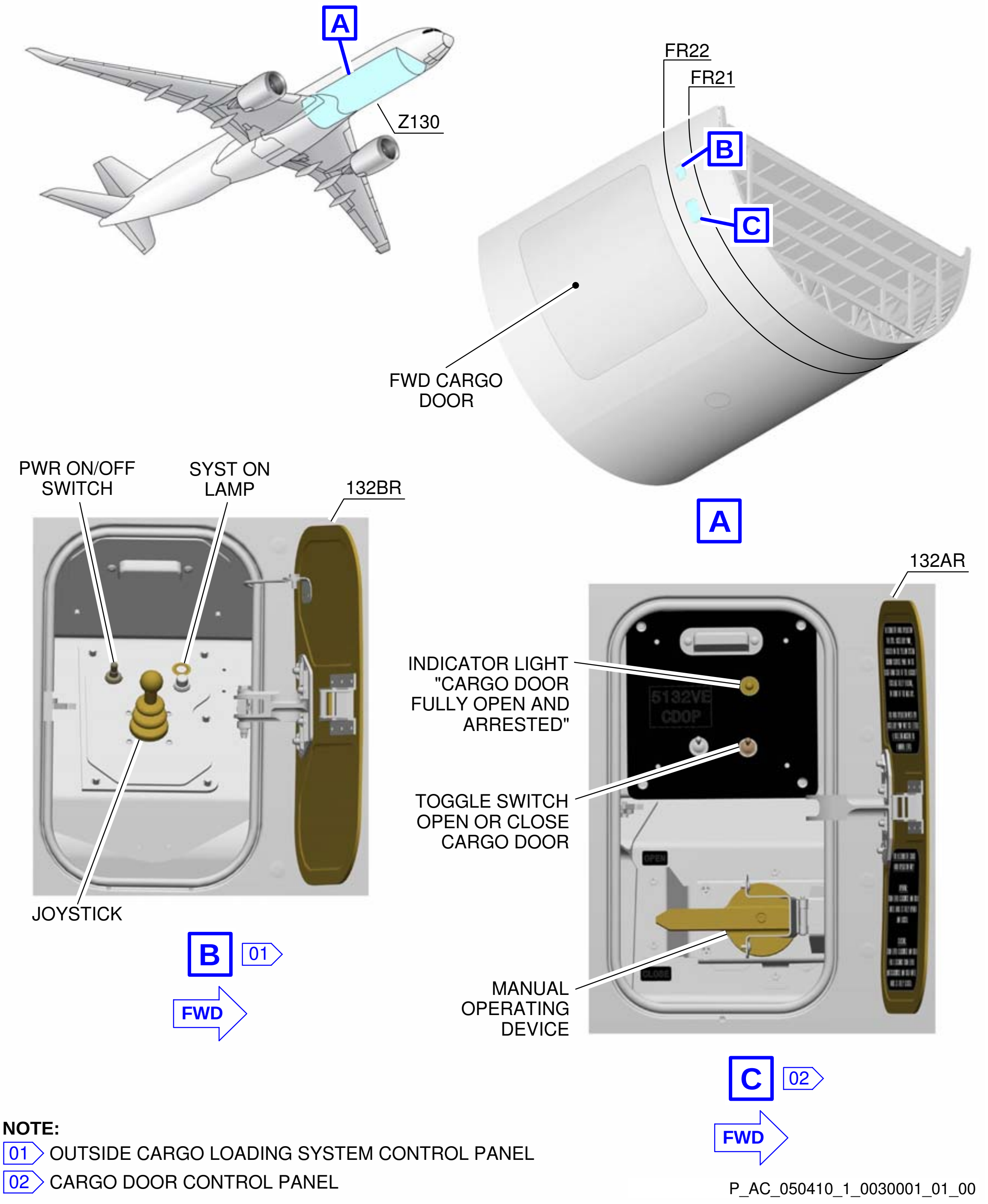
NOTE : The mean height from ground in the below table may change according to the CG position and aircraft weight.

ACCESS	DISTANCE			
	AFT OF NOSE	FROM AIRCRAFT CENTERLINE		MEAN HEIGHT FROM GROUND
		LH SIDE	RH SIDE	
FWD Cargo Door Control Panel: Access Door 132AR	9.59 m (31.46 ft.)		2.48 m (8.14 ft.)	3.87 m (12.70 ft.)
FWD CLS* Panel: Access Door 132BR	9.59 m (31.46 ft.)		2.77 m (9.09 ft.)	4.50 m (14.76 ft.)

ACCESS	DISTANCE			
	AFT OF NOSE	FROM AIRCRAFT CENTERLINE		MEAN HEIGHT FROM GROUND
		LH SIDE	RH SIDE	
AFT Cargo Door Control Panel: Access Door 152AR	52.17 m (171.16 ft.)		2.46 m (8.07 ft.)	3.80 m (12.47 ft.)
AFT CLS* Panel: Access Door 152BR	52.36 m (171.78 ft.)		2.84 m (9.32 ft.)	4.71 m (15.45 ft.)

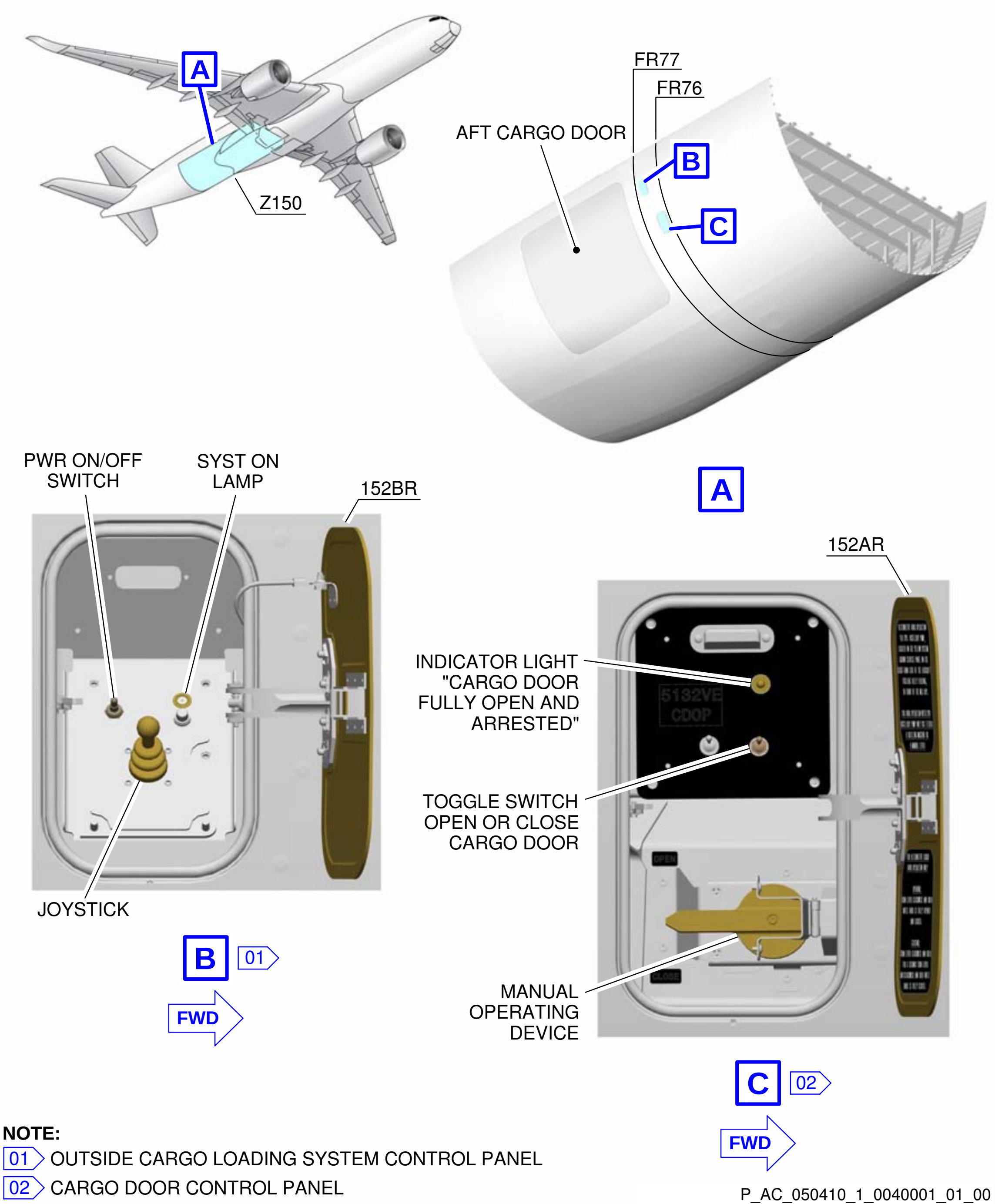
NOTE : * CLS - CARGO LOADING SYSTEMS

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



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.

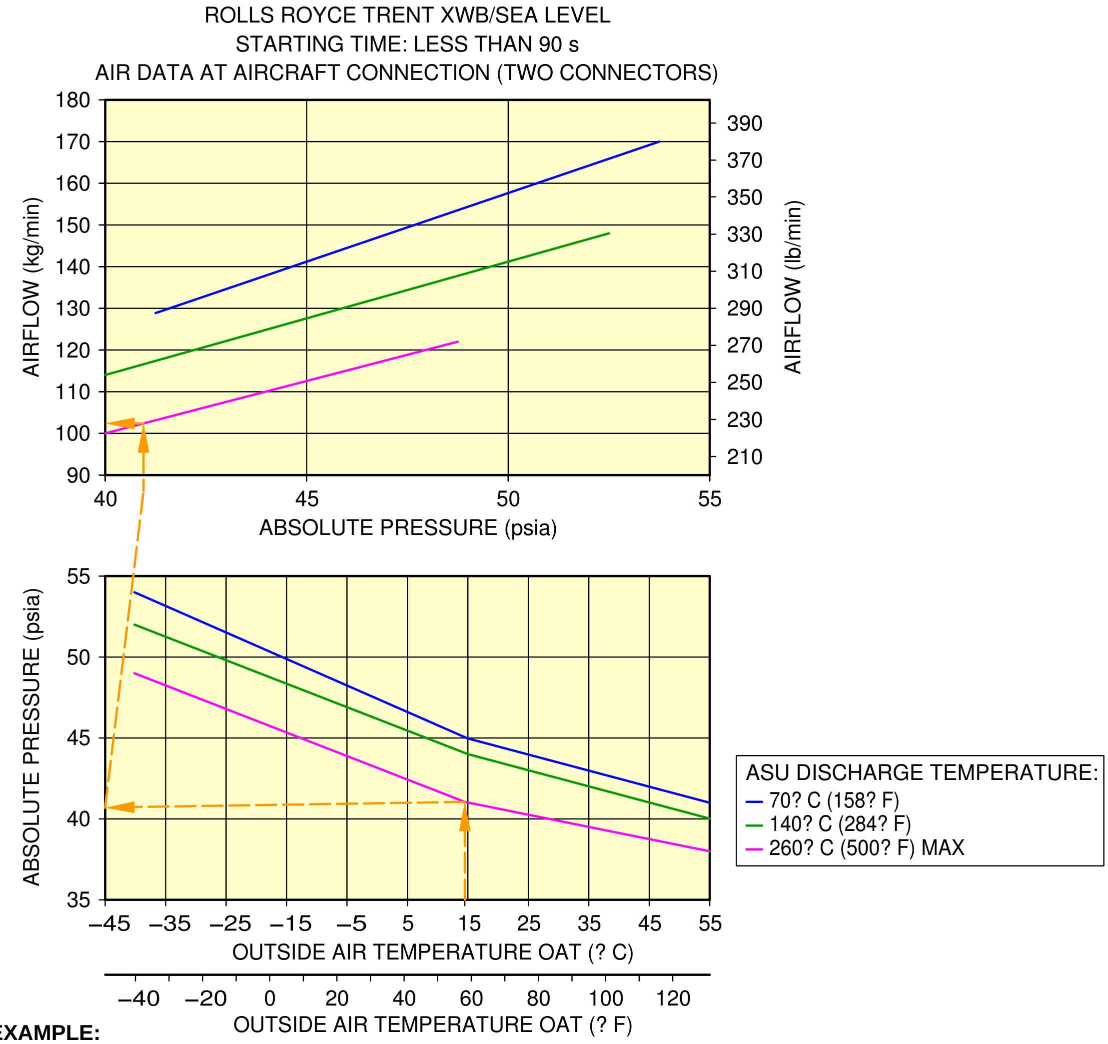
B. For the requirements below, the configuration with two HPGC is used. Using one connector only (for a given mass flow rate and discharge pressure from the ASU) will increase the pressure loss in the ducts of the bleed system and therefore lower the performances at the engine starter.

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**



EXAMPLE:

FOR AN OAT OF 15? C (59? F) AND AN ASU PROVIDING A DISCHARGE TEMPERATURE OF 260? C (500? F) AT HPGC:

– THE REQUIRED PRESSURE AT HPGC IS 41 psia
– THE REQUIRED AIRFLOW AT HPGC IS 102 kg/min.

NOTE:

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

EXAMPLE:

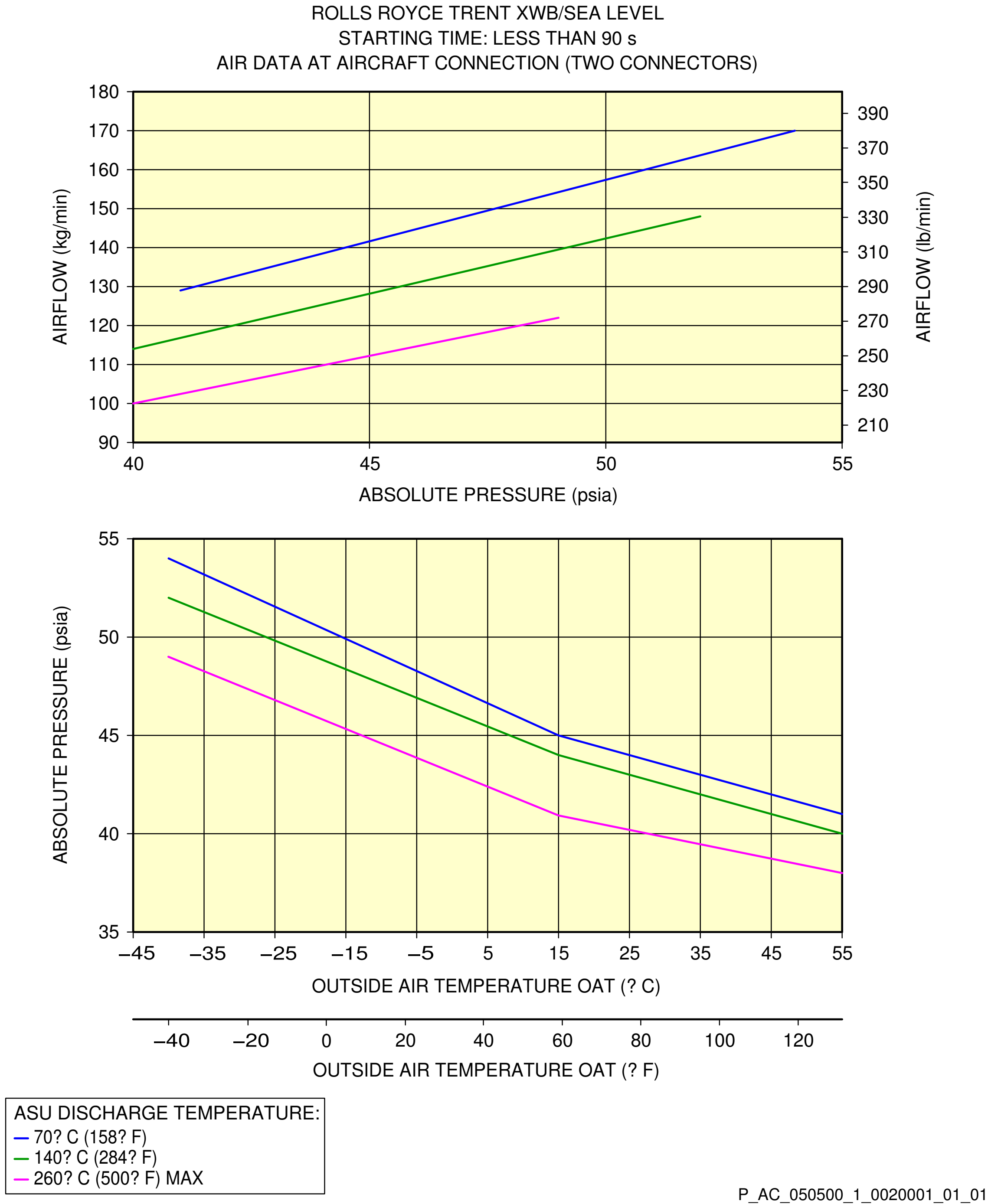
FOR AN OAT OF 15? C (59? F) AND AN ASU PROVIDING A DISCHARGE TEMPERATURE OF 200? C (392? F) AT HPGC, INTERPOLATING BETWEEN THE LINES 140? C (284? F) AND 260? C (500? F) RESULTS IN:

– A REQUIRED PRESSURE AT HPGC OF 42.5 psia
– A REQUIRED AIRFLOW AT HPGC OF 114 kg/min.

P_AC_050500_1_0010001_01_01

Example for Use of the Charts
FIGURE-5-5-0-991-001-A01

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



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 ≡ 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**

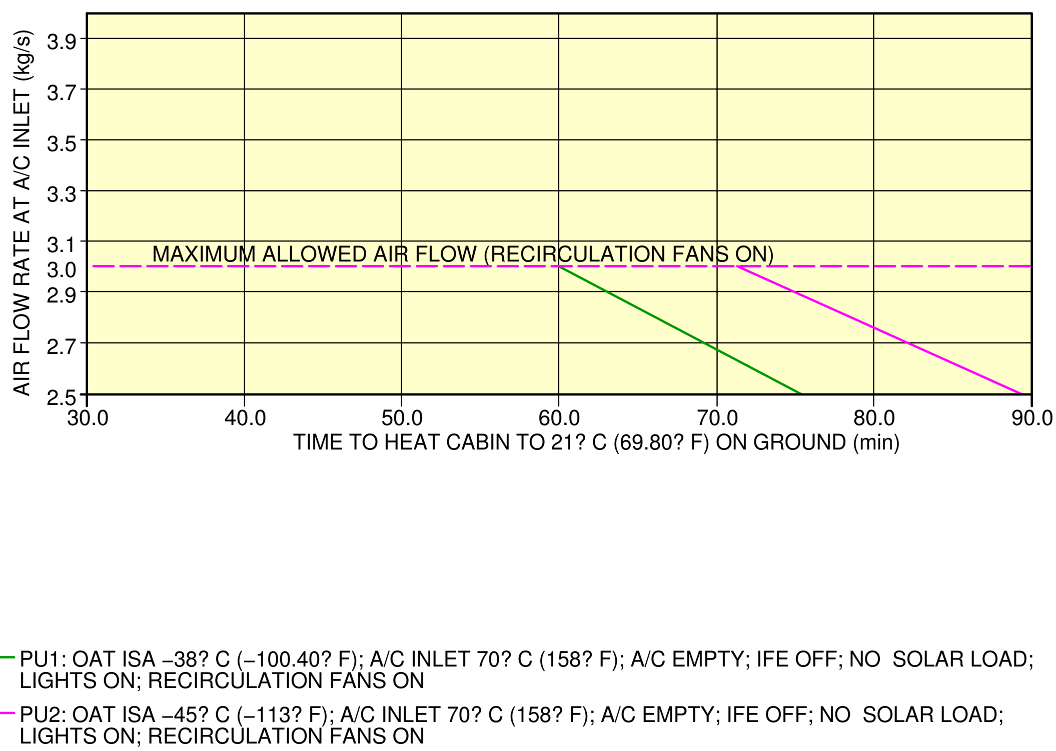
3. Ground Pneumatic Power Requirements

   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

PULL UP PERFORMANCE (70? C (158? F) AT A/C INLET)



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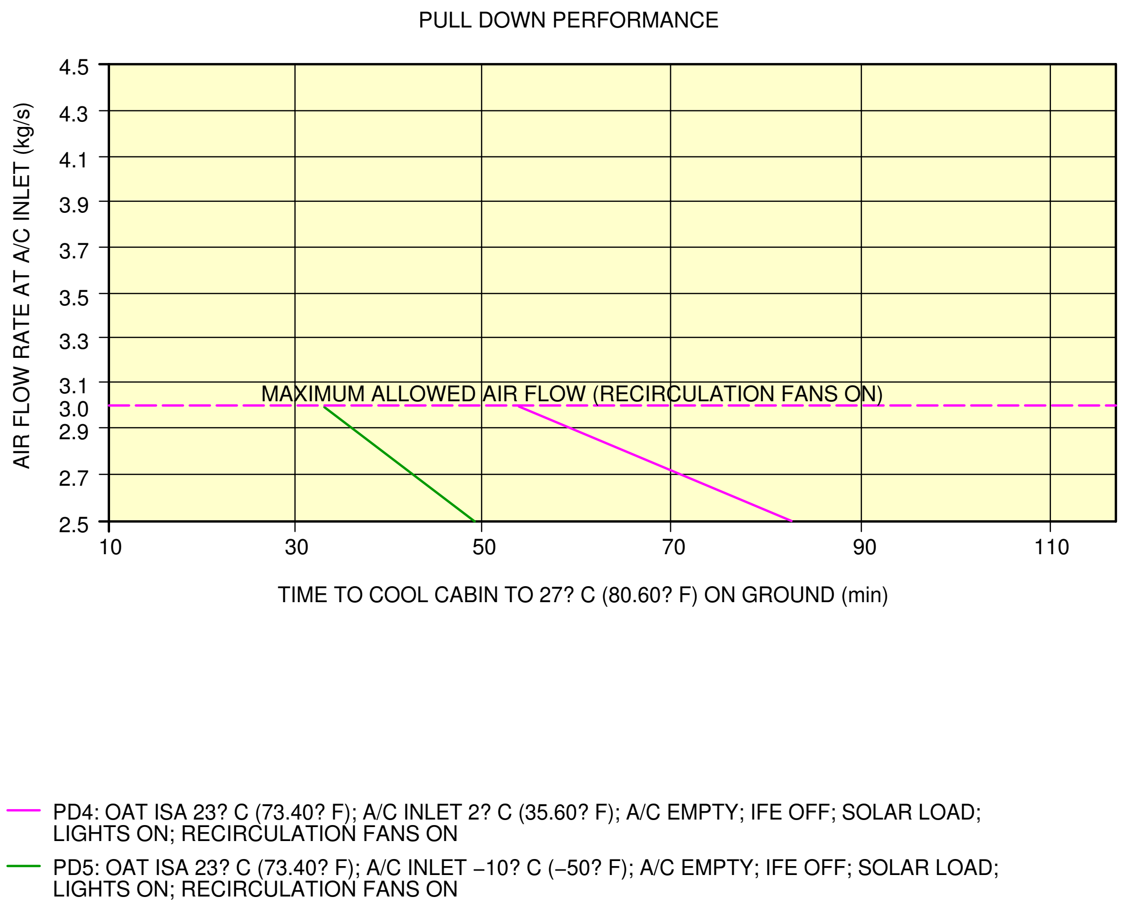
Ground Pneumatic Power Requirements
Heating (Sheet 1 of 2)
FIGURE-5-6-0-991-001-A01

**ON A/C A350-900



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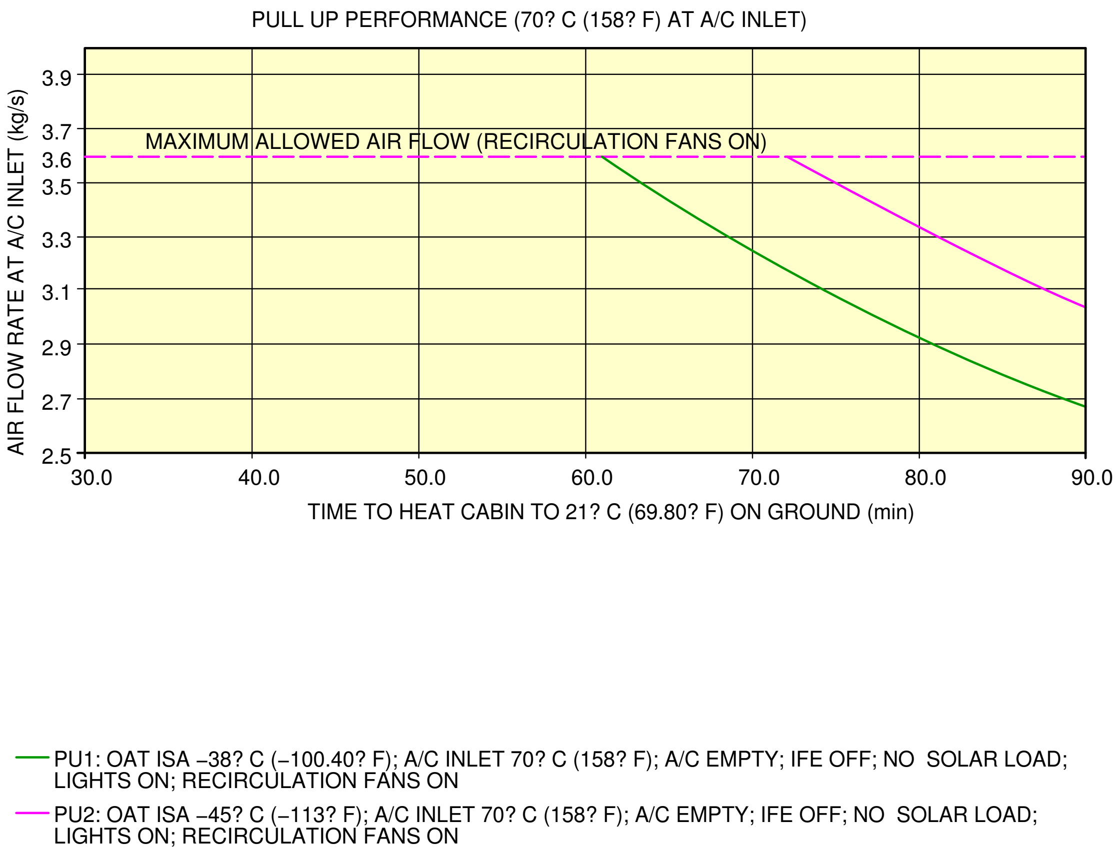
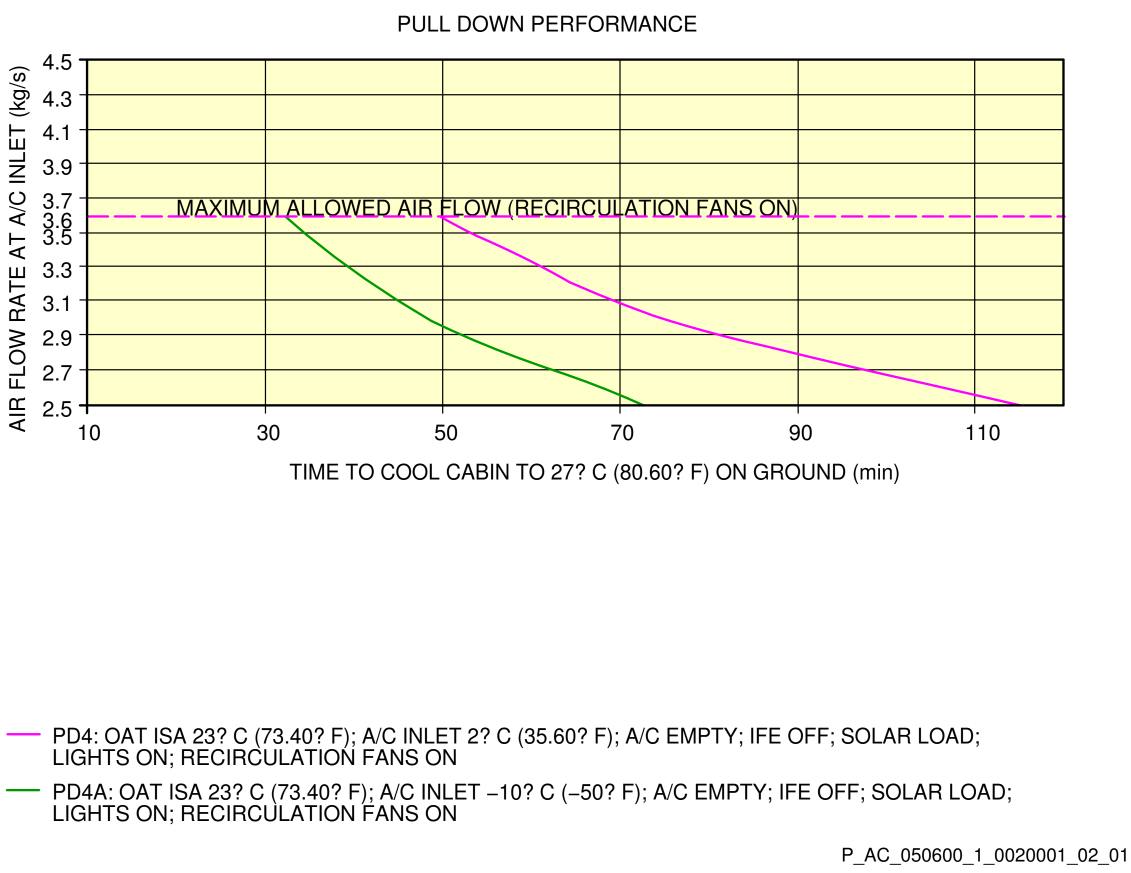
Ground Pneumatic Power Requirements
Cooling (Sheet 2 of 2)
FIGURE-5-6-0-991-001-A01

**ON A/C A350-1000



Ground Pneumatic Power Requirements
Heating (Sheet 1 of 2)
FIGURE-5-6-0-991-002-A01

**ON A/C A350-1000



Ground Pneumatic Power Requirements
Cooling (Sheet 2 of 2)
FIGURE-5-6-0-991-002-A01

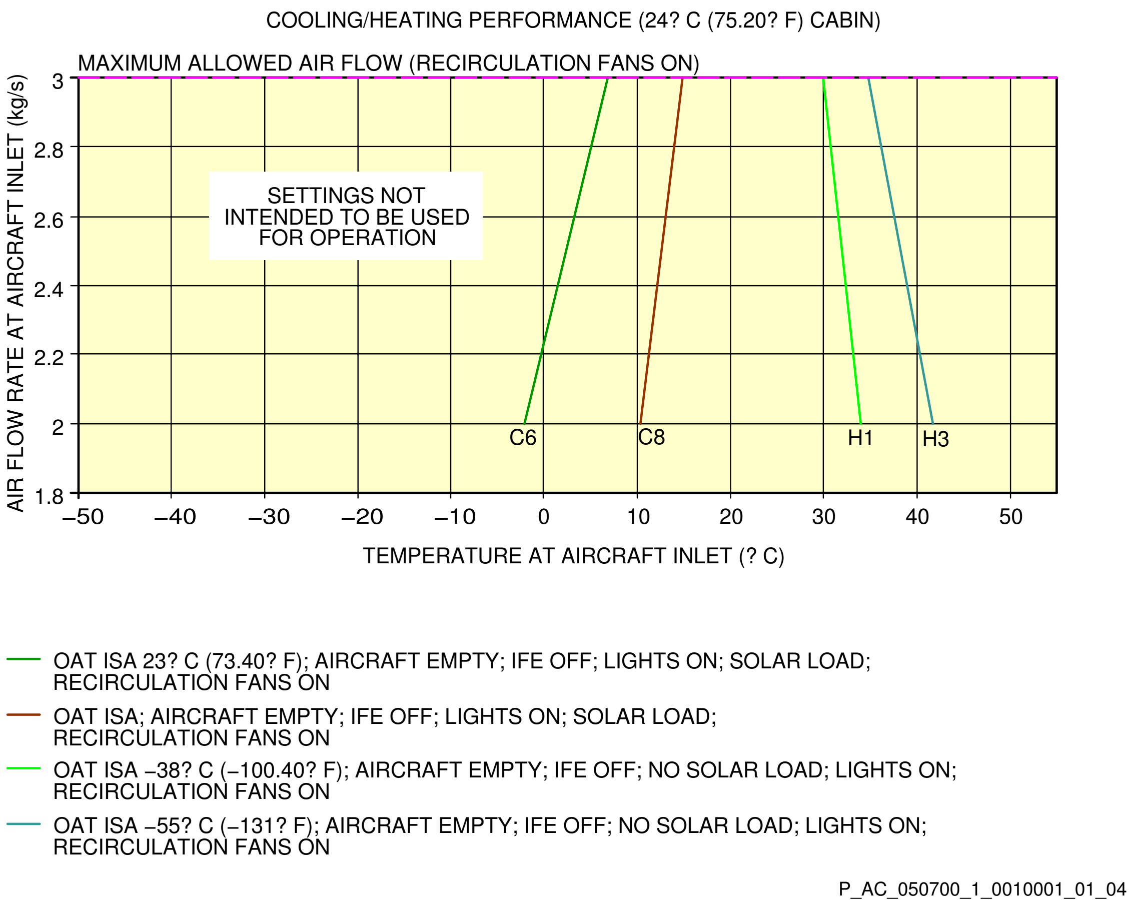
5-7-0 Preconditioned Airflow Requirements

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

Preconditioned Airflow Requirements

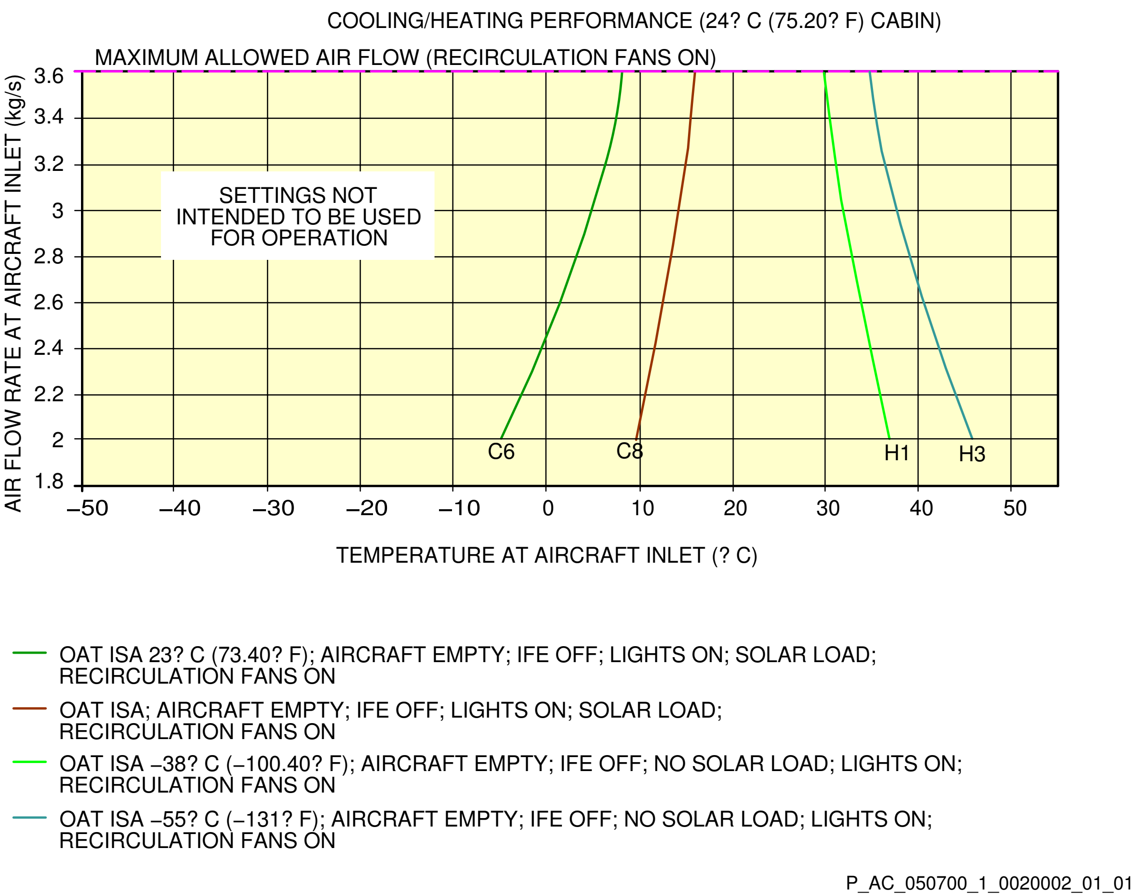
1. This section gives the preconditioned airflow rate and temperature necessary to keep the cabin temperature at 24 deg.C (75.20 deg.F).
   These settings must not be used for operation (they are not alternatives for the settings given in the AMM). They are based on theoretical simulations and give the 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



Preconditioned Airflow Requirements
FIGURE-5-7-0-991-001-A01

**ON A/C A350-1000



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.

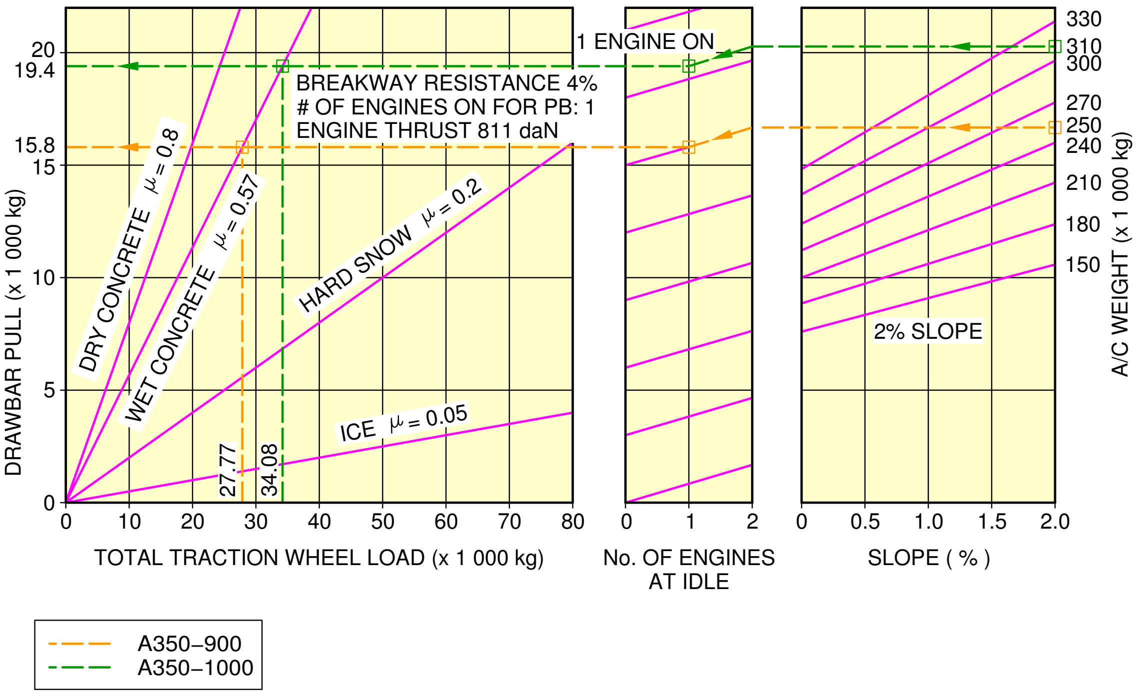
2. Towbar design guidelines

   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.

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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 (Both Sides)	Wingtip Devices (Both Inside and Outside Surfaces) (Both Sides)	HTP Top Surface (Both Sides)	VTP (Both Sides)
A350–900	354 m2 (3 810 ft.2)	25 m2 (269 ft.2)	72 m2 (775 ft.2)	102 m2 (1 098 ft.2)
A350–1000	370 m2 (3 983 ft.2)	30 m2 (323 ft.2)	72 m2 (775 ft.2)	102 m2 (1 098 ft.2)

AIRCRAFT TYPE	Fuselage Top Surface (Top Third - 120⊠ Arc)	Nacelle and Pylon (Top Third - 120⊠ Arc) (All Engines)	Total De-Iced Area
A350–900	357 m2 (3 843 ft.2)	56 m2 (603 ft.2)	966 m2 (10 398 ft.2)
A350–1000	395 m2 (4 252 ft.2)	56 m2 (603 ft.2)	1 024 m2 (11 022 ft.2)

NOTE : Dimensions are approximate.

3. External Cleaning

AIRCRAFT TYPE	Wing Top Surface (Both Sides)	Wing Lower Surface (Including Flap Track Fairing) (Both Sides)	Wingtip Devices (Both Inside and Outside Surfaces) (Both Sides)	HTP Top Surface (Both Sides)	HTP Lower Surface (Both Sides)
A350–900	354 m2 (3 810 ft.2)	384 m2 (4 133 ft.2)	25 m2 (269 ft.2)	72 m2 (775 ft.2)	72 m2 (775 ft.2)
A350–1000	370 m2 (3 983 ft.2)	399 m2 (4 295 ft.2)	30 m2 (323 ft.2)	72 m2 (775 ft.2)	72 m2 (775 ft.2)

AIRCRAFT TYPE	VTP (Both Sides)	Fuselage and Belly Fairing	Nacelle and Pylon (All Engines)	Total Cleaned Area
A350–900	102 m2 (1 098 ft.2)	1 073 m2 (11 550 ft.2)	166 m2 (1 787 ft.2)	2 242 m2 (24 133 ft.2)
A350–1000	102 m2 (1 098 ft.2)	1 187 m2 (12 777 ft.2)	166 m2 (1 787 ft.2)	2 392 m2 (25 747 ft.2)

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.

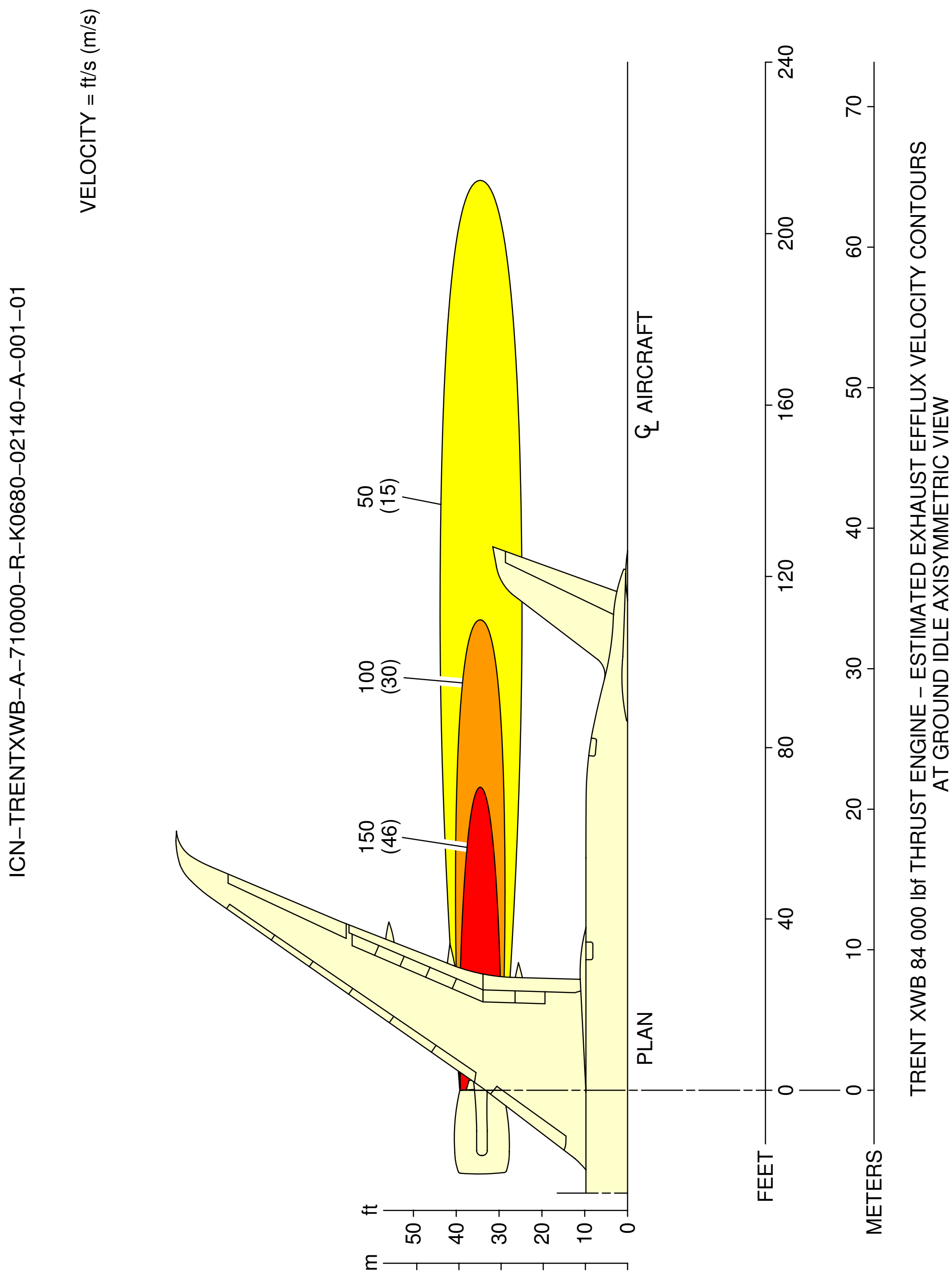
6-1-1 Engine Exhaust Velocities Contours - Ground Idle Power

**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



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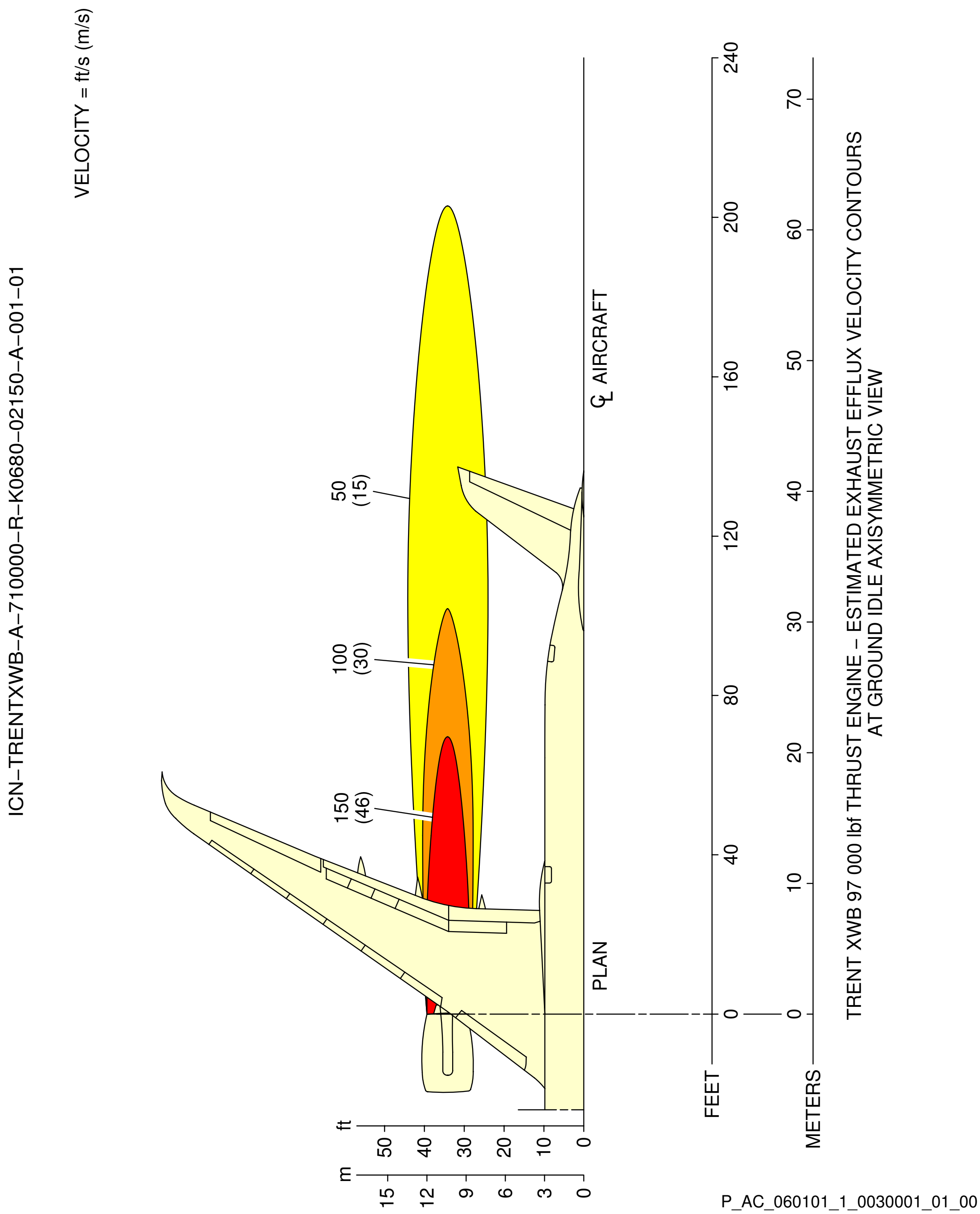
Ground Idle Power - TRENT XWB-84 Engine
FIGURE-6-1-1-991-002-A01

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



Ground Idle Power - TRENT XWB-97 Engine
FIGURE-6-1-1-991-003-A01

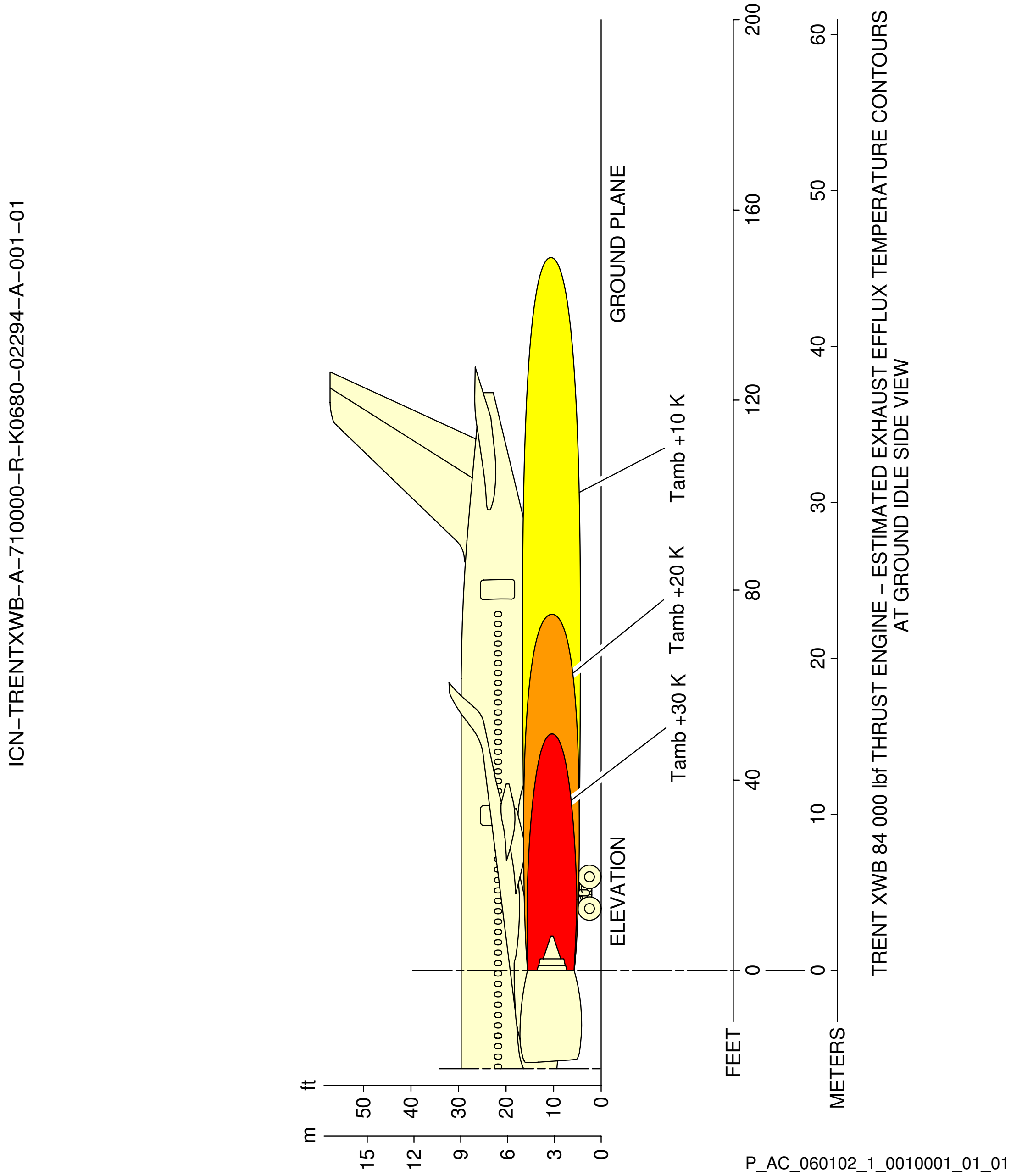
6-1-2 Engine Exhaust Temperatures Contours - Ground Idle Power

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

Engine Exhaust Temperatures Contours - Ground Idle Power

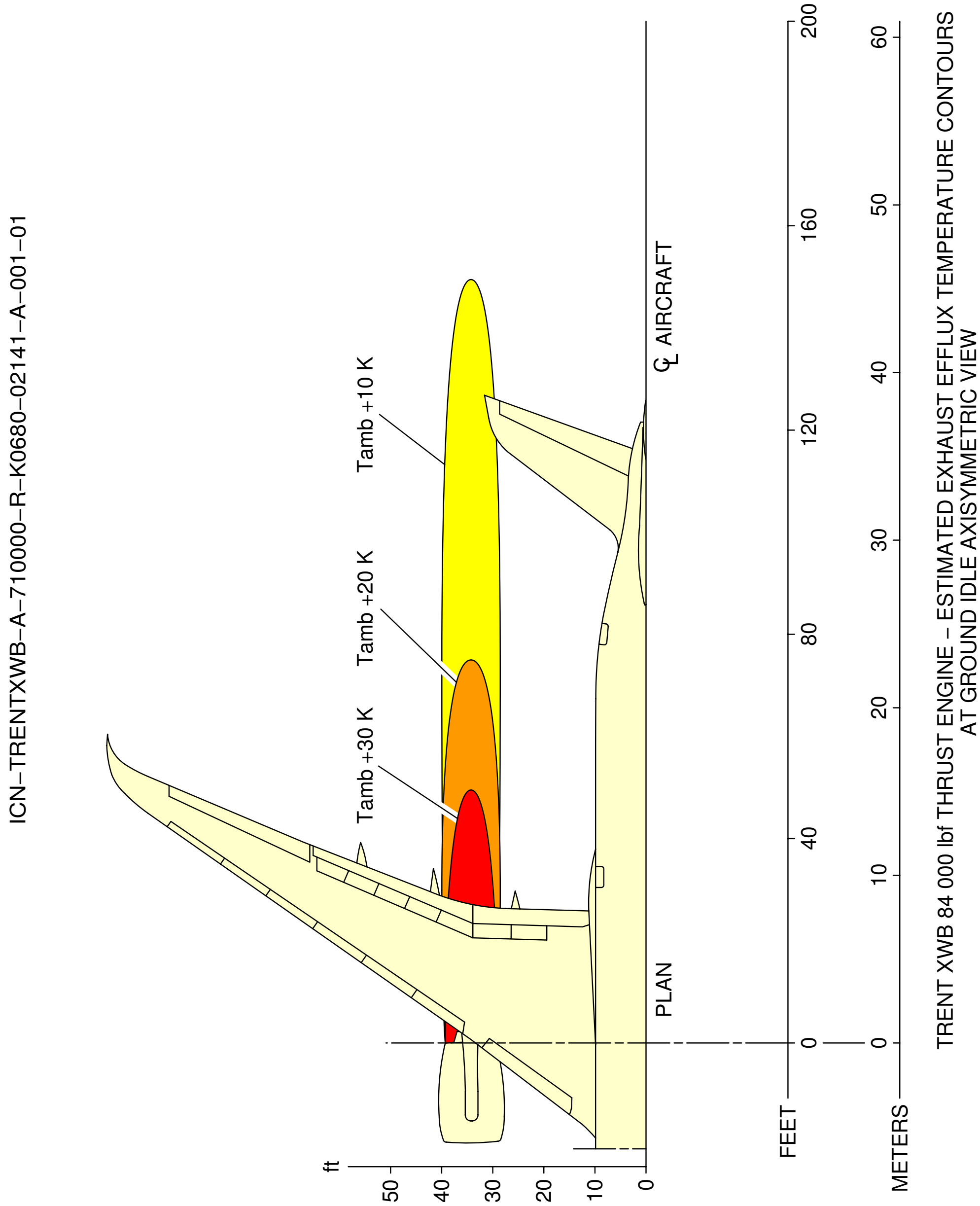
1. This section provides engine exhaust temperatures contours at ground idle power.

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



Ground Idle Power - TRENT XWB-84 Engine
(Sheet 1 of 2)
FIGURE-6-1-2-991-001-A01

**ON A/C A350-900



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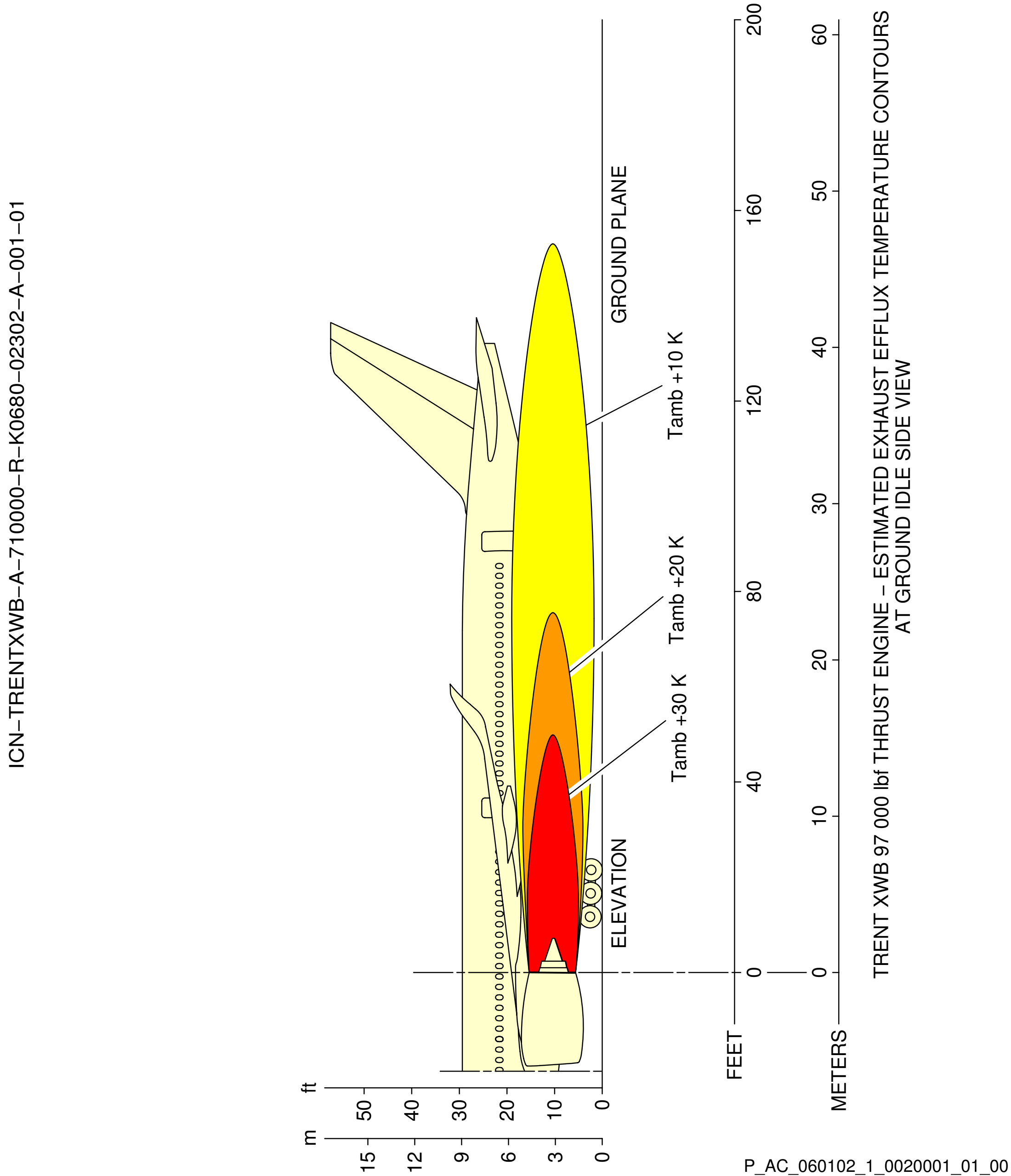
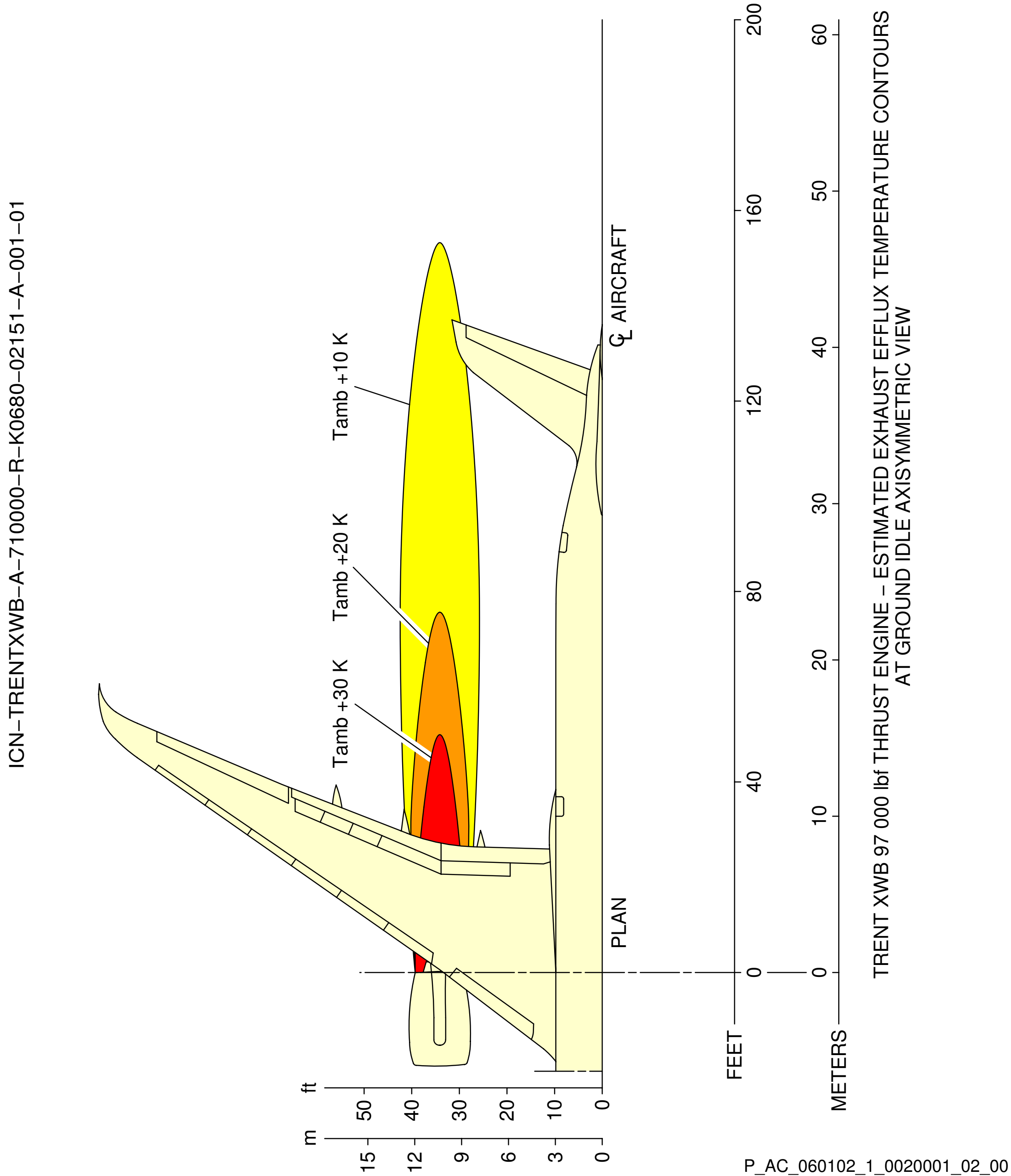
Ground Idle Power - TRENT XWB-84 Engine
(Sheet 2 of 2)
FIGURE-6-1-2-991-001-A01

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



Ground Idle Power - TRENT XWB-97 Engine
(Sheet 1 of 2)
FIGURE-6-1-2-991-002-A01

**ON A/C A350-1000



Ground Idle Power - TRENT XWB-97 Engine
(Sheet 2 of 2)
FIGURE-6-1-2-991-002-A01

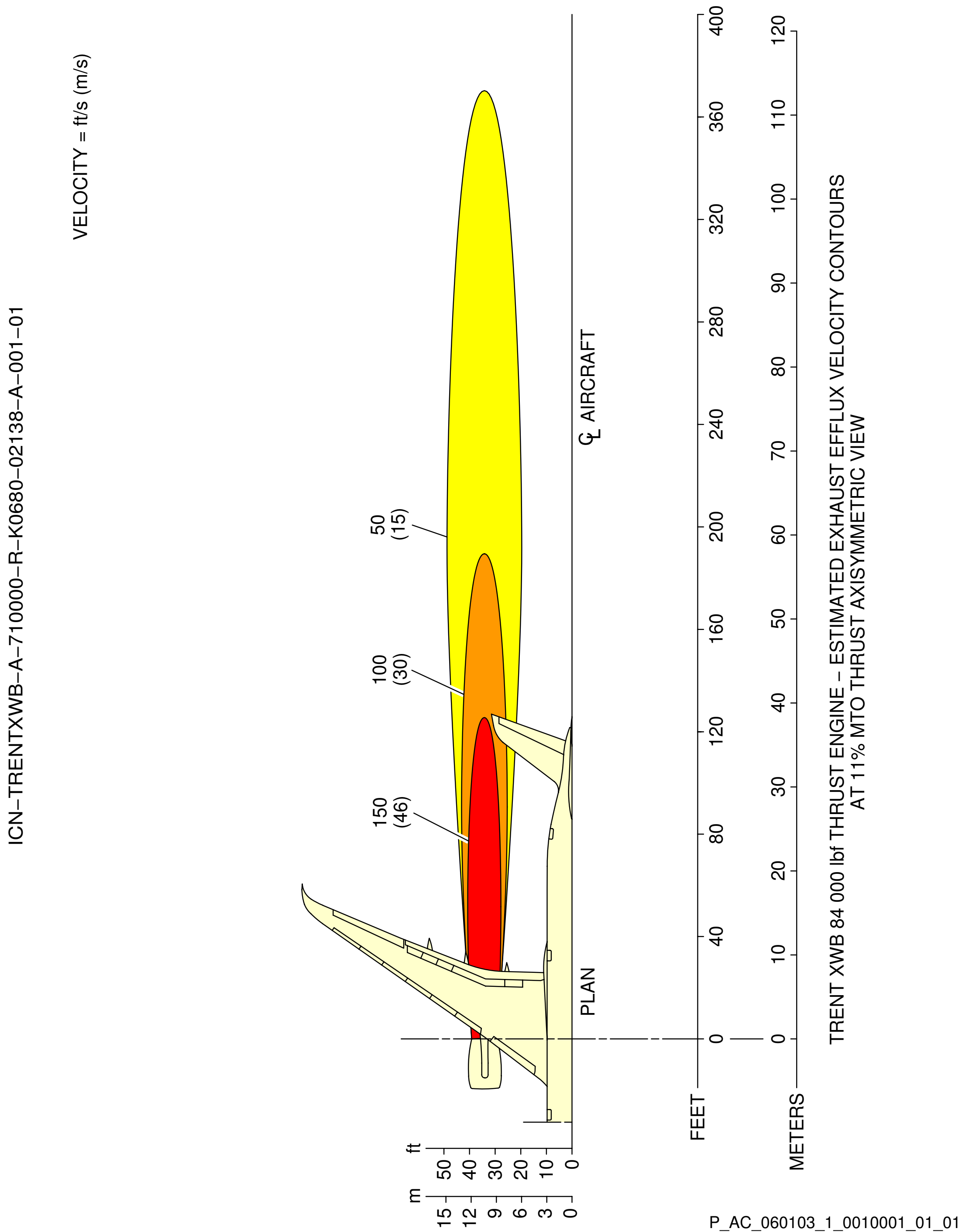
6-1-3 Engine Exhaust Velocities Contours - Breakaway Power

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

Engine Exhaust Velocities Contours - Breakaway Power

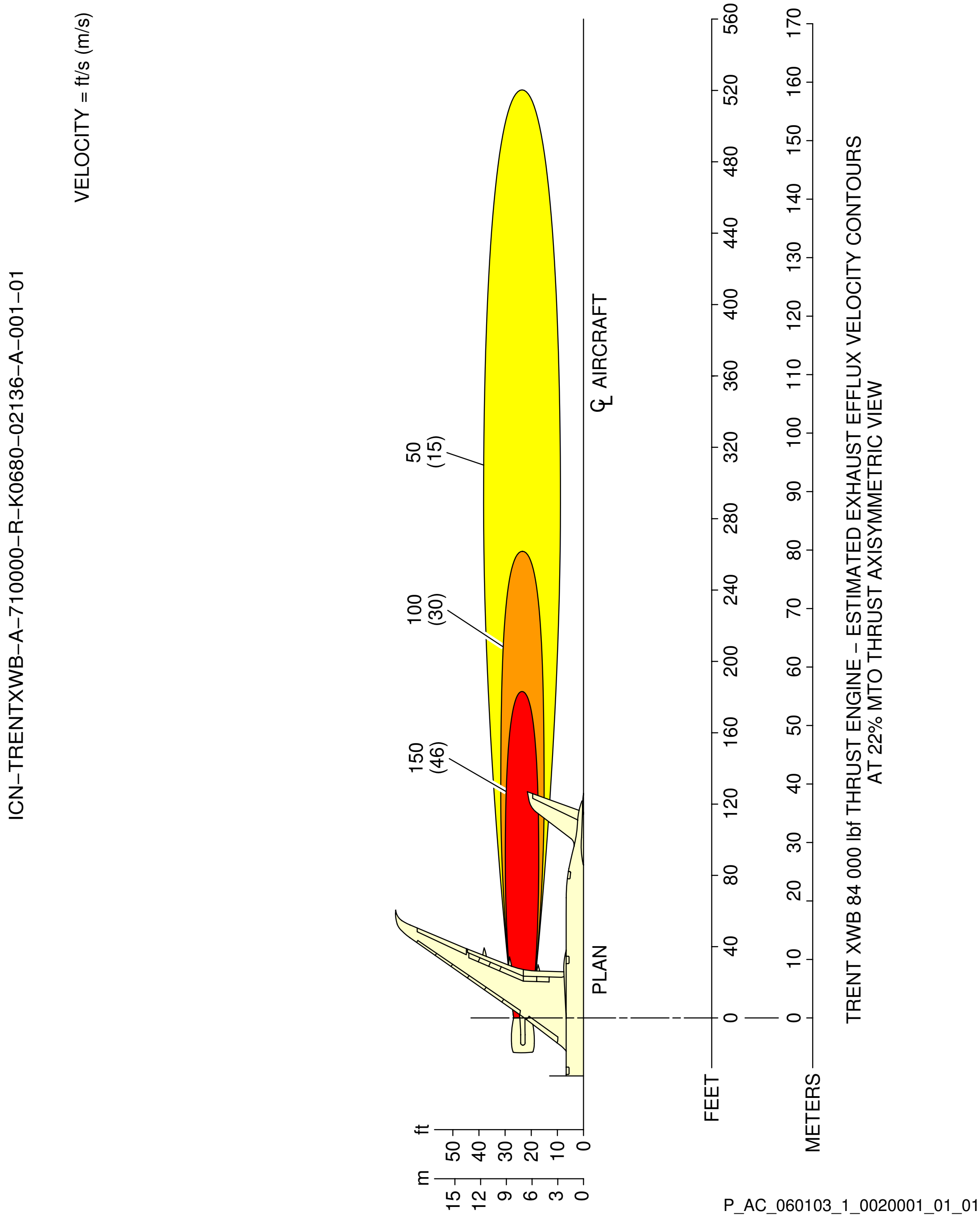
1. This section provides engine exhaust velocities contours at breakaway power.

**ON A/C A350-900



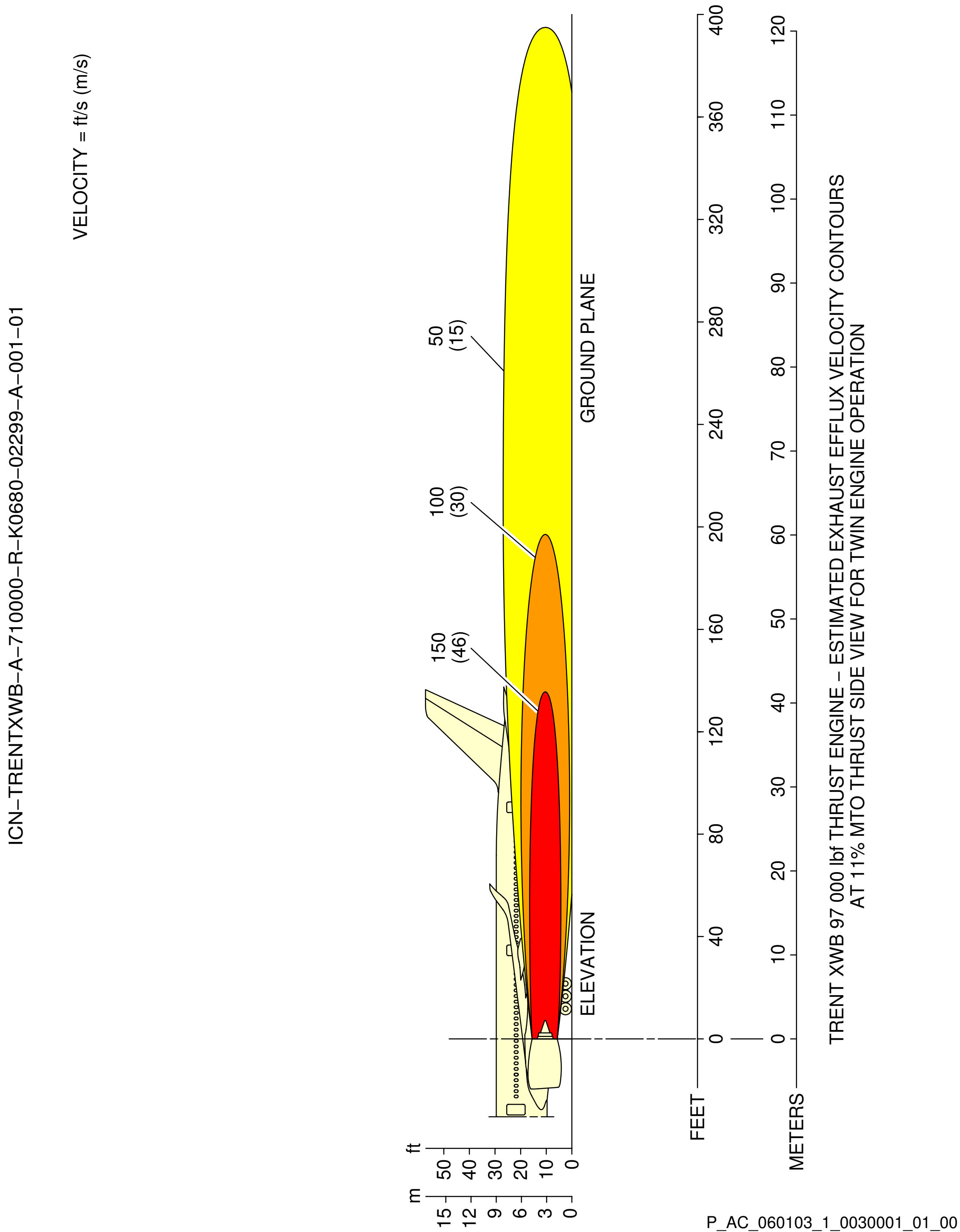
Breakaway Power (11% MTO Thrust) - TRENT XWB-84 Engine
FIGURE-6-1-3-991-001-A01

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



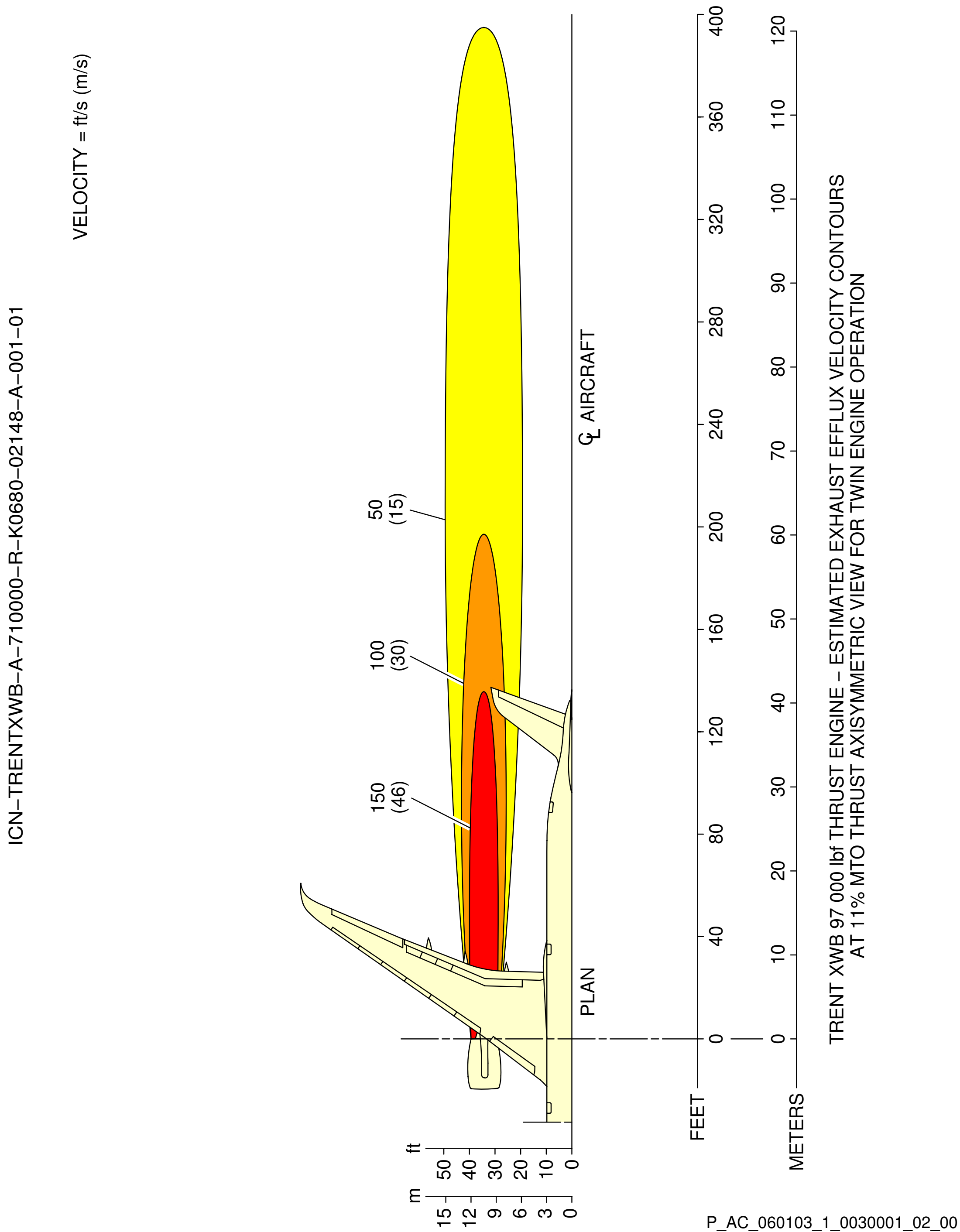
Breakaway Power (22% MTO Thrust) - TRENT XWB-84 Engine
FIGURE-6-1-3-991-002-A01

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



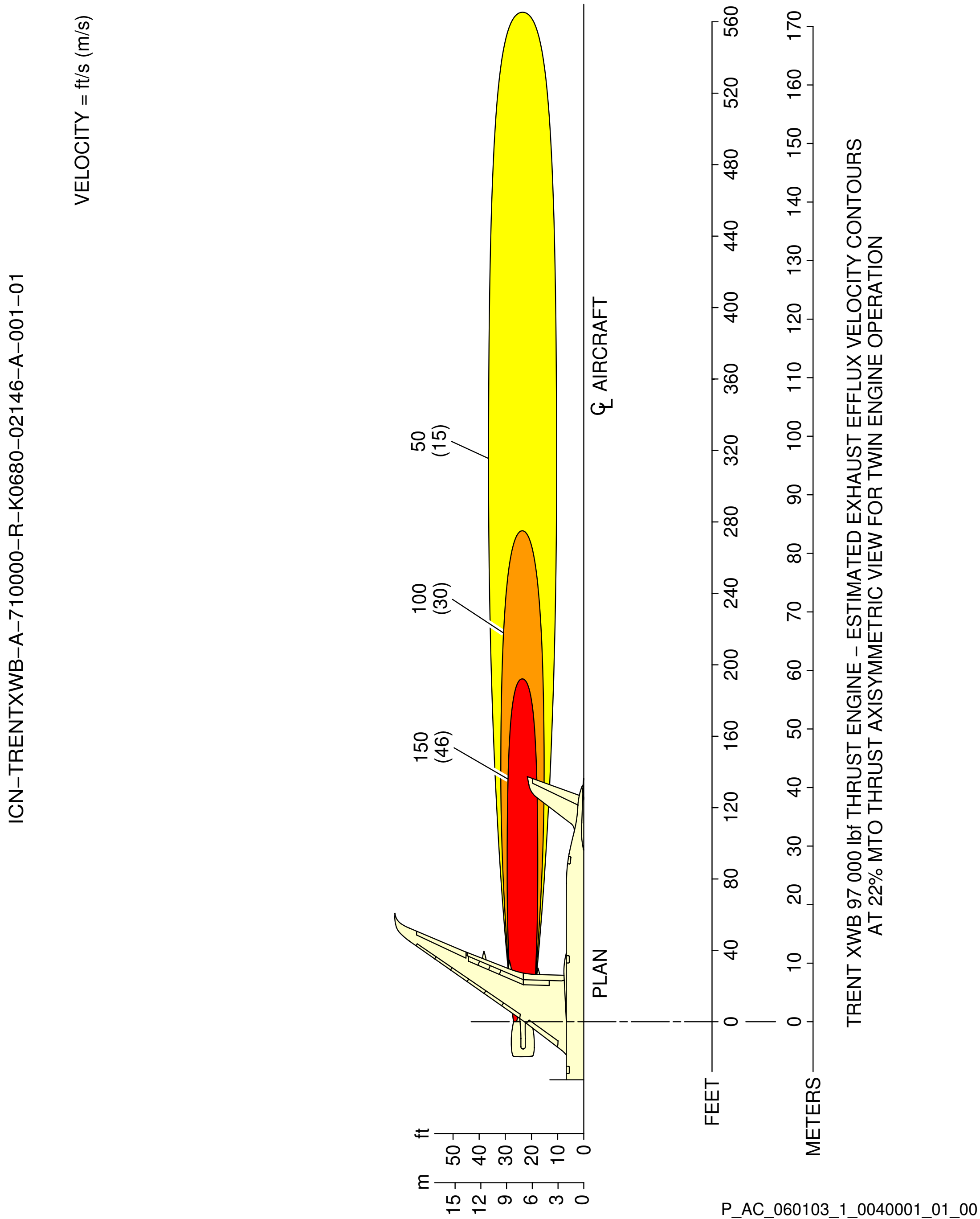
Breakaway Power (11% MTO Thrust) - TRENT XWB-97 Engine
(Sheet 1 of 2)
FIGURE-6-1-3-991-003-A01

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



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



Breakaway Power (22% MTO Thrust) - TRENT XWB-97 Engine
FIGURE-6-1-3-991-004-A01

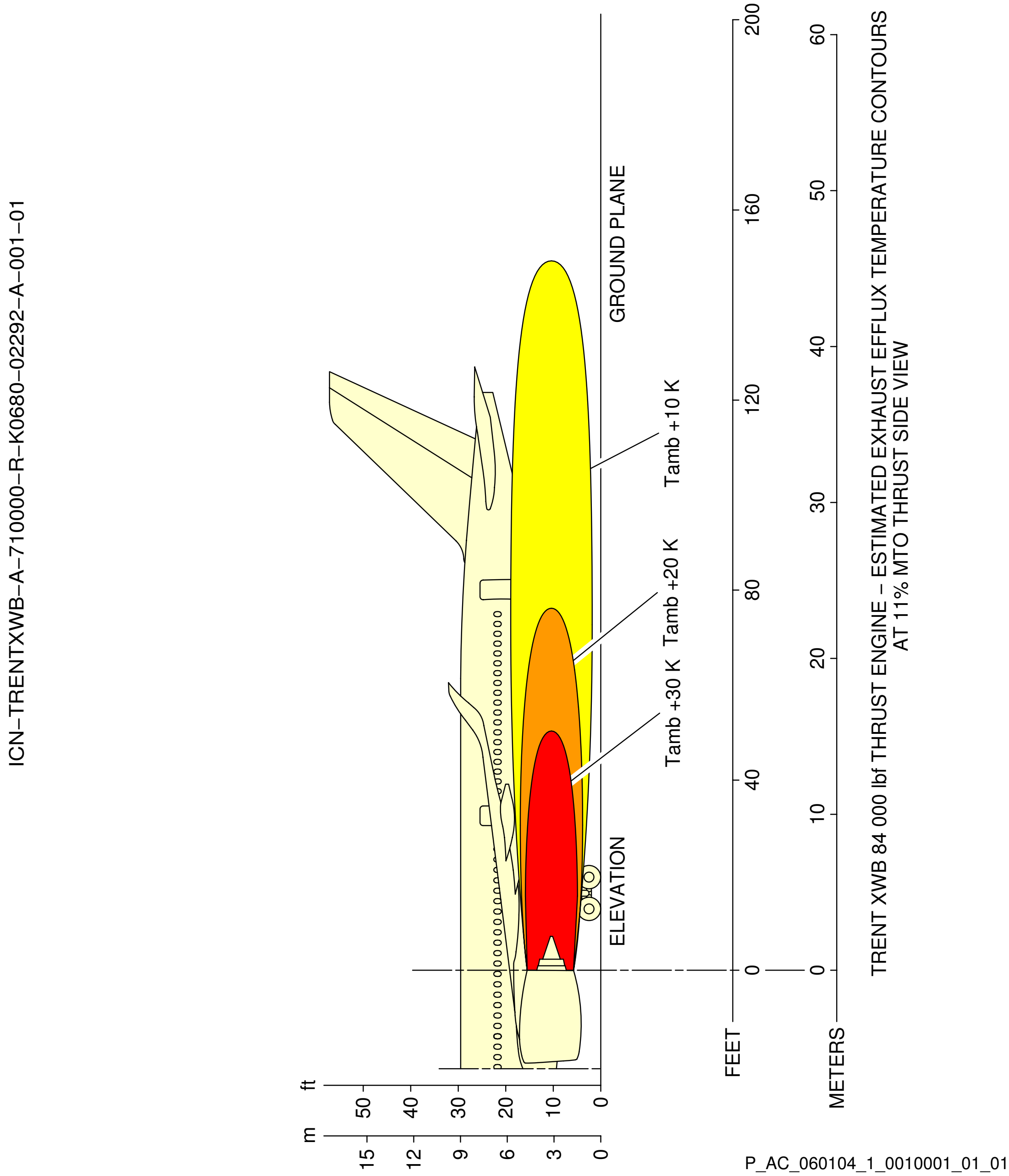
6-1-4 Engine Exhaust Temperatures Contours - Breakaway Power

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

Engine Exhaust Temperatures Contours - Breakaway Power

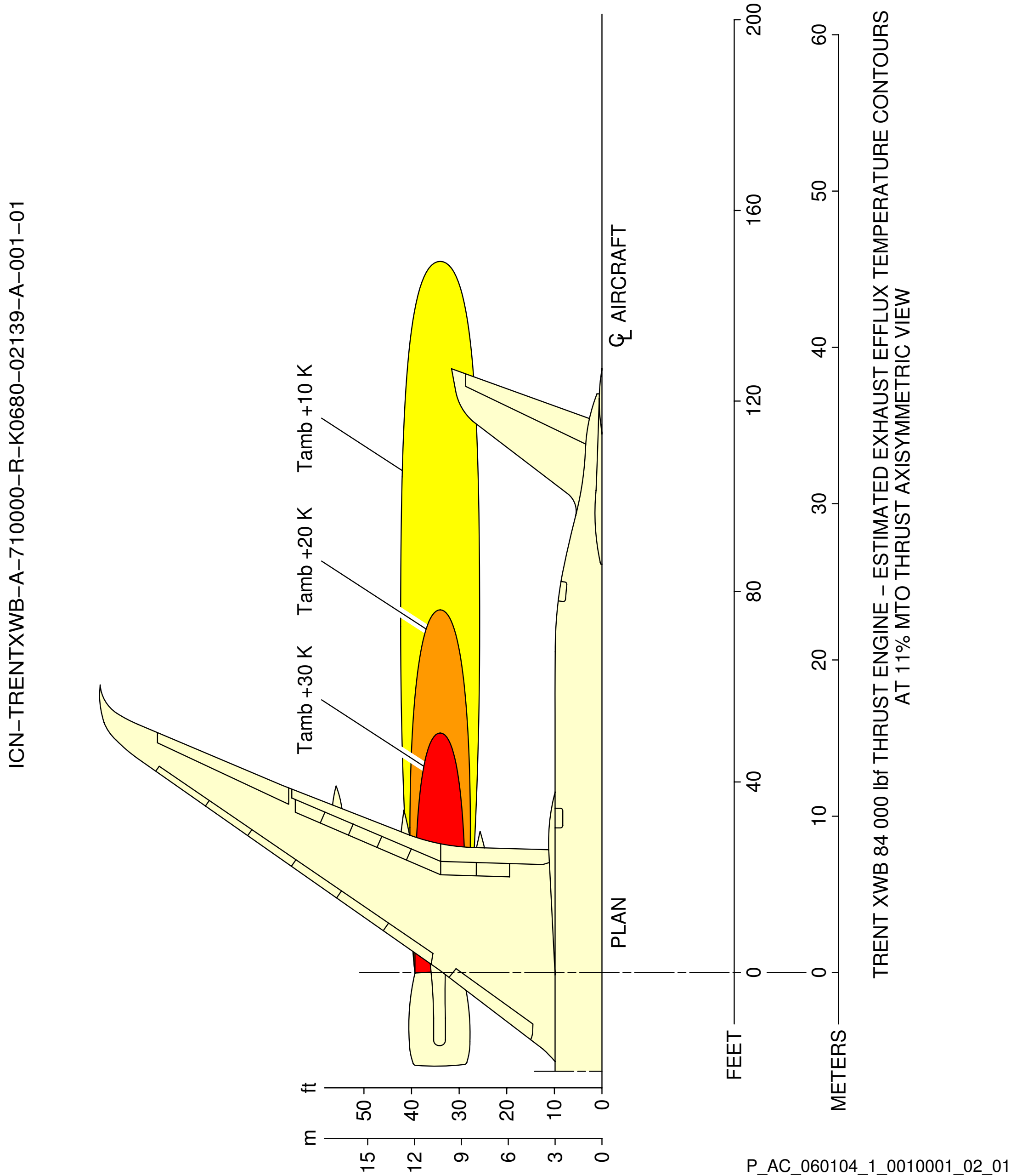
1. This section provides engine exhaust temperatures contours at breakaway power.

**ON A/C A350-900



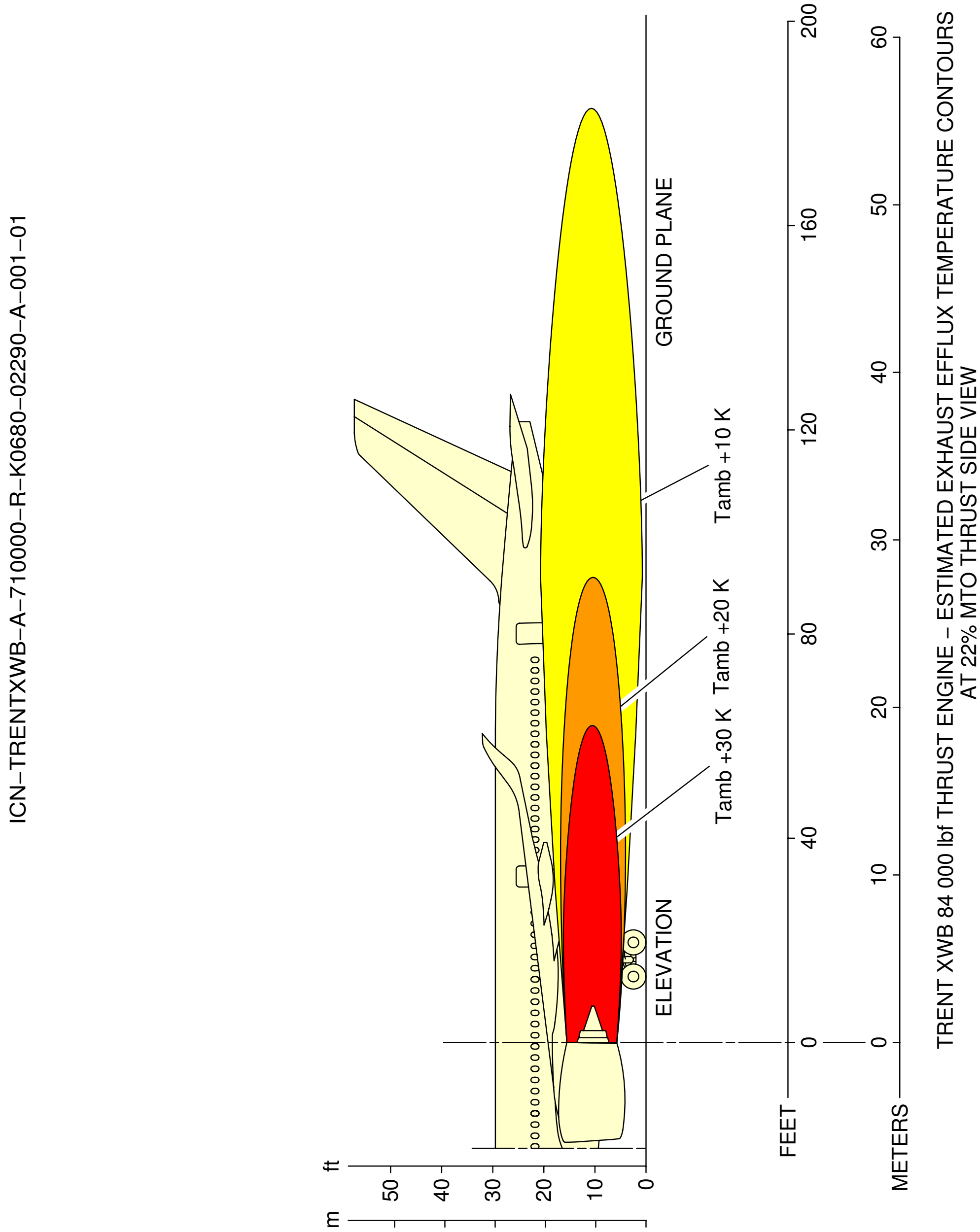
Breakaway Power (11% MTO Thrust) - TRENT XWB-84 Engine
(Sheet 1 of 2)
FIGURE-6-1-4-991-001-A01

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



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



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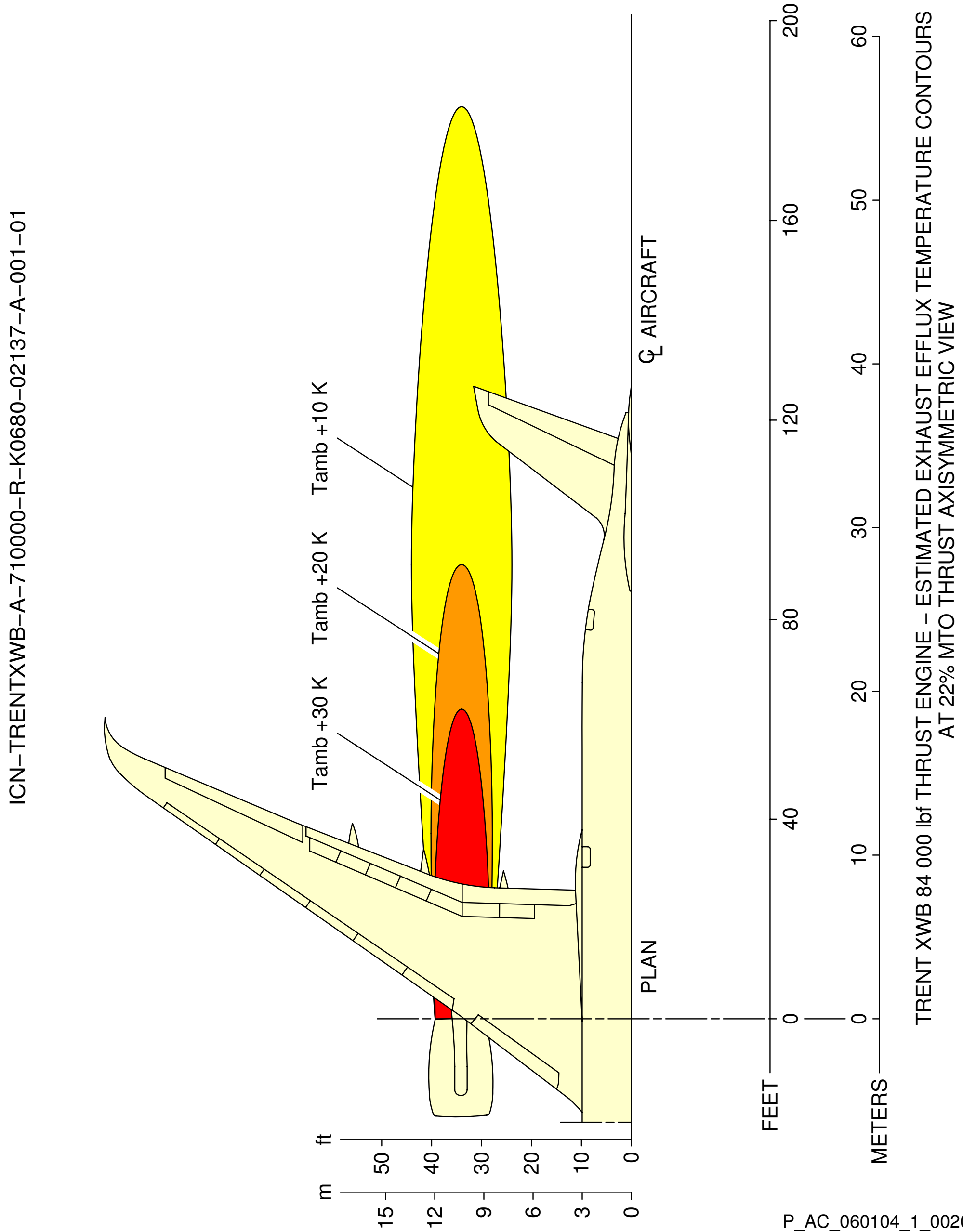
Breakaway Power (22% MTO Thrust) - TRENT XWB-84 Engine
(Sheet 1 of 2)
FIGURE-6-1-4-991-002-A01

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



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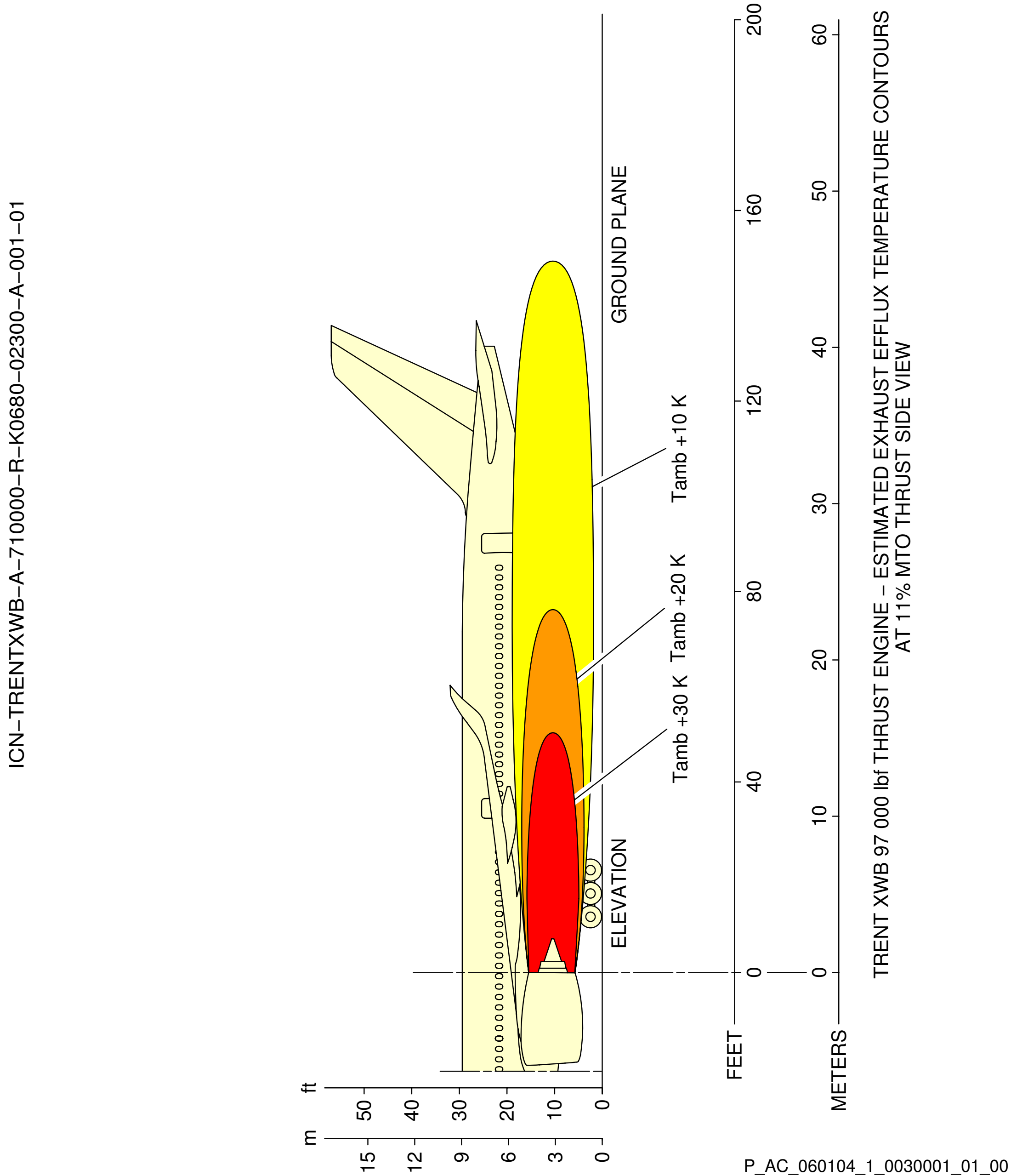
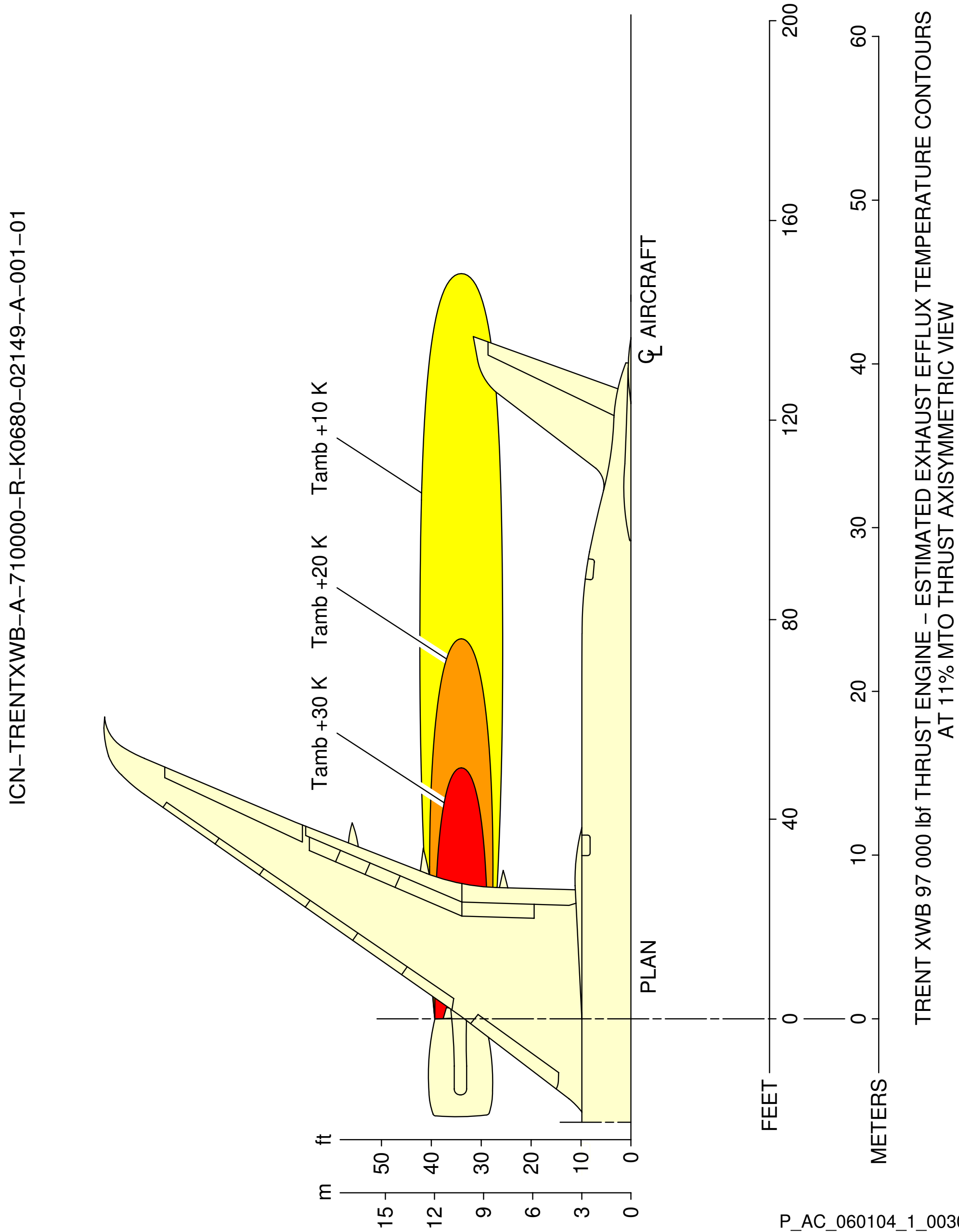
Breakaway Power (22% MTO Thrust) - TRENT XWB-84 Engine
(Sheet 2 of 2)
FIGURE-6-1-4-991-002-A01

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



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**



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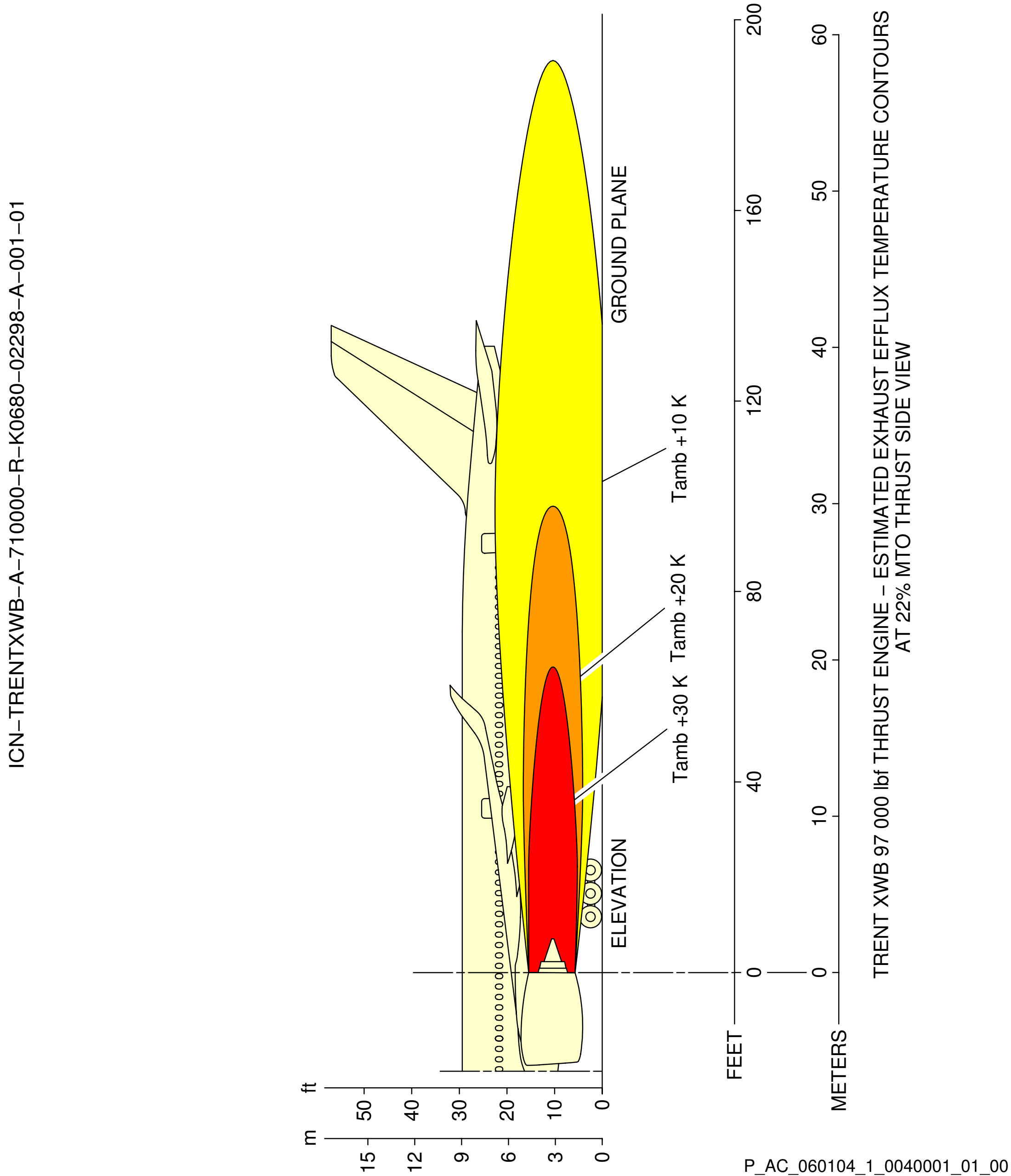
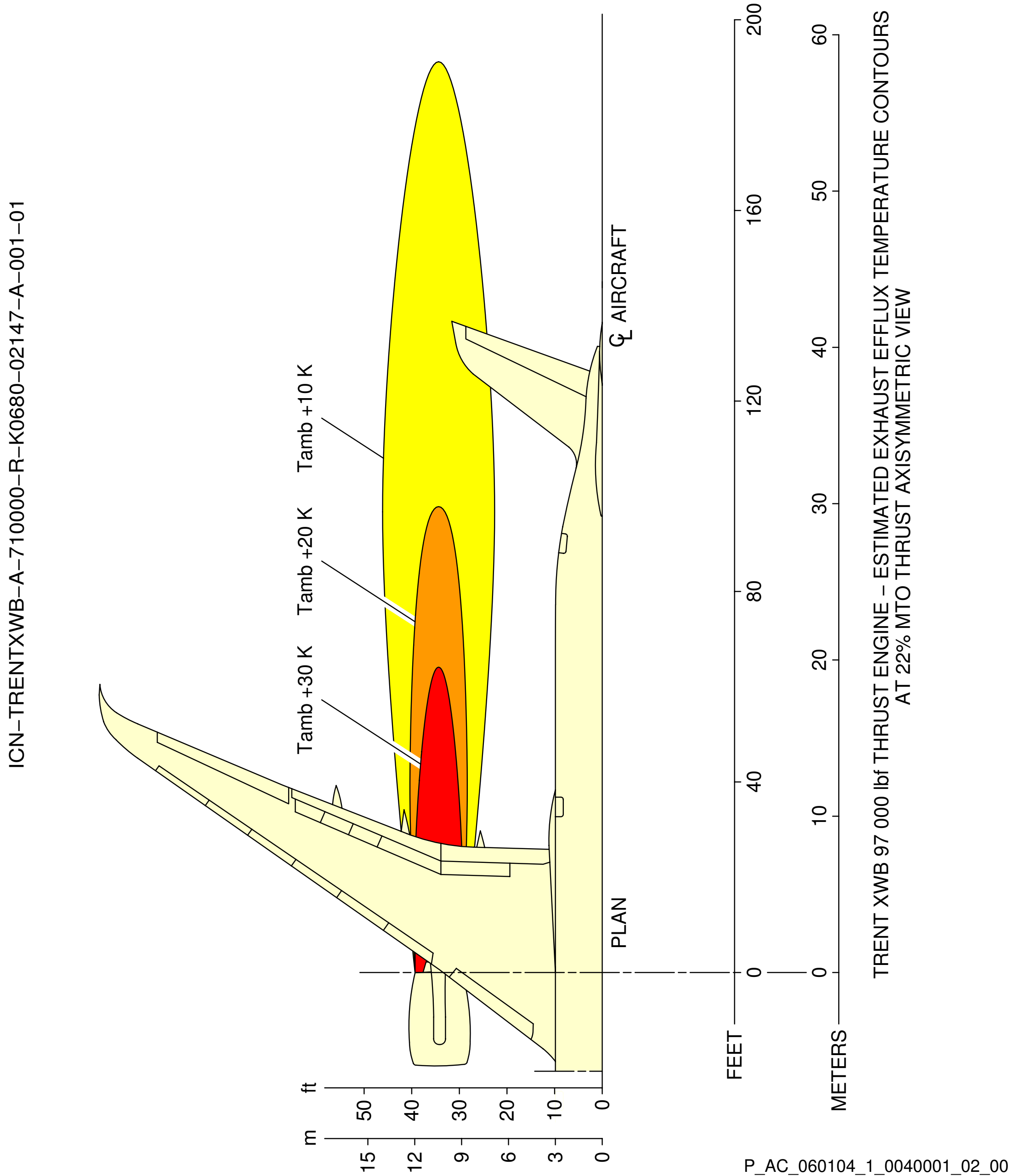
Breakaway Power (11% MTO Thrust) - TRENT XWB-97 Engine
(Sheet 2 of 2)
FIGURE-6-1-4-991-003-A01

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



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**



Breakaway Power (22% MTO Thrust) - TRENT XWB-97 Engine
(Sheet 2 of 2)
FIGURE-6-1-4-991-004-A01

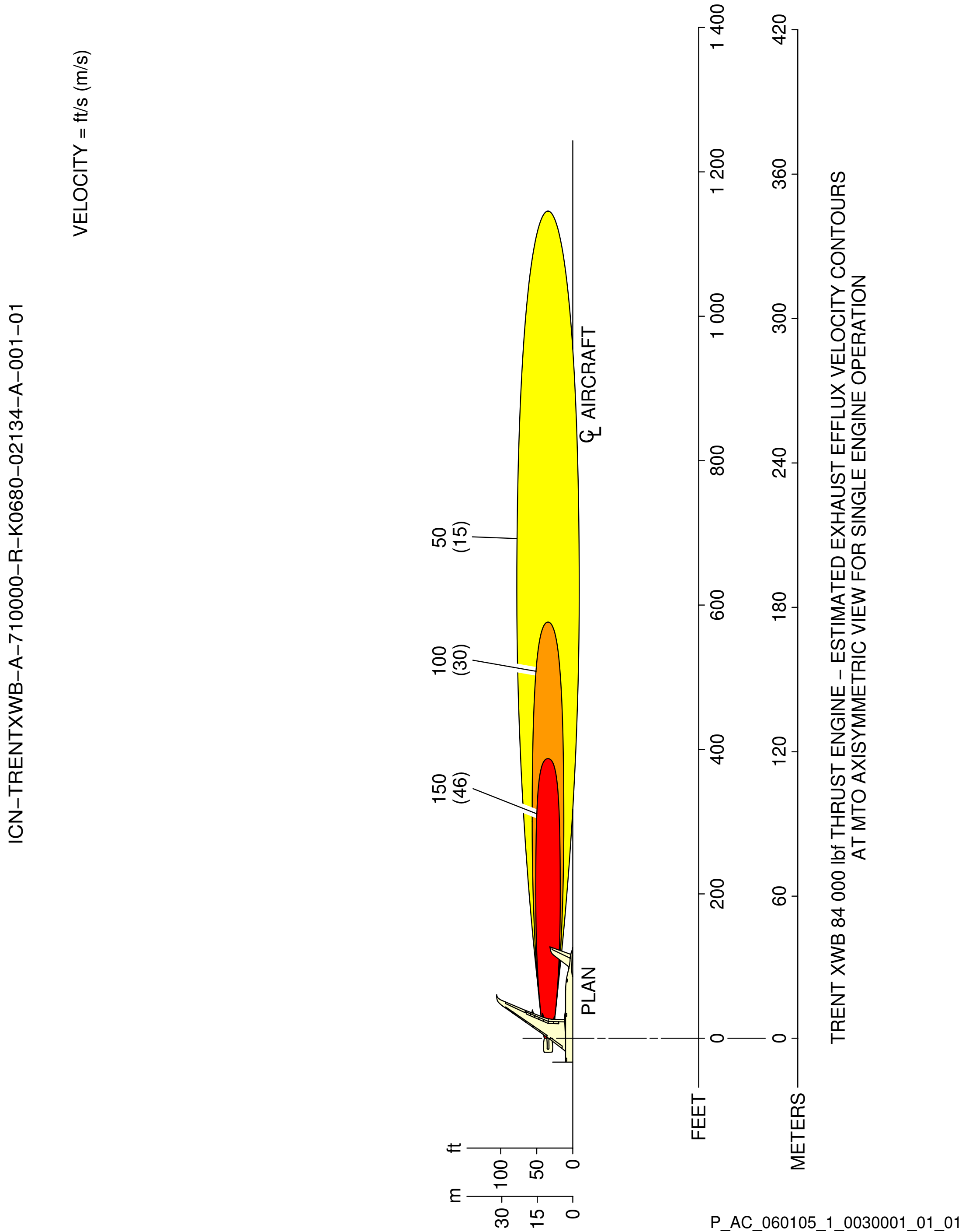
6-1-5 Engine Exhaust Velocities Contours - Max Take-Off Power

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

Engine Exhaust Velocities Contours - Max Take-Off Power

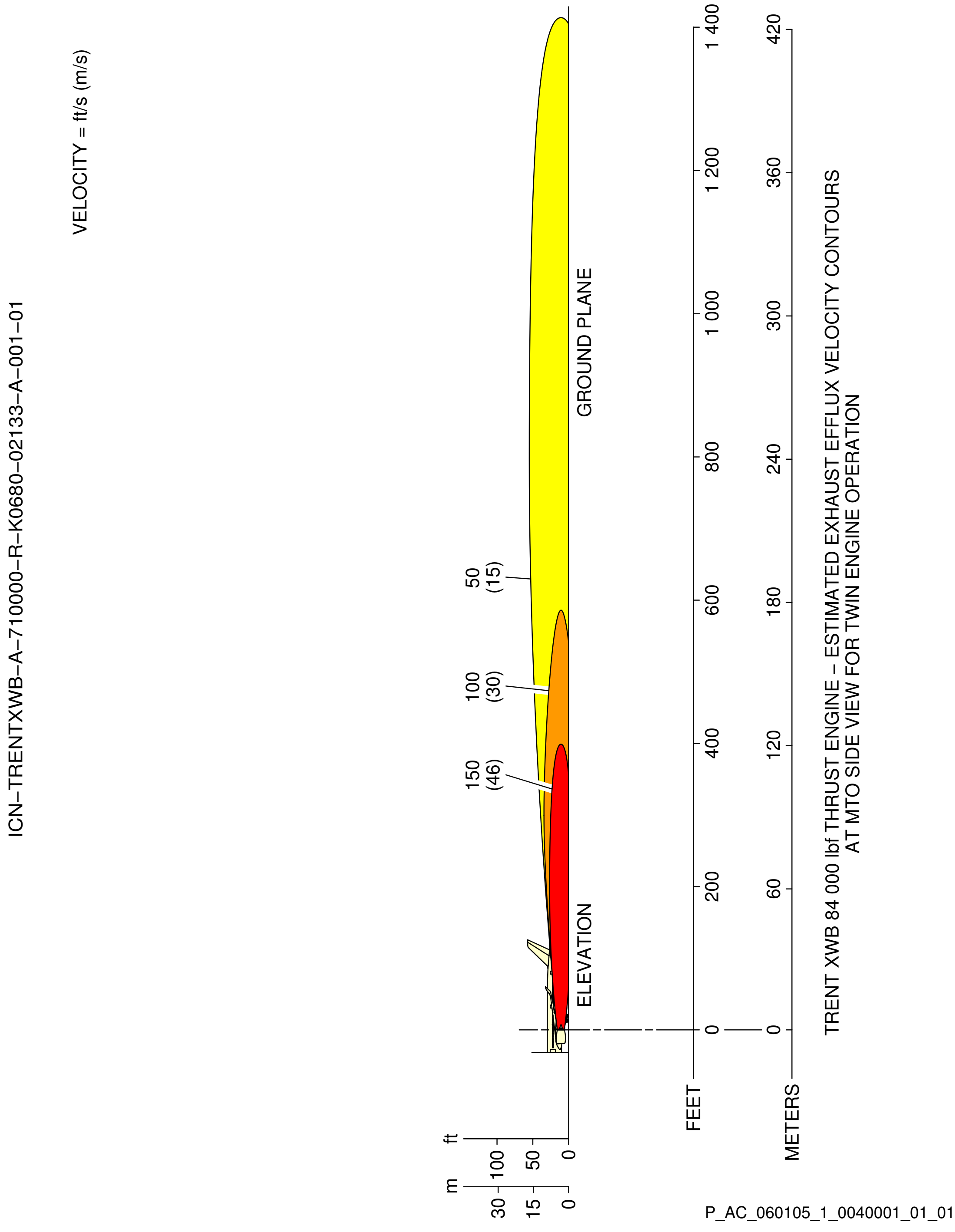
1. This section provides engine exhaust velocities contours at max take-off power.

**ON A/C A350-900



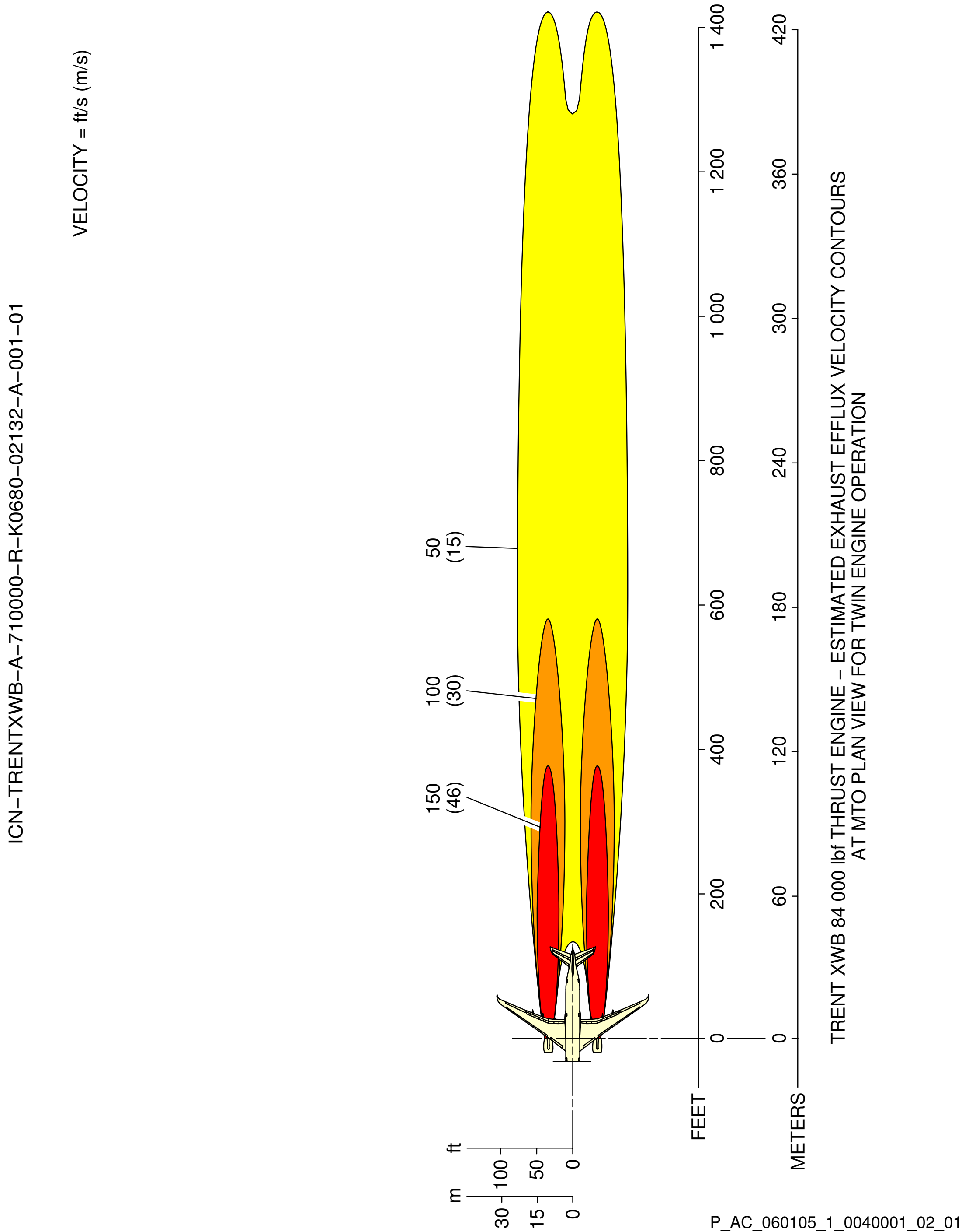
Max Take-Off Power - TRENT XWB-84 Engine (Single)
FIGURE-6-1-5-991-003-A01

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



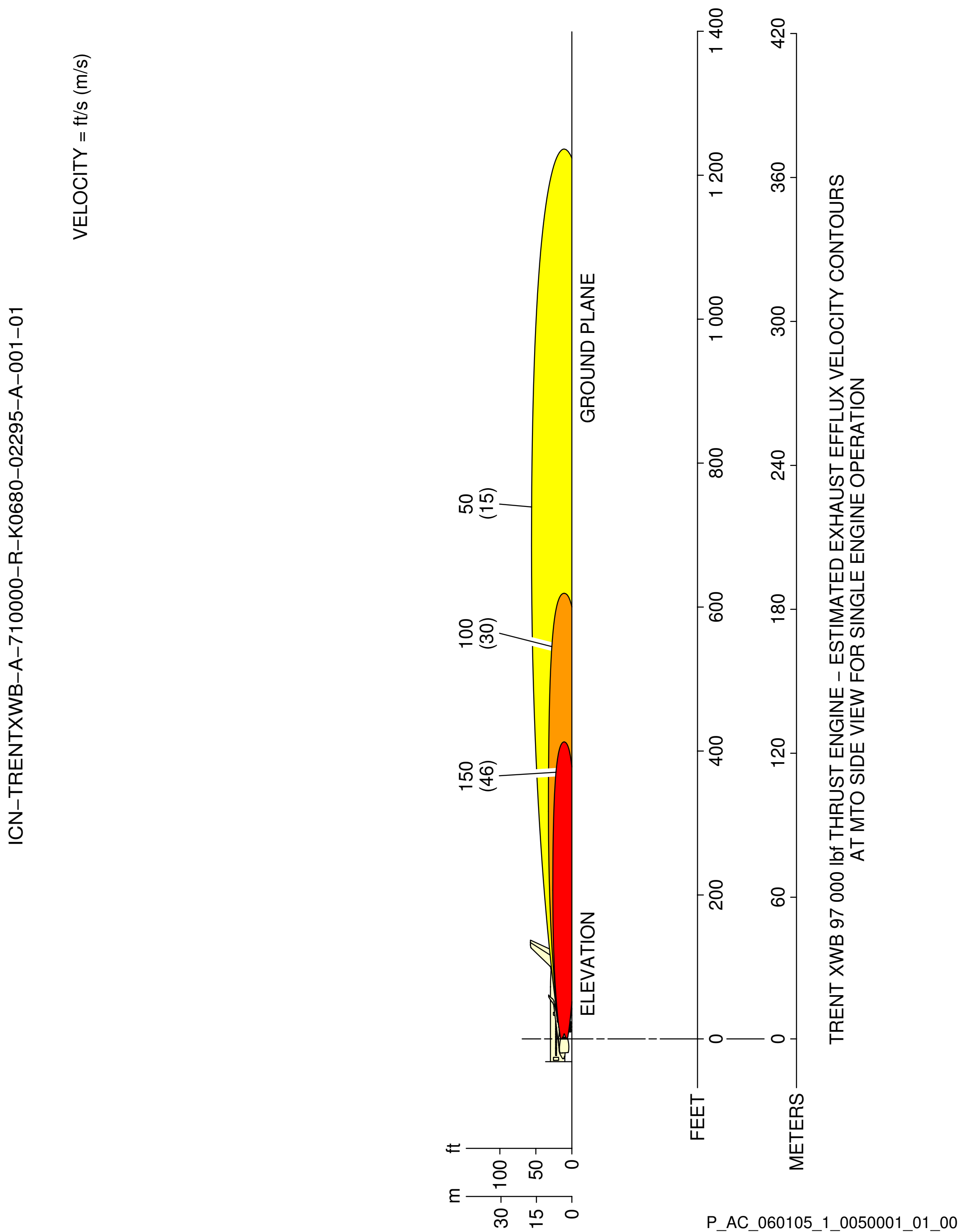
Max Take-Off Power - TRENT XWB-84 Engine (Twin)
(Sheet 1 of 2)
FIGURE-6-1-5-991-004-A01

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



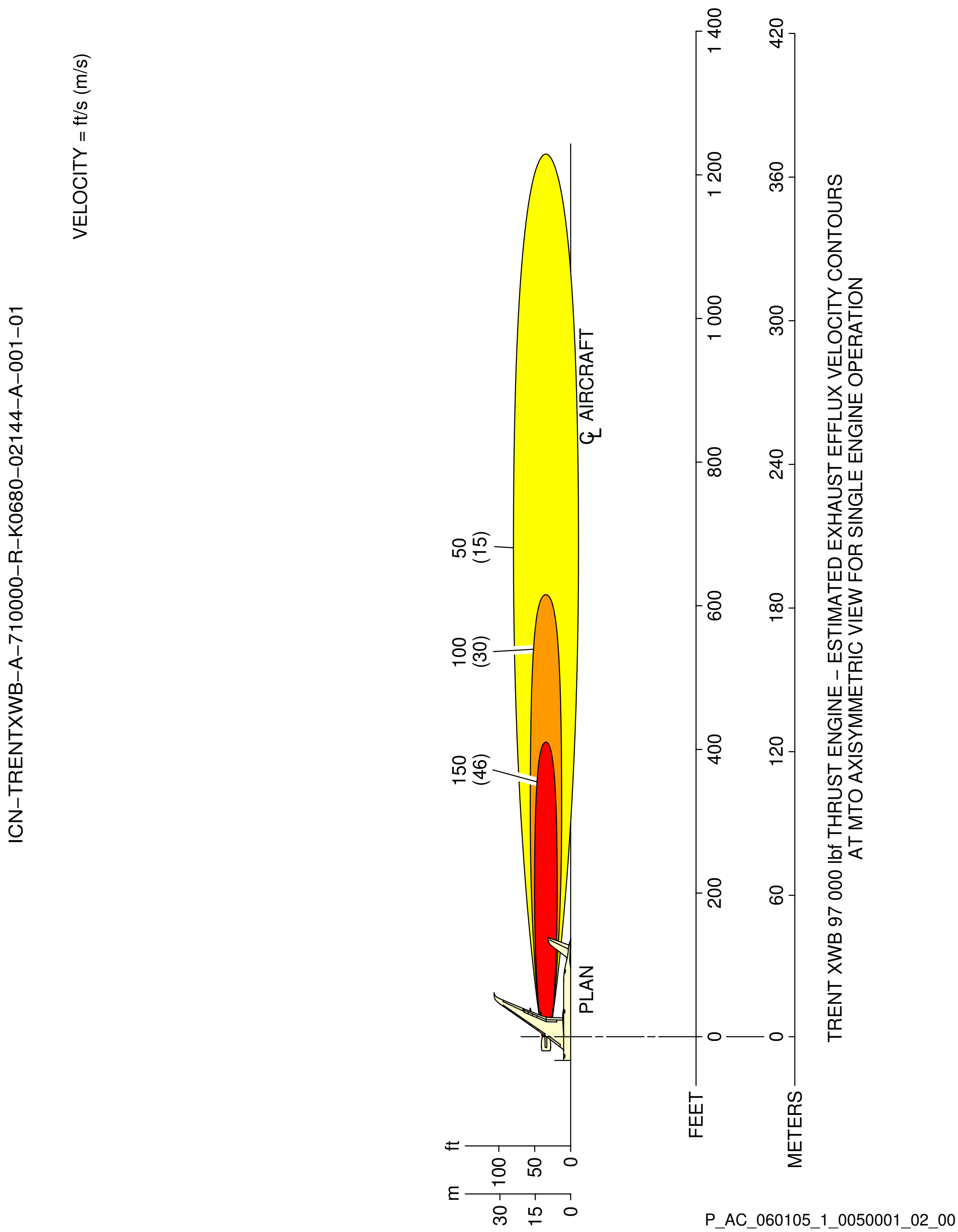
Max Take-Off Power - TRENT XWB-84 Engine (Twin)
(Sheet 2 of 2)
FIGURE-6-1-5-991-004-A01

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



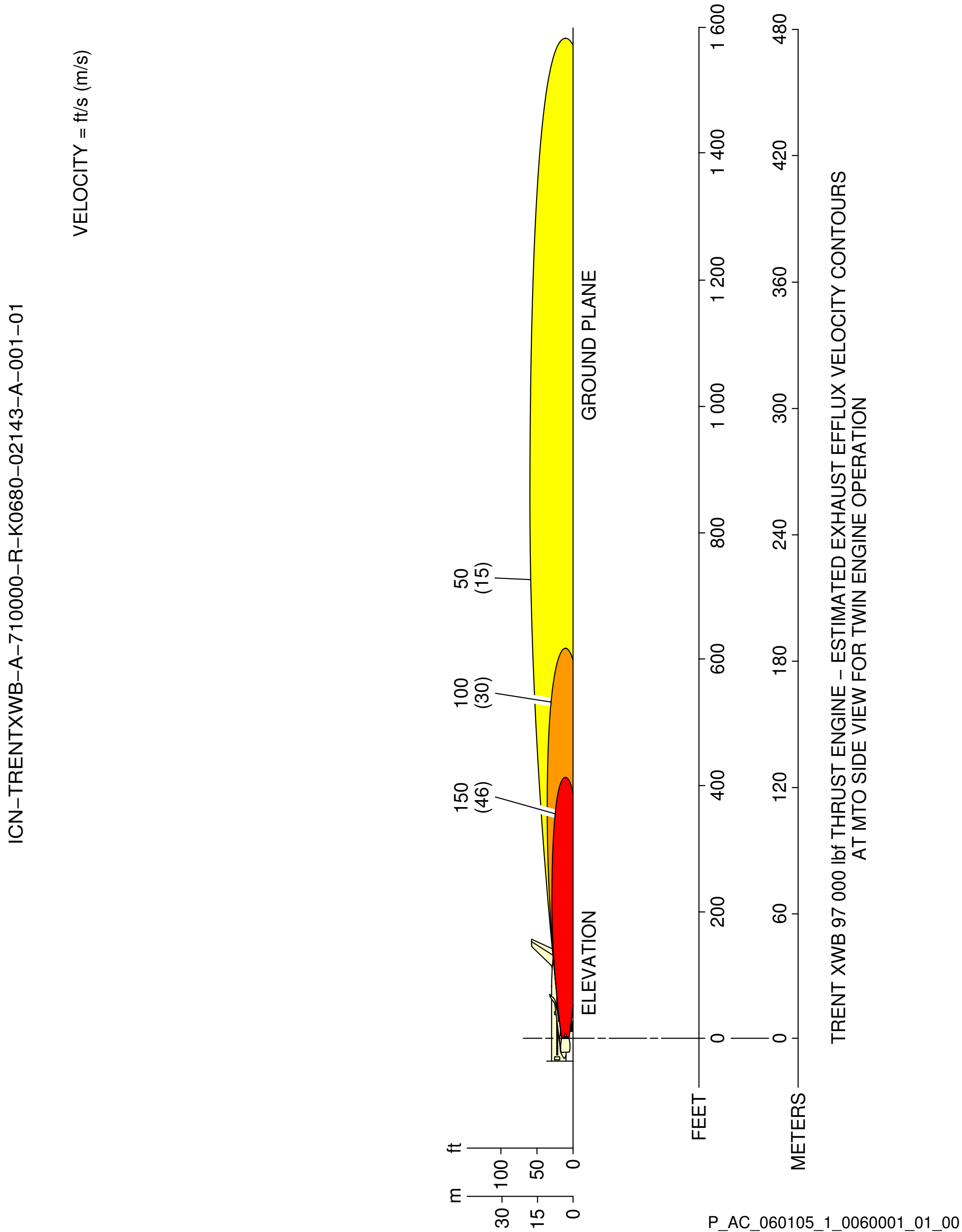
Max Take-Off Power - TRENT XWB-97 Engine (Single)
(Sheet 1 of 2)
FIGURE-6-1-5-991-005-A01

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



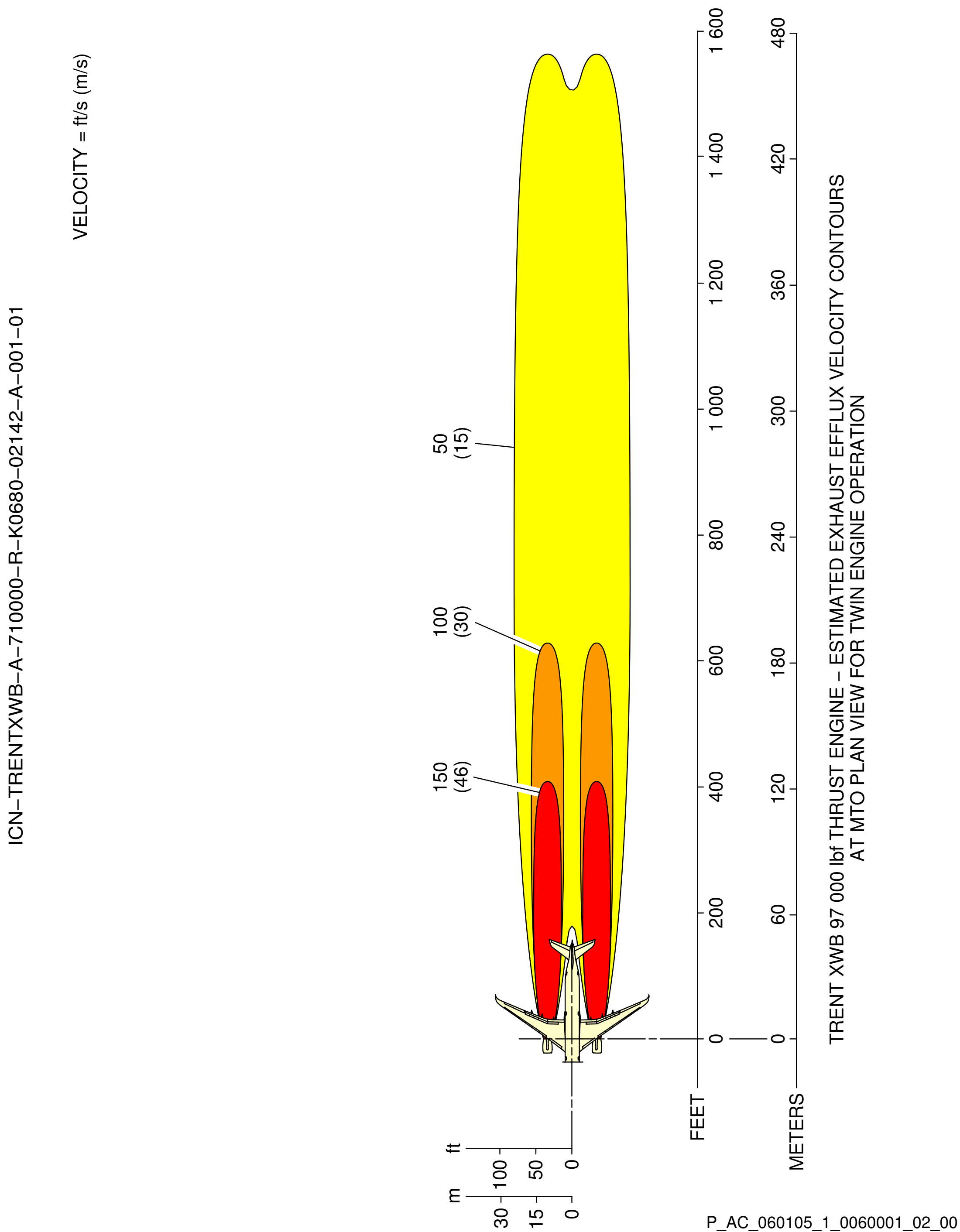
Max Take-Off Power - TRENT XWB-97 Engine (Single)
(Sheet 2 of 2)
FIGURE-6-1-5-991-005-A01

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



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**



Max Take-Off Power - TRENT XWB-97 Engine (Twin)
(Sheet 2 of 2)
FIGURE-6-1-5-991-006-A01

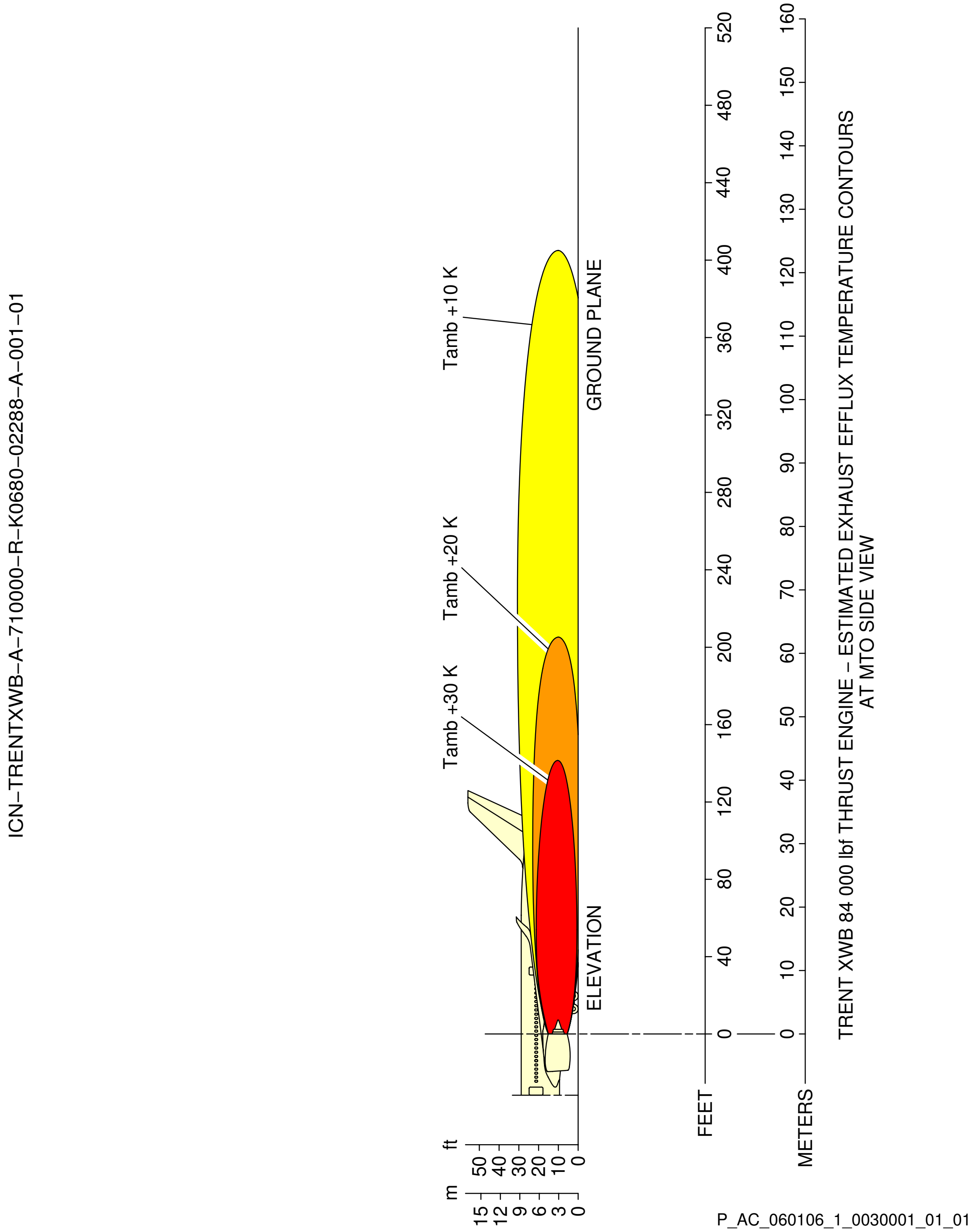
6-1-6 Engine Exhaust Temperatures Contours - Max Take-Off Power

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

Engine Exhaust Temperatures Contours - Max Take-Off Power

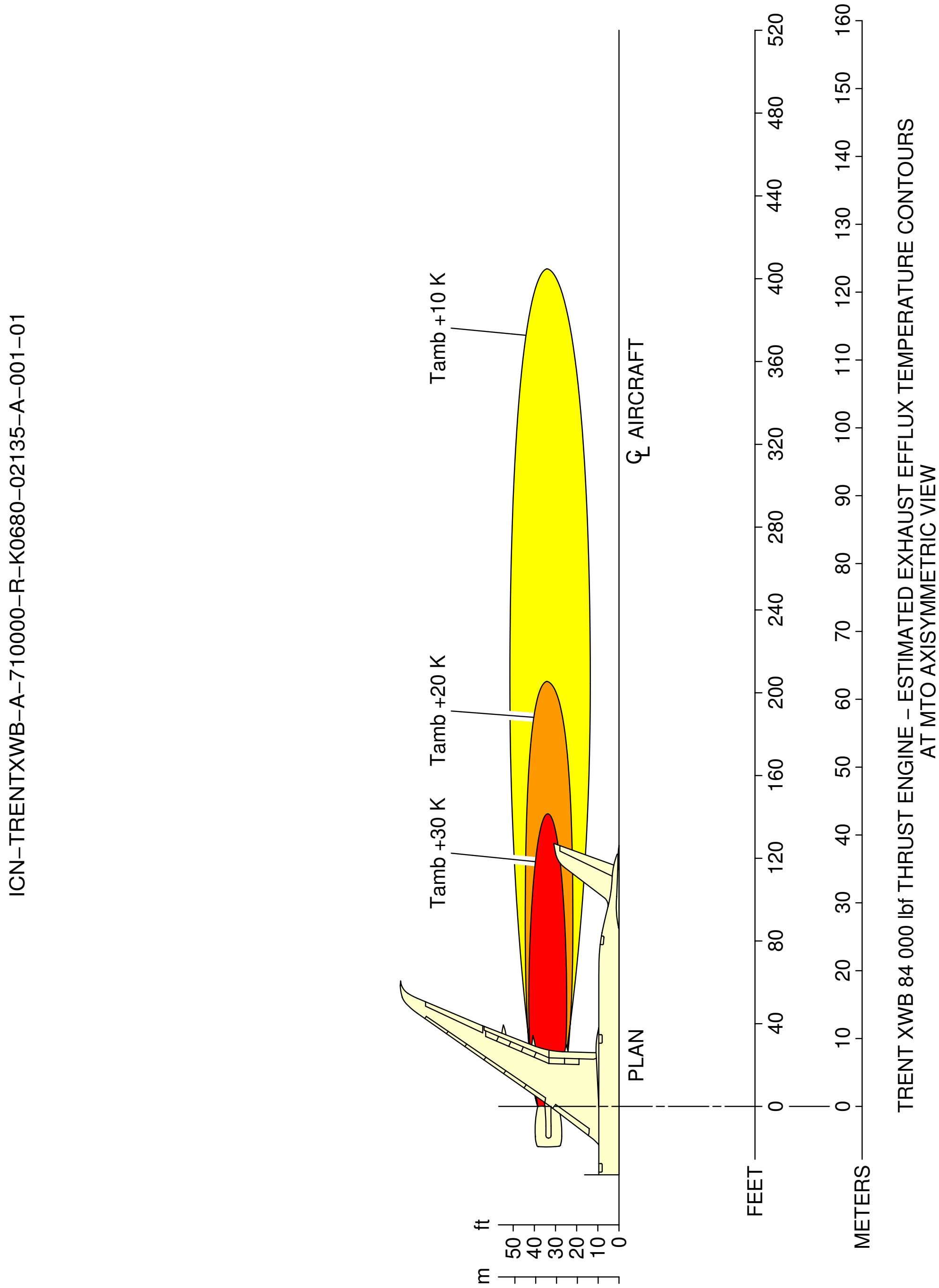
1. This section provides engine exhaust temperatures contours at max take-off power.

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



Max Take-Off Power - TRENT XWB-84 Engine
(Sheet 1 of 2)
FIGURE-6-1-6-991-003-A01

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



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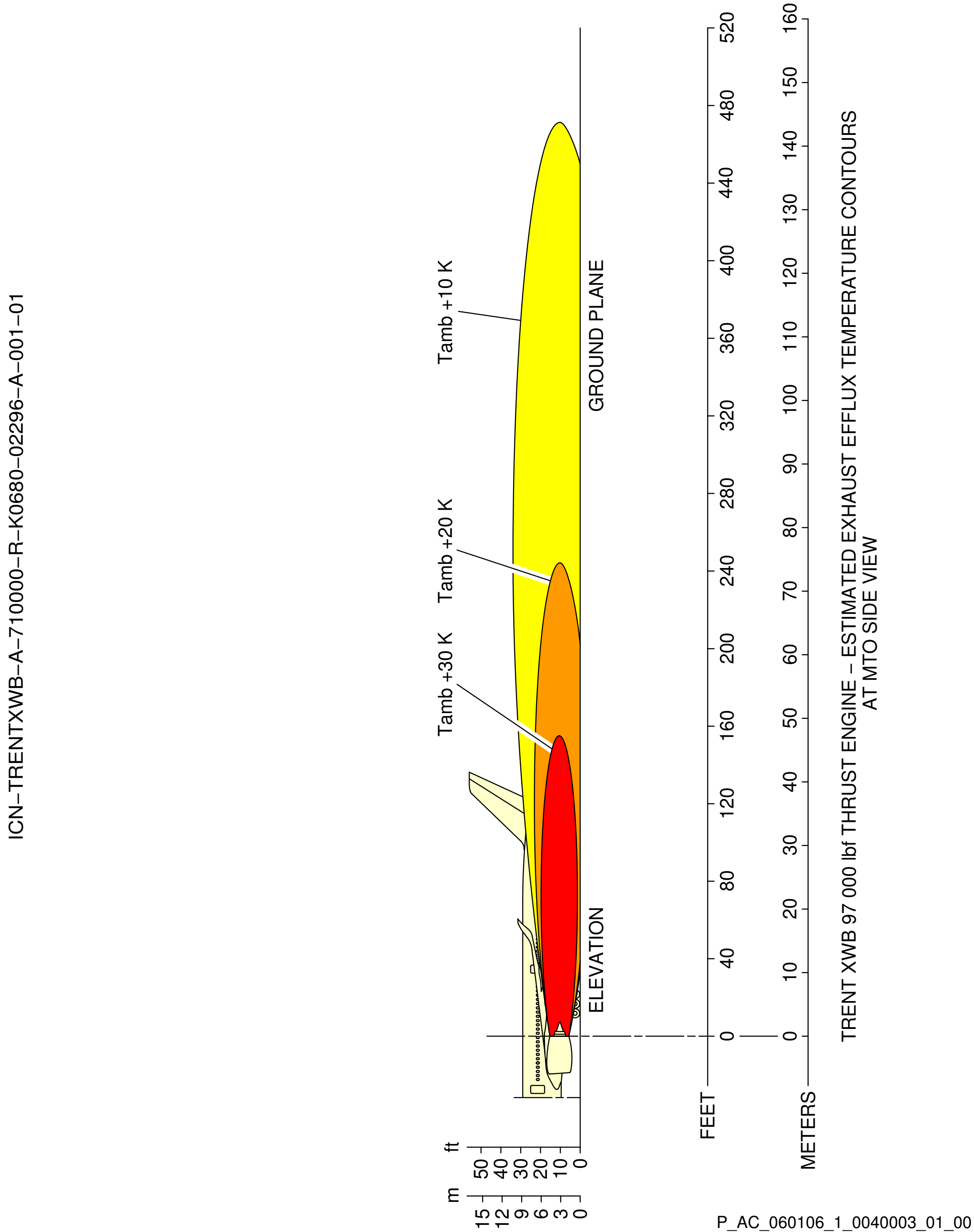
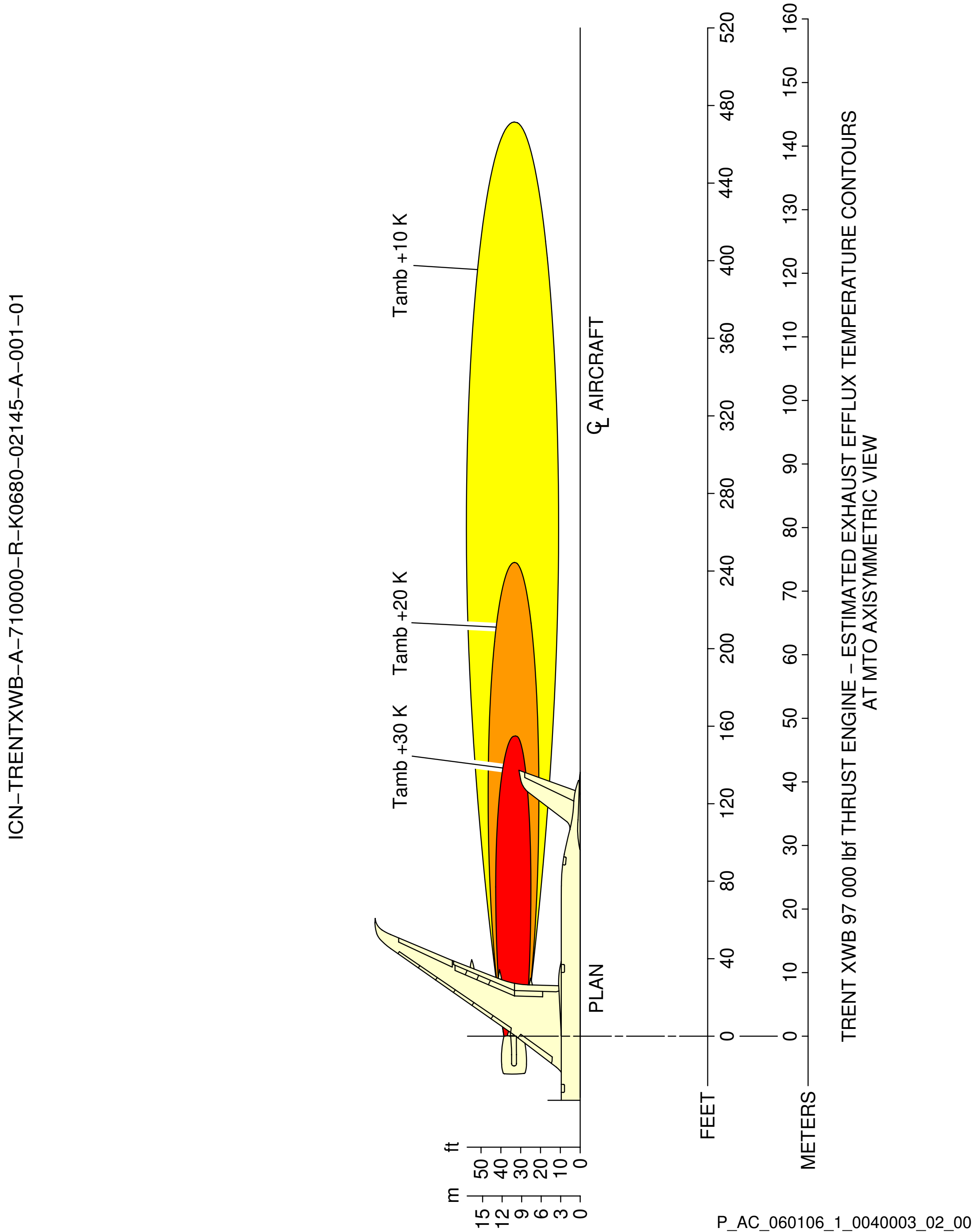
Max Take-Off Power - TRENT XWB-84 Engine
(Sheet 2 of 2)
FIGURE-6-1-6-991-003-A01

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



Max Take-Off Power - TRENT XWB-97 Engine
(Sheet 1 of 2)
FIGURE-6-1-6-991-004-C01

**ON A/C A350-1000



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.

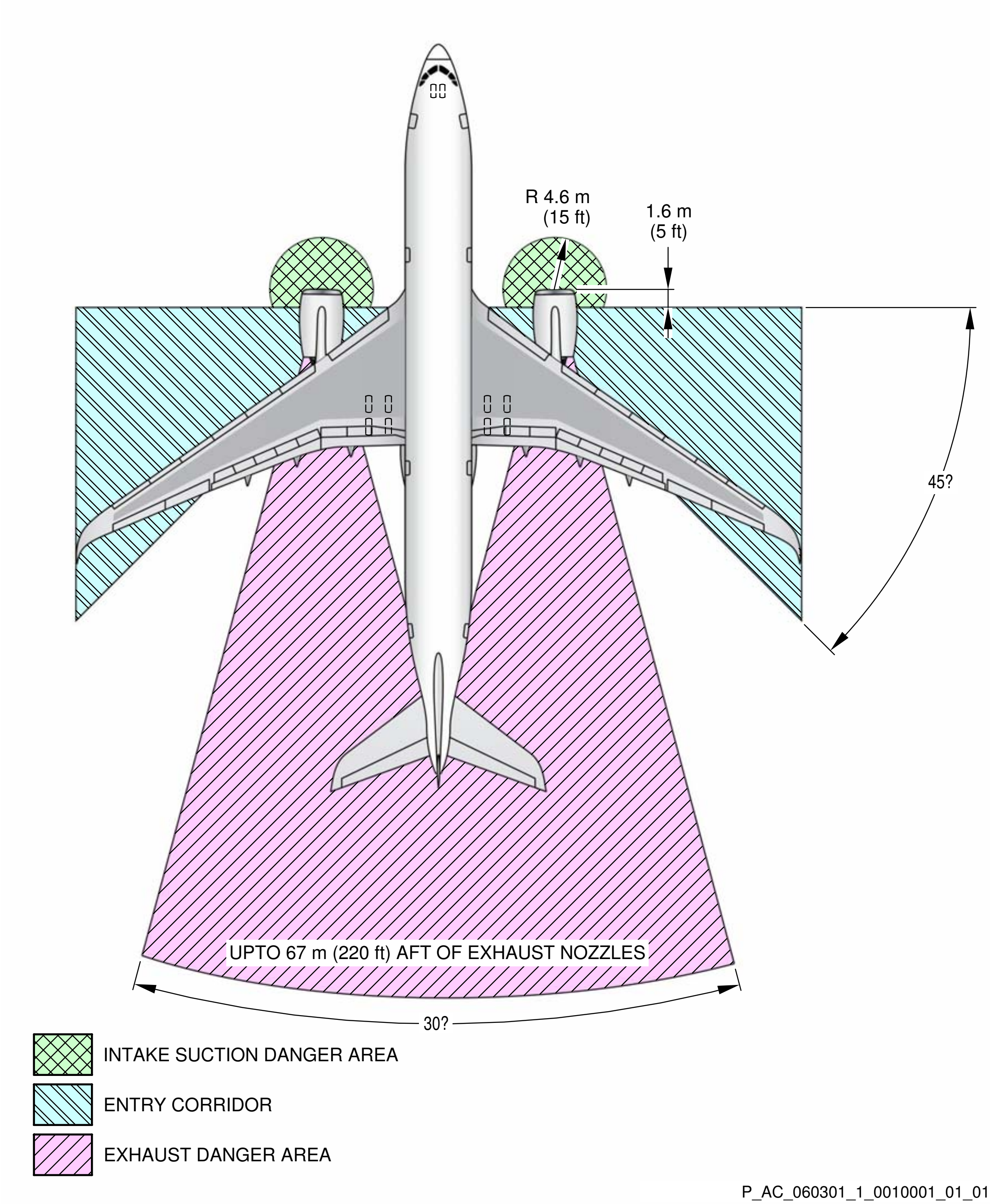
6-3-1 Danger Areas of the Engines - Ground Idle Power

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

Danger Areas of the Engines - Ground Idle Power

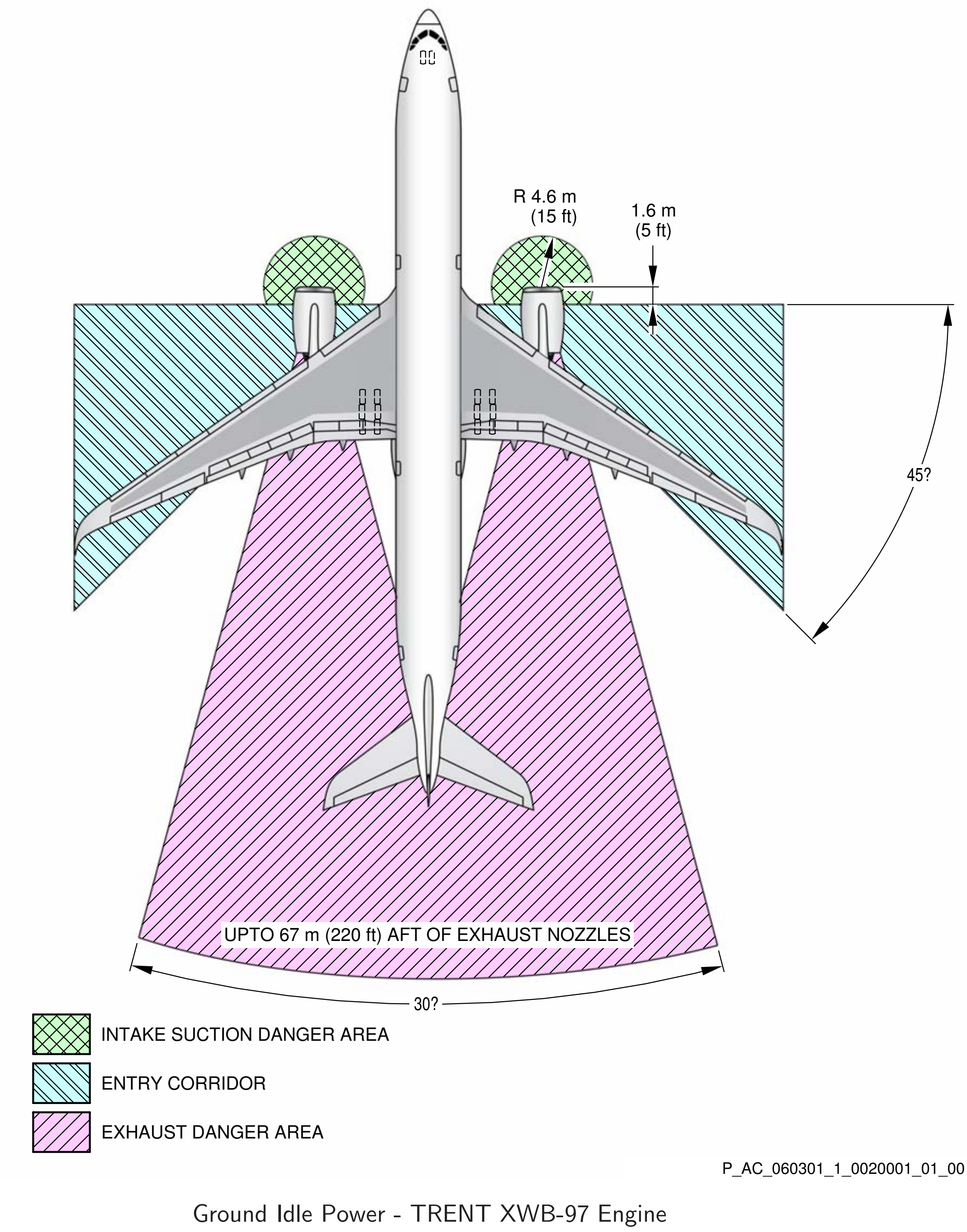
1. This section provides danger areas of the engines at ground idle power conditions.

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



Ground Idle Power - TRENT XWB-84 Engine
FIGURE-6-3-1-991-001-A01

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



Ground Idle Power - TRENT XWB-97 Engine
FIGURE-6-3-1-991-002-A01

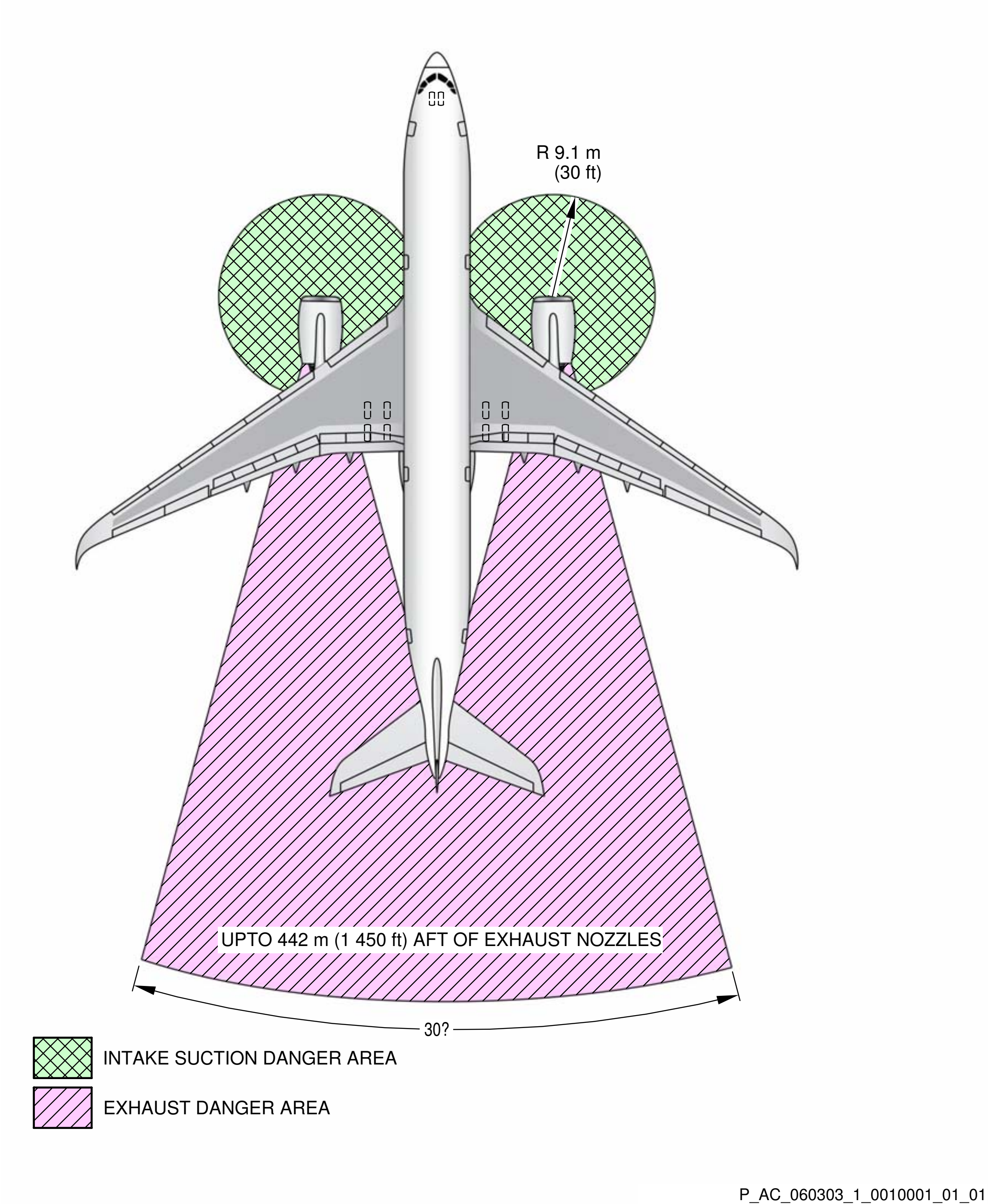
6-3-3 Danger Areas of the Engines - Max Take-Off Power

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

Danger Areas of the Engines - Max Take-Off Power

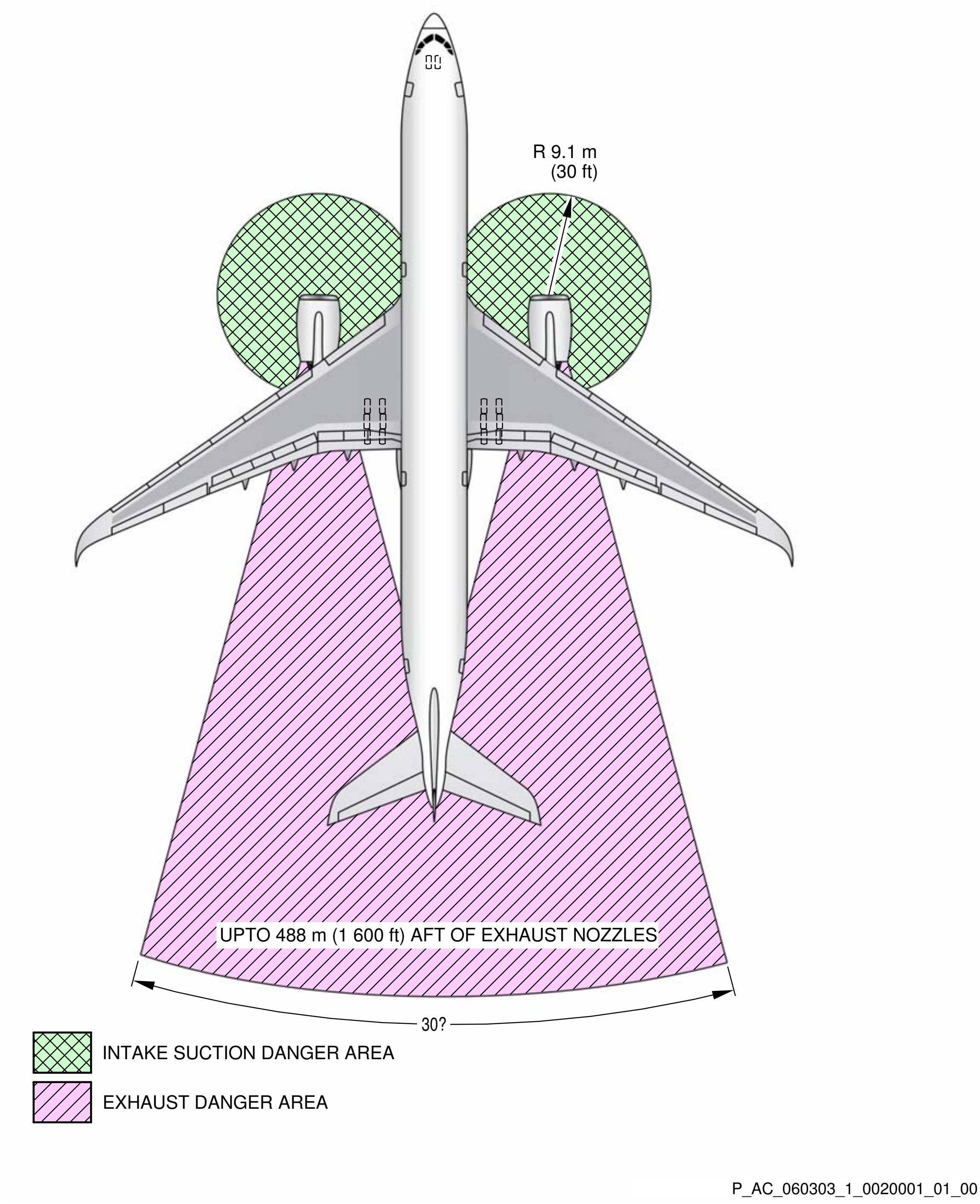
1. This section provides danger areas of the engines at maximum take-off power conditions.

**ON A/C A350-900



Max Take-Off Power - TRENT XWB-84 Engine
FIGURE-6-3-3-991-001-A01

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



Max Take-Off Power - TRENT XWB-97 Engine
FIGURE-6-3-3-991-002-A01

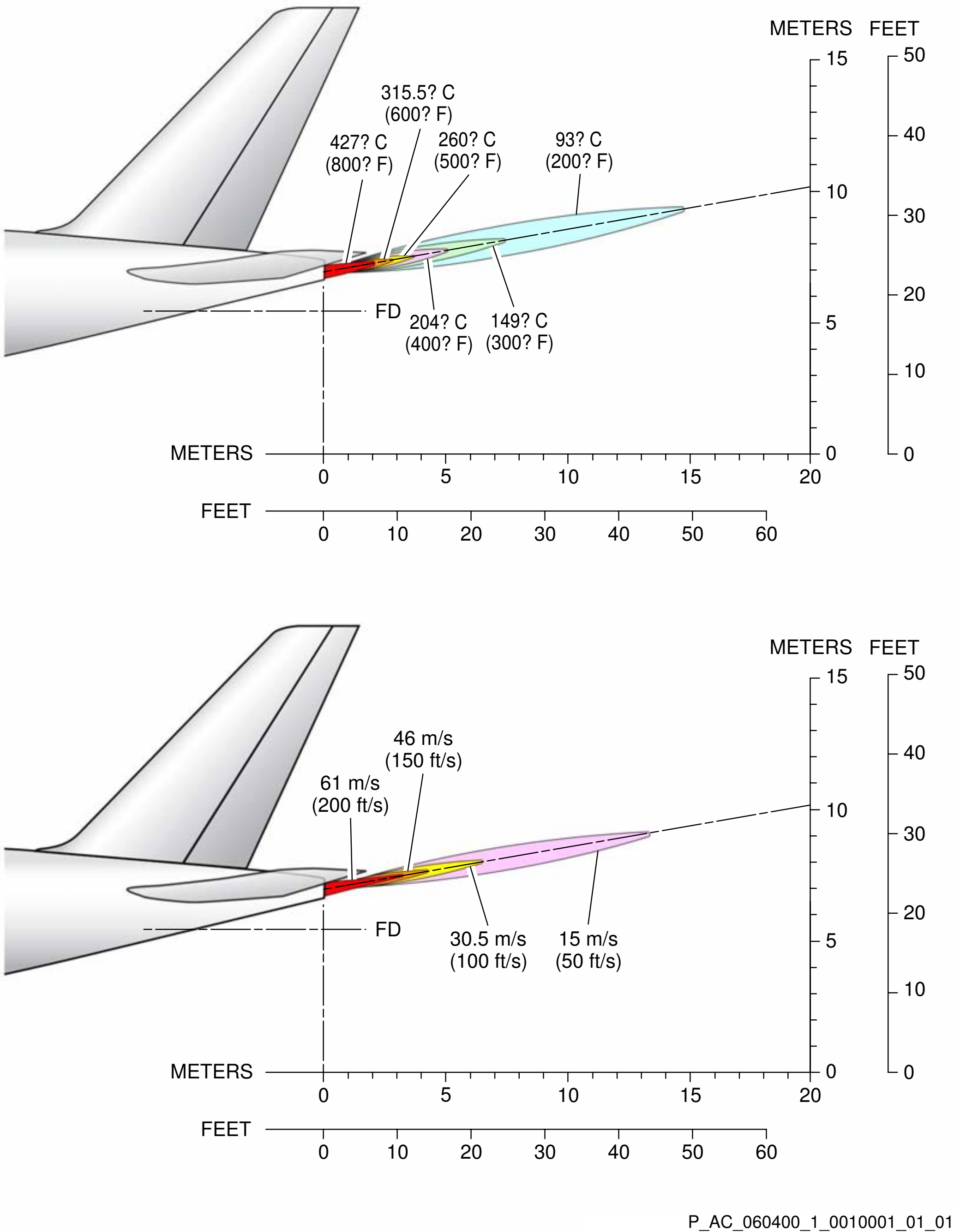
6-4-0 APU Exhaust Velocities and Temperatures

****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**



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:
   Section 7-4-0 contains charts to find these loads throughout the stability limits of the aircraft at rest on the pavement.
   These MLG loads are used as the point of entry to the pavement design charts which follow, interpolating load values where necessary.

   Flexible Pavement Requirements - US Army Corps of Engineers Design Method:
   Section 7-5-0 uses the procedures in Instruction Report No. S-77-1 "Procedures for Development of CBR Design Curves", dated June 1977 and as modified according to the methods described in ICAO Aerodrome Design Manual, Part 3. Pavements, 2nd Edition, 1983, Section 1.1 (The ACN-PCN Method), and utilizing the alpha factors approved by the ICAO in October 2007.
   The report was prepared by the "U.S. Army Corps Engineers Waterways Experiment Station, Soils and Pavement Laboratory, Vicksburg, Mississippi".
   The line showing 10 000 coverages is used to calculate Aircraft Classification Number (ACN).

   Flexible Pavement Requirements - LCN Conversion Method:

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.
For questions regarding the LCN system, contact Airbus.

Rigid Pavement Requirements - PCA (Portland Cement Association) Design Method:
Section 7-7-0 gives the rigid pavement design curves that have been prepared with the use of the Westergaard Equation.
This is in general accordance with the procedures outlined in the Portland Cement Association publications, "Design of Concrete Airport Pavement", 1973 and "Computer Program for Airport Pavement Design", (Program PDILB), 1967 both by Robert G. Packard.

Rigid Pavement Requirements - LCN Conversion:
The Load Classification Number (LCN) curves are no longer provided in section 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.
For questions regarding the LCN system, contact Airbus.

ACN/PCN Reporting System:
Section 7-9-0 provides ACN data prepared according to the ACN/PCN system as referenced in ICAO Annex 14, "Aerodromes", Volume 1 "Aerodrome Design and Operations" Fourth Edition, July 2004, incorporating Amendments 1 to 6.
The ACN/PCN system provides a standardized international aircraft/pavement rating system replacing the various S, T, TT, LCN, AUW, ISWL, etc., rating systems used throughout the world.
ACN is the Aircraft Classification Number and PCN is the corresponding Pavement Classification Number.
An aircraft 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 decide on the method of pavement analysis and the results of their evaluation shown as follows:

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

PCN			
PAVEMENT TYPE	SUBGRADE CATEGORY	TIRE PRESSURE CATEGORY	EVALUATION METHOD
	C - Low	Y - Medium pressure limited to 1.25 MPa (181 psi)	
	D - Ultra Low	Z - Low pressure limited to 0.5 MPa (73 psi)	

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 $k = 150\ MN/m^3$ (550 pci)
- B. Medium Strength $k = 80\ MN/m^3$ (300 pci)
- C. Low Strength $k = 40\ MN/m^3$ (150 pci)
- D. Ultra Low Strength $k = 20\ MN/m^3$ (75 pci)

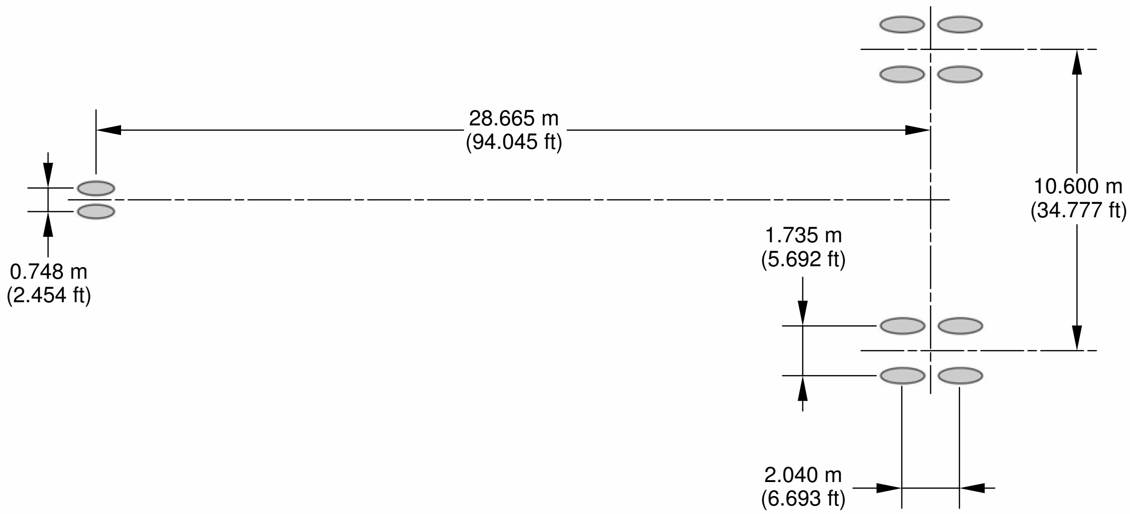
7-2-0 Landing Gear Footprint

****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)	93.8%	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

**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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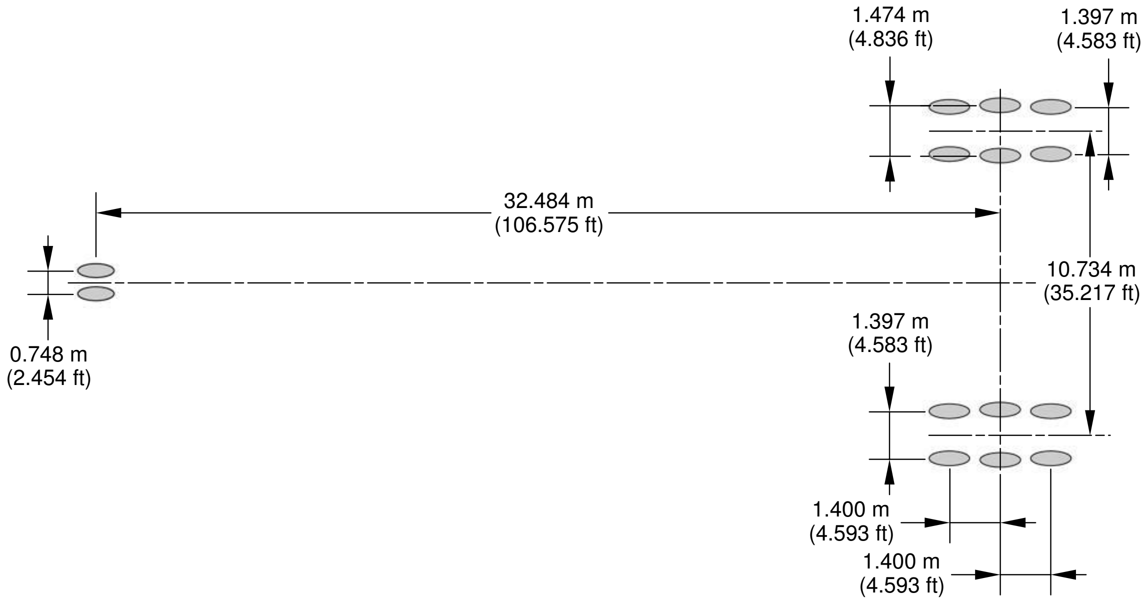
Landing Gear Footprint
(Sheet 3 of 3)
FIGURE-7-2-0-991-001-A01

**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 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

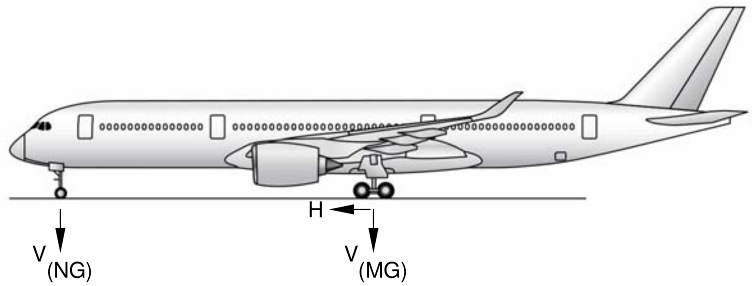
7-3-0 Maximum Pavement Loads

****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



$V_{(NG)}$ MAXIMUM VERTICAL NOSE GEAR GROUND LOAD AT MOST FORWARD CG
$V_{(MG)}$ MAXIMUM VERTICAL MAIN GEAR GROUND LOAD AT MOST AFT CG
H MAXIMUM HORIZONTAL GROUND LOAD FROM BRAKING

1	2	3		4	5		6	
		$V_{(NG)}$			$V_{(MG)}$ (PER STRUT)		H (PER STRUT)	
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 10 ft/s? DECELERATION	AT INSTANTANEOUS BRAKING COEFFICIENT = 0.8
A350–900 WV000 (CG 33%)	268 900 kg (592 825 lb)	23 450 kg (51 700 lb)	23.4% MAC (b)	37 500 kg (82 675 lb)	125 960 kg (277 700 lb)	33% MAC (a)	41 790 kg (92 125 lb) (c)	100 770 kg (222 150 lb) (c)
A350–900 WV000 (CG 38.09%)	268 900 kg (592 825 lb)	25 120kg (55 375 lb)	23.48% MAC (a)	40 230 kg (88 700 lb)	128 150 kg (282 525 lb)	38.09% MAC (a)	41 790 kg (92 125 lb) (c)	102 520 kg (226 025 lb) (c)
A350–900 WV001 (CG 33.2%)	275 900 kg (608 250 lb)	23 450 kg (51 700 lb)	23.4% MAC (b)	37 500 kg (82 675 lb)	129 330 kg (285 125 lb)	33.2% MAC (a)	42 880 kg (94 525 lb) (c)	103 460 kg (228 100 lb) (c)
A350–900 WV001 (CG 34.83%)	275 900 kg (608 250 lb)	25 090 kg (55 325 lb)	24.26% MAC (a)	40 590 kg (89 475 lb)	130 040 kg (286 700 lb)	34.83% MAC (a)	42 880 kg (94 525 lb) (c)	104 030 kg (229 350 lb) (c)
A350–900 WV002 (CG 36.39%)	272 900 kg (601 650 lb)	23 450 kg (51 700 lb)	23.4% MAC (b)	37 500 kg (82 675 lb)	129 310 kg (285 075 lb)	36.39% MAC (a)	42 410 kg (93 500 lb) (c)	103 450 kg (228 075 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.

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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	5		6	
		$V_{(NG)}$			$V_{(MG)}$ (PER STRUT)		H (PER STRUT)	
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 10 ft/s? DECELERATION	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)	40 440 kg (89 150 lb)	129 610 kg (285 750 lb)	37.07% MAC (a)	42 410 kg (93 500 lb) (c)	103 690 kg (228 600 lb) (c)
A350−900 WV003	268 900 kg (592 825 lb)	23 450 kg (51 700 lb)	23.4% MAC (b)	37 500 kg (82 675 lb)	128 150 kg (282 525 lb)	38.1% MAC (a)	41 790 kg (92 125 lb) (c)	102 520 kg (226 025 lb) (c)
A350−900 WV004	260 900 kg (575 175 lb)	23 480 kg (51 775 lb)	24.57% MAC (a)	38 130 kg (84 050 lb)	124 830 kg (275 200 lb)	39.28% MAC (a)	40 550 kg (89 400 lb) (c)	99 870 kg (220 175 lb) (c)
A350−900 WV005	250 900 kg (553 150 lb)	23 520 kg (51 850 lb)	23.39% MAC (a)	37 620 kg (82 950 lb)	120 690 kg (266 075 lb)	40.86% MAC (a)	38 990 kg (85 950 lb) (c)	96 550 kg (212 850 lb) (c)
A350−900 WV006 (CG 36.4%)	272 900 kg (601 650 lb)	23 450 kg (51 700 lb)	23.4% MAC (b)	37 500 kg (82 675 lb)	129 310 kg (285 075 lb)	36.4% MAC (a)	42 410 kg (93 500 lb) (c)	103 450 kg (228 075 lb) (c)
A350−900 WV006 (CG 36.83%)	272 900 kg (601 650 lb)	25 110 kg (55 350 lb)	23.93% MAC (a)	40 440 kg (89 150 lb)	129 500 kg (285 500 lb)	36.83% MAC (a)	42 410 kg (93 500 lb) (c)	103 600 kg (228 400 lb) (c)
A350−900 WV007 (CG 33%)	268 900 kg (592 825 lb)	23 450 kg (51 700 lb)	23.4% MAC (b)	37 500 kg (82 675 lb)	125 960 kg (277 700 lb)	33% MAC (a)	41 790 kg (92 125 lb) (c)	100 770 kg (222 150 lb) (c)
A350−900 WV007 (CG 38.1%)	268 900kg (592 825 lb)	25 130 kg (55 400 lb)	23.47% MAC (a)	40 240 kg (88 725 lb)	128 150 kg (282 525 lb)	38.1% MAC (a)	41 790 kg (92 125 lb) (c)	102 520 kg (226 025 lb) (c)
A350−900 WV008	240 900 kg (531 100 lb)	23 150 kg (51 025 lb)	22.65% MAC (a)	36 690 kg (80 900 lb)	116 490 kg (256 825 lb)	42.4% MAC (a)	37 440 kg (82 550 lb) (c)	93 190 kg (205 450 lb) (c)
A350−900 WV009	275 900 kg (608 250 lb)	23 450 kg (51 700 lb)	23.4% MAC (b)	37 500 kg (82 675 lb)	129 330 kg (285 125 lb)	33.2% MAC (a)	42 880 kg (94 525 lb) (c)	103 460 kg (228 100 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.

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Maximum Pavement Loads
(Sheet 2 of 4)
FIGURE-7-3-0-991-001-A01

**ON A/C A350-900

1	2	3		4	5		6	
		$V_{(NG)}$			$V_{(MG)}$ (PER STRUT)		H (PER STRUT)	
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 10 ft/s? DECELERATION	AT INSTANTANEOUS BRAKING COEFFICIENT = 0.8
A350−900 WV010	280 900 kg (619 275 lb)	25 080 kg (55 300 lb)	22.78% MAC (d)	39 800 kg (87 750 lb)	130 780 kg (288 325 lb)	31.2% MAC (a)	43 650 kg (96 225 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)	37 880 kg (83 500 lb)	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)	37 620 kg (82 950 lb)	120 690 kg (266 075 lb)	40.86% MAC (a)	38 990 kg (85 950 lb) (c)	96 550 kg (212 850 lb) (c)
A350−900 WV013 (ULR)	280 900 kg (619 275 lb)	25 080 kg (55 300 lb)	22.78% MAC (d)	39 800 kg (87 750 lb)	130 780 kg (288 325 lb)	31.2% MAC (a)	43 650 kg (96 225 lb) (c)	104 620 kg (230 650 lb) (c)
A350−900 WV014	235 900 kg (520 075 lb)	22 970 kg (50 650 lb)	22.26% MAC (a)	36 220 kg (79 850 lb)	114 070 kg (251 475 lb)	42.4% MAC (a)	36 660 kg (80 825 lb) (c)	91 260 kg (201 200 lb) (c)
A350−900 WV015 (CG 31.15%)	277 900 kg (612 675 lb)	23 450 kg (51 700 lb)	23.4% MAC (b)	37 500 kg (82 675 lb)	129 360 kg (285 200 lb)	31.15% MAC (a)	43 190 kg (95 225 lb) (c)	103 480 kg (228 125 lb) (c)
A350−900 WV015 (CG 33.27%)	277 900 kg (612 675 lb)	25 080 kg (55 300 lb)	24.48% MAC (a)	40 690 kg (89 700 lb)	130 290 kg (287 250 lb)	33.27% MAC (a)	43 190 kg (95 225 lb) (c)	104 240 kg (229 800 lb) (c)
A350−900 WV016	278 900 kg (614 875 lb)	23 650 kg (52 150 lb)	24.59% MAC (a)	39 320 kg (86 675 lb)	130 740 kg (288 225 lb)	32.58% MAC (a)	43 340 kg (95 550 lb) (c)	104 600 kg (230 600 lb) (c)
A350−900 WV017	210 900 kg (464 950 lb)	19 380 kg (42 725 lb)	24% MAC (a)	31 230 kg (68 850 lb)	99 790 kg (220 000 lb)	36% MAC (a)	32 770 kg (72 250 lb) (c)	79 840 kg (176 025 lb) (c)
A350−900 WV018	217 900 kg (480 375 lb)	20 020 kg (44 125 lb)	24% MAC (a)	32 260 kg (71 125 lb)	103 100 kg (227 300 lb)	35.99% MAC (a)	33 860 kg (74 650 lb) (c)	82 480 kg (181 825 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 262 135 kg (577 900 lb).

P_AC_070300_1_0010001_03_01

Maximum Pavement Loads
(Sheet 3 of 4)
FIGURE-7-3-0-991-001-A01

**ON A/C A350-900

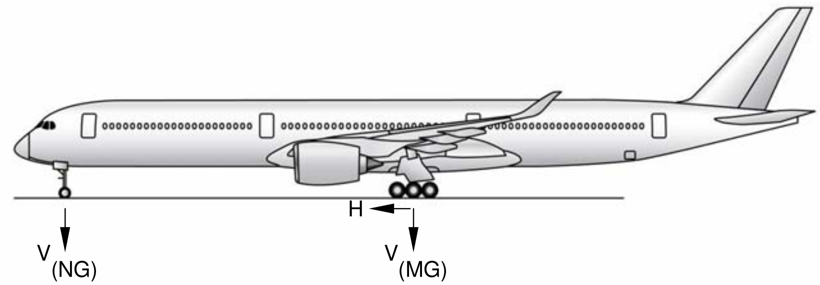
1	2	3		4	5		6	
		$V_{(NG)}$			$V_{(MG)}$ (PER STRUT)		H (PER STRUT)	
WEIGHT VARIANT	MAXIMUM RAMP WEIGHT	STATIC LOAD AT FWD CG		STATIC BRAKING AT 10 ft/s? DECELERATION	STATIC LOAD AT AFT CG		STEADY BRAKING AT 10 ft/s? DECELERATION	AT INSTANTANEOUS BRAKING COEFFICIENT = 0.8
A350–900 WV019	235 900 kg (520 075 lb)	22 970 kg (50 650 lb)	22.26% MAC (a)	36 220 kg (79 850 lb)	114 070 kg (251 475 lb)	42.4% MAC (a)	36 660 kg (80 825 lb) (c)	91 260 kg (201 200 lb) (c)
A350–900 WV022	280 900 kg (619 275 lb)	25 080 kg (55 300 lb)	22.78% MAC (d)	39 800 kg (87 750 lb)	130 780 kg (288 325 lb)	31.2% MAC (a)	43 650 kg (96 225 lb) (c)	104 620 kg (230 650 lb) (c)
A350–900 WV023	280 900 kg (619 275 lb)	25 080 kg (55 300 lb)	22.78% MAC (d)	39 800 kg (87 750 lb)	130 780 kg (288 325 lb)	31.2% MAC (a)	43 650 kg (96 225 lb) (c)	104 620 kg (230 650 lb) (c)

NOTE:
(a) LOADS CALCULATED USING AIRCRAFT AT MRW.
(c) BRAKED MAIN GEAR.
(d) LOADS CALCULATED USING AIRCRAFT AT 262 135 kg (577 900 lb).

P_AC_070300_1_0010001_04_00

Maximum Pavement Loads
(Sheet 4 of 4)
FIGURE-7-3-0-991-001-A01

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



$V_{(NG)}$ MAXIMUM VERTICAL NOSE GEAR GROUND LOAD AT MOST FORWARD CG
$V_{(MG)}$ MAXIMUM VERTICAL MAIN GEAR GROUND LOAD AT MOST AFT CG
H MAXIMUM HORIZONTAL GROUND LOAD FROM BRAKING

1	2	3		4	5		6	
		$V_{(NG)}$			$V_{(MG)}$ (PER STRUT)		H (PER STRUT)	
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 10 ft/s? DECELERATION	AT INSTANTANEOUS BRAKING COEFFICIENT = 0.8
A350−1000 WV000 (CG 35.96%)	308 900 kg (681 000 lb)	26 560 kg (58 550 lb)	24.16% MAC (a)	TBD	146 280 kg (322 500 lb)	35.96% MAC (a)	48 000 kg (105 825 lb) (c)	117 020 kg (257 975 lb) (c)
A350−1000 WV000 (CG 36.28%)	308 900 kg (681 000 lb)	28 020 kg (61 775 lb)	22.46% MAC (a)	TBD	146 420 kg (322 800 lb)	36.28% MAC (a)	48 000 kg (105 825 lb) (c)	117 130 kg (258 225 lb) (c)
A350−1000 WV001	311 900 kg (687 625 lb)	26 570 kg (58 575 lb)	24.3% MAC (b)	TBD	146 840 kg (323 725 lb)	34% MAC (a)	48 470 kg (106 850 lb) (c)	117 470 kg (258 975 lb) (c)
A350−1000 WV002	316 900 kg (698 650 lb)	26 850 kg (59 200 lb)	24.6% MAC (a)	TBD	147 770 kg (325 775 lb)	30.8% MAC (a)	49 250 kg (108 575 lb) (c)	118 220 kg (260 625 lb) (c)
A350−1000 WV004	308 900 kg (681 000 lb)	26 560 kg (58 550 lb)	24.16% MAC (a)	TBD	146 280 kg (322 500 lb)	35.96% MAC (a)	48 000 kg (105 825 lb) (c)	117 020 kg (257 975 lb) (c)
A350−1000 WV005	270 900 kg (597 225 lb)	25 190 kg (55 525 lb)	21.67% MAC (a)	TBD	130 250 kg (287 150 lb)	41.07% MAC (a)	42 100 kg (92 825 lb) (c)	104 200 kg (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	5		6	
		$V_{(NG)}$			$V_{(MG)}$ (PER STRUT)		H (PER STRUT)	
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 10 ft/s? DECELERATION	AT INSTANTANEOUS BRAKING COEFFICIENT = 0.8
A350–1000 WV007	260 900 kg (575 175 lb)	24 380 kg (53 750 lb)	21.5% MAC (a)	TBD	125 450 kg (276 575 lb)	41.1% MAC (a)	40 550 kg (89 400 lb) (c)	100 360 kg (221 250 lb) (c)
A350–1000 WV009	290 900 kg (641 325 lb)	25 910 kg (57 125 lb)	23.06% MAC (a)	TBD	138 680 kg (305 725 lb)	38.21% MAC (a)	45 210 kg (99 675 lb) (c)	110 940 kg (244 575 lb) (c)
A350–1000 WV010	300 900 kg (663 375 lb)	26 270 kg (57 925 lb)	23.69% MAC (a)	TBD	142 900 kg (315 050 lb)	36.93% MAC (a)	46 760 kg (103 100 lb) (c)	114 320 kg (252 025 lb) (c)
A350–1000 WV011	316 900 kg (698 650 lb)	26 850 kg (59 200 lb)	24.6% MAC (a)	TBD	147 770 kg (325 775 lb)	30.8% MAC (a)	49 250 kg (108 575 lb) (c)	118 220 kg (260 625 lb) (c)

NOTE:
(a) LOADS CALCULATED USING AIRCRAFT AT MRW.
(c) BRAKED MAIN GEAR.

P_AC_070300_1_0020001_02_00

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**

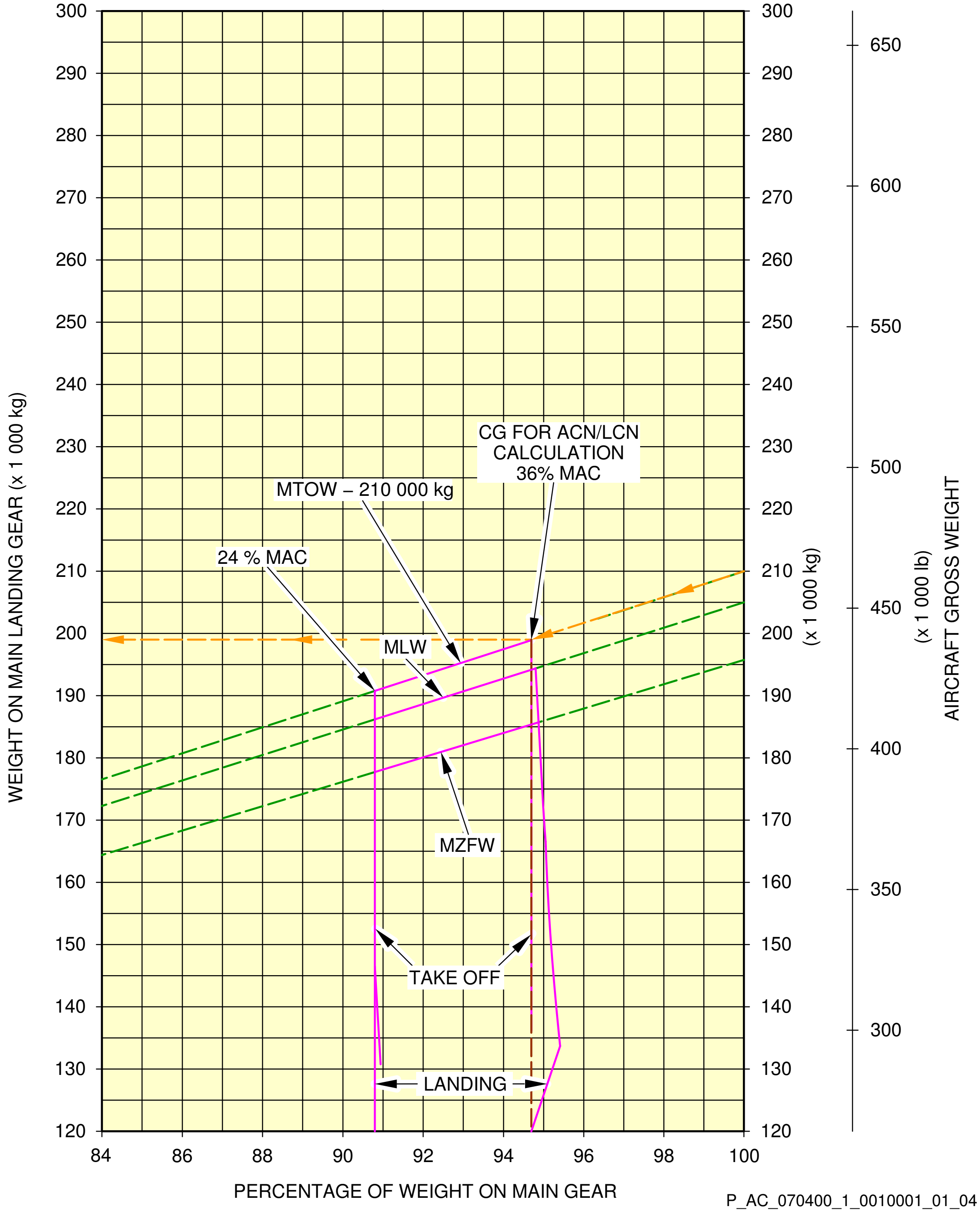
Landing Gear Loading on Pavement

1. This section provides data about the landing gear loading on pavement.
   The MLG loading on pavement graphs are given for the weight variants producing (at the MRW and maximum aft CG) the lowest MLG load and the highest MLG load for each type of aircraft.
   Example, FIGURE 7-4-0-991-001-A, calculation of the total weight on the MLG for:
   - An aircraft with a MRW of 210 900 kg (464 950 lb),
   - The aircraft gross weight is 210 000 kg (462 975 lb),
   - A percentage of weight on the MLG of 94.64 % (percentage of weight on the MLG at MRW and maximum aft CG at MRW).

   The total weight on the MLG group is 198 740 kg (438 150 lb).

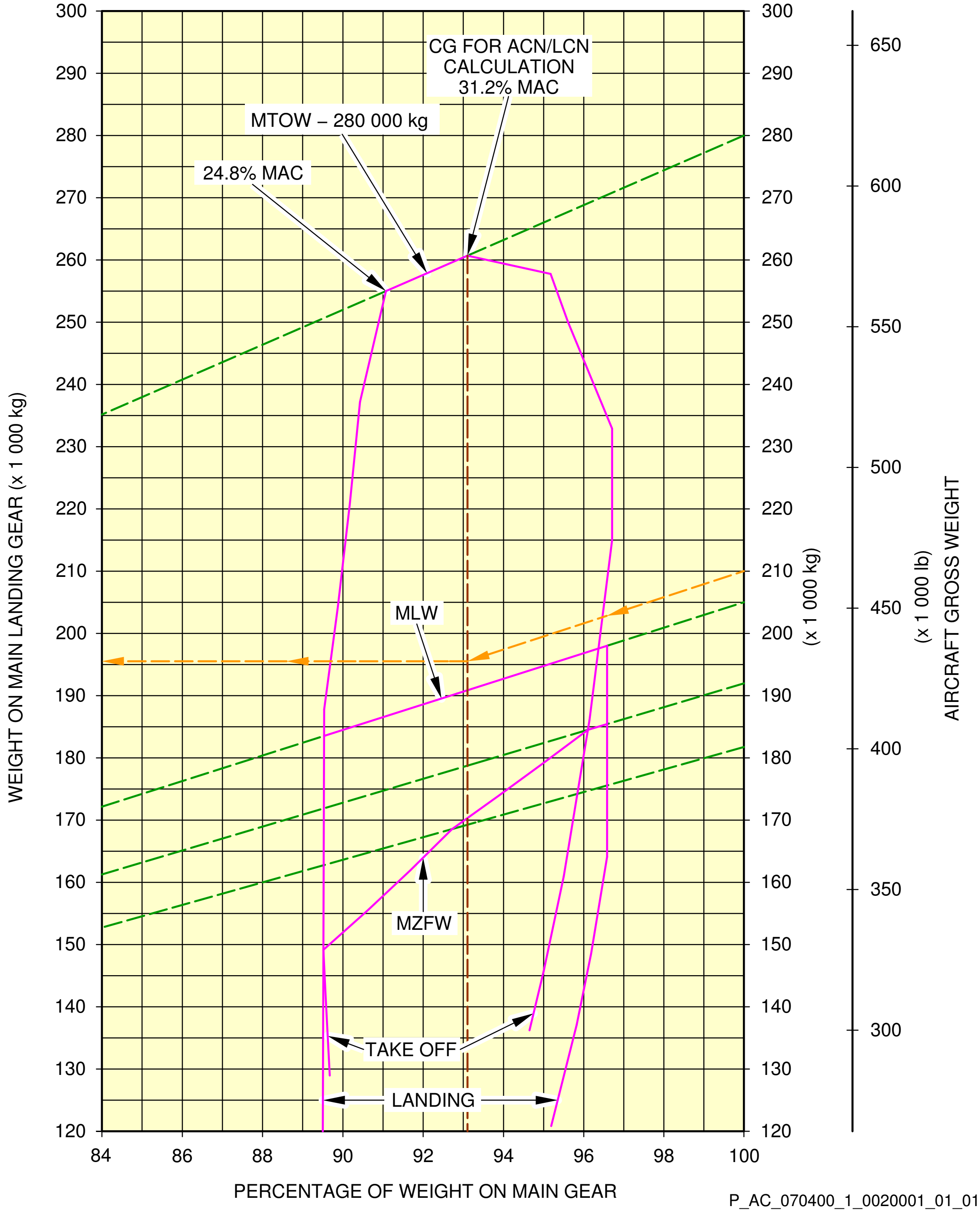
   NOTE : The CG in the figure title is the CG used for ACN/LCN calculation.

**ON A/C A350-900



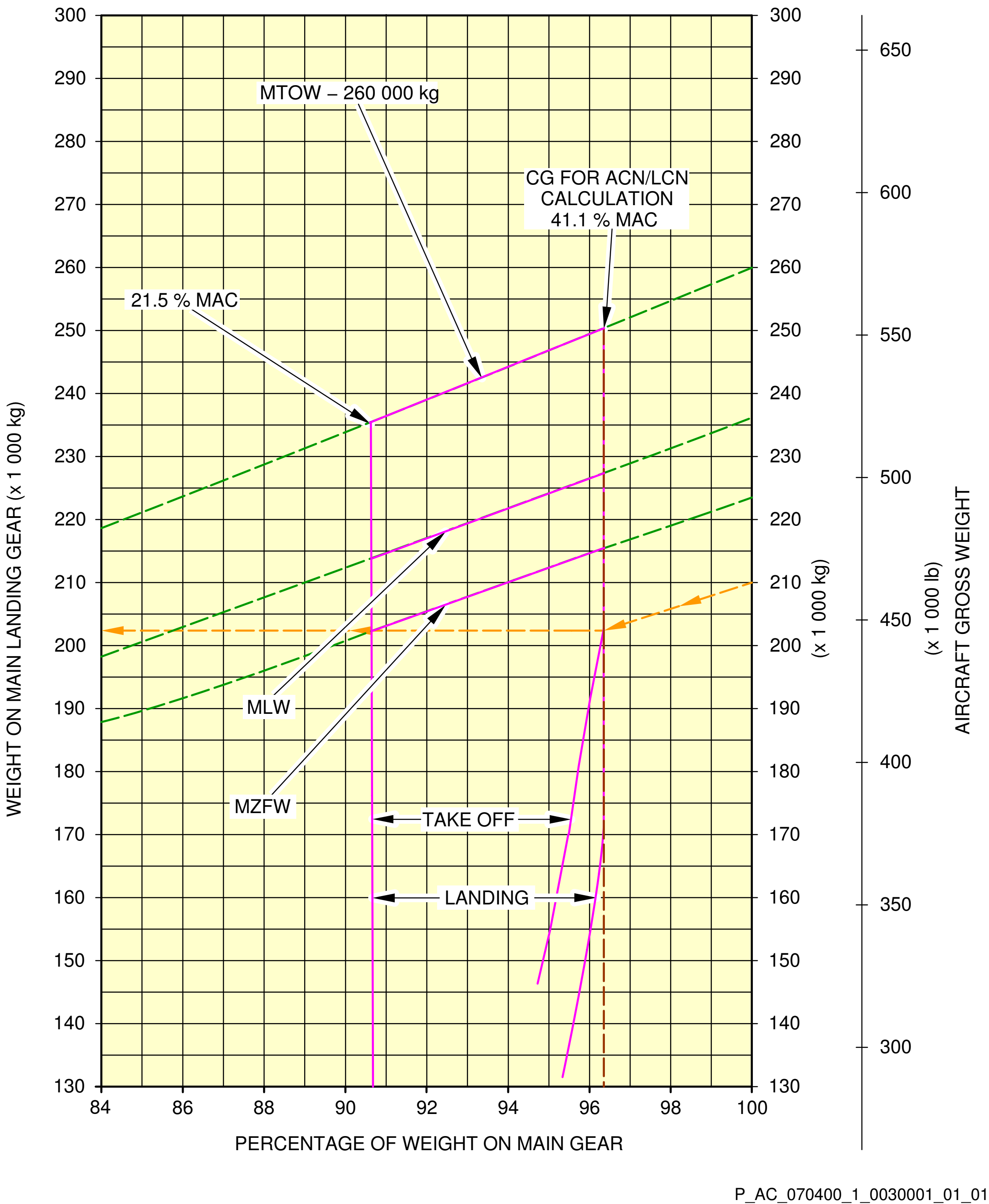
Landing Gear Loading on Pavement
WV017, MRW 210 900 kg, CG 36%
FIGURE-7-4-0-991-001-A01

**ON A/C A350-900



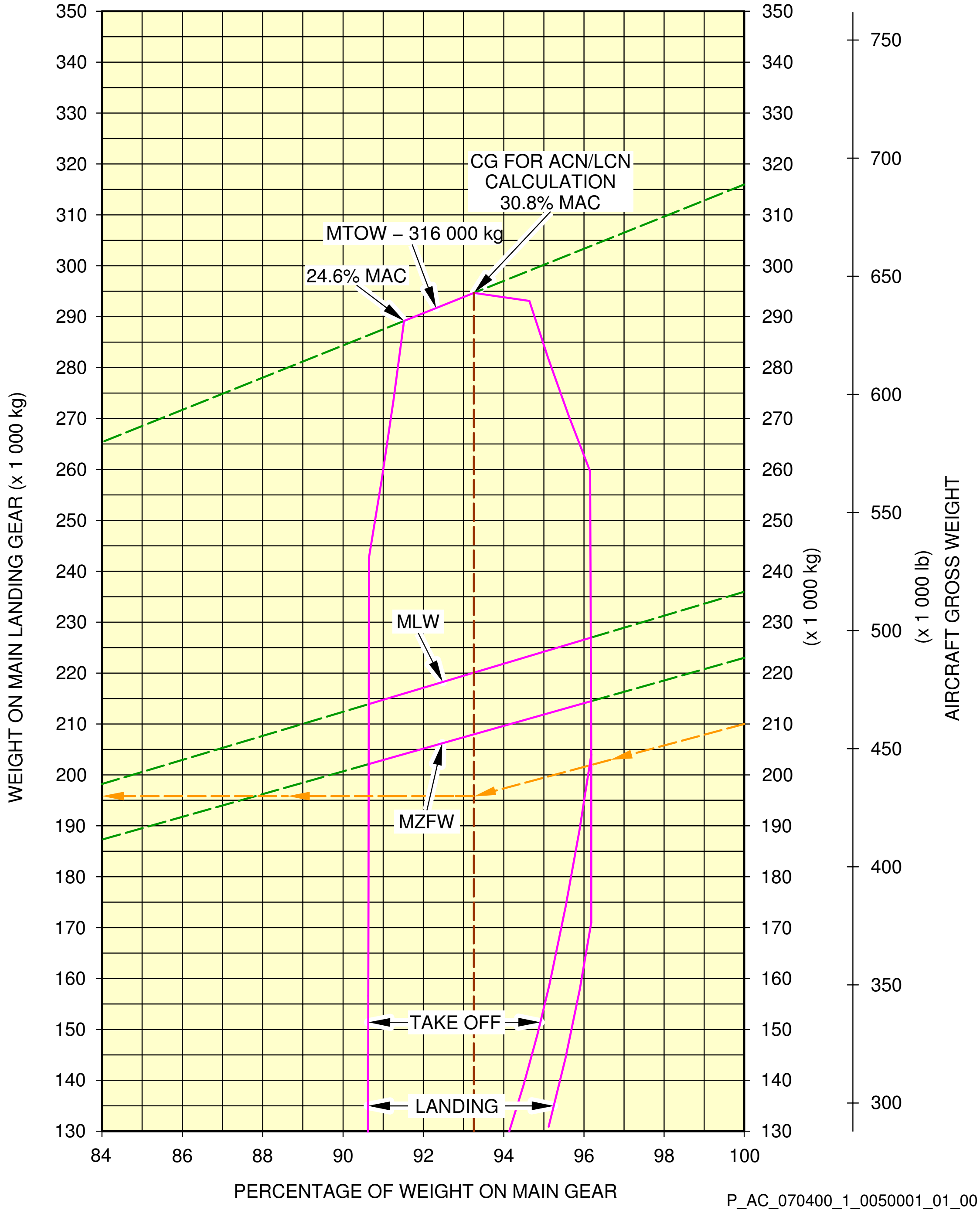
Landing Gear Loading on Pavement
WV013 (ULR), MRW 280 900 kg, CG 31.2%
FIGURE-7-4-0-991-002-A01

**ON A/C A350-1000



Landing Gear Loading on Pavement
WV007, MRW 260 900 kg, CG 41.1%
FIGURE-7-4-0-991-003-A01

**ON A/C A350-1000



Landing Gear Loading on Pavement
WV002, MRW 316 900 kg, CG 30.8%
FIGURE-7-4-0-991-005-A01

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

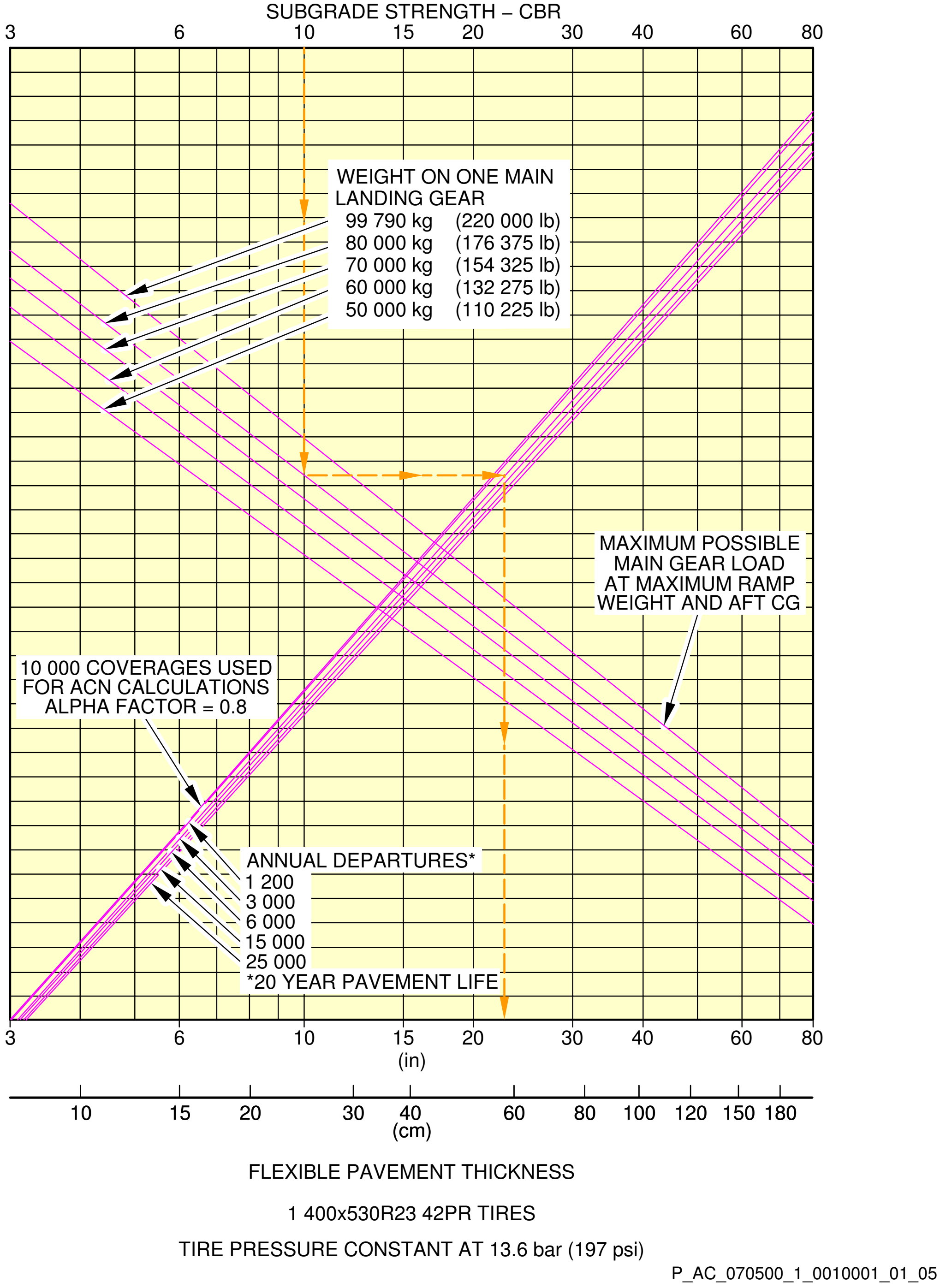
1. This section provides data about the flexible pavement requirements.
   The flexible pavement requirement graphs are given at standard tire pressure for the weight variants producing (at the MRW and maximum aft CG) the lowest MLG load and the highest MLG load for each type of aircraft.
   They are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

   Example, FIGURE 7-5-0-991-001-A, calculation of the thickness of the flexible pavement for the MLG:
   - An aircraft with a MRW of 210 900 kg (464 950 lb),
   - A "CBR" value of 10,
   - An annual departure level of 3 000,
   - The load on one MLG of 80 000 kg (176 375 lb).

   The required flexible pavement thickness is 576 mm (23 in.).

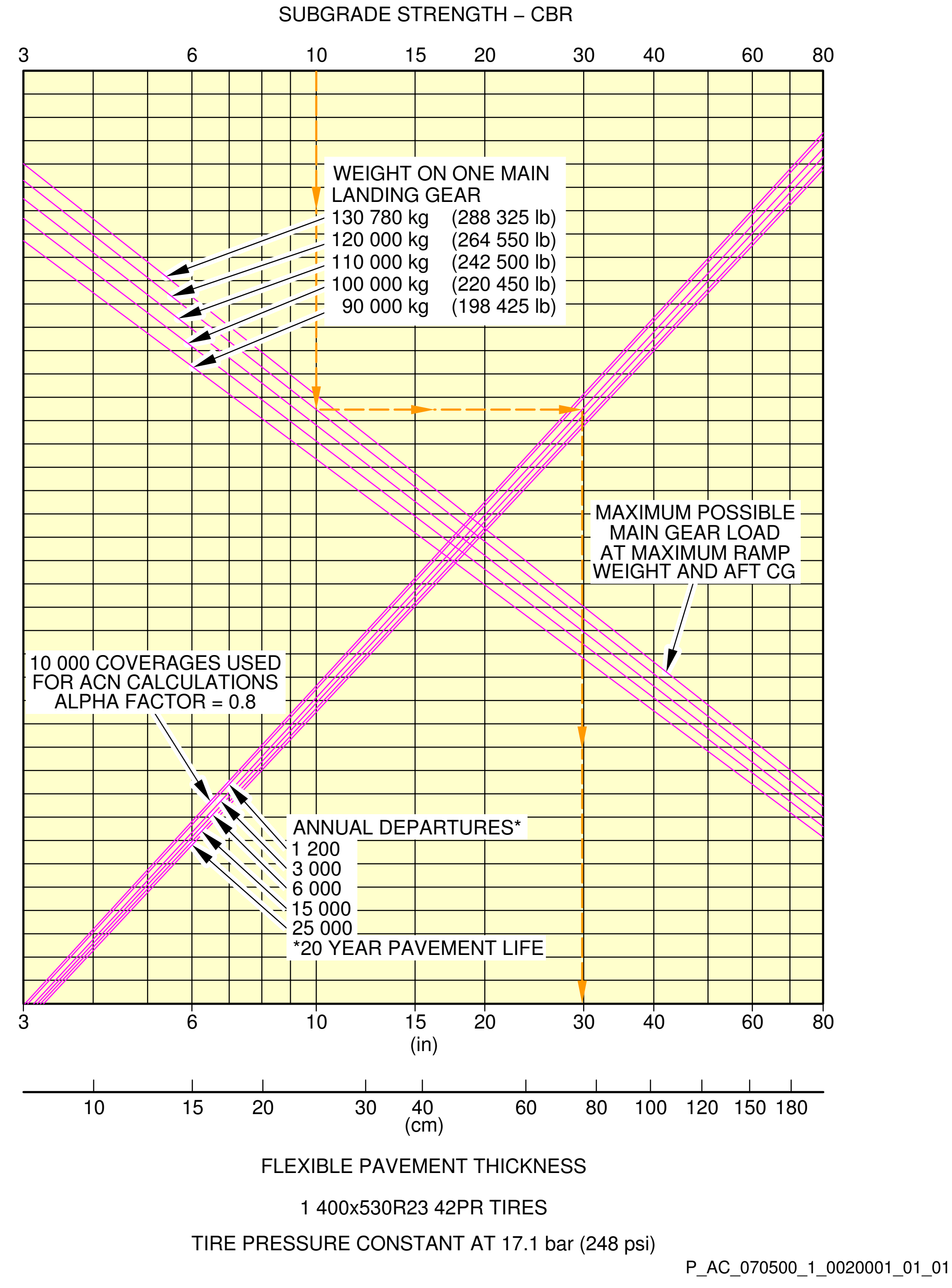
   NOTE : The CG in the figure title is the CG used for ACN calculation.

**ON A/C A350-900



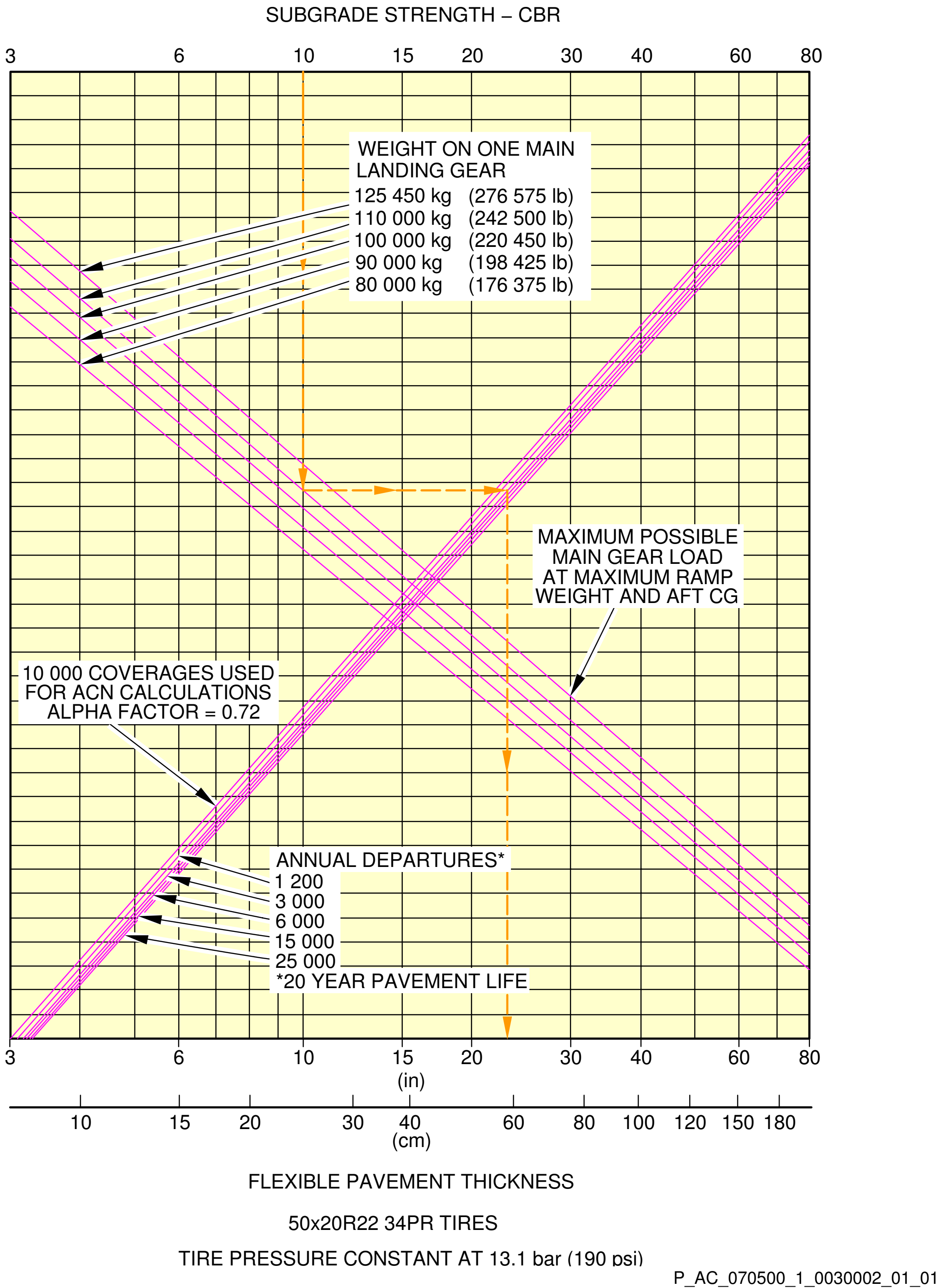
Flexible Pavement Requirements
WV017, MRW 210 900 kg, CG 36%
FIGURE-7-5-0-991-001-A01

**ON A/C A350-900



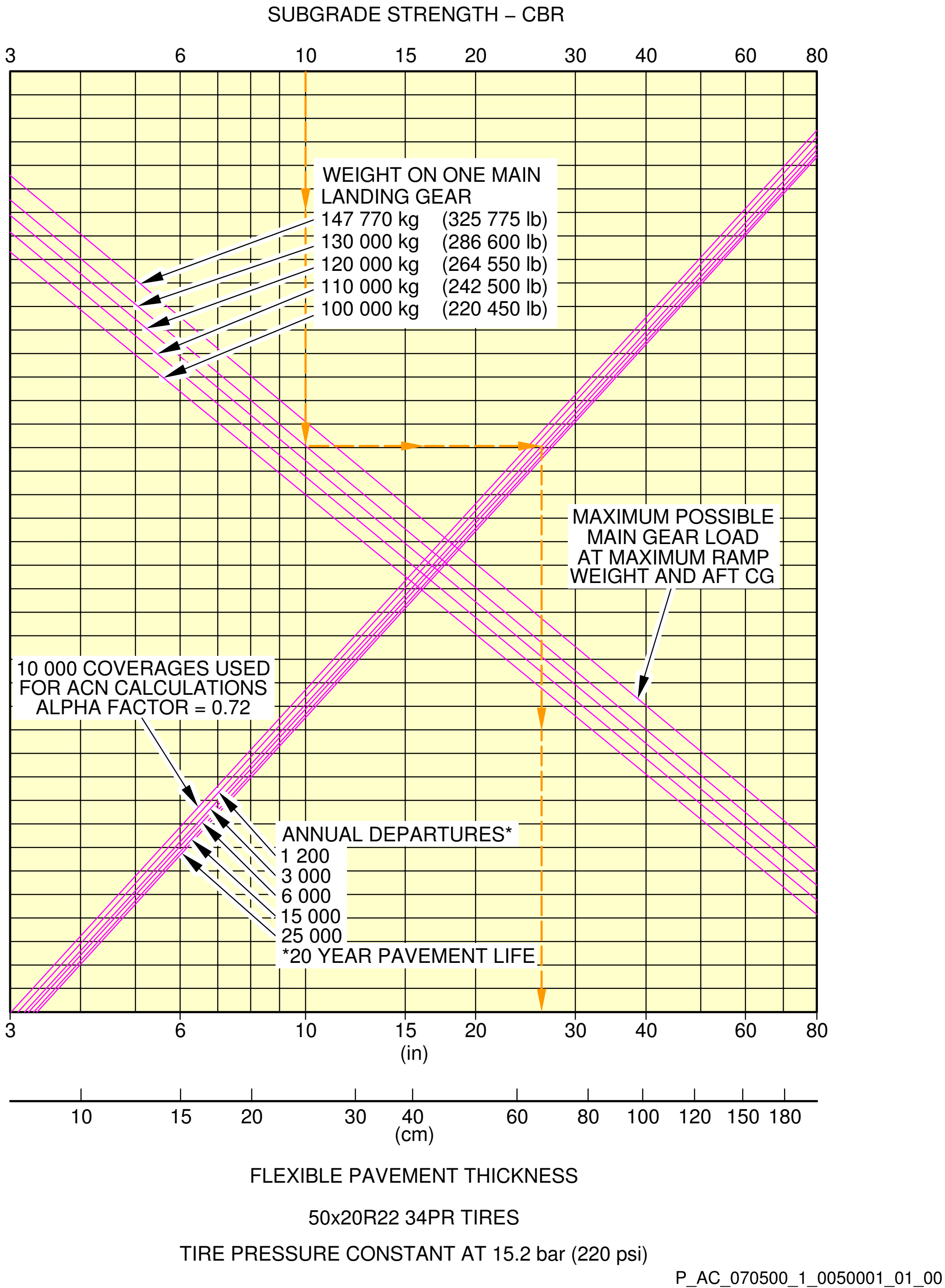
Flexible Pavement Requirements
WV013 (ULR), MRW 280 900 kg, CG 31.2%
FIGURE-7-5-0-991-002-A01

**ON A/C A350-1000



Flexible Pavement Requirements
WV007, MRW 260 900 kg, CG 41.1%
FIGURE-7-5-0-991-003-B01

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



Flexible Pavement Requirements
WV002, MRW 316 900 kg, CG 30.8%
FIGURE-7-5-0-991-005-A01

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.
   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

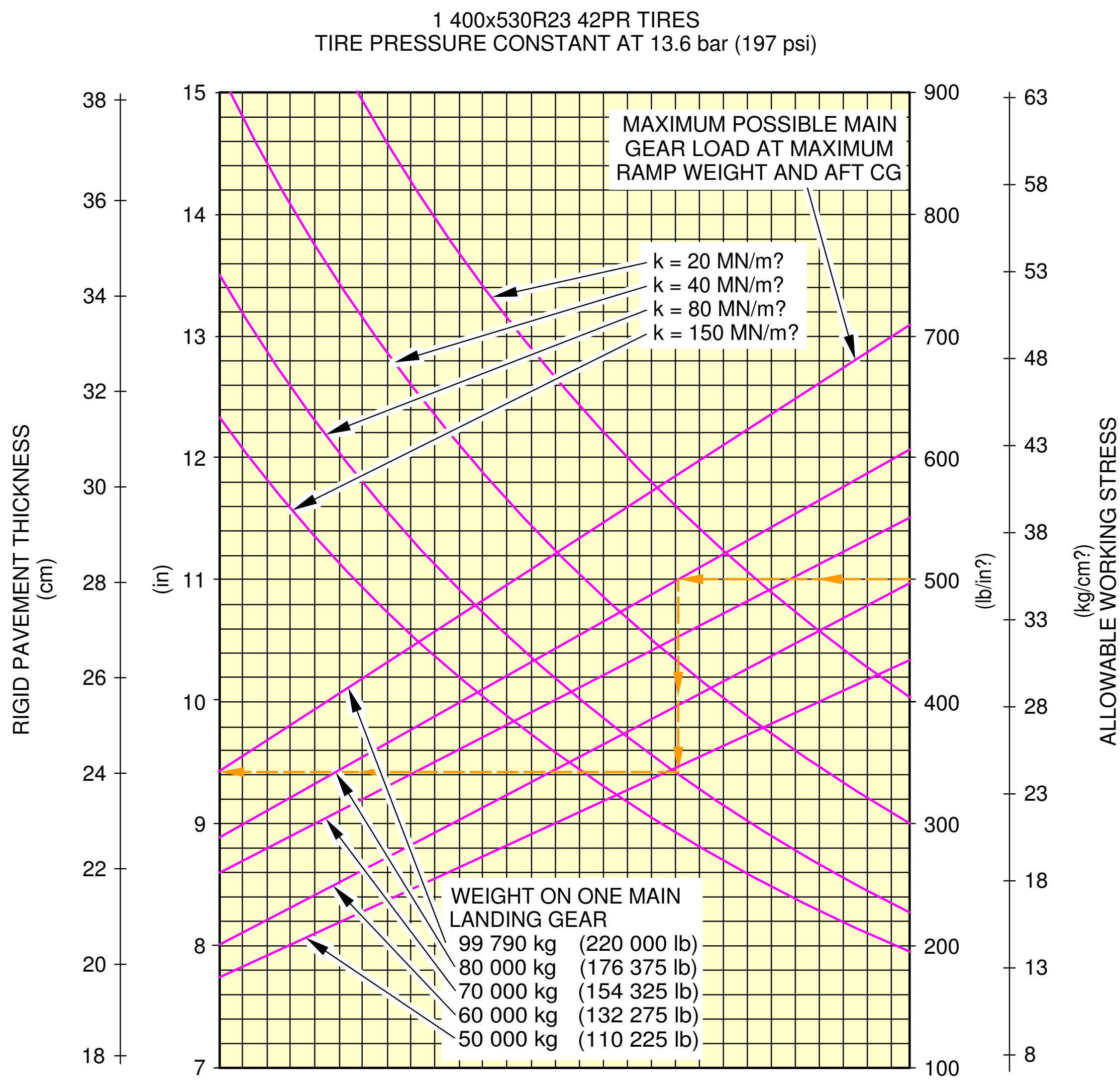
1. This section provides data about the rigid pavement requirements for the PCA (Portland Cement Association) design method.
   The rigid pavement requirement graphs are given at standard tire pressure for the weight variants producing (at the MRW and maximum aft CG) the lowest MLG load and the highest MLG load for each type of aircraft.
   They are calculated with the PCA design method.
   To find a rigid pavement thickness, you must know the Subgrade Modulus (k), the permitted working stress and the weight on one MLG.
   The procedure that follows is used to develop rigid pavement design curves:
   - With the scale for pavement thickness on the left and the scale for permitted working stress on the right, a random load line is made. This represents the MLG maximum weight to be shown,
   - A plot is then made of all values of the subgrade modulus (k values),
   - More load lines for the incremental values of the weight on the MLG are made based on the curve for k = 80 MN/m^3 , which is already shown on the graph.

   Example, FIGURE 7-7-0-991-001-A, calculation of the thickness of the rigid pavement for the MLG:
   - An aircraft with a MRW of 210 900 kg (464 950 lb),
   - A k value of 80 MN/m^3 (300 lbf/in^3),
   - A permitted working stress of 35.15 kg/cm^2 (500 lb/in^2),
   - The load on one MLG of 80 000 kg (176 375 lb).

   The required rigid pavement thickness is 239 mm (9 in.).

   NOTE : The CG in the figure title is the CG used for ACN calculation.

**ON A/C A350-900



NOTE:
THE VALUES OBTAINED BY USING THE MAXIMUM LOAD REFERENCE LINE AND ANY VALUES FOR k ARE EXACT. FOR LOADS LESS THAN MAXIMUM, THE CURVES ARE EXACT FOR k = 80 MN/m? BUT DEVIATE SLIGHTLY FOR ANY OTHER VALUES OF k.

REFERENCE:
"DESIGN OF CONCRETE AIRPORT PAVEMENTS" AND "COMPUTER PROGRAM FOR AIRPORT PAVEMENT DESIGN – PROGRAM PDILB" PORTLAND CEMENT ASSOCIATION.

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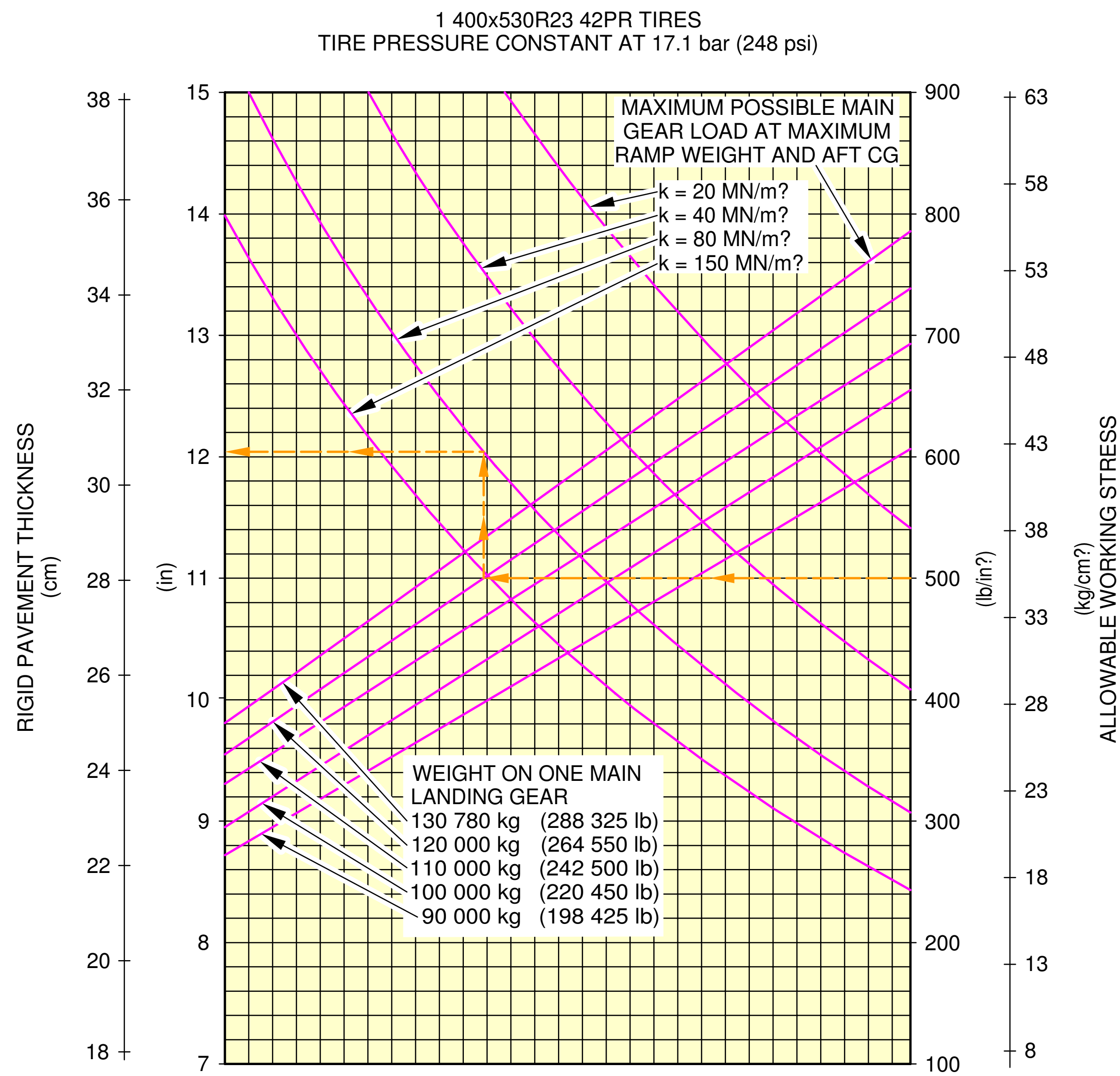
Rigid Pavement Requirements
WV017, MRW 210 900 kg, CG 36%
FIGURE-7-7-0-991-001-A01

**ON A/C A350-900



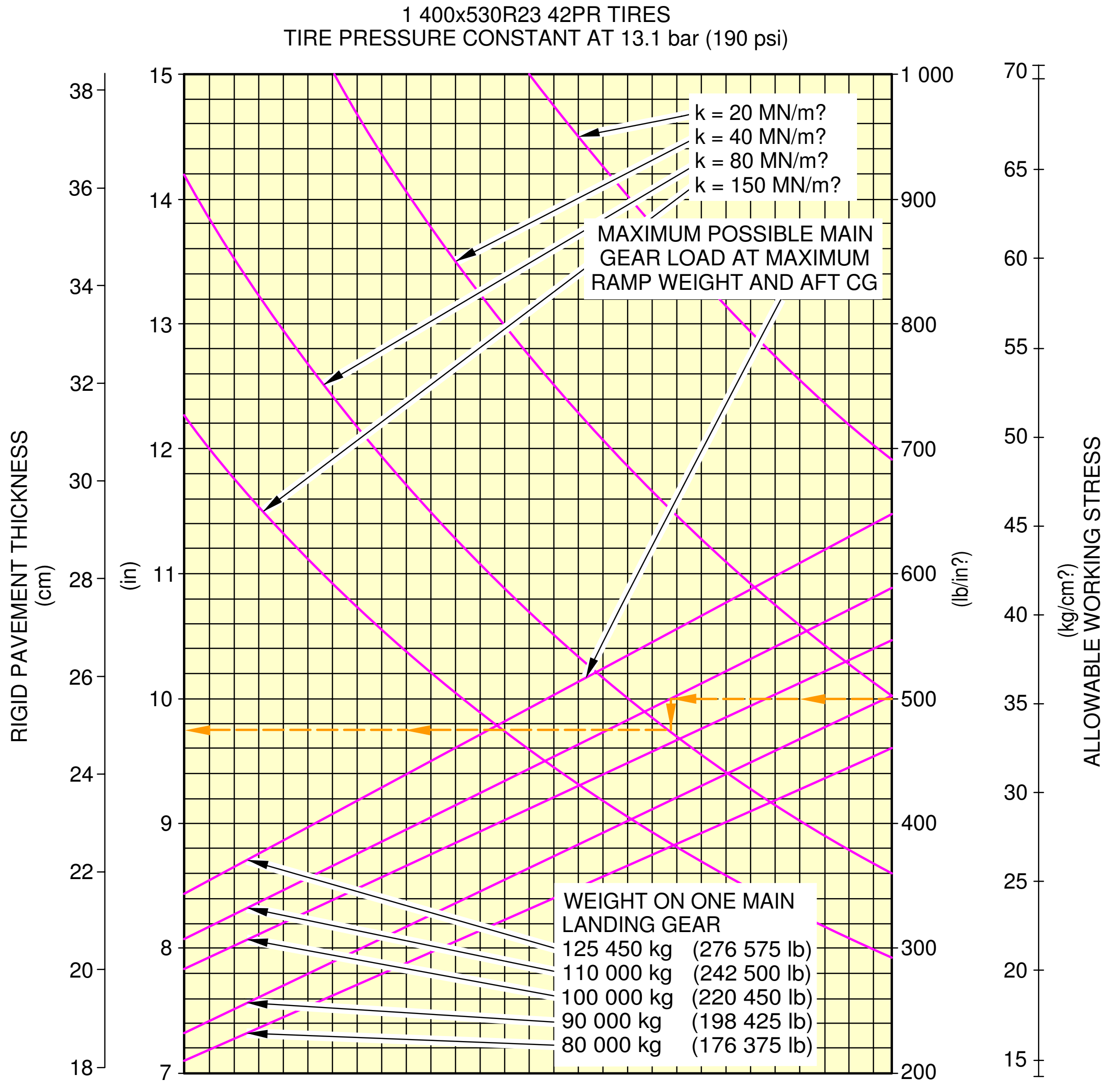
NOTE:
THE VALUES OBTAINED BY USING THE MAXIMUM LOAD REFERENCE LINE AND ANY VALUES FOR k ARE EXACT. FOR LOADS LESS THAN MAXIMUM, THE CURVES ARE EXACT FOR k = 80 MN/m? BUT DEVIATE SLIGHTLY FOR ANY OTHER VALUES OF k.

REFERENCE:
"DESIGN OF CONCRETE AIRPORT PAVEMENTS" AND "COMPUTER PROGRAM FOR AIRPORT PAVEMENT DESIGN – PROGRAM PDILB" PORTLAND CEMENT ASSOCIATION.

P_AC_070700_1_0020001_01_01

Rigid Pavement Requirements
WV013 (ULR), MRW 280 900 kg, CG 31.2%
FIGURE-7-7-0-991-002-A01

**ON A/C A350-1000



NOTE:

THE VALUES OBTAINED BY USING THE MAXIMUM LOAD REFERENCE LINE AND ANY VALUES FOR k ARE EXACT. FOR LOADS LESS THAN MAXIMUM, THE CURVES ARE EXACT FOR k = 80 MN/m? BUT DEVIATE SLIGHTLY FOR ANY OTHER VALUES OF k.

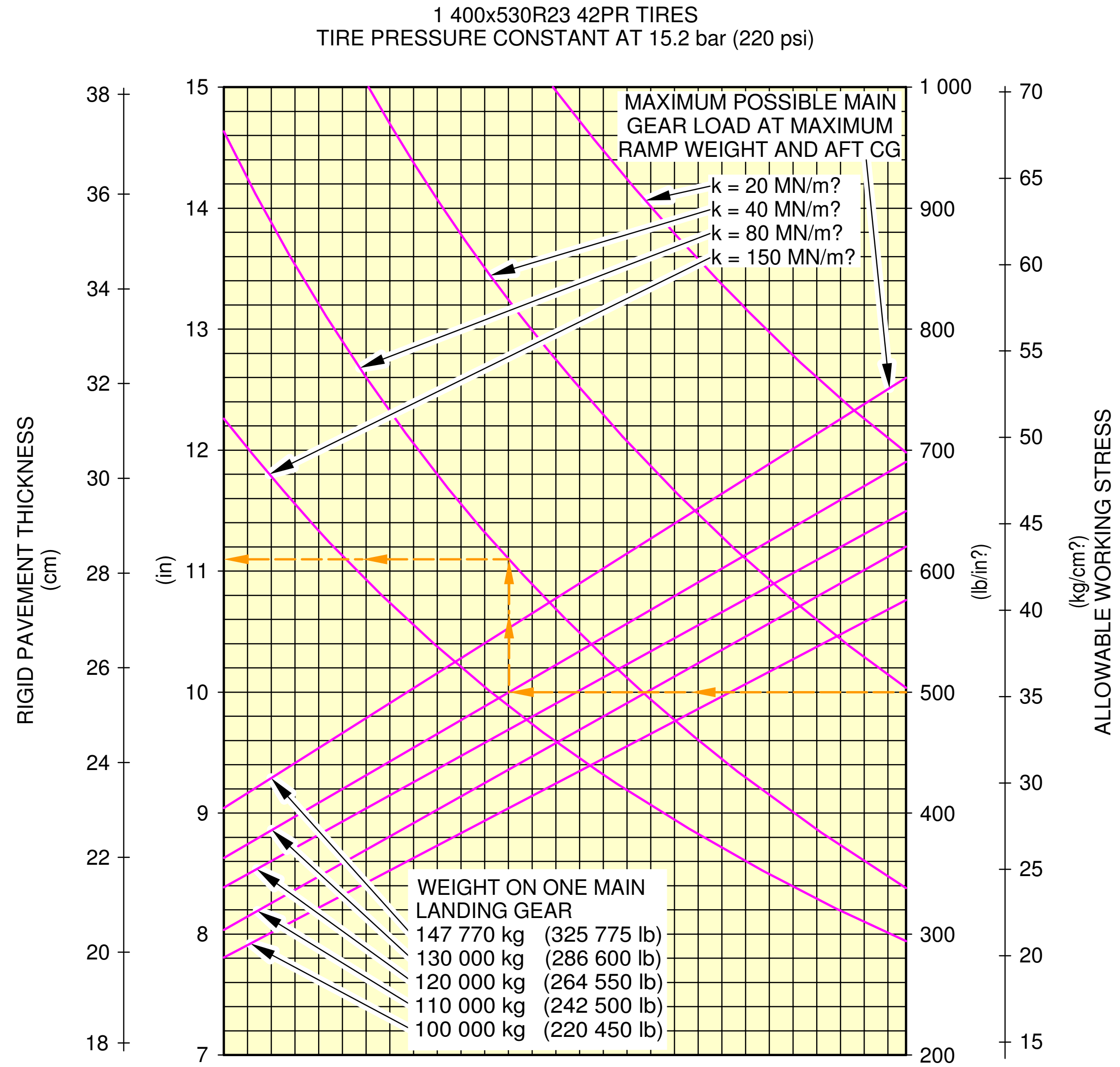
REFERENCE:

"DESIGN OF CONCRETE AIRPORT PAVEMENTS" AND "COMPUTER PROGRAM FOR AIRPORT PAVEMENT DESIGN – PROGRAM PDILB" PORTLAND CEMENT ASSOCIATION.

P_AC_070700_1_0030001_01_01

Rigid Pavement Requirements
WV007, MRW 260 900 kg, CG 41.1%
FIGURE-7-7-0-991-003-A01

**ON A/C A350-1000



NOTE:

THE VALUES OBTAINED BY USING THE MAXIMUM LOAD REFERENCE LINE AND ANY VALUES FOR k ARE EXACT. FOR LOADS LESS THAN MAXIMUM, THE CURVES ARE EXACT FOR k = 80 MN/m? BUT DEVIATE SLIGHTLY FOR ANY OTHER VALUES OF k.

REFERENCE:

"DESIGN OF CONCRETE AIRPORT PAVEMENTS" AND "COMPUTER PROGRAM FOR AIRPORT PAVEMENT DESIGN – PROGRAM PDILB" PORTLAND CEMENT ASSOCIATION.

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RIGID PAVEMENT REQUIREMENTS
WV002, MRW 316 900 kg, CG 30.8%
FIGURE-7-7-0-991-005-A01

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

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

   Example, FIGURE 7-9-0-991-009-A (sheet 1), calculation of the ACN for flexible pavement for:
   - An aircraft with an MRW of 210 900 kg (464 955 lb),
   - An aircraft gross weight of 210 000 kg (462 975 lb),
   - A medium subgrade strength (code B).

   The ACN for flexible pavement is 51.
   Example, FIGURE 7-9-0-991-009-A (sheet 2), calculation of the ACN for rigid pavement for:
   - An aircraft with an MRW of 210 900 kg (464 950 lb),
   - An aircraft gross weight of 210 000 kg (462 975 lb),
   - A medium subgrade strength (code B).

   The ACN for rigid pavement is 48.

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) provide ACN data in tabular format similar to the one used by ICAO in the "Aerodrome Design Manual Part 3, Pavements - Edition 1983" for all the operational weight variants of the aircraft.
   As an approximation, use a linear interpolation in order to get the ACN at the required operating weight using the following equation:
   - ACN = ACN min + (ACN max - ACN min) x (Operating weight - 140 000 kg)/(MRW - 140 000 kg) for the A350-900,
   - ACN = ACN min + (ACN max - ACN min) x (Operating Weight - 160 000 kg)/(MRW - 160 000 kg) for the A350-1000.

   As an approximation, also use a linear interpolation in order to get the aircraft weight at the pavement PCN using the following equation:
   - Operating weight = 140 000 kg + (MRW - 140 000 kg) x (PCN - ACN min)/(ACN max - ACN min) for the A350-900,
   - Operating weight = 160 000 kg + (MRW - 160 000 kg) x (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.

<u>NOTE</u> : The CG in the figure title is the CG used for ACN calculation.

**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?				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	84	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	63	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	65	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	62	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	84	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	84	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	61	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	63	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	46.9	1.71	65	74	86	100	69	73	83	115
	140 000	46.9		32	33	36	40	30	31	33	40

P_AC_070900_1_0080001_01_01

ACN Table
(Sheet 1 of 2)
FIGURE-7-9-0-991-008-A01

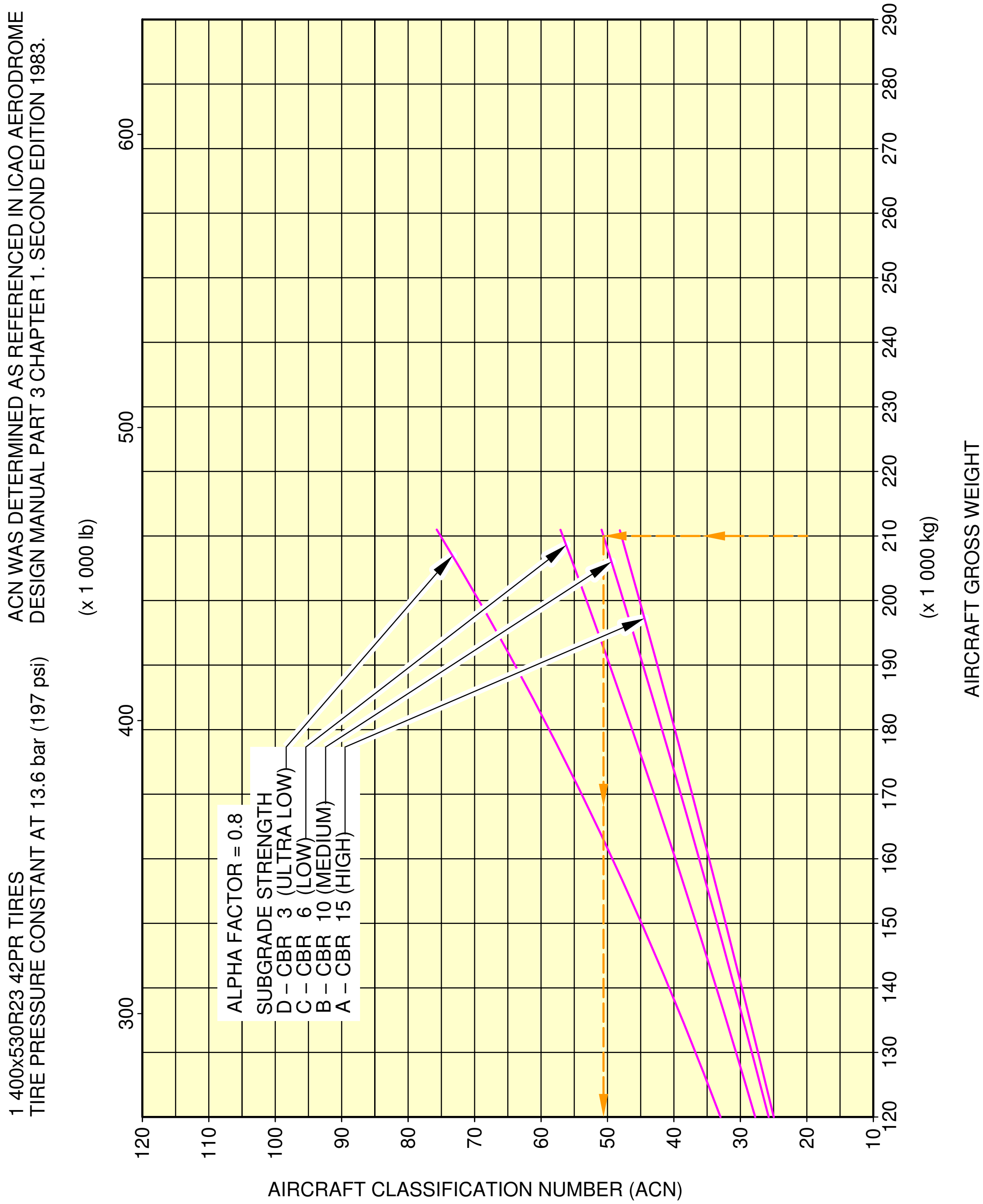
**ON A/C A350-900

WEIGHT VARIANT	ALL UP MASS (kg)	LOAD ON ONE MAIN GEAR LEG (%)	TIRE PRESSURE (MPa)	ACN FOR RIGID PAVEMENT SUBGRADES – MN/m?				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

P_AC_070900_1_0080001_02_00

ACN Table
(Sheet 2 of 2)
FIGURE-7-9-0-991-008-A01

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



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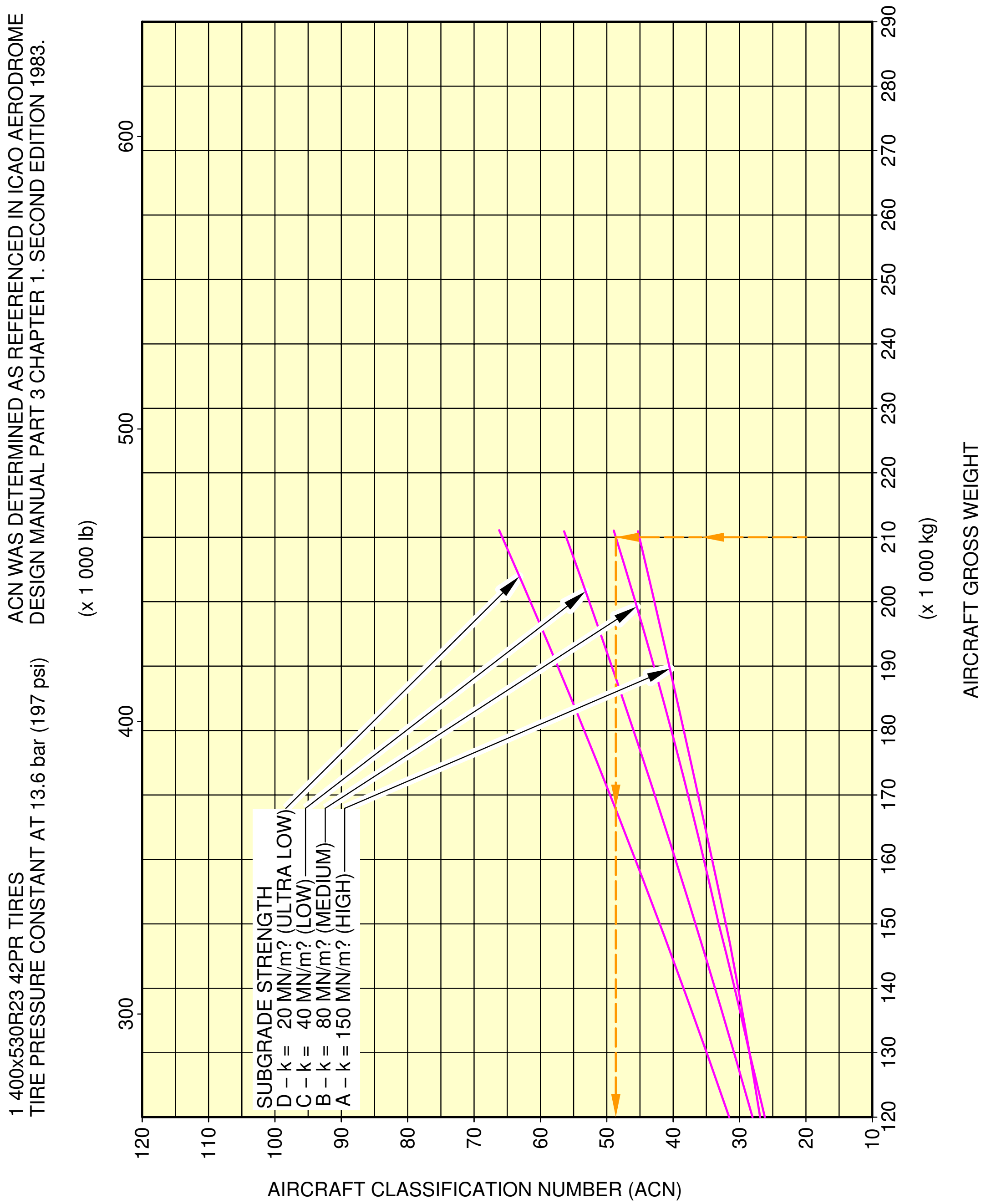
Aircraft Classification Number - WV017, MRW 210 900 kg, CG 36%
Flexible Pavement (Sheet 1 of 2)
FIGURE-7-9-0-991-009-A01

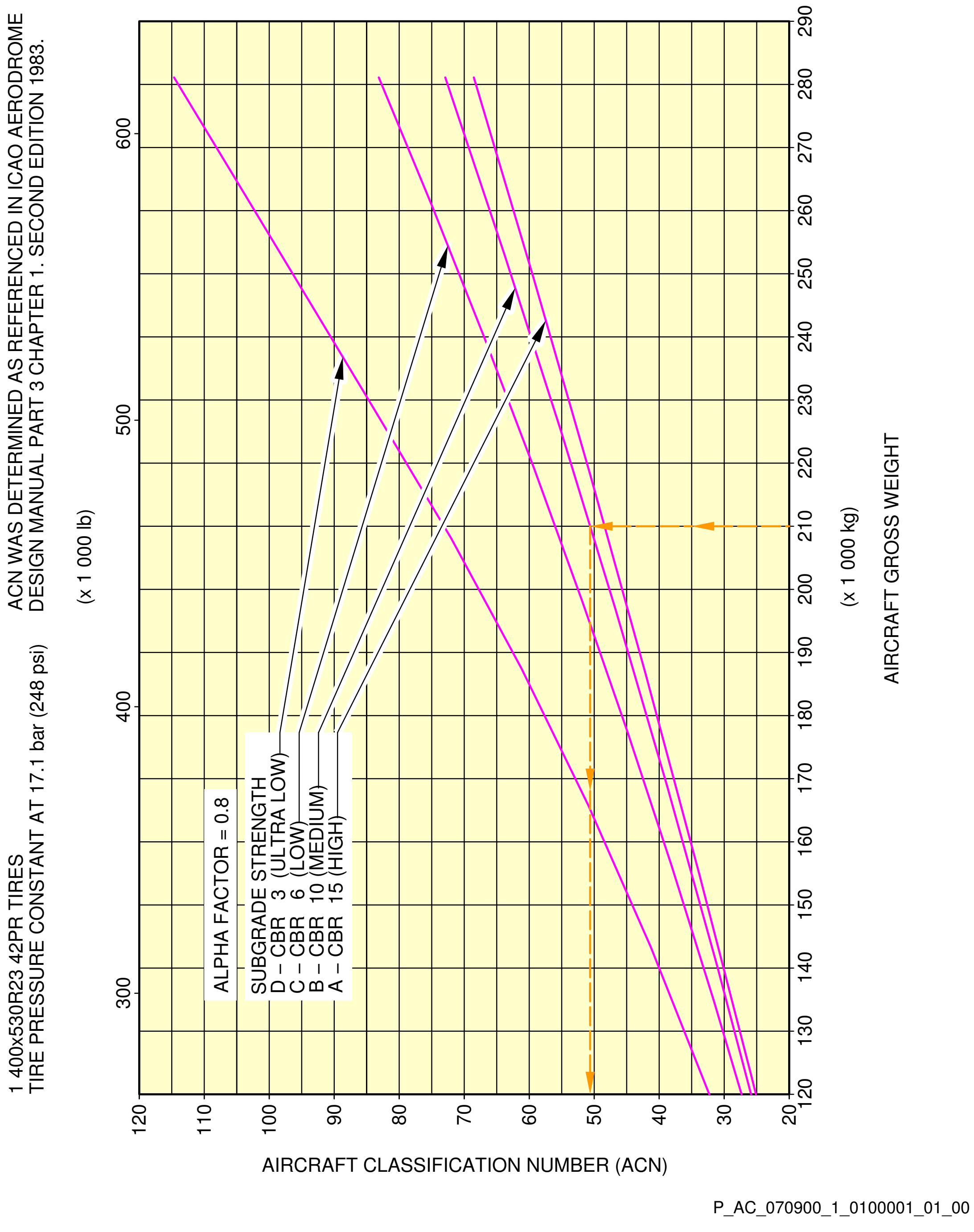
****ON A/C A350-900**



P_AC_070900_1_0090001_02_00

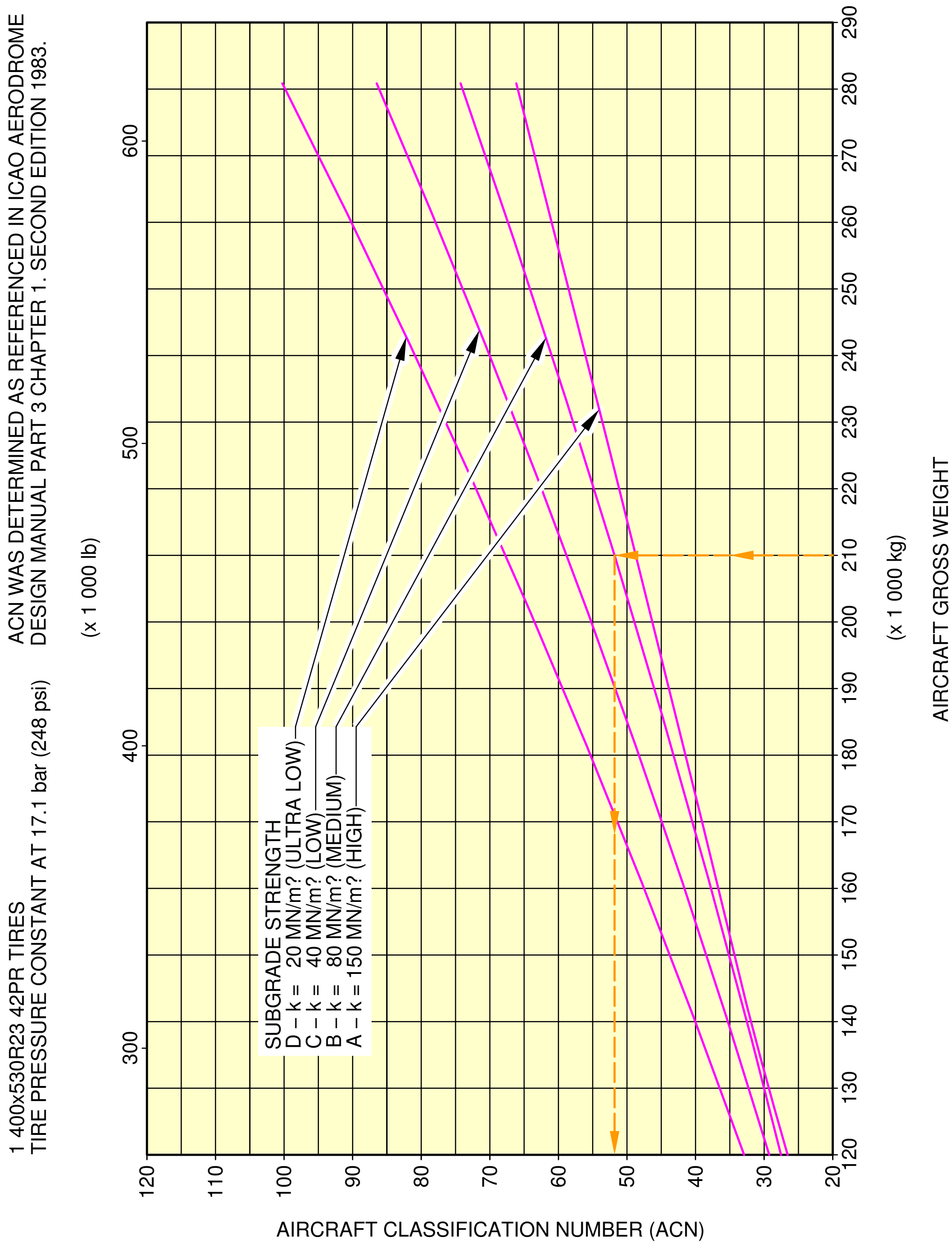
Aircraft Classification Number - WV017, MRW 210 900 kg, CG 36%
Rigid Pavement (Sheet 2 of 2)
FIGURE-7-9-0-991-009-A01

**ON A/C A350-900



Aircraft Classification Number - WV013, MRW 280 900 kg, CG 31.2%
Flexible Pavement (Sheet 1 of 2)
FIGURE-7-9-0-991-010-A01

**ON A/C A350-900



P_AC_070900_1_0100001_02_00

Aircraft Classification Number - WV013, MRW 280 900 kg, CG 31.2%
Rigid Pavement (Sheet 2 of 2)
FIGURE-7-9-0-991-010-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 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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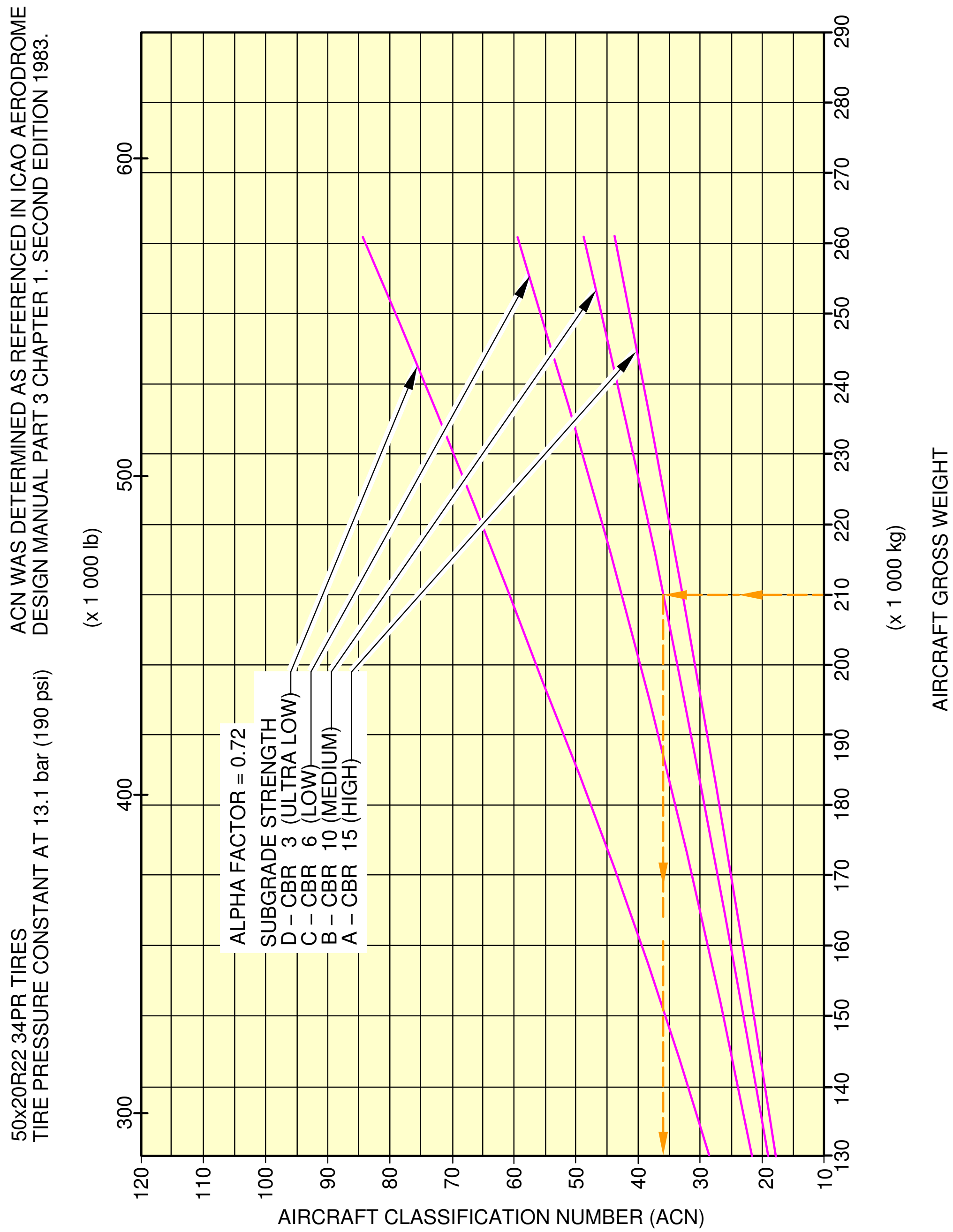
ACN Table
FIGURE-7-9-0-991-011-A01

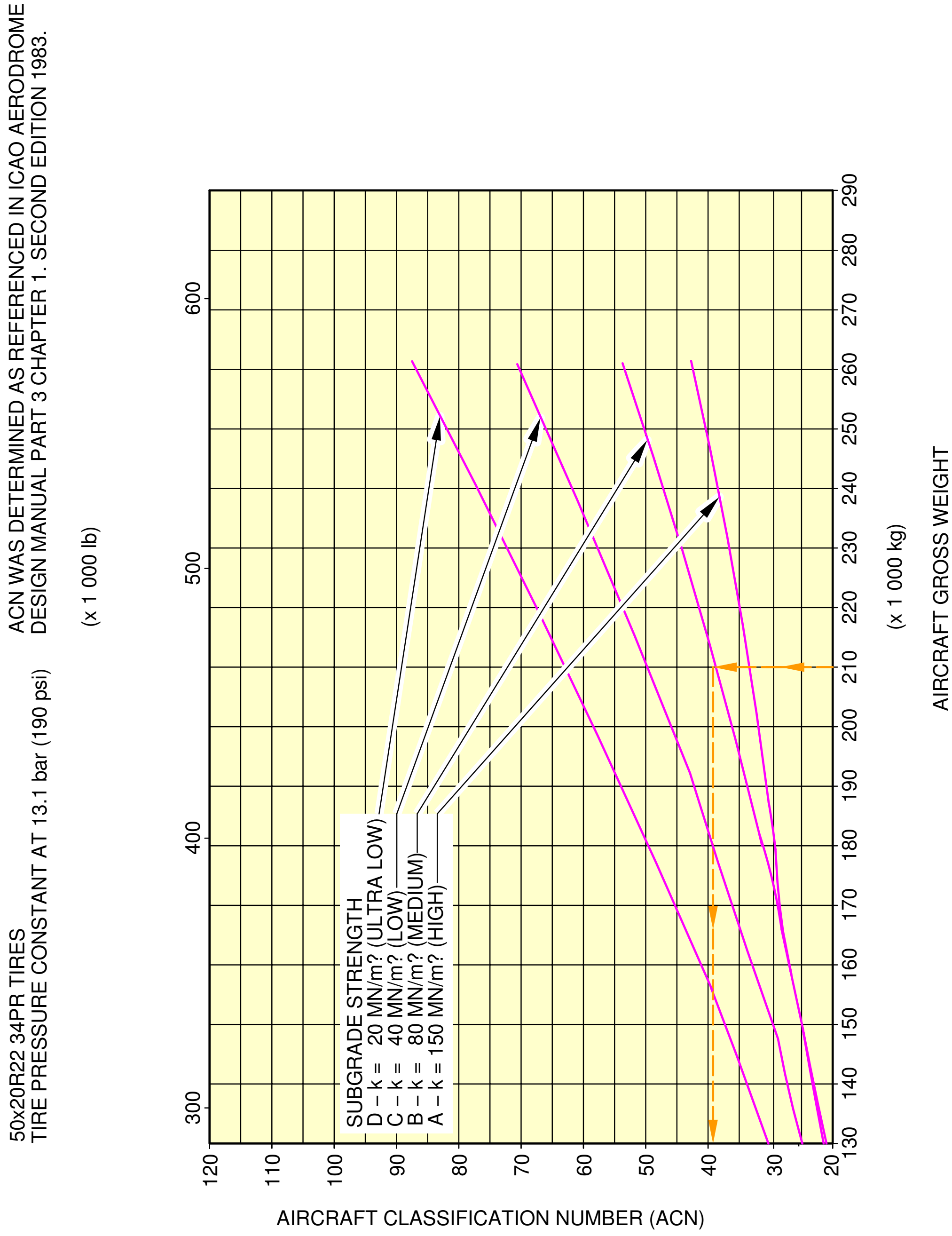
**ON A/C A350-1000



P_AC_070900_1_0120001_01_00

Aircraft Classification Number - WV007, MRW 260 900 kg, CG 41.1%
Flexible Pavement (Sheet 1 of 2)
FIGURE-7-9-0-991-012-A01

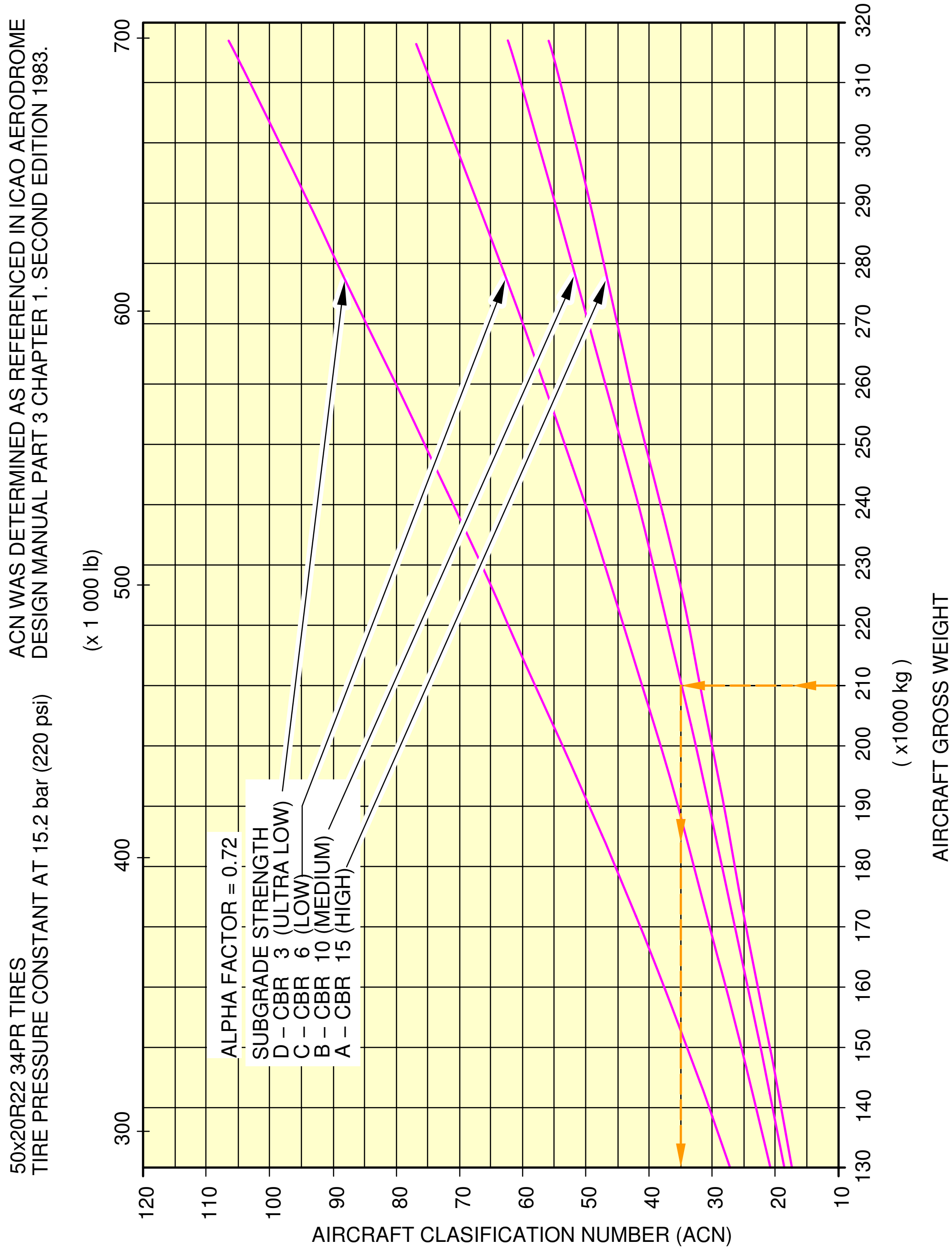
****ON A/C A350-1000**



P_AC_070900_1_0120001_02_00

Aircraft Classification Number - WV007, MRW 260 900 kg, CG 41.1%
Rigid Pavement (Sheet 2 of 2)
FIGURE-7-9-0-991-012-A01

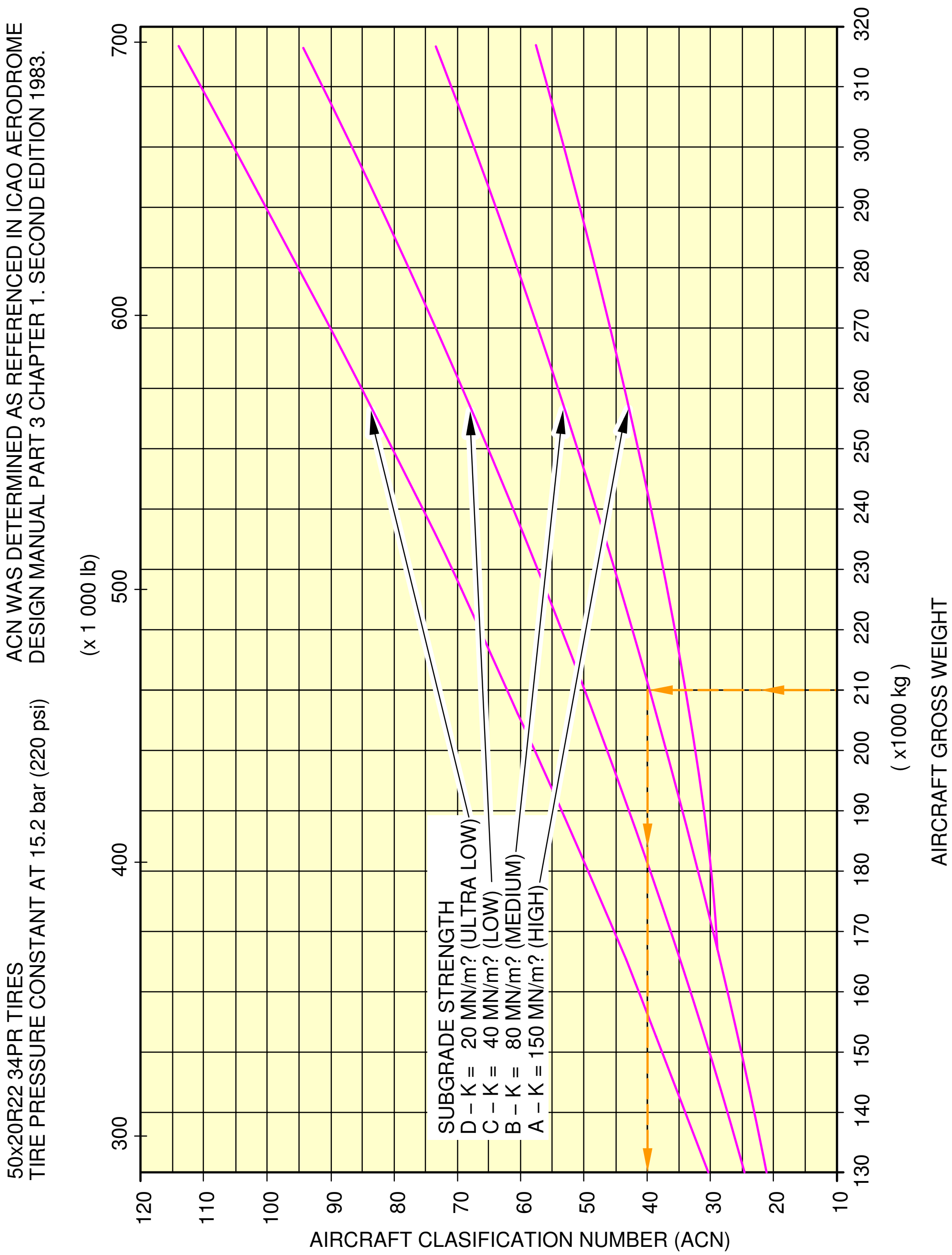
**ON A/C A350-1000



P_AC_070900_1_0130001_01_00

Aircraft Classification Number - WV002, MRW 316 900 kg, CG 30.8%
Flexible Pavement (Sheet 1 of 2)
FIGURE-7-9-0-991-013-A01

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



P_AC_070900_1_0130001_02_00

Aircraft Classification Number - WV002, MRW 316 900 kg, CG 30.8%
Rigid Pavement (Sheet 2 of 2)
FIGURE-7-9-0-991-013-A01

SCALED DRAWINGS

8-0-0 Scaled Drawings

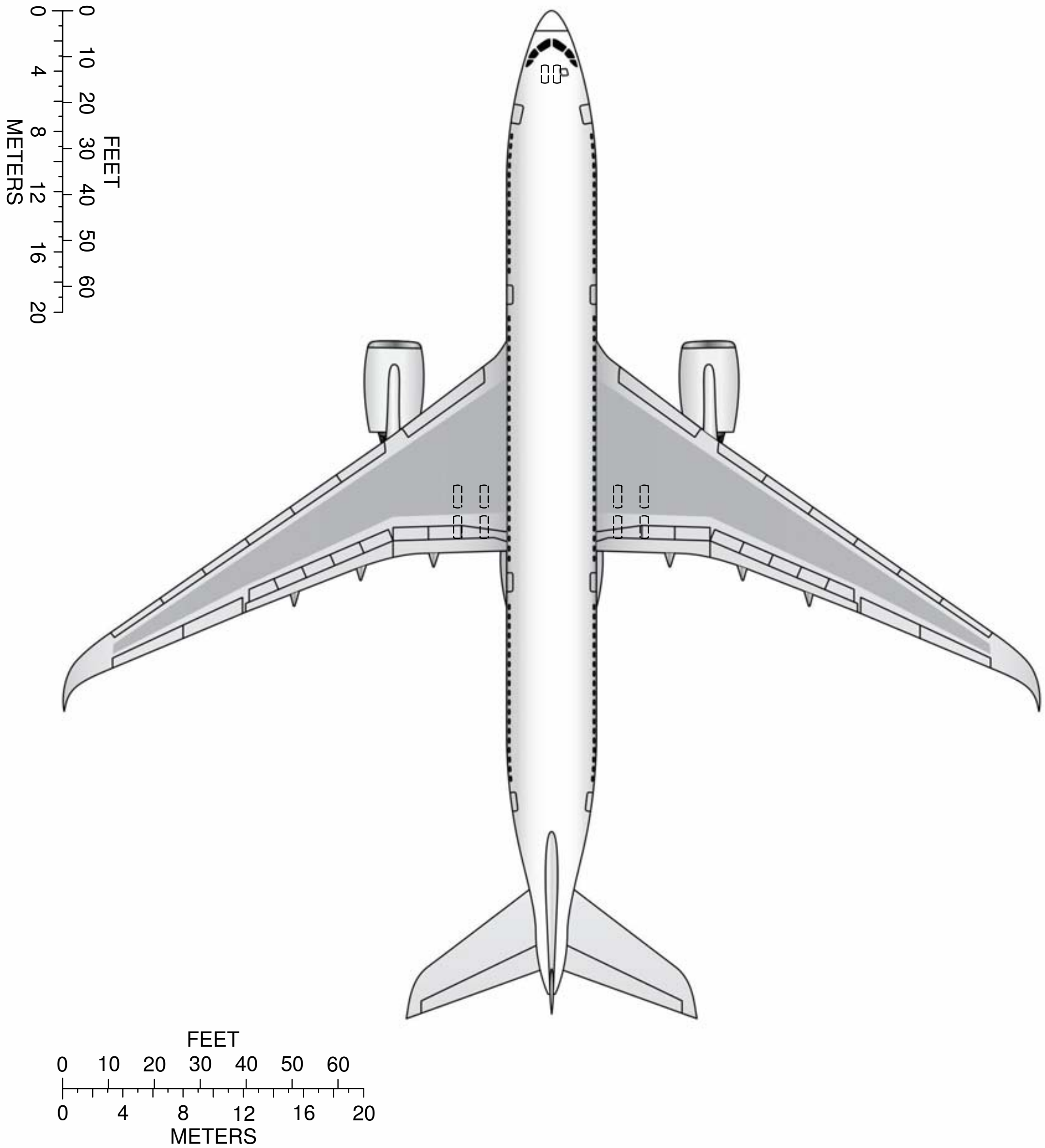
****ON A/C A350-1000 A350-900**

Scaled Drawings

1. This section provides the scaled drawings.

   NOTE : When printing this drawing, make sure to adjust for proper scaling.

**ON A/C A350-900



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

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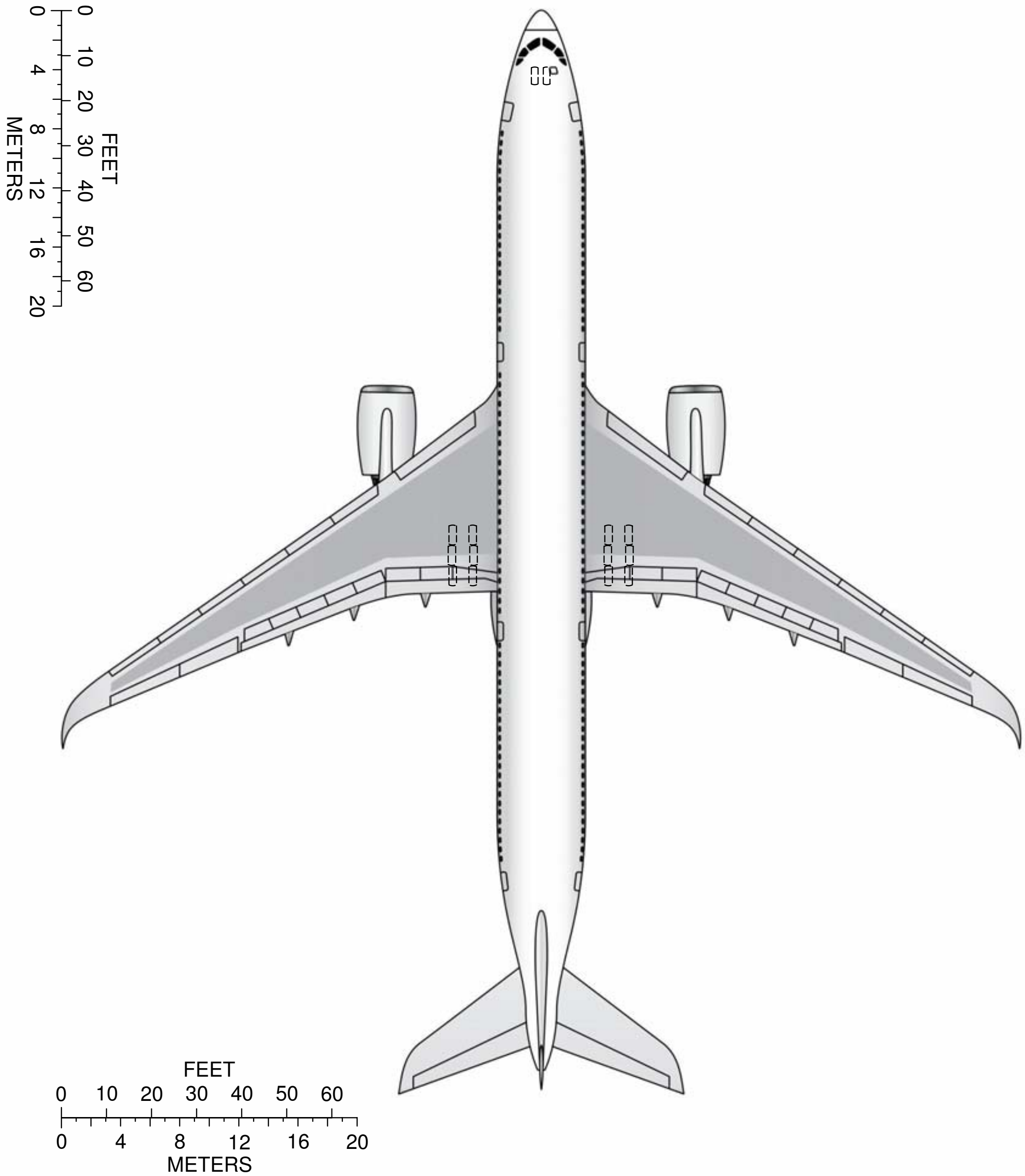
Scaled Drawings
FIGURE-8-0-0-991-001-A01

**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

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 sections 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.

**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: JUNE 2019
REFERENCE : P_RF_000000_1_A350900
SHEET 1/2

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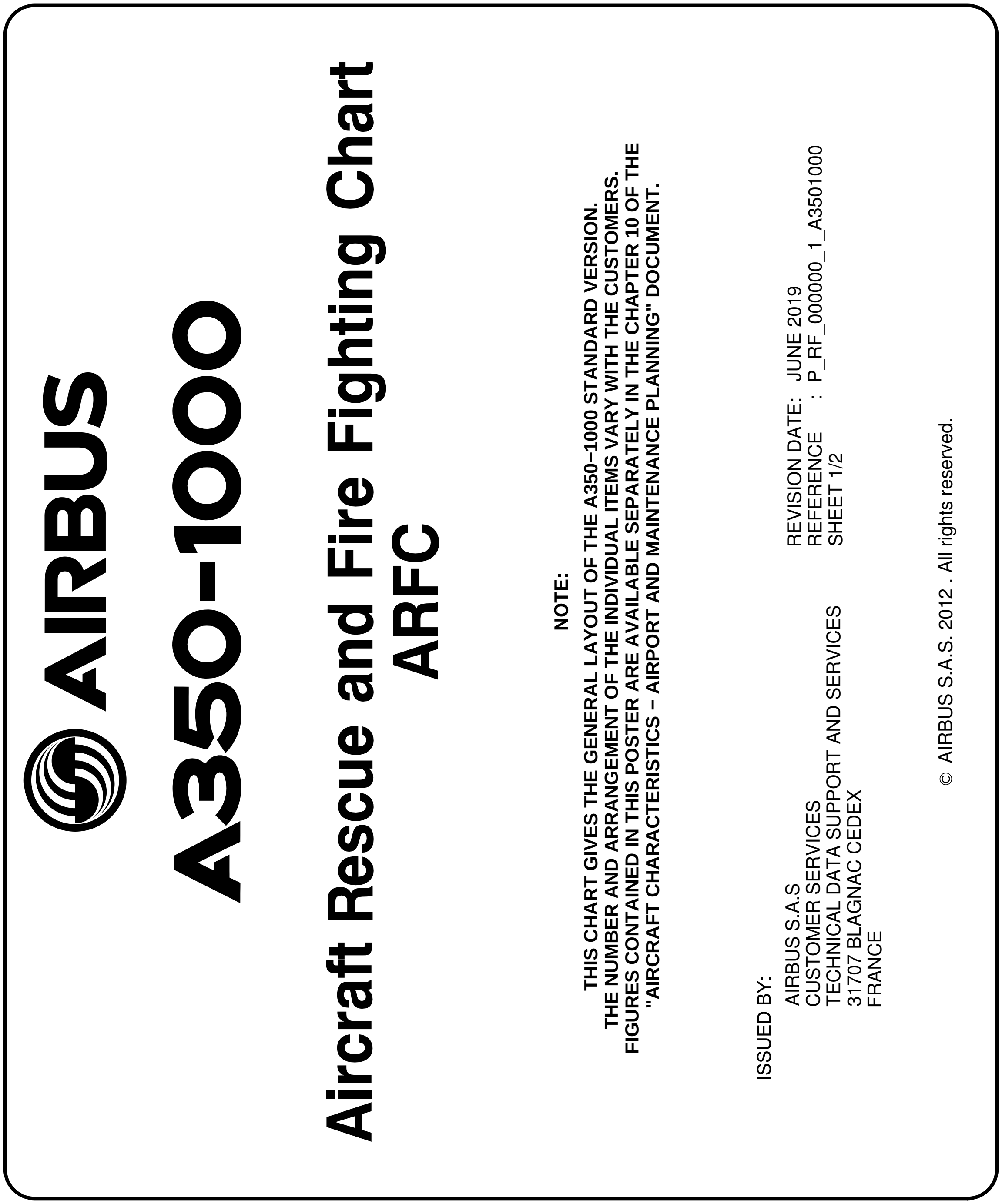
Front Page
FIGURE-10-0-0-991-001-A01

**ON A/C A350-1000



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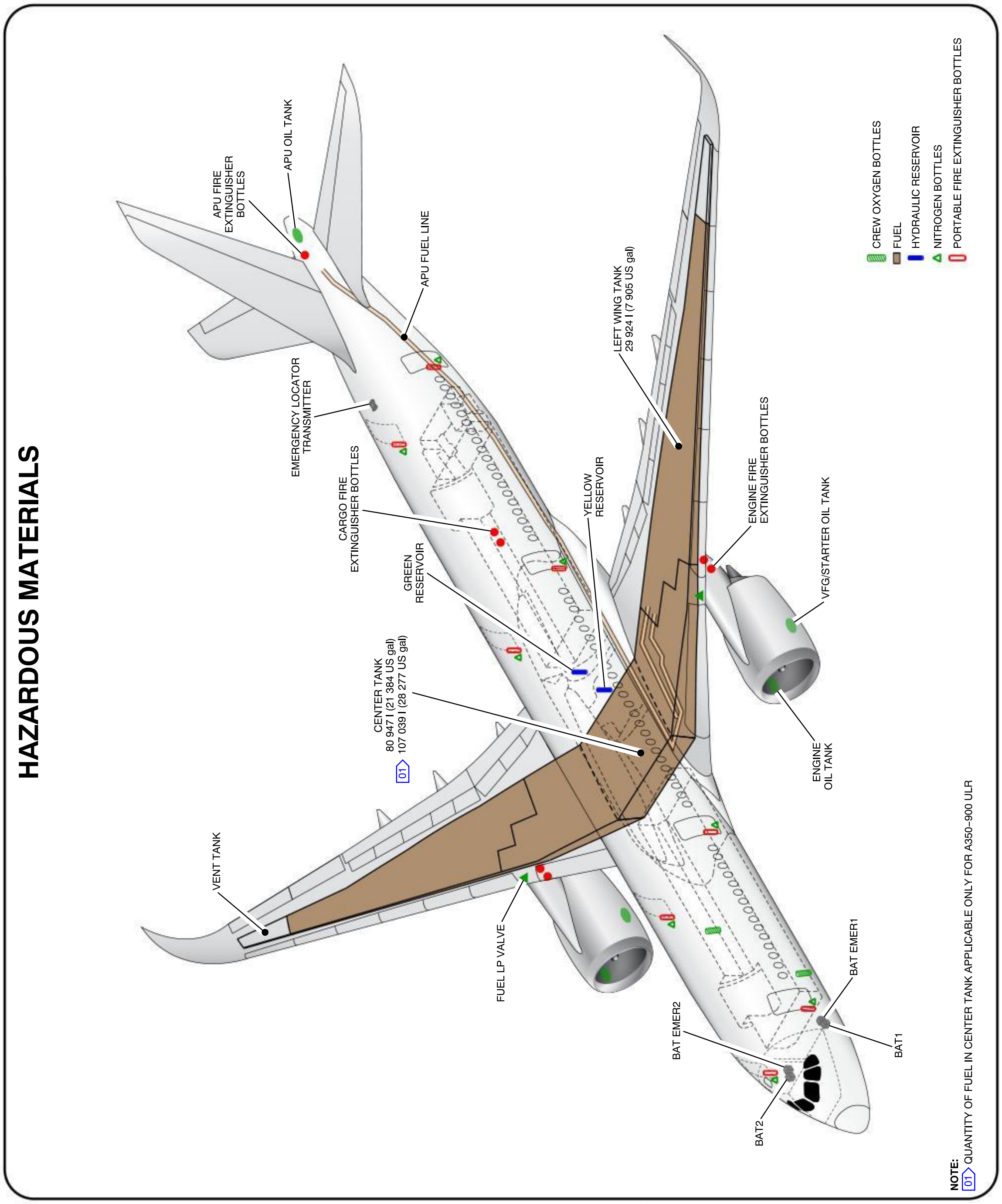
Front Page
FIGURE-10-0-0-991-001-C01

**ON A/C A350-900



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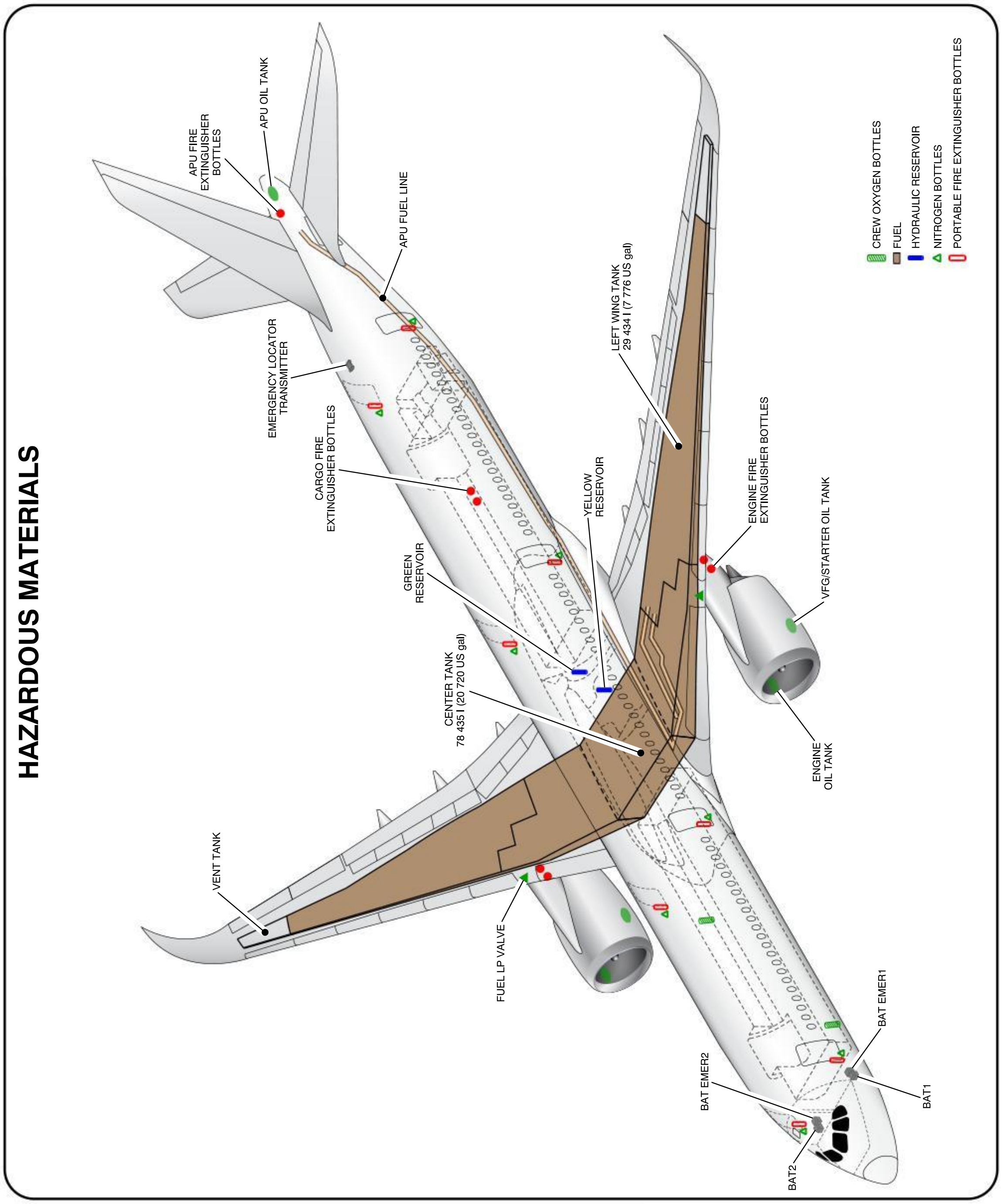
Highly Flammable and Hazardous Materials and Components
FIGURE-10-0-0-991-003-A01

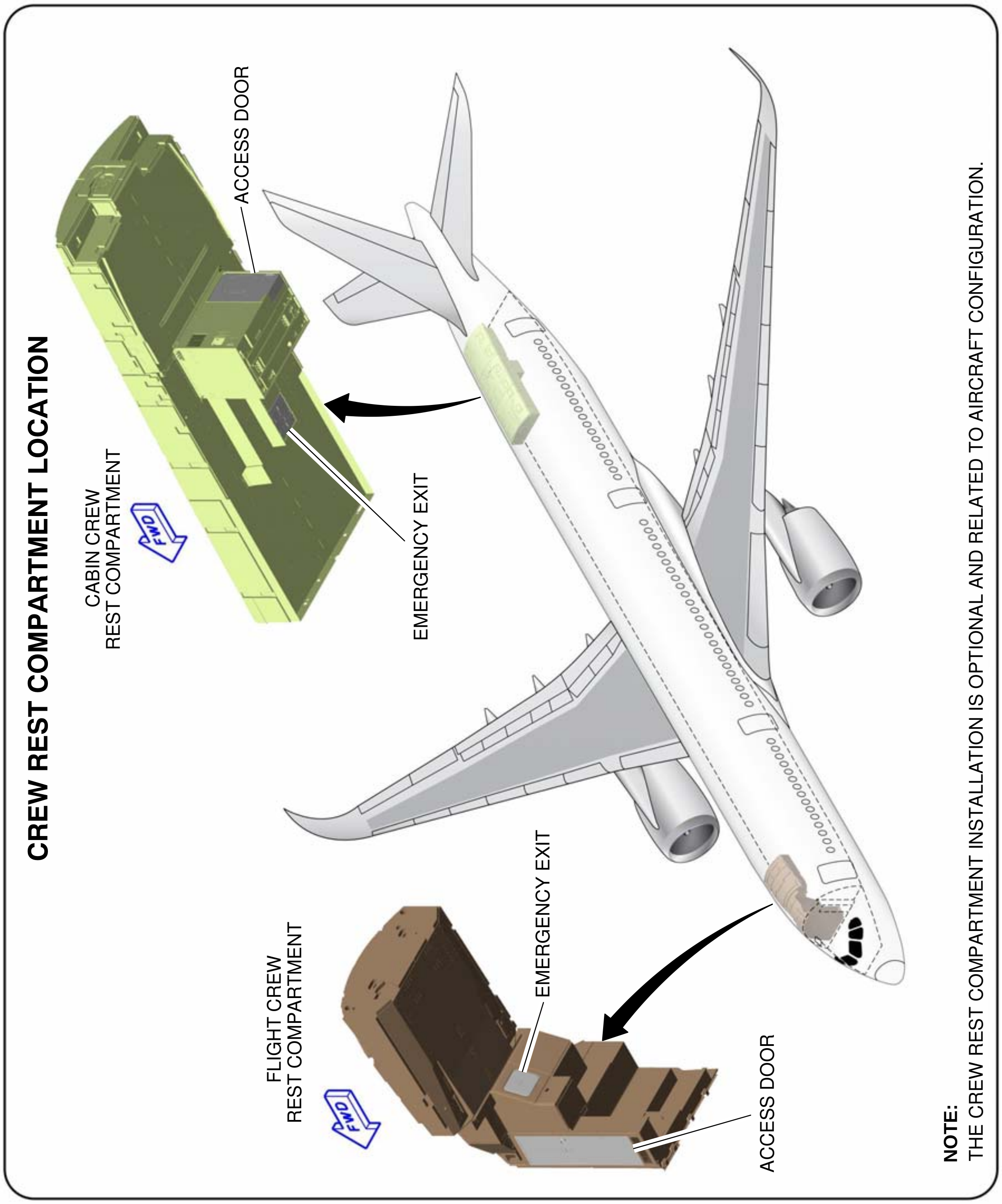
**ON A/C A350-1000



P_AC_100000_1_0030002_01_01

Highly Flammable and Hazardous Materials and Components
FIGURE-10-0-0-991-003-B01

**ON A/C A350-900



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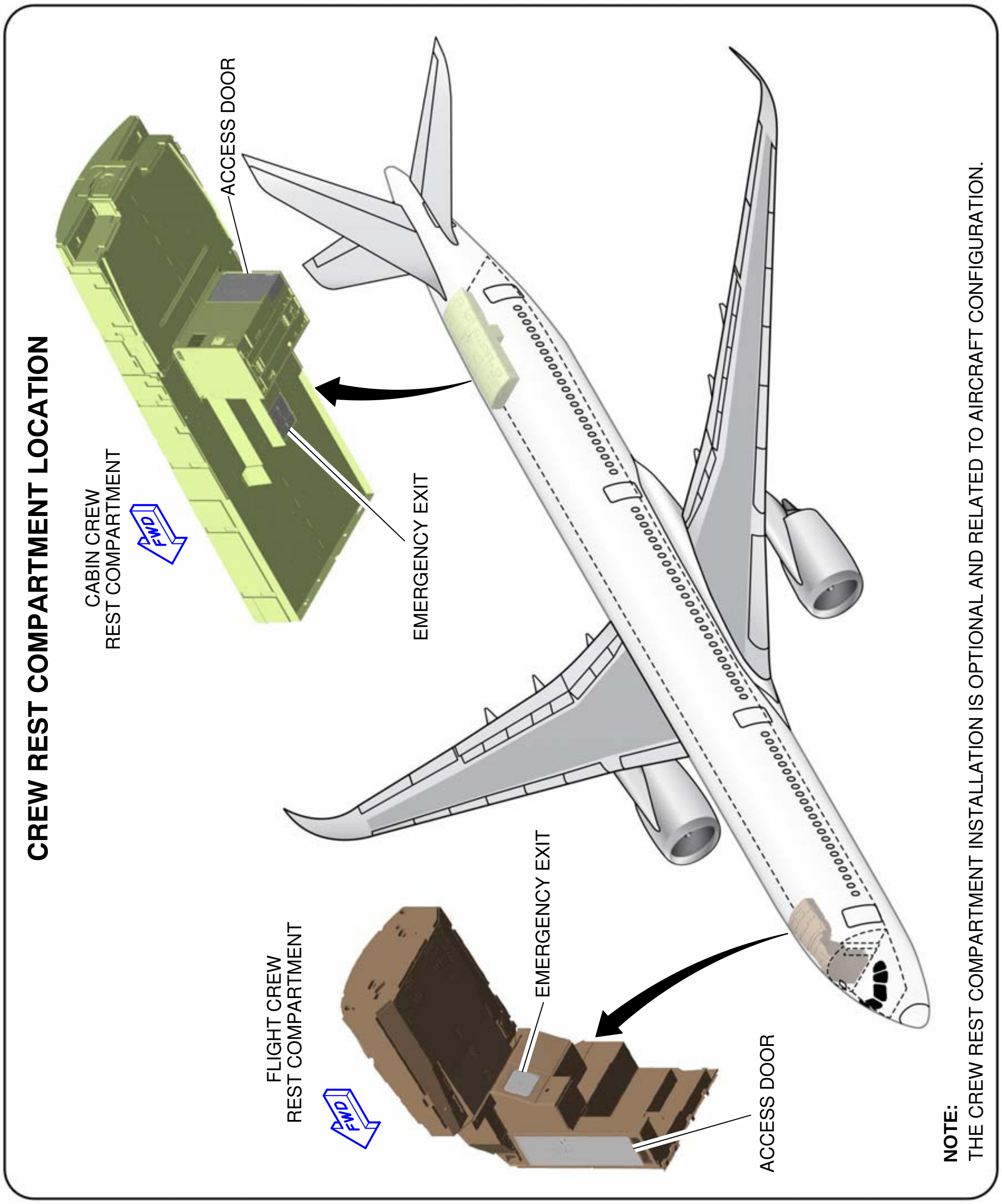
Crew Rest Compartments Location
FIGURE-10-0-0-991-004-A01

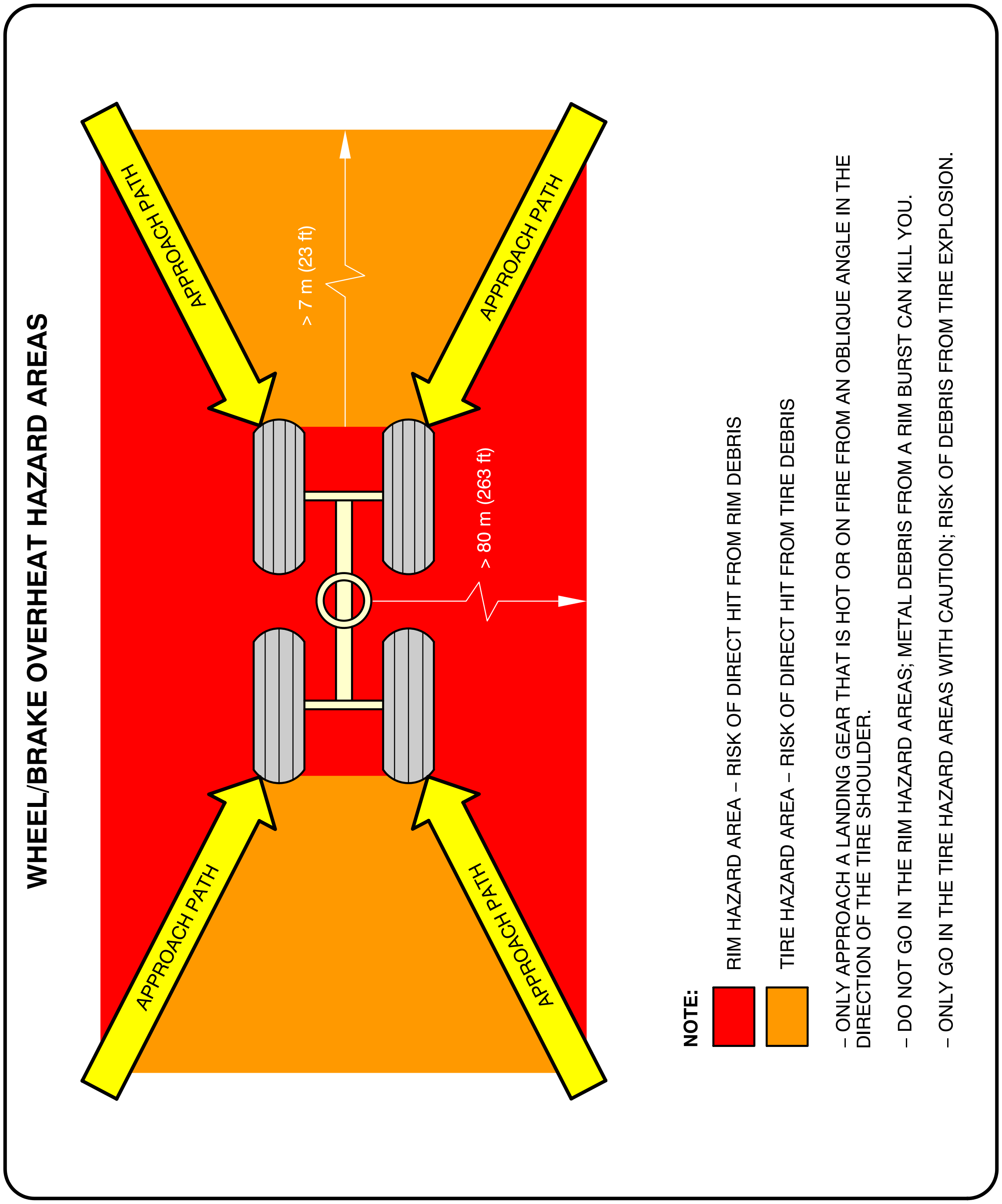
**ON A/C A350-1000



P_AC_100000_1_0040002_01_00

Crew Rest Compartments Location
FIGURE-10-0-0-991-004-B01

**ON A/C A350-900



P_AC_100000_1_0050001_01_00

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°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_2. THESE COOLING AGENTS (AND ESPECIALLY CO_2, 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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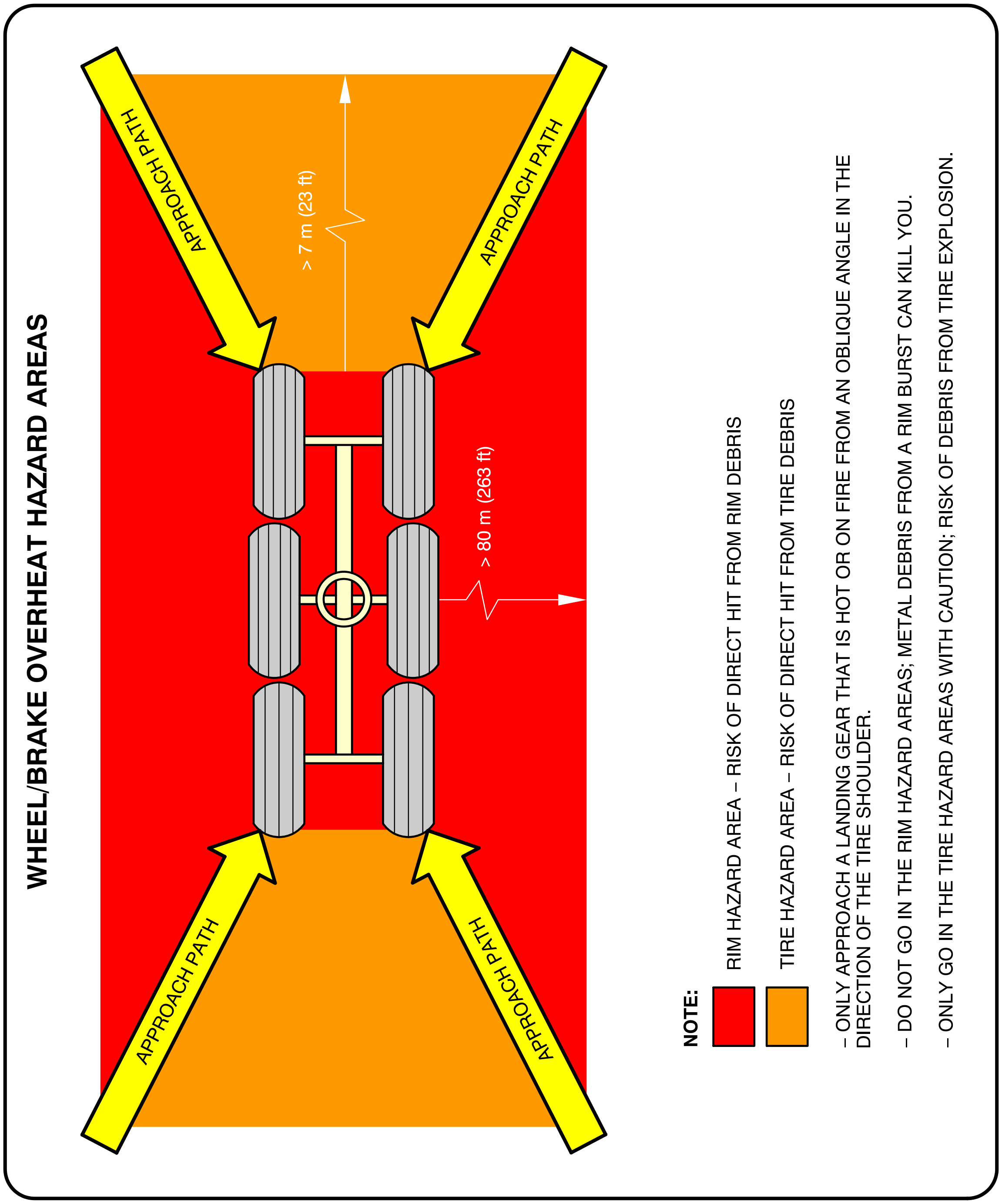
Wheel/Brake Overheat
Recommendations (Sheet 2 of 2)
FIGURE-10-0-0-991-005-A01

**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

BRAKE OVERHEAT AND LANDING GEAR FIRE

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

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

BRAKE OVERHEAT:

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

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

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

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

LANDING GEAR FIRE:

CAUTION: AIRBUS RECOMMENDS THAT YOU DO NOT USE DRY POWDERS OR DRY CHEMICALS ON HOT BRAKES OR 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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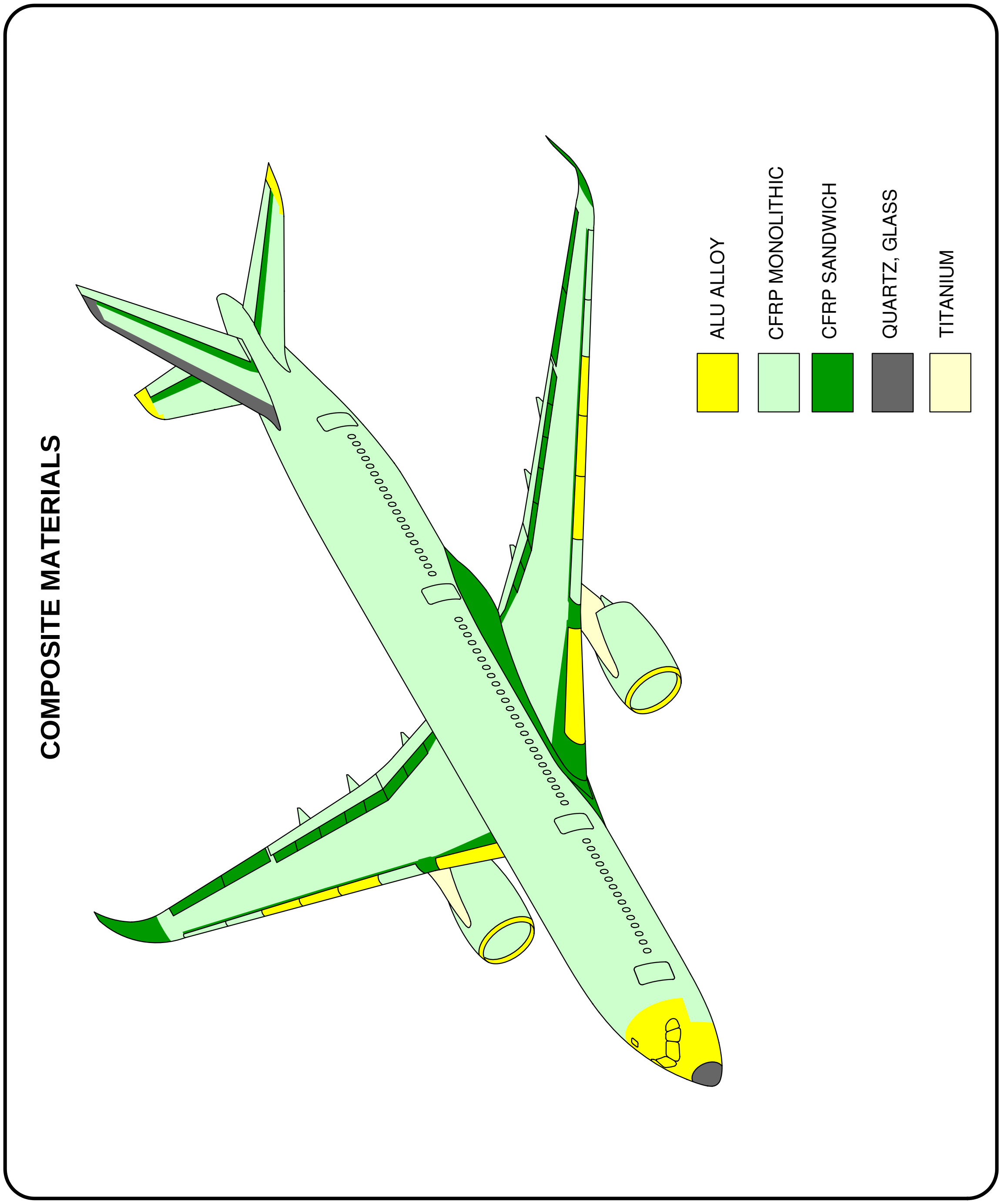
Wheel/Brake Overheat
Recommendations (Sheet 2 of 2)
FIGURE-10-0-0-991-005-B01

**ON A/C A350-900



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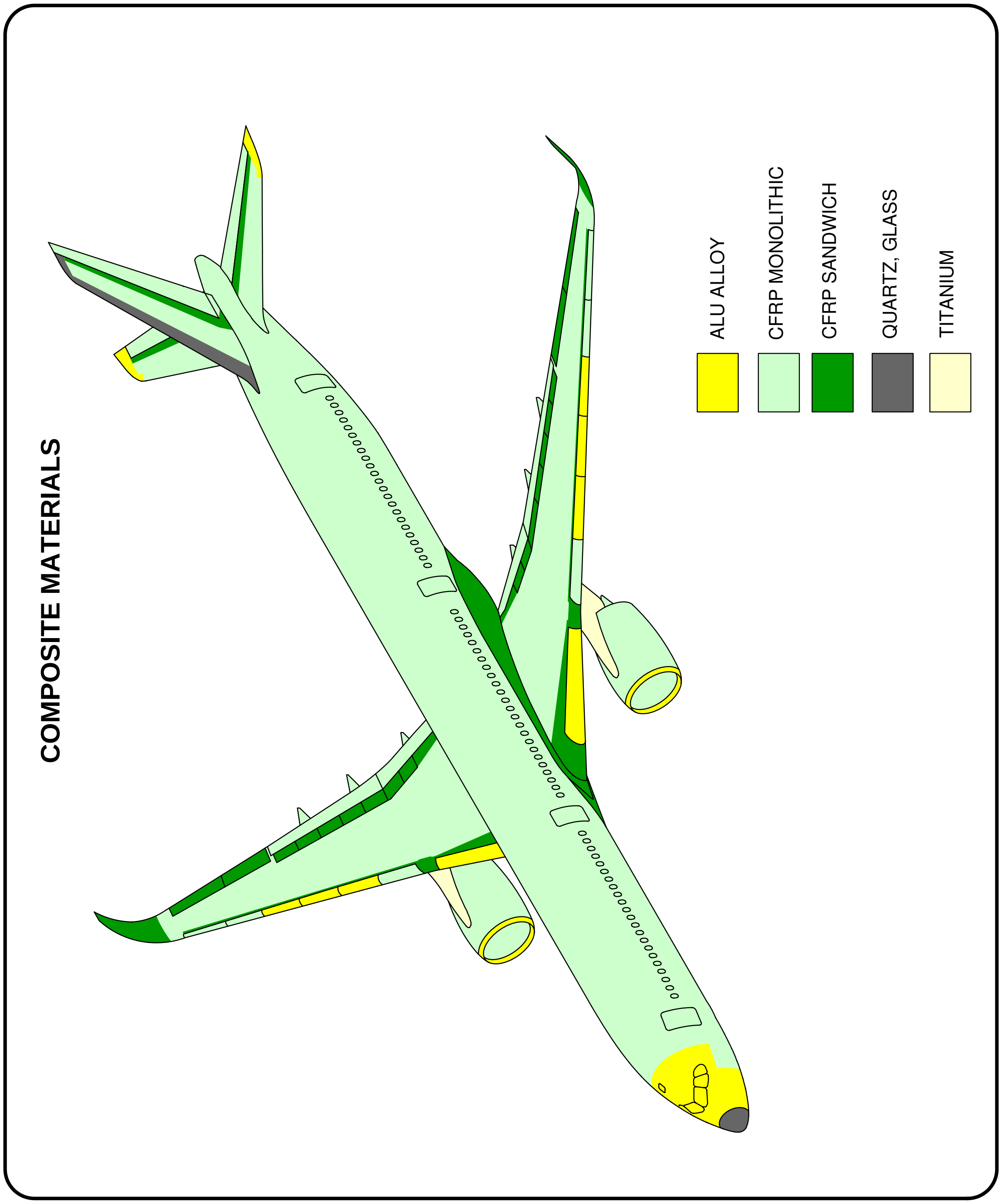
Composite Materials Location
FIGURE-10-0-0-991-006-A01

**ON A/C A350-1000



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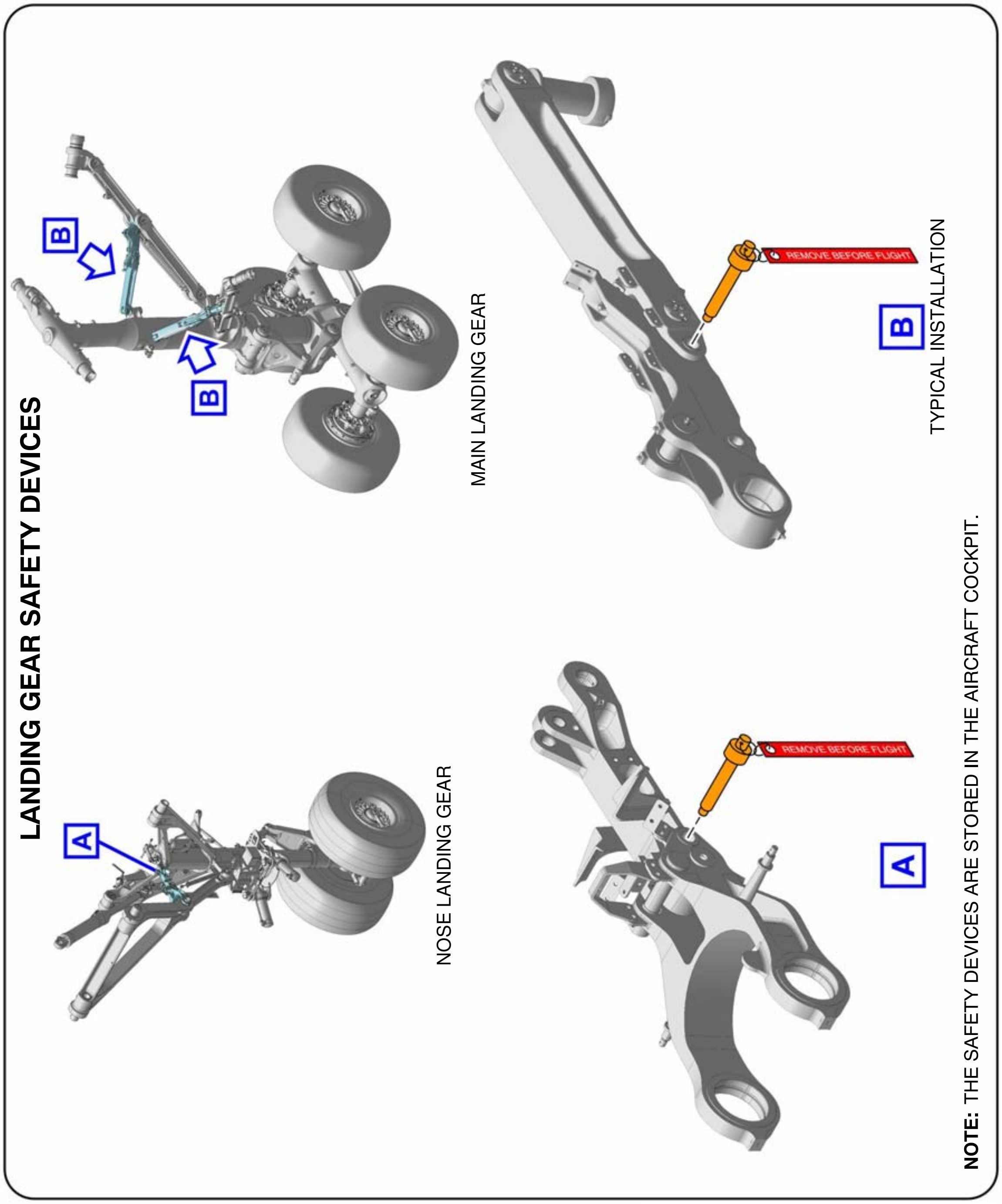
Composite Materials Location
FIGURE-10-0-0-991-006-B01

**ON A/C A350-900



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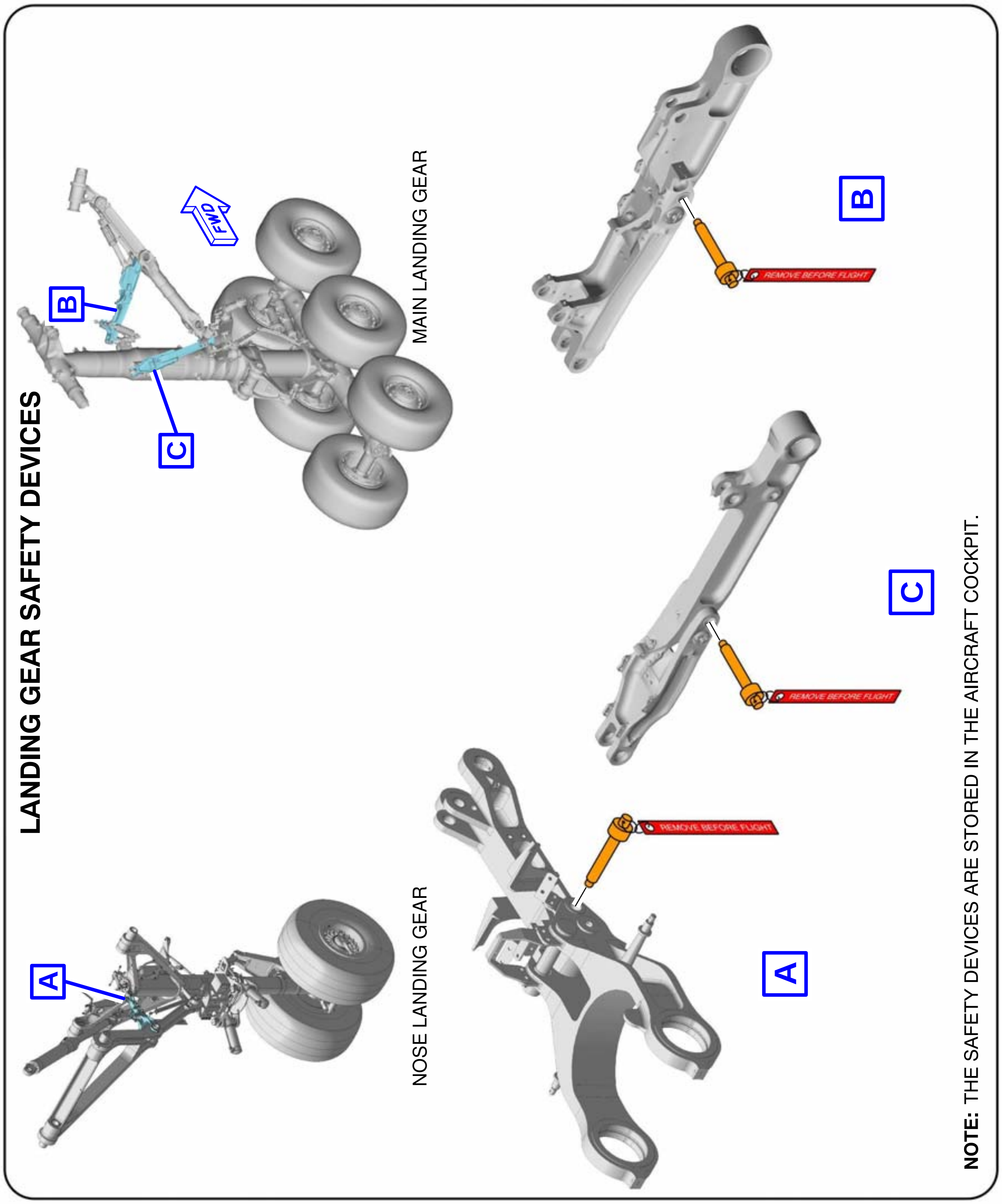
Ground Lock Safety Devices
FIGURE-10-0-0-991-007-A01

**ON A/C A350-1000



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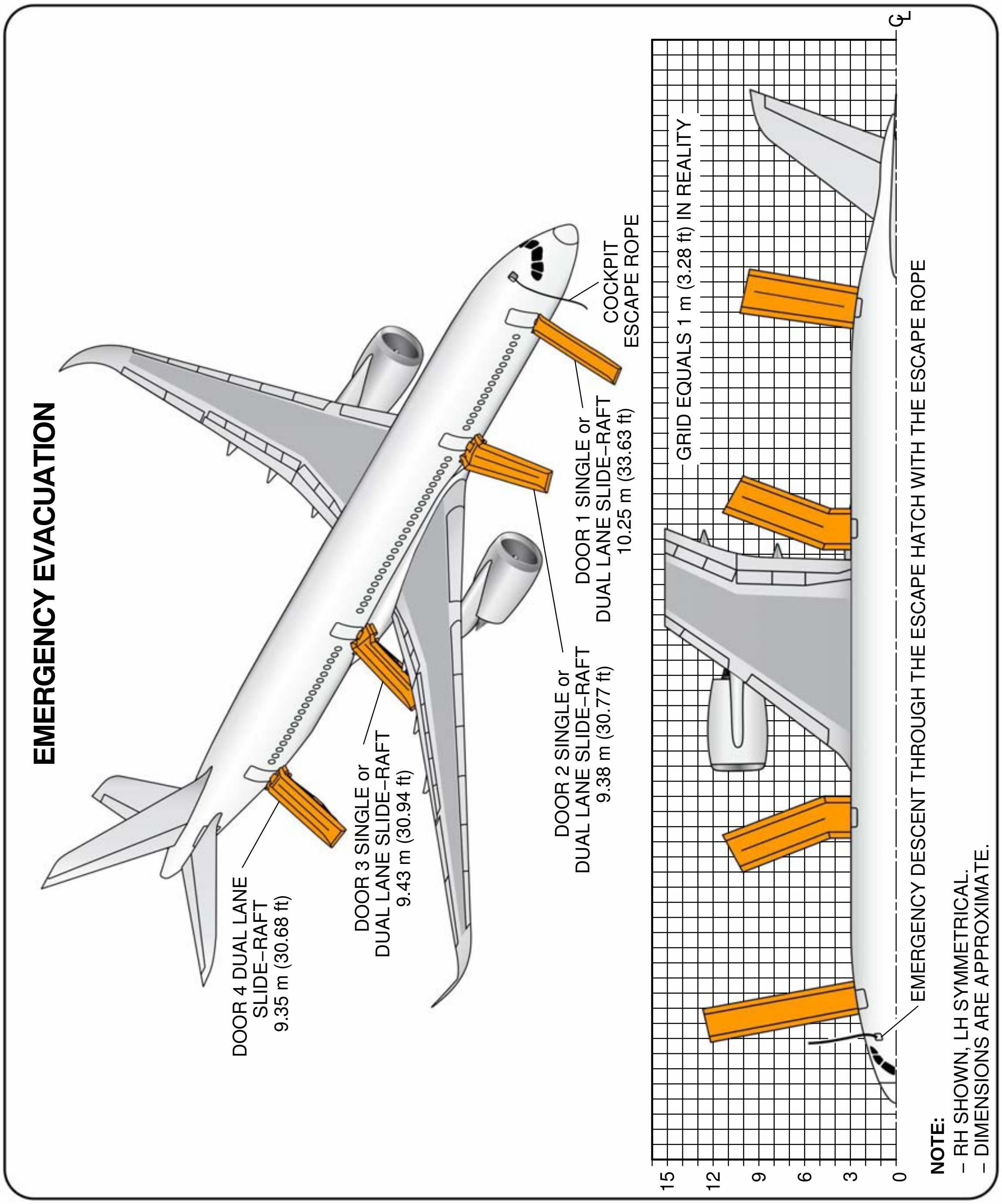
Ground Lock Safety Devices
FIGURE-10-0-0-991-007-B01

**ON A/C A350-900



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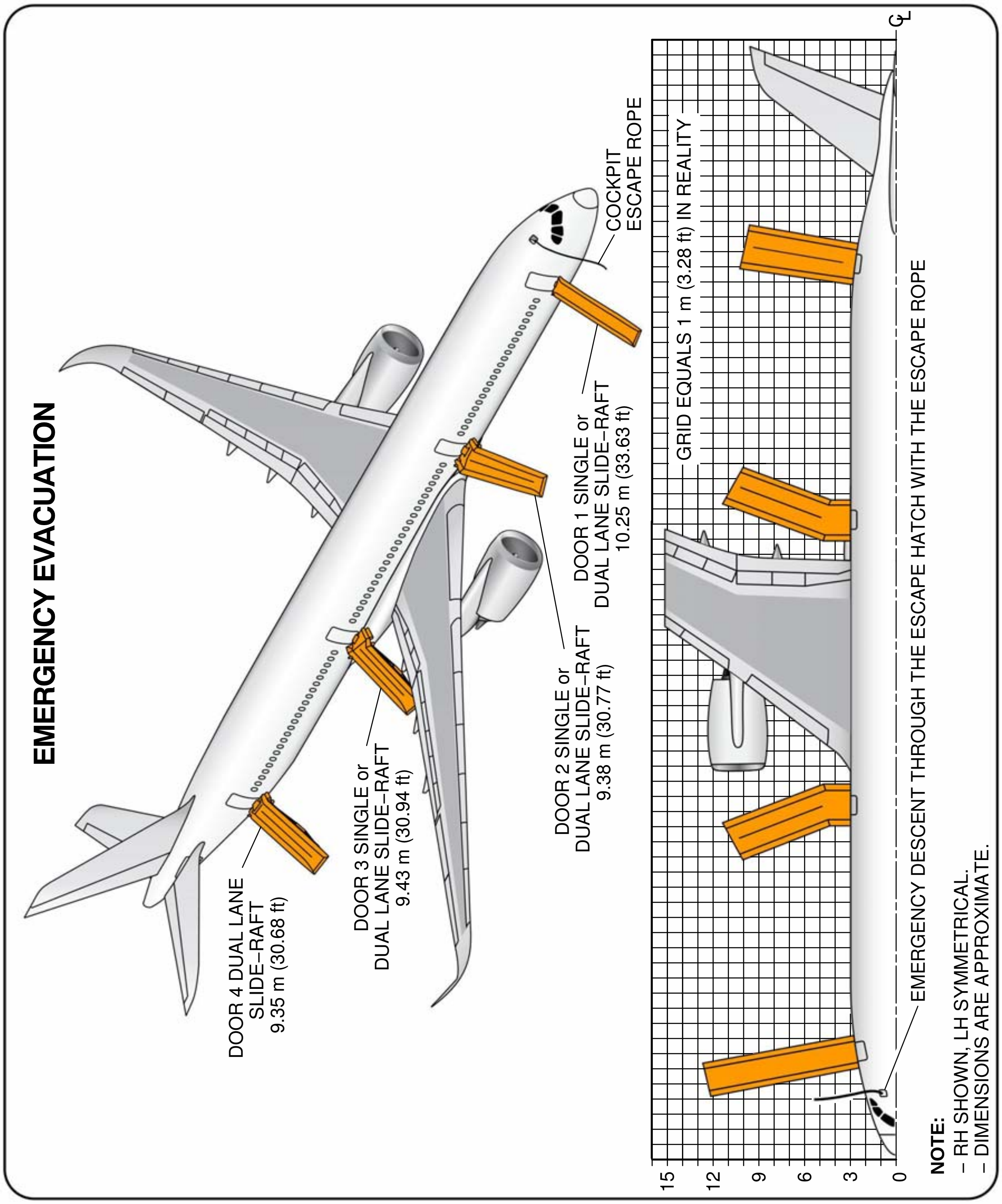
Emergency Evacuation Devices
FIGURE-10-0-0-991-008-A01

**ON A/C A350-1000



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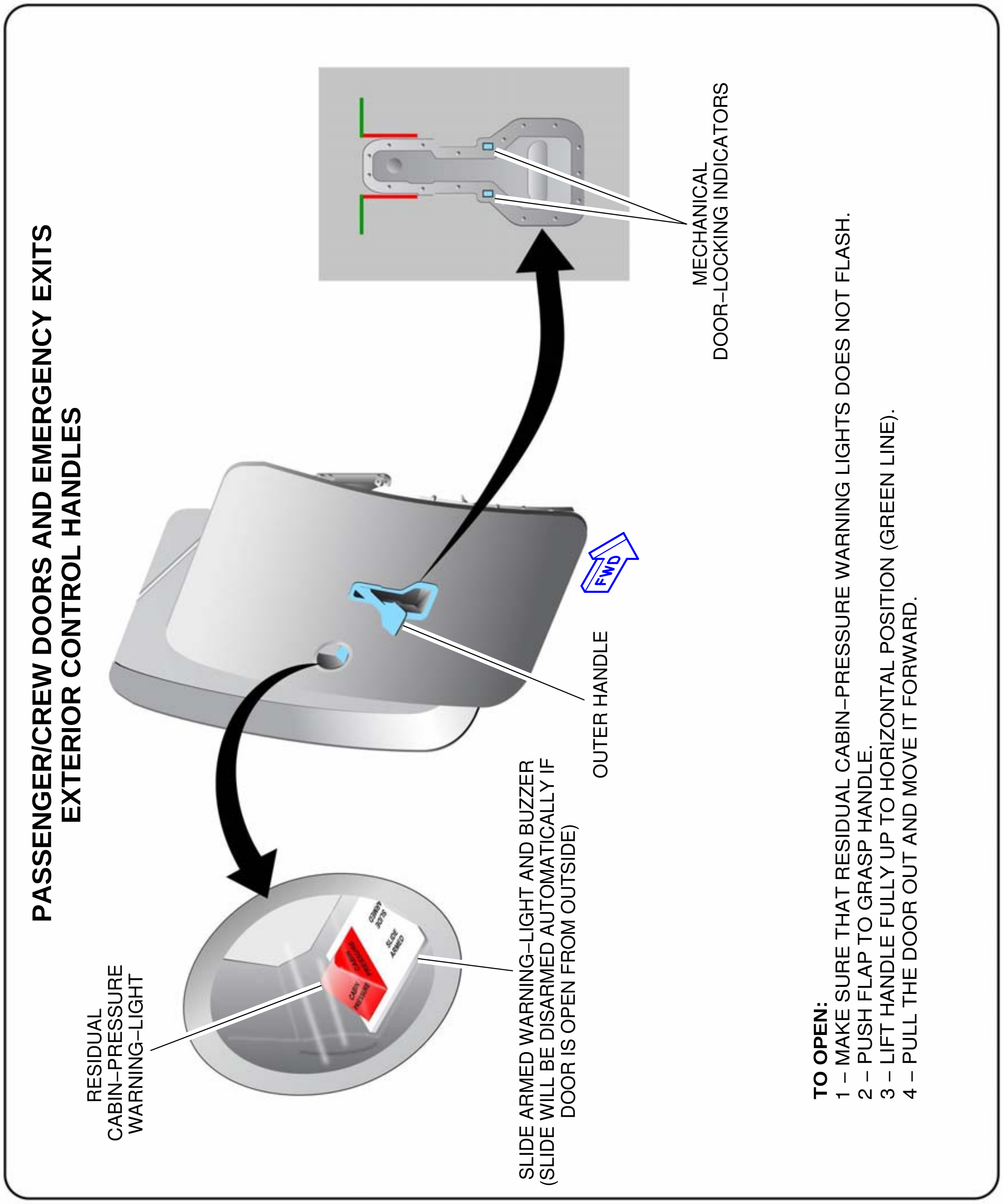
Emergency Evacuation Devices
FIGURE-10-0-0-991-008-B01

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



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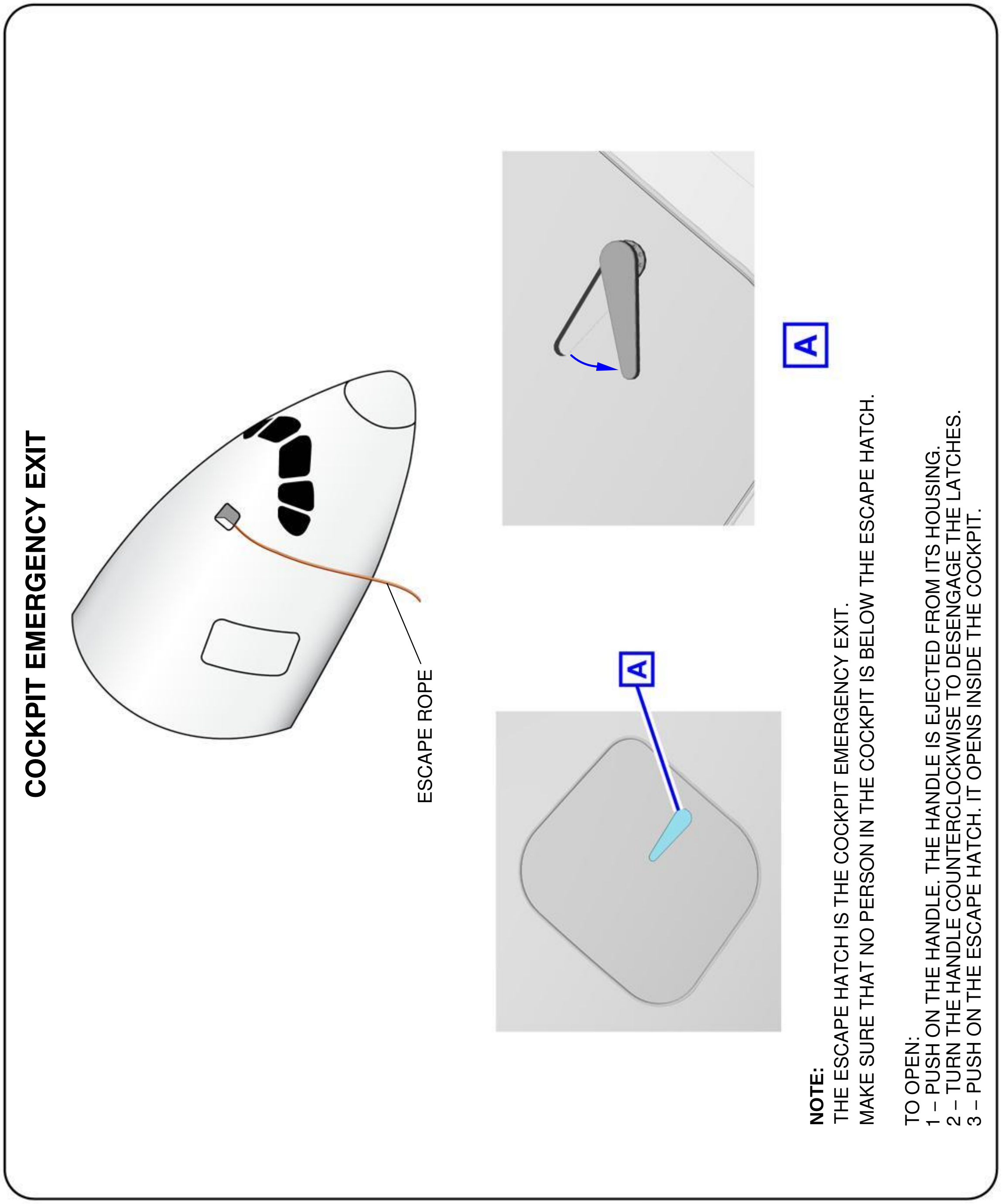
Pax/Crew Doors and Emergency Exits
FIGURE-10-0-0-991-009-A01

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



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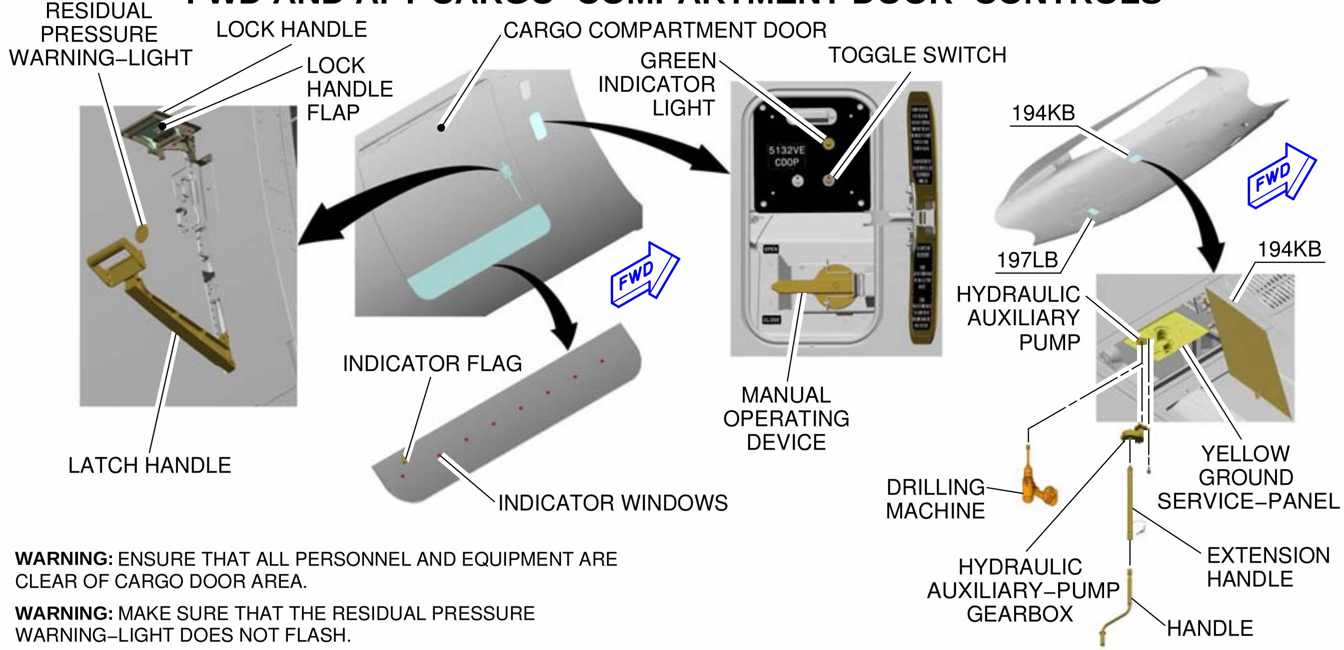
Cockpit Emergency Exit
FIGURE-10-0-0-991-010-A01

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

FWD AND AFT CARGO−COMPARTMENT DOOR−CONTROLS



WARNING: ENSURE THAT ALL PERSONNEL AND EQUIPMENT ARE CLEAR OF CARGO DOOR AREA.

WARNING: MAKE SURE THAT THE RESIDUAL PRESSURE WARNING−LIGHT DOES NOT FLASH.

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 DIA 1/2 in (12.7 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.

NORMAL OPERATION

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.

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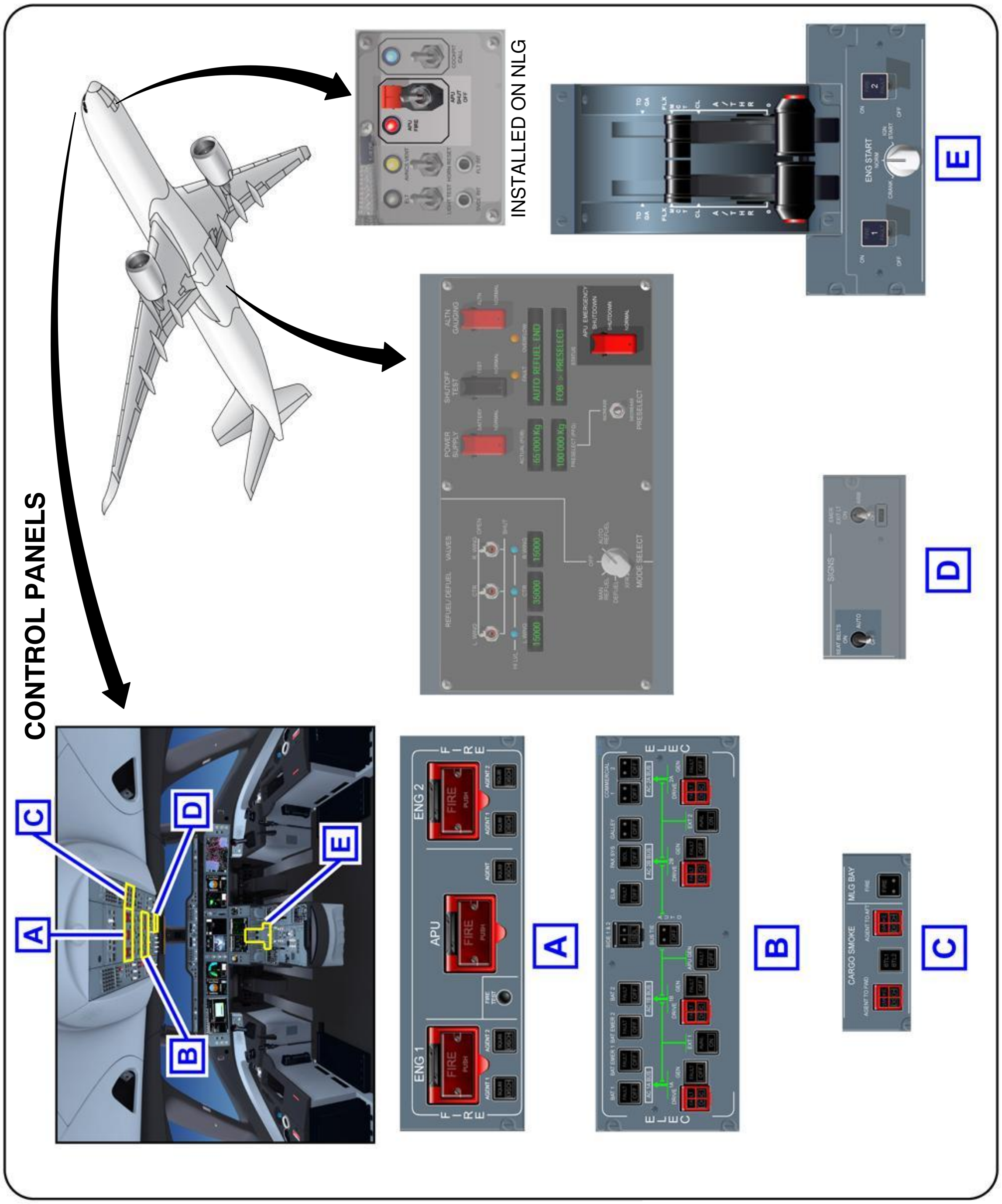
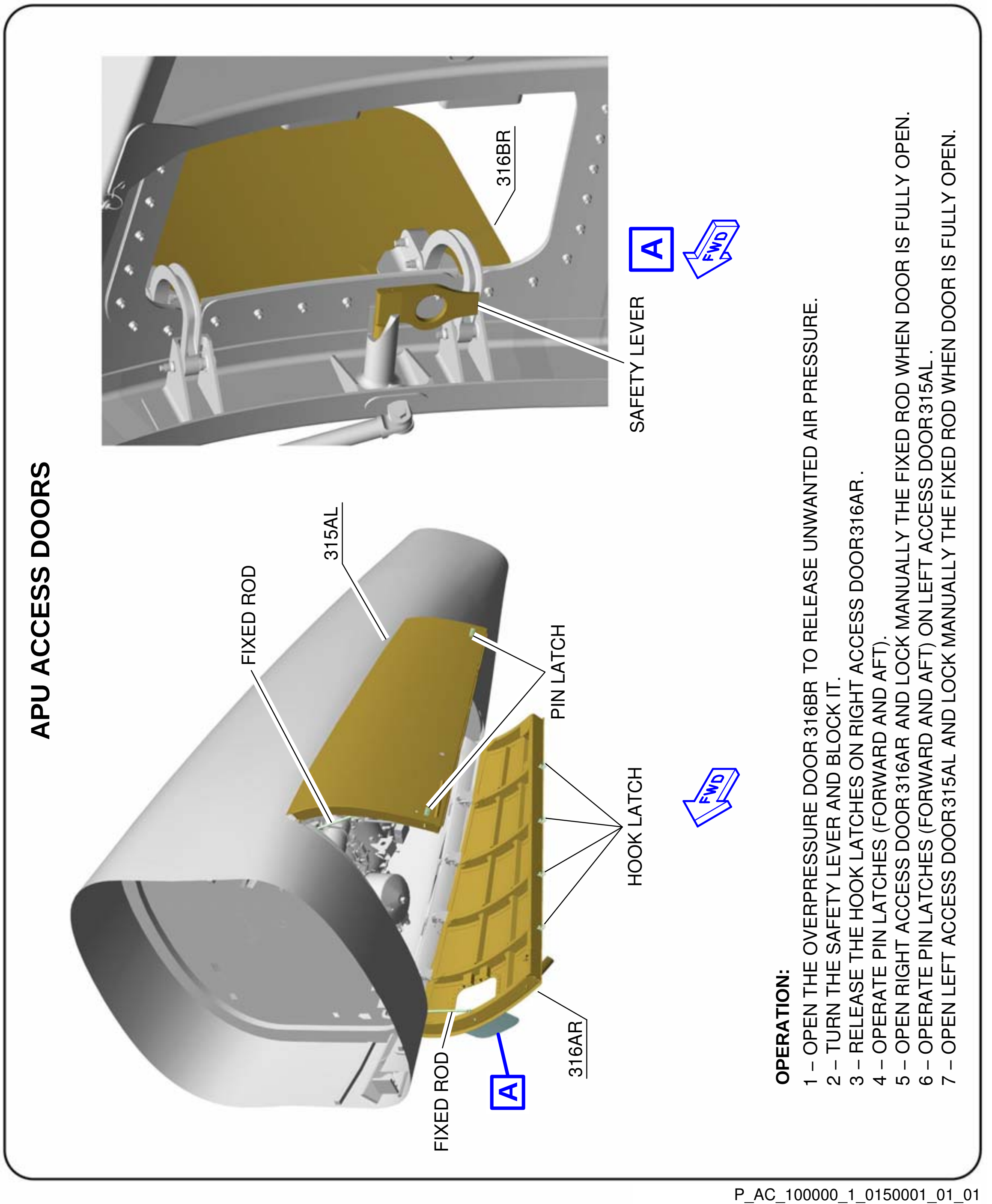
FWD and AFT Lower Deck Cargo Doors
FIGURE-10-0-0-991-011-A01

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



Control Panels
FIGURE-10-0-0-991-012-A01

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



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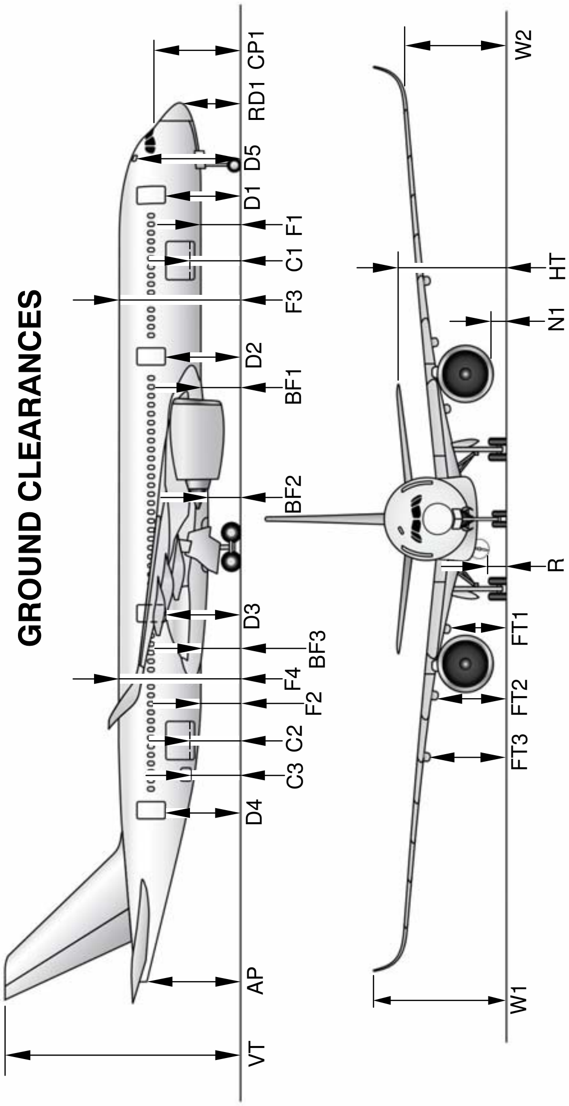
APU Compartment Access
FIGURE-10-0-0-991-015-A01

**ON A/C A350-900

GROUND CLEARANCES



DIMENSIONS ARE RELATED TO AIRCRAFT WEIGHT AND CG CONFIGURATION

A/C CONFIGURATION		140 000 kg (308 647 lb) AFT CG (40%) m	ft
DOORS	D1	5.36	17.60
	D2	5.34	17.52
	D3	5.30	17.39
	D4	5.27	17.29
	D5	7.61	24.97
	C1	3.37	11.06
	C2	3.33	10.94
	C3	3.31	10.87

A/C CONFIGURATION		140 000 kg (308 647 lb) AFT CG (40%) m	ft
FUSELAGE	F1	2.70	8.85
	F2	2.63	8.62
	F3	8.78	28.80
	F4	8.49	27.87
	BF1	2.67	8.77
	BF2	2.10	6.90
	BF3	2.63	8.63
	CP1	6.18	20.28
	RD1	4.32	14.18

A/C CONFIGURATION		140 000 kg (308 647 lb) AFT CG (40%) m	ft
WINGS	FT1	3.87	12.71
	FT2	4.67	15.34
	FT3	5.30	17.40
	W1	9.48	31.11
	W1 (ULR)	9.98	32.74
	W2	7.09	23.25
	R	1.37	4.49
TAILPLANE	HT	7.64	25.05
	AP	6.59	21.63
	VT	17.14	56.24
ENGINE/ NACELLE	N1	0.95	3.11

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

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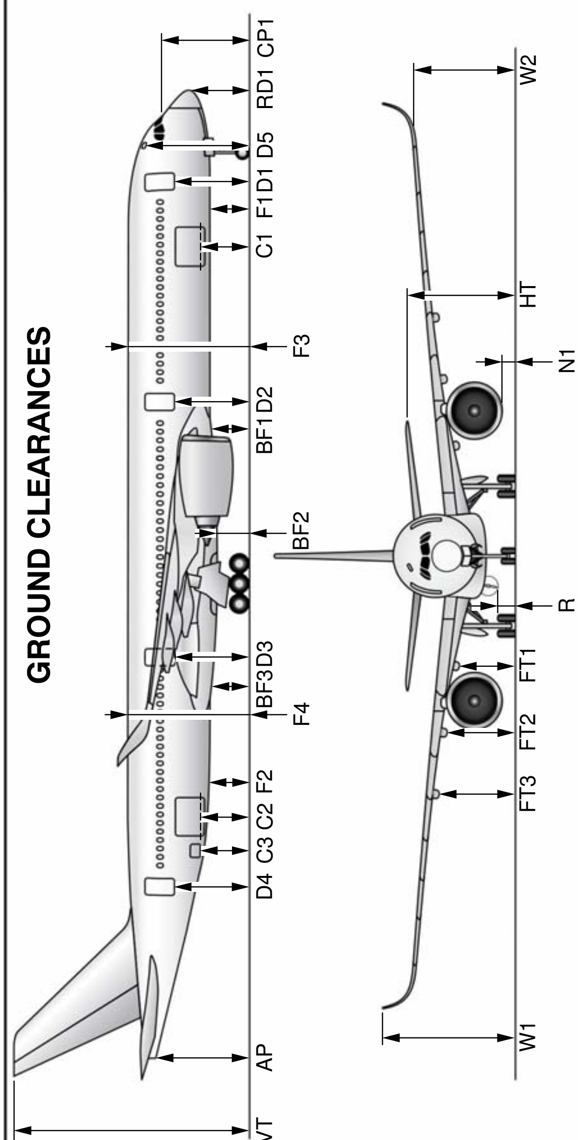
Aircraft Ground Clearances
FIGURE-10-0-0-991-016-A01

**ON A/C A350-1000

GROUND CLEARANCES



DIMENSIONS ARE RELATED TO AIRCRAFT WEIGHT AND CG CONFIGURATION

A/C CONFIGURATION		160 000 kg (352 739 lb) AFT CG (40%) m	ft
DOORS	D1	5.36	17.59
	D2	5.32	17.47
	D3	5.28	17.33
	D4	5.24	17.20
	D5	7.55	24.77
	C1	3.37	11.05
	C2	3.31	10.86
	C3	3.29	10.79

A/C CONFIGURATION		160 000 kg (352 739 lb) AFT CG (40%) m	ft
FUSELAGE	F1	2.69	8.84
	F2	2.60	8.54
	F3	8.77	28.79
	F4	8.47	27.79
	BF1	2.66	8.73
	BF2	2.09	6.85
	BF3	2.61	8.58
	CP1	6.18	20.27
	RD1	4.32	14.18

A/C CONFIGURATION		160 000 kg (352 739 lb) AFT CG (40%) m	ft
WINGS	FT1	3.86	12.65
	FT2	4.66	15.28
	FT3	5.29	17.35
	W1	9.46	31.05
	W2	7.07	23.19
	R	1.36	4.45
TAILPLANE	HT	7.61	24.96
	AP	6.57	21.54
	VT	17.11	56.15
ENGINE/ NACELLE	N1	0.93	3.07

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

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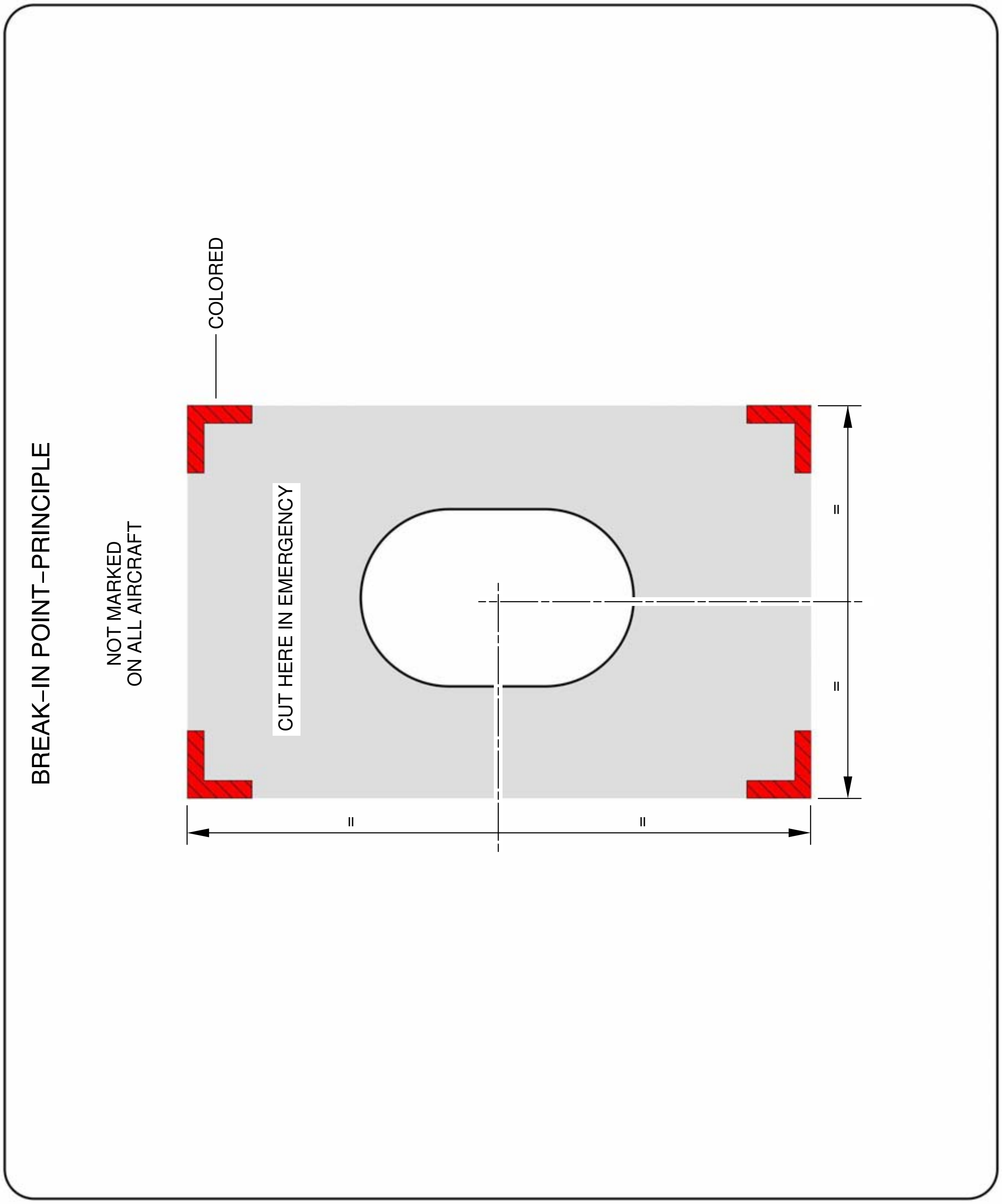
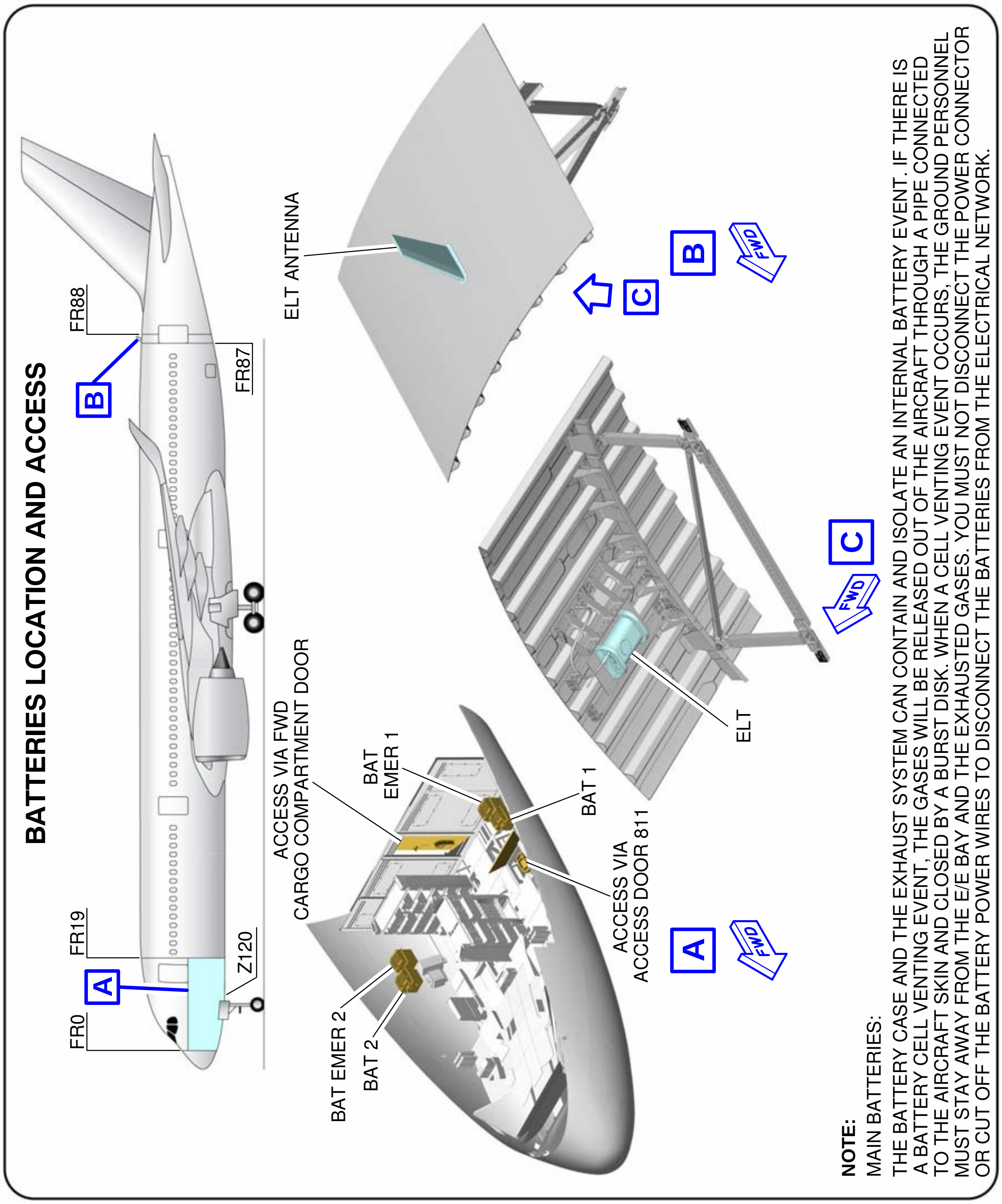
Aircraft Ground Clearances
FIGURE-10-0-0-991-016-B01

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



Structural Break-in Points
FIGURE-10-0-0-991-017-A01

**ON A/C A350-900



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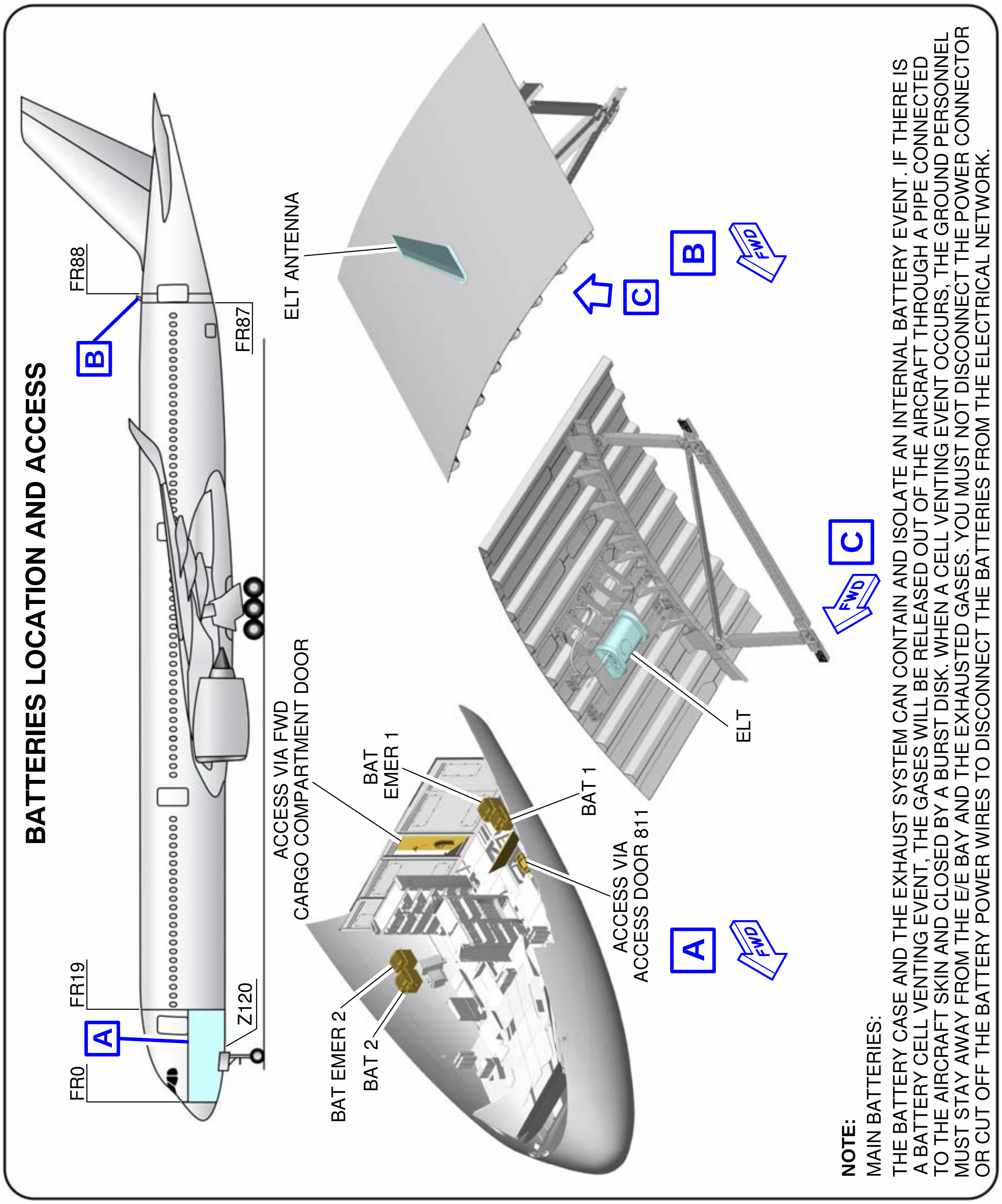
Batteries Location and Access
FIGURE-10-0-0-991-018-A01

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



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Batteries Location and Access
FIGURE-10-0-0-991-018-B01