A320

AIRCRAFT CHARACTERISTICS
AIRPORT AND MAINTENANCE PLANNING

AC

AIRBUS S.A.S.
Customer Services
Technical Data Support and Services
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FRANCE

HIGHLIGHTS

Revision No. 41 - Mar 01/22

LOCATIONS	CHG CODE	DESCRIPTIONS OF CHANGE
CHAPTER 1		
Section 1-1		
Subject 1-1-0		
Purpose	R	
CHAPTER 2		
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General Aircraft Characteristics Data	R	PART EFFECTIVITY ADDED/REVISED/ DELETED
Section 2-3		
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FIGURE Ground Clearances - Wing Tip Fence	R	ADDED THE NEW MRW WEIGHT VARIANTS. ADDED AN INFORMATION RELATED TO FLAP TRACK 2, 3 AND 4. MODIFIED ALL THE VALUES IN THE TABLE. ILLUSTRATION REVISED
FIGURE Ground Clearances - Sharklet	R	ADDED THE NEW MRW WEIGHT VARIANTS. ADDED AN INFORMATION RELATED TO FLAP TRACK 2, 3 AND 4. MODIFIED ALL THE VALUES IN THE TABLE. ILLUSTRATION REVISED
Section 2-7		
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Door Clearances	R	NOTE AMENDED
FIGURE Doors Clearances - Airstairs - Location	N	ADDED AN ILLUSTRATION RELATED TO THE LOCATION OF THE AIRSTAIRS. ILLUSTRATION ADDED

LOCATIONS	CHG CODE	DESCRIPTIONS OF CHANGE
FIGURE Doors Clearances - Airstairs - Dimensions	N	ADDED AN ILLUSTRATION RELATED TO THE DIMENSIONS OF THE AIRSTAIRS. ILLUSTRATION ADDED
FIGURE Doors Clearances - Airstairs - Location for Operating the Airstairs	N	ADDED AN ILLUSTRATION RELATED TO THE LOCATION FOR THE OPERATION OF THE AIRSTAIRS. ILLUSTRATION ADDED
FIGURE Operation of the Airstairs	N	ADDED AN ILLUSTRATION RELATED TO THE OPERATION OF THE AIRSTAIRS. ILLUSTRATION ADDED
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FIGURE Landing Gear - Nose Landing Gear	R	MODIFIED THE ILLUSTRATION RELATED TO ELECTRICAL BOX.
FIGURE Operation of Airstairs for ACJ	N	ADDED AN ILLUSTRATION RELATED TO THE OPERATION OF AIRSTAIRS FOR ACJ. ILLUSTRATION ADDED
Section 2-14 Subject 2-14-0 Jacking for Maintenance	R	PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Jacking for Maintenance - Jacking Point Locations	R	DELETED A320NEO EFFECTIVITY. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Jacking for Maintenance - Jacking Point Locations	N	ADDED AN ILLUSTRATION RELATED TO JACKING POINT LOCATIONS FOR A320NEO. ILLUSTRATION ADDED
FIGURE Jacking for Maintenance - Jacking Design	R	DELETED A320NEO EFFECTIVITY. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Jacking for Maintenance - Jacking Design	N	ADDED AN ILLUSTRATION RELATED TO JACKING DESIGN FOR A320NEO. ILLUSTRATION ADDED

LOCATIONS	CHG CODE	DESCRIPTIONS OF CHANGE
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Landing Gear Footprint	R	
FIGURE Landing Gear Footprint	R	ADDED CG VALUES FOR WV002, WV003 AND WV005 IN THE TABLE. ADDED INFORMATION FOR WV003, WV005 AND WV009 IN THE TABLE. ILLUSTRATION REVISED
FIGURE Landing Gear Footprint	R	ADDED CG VALUES FOR THE WV050, WV051, WV052, WV053, WV056, WV057, WV068, WV069, WV071, WV075, WV078, WV082, WV083 AND WV085 IN THE TABLE. ILLUSTRATION REVISED
FIGURE Landing Gear Footprint for ACJ320NEO	N	ADDED AN ILLUSTRATION FOR LANDING GEAR FOOTPRINT OF ACJ320NEO. ILLUSTRATION ADDED
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FIGURE Maximum Pavement Loads for A320-200	R	DELETED THE INFORMATION FOR WV003 (CG 42.6%), WV009 (CG 38.5 %) AND WV019 (CG 40%) FOR A320-200 FROM THE TABLE. ADDED THE INFORMATION FOR WV005 (CG 42%) FOR A320-200 IN THE TABLE. ADDED AN

LOCATIONS	CHG CODE	DESCRIPTIONS OF CHANGE
FIGURE Maximum Pavement Loads for A320NEO	R	INFORMATION IN THE NOTE RELATED TO BRAKED MAIN GEAR. ILLUSTRATION REVISED MODIFIED THE INFORMATION FROM WV050 TO WV085 IN THE TABLE. ADDED AN INFORMATION IN THE NOTE RELATED TO BRAKED MAIN GEAR. ADDED AN ILLUSTRATION RELATED TO MAXIMUM PAVEMENT LOADS FOR ACJA320NEO. ILLUSTRATION REVISED
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LOCATIONS	CHG CODE	DESCRIPTIONS OF CHANGE
Aircraft Classification Number - Flexible and Rigid Pavements	R	NOTE AMENDED
FIGURE ACN Table for A320-200	R	DELETED THE INFORMATION FOR WV000 FOR A320-200 BOGIE IN THE ACN TABLE. MODIFIED THE ILLUSTRATION TITLE. MODIFIED THE INFORMATION FROM WV000 TO WV018 AND ADDED THE INFORMATION FOR WV018 AND WV019. ILLUSTRATION REVISED
FIGURE ACN Table for A320NEO and ACJ320NEO - ACN Table for A320NEO	R	ADDED AN ILLUSTRATION FOR ACJ320NEO IN THE ACN TABLE. MODIFIED THE ILLUSTRATION TITLE. MODIFIED THE INFORMATION FROM WV050 TO WV068 AND ADDED AN INFORMATION FOR WV069, WV071, WV075, WV078, WV082, WV083 AND WV085 FOR A320NEO IN THE ACN TABLE. ILLUSTRATION REVISED
Section 7-10	N	
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FIGURE ACR Table	N	ILLUSTRATION ADDED
FIGURE ACR Table for ACJ320NEO	N	ILLUSTRATION ADDED

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SCOPE

1-1-0 Introduction

****ON A/C A320-200 A320neo**

Purpose

1. General

The A320 AIRCRAFT CHARACTERISTICS – AIRPORT AND MAINTENANCE PLANNING (AC) manual is issued for the A320-200 series aircraft that have the wing-tip fences or sharklets, to give necessary data to the airport operators, airlines and Maintenance/Repair Organizations (MRO) for airport and maintenance facilities planning.

The A320 Family is the world's best-selling single-aisle aircraft. An A320 takes off or lands in the world each 1.5 seconds for each day, the family recorded more than 117 million cycles since the entry-into-service and records the best-in-class dispatch reliability of 99.7%.

To make sure this true market leadership, Airbus continues to invest in improvements in the A320 Family: enhancements to the aerodynamics for example the sharklet wingtip devices, upgrades to the widest passenger cabin in its class, the A320 Family neo. The latter mixes top-of-class engine efficiency offered with two new engine options: the PW1100G PurePower from Pratt&Whitney and the LEAP-1A from CFM International offered the new sharklet devices with superior aerodynamics.

The A320neo family offers a minimum of 15% fuel savings and an additional flight range of about 500 nm (926 km) and up to 20% fuel savings got through the cabin innovations and efficiency improvements. For the environment, the A320neo family is also more eco-friendly, with 5 000 t (11 023 113 lb) less CO2 emissions each year for each aircraft and almost 50% reduction in noise footprint compared to before generation aircraft.

When you fly the ACJ family member, we pride ourselves on four key intertwined DNA strands that are behind everything. We give the ultimate comfort, intercontinental freedom, pioneering technology and reliability. An ACJ is not only a plane but a home where you can experience space like no other jet, crafted ambience and artisanal quality materials you can connect with. We have selected the space and technology to let you do fine dining, pampering, movie night, working from the sky to make strategic business decisions or simply relaxing with your loved ones and guests, uncompromisingly.

1-2-0 Glossary

****ON A/C A320-200 A320neo**

Glossary

1. List of Abbreviations

A/C	Aircraft
ACF	Aircraft Cabin Flex
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
CKPT	Cockpit
E	Young’s Modulus
ELEC	Electric, Electrical, Electricity
ESWL	Equivalent Single Wheel Load
FAA	Federal Aviation Administration
F/C	First Class
FDL	Fuselage Datum Line
FR	Frame
FSTE	Full Size Trolley Equivalent
FWD	Forward
GPU	Ground Power Unit
GSE	Ground Support Equipment
HYD	Hydraulic
ICAO	International Civil Aviation Organisation
IDG	Integrated Drive Generator
ISA	International Standard Atmosphere
L	Left
L	Radius of relative stiffness
LCN	Load Classification Number
LD	Lower Deck
L/G	Landing Gear
LH	Left Hand
LPS	Last Pax Seating
MAC	Mean Aerodynamic Chord
MAX	Maximum

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
R	Right
RH	Right Hand
ULD	Unit Load Device
US	United States
WV	Weight Variant
Y/C	Tourist 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

2-1-1 General Aircraft Characteristics Data

****ON A/C A320-200 A320neo**

General Aircraft Characteristics Data

****ON A/C A320-200**

1. The following table gives characteristics of A320-200 models, these data are specific to each weight variant:

Aircraft Characteristics				
	WV000	WV001	WV002	WV003
Maximum Ramp Weight (MRW) Maximum Taxi Weight (MTW)	73 900 kg (162 922 lb)	68 400 kg (150 796 lb)	70 400 kg (155 205 lb)	75 900 kg (167 331 lb)
Maximum Take-Off Weight (MTOW)	73 500 kg (162 040 lb)	68 000 kg (149 914 lb)	70 000 kg (154 324 lb)	75 500 kg (166 449 lb)
Maximum Landing Weight (MLW)	64 500 kg (142 198 lb)	64 500 kg (142 198 lb)	64 500 kg (142 198 lb)	64 500 kg (142 198 lb)
Maximum Zero Fuel Weight (MZFW)	60 500 kg (133 380 lb)	60 500 kg (133 380 lb)	60 500 kg (133 380 lb)	60 500 kg (133 380 lb)

Aircraft Characteristics				
	WV004	WV005	WV006	WV007
Maximum Ramp Weight (MRW) Maximum Taxi Weight (MTW)	71 900 kg (158 512 lb)	67 400 kg (148 592 lb)	66 400 kg (146 387 lb)	77 400 kg (170 638 lb)
Maximum Take-Off Weight (MTOW)	71 500 kg (157 630 lb)	67 000 kg (147 710 lb)	66 000 kg (145 505 lb)	77 000 kg (169 756 lb)
Maximum Landing Weight (MLW)	64 500 kg (142 198 lb)	64 500 kg (142 198 lb)	64 500 kg (142 198 lb)	64 500 kg (142 198 lb)
Maximum Zero Fuel Weight (MZFW)	60 500 kg (133 380 lb)	60 500 kg (133 380 lb)	60 500 kg (133 380 lb)	60 500 kg (133 380 lb)

Aircraft Characteristics			
	WV008	WV009	WV010
Maximum Ramp Weight (MRW) Maximum Taxi Weight (MTW)	73 900 kg (162 922 lb)	75 900 kg (167 331 lb)	77 400 kg (170 638 lb)

Aircraft Characteristics			
	WV008	WV009	WV010
Maximum Take-Off Weight (MTOW)	73 500 kg (162 040 lb)	75 500 kg (166 449 lb)	77 000 kg (169 756 lb)
Maximum Landing Weight (MLW)	64 500 kg (142 198 lb)	64 500 kg (142 198 lb)	64 500 kg (142 198 lb)
Maximum Zero Fuel Weight (MZFW)	61 000 kg (134 482 lb)	61 000 kg (134 482 lb)	61 000 kg (134 482 lb)

Aircraft Characteristics			
	WV011	WV012	WV013
Maximum Ramp Weight (MRW) Maximum Taxi Weight (MTW)	75 900 kg (167 331 lb)	77 400 kg (170 638 lb)	71 900 kg (158 512 lb)
Maximum Take-Off Weight (MTOW)	75 500 kg (166 449 lb)	77 000 kg (169 756 lb)	71 500 kg (157 630 lb)
Maximum Landing Weight (MLW)	66 000 kg (145 505 lb)	66 000 kg (145 505 lb)	71 500 kg (157 630 lb)
Maximum Zero Fuel Weight (MZFW)	62 500 kg (137 789 lb)	62 500 kg (137 789 lb)	61 000 kg (134 482 lb)

Aircraft Characteristics				
	WV014	WV015	WV016	WV017
Maximum Ramp Weight (MRW) Maximum Taxi Weight (MTW)	73 900 kg (162 922 lb)	78 400 kg (172 842 lb)	73 900 kg (162 922 lb)	78 400 kg (172 482 lb)
Maximum Take-Off Weight (MTOW)	73 500 kg (162 040 lb)	78 000 kg (171 961 lb)	73 500 kg (162 040 lb)	78 000 kg (171 961 lb)
Maximum Landing Weight (MLW)	64 500 kg (142 198 lb)	64 500 kg (142 198 lb)	66 000 kg (145 505 lb)	66 000 kg (145 505 lb)
Maximum Zero Fuel Weight (MZFW)	61 500 kg (135 584 lb)	61 000 kg (134 482 lb)	62 500 kg (137 789 lb)	62 500 kg (137 789 lb)

Aircraft Characteristics		
	WV018	WV019
Maximum Ramp Weight (MRW) Maximum Taxi Weight (MTW)	71 900 kg (158 512 lb)	70 400 kg (155 205 lb)
Maximum Take-Off Weight (MTOW)	71 500 kg (157 630 lb)	70 000 kg (154 324 lb)
Maximum Landing Weight (MLW)	66 000 kg (145 505 lb)	64 500 kg (142 198 lb)
Maximum Zero Fuel Weight (MZFW)	62 500 kg	61 000 kg

Aircraft Characteristics		
	WV018	WV019
	(137 789 lb)	(134 482 lb)

****ON A/C A320neo**

2. The following table gives characteristics of A320neo and ACJA320neo Models, these data are specific to each Weight Variant:

Aircraft Characteristics			
	WV050	WV051	WV052
Maximum Ramp Weight (MRW) Maximum Taxi Weight (MTW)	73 900 kg (162 921 lb)	73 900 kg (162 921 lb)	77 400 kg (170 638 lb)
Maximum Take-Off Weight (MTOW)	73 500 kg (162 040 lb)	73 500 kg (162 040 lb)	77 000 kg (169 756 lb)
Maximum Landing Weight (MLW)	66 300 kg (146 166 lb)	67 400 kg (148 591 lb)	66 300 kg (146 166 lb)
Maximum Zero Fuel Weight (MZFW)	62 800 kg (138 450 lb)	64 300 kg (141 757 lb)	62 800 kg (138 450 lb)

Aircraft Characteristics				
	WV053	WV054	WV055	WV055 ACJ
Maximum Ramp Weight (MRW) Maximum Taxi Weight (MTW)	77 400 kg (170 638 lb)	79 400 kg (175 047 lb)	79 400 kg (175 047 lb)	79 400 kg (175 047 lb)
Maximum Take-Off Weight (MTOW)	77 000 kg (169 756 lb)	79 000 kg (174 165 lb)	79 000 kg (174 165 lb)	79 000 kg (174 165 lb)
Maximum Landing Weight (MLW)	67 400 kg (148 591 lb)	66 300 kg (146 166 lb)	67 400 kg (148 591 lb)	67 400 kg (148 591 lb)
Maximum Zero Fuel Weight (MZFW)	64 300 kg (141 757 lb)	62 800 kg (138 450 lb)	64 300 kg (141 757 lb)	64 300 kg (141 757 lb)

Aircraft Characteristics			
	WV056	WV057	WV068
Maximum Ramp Weight (MRW) Maximum Taxi Weight (MTW)	70 400 kg (155 205 lb)	70 400 kg (155 205 lb)	75 900 kg (167 331 lb)
Maximum Take-Off Weight (MTOW)	70 000 kg (154 324 lb)	70 000 kg (154 324 lb)	75 500 kg (166 449 lb)
Maximum Landing Weight (MLW)	66 300 kg (146 166 lb)	66 300 kg (146 166 lb)	66 300 kg (146 166 lb)
Maximum Zero Fuel Weight (MZFW)	62 800 kg	62 800 kg	62 800 kg

Aircraft Characteristics			
	WV056	WV057	WV068
	(138 450 lb)	(138 450 lb)	(138 450 lb)

Aircraft Characteristics		
	WV069	WV071
Maximum Ramp Weight (MRW) Maximum Taxi Weight (MTW)	75 900 kg (167 331 lb)	75 400 kg (166 228 lb)
Maximum Take-Off Weight (MTOW)	75 500 kg (166 449 lb)	75 000 kg (165 347 lb)
Maximum Landing Weight (MLW)	67 400 kg (148 591 lb)	67 400 kg (148 592 lb)
Maximum Zero Fuel Weight (MZFW)	64 300 kg (141 757 lb)	64 300 kg (141 757 lb)

Aircraft Characteristics			
	WV075	WV078	WV082
Maximum Ramp Weight (MRW) Maximum Taxi Weight (MTW)	74 400 kg (164 024 lb)	72 900 kg (160 717 lb)	71 900 kg (158 512 lb)
Maximum Take-Off Weight (MTOW)	74 000 kg (163 142 lb)	72 500 kg (159 835 lb)	71 500 kg (157 630 lb)
Maximum Landing Weight (MLW)	67 400 kg (148 592 lb)	66 300 kg (146 166 lb)	66 300 kg (146 166 lb)
Maximum Zero Fuel Weight (MZFW)	64 300 kg (141 757 lb)	62 800 kg (138 450 lb)	62 800 kg (138 450 lb)

Aircraft Characteristics					
	WV083	WV85	WV110 ACJ	WV111 ACJ	WV112 ACJ
Maximum Ramp Weight (MRW) Maximum Taxi Weight (MTW)	71 900 kg (158 512 lb)	71 400 kg (157 410 lb)	79 400 kg (175 047 lb)	78 400 kg (172 842 lb)	77 400 kg (170 638 lb)
Maximum Take-Off Weight (MTOW)	71 500 kg (157 630 lb)	71 000 kg (156 528 lb)	79 000 kg (174 165 lb)	78 000 kg (171 961 lb)	77 000 kg (169 756 lb)
Maximum Landing Weight (MLW)	67 400 kg (148 592 lb)	67 400 kg (148 592 lb)	67 400 kg (148 592 lb)	67 400 kg (148 592 lb)	67 400 kg (148 592 lb)
Maximum Zero Fuel Weight (MZFW)	64 300 kg (141 757 lb)	64 300 kg (141 757 lb)	55 300 kg (121 916 lb)	55 300 kg (121 916 lb)	55 300 kg (121 916 lb)

****ON A/C A320-200 A320neo**

3. The following table gives characteristics of A320-200 and A320neo models, these data are common to each weight variant:

Aircraft Characteristics						
Standard Seating Capacity	180 (Single-Class)					
Usable Fuel Capacity (density = 0.785 kg/l)		A320CEO CFM Engine	A320CEO IAE Engine	ACJ3 20CEO	A320NEO	ACJA 320neo
	Total Wing Fuel	15 959 l (4 216 US gal)	15 609 l (4 123 US gal)	15 490 l (4 092 US gal)	15 490 l (4 092 US gal)	15 490 l (4 092 US gal)
	Center Tank Fuel	8 250 l (2 179 US gal)	8 250 l (2 179 US gal)	8 250 l (2 179 US gal)	8 250 l (2 179 US gal)	8 250 l (2 179 US gal)
	ACT 1	X	X	3 121 l (824 US gal)	X	3 121 l (824 US gal)
	ACT 2	X	X	3 121 l (824 US gal)	X	3 121 l (824 US gal)
	ACT 4 / 4.1 / FWD	X	X	2 186 l (577 US gal)	X	2 186 l (577 US gal)
	Maximum Total Aircraft-Fuel	24 209 l (6 395 US gal)	23 859 l (6 303 US gal)	32 168 l (8 498 US gal)	23 740 l (6 271 US gal)	32 168 l (8 498 US gal)
Pressurized Fuselage Volume (A/C non equipped)	330 m³ (11 654 ft³)					
Passenger Compartment Volume	139 m³ (4 909 ft³)					
Cockpit Volume	9 m³ (318 ft³)					
Usable Volume, FWD CC	13.28 m³ (469 ft³)					
Usable Volume, AFT CC	18.26 m³ (645 ft³)					
Usable Volume, Bulk CC	5.88 m³ (208 ft³)					
Water Volume, FWD CC	15.56 m³ (549 ft³)					

Aircraft Characteristics	
Water Volume, AFT CC	20.77 m^3 (733 ft^3)
Water Volume, Bulk CC	7.76 m^3 (274 ft^3)

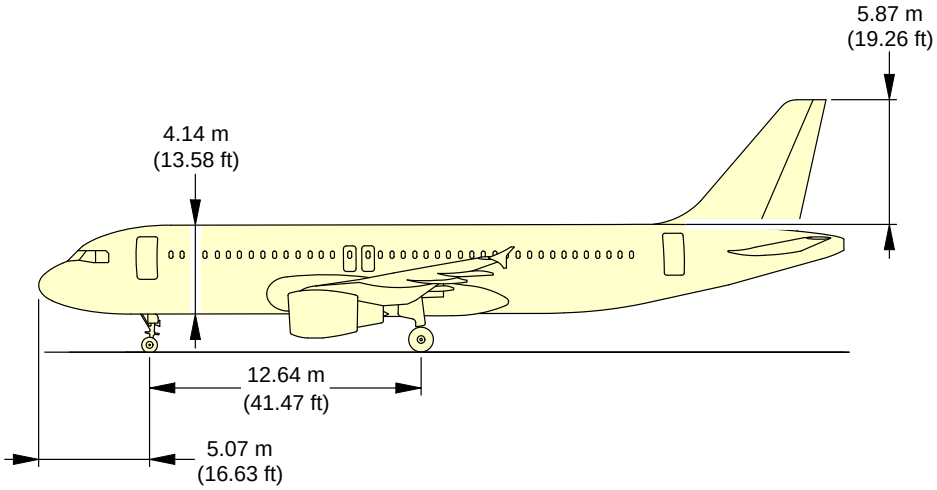
2-2-0 General Aircraft Dimensions

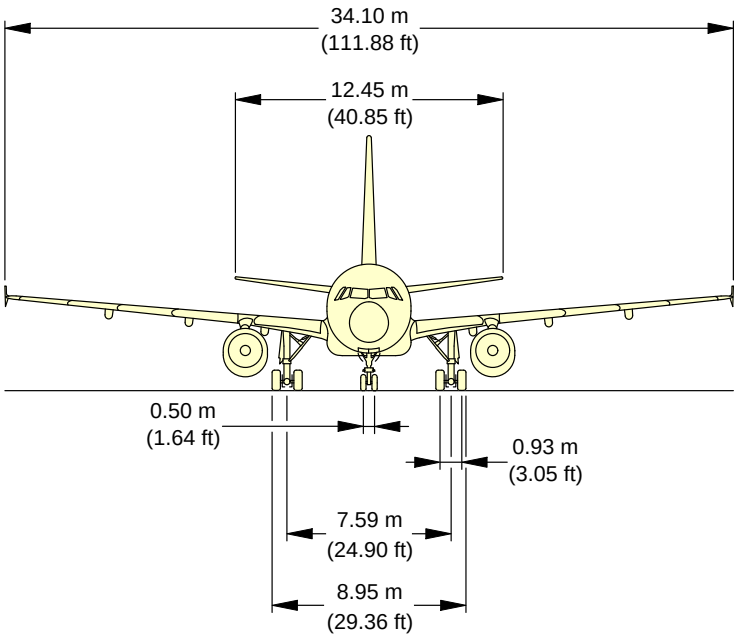
****ON A/C A320-200 A320neo**

General Aircraft Dimensions

1. This section provides general aircraft dimensions.

****ON A/C A320-200**



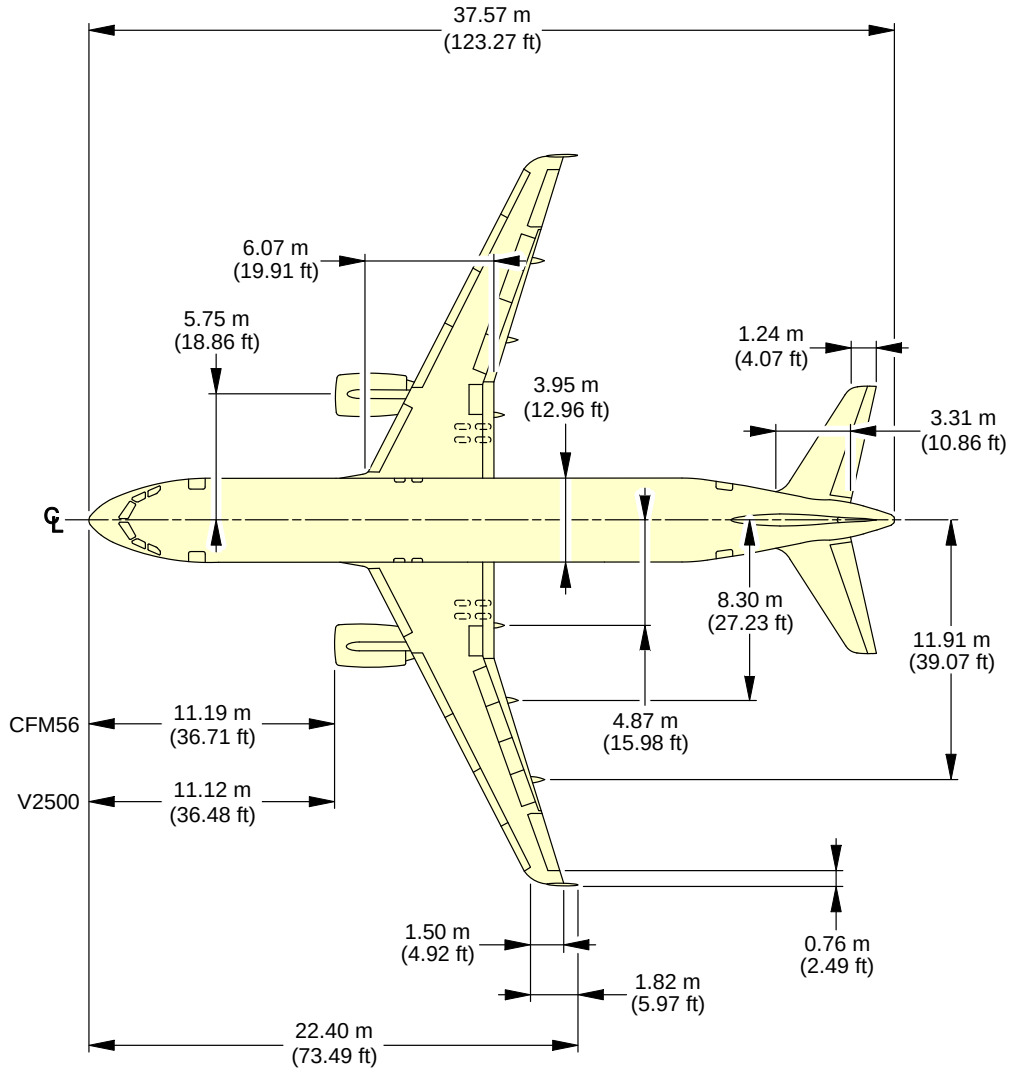


NOTE:
RELATED TO AIRCRAFT ATTITUDE AND WEIGHT.

N_AC_020200_1_0040101_01_04

General Aircraft Dimensions
Wing Tip Fence (Sheet 1 of 4)
FIGURE-2-2-0-991-004-A01

****ON A/C A320-200**

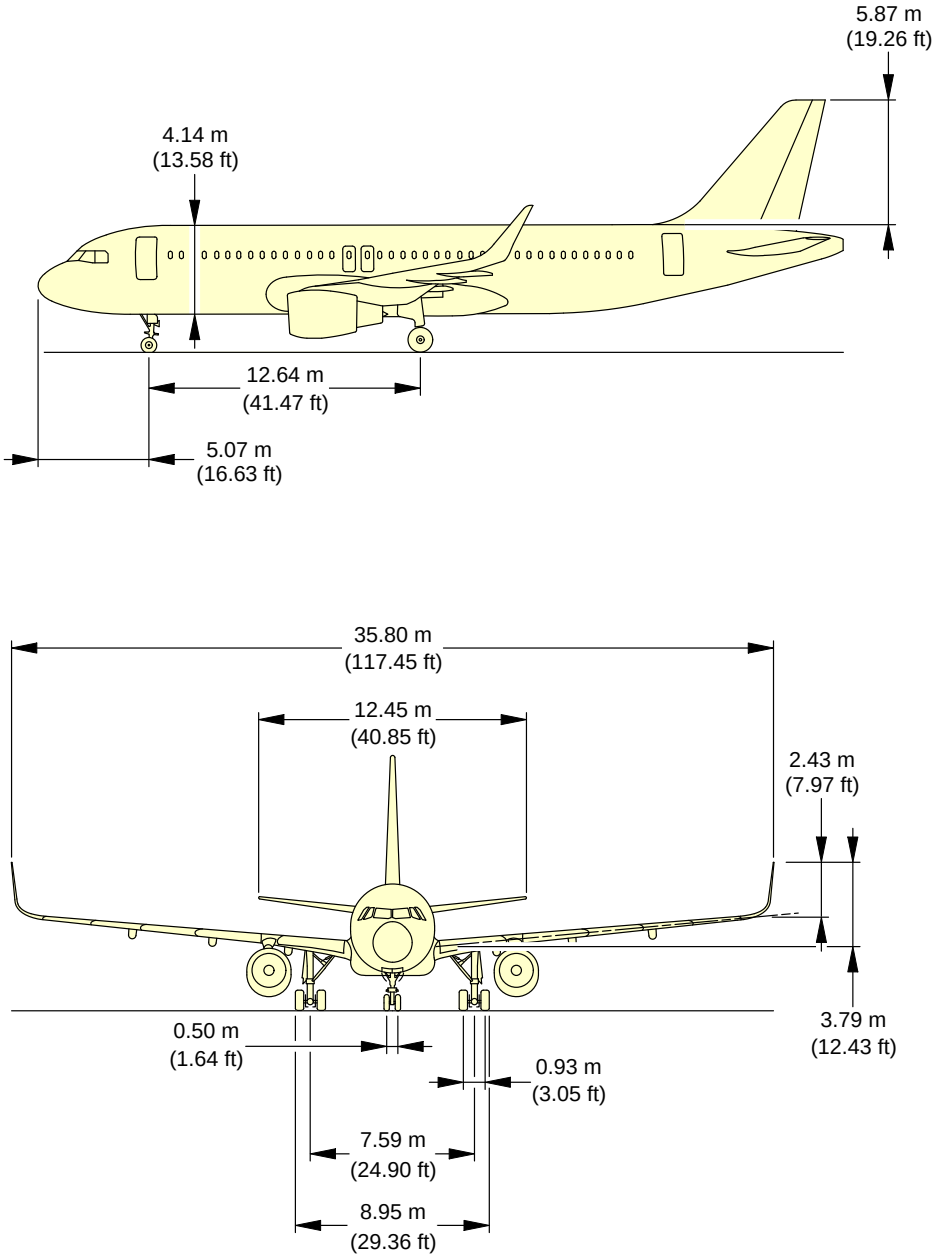


NOTE:
RELATED TO AIRCRAFT ATTITUDE AND WEIGHT.

N_AC_020200_1_0040104_01_02

General Aircraft Dimensions
Wing Tip Fence (Sheet 2 of 4)
FIGURE-2-2-0-991-004-A01

****ON A/C A320-200**

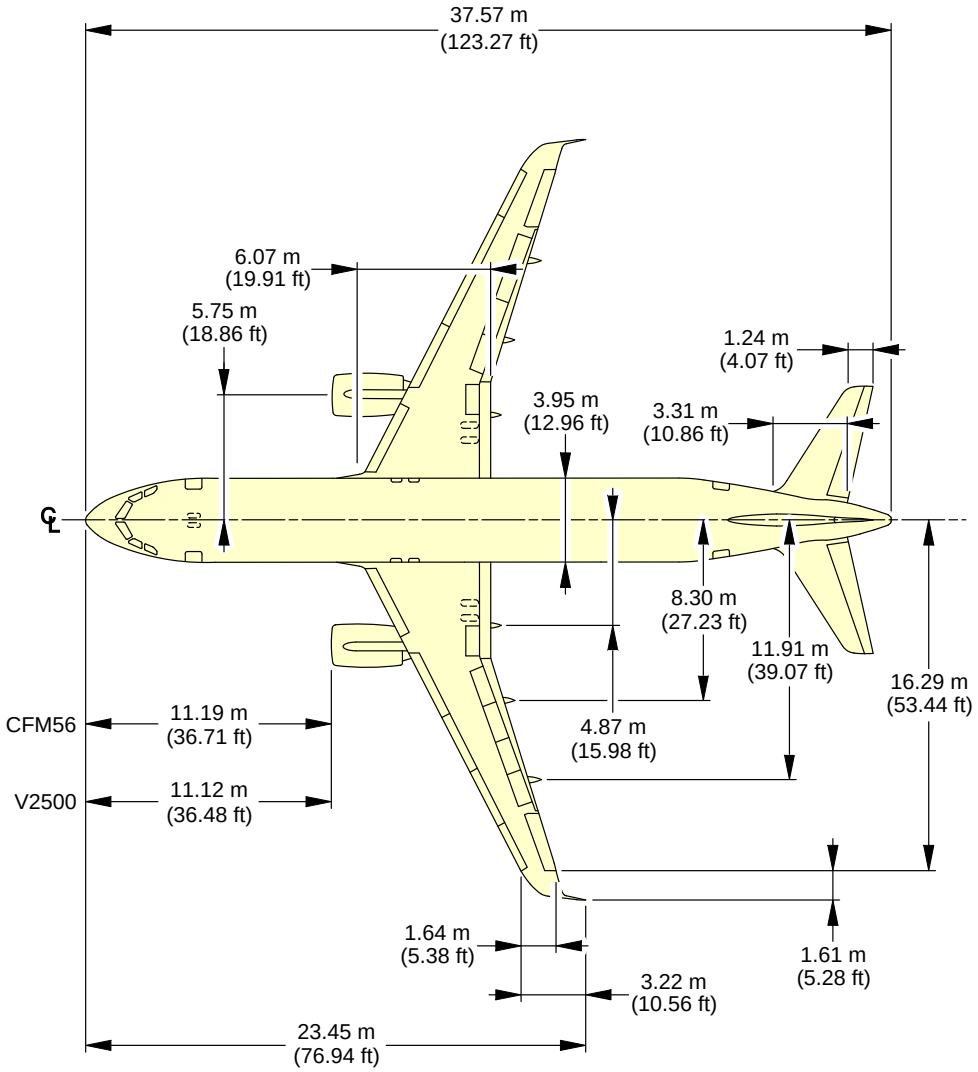


NOTE:
RELATED TO AIRCRAFT ATTITUDE AND WEIGHT.

N_AC_020200_1_0040103_01_02

General Aircraft Dimensions
Sharklet (Sheet 3 of 4)
FIGURE-2-2-0-991-004-A01

****ON A/C A320-200**

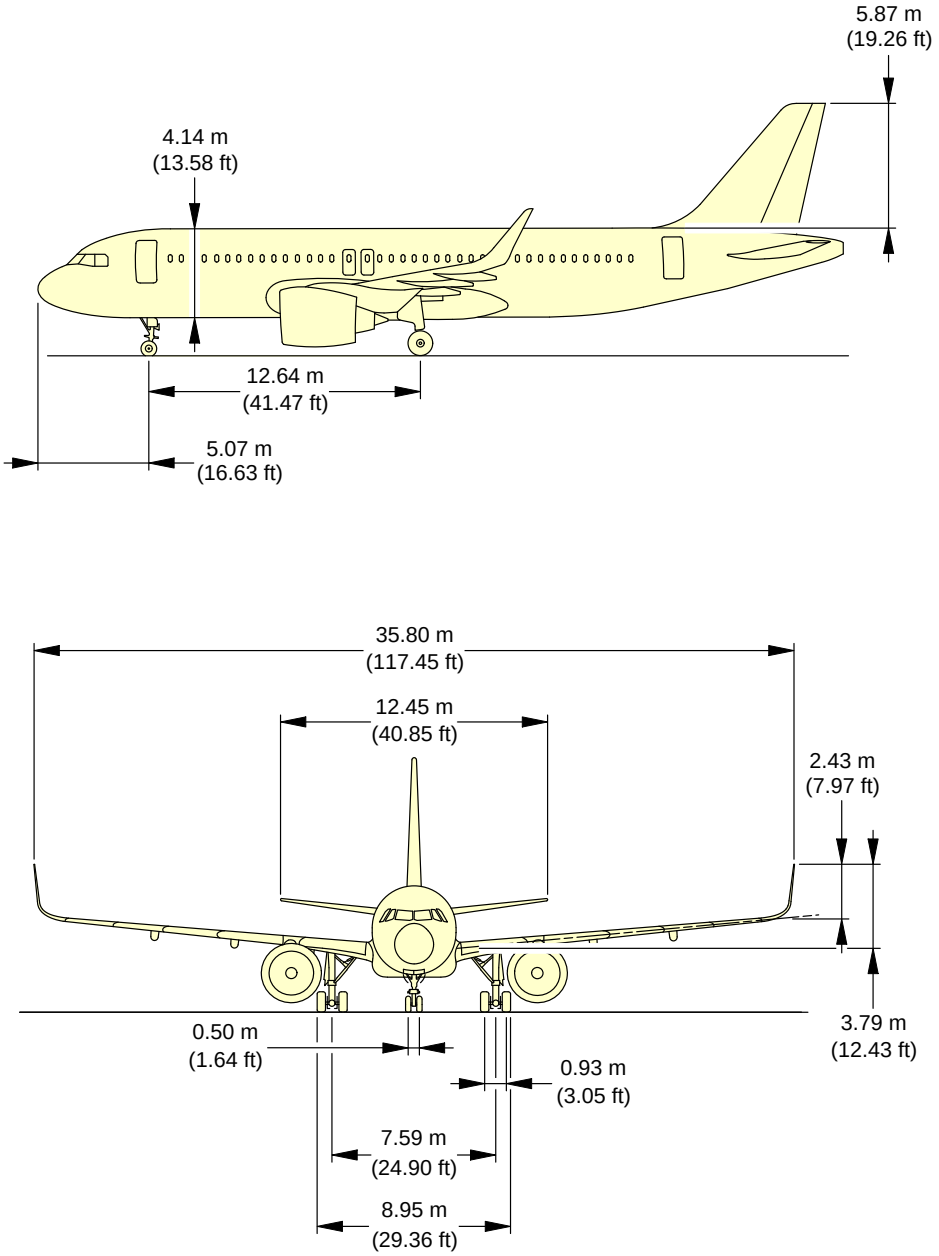


NOTE:
RELATED TO AIRCRAFT ATTITUDE AND WEIGHT.

N_AC_020200_1_0040105_01_02

General Aircraft Dimensions
Sharklet (Sheet 4 of 4)
FIGURE-2-2-0-991-004-A01

****ON A/C A320neo**

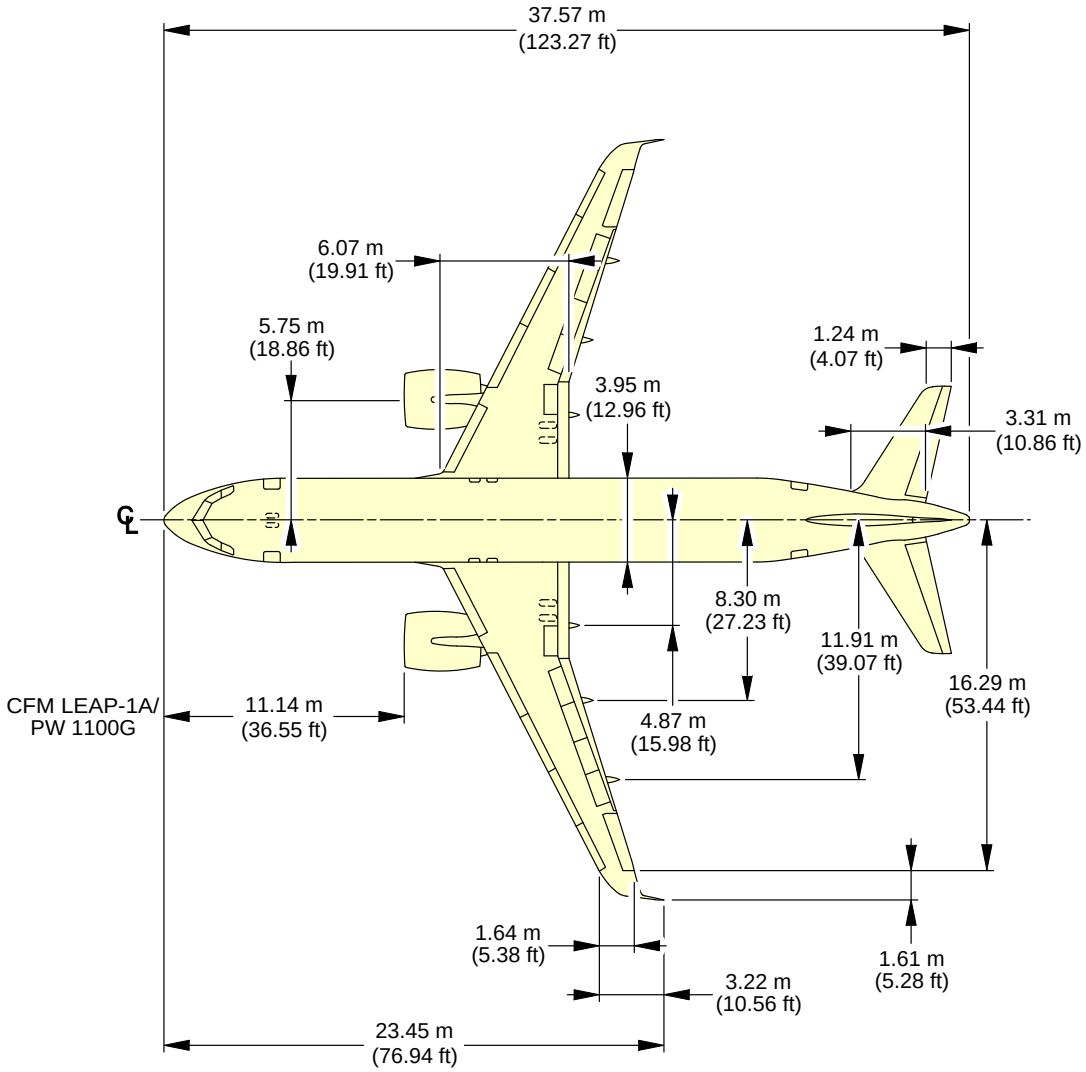


NOTE:
RELATED TO AIRCRAFT ATTITUDE AND WEIGHT.

N_AC_020200_1_0090101_01_01

General Aircraft Dimensions
(Sheet 1 of 2)
FIGURE-2-2-0-991-009-A01

****ON A/C A320neo**



NOTE:
RELATED TO AIRCRAFT ATTITUDE AND WEIGHT.

N_AC_020200_1_0090102_01_01

General Aircraft Dimensions
(Sheet 2 of 2)
FIGURE-2-2-0-991-009-A01

2-3-0 Ground Clearances

****ON A/C A320-200 A320neo**

Ground Clearances

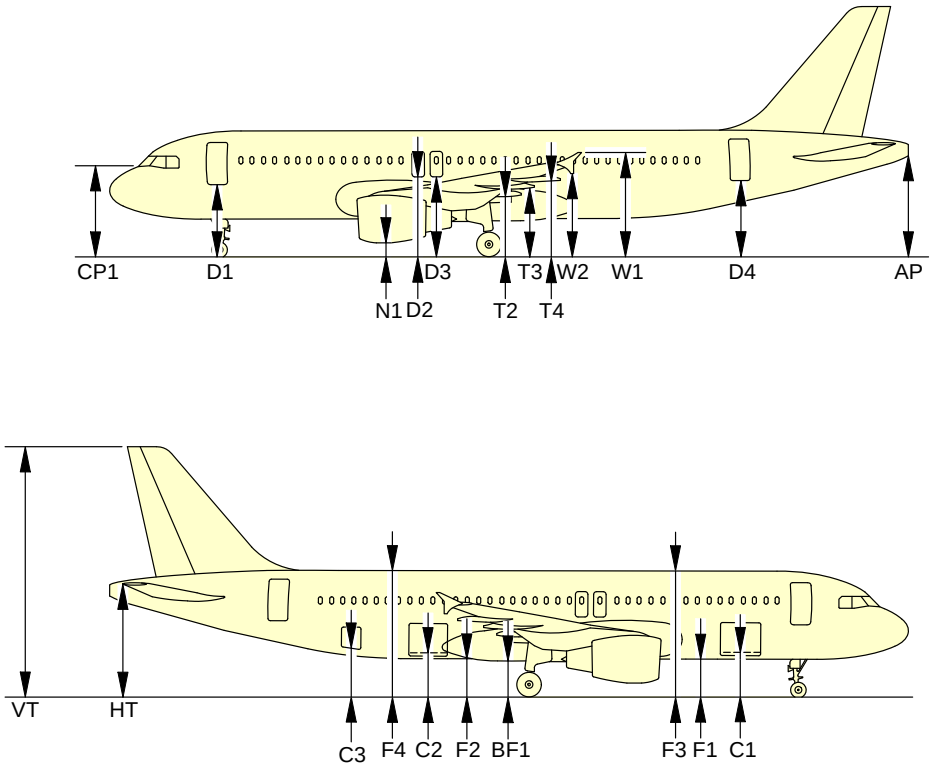
1. This section provides the height of various points of the aircraft, above the ground, for different aircraft configurations.

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

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

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

****ON A/C A320-200**



N_AC_020300_1_0040101_01_09

Ground Clearances
Wing Tip Fence (Sheet 1 of 2)
FIGURE-2-3-0-991-004-A01

****ON A/C A320-200**

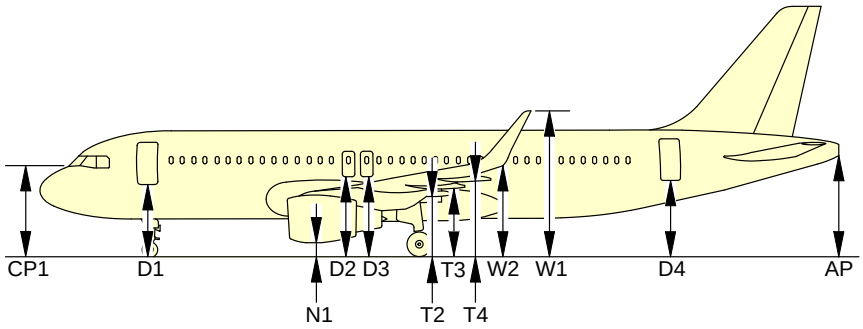
A/C CONFIGURATION			MRW (WV0) 73 900 kg (162 922 lb)				MRW (WV15) 78 400 kg (172 842 lb)				OEW 41 244 kg (90 927 lb)		A/C JACKED FDL = 4.60 m (15.09 ft)	
			FWD CG (17%)		AFT CG (40%)		FWD CG (17%)		AFT CG (36.8%)		CG (26.5%)			
			m	ft	m	ft	m	ft	m	ft	m	ft	m	ft
PASSENGER DOORS	DOOR 1	D1	3.381	11.094	3.482	11.424	3.375	11.074	3.450	11.320	3.482	11.423	4.132	13.556
	EMERGENCY HATCH 1	D2	3.874	12.709	3.888	12.756	3.864	12.678	3.874	12.709	3.969	13.020	4.535	14.878
	EMERGENCY HATCH 2	D3	3.882	12.735	3.888	12.757	3.872	12.703	3.875	12.715	3.976	13.045	4.535	14.878
	DOOR 2	D4	3.615	11.860	3.490	11.450	3.600	11.811	3.503	11.494	3.701	12.143	4.132	13.556
CARGO DOORS	FWD CARGO DOOR	C1	2.010	6.594	2.070	6.791	1.804	5.919	1.857	6.093	1.910	6.265	2.700	8.858
	AFT CARGO DOOR	C2	2.130	6.988	2.080	6.824	1.937	6.354	1.888	6.196	2.039	6.691	2.700	8.858
	BULK CARGO DOOR	C3	2.380	7.808	2.300	7.546	2.187	7.174	2.113	6.933	2.288	7.508	2.920	9.580
REFERENCE POINT	PILOT VIEW	CP1	4.173	13.691	4.308	14.133	4.169	13.676	4.269	14.006	4.276	14.027	4.959	16.269
FUSELAGE	BOTTOM FWD	F1	1.727	5.665	1.786	5.858	1.719	5.640	1.762	5.781	1.825	5.986	2.434	7.985
	BOTTOM AFT	F2	1.856	6.088	1.790	5.872	1.843	6.047	1.792	5.878	1.946	6.383	2.434	7.985
	TOP FWD	F3	5.872	19.266	5.927	19.444	5.865	19.241	5.904	19.371	5.970	19.586	6.575	21.571
	TOP AFT	F4	6.001	19.689	5.931	19.458	5.989	19.647	5.934	19.467	6.091	19.983	6.575	21.571
WING	BELLY FAIRING	BF1	1.631	5.352	1.610	5.283	1.621	5.317	1.603	5.259	1.724	5.656	2.256	7.401
	FLAP TRACK 2	T2	2.626	8.614	2.602	8.538	2.615	8.578	2.595	8.515	2.718	8.918	3.248	10.656
	FLAP TRACK 3	T3	3.060	10.040	3.032	9.946	3.049	10.003	3.026	9.927	3.152	10.342	3.677	12.064
	FLAP TRACK 4	T4	3.399	11.152	3.360	11.023	3.388	11.114	3.356	11.011	3.491	11.452	4.005	13.140
	WING TIP FENCE TOP	W1	4.767	15.641	4.709	15.448	4.755	15.601	4.709	15.449	4.858	15.937	5.353	17.562
	WING TIP FENCE BOTTOM	W2	3.920	12.861	3.870	12.697	3.783	12.412	3.738	12.265	3.886	12.748	4.490	14.731
TAILPLANE	HORIZONTAL TAIL PLANE	HT	5.420	17.782	5.290	17.355	5.456	17.899	5.315	17.438	5.555	18.226	5.930	19.455
	APU EXHAUST	AP	4.761	15.620	4.563	14.972	4.743	15.562	4.592	15.064	4.843	15.888	5.203	17.070
	VERTICAL TAIL PLANE	VT	11.996	39.357	11.805	38.730	11.979	39.299	11.832	38.819	12.078	39.626	12.445	40.830
ENGINE/ NACELLE	CFM 5A NACELLE LOW POINT	N1	0.577	1.893	0.592	1.942	0.568	1.864	0.577	1.893	0.672	2.205	1.239	4.065
	CFM 5B NACELLE LOW POINT	N1	0.577	1.893	0.592	1.942	0.568	1.864	0.577	1.893	0.672	2.205	1.239	4.065
	V2500 NACELLE LOW POINT	N1	0.680	2.231	0.769	2.524	0.710	2.329	0.756	2.479	0.854	2.802	1.830	6.004

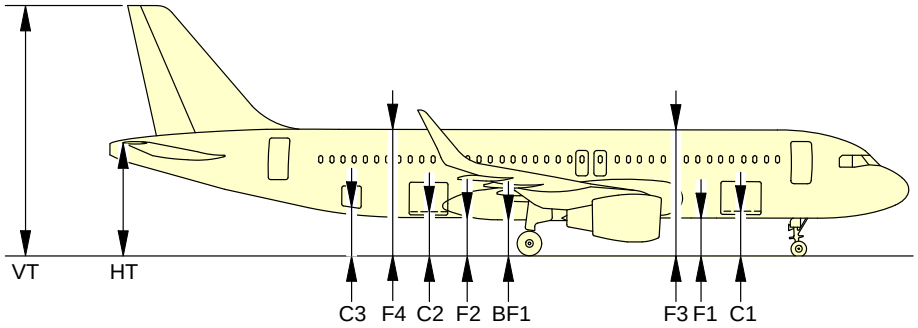
NOTE:
PASSENGER AND CARGO DOOR GROUND CLEARANCES ARE MEASURED FROM THE CENTER OF THE DOOR SILL AND FROM FLOOR LEVEL.

N_AC_020300_1_0040103_01_00

Ground Clearances
Wing Tip Fence2 of 2)
2-3-0-991-004-A01

****ON A/C A320-200**





N_AC_020300_1_0290101_01_04

Ground Clearances
Sharklet (Sheet 1 of 2)
FIGURE-2-3-0-991-029-A01

****ON A/C A320-200**

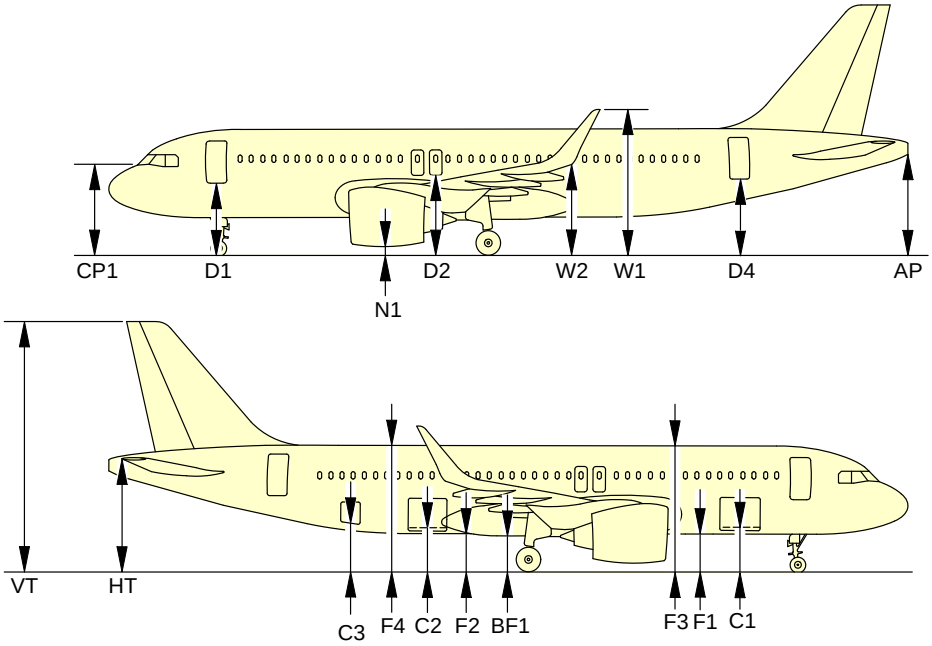
A/C CONFIGURATION			MRW (WV0) 73 900 kg (162 922 lb)				MRW (WV15) 78 400 kg (172 842 lb)				OEW 41 244 kg (90 927 lb)		A/C JACKED FDL = 4.60 m (15.09 ft)	
			FWD CG (17%)		AFT CG (40%)		FWD CG (17%)		AFT CG (36.8%)		CG (26.5%)			
			m	ft	m	ft	m	ft	m	ft	m	ft	m	ft
PASSENGER DOORS	DOOR 1	D1	3.381	11.094	3.482	11.424	3.375	11.074	3.450	11.320	3.482	11.423	4.132	13.556
	EMERGENCY HATCH 1	D2	3.874	12.709	3.888	12.756	3.864	12.678	3.874	12.709	3.969	13.020	4.535	14.878
	EMERGENCY HATCH 2	D3	3.882	12.735	3.888	12.757	3.872	12.703	3.875	12.715	3.976	13.045	4.535	14.878
	DOOR 2	D4	3.615	11.860	3.490	11.450	3.600	11.811	3.503	11.494	3.701	12.143	4.132	13.556
CARGO DOORS	FWD CARGO DOOR	C1	2.010	6.594	2.070	6.791	1.804	5.919	1.857	6.093	1.910	6.265	2.700	8.858
	AFT CARGO DOOR	C2	2.130	6.988	2.080	6.824	1.937	6.354	1.888	6.196	2.039	6.691	2.700	8.858
	BULK CARGO DOOR	C3	2.380	7.808	2.300	7.546	2.187	7.174	2.113	6.933	2.288	7.508	2.920	9.580
REFERENCE POINT	PILOT VIEW	CP1	4.173	13.691	4.308	14.133	4.169	13.676	4.269	14.006	4.276	14.027	4.959	16.269
FUSELAGE	BOTTOM FWD	F1	1.727	5.665	1.786	5.858	1.719	5.640	1.762	5.781	1.825	5.986	2.434	7.985
	BOTTOM AFT	F2	1.856	6.088	1.790	5.872	1.843	6.047	1.792	5.878	1.946	6.383	2.434	7.985
	TOP FWD	F3	5.872	19.266	5.927	19.444	5.865	19.241	5.904	19.371	5.970	19.586	6.575	21.571
	TOP AFT	F4	6.001	19.689	5.931	19.458	5.989	19.647	5.934	19.467	6.091	19.983	6.575	21.571
	BELLY FAIRING	BF1	1.631	5.352	1.610	5.283	1.621	5.317	1.603	5.259	1.724	5.656	2.256	7.401
WING	FLAP TRACK 2	T2	2.626	8.614	2.602	8.538	2.615	8.578	2.595	8.515	2.718	8.918	3.248	10.656
	FLAP TRACK 3	T3	3.060	10.040	3.032	9.946	3.049	10.003	3.026	9.927	3.152	10.342	3.677	12.064
	FLAP TRACK 4	T4	3.399	11.152	3.360	11.023	3.388	11.114	3.356	11.011	3.491	11.452	4.005	13.140
	SHARKLET TOP	W1	6.707	22.005	6.649	21.814	6.695	21.965	6.649	21.814	6.798	22.303	7.293	23.927
	SHARKLET BOTTOM	W2	4.067	13.343	4.009	13.153	4.055	13.304	4.009	13.153	4.158	13.642	4.653	15.266
TAILPLANE	HORIZONTAL TAIL PLANE	HT	5.420	17.782	5.290	17.355	5.456	17.899	5.315	17.438	5.555	18.226	5.930	19.455
	APU EXHAUST	AP	4.761	15.620	4.563	14.972	4.743	15.562	4.592	15.064	4.843	15.888	5.203	17.070
	VERTICAL TAIL PLANE	VT	11.996	39.357	11.805	38.730	11.979	39.299	11.832	38.819	12.078	39.626	12.445	40.830
ENGINE/ NACELLE	CFM 5A NACELLE LOW POINT	N1	0.577	1.893	0.592	1.942	0.568	1.864	0.577	1.893	0.672	2.205	1.239	4.065
	CFM 5B NACELLE LOW POINT	N1	0.577	1.893	0.592	1.942	0.568	1.864	0.577	1.893	0.672	2.205	1.239	4.065
	V2500 NACELLE LOW POINT	N1	0.680	2.231	0.769	2.524	0.710	2.329	0.756	2.479	0.854	2.802	1.830	6.004

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

N_AC_020300_1_0290103_01_00

Ground Clearances
Sharklet2 of 2)
2-3-0-991-029-A01

****ON A/C A320neo**



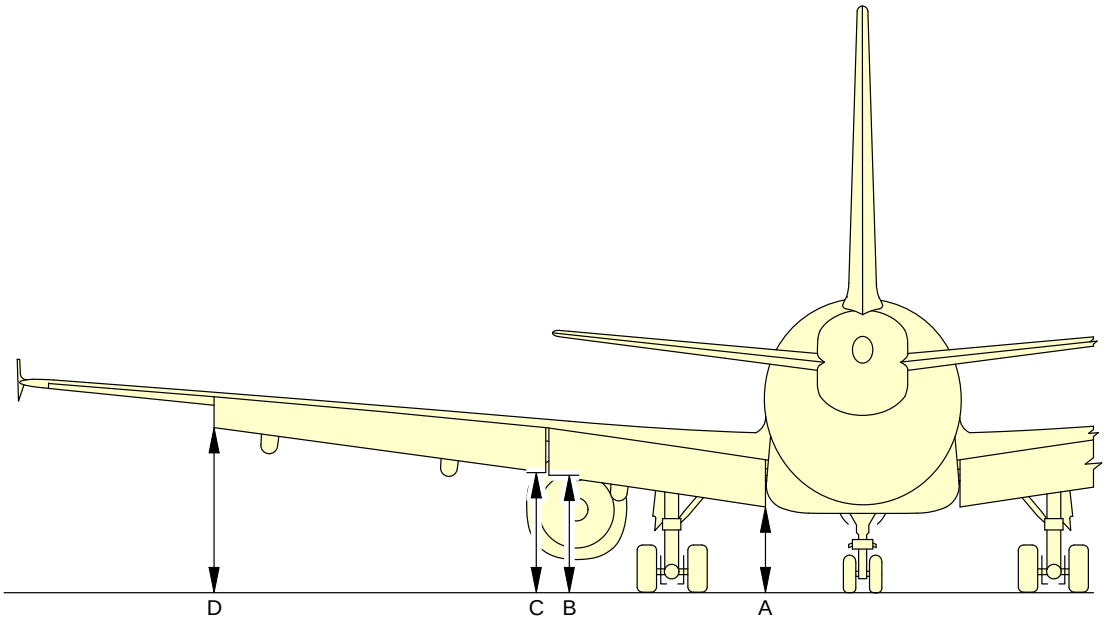
A/C CONFIGURATION		MRW				41 000 kg (90 389 lb)		A/C JACKED FDL = 4.60 m (15.09 ft)	
		FWD CG (17%)		AFT CG (36.8%)		CG (26.5%)			
		m	ft	m	ft	m	ft	m	ft
DOORS	D1	3.38	11.09	3.45	11.32	3.48	11.42	4.13	13.55
	D2	3.87	12.70	3.88	12.73	3.98	13.06	4.54	14.89
	D4	3.60	11.81	3.50	11.48	3.70	12.14	4.13	13.55
	C1	1.98	6.50	2.04	6.69	2.09	6.86	2.71	8.89
	C2	2.12	6.96	2.07	6.79	2.22	7.28	2.71	8.89
	C3	2.19	7.19	2.11	6.92	2.29	7.51	2.75	9.02
FUSELAGE	F1	1.72	5.64	1.76	5.77	1.82	5.97	2.43	7.97
	F2	1.84	6.04	1.79	5.87	1.95	6.40	2.43	7.97
	F3	5.86	19.23	5.90	19.36	5.97	19.59	6.58	21.59
	F4	5.99	19.65	5.93	19.46	6.09	19.98	6.58	21.59
	BF1	1.62	5.31	1.60	5.25	1.72	5.64	2.26	7.41
	CP1	4.17	13.68	4.27	14.01	4.28	14.04	4.96	16.27
WINGS	W1	6.70	21.98	6.65	21.82	6.80	22.31	7.25	23.79
	W2	4.05	13.29	4.01	13.16	4.16	13.65	4.65	15.26
TAILPLANE	HT	5.46	17.91	5.32	17.45	5.56	18.24	5.93	19.46
	AP	4.74	15.55	4.59	15.06	4.84	15.88	5.20	17.06
	VT	11.98	39.30	11.83	38.81	12.08	39.63	12.45	40.85
ENGINE/ NACELLE	N1 (CFM LEAP-1A)	0.46	1.51	0.47	1.54	0.56	1.84	1.13	3.71
	N1 (PW 1100G)	0.46	1.51	0.47	1.54	0.56	1.84	1.13	3.71

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

N_AC_020300_1_0320101_01_02

Ground Clearances
FIGURE-2-3-0-991-032-A01

****ON A/C A320-200**

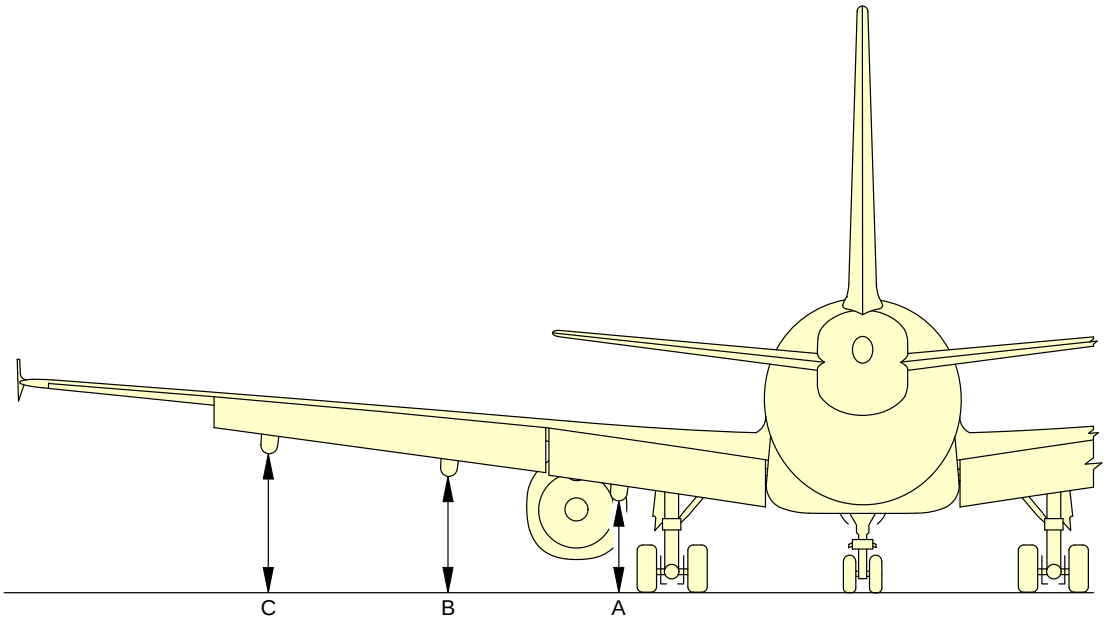


FLAPS EXTENDED CFM 56 ENGINE							
DESCRIPTION		A/C IN MAINTENANCE CONFIGURATION MID CG		MAXIMUM RAMP WEIGHT FWD CG		MAXIMUM RAMP WEIGHT AFT CG	
		m	ft	m	ft	m	ft
FLAP 1 INBD	A	2.09	6.86	1.99	6.53	1.96	6.43
FLAP 1 OUTBD	B	2.82	9.25	2.71	8.89	2.69	8.83
FLAP 2 INBD	C	2.86	9.38	2.75	9.02	2.72	8.92
FLAP 2 OUTBD	D	3.68	12.07	3.56	11.68	3.52	11.55

N_AC_020300_1_0160101_01_01

Ground Clearances
Trailing Edge Flaps - Extended
FIGURE-2-3-0-991-016-A01

****ON A/C A320-200**

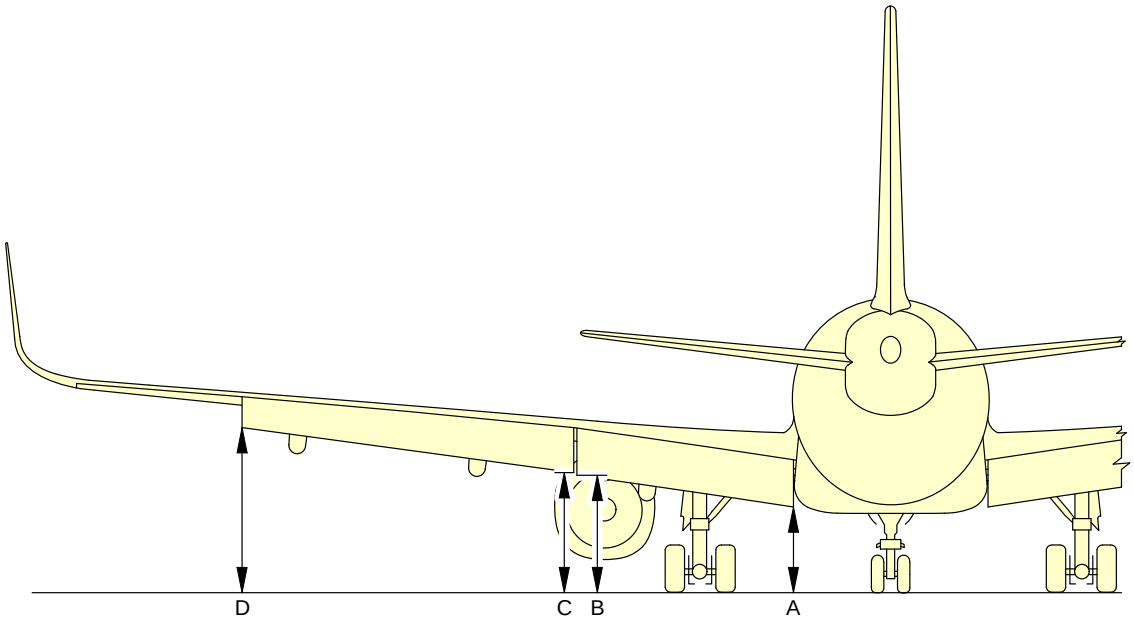


FLAP TRACKS EXTENDED CFM 56 ENGINE							
DESCRIPTION		A/C IN MAINTENANCE CONFIGURATION MID CG		MAXIMUM RAMP WEIGHT FWD CG		MAXIMUM RAMP WEIGHT AFT CG	
		m	ft	m	ft	m	ft
FLAP TRACK 2	A	2.18	7.15	2.08	6.82	2.05	6.73
FLAP TRACK 3	B	2.66	8.73	2.55	8.37	2.52	8.27
FLAP TRACK 4	C	3.10	10.17	2.99	9.81	2.95	9.68

N_AC_020300_1_0410101_01_00

Ground Clearances
Flap Tracks - Extended
FIGURE-2-3-0-991-041-A01

****ON A/C A320-200 A320neo**

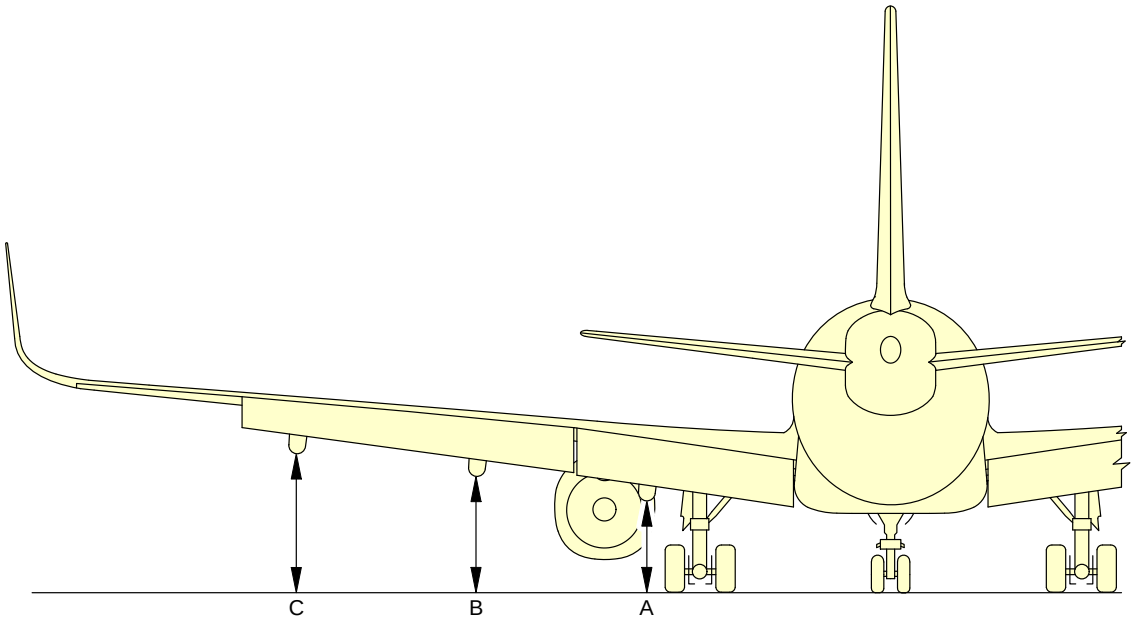


FLAPS EXTENDED IAE V2500, PW 1100G AND CFM LEAP-1A ENGINES							
DESCRIPTION		A/C IN MAINTENANCE CONFIGURATION MID CG		MAXIMUM RAMP WEIGHT FWD CG		MAXIMUM RAMP WEIGHT AFT CG	
		m	ft	m	ft	m	ft
FLAP 1 INBD	A	2.05	6.73	1.94	6.37	1.92	6.30
FLAP 1 OUTBD	B	2.77	9.09	2.66	8.73	2.64	8.66
FLAP 2 INBD	C	2.81	9.22	2.70	8.86	2.68	8.78
FLAP 2 OUTBD	D	3.64	11.94	3.53	11.58	3.49	11.45

N_AC_020300_1_0170101_01_02

Ground Clearances
Trailing Edge Flaps - Extended
FIGURE-2-3-0-991-017-A01

****ON A/C A320-200 A320neo**

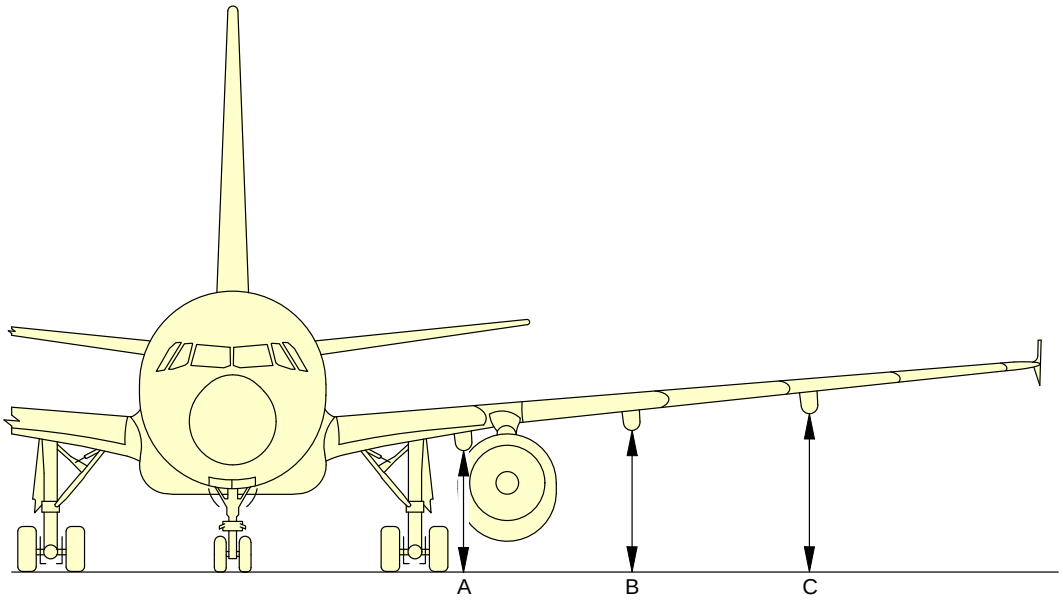


FLAP TRACKS EXTENDED IAE V2500, PW 1100G AND CFM LEAP-1A ENGINES							
DESCRIPTION		A/C IN MAINTENANCE CONFIGURATION MID CG		MAXIMUM RAMP WEIGHT FWD CG		MAXIMUM RAMP WEIGHT AFT CG	
		m	ft	m	ft	m	ft
FLAP TRACK 2	A	2.09	6.86	1.98	6.49	1.95	6.40
FLAP TRACK 3	B	2.59	8.50	2.48	8.14	2.44	8.01
FLAP TRACK 4	C	3.03	9.94	2.92	9.58	2.88	9.45

N_AC_020300_1_0420101_01_00

Ground Clearances
Flap Tracks - Extended
FIGURE-2-3-0-991-042-A01

****ON A/C A320-200 A320neo**

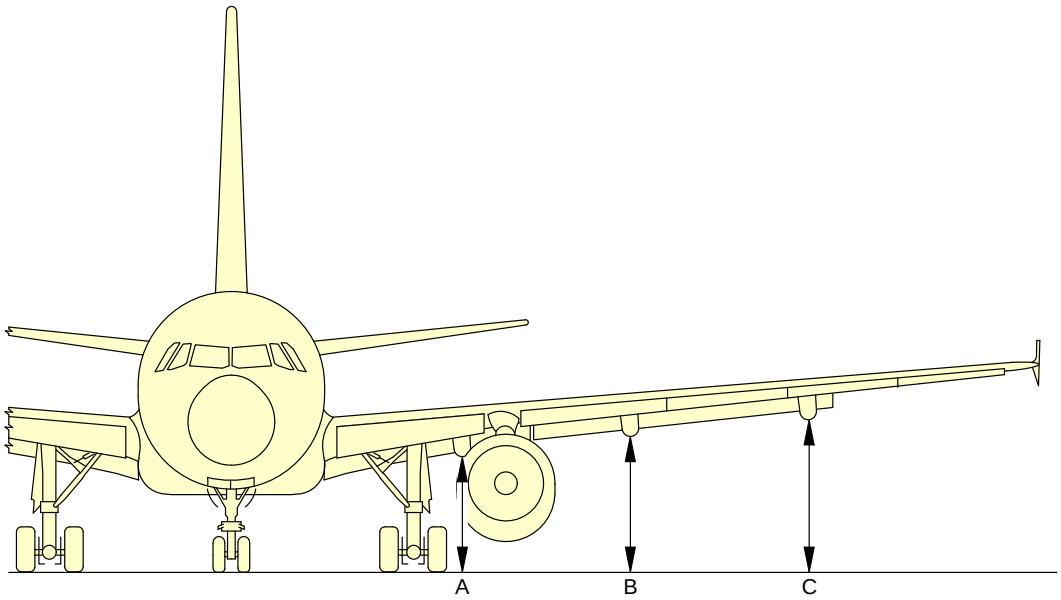


FLAP TRACKS RETRACTED							
DESCRIPTION		A/C IN MAINTENANCE CONFIGURATION MID CG		MAXIMUM RAMP WEIGHT FWD CG		MAXIMUM RAMP WEIGHT AFT CG	
		m	ft	m	ft	m	ft
FLAP TRACK 2	A	2.70	8.86	2.60	8.53	2.58	8.46
FLAP TRACK 3	B	3.10	10.17	3.00	9.84	2.97	9.74
FLAP TRACK 4	C	3.50	11.48	3.39	11.12	3.36	11.02

N_AC_020300_1_0180101_01_01

Ground Clearances
Flap Tracks - Retracted
FIGURE-2-3-0-991-018-A01

****ON A/C A320-200 A320neo**

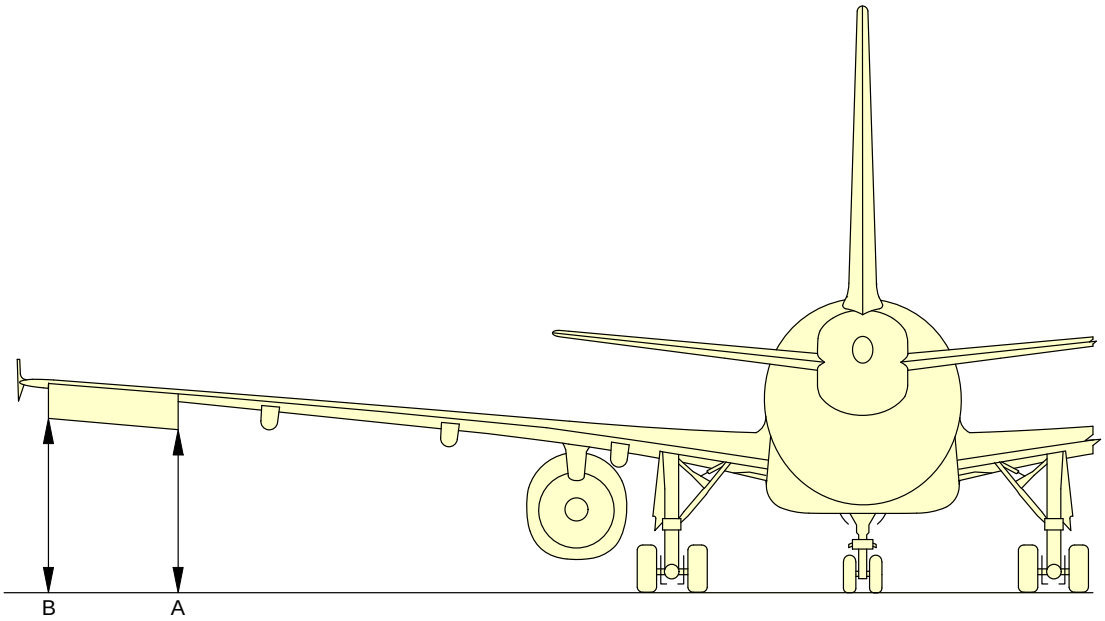


FLAP TRACKS 1+F							
DESCRIPTION		A/C IN MAINTENANCE CONFIGURATION MID CG		MAXIMUM RAMP WEIGHT FWD CG		MAXIMUM RAMP WEIGHT AFT CG	
		m	ft	m	ft	m	ft
FLAP TRACK 2	A	1.95	6.40	1.85	6.07	1.83	6.00
FLAP TRACK 3	B	2.31	7.58	2.21	7.25	2.18	7.15
FLAP TRACK 4	C	2.89	9.48	2.78	9.12	2.75	9.02

N_AC_020300_1_0430101_01_00

Ground Clearances
Flap Tracks - 1 + F
FIGURE-2-3-0-991-043-A01

****ON A/C A320-200 A320neo**

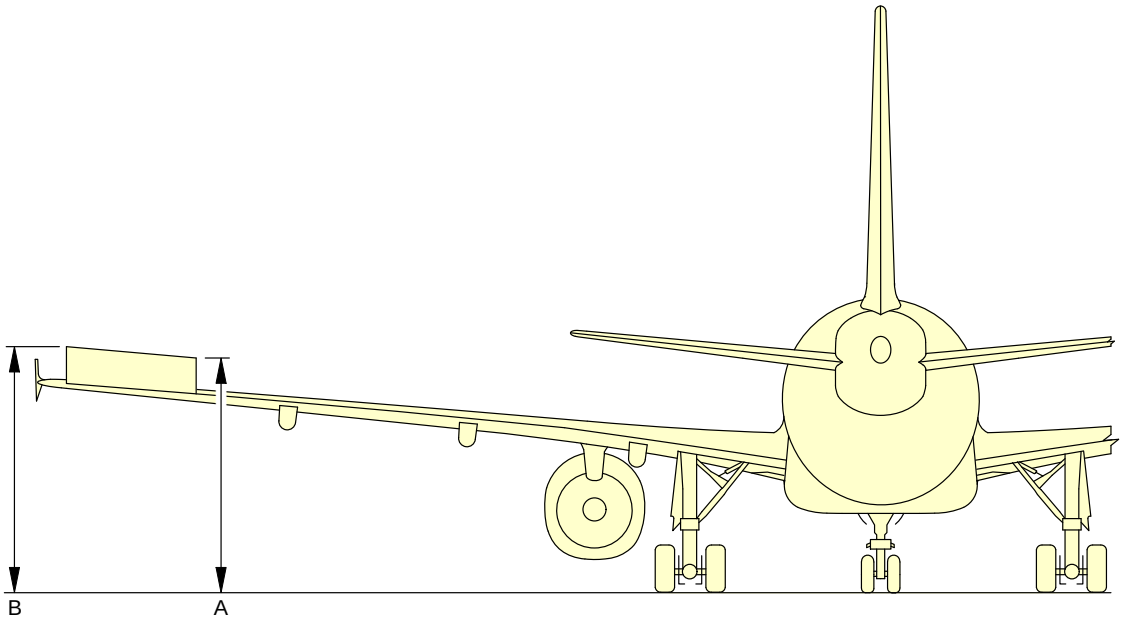


AILERON DOWN							
DESCRIPTION		A/C IN MAINTENANCE CONFIGURATION MID CG		MAXIMUM RAMP WEIGHT FWD CG		MAXIMUM RAMP WEIGHT AFT CG	
		m	ft	m	ft	m	ft
AILERON INBD	A	3.83	12.57	3.72	12.21	3.68	12.07
AILERON OUTBD	B	4.17	13.68	4.06	13.32	4.01	13.16

N_AC_020300_1_0190101_01_01

Ground Clearances
Aileron Down
FIGURE-2-3-0-991-019-A01

****ON A/C A320-200 A320neo**

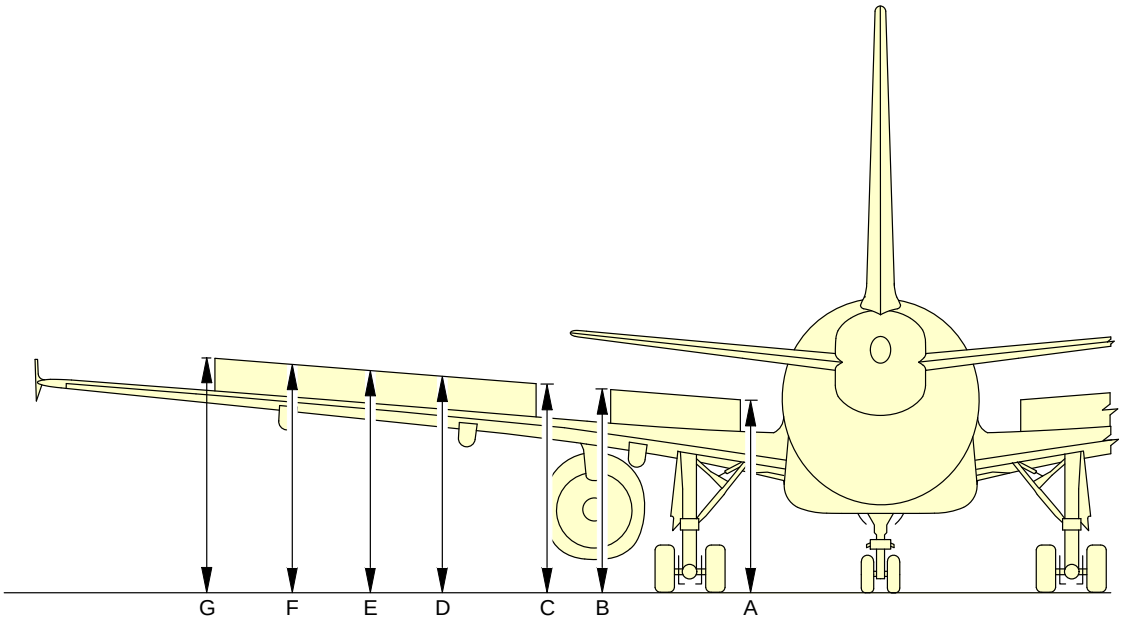


AILERON UP							
DESCRIPTION		A/C IN MAINTENANCE CONFIGURATION MID CG		MAXIMUM RAMP WEIGHT FWD CG		MAXIMUM RAMP WEIGHT AFT CG	
		m	ft	m	ft	m	ft
AILERON INBD	A	4.35	14.27	4.24	13.91	4.20	13.78
AILERON OUTBD	B	4.55	14.93	4.44	14.57	4.39	14.40

N_AC_020300_1_0440101_01_00

Ground Clearances
Aileron Up
FIGURE-2-3-0-991-044-A01

****ON A/C A320-200 A320neo**

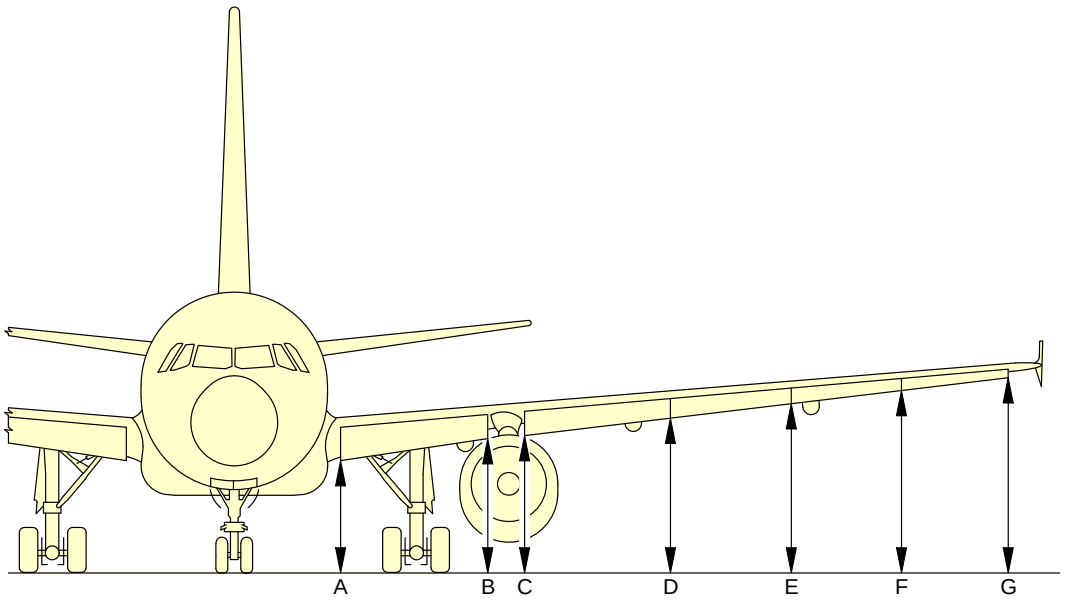


SPOILERS EXTENDED							
DESCRIPTION		A/C IN MAINTENANCE CONFIGURATION MID CG		MAXIMUM RAMP WEIGHT FWD CG		MAXIMUM RAMP WEIGHT AFT CG	
		m	ft	m	ft	m	ft
SPOILER 1 INBD	A	3.75	12.30	3.64	11.94	3.63	11.91
SPOILER 1 OUTBD	B	4.01	13.16	3.90	12.80	3.88	12.73
SPOILER 2 INBD	C	4.07	13.35	3.96	12.99	3.94	12.93
SPOILER 2/3	D	4.21	13.81	4.11	13.48	4.08	13.39
SPOILER 3/4	E	4.35	14.27	4.24	13.91	4.21	13.81
SPOILER 4/5	F	4.47	14.67	4.36	14.31	4.33	14.21
SPOILER 5 OUTBD	G	4.59	15.06	4.48	14.70	4.45	14.60

N_AC_020300_1_0200101_01_01

Ground Clearances
Spoilers - Extended
FIGURE-2-3-0-991-020-A01

****ON A/C A320-200 A320neo**



LEADING EDGE SLATS EXTENDED							
DESCRIPTION		A/C IN MAINTENANCE CONFIGURATION MID CG		MAXIMUM RAMP WEIGHT FWD CG		MAXIMUM RAMP WEIGHT AFT CG	
		m	ft	m	ft	m	ft
SLAT 1 INBD	A	2.57	8.43	2.48	8.14	2.50	8.20
SLAT 1 OUTBD	B	2.98	9.78	2.88	9.45	2.90	9.51
SLAT 2 INBD	C	3.07	10.07	2.97	9.74	2.98	9.78
SLAT 2/3	D	3.36	11.02	3.26	10.70	3.26	10.70
SLAT 3/4	E	3.61	11.84	3.51	11.52	3.50	11.48
SLAT 4/5	F	3.86	12.66	3.76	12.34	3.73	12.24
SLAT 5 OUTBD	G	4.09	13.42	3.98	13.06	3.95	12.96

N_AC_020300_1_0210101_01_01

Ground Clearances
Leading Edge Slats - Extended
FIGURE-2-3-0-991-021-A01

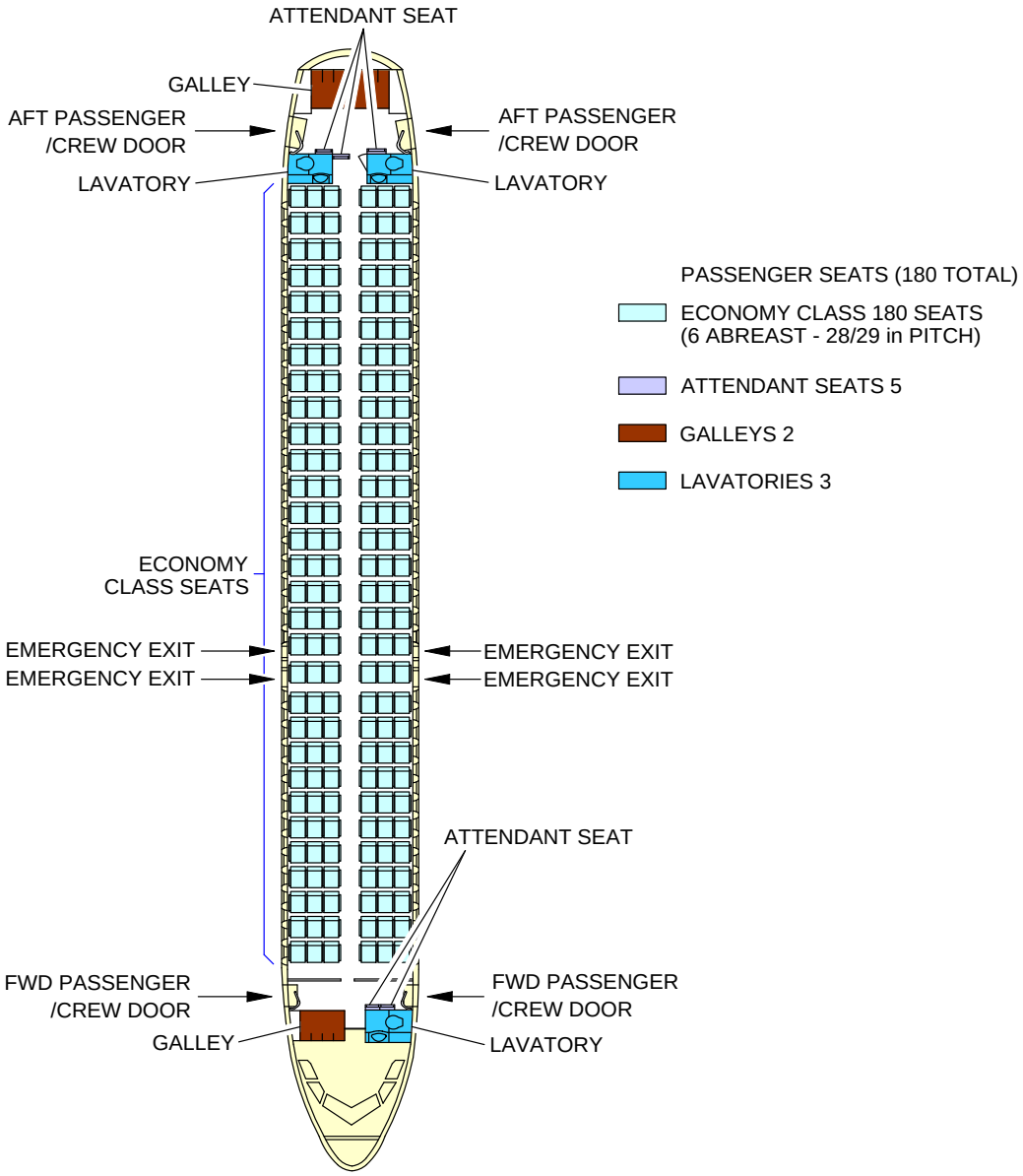
2-4-1 Interior Arrangements - Plan View

****ON A/C A320-200 A320neo**

Interior Arrangements - Plan View

1. This section provides the typical interior configuration.

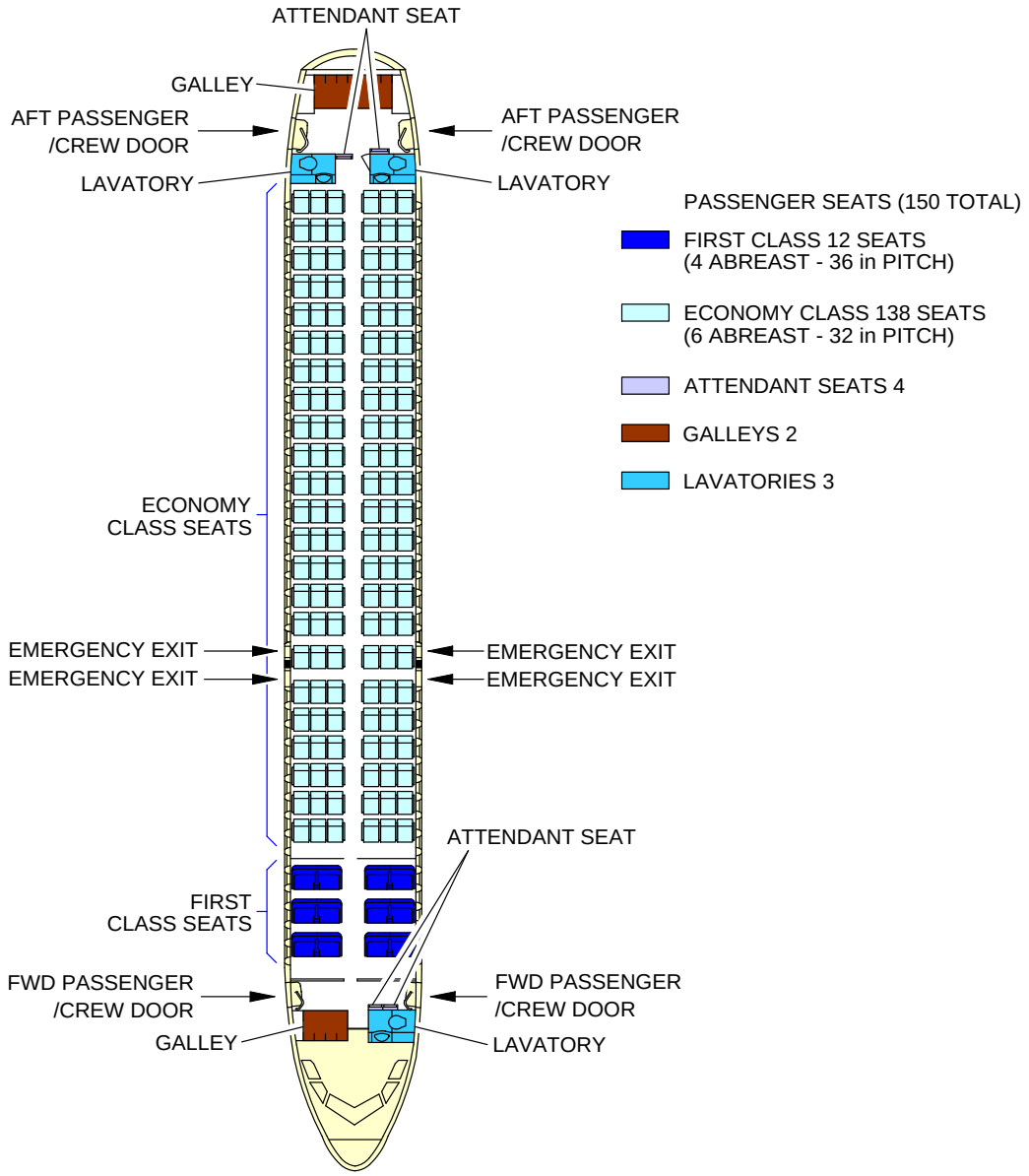
****ON A/C A320-200 A320neo**



N_AC_020401_1_0030101_01_03

Interior Arrangements - Plan View
Typical Configuration - Single-Class, High Density
FIGURE-2-4-1-991-003-A01

**ON A/C A320-200 A320neo



N_AC_020401_1_0090101_01_01

Interior Arrangements - Plan View
Typical Configuration - Two-Class
FIGURE-2-4-1-991-009-A01

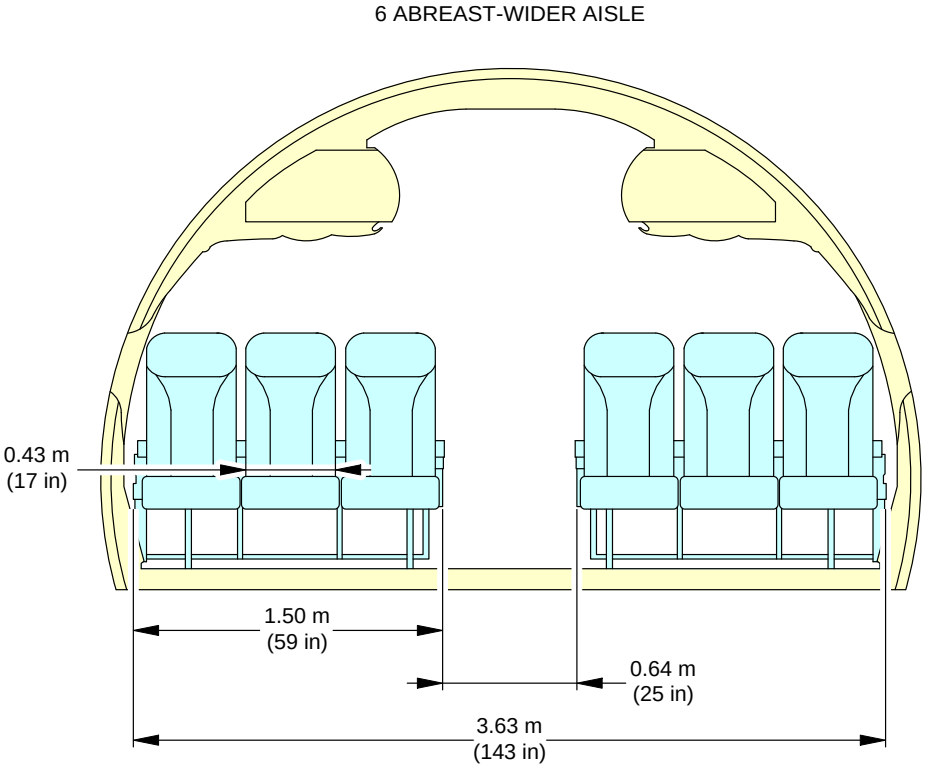
2-5-0 Interior Arrangements - Cross Section

****ON A/C A320-200 A320neo**

Interior Arrangements - Cross Section

1. This section provides the typical configuration.

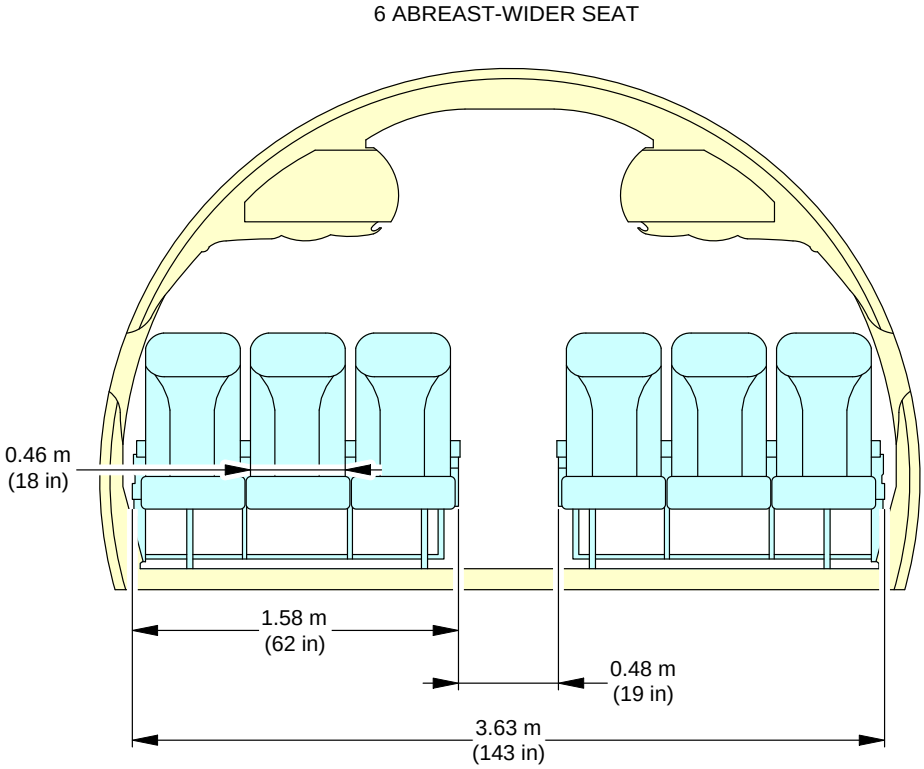
****ON A/C A320-200 A320neo**



N_AC_020500_1_0050101_01_01

Interior Arrangements - Cross Section
Economy Class, 6 Abreast - Wider Aisle (Sheet 1 of 2)
FIGURE-2-5-0-991-005-A01

****ON A/C A320-200 A320neo**

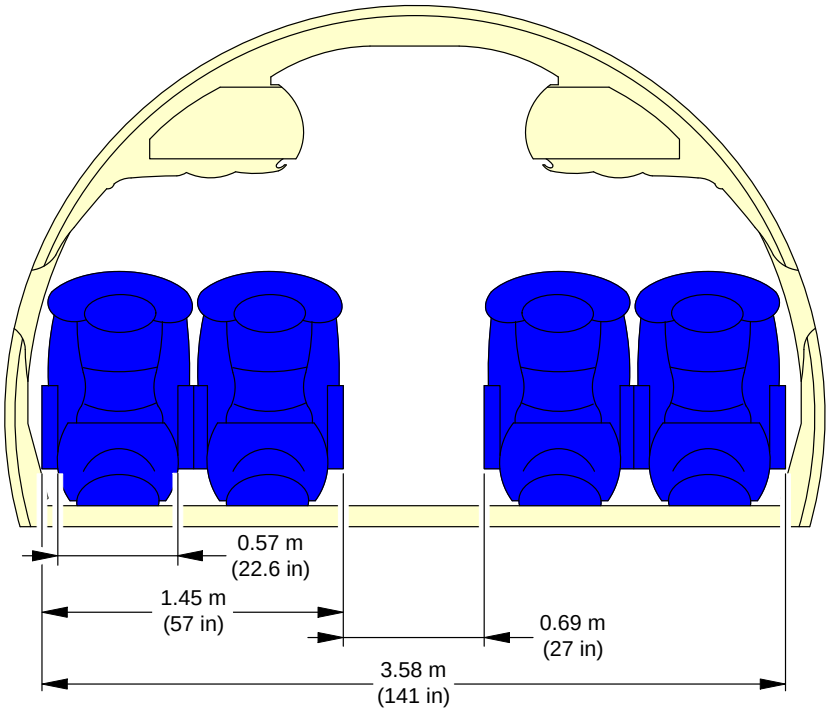


N_AC_020500_1_0050102_01_03

Interior Arrangements - Cross Section
Economy Class, 6 Abreast - Wider Seat (Sheet 2 of 2)
FIGURE-2-5-0-991-005-A01

****ON A/C A320-200 A320neo**

4 ABREAST-FIRST CLASS



N_AC_020500_1_0060101_01_01

Interior Arrangements - Cross Section
First-Class
FIGURE-2-5-0-991-006-A01

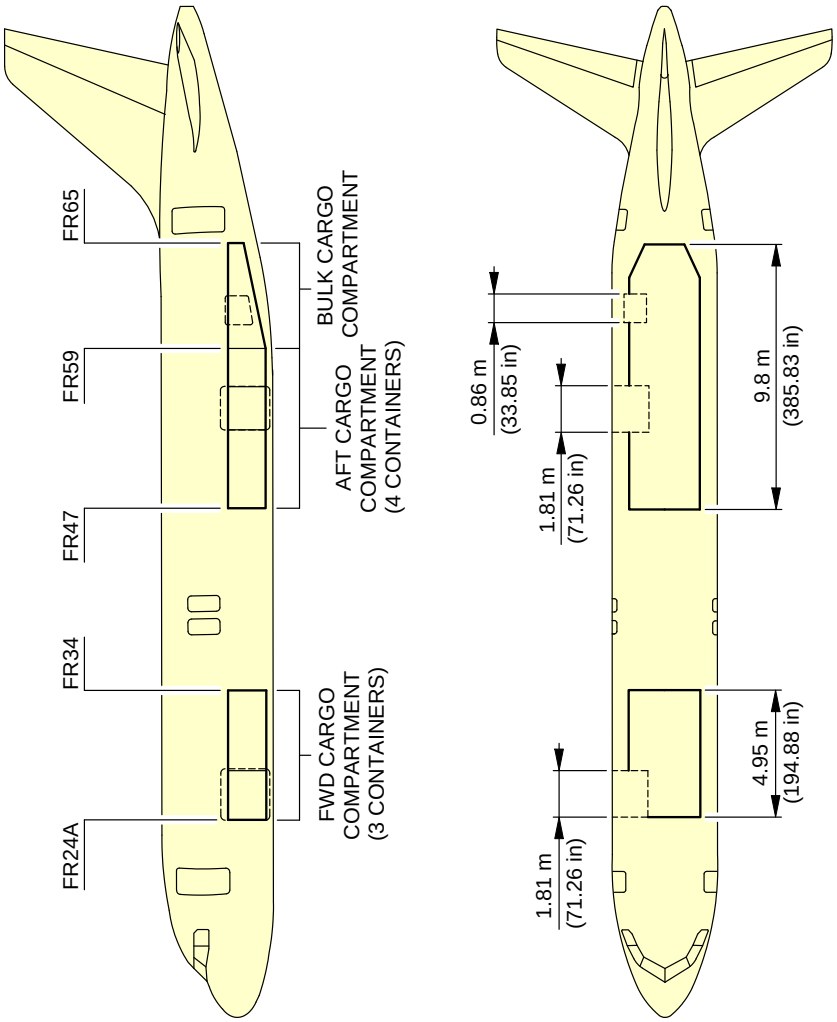
2-6-0 Cargo Compartments

****ON A/C A320-200 A320neo**

Cargo Compartments

1. This section provides the cargo compartments locations, dimensions and loading combinations.

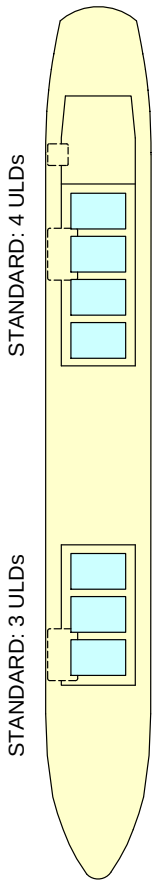
****ON A/C A320-200 A320neo**



N_AC_020600_1_0030101_01_00

Cargo Compartments
Locations and Dimensions
FIGURE-2-6-0-991-003-A01

****ON A/C A320-200 A320neo**



N_AC_020600_1_0060101_01_00

Cargo Compartments
Loading Combinations
FIGURE-2-6-0-991-006-A01

2-7-0 Door Clearances and Location

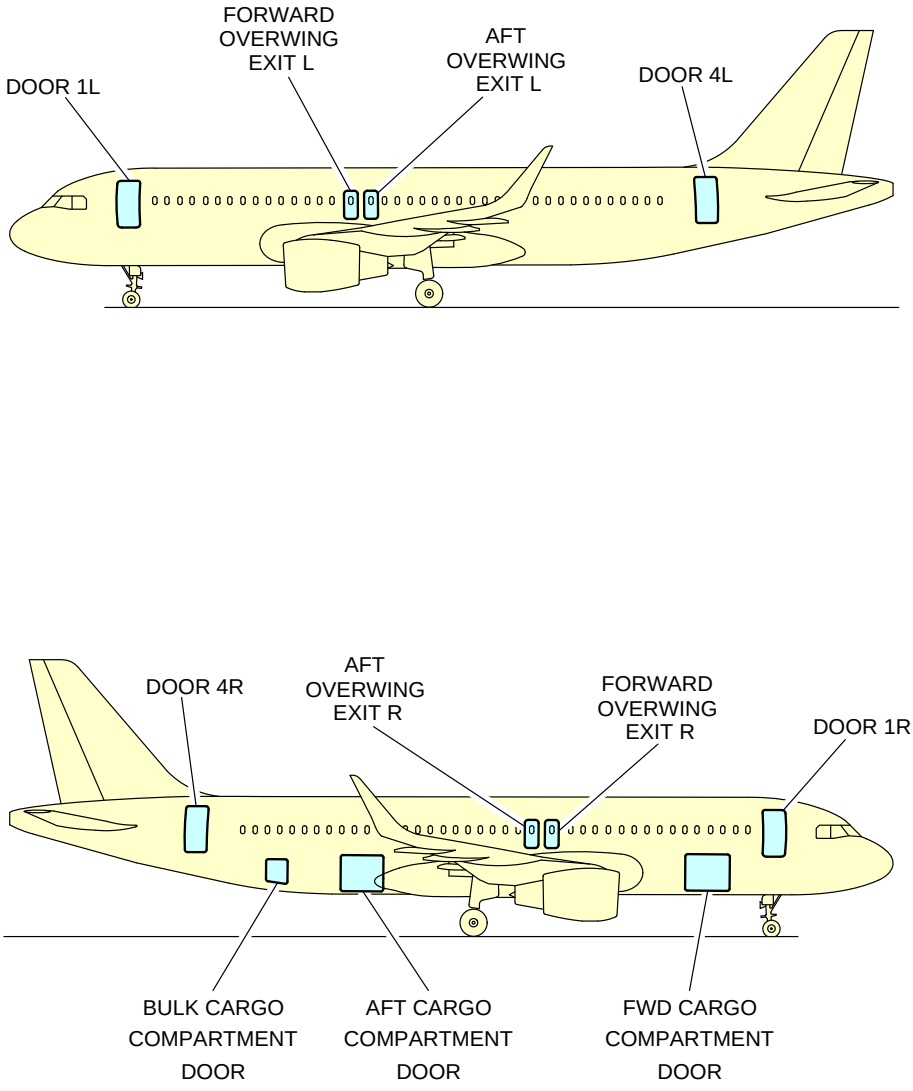
****ON A/C A320-200 A320neo**

Door Clearances

1. This section gives door identification and location.

NOTE : Dimensions of the ground clearances are approximate and will change with tire type, weight and balance and other special conditions.

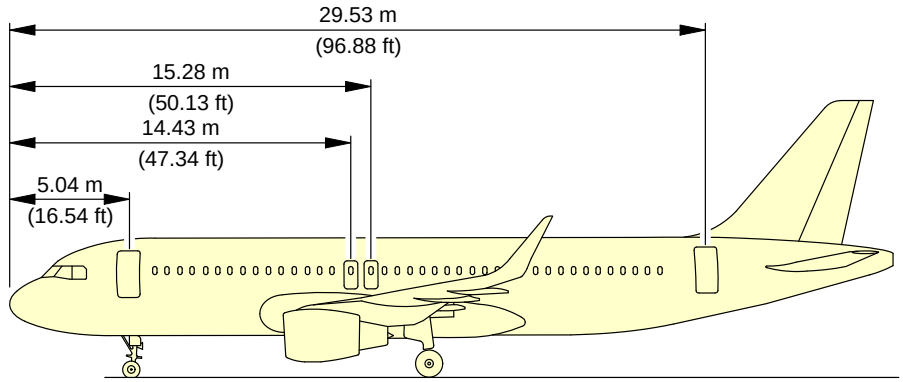
****ON A/C A320-200 A320neo**

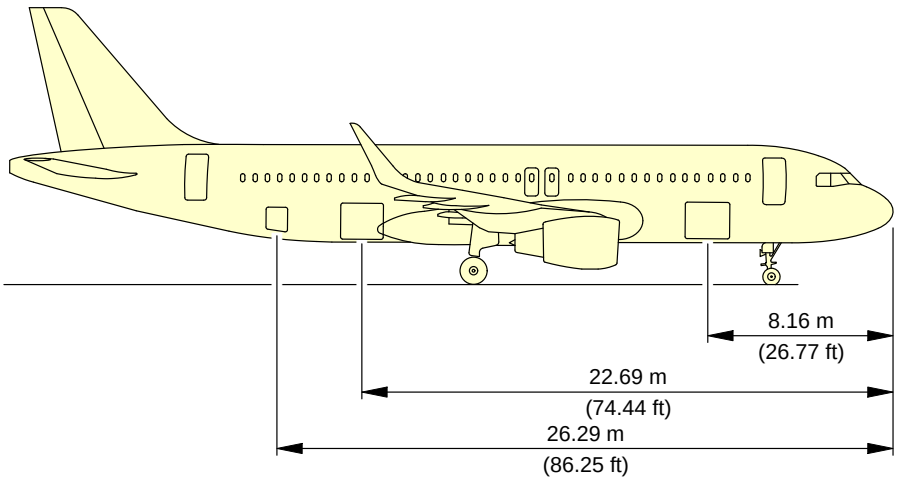


N_AC_020700_1_0030101_01_01

Door Identification and Location
Door Identification (Sheet 1 of 2)
FIGURE-2-7-0-991-003-A01

****ON A/C A320-200 A320neo**

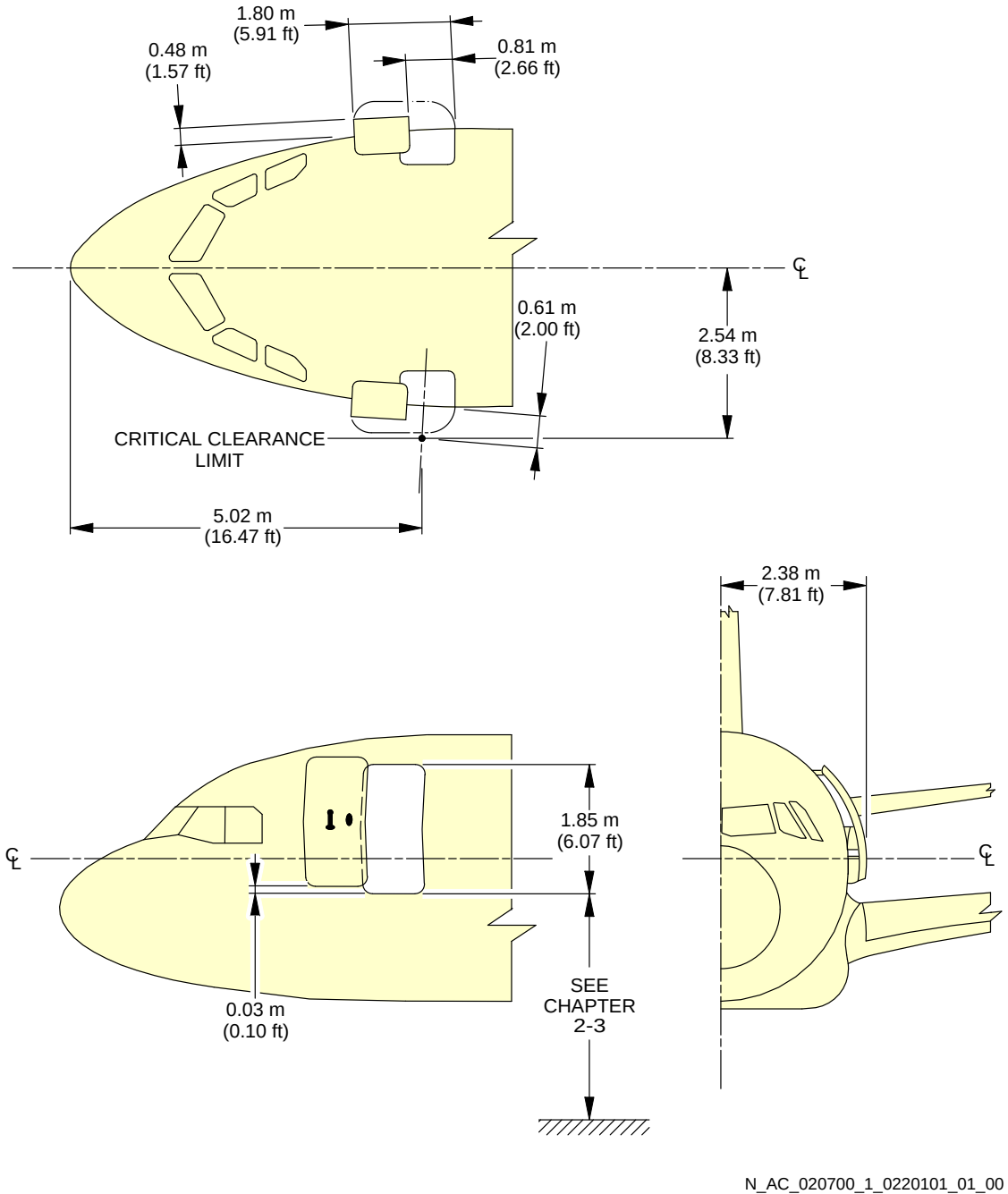




N_AC_020700_1_0030102_01_00

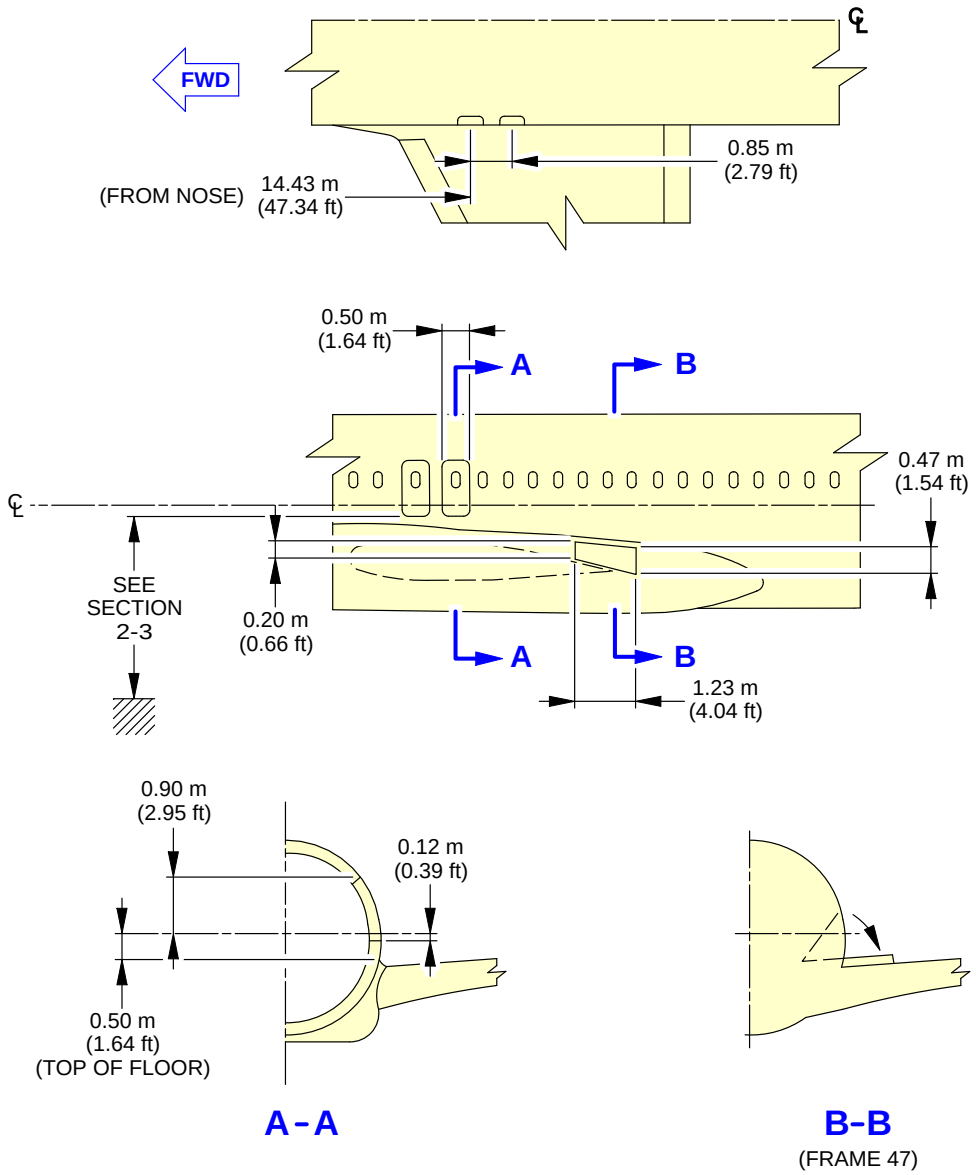
Door Identification and Location
Door Location (Sheet 2 of 2)
FIGURE-2-7-0-991-003-A01

****ON A/C A320-200 A320neo**



Doors Clearances
Forward Passenger/Crew Doors
FIGURE-2-7-0-991-022-A01

****ON A/C A320-200 A320neo**

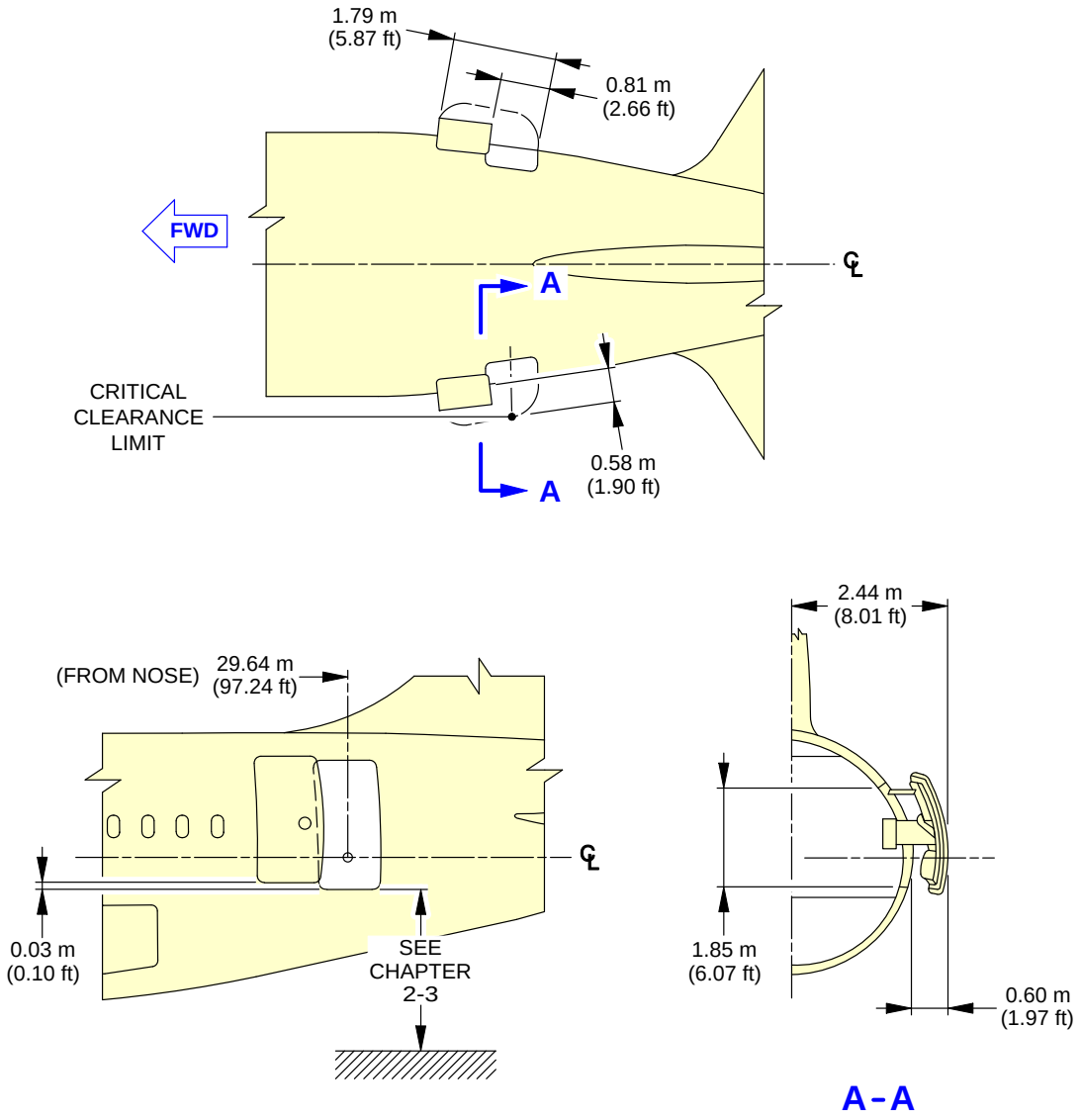


NOTE:
ESCAPE SLIDE COMPARTMENT DOOR OPENS ON WING UPPER SURFACE.

N_AC_020700_1_0230101_01_00

Doors Clearances
Emergency Exits
FIGURE-2-7-0-991-023-A01

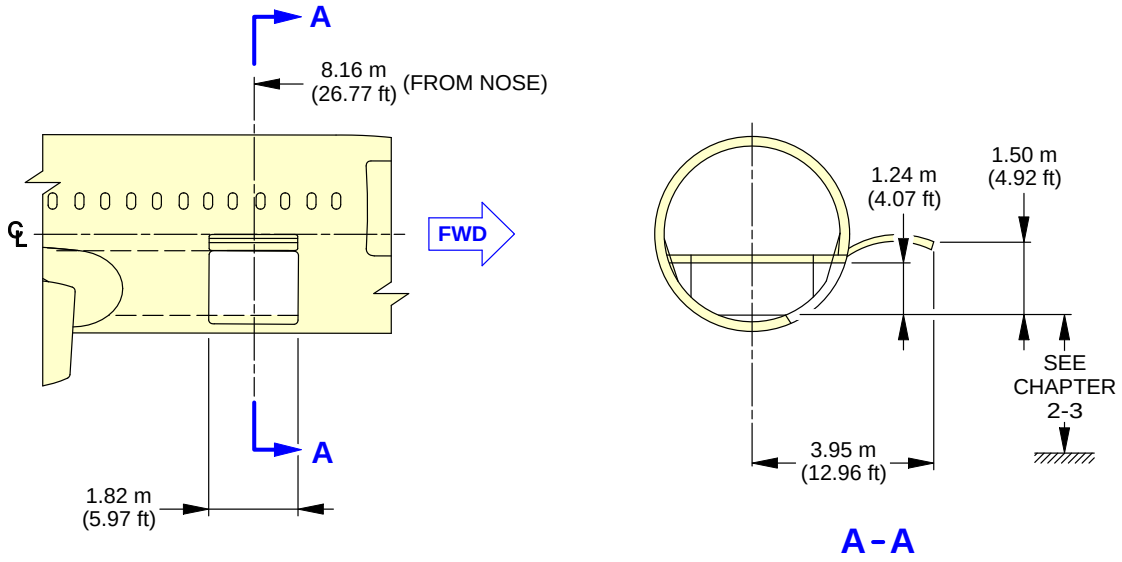
****ON A/C A320-200 A320neo**

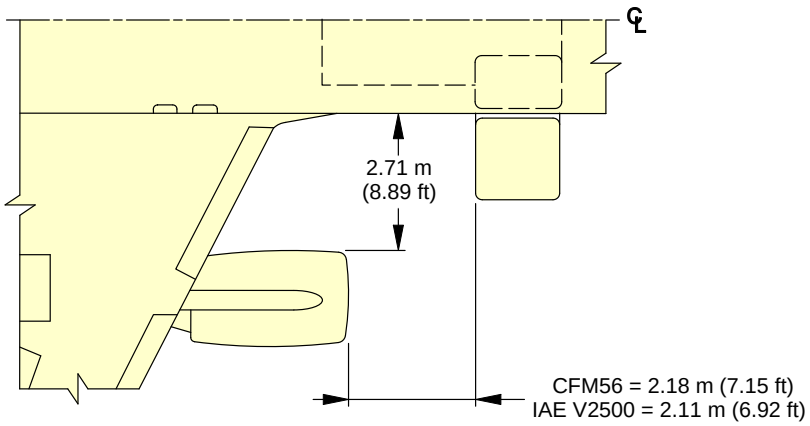


N_AC_020700_1_0240101_01_00

Doors Clearances
Aft Passenger/Crew Doors
FIGURE-2-7-0-991-024-A01

**ON A/C A320-200

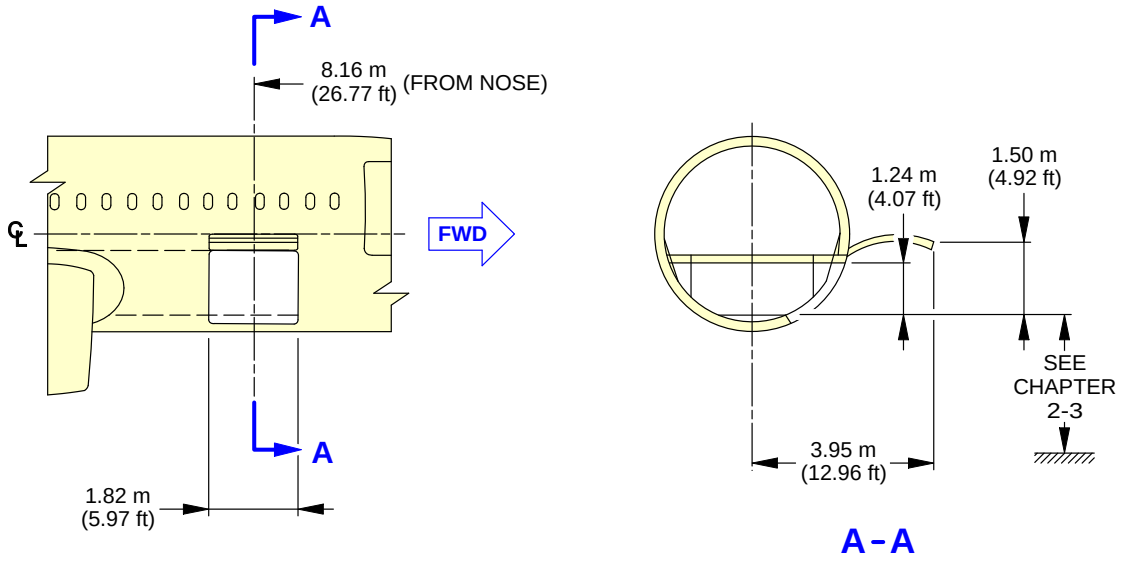


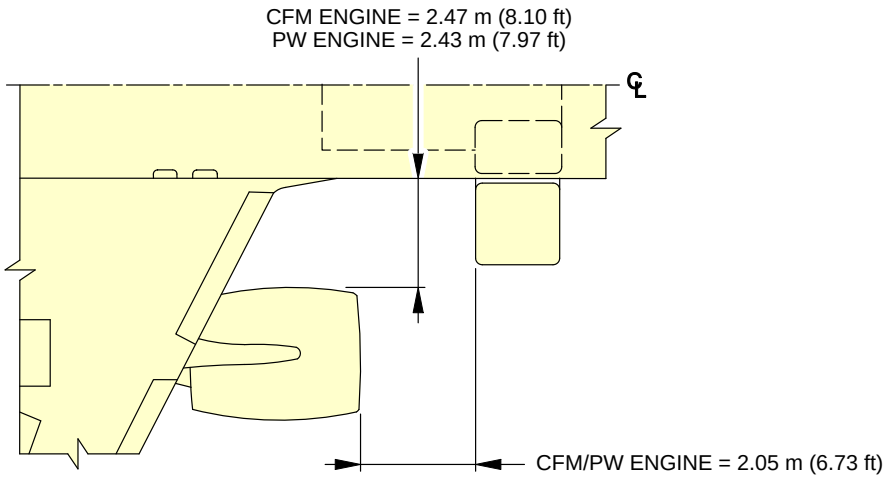


N_AC_020700_1_0250101_01_00

Door Clearances
Forward Cargo Compartment Door
FIGURE-2-7-0-991-025-A01

**ON A/C A320neo

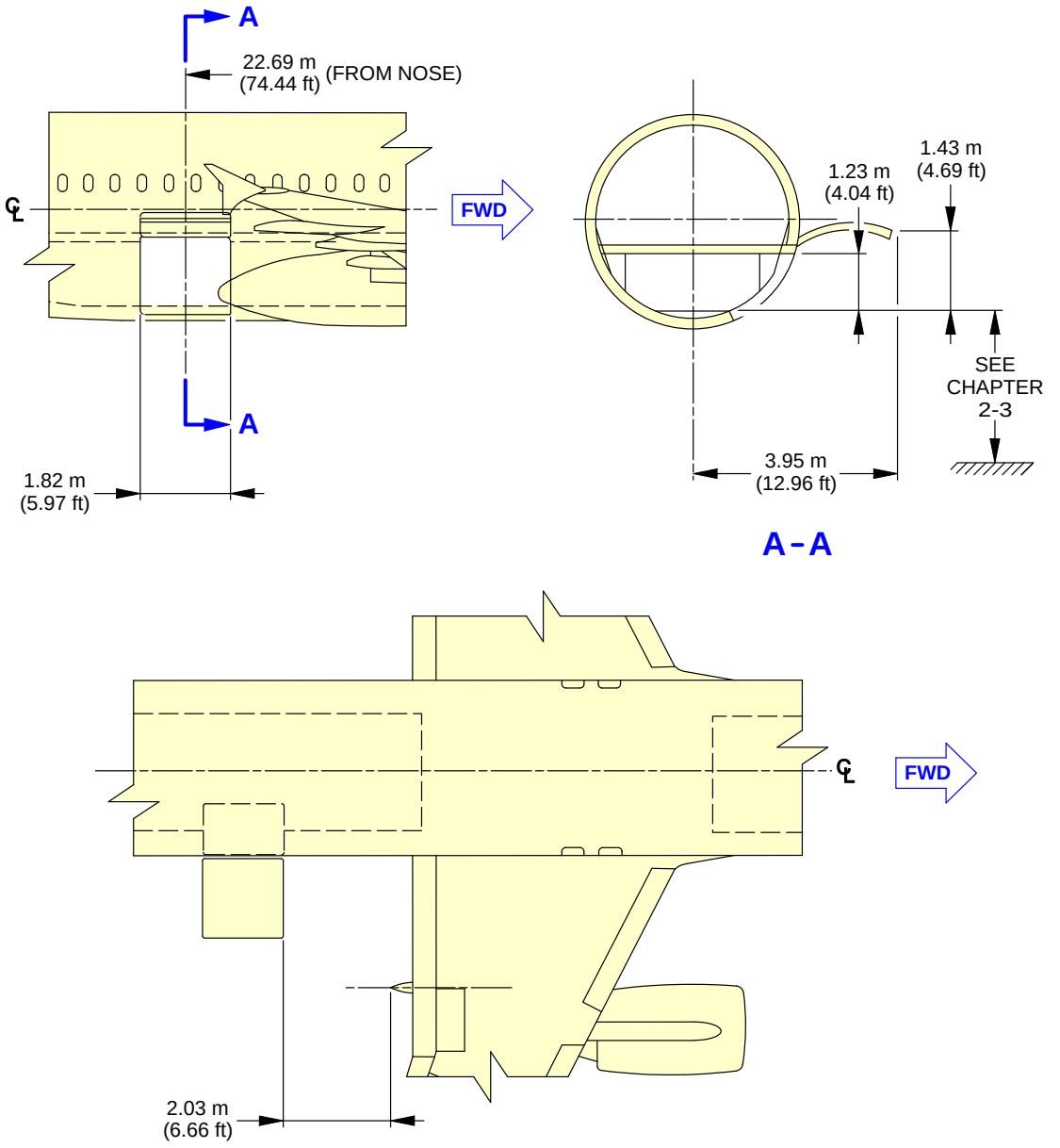




N_AC_020700_1_0260101_01_00

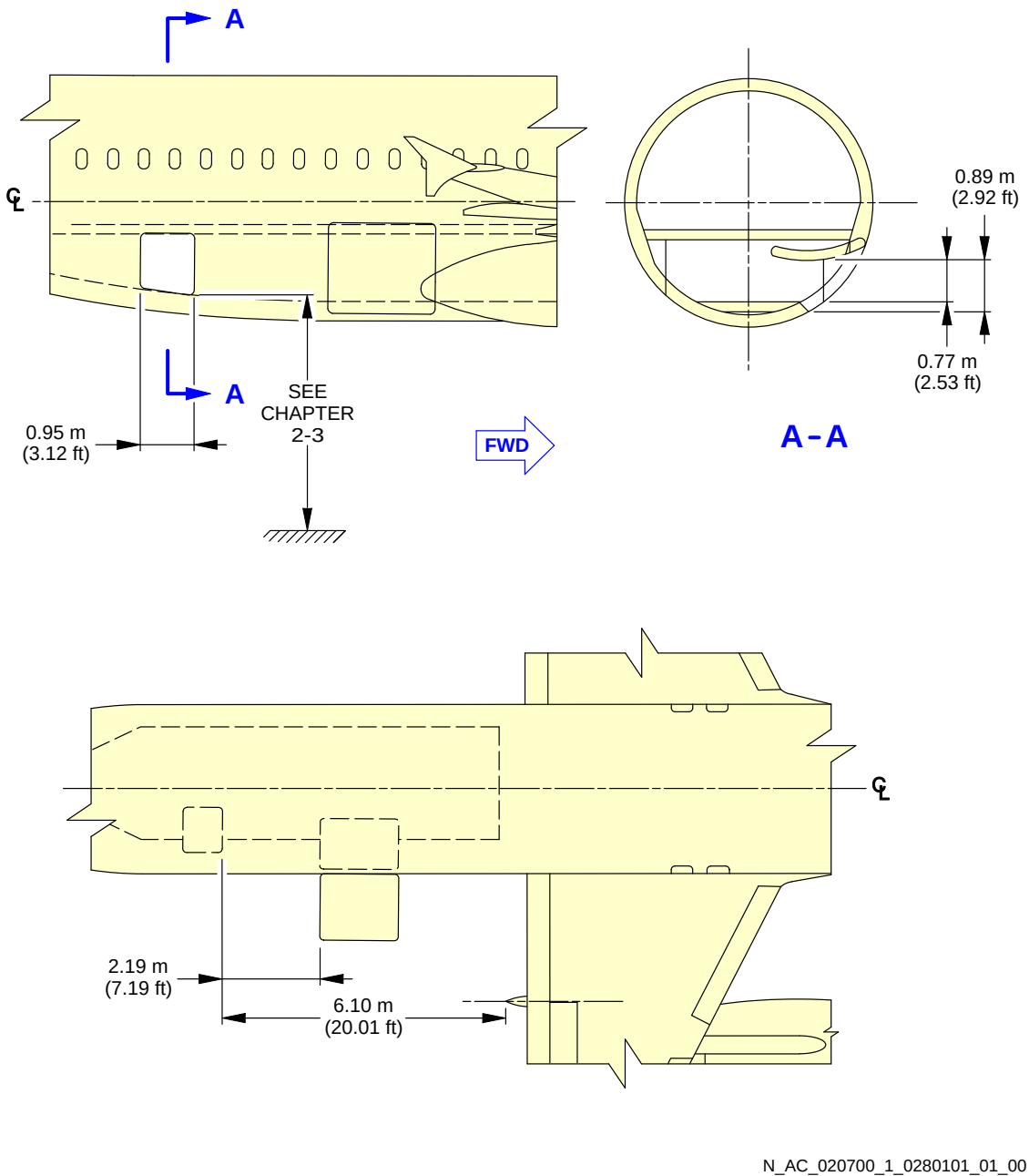
Door Clearances
Forward Cargo Compartment Door
FIGURE-2-7-0-991-026-A01

**ON A/C A320-200 A320neo



Doors Clearances
Aft Cargo Compartment Door
FIGURE-2-7-0-991-027-A01

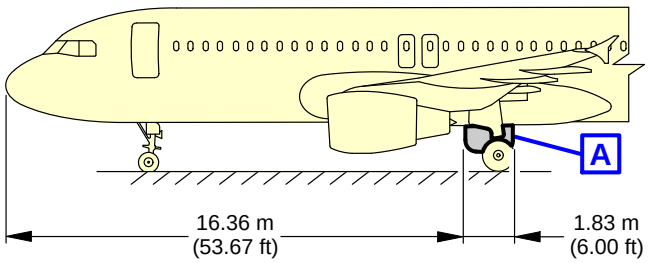
**ON A/C A320-200 A320neo

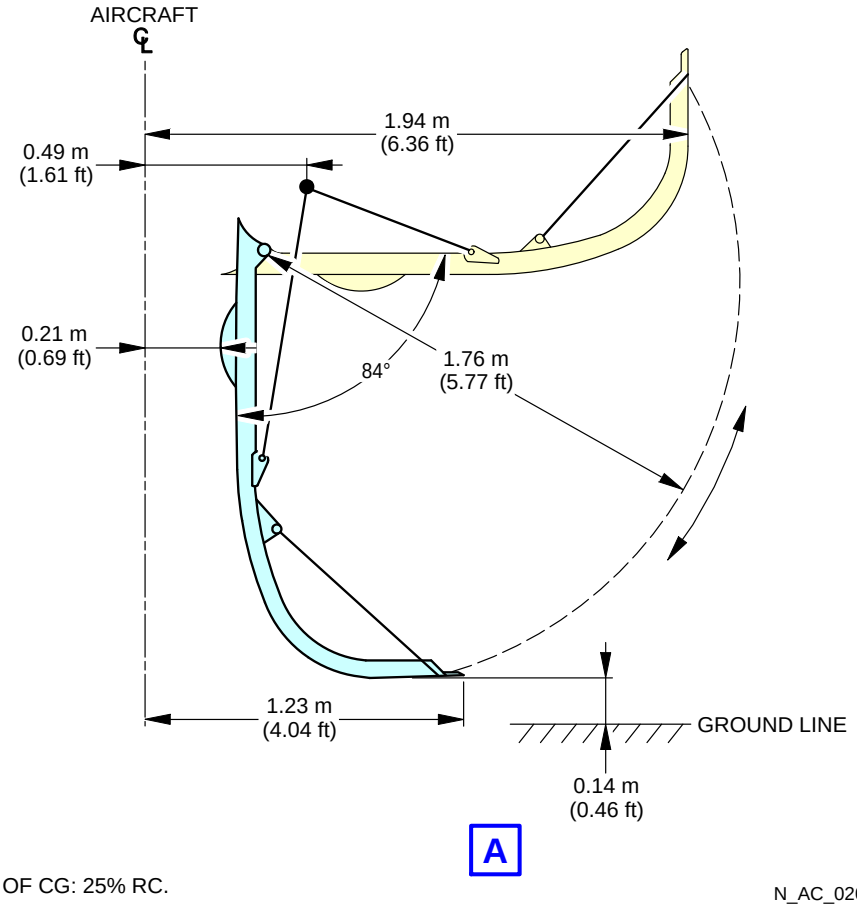


N_AC_020700_1_0280101_01_00

Doors Clearances
Bulk Cargo Compartment Door
FIGURE-2-7-0-991-028-A01

****ON A/C A320-200 A320neo**



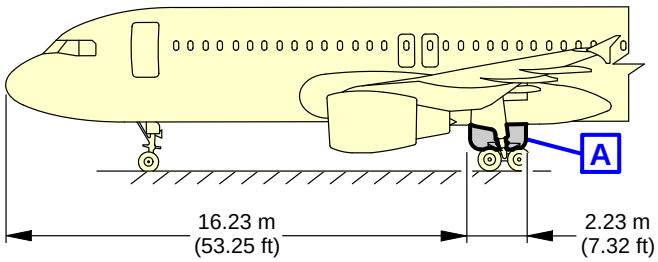


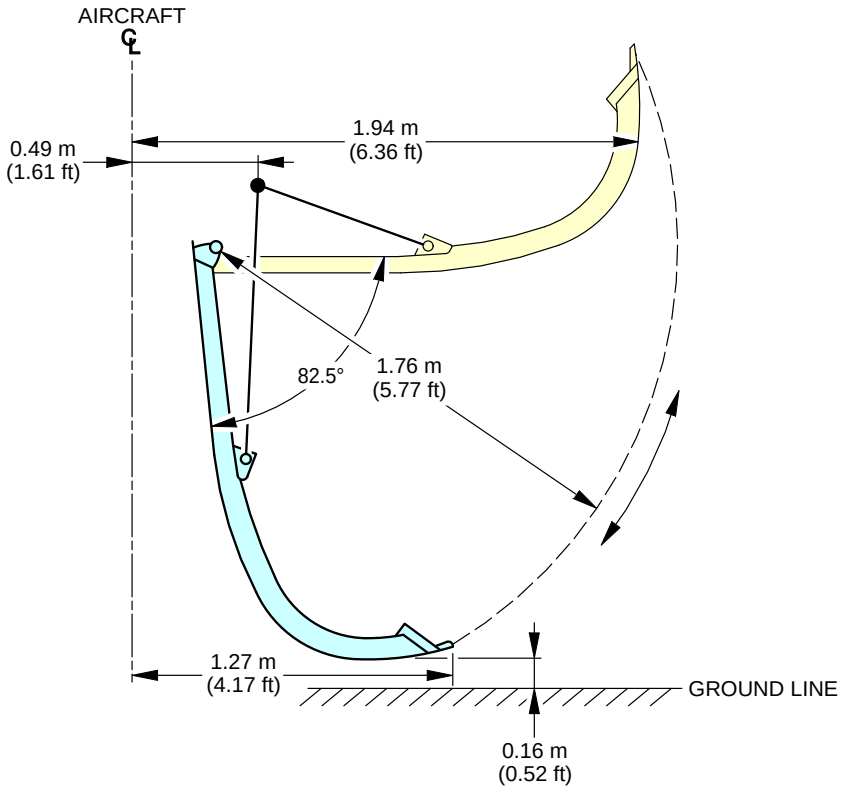
NOTE:
VALUE OF CG: 25% RC.

N_AC_020700_1_0290101_01_00

Doors Clearances
Main Landing Gear Doors
FIGURE-2-7-0-991-029-A01

**ON A/C A320-200



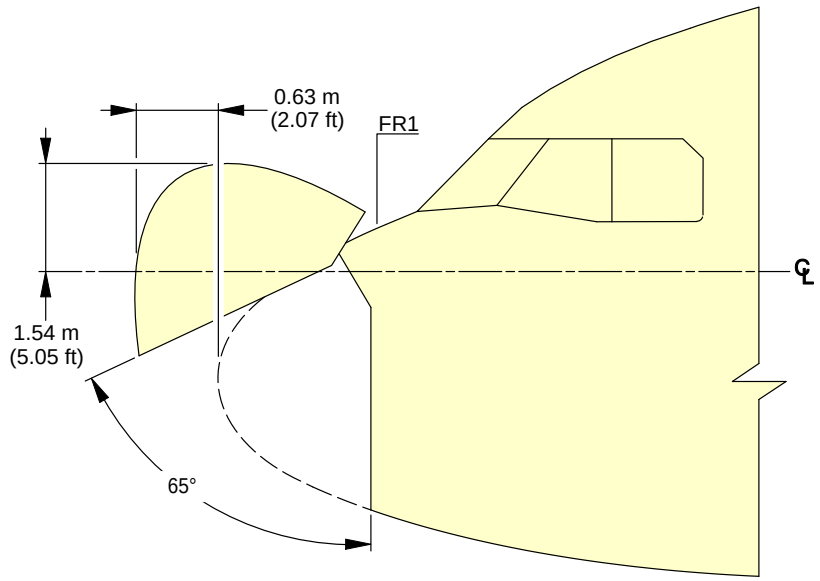


NOTE:
VALUE OF CG: 25% RC.

N_AC_020700_1_0300101_01_00

Doors Clearances
Main Landing Gear Doors (Bogie)
FIGURE-2-7-0-991-030-A01

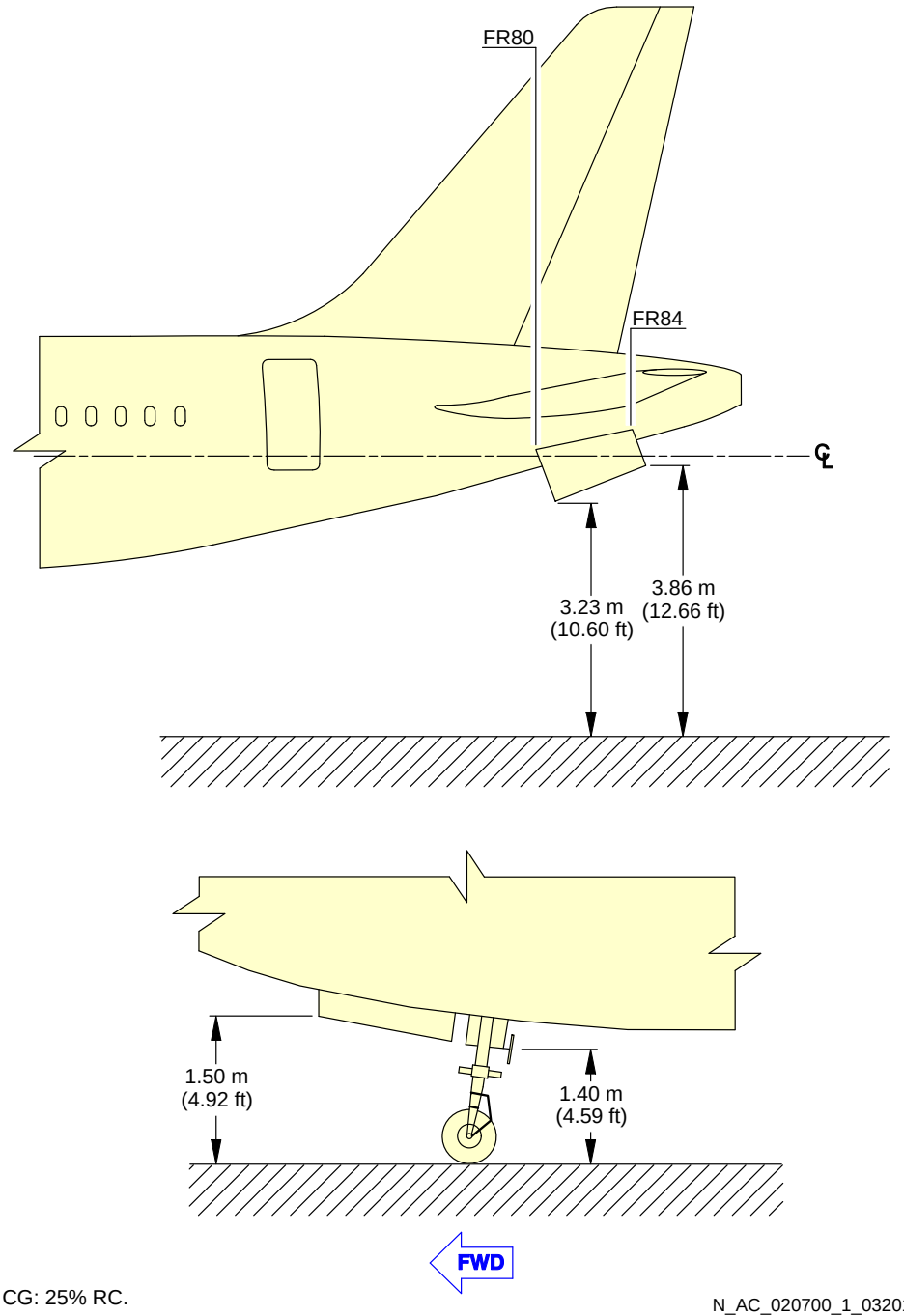
****ON A/C A320-200 A320neo**



N_AC_020700_1_0310101_01_00

Doors Clearances
Radome
FIGURE-2-7-0-991-031-A01

****ON A/C A320-200 A320neo**

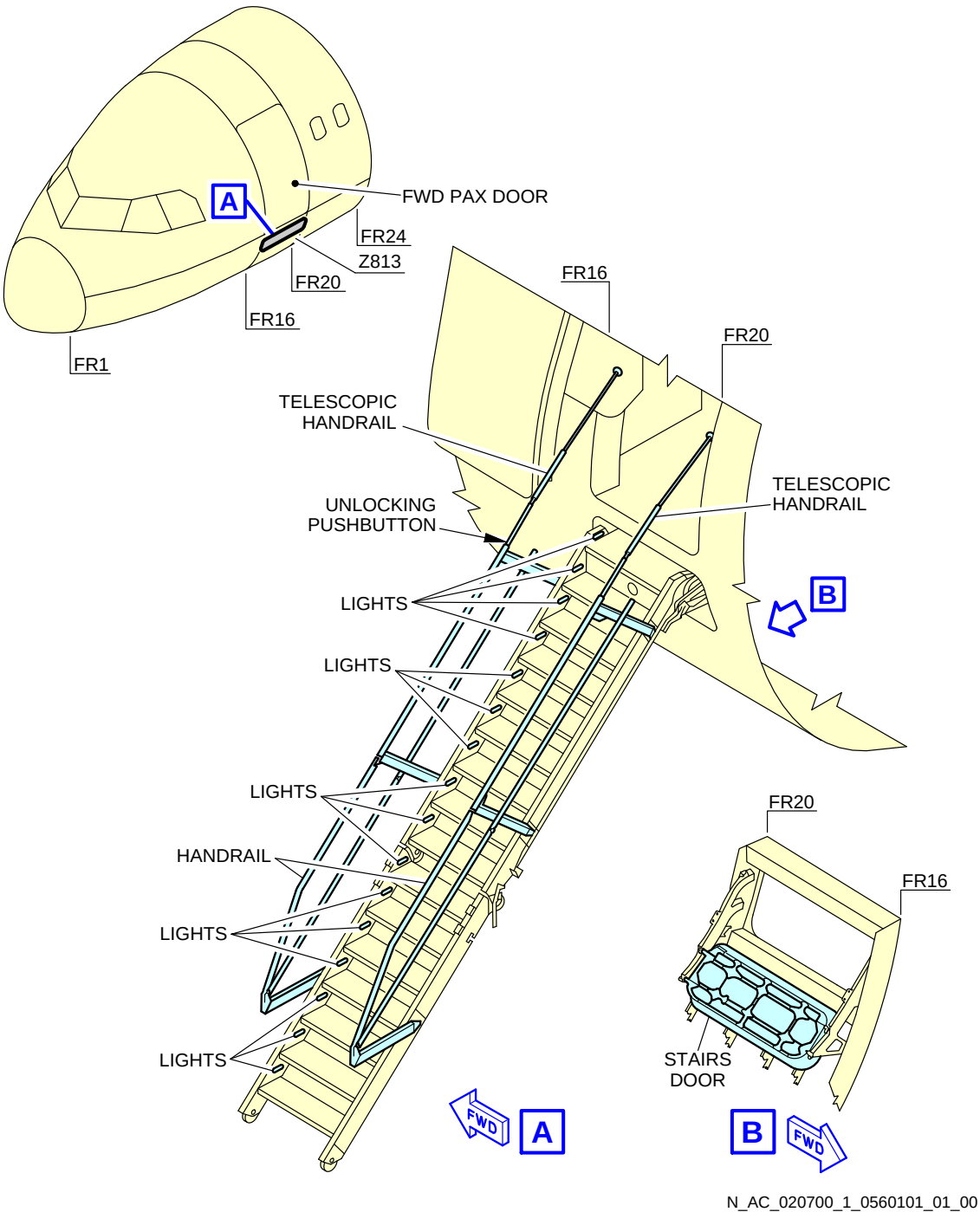


NOTE:
VALUE OF CG: 25% RC.

N_AC_020700_1_0320101_01_00

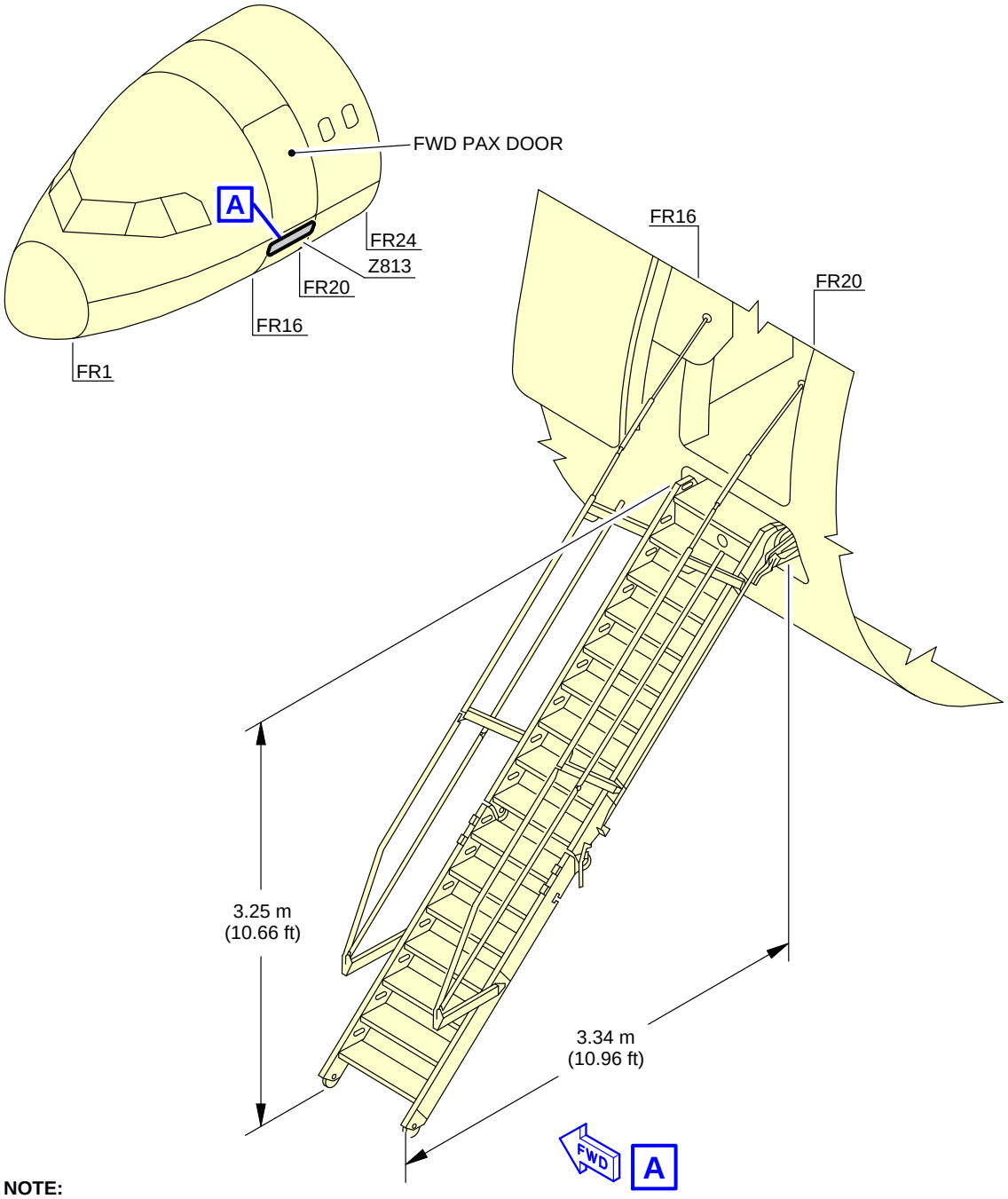
Doors Clearances
APU and Nose Landing Gear Doors
FIGURE-2-7-0-991-032-A01

**ON A/C A320-200 A320neo



Doors Clearances - Airstairs
Location
2-7-0-991-056-A01

**ON A/C A320-200 A320neo

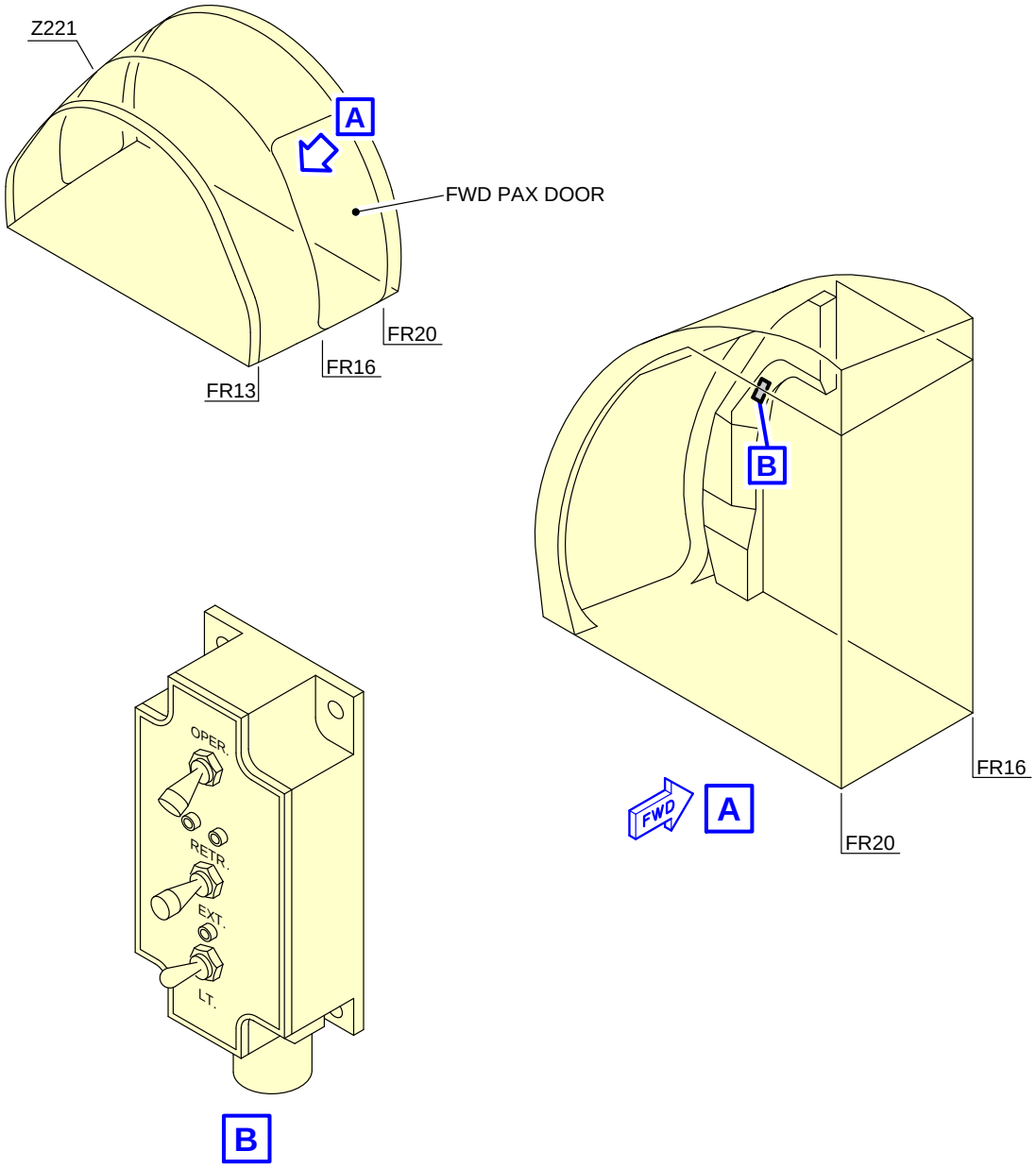


NOTE:
THE VALUES GIVEN DEPEND ON THE POSITION OF CENTER OF GRAVITY (CG) AND THE AIRCRAFT WEIGHT.

N_AC_020700_1_0570101_01_00

Doors Clearances - Airstairs
Dimensions
2-7-0-991-057-A01

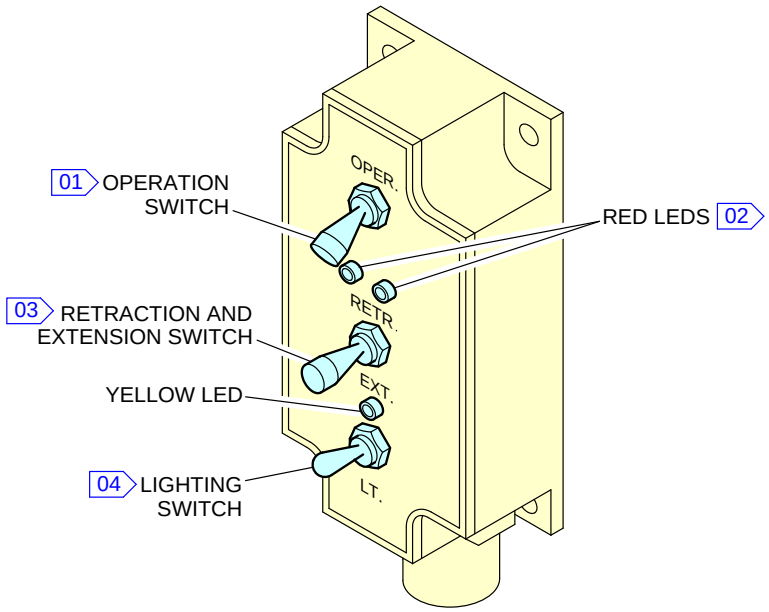
**ON A/C A320-200 A320neo



N_AC_020700_1_0580101_01_00

Doors Clearances - Airstairs
Location for Operating the Airstairs
2-7-0-991-058-A01

**ON A/C A320-200 A320neo



NOTE:

01 OPER.: WHEN THE FLIGHT CREW PUSHES THIS SWITCH TO THE OPER. POSITION AND HOLDS IT AGAINST THE SPRING, THE STAIRS WILL EXTEND OR RETRACT IF THE FLIGHT CREW ALSO HOLDS THE RETRACTION AND EXTENSION SWITCH IN THE RETR. OR EXT. POSITION.

OFF: OPERATION OF THE STAIRS IS PREVENTED.

02 THE TWO RED LIGHTS ARE ON DURING THE EXTENSION AND RETRACTION.

03 NEUTRAL: THIS IS THE STABLE, LOCKED POSITION. OPERATION OF THE STAIRS IS PREVENTED. TO MOVE IT FROM THIS POSITION, THE FLIGHT CREW MUST PULL THE SWITCH OUT.

RETR.: WHEN THE FLIGHT CREW HOLDS THE SWITCH IN THIS POSITION AGAINST THE SPRING, THE STAIRS RETRACT IF:
- THE OPERATION SWITCH IS HELD AT OPER.
- THE TELESCOPIC HANDRAILS ARE FULLY STOWED.

04 UP: THE STAIR LIGHTS COMES ON ALONG WITH THE YELLOW CONTROL LIGHT, IF:
- THE STAIRS ARE FULLY EXTENDED, AND
- THE POWER IS AVAILABLE FROM DC BUS 2.

DOWN: THE STAIR LIGHTS AND THE YELLOW CONTROL LIGHT ARE OFF.

N_AC_020700_1_0610101_01_00

Operation of the Airstairs
2-7-0-991-061-A01

2-8-0 Escape Slides

****ON A/C A320-200 A320neo**

Escape Slides

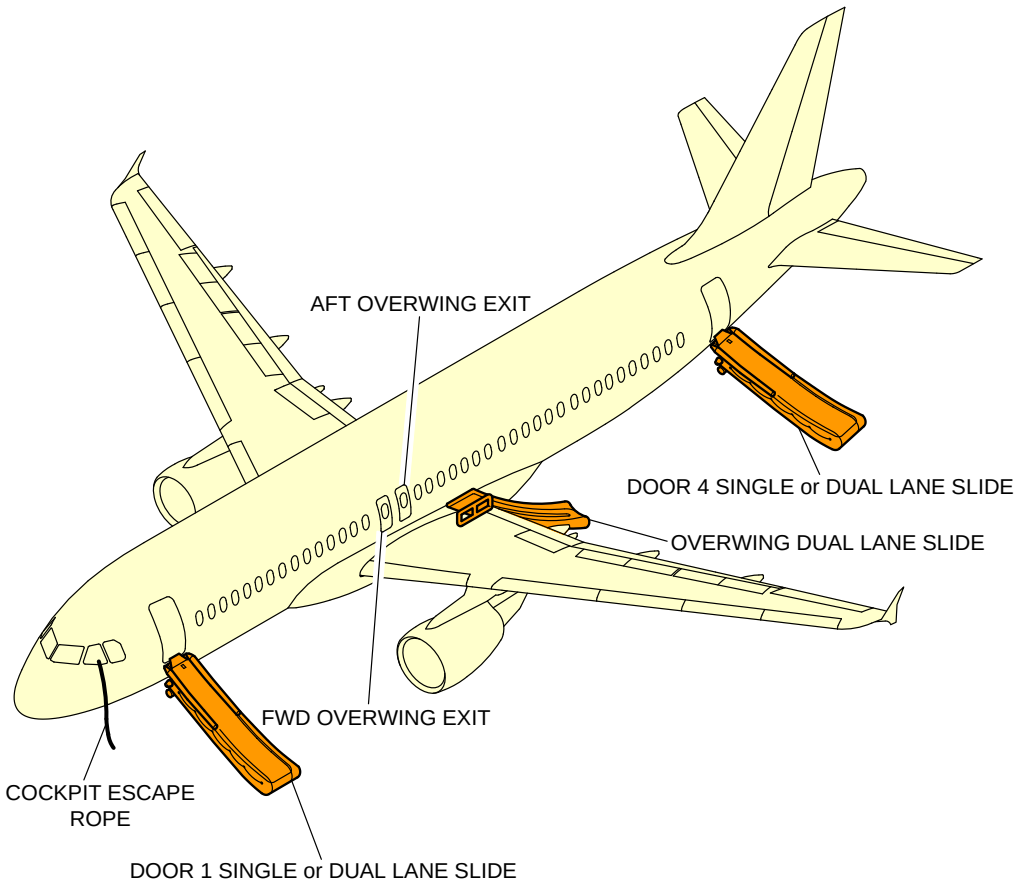
1. General

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

2. Location

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

****ON A/C A320-200 A320neo**

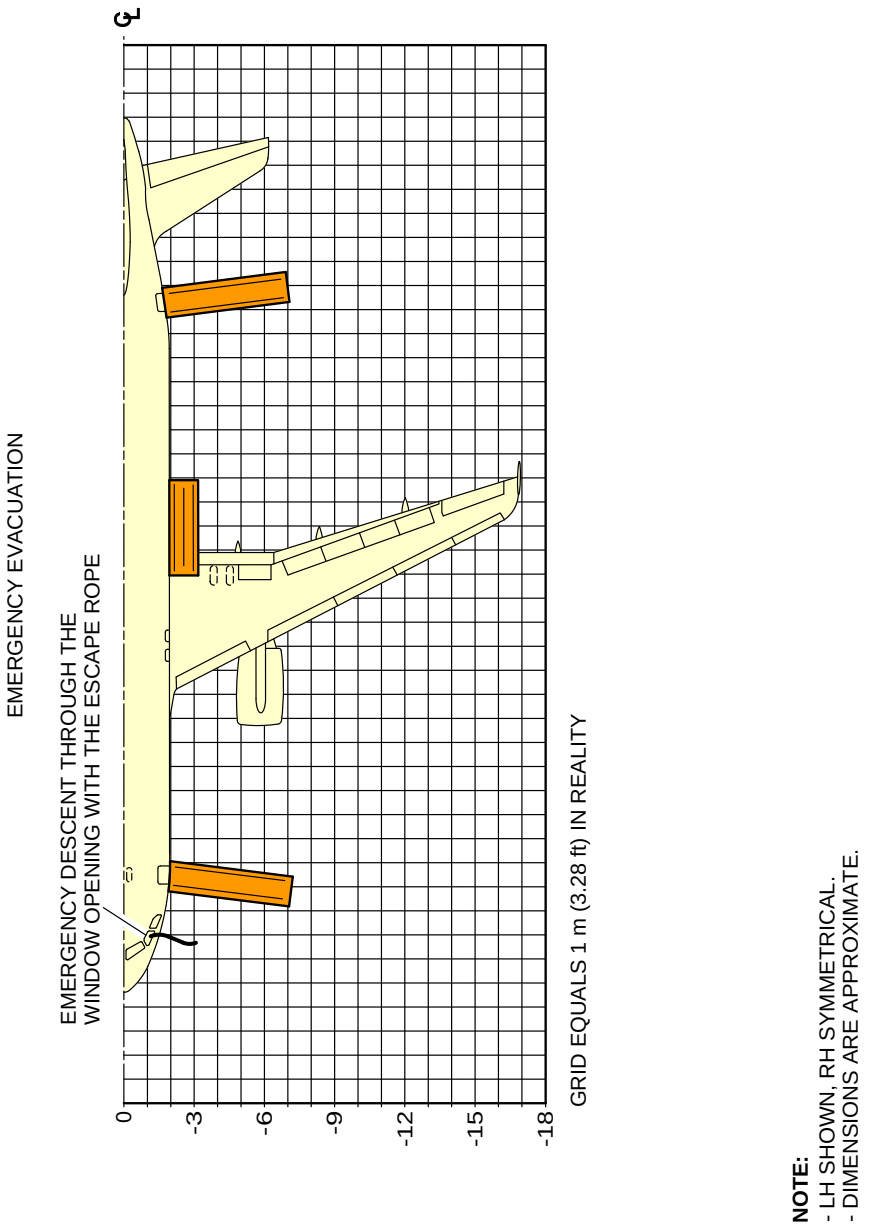


NOTE:
LH SHOWN, RH SYMMETRICAL.

N_AC_020800_1_0050101_01_04

Escape Slides
Location
FIGURE-2-8-0-991-005-A01

****ON A/C A320-200 A320neo**



Escape Slides
Dimensions
FIGURE-2-8-0-991-006-A01

2-9-0 Landing Gear

****ON A/C A320-200 A320neo**

Landing Gear

1. General

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

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

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

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

2. Main Landing Gear

A. Twin-Wheel

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

B. Four-Wheel Bogie

Each of the two main landing gear assemblies consists of a direct-action shock absorber on which is installed a four-wheel bogie beam.
The shock absorber is supported in the fore and aft directions by a fixed drag strut and laterally by a folding strut mechanically locked when in the DOWN position.

3. Nose Landing Gear

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

4. Nose Wheel Steering

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

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

5. Landing Gear Servicing Points

A. General

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

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

B. Charging Pressure

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

6. Braking

A. General

The four main wheels are equipped with carbon multidisc brakes.

The braking system is electrically controlled and hydraulically operated.

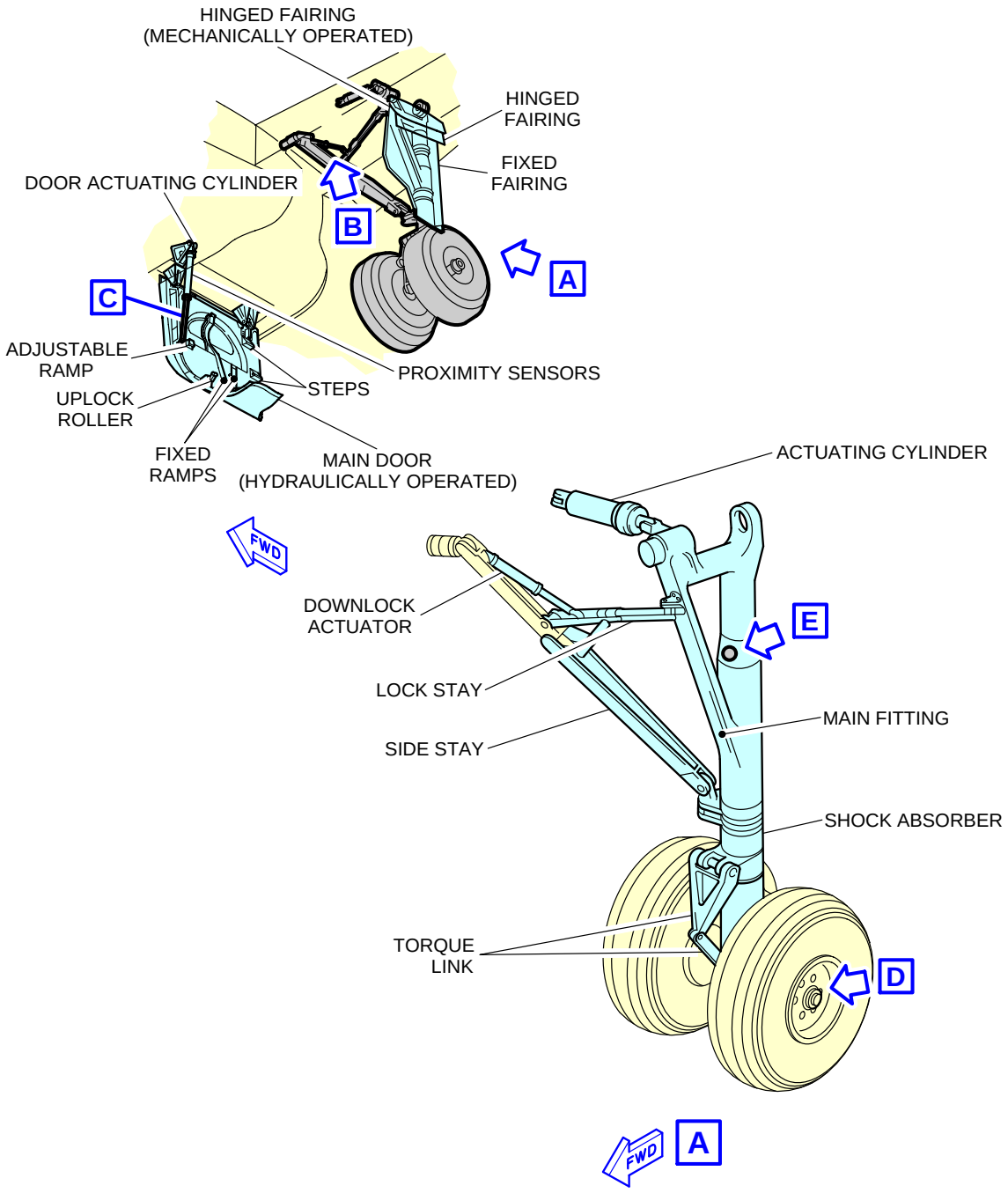
The braking system has four braking modes plus autobrake and anti-skid systems:
- Normal braking with anti-skid capability,
- Alternative braking with anti-skid capability,
- Alternative braking without anti-skid capability,
- Parking brake with full pressure application capability only.

B. In-Flight Wheel Braking

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

The nose gear wheels are stopped by the wheels contacting a rubbing strip (the brake band) when the gear is in the retracted position.

****ON A/C A320-200 A320neo**



NOTE: MAIN DOOR SHOWN OPEN IN GROUND MAINTENANCE POSITION.

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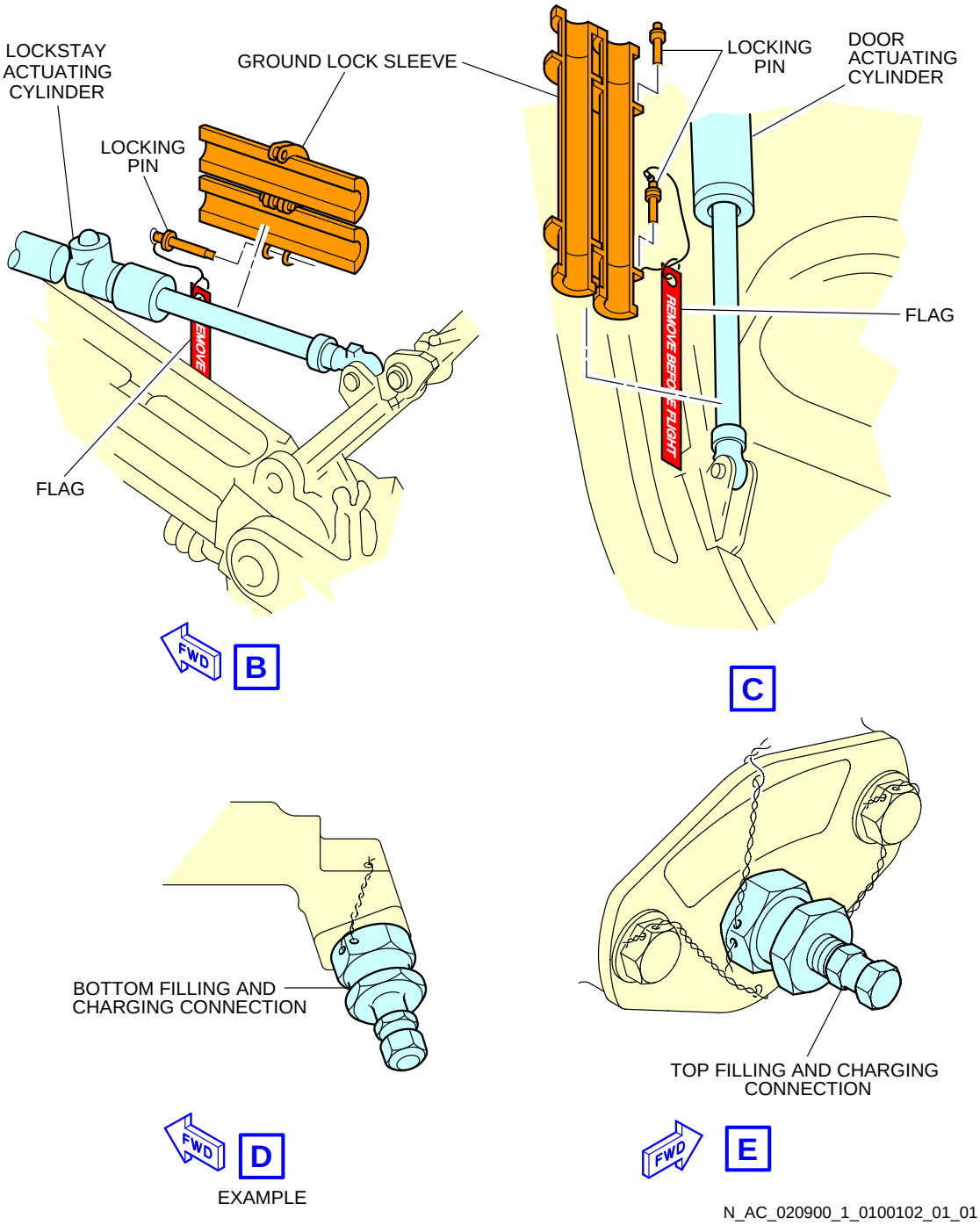
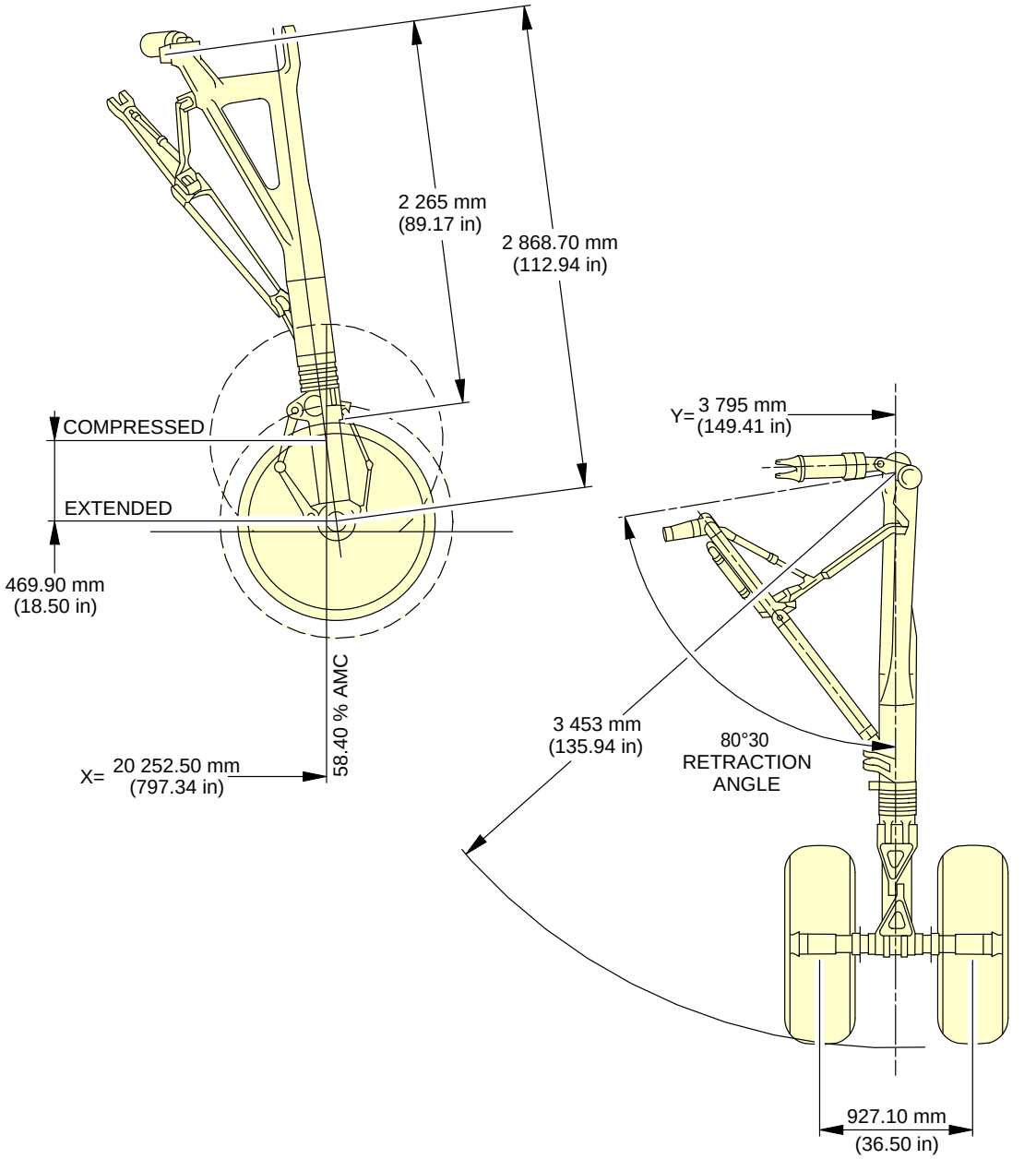
Landing Gear
Main Landing Gear - Twin-Wheel (Sheet 1 of 2)
FIGURE-2-9-0-991-010-A01

**ON A/C A320-200 A320neo



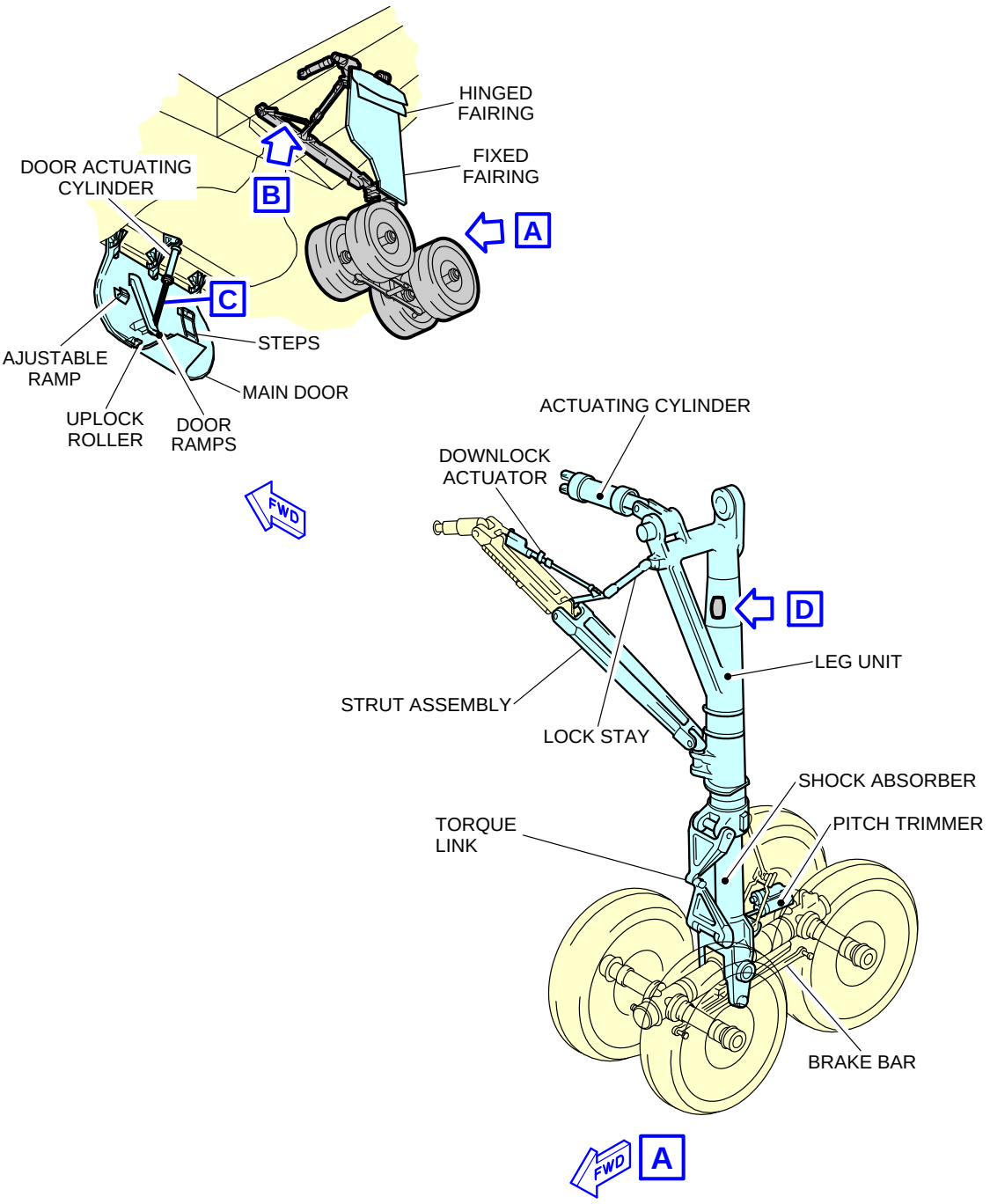
Landing Gear
Main Landing Gear - Twin-Wheel (Sheet 2 of 2)
FIGURE-2-9-0-991-010-A01

****ON A/C A320-200 A320neo**



Landing Gear
Main Landing Gear Dimensions - Twin-Wheel
FIGURE-2-9-0-991-011-A01

**ON A/C A320-200

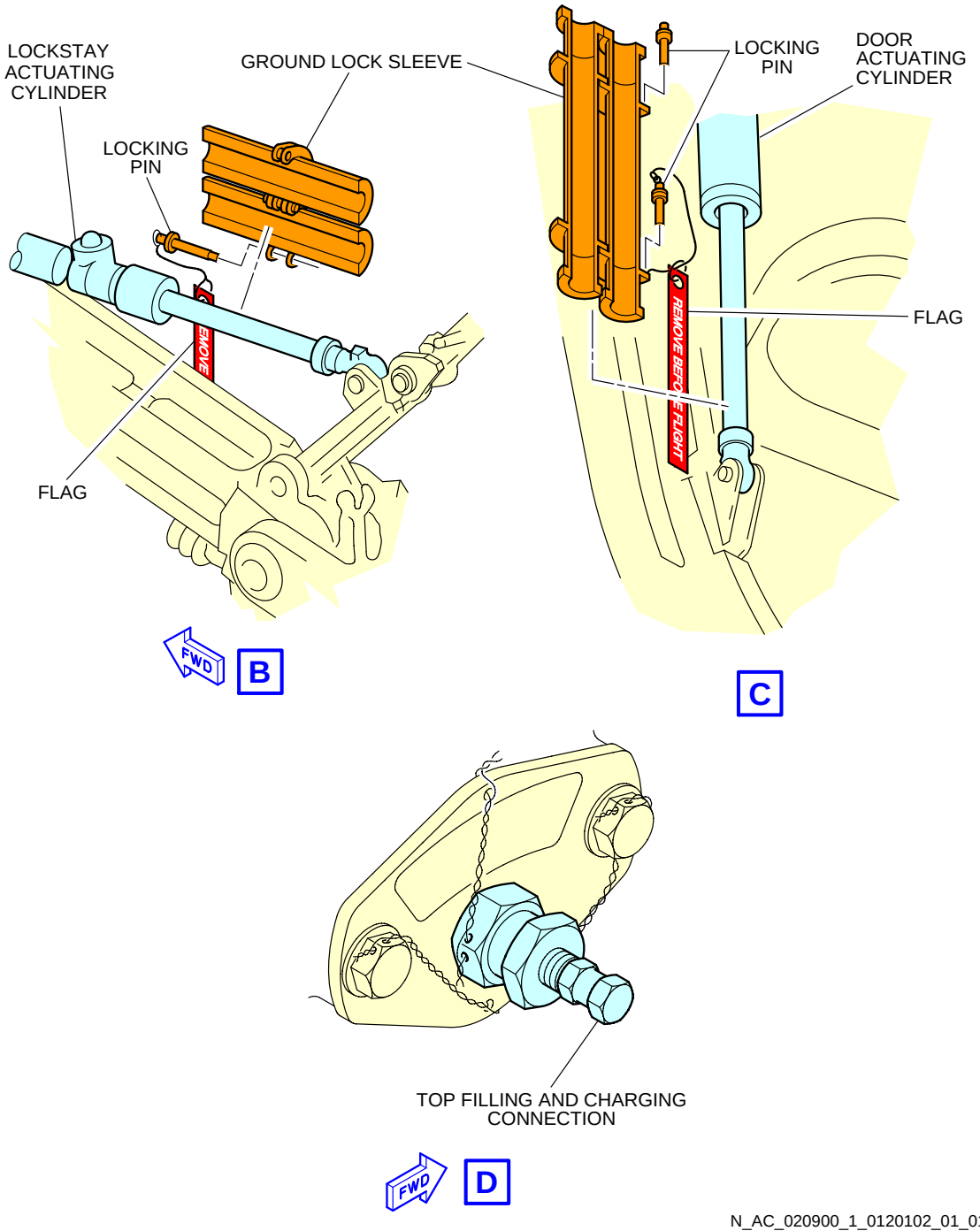


NOTE: MAIN DOOR SHOWN OPEN IN GROUND MAINTENANCE POSITION.

N_AC_020900_1_0120101_01_00

Landing Gear
Main Landing Gear - Four-Wheel Bogie (Sheet 1 of 2)
FIGURE-2-9-0-991-012-A01

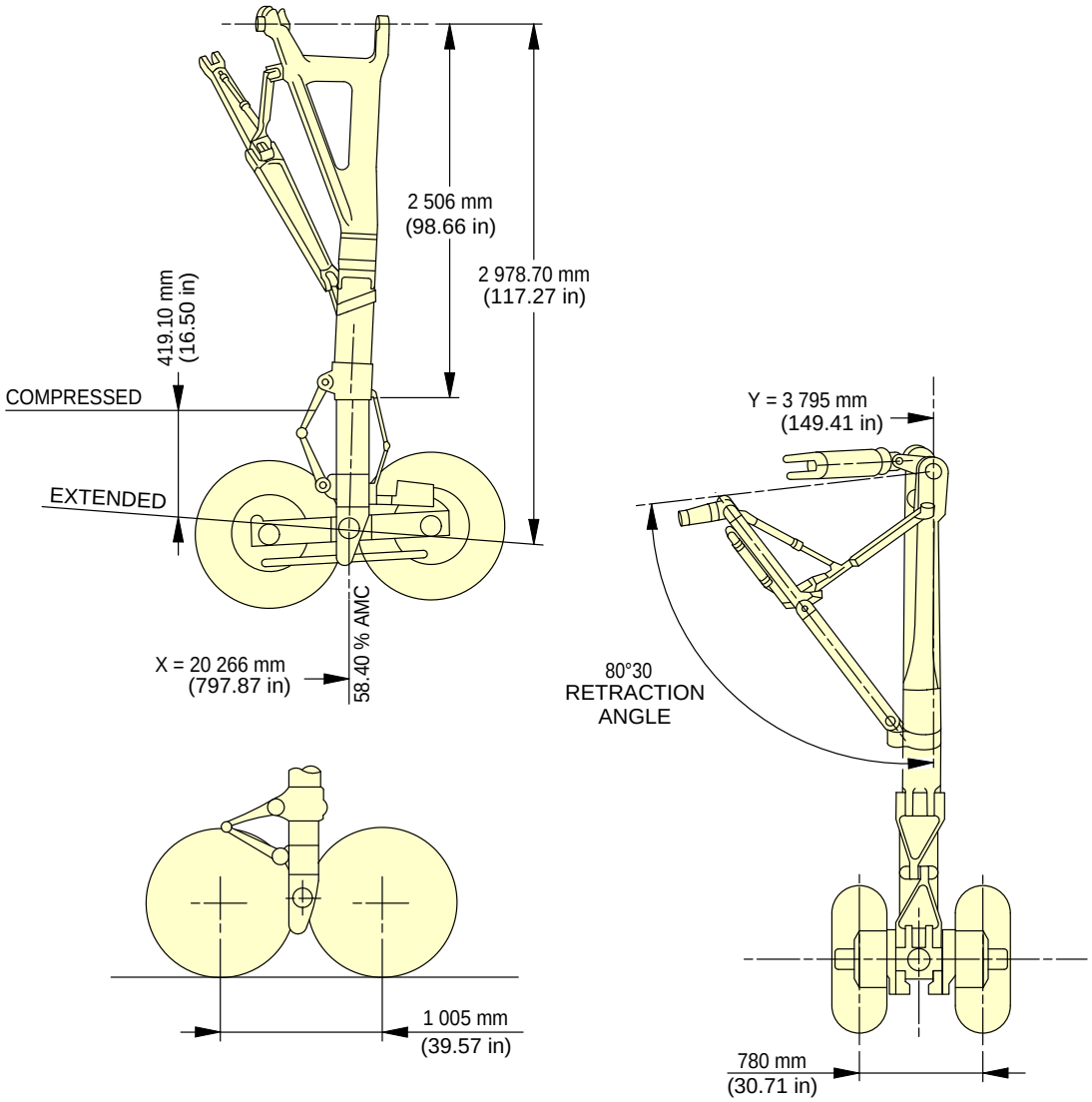
**ON A/C A320-200



N_AC_020900_1_0120102_01_01

Landing Gear
Main Landing Gear - Four-Wheel Bogie (Sheet 2 of 2)
FIGURE-2-9-0-991-012-A01

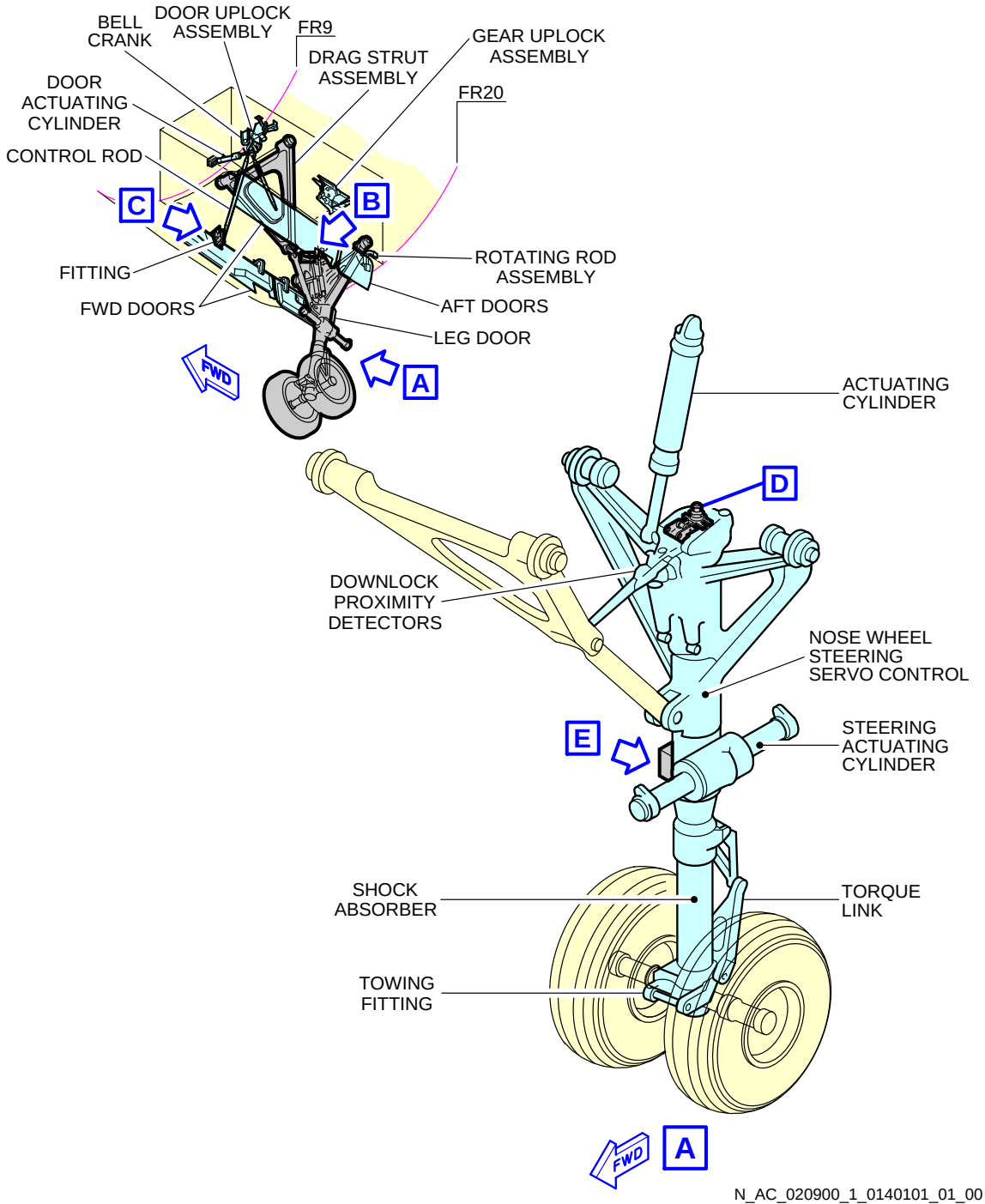
****ON A/C A320-200**



N_AC_020900_1_0130101_01_00

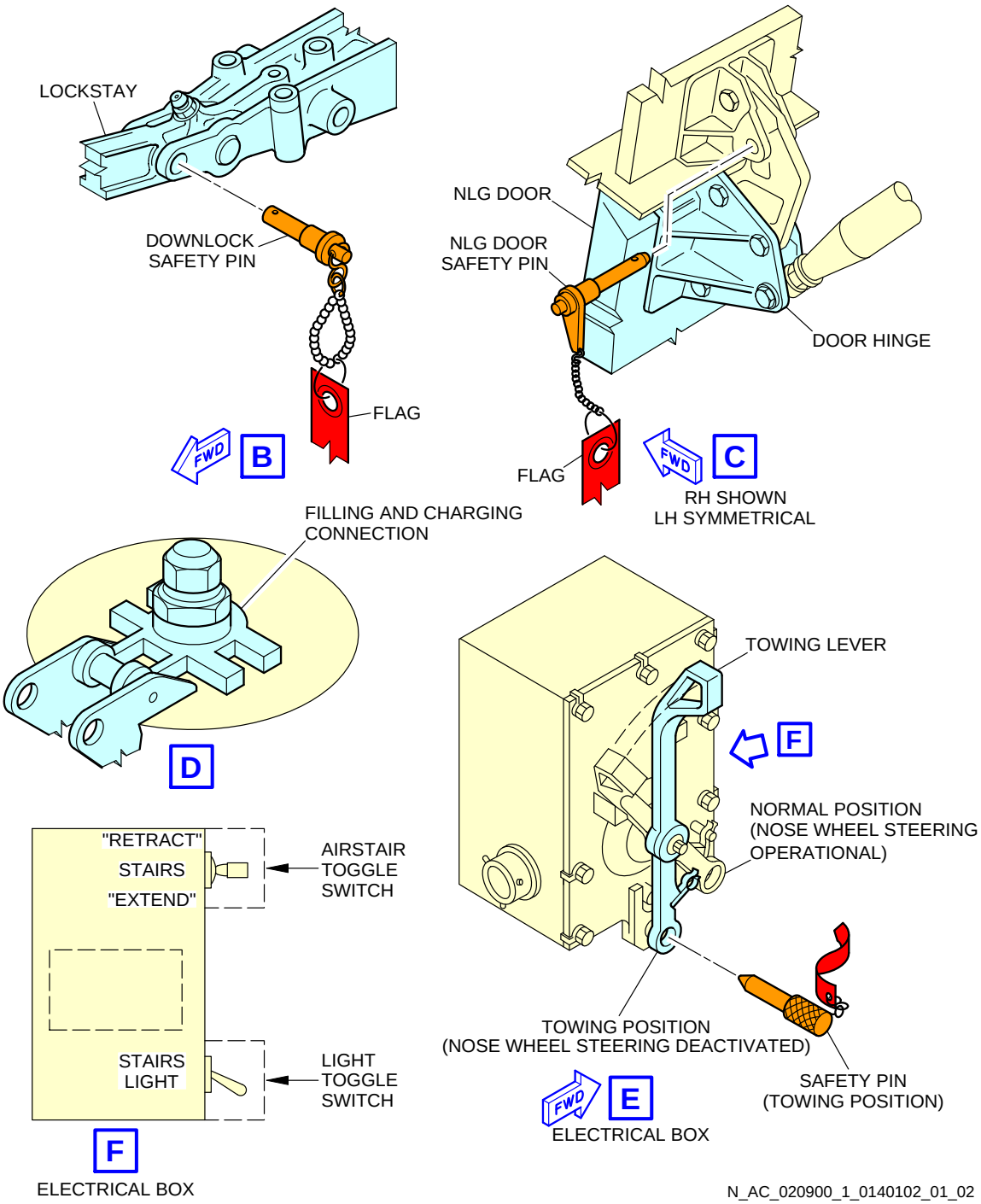
Landing Gear
Main Landing Gear Dimensions - Four-Wheel Bogie
FIGURE-2-9-0-991-013-A01

**ON A/C A320-200 A320neo



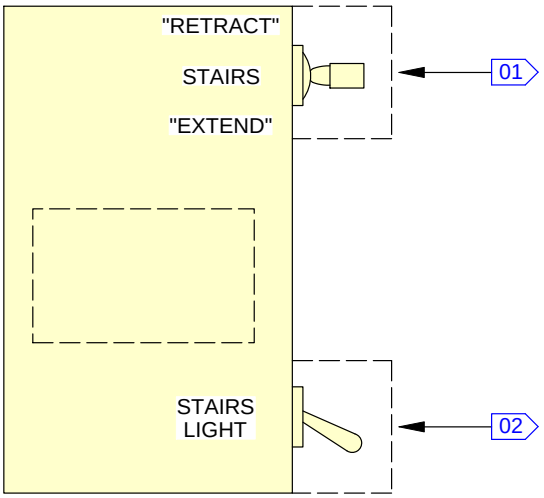
Landing Gear
Nose Landing Gear (Sheet 1 of 2)
FIGURE-2-9-0-991-014-A01

**ON A/C A320-200 A320neo



Landing Gear
Nose Landing Gear (Sheet 2 of 2)
FIGURE-2-9-0-991-014-A01

**ON A/C A320-200 A320neo



NOTE:

01 STAIRS SW

NEUTRAL: THIS STABLE AND LOCKED POSITION PREVENTS OPERATION OF THE AIRSTAIRS. THE FLIGHT CREW MUST PULL THE SWITCH OUT TO MOVE IT FROM THE NEUTRAL POSITION.

RETRACT: WHEN GROUND CREW HOLDS THE SWITCH AGAINST THE SPRING IN THIS POSITION, THE AIRSTAIRS RETRACT IF THE TELESCOPIC HANDRAILS ARE FULLY STOWED.

EXTEND: WHEN GROUND CREW HOLDS THE SWITCH AGAINST THE SPRING IN THIS POSITION, THE AIRSTAIRS EXTEND.

02 STAIRS LIGHT

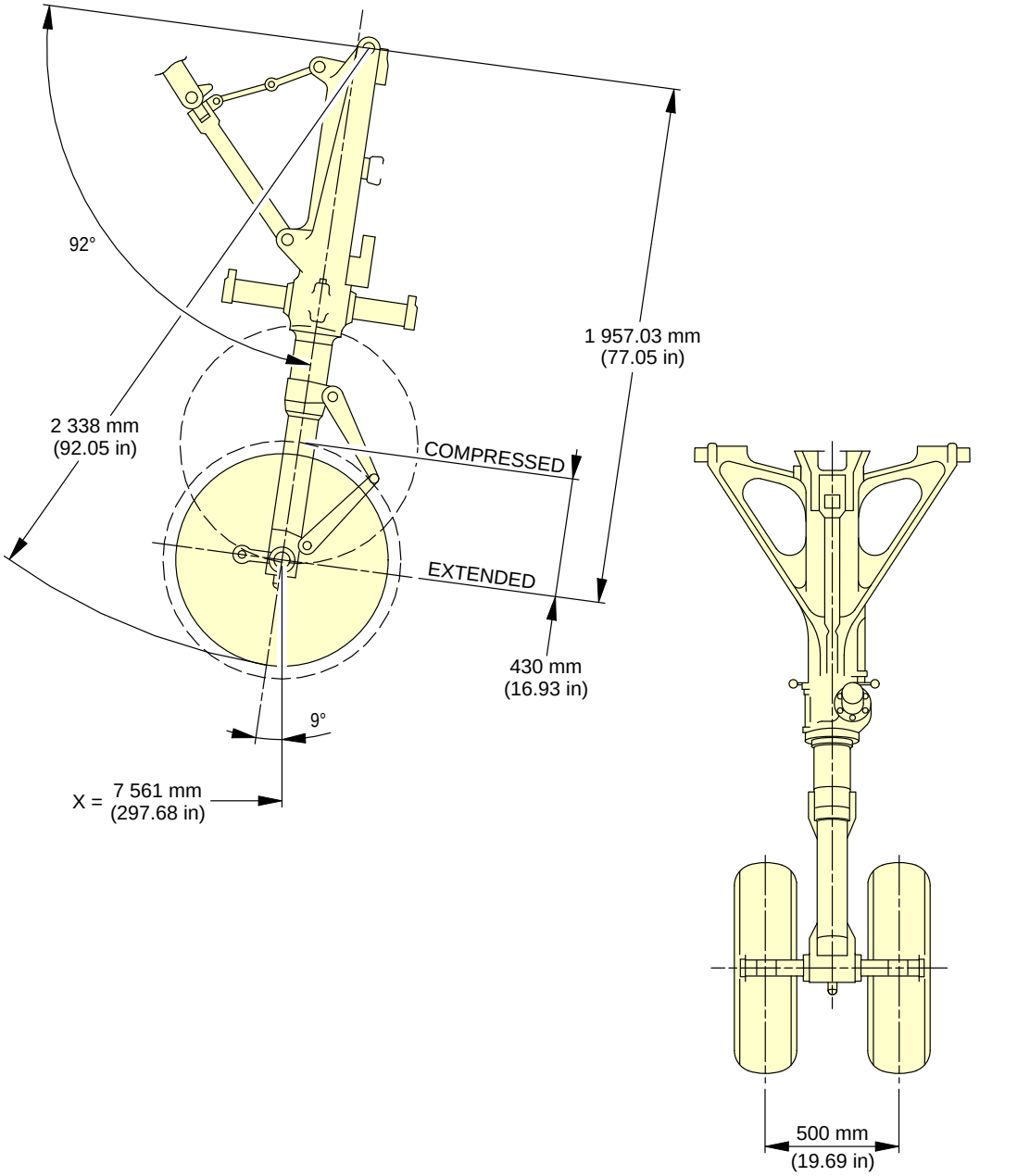
UP: STAIR LIGHTS COME ON, AS DOES THE YELLOW CONTROL LIGHT IN THE CABIN, IF:
- THE STAIRS ARE FULLY EXTENDED, AND
- POWER IS AVAILABLE FROM DC BUS 2.

DOWN: STAIR LIGHTS AND YELLOW CONTROL LIGHT ARE OFF.

N_AC_020900_1_0300101_01_00

Operation of Airstairs for ACJ
2-9-0-991-030-A01

****ON A/C A320-200 A320neo**



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Landing Gear
Nose Landing Gear Dimensions
FIGURE-2-9-0-991-015-A01

****ON A/C A320-200 A320neo**

Landing Gear Maintenance Pits

1. Description

The minimum maintenance pit envelopes for the landing-gear shock absorber removal are shown in FIGURE 2-9-0-991-024-A and FIGURE 2-9-0-991-025-A.

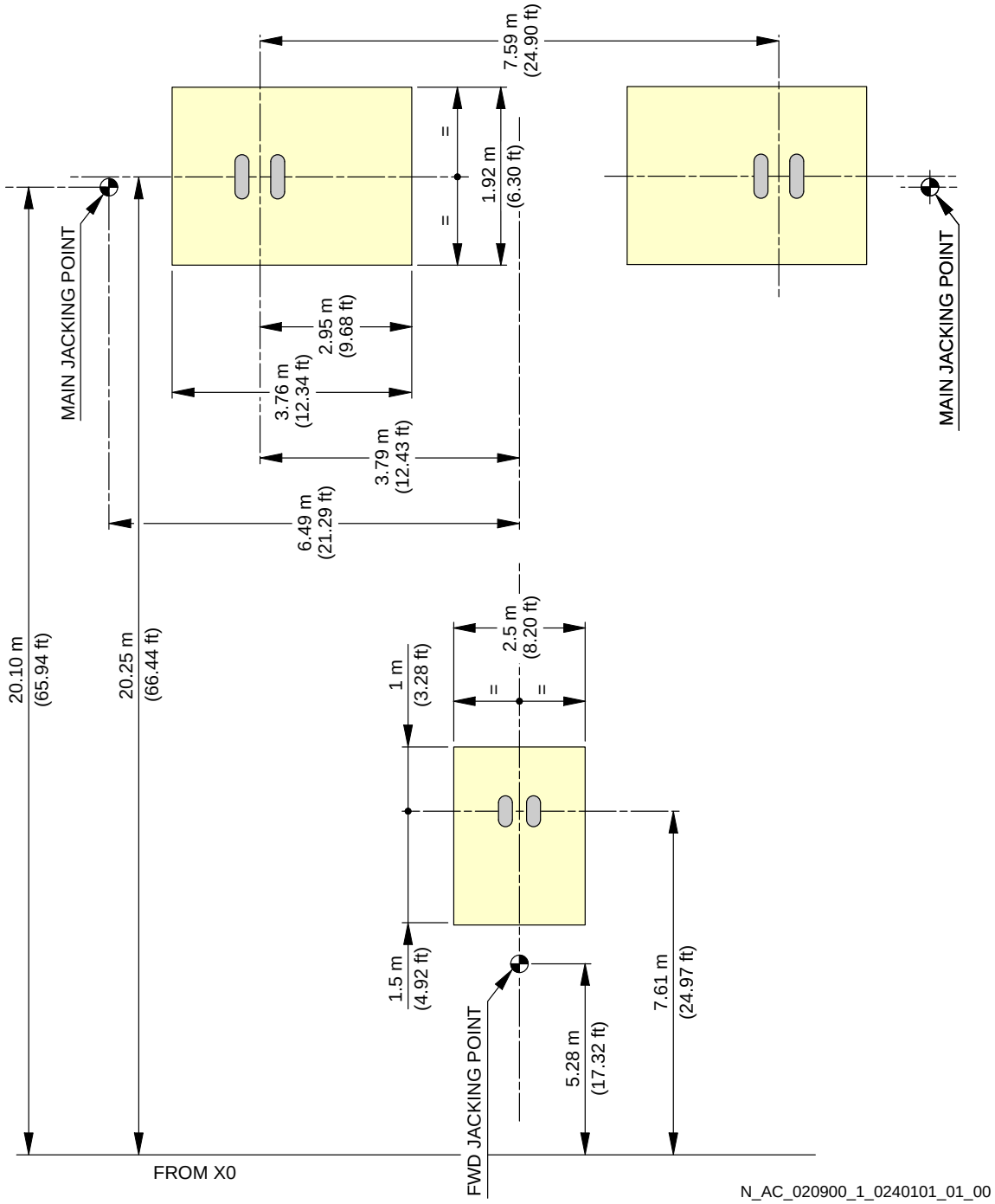
All dimensions shown are minimum dimensions with zero clearances.

The dimensions for the pits have been determined as follows:

- The length and width of the pits allow the gear to rotate as the weight is taken off the landing gear.
- The depth of the pits allows the shock absorber to be removed when all the weight is taken off the landing gear.

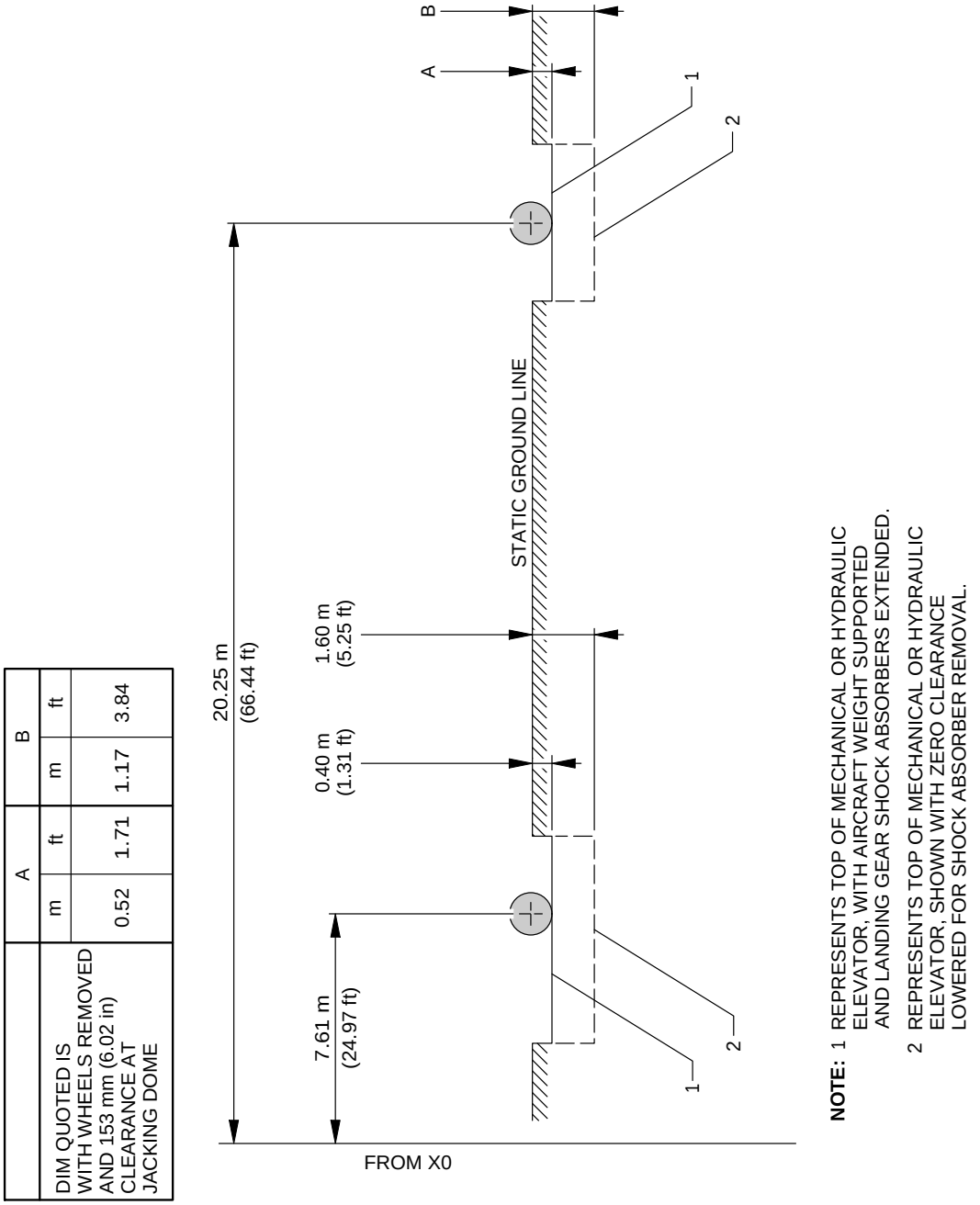
Dimensions for elevators and associated mechanisms must be added to those in FIGURE 2-9-0-991-024-A and FIGURE 2-9-0-991-025-A.

****ON A/C A320-200 A320neo**



Landing Gear Maintenance Pits
Maintenance Pit Envelopes
FIGURE-2-9-0-991-024-A01

****ON A/C A320-200 A320neo**



	A		B	
	m	ft	m	ft
DIM QUOTED IS WITH WHEELS REMOVED AND 153 mm (6.02 in) CLEARANCE AT JACKING DOME	0.52	1.71	1.17	3.84

N_AC_020900_1_0250101_01_00

Landing Gear Maintenance Pits
Maintenance Pit Envelopes
FIGURE-2-9-0-991-025-A01

2-10-0 Exterior Lighting

****ON A/C A320-200 A320neo**

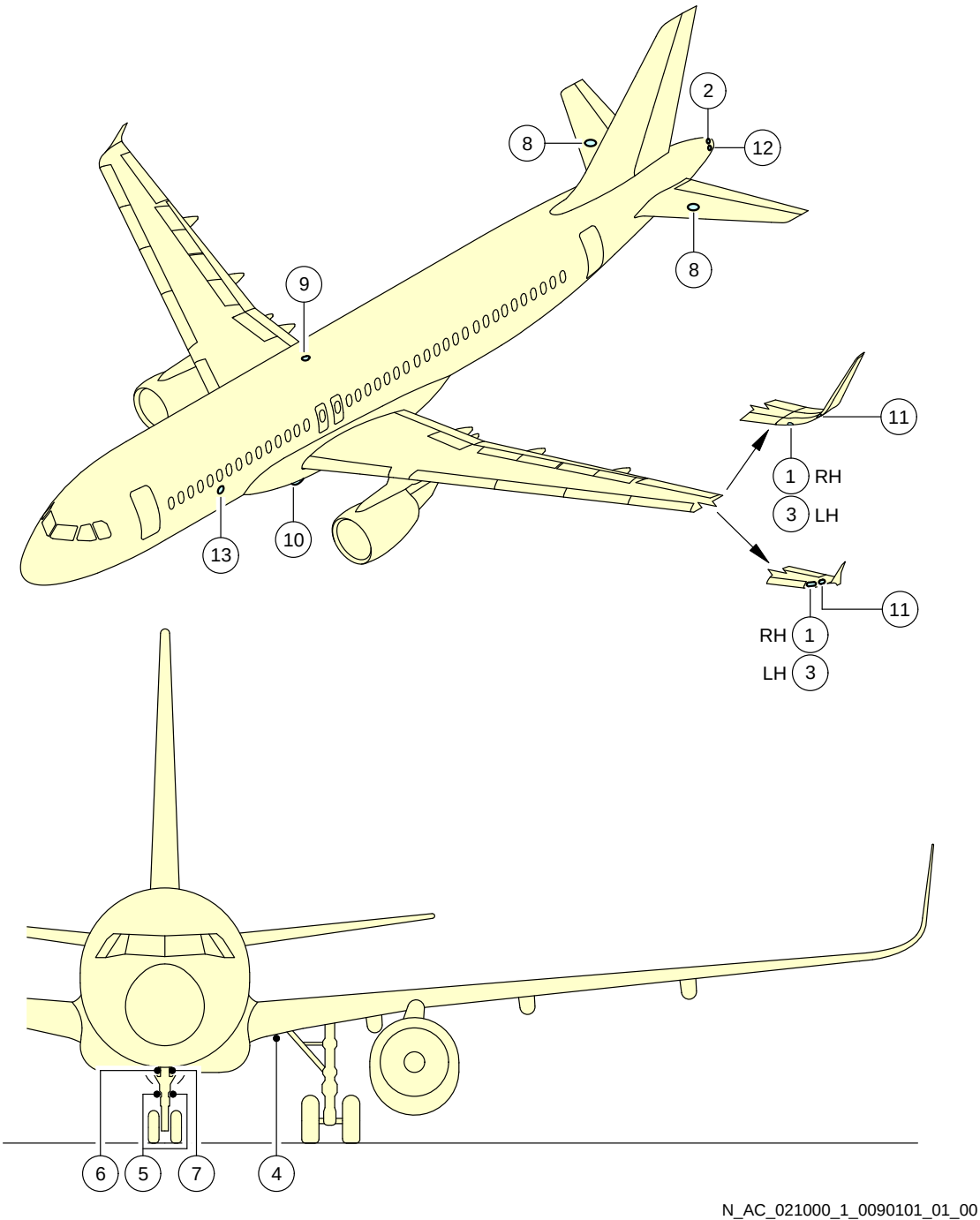
Exterior Lighting

1. General

This section provides the location of the aircraft exterior lighting.

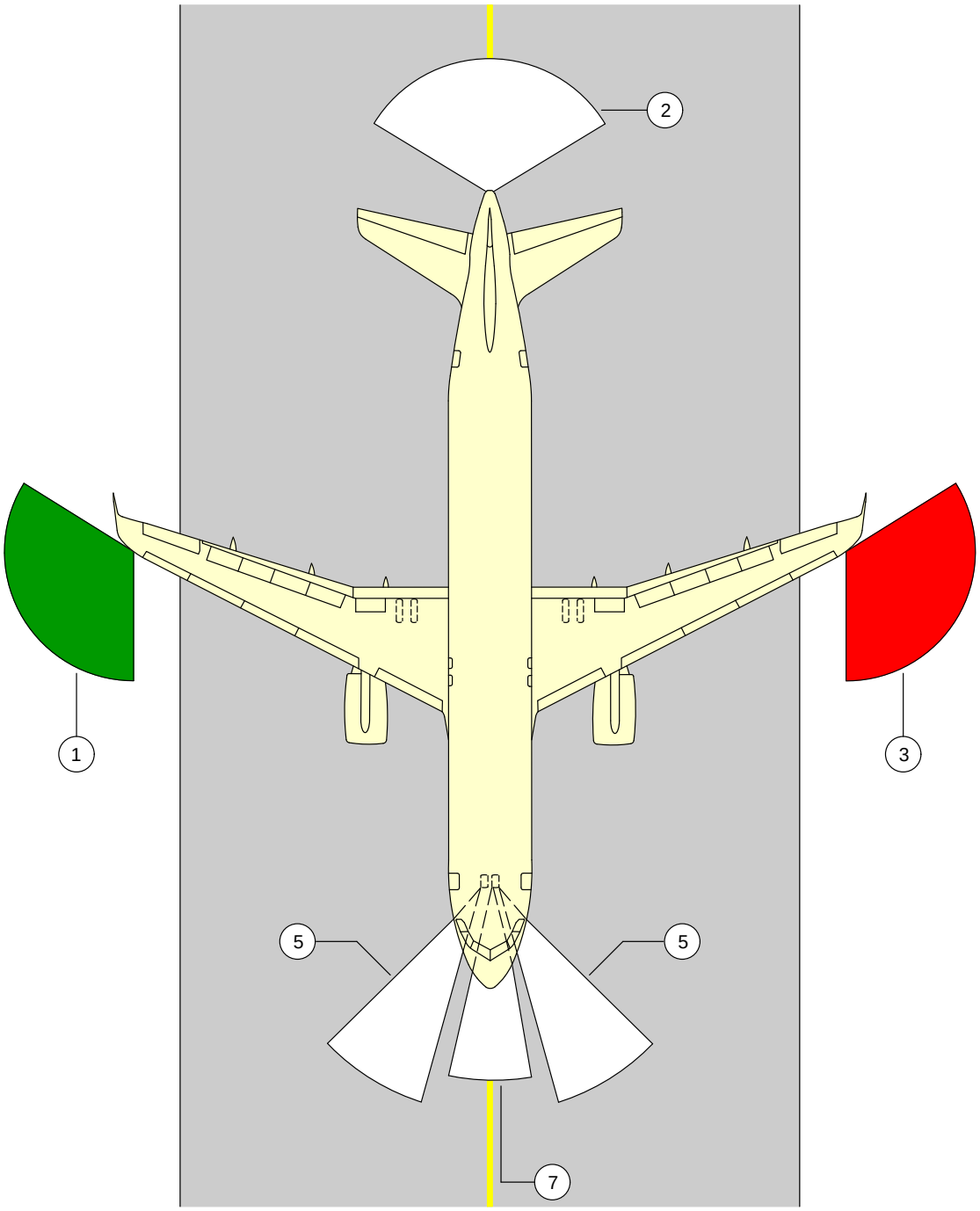
EXTERIOR LIGHTING	
ITEM	DESCRIPTION
1	RIGHT NAVIGATION LIGHT (GREEN)
2	TAIL NAVIGATION LIGHT (WHITE)
3	LEFT NAVIGATION LIGHT (RED)
4	RETRACTABLE LANDING LIGHT
5	RUNWAY TURN OFF LIGHT
6	TAXI LIGHT
7	TAKE-OFF LIGHT
8	LOGO LIGHT
9	UPPER ANTI-COLLISION LIGHT/BEACON (RED)
10	LOWER ANTI-COLLISION LIGHT/BEACON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

****ON A/C A320-200 A320neo**



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

****ON A/C A320-200 A320neo**



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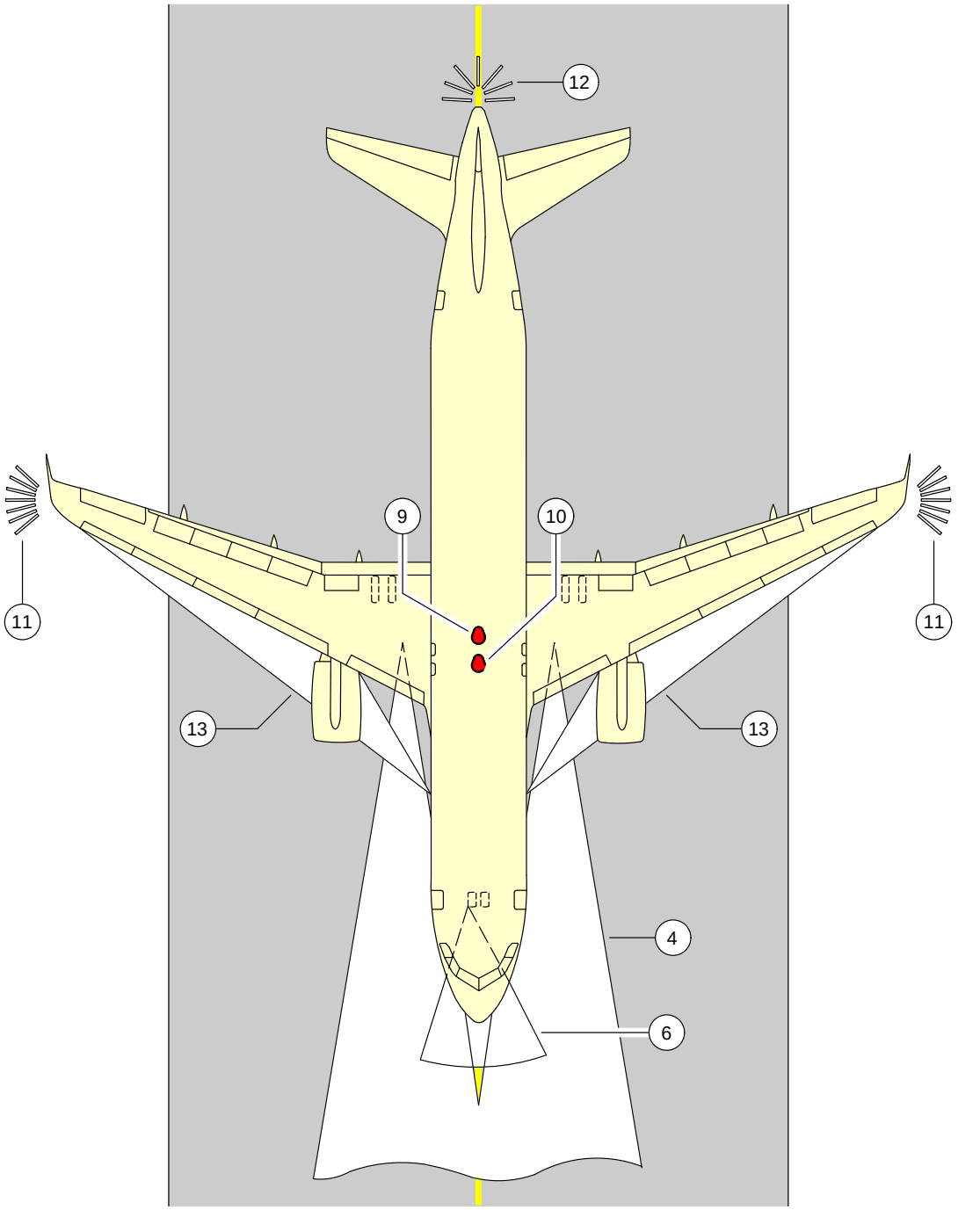
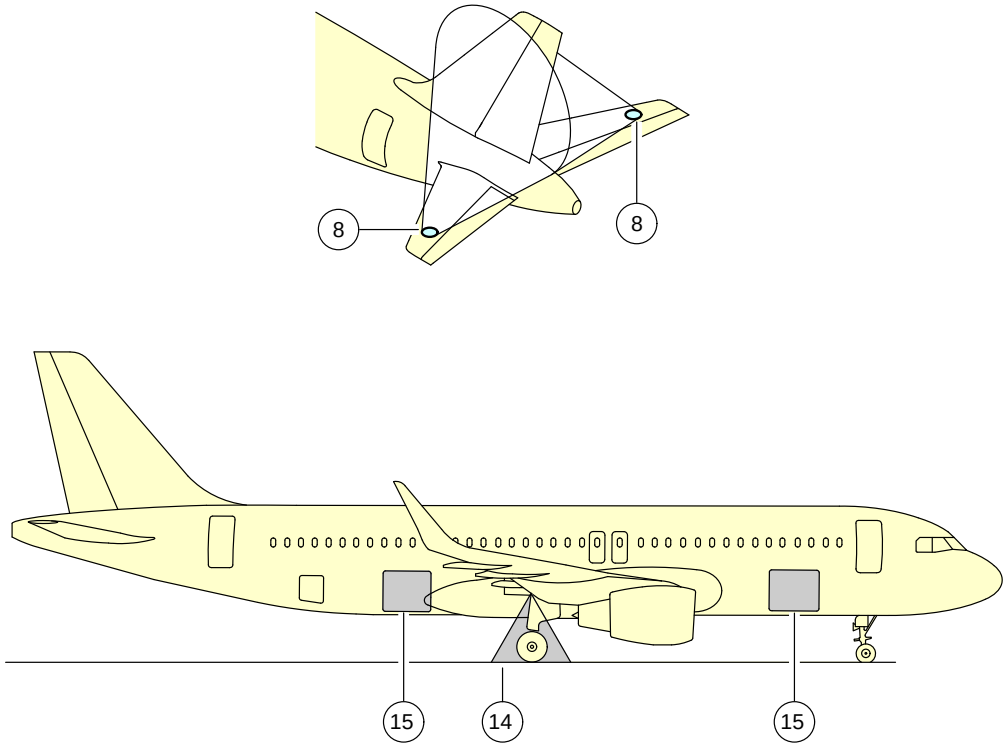
Exterior Lighting
FIGURE-2-10-0-991-010-A01

****ON A/C A320-200 A320neo**



Exterior Lighting
FIGURE-2-10-0-991-011-A01

****ON A/C A320-200 A320neo**



Exterior Lighting
FIGURE-2-10-0-991-019-A01

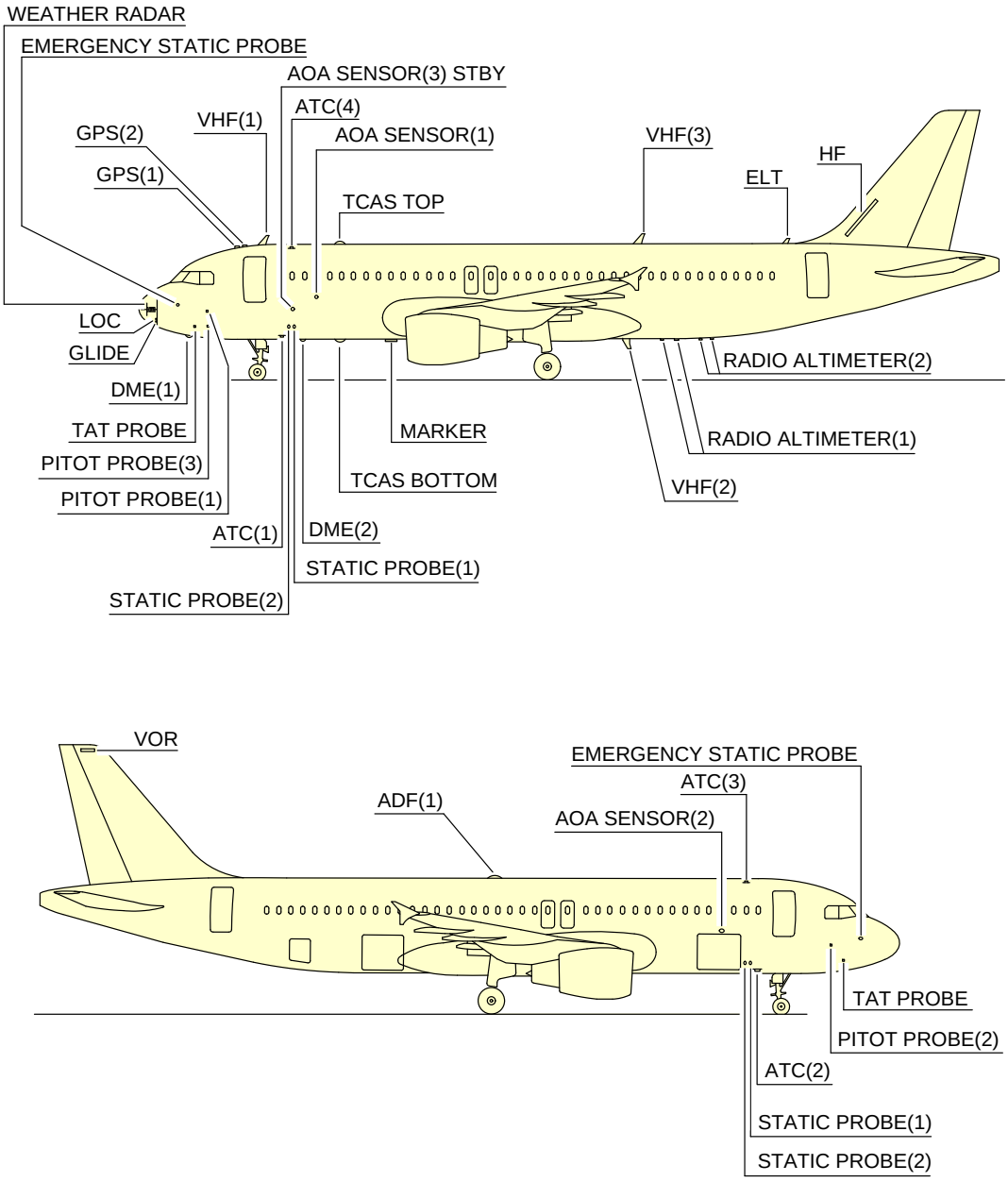
2-11-0 Antennas and Probes Location

****ON A/C A320-200 A320neo**

Antennas and Probes Location

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

****ON A/C A320-200 A320neo**



NOTE: DEPENDING ON AIRCRAFT CONFIGURATION

N_AC_021100_1_0030101_01_00

Antennas and Probes
Location
FIGURE-2-11-0-991-003-A01

2-12-0 Power Plant

****ON A/C A320-200 A320neo**

Auxiliary Power Unit

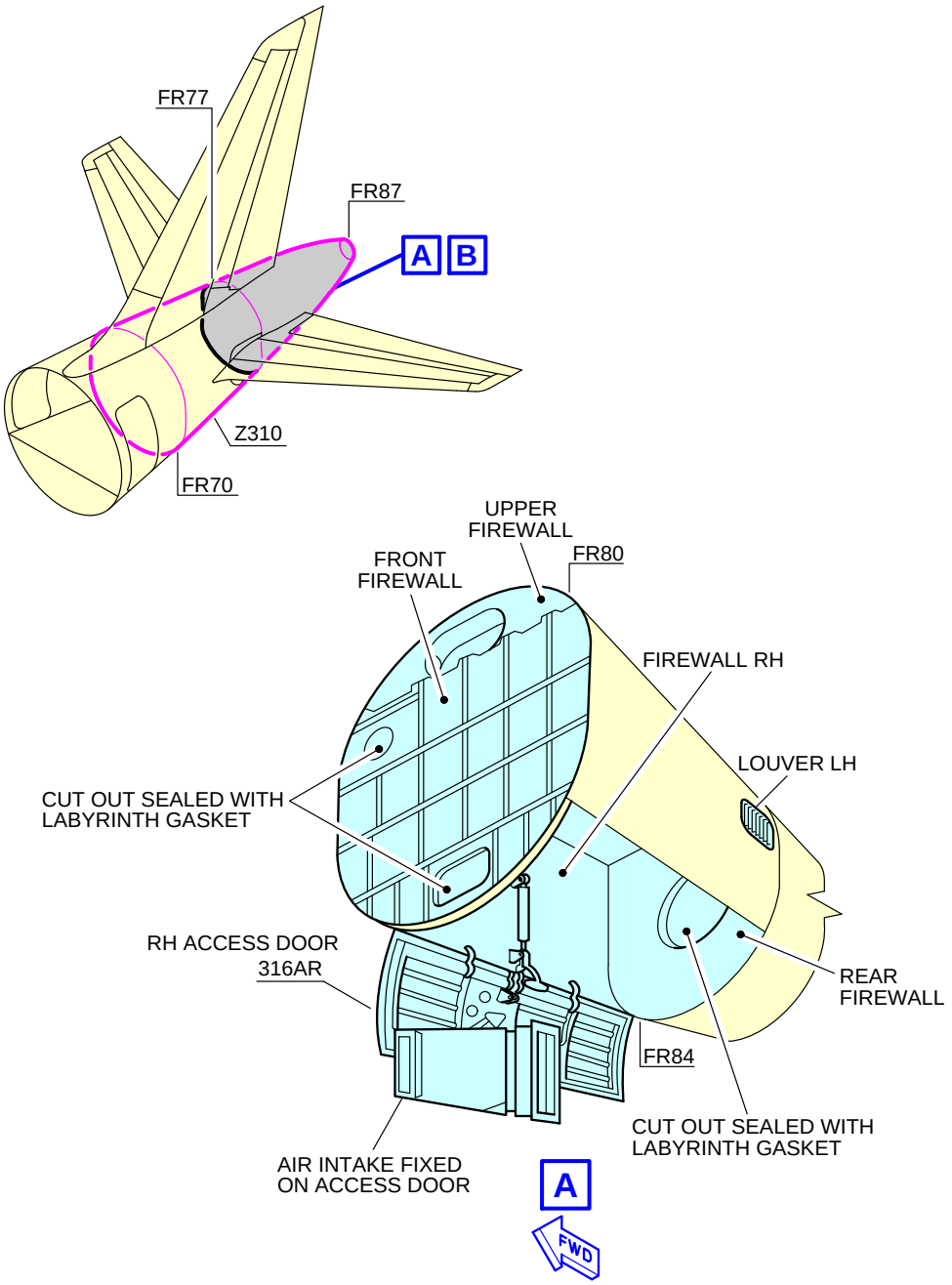
1. General

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

2. Controls and Indication

   The primary APU controls and indications are installed on the overhead panel, on the center pedestal and on the center instrument panel. Additionally, an external APU panel is installed on the nose landing gear to initiate an APU emergency shutdown.

**ON A/C A320-200 A320neo

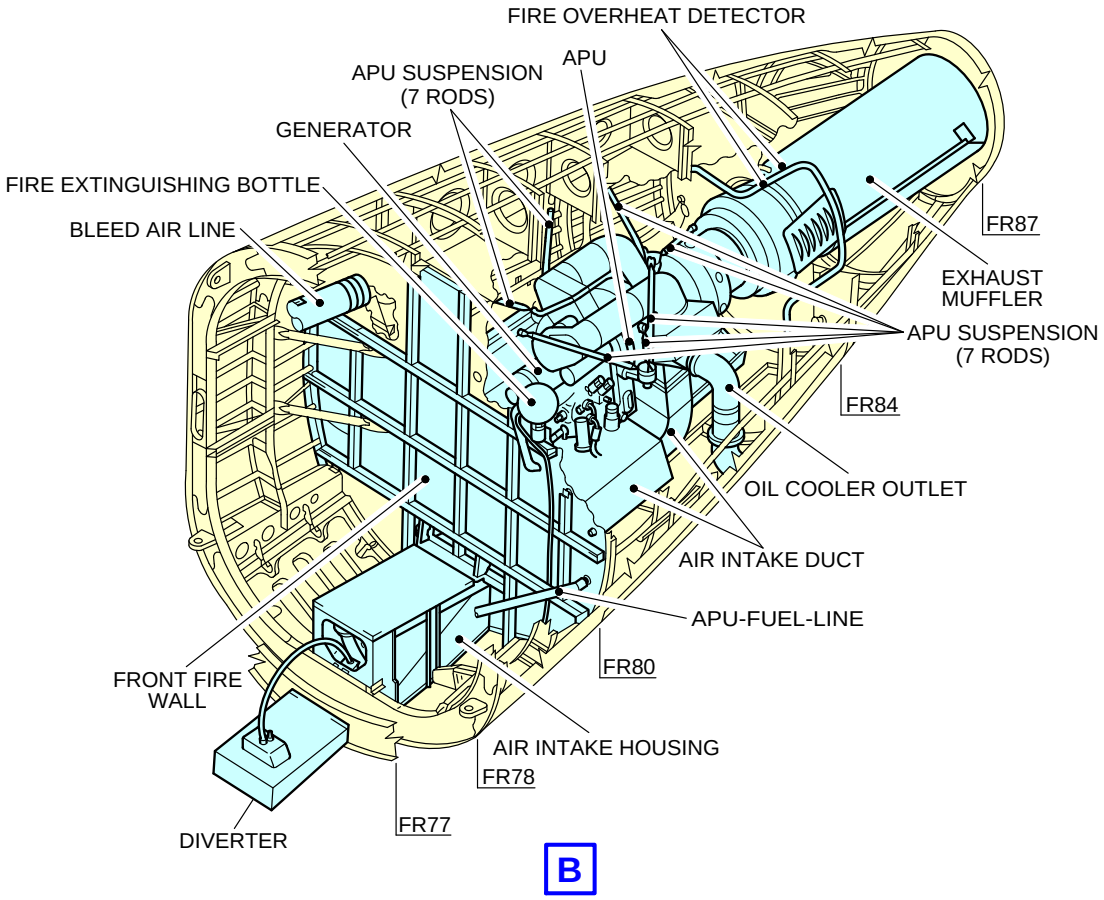


NOTE:
LH ACCESS DOOR 315AL NOT SHOWN FOR CLARITY.

N_AC_021200_1_0050101_01_01

Auxiliary Power Unit
Access Doors
FIGURE-2-12-0-991-005-A01

****ON A/C A320-200 A320neo**



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Auxiliary Power Unit
General Layout
FIGURE-2-12-0-991-006-A01

****ON A/C A320-200 A320neo**

Engine and Nacelle

****ON A/C A320-200**

1. Engine and Nacelle - CFM Engine

   A. Engine

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

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

   B. Nacelle

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

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

2. Engine and Nacelle - IAE Engine

A. Engine

The engine is a two spool, axial flow, high bypass ratio turbofan powerplant for subsonic service. The main modules of the engine are:

- low pressure compressor (fan and booster) assembly
- LP compressor/intermediate case
- No. 4 bearing and combustion section
- high pressure compressor
- HP turbine section
- LP turbine section
- accessory drives (gear box).

The four stage Low Pressure Compressor (LPC) is driven by a five stage Low Pressure Turbine (LPT) and the ten stage High Pressure Compressor (HPC) by a two stage High Pressure Turbine (HPT). The HPT also drives a gearbox which, in turn drives the engines and aircraft mounted accessories. The two shafts are supported by five main bearings.

The V2500 incorporates a Full Authority Digital Engine Control (FADEC) which governs all engine functions, including power management. Reverse thrust for braking the aircraft after landing is supplied by an integrated system which acts on the fan discharge airflow.

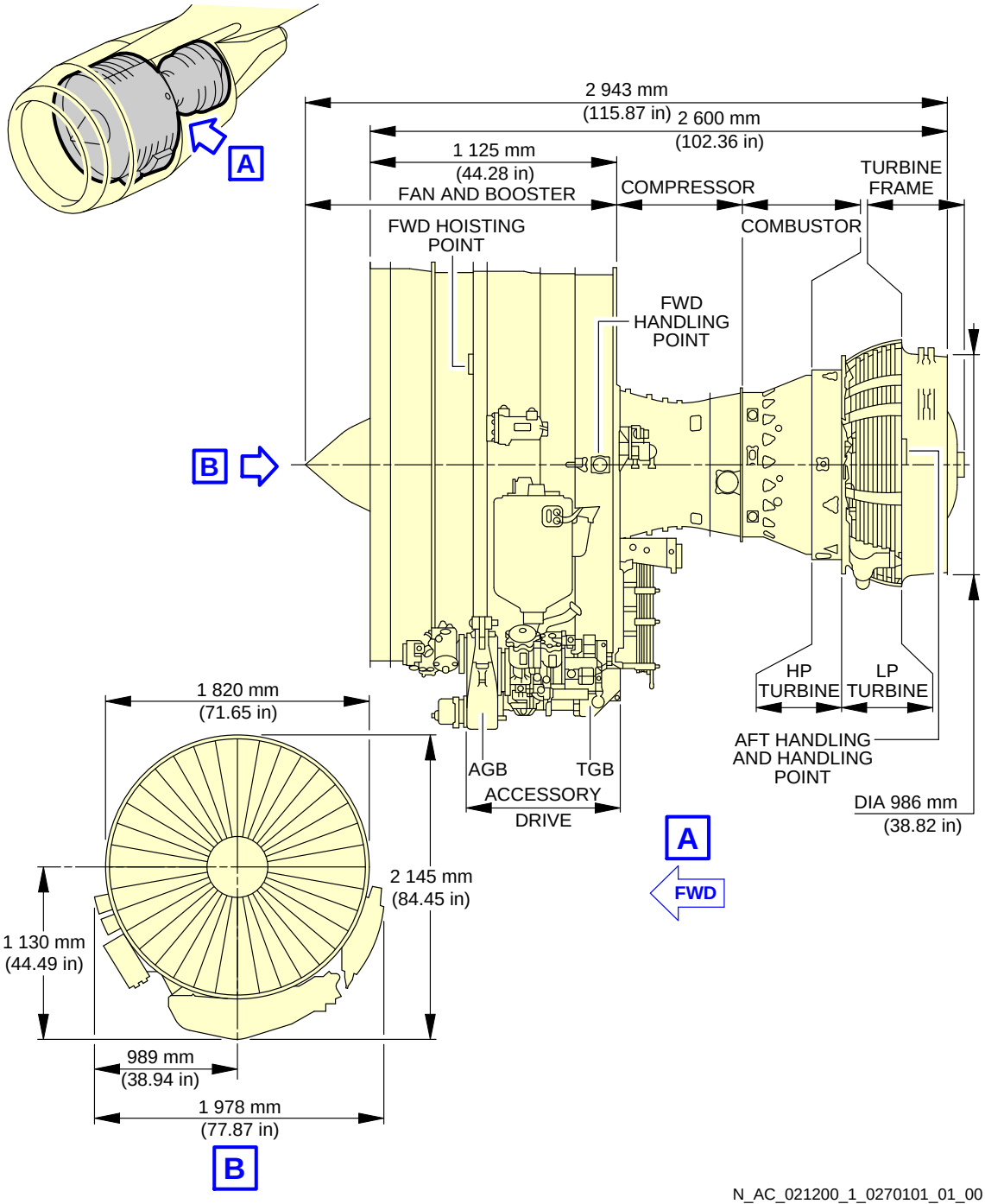
B. Nacelle

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

The nacelle installation is designed to provide cooling and ventilation air for engine accessories mounted along the fan and core casing. The nacelle provides:

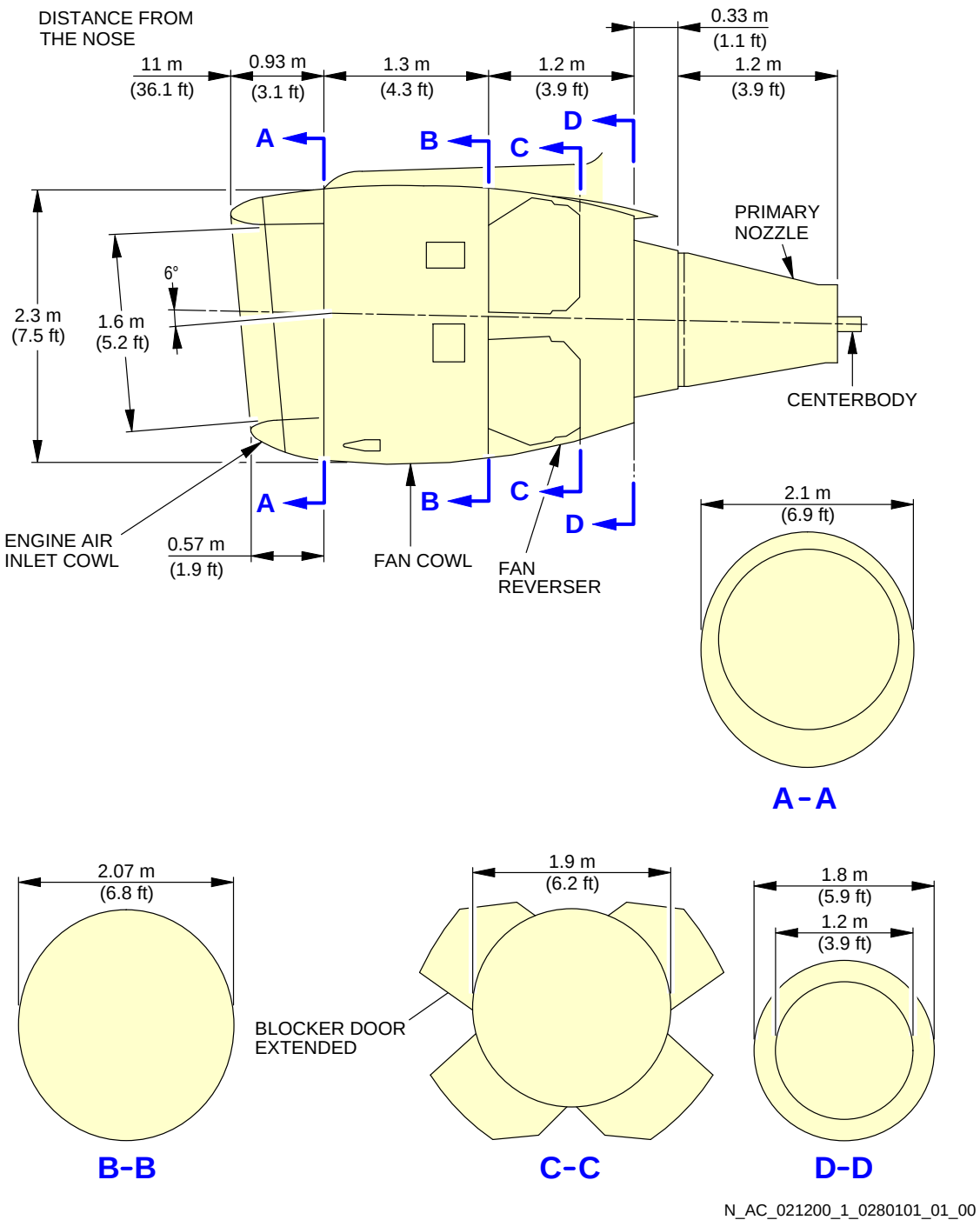
- protection for the engine and the accessories
- airflow around the engine during its operation
- lighting protection
- HIRF and EMI attenuation.

**ON A/C A320-200



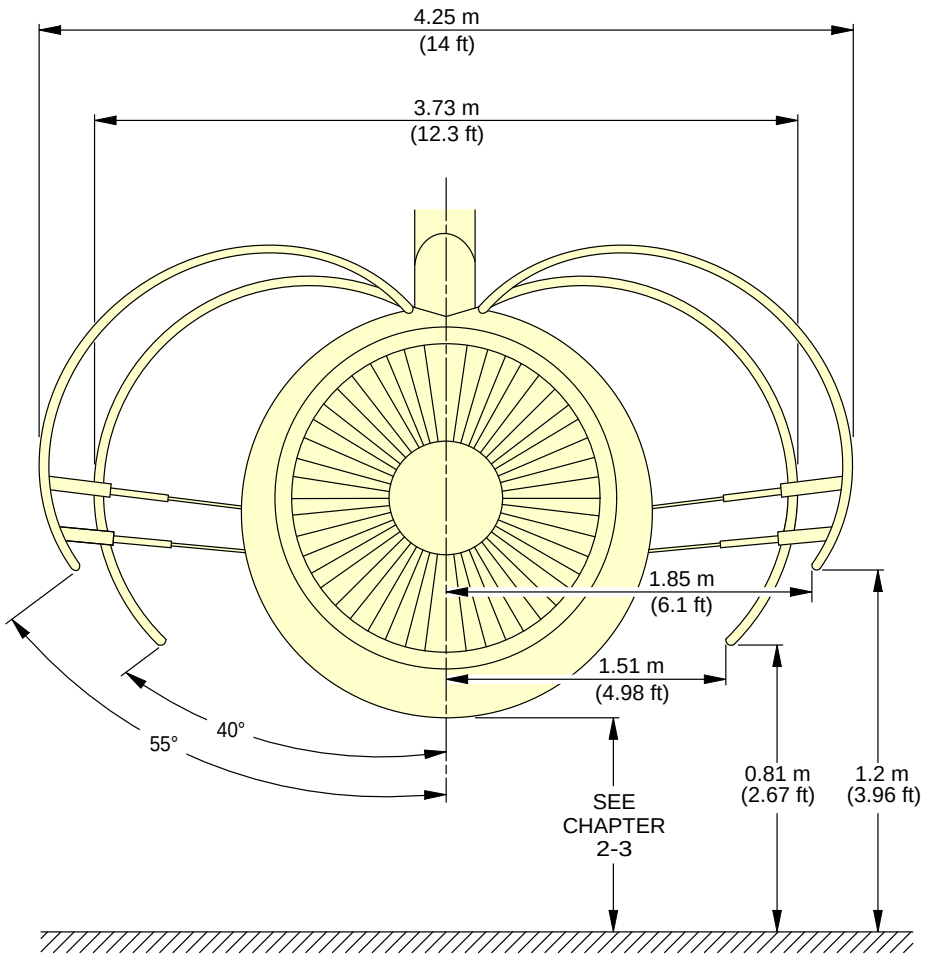
Power Plant Handling
Major Dimensions - CFM56 Series Engine
FIGURE-2-12-0-991-027-A01

**ON A/C A320-200



Power Plant Handling
Major Dimensions - CFM56 Series Engine
FIGURE-2-12-0-991-028-A01

****ON A/C A320-200**

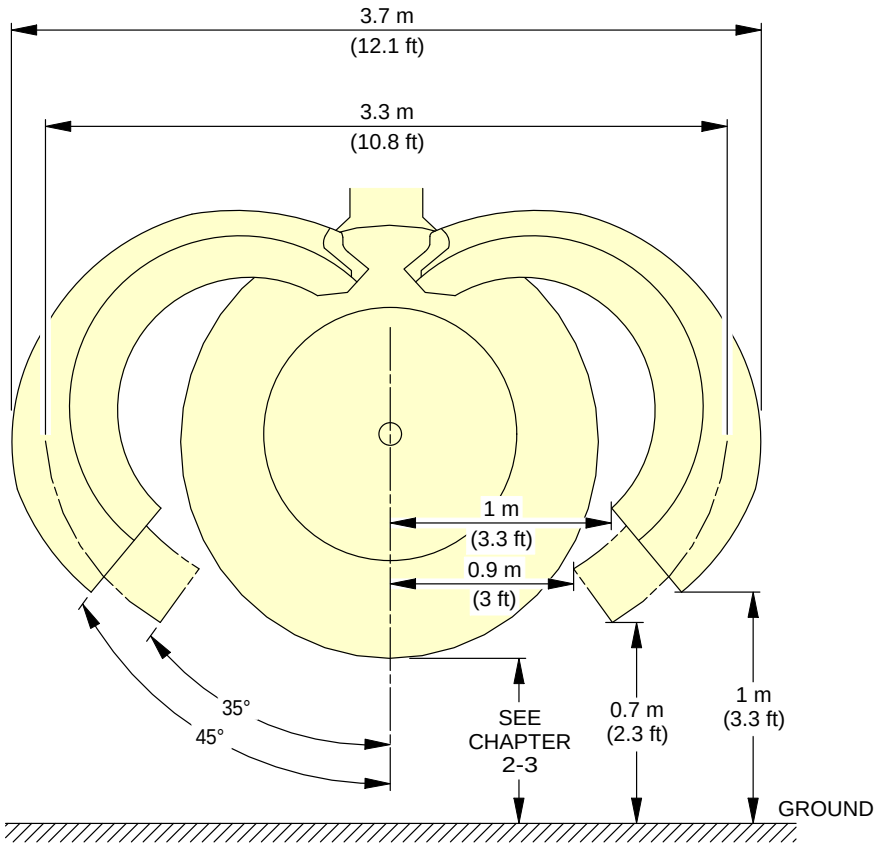


NOTE: APPROXIMATE DIMENSIONS.

N_AC_021200_1_0290101_01_01

Power Plant Handling
Fan Cowls - CFM56 Series Engine
FIGURE-2-12-0-991-029-A01

****ON A/C A320-200**



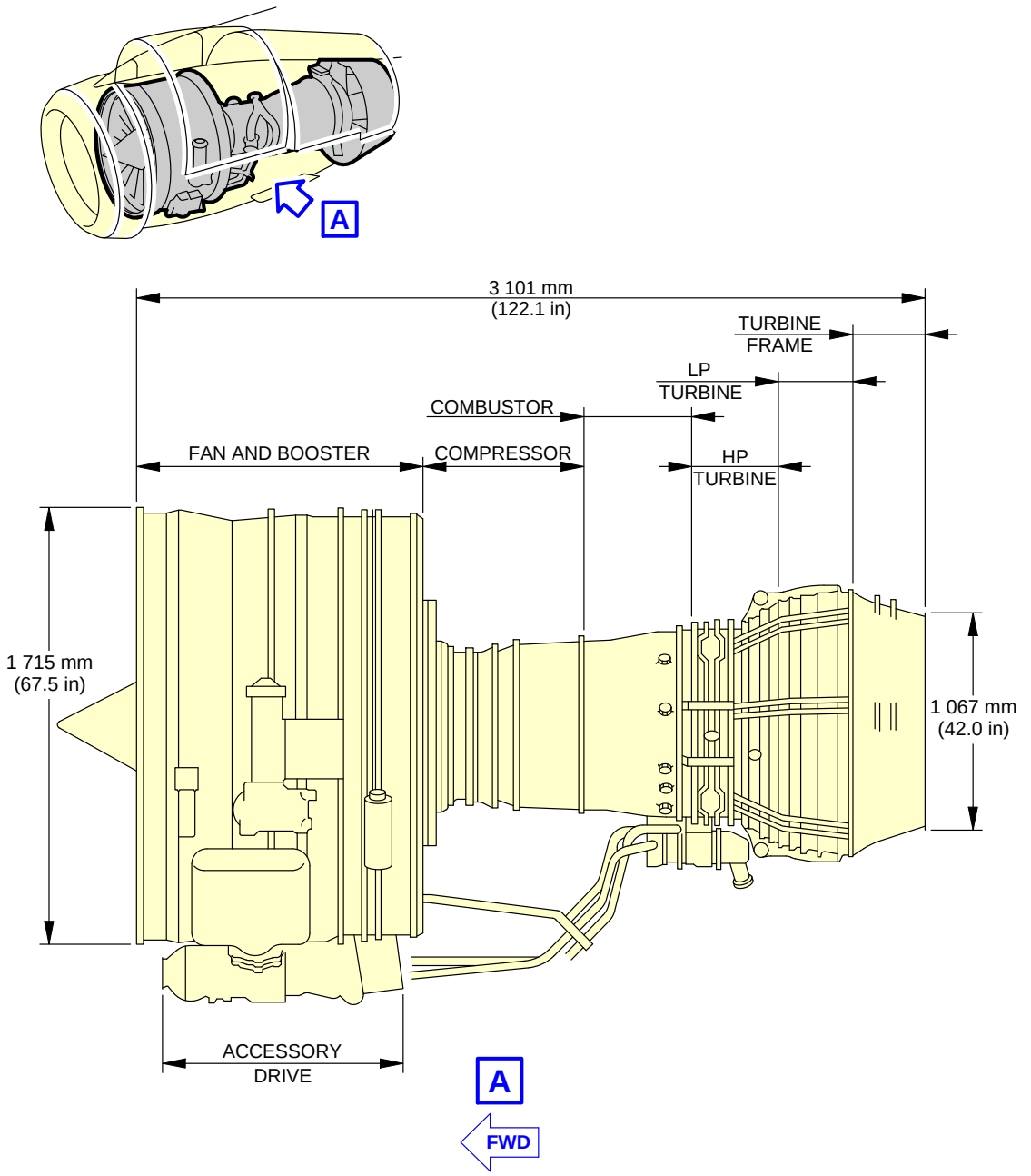
CAUTION
DO NOT ACTUATE SLATS:
- WITH THRUST REVERSER COWLS 45° OPEN POSITION
- WITH BLOCKER DOORS OPEN AND THRUST REVERSER COWLS AT 35° AND 45° OPEN POSITION.

NOTE: APPROXIMATE DIMENSIONS.

N_AC_021200_1_0300101_01_01

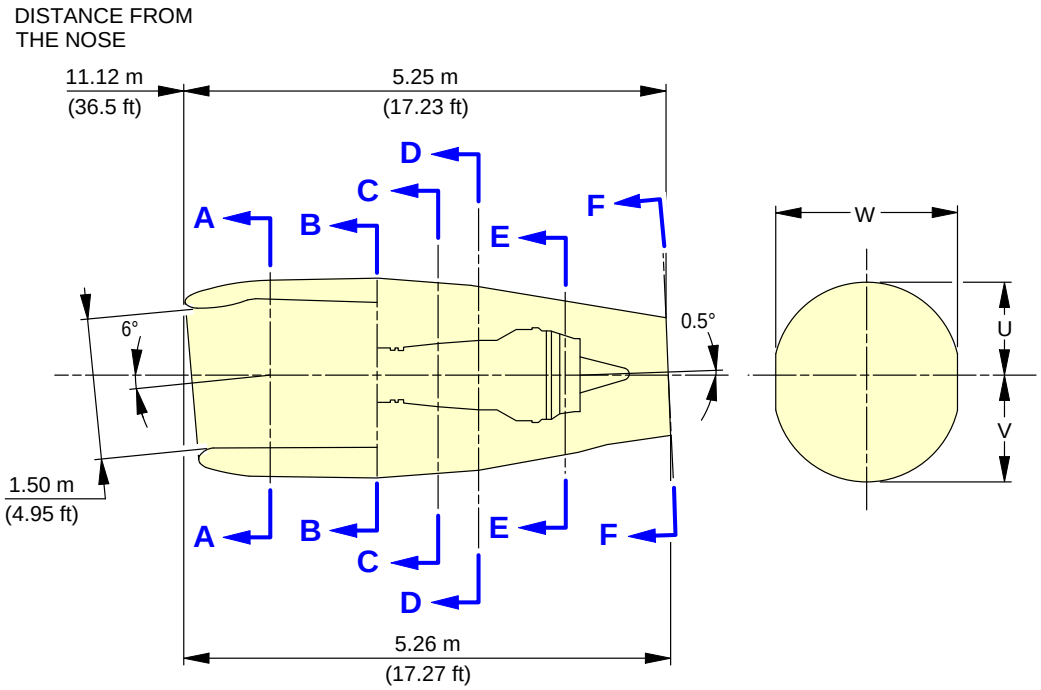
Power Plant Handling
Thrust Reverser Cowls - CFM56 Series Engine
FIGURE-2-12-0-991-030-A01

**ON A/C A320-200



Power Plant Handling
Major Dimensions - IAE V2500 Series Engine
FIGURE-2-12-0-991-031-A01

**ON A/C A320-200

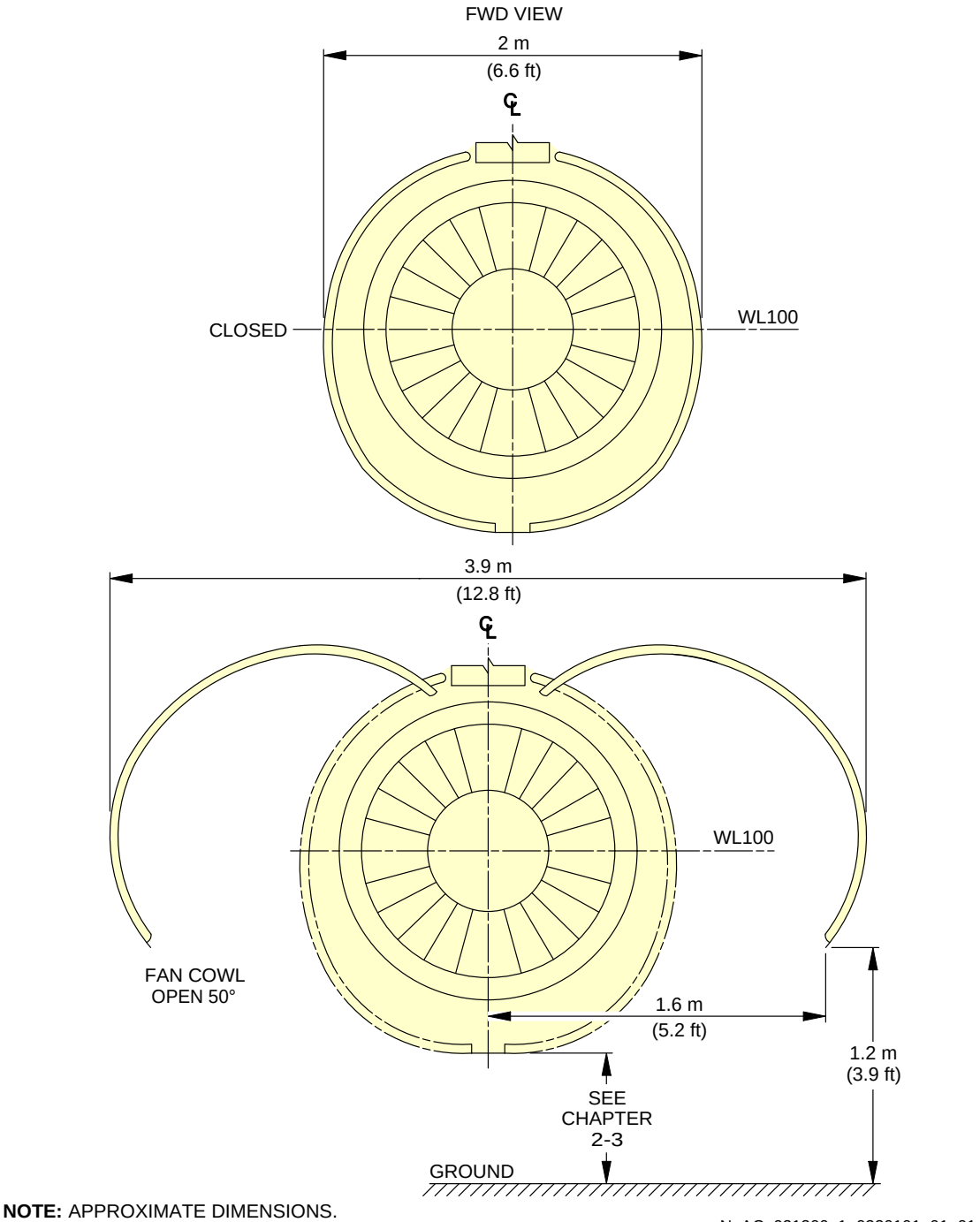


	W		U		V		PPS		AT COMPONENT
	m	ft	m	ft	m	ft	m	ft	
A-A	2.01	6.58	0.99	3.25	1.10	3.63	1.41	4.62	INLET ATTACH FLG
B-B	2.01	6.58	1.00	3.29	1.11	3.64	2.59	8.50	TORQUE BOX "V" BLADE
C-C	1.98	6.50	0.97	3.19	1.07	3.52	3.26	10.70	COMB. CHAMBER ENTRY FLG
D-D	1.93	6.32	0.93	3.06	1.03	3.39	3.63	11.90	COMB. CHAMBER EXIT FLG
E-E	1.64	5.38	0.78	2.57	0.86	2.83	4.60	15.10	TECH FLG TURB. EXIT CASE
F-F	1.24	4.07	0.60	1.96	0.64	2.11	----	----	AFT END CNA

N_AC_021200_1_0320101_01_00

Power Plant Handling
Major Dimensions - IAE V2500 Series Engine
FIGURE-2-12-0-991-032-A01

****ON A/C A320-200**

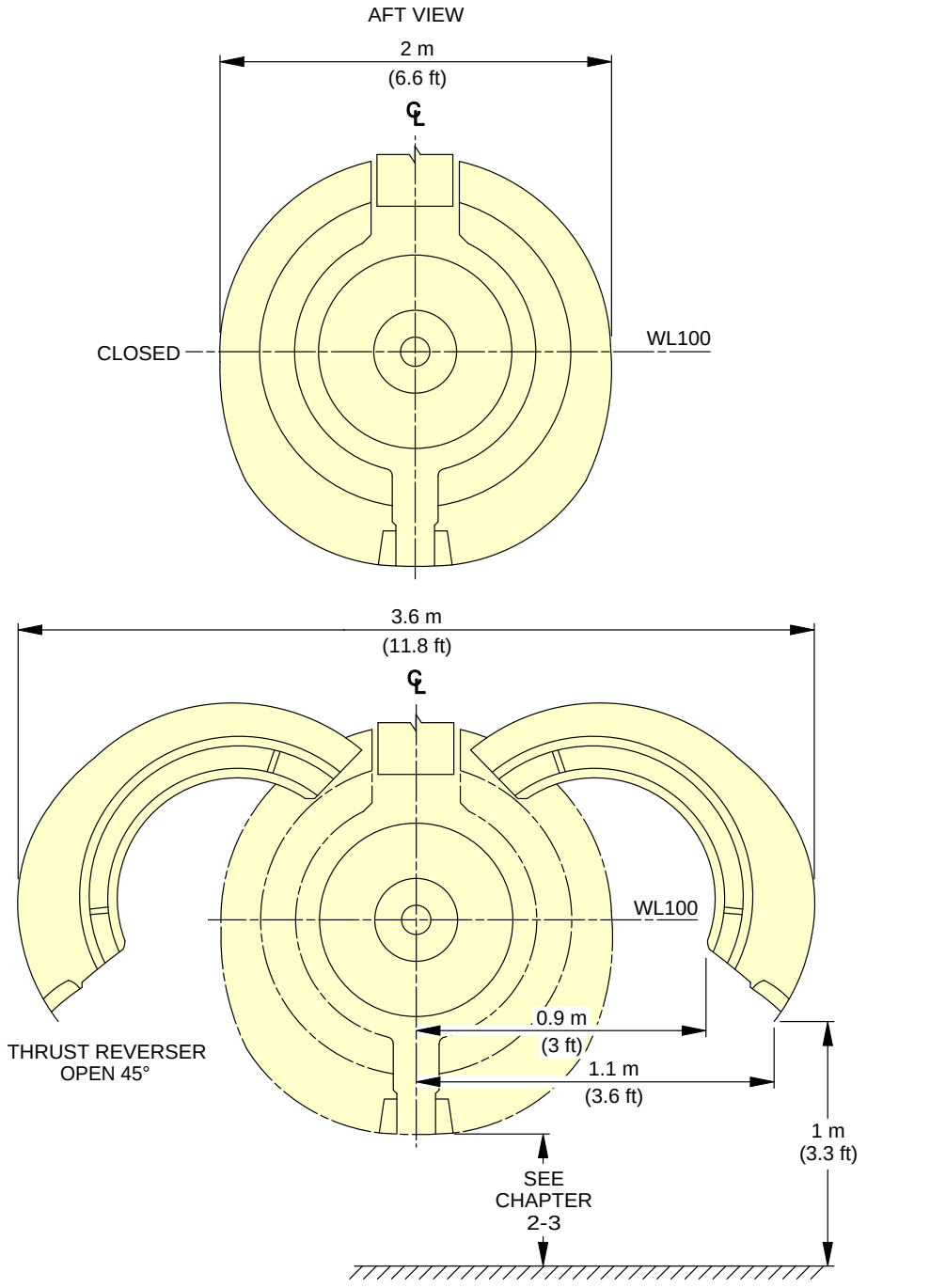


NOTE: APPROXIMATE DIMENSIONS.

N_AC_021200_1_0330101_01_01

Power Plant Handling
Fan Cowls - IAE V2500 Series Engine
FIGURE-2-12-0-991-033-A01

****ON A/C A320-200**

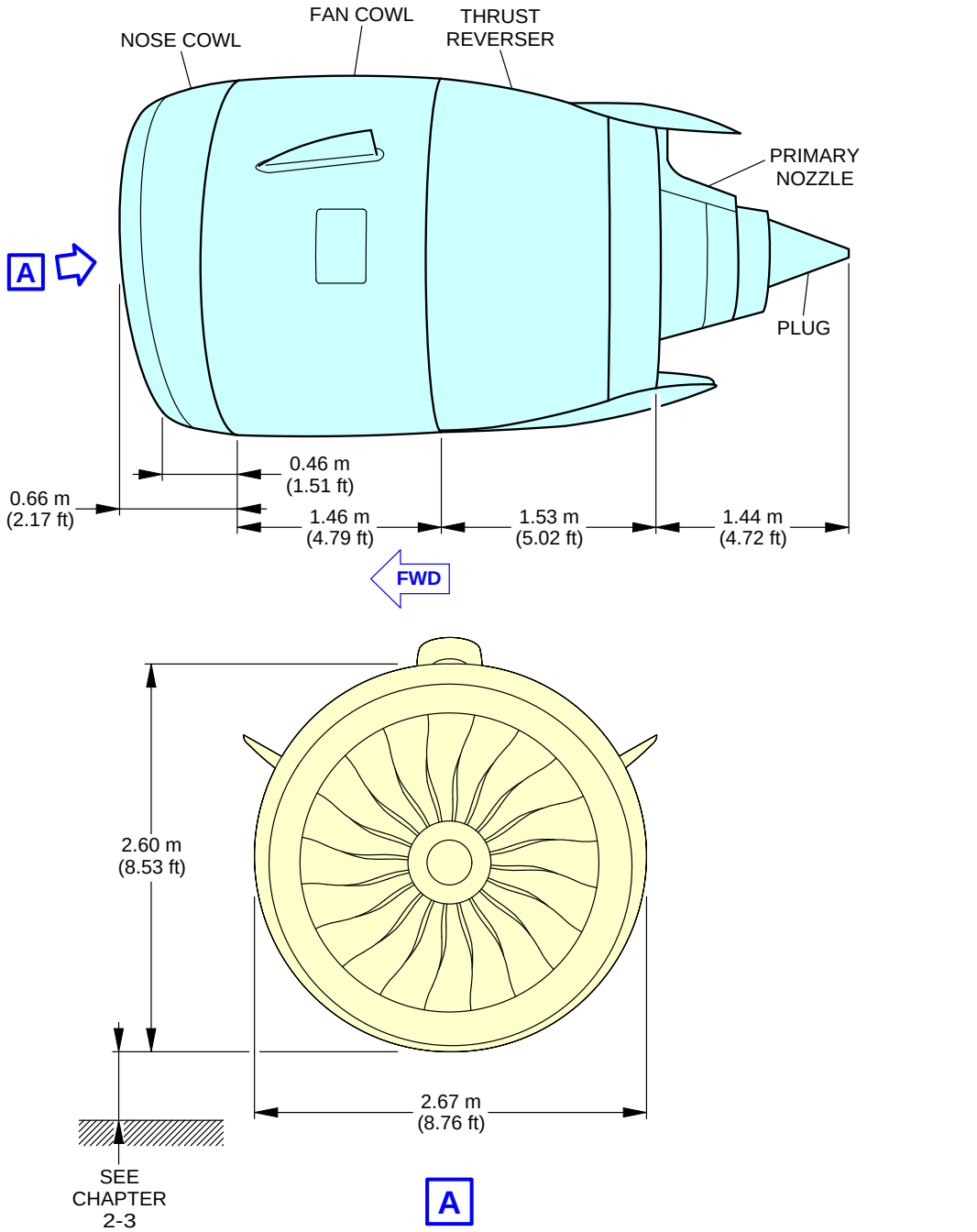


NOTE: APPROXIMATE DIMENSIONS.

N_AC_021200_1_0340101_01_01

Power Plant Handling
Thrust Reverser Halves - IAE V2500 Series Engine
FIGURE-2-12-0-991-034-A01

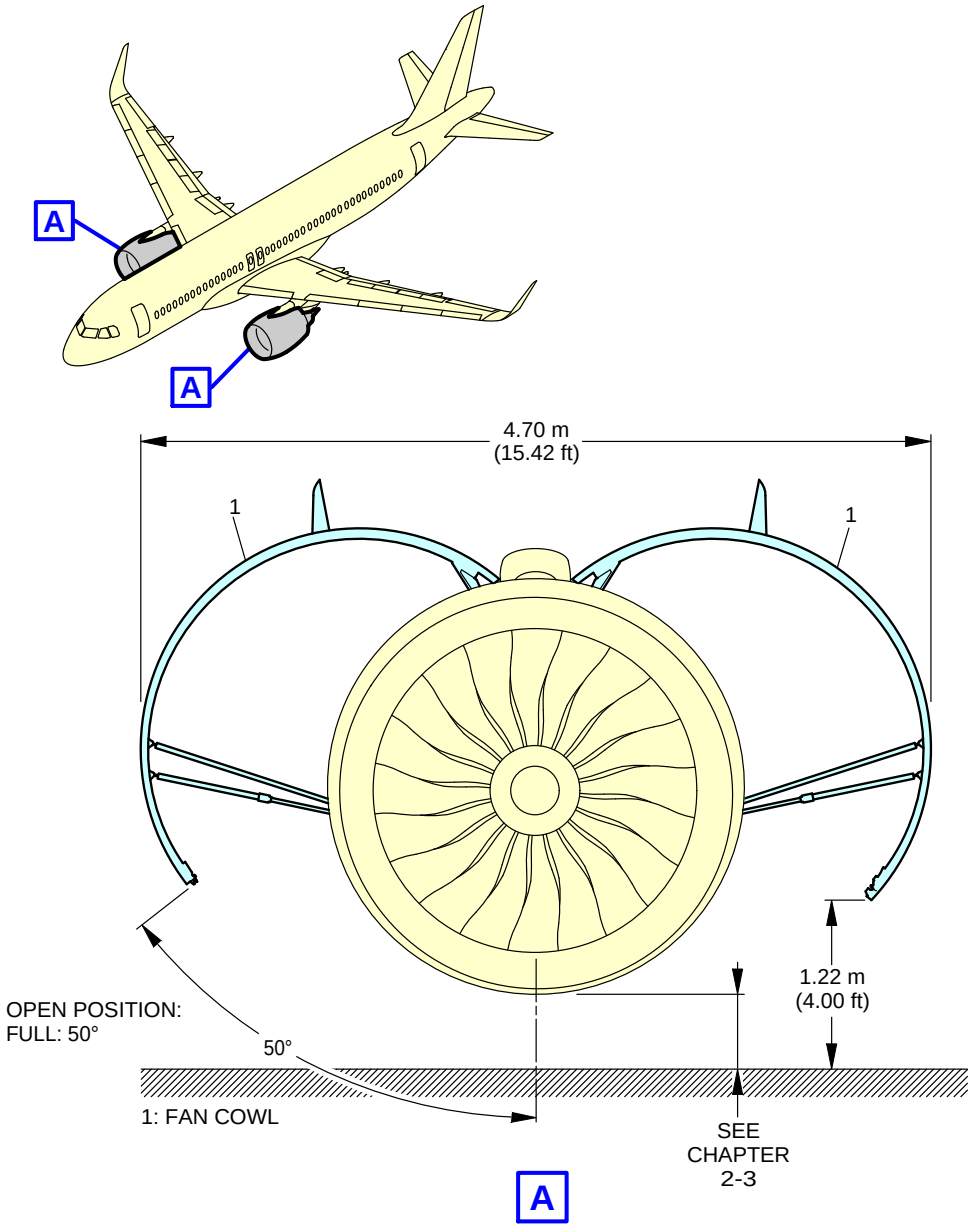
**ON A/C A320neo



N_AC_021200_1_0460101_01_01

Power Plant Handling
Major Dimensions - PW 1100G Engine
FIGURE-2-12-0-991-046-A01

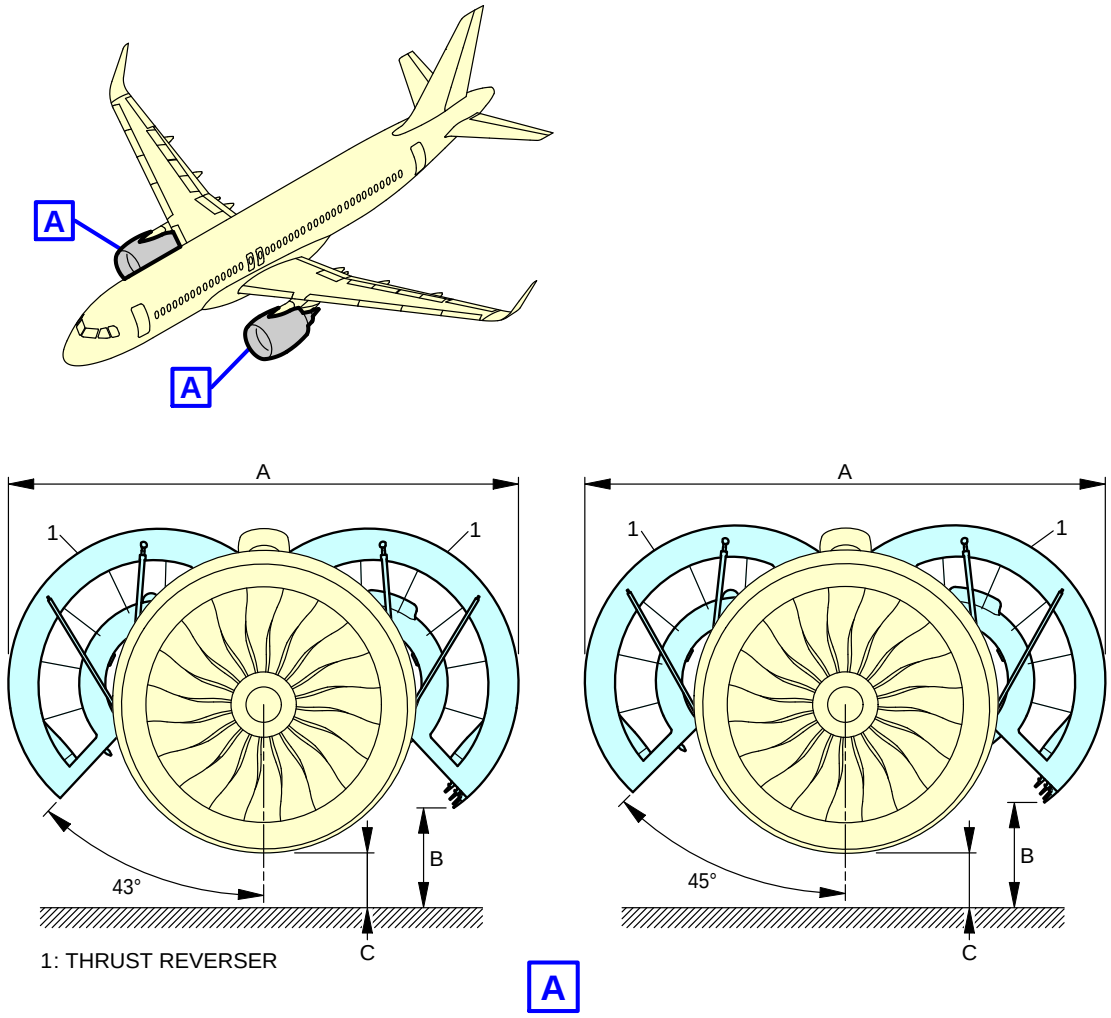
****ON A/C A320neo**



N_AC_021200_1_0470101_01_01

Power Plant Handling
Fan Cowls - PW 1100G Engine
FIGURE-2-12-0-991-047-A01

****ON A/C A320neo**



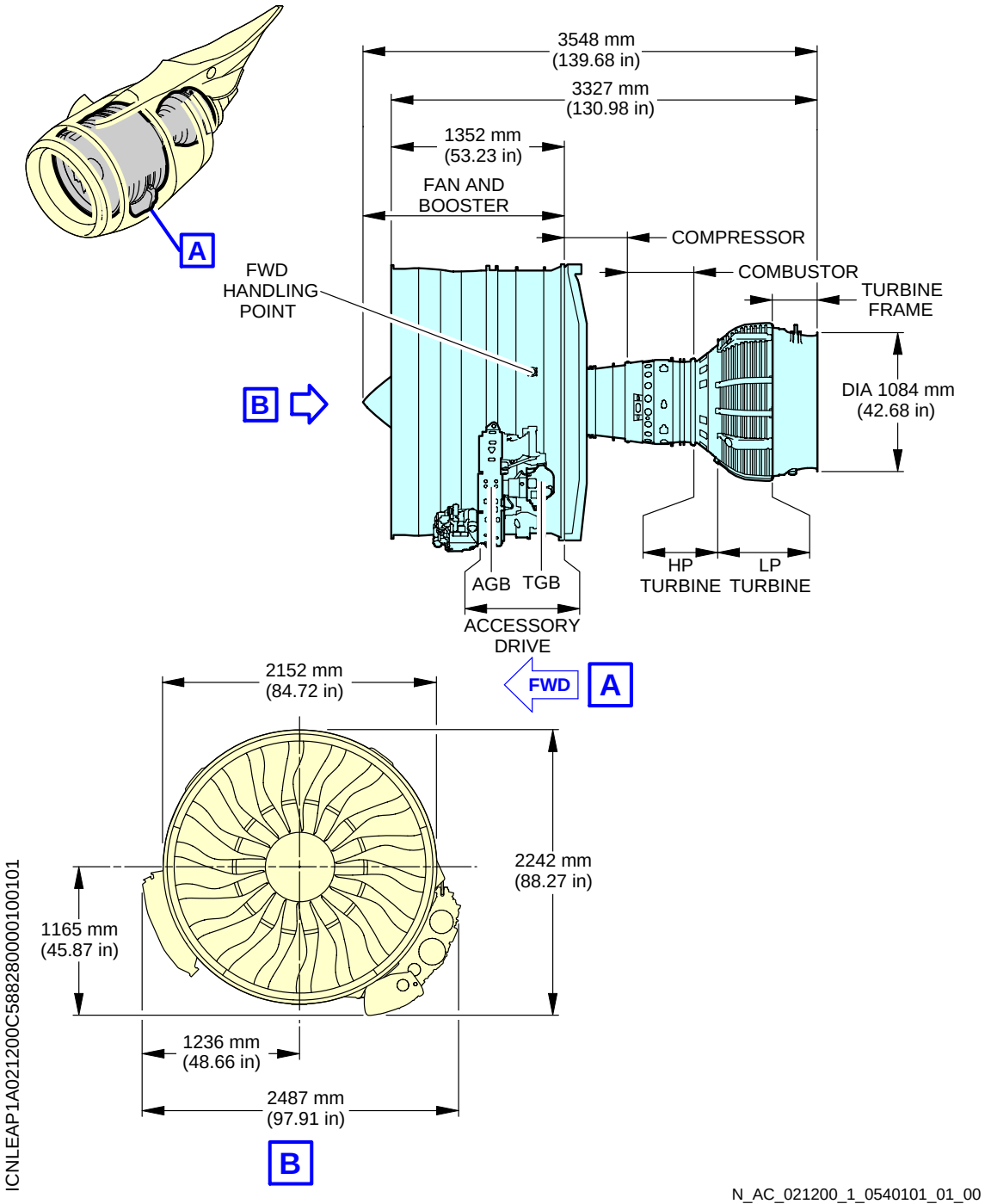
OPEN POSITION	A	B		C
		MIN.	MAX.	
43°	4.26 m (13.98 ft)	0.80 m (2.62 ft)	0.90 m (2.95 ft)	SEE AC SECTION 2-3-0
45°	4.33 m (14.21 ft)	0.84 m (2.76 ft)	0.95 m (3.12 ft)	

NOTE:
B AND C DEPENDING ON AIRCRAFT CONFIGURATION.

N_AC_021200_1_0480101_01_00

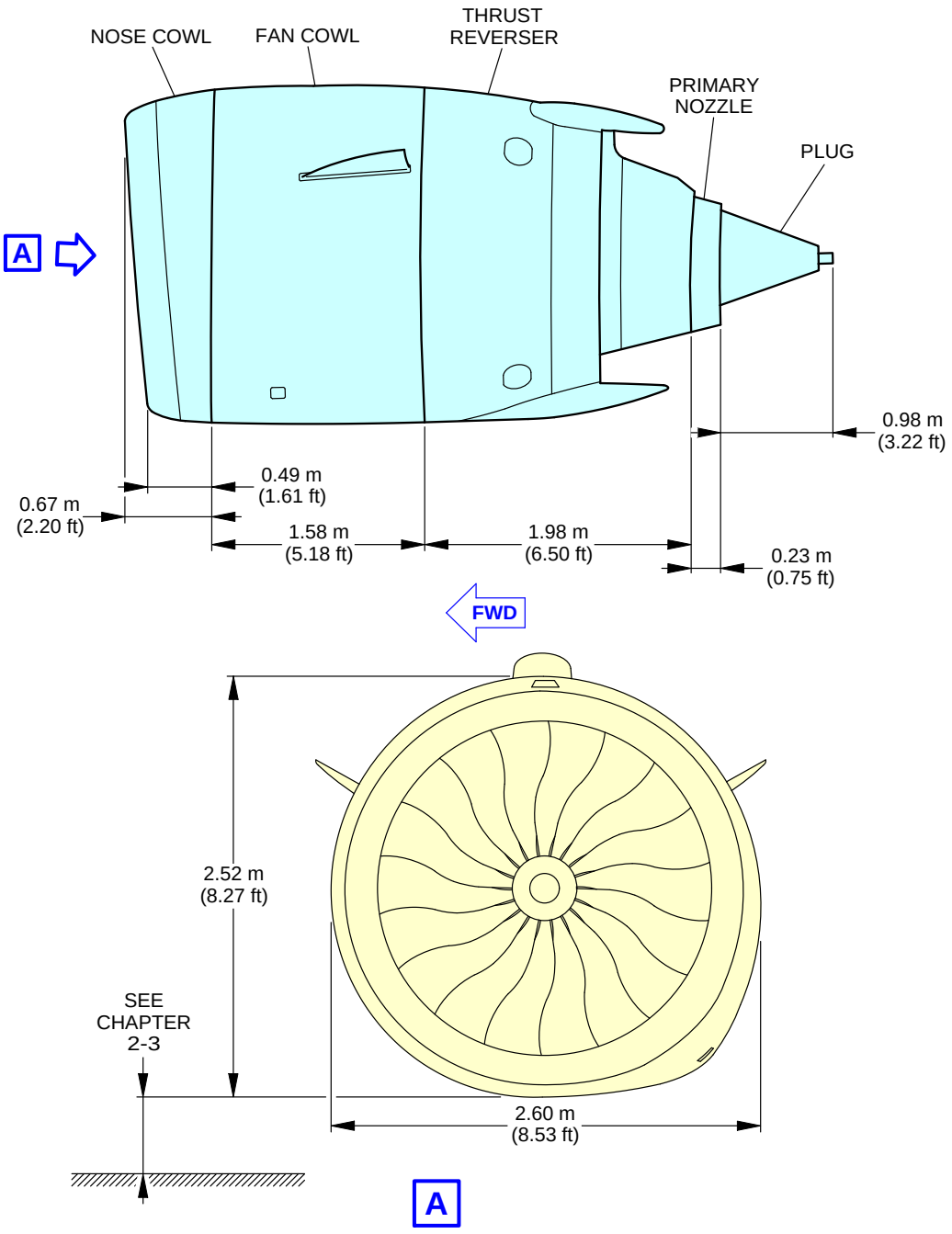
Power Plant Handling
Thrust Reverser Halves - PW 1100G Engine
FIGURE-2-12-0-991-048-A01

****ON A/C A320neo**



Power Plant Handling
Major Dimensions - CFM LEAP-1A Engine
FIGURE-2-12-0-991-054-A01

****ON A/C A320neo**



Power Plant Handling
Major Dimensions - CFM LEAP-1A Engine
FIGURE-2-12-0-991-055-A01

2-13-0 Leveling, Symmetry and Alignment

****ON A/C A320-200 A320neo**

Leveling, Symmetry and Alignment

1. Quick Leveling

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

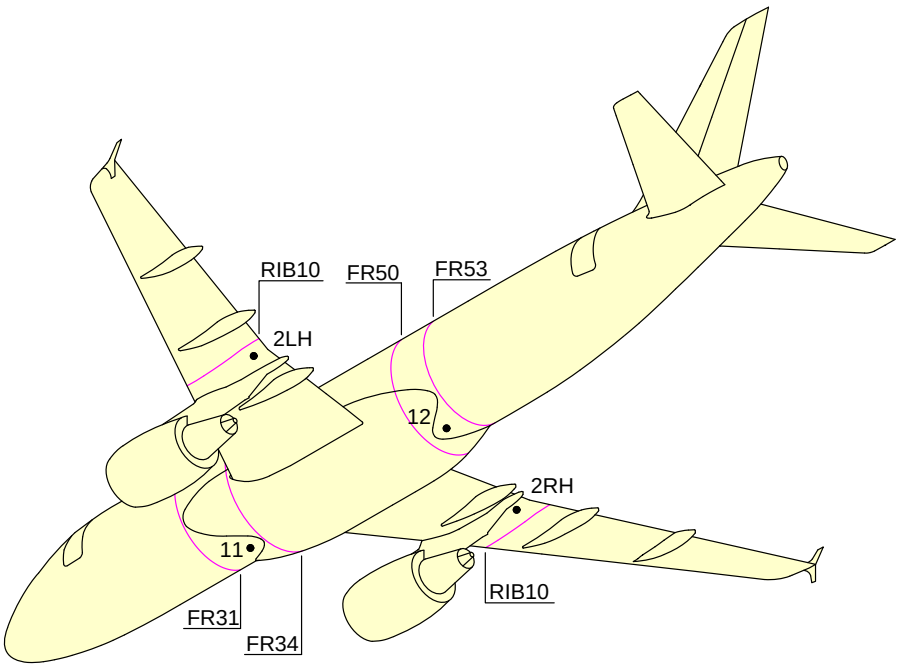
2. Precise Leveling

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

3. Symmetry and Alignment Check

   Possible deformation of the aircraft is measured by photogrammetry.

****ON A/C A320-200 A320neo**



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Location of the Leveling Points
FIGURE-2-13-0-991-004-A01

2-14-0 Jacking

****ON A/C A320-200 A320neo**

Jacking for Maintenance

1. Aircraft Jacking Points for Maintenance

   A. General

      (1) The A320 can be jacked:
      - At not more than 59 000 kg (130 073 lb),
      - Within the limits of the permissible wind speed when the aircraft is not in a closed environment.

   B. Primary Jacking Points

      (1) The aircraft is provided with three primary jacking points:
      - One located under the forward fuselage (FR8),
      - Two located under the wings (one under each wing, located at the intersection of RIB9 and the datum of the rear spar).

      (2) Three jack adapters are used as intermediary parts between the aircraft and the jacks:
      - One male spherical jack adapter of 19 mm (0.75 in) radius, forming part of the aircraft structure (FR8),
      - Two wing jack pads (one attached to each wing at RIB9 with 2 bolts) for the location of the jack adaptor.
        Wing jack pads are ground equipment.

   C. Auxiliary Jacking Points (Safety Stay)

      (1) When the aircraft is on jacks, it is recommended that a safety stay be placed under the fuselage, between FR73 and FR74, to prevent tail tipping caused by accidental displacement of the center of gravity.

      (2) The safety stay must not be used to lift the aircraft.

      (3) A male spherical ball pad with a 19 mm (0.75 in) radius, forming part of the aircraft structure, is provided for using the safety stay.

2. Jacks and Safety Stay

   A. Jack Design

      (1) The maximum permitted loads given in the table in FIGURE 2-14-0-991-030-A are the maximum loads applicable on jack fittings.

(2) In the fully retracted position (jack stroke at minimum), the height of the jack is such that the jack may be placed beneath the aircraft in the most adverse conditions, namely, tires deflated and shock absorbers depressurized. In addition, there must be a clearance of approximately 50 mm (1.97 in) between the aircraft jacking point and the jack upper end.

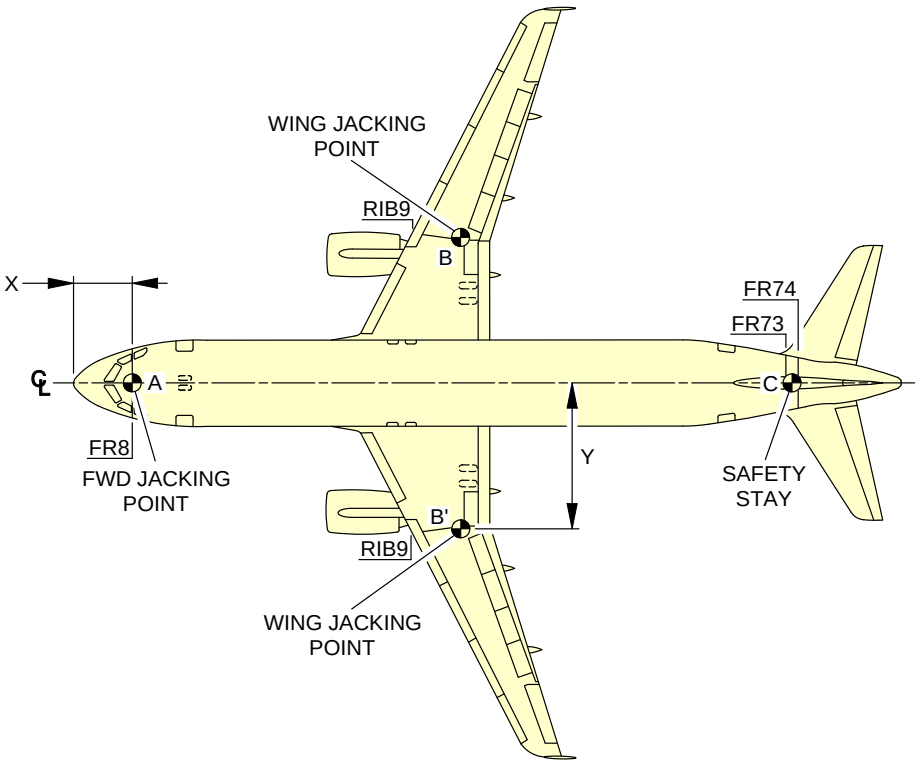
(3) The lifting jack stroke enables the aircraft to be jacked up so that the fuselage longitudinal datum line (aircraft center line) is parallel to the ground, with a clearance of 100 mm (3.94 in) between the main landing gear wheels and the ground. This enables the landing gear extension/retraction tests to be performed.

3. Shoring Cradles

When it is necessary to support the aircraft in order to relieve the loads on the structure to do modifications or major work, shoring cradles shall be placed under each wing and the fuselage as necessary.

NOTE : The aircraft must not be lifted or supported by the wings or fuselage alone without adequate support of the other.

**ON A/C A320-200



		X		Y		MAXIMUM LOAD ELIGIBLE
		m	ft	m	ft	daN
FORWARD FUSELAGE JACKING POINT	A	2.74	8.99	0	0	6 800
WING JACKING POINT	B	17.56	57.61	6.50	21.33	28 500
	B'	17.56	57.61	-6.50	-21.33	28 500
SAFETY STAY	C	32.57	106.86	0	0	2 000

NOTE:
SAFETY STAY IS NOT USED FOR JACKING.

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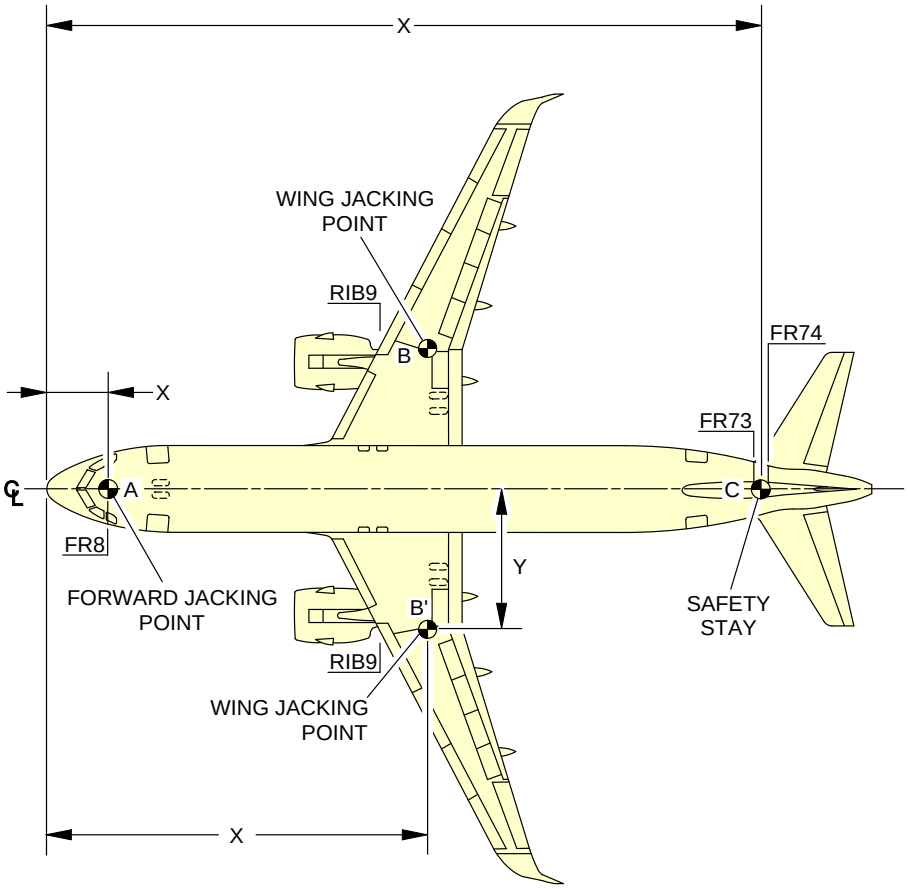
Jacking for Maintenance
Jacking Point Locations
FIGURE-2-14-0-991-030-A01

**ON A/C A320neo



	X		Y		MAXIMUM LOAD ELIGIBLE
	m	ft	m	ft	daN
FORWARD FUSELAGE JACKING POINT A	2.74	8.99	0	0	6 800
WING JACKING POINT B	17.73	58.17	6.50	21.33	28 500
WING JACKING POINT B'	17.73	58.17	-6.50	-21.33	28 500
SAFETY STAY C	32.57	106.86	0	0	2 000

NOTE:
SAFETY STAY IS NOT USED FOR JACKING.

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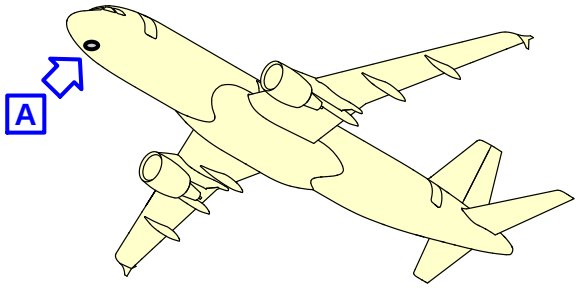
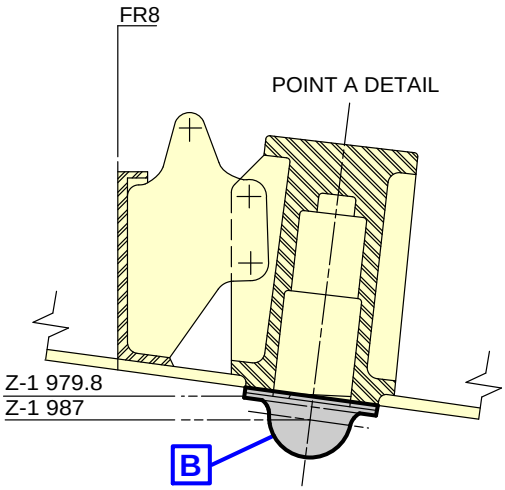
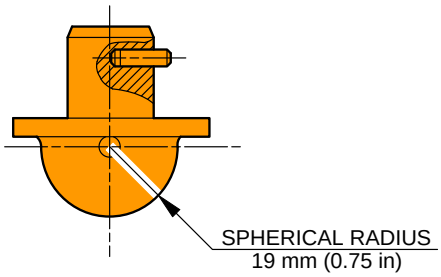
Jacking for Maintenance
Jacking Point Locations
2-14-0-991-066-A01

**ON A/C A320-200 A320neo





A



B

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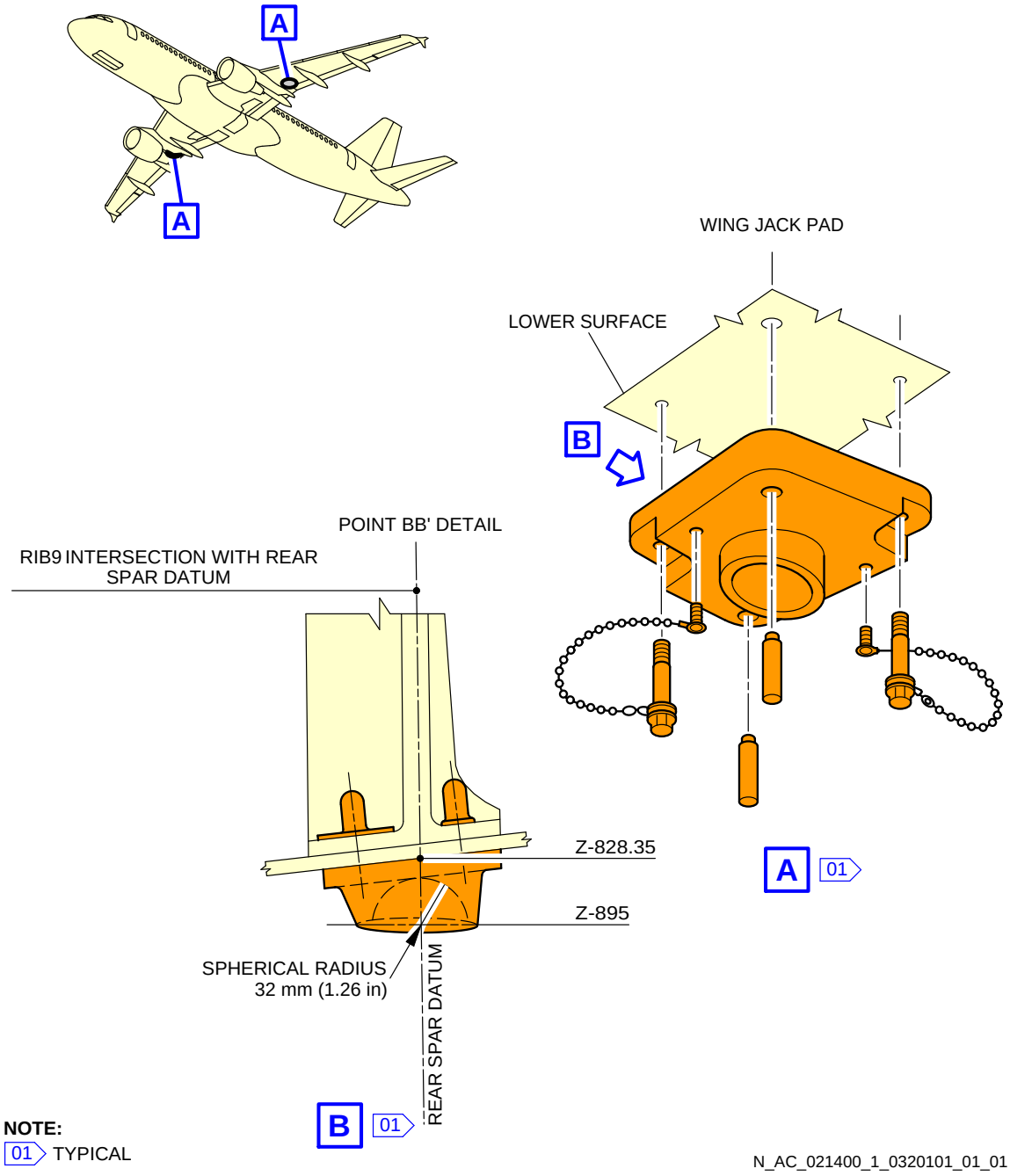
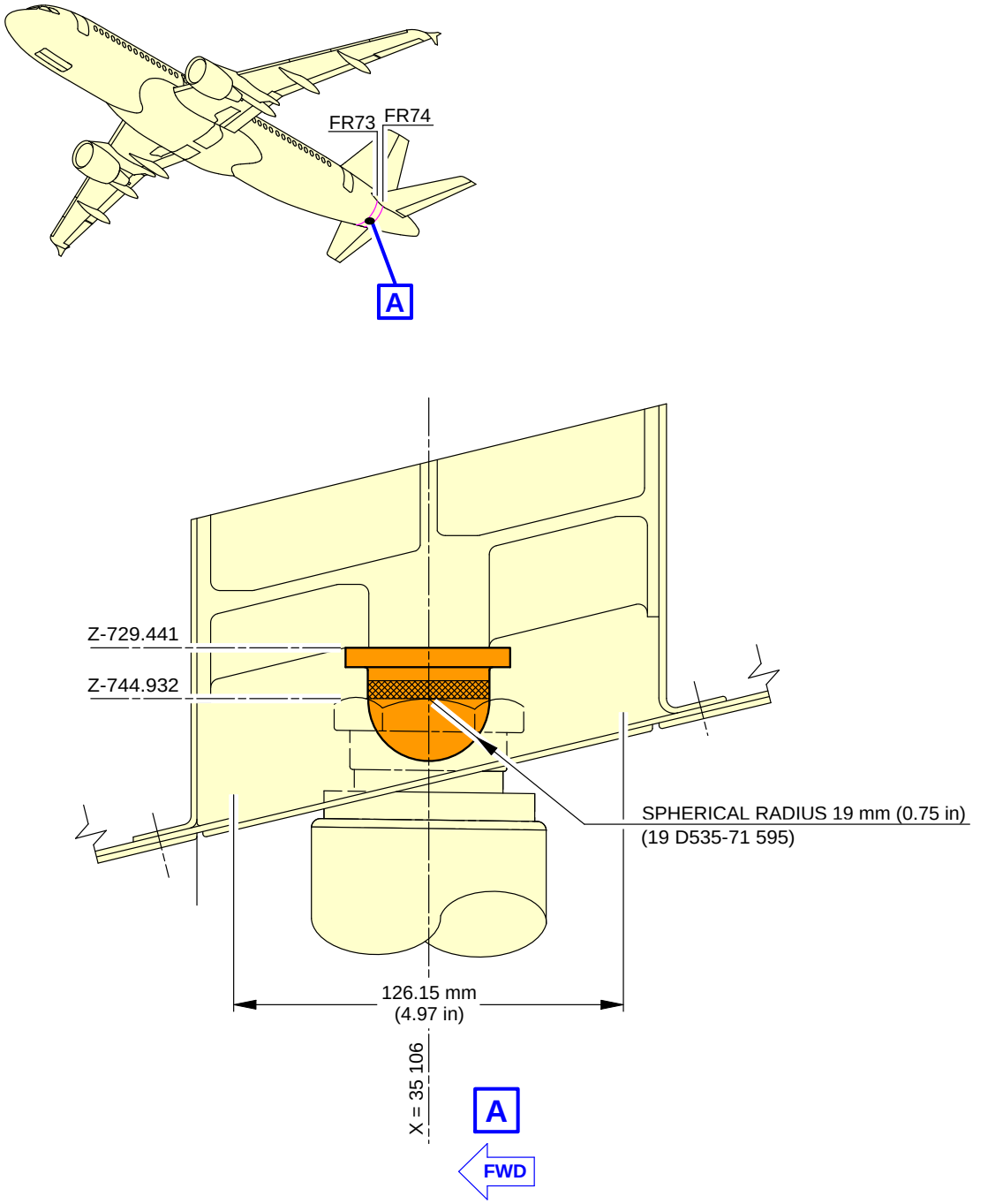
Jacking for Maintenance
Forward Jacking Point
FIGURE-2-14-0-991-031-A01

**ON A/C A320-200 A320neo



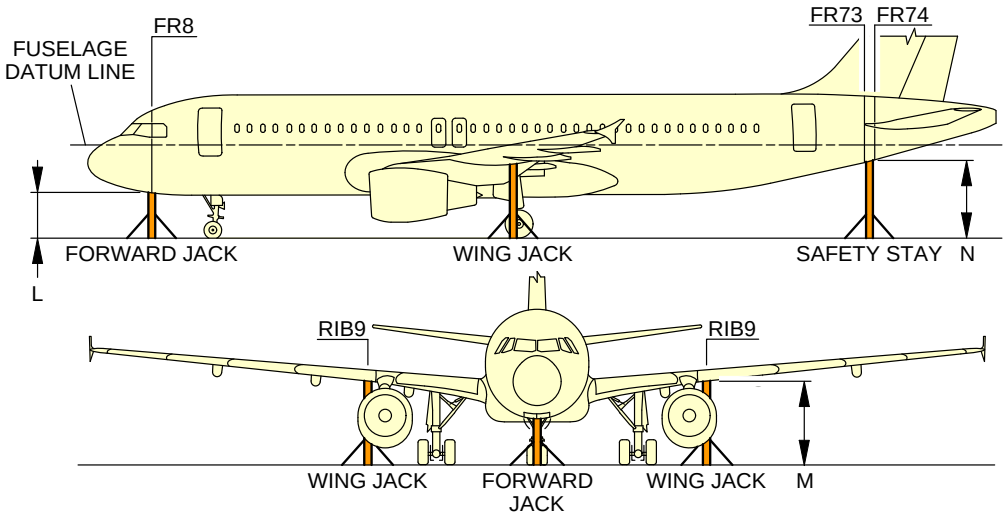
Jacking for Maintenance
Wing Jacking Points
FIGURE-2-14-0-991-032-A01

**ON A/C A320-200 A320neo



Jacking for Maintenance
Safety Stay
FIGURE-2-14-0-991-033-A01

**ON A/C A320-200



TYPICAL JACK INSTALLATION SHOWN

CONFIGURATION	DESCRIPTION	DISTANCE BETWEEN JACKING/SAFETY POINTS AND THE GROUND		
		L (FORWARD JACK)	M (WING JACK)	N (SAFETY STAY)
– AIRCRAFT ON WHEELS	- NLG SHOCK ABSORBER DEFLATED AND NLG TIRES FLAT - MLG STANDARD TIRES, WITH STANDARD SHOCK ABSORBERS	1 588 mm (62.52 in)	3 113 mm (122.56 in)	3 656 mm (143.00 in)
	TIRES FLAT SHOCK ABSORBERS DEFLATED	1 660 mm (65.35 in)	2 735 mm (107.68 in)	2 834 mm (111.57 in)
	STANDARD TIRES STANDARD SHOCK ABSORBERS	1 880 mm (74.02 in)	3 112 mm (122.52 in)	3 364 mm (132.44 in)
– AIRCRAFT ON JACKS (FORWARD JACK AND WING JACKS) – FUSELAGE DATUM LINE PARALLEL TO THE GROUND	STANDARD TIRES MLG SHOCK ABSORBERS EXTENDED WITH WHEEL CLEARANCE OF 120 mm (4.72 in) FOR MLG RETRACTION OR EXTENSION	2 554 mm (100.55 in)	3 655 mm (143.90 in)	3 779 mm (148.78 in)
	STANDARD TIRES MLG SHOCK ABSORBERS EXTENDED WITH WHEEL CLEARANCE OF 770 mm (30.31 in) FOR REPLACEMENT OF THE MLG	3 204 mm (126.14 in)	4 305 mm (169.49 in)	4 429 mm (174.37 in)
– AIRCRAFT ON FORWARD JACK – MLG WHEELS ON THE GROUND	STANDARD TIRES NLG SHOCK ABSORBERS EXTENDED WITH WHEEL CLEARANCE OF 60 mm (2.36 in) FOR NLG RETRACTION OR EXTENSION	2 387 mm (93.98 in)	NA	2 854 mm (112.36 in)

NOTE:

THE SAFETY STAY IS NOT USED FOR JACKING.

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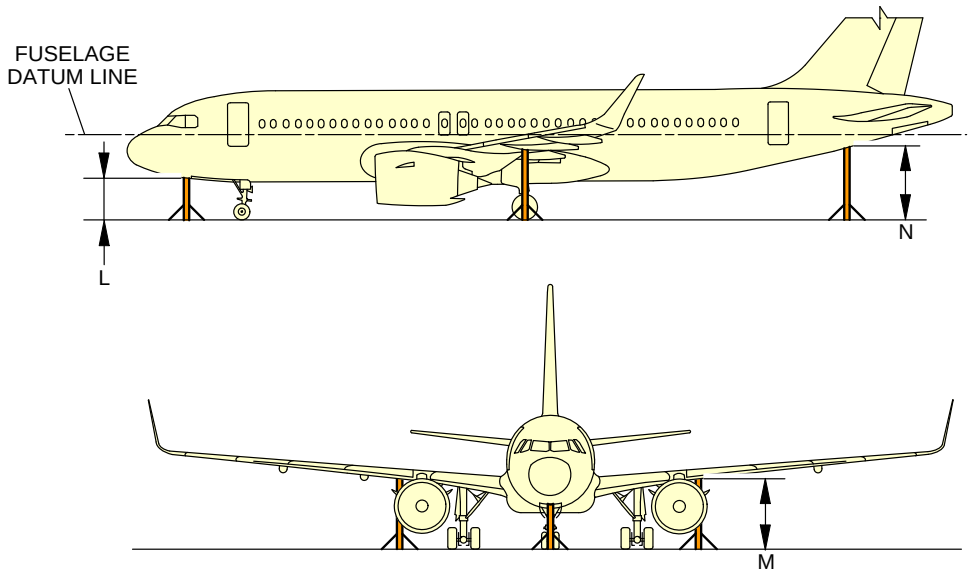
Jacking for Maintenance
Jacking Design
FIGURE-2-14-0-991-034-A01

**ON A/C A320neo



CONFIGURATION	CG POSITION (% MAC)	HEIGHT					
		L		M		N	
		m	ft	m	ft	m	ft
AIRCRAFT ON WHEELS, SHOCK-ABSORBER DEFLATED, TIRES DEFLATED (RH)	15	1.91	6.27	3.29 LH 2.75 RH	10.79 LH 9.02 RH	3.06	10.04
	40	2.07	6.79	3.26 LH 2.76 RH	10.70 LH 9.06 RH	2.88	9.45
AIRCRAFT ON JACKS, FDL AT 5.21 m (17.09 ft), AIRCRAFT FUSELAGE PARALLEL TO THE GROUND, SHOCK-ABSORBER RELAXED, CLEARANCE OF MAIN GEAR WHEELS = 0.73 m (2.40 ft) (STANDARD TIRES 01), CLEARANCE OF NOSE GEAR WHEELS = 0.94 m (3.08 ft) (STANDARD TIRES 01)	15	3.23	10.60	4.38	14.37	4.47	14.67
	40	3.23	10.60	4.38	14.37	4.47	14.67
AIRCRAFT ON WHEELS (STANDARD TIRES 01) MAXIMUM JACKING WEIGHT = 59 000 kg (130 073 lb)	15	1.87	6.14	3.19	10.47	3.44	11.29
	40	2.01	6.59	3.17	10.40	3.26	10.70
AIRCRAFT ON WHEELS (STANDARD TIRES 01) OEW = 43 144 kg (95 116 lb)	15	1.90	6.23	3.23	10.60	3.50	11.48
	40	2.08	6.82	3.23	10.60	3.31	10.86

NOTE:

01 STANDARD TIRES: NOSE LANDING GEAR = 762 x 233.52 R15
MAIN LANDING GEAR = 1 168.4 x 431.8 R20

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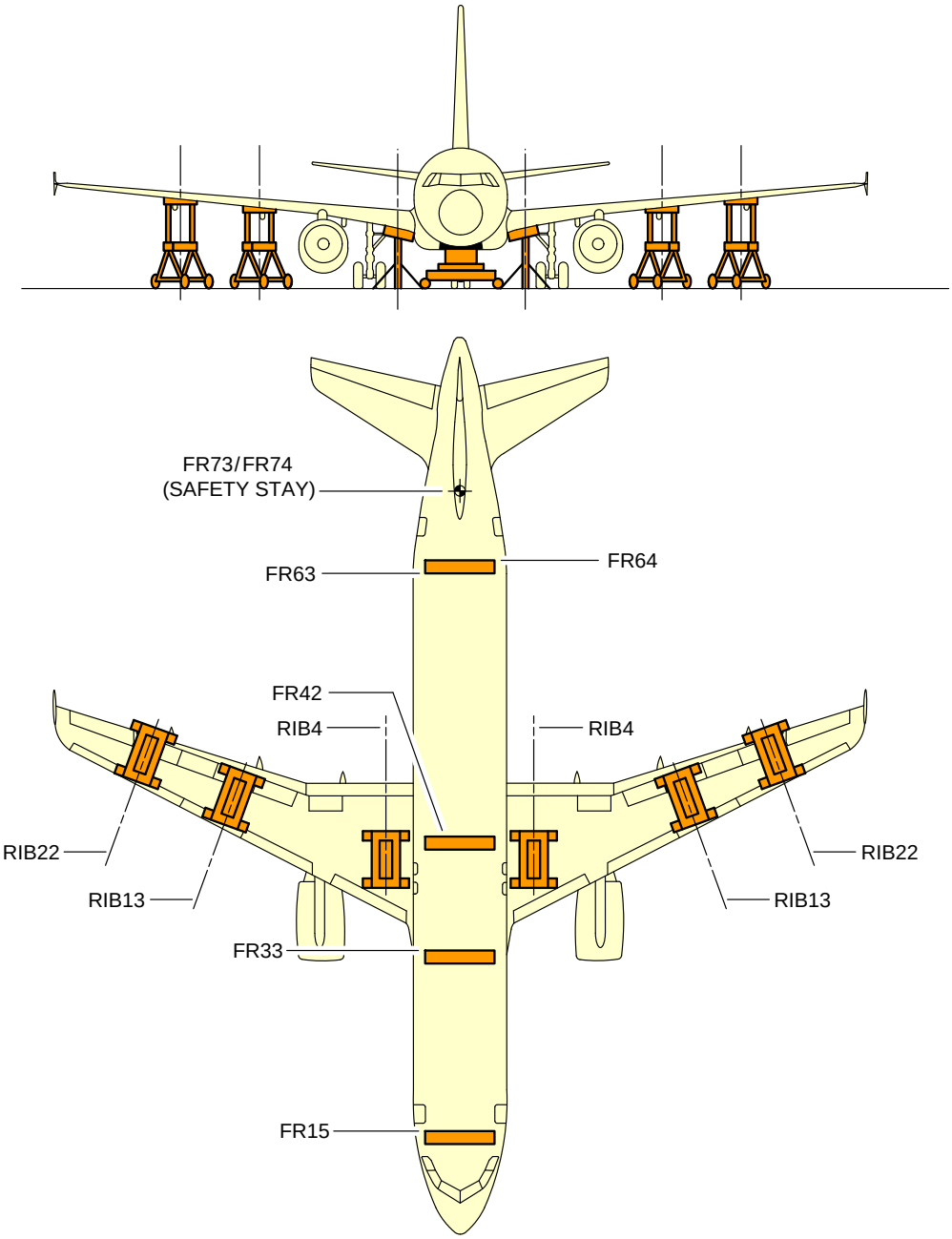
****ON A/C A320-200 A320neo**



NOTE: THE SHORING CRADLE MUST BE INSTALLED AT THE EXACT LOCATION OF THE FRAME.

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Jacking for Maintenance
Location of Shoring Cradles
FIGURE-2-14-0-991-037-A01

****ON A/C A320-200 A320neo**

Jacking of the Landing Gear

1. General

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

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

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

****ON A/C A320-200**

2. Main Gear Jacking (Twin Wheel)

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

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

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

The reactions at each of the jacking points are shown in the table, see FIGURE 2-14-0-991-060-A.

****ON A/C A320neo**

3. Main Gear Jacking (Twin Wheel)

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

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

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

The reactions at each of the jacking points are shown in the table, see FIGURE 2-14-0-991-063-A.

****ON A/C A320-200**

4. Main Gear Jacking (4-Wheel Bogie)

   The fore and aft pairs of MLG wheels can be jacked by placing a jack directly under the ball pads located at each end of the bogie beam.

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

   The leading dimensions and environmental distances of these jacking points are shown on FIGURE 2-14-0-991-048-A, FIGURE 2-14-0-991-049-A and FIGURE 2-14-0-991-050-A.

   The reactions at each of the jacking points are shown in the table, see FIGURE 2-14-0-991-060-A.

5. Nose Gear Jacking

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

   The reactions at each of the jacking points are shown in the table, see FIGURE 2-14-0-991-060-A.

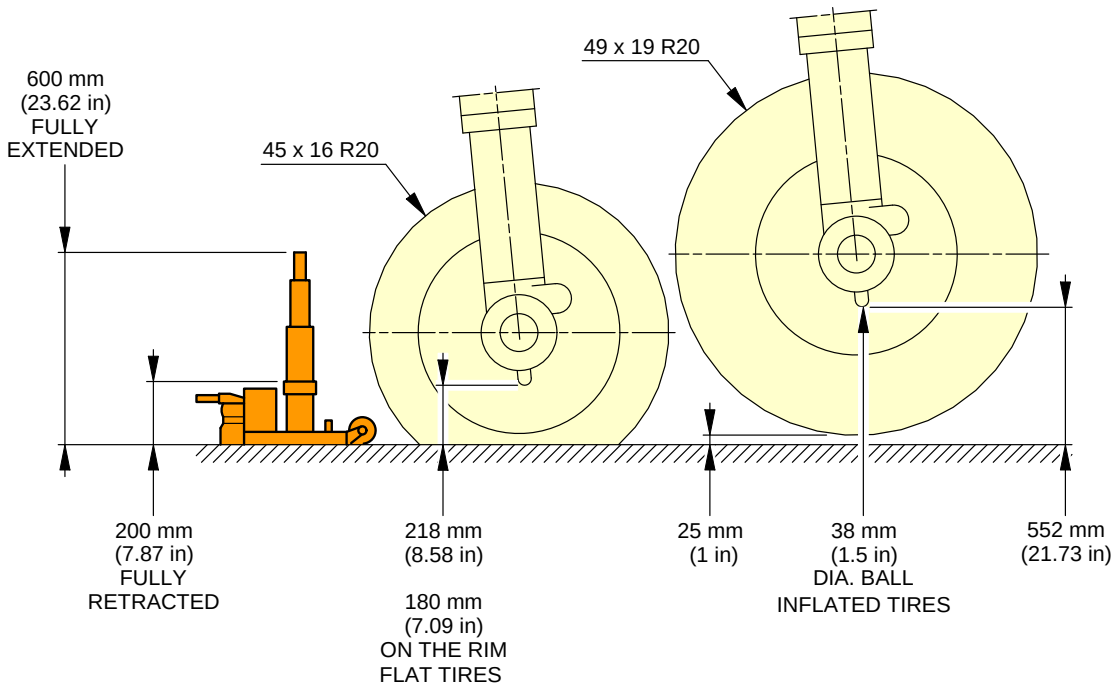
****ON A/C A320neo**

6. Nose Gear Jacking

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

   The reactions at each of the jacking points are shown in the table, see FIGURE 2-14-0-991-063-A.

****ON A/C A320-200 A320neo**



NOTE: TWIN WHEEL TRACK IS 927 mm (36.5 in).
THE FLAT TIRES VIEW SHOWS THE MINIMUM HEIGHT TO ENGAGE JACK WITH 2 FLAT TIRES.
THE INFLATED TIRES VIEW SHOWS THE JACKING HEIGHT TO GIVE 25 mm (1 in) CLEARANCE BETWEEN THE TIRE AND GROUND.

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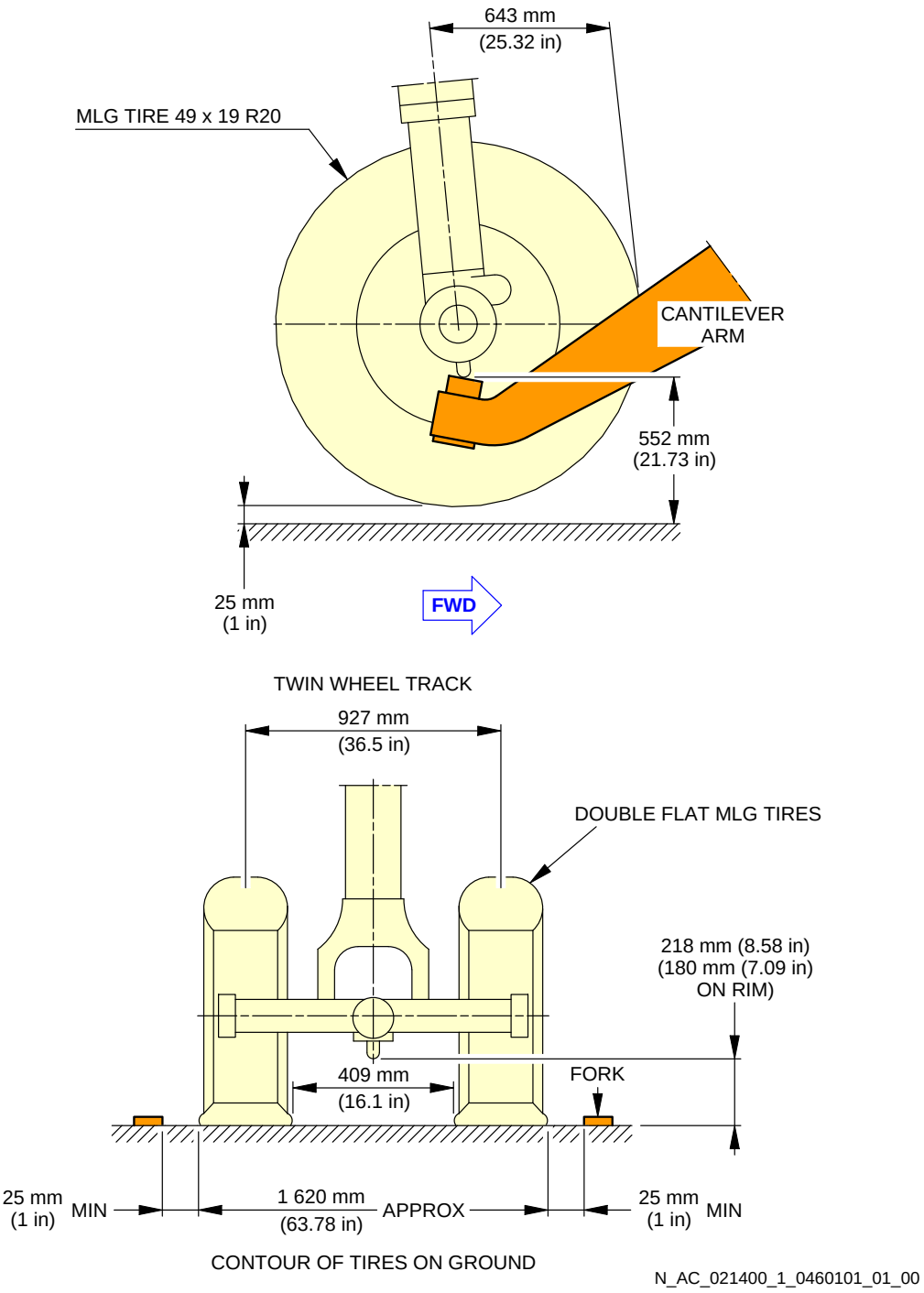
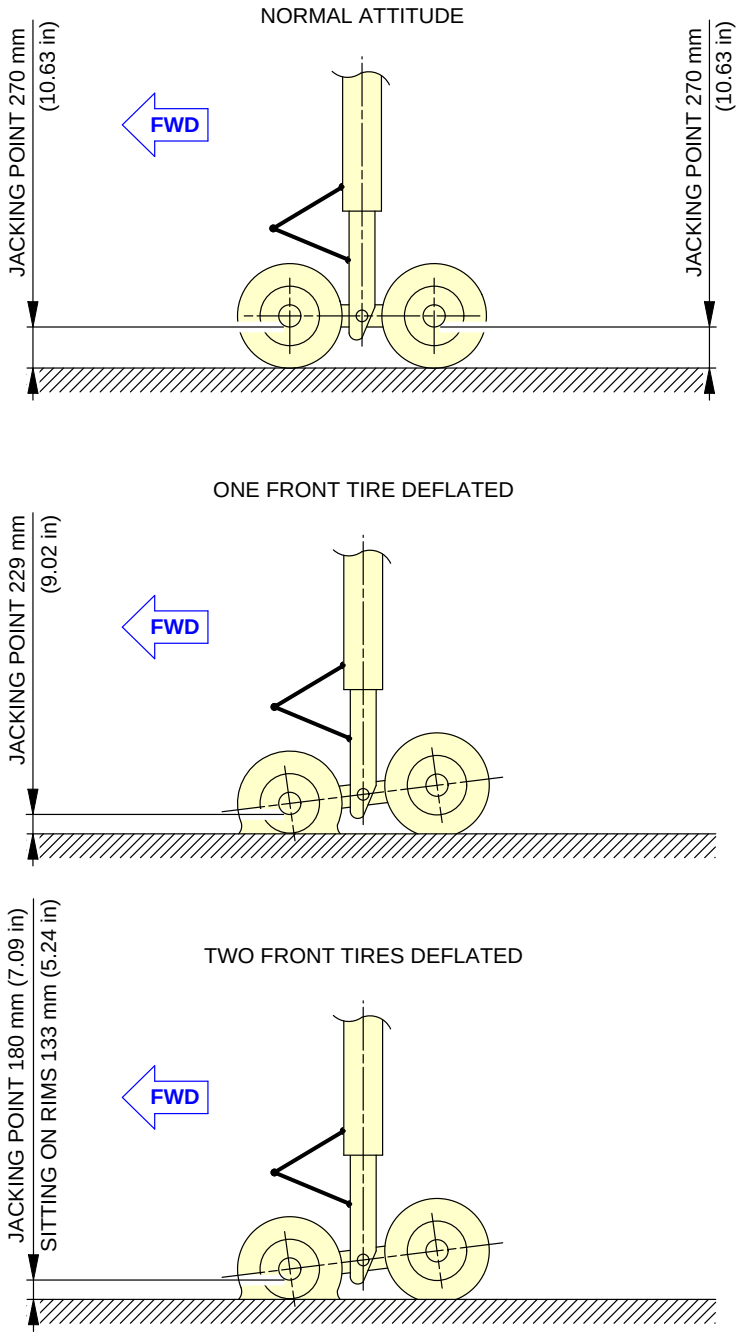
Jacking of the Landing Gear
MLG Jacking Point Location - Twin Wheels
FIGURE-2-14-0-991-045-A01

****ON A/C A320-200 A320neo**



Jacking of the Landing Gear
MLG Jacking with Cantilever Jack - Twin Wheels
FIGURE-2-14-0-991-046-A01

**ON A/C A320-200



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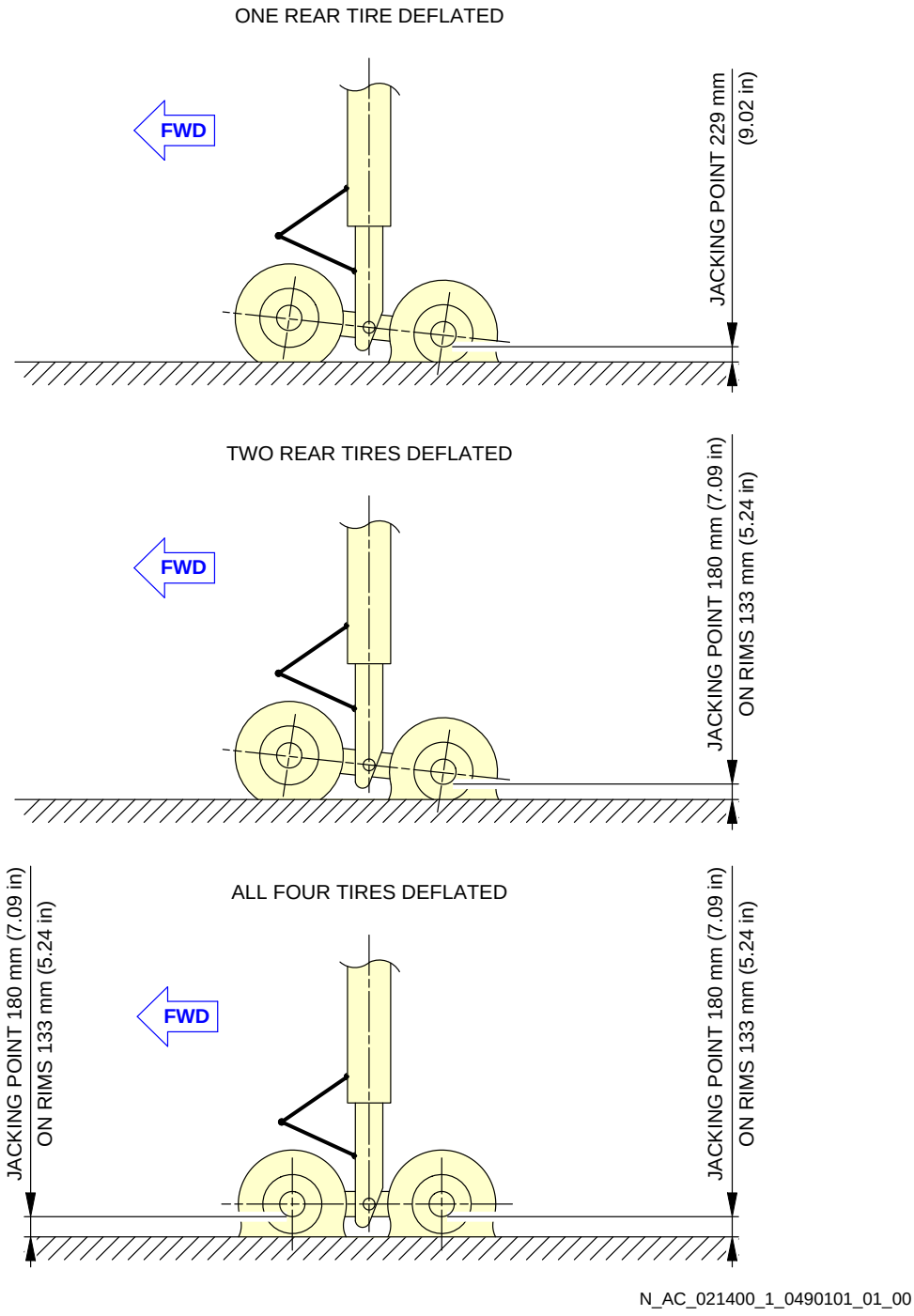
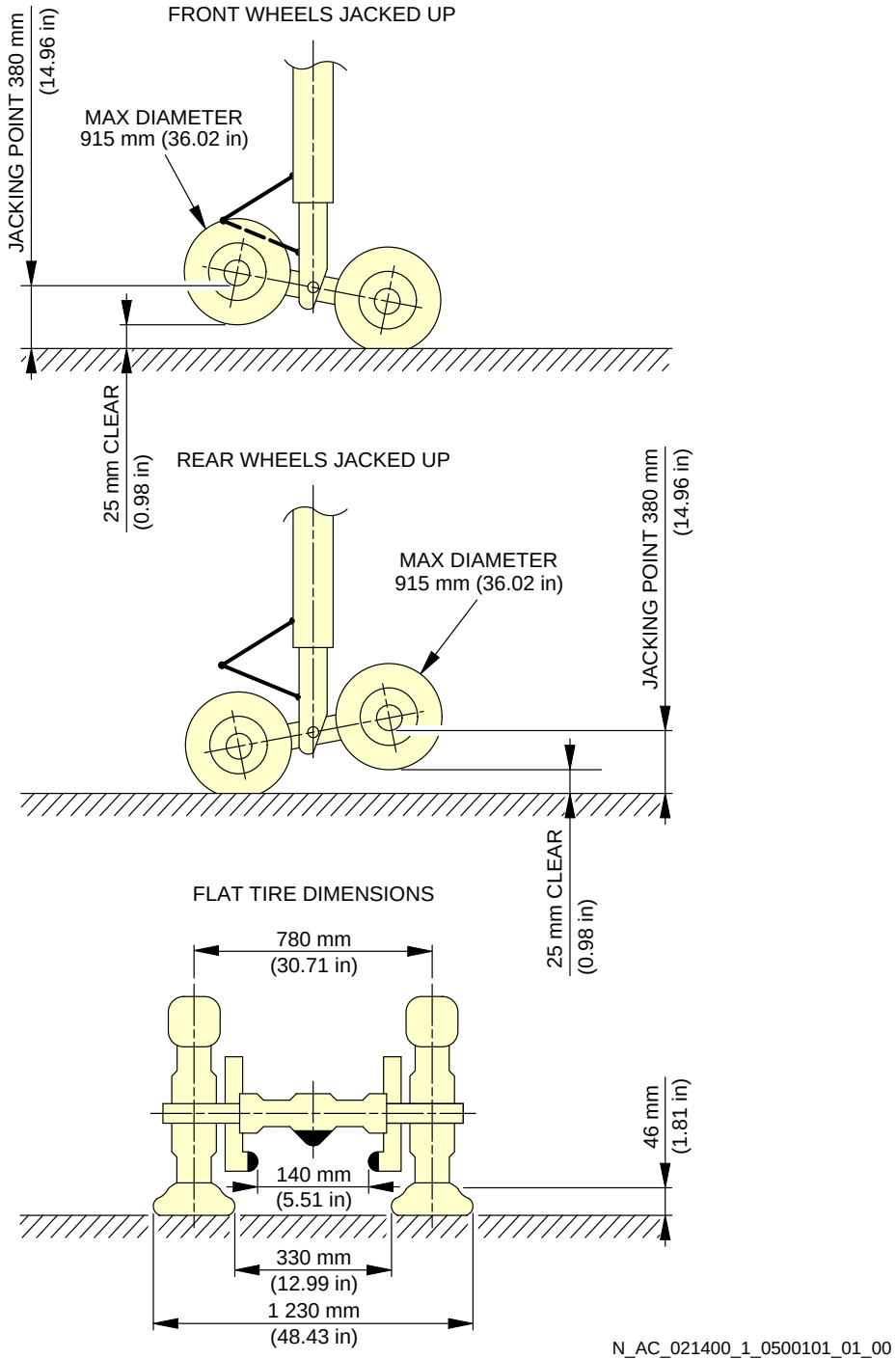
Jacking of the Landing Gear
MLG Jacking Point Location Bogie
FIGURE-2-14-0-991-048-A01

**ON A/C A320-200



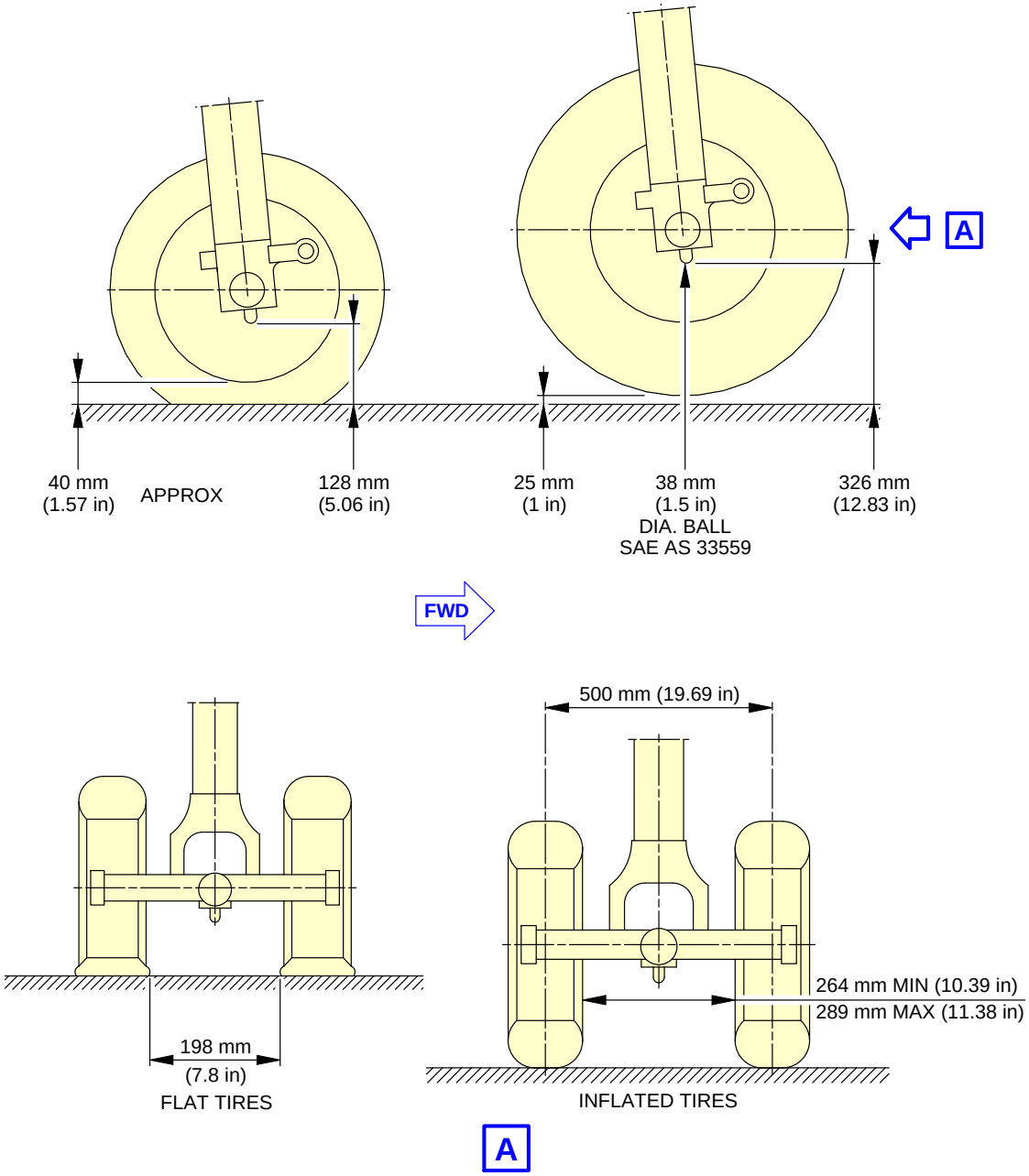
Jacking of the Landing Gear
MLG Jacking Point Location Bogie
FIGURE-2-14-0-991-049-A01

****ON A/C A320-200**



Jacking of the Landing Gear
MLG Jacking Point Location Bogie
FIGURE-2-14-0-991-050-A01

****ON A/C A320-200 A320neo**



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

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Jacking of the Landing Gear
NLG Jacking - Point Location
FIGURE-2-14-0-991-053-A01

****ON A/C A320-200**

A320-200 WV017	
MAXIMUM DESIGN TAXI WEIGHT (MTW)	78 400 kg (172 842 lb)
MAXIMUM DESIGN TAKE-OFF WEIGHT (MTOW)	78 000 kg (171 960 lb)
MAXIMUM LOAD VALUE TO BE APPLIED ON NLG JACKING POINT	9 900 kg (21 826 lb)
NUMBER OF JACKING POINTS ON ONE MLG	1
MAXIMUM LOAD VALUE TO BE APPLIED ON MLG JACKING POINT (LEFT OR RIGHT)	36 000 kg (79 366 lb)

NOTE:

A320 EQUIPPED WITH BOGIE MLG IS NOT LISTED SINCE JACKING CAPABILITY REQUESTED FOR LIFTING ONE AXLE WILL BE LOWER THAN A320 EQUIPPED WITH TWIN WHEELS.

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Jacking of the Landing Gear
Maximum Load Capacity to Lift Each Jacking Point
FIGURE-2-14-0-991-060-A01

****ON A/C A320neo**

A320 NEO WV054 AND WV055	
MAXIMUM DESIGN TAXI WEIGHT (MTW)	79 400 kg (175 047 lb)
MAXIMUM DESIGN TAKE-OFF WEIGHT (MTOW)	79 000 kg (174 165 lb)
MAXIMUM LOAD VALUE TO BE APPLIED ON NLG JACKING POINT	9 900 kg (21 826 lb)
NUMBER OF JACKING POINTS ON ONE MLG	1
MAXIMUM LOAD VALUE TO BE APPLIED ON MLG JACKING POINT (LEFT OR RIGHT)	36 250 kg (79 917 lb)

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Jacking of the Landing Gear
Maximum Load Capacity to Lift Each Jacking Point
FIGURE-2-14-0-991-063-A01

AIRCRAFT PERFORMANCE

3-1-0 General Information

****ON A/C A320-200 A320neo**

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

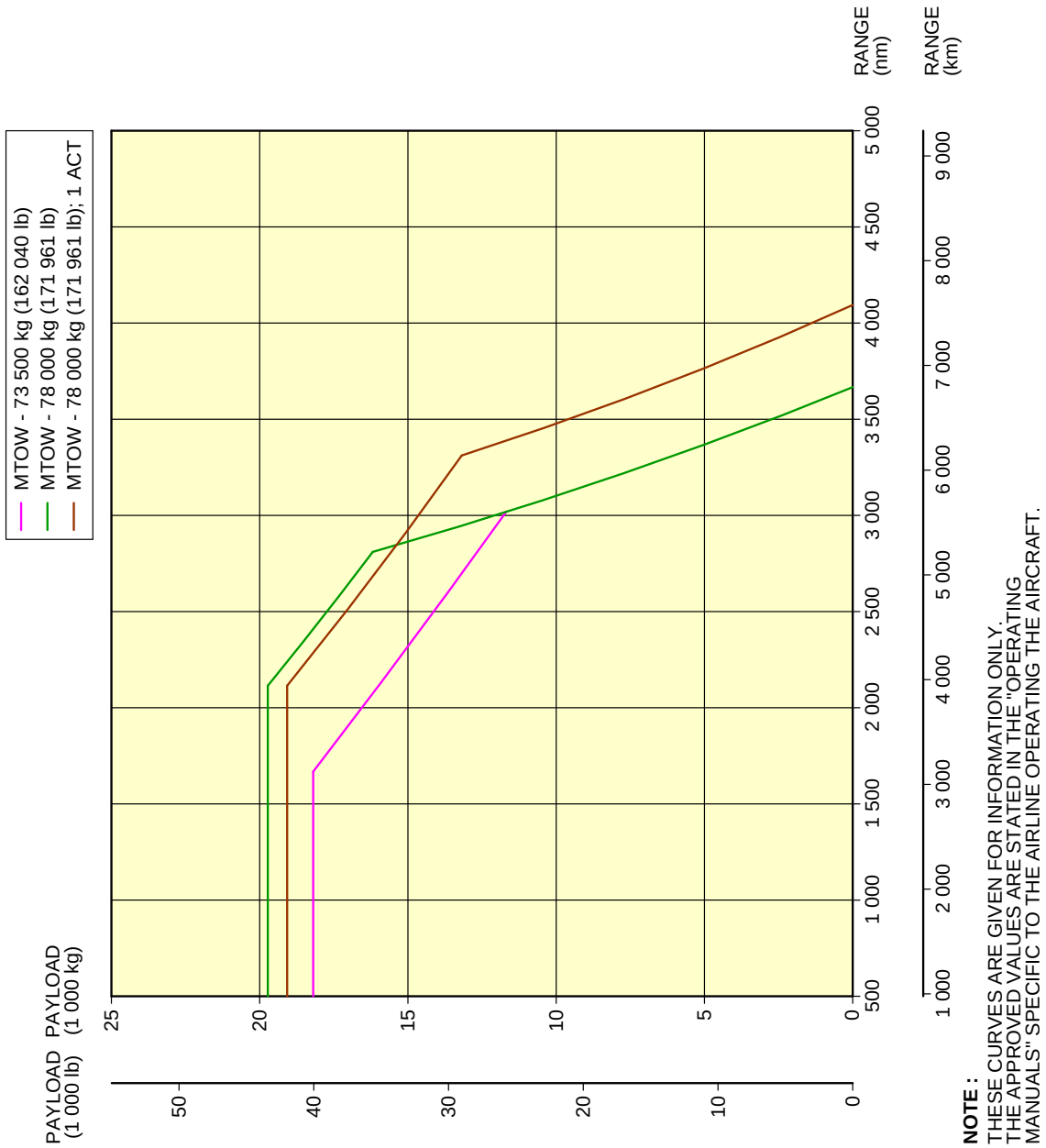
3-2-1 Payload / Range - ISA Conditions

****ON A/C A320-200 A320neo**

Payload/Range - ISA Conditions

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

****ON A/C A320-200**



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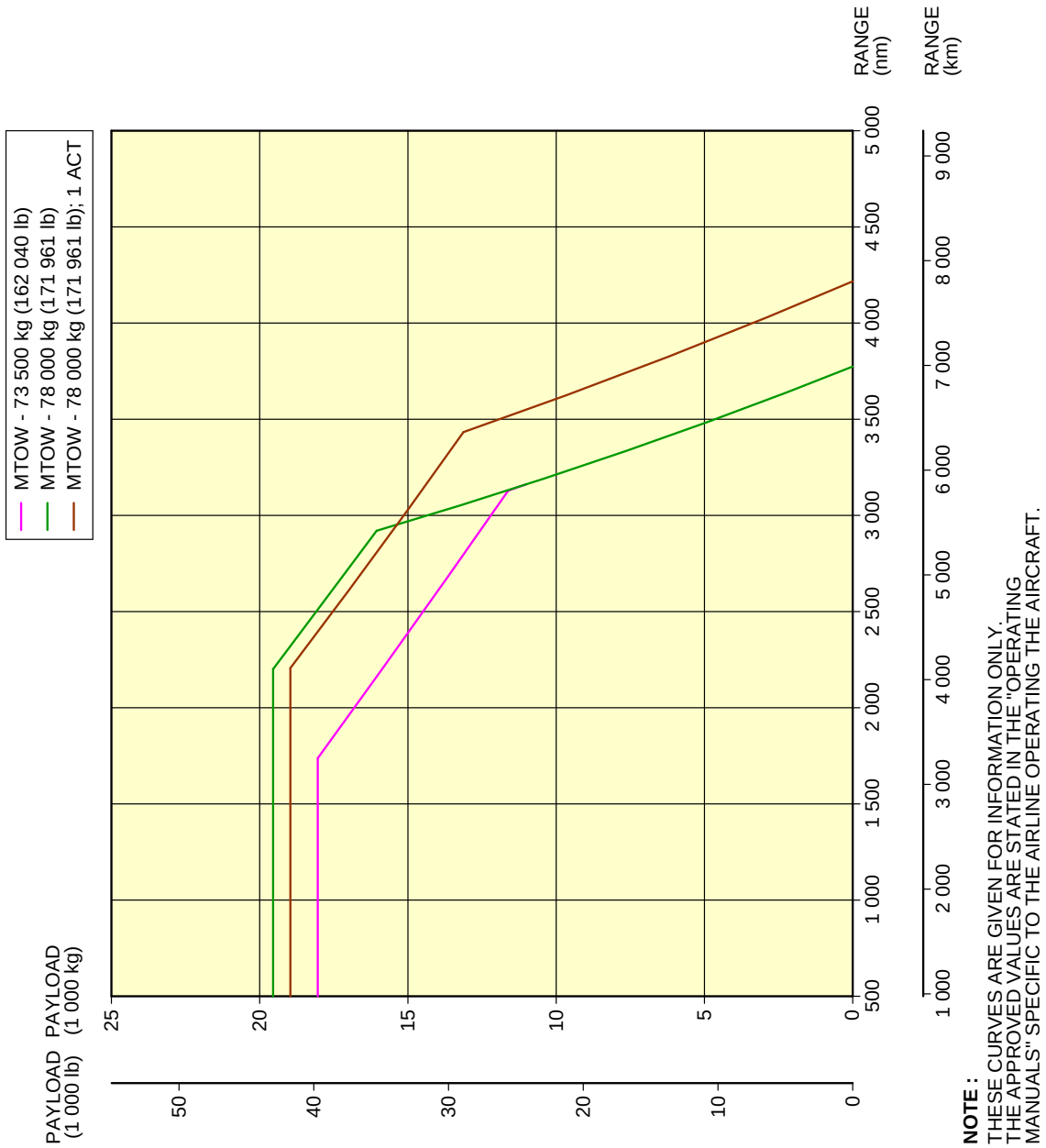
Payload/Range - ISA Conditions
FIGURE-3-2-1-991-016-A01

****ON A/C A320-200**



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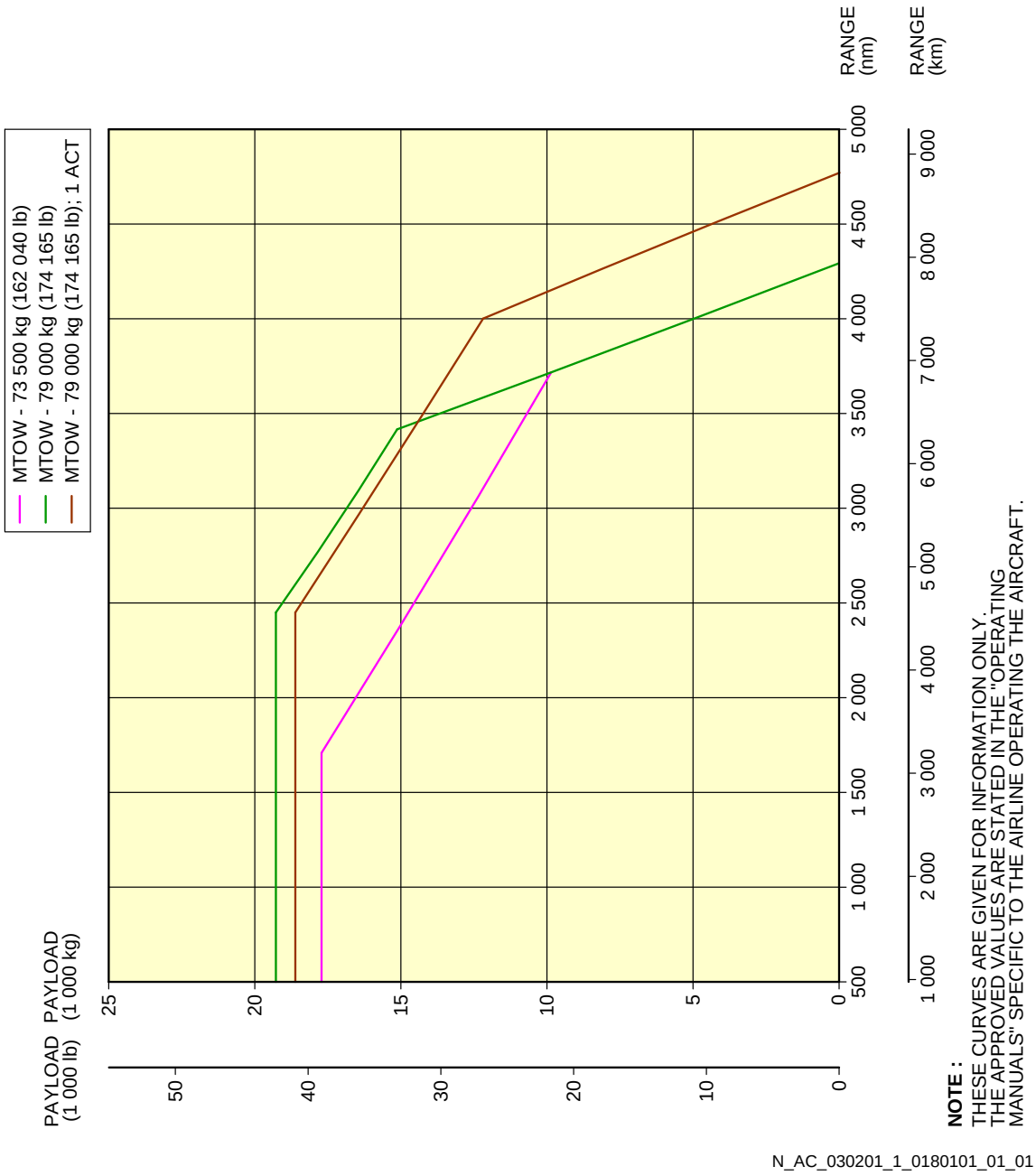
Payload/Range - ISA Conditions
Sharklet
FIGURE-3-2-1-991-017-A01

****ON A/C A320neo**



Payload/Range - ISA Conditions
FIGURE-3-2-1-991-018-A01

3-3-1 Take-off Weight Limitation - ISA Conditions

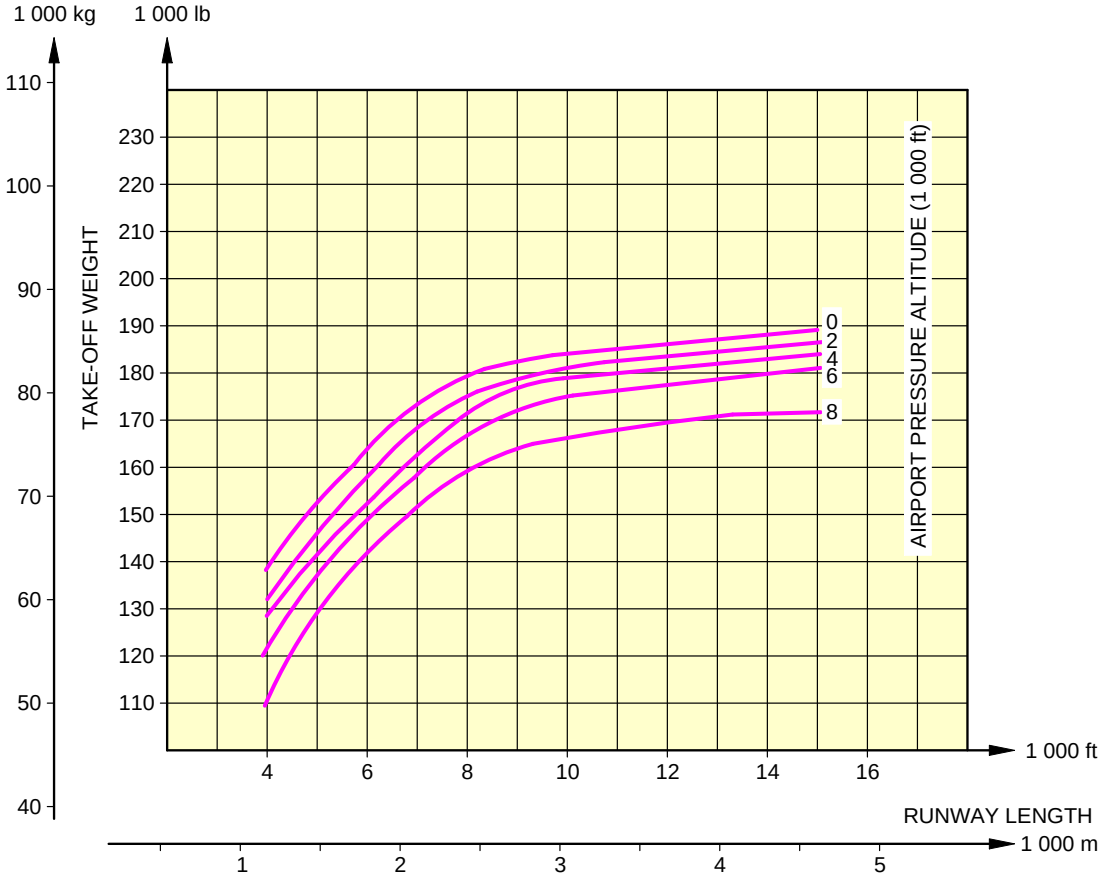
****ON A/C A320-200 A320neo**

Take-Off Weight Limitation - ISA Conditions

1. This section gives the take-off weight limitation at ISA conditions.

****ON A/C A320-200**

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

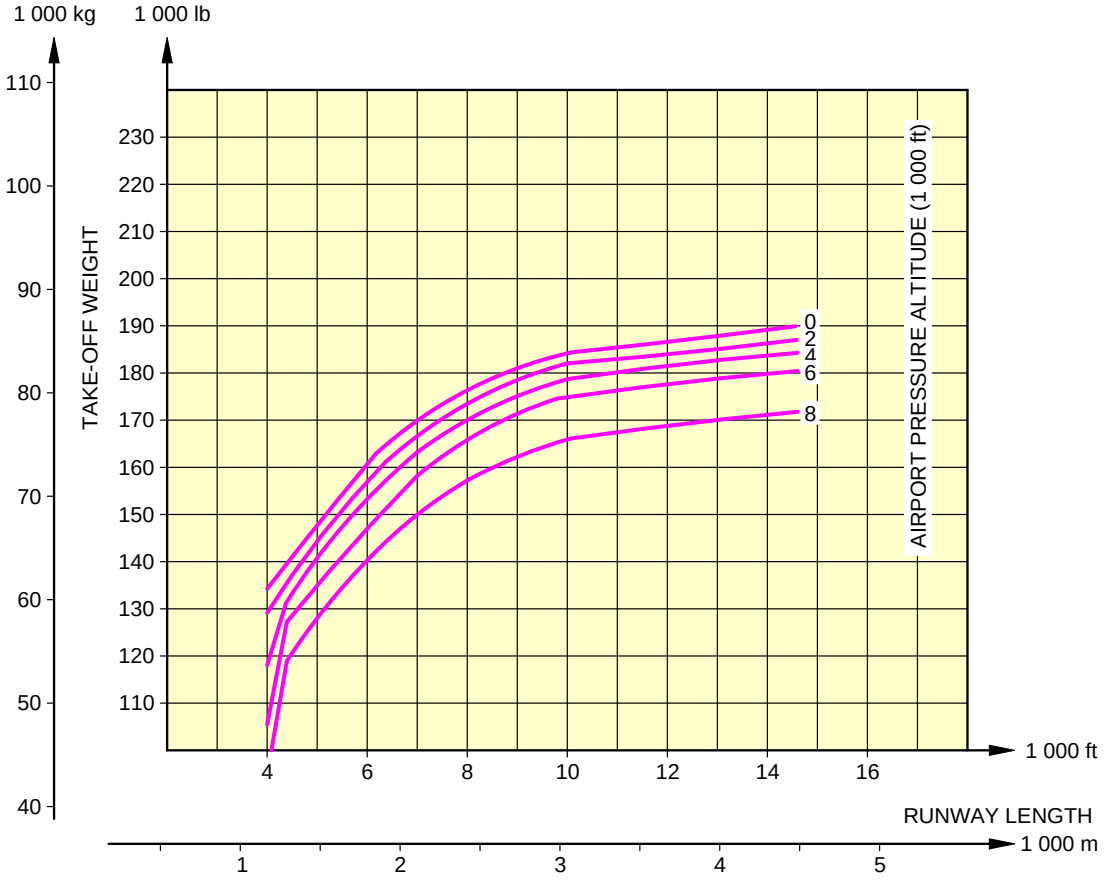


N_AC_030301_1_0050101_01_01

Take-Off Weight Limitation - ISA Conditions
CFM56 Series Engine
FIGURE-3-3-1-991-005-A01

****ON A/C A320-200**

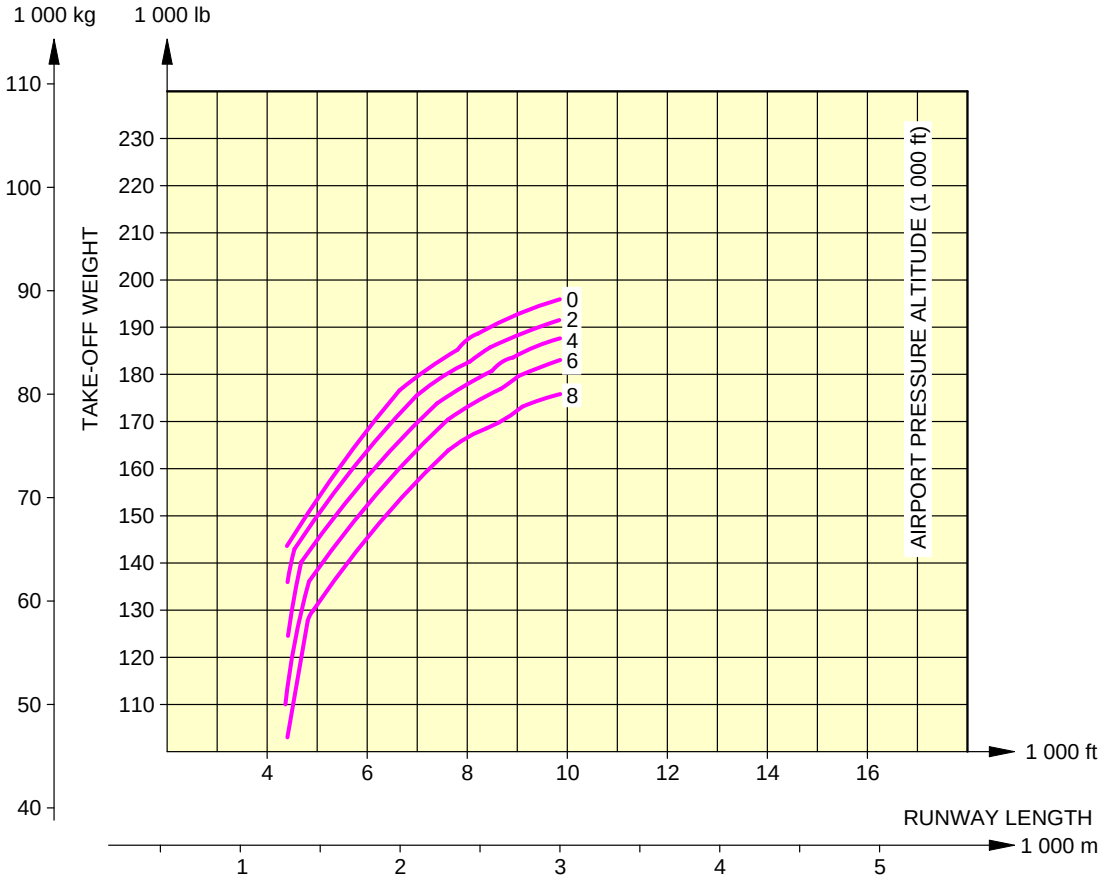
NOTE: THESE CURVES ARE GIVEN FOR INFORMATION ONLY
THE APPROVED VALUES ARE STATED IN THE "OPERATING MANUALS" SPECIFIC TO THE AIRLINE OPERATING THE AIRCRAFT.



N_AC_030301_1_0060101_01_01

Take-Off Weight Limitation - ISA Conditions
IAE V2500 Series Engine
FIGURE-3-3-1-991-006-A01

****ON A/C A320neo**



NOTE:
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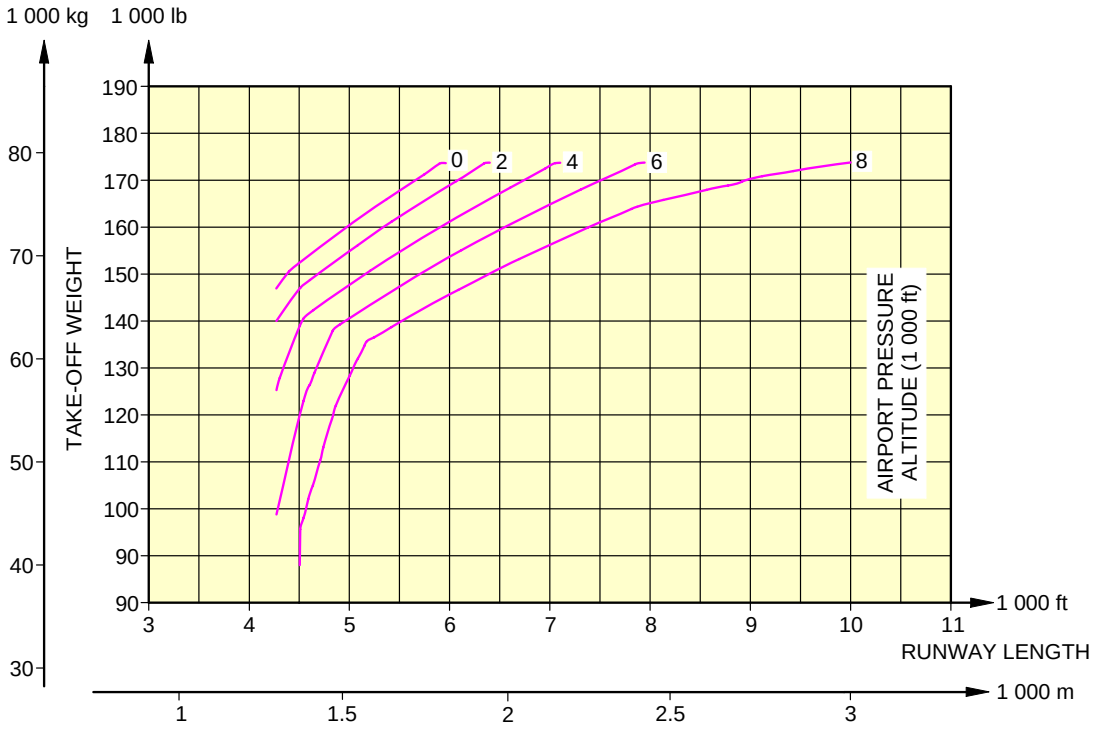
THE APPROVED VALUES ARE STATED IN THE "OPERATING MANUALS" SPECIFIC TO THE AIRLINE OPERATING THE AIRCRAFT.

N_AC_030301_1_0090101_01_00

Take-Off Weight Limitation - ISA Conditions
LEAP-1A Series Engine
FIGURE-3-3-1-991-009-A01

****ON A/C A320neo**



NOTE:
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THE APPROVED VALUES ARE STATED IN THE "OPERATING MANUALS" SPECIFIC TO THE AIRLINE OPERATING THE AIRCRAFT.

N_AC_030301_1_0130101_01_00

Take-Off Weight Limitation - ISA Conditions
PW Engines
FIGURE-3-3-1-991-013-A01

3-3-2 Take-off Weight Limitation - ISA +15°C (+59°F) Conditions

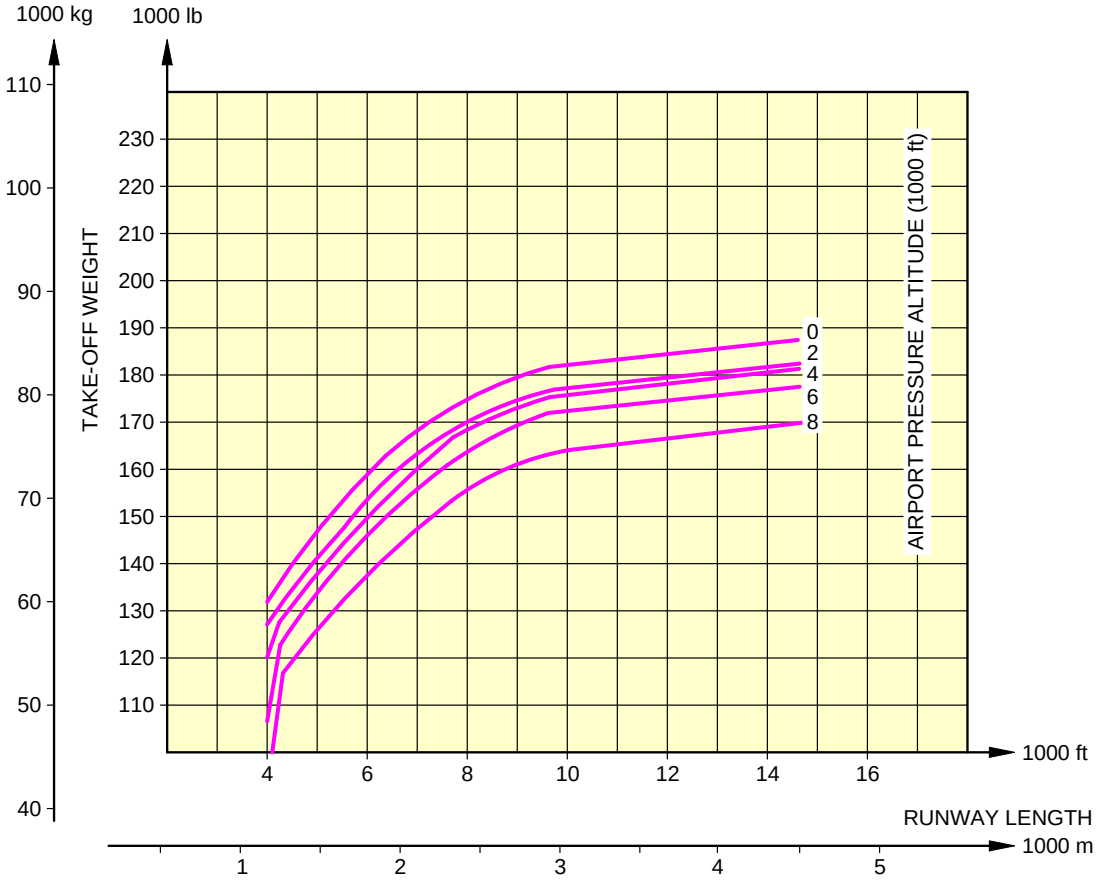
****ON A/C A320-200 A320neo**

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

1. This section gives the take-off weight limitation at ISA +15°C (+27°F) conditions.

****ON A/C A320-200**

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

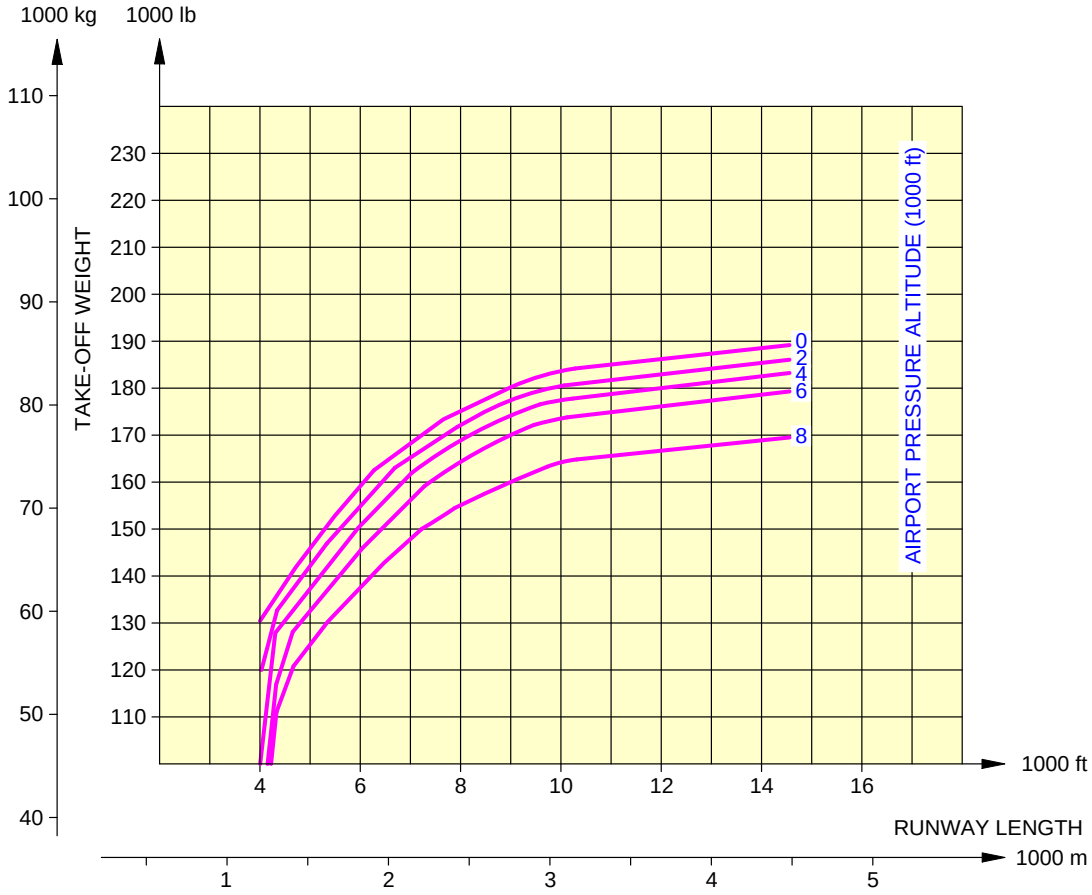


N_AC_030302_1_0050101_01_01

Take-Off Weight Limitation - ISA +15°C (+27°F) Conditions
CFM56 Series Engine
FIGURE-3-3-2-991-005-A01

****ON A/C A320-200**

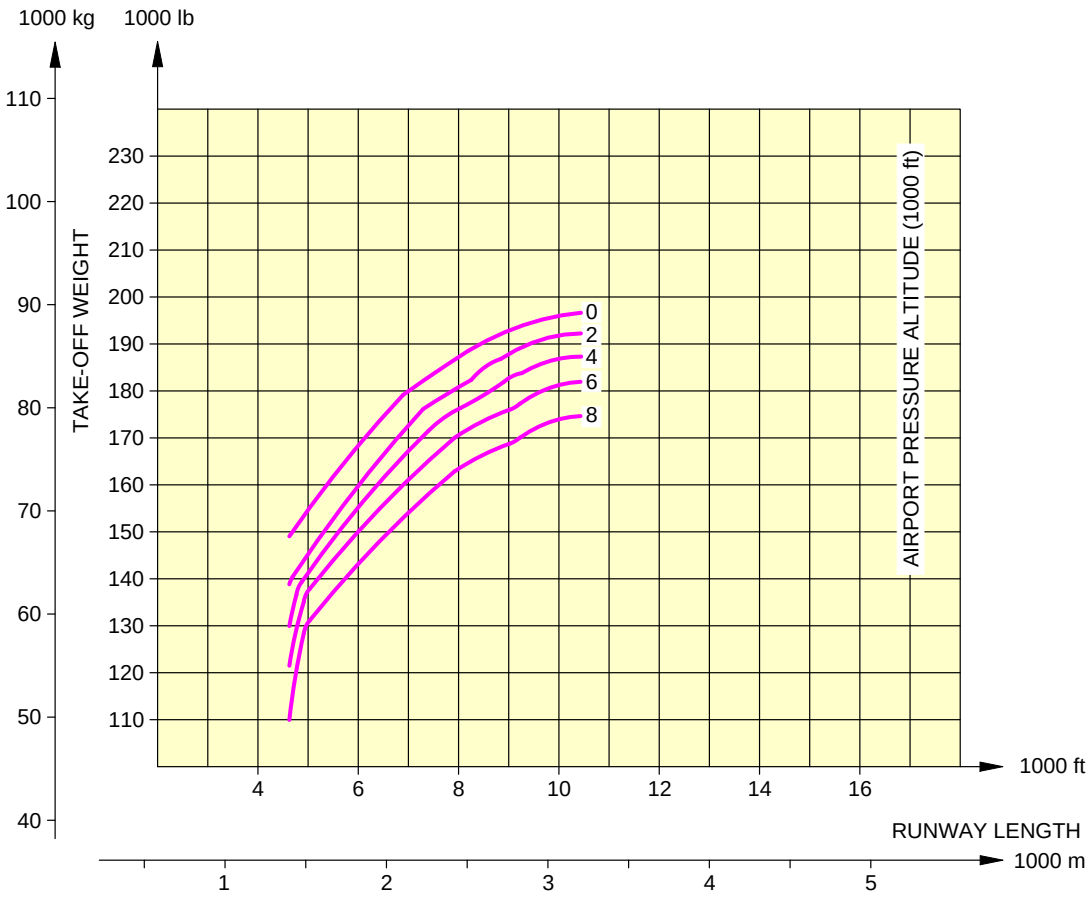
NOTE: THESE CURVES ARE GIVEN FOR INFORMATION ONLY
THE APPROVED VALUES ARE STATED IN THE "OPERATING MANUALS" SPECIFIC TO THE AIRLINE OPERATING THE AIRCRAFT.



N_AC_030302_1_0060101_01_00

Take-Off Weight Limitation - ISA +15°C (+27°F) Conditions
IAE V2500 Series Engine
FIGURE-3-3-2-991-006-A01

****ON A/C A320neo**



NOTE:
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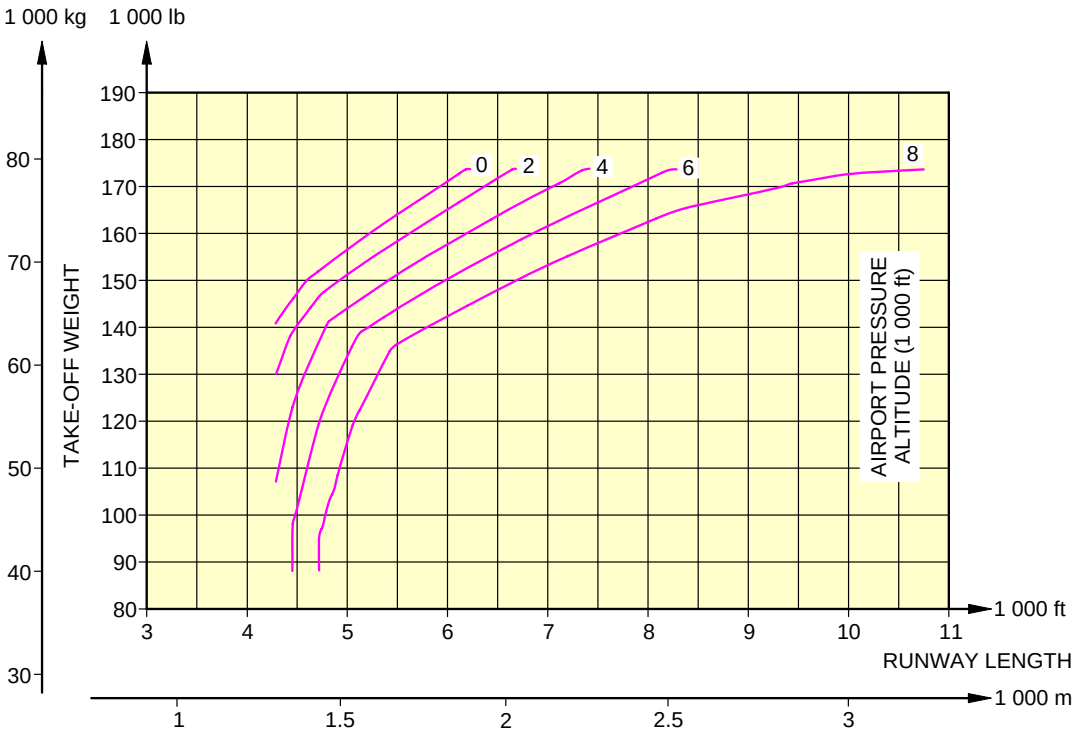
MANUALS" SPECIFIC TO THE AIRLINE OPERATING THE AIRCRAFT.

N_AC_030302_1_0090101_01_00

Take-Off Weight Limitation - ISA +15°C (+27°F) Conditions
LEAP-1A Series Engine
FIGURE-3-3-2-991-009-A01

****ON A/C A320neo**



NOTE:
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THE APPROVED VALUES ARE STATED IN THE "OPERATING MANUALS" SPECIFIC TO THE AIRLINE OPERATING THE AIRCRAFT.

N_AC_030302_1_0120101_01_00

Take-Off Weight Limitation - ISA +15°C (+27°F) Conditions
PW Engines
FIGURE-3-3-2-991-012-A01

3-3-3 Aerodrome Reference Code

****ON A/C A320-200 A320neo**

Aerodrome Reference Code

1. For A320-200:
   - If the aircraft take-off weight is less than or equal to 73 500 kg (162 040 lb), the aircraft is classified as code 3C as per ICAO Aerodrome Reference Code.
   - If the aircraft take-off weight is more than 73 500 kg (162 040 lb), the aircraft is classified as code 4C as per ICAO Aerodrome Reference Code.

2. A320neo is classified as code 3C as per ICAO Aerodrome Reference Code.

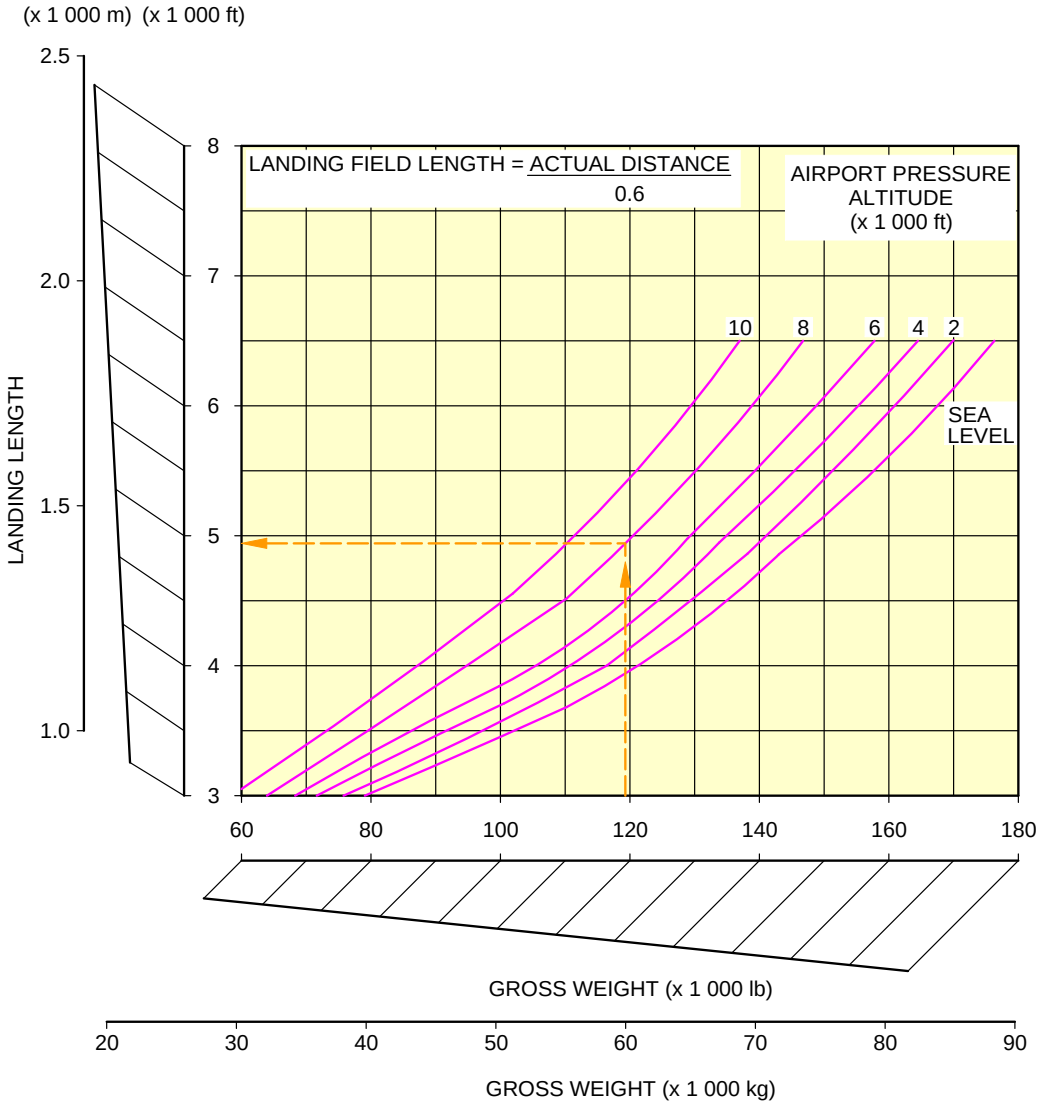
3-4-1 Landing Field Length - ISA Conditions

****ON A/C A320-200 A320neo**

Landing Field Length - ISA Conditions

1. This section provides the landing field length.

****ON A/C A320-200**

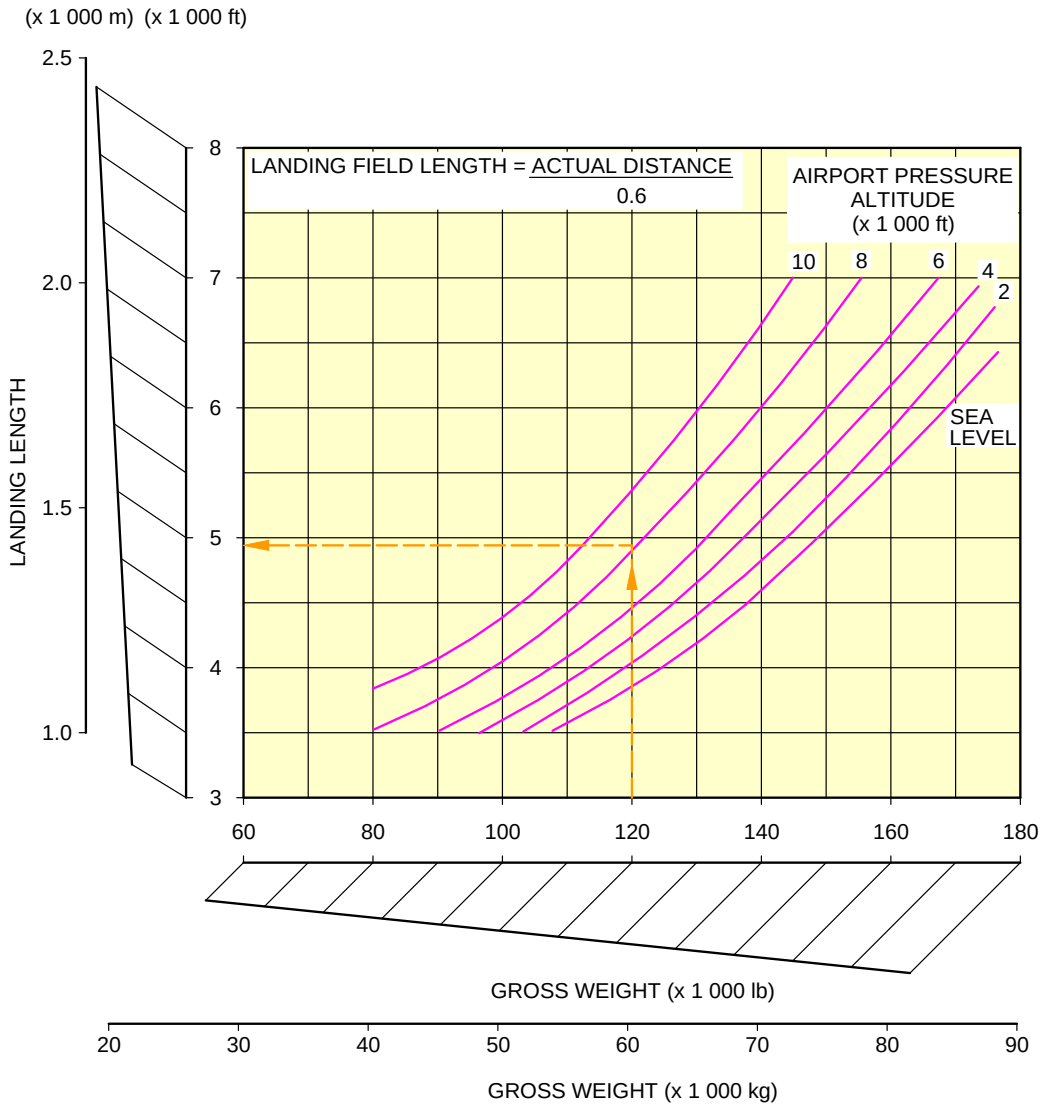


NOTE:
THESE CURVES ARE GIVEN FOR INFORMATION ONLY.
THE APPROVED VALUES ARE STATED IN THE "OPERATING MANUALS" SPECIFIC TO THE AIRLINE OPERATING THE AIRCRAFT.

N_AC_030401_1_0050101_01_01

Landing Field Length - ISA Conditions
CFM56 Series Engine
FIGURE-3-4-1-991-005-A01

****ON A/C A320-200**



NOTE:
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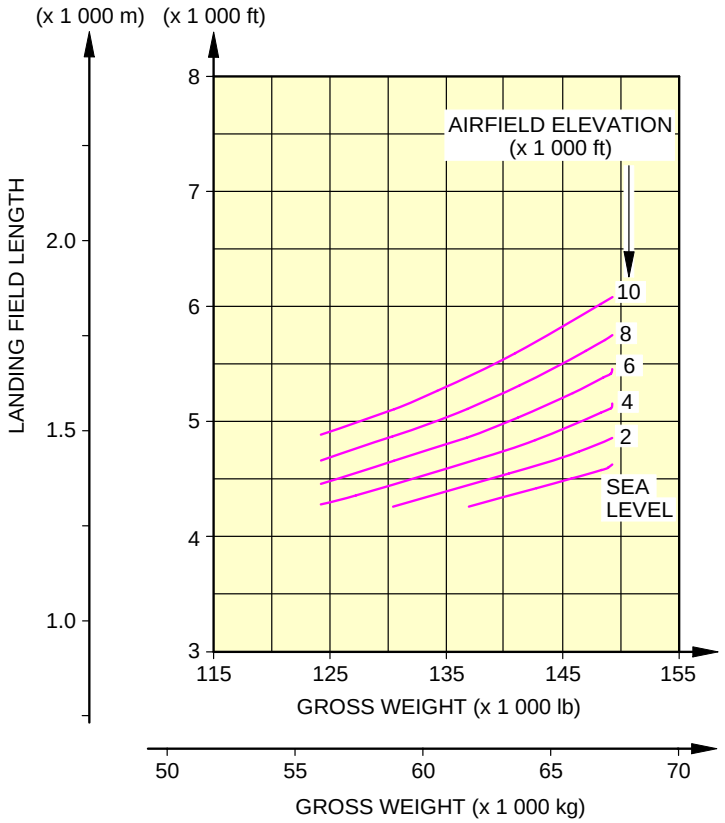
THE APPROVED VALUES ARE STATED IN THE "OPERATING MANUALS" SPECIFIC TO THE AIRLINE OPERATING THE AIRCRAFT.

N_AC_030401_1_0060101_01_01

Landing Field Length - ISA Conditions
IAE V2500 Series Engine
FIGURE-3-4-1-991-006-A01

****ON A/C A320neo**



NOTE:
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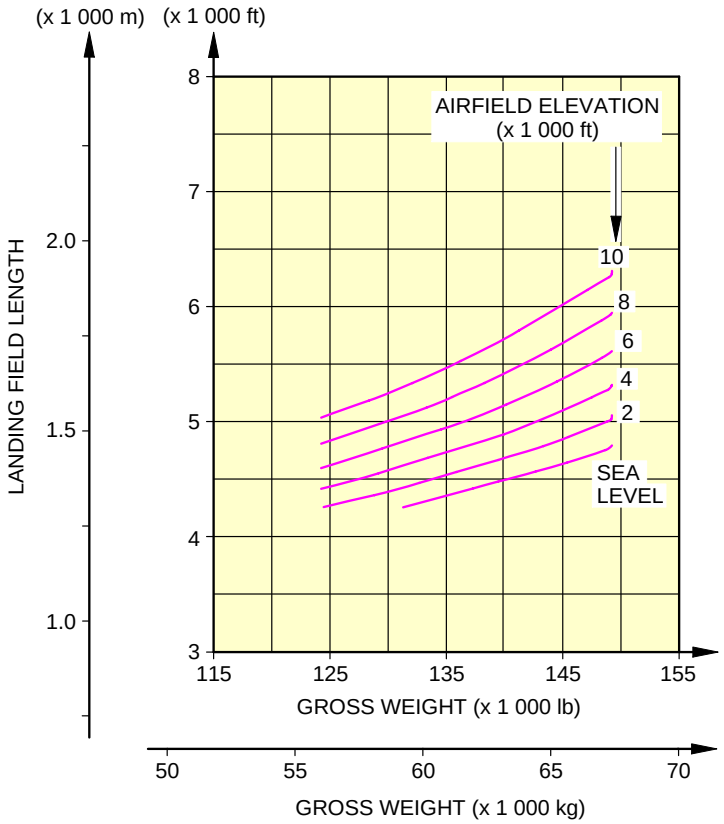
THE APPROVED VALUES ARE STATED IN THE "OPERATING MANUALS" SPECIFIC TO THE AIRLINE OPERATING THE AIRCRAFT.

N_AC_030401_1_0110101_01_00

Landing Field Length - ISA Conditions
Leap Engines
FIGURE-3-4-1-991-011-A01

****ON A/C A320neo**



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

N_AC_030401_1_0120101_01_00

Landing Field Length - ISA Conditions
PW Engines
FIGURE-3-4-1-991-012-A01

3-5-0 Final Approach Speed

****ON A/C A320-200 A320neo**

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 A320-200**

2. The final approach speed is 136 kt at a MLW of 66 000 kg (145 505 lb) and classifies the aircraft into the Aircraft Approach Category C.

   NOTE : This value is given for information only.

****ON A/C A320neo**

3. The final approach speed is 131.5 kt at a MLW of 67 400 kg (148 592 lb) and classifies the aircraft into the Aircraft Approach Category C.

   NOTE : This value is given for information only.

GROUND MANEUVERING

4-1-0 General Information

****ON A/C A320-200 A320neo**

General Information

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

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

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

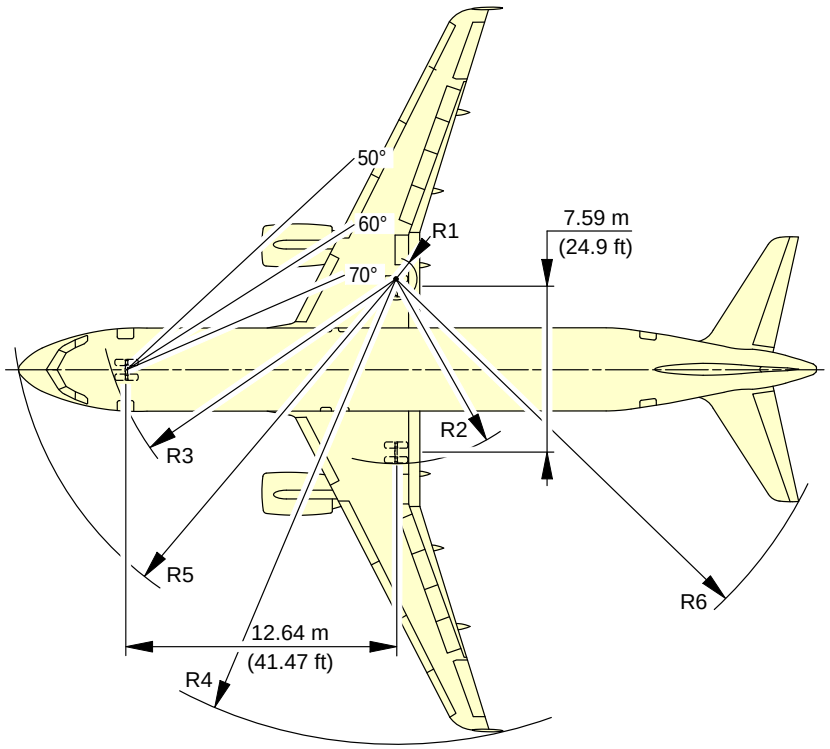
4-2-0 Turning Radii

****ON A/C A320-200 A320neo**

Turning Radii

1. This section provides the turning radii.

****ON A/C A320-200 A320neo**



NOTE: FOR STEERING DIMENSION TABLE SEE SHEET 2.

TURN TYPE:

1. ASYMMETRIC THRUST DIFFERENTIAL BRAKING (PIVOTTING ON ONE MAIN GEAR).
2. SYMMETRIC THRUST NO BRAKING.

N_AC_040200_1_0050101_01_01

Turning Radii, No Slip Angle
Dual Landing Gear (Sheet 1)
FIGURE-4-2-0-991-005-A01

****ON A/C A320-200 A320neo**

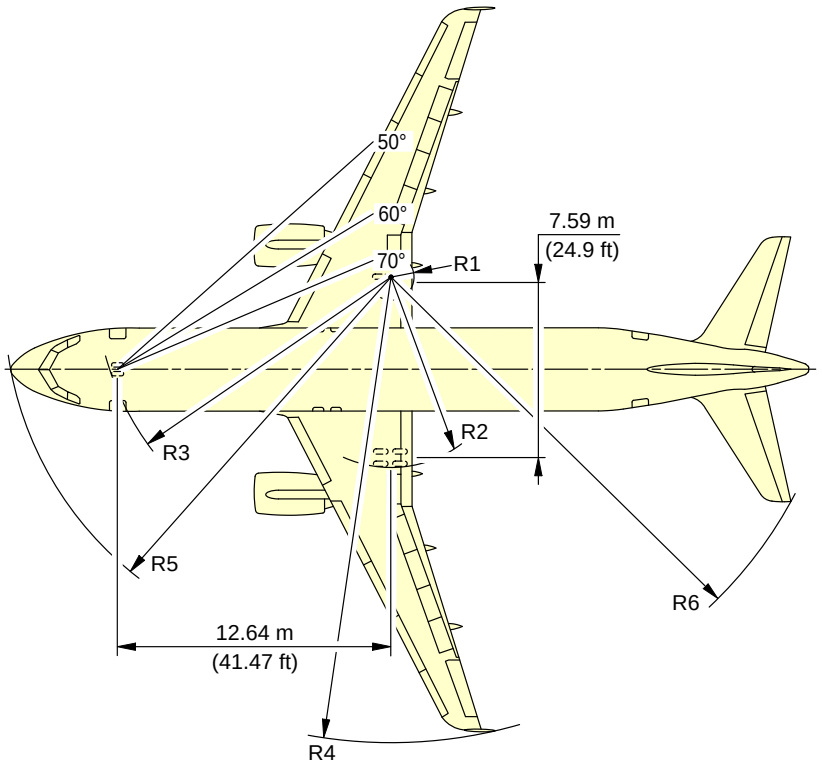
TYPE OF TURN	MAXIMUM RAMP WEIGHT		R1 RMLG		R2 LMLG		R3 NLG		R4 - WING				R5 NOSE		R6 THS	
	STEERING ANGLE (deg)	EFFECTIVE STEERING ANGLE (deg)	m	ft	m	ft	m	ft	WINGTIP FENCE		SHARKLET		m	ft	m	ft
									m	ft	m	ft				
2	20	19.5	32.6	107	40.2	132	38.2	125	52.9	174	53.8	176	39.8	131	46.0	151
2	25	24.4	24.8	81	32.3	106	30.9	101	45.1	148	46.0	151	33.0	108	39.0	128
2	30	29.3	19.4	64	27.0	89	26.2	86	39.8	131	40.7	133	28.7	94	34.4	113
2	35	34.2	15.5	51	23.1	76	22.8	75	35.9	118	36.8	121	25.7	84	31.3	103
2	40	39.0	12.5	41	20.1	66	20.4	67	32.9	108	33.8	111	23.6	77	28.9	95
2	45	43.8	10.1	33	17.6	58	18.5	61	30.5	100	31.4	103	22.1	72	27.1	89
2	50	48.6	8.0	26	15.6	51	17.1	56	28.5	94	29.4	96	20.9	69	25.7	84
2	55	53.3	6.3	21	13.9	46	16.0	52	26.8	88	27.7	91	20.1	66	24.6	81
2	60	57.9	4.8	16	12.4	41	15.1	50	25.4	83	26.2	86	19.4	64	23.7	78
2	65	62.4	3.5	12	11.1	36	14.4	47	24.1	79	24.9	82	18.9	62	22.9	75
2	70	66.8	2.4	8	9.9	33	13.9	46	22.9	75	23.7	78	18.5	61	22.3	73
2	75 (MAX)	70.2	1.5	5	9.0	30	13.6	44	22.0	72	22.9	75	18.3	60	21.8	72
1	50	48.8	8.0	26	15.5	51	17.0	56	28.4	93	29.3	96	20.9	68	25.6	84
1	55	53.6	6.2	20	13.8	45	15.9	52	26.7	88	27.6	90	20.0	66	24.5	80
1	60	58.4	4.7	15	12.3	40	15.0	49	25.2	83	26.0	85	19.3	63	23.6	77
1	65	63.1	3.3	11	10.9	36	14.3	47	23.9	78	24.7	81	18.8	62	22.8	75
1	70	67.8	2.1	7	9.6	32	13.8	45	22.6	74	23.5	77	18.4	61	22.1	73
1	75 (MAX)	71.9	1.1	4	8.6	28	13.4	44	21.6	71	22.5	74	18.2	60	21.6	71

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.

N_AC_040200_1_0100101_01_00

Turning Radii, No Slip Angle
Dual Landing Gear (Sheet 2)
FIGURE-4-2-0-991-010-A01

****ON A/C A320-200**



NOTE: FOR STEERING DIMENSION TABLE SEE SHEET 2.

N_AC_040200_1_0060101_01_02

Turning Radii, No Slip Angle
Bogie Landing Gear (Sheet 1)
FIGURE-4-2-0-991-006-A01

****ON A/C A320-200**

STEERING ANGLE (deg)	R1		R2		R3		R4		R5		R6	
	m	ft	m	ft	m	ft	m	ft	m	ft	m	ft
30	17.55	58	26.23	86	25.64	84	39.1	128	28.16	92	33.96	111
35	13.71	45	22.39	73	22.40	73	35.28	116	25.29	83	30.86	101
40	10.72	35	19.40	64	20.02	66	32.32	106	23.25	76	28.56	94
45	8.3	27	16.98	56	18.24	60	29.92	98	21.76	71	26.81	88
50	6.27	21	14.95	49	16.86	55	27.90	92	20.65	68	25.42	83
55	4.51	15	13.19	43	15.79	52	26.17	86	19.80	65	24.29	80
60	2.96	10	11.64	38	14.95	49	24.64	81	19.16	63	23.36	77
65	1.55	5	10.23	34	14.31	47	23.26	78	18.67	61	22.58	74
70	0.26	1	8.94	29	13.81	45	21.99	72	18.3	60	21.91	72

N_AC_040200_1_0110101_01_00

Turning Radii, No Slip Angle
Bogie Landing Gear (Sheet 2)
FIGURE-4-2-0-991-011-A01

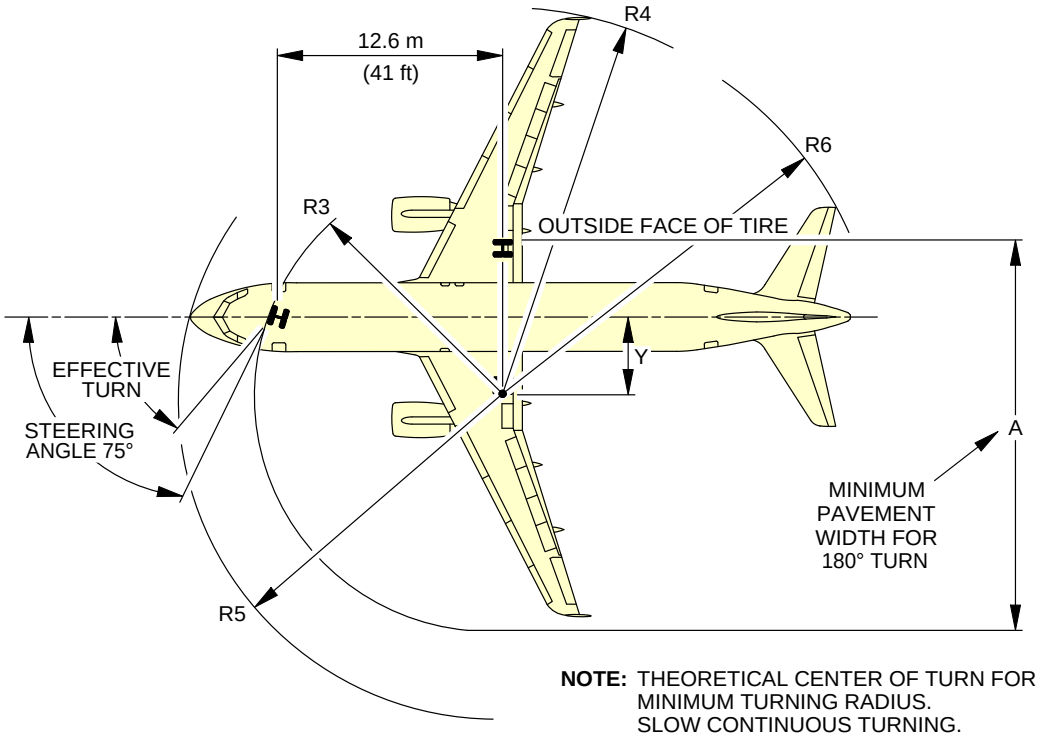
4-3-0 Minimum Turning Radii

****ON A/C A320-200 A320neo**

Minimum Turning Radii

1. This section provides the minimum turning radii.

****ON A/C A320-200 A320neo**



NOTE: THEORETICAL CENTER OF TURN FOR MINIMUM TURNING RADIUS.
SLOW CONTINUOUS TURNING.
APPROXIMATELY IDLE THRUST ON ALL ENGINES.
NO DIFFERENTIAL BRAKING.
NOSE GEAR RADII TRACK MEASURED FROM OUTSIDE FACE OF TIRE.

DUAL LANDING GEAR

TYPE OF TURN	STEERING ANGLE (DEG)	EFFECTIVE STEERING ANGLE		Y	A	R3 NLG	R4 WING		R5 NOSE	R6 THS
							WING TIP FENCE	SHARKLET		
1	75 (MAX)	71.9°	m	4.1	22.3	13.4	21.6	22.5	18.2	21.6
			ft	14	73	44	71	74	60	71
2	75 (MAX)	70.2°	m	4.5	22.8	13.6	22.0	22.9	18.3	21.8
			ft	15	75	44	72	75	60	72

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

BOGIE LANDING GEAR

STEERING ANGLE (DEG)	EFFECTIVE STEERING ANGLE		Y	A	R3 NLG	R4 WING	R5 NOSE	R6 THS
						WING TIP FENCE		
75 (MAX)	70.0°	m	4.6	22.8	13.8	22.0	18.3	21.9
		ft	15	75	45	72	60	72

N_AC_040300_1_0030101_01_01

Minimum Turning Radii
FIGURE-4-3-0-991-003-A01

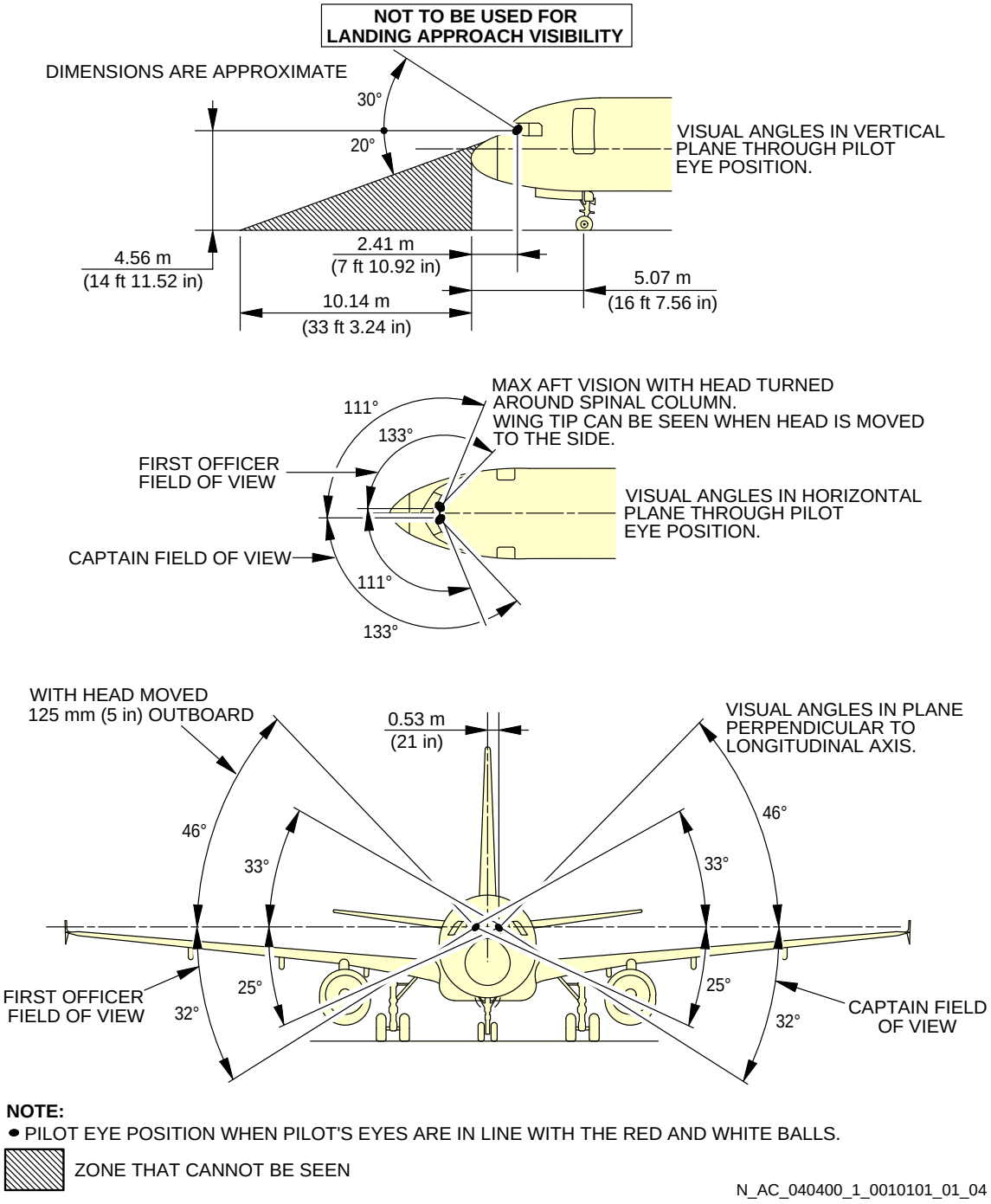
4-4-0 Visibility from Cockpit in Static Position

****ON A/C A320-200 A320neo**

Visibility from Cockpit in Static Position

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

****ON A/C A320-200 A320neo**



NOTE:

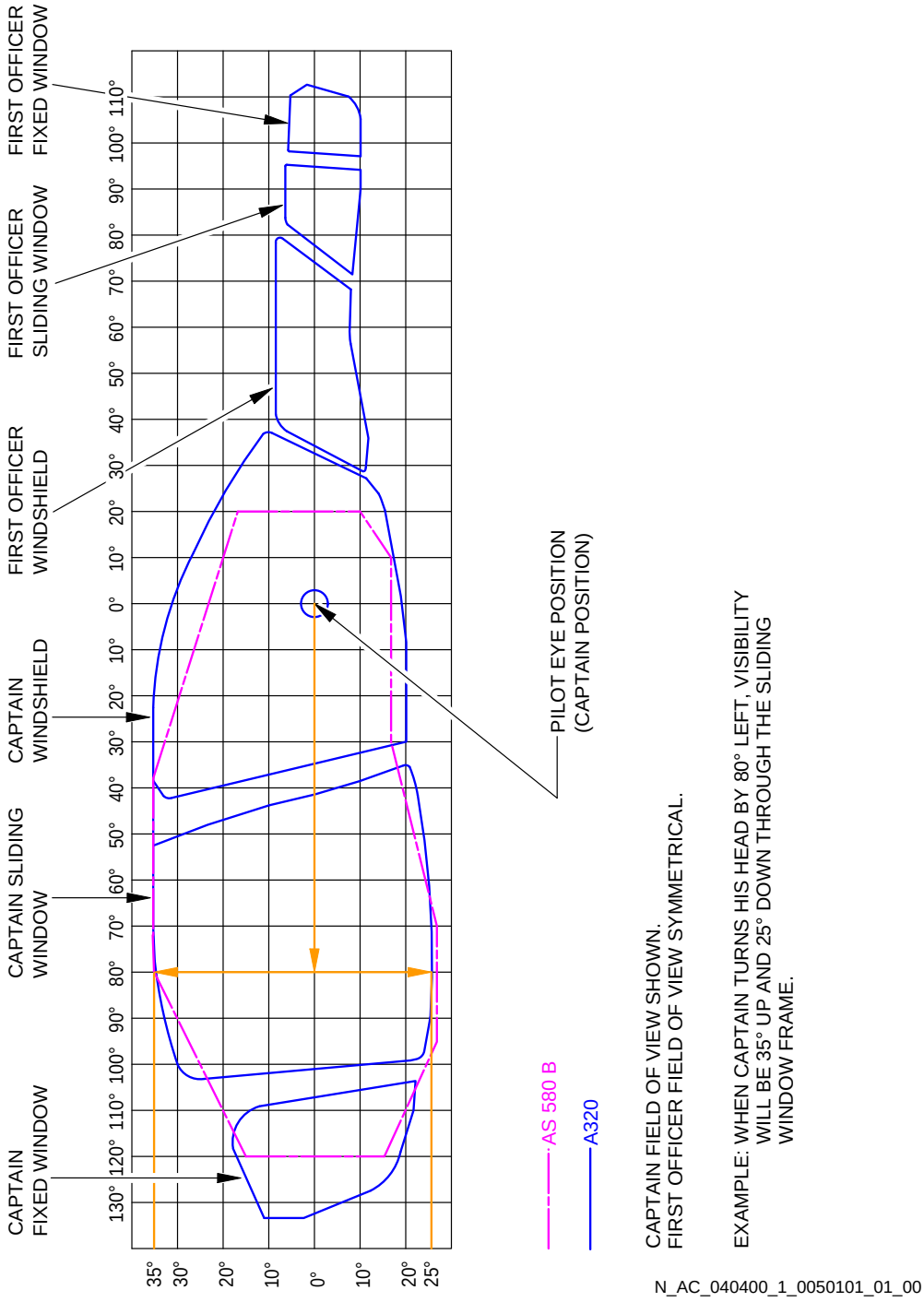
- PILOT EYE POSITION WHEN PILOT'S EYES ARE IN LINE WITH THE RED AND WHITE BALLS.

ZONE THAT CANNOT BE SEEN

N_AC_040400_1_0010101_01_04

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

****ON A/C A320-200 A320neo**



Binocular Visibility Through Windows from Captain Eye Position
FIGURE-4-4-0-991-005-A01

4-5-0 Runway and Taxiway Turn Paths

****ON A/C A320-200 A320neo**

Runway and Taxiway Turn Paths

1. Runway and Taxiway Turn Paths.

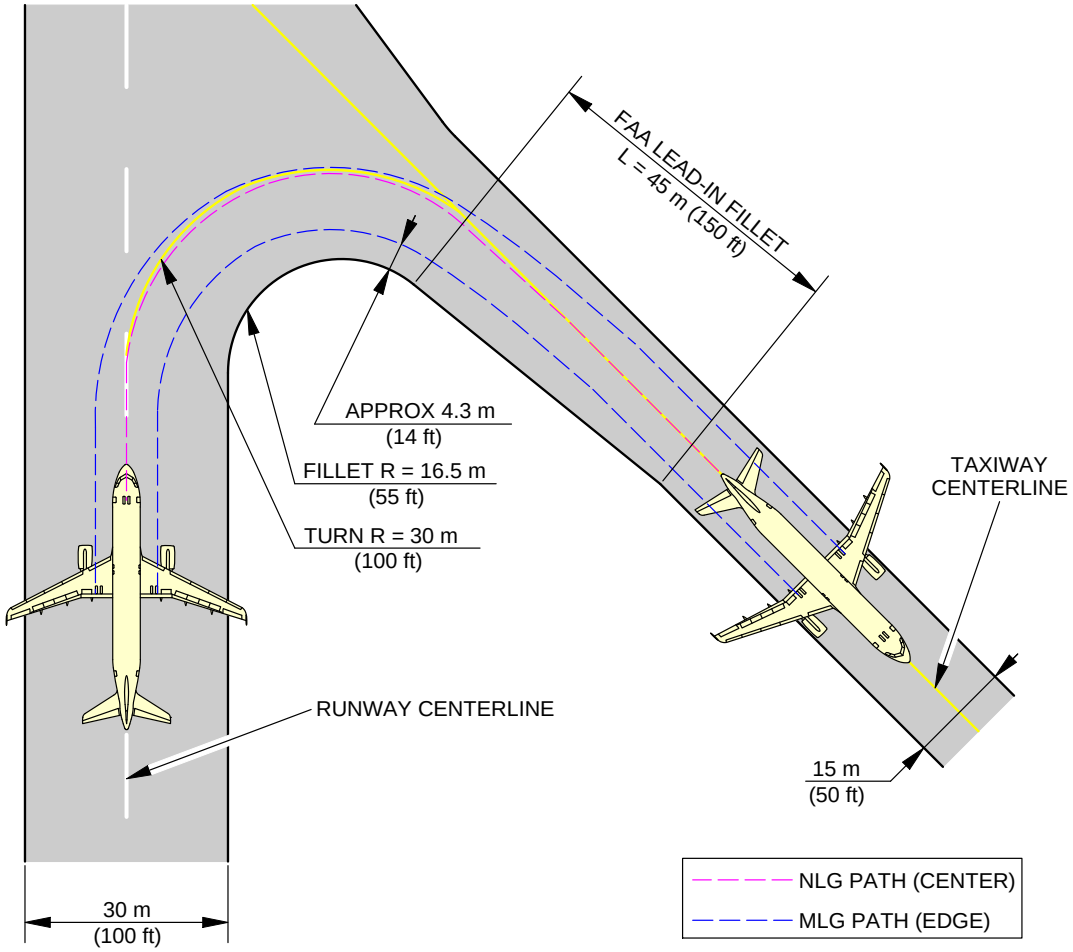
4-5-1 135° Turn - Runway to Taxiway

****ON A/C A320-200 A320neo**

135° Turn - Runway to Taxiway

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

****ON A/C A320-200 A320neo**

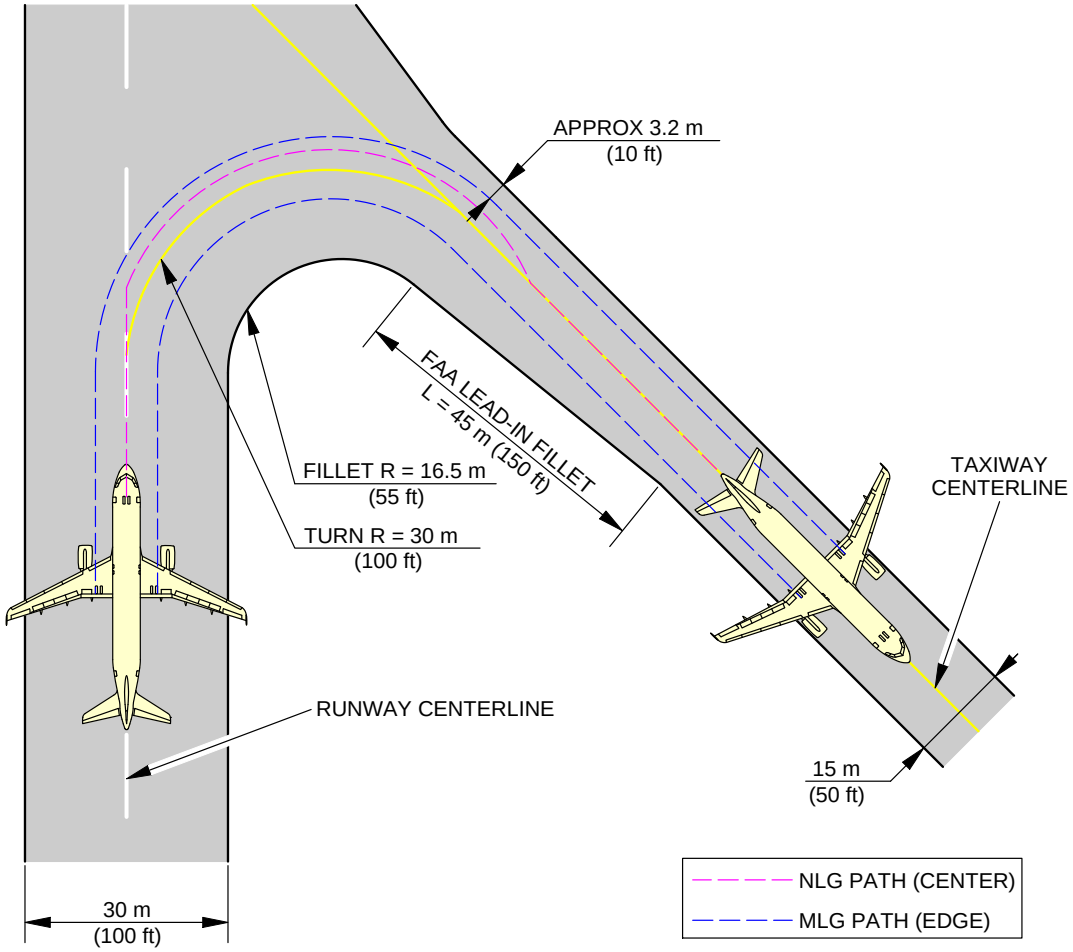


NOTE:
FAA GROUP III FACILITIES.

N_AC_040501_1_0040101_01_02

135° Turn - Runway to Taxiway
Cockpit Over Centerline Method
FIGURE-4-5-1-991-004-A01

****ON A/C A320-200 A320neo**



NOTE:
FAA GROUP III FACILITIES.

N_AC_040501_1_0120101_01_01

135° Turn - Runway to Taxiway
Judgemental Oversteering Method
FIGURE-4-5-1-991-012-A01

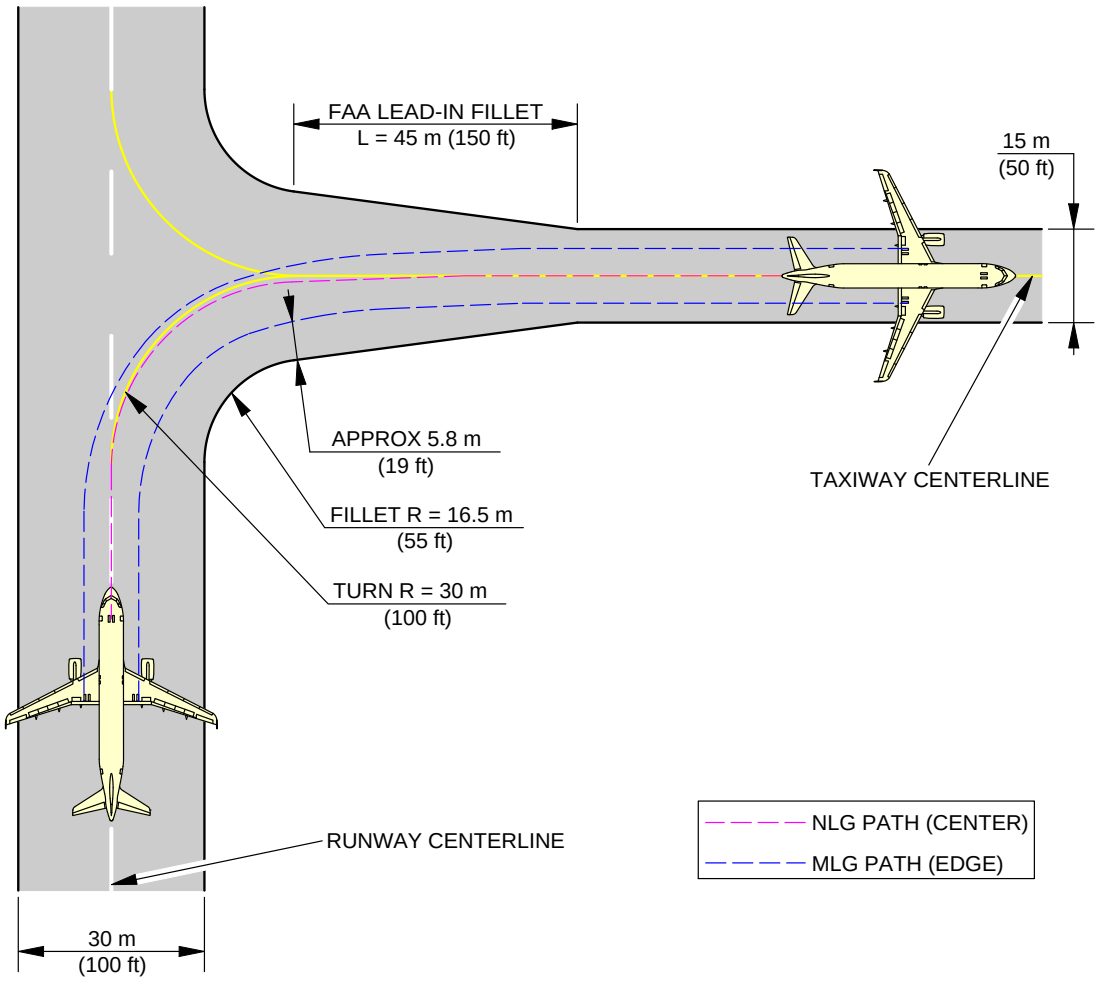
4-5-2 90° Turn - Runway to Taxiway

****ON A/C A320-200 A320neo**

90° Turn - Runway to Taxiway

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

****ON A/C A320-200 A320neo**

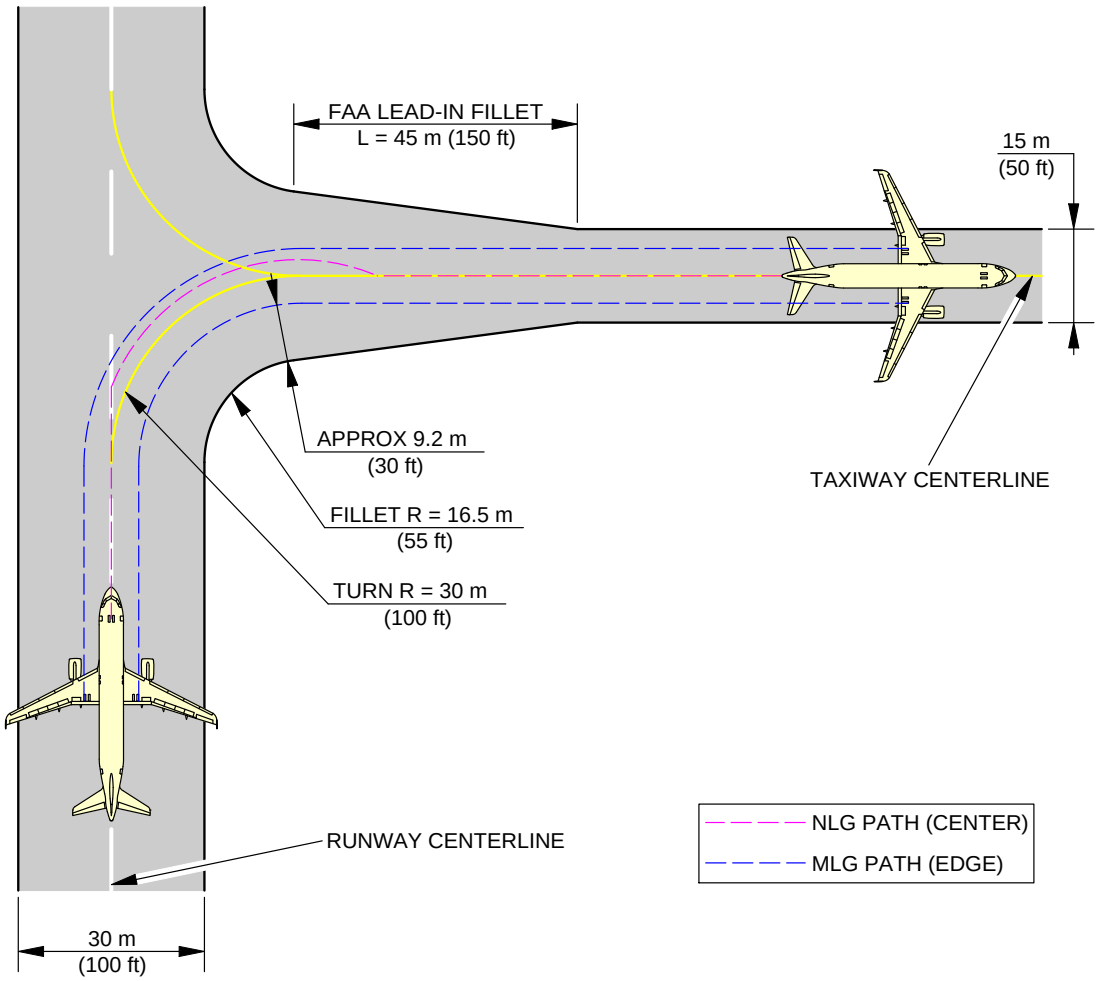


NOTE:
FAA GROUP III FACILITIES.

N_AC_040502_1_0040101_01_02

90° Turn - Runway to Taxiway
Cockpit Over Centerline Method
FIGURE-4-5-2-991-004-A01

****ON A/C A320-200 A320neo**



NOTE:
FAA GROUP III FACILITIES.

N_AC_040502_1_0090101_01_01

90° Turn - Runway to Taxiway
Judgemental Oversteering Method
FIGURE-4-5-2-991-009-A01

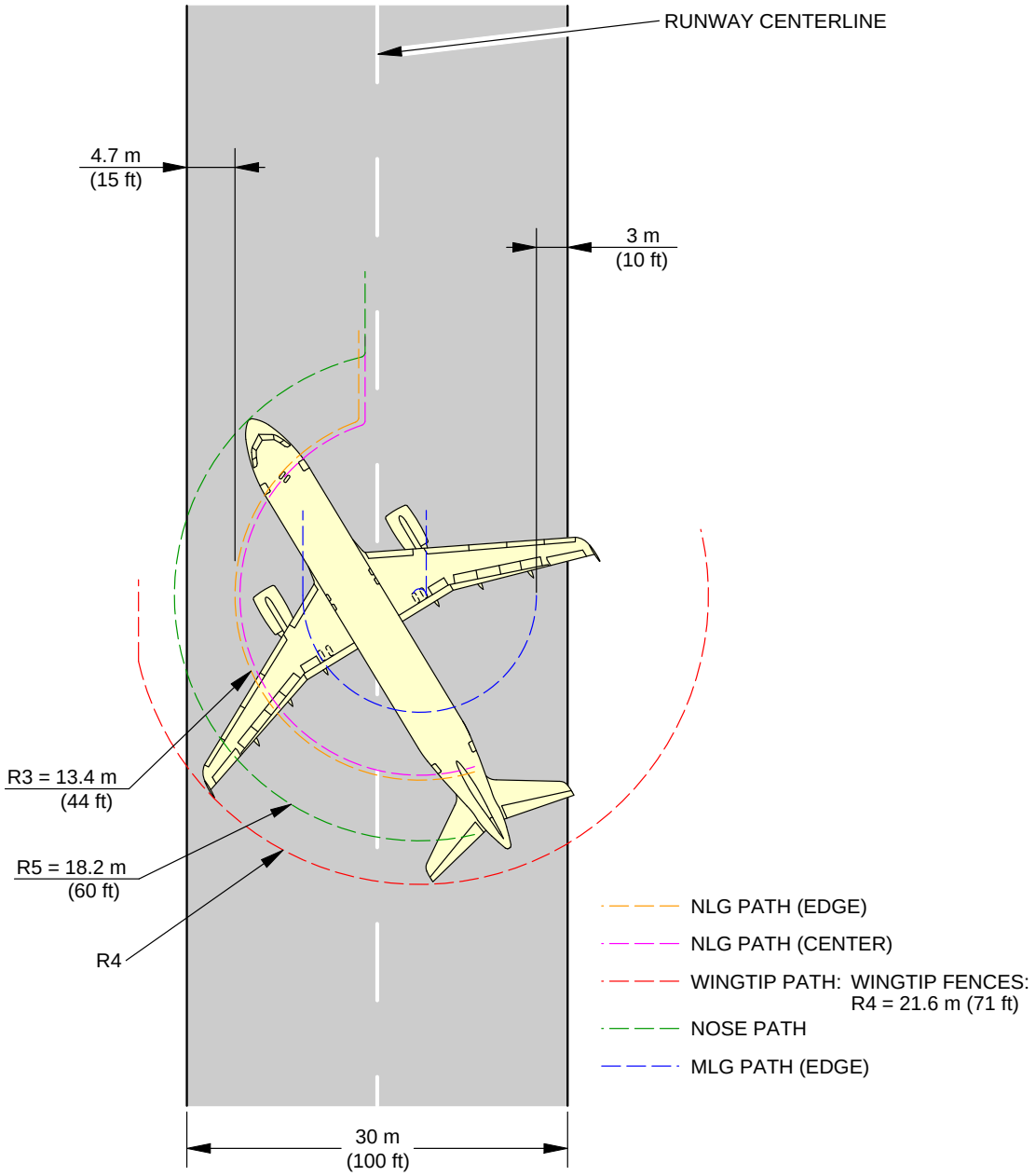
4-5-3 180° Turn on a Runway

****ON A/C A320-200 A320neo**

180° Turn on a Runway

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

****ON A/C A320-200**

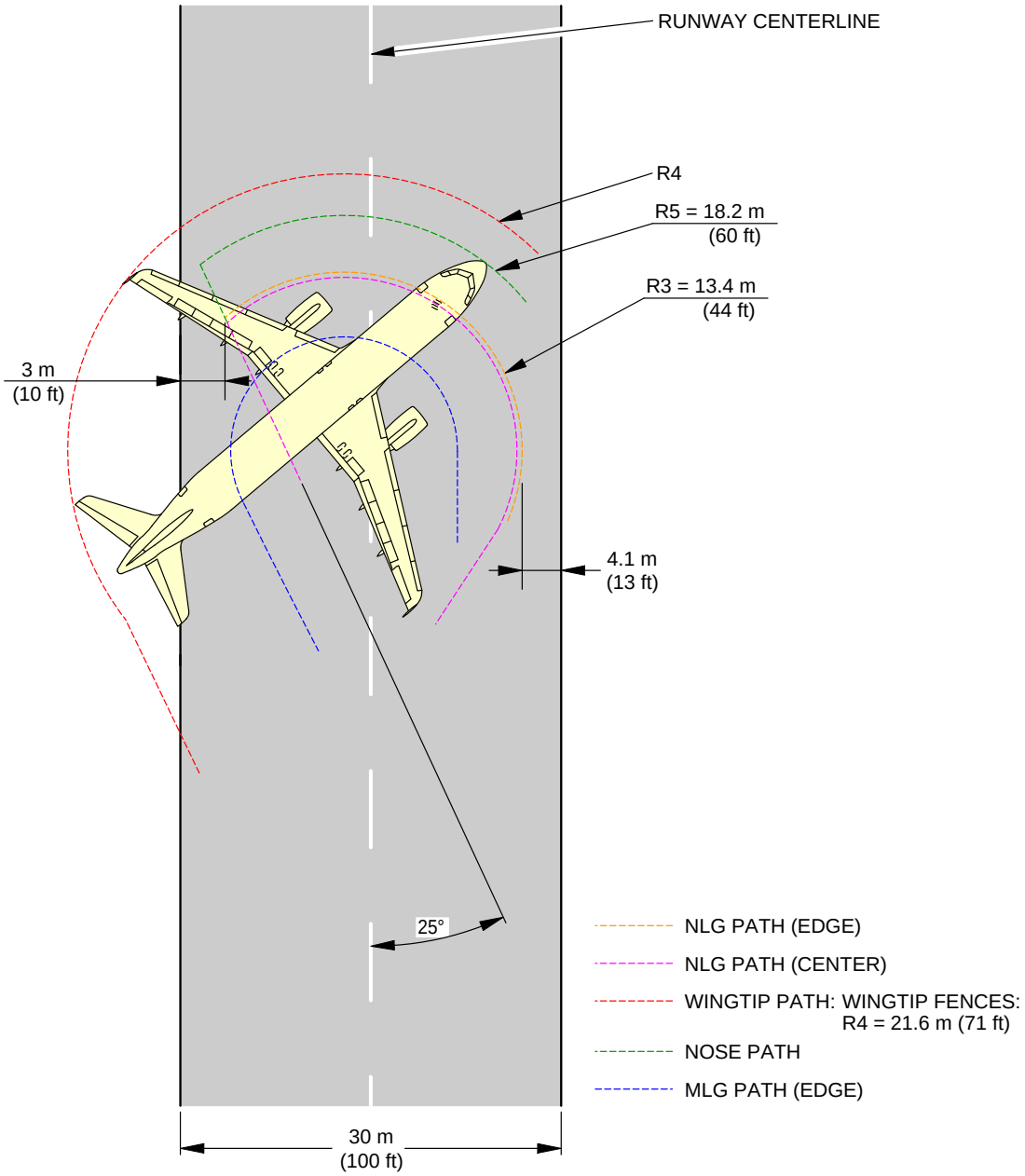


NOTE:
TYPE 1 VALUES.

N_AC_040503_1_0060101_01_02

180° Turn on a Runway
Edge of Runway Method (Sheet 1 of 2)
FIGURE-4-5-3-991-006-A01

**ON A/C A320-200

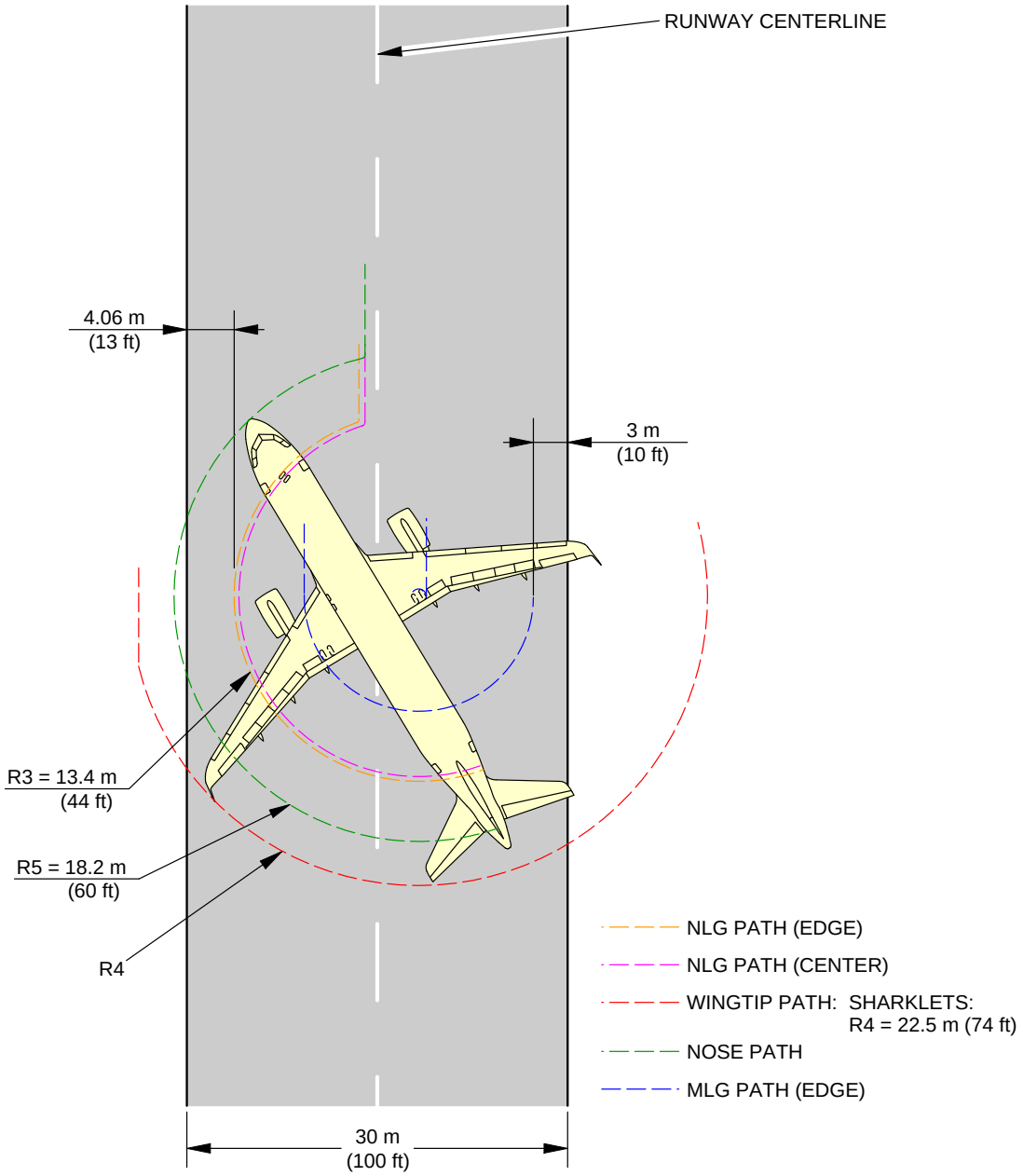


NOTE:
TYPE 1 VALUES.

N_AC_040503_1_0060102_01_02

180° Turn on a Runway
Center of Runway Method (Sheet 2 of 2)
FIGURE-4-5-3-991-006-A01

****ON A/C A320neo**

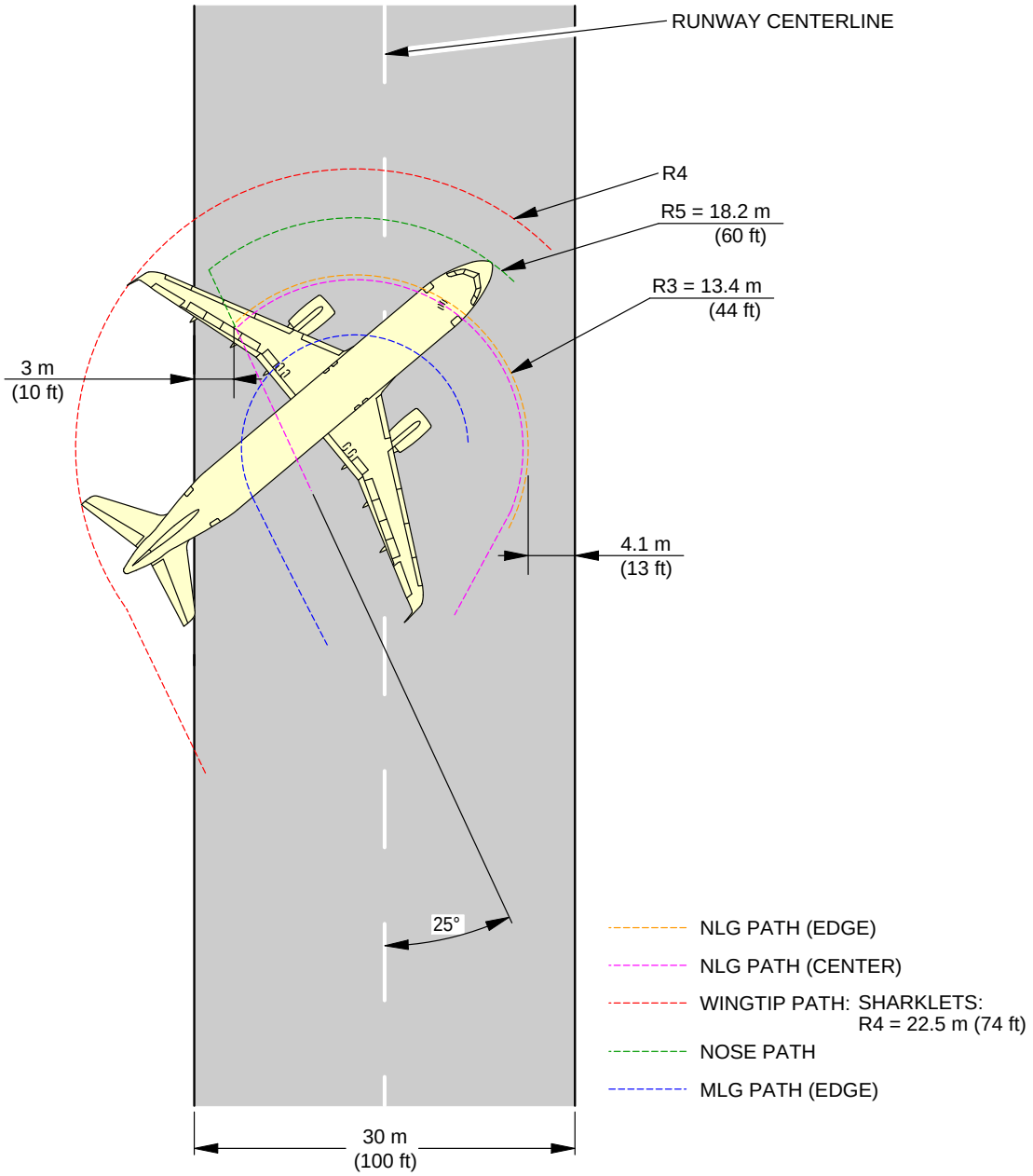


NOTE:
TYPE 1 VALUES.

N_AC_040503_1_0090101_01_00

180° Turn on a Runway
Edge of Runway Method (Sheet 1 of 2)
FIGURE-4-5-3-991-009-A01

****ON A/C A320neo**



NOTE:
TYPE 1 VALUES.

N_AC_040503_1_0090102_01_00

180° Turn on a Runway
Center of Runway Method (Sheet 2 of 2)
FIGURE-4-5-3-991-009-A01

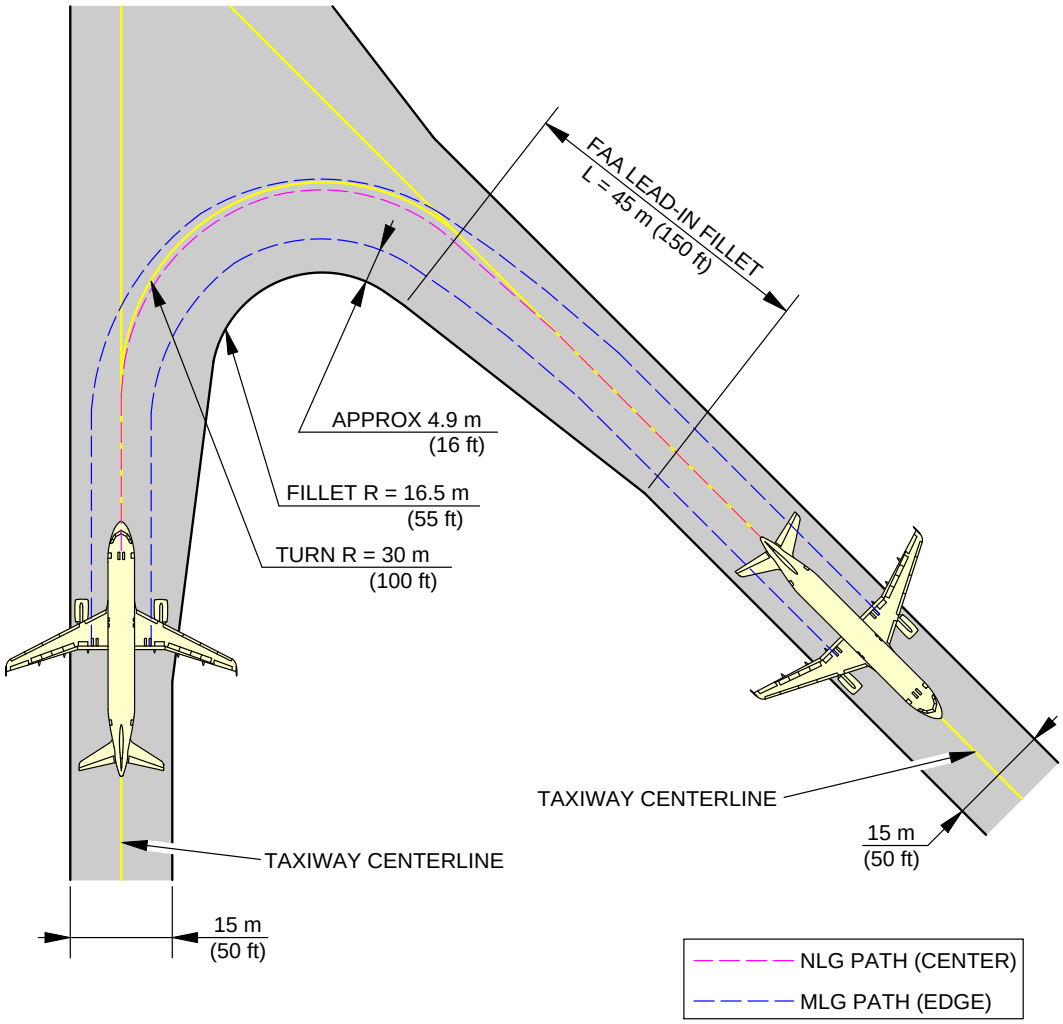
4-5-4 135° Turn - Taxiway to Taxiway

****ON A/C A320-200 A320neo**

135° Turn - Taxiway to Taxiway

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

****ON A/C A320-200 A320neo**

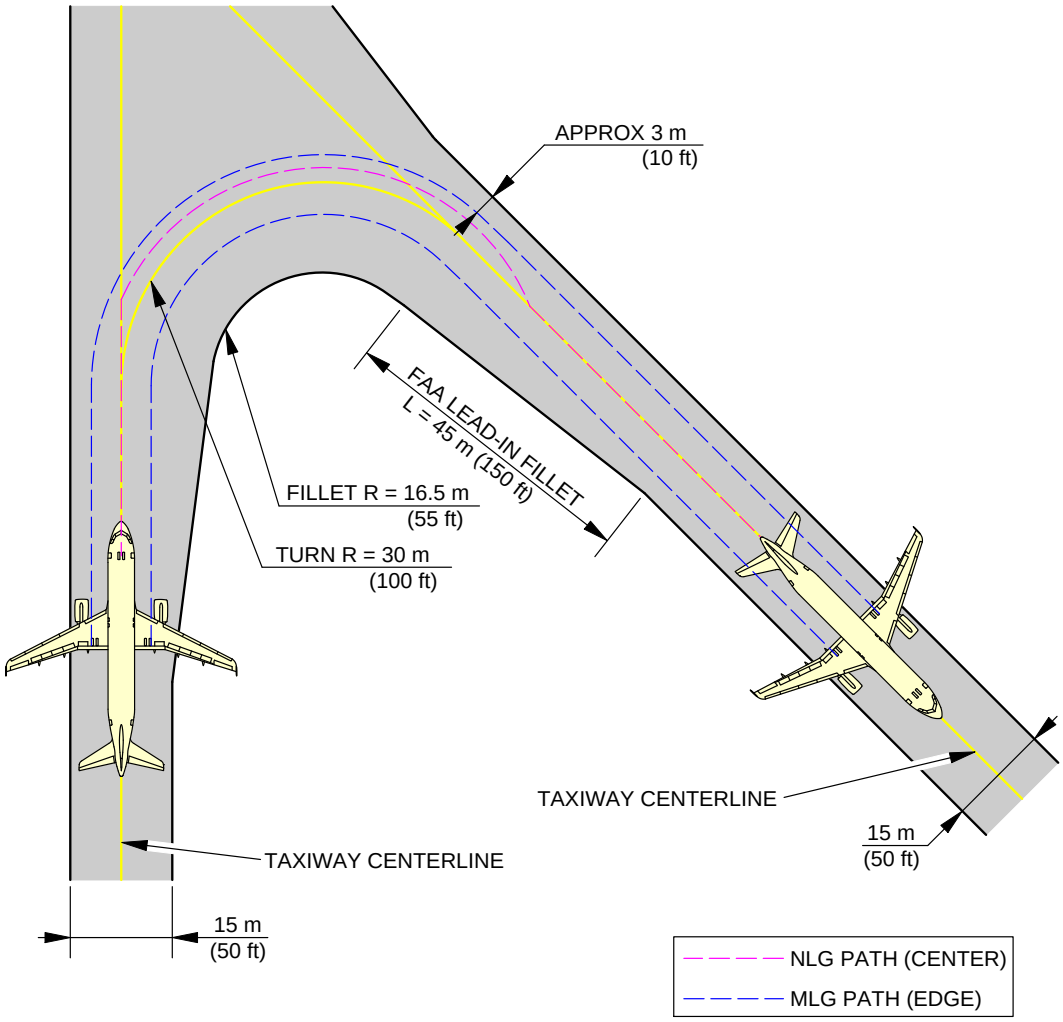


NOTE:
FAA GROUP III FACILITIES.

N_AC_040504_1_0060101_01_01

135° Turn - Taxiway to Taxiway
Cockpit Over Centerline Method (Sheet 1 of 2)
FIGURE-4-5-4-991-006-A01

****ON A/C A320-200 A320neo**



NOTE:
FAA GROUP III FACILITIES.

N_AC_040504_1_0060102_01_01

135° Turn - Taxiway to Taxiway
Judgemental Oversteering Method (Sheet 2 of 2)
FIGURE-4-5-4-991-006-A01

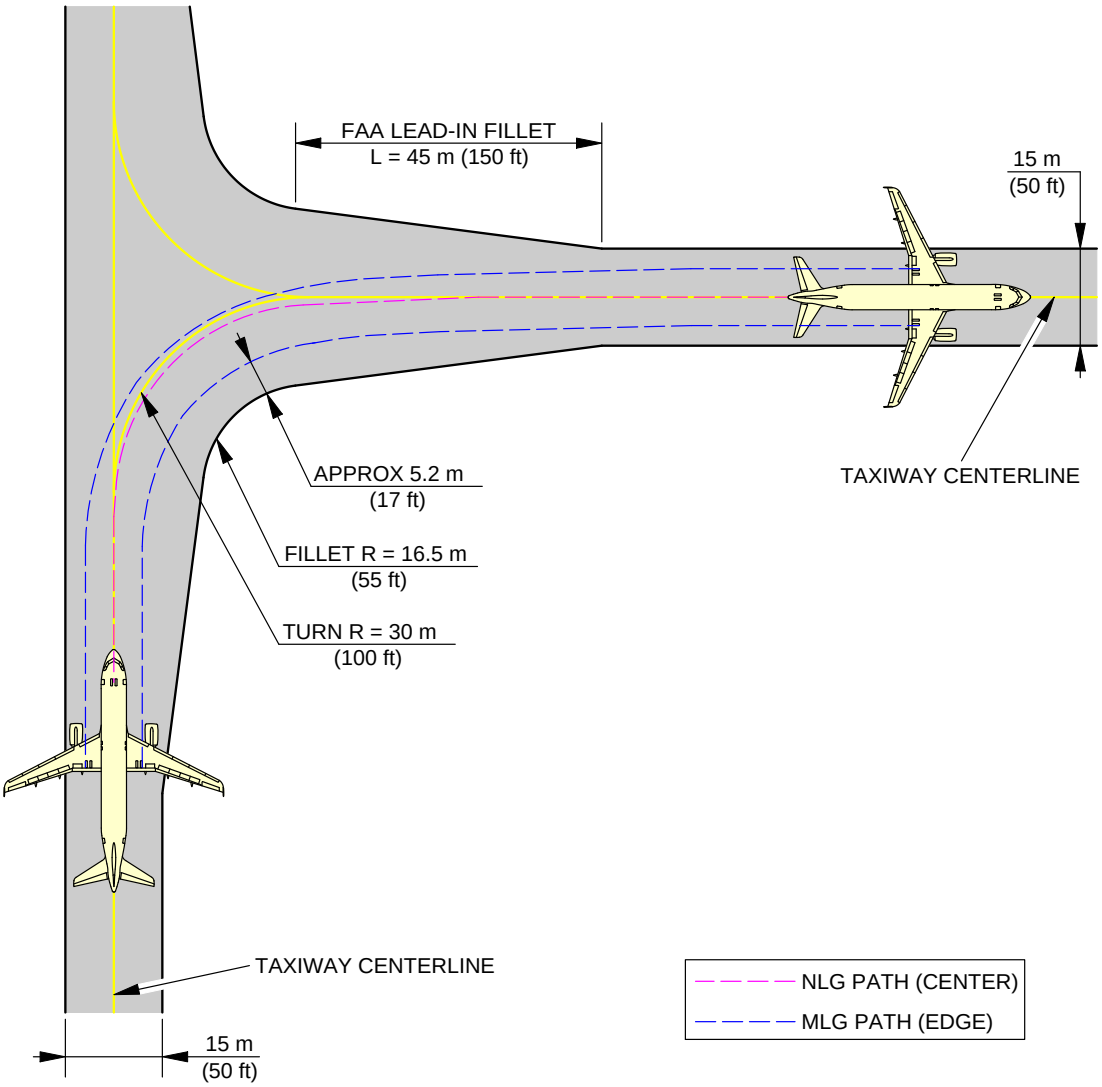
4-5-5 90° Turn - Taxiway to Taxiway

****ON A/C A320-200 A320neo**

90° Turn - Taxiway to Taxiway

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

****ON A/C A320-200 A320neo**

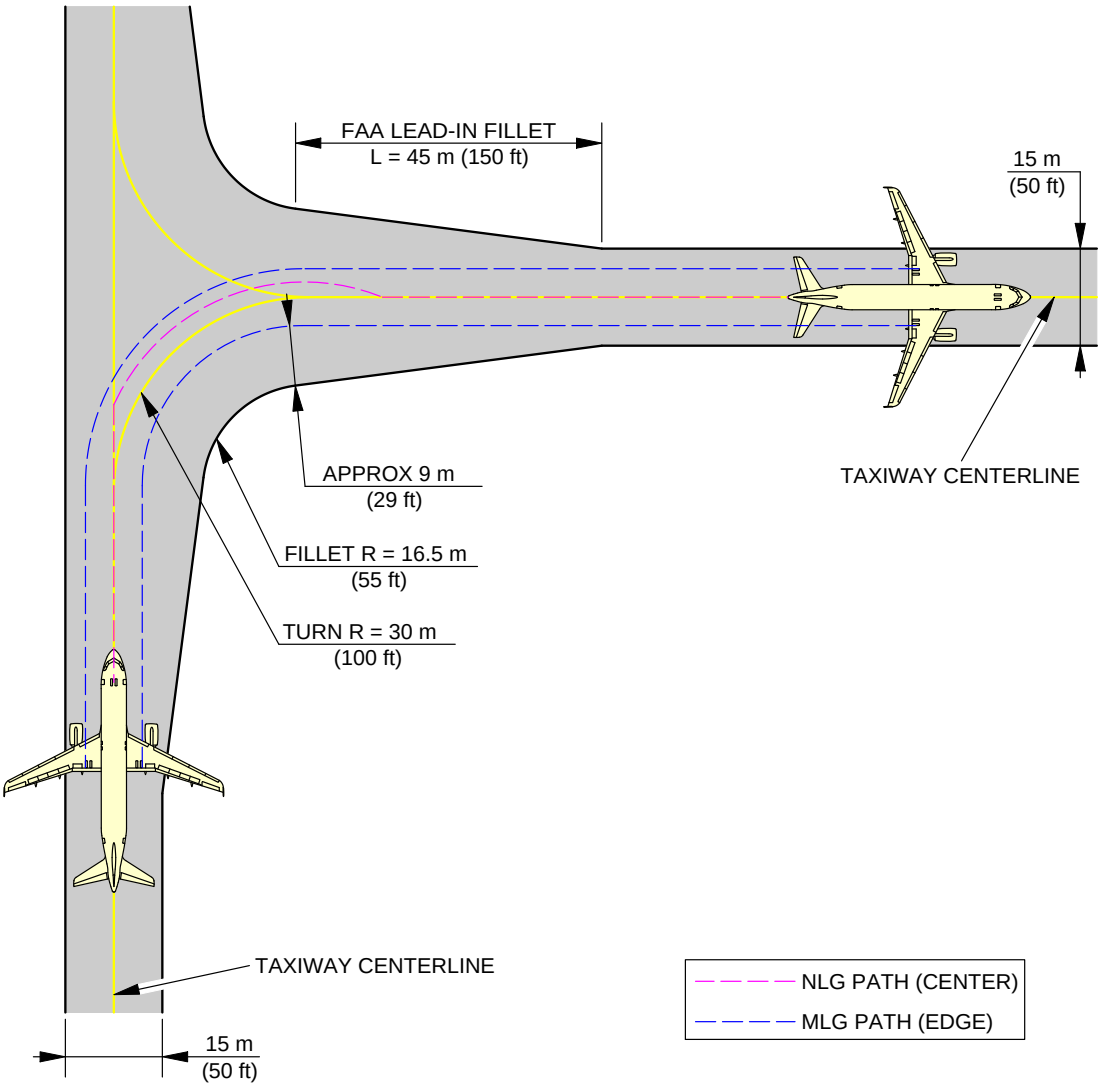


NOTE:
FAA GROUP III FACILITIES.

N_AC_040505_1_0020101_01_02

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

****ON A/C A320-200 A320neo**



NOTE:
FAA GROUP III FACILITIES.

N_AC_040505_1_0020102_01_01

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

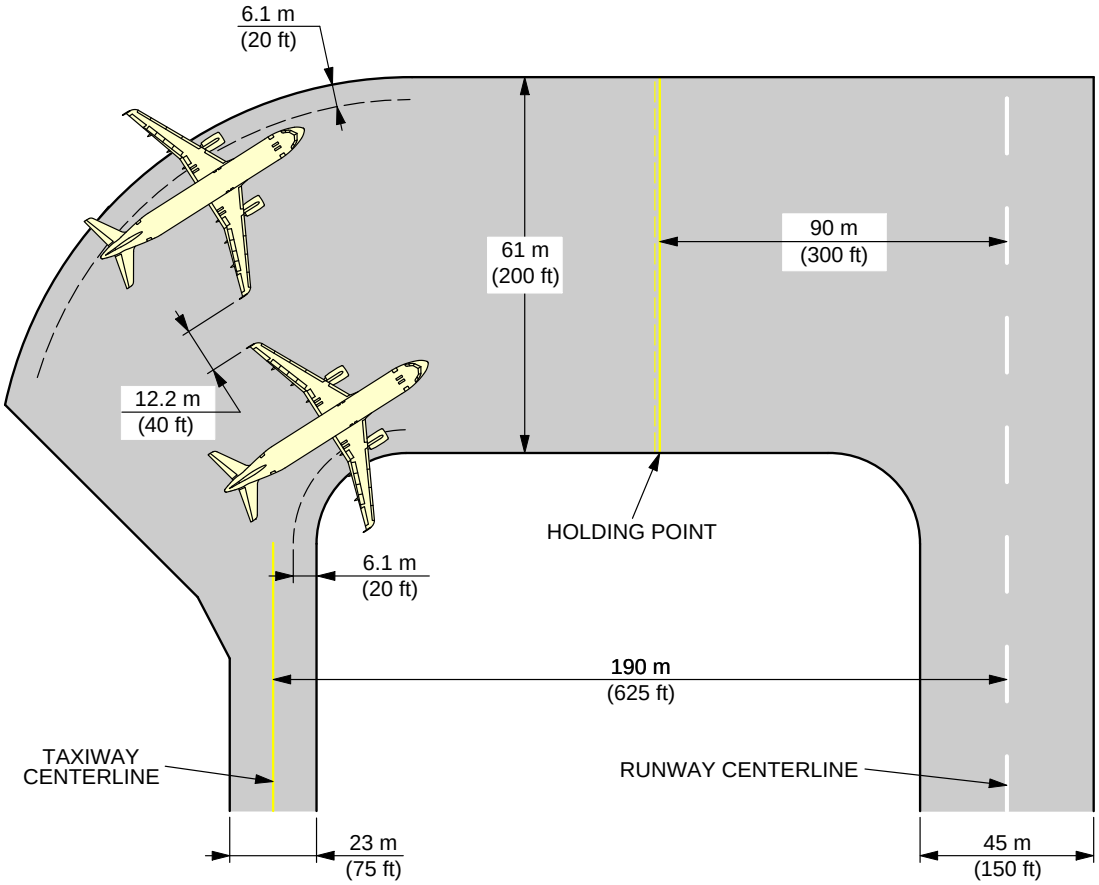
4-6-0 Runway Holding Bay (Apron)

****ON A/C A320-200 A320neo**

Runway Holding Bay (Apron)

1. This section gives the runway holding bay (Apron).

****ON A/C A320-200 A320neo**



NOTE: COORDINATE WITH USING AIRLINE FOR SPECIFIC PLANNED OPERATING PROCEDURES.

N_AC_040600_1_0030101_01_01

Runway Holding Bay (Apron)
FIGURE-4-6-0-991-003-A01

4-7-0 Minimum Line-Up Distance Corrections

****ON A/C A320-200 A320neo**

Minimum Line-Up Distance Corrections

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

   TODA: Take-Off Distance Available
   ASDA: Acceleration-Stop Distance Available

2. 90° Turn on Runway Entry

   This section gives the minimum line-up distance correction for a 90° turn on runway entry.
   This maneuver consists in a 90° turn at minimum turn radius. It starts with the edge of the MLG at a distance of 3 m (10 ft) from the taxiway edge, and finishes with the aircraft aligned on the centerline of the runway, see FIGURE 4-7-0-991-023-A.
   During the turn, all the clearances must meet the minimum value of 3 m (10 ft) for this category of aircraft as recommended in ICAO Annex 14.

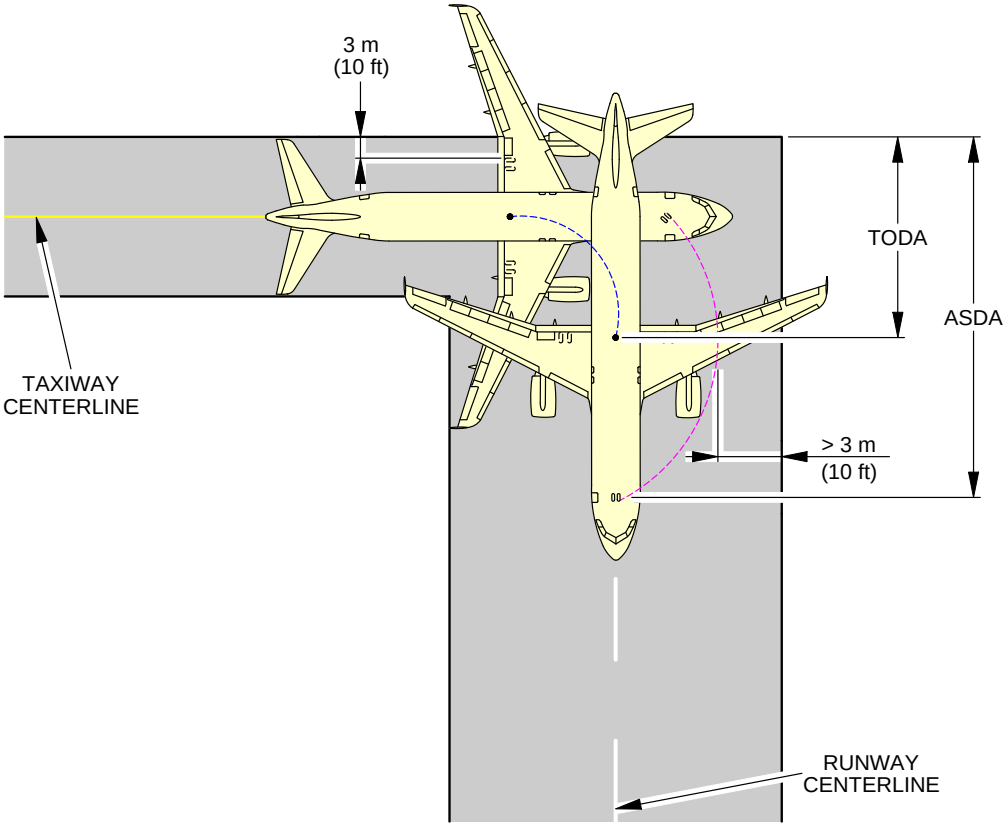
3. 180° Turn on Runway Turn Pad

   This section gives the minimum line-up distance correction for a 180° turn on the runway turn pad.
   This maneuver consists in a 180° turn at minimum turn radius on a runway turn pad with standard ICAO geometry.
   It starts with the edge of the MLG at a distance of 3 m (10 ft) from the pavement edge, and it finishes with the aircraft aligned on the centerline of the runway, see FIGURE 4-7-0-991-024-A.
   During the turn, all the clearances must meet the minimum value of 3 m (10 ft) for this category of aircraft as recommended in ICAO Annex 14.

4. 180° Turn on Runway Width

   This section gives the minimum line-up distance correction for a 180° turn on the runway width.
   For this maneuver, the pavement width is considered to be the runway width, which is a frozen parameter (30 m (100 ft), 45 m (150 ft) and 60 m (200 ft)).
   As per the standard operating procedures for the ”180° turn on runway” (described in the Flight Crew Operating Manual), the aircraft is initially angled with respect to the runway centerline when starting the 180° turn, see FIGURE 4-7-0-991-025-A.
   The value of this angle depends on the aircraft type and is mentioned in the FCOM.
   During the turn, all the clearances must meet the minimum value of 3 m (10 ft) for this category of aircraft as recommended in ICAO Annex 14.

**ON A/C A320-200 A320neo



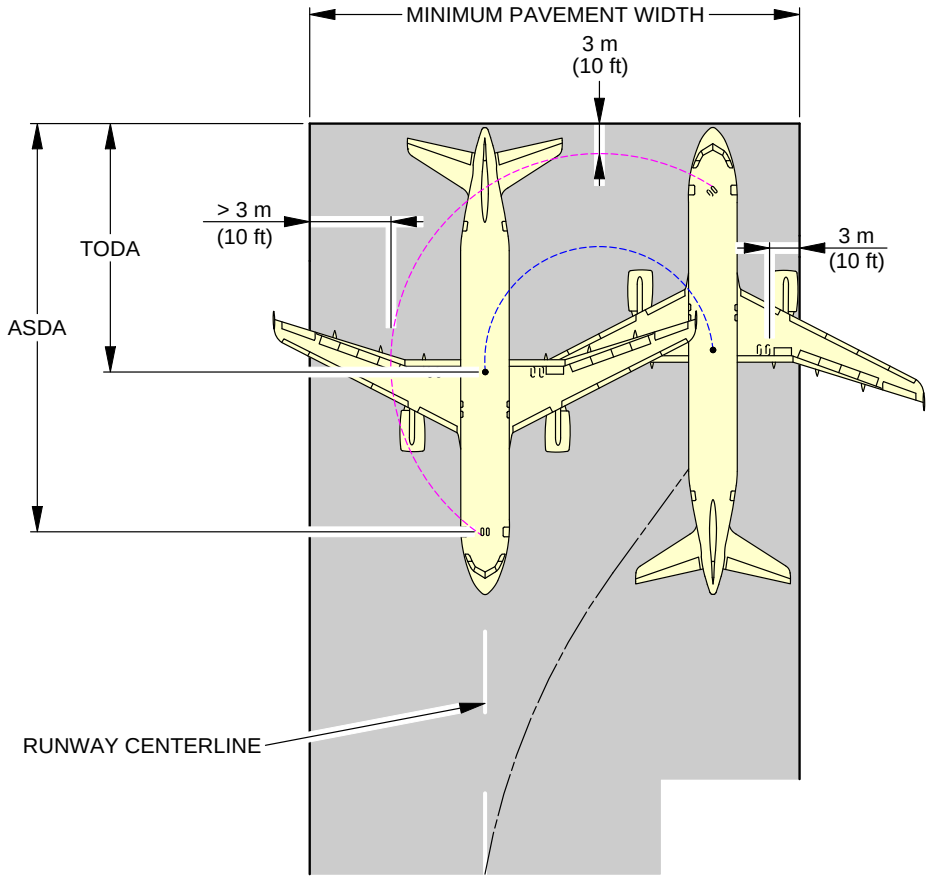
ASDA: ACCELERATION-STOP DISTANCE AVAILABLE
TODA: TAKE-OFF DISTANCE AVAILABLE

90° TURN ON RUNWAY ENTRY					
AIRCRAFT TYPE	MAX STEERING ANGLE	30 m (100 ft)/45 m (150 ft)/60 m (200 ft) WIDE RUNWAY			
		MINIMUM LINE-UP DISTANCE CORRECTION			
		ON TODA		ON ASDA	
A320	75°	11.7 m	38 ft	24.3 m	80 ft

N_AC_040700_1_0230101_01_00

Minimum Line-Up Distance Corrections
90° Turn on Runway Entry
FIGURE-4-7-0-991-023-A01

**ON A/C A320-200 A320neo

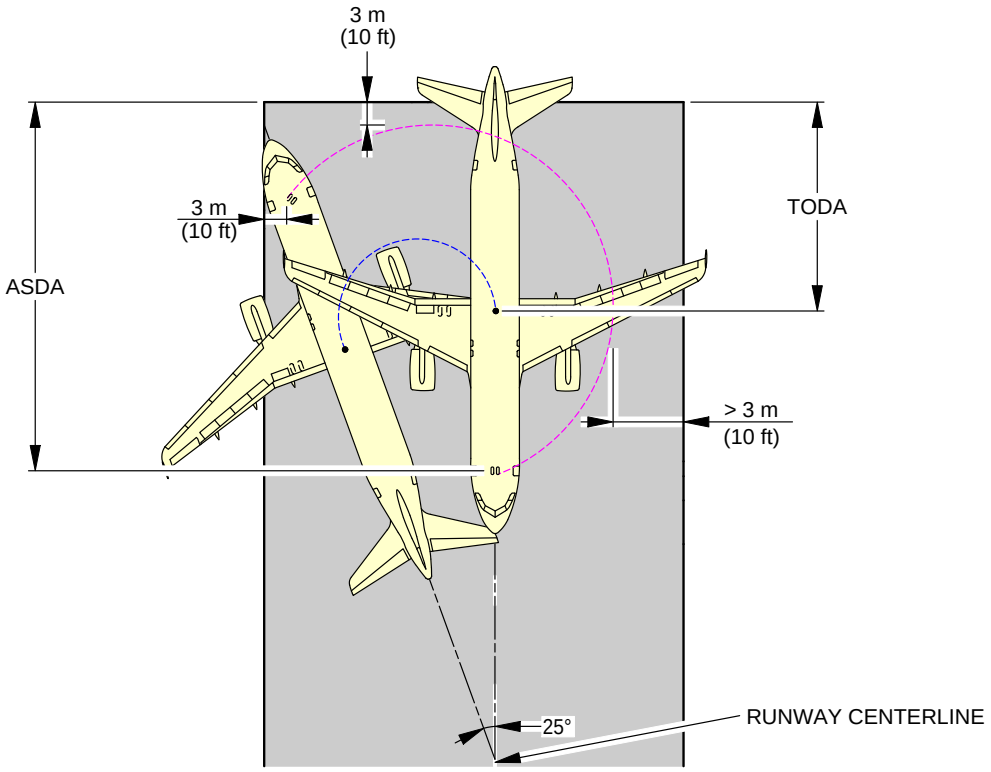


180° TURN ON RUNWAY TURN PAD							
AIRCRAFT TYPE	MAX STEERING ANGLE	30 m (100 ft)/45 m (150 ft)/60 m (200 ft) WIDE RUNWAY					
		MINIMUM LINE-UP DISTANCE CORRECTION				REQUIRED MINIMUM PAVEMENT WIDTH	
		ON TODA		ON ASDA			
A320	75°	16.7 m	55 ft	29.3 m	96 ft	30.8 m	101 ft

N_AC_040700_1_0240101_01_00

Minimum Line-Up Distance Corrections
180° Turn on Runway Turn Pad
FIGURE-4-7-0-991-024-A01

****ON A/C A320-200 A320neo**



180° TURN ON RUNWAY WIDTH									
AIRCRAFT TYPE	MAX STEERING ANGLE	30 m (100 ft) WIDE RUNWAY				45 m (150 ft)/60 m (200 ft) WIDE RUNWAY			
		MINIMUM LINE-UP DISTANCE CORRECTION				MINIMUM LINE-UP DISTANCE CORRECTION			
		ON TODA		ON ASDA		ON TODA		ON ASDA	
A320	75°	21.3 m	70 ft	33.9 m	111 ft	16.7 m	55 ft	29.3 m	96 ft

N_AC_040700_1_0250101_01_00

Minimum Line-Up Distance Corrections
180° Turn on Runway Width
FIGURE-4-7-0-991-025-A01

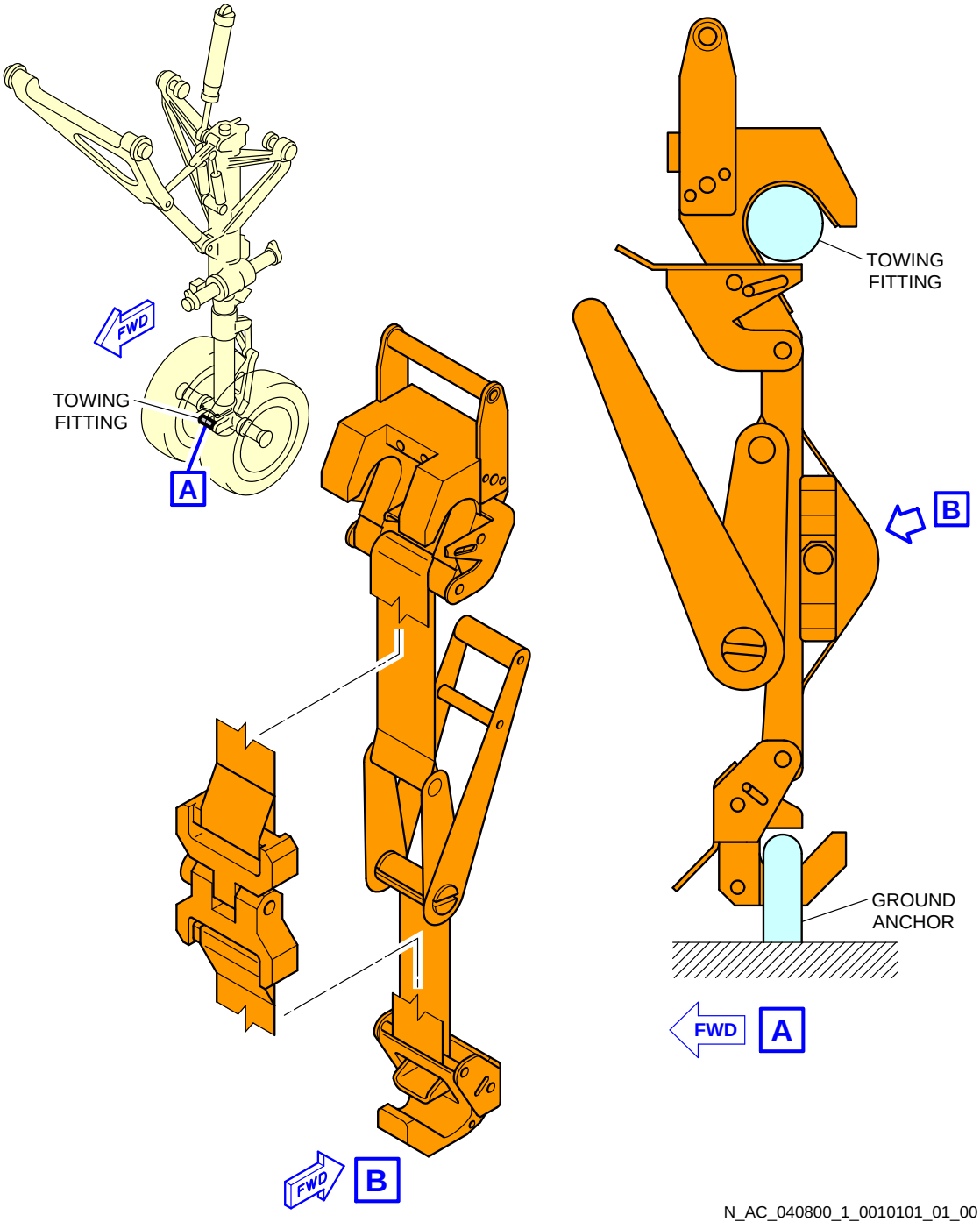
4-8-0 Aircraft Mooring

****ON A/C A320-200 A320neo**

Aircraft Mooring

1. This section provides information on aircraft mooring.

**ON A/C A320-200 A320neo



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

TERMINAL SERVICING

5-1-1 Aircraft Servicing Arrangements

****ON A/C A320-200 A320neo**

Aircraft Servicing Arrangements

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

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

   This table gives the symbols used on servicing diagrams.

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

5-1-2 Typical Ramp Layout - Open Apron

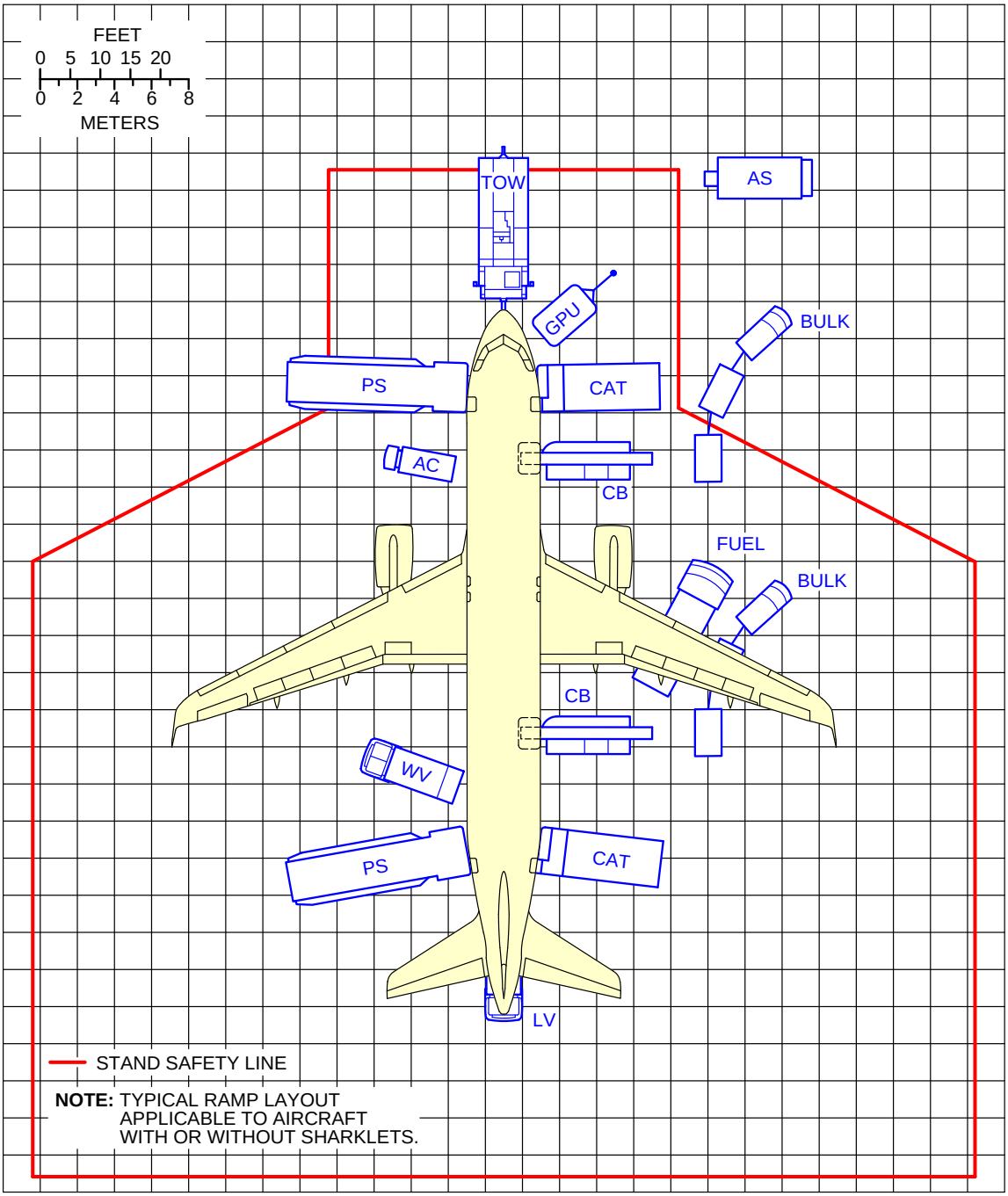
****ON A/C A320-200 A320neo**

Typical Ramp Layout - Open Apron

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

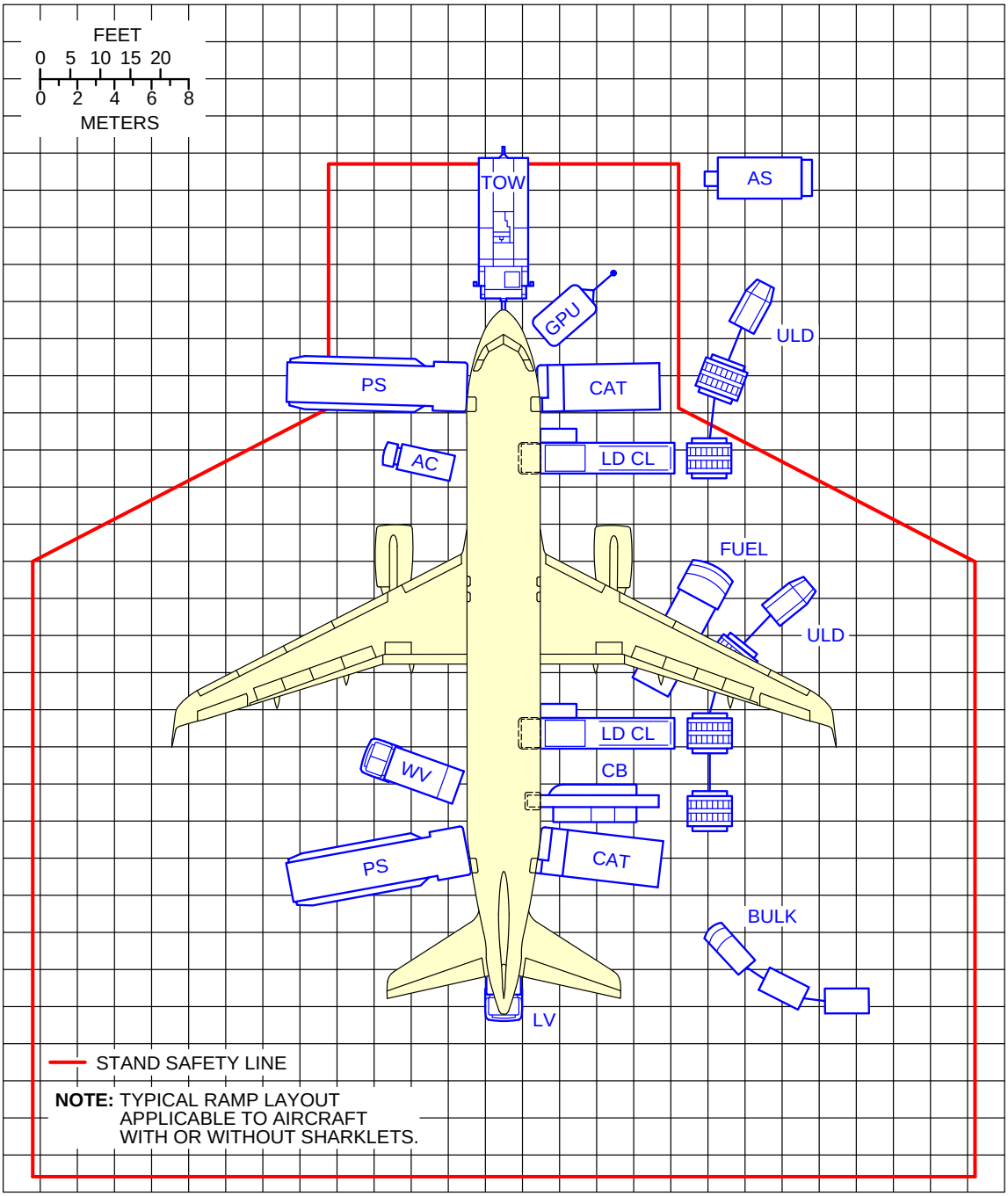
   The Stand Safety Line delimits the Aircraft Safety Area (minimum distance of 7.5 m from the aircraft). No vehicle must be parked in this area before complete stop of the aircraft (wheel chocks in position on landing gears).

****ON A/C A320-200 A320neo**



Typical Ramp Layout
Open Apron - Bulk Loading
FIGURE-5-1-2-991-003-A01

****ON A/C A320-200 A320neo**



Typical Ramp Layout
Open Apron - ULD Loading
FIGURE-5-1-2-991-009-A01

5-1-3 Typical Ramp Layout - Gate

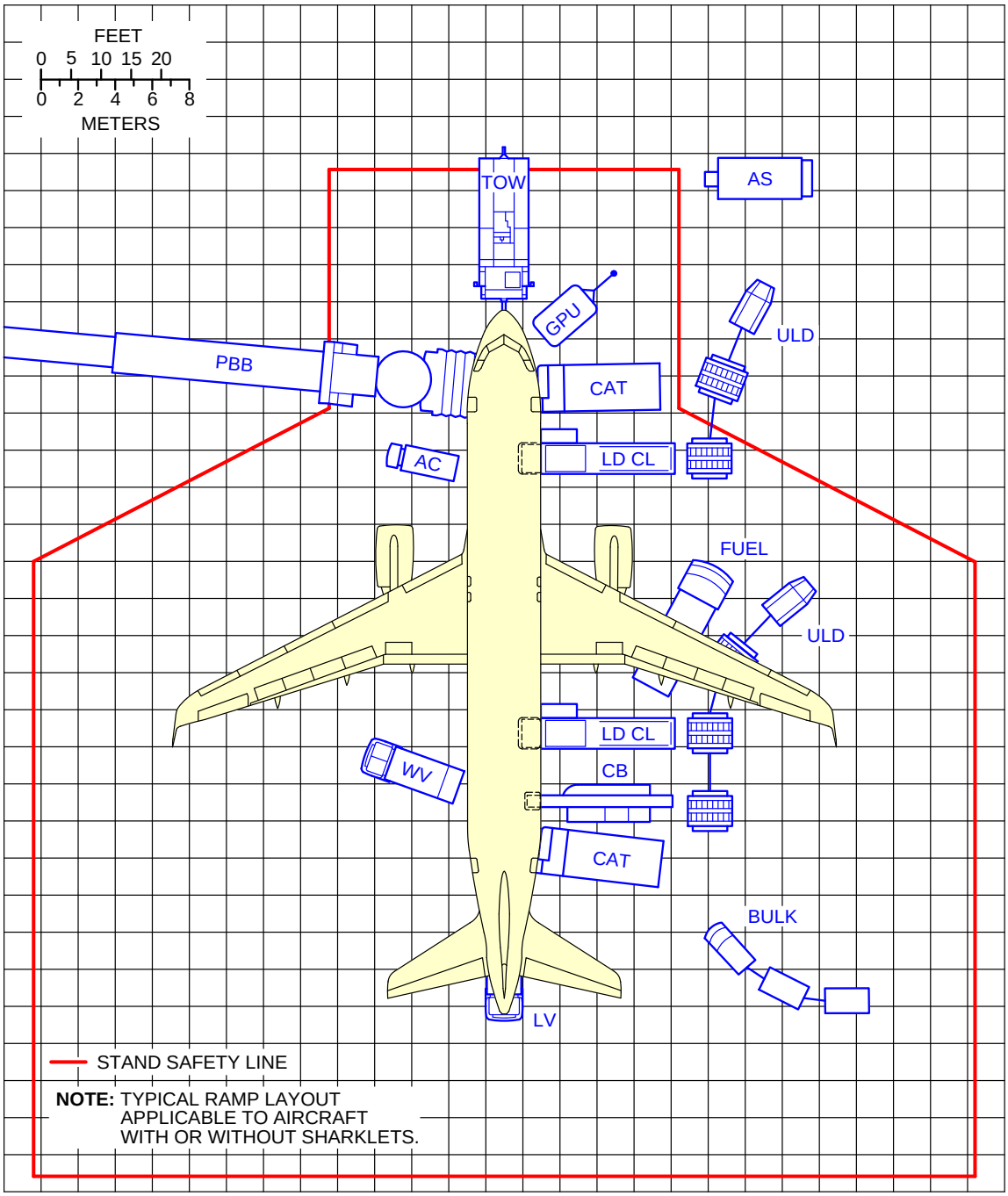
****ON A/C A320-200 A320neo**

Typical Ramp Layout - Gate

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

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

****ON A/C A320-200 A320neo**



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Typical Ramp Layout
Gate
FIGURE-5-1-3-991-002-A01

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

****ON A/C A320-200 A320neo**

Terminal Operations - Full Servicing Turn Round Time

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

   Actual times may vary due to each operator's specific practices, resources, equipment and operating conditions.

2. Assumptions used for full servicing turn round time chart

   A. PASSENGER HANDLING

   150 pax: 12 F/C + 138 Y/C.
   All passengers deplane and board the aircraft.
   1 Passenger Boarding Bridge (PBB) used at door 1L.
   Equipment positioning + opening door = +2 min.
   Closing door + equipment removal = +1.5 min.
   No Passenger with Reduced Mobility (PRM) on board.

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

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

   B. CARGO

   2 cargo loaders + 1 belt loader.
   Opening door + equipment positioning = +2 min.
   Equipment removal + closing door = +1.5 min.

   100% cargo exchange (baggage only):
   - FWD cargo compartment: 3 containers
   - AFT cargo compartment: 4 containers
   - Bulk compartment: 500 kg (1 102 lb).

   Container unloading/loading times:

- Unloading = 1.5 min/container
- Loading = 1.5 min/container.

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

C. REFUELING

Uplifted quantity: 20 000 l (5 283 US gal) at 50 psig (3.45 bars-rel), one hose (right wing).
Truck positioning/removal + connection/disconnection times = +2.5 min.
No refuel with pax on board

D. CLEANING

Cleaning is performed in available time.

E. CATERING

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

Full Size Trolley Equivalent (FSTE) to unload and load: 11 FSTE
- 4 FSTE at door 1R
- 7 FSTE at door 4R.

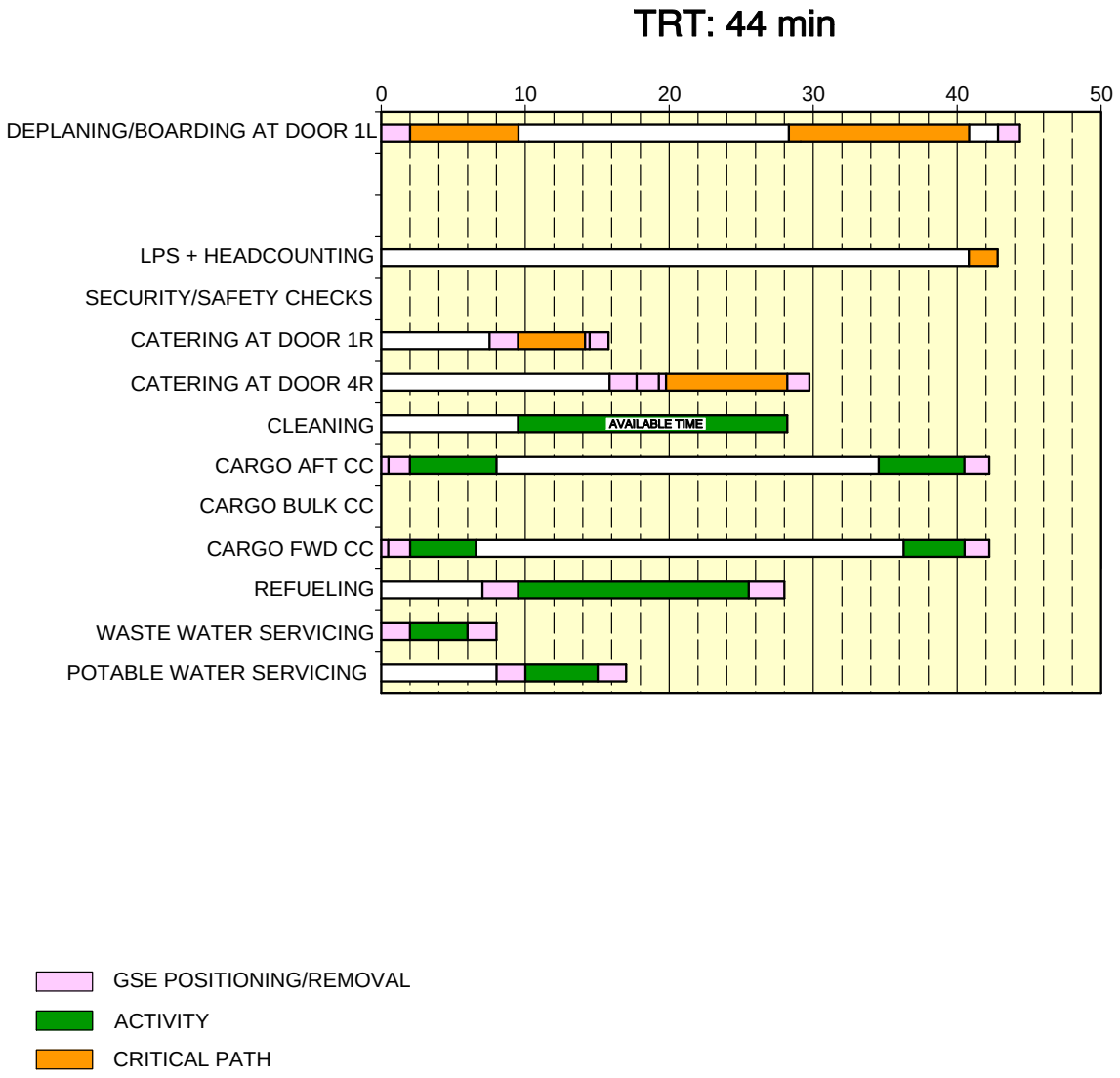
Time for trolley exchange = 1.2 min per FSTE.

F. GROUND HANDLING/GENERAL SERVICING

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

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

**ON A/C A320-200 A320neo



Full Servicing Turn Round Time Chart
FIGURE-5-2-0-991-006-A01

5-3-0 Terminal Operation - Outstation Turn Round Time Chart

****ON A/C A320-200 A320neo**

Terminal Operations - Outstation Turn Round Time

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

   Actual times may vary due to each operator's specific practices, resources, equipment and operating conditions.

2. Assumptions used for outstation turn round time chart

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

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

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

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

   100% cargo exchange:
   - FWD cargo compartment: 3 containers
   - AFT cargo compartment: 4 containers.

   Container unloading/loading times:

- Unloading = 1.5 min/container
- Loading = 1.5 min/container.

C. REFUELING

No refueling.

D. CLEANING

Cleaning is performed in available time.

E. CATERING

One catering truck for servicing the galleys as required.

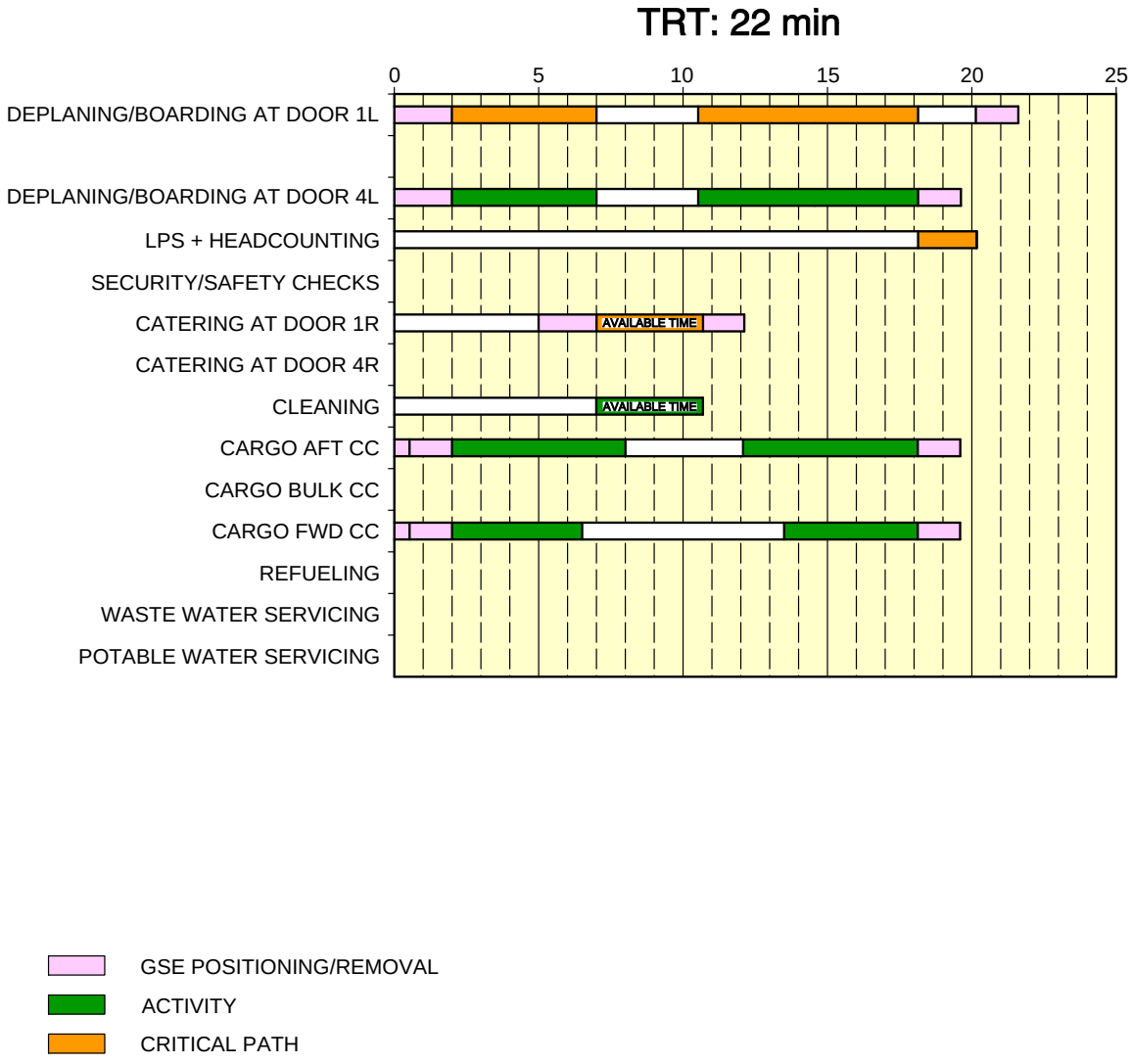
F. GROUND HANDLING/GENERAL SERVICING

Start of operations:

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

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

****ON A/C A320-200 A320neo**



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Outstation Turn Round Time Chart
FIGURE-5-3-0-991-003-A01

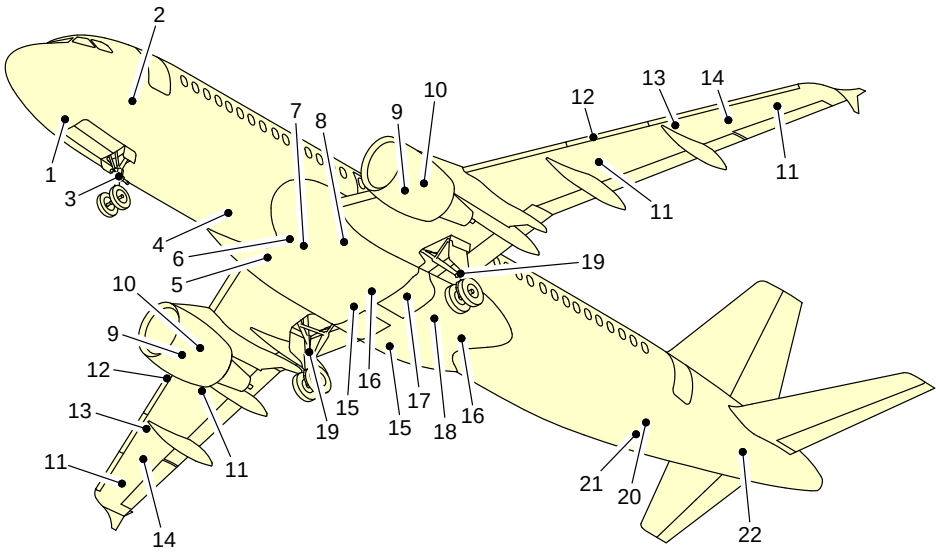
5-4-1 Ground Service Connections

****ON A/C A320-200 A320neo**

Ground Service Connections Layout

1. This section provides the ground service connections layout.

****ON A/C A320-200 A320neo**



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

N_AC_050401_1_0050101_01_02

Ground Service Connections Layout
FIGURE-5-4-1-991-005-A01

5-4-2 Grounding Points

****ON A/C A320-200 A320neo**

Grounding (Earthing) Points

1. Grounding (Earthing) Points

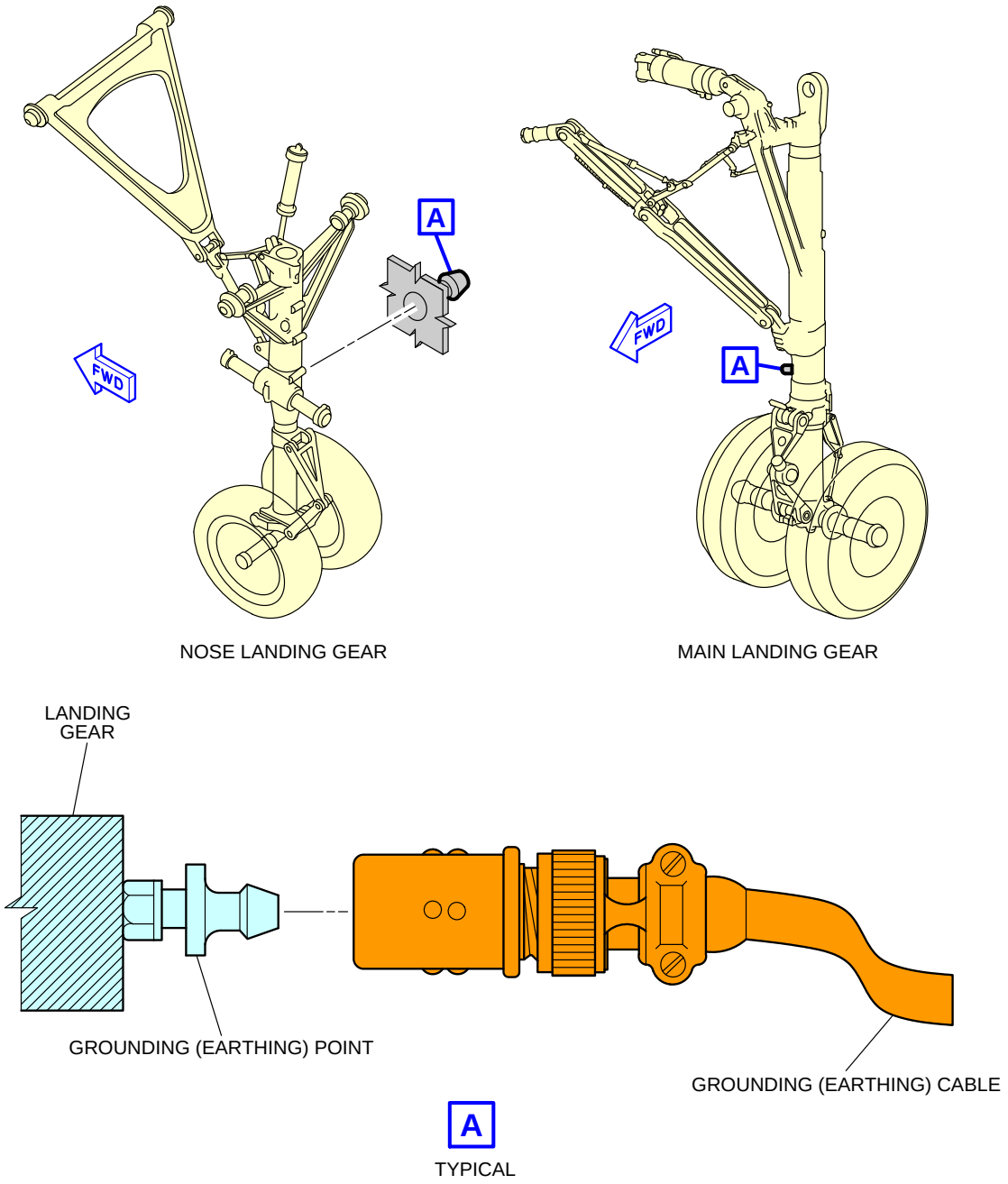
	DISTANCE			
	AFT OF NOSE	FROM AIRCRAFT CENTERLINE		MEAN HEIGHT FROM GROUND
		LH SIDE	RH SIDE	
On Nose Landing Gear leg:	5.07 m (16.63 ft)	On Centerline		0.94 m (3.08 ft)
On left Main Landing Gear leg:	20.25 m (66.44 ft)	3.79 m (12.43 ft)	-	1.07 m (3.51 ft)
On right Main Landing Gear leg:	20.25 m (66.44 ft)	-	3.79 m (12.43 ft)	1.07 m (3.51 ft)

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

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

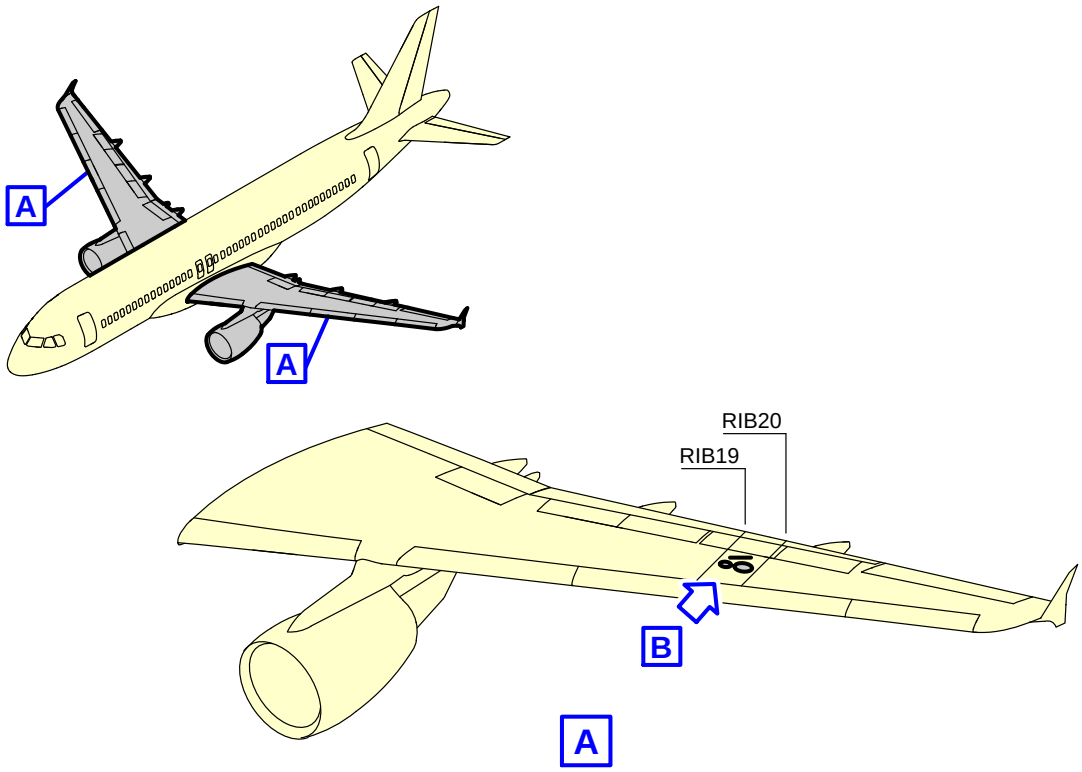
NOTE : In all other conditions, the electrostatic discharge through the tire is sufficient. If the aircraft is on jacks for retraction and extension checks or for the removal/ installation of the landing gear, the grounding (earthing) alternative points (if installed) are:
   - In the hole on the avionics-compartment lateral right door-frame (on FR14),
   - On the engine nacelles,
   - Adjacent to the high-pressure connector,
   - On the wing upper surfaces.

**ON A/C A320-200 A320neo



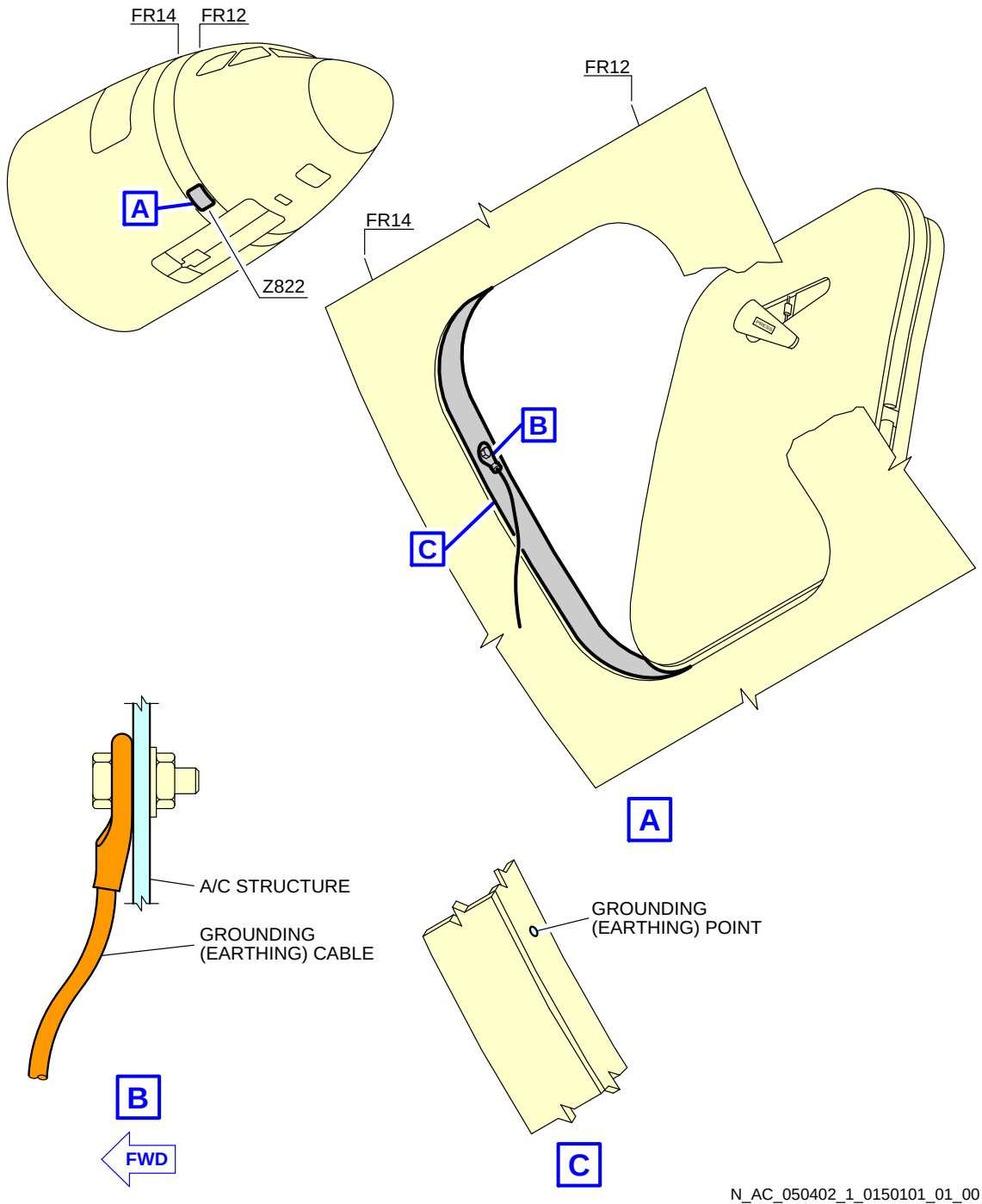
Ground Service Connections
Grounding (Earthing) Points - Landing Gear
FIGURE-5-4-2-991-005-A01

****ON A/C A320-200 A320neo**



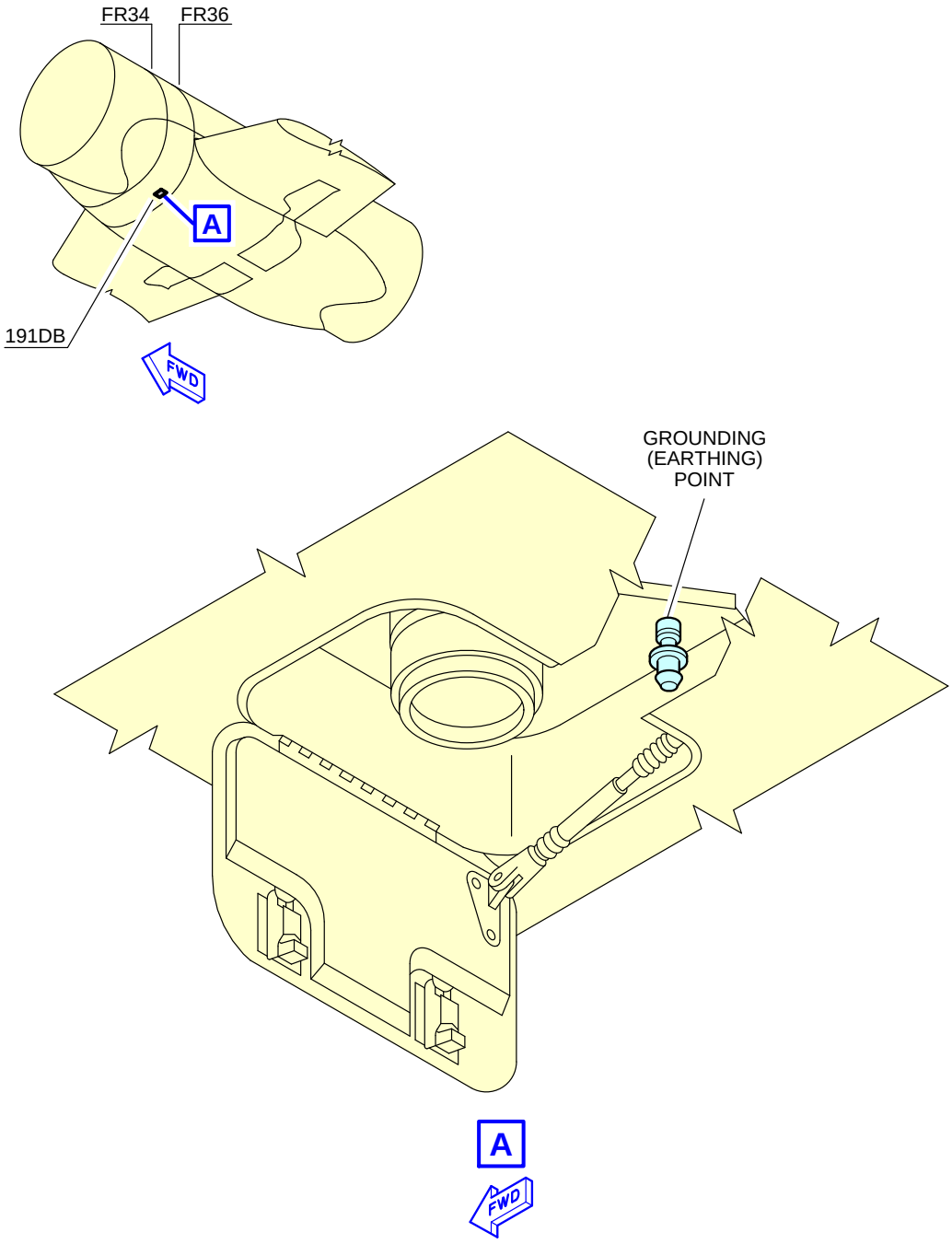
Ground Service Connections
Grounding (Earthing) Points - Wing (If Installed)
FIGURE-5-4-2-991-006-A01

**ON A/C A320-200 A320neo



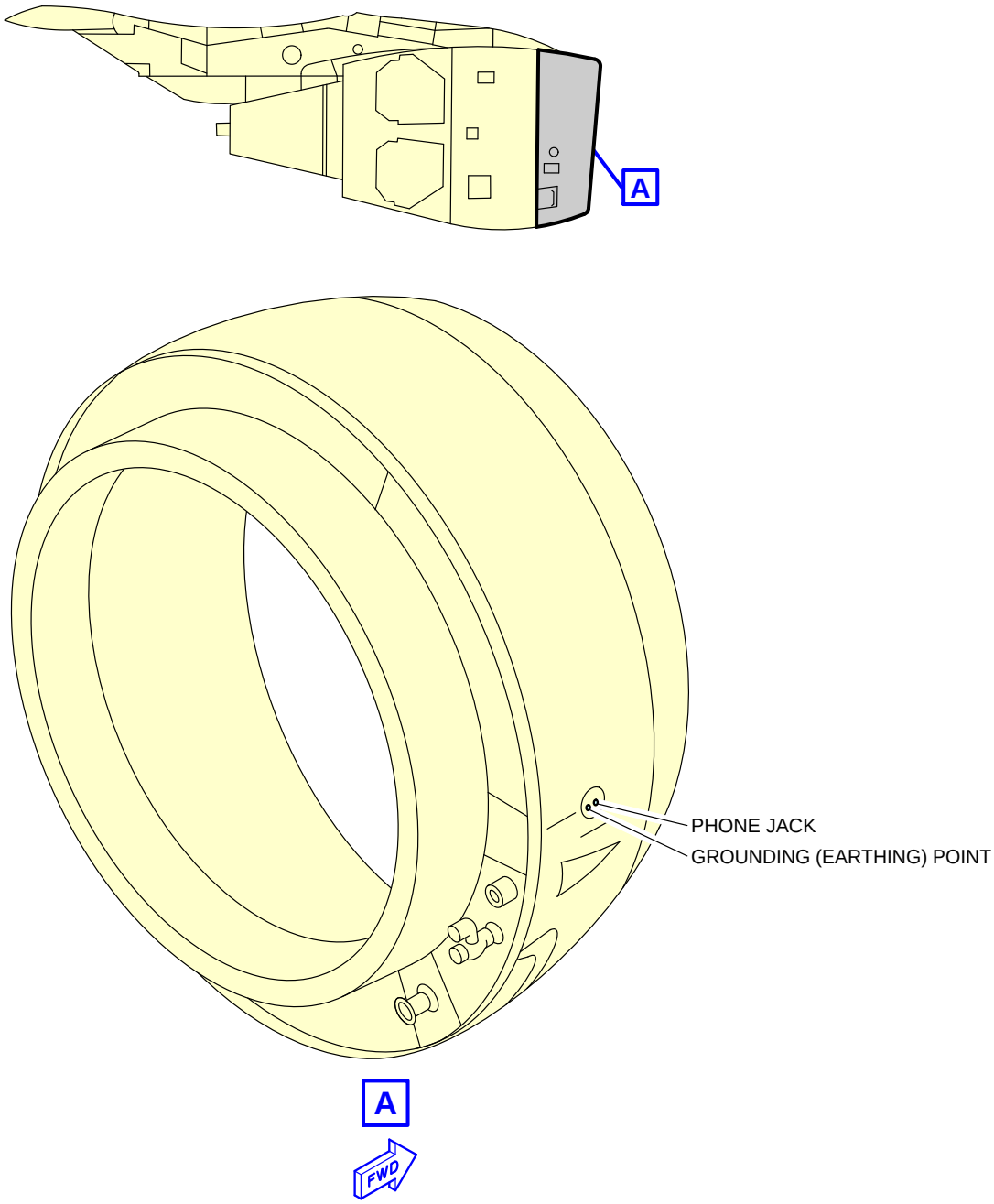
Ground Service Connections
Grounding (Earthing) Point - Avionics Compartment Door-Frame
FIGURE-5-4-2-991-015-A01

****ON A/C A320-200 A320neo**



Ground Service Connections
Grounding (Earthing) Point - High-Pressure Connector (If Installed)
FIGURE-5-4-2-991-016-A01

****ON A/C A320-200 A320neo**



Ground Service Connections
Grounding (Earthing) Point - Engine Air Intake (If Installed)
FIGURE-5-4-2-991-017-A01

5-4-3 Hydraulic System

****ON A/C A320-200 A320neo**

Hydraulic Servicing

1. Access

ACCESS	DISTANCE			
	AFT OF NOSE	FROM AIRCRAFT CENTERLINE		MEAN HEIGHT FROM GROUND
		LH SIDE	RH SIDE	
Green System: Access Door 197CB	19.17 m (62.89 ft)	1.27 m (4.17 ft)		1.76 m (5.77 ft)
Yellow System: Access Door 198CB	19.17 m (62.89 ft)		1.27 m (4.17 ft)	1.76 m (5.77 ft)
Blue System: Access Door 197EB	20.22 m (66.34 ft)	1.27 m (4.17 ft)		1.76 m (5.77 ft)

2. Reservoir Pressurization

ACCESS	DISTANCE			
	AFT OF NOSE	FROM AIRCRAFT CENTERLINE		MEAN HEIGHT FROM GROUND
		LH SIDE	RH SIDE	
Access Door 195BB	15.65 m (51.35 ft)	0.25 m (0.82 ft)		1.74 m (5.71 ft)

3. Accumulator Charging

Four MIL-PRF-6164 connections:

ACCESS	DISTANCE			
	AFT OF NOSE	FROM AIRCRAFT CENTERLINE		MEAN HEIGHT FROM GROUND
		LH SIDE	RH SIDE	
Yellow System Accumulator: Access Door 196BB	15.65 m (51.35 ft)		0.25 m (0.82 ft)	1.74 m (5.71 ft)
Green System Accumulator: Left MLG Door	16.77 m (55.02 ft)	0.25 m (0.82 ft)		3.20 m (10.50 ft)
Blue System Accumulator: Access Door 195BB	15.65 m (51.35 ft)	0.25 m (0.82 ft)		1.74 m (5.71 ft)
Yellow System Braking Accumulator: Access Door 196BB	15.65 m (51.35 ft)		0.25 m (0.82 ft)	1.74 m (5.71 ft)

4. Reservoir Filling

Centralized filling capability on the Green System ground service panel:

ACCESS	DISTANCE			
	AFT OF NOSE	FROM AIRCRAFT CENTERLINE		MEAN HEIGHT FROM GROUND
		LH SIDE	RH SIDE	
Access Door 197CB	19.17 m (62.89 ft)	1.27 m (4.17 ft)		1.76 m (5.77 ft)

Filling: Ground pressurized supply or hand pump.

5. Reservoir Drain

Three 3/8 in. self-sealing connections:

ACCESS	DISTANCE			
	AFT OF NOSE	FROM AIRCRAFT CENTERLINE		MEAN HEIGHT FROM GROUND
		LH SIDE	RH SIDE	
Yellow System:	15.65 m		0.25 m	1.74 m

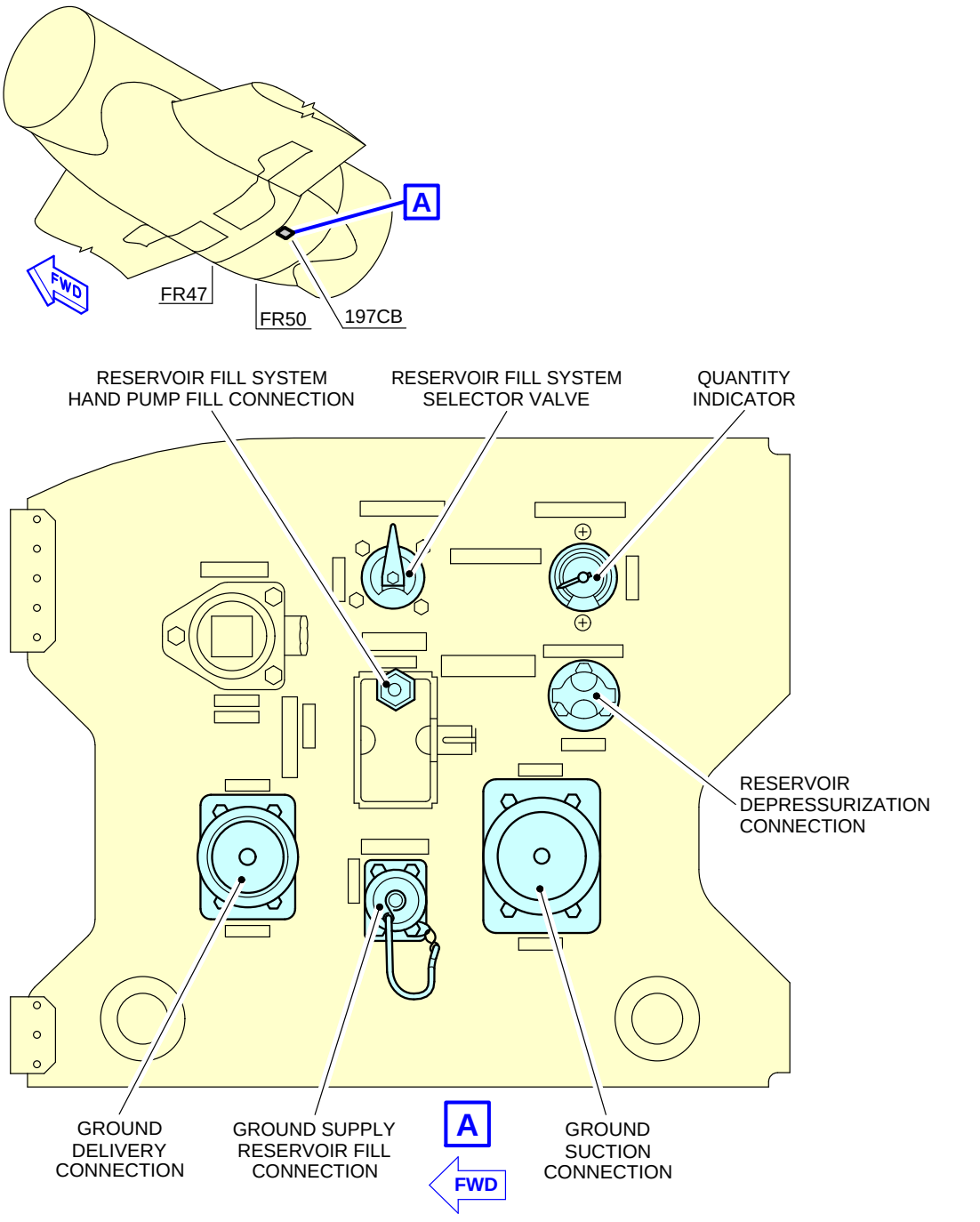
ACCESS	DISTANCE			
	AFT OF NOSE	FROM AIRCRAFT CENTERLINE		MEAN HEIGHT FROM GROUND
		LH SIDE	RH SIDE	
Access Door 196BB	(51.35 ft)		(0.82 ft)	(5.71 ft)
Green System: Left MLG Door	16.77 m (55.02 ft)	0.25 m (0.82 ft)		3.20 m (10.50 ft)
Blue System: Access Door 197EB	20.22 m (66.34 ft)	1.27 m (4.17 ft)		1.76 m (5.77 ft)

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

6. Ground Test

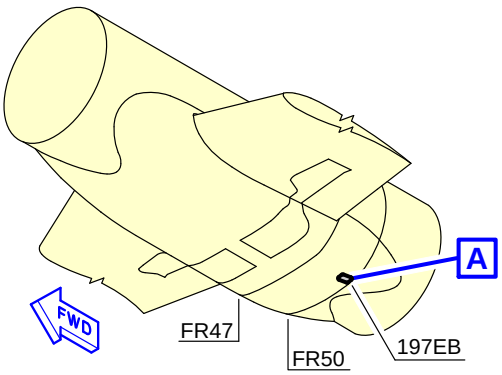
On each ground service panel:
- One self-sealing connector (suction).
- One self-sealing connector (delivery).

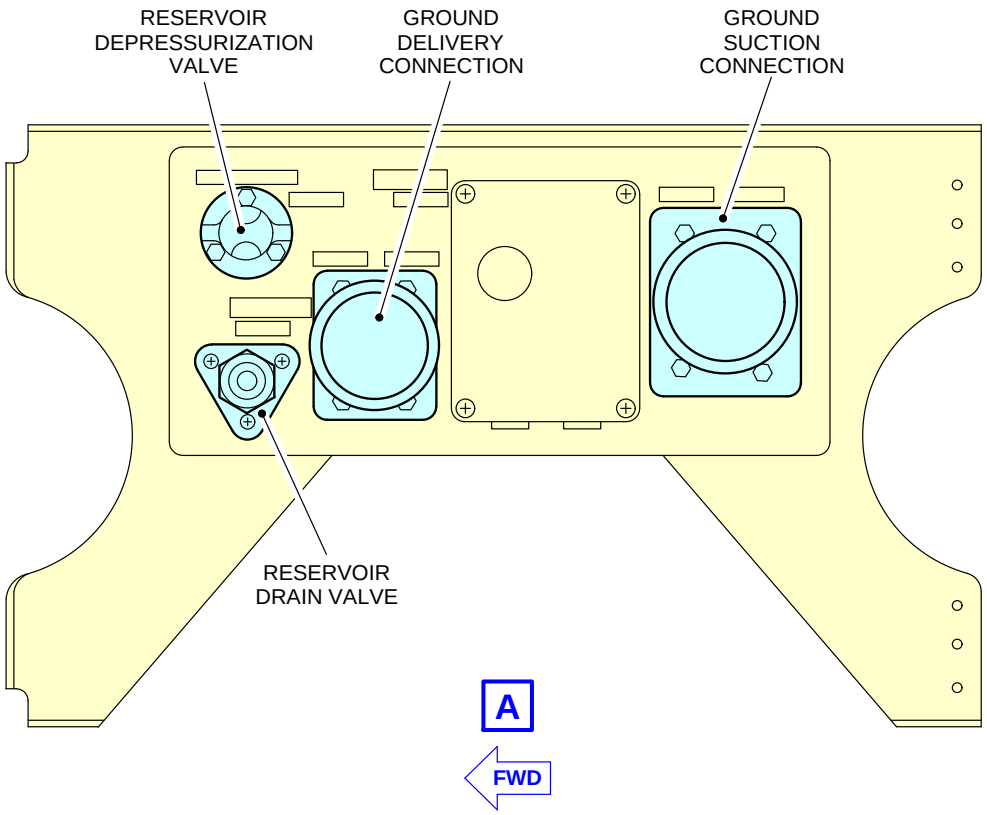
**ON A/C A320-200 A320neo



Ground Service Connections
Green System Ground Service Panel
FIGURE-5-4-3-991-004-A01

**ON A/C A320-200 A320neo





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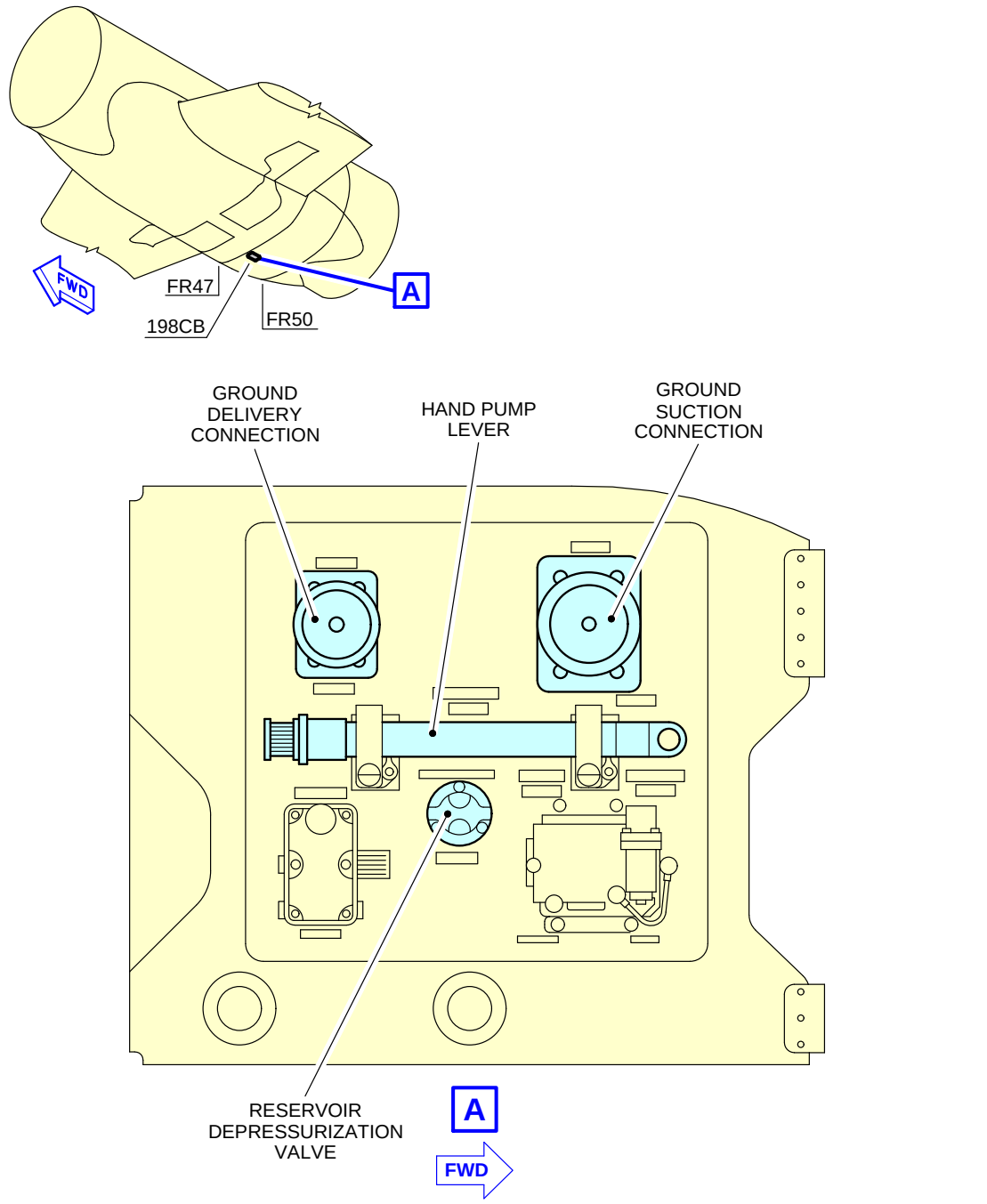
Ground Service Connections
Blue System Ground Service Panel
FIGURE-5-4-3-991-005-A01

**ON A/C A320-200 A320neo



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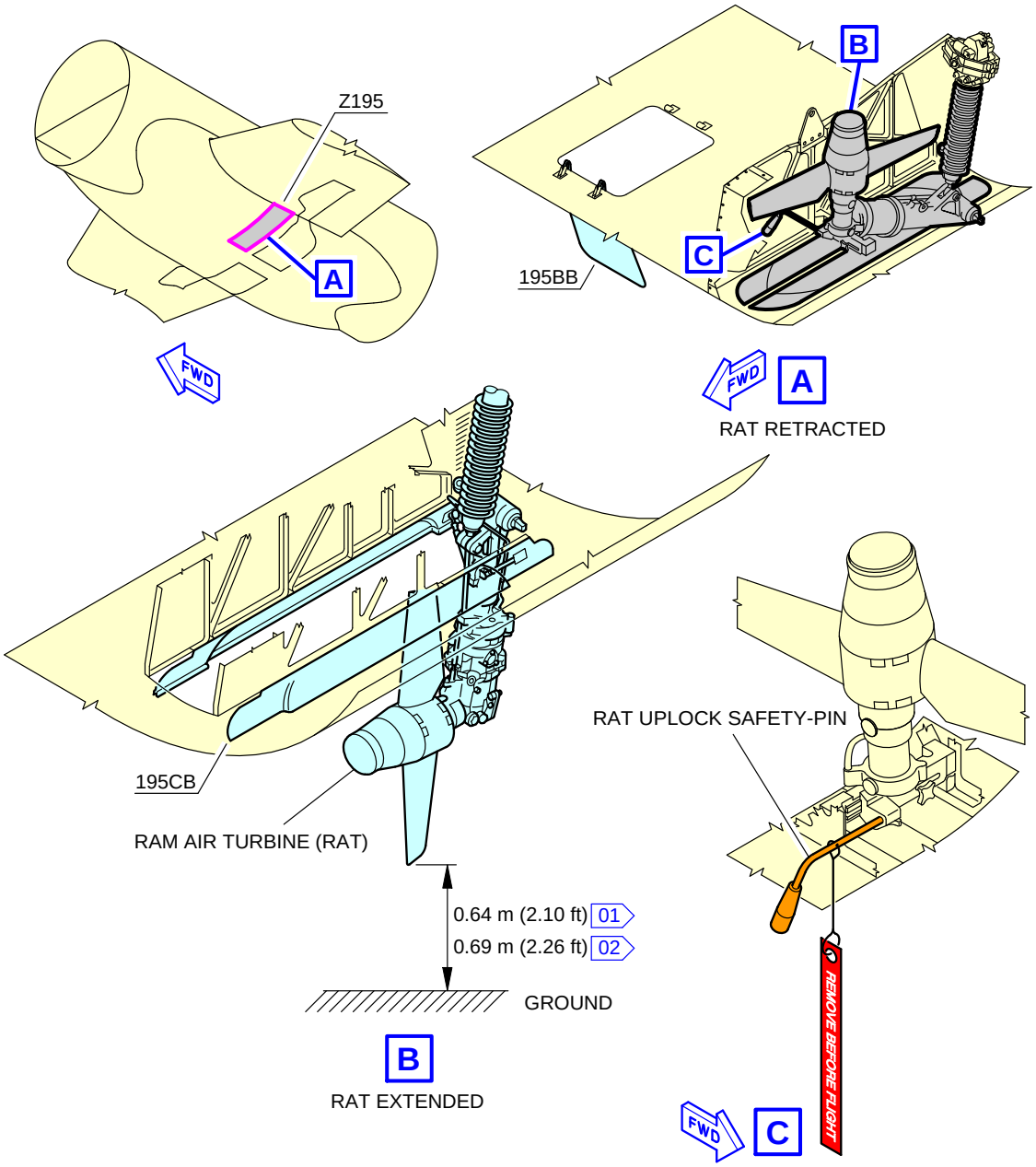
Ground Service Connections
Yellow System Ground Service Panel
FIGURE-5-4-3-991-006-A01

****ON A/C A320-200 A320neo**



NOTE:

01 FOR A318, A319 AND A320

02 FOR A321

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

5-4-4 Electrical System

****ON A/C A320-200 A320neo**

Electrical System

1. Electrical System

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

ACCESS	DISTANCE			
	AFT OF NOSE	FROM AIRCRAFT CENTERLINE		MEAN HEIGHT FROM GROUND
		LH SIDE	RH SIDE	
A/C External Power: Access Door 121AL	2.55 m (8.37 ft)	On centerline		2.00 m (6.56 ft)

NOTE : Distances are approximate.

2. Technical Specifications

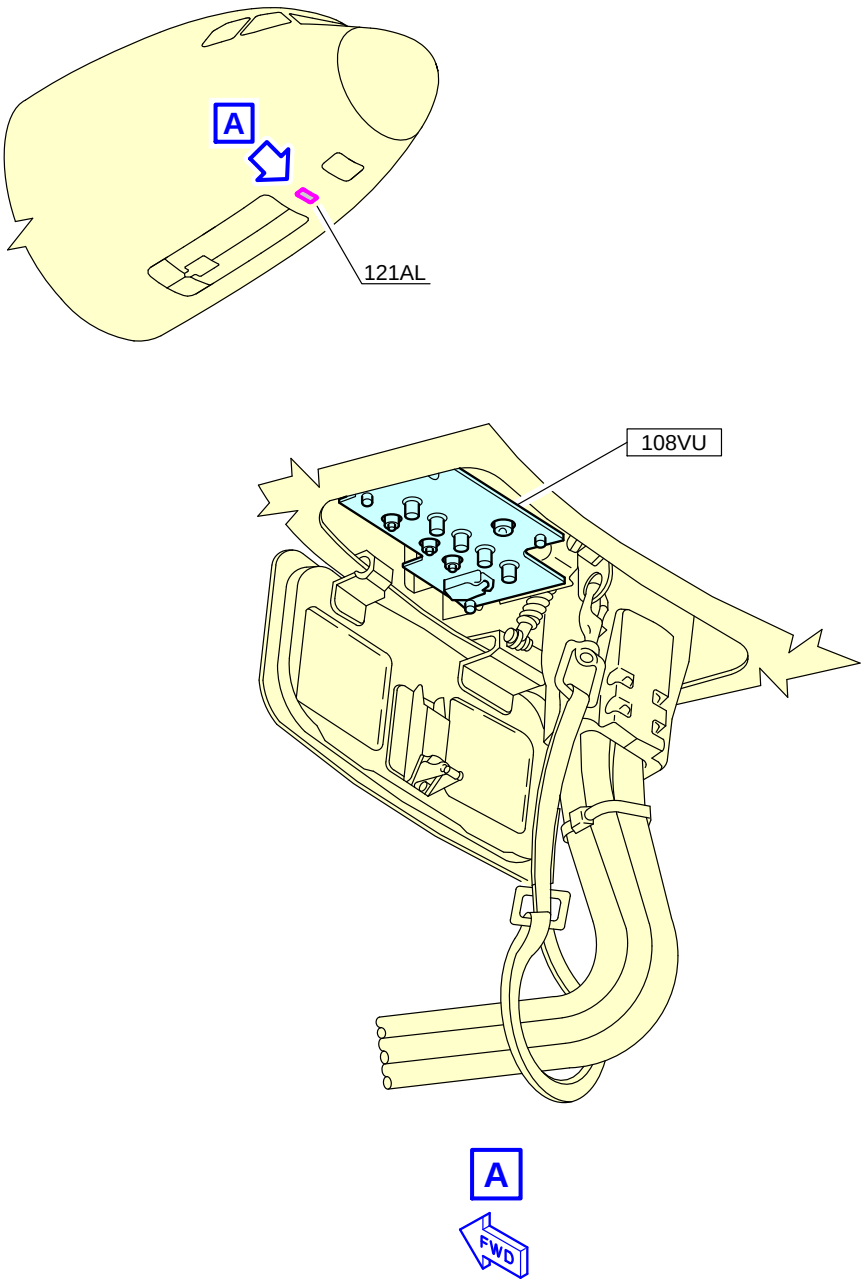
   A. External Power Receptacle:
   - One receptacle according to MS 90362-3 (without shield MS 17845-1) – 90 kVA.

   NOTE : Make sure that for connectors featuring micro switches, the connector is chamfered to properly engage in the receptacle.

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

   C. Electrical Connectors for Servicing:
   - AC outlets: HUBBELL 5258
   - DC outlets: HUBBELL 7472.

**ON A/C A320-200 A320neo



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Ground Service Connections
External Power Receptacles
FIGURE-5-4-4-991-001-A01

5-4-5 Oxygen System

****ON A/C A320-200 A320neo**

Oxygen System

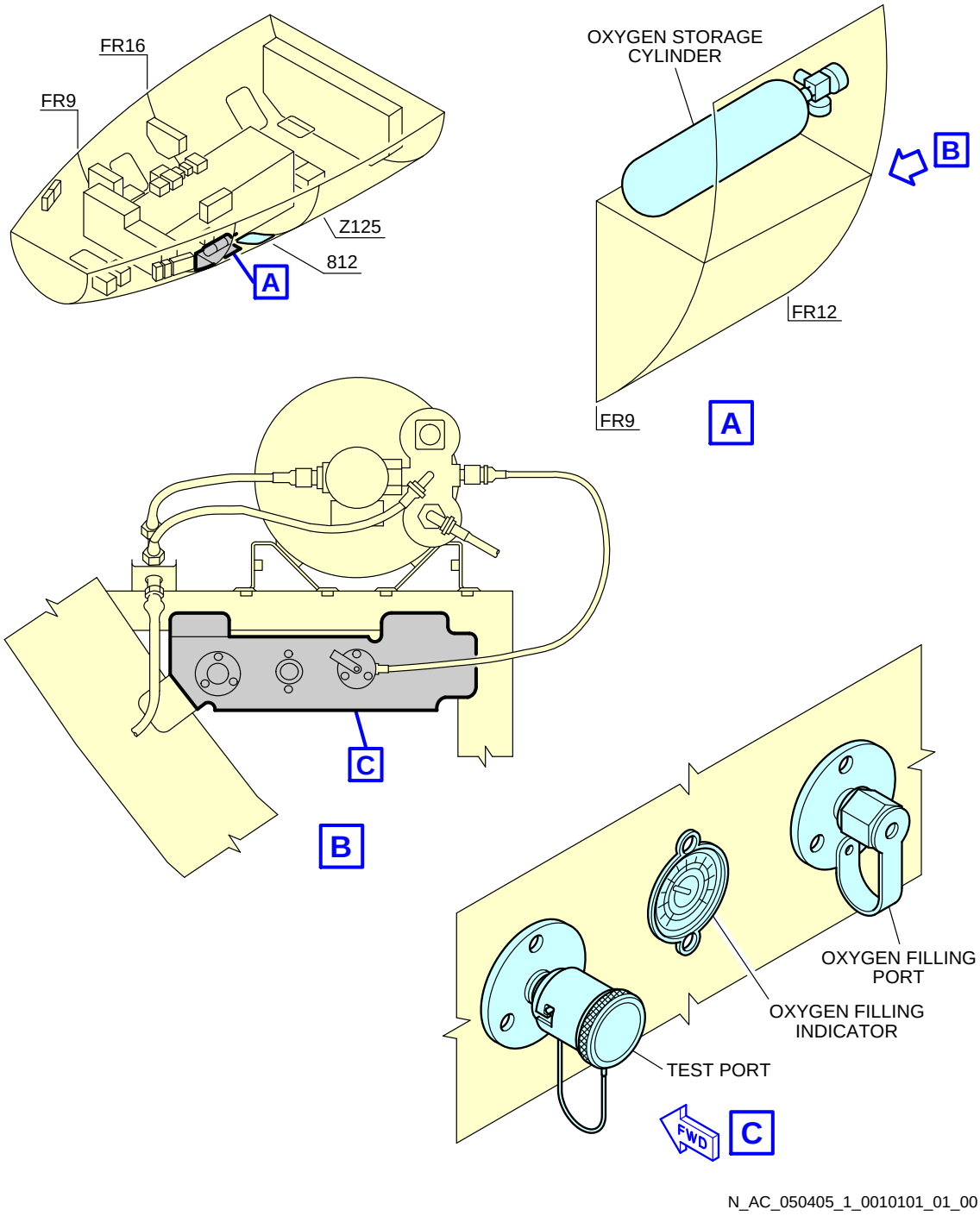
1. Oxygen System

ACCESS	DISTANCE			
	AFT OF NOSE	FROM AIRCRAFT CENTERLINE		MEAN HEIGHT FROM GROUND
		LH SIDE	RH SIDE	
Oxygen Replenishment: Access Door 812	3.45 m (11.32 ft)	1.15 m (3.77 ft)	-	2.60 m (8.53 ft)

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

   NOTE : External charging in the avionics compartment.

**ON A/C A320-200 A320neo



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

5-4-6 Fuel System

****ON A/C A320-200 A320neo**

Fuel System

1. Refuel/Defuel Control Panel

ACCESS	DISTANCE			
	AFT OF NOSE	POSITION FROM AIRCRAFT CENTERLINE		MEAN HEIGHT FROM GROUND
		LH SIDE	RH SIDE	
Refuel/Defuel Integrated Panel: Access Door 192MB	16.4 m (53.81 ft)	-	1.8 m (5.91 ft)	1.8 m (5.91 ft)

2. Refuel/Defuel Connectors

ACCESS	DISTANCE			
	AFT OF NOSE	POSITION FROM AIRCRAFT CENTERLINE		MEAN HEIGHT FROM GROUND
		LH SIDE	RH SIDE	
Refuel/Defuel Coupling, Left: Access Panel 522HB (Optional)	17.59 m (57.71 ft)	9.83 m (32.25 ft)	-	3.65 m (11.98 ft)
Refuel/Defuel Coupling, Right: Access Panel 622HB	17.59 m (57.71 ft)	-	9.83 m (32.25 ft)	3.65 m (11.98 ft)
Overwing Gravity-Refuel Cap	19.1 m (62.66 ft)	12.4 m (40.68 ft)	12.4 m (40.68 ft)	3.7 m (12.14 ft)

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

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

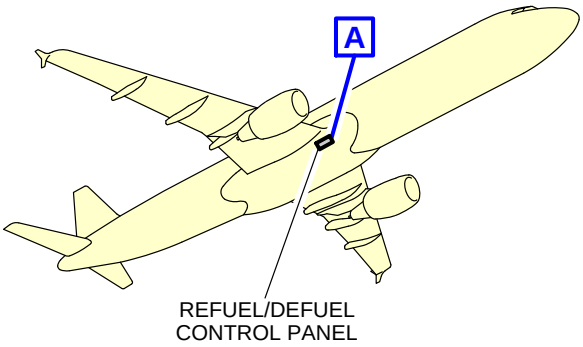
C. Average Flow Rate:
- 1250 l/min (330 US gal/min).

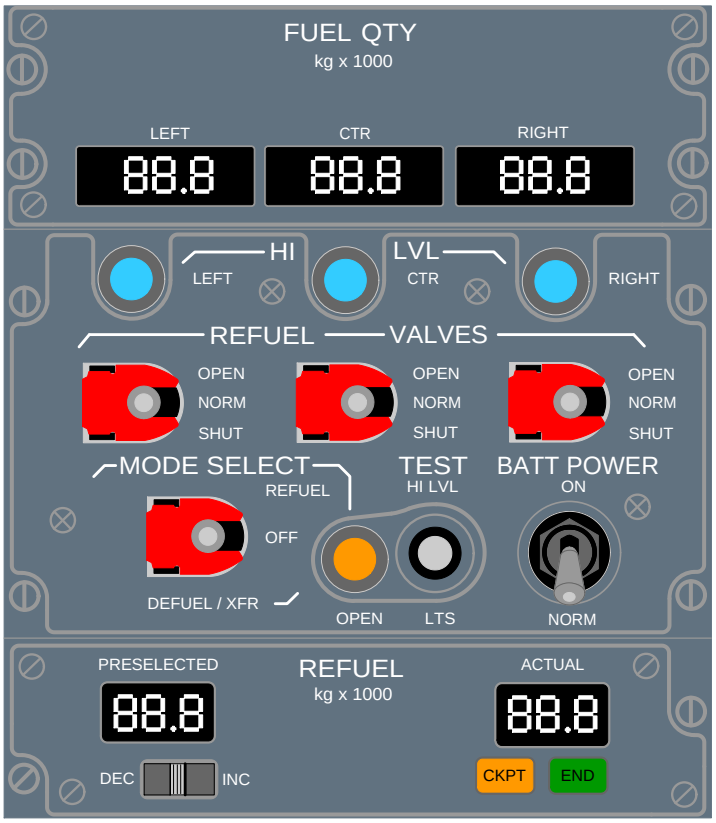
3. Overpressure Protectors and NACA Vent Intake

ACCESS	DISTANCE			
	AFT OF NOSE	POSITION FROM AIRCRAFT CENTERLINE		MEAN HEIGHT FROM GROUND
		LH SIDE	RH SIDE	
Surge Tank Overpressure-Protector: Access Panel 550CB (650CB)	20.36 m (66.80 ft)	14.9 m (48.88 ft)	14.9 m (48.88 ft)	4.32 m (14.17 ft)
Inner Cell Overpressure-Protector: Access Panel 540HB (640HB)	19.5 m (63.98 ft)	9.19 m (30.15 ft)	9.19 m (30.15 ft)	4.1 m (13.45 ft)
NACA Vent Intake: Access Panel 550AB (650AB)	19.8 m (64.96 ft)	13.7 m (44.95 ft)	13.7 m (44.95 ft)	4.02 m (13.19 ft)

NOTE : Distances are approximate.

****ON A/C A320-200 A320neo**





NOTE: STANDARD CONFIGURATION OF REFUEL/DEFUEL PANEL.

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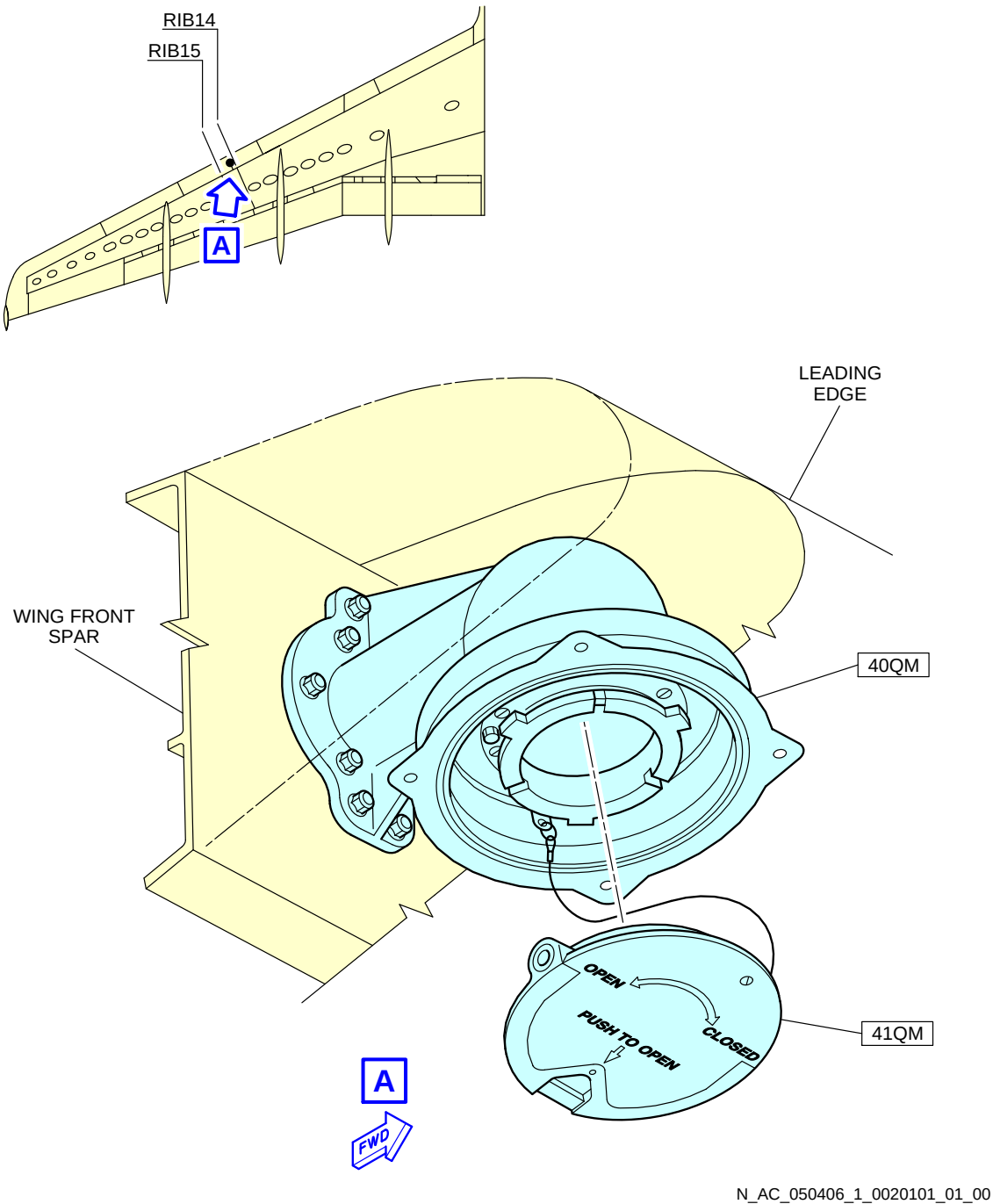
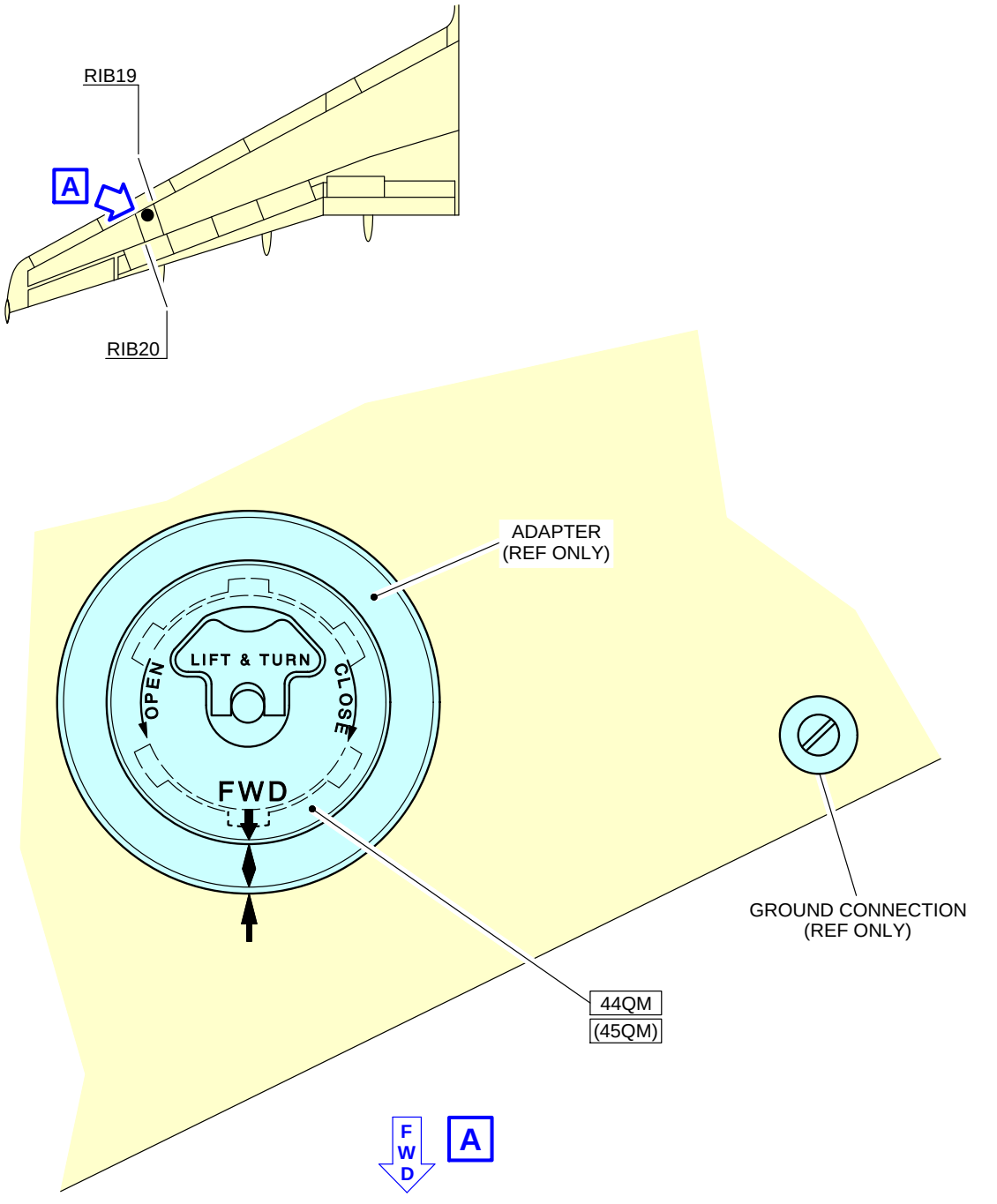
Ground Service Connections
Refuel/Defuel Control Panel
FIGURE-5-4-6-991-001-A01

**ON A/C A320-200 A320neo



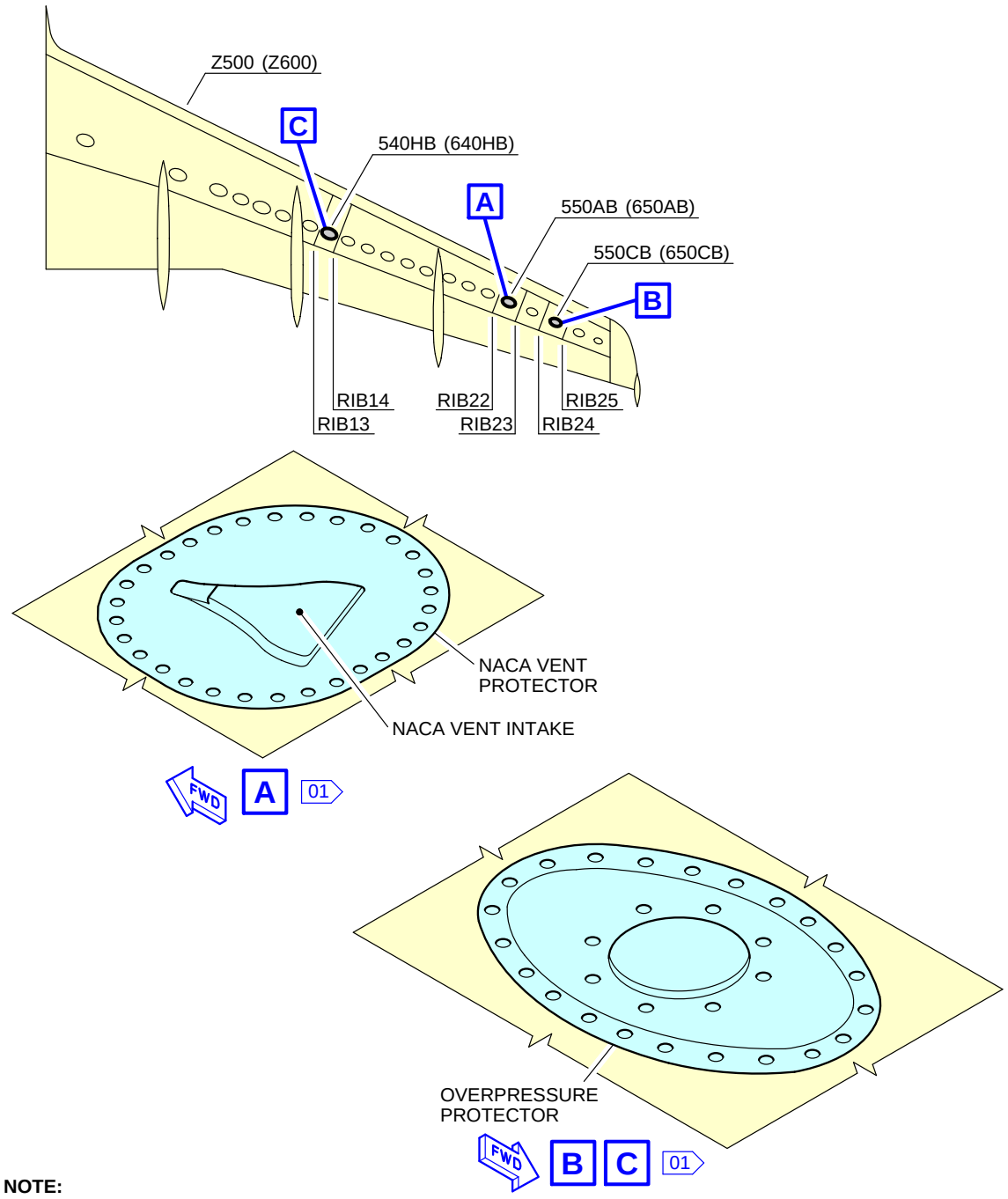
Ground Service Connections
Refuel/Defuel Couplings
FIGURE-5-4-6-991-002-A01

**ON A/C A320-200 A320neo



Ground Service Connections
Overwing Gravity-Refuel Cap (If Installed)
FIGURE-5-4-6-991-003-A01

**ON A/C A320-200 A320neo



NOTE:
01 LH SHOWN, RH SYMMETRICAL

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

5-4-7 Pneumatic System

****ON A/C A320-200 A320neo**

Pneumatic System

1. High Pressure Air Connector

ACCESS	DISTANCE			
	AFT OF NOSE	FROM AIRCRAFT CENTERLINE		MEAN HEIGHT FROM GROUND
		LH SIDE	RH SIDE	
HP Connector: Access Door 191DB	12.98 m (42.59 ft)	0.84 m (2.76 ft)	-	1.76 m (5.77 ft)

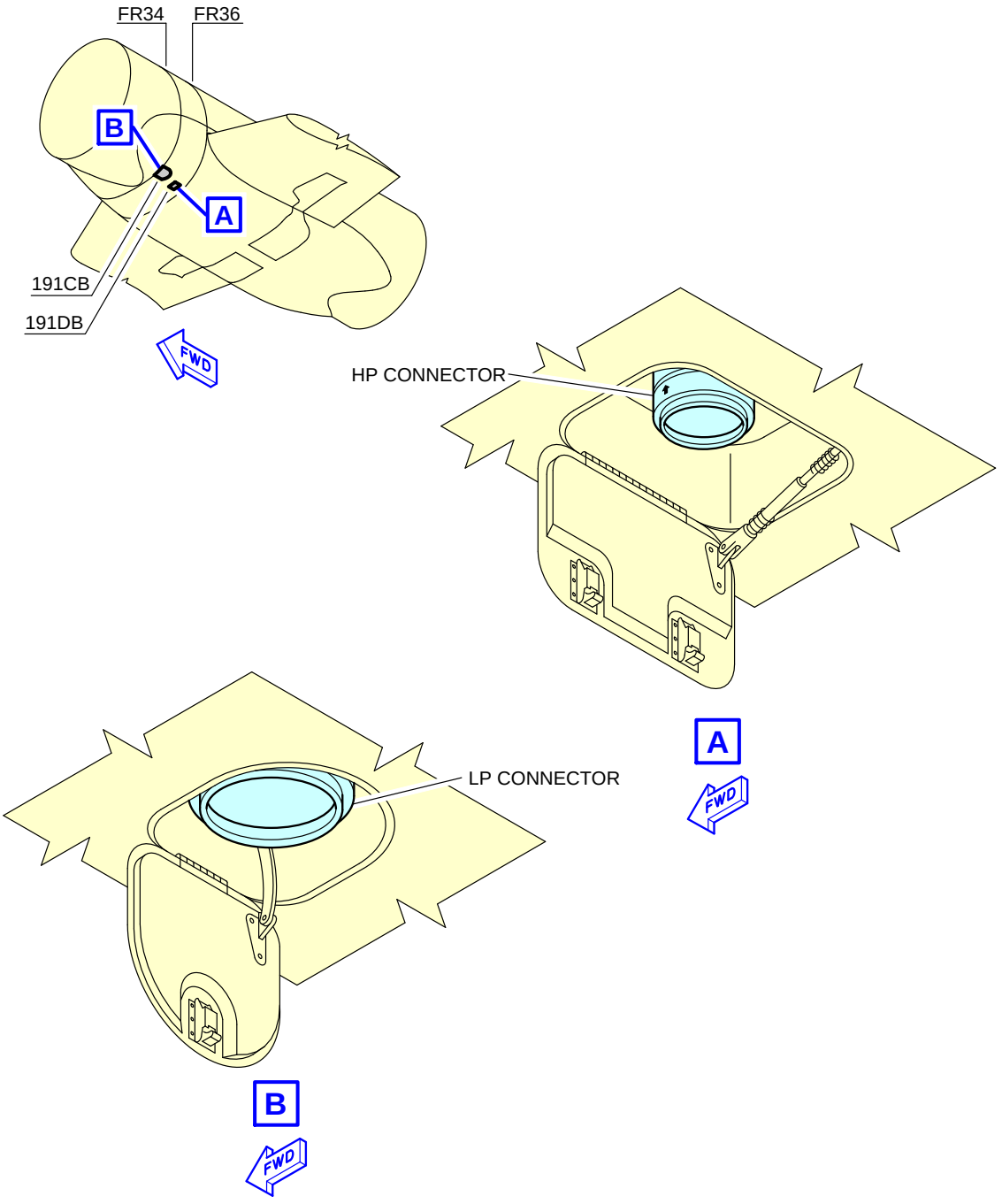
A. Connector:
- One standard 3 in. ISO 2026 connection.

2. Low Pressure Air Connector

ACCESS	DISTANCE			
	AFT OF NOSE	FROM AIRCRAFT CENTERLINE		MEAN HEIGHT FROM GROUND
		LH SIDE	RH SIDE	
LP Connector: Access Door 191CB	12.45 m (40.85 ft)	1.11 m (3.64 ft)	-	1.73 m (5.68 ft)

A. Connector:
- One standard 8 in. SAE AS4262 connection.

**ON A/C A320-200 A320neo



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

5-4-8 Oil System

****ON A/C A320-200 A320neo**

Oil System

****ON A/C A320-200**

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

ACCESS	DISTANCE			
	AFT OF NOSE	FROM AIRCRAFT CENTERLINE		MEAN HEIGHT FROM GROUND
		ENGINE 1 (LH)	ENGINE 2 (RH)	
Engine oil gravity-filling-cap: Access door: 437BL (LH), 447BL (RH)	13.12 m (43.04 ft)	6.63 m (21.75 ft)	4.82 m (15.81 ft)	1.46 m (4.79 ft)
Engine oil pressure-filling-port:	13.00 m (42.65 ft)	6.49 m (21.29 ft)	4.74 m (15.55 ft)	1.42 m (4.66 ft)

NOTE : Distances are approximate.

A. Tank capacity:
   - Full level: 19.6 l (5 US gal),
   - Usable: 9.46 l (3 US gal).

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

2. IDG Oil Replenishment for CFM56 Series Engine (See FIGURE 5-4-8-991-004-A):
   One pressure filling connection per engine: OMP 2506-18 plus one connection overflow: OMP 2505-18.

ACCESS	DISTANCE			
	AFT OF NOSE	FROM AIRCRAFT CENTERLINE		MEAN HEIGHT FROM GROUND
		ENGINE 1 (LH)	ENGINE 2 (RH)	
IDG oil-pressure-filling connection: Access door: 438AR (LH),	12.20 m (40.03 ft)	6.90 m (22.64 ft)	5.52 m (18.11 ft)	0.68 m (2.23 ft)

ACCESS	DISTANCE			
	AFT OF NOSE	FROM AIRCRAFT CENTERLINE		MEAN HEIGHT FROM GROUND
		ENGINE 1 (LH)	ENGINE 2 (RH)	
448AR (RH)				

NOTE : Distances are approximate.

A. Tank capacity: 5 l (1 US gal).

B. Delivery pressure required: 0.34 bar (5 psi) to 2.76 bar (40 psi) at the IDG inlet.

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

ACCESS	DISTANCE			
	AFT OF NOSE	FROM AIRCRAFT CENTERLINE		MEAN HEIGHT FROM GROUND
		ENGINE 1 (LH)	ENGINE 2 (RH)	
Starter-oil filling connection:	12.70 m (41.67 ft)	5.30 m (17.39 ft)	6.20 m (20.34 ft)	0.76 m (2.49 ft)

NOTE : Distances are approximate.

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

4. Engine Oil Replenishment for IAE V2500 Series Engine (See FIGURE 5-4-8-991-006-B):
One gravity filling cap per engine.

ACCESS	DISTANCE			
	AFT OF NOSE	FROM AIRCRAFT CENTERLINE		MEAN HEIGHT FROM GROUND
		ENGINE 1 (LH)	ENGINE 2 (RH)	
Engine oil gravity-filling-cap: Access door: 437BL (LH), 447BL (RH)	12.24 m (40.16 ft)	6.56 m (21.52 ft)	4.92 m (16.14 ft)	1.22 m (4.00 ft)

NOTE : Distances are approximate.

A. Tank capacity:
- Full level: 28 l (7 US gal),

- Usable: 23.50 l (6 US gal).

5. IDG Oil Replenishment for IAE V2500 Series Engine (See FIGURE 5-4-8-991-007-B):
One pressure filling connection per engine: OMP 2506-2 plus one overflow connection: OMP 2505-2.

ACCESS	DISTANCE			
	AFT OF NOSE	FROM AIRCRAFT CENTERLINE		MEAN HEIGHT FROM GROUND
		ENGINE 1 (LH)	ENGINE 2 (RH)	
IDG oil-pressure-filling connection:	12.80 m (41.99 ft)	5.42 m (17.78 ft)	6.04 m (19.82 ft)	0.80 m (2.62 ft)

NOTE : Distances are approximate.

A. Tank capacity: 4.10 l (1 US gal).

6. Starter Oil Replenishment for IAE V2500 Series Engine (See FIGURE 5-4-8-991-008-B):
One gravity filling cap per engine.

ACCESS	DISTANCE			
	AFT OF NOSE	FROM AIRCRAFT CENTERLINE		MEAN HEIGHT FROM GROUND
		ENGINE 1 (LH)	ENGINE 2 (RH)	
Starter-oil filling connection:	15.40 m (50.52 ft)	5.30 m (17.39 ft)	6.14 m (20.14 ft)	0.75 m (2.46 ft)

NOTE : Distances are approximate.

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

****ON A/C A320neo**

7. Engine Oil Replenishment for CFM LEAP-1A Series Engine (See FIGURE 5-4-8-991-010-A):
One gravity filling cap and one pressure filling connection per engine.

ACCESS	DISTANCE			
	AFT OF NOSE	FROM AIRCRAFT CENTERLINE		MEAN HEIGHT FROM GROUND
		ENGINE 1 (LH)	ENGINE 2 (RH)	
Engine oil gravity-filling-cap: Access doors: 438BR and 448BR.	TBD	TBD	TBD	TBD

ACCESS	DISTANCE			
	AFT OF NOSE	FROM AIRCRAFT CENTERLINE		MEAN HEIGHT FROM GROUND
		ENGINE 1 (LH)	ENGINE 2 (RH)	
Engine oil pressure-filling-port: Access doors: 438BR and 448BR.	TBD	TBD	TBD	TBD

NOTE : Distances are approximate.

A. Tank capacity:
- Full level: 23.45 l (6 US gal)
- Usable: 18.7 l (5 US gal)
- Consumable level: 7.7 l (2 US gal).

8. IDG Oil Replenishment for CFM LEAP-1A Series Engine (See FIGURE 5-4-8-991-011-A):

ACCESS	DISTANCE			
	AFT OF NOSE	FROM AIRCRAFT CENTERLINE		MEAN HEIGHT FROM GROUND
		ENGINE 1 (LH)	ENGINE 2 (RH)	
IDG oil-pressure-filling connection: Access doors: 437AL (LH), 438AR (LH), 447AL (RH) and 448AR (RH).	TBD	TBD	TBD	TBD

NOTE : Distances are approximate.

A. IDG oil tank capacity: 5.7 l (2 US gal) (additional amount of 0.9 l (0.2 US gal) is necessary to ensure a complete filling).

B. Maximum servicing pressure:
- 0.5 bar (7 psi), when "DESHONS" tool is used.
- 2.41 bar (35 psi), when other tools are used.

9. Starter Oil Replenishment for CFM LEAP-1A Series Engine (See FIGURE 5-4-8-991-012-A):
One gravity filling cap per engine.

ACCESS	DISTANCE			
	AFT OF NOSE	FROM AIRCRAFT CENTERLINE		MEAN HEIGHT FROM GROUND
		ENGINE 1 (LH)	ENGINE 2 (RH)	
Starter-oil filling connection: Access doors: 438BR and 448BR.	TBD	TBD	TBD	TBD

NOTE : Distances are approximate.

A. Tank capacity: 0.5 l (0.1 US gal).

10. Engine Oil Replenishment for PW 1100G Series Engine (See FIGURE 5-4-8-991-013-A):
One gravity filling cap per engine.

ACCESS	DISTANCE			
	AFT OF NOSE	FROM AIRCRAFT CENTERLINE		MEAN HEIGHT FROM GROUND
		ENGINE 1 (LH)	ENGINE 2 (RH)	
Engine oil gravity-filling-cap: Access doors: 437BL and 447BL.	TBD	TBD	TBD	TBD

NOTE : Distances are approximate.

A. Tank capacity:
- Full level: 33.02 l (9 US gal)
- Usable: 9.08 l (2 US gal).

11. IDG Oil Replenishment for PW 1100G Series Engine (See FIGURE 5-4-8-991-014-A):

ACCESS	DISTANCE			
	AFT OF NOSE	FROM AIRCRAFT CENTERLINE		MEAN HEIGHT FROM GROUND
		ENGINE 1 (LH)	ENGINE 2 (RH)	
IDG oil-pressure-filling connection:	TBD	TBD	TBD	TBD

ACCESS	DISTANCE			
	AFT OF NOSE	FROM AIRCRAFT CENTERLINE		MEAN HEIGHT FROM GROUND
		ENGINE 1 (LH)	ENGINE 2 (RH)	
Access doors: 437AL (LH), 438AR (LH), 447AL (RH), 448AR (RH), 451AL (LH), 452AR (LH), 461AL (RH) and 462AR (RH).				

NOTE : Distances are approximate.

A. IDG oil tank capacity: 5.4 l (1 US gal) plus 1.93 l (0.5 US gal) for external system (Air Oil Heat Exchanger / Oil Cooler).
Usable capacity: 0.6 l (0.2 US gal).

B. Maximum delivery pressure required: 2.41 bar (35 psi).
Maximum delivery flow required: Not specified, based on the requirements from the supplier.

12. Starter Oil Replenishment for PW 1100G Series Engine (See FIGURE 5-4-8-991-015-A):
One gravity filling cap per engine.

ACCESS	DISTANCE			
	AFT OF NOSE	FROM AIRCRAFT CENTERLINE		MEAN HEIGHT FROM GROUND
		ENGINE 1 (LH)	ENGINE 2 (RH)	
Starter oil-filling connection:	TBD	TBD	TBD	TBD

NOTE : Distances are approximate.

A. Starter lubrication is a part of the engine oil system, no dedicated supply/tank.

****ON A/C A320-200 A320neo**

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

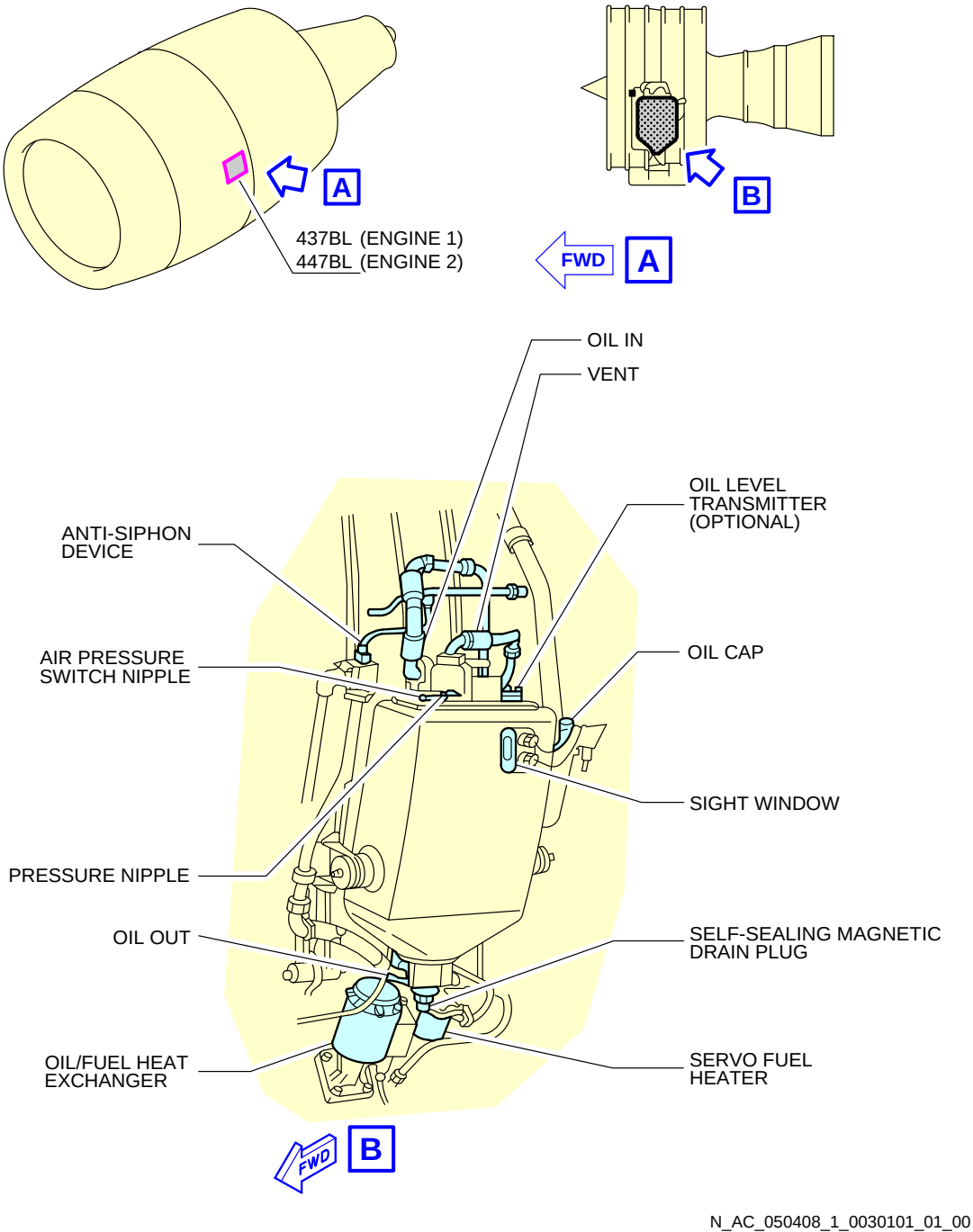
ACCESS	DISTANCE			
	AFT OF NOSE	FROM AIRCRAFT CENTERLINE		MEAN HEIGHT FROM GROUND
		ENGINE 1 (LH)	ENGINE 2 (RH)	
GTCP 36-300	35.49 m	0.30 m	-	4.83 m

ACCESS	DISTANCE			
	AFT OF NOSE	FROM AIRCRAFT CENTERLINE		MEAN HEIGHT FROM GROUND
		ENGINE 1 (LH)	ENGINE 2 (RH)	
	(116.44 ft)	(0.98 ft)		(15.85 ft)
APS 3200	35.49 m (116.44 ft)	0.30 m (0.98 ft)	-	4.78 m (15.68 ft)
131-9	35.39 m (116.11 ft)	0.35 m (1.15 ft)	-	4.32 m (14.17 ft)

NOTE : Distances are approximate.

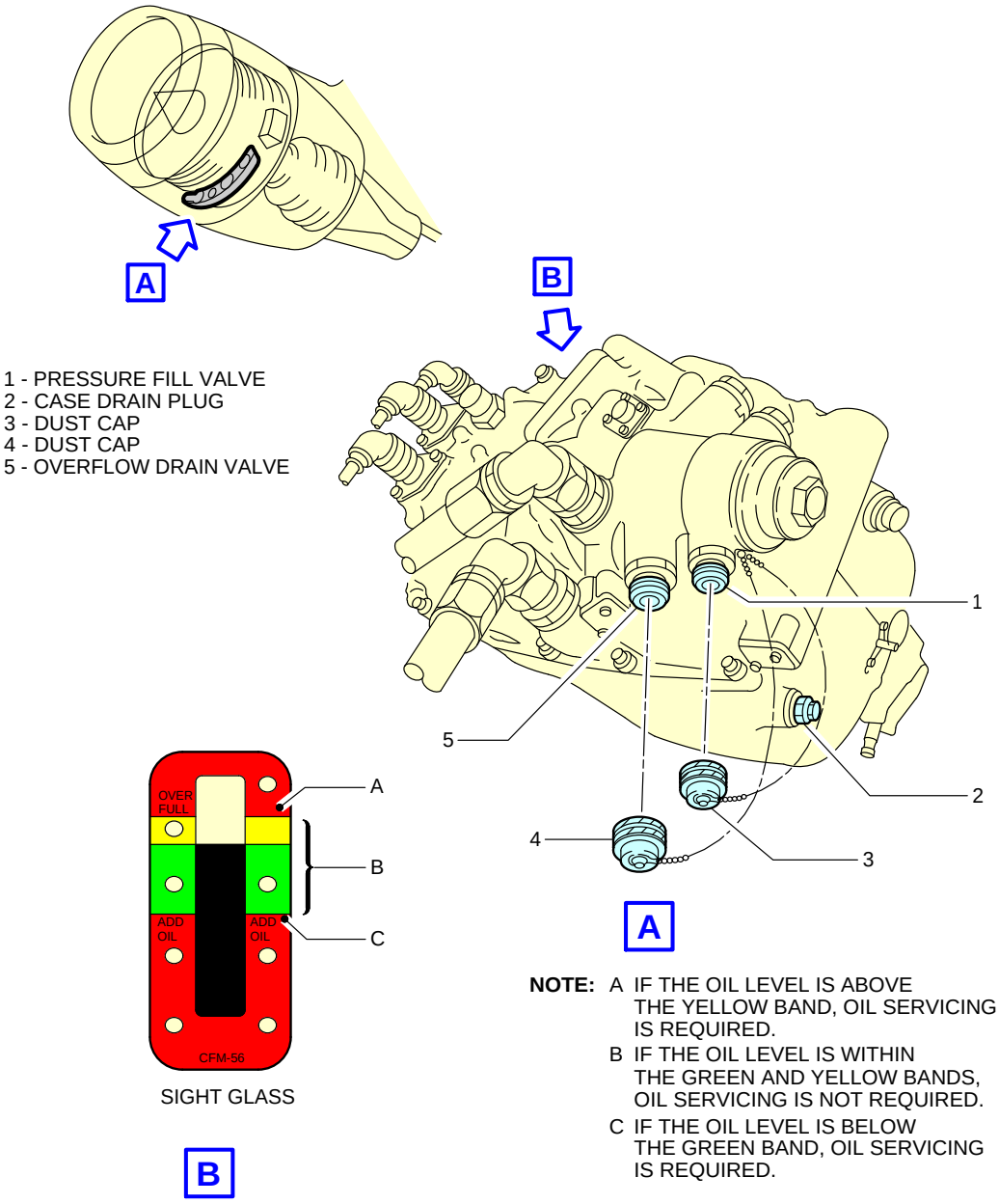
A. Tank capacity (usable):
- APU type GTCP 36-300: 6.20 l (2 US gal),
- APU type APS 3200: 5.40 l (1 US gal),
- APU type 131-9: 6.25 l (2 US gal).

**ON A/C A320-200



Ground Service Connections
Engine Oil Tank – CFM56 Series Engine
FIGURE-5-4-8-991-003-A01

**ON A/C A320-200



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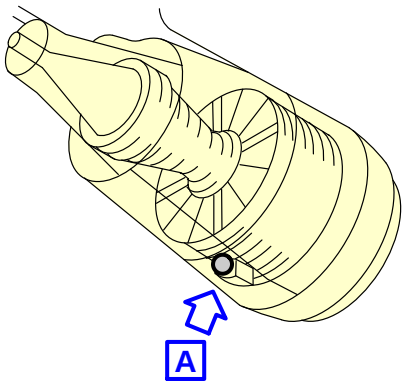
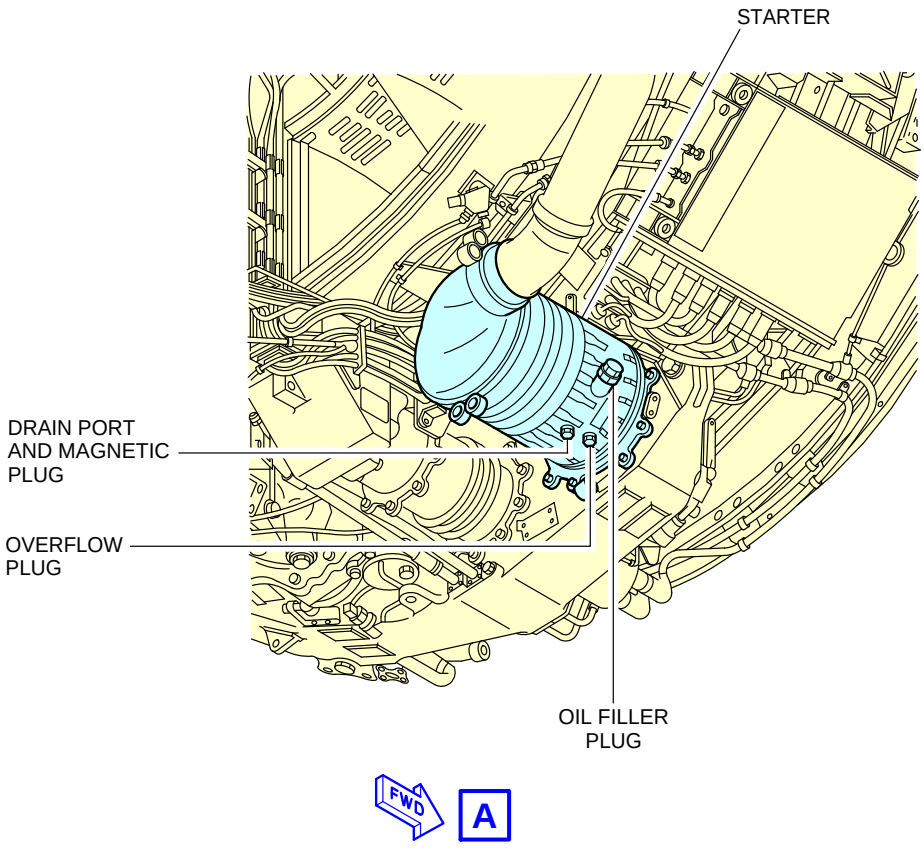
Ground Service Connections
IDG Oil Tank – CFM56 Series Engine
FIGURE-5-4-8-991-004-A01

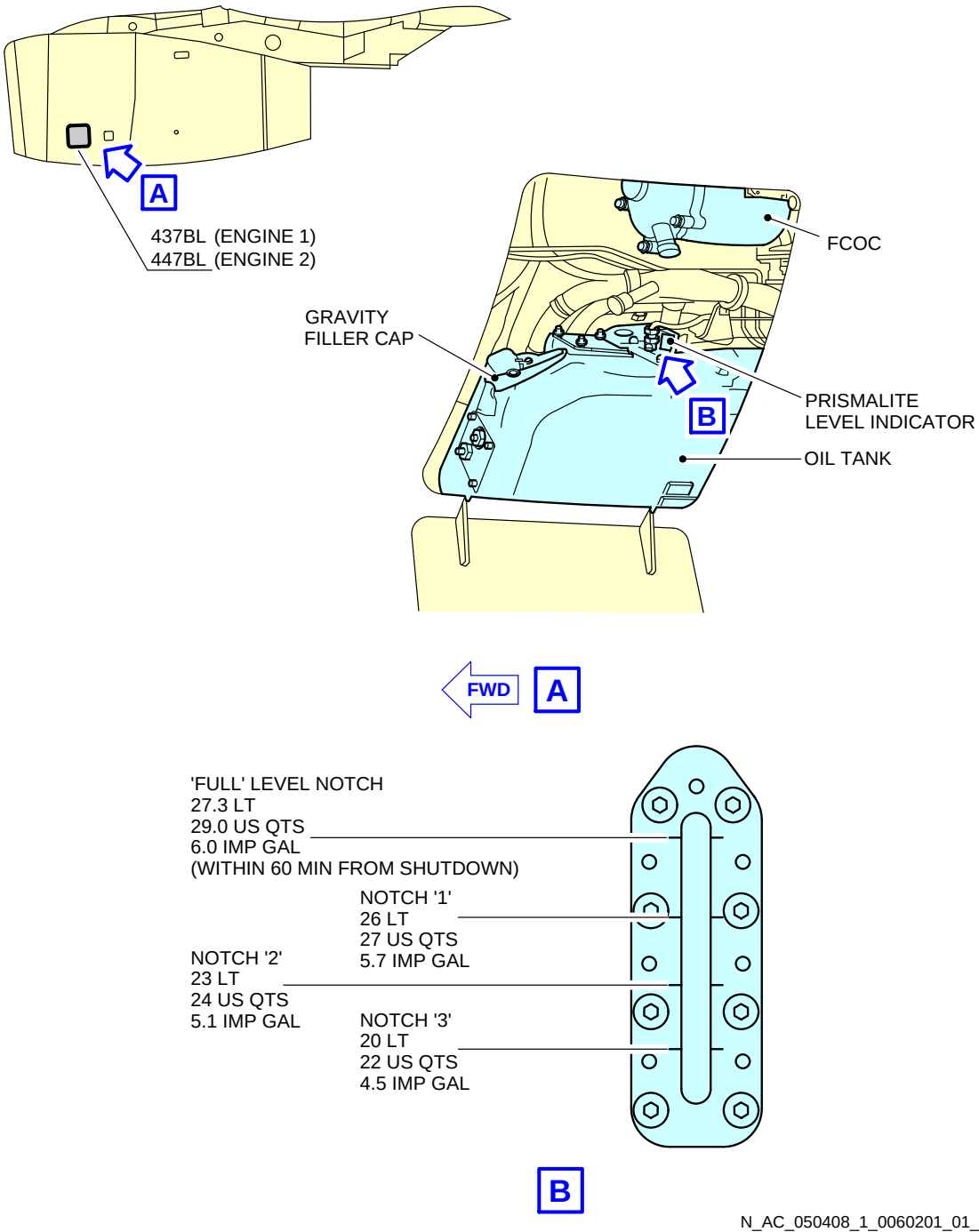
**ON A/C A320-200





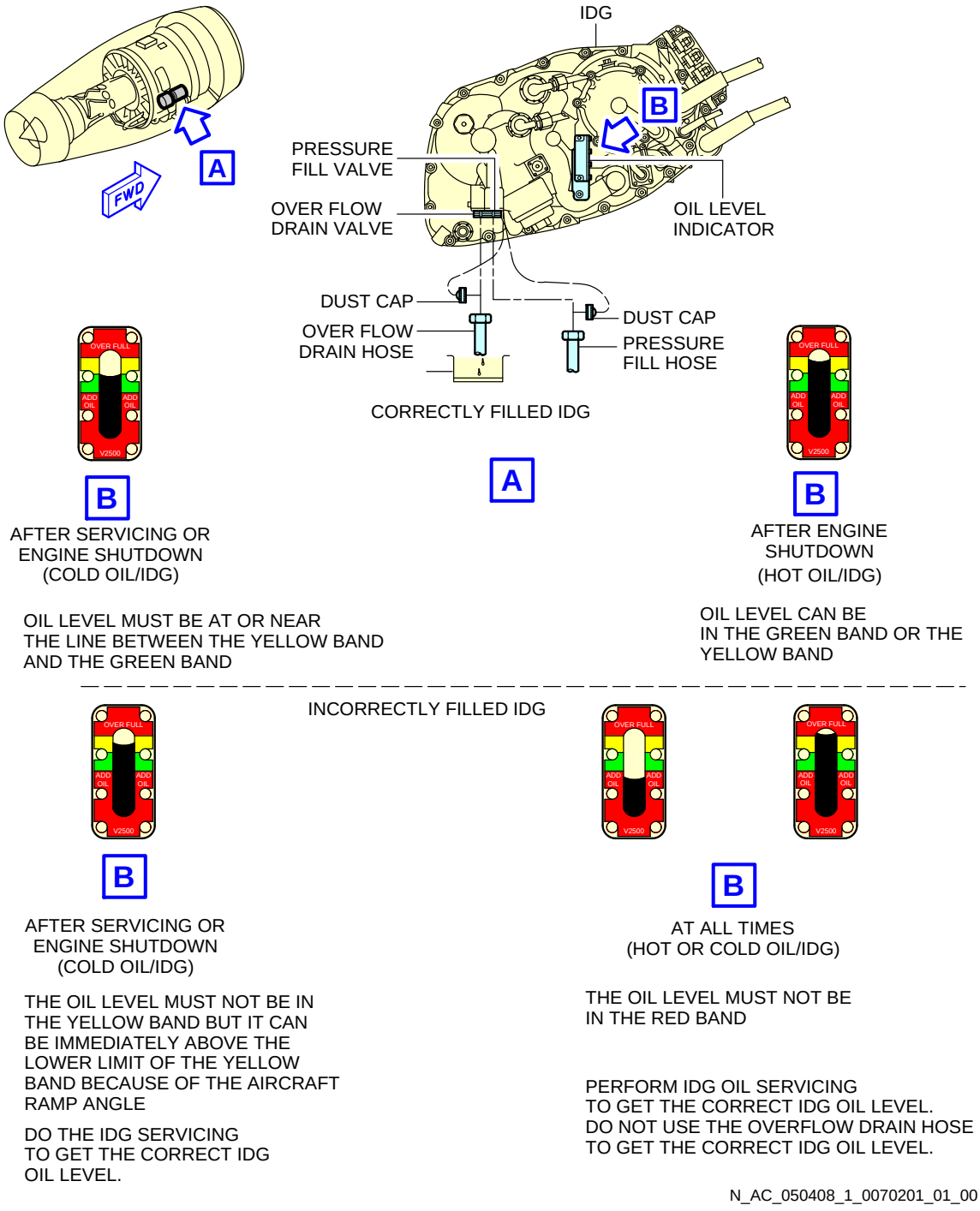
Ground Service Connections
Starter Oil Tank – CFM56 Series Engine
FIGURE-5-4-8-991-005-A01

**ON A/C A320-200



Ground Service Connections
Engine Oil Tank – IAE V2500 Series Engine
FIGURE-5-4-8-991-006-B01

**ON A/C A320-200



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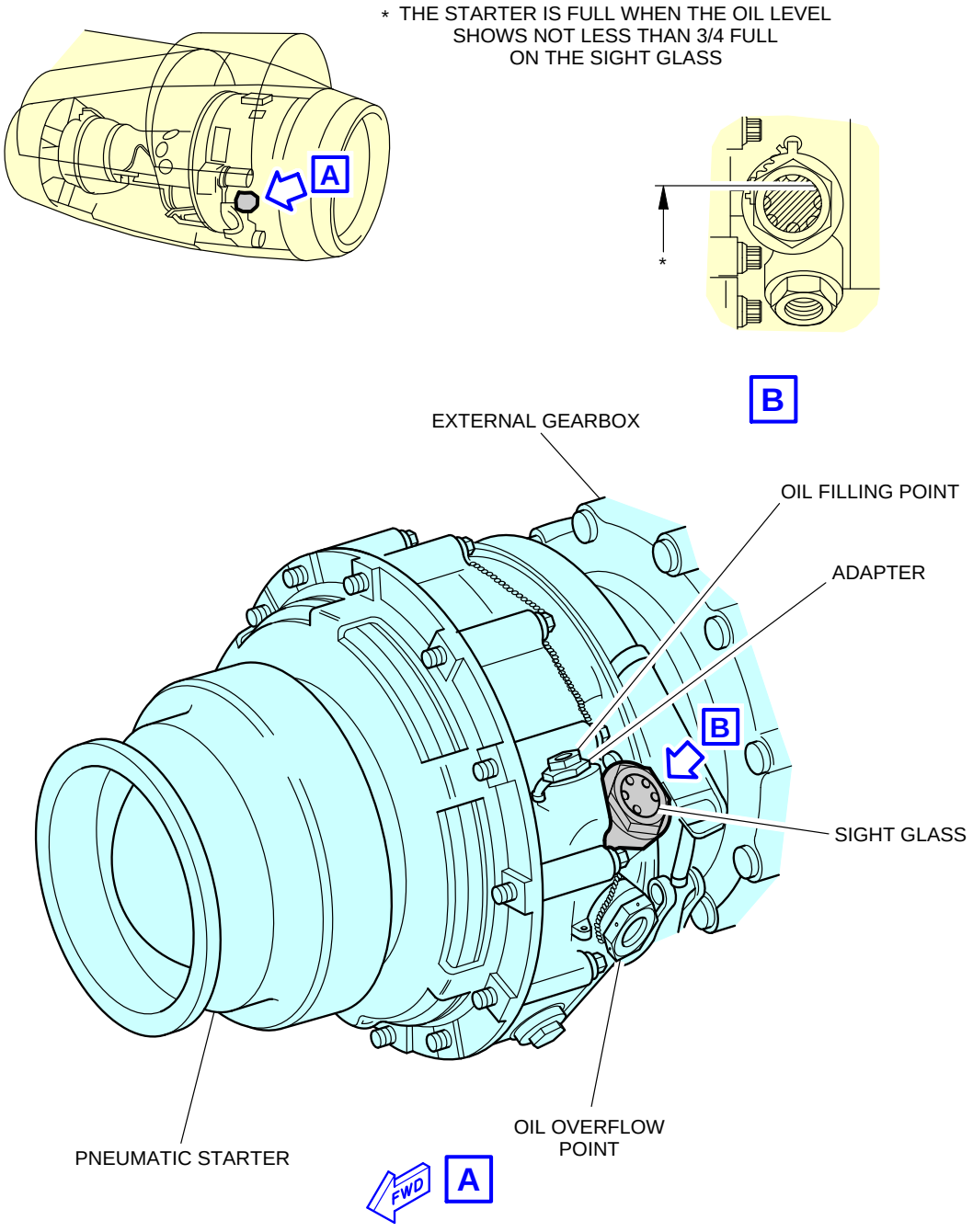
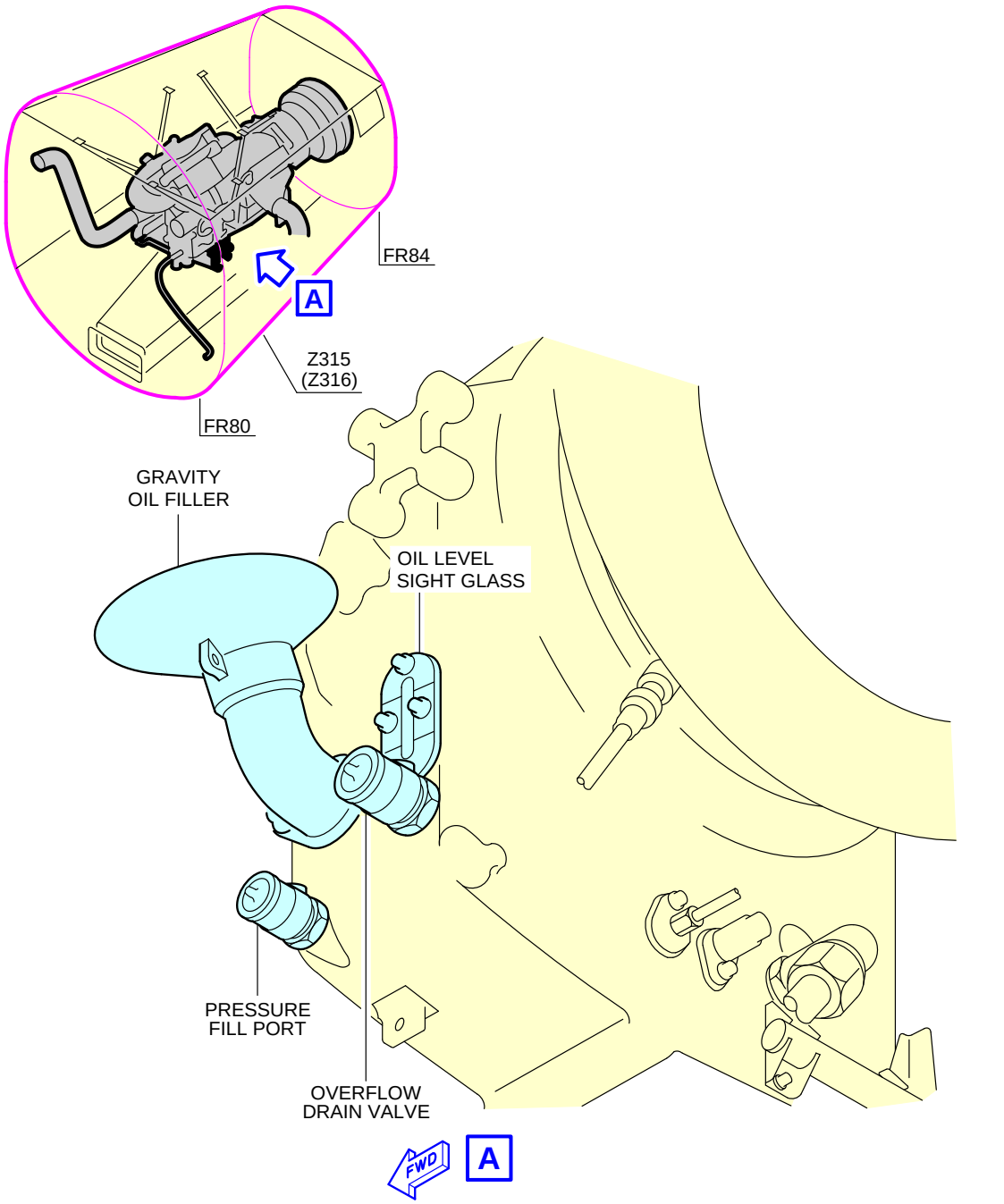
Ground Service Connections
IDG Oil Tank – IAE V2500 Series Engine
FIGURE-5-4-8-991-007-B01

**ON A/C A320-200



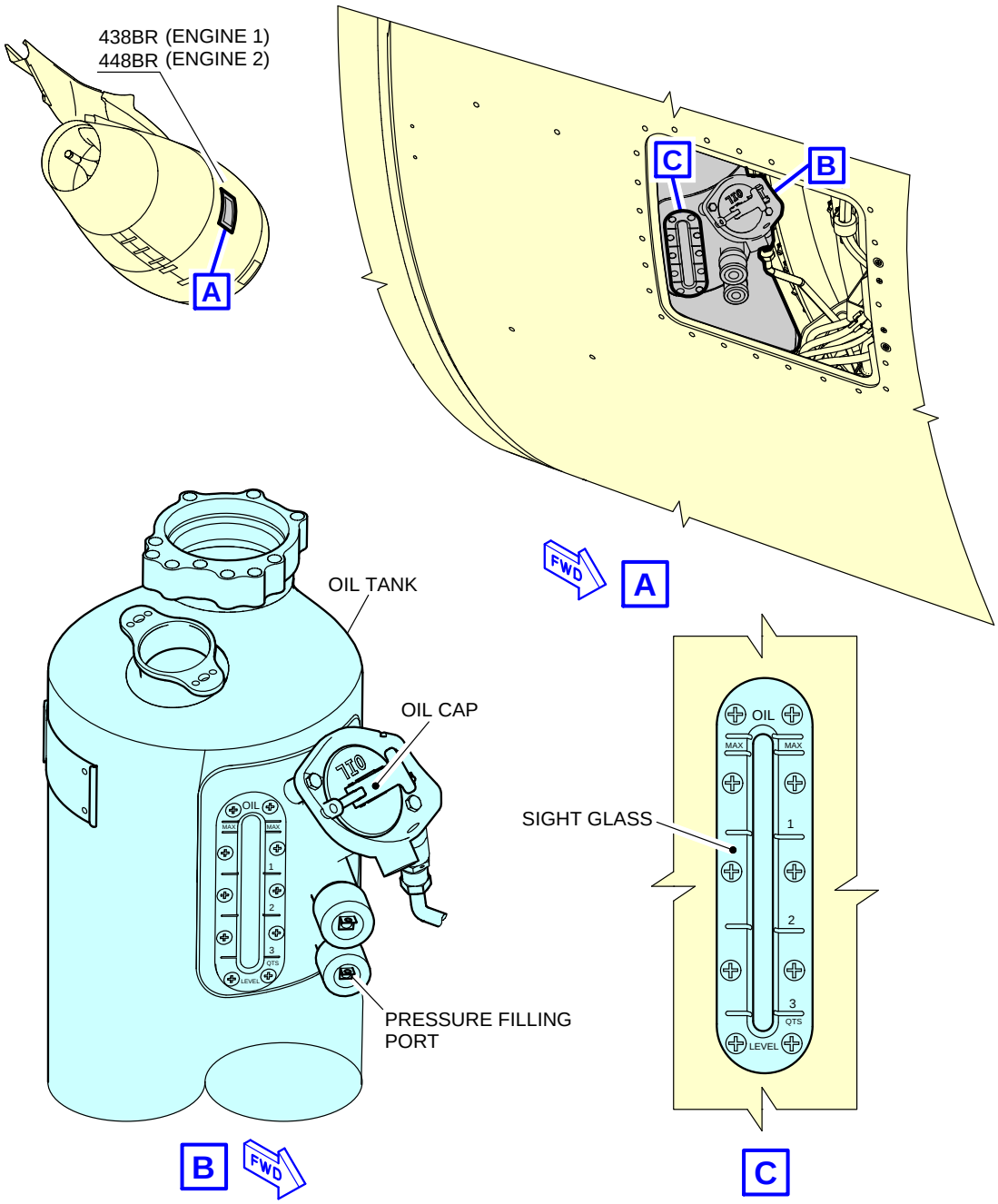
Ground Service Connections
Starter Oil Tank – IAE V2500 Series Engine
FIGURE-5-4-8-991-008-B01

**ON A/C A320-200 A320neo



Ground Service Connections
APU Oil Tank
FIGURE-5-4-8-991-009-A01

**ON A/C A320neo



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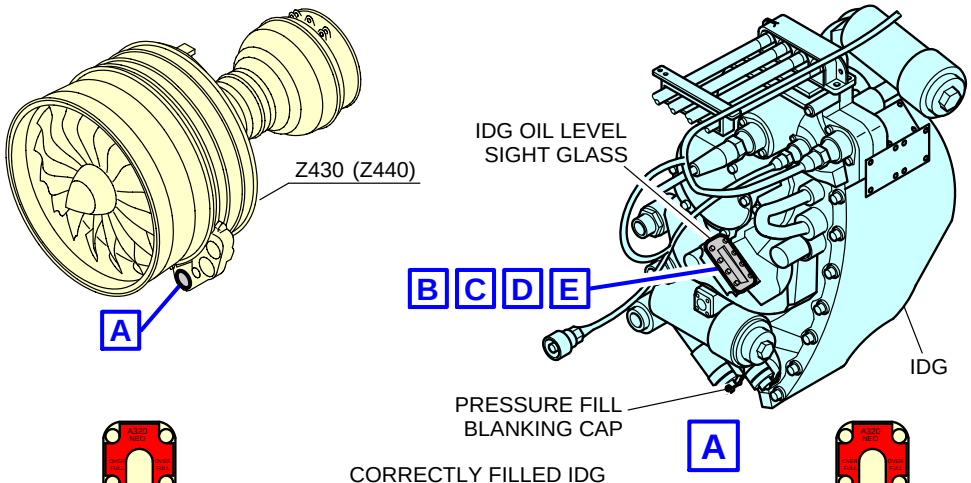
Ground Service Connections
Engine Oil Tank – CFM LEAP-1A Series Engine
FIGURE-5-4-8-991-010-A01

**ON A/C A320neo



NOTE:

01 IF THE OIL LEVEL IS NOT IN THE TOP OF THE GREEN BAND WITH A TOLERANCE OF ± 2 mm, IT IS RECOMMENDED TO FILL THE IDG AGAIN.

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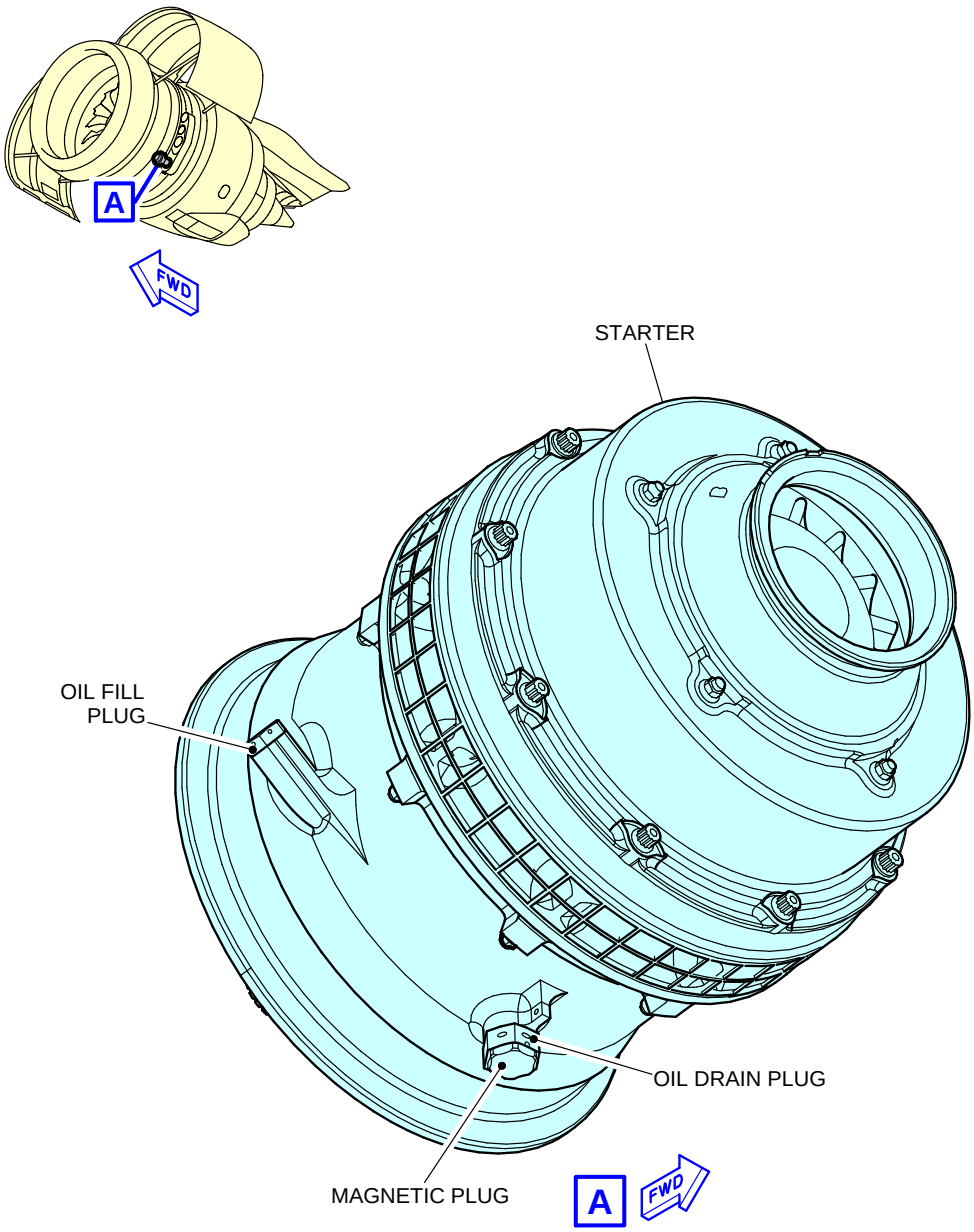
Ground Service Connections
IDG Oil Tank – CFM LEAP-1A Series Engine
FIGURE-5-4-8-991-011-A01

****ON A/C A320neo**



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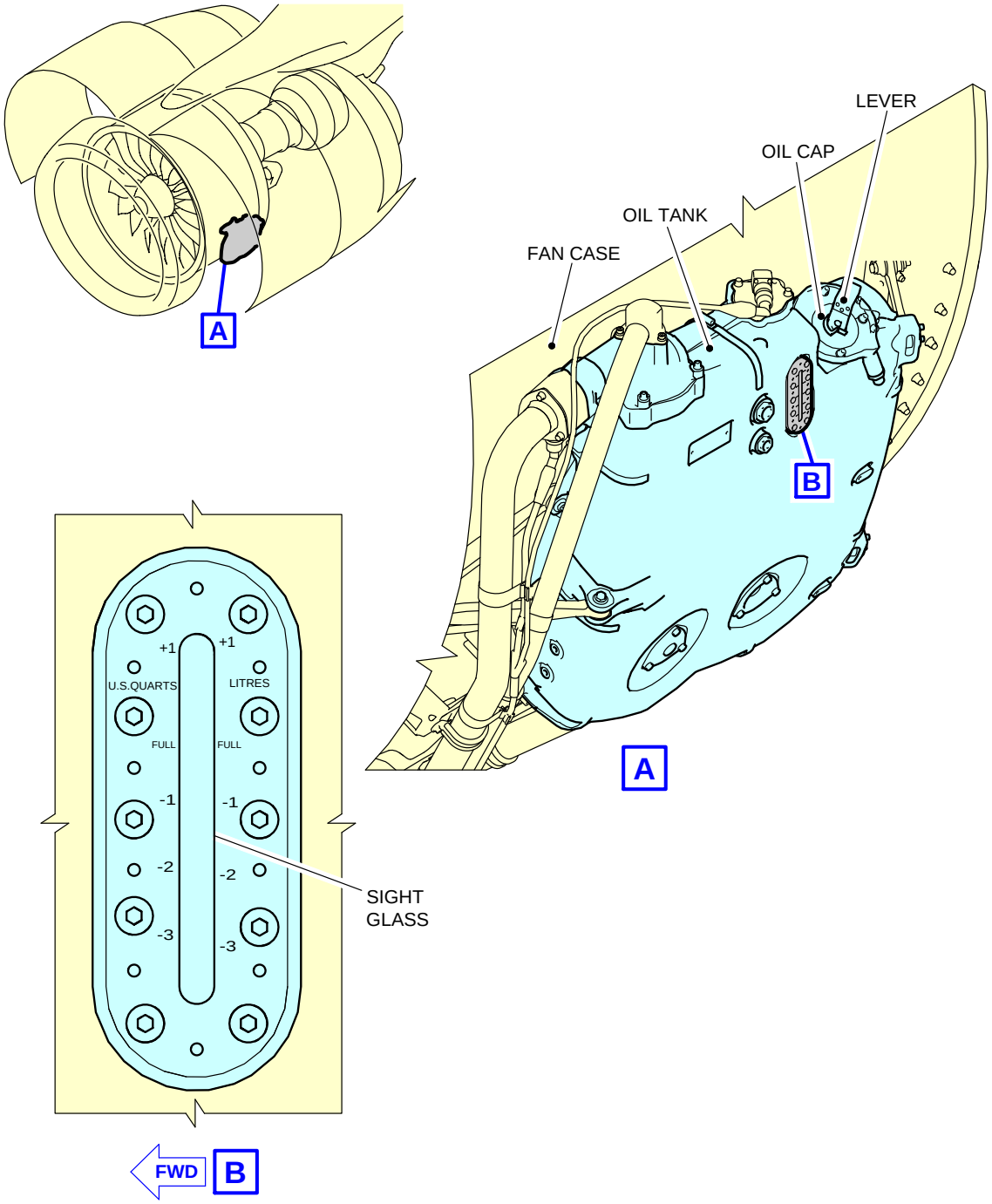
Ground Service Connections
Starter Oil Tank – CFM LEAP-1A Series Engine
FIGURE-5-4-8-991-012-A01

****ON A/C A320neo**



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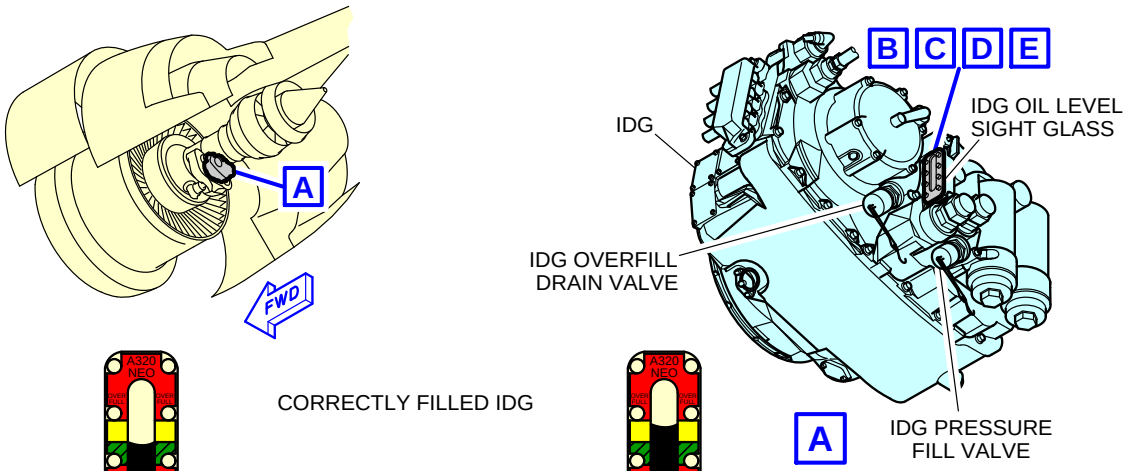
Ground Service Connections
Engine Oil Tank – PW 1100G Series Engine
FIGURE-5-4-8-991-013-A01

**ON A/C A320neo



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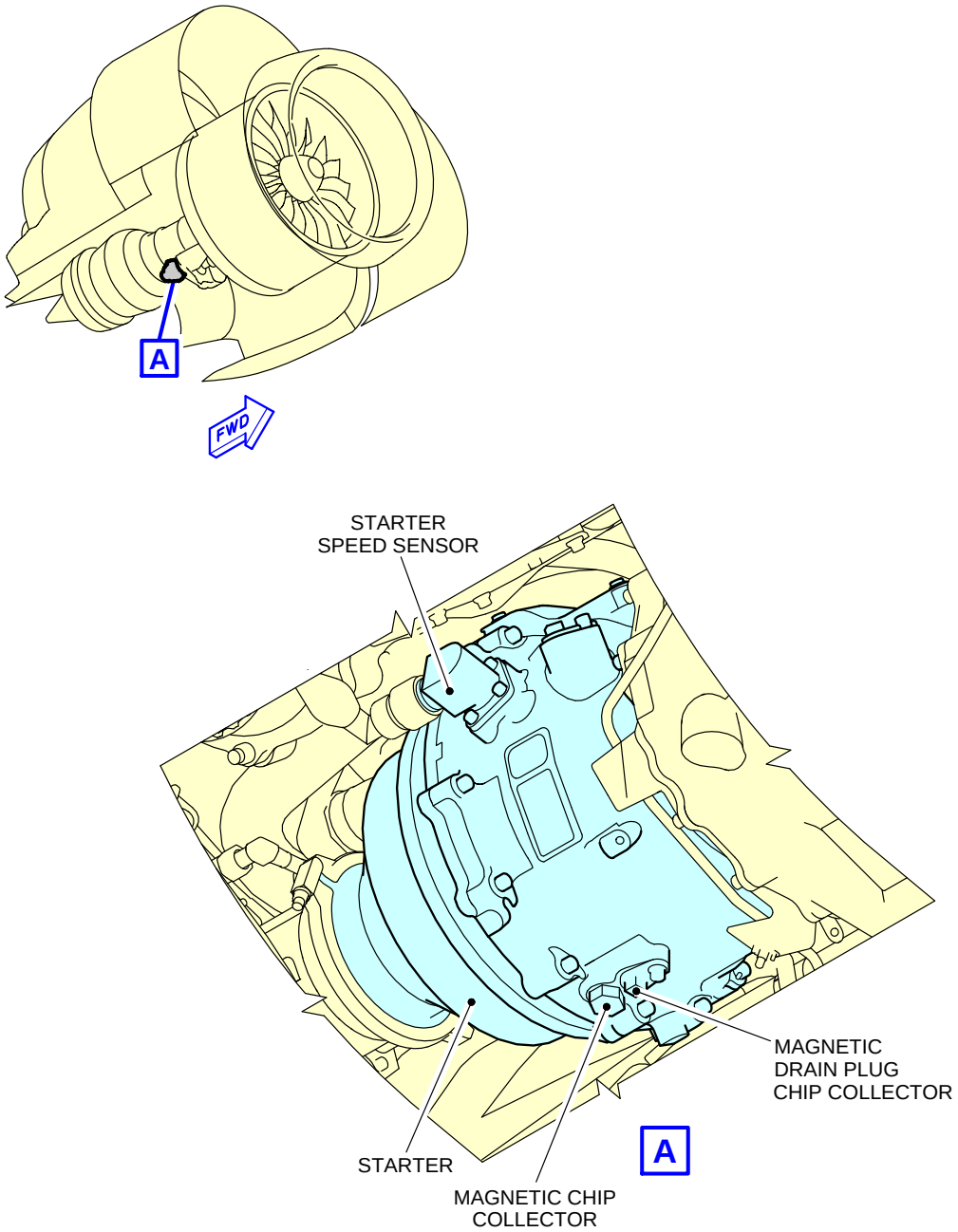
Ground Service Connections
IDG Oil Tank – PW 1100G Series Engine
FIGURE-5-4-8-991-014-A01

**ON A/C A320neo



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Ground Service Connections
Starter Oil Tank – PW 1100G Series Engine
FIGURE-5-4-8-991-015-A01

5-4-9 Potable Water System

****ON A/C A320-200 A320neo**

Potable Water System

1. Potable Water Ground Service Panels

ACCESS	DISTANCE			
	AFT OF NOSE	POSITION FROM AIRCRAFT CENTERLINE		MEAN HEIGHT FROM GROUND
		LH SIDE	RH SIDE	
Potable-Water Service Panel: Access Door 171AL	31.3 m (102.69 ft)	0.3 m (0.98 ft)	-	2.6 m (8.53 ft)
Potable-Water Drain Panel: Access Door 133AL (Optional)	11.8 m (38.71 ft)	0.15 m (0.49 ft)	-	1.75 m (5.74 ft)
Potable-Water Drain Panel: Access Door 192NB	12.5 m (41.01 ft)	-	0.51 m (1.67 ft)	1.75 m (5.74 ft)

NOTE : Distances are approximate.

2. Technical Specifications

A. Connectors:

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

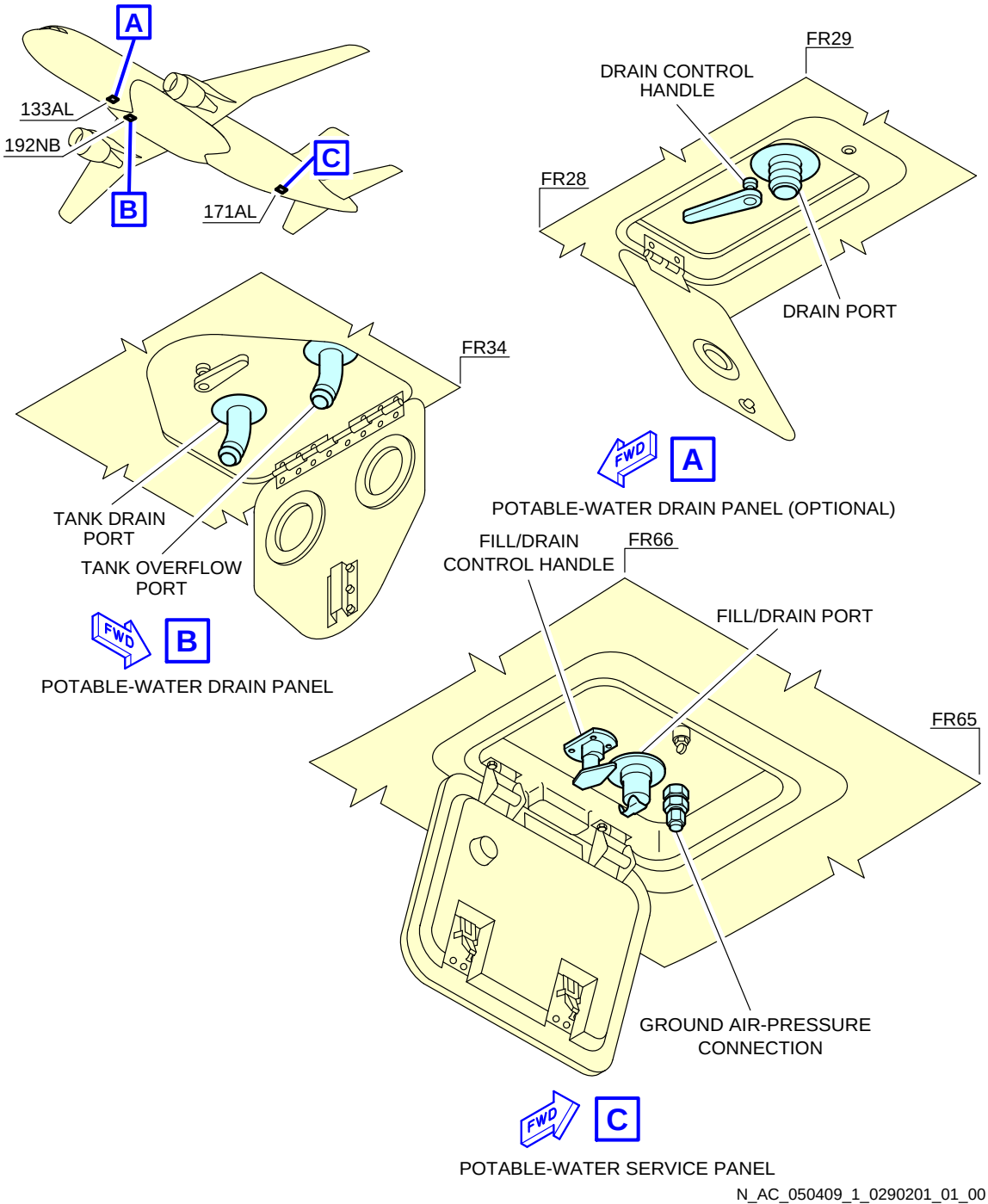
(2) On the potable-water drain panel (Access Door 133AL and/or 192NB)
- Drain Nipple 3/4 in. (ISO 17775).

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

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

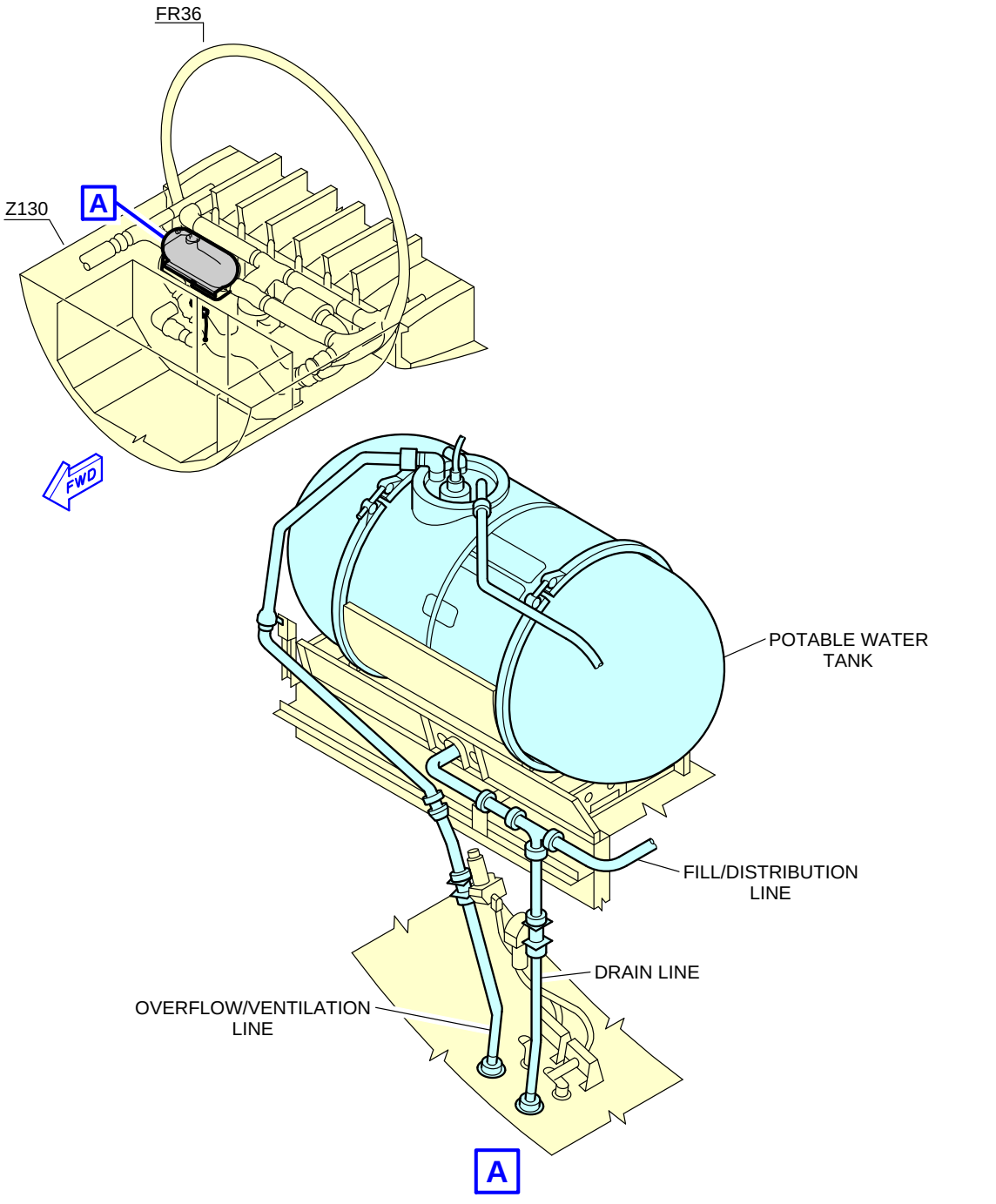
D. Typical flow rate:
   - 50 l/min (13 US gal/min).

****ON A/C A320-200 A320neo**



Ground Service Connections
Potable Water Ground Service Panels
FIGURE-5-4-9-991-029-B01

**ON A/C A320-200 A320neo



Ground Service Connections
Potable Water Tank Location
FIGURE-5-4-9-991-030-B01

5-4-10 Waste Water System

****ON A/C A320-200 A320neo**

Waste Water System

1. Waste Water System

ACCESS	DISTANCE			
	AFT OF NOSE	POSITION FROM AIRCRAFT CENTERLINE		MEAN HEIGHT FROM GROUND
		LH SIDE	RH SIDE	
Waste-Water Ground Service Panel: Access door 172AR	31.3 m (102.69 ft)	-	0.8 m (2.62 ft)	2.8 m (9.19 ft)

NOTE : Distances are approximate.

2. Technical Specifications

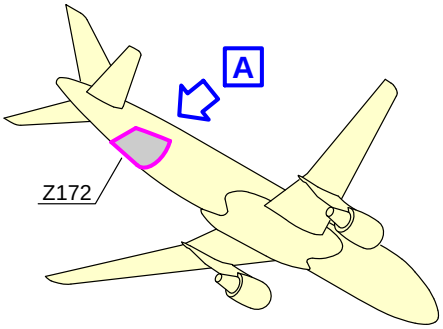
A. Connectors:
- Draining: 4 in. (ISO 17775).
- Flushing and filling: 1 in. (ISO 17775).

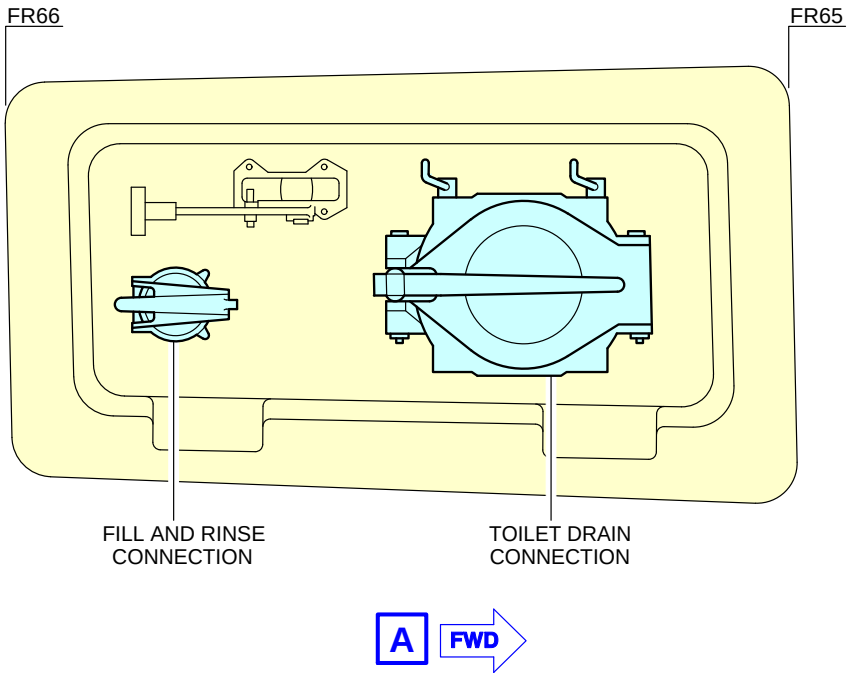
B. Usable waste tank capacity:
- Standard configuration - one tank: 177 l (47 US gal).

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

D. Waste tank - Precharge:
- 10 l (3 US gal).

**ON A/C A320-200 A320neo





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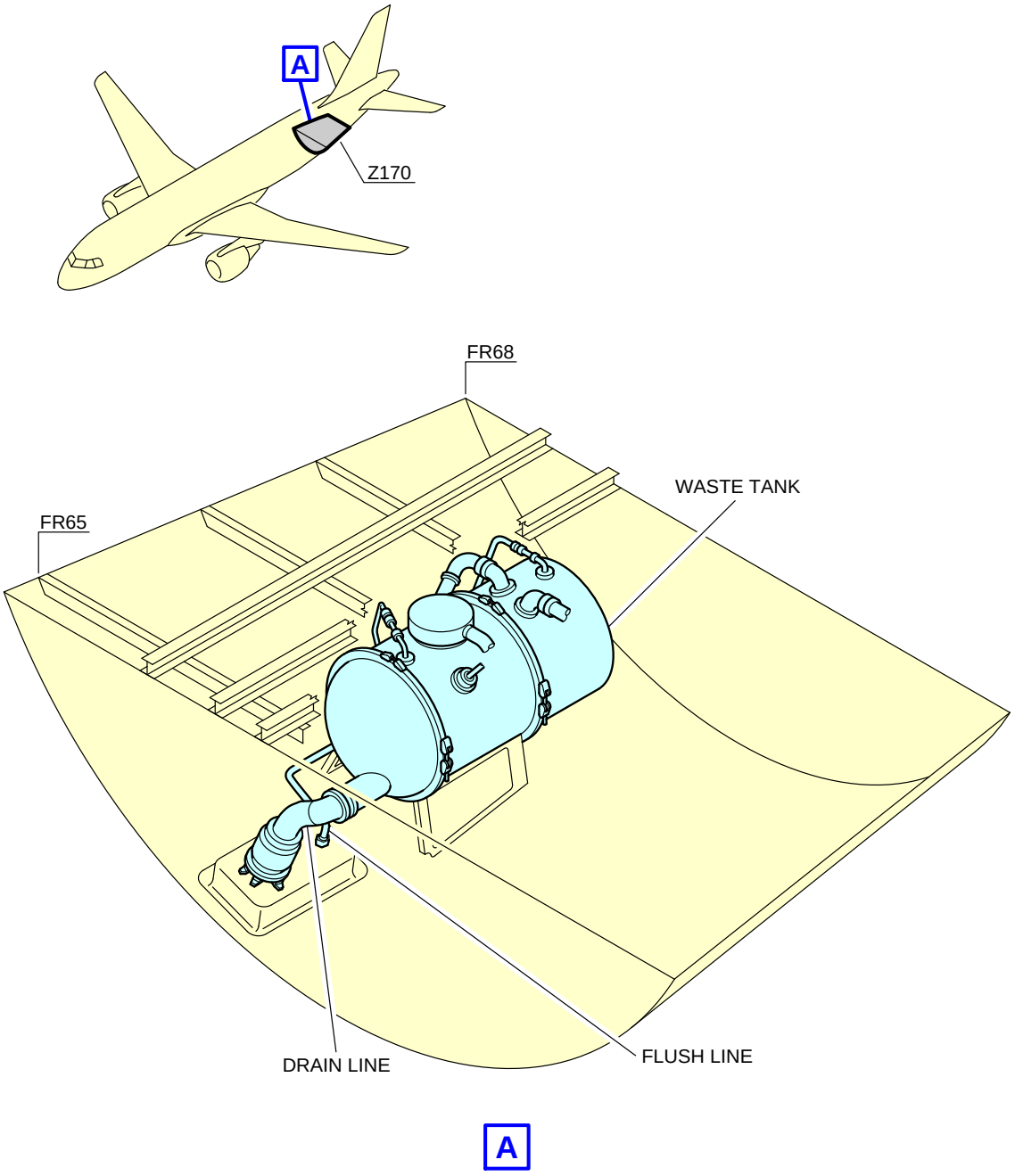
Ground Service Connections
Waste Water Ground Service Panel
FIGURE-5-4-10-991-001-A01

**ON A/C A320-200 A320neo



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Ground Service Connections
Waste Tank Location
FIGURE-5-4-10-991-004-A01

5-5-0 Engine Starting Pneumatic Requirements

****ON A/C A320-200 A320neo**

Engine Starting Pneumatic Requirements

1. The function of this section gives the minimum air-data requirements at the aircraft.

Abbreviation	Definition
ASU	Air Start Unit
HPGC	High Pressure Ground Connection
OAT	Outside Air Temperature

A. The pressure at HPGC must not be more than 60 psig (75 psia) and less than 33 psig (48 psia). The temperature must be less than 220 °C (428 °F).

B. The recommended pressure at HPGC is 40 psig (55 psia).

C. The OAT and the ASU performances (see the technical data from the ASU manufacturer) effect the ASU output temperature.

****ON A/C A320-200**

2. CFM56 Engines for an OAT between -40 °C (-40 °F) and 55 °C (131 °F) at Sea Level

ASU Output Temperature Range	Pressure at HPGC	Mass Flow at HPGC
100 °C (212 °F) - 125 °C (257 °F)	40 psig (55 psia)	186 ppm (84 kg/min)
125 °C (257 °F) - 175 °C (347 °F)	40 psig (55 psia)	180 ppm (82 kg/min)
175 °C (347 °F) - 220 °C (428 °F)	40 psig (55 psia)	169 ppm (77 kg/min)

ASU Output Temperature Range	Pressure at HPGC	Mass Flow at HPGC
TBD	40 psig (55 psia)	TBD

3. IAE V2500 Engines for an OAT between -40 °C (-40 °F) and 55 °C (131 °F)

ASU Output Temperature Range	Pressure at HPGC	Mass Flow at HPGC
100 °C (212 °F) - 125 °C (257 °F)	40 psig (55 psia)	167 ppm (76 kg/min)
125 °C (257 °F) - 175 °C (347 °F)	40 psig (55 psia)	162 ppm (73 kg/min)
175 °C (347 °F) - 220 °C (428 °F)	40 psig (55 psia)	152 ppm (69 kg/min)

ASU Output Temperature Range	Pressure at HPGC	Mass Flow at HPGC
TBD	40 psig (55 psia)	TBD

****ON A/C A320neo**

4. CFM Leap Engines for an OAT between -40 °C (-40 °F) and 55 °C (131 °F)

ASU Output Temperature Range	Pressure at HPGC	Mass Flow at HPGC
100 °C (212 °F) - 125 °C (257 °F)	40 psig (55 psia)	196 ppm (89 kg/min)
125 °C (257 °F) - 175 °C (347 °F)	40 psig (55 psia)	189 ppm (86 kg/min)
175 °C (347 °F) - 220 °C (428 °F)	40 psig (55 psia)	179 ppm (81 kg/min)

ASU Output Temperature Range	Pressure at HPGC	Mass Flow at HPGC
TBD	40 psig (55 psia)	TBD

5. PW1100G Engines for an OAT between -40 °C (-40 °F) and 55 °C (131 °F)

ASU Output Temperature Range	Pressure at HPGC	Mass Flow at HPGC
100 °C (212 °F) - 125 °C (257 °F)	40 psig (55 psia)	194 ppm (88 kg/min)
125 °C (257 °F) - 175 °C (347 °F)	40 psig (55 psia)	188 ppm (85 kg/min)
175 °C (347 °F) - 220 °C (428 °F)	40 psig (55 psia)	177 ppm (80 kg/min)

ASU Output Temperature Range	Pressure at HPGC	Mass Flow at HPGC
TBD	40 psig (55 psia)	TBD

5-6-0 Ground Pneumatic Power Requirements

****ON A/C A320-200 A320neo**

Ground Pneumatic Power Requirements

1. General

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

ABBREVIATION	DEFINITION
A/C	Aircraft
AHM	Aircraft Handling Manual
AMM	Aircraft Maintenance Manual
GC	Ground Connection
GSE	Ground Service Equipment
IFE	In-Flight Entertainment
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 capacity of the equipment (kW) is only indicative and is not sufficient by itself to ensure the performance (outlet temperature and flow rate combinations are the requirements needed for ground power). An example of cooling capacity calculation is given in Section 5.7.

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

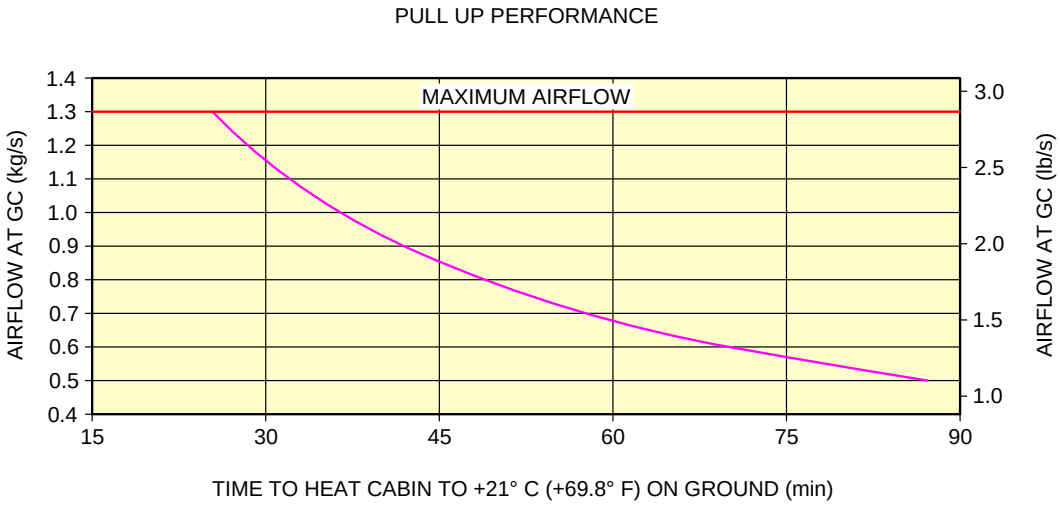
   B. For temperatures at ground connection below 2 °C (35.6 °F) (Subfreezing), the ground equipment shall be compliant with the Airbus document ”Subfreezing PCA Carts - Compliance Document for Suppliers” (contact Airbus to obtain this document) defining all the requirements with which Subfreezing Pre-Conditioning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

2. Ground Pneumatic Power Requirements

   This section provides the ground pneumatic power requirements for:

- Heating (pull up) the cabin, initially at OAT, up to 21 °C (69.8 °F) (see FIGURE 5-6-0-991-001-A)
- Cooling (pull down) the cabin, initially at OAT, down to 27 °C (80.6 °F) (see FIGURE 5-6-0-991-002-A).

****ON A/C A320-200 A320neo**



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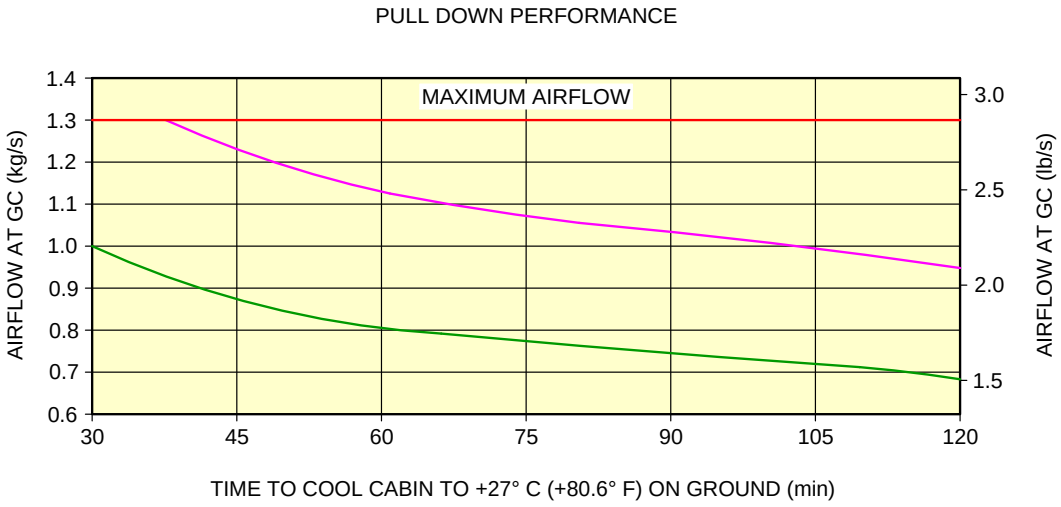
Ground Pneumatic Power Requirements
Heating
FIGURE-5-6-0-991-001-A01

****ON A/C A320-200 A320neo**



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Ground Pneumatic Power Requirements
Cooling
FIGURE-5-6-0-991-002-A01

5-7-0 Preconditioned Airflow Requirements

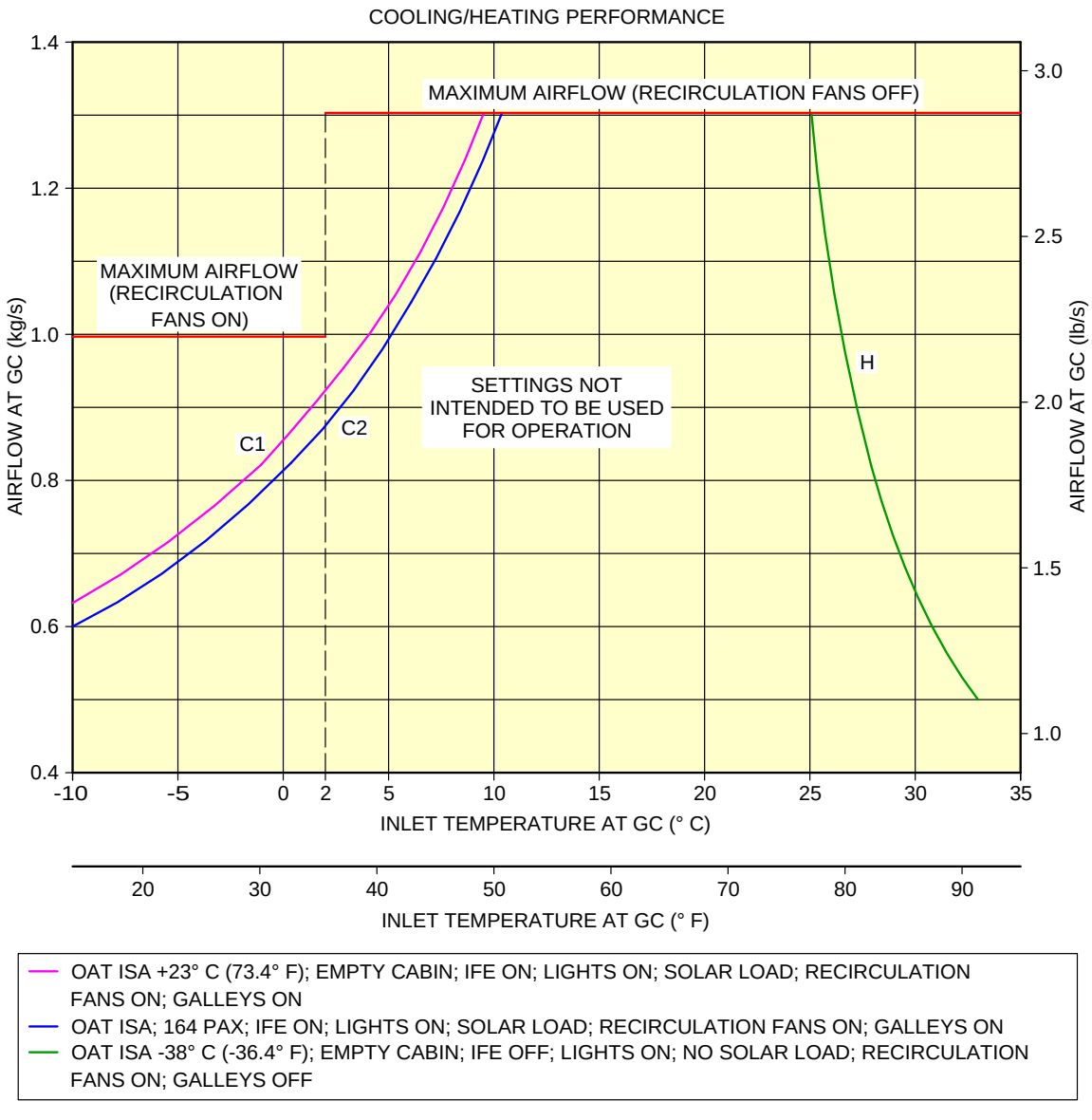
****ON A/C A320-200 A320neo**

Preconditioned Airflow Requirements

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

   These settings are not intended to be used for operation (they are not a substitute for the settings given in the AMM). They are based on theoretical simulations and give the picture of a real steady state.
   The purpose of the air conditioning (cooling) operation (described in the AMM) is to maintain the cabin temperature below 27 °C (80.6 °F) during boarding (therefore it is not a steady state).

****ON A/C A320-200 A320neo**



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Preconditioned Airflow Requirements
FIGURE-5-7-0-991-003-A01

5-8-0 Ground Towing Requirements

****ON A/C A320-200 A320neo**

Ground Towing Requirements

1. This section gives information on aircraft towing.

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

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

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

   This section shows the chart to determine the drawbar pull and tow tractor mass requirements as a function of the following physical characteristics:
   - Aircraft weight,
   - Number of engines at idle,
   - Slope.

   The chart is based on the engine type with the highest idle thrust level.

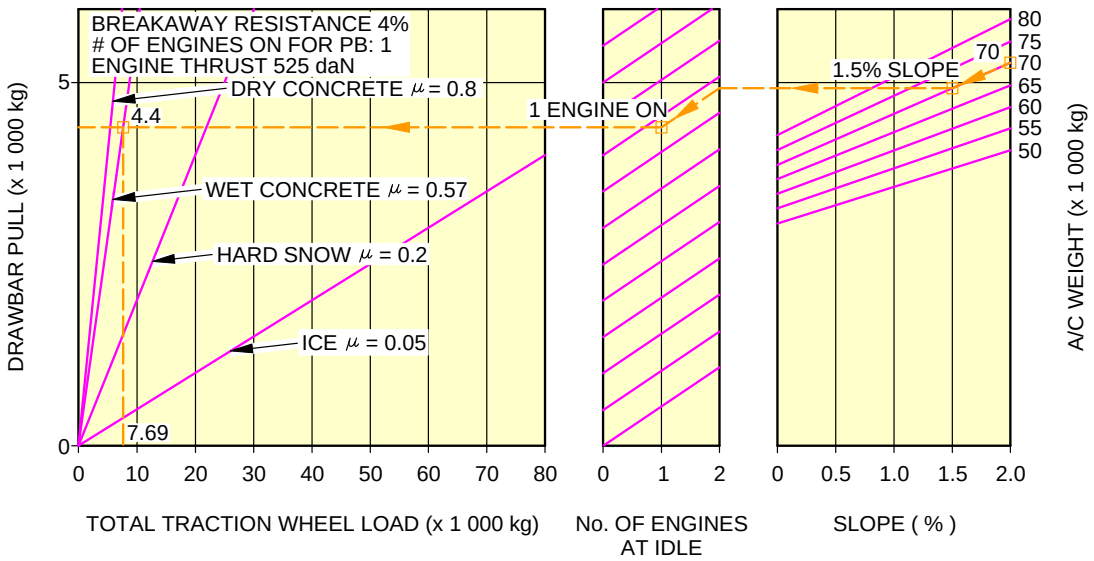
2. Towbar design guidelines

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

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

The towing head is designed according to ISO 8267-1, cat. I.

****ON A/C A320-200**



EXAMPLE HOW TO DETERMINE THE MASS REQUIREMENT TO TOW A A320 AT 70 000 kg, AT 1.5% SLOPE, 1 ENGINE AT IDLE AND FOR WET TARMAC CONDITIONS:

- ON THE RIGHT HAND SIDE OF THE GRAPH, CHOOSE THE RELEVANT AIRCRAFT WEIGHT (70 000 kg),
- FROM THIS POINT DRAW A PARALLEL LINE TO THE REQUIRED SLOPE PERCENTAGE (1.5%),
- FROM THE POINT OBTAINED DRAW A STRAIGHT HORIZONTAL LINE UNTIL No. OF ENGINES AT IDLE = 2,
- FROM THIS POINT DRAW A PARALLEL LINE TO THE REQUESTED No. OF ENGINES (1),
- FROM THIS POINT DRAW A STRAIGHT HORIZONTAL LINE TO THE DRAWBAR PULL AXIS,
- THE Y-COORDINATE OBTAINED IS THE NECESSARY DRAWBAR PULL FOR THE TRACTOR (4 400 kg),
- SEARCH THE INTERSECTION WITH THE "WET CONCRETE" LINE.
  THE OBTAINED X-COORDINATE IS THE TOTAL TRACTION WHEEL LOAD (7 690 kg).

NOTE:

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

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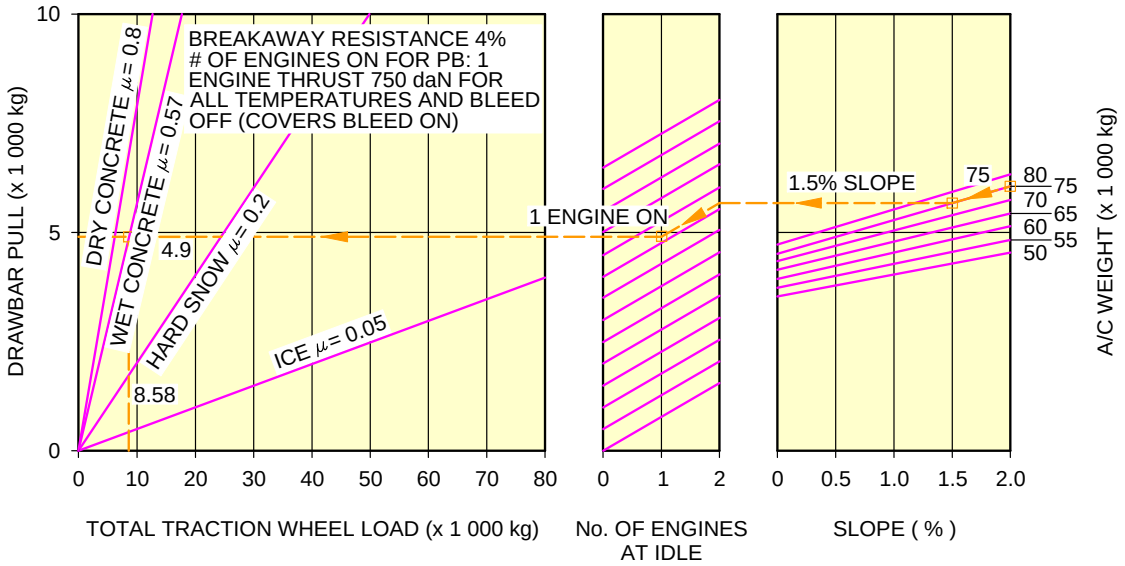
Ground Towing Requirements
FIGURE-5-8-0-991-001-C01

****ON A/C A320neo**



EXAMPLE HOW TO DETERMINE THE MASS REQUIREMENT TO TOW A A320 AT 75 000 kg, AT 1.5% SLOPE, 1 ENGINE AT IDLE AND FOR WET TARMAC CONDITIONS:

- ON THE RIGHT HAND SIDE OF THE GRAPH, CHOOSE THE RELEVANT AIRCRAFT WEIGHT (75 000 kg),
- FROM THIS POINT DRAW A PARALLEL LINE TO THE REQUIRED SLOPE PERCENTAGE (1.5%),
- FROM THE POINT OBTAINED DRAW A STRAIGHT HORIZONTAL LINE UNTIL No. OF ENGINES AT IDLE = 2,
- FROM THIS POINT DRAW A PARALLEL LINE TO THE REQUESTED No. OF ENGINES (1),
- FROM THIS POINT DRAW A STRAIGHT HORIZONTAL LINE TO THE DRAWBAR PULL AXIS,
- THE Y-COORDINATE OBTAINED IS THE NECESSARY DRAWBAR PULL FOR THE TRACTOR (4 900 kg),
- SEARCH THE INTERSECTION WITH THE "WET CONCRETE" LINE.
  THE OBTAINED X-COORDINATE IS THE TOTAL TRACTION WHEEL LOAD (8 580 kg).

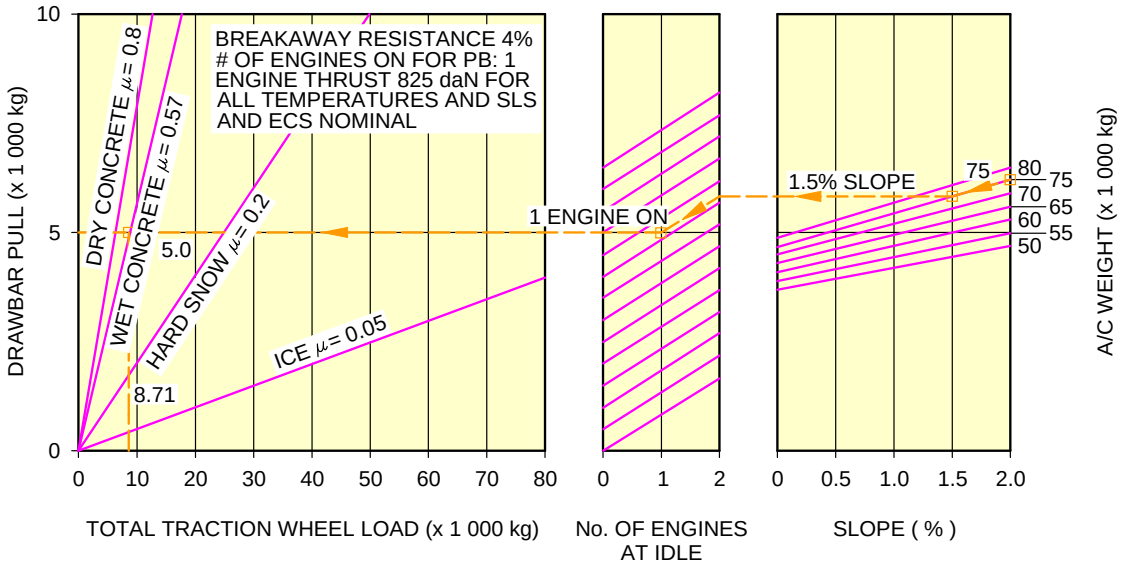
NOTE:

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

N_AC_050800_1_0010501_01_00

Ground Towing Requirements
PW 1100G Engine (Sheet 1 of 2)
FIGURE-5-8-0-991-001-E01

****ON A/C A320neo**



EXAMPLE HOW TO DETERMINE THE MASS REQUIREMENT TO TOW A A320 AT 75 000 kg, AT 1.5% SLOPE, 1 ENGINE AT IDLE AND FOR WET TARMAC CONDITIONS:

- ON THE RIGHT HAND SIDE OF THE GRAPH, CHOOSE THE RELEVANT AIRCRAFT WEIGHT (75 000 kg),
- FROM THIS POINT DRAW A PARALLEL LINE TO THE REQUIRED SLOPE PERCENTAGE (1.5%),
- FROM THE POINT OBTAINED DRAW A STRAIGHT HORIZONTAL LINE UNTIL No. OF ENGINES AT IDLE = 2,
- FROM THIS POINT DRAW A PARALLEL LINE TO THE REQUESTED No. OF ENGINES (1),
- FROM THIS POINT DRAW A STRAIGHT HORIZONTAL LINE TO THE DRAWBAR PULL AXIS,
- THE Y-COORDINATE OBTAINED IS THE NECESSARY DRAWBAR PULL FOR THE TRACTOR (5 000 kg),
- SEARCH THE INTERSECTION WITH THE "WET CONCRETE" LINE.
  THE OBTAINED X-COORDINATE IS THE TOTAL TRACTION WHEEL LOAD (8 710 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
CFM LEAP-1A Engine (Sheet 2 of 2)
FIGURE-5-8-0-991-001-E01

5-9-0 De-Icing and External Cleaning

****ON A/C A320-200 A320neo**

De-Icing and External Cleaning

1. De-Icing and External Cleaning on Ground

   The mobile equipment for aircraft de-icing and external cleaning must be capable of reaching heights up to approximately 13 m (43 ft).

2. De-Icing

AIRCRAFT TYPE	Wing Top Surface (Both Sides)		Wingtip Devices (Both Inside and Outside Surfaces) (Both Sides)		HTP Top Surface (Both Sides)		VTP (Both Sides)	
	m^2	ft^2	m^2	ft^2	m^2	ft^2	m^2	ft^2
A320	100	1 076	2	22	27	291	43	463
A320 Sharklet/neo	100	1 076	10	108	27	291	43	463

AIRCRAFT TYPE	Fuselage Top Surface (Top Third - 120° Arc)		Nacelle and Pylon (Top Third - 120° Arc) (All Engines)		Total De-Iced Area	
	m^2	ft^2	m^2	ft^2	m^2	ft^2
A320	138	1 485	24	258	333	3 584
A320 Sharklet/neo	138	1 485	24	258	341	3 670

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)	
	m^2	ft^2	m^2	ft^2	m^2	ft^2
A320	100	1 076	103	1 109	2	22
A320 Sharklet/neo	100	1 076	103	1 109	10	108

AIRCRAFT TYPE	HTP Top Surface (Both Sides)		HTP Lower Surface (Both Sides)		VTP (Both Sides)	
	m^2	ft^2	m^2	ft^2	m^2	ft^2
A320	27	291	27	291	43	463
A320 Sharklet/neo	27	291	27	291	43	463

AIRCRAFT TYPE	Fuselage and Belly Fairing		Nacelle and Pylon (All Engines)		Total Cleaned Area	
	m^2	ft^2	m^2	ft^2	m^2	ft^2
A320	421	4 532	73	786	796	8 568
A320 Sharklet/neo	421	4 532	73	786	804	8 654

NOTE : Dimensions are approximate.

OPERATING CONDITIONS

6-1-0 Engine Exhaust Velocities and Temperatures

****ON A/C A320-200 A320neo**

Engine Exhaust Velocities and Temperatures

****ON A/C A320-200**

1. General

   This section provides the estimated engine exhaust efflux velocities and temperatures contours for Ground Idle, Breakaway and Maximum Take-Off (MTO) conditions.

****ON A/C A320neo**

2. General

   This section provides the estimated engine exhaust velocity and temperature contours for MTO, Breakaway 12% MTO, Breakaway 24% MTO and Ground Idle conditions for the CFM LEAP-1A and PW 1100G engines.

   The MTO 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 A/C from a static position at its maximum ramp weight. Breakaway thrust corresponds to 12% MTO if applied on both engines and 24% MTO when applied on a single engine (Idle thrust on the other engine).

   The Idle data, provided by the engine manufacturer, are calculated for operational conditions ISA +15K (+15°C), Sea Level, Static and no headwind. 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 effects of on-wing installation are not taken into account. The effects of ground proximity are not taken into account for PW 1100G engines, but they are taken into account for the CFM LEAP-1A engines.

   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 313K (+40°C), 323K (+50°C) and 333K (+60°C). The velocity and temperature contours do not take into account possible variations affecting performance, such as ambient temperature, field elevation or failure cases leading to an abnormal bleed configuration. To evaluate the impact of these specific variables on the exhaust contours, a specific study of the airport where the aircraft is intended to operate should be carried out.

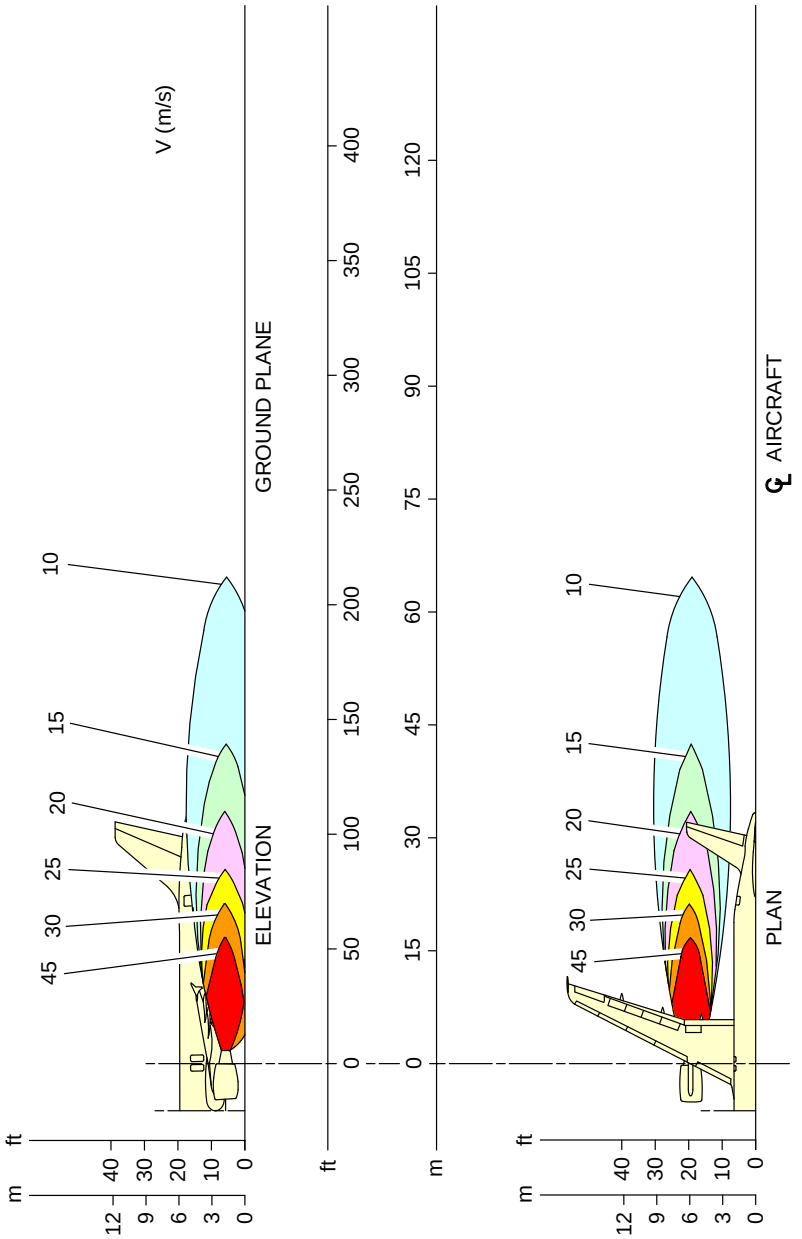
6-1-1 Engine Exhaust Velocities Contours - Ground Idle Power

****ON A/C A320-200 A320neo**

Engine Exhaust Velocities Contours - Ground Idle Power

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

****ON A/C A320-200**



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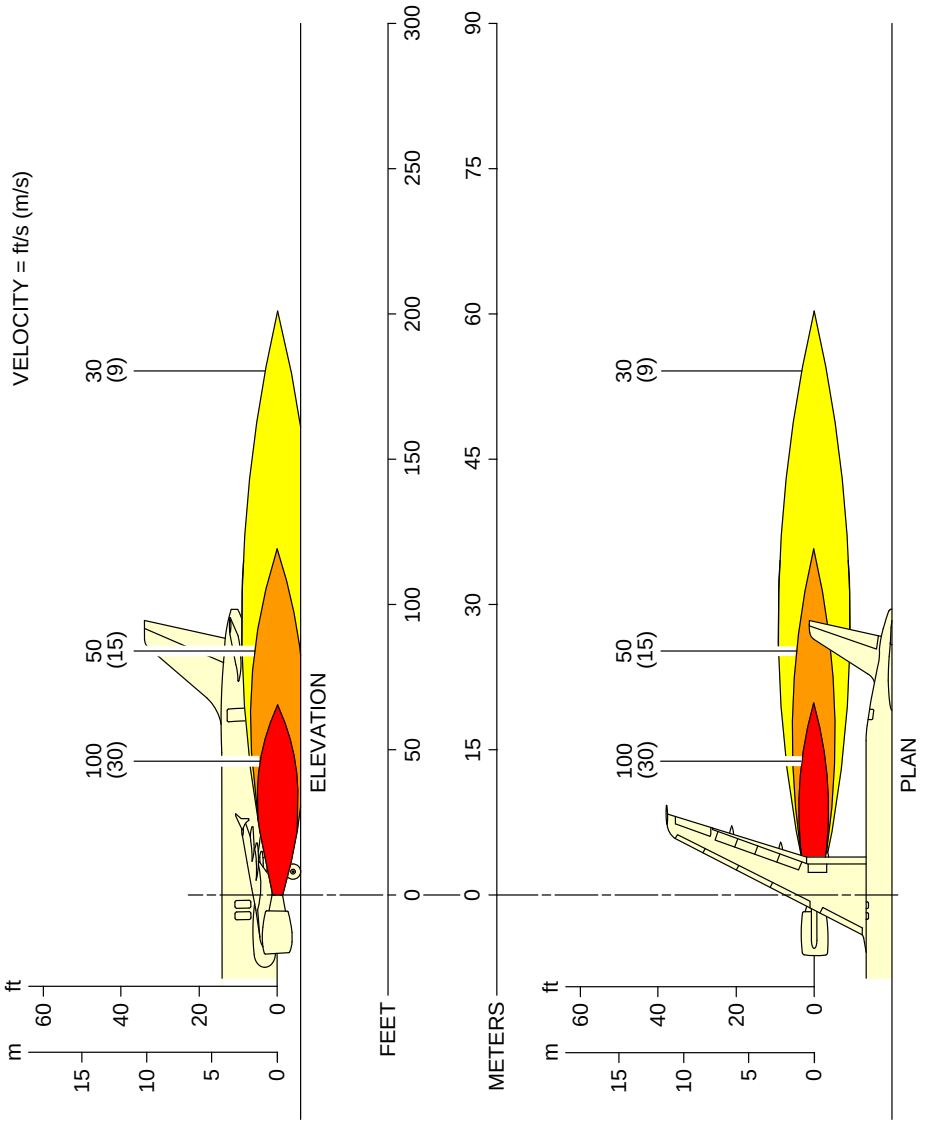
Engine Exhaust Velocities
Ground Idle Power – CFM56 Series Engine
FIGURE-6-1-1-991-005-A01

****ON A/C A320-200**



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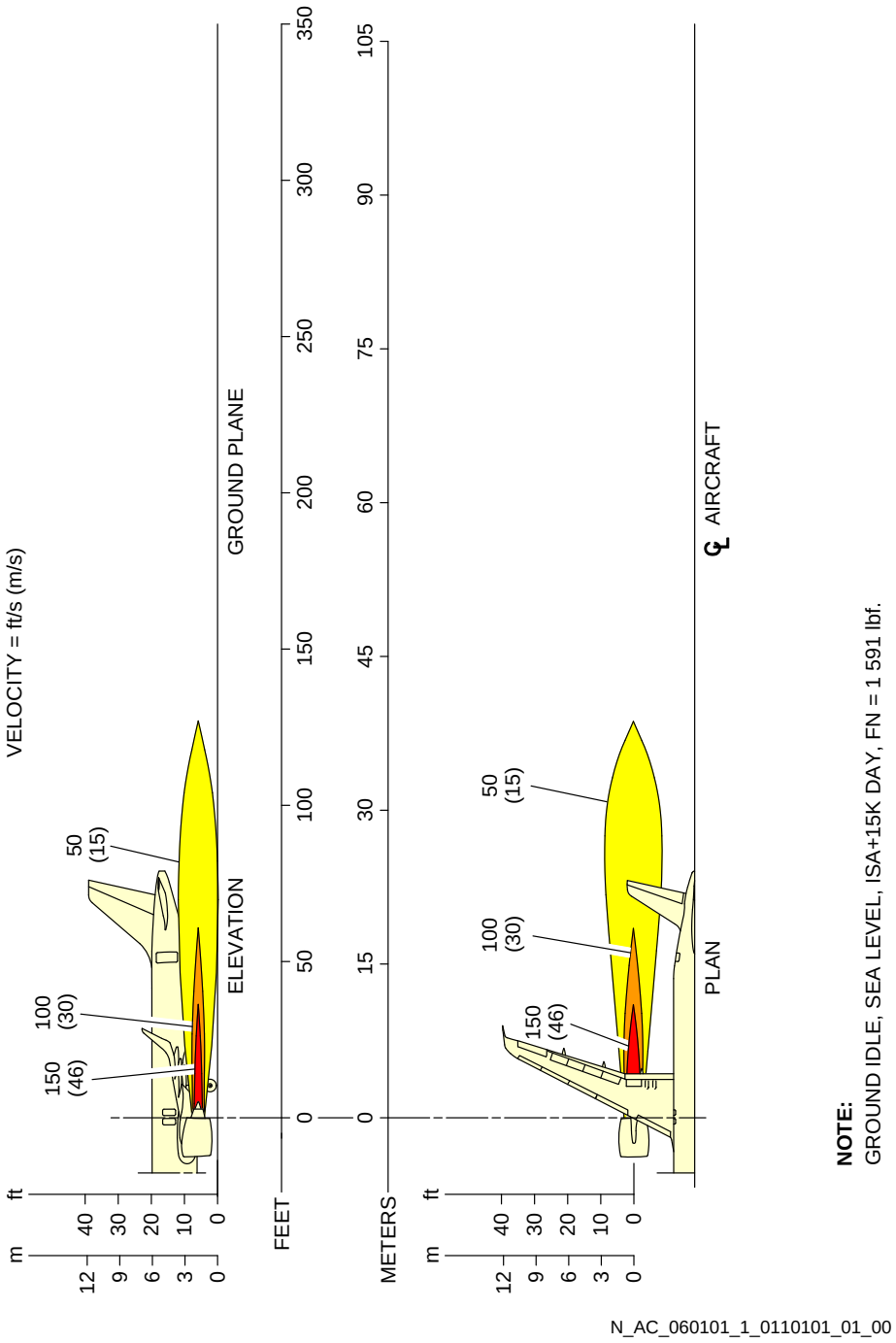
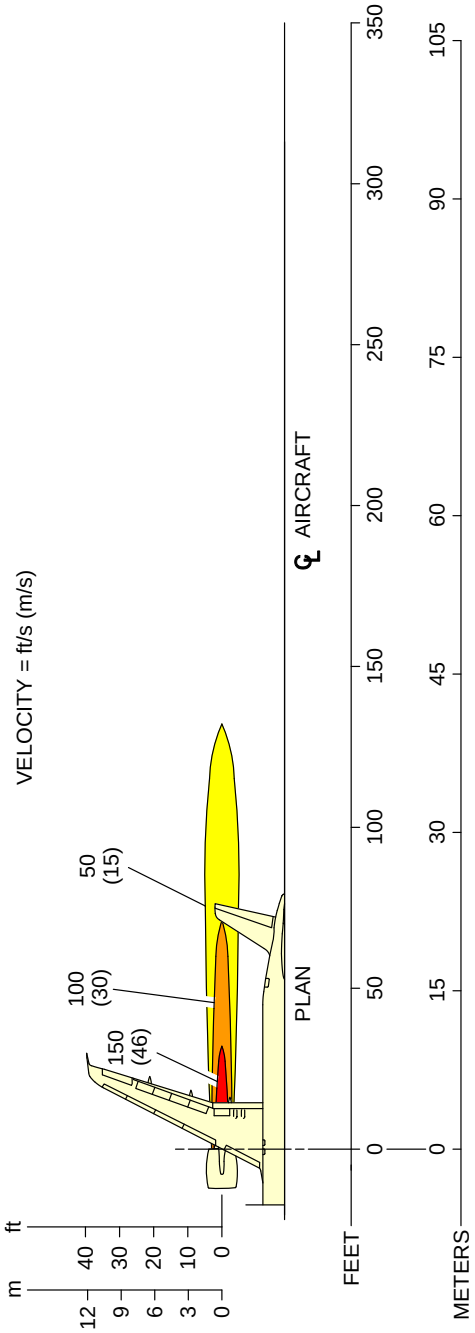
Engine Exhaust Velocities
Ground Idle Power – IAE V2500 Series Engine
FIGURE-6-1-1-991-006-A01

****ON A/C A320neo**



Engine Exhaust Velocities
Ground Idle Power – CFM LEAP-1A Engine
FIGURE-6-1-1-991-011-A01

****ON A/C A320neo**



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Engine Exhaust Velocities
Ground Idle Power – PW 1100G Engine
FIGURE-6-1-1-991-012-A01

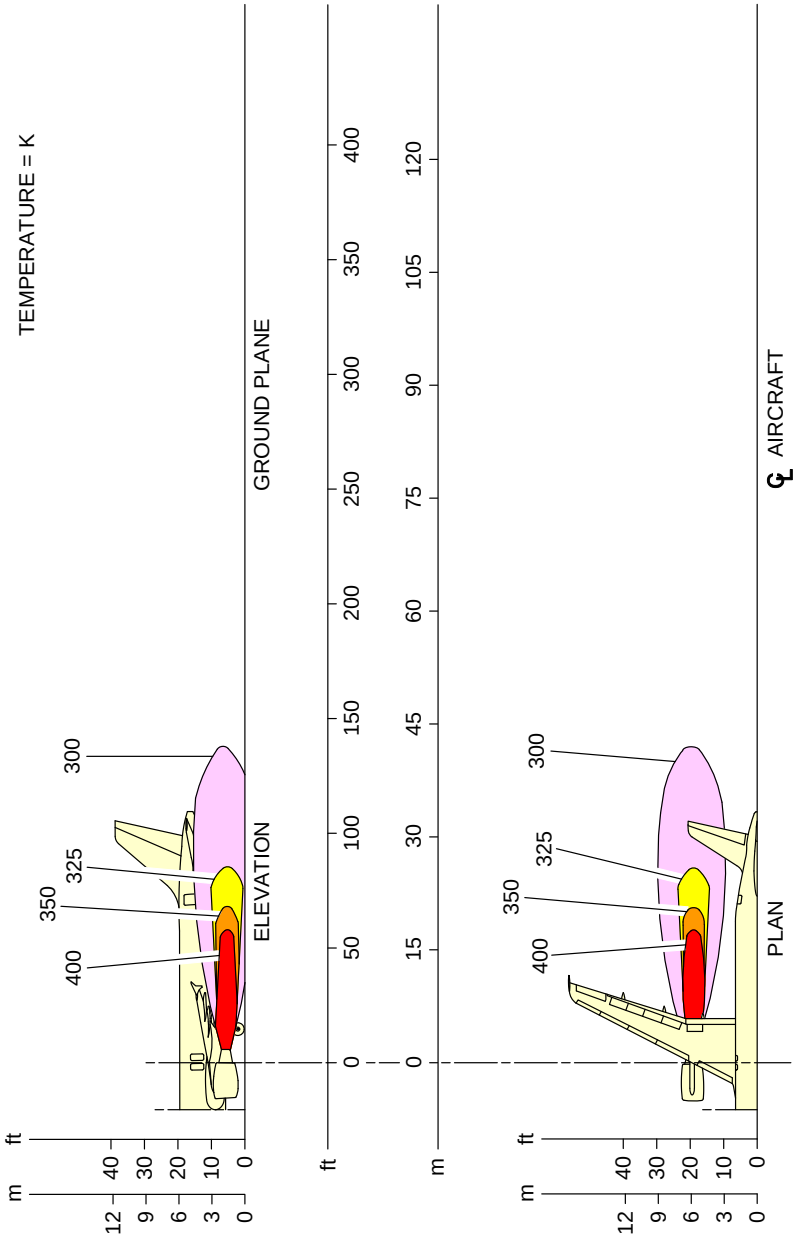
6-1-2 Engine Exhaust Temperatures Contours - Ground Idle Power

****ON A/C A320-200 A320neo**

Engine Exhaust Temperatures Contours - Ground Idle Power

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

****ON A/C A320-200**



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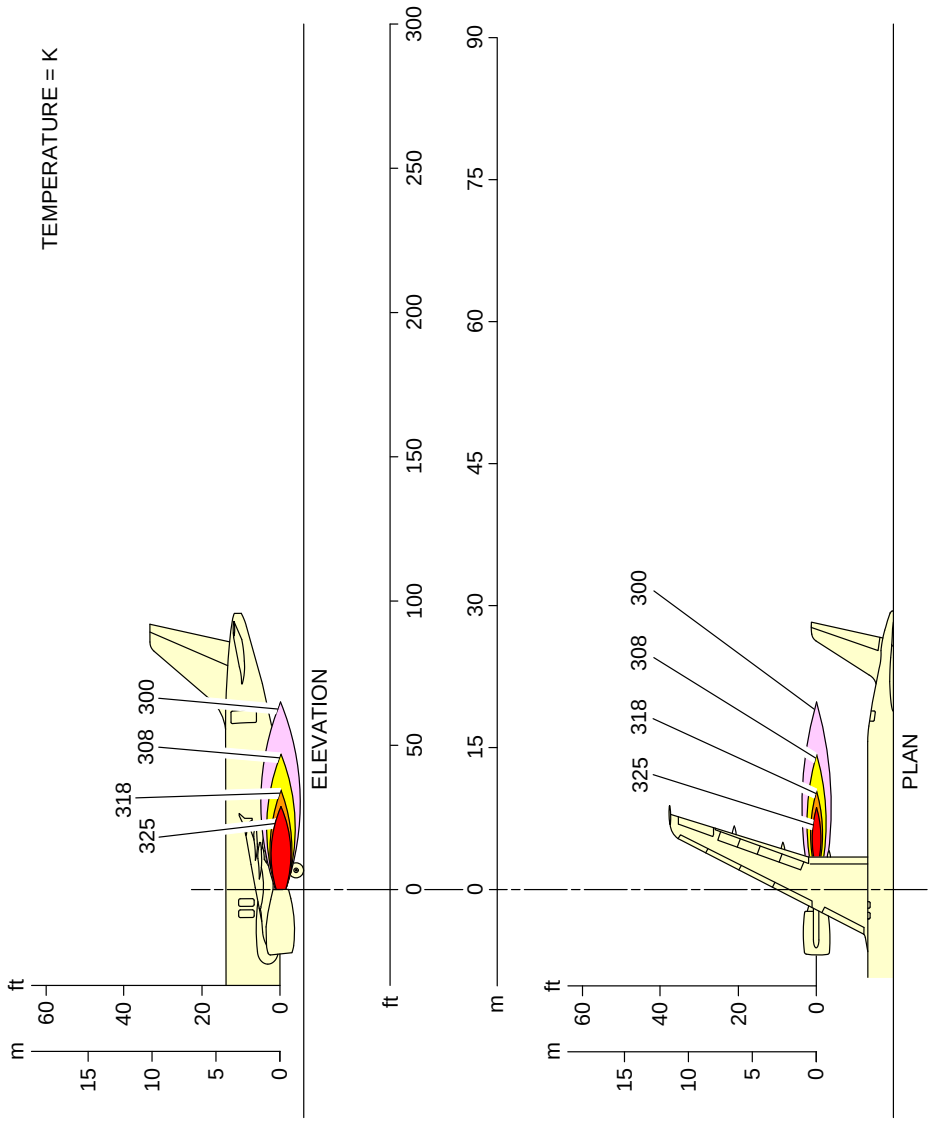
Engine Exhaust Temperatures
Ground Idle Power – CFM56 Series Engine
FIGURE-6-1-2-991-005-A01

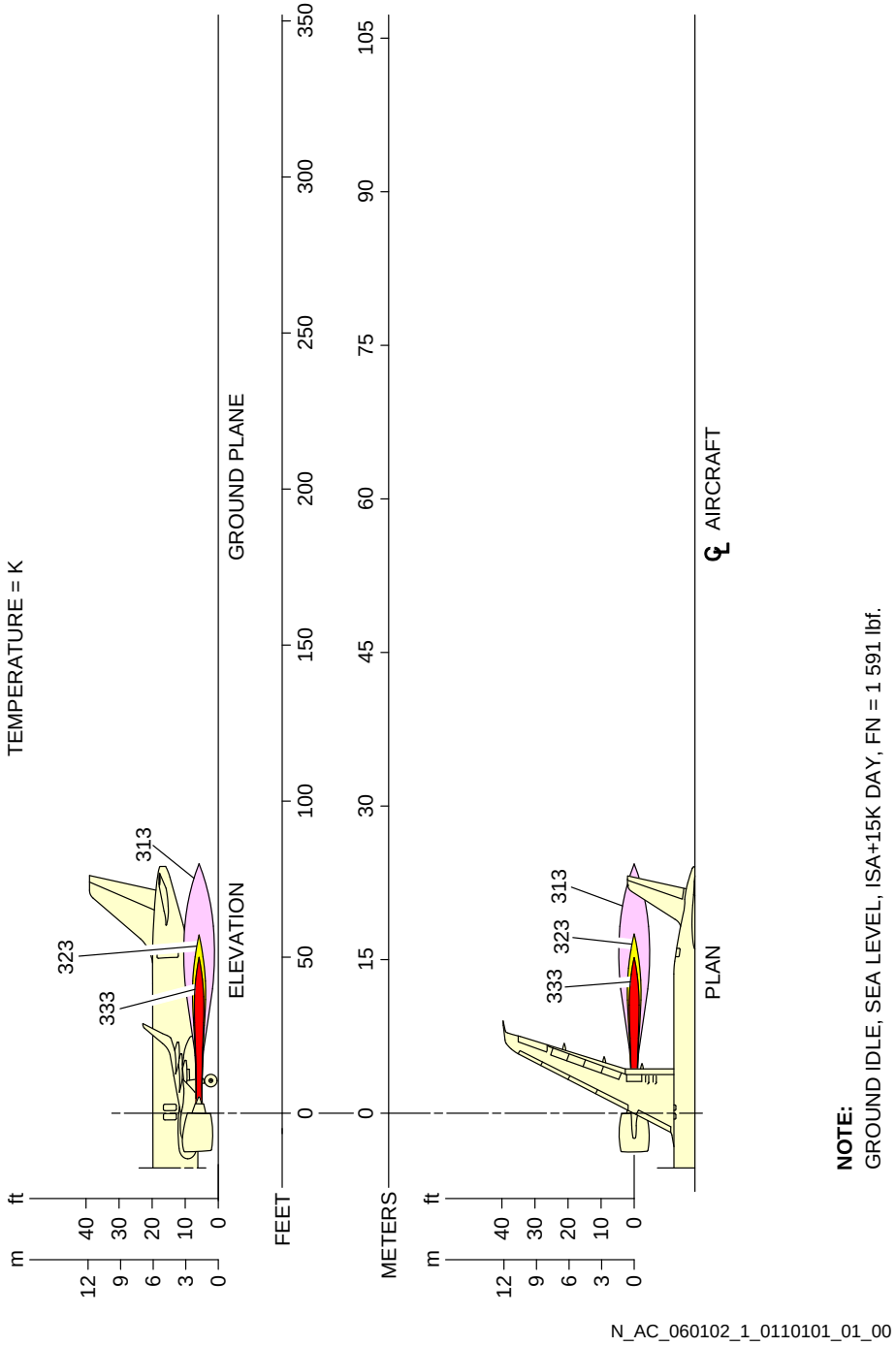
****ON A/C A320-200**



N_AC_060102_1_0060101_01_01

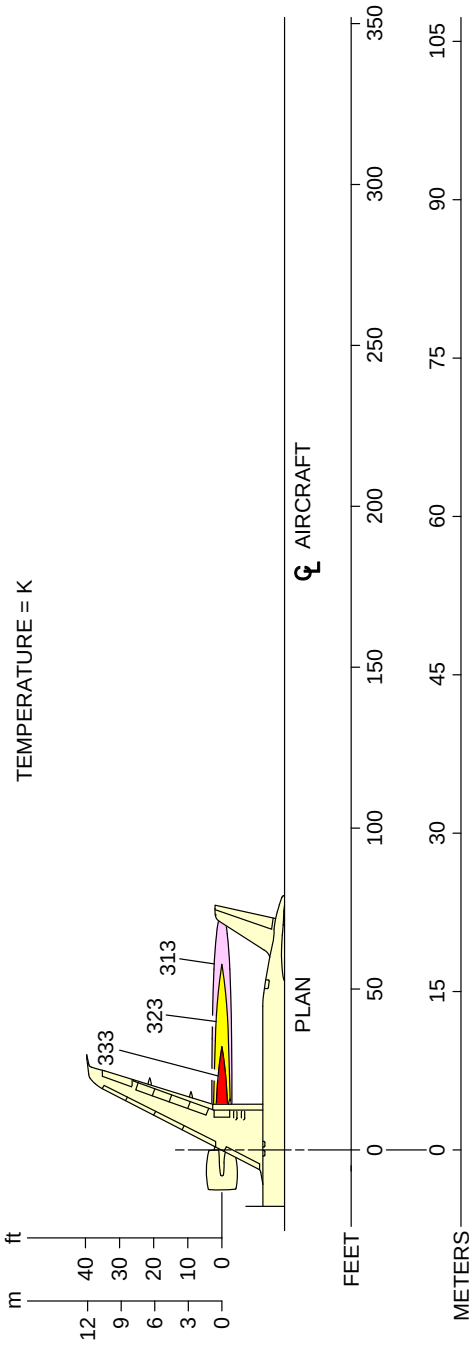
Engine Exhaust Temperatures
Ground Idle Power – IAE V2500 Series Engine
FIGURE-6-1-2-991-006-A01

****ON A/C A320neo**



Engine Exhaust Temperatures
Ground Idle Power – CFM LEAP-1A Engine
FIGURE-6-1-2-991-011-A01

****ON A/C A320neo**



N_AC_060102_1_0120101_01_00

Engine Exhaust Temperatures
Ground Idle Power – PW 1100G Engine
FIGURE-6-1-2-991-012-A01

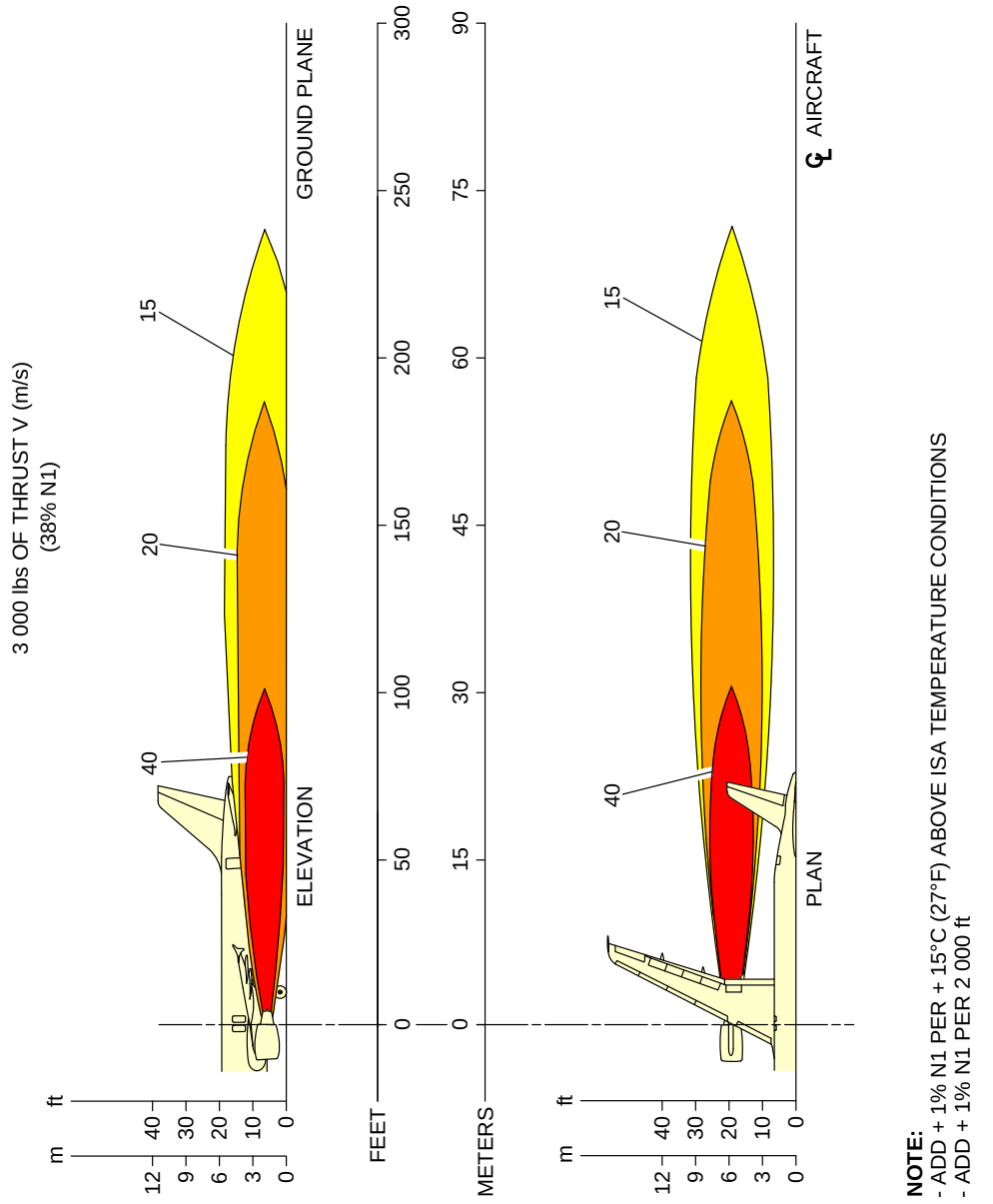
6-1-3 Engine Exhaust Velocities Contours - Breakaway Power

****ON A/C A320-200 A320neo**

Engine Exhaust Velocities Contours - Breakaway Power

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

****ON A/C A320-200**



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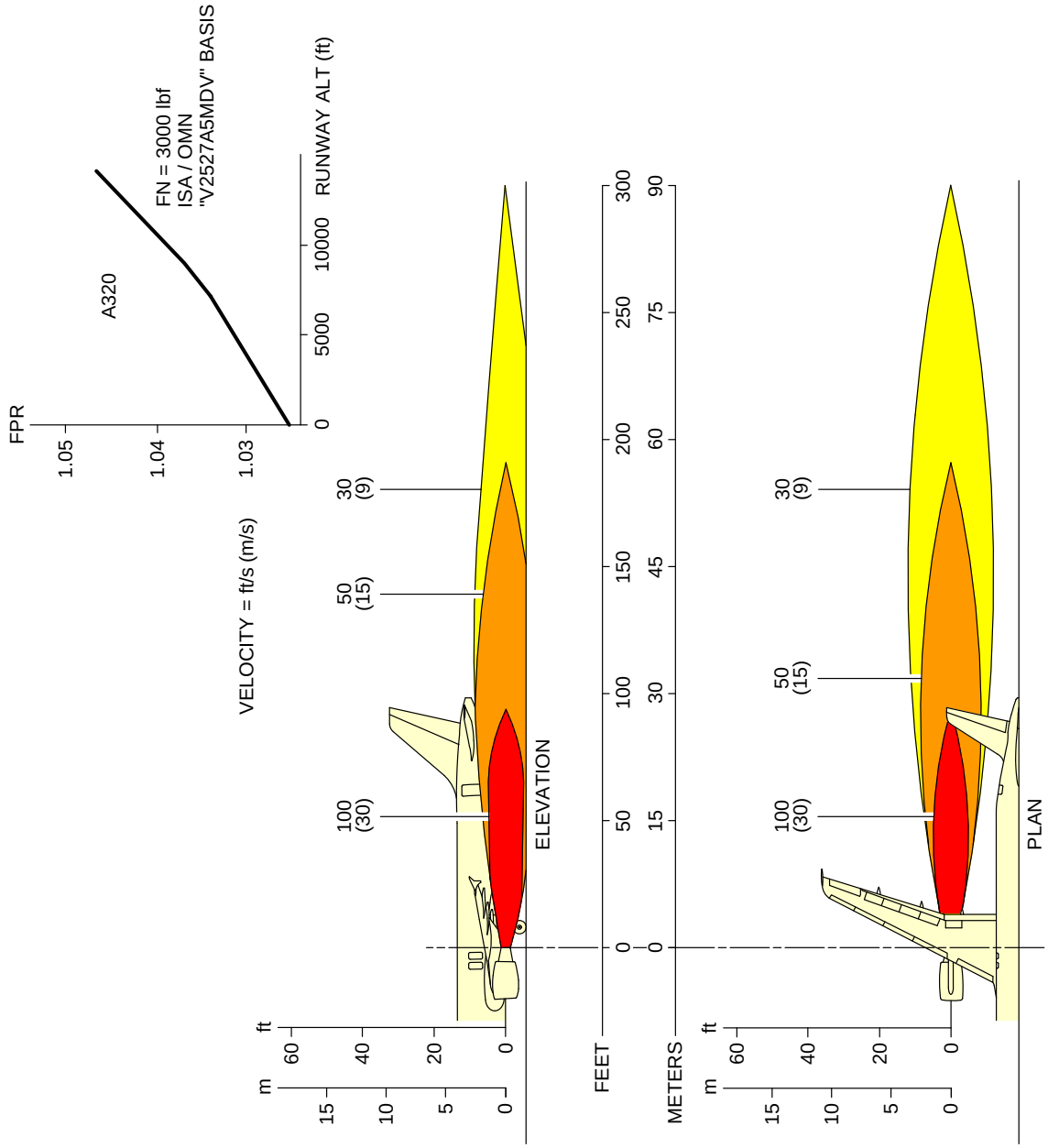
Engine Exhaust Velocities
Breakaway Power – CFM56 Series Engine
FIGURE-6-1-3-991-003-A01

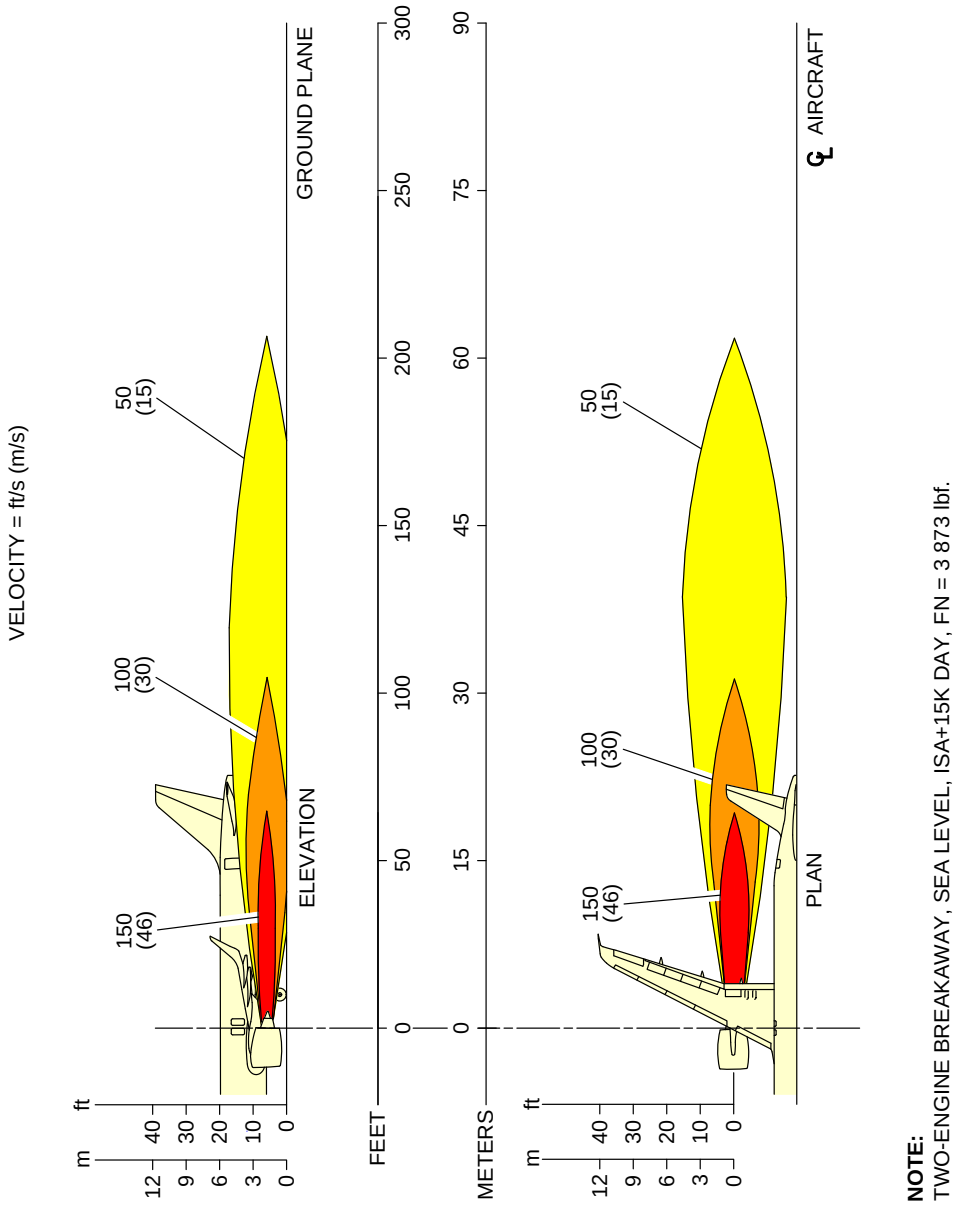
****ON A/C A320-200**



N_AC_060103_1_0040101_01_00

Engine Exhaust Velocities
Breakaway Power – IAE V2500 Series Engine
FIGURE-6-1-3-991-004-A01

****ON A/C A320neo**



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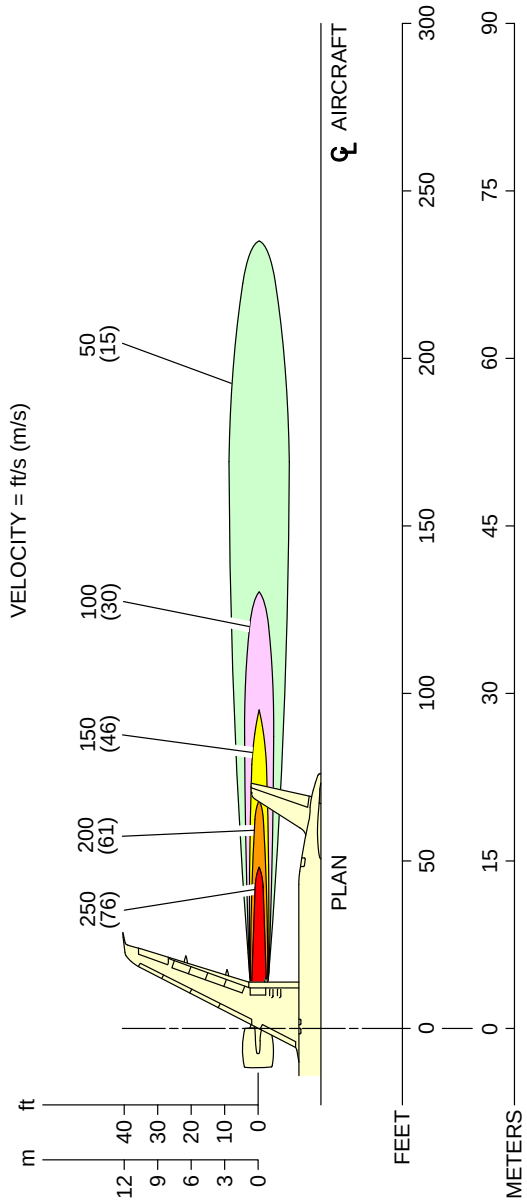
Engine Exhaust Velocities
Breakaway Power 12% MTO – CFM LEAP-1A Engine
FIGURE-6-1-3-991-013-A01

****ON A/C A320neo**



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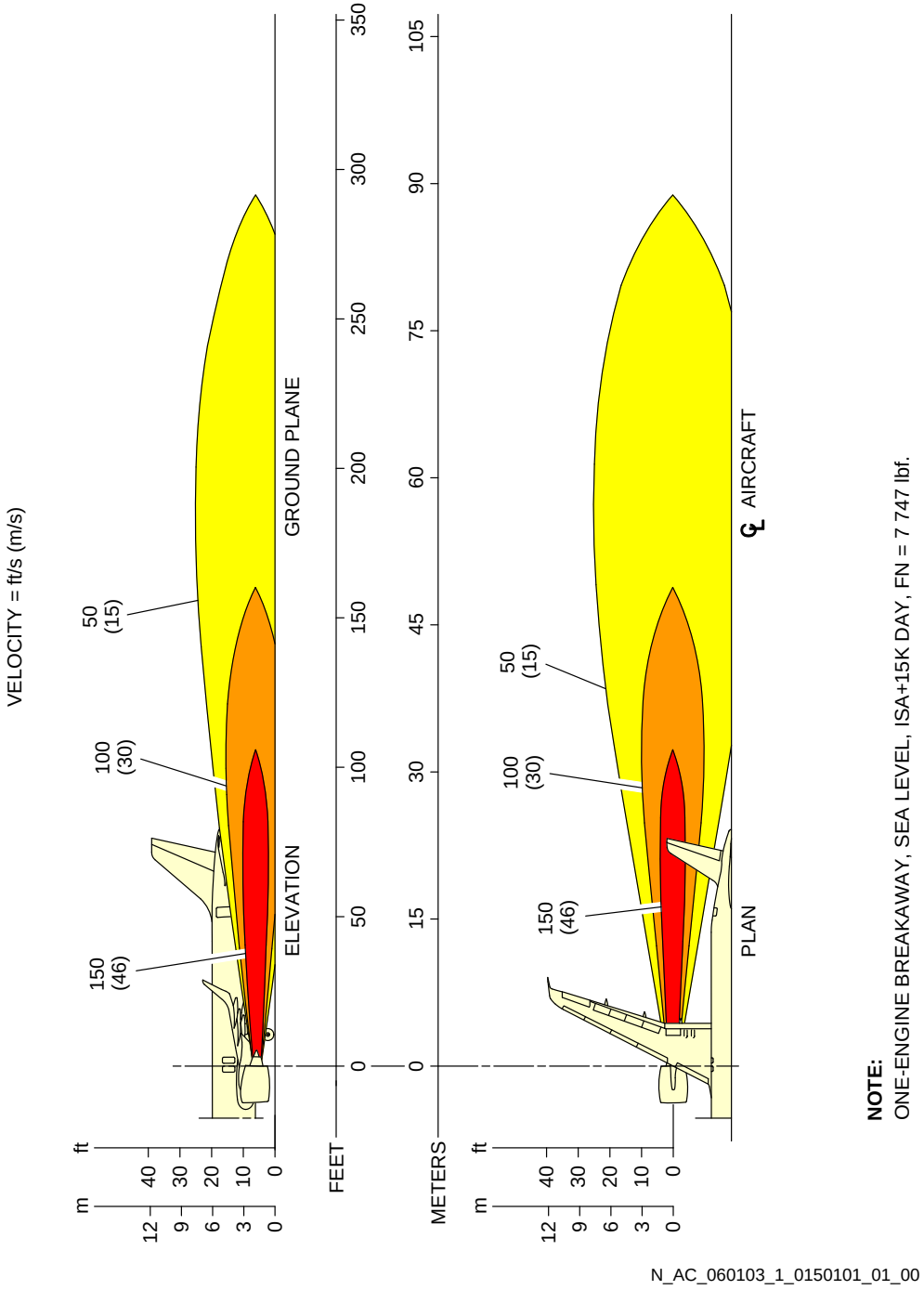
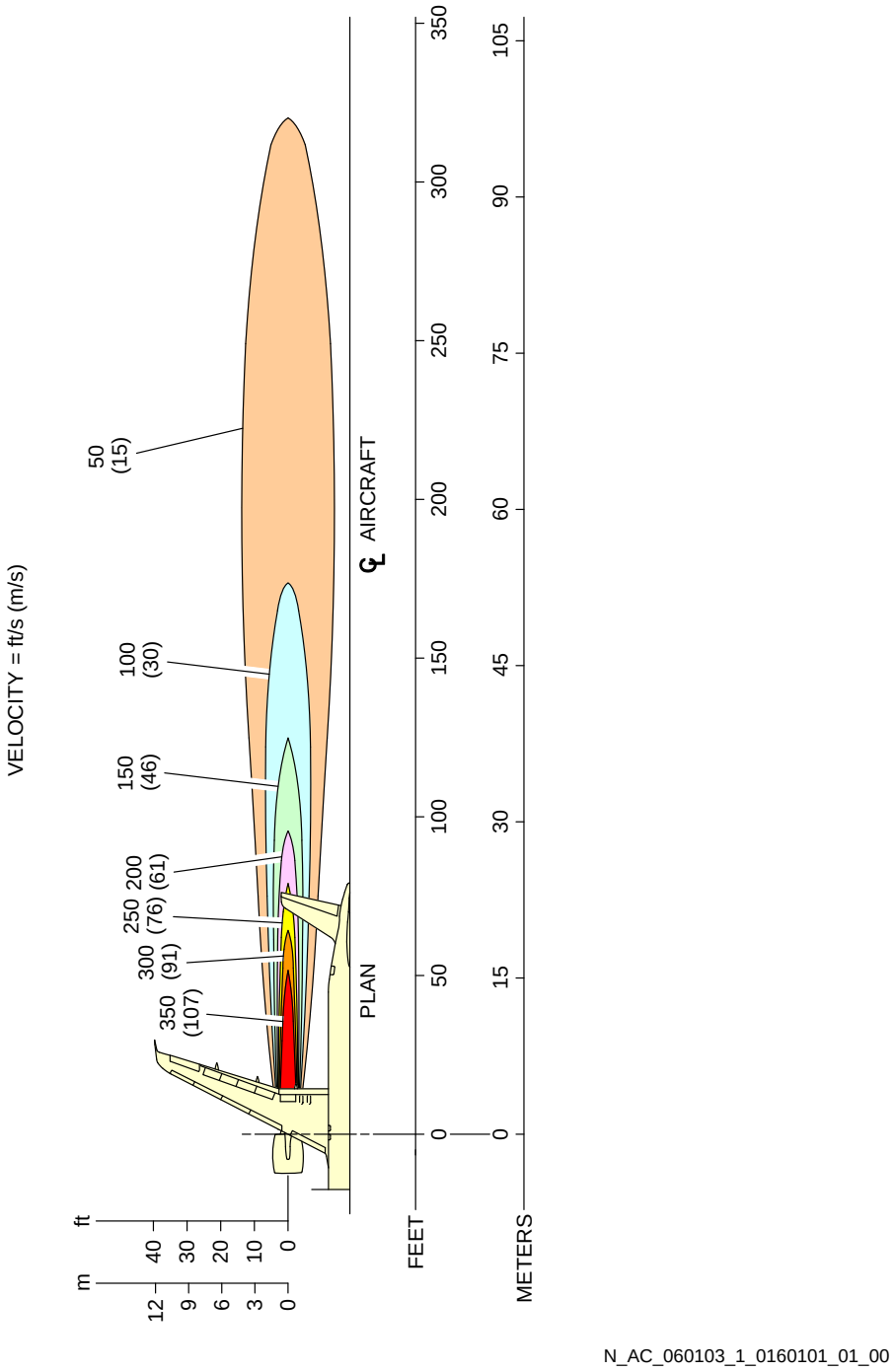
Engine Exhaust Velocities
Breakaway Power 12% MTO – PW 1100G Engine
FIGURE-6-1-3-991-014-A01

****ON A/C A320neo**



Engine Exhaust Velocities
Breakaway Power 24% MTO – CFM LEAP-1A Engine
FIGURE-6-1-3-991-015-A01

****ON A/C A320neo**



Engine Exhaust Velocities
Breakaway Power 24% MTO – PW 1100G Engine
FIGURE-6-1-3-991-016-A01

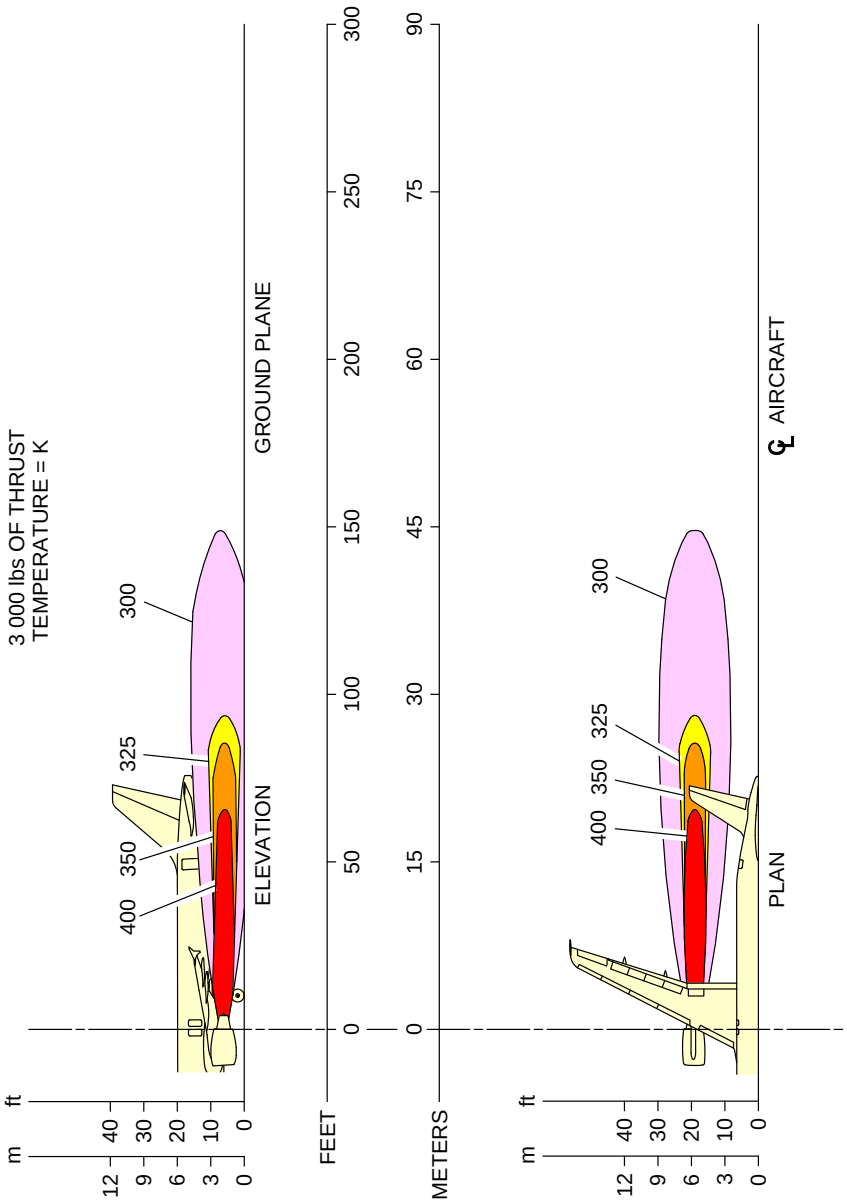
6-1-4 Engine Exhaust Temperatures Contours - Breakaway Power

****ON A/C A320-200 A320neo**

Engine Exhaust Temperatures Contours - Breakaway Power

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

****ON A/C A320-200**



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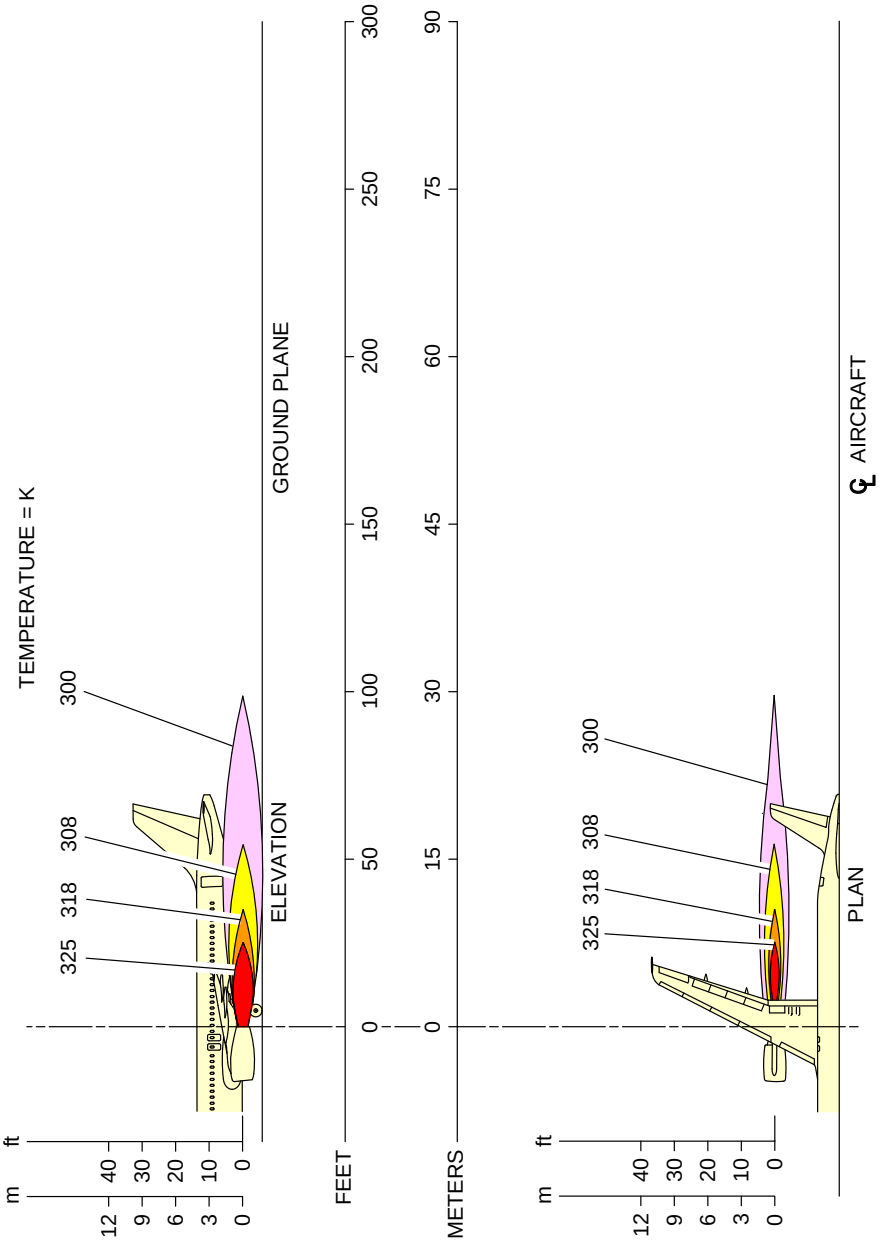
Engine Exhaust Temperatures
Breakaway Power – CFM56 Series Engine
FIGURE-6-1-4-991-003-A01

****ON A/C A320-200**



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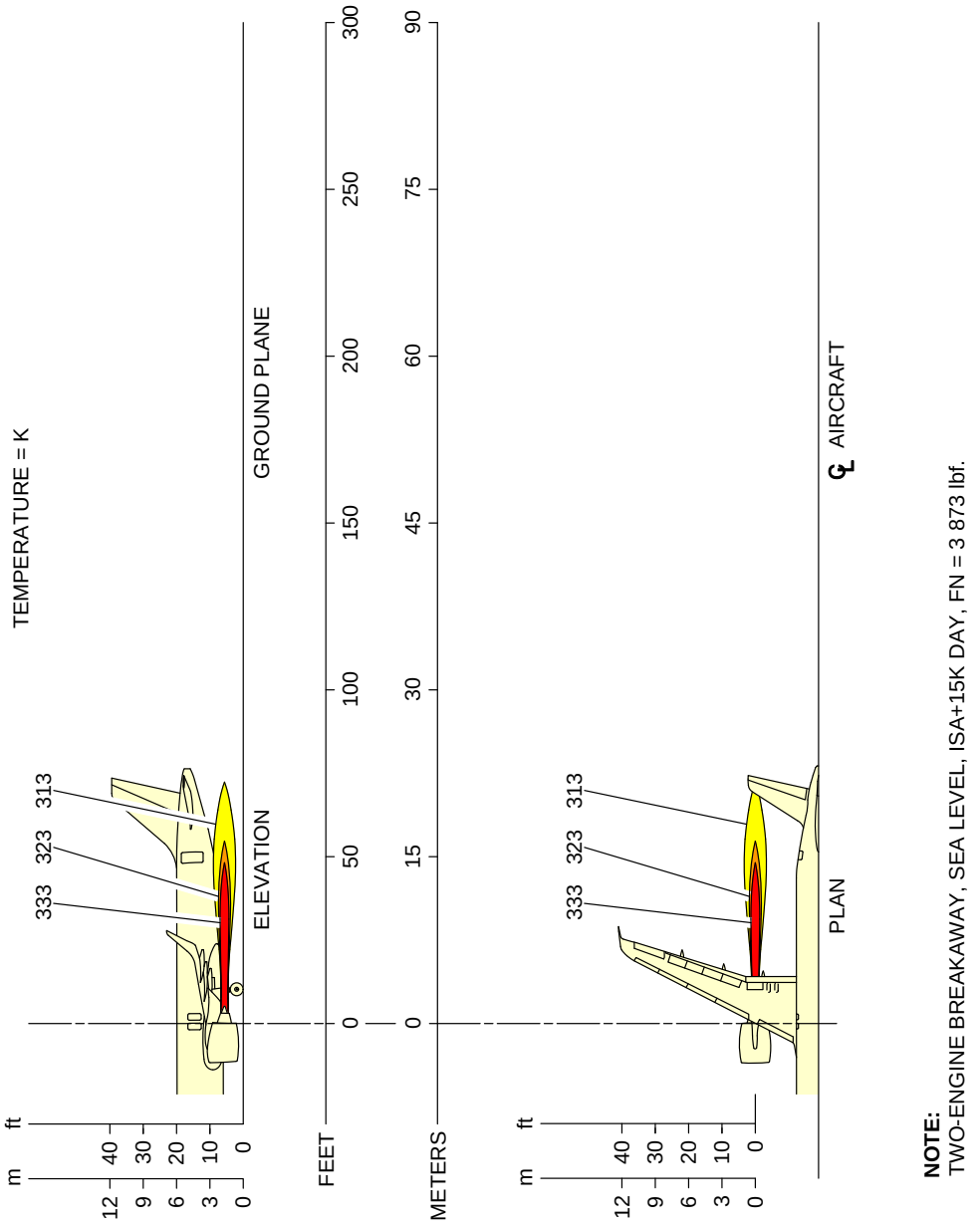
Engine Exhaust Temperatures
Breakaway Power – IAE V2500 Series Engine
FIGURE-6-1-4-991-004-A01

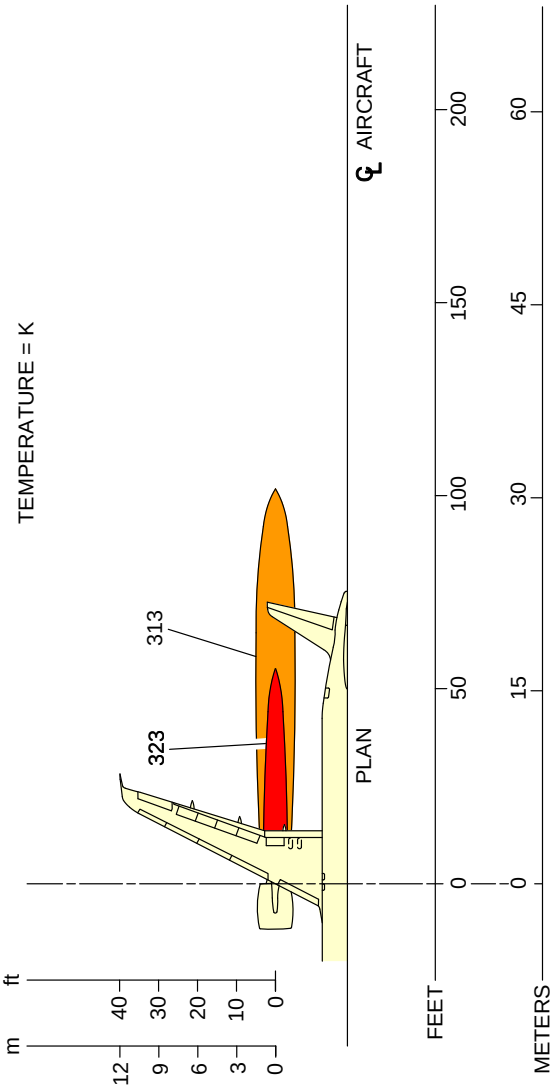
****ON A/C A320neo**



N_AC_060104_1_0090101_01_00

Engine Exhaust Temperatures
Breakaway Power 12% MTO - CFM LEAP-1A Engine
FIGURE-6-1-4-991-009-A01

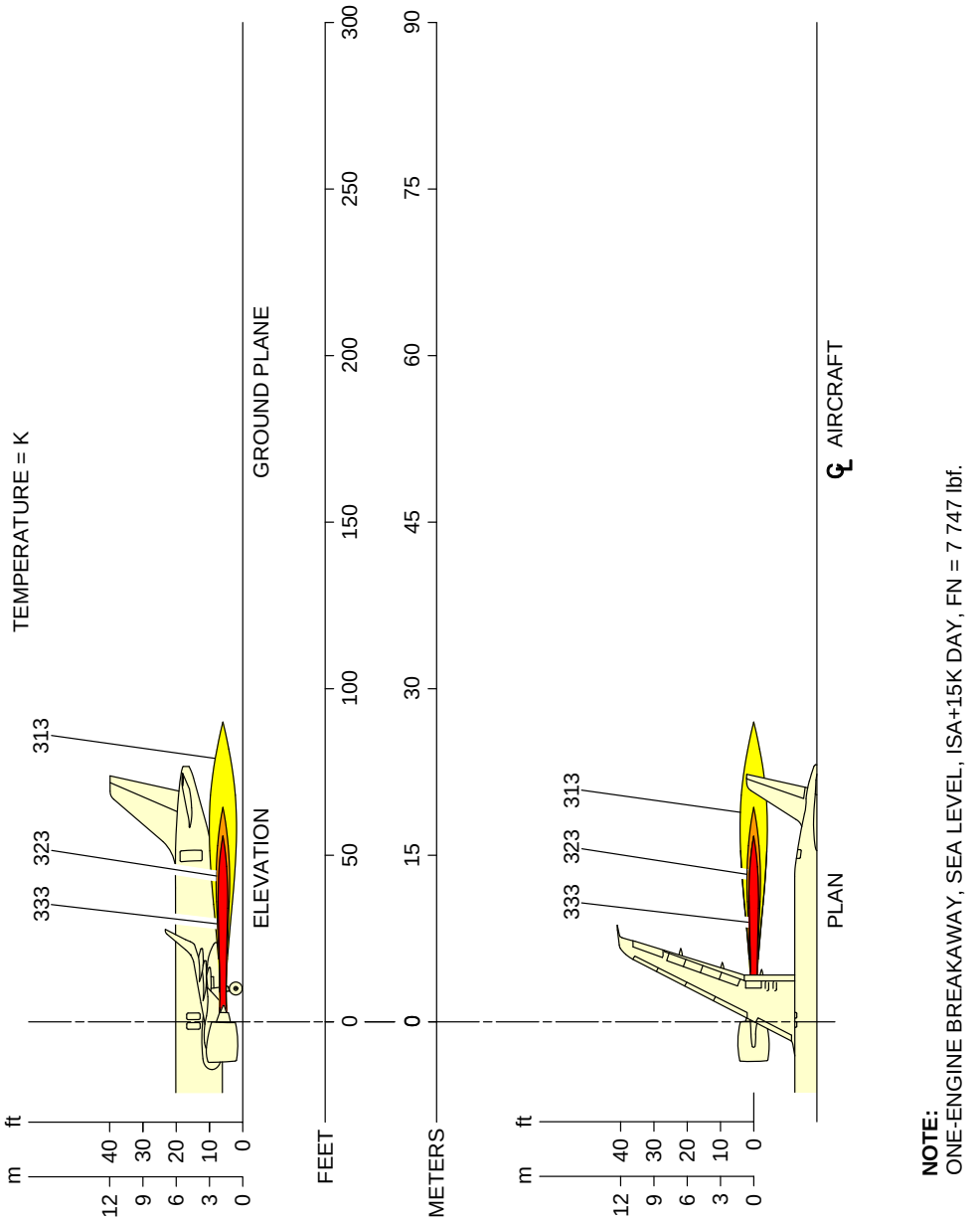
****ON A/C A320neo**



N_AC_060104_1_0100101_01_00

Engine Exhaust Temperatures
Breakaway Power 12% MTO - PW 1100G Engine
FIGURE-6-1-4-991-010-A01

****ON A/C A320neo**



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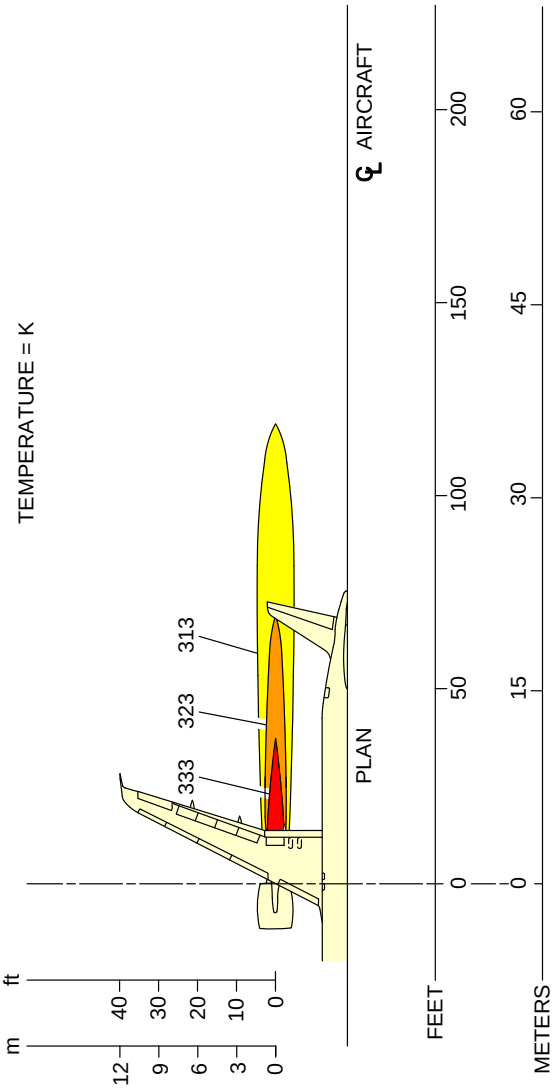
Engine Exhaust Temperatures
Breakaway Power 24% MTO - CFM LEAP-1A Engine
FIGURE-6-1-4-991-011-A01

****ON A/C A320neo**



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Engine Exhaust Temperatures
Breakaway Power 24% MTO - PW 1100G Engine
FIGURE-6-1-4-991-012-A01

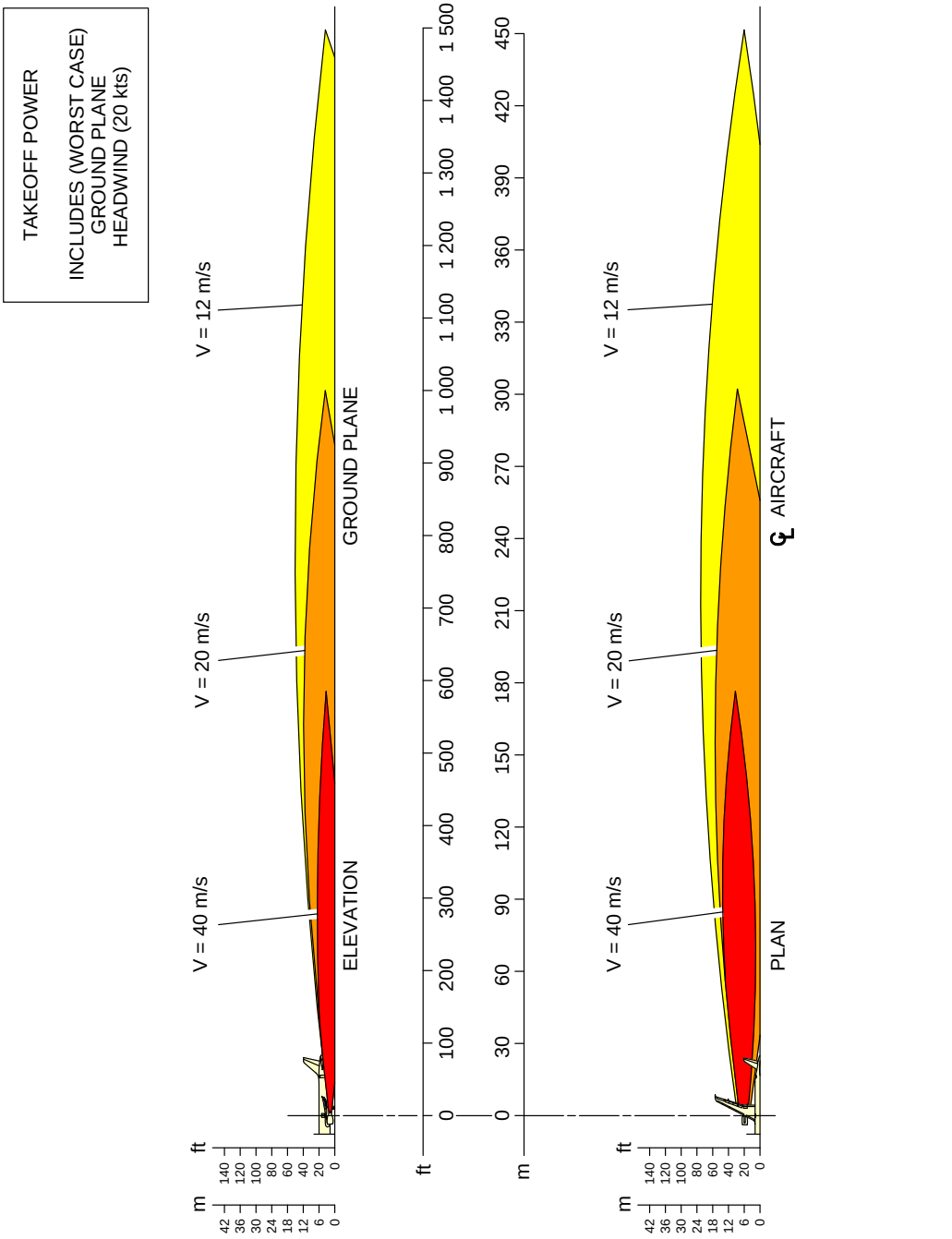
6-1-5 Engine Exhaust Velocities Contours - Takeoff Power

****ON A/C A320-200 A320neo**

Engine Exhaust Velocities Contours - Takeoff Power

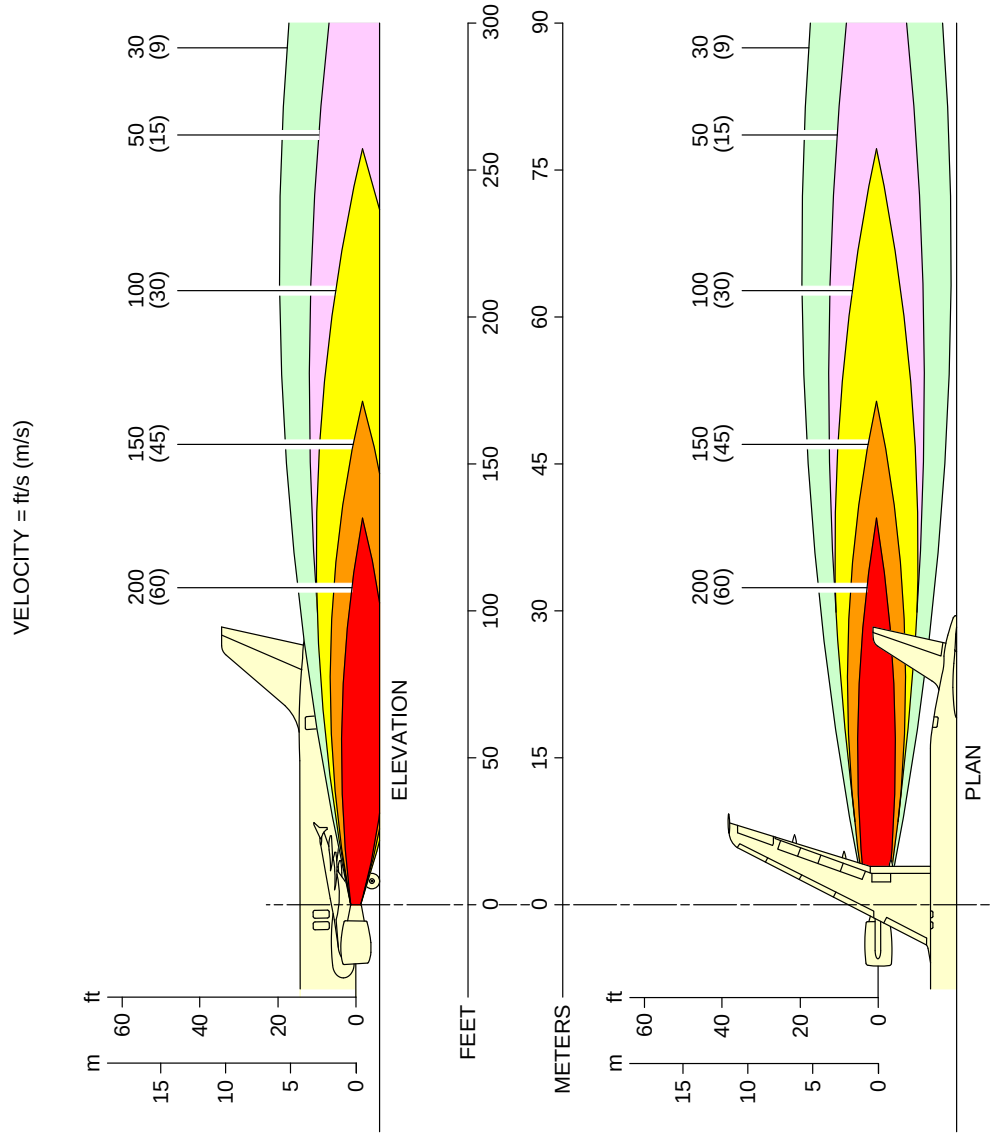
1. This section provides engine exhaust velocities contours at takeoff power.

****ON A/C A320-200**



Engine Exhaust Velocities
Takeoff Power – CFM56 Series Engine
FIGURE-6-1-5-991-005-A01

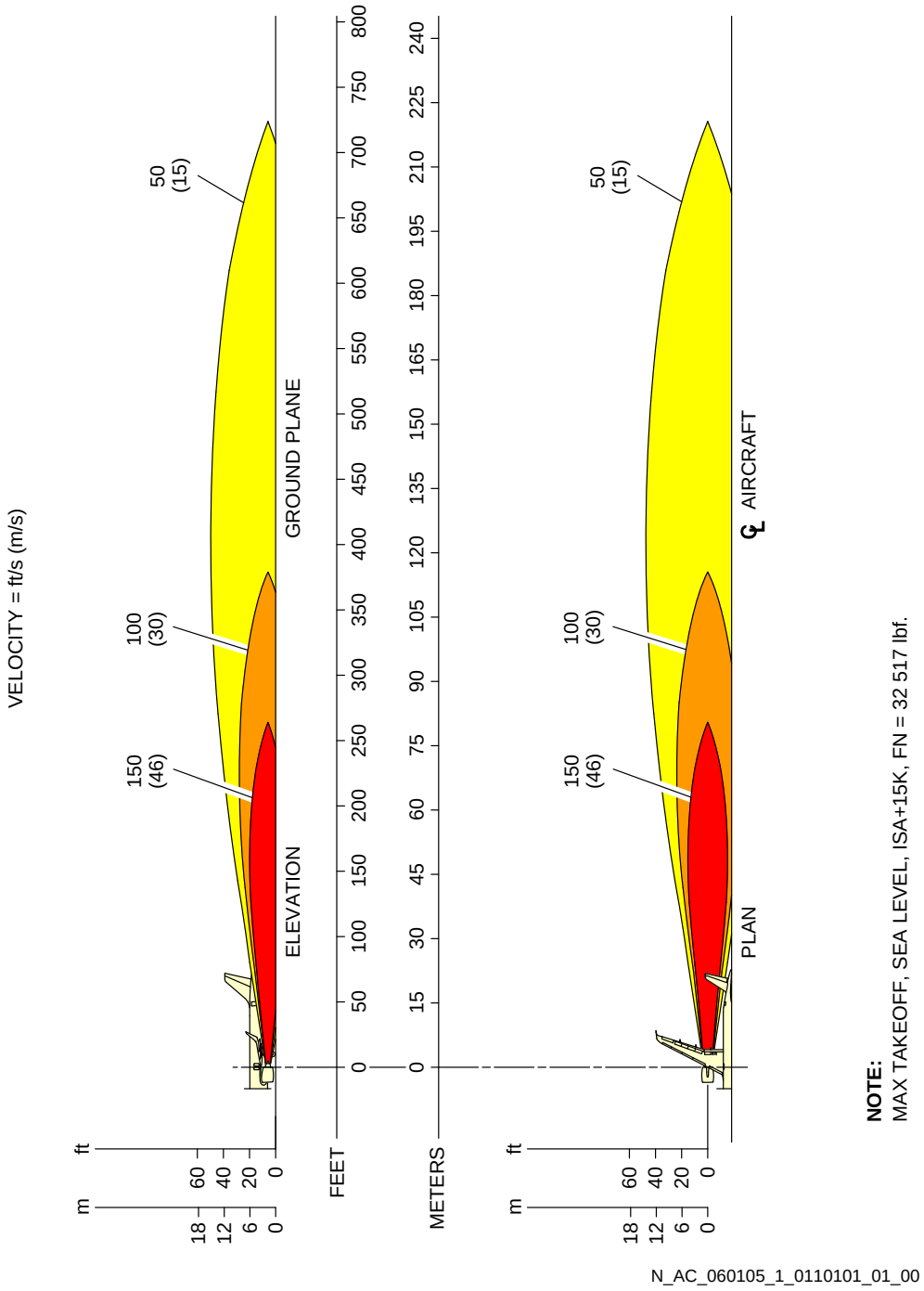
****ON A/C A320-200**



N_AC_060105_1_0060101_01_01

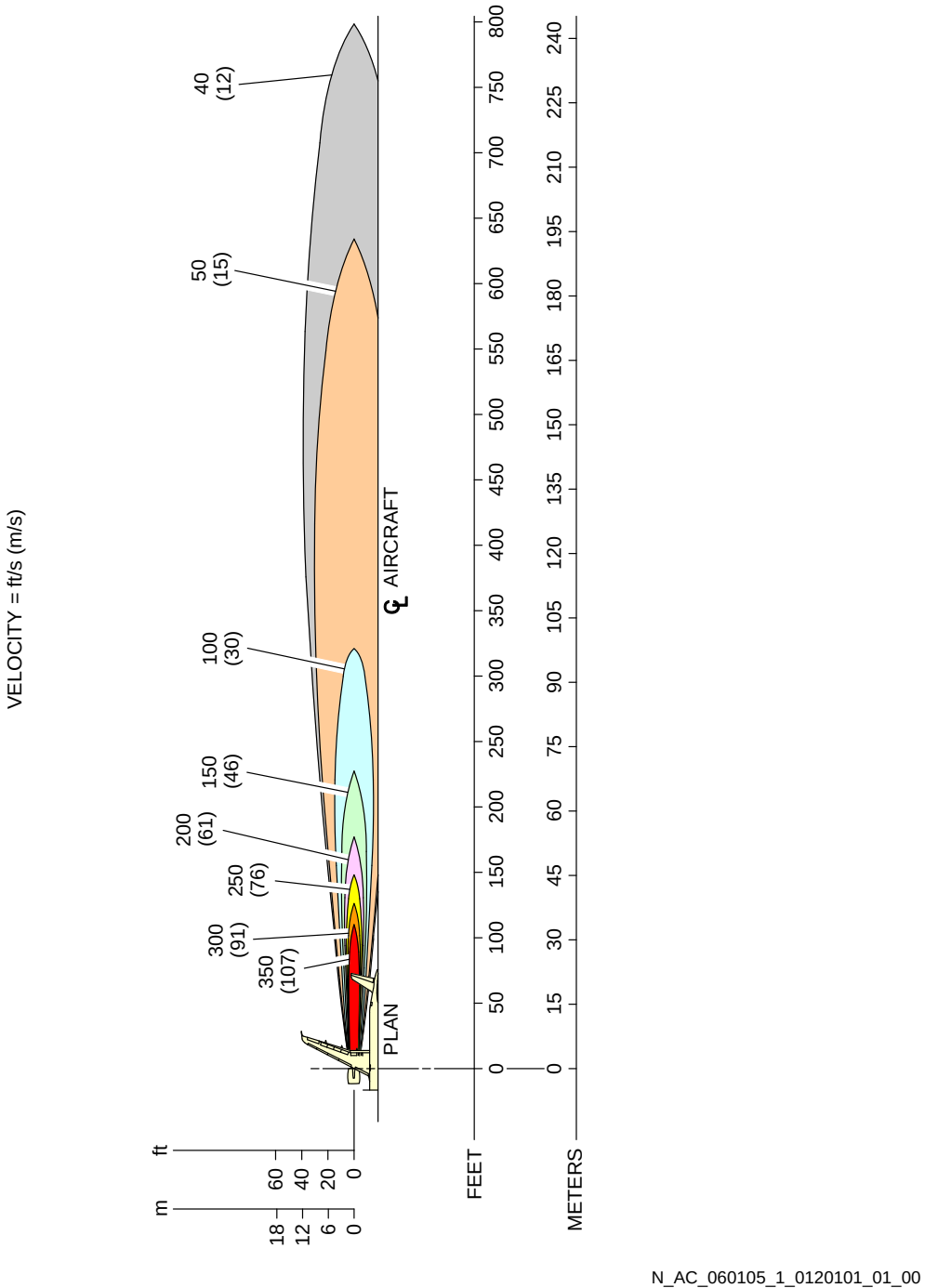
Engine Exhaust Velocities
Takeoff Power – IAE V2500 Series Engine
FIGURE-6-1-5-991-006-A01

****ON A/C A320neo**



Engine Exhaust Velocities
Takeoff Power – CFM LEAP-1A Engine
FIGURE-6-1-5-991-011-A01

****ON A/C A320neo**



Engine Exhaust Velocities
Takeoff Power – PW 1100G Engine
FIGURE-6-1-5-991-012-A01

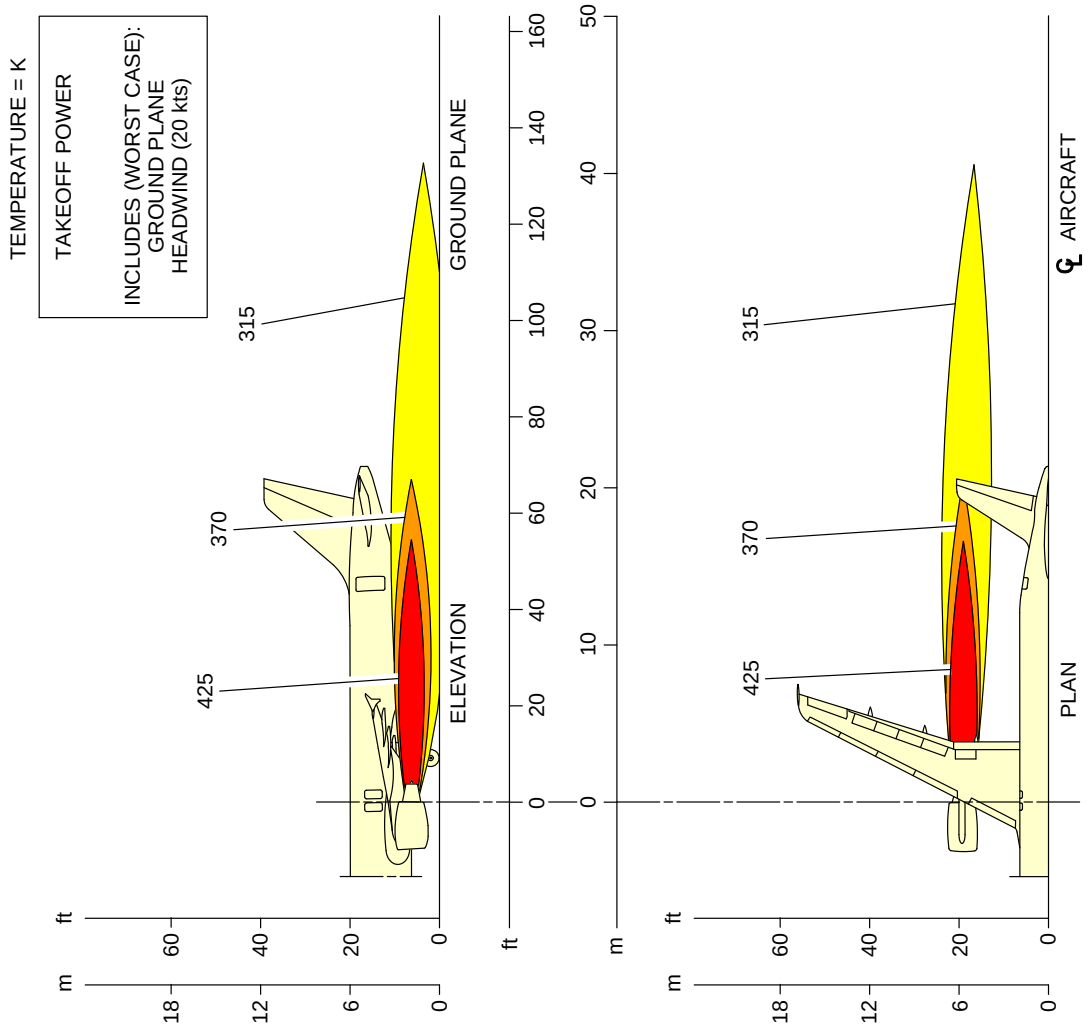
6-1-6 Engine Exhaust Temperatures Contours - Takeoff Power

****ON A/C A320-200 A320neo**

Engine Exhaust Temperatures Contours - Takeoff Power

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

****ON A/C A320-200**



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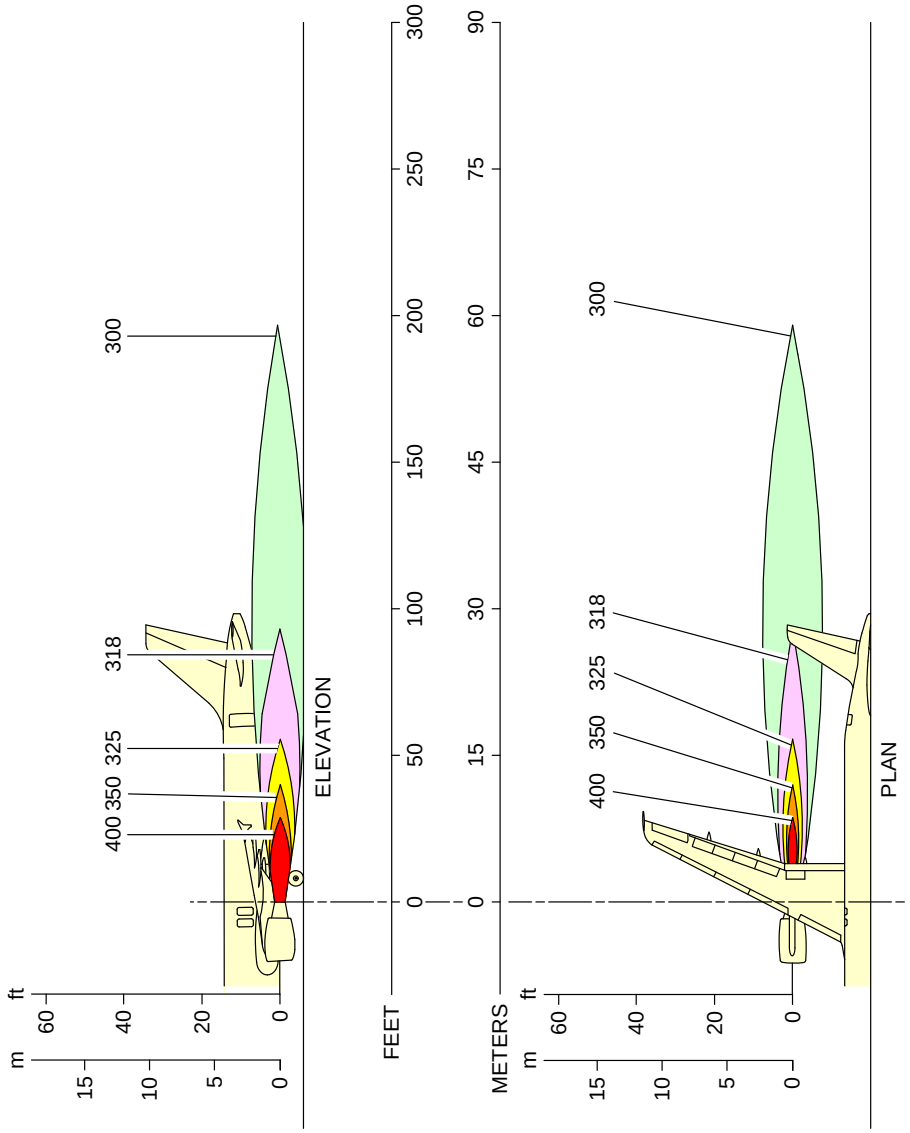
Engine Exhaust Temperatures
Takeoff Power – CFM56 Series Engine
FIGURE-6-1-6-991-005-A01

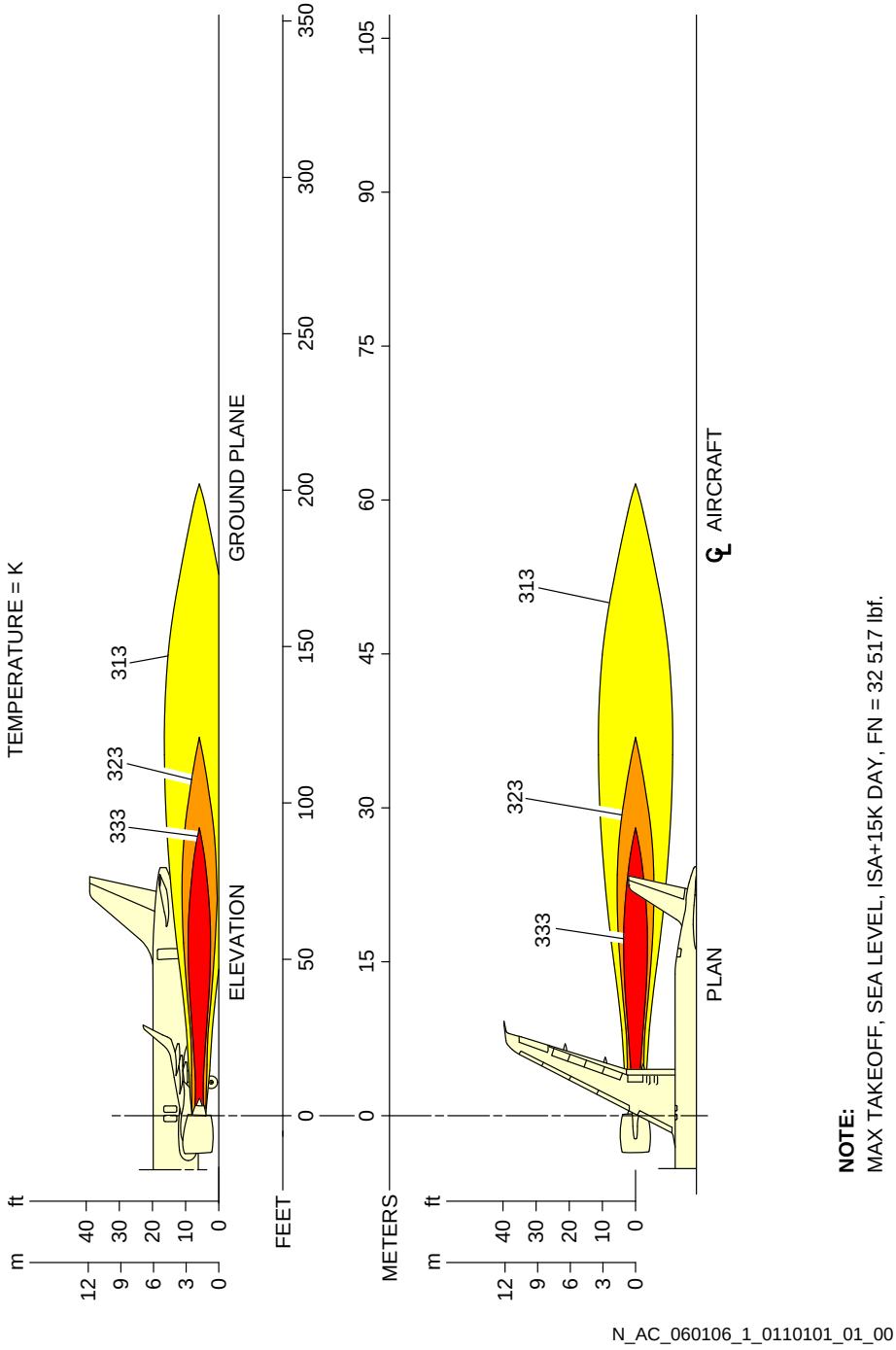
****ON A/C A320-200**



N_AC_060106_1_0060101_01_00

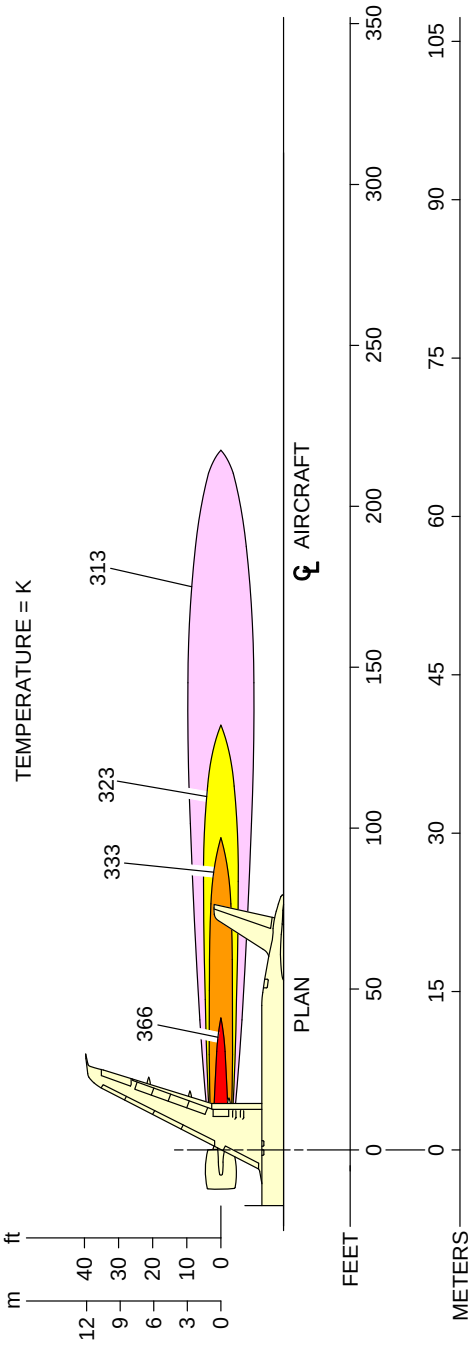
Engine Exhaust Temperatures
Takeoff Power – IAE V2500 Series Engine
FIGURE-6-1-6-991-006-A01

****ON A/C A320neo**



Engine Exhaust Temperatures
Takeoff Power - CFM LEAP-1A Engine
FIGURE-6-1-6-991-011-A01

****ON A/C A320neo**



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Engine Exhaust Temperatures
Takeoff Power - PW 1100G Engine
FIGURE-6-1-6-991-012-A01

6-3-0 Danger Areas of Engines

****ON A/C A320-200 A320neo**

Danger Areas of Engines

1. Danger Areas of the Engines

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

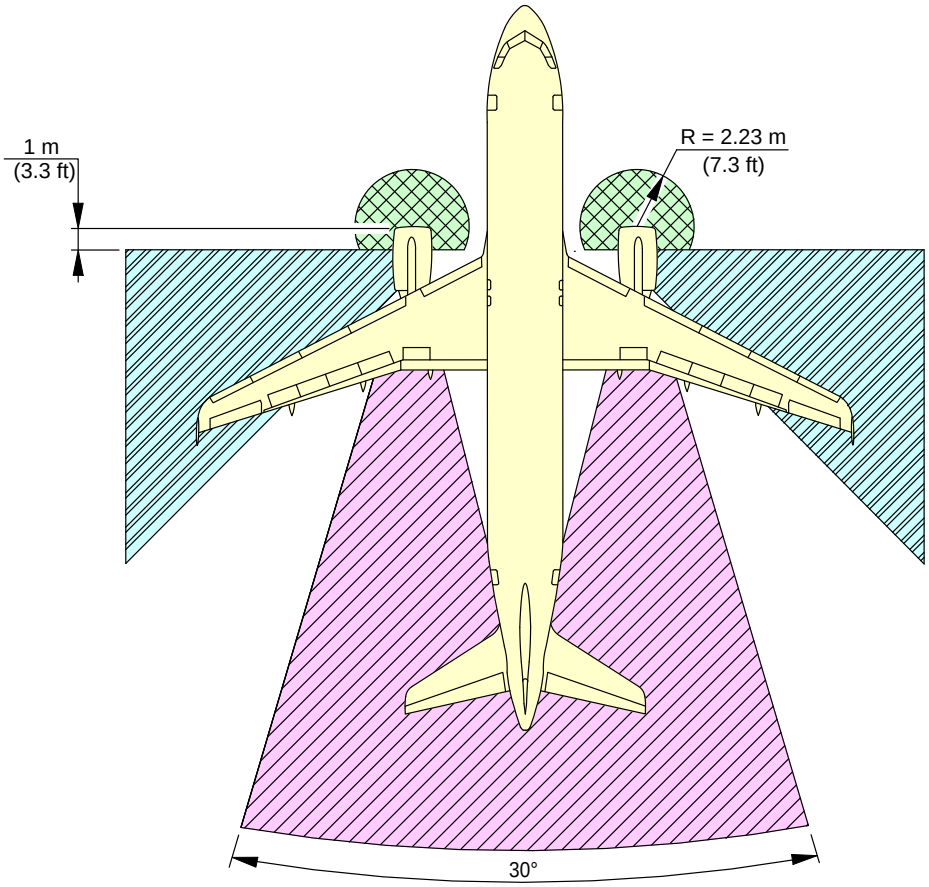
6-3-1 Ground Idle Power

****ON A/C A320-200 A320neo**

Ground Idle Power

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

****ON A/C A320-200**



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

NOTE:

INLET SUCTION DANGER AREA

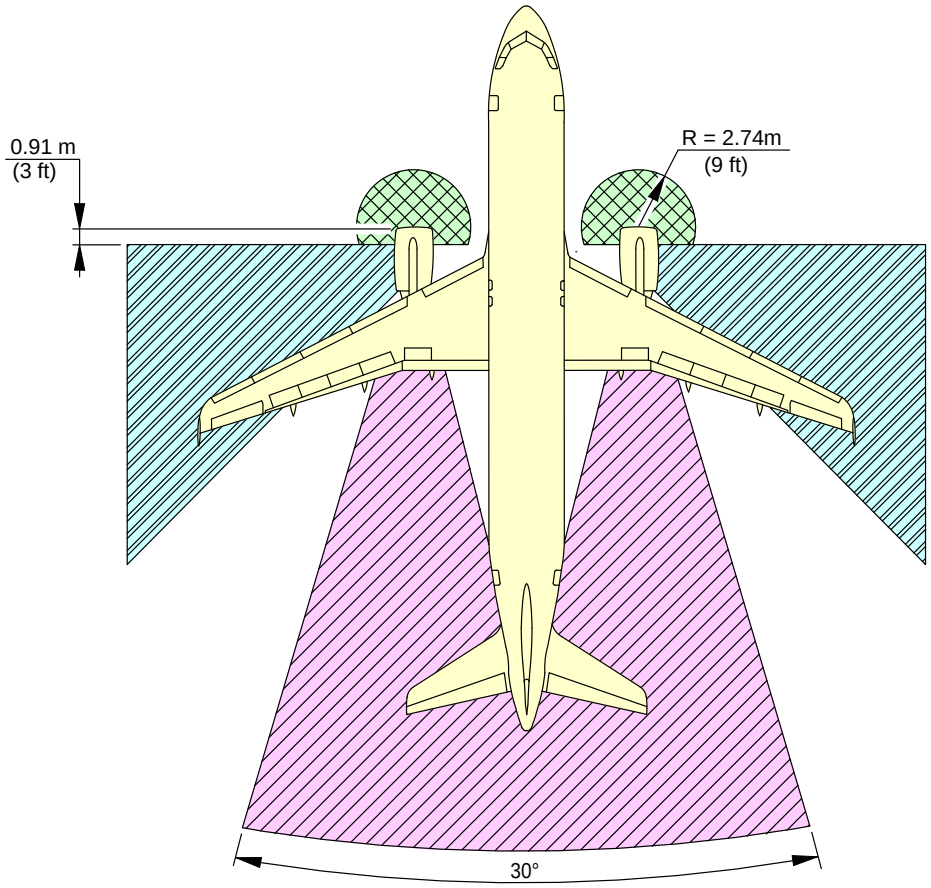
ENTRY CORRIDOR

EXHAUST WAKE DANGER AREA

N_AC_060301_1_0050101_01_04

Danger Areas of the Engines
CFM56 Series Engine
FIGURE-6-3-1-991-005-A01

****ON A/C A320-200**



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

NOTE:

INTAKE SUCTION DANGER AREA MINIMUM IDLE POWER

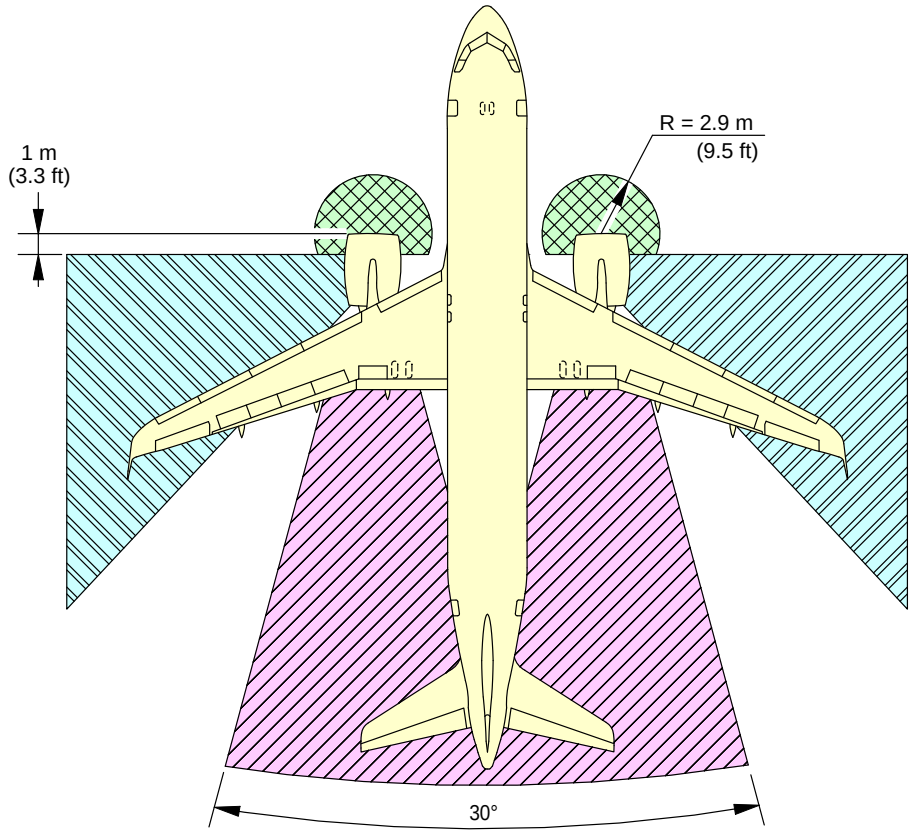
ENTRY CORRIDOR

EXHAUST DANGER AREA

N_AC_060301_1_0060101_01_04

Danger Areas of the Engines
IAE V2500 Series Engine
FIGURE-6-3-1-991-006-A01

****ON A/C A320neo**



NOTE:

INTAKE SUCTION DANGER AREA MINIMUM IDLE POWER

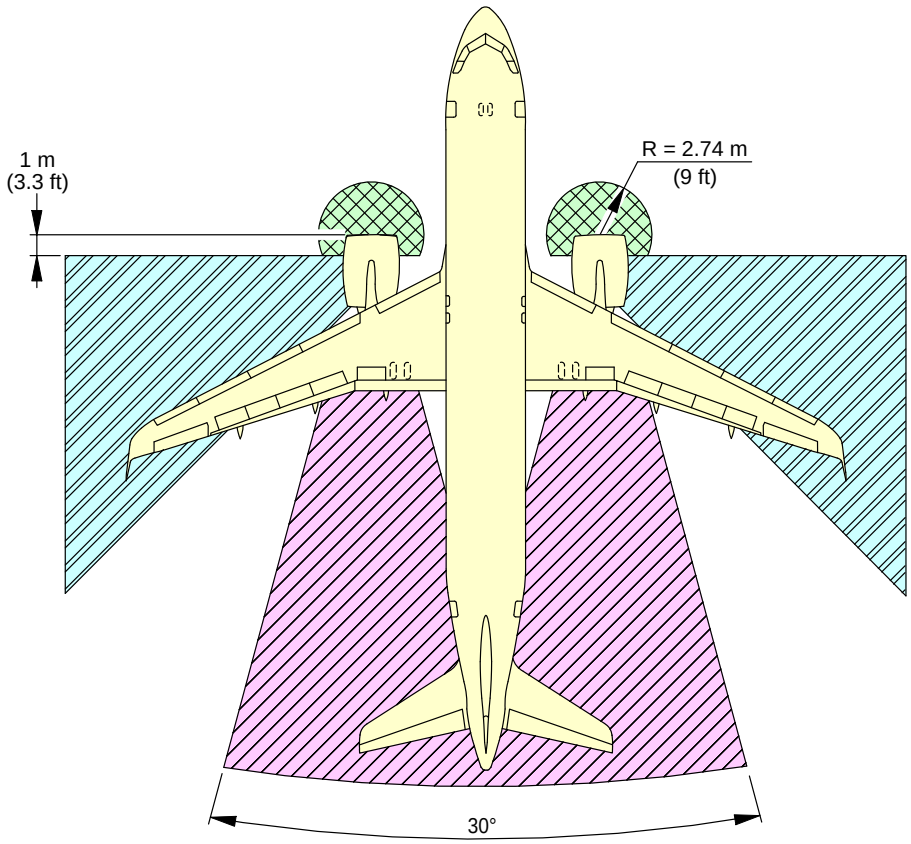
ENTRY CORRIDOR

EXHAUST DANGER AREA

N_AC_060301_1_0130101_01_02

Danger Areas of the Engines
CFM LEAP-1A Engine
FIGURE-6-3-1-991-013-A01

****ON A/C A320neo**



TO 40.3 m (132 ft) AFT OF COMMON NOZZLE ASSEMBLY (CNA) INCLUDES CROSS WIND EFFECT

NOTE:

INTAKE SUCTION DANGER AREA MINIMUM IDLE POWER

ENTRY CORRIDOR

EXHAUST DANGER AREA

N_AC_060301_1_0140101_01_02

Danger Areas of the Engines
PW 1100G Engine
FIGURE-6-3-1-991-014-A01

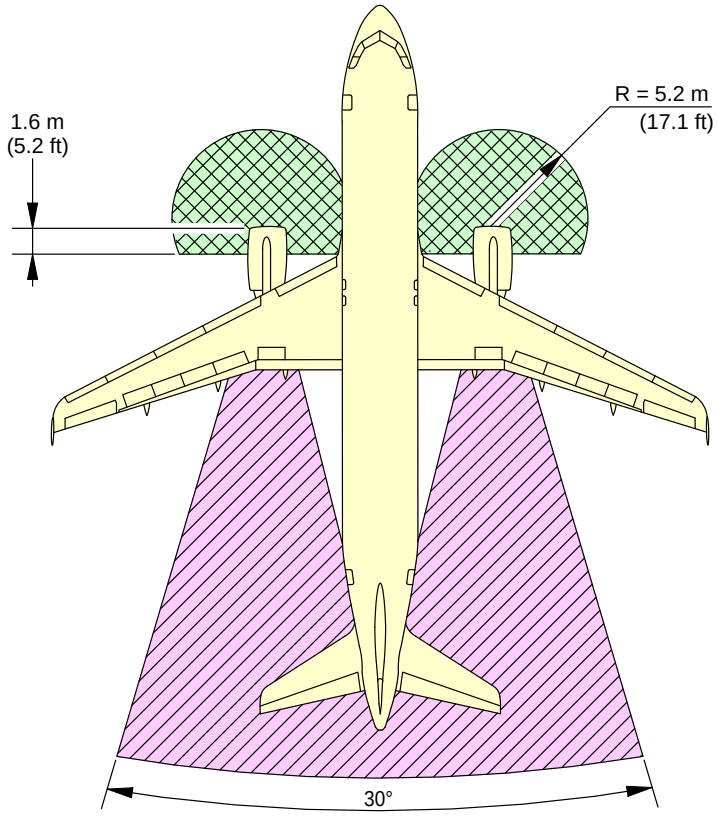
6-3-2 Breakaway Power

****ON A/C A320-200 A320neo**

Breakaway Power

1. This section provides danger areas of the engines at breakaway power.

****ON A/C A320-200**



NOTE:

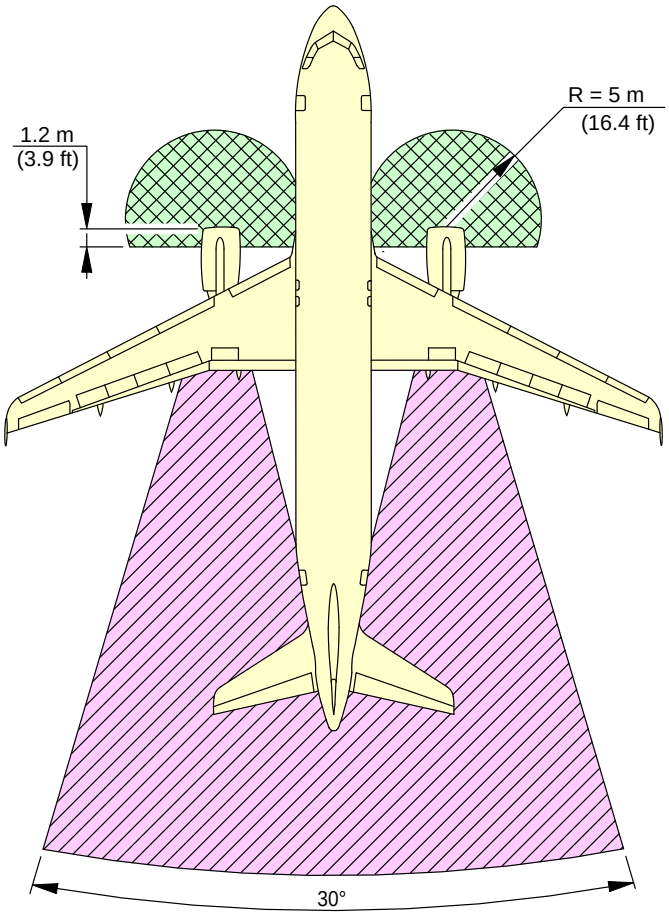
INTAKE SUCTION DANGER AREA MAX. TAKEOFF POWER

EXHAUST WAKE DANGER AREA

N_AC_060302_1_0050101_01_03

Danger Areas of the Engines
CFM56 Series Engine
FIGURE-6-3-2-991-005-A01

****ON A/C A320-200**



TO 91.4 m (300 ft) AFT OF COMMON NOZZLE ASSEMBLY (CNA) INCLUDES CROSS WIND EFFECT

NOTE:

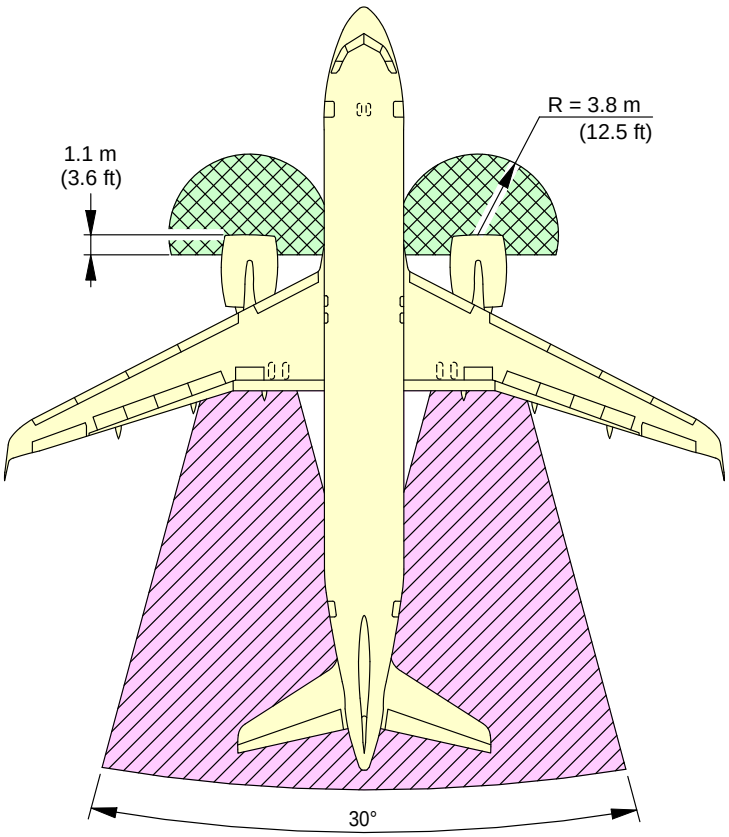
INTAKE SUCTION DANGER AREA MAX. TAKEOFF POWER

EXHAUST DANGER AREA

N_AC_060302_1_0060101_01_03

Danger Areas of the Engines
IAE V2500 Series Engine
FIGURE-6-3-2-991-006-A01

****ON A/C A320neo**



TO 63.5 m (208 ft) AFT OF COMMON NOZZLE ASSEMBLY (CNA) INCLUDES CROSS WIND EFFECT

NOTE:

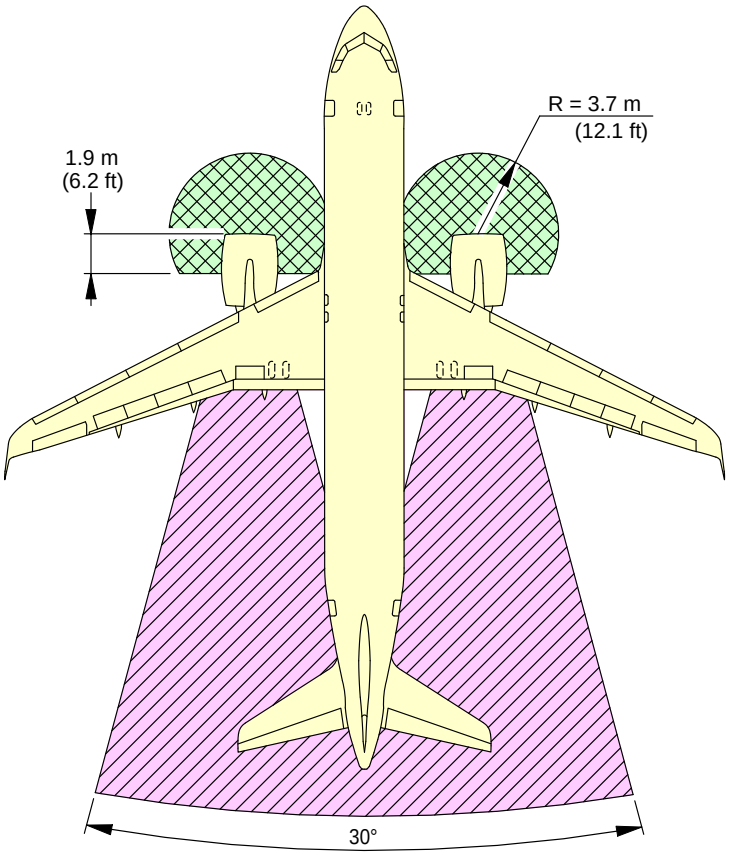
INTAKE SUCTION DANGER AREA MAX. TAKEOFF POWER

EXHAUST DANGER AREA

N_AC_060302_1_0110101_01_02

Danger Areas of the Engines
CFM LEAP-1A Engine
FIGURE-6-3-2-991-011-A01

****ON A/C A320neo**



TO 71.6 m (235 ft) AFT OF COMMON NOZZLE ASSEMBLY (CNA) INCLUDES CROSS WIND EFFECT

NOTE:

INTAKE SUCTION DANGER AREA MAX. TAKEOFF POWER

EXHAUST DANGER AREA

N_AC_060302_1_0120101_01_02

Danger Areas of the Engines
PW 1100G Engine
FIGURE-6-3-2-991-012-A01

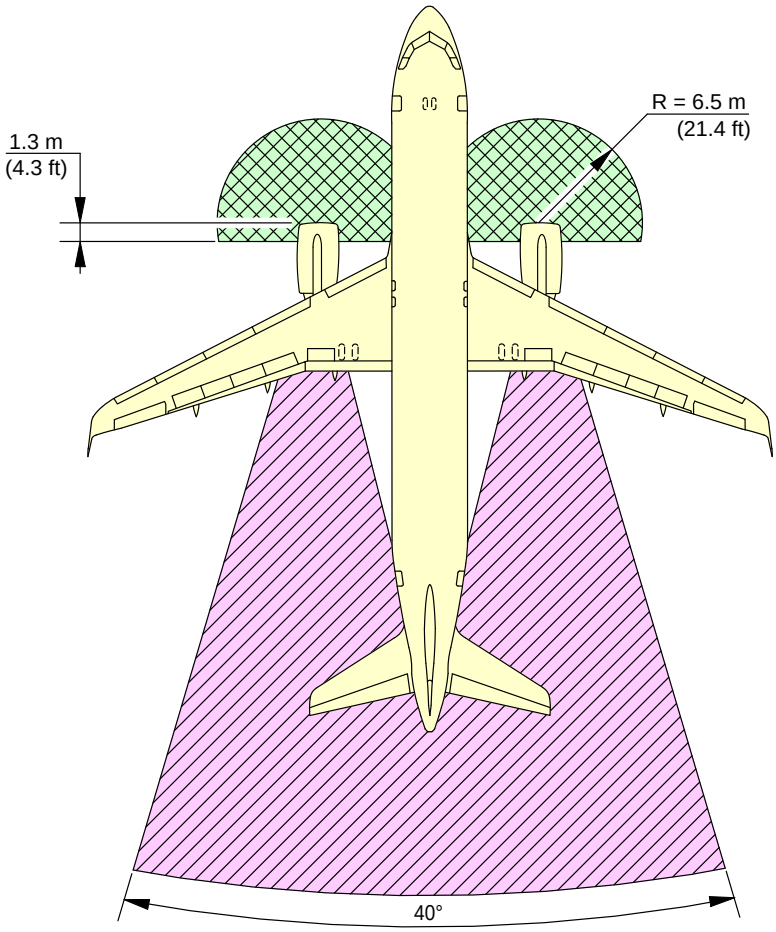
6-3-3 Max Take Off Power

****ON A/C A320-200 A320neo**

Take Off Power

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

****ON A/C A320-200**



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

NOTE:

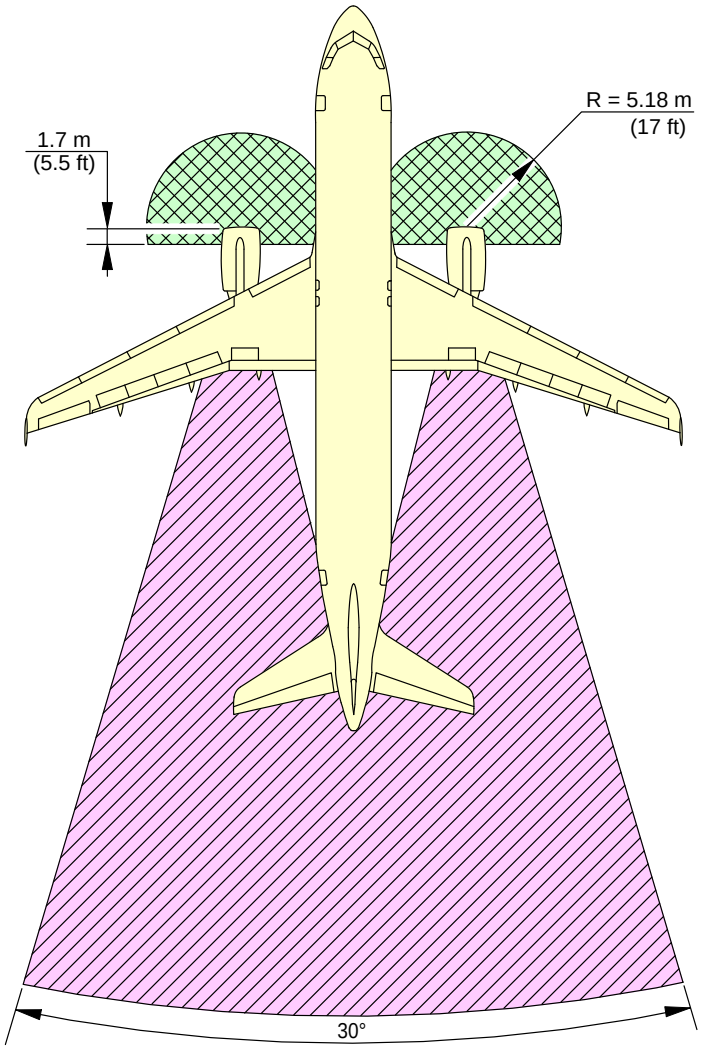
INTAKE SUCTION DANGER AREA

EXHAUST WAKE DANGER

N_AC_060303_1_0070101_01_01

Danger Areas of the Engine
CFM56 Series Engine
FIGURE-6-3-3-991-007-A01

****ON A/C A320-200**



TO 348 m (1150 ft) AFT OF COMMON NOZZLE ASSEMBLY (CNA) INCLUDES CROSS WIND EFFECT

NOTE:

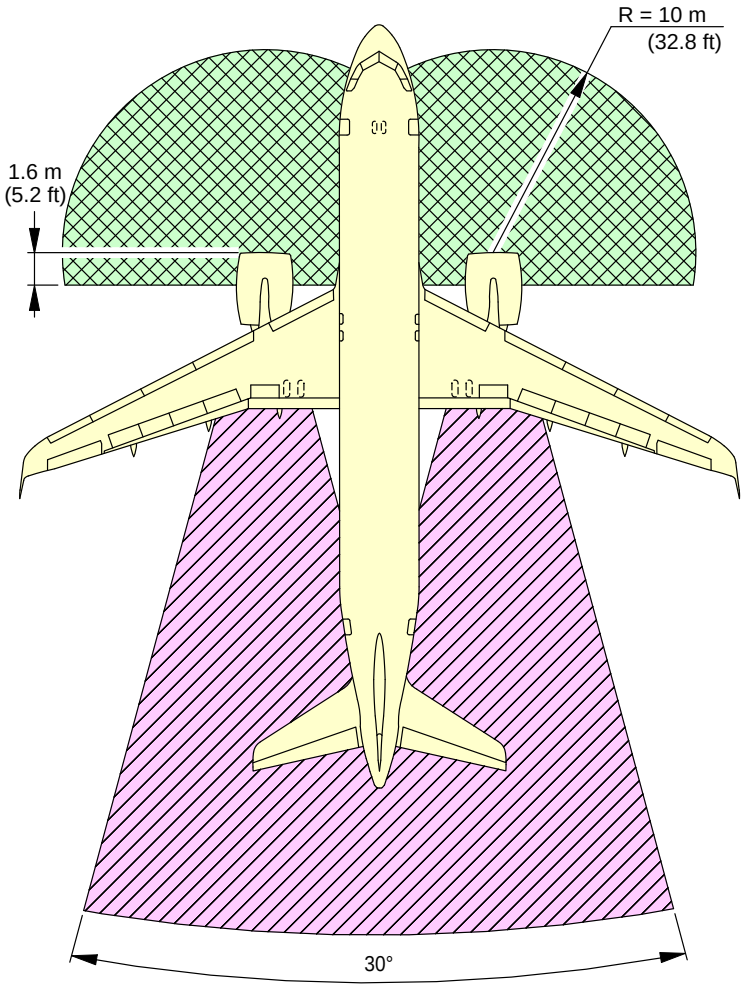
INTAKE SUCTION DANGER AREA MAX. TAKEOFF POWER

EXHAUST DANGER AREA

N_AC_060303_1_0080101_01_01

Danger Areas of the Engine
IAE V2500 Series Engine
FIGURE-6-3-3-991-008-A01

****ON A/C A320neo**



TO 220.7 m (724 ft) AFT OF COMMON NOZZLE ASSEMBLY (CNA) INCLUDES CROSS WIND EFFECT

NOTE:

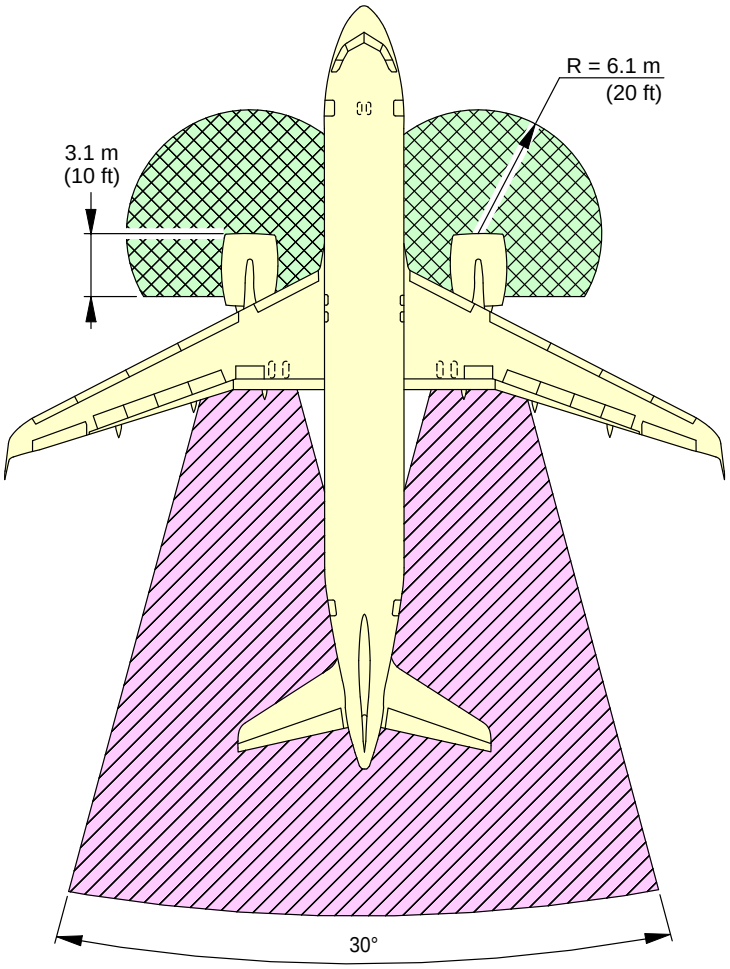
INTAKE SUCTION DANGER AREA MAX. TAKEOFF POWER

EXHAUST DANGER AREA

N_AC_060303_1_0090101_01_01

Danger Areas of the Engine
CFM LEAP-1A Engine
FIGURE-6-3-3-991-009-A01

****ON A/C A320neo**



TO 243 m (797.4 ft) AFT OF COMMON NOZZLE ASSEMBLY (CNA) INCLUDES CROSS WIND EFFECT

NOTE:

INTAKE SUCTION DANGER AREA MAX. TAKEOFF POWER

EXHAUST DANGER AREA

N_AC_060303_1_0100101_01_01

Danger Areas of the Engine
PW 1100G Engine
FIGURE-6-3-3-991-010-A01

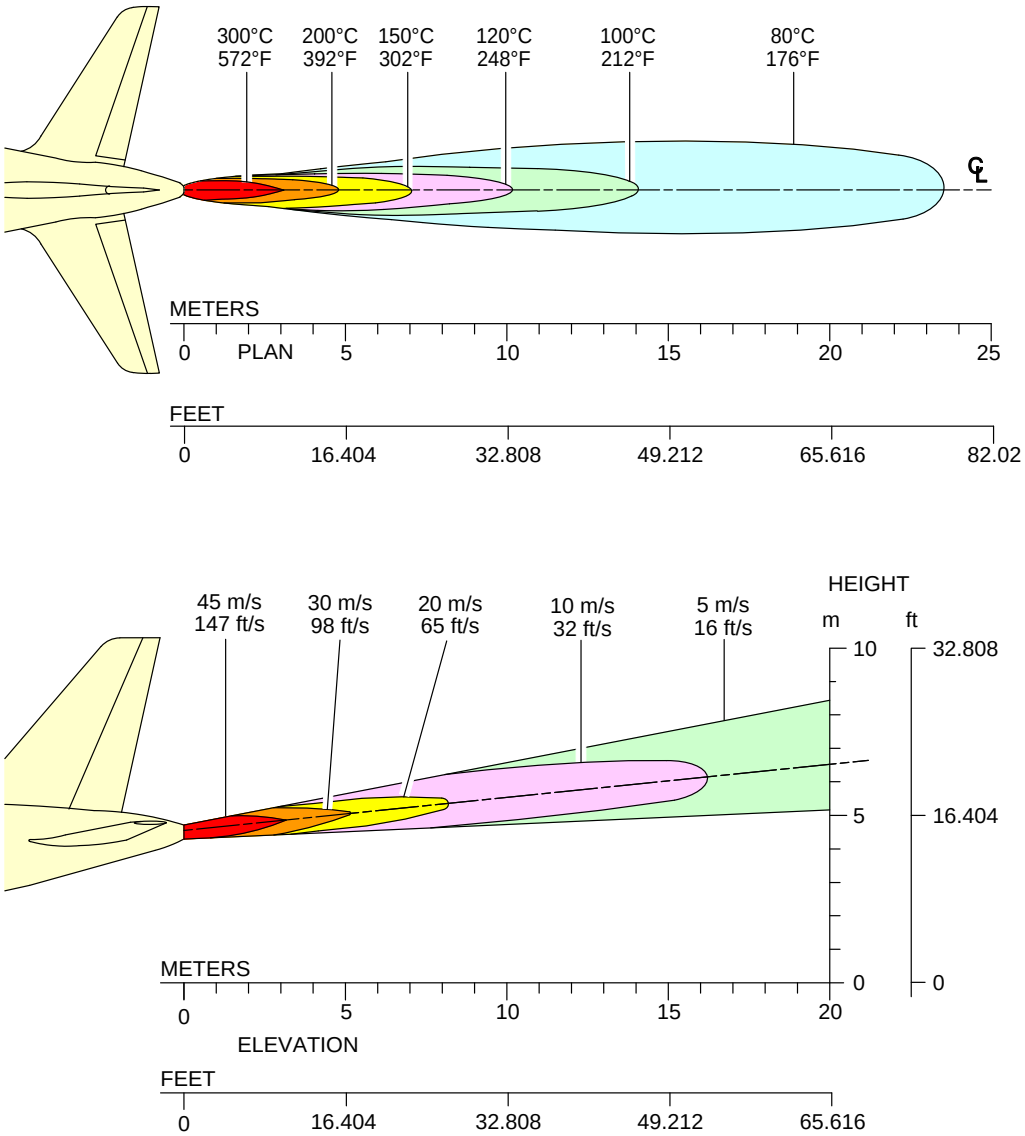
6-4-1 APU

****ON A/C A320-200 A320neo**

APU - APIC & GARRETT

1. This section gives APU exhaust velocities and temperatures.

****ON A/C A320-200 A320neo**



N_AC_060401_1_0030101_01_00

Exhaust Velocities and Temperatures
APU – APIC & GARRETT
FIGURE-6-4-1-991-003-A01

PAVEMENT DATA

7-1-0 General Information

****ON A/C A320-200 A320neo**

General Information

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

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

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

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

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

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

   Landing Gear Loading on Pavement:
   The curves related to the landing gear loading on pavement are not given in section 07-04-00. Because the relationship between the aircraft weight, the center of gravity and the landing gear loading on the pavement is not strictly linear, it cannot be shown in chart format. But you can find in section 07-03-00 the maximum vertical and horizontal pavement loads for some critical conditions at the tire/ground interfaces for all the operational weight variants of the aircraft. For questions that are related to landing gear loading on pavement, contact Airbus.

   Flexible Pavement Requirements - US Army Corps of Engineers Design Method:

The flexible pavement requirements curves as per U.S. Army Corps of Engineers Design Method are not given in section 07-05-00 since the related data is available through free software.
Sections 07-02-00 and 07-03-00 give all the inputs data required for the use of such software.
For questions that are related to the flexible pavement requirements, contact Airbus.

Flexible Pavement Requirements - LCN Conversion Method:
The Load Classification Number (LCN) curves are not given in section 07-06-00 since the LCN system for reporting pavement strength is old and are replaced by the ICAO recommended ACN/PCN system in 1983 and ACR/PCR system in 2020.
For questions that are related to the LCN system, contact Airbus.

Rigid Pavement Requirements - PCA (Portland Cement Association) Design Method:
The rigid pavement requirements curves as per as Portland Cement Association Design Method are not given in section 07-07-00 since the related data is available through free software.
Sections 07-02-00 and 07-03-00 give all the inputs data required for the use of such software.
For questions that are related to the rigid pavement requirements, contact Airbus.

Rigid Pavement Requirements - LCN Conversion:
The Load Classification Number (LCN) curves are not given in section 07-08-00 since the LCN system for reporting pavement strength is old and are replaced by the ICAO recommended ACN/PCN system in 1983 and ACR/PCR system in 2020.
For questions that are related to the LCN system, contact Airbus.

ACN/PCN Reporting System:
Section 07-09-00 gives ACN data prepared according to the ACN/PCN system as referenced in ICAO Annex 14, ”Aerodromes”, Volume 1 ”Aerodrome Design and Operations”.
Eighth Edition July 2018, incorporating Amendments 1 to 14 and ICAO doc 9157, "Aerodrome Design Manual", part 3 "Pavements" Second Edition 1983.
The ACN/PCN system is applicable until November 2024.
ACN is the Aircraft Classification Number and PCN is the related Pavement Classification Number.
An aircraft with an ACN less than or equal to the PCN can operate without restriction on the pavement.
Numerically the ACN is two times the derived single wheel load expressed in thousands of kilograms.
The derived single wheel load is calculated as the load on a single tire inflated to 1.25 MPa (181 psi) that would have the same pavement requirements as the aircraft.
Computationally the ACN/PCN system uses PCA program PDILB for rigid pavements and S-77-1 for flexible pavements to calculate ACN values.

The airport authority must select the method of pavement analysis.
The results of their analysis should be reported using the following format:

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

Section 07-09-00 shows the aircraft ACN values.

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

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

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

- A. High Strength k = 150 MN/m³ (550 pci)
- B. Medium Strength k = 80 MN/m³ (300 pci)
- C. Low Strength k = 40 MN/m³ (150 pci)
- D. Ultra Low Strength k = 20 MN/m³ (75 pci)

ACR/PCR Reporting System:
Section 07-10-00 gives ACR data prepared according to the ACR/PCR system as referenced in ICAO Annex 14, "Aerodromes", Volume 1 "Aerodrome Design and Operations".
Eight Edition July 2018, incorporating Amendments 1 to 15 and ICAO doc 9157, "Aerodrome Design Manual", part 3 "Pavements" Third Edition 2021.
The ACR/PCR system is effective from November 2020 and will be applicable in November 2024.
ACR is the Aircraft Classification Rating and PCR is the related Pavement Classification Rating.
An aircraft with an ACR less than or equal to the PCR can operate without restriction on the pavement.
Numerically the ACR is two times the derived single-wheel load expressed in hundreds of kilograms.
The derived single-wheel load is calculated as the load on a single tire inflated to 1.50 Mpa (218 psi) that can have the same pavement requirements as the aircraft.

Computationally the ACR/PCR system relies on the Linear Elastic Analysis (LEA). The ACR are computed with the official ICAO-ACR software.
States can start their own methods for PCR determination, which agree with the overall parameters of the ACR/PCR method.
The results of their analysis should be reported with the following format:

PCR			
PAVEMENT TYPE	SUBGRADE CATEGORY	TIRE PRESSURE CATEGORY	EVALUATION METHOD
R – Rigid	A – High	W – No pressure limit	T – Technical
F – Flexible	B – Medium	X – High pressure limited to 1.75 MPa (254 psi)	U – Using Aircraft
	C – Low	Y – Medium pressure limited to 1.25 MPa (181 psi)	
	D – Ultra Low	Z – Low pressure limited to 0.5 MPa (73 psi)	

Section 07-10-00 shows the aircraft ACR value.
For flexible and rigid pavement, the four subgrade categories are defined based on the subgrade modulus of elasticity (E):

- A. High Strength E = 200 Mpa (29 008 psi)
- B. Medium Strength E = 120 Mpa (17 405 psi)
- C. Low Strength E = 80 Mpa (11 603 psi)
- D. Ultra Low Strength E = 50 Mpa (7 252 psi)

7-2-0 Landing Gear Footprint

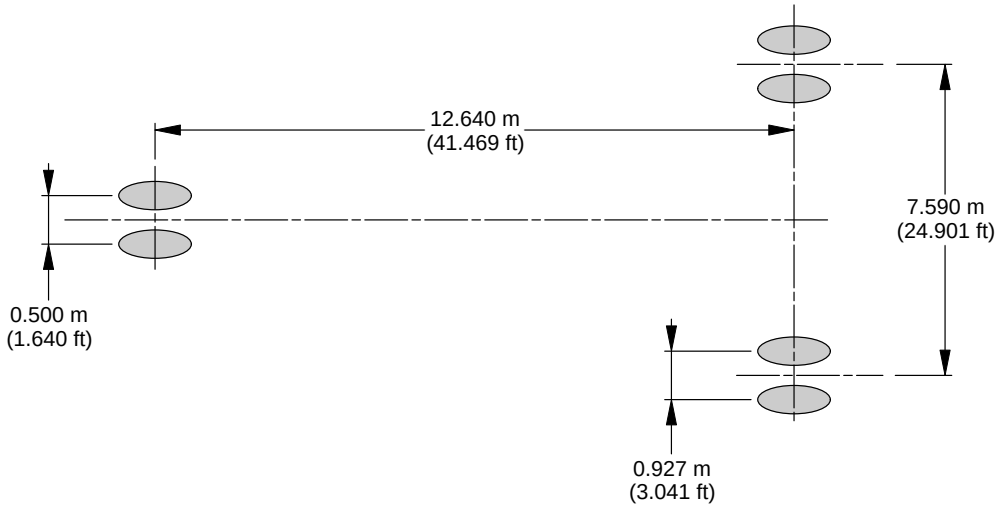
****ON A/C A320-200 A320neo**

Landing Gear Footprint

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

   The landing-gear footprint information is given for all the operational weight variants of the aircraft.

****ON A/C A320-200**



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
A320-200 WV000	73 900 kg (162 925 lb)	94.0%	30x8.8R15 (30x8.8-15)	12.3 bar (178 psi)	46x17R20 (46x16-20)	13.8 bar (200 psi)
					49x17-20	11.4 bar (165 psi)
					1 270x455R22 (49x18-22)	11.8 bar (171 psi)
					49x19-20	10.3 bar (149 psi)
A320-200 WV001	68 400 kg (150 800 lb)	95.0%	30x8.8R15 (30x8.8-15)	11.4 bar (165 psi)	46x17R20 (46x16-20)	12.8 bar (186 psi)
					49x17-20	10.6 bar (154 psi)
					1 270x455R22 (49x18-22)	10.9 bar (158 psi)
					49x19-20	9.6 bar (139 psi)

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Landing Gear Footprint
(Sheet 1 of 8)
FIGURE-7-2-0-991-010-A01

****ON A/C A320-200**

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
A320-200 WV002 (CG 42%)	70 400 kg (155 200 lb)	94.7%	30x8.8R15 (30x8.8-15)	11.4 bar (165 psi)	46x17R20 (46x16-20)	12.8 bar (186 psi)
					49x17-20	10.6 bar (154 psi)
					1 270x455R22 (49x18-22)	10.9 bar (158 psi)
					49x19-20	9.6 bar (139 psi)
A320-200 WV002 (CG 41%)	70 400 kg (155 200 lb)	94.3%	30x8.8R15 (30x8.8-15)	11.4 bar (165 psi)	46x17R20 (46x16-20)	12.8 bar (186 psi)
					49x17-20	10.6 bar (154 psi)
					1 270x455R22 (49x18-22)	10.9 bar (158 psi)
					49x19-20	9.6 bar (139 psi)
A320-200 WV003 (CG 38.7%)	75 900 kg (167 325 lb)	93.5%	30x8.8R15 (30x8.8-15)	12.3 bar (178 psi)	46x17R20 (46x16-20)	13.8 bar (200 psi)
					49x17-20	11.4 bar (165 psi)
					1 270x455R22 (49x18-22)	11.8 bar (171 psi)
					49x19-20	10.3 bar (149 psi)
A320-200 WV003 (CG 38.5%)	75 900 kg (167 325 lb)	93.5%	30x8.8R15 (30x8.8-15)	12.3 bar (178 psi)	46x17R20 (46x16-20)	13.8 bar (200 psi)
					49x17-20	11.4 bar (165 psi)
					1 270x455R22 (49x18-22)	11.8 bar (171 psi)
					49x19-20	10.3 bar (149 psi)

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Landing Gear Footprint
(Sheet 2 of 8)
FIGURE-7-2-0-991-010-A01

****ON A/C A320-200**

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
A320-200 WV004	71 900 kg (158 500 lb)	94.5%	30x8.8R15 (30x8.8-15)	12.3 bar (178 psi)	46x17R20 (46x16-20)	13.8 bar (200 psi)
					49x17-20	11.4 bar (165 psi)
					1 270x455R22 (49x18-22)	11.8 bar (171 psi)
					49x19-20	10.3 bar (149 psi)
A320-200 WV005 (CG 43%)	67 400 kg (148 600 lb)	95.0%	30x8.8R15 (30x8.8-15)	11.4 bar (165 psi)	46x17R20 (46x16-20)	12.8 bar (186 psi)
					49x17-20	10.6 bar (154 psi)
					1 270x455R22 (49x18-22)	10.9 bar (158 psi)
					49x19-20	9.6 bar (139 psi)
A320-200 WV005 (CG 42%)	67 400 kg (148 600 lb)	94.7%	30x8.8R15 (30x8.8-15)	11.4 bar (165 psi)	46x17R20 (46x16-20)	12.8 bar (186 psi)
					49x17-20	10.6 bar (154 psi)
					1 270x455R22 (49x18-22)	10.9 bar (158 psi)
					49x19-20	9.6 bar (139 psi)
A320-200 WV006	66 400 kg (146 375 lb)	95.0%	30x8.8R15 (30x8.8-15)	11 bar (160 psi)	46x17R20 (46x16-20)	12.3 bar (178 psi)
					49x17-20	10.2 bar (148 psi)
					49x19-20	9.2 bar (133 psi)

N_AC_070200_1_0100107_01_00

Landing Gear Footprint
3 of 8)
7-2-0-991-010-A01

****ON A/C A320-200**

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
A320-200 WV007 (CG 37.5%)	77 400 kg (170 650 lb)	93.1%	30x8.8R15 (30x8.8-15)	12.3 bar (178 psi)	46x17R20 (46x16-20)	14.4 bar (209 psi)
					49x17-20	12 bar (174 psi)
					1 270x455R22 (49x18-22)	12.3 bar (178 psi)
					49x19-20	10.7 bar (155 psi)
A320-200 WV007 (CG 33%)	77 400 kg (170 650 lb)	91.6%	30x8.8R15 (30x8.8-15)	12.3 bar (178 psi)	46x17R20 (46x16-20)	14.4 bar (209 psi)
					49x17-20	12 bar (174 psi)
					1 270x455R22 (49x18-22)	12.3 bar (178 psi)
					49x19-20	10.7 bar (155 psi)
A320-200 WV008	73 900 kg (162 925 lb)	94.0%	30x8.8R15 (30x8.8-15)	12.3 bar (178 psi)	46x17R20 (46x16-20)	13.8 bar (200 psi)
					49x17-20	11.4 bar (165 psi)
					1 270x455R22 (49x18-22)	11.8 bar (171 psi)
					49x19-20	10.3 bar (149 psi)
A320-200 WV009 (CG 38.7%)	75 900 kg (167 325 lb)	93.5%	30x8.8R15 (30x8.8-15)	12.3 bar (178 psi)	46x17R20 (46x16-20)	13.8 bar (200 psi)
					49x17-20	11.4 bar (165 psi)
					1 270x455R22 (49x18-22)	11.8 bar (171 psi)
					49x19-20	10.3 bar (149 psi)

N_AC_070200_1_0100103_01_01

Landing Gear Footprint
(Sheet 4 of 8)
FIGURE-7-2-0-991-010-A01

****ON A/C A320-200**

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
A320-200 WV009 (CG 38.5%)	75 900 kg (167 325 lb)	93.5%	30x8.8R15 (30x8.8-15)	12.3 bar (178 psi)	46x17R20 (46x16-20)	13.8 bar (200 psi)
					49x17-20	11.4 bar (165 psi)
					1 270x455R22 (49x18-22)	11.8 bar (171 psi)
					49x19-20	10.3 bar (149 psi)
A320-200 WV010 (CG 37.5%)	77 400 kg (170 650 lb)	93.1%	30x8.8R15 (30x8.8-15)	12.3 bar (178 psi)	46x17R20 (46x16-20)	14.4 bar (209 psi)
					49x17-20	12 bar (174 psi)
					1 270x455R22 (49x18-22)	12.3 bar (178 psi)
					49x19-20	10.7 bar (155 psi)
A320-200 WV010 (CG 33%)	77 400 kg (170 650 lb)	91.6%	30x8.8R15 (30x8.8-15)	12.3 bar (178 psi)	46x17R20 (46x16-20)	14.4 bar (209 psi)
					49x17-20	12 bar (174 psi)
					1 270x455R22 (49x18-22)	12.3 bar (178 psi)
					49x19-20	10.7 bar (155 psi)

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Landing Gear Footprint
5 of 8)
7-2-0-991-010-A01

****ON A/C A320-200**

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
A320-200 WV011 (CG 38.7%)	75 900 kg (167 325 lb)	93.5%	30x8.8R15 (30x8.8-15)	12.3 bar (178 psi)	46x17R20 (46x16-20)	13.8 bar (200 psi)
					49x17-20	11.4 bar (165 psi)
					1 270x455R22 (49x18-22)	11.8 bar (171 psi)
					49x19-20	10.3 bar (149 psi)
A320-200 WV011 (CG 38.5%)	75 900 kg (167 325 lb)	93.5%	30x8.8R15 (30x8.8-15)	12.3 bar (178 psi)	46x17R20 (46x16-20)	13.8 bar (200 psi)
					49x17-20	11.4 bar (165 psi)
					1 270x455R22 (49x18-22)	11.8 bar (171 psi)
					49x19-20	10.3 bar (149 psi)
A320-200 WV012	77 400 kg (170 650 lb)	93.1%	30x8.8R15 (30x8.8-15)	12.3 bar (178 psi)	46x17R20 (46x16-20)	14.4 bar (209 psi)
					49x17-20	12 bar (174 psi)
					1 270x455R22 (49x18-22)	12.3 bar (178 psi)
					49x19-20	10.7 bar (155 psi)
A320-200 WV013 (CG 41.42%)	71 900 kg (158 500 lb)	94.5%	30x8.8R15 (30x8.8-15)	12.3 bar (178 psi)	46x17R20 (46x16-20)	13.8 bar (200 psi)
					49x17-20	11.4 bar (165 psi)
					1 270x455R22 (49x18-22)	11.8 bar (171 psi)
					49x19-20	10.3 bar (149 psi)
A320-200 WV013 (CG 41%)	71 900 kg (158 500 lb)	94.3%	30x8.8R15 (30x8.8-15)	12.3 bar (178 psi)	46x17R20 (46x16-20)	13.8 bar (200 psi)
					49x17-20	11.4 bar (165 psi)
					1 270x455R22 (49x18-22)	11.8 bar (171 psi)
					49x19-20	10.3 bar (149 psi)
A320-200 WV014	73 900 kg (162 925 lb)	94.0%	30x8.8R15 (30x8.8-15)	12.3 bar (178 psi)	46x17R20 (46x16-20)	13.8 bar (200 psi)
					49x17-20	11.4 bar (165 psi)
					1 270x455R22 (49x18-22)	11.8 bar (171 psi)
					49x19-20	10.3 bar (149 psi)
A320-200 WV015	78 400 kg (172 850 lb)	92.9%	30x8.8R15 (30x8.8-15)	12.3 bar (178 psi)	46x17R20 (46x16-20)	14.4 bar (209 psi)

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Landing Gear Footprint
(Sheet 6 of 8)
FIGURE-7-2-0-991-010-A01

****ON A/C A320-200**

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
A320-200 WV016	73 900 kg (162 925 lb)	94.0%	30x8.8R15 (30x8.8-15)	12.3 bar (178 psi)	46x17R20 (46x16-20)	13.8 bar (200 psi)
					49x17-20	11.4 bar (165 psi)
					1 270x455R22 (49x18-22)	11.8 bar (171 psi)
					49x19-20	10.3 bar (149 psi)
A320-200 WV017	78 400 kg (172 850 lb)	92.9%	30x8.8R15 (30x8.8-15)	12.3 bar (178 psi)	46x17R20 (46x16-20)	14.4 bar (209 psi)
A320-200 WV018 (CG 41.47%)	71 900 kg (158 500 lb)	94.5%	30x8.8R15 (30x8.8-15)	12.3 bar (178 psi)	46x17R20 (46x16-20)	13.8 bar (200 psi)
					49x17-20	11.4 bar (165 psi)
					1 270x455R22 (49x18-22)	11.8 bar (171 psi)
					49x19-20	10.3 bar (149 psi)
A320-200 WV018 (CG 41.46%)	71 900 kg (158 500 lb)	94.5%	30x8.8R15 (30x8.8-15)	12.3 bar (178 psi)	46x17R20 (46x16-20)	13.8 bar (200 psi)
					49x17-20	11.4 bar (165 psi)
					1 270x455R22 (49x18-22)	11.8 bar (171 psi)
					49x19-20	10.3 bar (149 psi)
A320-200 WV018 (CG 41.4%)	71 900 kg (158 500 lb)	94.5%	30x8.8R15 (30x8.8-15)	12.3 bar (178 psi)	46x17R20 (46x16-20)	13.8 bar (200 psi)
					49x17-20	11.4 bar (165 psi)
					1 270x455R22 (49x18-22)	11.8 bar (171 psi)
					49x19-20	10.3 bar (149 psi)
A320-200 WV018 (CG 41%)	71 900 kg (158 500 lb)	94.3%	30x8.8R15 (30x8.8-15)	12.3 bar (178 psi)	46x17R20 (46x16-20)	13.8 bar (200 psi)
					49x17-20	11.4 bar (165 psi)
					1 270x455R22 (49x18-22)	11.8 bar (171 psi)
					49x19-20	10.3 bar (149 psi)

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Landing Gear Footprint
(Sheet 7 of 8)
FIGURE-7-2-0-991-010-A01

****ON A/C A320-200**

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
A320-200 WV019 (CG 42.61%)	70 400 kg (155 200 lb)	94.9%	30x8.8R15 (30x8.8-15)	11.4 bar (165 psi)	46x17R20 (46x16-20)	12.8 bar (186 psi)
					49x17-20	10.6 bar (154 psi)
					1 270x455R22 (49x18-22)	10.9 bar (158 psi)
					49x19-20	9.6 bar (139 psi)
A320-200 WV019 (CG 42%)	70 400 kg (155 200 lb)	94.7%	30x8.8R15 (30x8.8-15)	11.4 bar (165 psi)	46x17R20 (46x16-20)	12.8 bar (186 psi)
					49x17-20	10.6 bar (154 psi)
					1 270x455R22 (49x18-22)	10.9 bar (158 psi)
					49x19-20	9.6 bar (139 psi)
A320-200 WV019 (CG 41%)	70 400 kg (155 200 lb)	94.3%	30x8.8R15 (30x8.8-15)	11.4 bar (165 psi)	46x17R20 (46x16-20)	12.8 bar (186 psi)
					49x17-20	10.6 bar (154 psi)
					1 270x455R22 (49x18-22)	10.9 bar (158 psi)
					49x19-20	9.6 bar (139 psi)
A320-200 WV019 (CG 40%)	70 400 kg (155 200 lb)	94.0%	30x8.8R15 (30x8.8-15)	11.4 bar (165 psi)	46x17R20 (46x16-20)	12.8 bar (186 psi)
					49x17-20	10.6 bar (154 psi)
					1 270x455R22 (49x18-22)	10.9 bar (158 psi)
					49x19-20	9.6 bar (139 psi)

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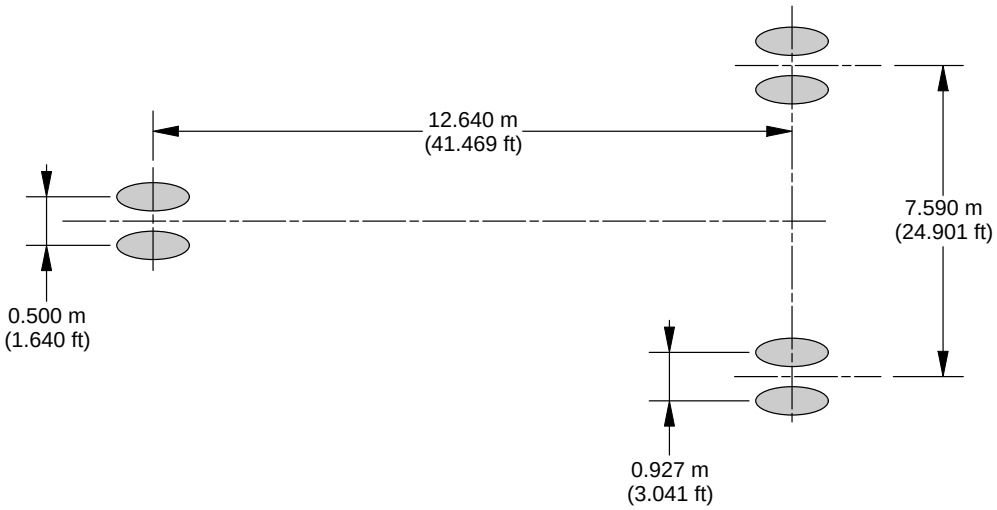
Landing Gear Footprint
(Sheet 8 of 8)
FIGURE-7-2-0-991-010-A01

****ON A/C A320neo**



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
A320NEO WV050 (CG 38.87%)	73 900 kg (162 925 lb)	93.9%	30x8.8R15 (30x8.8-15)	12.3 bar (178 psi)	46x17R20 (46x16-20)	13.8 bar (200 psi)
A320NEO WV050 (CG 39.85%)	73 900 kg (162 925 lb)	93.9%	30x8.8R15 (30x8.8-15)	12.3 bar (178 psi)	46x17R20 (46x16-20)	13.8 bar (200 psi)
A320NEO WV051 (CG 39.87%)	73 900 kg (162 925 lb)	93.9%	30x8.8R15 (30x8.8-15)	12.3 bar (178 psi)	46x17R20 (46x16-20)	13.8 bar (200 psi)
A320NEO WV051 (CG 39.85%)	73 900 kg (162 925 lb)	93.9%	30x8.8R15 (30x8.8-15)	12.3 bar (178 psi)	46x17R20 (46x16-20)	13.8 bar (200 psi)
A320NEO WV052 (CG 37.41%)	77 400 kg (170 650 lb)	93.1%	30x8.8R15 (30x8.8-15)	12.3 bar (178 psi)	46x17R20 (46x16-20)	14.4 bar (209 psi)
A320NEO WV052 (CG 37.4%)	77 400 kg (170 650 lb)	93.1%	30x8.8R15 (30x8.8-15)	12.3 bar (178 psi)	46x17R20 (46x16-20)	14.4 bar (209 psi)
A320NEO WV053 (CG 37.41%)	77 400 kg (170 650 lb)	93.1%	30x8.8R15 (30x8.8-15)	12.3 bar (178 psi)	46x17R20 (46x16-20)	14.4 bar (209 psi)
A320NEO WV053 (CG 37.4%)	77 400 kg (170 650 lb)	93.1%	30x8.8R15 (30x8.8-15)	12.3 bar (178 psi)	46x17R20 (46x16-20)	14.4 bar (209 psi)

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Landing Gear Footprint
(Sheet 1 of 3)
FIGURE-7-2-0-991-036-A01

****ON A/C A320neo**

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
A320NEO WV054	79 400 kg (175 050 lb)	92.6%	30x8.8R15 (30x8.8-15)	12.3 bar (178 psi)	46x17R20 (46x16-20)	14.4 bar (209 psi)
A320NEO WV055	79 400 kg (175 050 lb)	92.6%	30x8.8R15 (30x8.8-15)	12.3 bar (178 psi)	46x17R20 (46x16-20)	14.4 bar (209 psi)
A320NEO WV056 (CG 39.46%)	70 400 kg (155 200 lb)	93.8%	30x8.8R15 (30x8.8-15)	12.3 bar (178 psi)	46x17R20 (46x16-20)	12.8 bar (186 psi)
A320NEO WV056 (CG 40%)	70 400 kg (155 200 lb)	94.0%	30x8.8R15 (30x8.8-15)	12.3 bar (178 psi)	46x17R20 (46x16-20)	12.8 bar (186 psi)
A320NEO WV057 (CG 40%)	70 400 kg (155 200 lb)	94.0%	30x8.8R15 (30x8.8-15)	12.3 bar (178 psi)	46x17R20 (46x16-20)	12.8 bar (186 psi)
A320NEO WV057 (CG 39.46%)	70 400 kg (155 200 lb)	93.8%	30x8.8R15 (30x8.8-15)	12.3 bar (178 psi)	46x17R20 (46x16-20)	12.8 bar (186 psi)
A320NEO WV068 (CG 38.44%)	75 900 kg (167 325 lb)	93.4%	30x8.8R15 (30x8.8-15)	12.3 bar (178 psi)	46x17R20 (46x16-20)	13.8 bar (200 psi)
A320NEO WV068 (CG 38.42%)	75 900 kg (167 325 lb)	93.4%	30x8.8R15 (30x8.8-15)	12.3 bar (178 psi)	46x17R20 (46x16-20)	13.8 bar (200 psi)
A320NEO WV069 (CG 38.44%)	75 900 kg (167 325 lb)	93.4%	30x8.8R15 (30x8.8-15)	12.3 bar (178 psi)	46x17R20 (46x16-20)	13.8 bar (200 psi)
A320NEO WV069 (CG 38.42%)	75 900 kg (167 325 lb)	93.4%	30x8.8R15 (30x8.8-15)	12.3 bar (178 psi)	46x17R20 (46x16-20)	13.8 bar (200 psi)
A320NEO WV071 (CG 38.79%)	75 400 kg (166 225 lb)	93.6%	30x8.8R15 (30x8.8-15)	12.3 bar (178 psi)	46x17R20 (46x16-20)	13.8 bar (200 psi)

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Landing Gear Footprint
(Sheet 2 of 3)
FIGURE-7-2-0-991-036-A01

****ON A/C A320neo**

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
A320NEO WV071 (CG 38.77%)	75 400 kg (166 225 lb)	93.5%	30x8.8R15 (30x8.8-15)	12.3 bar (178 psi)	46x17R20 (46x16-20)	13.8 bar (200 psi)
A320NEO WV075 (CG 39.51%)	74 400 kg (164 025 lb)	93.8%	30x8.8R15 (30x8.8-15)	12.3 bar (178 psi)	46x17R20 (46x16-20)	13.8 bar (200 psi)
A320NEO WV075 (CG 39.49%)	74 400 kg (164 025 lb)	93.8%	30x8.8R15 (30x8.8-15)	12.3 bar (178 psi)	46x17R20 (46x16-20)	13.8 bar (200 psi)
A320NEO WV078 (CG 40%)	72 900 kg (160 725 lb)	94.0%	30x8.8R15 (30x8.8-15)	12.3 bar (178 psi)	46x17R20 (46x16-20)	13.8 bar (200 psi)
A320NEO WV078 (CG 39.87%)	72 900 kg (160 725 lb)	93.9%	30x8.8R15 (30x8.8-15)	12.3 bar (178 psi)	46x17R20 (46x16-20)	13.8 bar (200 psi)
A320NEO WV082 (CG 40%)	71 900 kg (158 500 lb)	94.0%	30x8.8R15 (30x8.8-15)	12.3 bar (178 psi)	46x17R20 (46x16-20)	13.8 bar (200 psi)
A320NEO WV082 (CG 39.71%)	71 900 kg (158 500 lb)	93.9%	30x8.8R15 (30x8.8-15)	12.3 bar (178 psi)	46x17R20 (46x16-20)	13.8 bar (200 psi)
A320NEO WV083 (CG 40%)	71 900 kg (158 500 lb)	94.0%	30x8.8R15 (30x8.8-15)	12.3 bar (178 psi)	46x17R20 (46x16-20)	13.8 bar (200 psi)
A320NEO WV083 (CG 39.71%)	71 900 kg (158 500 lb)	93.9%	30x8.8R15 (30x8.8-15)	12.3 bar (178 psi)	46x17R20 (46x16-20)	13.8 bar (200 psi)
A320NEO WV085 (CG 40%)	71 400 kg (157 400 lb)	94.0%	30x8.8R15 (30x8.8-15)	12.3 bar (178 psi)	46x17R20 (46x16-20)	13.8 bar (200 psi)
A320NEO WV085 (CG 39.63%)	71 400 kg (157 400 lb)	93.8%	30x8.8R15 (30x8.8-15)	12.3 bar (178 psi)	46x17R20 (46x16-20)	13.8 bar (200 psi)

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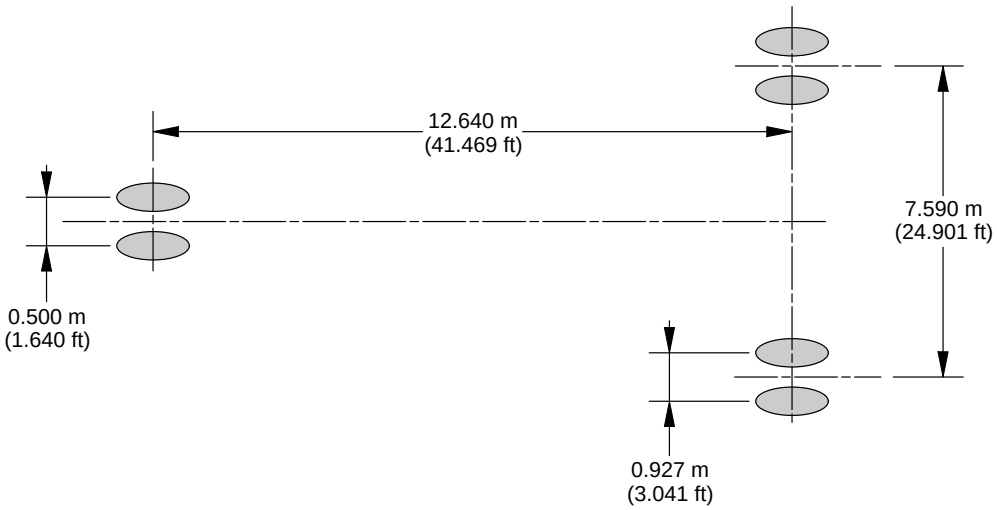
Landing Gear Footprint
3 of 3)
7-2-0-991-036-A01

**ON A/C A320neo



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
ACJ320neo WV055	79 400 kg (175 050 lb)	92.6%	30x8.8R15 (30x8.8-15)	12.3 bar (178 psi)	46x17R20 (46x16-20)	14.4 bar (209 psi)
ACJ320neo WV110	79 400 kg (175 050 lb)	92.6%	30x8.8R15 (30x8.8-15)	12.3 bar (178 psi)	46x17R20 (46x16-20)	14.4 bar (209 psi)
ACJ320neo WV111	78 400 kg (172 850 lb)	92.9%	30x8.8R15 (30x8.8-15)	12.3 bar (178 psi)	46x17R20 (46x16-20)	14.4 bar (209 psi)
ACJ320neo WV112	77 400 kg (170 650 lb)	93.1%	30x8.8R15 (30x8.8-15)	12.3 bar (178 psi)	46x17R20 (46x16-20)	14.4 bar (209 psi)

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Landing Gear Footprint for ACJ320NEO
7-2-0-991-041-A01

7-3-0 Maximum Pavement Loads

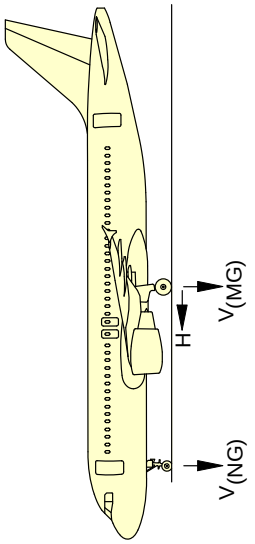
****ON A/C A320-200 A320neo**

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 A320-200**



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

1	2	3		4	5		6	
		$V_{(NG)}$			$V_{(MG)}$ (PER STRUT)		H (PER STRUT)	
WEIGHT VARIANT	MAXIMUM RAMP WEIGHT	STATIC LOAD AT MOST FWD CG		STATIC BRAKING AT 10 ft/s² DECELERATION	STATIC LOAD AT MAX AFT CG		STEADY BRAKING AT 10 ft/s² DECELERATION	AT INSTANTANEOUS BRAKING COEFFICIENT = 0.8
A320-200 WV000	73 900 kg (162 925 lb)	10 000 kg (22 050 lb)	17% MAC (b)	15 830 kg (34 900 lb)	34 720 kg (76 550 lb)	40% MAC (a)	11 480 kg (25 325 lb) (c)	27 780 kg (61 250 lb) (c)
A320-200 WV001	68 400 kg (150 800 lb)	9 510 kg (20 975 lb)	17% MAC (a)	15 070 kg (33 225 lb)	32 500 kg (71 650 lb)	43% MAC (a)	10 630 kg (23 425 lb) (c)	26 000 kg (57 300 lb) (c)
A320-200 WV002 (CG 42%)	70 400 kg (155 200 lb)	9 780 kg (21 575 lb)	17% MAC (a)	15 500 kg (34 175 lb)	33 330 kg (73 475 lb)	42% MAC (a)	10 940 kg (24 125 lb) (c)	26 660 kg (58 775 lb) (c)
A320-200 WV002 (CG 41%)	70 400 kg (155 200 lb)	9 780 kg (21 575 lb)	17% MAC (a)	15 500 kg (34 175 lb)	33 200 kg (73 200 lb)	41% MAC (a)	10 940 kg (24 125 lb) (c)	26 560 kg (58 550 lb) (c)
A320-200 WV003 (CG 38.7%)	75 900 kg (167 325 lb)	10 000 kg (22 050 lb)	17% MAC (a)	15 820 kg (34 900 lb)	35 490 kg (78 250 lb)	38.7% MAC (a)	11 800 kg (26 000 lb) (c)	28 390 kg (62 600 lb) (c)

NOTE:
(a) LOADS CALCULATED USING AIRCRAFT AT MRW.
(b) LOADS CALCULATED USING AIRCRAFT AT 72 000 kg (158 725 lb).
(c) BRAKED MAIN GEAR.

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Maximum Pavement Loads for A320-200
(Sheet 1 of 4)
FIGURE-7-3-0-991-010-A01

****ON A/C A320-200**

1	2	3		4	5		6	
		$V_{(NG)}$			$V_{(MG)}$ (PER STRUT)		H (PER STRUT)	
WEIGHT VARIANT	MAXIMUM RAMP WEIGHT	STATIC LOAD AT MOST FWD CG		STATIC BRAKING AT 10 ft/s² DECELERATION	STATIC LOAD AT MAX AFT CG		STEADY BRAKING AT 10 ft/s² DECELERATION	AT INSTANTANEOUS BRAKING COEFFICIENT = 0.8
A320-200 WV003 (CG 38.5%)	75 900 kg (167 325 lb)	10 000 kg (22 050 lb)	17% MAC (b)	15 820 kg (34 900 lb)	35 470 kg (78 200 lb)	38.5% MAC (a)	11 800 kg (26 000 lb) (c)	28 370 kg (62 550 lb) (c)
A320-200 WV004	71 900 kg (158 500 lb)	9 990 kg (22 025 lb)	17% MAC (a)	15 820 kg (34 875 lb)	33 970 kg (74 900 lb)	41.5% MAC (a)	11 170 kg (24 625 lb) (c)	27 180 kg (59 925 lb) (c)
A320-200 WV005 (CG 43%)	67 400 kg (148 600 lb)	9 380 kg (20 675 lb)	17% MAC (a)	14 860 kg (32 750 lb)	32 020 kg (70 600 lb)	43% MAC (a)	10 470 kg (23 100 lb) (c)	25 620 kg (56 475 lb) (c)
A320-200 WV005 (CG 42%)	67 400 kg (148 600 lb)	9 380 kg (20 675 lb)	17% MAC (a)	14 860 kg (32 775 lb)	31 900 kg (70 325 lb)	42% MAC (a)	10 470 kg (23 100 lb) (c)	25 520 kg (56 275 lb) (c)
A320-200 WV006	66 400 kg (146 375 lb)	9 240 kg (20 375 lb)	17% MAC (a)	14 650 kg (32 300 lb)	31 540 kg (69 550 lb)	43% MAC (a)	10 320 kg (22 750 lb) (c)	25 230 kg (55 625 lb) (c)
A320-200 WV007 (CG 37.5%)	77 400 kg (170 650 lb)	10 000 kg (22 050 lb)	17% MAC (b)	15 820 kg (34 875 lb)	36 030 kg (79 450 lb)	37.5% MAC (a)	12 030 kg (26 525 lb) (c)	28 830 kg (63 550 lb) (c)
A320-200 WV007 (CG 33%)	77 400 kg (170 650 lb)	10 000 kg (22 050 lb)	17% MAC (b)	15 820 kg (34 875 lb)	35 440 kg (78 125 lb)	33% MAC (a)	12 030 kg (26 525 lb) (c)	28 350 kg (62 500 lb) (c)
A320-200 WV008	73 900 kg (162 925 lb)	10 000 kg (22 050 lb)	17% MAC (b)	15 830 kg (34 900 lb)	34 720 kg (76 550 lb)	40% MAC (a)	11 480 kg (25 325 lb) (c)	27 780 kg (61 250 lb) (c)
A320-200 WV009 (CG 38.7%)	75 900 kg (167 325 lb)	10 000 kg (22 050 lb)	17% MAC (b)	15 820 kg (34 900 lb)	35 490 kg (78 250 lb)	38.7% MAC (a)	11 800 kg (26 000 lb) (c)	28 390 kg (62 600 lb) (c)
A320-200 WV009 (CG 38.5%)	75 900 kg (167 325 lb)	10 000 kg (22 050 lb)	17% MAC (b)	15 830 kg (34 900 lb)	35 470 kg (78 175 lb)	38.5% MAC (a)	11 800 kg (26 000 lb) (c)	28 370 kg (62 550 lb) (c)
A320-200 WV010 (CG 37.5%)	77 400 kg (170 650 lb)	10 000 kg (22 050 lb)	17% MAC (b)	15 820 kg (34 875 lb)	36 030 kg (79 450 lb)	37.5% MAC (a)	12 030 kg (26 525 lb) (c)	28 830 kg (63 550 lb) (c)
A320-200 WV010 (CG 33%)	77 400 kg (170 650 lb)	10 000 kg (22 050 lb)	17% MAC (b)	15 820 kg (34 875 lb)	35 440 kg (78 125 lb)	33% MAC (a)	12 030 kg (26 525 lb) (c)	28 350 kg (62 500 lb) (c)

NOTE:
(a) LOADS CALCULATED USING AIRCRAFT AT MRW.
(b) LOADS CALCULATED USING AIRCRAFT AT 72 000 kg (158 725 lb).
(c) BRAKED MAIN GEAR.

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Maximum Pavement Loads for A320-200
(Sheet 2 of 4)
FIGURE-7-3-0-991-010-A01

****ON A/C A320-200**

1	2	3		4	5		6	
		$V_{(NG)}$			$V_{(MG)}$ (PER STRUT)		H (PER STRUT)	
WEIGHT VARIANT	MAXIMUM RAMP WEIGHT	STATIC LOAD AT MOST FWD CG		STATIC BRAKING AT 10 ft/s² DECELERATION	STATIC LOAD AT MAX AFT CG		STEADY BRAKING AT 10 ft/s² DECELERATION	AT INSTANTANEOUS BRAKING COEFFICIENT = 0.8
A320-200 WV011 (CG 38.7%)	75 900 kg (167 325 lb)	10 000 kg (22 050 lb)	17% MAC (b)	15 820 kg (34 900 lb)	35 490 kg (78 250 lb)	38.7% MAC (a)	11 800 kg (26 000 lb) (c)	28 390 kg (62 600 lb) (c)
A320-200 WV011 (CG 38.5%)	75 900 kg (167 325 lb)	10 000 kg (22 050 lb)	17% MAC (b)	15 830 kg (34 900 lb)	35 470 kg (78 175 lb)	38.5% MAC (a)	11 800 kg (26 000 lb) (c)	28 370 kg (62 550 lb) (c)
A320-200 WV012	77 400 kg (170 650 lb)	10 000 kg (22 050 lb)	17% MAC (b)	15 820 kg (34 875 lb)	36 030 kg (79 450 lb)	37.5% MAC (a)	12 030 kg (26 525 lb) (c)	28 830 kg (63 550 lb) (c)
A320-200 WV013 (CG 41.42%)	71 900 kg (158 500 lb)	9 990 kg (22 025 lb)	17% MAC (a)	15 820 kg (34 875 lb)	33 960 kg (74 875 lb)	41.42% MAC (a)	11 170 kg (24 625 lb) (c)	27 170 kg (59 900 lb) (c)
A320-200 WV013 (CG 41%)	71 900 kg (158 500 lb)	9 990 kg (22 025 lb)	17% MAC (a)	15 820 kg (34 875 lb)	33 910 kg (74 750 lb)	41% MAC (a)	11 170 kg (24 625 lb) (c)	27 130 kg (59 800 lb) (c)
A320-200 WV014	73 900 kg (162 925 lb)	10 000 kg (22 050 lb)	17% MAC (b)	15 830 kg (34 900 lb)	34 720 kg (76 550 lb)	40% MAC (a)	11 480 kg (25 325 lb) (c)	27 780 kg (61 250 lb) (c)
A320-200 WV015	78 400 kg (172 850 lb)	10 000 kg (22 050 lb)	17% MAC (b)	15 820 kg (34 875 lb)	36 410 kg (80 250 lb)	36.8% MAC (a)	12 180 kg (26 850 lb) (c)	29 120 kg (64 200 lb) (c)
A320-200 WV016	73 900 kg (162 925 lb)	10 000 kg (22 050 lb)	17% MAC (b)	15 830 kg (34 900 lb)	34 720 kg (76 550 lb)	40% MAC (a)	11 480 kg (25 325 lb) (c)	27 780 kg (61 250 lb) (c)
A320-200 WV017	78 400 kg (172 850 lb)	10 000 kg (22 050 lb)	17% MAC (b)	15 820 kg (34 875 lb)	36 410 kg (80 250 lb)	36.8% MAC (a)	12 180 kg (26 850 lb) (c)	29 120 kg (64 200 lb) (c)
A320-200 WV018 (CG 41.47%)	71 900 kg (158 500 lb)	9 990 kg (22 025 lb)	17% MAC (a)	15 820 kg (34 875 lb)	33 970 kg (74 900 lb)	41.47% MAC (a)	11 170 kg (24 625 lb) (c)	27 170 kg (59 900 lb) (c)
A320-200 WV018 (CG 41.46%)	71 900 kg (158 500 lb)	9 990 kg (22 025 lb)	17% MAC (a)	15 820 kg (34 875 lb)	33 970 kg (74 900 lb)	41.46% MAC (a)	11 170 kg (24 625 lb) (c)	27 170 kg (59 900 lb) (c)
A320-200 WV018 (CG 41.4%)	71 900 kg (158 500 lb)	9 990 kg (22 025 lb)	17% MAC (a)	15 820 kg (34 875 lb)	33 960 kg (74 875 lb)	41.4% MAC (a)	11 170 kg (24 625 lb) (c)	27 170 kg (59 900 lb) (c)

NOTE:
(a) LOADS CALCULATED USING AIRCRAFT AT MRW.
(b) LOADS CALCULATED USING AIRCRAFT AT 72 000 kg (158 725 lb).
(c) BRAKED MAIN GEAR.

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Maximum Pavement Loads for A320-200
(Sheet 3 of 4)
FIGURE-7-3-0-991-010-A01

****ON A/C A320-200**

1	2	3		4	5		6	
		$V_{(NG)}$			$V_{(MG)}$ (PER STRUT)		H (PER STRUT)	
WEIGHT VARIANT	MAXIMUM RAMP WEIGHT	STATIC LOAD AT MOST FWD CG		STATIC BRAKING AT 10 ft/s² DECELERATION	STATIC LOAD AT MAX AFT CG		STEADY BRAKING AT 10 ft/s² DECELERATION	AT INSTANTANEOUS BRAKING COEFFICIENT = 0.8
A320-200 WV018 (CG 41%)	71 900 kg (158 500 lb)	9 990 kg (22 025 lb)	17% MAC (a)	15 820 kg (34 875 lb)	33 910 kg (74 750 lb)	41% MAC (a)	11 170 kg (24 625 lb) (b)	27 130 kg (59 800 lb) (b)
A320-200 WV019 (CG 42.61%)	70 400 kg (155 200 lb)	9 790 kg (21 575 lb)	17% MAC (a)	15 500 kg (34 175 lb)	33 400 kg (73 625 lb)	42.61% MAC (a)	10 940 kg (24 125 lb) (b)	26 720 kg (58 900 lb) (b)
A320-200 WV019 (CG 42%)	70 400 kg (155 200 lb)	9 780 kg (21 575 lb)	17% MAC (a)	15 500 kg (34 175 lb)	33 330 kg (73 475 lb)	42% MAC (a)	10 940 kg (24 125 lb) (b)	26 660 kg (58 775 lb) (b)
A320-200 WV019 (CG 41%)	70 400 kg (155 200 lb)	9 780 kg (21 575 lb)	17% MAC (a)	15 500 kg (34 175 lb)	33 200 kg (73 200 lb)	41% MAC (a)	10 940 kg (24 125 lb) (b)	26 560 kg (58 550 lb) (b)
A320-200 WV019 (CG 40%)	70 400 kg (155 200 lb)	9 790 kg (21 575 lb)	17% MAC (a)	15 500 kg (34 175 lb)	33 080 kg (72 925 lb)	40% MAC (a)	10 940 kg (24 125 lb) (b)	26 460 kg (58 350 lb) (b)

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

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Maximum Pavement Loads for A320-200
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7-3-0-991-010-A01

****ON A/C A320neo**

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

1	2	3		4	5		6	
		$V_{(NG)}$			$V_{(MG)}$ (PER STRUT)		H (PER STRUT)	
WEIGHT VARIANT	MAXIMUM RAMP WEIGHT	STATIC LOAD AT MOST FWD CG		STATIC BRAKING AT 10 ft/s² DECELERATION	STATIC LOAD AT MAX AFT CG		STEADY BRAKING AT 10 ft/s² DECELERATION	AT INSTANTANEOUS BRAKING COEFFICIENT = 0.8
A320NEO WV050 (CG 38.87%)	73 900 kg (162 925 lb)	10 000 kg (22 050 lb)	17% MAC (b)	15 830 kg (34 900 lb)	34 710 kg (76 525 lb)	39.87% MAC (a)	11 480 kg (25 325 lb) (c)	27 760 kg (61 200 lb) (c)
A320NEO WV050 (CG 39.85%)	73 900 kg (162 925 lb)	10 000 kg (22 050 lb)	17% MAC (b)	15 830 kg (34 900 lb)	34 700 kg (76 500 lb)	39.85% MAC (a)	11 480 kg (25 325 lb) (c)	27 760 kg (61 200 lb) (c)
A320NEO WV051 (CG 39.87%)	73 900 kg (162 925 lb)	10 000 kg (22 050 lb)	17% MAC (b)	15 830 kg (34 900 lb)	34 710 kg (76 525 lb)	39.87% MAC (a)	11 480 kg (25 325 lb) (c)	27 760 kg (61 200 lb) (c)
A320NEO WV051 (CG 39.85%)	73 900 kg (162 925 lb)	10 000 kg (22 050 lb)	17% MAC (b)	15 830 kg (34 900 lb)	34 700 kg (76 500 lb)	39.85% MAC (a)	11 480 kg (25 325 lb) (c)	27 760 kg (61 200 lb) (c)
A320NEO WV052 (CG 37.41%)	77 400 kg (170 650 lb)	10 000 kg (22 050 lb)	17% MAC (b)	15 820 kg (34 875 lb)	36 020 kg (79 425 lb)	37.41% MAC (a)	12 030 kg (26 525 lb) (c)	28 820 kg (63 525 lb) (c)
A320NEO WV052 (CG 37.4%)	77 400 kg (170 650 lb)	10 000 kg (22 050 lb)	17% MAC (b)	15 820 kg (34 875 lb)	36 020 kg (79 400 lb)	37.4% MAC (a)	12 030 kg (26 525 lb) (c)	28 820 kg (63 525 lb) (c)
A320NEO WV053 (CG 37.41%)	77 400 kg (170 650 lb)	10 000 kg (22 050 lb)	17% MAC (b)	15 820 kg (34 875 lb)	36 020 kg (79 425 lb)	37.41% MAC (a)	12 030 kg (26 525 lb) (c)	28 820 kg (63 525 lb) (c)
A320NEO WV053 (CG 37.4%)	77 400 kg (170 650 lb)	10 000 kg (22 050 lb)	17% MAC (b)	15 820 kg (34 875 lb)	36 020 kg (79 400 lb)	37.4% MAC (a)	12 030 kg (26 525 lb) (c)	28 820 kg (63 525 lb) (c)

NOTE:
(a) LOADS CALCULATED USING AIRCRAFT AT MRW.
(b) LOADS CALCULATED USING AIRCRAFT AT 72 000 kg (158 725 lb).
(c) BRAKED MAIN GEAR.

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Maximum Pavement Loads for A320NEO
(Sheet 1 of 4)
FIGURE-7-3-0-991-041-A01

****ON A/C A320neo**

1	2	3		4	5		6	
		$V_{(NG)}$			$V_{(MG)}$ (PER STRUT)		H (PER STRUT)	
WEIGHT VARIANT	MAXIMUM RAMP WEIGHT	STATIC LOAD AT MOST FWD CG		STATIC BRAKING AT 10 ft/s² DECELERATION	STATIC LOAD AT MAX AFT CG		STEADY BRAKING AT 10 ft/s² DECELERATION	AT INSTANTANEOUS BRAKING COEFFICIENT = 0.8
A320NEO WV054	79 400 kg (175 050 lb)	9 900 kg (21 825 lb)	17% MAC (b)	15 710 kg (34 625 lb)	36 760 kg (81 025 lb)	36.1% MAC (a)	12 340 kg (27 200 lb) (c)	29 410 kg (64 825 lb) (c)
A320NEO WV055	79 400 kg (175 050 lb)	9 900 kg (21 825 lb)	17% MAC (b)	15 710 kg (34 625 lb)	36 760 kg (81 025 lb)	36.1% MAC (a)	12 340 kg (27 200 lb) (c)	29 410 kg (64 825 lb) (c)
A320NEO WV056 (CG 39.46%)	70 400 kg (155 200 lb)	9 780 kg (21 575 lb)	17% MAC (a)	15 500 kg (34 175 lb)	33 010 kg (72 775 lb)	39.46% MAC (a)	10 940 kg (24 125 lb) (c)	26 410 kg (58 225 lb) (c)
A320NEO WV056 (CG 40%)	70 400 kg (155 200 lb)	9 780 kg (21 575 lb)	17% MAC (a)	15 500 kg (34 175 lb)	33 080 kg (72 925 lb)	40% MAC (a)	10 940 kg (24 125 lb) (c)	26 460 kg (58 350 lb) (c)
A320NEO WV057 (CG 40%)	70 400 kg (155 200 lb)	9 780 kg (21 575 lb)	17% MAC (a)	15 500 kg (34 175 lb)	33 080 kg (72 925 lb)	40% MAC (a)	10 940 kg (24 125 lb) (c)	26 460 kg (58 350 lb) (c)
A320NEO WV057 (CG 39.46%)	70 400 kg (155 200 lb)	9 780 kg (21 575 lb)	17% MAC (a)	15 500 kg (34 175 lb)	33 010 kg (72 775 lb)	39.46% MAC (a)	10 940 kg (24 125 lb) (c)	26 410 kg (58 225 lb) (c)
A320NEO WV068 (CG 38.44%)	75 900 kg (167 325 lb)	10 000 kg (22 050 lb)	17% MAC (b)	15 820 kg (34 900 lb)	35 460 kg (78 175 lb)	38.44% MAC (a)	11 800 kg (26 000 lb) (c)	28 370 kg (62 525 lb) (c)
A320NEO WV068 (CG 38.42%)	75 900 kg (167 325 lb)	10 000 kg (22 050 lb)	17% MAC (b)	15 820 kg (34 900 lb)	35 450 kg (78 175 lb)	38.42% MAC (a)	11 800 kg (26 000 lb) (c)	28 360 kg (62 525 lb) (c)
A320NEO WV069 (CG 38.44%)	75 900 kg (167 325 lb)	10 000 kg (22 050 lb)	17% MAC (b)	15 820 kg (34 900 lb)	35 460 kg (78 175 lb)	38.44% MAC (a)	11 800 kg (26 000 lb) (c)	28 370 kg (62 525 lb) (c)
A320NEO WV069 (CG 38.42%)	75 900 kg (167 325 lb)	10 000 kg (22 050 lb)	17% MAC (b)	15 820 kg (34 900 lb)	35 450 kg (78 175 lb)	38.42% MAC (a)	11 800 kg (26 000 lb) (c)	28 360 kg (62 525 lb) (c)
A320NEO WV071 (CG 38.79%)	75 400 kg (166 225 lb)	10 000 kg (22 050 lb)	17% MAC (b)	15 830 kg (34 900 lb)	35 270 kg (77 750 lb)	38.79% MAC (a)	11 720 kg (25 825 lb) (c)	28 220 kg (62 200 lb) (c)
A320NEO WV071 (CG 38.77%)	75 400 kg (166 225 lb)	10 000 kg (22 050 lb)	17% MAC (b)	15 830 kg (34 900 lb)	35 270 kg (77 750 lb)	38.77% MAC (a)	11 720 kg (25 825 lb) (c)	28 210 kg (62 200 lb) (c)

NOTE:

(a) LOADS CALCULATED USING AIRCRAFT AT MRW.
(b) LOADS CALCULATED USING AIRCRAFT AT 72 000 kg (158 725 lb).
(c) BRAKED MAIN GEAR.

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Maximum Pavement Loads for A320NEO
(Sheet 2 of 4)
FIGURE-7-3-0-991-041-A01

****ON A/C A320neo**

1	2	3		4	5		6	
		$V_{(NG)}$			$V_{(MG)}$ (PER STRUT)		H (PER STRUT)	
WEIGHT VARIANT	MAXIMUM RAMP WEIGHT	STATIC LOAD AT MOST FWD CG		STATIC BRAKING AT 10 ft/s² DECELERATION	STATIC LOAD AT MAX AFT CG		STEADY BRAKING AT 10 ft/s² DECELERATION	AT INSTANTANEOUS BRAKING COEFFICIENT = 0.8
A320NEO WV075 (CG 39.51%)	74 400 kg (164 025 lb)	10 000 kg (22 050 lb)	17% MAC (b)	15 830 kg (34 900 lb)	34 890 kg (76 925 lb)	39.51% MAC (a)	11 560 kg (25 500 lb) (c)	27 920 kg (61 550 lb) (c)
A320NEO WV075 (CG 39.49%)	74 400 kg (164 025 lb)	10 000 kg (22 050 lb)	17% MAC (b)	15 830 kg (34 900 lb)	34 890 kg (76 925 lb)	39.49% MAC (a)	11 560 kg (25 500 lb) (c)	27 910 kg (61 550 lb) (c)
A320NEO WV078 (CG 40%)	72 900 kg (160 725 lb)	10 010 kg (22 075 lb)	17% MAC (b)	15 840 kg (34 925 lb)	34 250 kg (75 525 lb)	40% MAC (a)	11 330 kg (24 975 lb) (c)	27 400 kg (60 400 lb) (c)
A320NEO WV078 (CG 39.87%)	72 900 kg (160 725 lb)	10 010 kg (22 075 lb)	17% MAC (b)	15 840 kg (34 925 lb)	34 240 kg (75 475 lb)	39.87% MAC (a)	11 330 kg (24 975 lb) (c)	27 390 kg (60 375 lb) (c)
A320NEO WV082 (CG 40%)	71 900 kg (158 500 lb)	10 000 kg (22 050 lb)	17% MAC (a)	15 830 kg (34 900 lb)	33 780 kg (74 475 lb)	40% MAC (a)	11 170 kg (24 625 lb) (c)	27 030 kg (59 575 lb) (c)
A320NEO WV082 (CG 39.71%)	71 900 kg (158 500 lb)	10 000 kg (22 050 lb)	17% MAC (a)	15 830 kg (34 900 lb)	33 750 kg (74 400 lb)	39.71% MAC (a)	11 170 kg (24 625 lb) (c)	27 000 kg (59 525 lb) (c)
A320NEO WV083 (CG 40%)	71 900 kg (158 500 lb)	9 990 kg (22 025 lb)	17% MAC (a)	15 820 kg (34 875 lb)	33 780 kg (74 475 lb)	40% MAC (a)	11 170 kg (24 625 lb) (c)	27 030 kg (59 575 lb) (c)
A320NEO WV083 (CG 39.71%)	71 900 kg (158 500 lb)	9 990 kg (22 025 lb)	17% MAC (a)	15 820 kg (34 875 lb)	33 750 kg (74 400 lb)	39.71% MAC (a)	11 170 kg (24 625 lb) (c)	27 000 kg (59 525 lb) (c)
A320NEO WV085 (CG 40%)	71 400 kg (157 400 lb)	9 920 kg (21 875 lb)	17% MAC (a)	15 710 kg (34 650 lb)	33 550 kg (73 950 lb)	40% MAC (a)	11 100 kg (24 450 lb) (c)	26 840 kg (59 175 lb) (c)
A320NEO WV085 (CG 39.63%)	71 400 kg (157 400 lb)	9 920 kg (21 875 lb)	17% MAC (a)	15 710 kg (34 650 lb)	33 500 kg (73 850 lb)	39.63% MAC (a)	11 100 kg (24 450 lb) (c)	26 800 kg (59 075 lb) (c)

NOTE:
(a) LOADS CALCULATED USING AIRCRAFT AT MRW.
(b) LOADS CALCULATED USING AIRCRAFT AT 72 000 kg (158 725 lb).
(c) BRAKED MAIN GEAR.

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Maximum Pavement Loads for A320NEO
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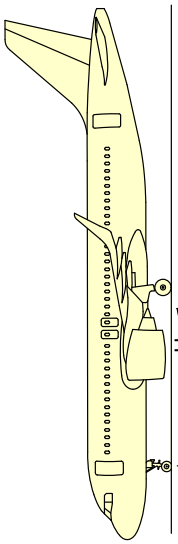
****ON A/C A320neo**



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

1	2	3		4	5		6	
		$V_{(NG)}$			$V_{(MG)}$ (PER STRUT)		H (PER STRUT)	
WEIGHT VARIANT	MAXIMUM RAMP WEIGHT	STATIC LOAD AT MOST FWD C.G.		STATIC BRAKING @ 10 ft/s² DECELERATION	STATIC LOAD AT MAX AFT C.G.		STEADY BRAKING @ 10 ft/s² DECELERATION	AT INSTANTANEOUS BRAKING COEFFICIENT = 0.8
ACJ320NEO WV055	79 400 kg (175 050 lb)	9 900 kg (21 825 lb)	17% MAC (b)	15 710 kg (34 650 lb)	36 760 kg (81 025 lb)	36.1% MAC (a)	12 340 kg (27 200 lb) (c)	29 400 kg (64 825 lb) (c)
ACJ320NEO WV110	79 400 kg (175 050 lb)	9 900 kg (21 825 lb)	17% MAC (b)	15 710 kg (34 650 lb)	36 760 kg (81 025 lb)	36.1% MAC (a)	12 340 kg (27 200 lb) (c)	29 400 kg (64 825 lb) (c)
ACJ320NEO WV111	78 400 kg (172 850 lb)	10 010 kg (22 075 lb)	16.97% MAC (b)	15 820 kg (34 875 lb)	36 400 kg (80 250 lb)	36.75% MAC (a)	12 180 kg (26 850 lb) (c)	29 120 kg (64 200 lb) (c)
ACJ320NEO WV112	77 400 kg (170 650 lb)	10 010 kg (22 075 lb)	16.97% MAC (b)	15 830 kg (34 900 lb)	36 020 kg (79 425 lb)	37.41% MAC (a)	12 030 kg (26 525 lb) (c)	28 820 kg (63 525 lb) (c)

NOTE:
(a) LOADS CALCULATED USING AIRCRAFT AT MRW.
(b) LOADS CALCULATED USING AIRCRAFT AT 72 000 kg (158 725 lb).
(c) BRAKED MAIN GEAR.

N_AC_070300_1_0410104_01_00

Maximum Pavement Loads for A320NEO
Maximum Pavement Loads for ACJ320NEO4 of 4)
7-3-0-991-041-A01

7-4-0 Landing Gear Loading on Pavement

****ON A/C A320-200 A320neo**

Landing Gear Loading on Pavement

1. The curves related to the landing gear loading on pavement are not given in section 07-04-00. Because the relationship between the aircraft weight, the center of gravity and the landing gear loading on the pavement is not strictly linear, it cannot be shown in chart format. But you can find in section 07-03-00 the maximum vertical and horizontal pavement loads for some critical conditions at the tire/ground interfaces for all the operational weight variants of the aircraft.

   For questions that are related to landing gear loading on pavement, contact Airbus.

7-5-0 Flexible Pavement Requirements - U.S. Army Corps of Engineers Design Method

****ON A/C A320-200 A320neo**

Flexible Pavement Requirements - US Army Corps of Engineers Design Method

1. The flexible pavement requirements curves as per as U.S. Army Corps of Engineers Design Method are not given in section 07-05-00 since the related data is available through free software.
   Sections 07-02-00 and 07-03-00 give all the inputs data required for the use of such software.

   NOTE : The U.S. Army Corps of Engineers Design Method for flexible pavements is being gradually superseded by mechanistic-empirical design methods mostly relying on Linear Elastic Analysis (LEA). The number of parameters considered by such methods is not applicable for a chart format and the use of dedicated pavement-design software is necessary.

   For questions that are related to the flexible pavement requirements, contact Airbus.

7-6-0 Flexible Pavement Requirements - LCN Conversion

****ON A/C A320-200 A320neo**

Flexible Pavement Requirements - LCN Conversion

1. The Load Classification Number (LCN) curves are not given in section 07-06-00 since the LCN system for reporting pavement strength is old and are replaced by the ICAO recommended ACN/PCN system in 1983 and ACR/PCR system in 2020.
   For questions that are related to the LCN system, contact Airbus.

7-7-0 Rigid Pavement Requirements - Portland Cement Association Design Method

****ON A/C A320-200 A320neo**

Rigid Pavement Requirements - Portland Cement Association Design Method

1. The rigid-pavement requirements curves as per as Portland Cement Association Design Method are not given in section 07-07-00 since the related data is available through free software. Sections 07-02-00 and 07-03-00 give all the inputs data required for the use of such software.

   NOTE : The Portland Cement Association Design Method for rigid pavements is being gradually superseded by mechanistic-empirical design methods mostly relying on Finite Element Analysis (FEM). The number of parameters considered by such methods is not applicable for a chart format and the use of dedicated pavement-design software is necessary.

   For questions that are related to the rigid pavement requirements, contact Airbus.

7-8-0 Rigid Pavement Requirements - LCN Conversion

****ON A/C A320-200 A320neo**

Rigid Pavement Requirements - LCN Conversion

1. The Load Classification Number (LCN) curves are not given in section 07-08-00 since the LCN system for reporting pavement strength is old and are replaced by the ICAO recommended ACN/PCN system in 1983 and ACR/PCR system in 2020.
   For questions that are related to the LCN system, contact Airbus.

7-9-0 ACN/PCN Reporting System - Flexible and Rigid Pavements

****ON A/C A320-200 A320neo**

Aircraft Classification Number - Flexible and Rigid Pavements

1. This section gives data about the Aircraft Classification Number (ACN) for an aircraft gross weight in relation with standard subgrade strength values for flexible and rigid pavement.

   To find the ACN of an aircraft on flexible and rigid pavement, you must know the aircraft gross weight and the subgrade strength.

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

2. Aircraft Classification Number - ACN table

   The tables in FIGURE 7-9-0-991-012-A and FIGURE 7-9-0-991-016-A give data in tabular format for all the operational weight variants of the aircraft.
   As an approximation, use a linear interpolation in order to get the ACN at the required operating weight using the following equation:
   - ACN = ACN min + (ACN max - ACN min) x (Operating weight - 42 000 kg)/(MRW - 42 000 kg)
     Please note that the interpolation error may reach 5% to 10%.

   As an approximation, use a linear interpolation in order to get the aircraft weight at the pavement PCN using the following equation:
   - Operating weight = 42 000 kg + (MRW - 42 000 kg) x (PCN - ACN min)/(ACN max - ACN min)
     Please note that the interpolation error may reach up to 5%.

   With ACN max = ACN calculated at the MRW in the table and with ACN min = ACN calculated at 42 000 kg.
   For questions or specific calculation regarding ACN/PCN Reporting System, contact Airbus.

****ON A/C A320-200**

WEIGHT VARIANT	ALL UP MASS (kg)	LOAD ON ONE MAIN GEAR LEG (%)	TIRE PRESSURE (MPa)	ACN FOR RIGID PAVEMENT SUBGRADES - MN/m³				ACN FOR FLEXIBLE PAVEMENT SUBGRADES - CBR			
				High 150	Medium 80	Low 40	Ultra-low 20	High 15	Medium 10	Low 6	Ultra-low 3
A320-200 WV000	73 900	47.0	1.38	44	46	48	50	39	40	44	50
	42 000	46.9		22	24	25	26	20	20	22	26
A320-200 WV000	73 900	47.0	1.18	41	44	47	49	38	39	44	50
	42 000	46.9		21	23	24	26	20	20	22	25
A320-200 WV000	73 900	47.0	1.14	41	44	46	49	38	39	44	50
	42 000	46.9		21	23	24	25	20	20	22	25
A320-200 WV000	73 900	47.0	1.03	40	43	45	48	37	39	44	50
	42 000	46.9		20	22	23	25	19	20	22	25
A320-200 WV001	68 400	47.5	1.28	39	42	44	46	35	36	41	47
	42 000	47.5		22	24	25	26	20	21	22	26
A320-200 WV001	68 400	47.5	1.09	37	40	43	45	35	36	40	46
	42 000	47.5		21	23	24	25	20	20	22	26
A320-200 WV001	68 400	47.5	1.06	37	40	42	44	34	36	40	46
	42 000	47.5		21	22	24	25	20	20	22	26
A320-200 WV001	68 400	47.5	0.96	36	39	41	44	34	35	40	46
	42 000	47.5		20	22	23	25	19	20	22	26
A320-200 WV002 (CG 42%)	70 400	47.3	1.28	41	43	45	47	36	37	42	48
	42 000	47.3		22	23	25	26	20	21	22	26
A320-200 WV002 (CG 42%)	70 400	47.3	1.09	38	41	44	46	36	37	42	48
	42 000	47.3		21	22	24	25	20	20	22	26
A320-200 WV002 (CG 42%)	70 400	47.3	1.06	38	41	44	46	36	37	42	48
	42 000	47.3		21	22	24	25	20	20	22	26
A320-200 WV002 (CG 42%)	70 400	47.3	0.96	37	40	43	45	35	36	41	48
	42 000	47.3		20	22	23	25	19	20	22	26
A320-200 WV002 (CG 41%)	70 400	47.2	1.28	40	43	45	47	36	37	42	48
	42 000	47.1		22	23	25	26	20	20	22	26
A320-200 WV002 (CG 41%)	70 400	47.2	1.09	38	41	44	46	36	37	41	47
	42 000	47.1		21	22	24	25	20	20	22	25
A320-200 WV002 (CG 41%)	70 400	47.2	1.06	38	41	43	46	35	37	41	47
	42 000	47.1		21	22	24	25	20	20	22	25
A320-200 WV002 (CG 41%)	70 400	47.2	0.96	37	40	42	45	35	36	41	47
	42 000	47.1		20	22	23	25	19	20	22	25

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ACN Table for A320-200
(Sheet 1 of 9)
FIGURE-7-9-0-991-012-A01

****ON A/C A320-200**

WEIGHT VARIANT	ALL UP MASS (kg)	LOAD ON ONE MAIN GEAR LEG (%)	TIRE PRESSURE (MPa)	ACN FOR RIGID PAVEMENT SUBGRADES - MN/m³				ACN FOR FLEXIBLE PAVEMENT SUBGRADES - CBR			
				HIGH 150	MEDIUM 80	LOW 40	ULTRA-LOW 20	HIGH 15	MEDIUM 10	LOW 6	ULTRA-LOW 3
A320-200 WV003 (CG 38.7%)	75 900	46.8	1.38	45	47	50	52	40	41	46	52
	42 000	46.7		22	24	25	26	20	20	22	25
A320-200 WV003 (CG 38.7%)	75 900	46.8	1.18	43	45	48	50	39	40	45	51
	42 000	46.7		21	23	24	25	20	20	22	25
A320-200 WV003 (CG 38.7%)	75 900	46.8	1.14	42	45	48	50	39	40	45	51
	42 000	46.7		21	22	24	25	20	20	22	25
A320-200 WV003 (CG 38.7%)	75 900	46.8	1.03	41	44	47	49	38	40	45	51
	42 000	46.7		20	22	23	25	19	20	22	25
A320-200 WV003 (CG 38.5%)	75 900	46.7	1.38	45	47	50	52	40	41	46	52
	42 000	46.7		22	24	25	26	20	20	22	25
A320-200 WV003 (CG 38.5%)	75 900	46.7	1.18	43	45	48	50	39	40	45	51
	42 000	46.7		21	23	24	25	20	20	22	25
A320-200 WV003 (CG 38.5%)	75 900	46.7	1.14	42	45	48	50	39	40	45	51
	42 000	46.7		21	22	24	25	20	20	22	25
A320-200 WV003 (CG 38.5%)	75 900	46.7	1.03	41	44	47	49	38	40	45	51
	42 000	46.7		20	22	23	25	19	20	22	25
A320-200 WV004	71 900	47.3	1.38	42	45	47	49	38	39	43	49
	42 000	47.2		23	24	25	27	20	21	22	26
A320-200 WV004	71 900	47.3	1.18	40	43	46	48	37	38	43	49
	42 000	47.2		21	23	24	26	20	20	22	26
A320-200 WV004	71 900	47.3	1.14	40	43	45	47	37	38	43	49
	42 000	47.2		21	23	24	26	20	20	22	26
A320-200 WV004	71 900	47.3	1.03	39	42	44	47	36	38	43	49
	42 000	47.2		20	22	24	25	19	20	22	25
A320-200 WV005 (CG 43%)	67 400	47.5	1.28	39	41	43	45	35	36	40	46
	42 000	47.5		22	24	25	26	20	21	22	26
A320-200 WV005 (CG 43%)	67 400	47.5	1.09	37	39	42	44	34	35	40	46
	42 000	47.5		21	23	24	25	20	20	22	26
A320-200 WV005 (CG 43%)	67 400	47.5	1.06	36	39	42	44	34	35	40	46
	42 000	47.5		21	22	24	25	20	20	22	26
A320-200 WV005 (CG 43%)	67 400	47.5	0.96	35	38	41	43	33	35	39	45
	42 000	47.5		20	22	23	25	19	20	22	26

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ACN Table for A320-200
(Sheet 2 of 9)
FIGURE-7-9-0-991-012-A01

****ON A/C A320-200**

WEIGHT VARIANT	ALL UP MASS (kg)	LOAD ON ONE MAIN GEAR LEG (%)	TIRE PRESSURE (MPa)	ACN FOR RIGID PAVEMENT SUBGRADES - MN/m³				ACN FOR FLEXIBLE PAVEMENT SUBGRADES - CBR			
				HIGH 150	MEDIUM 80	LOW 40	ULTRA-LOW 20	HIGH 15	MEDIUM 10	LOW 6	ULTRA-LOW 3
A320-200 WV005 (CG 42%)	67 400	47.3	1.28	38	41	43	45	35	36	40	46
	42 000	47.3		22	23	25	26	20	21	22	26
A320-200 WV005 (CG 42%)	67 400	47.3	1.09	36	39	42	44	34	35	39	45
	42 000	47.3		21	22	24	25	20	20	22	26
A320-200 WV005 (CG 42%)	67 400	47.3	1.06	36	39	41	44	34	35	39	45
	42 000	47.3		21	22	24	25	20	20	22	26
A320-200 WV005 (CG 42%)	67 400	47.3	0.96	35	38	40	43	33	35	39	45
	42 000	47.3		20	22	23	25	19	20	22	26
A320-200 WV006	66 400	47.5	1.23	37	40	42	44	34	35	39	45
	42 000	47.5		22	23	25	26	20	21	22	26
A320-200 WV006	66 400	47.5	1.02	35	38	41	43	33	34	39	45
	42 000	47.5		20	22	24	25	19	20	22	26
A320-200 WV006	66 400	47.5	0.92	34	37	40	42	32	34	38	45
	42 000	47.5		20	21	23	25	19	20	22	26
A320-200 WV007 (CG 37.5%)	77 400	46.6	1.44	46	49	51	53	41	42	47	53
	42 000	46.5		22	24	25	26	20	20	22	25
A320-200 WV007 (CG 37.5%)	77 400	46.6	1.23	44	47	49	52	40	41	46	52
	42 000	46.5		21	23	24	25	20	20	22	25
A320-200 WV007 (CG 37.5%)	77 400	46.6	1.20	44	46	49	51	40	41	46	52
	42 000	46.5		21	23	24	25	20	20	22	25
A320-200 WV007 (CG 37.5%)	77 400	46.6	1.07	42	45	48	50	39	41	46	52
	42 000	46.5		20	22	23	25	19	20	22	25
A320-200 WV007 (CG 33%)	77 400	45.8	1.44	45	48	50	52	40	41	46	52
	42 000	45.7		22	23	25	26	20	20	21	25
A320-200 WV007 (CG 33%)	77 400	45.8	1.23	43	46	48	51	39	40	45	51
	42 000	45.7		21	22	24	25	20	20	21	25
A320-200 WV007 (CG 33%)	77 400	45.8	1.20	43	46	48	50	39	40	45	51
	42 000	45.7		21	22	24	25	19	20	21	25
A320-200 WV007 (CG 33%)	77 400	45.8	1.07	41	44	47	49	39	40	45	51
	42 000	45.7		20	21	23	24	19	19	21	25
A320-200 WV008	73 900	47.0	1.38	44	46	48	50	39	40	44	50
	42 000	46.9		22	24	25	26	20	20	22	26

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ACN Table for A320-200
(Sheet 3 of 9)
FIGURE-7-9-0-991-012-A01

****ON A/C A320-200**

WEIGHT VARIANT	ALL UP MASS (kg)	LOAD ON ONE MAIN GEAR LEG (%)	TIRE PRESSURE (MPa)	ACN FOR RIGID PAVEMENT SUBGRADES - MN/m³				ACN FOR FLEXIBLE PAVEMENT SUBGRADES - CBR				
				HIGH 150	MEDIUM 80	LOW 40	ULTRA-LOW 20	HIGH 15	MEDIUM 10	LOW 6	ULTRA-LOW 3	
A320-200 WV008	73 900	47.0	1.18	41	44	47	49	38	39	44	50	
	42 000	46.9		21	23	24	26	20	20	22	25	
A320-200 WV008	73 900	47.0	1.14	41	44	46	49	38	39	44	50	
	42 000	46.9		21	23	24	25	20	20	22	25	
A320-200 WV008	73 900	47.0	1.03	40	43	45	48	37	39	44	50	
	42 000	46.9		20	22	23	25	19	20	22	25	
A320-200 WV009 (CG 38.7%)	75 900	46.8	1.38	45	47	50	52	40	41	46	52	
	42 000	46.7		22	24	25	26	20	20	22	25	
A320-200 WV009 (CG 38.7%)	75 900	46.8	1.18	43	45	48	50	39	40	45	51	
	42 000	46.7		21	23	24	25	20	20	22	25	
A320-200 WV009 (CG 38.7%)	75 900	46.8	1.14	42	45	48	50	39	40	45	51	
	42 000	46.7		21	22	24	25	20	20	22	25	
A320-200 WV009 (CG 38.7%)	75 900	46.8	1.03	41	44	47	49	38	40	45	51	
	42 000	46.7		20	22	23	25	19	20	22	25	
A320-200 WV09 (CG 38.5%)	75 900	46.7	1.38	45	47	50	52	40	41	46	52	
	42 000	46.7		22	24	25	26	20	20	22	25	
A320-200 WV09 (CG 38.5%)	75 900	46.7	1.14	42	45	48	50	39	40	45	51	
	42 000	46.7		21	22	24	25	20	20	22	25	
A320-200 WV09 (CG 38.5%)	75 900	46.7	1.18	43	45	48	50	39	40	45	51	
	42 000	46.7		21	23	24	25	20	20	22	25	
A320-200 WV09 (CG 38.5%)	75 900	46.7	1.03	41	44	47	49	38	40	45	51	
	42 000	46.7		20	22	23	25	19	20	22	25	
A320-200 WV010 (CG 37.5%)	77 400	46.6	1.44	46	49	51	53	41	42	47	53	
	42 000	46.5		22	24	25	26	20	20	22	25	
A320-200 WV010 (CG 37.5%)	77 400	46.6	1.23	44	47	49	52	40	41	46	52	
	42 000	46.5		21	23	24	25	20	20	22	25	
A320-200 WV010 (CG 37.5%)	77 400	46.6	1.20	44	46	49	51	40	41	46	52	
	42 000	46.5		21	23	24	25	20	20	22	25	
A320-200 WV010 (CG 37.5%)	77 400	46.6	1.07	42	45	48	50	39	41	46	52	
	42 000	46.5		20	22	23	25	19	20	22	25	
A320-200 WV010 (CG 33%)	77 400	45.8	1.44	45	48	50	52	40	41	46	52	
	42 000	45.7		22	23	25	26	20	20	21	25	

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ACN Table for A320-200
(Sheet 4 of 9)
FIGURE-7-9-0-991-012-A01

****ON A/C A320-200**

WEIGHT VARIANT	ALL UP MASS (kg)	LOAD ON ONE MAIN GEAR LEG (%)	TIRE PRESSURE (MPa)	ACN FOR RIGID PAVEMENT SUBGRADES - MN/m³				ACN FOR FLEXIBLE PAVEMENT SUBGRADES - CBR			
				HIGH 150	MEDIUM 80	LOW 40	ULTRA-LOW 20	HIGH 15	MEDIUM 10	LOW 6	ULTRA-LOW 3
A320-200 WV010 (CG 33%)	77 400	45.8	1.23	43	46	48	51	39	40	45	51
	42 000	45.7		21	22	24	25	20	20	21	25
A320-200 WV010 (CG 33%)	77 400	45.8	1.20	43	46	48	50	39	40	45	51
	42 000	45.7		21	22	24	25	19	20	21	25
A320-200 WV010 (CG 33%)	77 400	45.8	1.07	41	44	47	49	39	40	45	51
	42 000	45.7		20	21	23	24	19	19	21	25
A320-200 WV011 (CG 38.7%)	75 900	46.8	1.38	45	47	50	52	40	41	46	52
	42 000	46.7		22	24	25	26	20	20	22	25
A320-200 WV011 (CG 38.7%)	75 900	46.8	1.18	43	45	48	50	39	40	45	51
	42 000	46.7		21	23	24	25	20	20	22	25
A320-200 WV011 (CG 38.7%)	75 900	46.8	1.14	42	45	48	50	39	40	45	51
	42 000	46.7		21	22	24	25	20	20	22	25
A320-200 WV011 (CG 38.7%)	75 900	46.8	1.03	41	44	47	49	38	40	45	51
	42 000	46.7		20	22	23	25	19	20	22	25
A320-200 WV011 (CG 38.5%)	75 900	46.7	1.38	45	47	50	52	40	41	46	52
	42 000	46.7		22	24	25	26	20	20	22	25
A320-200 WV011 (CG 38.5%)	75 900	46.7	1.18	43	45	48	50	39	40	45	51
	42 000	46.7		21	23	24	25	20	20	22	25
A320-200 WV011 (CG 38.5%)	75 900	46.7	1.14	42	45	48	50	39	40	45	51
	42 000	46.7		21	22	24	25	20	20	22	25
A320-200 WV011 (CG 38.5%)	75 900	46.7	1.03	41	44	47	49	38	40	45	51
	42 000	46.7		20	22	23	25	19	20	22	25
A320-200 WV012	77 400	46.6	1.44	46	49	51	53	41	42	47	53
	42 000	46.5		22	24	25	26	20	20	22	25
A320-200 WV012	77 400	46.6	1.23	44	47	49	52	40	41	46	52
	42 000	46.5		21	23	24	25	20	20	22	25
A320-200 WV012	77 400	46.6	1.20	44	46	49	51	40	41	46	52
	42 000	46.5		21	23	24	25	20	20	22	25
A320-200 WV012	77 400	46.6	1.07	42	45	48	50	39	41	46	52
	42 000	46.5		20	22	23	25	19	20	22	25
A320-200 WV013 (CG 41.42%)	71 900	47.2	1.38	42	45	47	49	38	39	43	49
	42 000	47.2		23	24	25	27	20	21	22	26

N_AC_070900_1_0120105_01_03

ACN Table for A320-200
(Sheet 5 of 9)
FIGURE-7-9-0-991-012-A01

****ON A/C A320-200**

WEIGHT VARIANT	ALL UP MASS (kg)	LOAD ON ONE MAIN GEAR LEG (%)	TIRE PRESSURE (MPa)	ACN FOR RIGID PAVEMENT SUBGRADES - MN/m³				ACN FOR FLEXIBLE PAVEMENT SUBGRADES - CBR			
				HIGH 150	MEDIUM 80	LOW 40	ULTRA-LOW 20	HIGH 15	MEDIUM 10	LOW 6	ULTRA-LOW 3
A320-200 WV013 (CG 41.42%)	71 900	47.2	1.18	40	43	46	48	37	38	43	49
	42 000	47.2		21	23	24	26	20	20	22	26
A320-200 WV013 (CG 41.42%)	71 900	47.2	1.14	40	43	45	47	37	38	43	49
	42 000	47.2		21	23	24	26	20	20	22	26
A320-200 WV013 (CG 41.42%)	71 900	47.2	1.03	39	42	44	47	36	38	43	49
	42 000	47.2		20	22	24	25	19	20	22	25
A320-200 WV013 (CG 41%)	71 900	47.2	1.38	42	45	47	49	38	39	43	49
	42 000	47.1		22	24	25	26	20	21	22	26
A320-200 WV013 (CG 41%)	71 900	47.2	1.18	40	43	46	48	37	38	43	49
	42 000	47.1		21	23	24	26	20	20	22	26
A320-200 WV013 (CG 41%)	71 900	47.2	1.14	40	43	45	47	37	38	43	49
	42 000	47.1		21	23	24	25	20	20	22	26
A320-200 WV013 (CG 41%)	71 900	47.2	1.03	38	41	44	46	36	38	42	49
	42 000	47.1		20	22	24	25	19	20	22	25
A320-200 WV014	73 900	47.0	1.38	44	46	48	50	39	40	44	50
	42 000	46.9		22	24	25	26	20	20	22	26
A320-200 WV014	73 900	47.0	1.18	41	44	47	49	38	39	44	50
	42 000	46.9		21	23	24	26	20	20	22	25
A320-200 WV014	73 900	47.0	1.14	41	44	46	49	38	39	44	50
	42 000	46.9		21	23	24	25	20	20	22	25
A320-200 WV014	73 900	47.0	1.03	40	43	45	48	37	39	44	50
	42 000	46.9		20	22	23	25	20	20	22	25
A320-200 WV015	78 400	46.4	1.44	47	49	52	54	41	43	47	53
	42 000	46.4		22	24	25	26	20	20	22	25
A320-200 WV016	73 900	47.0	1.38	44	46	48	50	39	40	44	50
	42 000	46.9		22	24	25	26	20	20	22	26
A320-200 WV016	73 900	47.0	1.18	41	44	47	49	38	39	44	50
	42 000	46.9		21	23	24	26	20	20	22	25
A320-200 WV016	73 900	47.0	1.14	41	44	46	49	38	39	44	50
	42 000	46.9		21	23	24	25	20	20	22	25
A320-200 WV016	73 900	47.0	1.03	40	43	45	48	37	39	44	50
	42 000	46.9		20	22	23	25	19	20	22	25

N_AC_070900_1_0120106_01_04

ACN Table for A320-200
(Sheet 6 of 9)
FIGURE-7-9-0-991-012-A01

****ON A/C A320-200**

WEIGHT VARIANT	ALL UP MASS (kg)	LOAD ON ONE MAIN GEAR LEG (%)	TIRE PRESSURE (MPa)	ACN FOR RIGID PAVEMENT SUBGRADES - MN/m³				ACN FOR FLEXIBLE PAVEMENT SUBGRADES - CBR			
				HIGH 150	MEDIUM 80	LOW 40	ULTRA-LOW 20	HIGH 15	MEDIUM 10	LOW 6	ULTRA-LOW 3
A320-200 WV017	78 400	46.4	1.44	47	49	52	54	41	43	47	53
	42 000	46.4		22	24	25	26	20	20	22	25
A320-200 WV018 (CG 41.47%)	71 900	47.2	1.38	42	45	47	49	38	39	43	49
	42 000	47.2		23	24	25	27	20	21	22	26
A320-200 WV018 (CG 41.47%)	71 900	47.2	1.18	40	43	46	48	37	38	43	49
	42 000	47.2		21	23	24	26	20	20	22	26
A320-200 WV018 (CG 41.47%)	71 900	47.2	1.14	40	43	45	47	37	38	43	49
	42 000	47.2		21	23	24	26	20	20	22	26
A320-200 WV018 (CG 41.47%)	71 900	47.2	1.03	39	42	44	47	36	38	43	49
	42 000	47.2		20	22	24	25	19	20	22	25
A320-200 WV018 (CG 41.46%)	71 900	47.2	1.38	42	45	47	49	38	39	43	49
	42 000	47.2		23	24	25	27	20	21	22	26
A320-200 WV018 (CG 41.46%)	71 900	47.2	1.18	40	43	46	48	37	38	43	49
	42 000	47.2		21	23	24	26	20	20	22	26
A320-200 WV018 (CG 41.46%)	71 900	47.2	1.14	40	43	45	47	37	38	43	49
	42 000	47.2		21	23	24	26	20	20	22	26
A320-200 WV018 (CG 41.46%)	71 900	47.2	1.03	39	42	44	47	36	38	43	49
	42 000	47.2		20	22	24	25	19	20	22	25
A320-200 WV018 (CG 41.4%)	71 900	47.2	1.38	42	45	47	49	38	39	43	49
	42 000	47.2		23	24	25	27	20	21	22	26
A320-200 WV018 (CG 41.4%)	71 900	47.2	1.18	40	43	46	48	37	38	43	49
	42 000	47.2		21	23	24	26	20	20	22	26
A320-200 WV018 (CG 41.4%)	71 900	47.2	1.14	40	43	45	47	37	38	43	49
	42 000	47.2		21	23	24	26	20	20	22	26
A320-200 WV018 (CG 41.4%)	71 900	47.2	1.03	39	42	44	47	36	38	43	49
	42 000	47.2		20	22	24	25	19	20	22	25
A320-200 WV018 (CG 41%)	71 900	47.2	1.38	42	45	47	49	38	39	43	49
	42 000	47.1		22	24	25	26	20	21	22	26
A320-200 WV018 (CG 41%)	71 900	47.2	1.18	40	43	46	48	37	38	43	49
	42 000	47.1		21	23	24	26	20	20	22	26
A320-200 WV018 (CG 41%)	71 900	47.2	1.14	40	43	45	47	37	38	43	49
	42 000	47.1		21	23	24	25	20	20	22	26

N_AC_070900_1_0120107_01_03

ACN Table for A320-200
(Sheet 7 of 9)
FIGURE-7-9-0-991-012-A01

****ON A/C A320-200**

WEIGHT VARIANT	ALL UP MASS (kg)	LOAD ON ONE MAIN GEAR LEG (%)	TIRE PRESSURE (MPa)	ACN FOR RIGID PAVEMENT SUBGRADES - MN/m³				ACN FOR FLEXIBLE PAVEMENT SUBGRADES - CBR			
				HIGH 150	MEDIUM 80	LOW 40	ULTRA-LOW 20	HIGH 15	MEDIUM 10	LOW 6	ULTRA-LOW 3
A320-200 WV018 (CG 41%)	71 900	47.2	1.03	38	41	44	46	36	38	42	49
	42 000	47.1		20	22	24	25	19	20	22	25
A320-200 WV019 (CG 42.61%)	70 400	47.4	1.28	41	43	46	48	37	38	42	48
	42 000	47.4		22	24	25	26	20	21	22	26
A320-200 WV019 (CG 42.61%)	70 400	47.4	1.09	39	41	44	46	36	37	42	48
	42 000	47.4		21	22	24	25	20	20	22	26
A320-200 WV019 (CG 42.61%)	70 400	47.4	1.06	38	41	44	46	36	37	42	48
	42 000	47.4		21	22	24	25	20	20	22	26
A320-200 WV019 (CG 42.61%)	70 400	47.4	0.96	37	40	43	45	35	37	41	48
	42 000	47.4		20	22	23	25	19	20	22	26
A320-200 WV019 (CG 42%)	70 400	47.3	1.28	41	43	45	47	36	37	42	48
	42 000	47.3		22	23	25	26	20	21	22	26
A320-200 WV019 (CG 42%)	70 400	47.3	1.09	38	41	44	46	36	37	42	48
	42 000	47.3		21	22	24	25	20	20	22	26
A320-200 WV019 (CG 42%)	70 400	47.3	1.06	38	41	44	46	35	37	42	48
	42 000	47.3		21	22	24	25	20	20	22	26
A320-200 WV019 (CG 42%)	70 400	47.3	0.96	37	40	43	45	35	36	41	48
	42 000	47.3		20	22	23	25	19	20	22	26
A320-200 WV019 (CG 41%)	70 400	47.2	1.28	40	43	45	47	36	37	42	48
	42 000	47.1		22	23	25	26	20	20	22	26
A320-200 WV019 (CG 41%)	70 400	47.2	1.09	38	41	44	46	36	37	41	47
	42 000	47.1		21	22	24	25	20	20	22	25
A320-200 WV019 (CG 41%)	70 400	47.2	1.06	38	41	43	46	35	37	41	47
	42 000	47.1		21	22	24	25	20	20	22	25
A320-200 WV019 (CG 41%)	70 400	47.2	0.96	37	40	42	45	35	36	41	47
	42 000	47.1		20	22	23	25	19	20	22	25
A320-200 WV019 (CG 40%)	70 400	47.0	1.28	40	43	45	47	36	37	42	47
	42 000	46.9		22	23	25	26	20	20	22	25
A320-200 WV019 (CG 40%)	70 400	47.0	1.09	38	41	43	46	36	37	41	47
	42 000	46.9		21	22	24	25	20	20	22	25
A320-200 WV019 (CG 40%)	70 400	47.0	1.06	38	41	43	45	35	37	41	47
	42 000	46.9		20	22	24	25	20	20	22	25

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ACN Table for A320-200
8 of 9)
7-9-0-991-012-A01

****ON A/C A320-200**

WEIGHT VARIANT	ALL UP MASS (kg)	LOAD ON ONE MAIN GEAR LEG (%)	TIRE PRESSURE (MPa)	ACN FOR RIGID PAVEMENT SUBGRADES - MN/m³				ACN FOR FLEXIBLE PAVEMENT SUBGRADES - CBR				
				HIGH 150	MEDIUM 80	LOW 40	ULTRA-LOW 20	HIGH 15	MEDIUM 10	LOW 6	ULTRA-LOW 3	
A320-200 WV019 (CG 40%)	70 400	47.0	0.96	36	39	42	45	34	36	41	47	
	42 000	46.9		20	21	23	24	19	20	22	25	

N_AC_070900_1_0120109_01_00

ACN Table for A320-200
9 of 9)
7-9-0-991-012-A01

****ON A/C A320neo**

WEIGHT VARIANT	ALL UP MASS (kg)	LOAD ON ONE MAIN GEAR LEG (%)	TIRE PRESSURE (MPa)	ACN FOR RIGID PAVEMENT SUBGRADES - MN/m³				ACN FOR FLEXIBLE PAVEMENT SUBGRADES - CBR			
				HIGH 150	MEDIUM 80	LOW 40	ULTRA-LOW 20	HIGH 15	MEDIUM 10	LOW 6	ULTRA-LOW 3
A320NEO WV050 (CG 38.87%)	73 900	47.0	1.38	44	46	48	50	39	40	44	50
	42 000	46.9		22	24	25	26	20	20	22	25
A320NEO WV050 (CG 39.85%)	73 900	47.0	1.38	44	46	48	50	39	40	44	50
	42 000	46.9		22	24	25	26	20	20	22	25
A320NEO WV051 (CG 39.87%)	73 900	47.0	1.38	44	46	48	50	39	40	44	50
	42 000	46.9		22	24	25	26	20	20	22	25
A320NEO WV051 (CG 39.85%)	73 900	47.0	1.38	44	46	48	50	39	40	44	50
	42 000	46.9		22	24	25	26	20	20	22	25
A320NEO WV052 (CG 37.41%)	77 400	46.5	1.44	46	49	51	53	41	42	47	52
	42 000	46.5		22	24	25	26	20	20	22	25
A320NEO WV052 (CG 37.4%)	77 400	46.5	1.44	46	49	51	53	41	42	47	52
	42 000	46.5		22	24	25	26	20	20	22	25
A320NEO WV053 (CG 37.41%)	77 400	46.5	1.44	46	49	51	53	41	42	47	52
	42 000	46.5		22	24	25	26	20	20	22	25
A320NEO WV053 (CG 37.4%)	77 400	46.5	1.44	46	49	51	53	41	42	47	52
	42 000	46.5		22	24	25	26	20	20	22	25
A320NEO WV054	79 400	46.3	1.44	47	50	52	54	41	43	48	54
	42 000	46.3		22	24	25	26	20	20	22	25
A320NEO WV055	79 400	46.3	1.44	47	50	52	54	41	43	48	54
	42 000	46.3		22	24	25	26	20	20	22	25
A320NEO WV056 (CG 40%)	70 400	47.0	1.28	40	43	45	47	36	37	42	47
	42 000	46.9		22	23	25	26	20	20	22	25
A320NEO WV056 (CG 39.46%)	70 400	46.9	1.28	40	43	45	47	36	37	41	47
	42 000	46.8		22	23	25	26	20	20	22	25
A320NEO WV057 (CG 40%)	70 400	47.0	1.28	40	43	45	47	36	37	42	47
	42 000	46.9		22	23	25	26	20	20	22	25
A320NEO WV057 (CG 39.46%)	70 400	46.9	1.28	40	43	45	47	36	37	41	47
	42 000	46.8		22	23	25	26	20	20	22	25
A320NEO WV068 (CG 38.44%)	75 900	46.7	1.38	45	47	50	52	40	41	46	52
	42 000	46.7		22	24	25	26	20	20	22	25
A320NEO WV068 (CG 38.42%)	75 900	46.7	1.38	45	47	50	52	40	41	46	52
	42 000	46.7		22	24	25	26	20	20	22	25

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ACN Table for A320NEO and ACJ320NEO
ACN Table for A320NEO (Sheet 1 of 3)
FIGURE-7-9-0-991-016-A01

****ON A/C A320neo**

WEIGHT VARIANT	ALL UP MASS (kg)	LOAD ON ONE MAIN GEAR LEG (%)	TIRE PRESSURE (MPa)	ACN FOR RIGID PAVEMENT SUBGRADES - MN/m³				ACN FOR FLEXIBLE PAVEMENT SUBGRADES - CBR			
				HIGH 150	MEDIUM 80	LOW 40	ULTRA-LOW 20	HIGH 15	MEDIUM 10	LOW 6	ULTRA-LOW 3
A320NEO WV069 (CG 38.44%)	75 900	46.7	1.38	45	47	50	52	40	41	46	52
	42 000	46.7		22	24	25	26	20	20	22	25
A320NEO WV069 (CG 38.42%)	75 900	46.7	1.38	45	47	50	52	40	41	46	52
	42 000	46.7		22	24	25	26	20	20	22	25
A320NEO WV071 (CG 38.79%)	75 400	46.8	1.38	44	47	49	51	39	41	45	51
	42 000	46.7		22	24	25	26	20	20	22	25
A320NEO WV071 (CG 38.77%)	75 400	46.8	1.38	44	47	49	51	39	41	45	51
	42 000	46.7		22	24	25	26	20	20	22	25
A320NEO WV075 (CG 39.51%)	74 400	46.9	1.38	44	46	49	51	39	40	45	51
	42 000	46.9		22	24	25	26	20	20	22	25
A320NEO WV075 (CG 39.49%)	74 400	46.9	1.38	44	46	49	51	39	40	45	51
	42 000	46.9		22	24	25	26	20	20	22	25
A320NEO WV078 (CG 40%)	72 900	47.0	1.38	43	45	48	50	38	39	44	50
	42 000	46.9		22	24	25	26	20	20	22	26
A320NEO WV078 (CG 39.87%)	72 900	47.0	1.38	43	45	48	50	38	39	44	49
	42 000	46.9		22	24	25	26	20	20	22	25
A320NEO WV082 (CG 40%)	71 900	47.0	1.38	42	45	47	49	37	39	43	49
	42 000	46.9		22	24	25	26	20	20	22	26
A320NEO WV082 (CG 39.71%)	71 900	46.9	1.38	42	45	47	49	37	39	43	49
	42 000	46.9		22	24	25	26	20	20	22	25
A320NEO WV083 (CG 40%)	71 900	47.0	1.38	42	45	47	49	37	39	43	49
	42 000	46.9		22	24	25	26	20	20	22	26
A320NEO WV083 (CG 39.71%)	71 900	46.9	1.38	42	45	47	49	37	39	43	49
	42 000	46.9		22	24	25	26	20	20	22	25
A320NEO WV085 (CG 40%)	71 400	47.0	1.38	42	44	47	48	37	38	43	48
	42 000	46.9		22	24	25	26	20	20	22	26
A320NEO WV085 (CG 39.63%)	71 400	46.9	1.38	42	44	46	48	37	38	42	48
	42 000	46.9		22	24	25	26	20	20	22	25

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ACN Table for A320NEO and ACJ320NEO
ACN Table for A320NEO2 of 3)
7-9-0-991-016-A01

****ON A/C A320neo**

WEIGHT VARIANT	ALL UP MASS (kg)	LOAD ON ONE MAIN GEAR LEG (%)	TIRE PRESSURE (MPa)	ACN FOR RIGID PAVEMENT SUBGRADES - MN/m³				ACN FOR FLEXIBLE PAVEMENT SUBGRADES - CBR			
				HIGH 150	MEDIUM 80	LOW 40	ULTRA-LOW 20	HIGH 15	MEDIUM 10	LOW 6	ULTRA-LOW 3
ACJ320NEO WV055	79 400	46.3	1.44	47	50	52	54	41	43	48	54
	42 000	46.3		22	24	25	26	20	20	22	25
ACJ320NEO WV110	79 400	46.3	1.44	47	50	52	54	41	43	48	54
	42 000	46.3		22	24	25	26	20	20	22	25
ACJ320NEO WV111	78 400	46.4	1.44	47	49	52	54	41	43	47	53
	42 000	46.4		22	24	25	26	20	20	22	25
ACJ320NEO WV112	77 400	46.5	1.44	46	49	51	53	41	42	47	52
	42 000	46.5		22	24	25	26	20	20	22	25

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ACN Table for A320NEO and ACJ320NEO
ACN Table for ACJ320NEO3 of 3)
7-9-0-991-016-A01

7-10-0 ACR/PCR Reporting System - Flexible And Rigid Pavements

****ON A/C A320-200 A320neo**

ACR/PCR Reporting System - Flexible and Rigid Pavements

1. The ACR/PCR system has been developed by the ICAO to overcome the deficiencies of the ACN/PCN system. Significant advances in pavement design methods had occurred since its development in the late 1970s early 1980s, leading to inconsistencies with the pavement-strength-rating system.

   The ACR/PCR system entails new procedures for the determination of both the ACR and the PCR that are consistent with the current pavement design procedures. This allows to capture the effects of the improved characteristics of new pavement materials as well as modern landing gear configurations, thus leading to an improved accuracy.
   This section gives data about the Aircraft Classification Rating (ACR) for the maximum ramp weight in relation with standard subgrade strength values for flexible and rigid pavement.
   To determine the ACR at other aircraft gross weight, use the official ICAO-ACR software.

   NOTE : An aircraft with an ACR equal to or less than the reported PCR can operate on that pavement, subject to any limitation on the tire pressure. (Ref: ICAO Aerodrome Design Manual, Part 3, Third Edition 2020).

2. Aircraft Classification Rating - ACR Table

   The tables in FIGURE 7-10-0-991-007-A, FIGURE 7-10-0-991-009-A and FIGURE 7-10-0-991-010-A give ACR data in tabular format for all the operational weight variants of the aircraft.
   For questions or specific calculation related to ACR/PCR Reporting System, contact Airbus.

**ON A/C A320-200

WEIGHT VARIANT	ALL UP MASS (kg)	LOAD ON ONE MAIN GEAR LEG (%)	TIRE PRESSURE (MPa)	ACR FOR RIGID PAVEMENT SUBGRADES - MPa				ACR FOR FLEXIBLE PAVEMENT SUBGRADES - MPa			
				HIGH 200	MEDIUM 120	LOW 80	ULTRA-LOW 50	HIGH 200	MEDIUM 120	LOW 80	ULTRA-LOW 50
A320-200 WV000	73 900	47.0	1.38	450	470	490	500	350	370	400	450
A320-200 WV000	73 900	47.0	1.18	430	460	470	490	330	360	390	440
A320-200 WV000	73 900	47.0	1.14	430	450	470	490	320	360	390	440
A320-200 WV000	73 900	47.0	1.03	410	440	460	480	310	350	390	440
A320-200 WV001	68 400	47.5	1.28	410	430	440	460	310	340	370	410
A320-200 WV001	68 400	47.5	1.09	390	410	430	450	300	330	360	400
A320-200 WV001	68 400	47.5	1.06	380	410	430	450	290	320	360	400
A320-200 WV001	68 400	47.5	0.96	370	400	420	440	280	320	350	400
A320-200 WV002 (CG 42%)	70 400	47.3	1.28	420	440	460	470	320	350	380	420
A320-200 WV002 (CG 42%)	70 400	47.3	1.09	400	430	440	460	310	340	370	420
A320-200 WV002 (CG 42%)	70 400	47.3	1.06	400	420	440	460	300	330	370	420
A320-200 WV002 (CG 42%)	70 400	47.3	0.96	380	410	430	450	290	330	360	410
A320-200 WV002 (CG 41%)	70 400	47.2	1.28	420	440	460	470	320	350	380	420
A320-200 WV002 (CG 41%)	70 400	47.2	1.09	400	420	440	460	300	330	370	410
A320-200 WV002 (CG 41%)	70 400	47.2	1.06	390	420	440	460	300	330	370	410
A320-200 WV002 (CG 41%)	70 400	47.2	0.96	380	410	430	450	290	320	360	410

N_AC_071000_1_0070101_01_00

ACR Table
1 of 9)
7-10-0-991-007-A01

**ON A/C A320-200

WEIGHT VARIANT	ALL UP MASS (kg)	LOAD ON ONE MAIN GEAR LEG (%)	TIRE PRESSURE (MPa)	ACR FOR RIGID PAVEMENT SUBGRADES - MPa				ACR FOR FLEXIBLE PAVEMENT SUBGRADES - MPa			
				HIGH 200	MEDIUM 120	LOW 80	ULTRA-LOW 50	HIGH 200	MEDIUM 120	LOW 80	ULTRA-LOW 50
A320-200 WV003 (CG 38.7%)	75 900	46.8	1.38	460	480	500	520	350	380	410	460
A320-200 WV003 (CG 38.7%)	75 900	46.8	1.18	440	470	490	500	340	370	400	450
A320-200 WV003 (CG 38.7%)	75 900	46.8	1.14	440	460	480	500	330	360	400	450
A320-200 WV003 (CG 38.7%)	75 900	46.8	1.03	420	450	470	490	320	360	400	450
A320-200 WV003 (CG 38.5%)	75 900	46.7	1.38	460	480	500	510	350	380	410	460
A320-200 WV003 (CG 38.5%)	75 900	46.7	1.18	440	470	480	500	340	370	400	450
A320-200 WV003 (CG 38.5%)	75 900	46.7	1.14	440	460	480	500	330	360	400	450
A320-200 WV003 (CG 38.5%)	75 900	46.7	1.03	420	450	470	490	320	360	400	450
A320-200 WV004	71 900	47.3	1.38	440	460	470	490	340	360	390	430
A320-200 WV004	71 900	47.3	1.18	420	440	460	480	320	350	380	430
A320-200 WV004	71 900	47.3	1.14	410	440	460	480	320	350	380	430
A320-200 WV004	71 900	47.3	1.03	400	430	450	470	300	340	380	420
A320-200 WV005 (CG 43%)	67 400	47.5	1.28	400	420	440	450	310	330	360	400
A320-200 WV005 (CG 43%)	67 400	47.5	1.09	380	410	420	440	290	320	350	400
A320-200 WV005 (CG 43%)	67 400	47.5	1.06	380	400	420	440	290	320	350	390
A320-200 WV005 (CG 43%)	67 400	47.5	0.96	360	390	410	430	280	310	350	390

N_AC_071000_1_0070102_01_00

ACR Table
2 of 9)
7-10-0-991-007-A01

**ON A/C A320-200

WEIGHT VARIANT	ALL UP MASS (kg)	LOAD ON ONE MAIN GEAR LEG (%)	TIRE PRESSURE (MPa)	ACR FOR RIGID PAVEMENT SUBGRADES - MPa				ACR FOR FLEXIBLE PAVEMENT SUBGRADES - MPa			
				HIGH 200	MEDIUM 120	LOW 80	ULTRA-LOW 50	HIGH 200	MEDIUM 120	LOW 80	ULTRA-LOW 50
A320-200 WV005 (CG 42%)	67 400	47.3	1.28	400	420	430	450	310	330	360	400
A320-200 WV005 (CG 42%)	67 400	47.3	1.09	380	400	420	440	290	320	350	390
A320-200 WV005 (CG 42%)	67 400	47.3	1.06	370	400	420	440	290	320	350	390
A320-200 WV005 (CG 42%)	67 400	47.3	0.96	360	390	410	430	280	310	340	390
A320-200 WV006	66 400	47.5	1.23	390	410	430	440	300	320	350	390
A320-200 WV006	66 400	47.5	1.02	360	390	410	430	280	310	340	390
A320-200 WV006	66 400	47.5	0.92	350	380	400	420	270	300	340	380
A320-200 WV007 (CG 37.5%)	77 400	46.6	1.44	470	500	510	530	360	390	420	470
A320-200 WV007 (CG 37.5%)	77 400	46.6	1.23	450	480	500	520	350	380	410	460
A320-200 WV007 (CG 37.5%)	77 400	46.6	1.20	450	480	500	510	340	380	410	460
A320-200 WV007 (CG 37.5%)	77 400	46.6	1.07	440	460	480	500	330	370	410	460
A320-200 WV007 (CG 33%)	77 400	45.8	1.44	460	490	500	520	360	380	410	460
A320-200 WV007 (CG 33%)	77 400	45.8	1.23	450	470	490	510	340	370	410	450
A320-200 WV007 (CG 33%)	77 400	45.8	1.20	440	470	490	500	340	370	400	450
A320-200 WV007 (CG 33%)	77 400	45.8	1.07	430	460	480	500	320	360	400	450
A320-200 WV008	73 900	47.0	1.38	450	470	490	500	350	370	400	450

N_AC_071000_1_0070103_01_00

ACR Table
3 of 9)
7-10-0-991-007-A01

**ON A/C A320-200

WEIGHT VARIANT	ALL UP MASS (kg)	LOAD ON ONE MAIN GEAR LEG (%)	TIRE PRESSURE (MPa)	ACR FOR RIGID PAVEMENT SUBGRADES - MPa				ACR FOR FLEXIBLE PAVEMENT SUBGRADES - MPa			
				HIGH 200	MEDIUM 120	LOW 80	ULTRA-LOW 50	HIGH 200	MEDIUM 120	LOW 80	ULTRA-LOW 50
A320-200 WV008	73 900	47.0	1.18	430	460	470	490	330	360	390	440
A320-200 WV008	73 900	47.0	1.14	430	450	470	490	320	360	390	440
A320-200 WV008	73 900	47.0	1.03	410	440	460	480	310	350	390	440
A320-200 WV009 (CG 38.7%)	75 900	46.8	1.38	460	480	500	520	350	380	410	460
A320-200 WV009 (CG 38.7%)	75 900	46.8	1.18	440	470	490	500	340	370	400	450
A320-200 WV009 (CG 38.7%)	75 900	46.8	1.14	440	460	480	500	330	360	400	450
A320-200 WV009 (CG 38.7%)	75 900	46.8	1.03	420	450	470	490	320	360	400	450
A320-200 WV009 (CG 38.5%)	75 900	46.7	1.38	460	480	500	520	350	380	410	460
A320-200 WV009 (CG 38.5%)	75 900	46.7	1.14	440	460	480	500	330	360	400	450
A320-200 WV009 (CG 38.5%)	75 900	46.7	1.18	440	470	480	500	340	370	400	450
A320-200 WV009 (CG 38.5%)	75 900	46.7	1.03	420	450	470	490	320	360	400	450
A320-200 WV010 (CG 37.5%)	77 400	46.6	1.44	470	500	510	530	360	390	420	470
A320-200 WV010 (CG 37.5%)	77 400	46.6	1.23	450	480	500	520	350	380	410	460
A320-200 WV010 (CG 37.5%)	77 400	46.6	1.20	450	480	500	510	340	380	410	460
A320-200 WV010 (CG 37.5%)	77 400	46.6	1.07	440	460	480	500	330	370	410	460
A320-200 WV010 (CG 33%)	77 400	45.8	1.44	460	490	500	520	360	380	410	460

N_AC_071000_1_0070104_01_00

ACR Table
4 of 9)
7-10-0-991-007-A01

**ON A/C A320-200

WEIGHT VARIANT	ALL UP MASS (kg)	LOAD ON ONE MAIN GEAR LEG (%)	TIRE PRESSURE (MPa)	ACR FOR RIGID PAVEMENT SUBGRADES - MPa				ACR FOR FLEXIBLE PAVEMENT SUBGRADES - MPa			
				HIGH 200	MEDIUM 120	LOW 80	ULTRA-LOW 50	HIGH 200	MEDIUM 120	LOW 80	ULTRA-LOW 50
A320-200 WV010 (CG 33%)	77 400	45.8	1.23	450	470	490	510	340	370	410	450
A320-200 WV010 (CG 33%)	77 400	45.8	1.20	440	470	490	500	340	370	400	450
A320-200 WV010 (CG 33%)	77 400	45.8	1.07	430	460	480	490	320	360	400	450
A320-200 WV011 (CG 38.7%)	75 900	46.8	1.38	460	480	500	520	350	380	410	460
A320-200 WV011 (CG 38.7%)	75 900	46.8	1.18	440	470	490	500	340	370	400	450
A320-200 WV011 (CG 38.7%)	75 900	46.8	1.14	440	460	480	500	330	360	400	450
A320-200 WV011 (CG 38.7%)	75 900	46.8	1.03	420	450	470	490	320	360	400	450
A320-200 WV011 (CG 38.5%)	75 900	46.7	1.38	460	480	500	520	350	380	410	460
A320-200 WV011 (CG 38.5%)	75 900	46.7	1.18	440	470	480	500	340	370	400	450
A320-200 WV011 (CG 38.5%)	75 900	46.7	1.14	440	460	480	500	330	360	400	450
A320-200 WV011 (CG 38.5%)	75 900	46.7	1.03	420	450	470	490	320	360	400	450
A320-200 WV012	77 400	46.6	1.44	470	500	510	530	360	390	420	470
A320-200 WV012	77 400	46.6	1.23	450	480	500	520	350	380	410	460
A320-200 WV012	77 400	46.6	1.20	450	480	500	510	340	380	410	460
A320-200 WV012	77 400	46.6	1.07	440	460	480	500	330	370	410	460
A320-200 WV013 (CG 41.42%)	71 900	47.2	1.38	440	460	470	490	340	360	390	430

N_AC_071000_1_0070105_01_00

ACR Table
5 of 9)
7-10-0-991-007-A01

**ON A/C A320-200

WEIGHT VARIANT	ALL UP MASS (kg)	LOAD ON ONE MAIN GEAR LEG (%)	TIRE PRESSURE (MPa)	ACR FOR RIGID PAVEMENT SUBGRADES - MPa				ACR FOR FLEXIBLE PAVEMENT SUBGRADES - MPa			
				HIGH 200	MEDIUM 120	LOW 80	ULTRA-LOW 50	HIGH 200	MEDIUM 120	LOW 80	ULTRA-LOW 50
A320-200 WV013 (CG 41.42%)	71 900	47.2	1.18	420	440	460	480	320	350	380	430
A320-200 WV013 (CG 41.42%)	71 900	47.2	1.14	410	440	460	480	320	350	380	430
A320-200 WV013 (CG 41.42%)	71 900	47.2	1.03	400	430	450	470	300	340	380	420
A320-200 WV013 (CG 41%)	71 900	47.2	1.38	440	460	470	490	340	360	390	430
A320-200 WV013 (CG 41%)	71 900	47.2	1.18	420	440	460	480	320	350	380	430
A320-200 WV013 (CG 41%)	71 900	47.2	1.14	410	440	460	480	320	350	380	430
A320-200 WV013 (CG 41%)	71 900	47.2	1.03	400	430	450	470	300	340	380	420
A320-200 WV014	73 900	47.0	1.38	450	470	490	500	350	370	400	450
A320-200 WV014	73 900	47.0	1.18	430	460	470	490	330	360	390	440
A320-200 WV014	73 900	47.0	1.14	430	450	470	490	320	360	390	440
A320-200 WV014	73 900	47.0	1.03	410	440	460	480	310	350	390	440
A320-200 WV015	78 400	46.4	1.44	480	500	520	530	370	390	430	470
A320-200 WV016	73 900	47.0	1.38	450	470	490	500	350	370	400	450
A320-200 WV016	73 900	47.0	1.18	430	460	470	490	330	360	390	440
A320-200 WV016	73 900	47.0	1.14	430	450	470	490	320	360	390	440
A320-200 WV016	73 900	47.0	1.03	410	440	460	480	310	350	390	440

N_AC_071000_1_0070106_01_00

ACR Table
6 of 9)
7-10-0-991-007-A01

**ON A/C A320-200

WEIGHT VARIANT	ALL UP MASS (kg)	LOAD ON ONE MAIN GEAR LEG (%)	TIRE PRESSURE (MPa)	ACR FOR RIGID PAVEMENT SUBGRADES - MPa				ACR FOR FLEXIBLE PAVEMENT SUBGRADES - MPa			
				HIGH 200	MEDIUM 120	LOW 80	ULTRA-LOW 50	HIGH 200	MEDIUM 120	LOW 80	ULTRA-LOW 50
A320-200 WV017	78 400	46.4	1.44	480	500	520	530	370	390	430	470
A320-200 WV018 (CG 41.47%)	71 900	47.2	1.03	400	430	450	470	300	340	380	420
A320-200 WV018 (CG 41.47%)	71 900	47.2	1.38	440	460	470	490	340	360	390	430
A320-200 WV018 (CG 41.47%)	71 900	47.2	1.18	420	440	460	480	320	350	380	430
A320-200 WV018 (CG 41.47%)	71 900	47.2	1.14	410	440	460	480	320	350	380	430
A320-200 WV018 (CG 41.46%)	71 900	47.2	1.03	400	430	450	470	300	340	380	420
A320-200 WV018 (CG 41.46%)	71 900	47.2	1.38	440	460	470	490	340	360	390	430
A320-200 WV018 (CG 41.46%)	71 900	47.2	1.18	420	440	460	480	320	350	380	430
A320-200 WV018 (CG 41.46%)	71 900	47.2	1.14	410	440	460	480	320	350	380	430
A320-200 WV018 (CG 41.4%)	71 900	47.2	1.03	400	430	450	470	300	340	380	420
A320-200 WV018 (CG 41.4%)	71 900	47.2	1.38	440	460	470	490	340	360	390	430
A320-200 WV018 (CG 41.4%)	71 900	47.2	1.18	420	440	460	480	320	350	380	430
A320-200 WV018 (CG 41.4%)	71 900	47.2	1.14	410	440	460	480	320	350	380	430
A320-200 WV018 (CG 41%)	71 900	47.2	1.38	440	460	470	490	340	360	390	430
A320-200 WV018 (CG 41%)	71 900	47.2	1.18	420	440	460	480	320	350	380	430
A320-200 WV018 (CG 41%)	71 900	47.2	1.14	410	440	460	480	320	350	380	430

N_AC_071000_1_0070107_01_00

ACR Table
7 of 9)
7-10-0-991-007-A01

**ON A/C A320-200

WEIGHT VARIANT	ALL UP MASS (kg)	LOAD ON ONE MAIN GEAR LEG (%)	TIRE PRESSURE (MPa)	ACR FOR RIGID PAVEMENT SUBGRADES - MPa				ACR FOR FLEXIBLE PAVEMENT SUBGRADES - MPa			
				HIGH 200	MEDIUM 120	LOW 80	ULTRA-LOW 50	HIGH 200	MEDIUM 120	LOW 80	ULTRA-LOW 50
A320-200 WV018 (CG 41%)	71 900	47.2	1.03	400	430	450	470	300	340	380	420
A320-200 WV019 (CG 42.61%)	70 400	47.4	0.96	380	410	430	450	290	330	360	410
A320-200 WV019 (CG 42.61%)	70 400	47.4	1.28	420	440	460	480	320	350	380	420
A320-200 WV019 (CG 42.61%)	70 400	47.4	1.09	400	430	440	460	310	340	370	420
A320-200 WV019 (CG 42.61%)	70 400	47.4	1.06	400	420	440	460	300	340	370	420
A320-200 WV019 (CG 42%)	70 400	47.3	1.06	400	420	440	460	300	330	370	420
A320-200 WV019 (CG 42%)	70 400	47.3	1.28	420	440	460	470	320	350	380	420
A320-200 WV019 (CG 42%)	70 400	47.3	1.09	400	430	440	460	310	340	370	420
A320-200 WV019 (CG 42%)	70 400	47.3	0.96	380	410	430	450	290	330	360	410
A320-200 WV019 (CG 41%)	70 400	47.2	1.06	390	420	440	460	300	330	370	410
A320-200 WV019 (CG 41%)	70 400	47.2	1.28	420	440	460	470	320	350	380	420
A320-200 WV019 (CG 41%)	70 400	47.2	1.09	400	420	440	460	300	330	370	410
A320-200 WV019 (CG 41%)	70 400	47.2	0.96	380	410	430	450	290	320	360	410
A320-200 WV019 (CG 40%)	70 400	47.0	1.28	410	440	450	470	320	340	370	420
A320-200 WV019 (CG 40%)	70 400	47.0	1.09	400	420	440	460	300	330	370	410
A320-200 WV019 (CG 40%)	70 400	47.0	1.06	390	420	440	460	300	330	370	410

N_AC_071000_1_0070108_01_00

ACR Table
8 of 9)
7-10-0-991-007-A01

**ON A/C A320-200

WEIGHT VARIANT	ALL UP MASS (kg)	LOAD ON ONE MAIN GEAR LEG (%)	TIRE PRESSURE (MPa)	ACR FOR RIGID PAVEMENT SUBGRADES - MPa				ACR FOR FLEXIBLE PAVEMENT SUBGRADES - MPa			
				HIGH 200	MEDIUM 120	LOW 80	ULTRA-LOW 50	HIGH 200	MEDIUM 120	LOW 80	ULTRA-LOW 50
A320-200 WV019 (CG 40%)	70 400	47.0	0.96	380	410	430	450	290	320	360	410

N_AC_071000_1_0070109_01_00

ACR Table
9 of 9)
7-10-0-991-007-A01

**ON A/C A320neo

WEIGHT VARIANT	ALL UP MASS (kg)	LOAD ON ONE MAIN GEAR LEG (%)	TIRE PRESSURE (MPa)	ACR FOR RIGID PAVEMENT SUBGRADES - MPa				ACR FOR FLEXIBLE PAVEMENT SUBGRADES - MPa			
				HIGH 200	MEDIUM 120	LOW 80	ULTRA-LOW 50	HIGH 200	MEDIUM 120	LOW 80	ULTRA-LOW 50
A320NEO WV050 (CG 38.87%)	73 900	47.0	1.38	450	470	490	500	350	370	400	440
A320NEO WV050 (CG 39.85%)	73 900	47.0	1.38	450	470	490	500	350	370	400	440
A320NEO WV051 (CG 39.87%)	73 900	47.0	1.38	450	470	490	500	350	370	400	440
A320NEO WV051 (CG 39.85%)	73 900	47.0	1.38	450	470	490	500	350	370	400	440
A320NEO WV052 (CG 37.41%)	77 400	46.5	1.44	470	500	510	530	360	390	420	470
A320NEO WV052 (CG 37.4%)	77 400	46.5	1.44	470	500	510	530	360	390	420	470
A320NEO WV053 (CG 37.41%)	77 400	46.5	1.44	470	500	510	530	360	390	420	470
A320NEO WV053 (CG 37.4%)	77 400	46.5	1.44	470	500	510	530	360	390	420	470
A320NEO WV054	79 400	46.3	1.44	490	510	520	540	370	400	430	480
A320NEOWV055	79 400	46.3	1.44	490	510	520	540	370	400	430	480
A320NEO WV056 (CG 39.46%)	70 400	46.9	1.28	410	440	450	470	320	340	370	420
A320NEO WV056 (CG 40%)	70 400	47.0	1.28	410	440	450	470	320	340	370	420
A320NEO WV057 (CG 40%)	70 400	47.0	1.28	410	440	450	470	320	340	370	420
A320NEO WV057 (CG 39.46%)	70 400	46.9	1.28	410	440	450	470	320	340	370	420
A320NEO WV068 (CG 38.44%)	75 900	46.7	1.38	460	480	500	510	350	380	410	460
A320NEO WV068 (CG 38.42%)	75 900	46.7	1.38	460	480	500	510	350	380	410	460

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ACR Table
1 of 2)
7-10-0-991-009-A01

**ON A/C A320neo

WEIGHT VARIANT	ALL UP MASS (kg)	LOAD ON ONE MAIN GEAR LEG (%)	TIRE PRESSURE (MPa)	ACR FOR RIGID PAVEMENT SUBGRADES - MPa				ACR FOR FLEXIBLE PAVEMENT SUBGRADES - MPa			
				HIGH 200	MEDIUM 120	LOW 80	ULTRA-LOW 50	HIGH 200	MEDIUM 120	LOW 80	ULTRA-LOW 50
A320NEO WV069 (CG 38.44%)	75 900	46.7	1.38	460	480	500	510	350	380	410	460
A320NEO WV069 (CG 38.42%)	75 900	46.7	1.38	460	480	500	510	350	380	410	460
A320NEO WV071 (CG 38.79%)	75 400	46.8	1.38	460	480	500	510	350	380	410	450
A320NEO WV071 (CG 38.77%)	75 400	46.8	1.38	460	480	500	510	350	380	410	450
A320NEO WV075 (CG 39.51%)	74 400	46.9	1.38	450	470	490	510	350	370	400	450
A320NEO WV075 (CG 39.49%)	74 400	46.9	1.38	450	470	490	510	350	370	400	450
A320NEO WV078 (CG 40%)	72 900	47.0	1.38	440	460	480	490	340	360	390	440
A320NEO WV078 (CG 39.87%)	72 900	47.0	1.38	440	460	480	490	340	360	390	440
A320NEO WV082 (CG 40%)	71 900	47.0	1.38	430	460	470	490	340	360	390	430
A320NEO WV082 (CG 39.71%)	71 900	46.9	1.38	430	450	470	490	340	360	390	430
A320NEO WV083 (CG 40%)	71 900	47.0	1.38	430	460	470	490	340	360	390	430
A320NEO WV083 (CG 39.71%)	71 900	46.9	1.38	430	450	470	490	340	360	390	430
A320NEO WV085 (CG 40%)	71 400	47.0	1.38	430	450	470	480	330	350	380	430
A320NEO WV085 (CG 39.63%)	71 400	46.9	1.38	430	450	470	480	330	350	380	430

N_AC_071000_1_0090102_01_00

ACR Table
2 of 2)
7-10-0-991-009-A01

**ON A/C A320neo

WEIGHT VARIANT	ALL UP MASS (kg)	LOAD ON ONE MAIN GEAR LEG (%)	TIRE PRESSURE (MPa)	ACR FOR RIGID PAVEMENT SUBGRADES - MPa				ACR FOR FLEXIBLE PAVEMENT SUBGRADES - MPa			
				HIGH 200	MEDIUM 120	LOW 80	ULTRA-LOW 50	HIGH 200	MEDIUM 120	LOW 80	ULTRA-LOW 50
ACJ320NEO WV055	79 400	46.3	1.44	490	510	520	540	370	400	430	480
ACJ320NEO WV110	79 400	46.3	1.44	490	510	520	540	370	400	430	480
ACJ320NEO WV111	78 400	46.4	1.44	480	500	520	530	370	390	430	470
ACJ320NEO WV112	77 400	46.5	1.44	470	500	510	530	360	390	420	470

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ACR Table for ACJ320NEO
7-10-0-991-010-A01

SCALED DRAWINGS

8-0-0 SCALED DRAWINGS

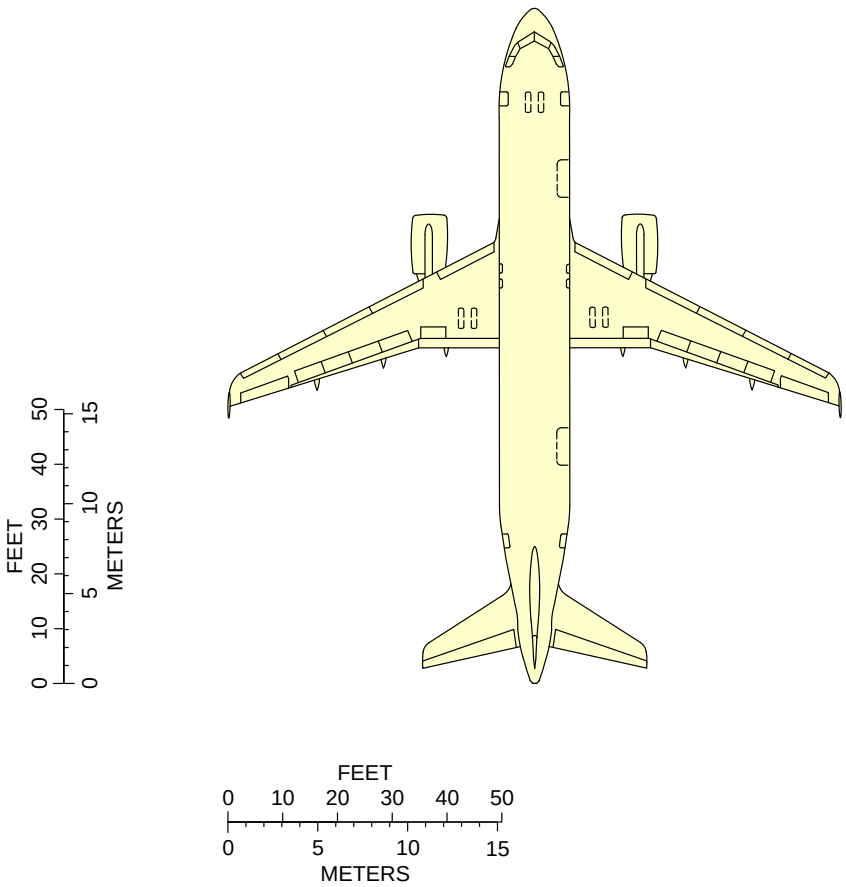
****ON A/C A320-200 A320neo**

Scaled Drawings

1. This section provides the scaled drawings.

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

****ON A/C A320-200**



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

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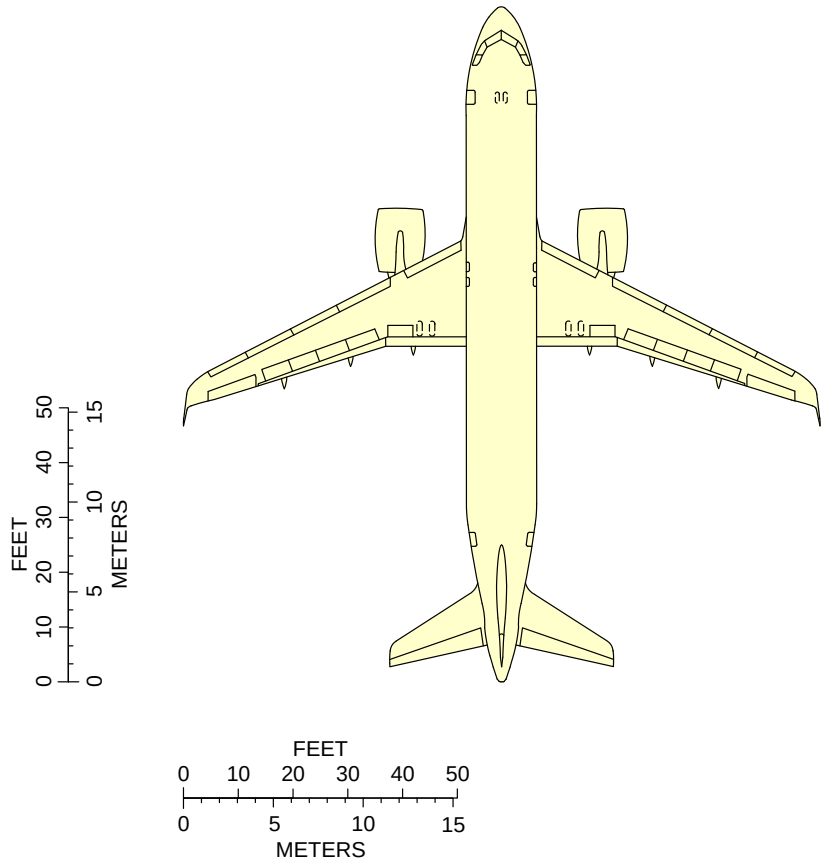
Scaled Drawing
FIGURE-8-0-0-991-003-A01

****ON A/C A320neo**



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

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Scaled Drawing
FIGURE-8-0-0-991-006-A01

AIRCRAFT RESCUE AND FIRE FIGHTING

10-0-0 AIRCRAFT RESCUE AND FIRE FIGHTING

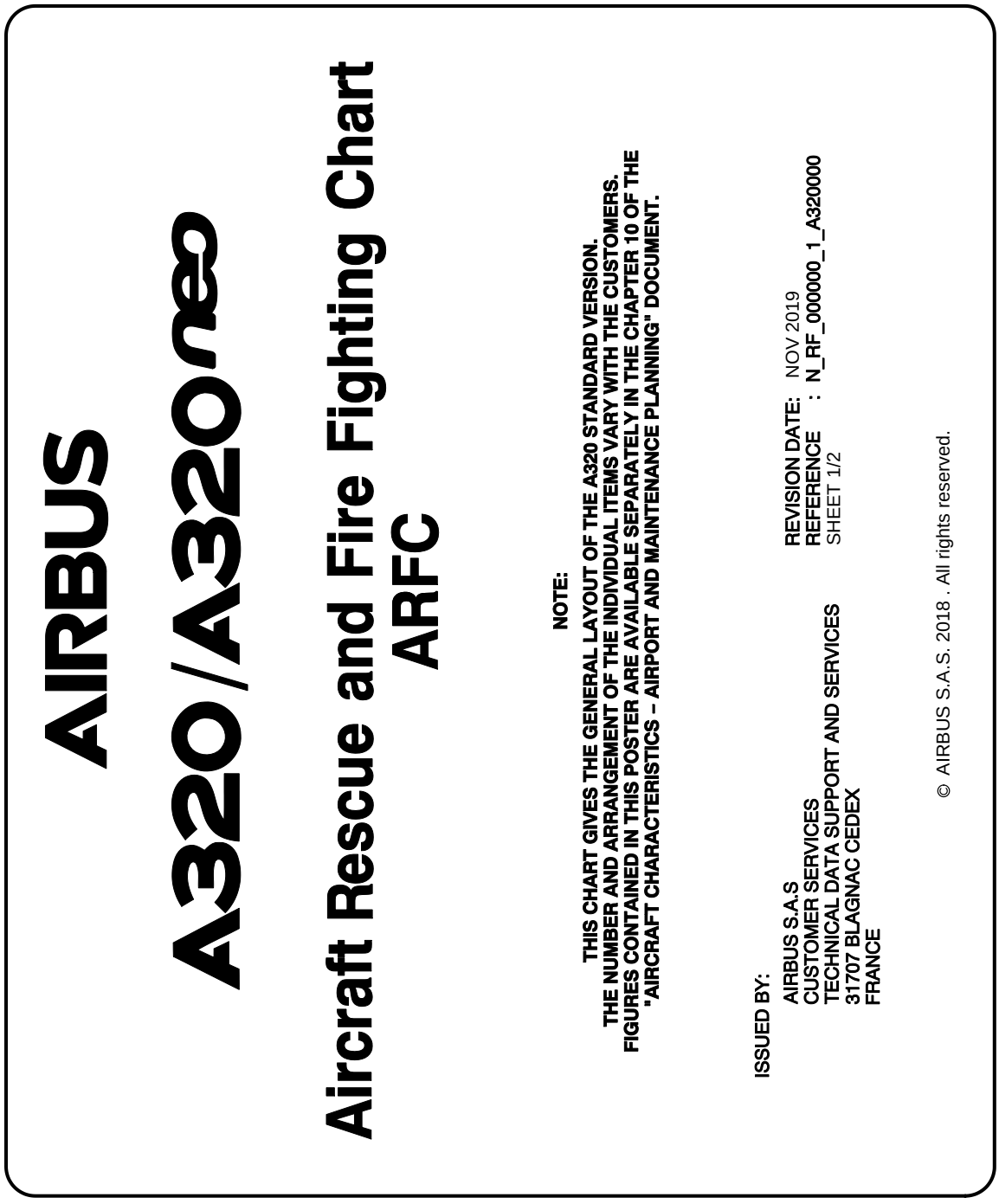
****ON A/C A320-200 A320neo**

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 A320-200 A320neo**



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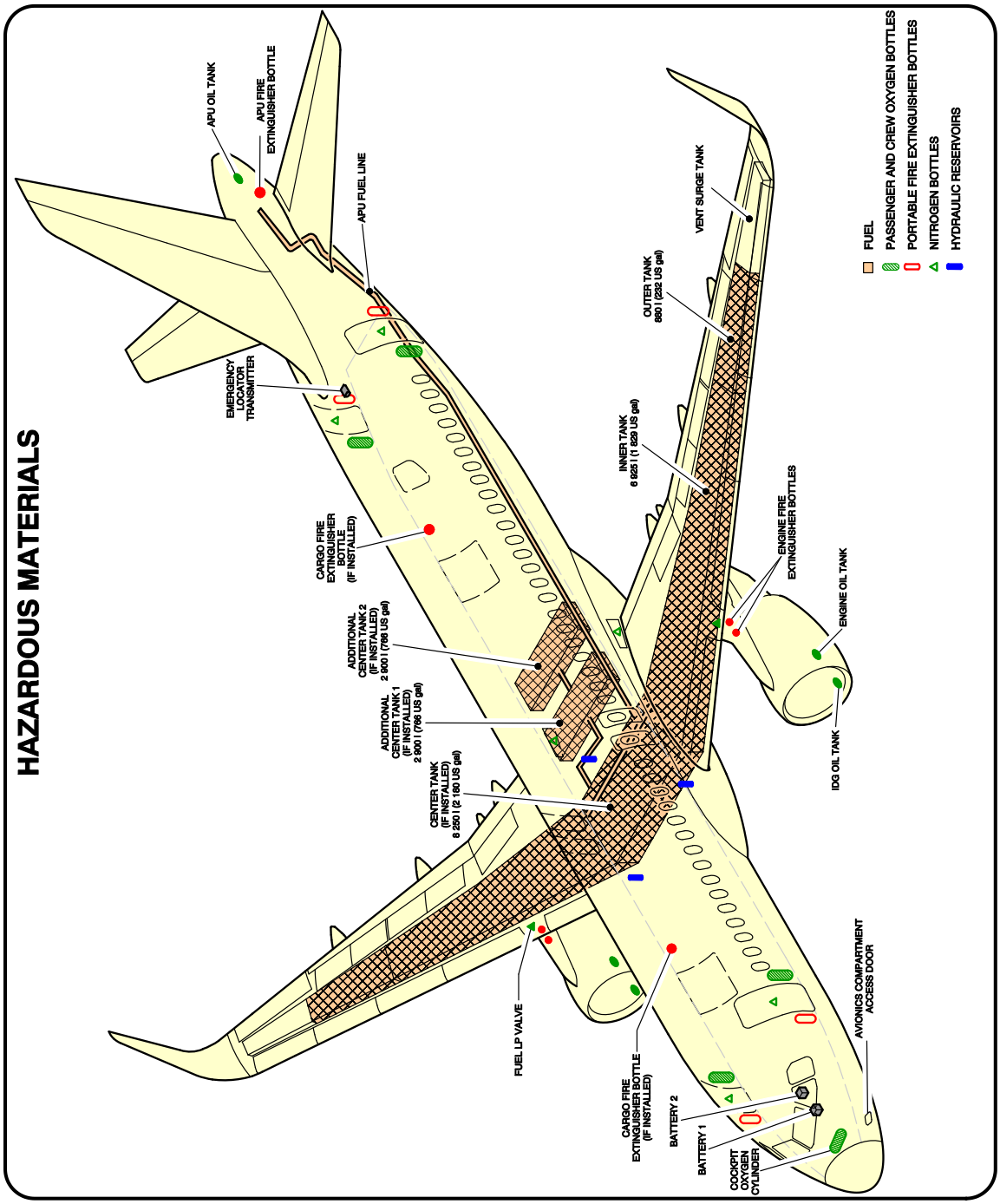
Front Page
FIGURE-10-0-0-991-030-A01

****ON A/C A320-200 A320neo**



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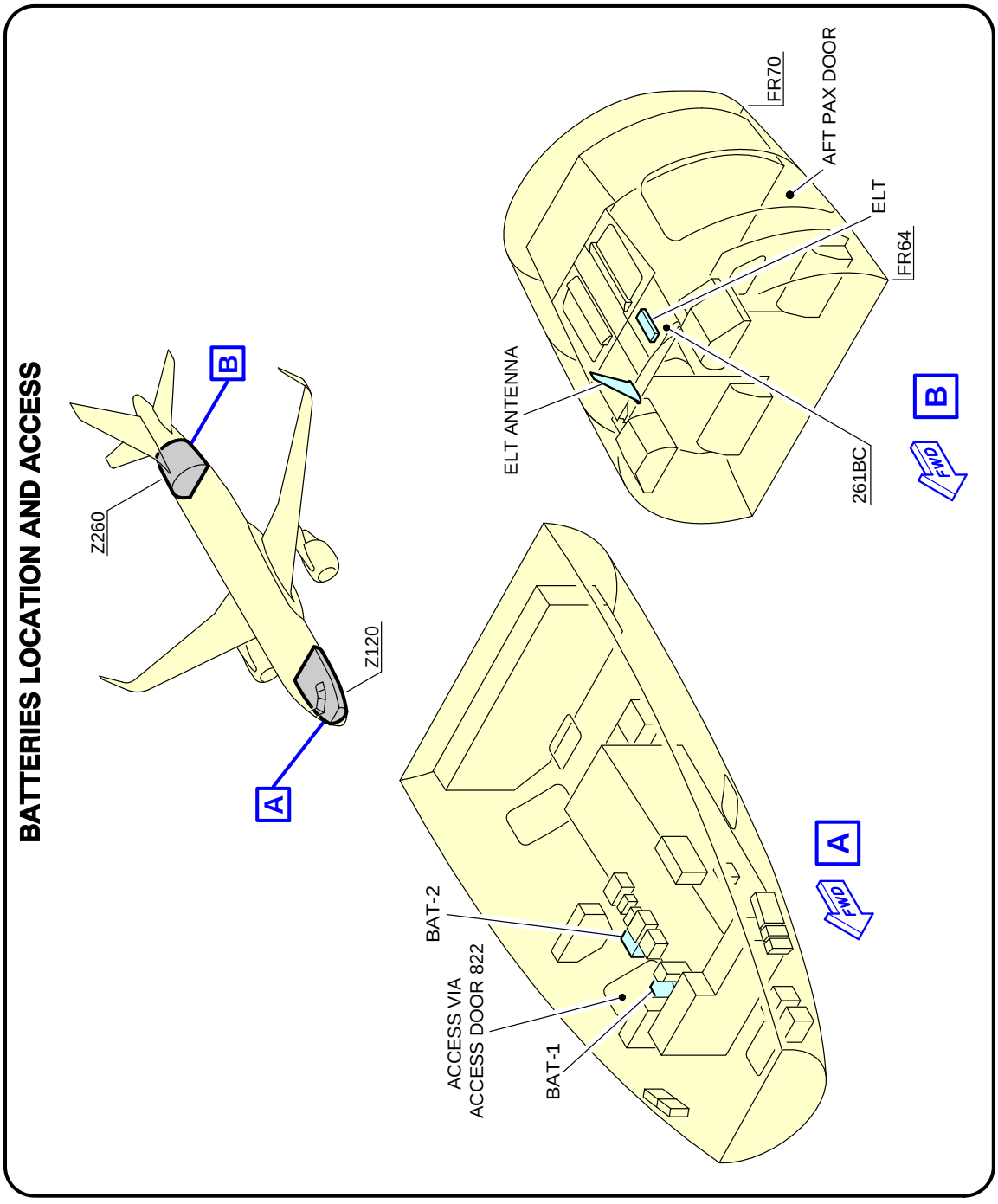
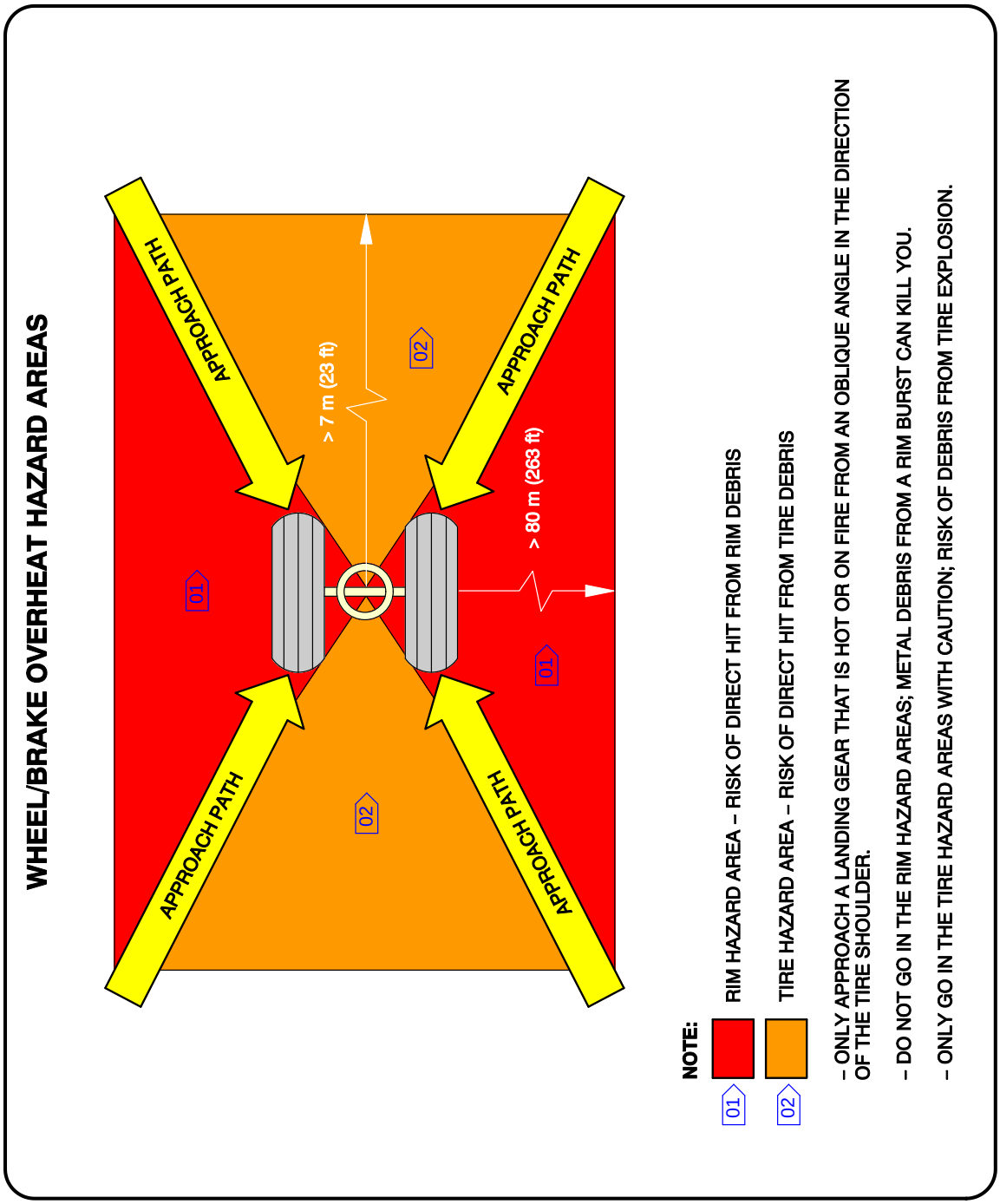
Highly Flammable and Hazardous Materials and Components
FIGURE-10-0-0-991-031-A01

****ON A/C A320-200 A320neo**



Batteries Location and Access
FIGURE-10-0-0-991-057-A01

**ON A/C A320-200 A320neo



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Wheel/Brake Overheat
Wheel Safety Area (Sheet 1 of 2)
FIGURE-10-0-0-991-032-A01

****ON A/C A320-200 A320neo**

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 LANDING GEAR FIRES. THESE AGENTS CAN CHANGE INTO SOLID OR ENAMELED DEPOSITS. THEY CAN DECREASE THE SPEED OF HEAT DISSIPATION WITH A POSSIBLE RISK OF PERMANENT STRUCTURAL DAMAGE TO THE BRAKES, WHEELS OR WHEEL AXLES.

1 – IMMEDIATELY STOP THE FIRE:

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

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

C) DO NOT USE FANS OR BLOWERS.

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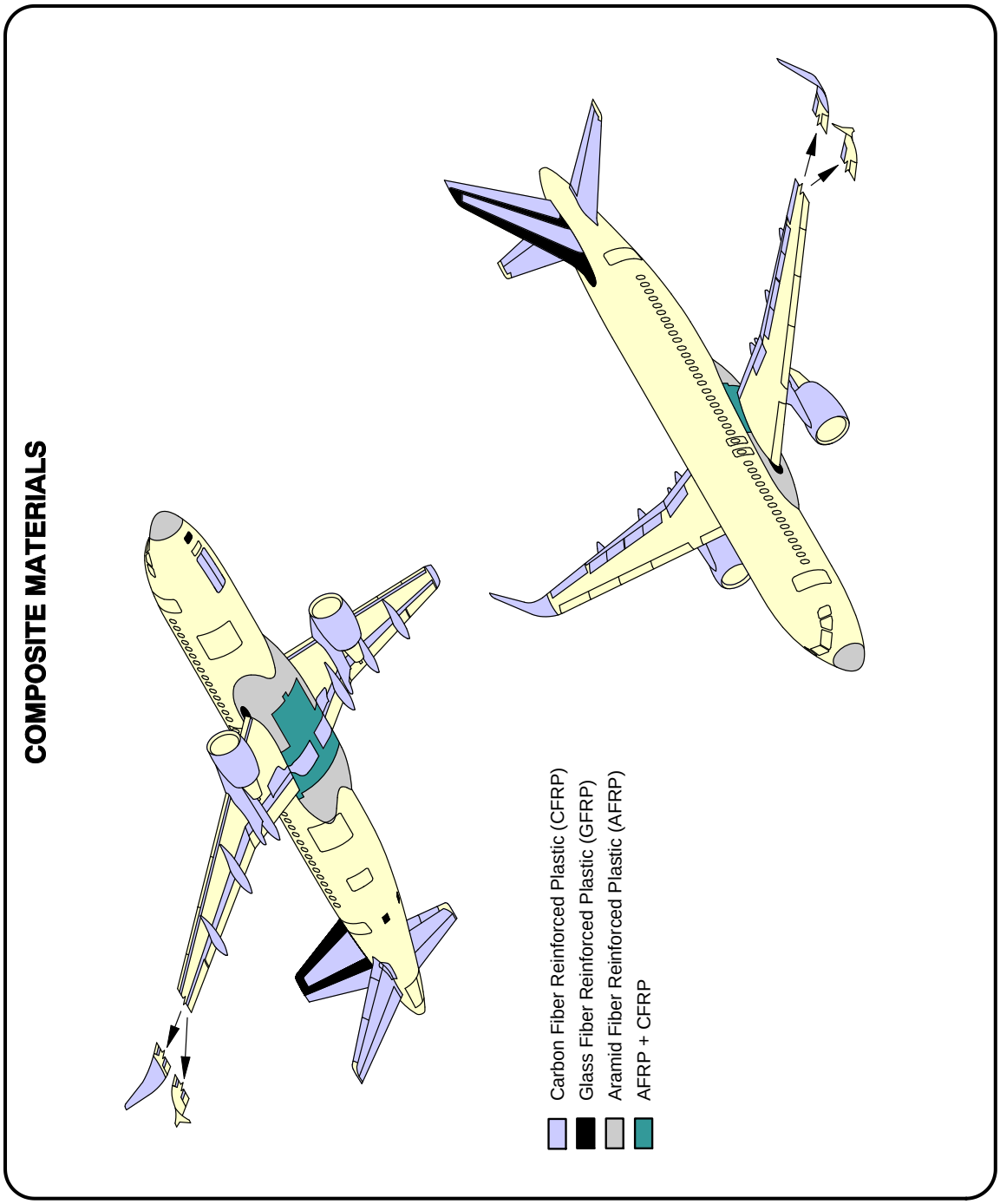
Wheel/Brake Overheat
Recommendations (Sheet 2 of 2)
FIGURE-10-0-0-991-032-A01

****ON A/C A320-200 A320neo**



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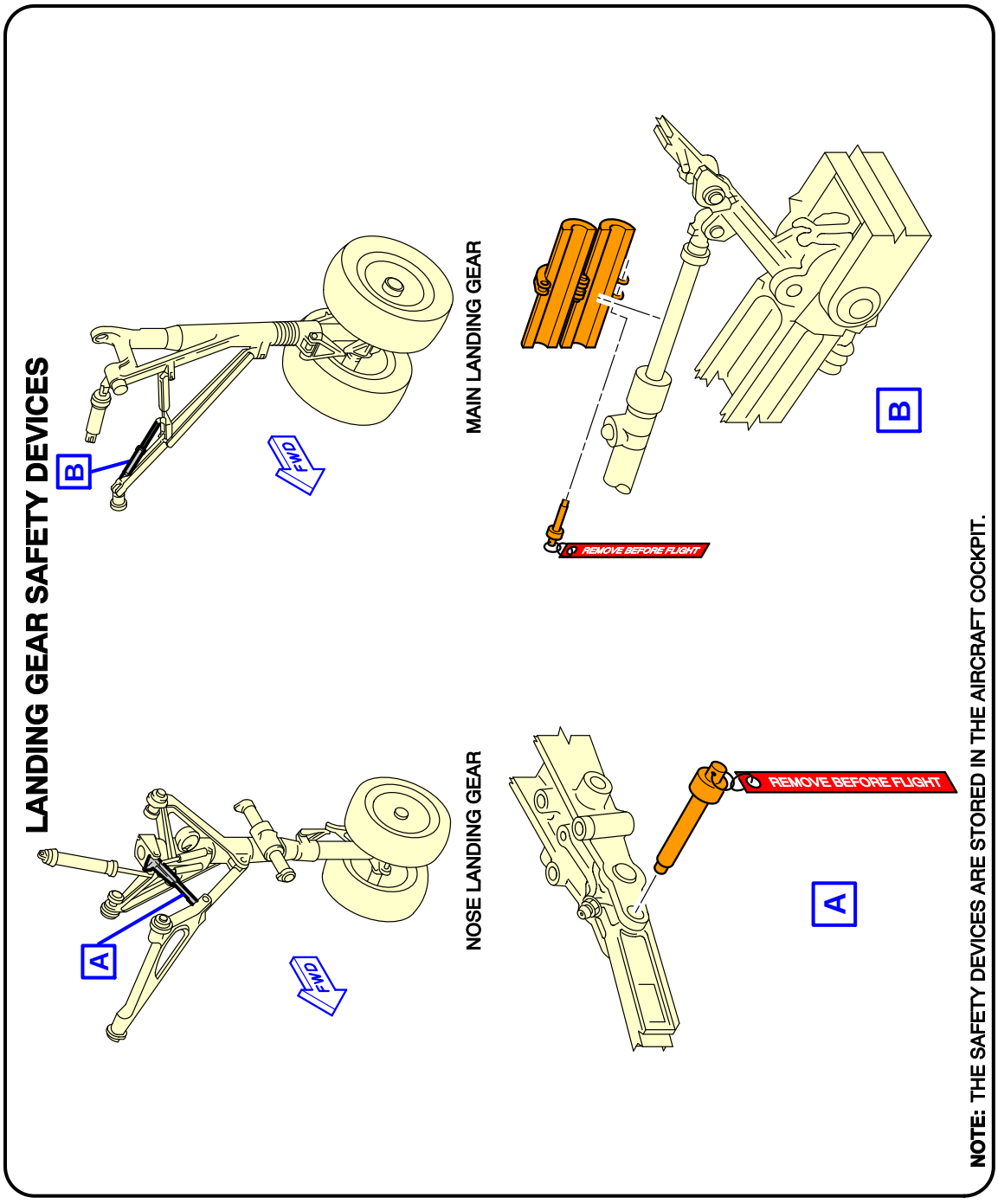
Composite Materials
FIGURE-10-0-0-991-033-A01

****ON A/C A320-200 A320neo**



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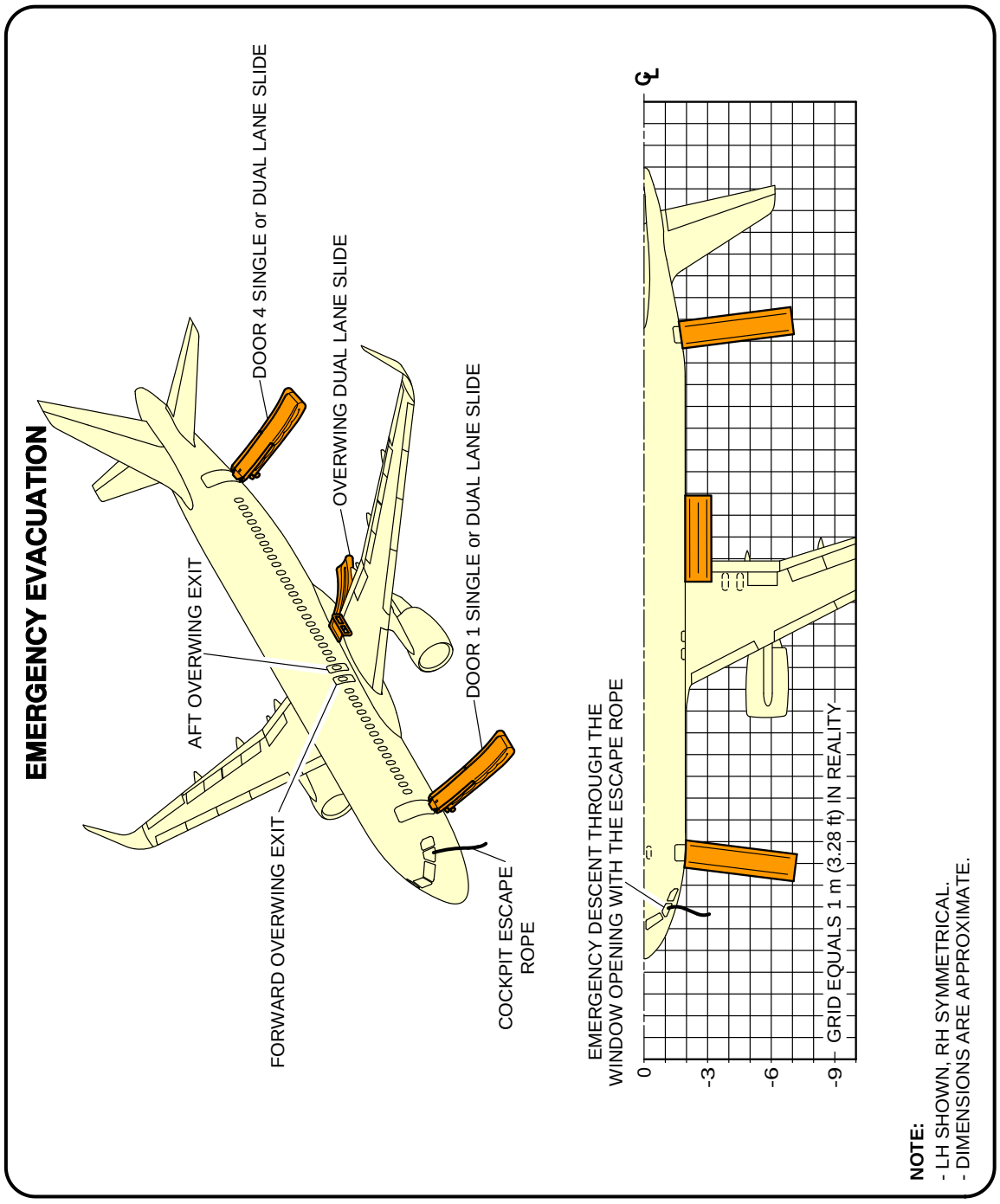
L/G Ground Lock Safety Devices
FIGURE-10-0-0-991-034-A01

****ON A/C A320-200 A320neo**



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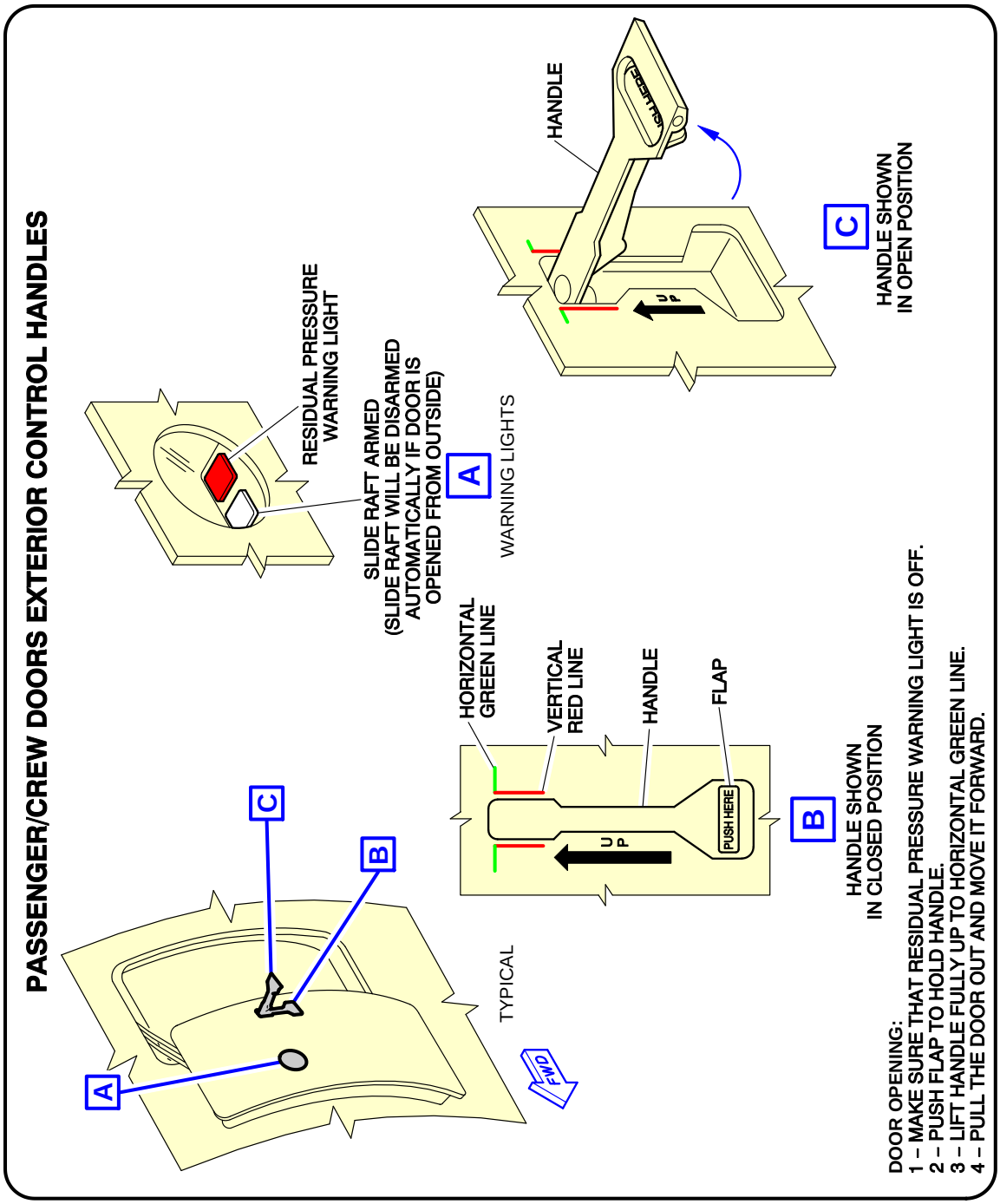
Emergency Evacuation Devices
FIGURE-10-0-0-991-035-A01

****ON A/C A320-200 A320neo**



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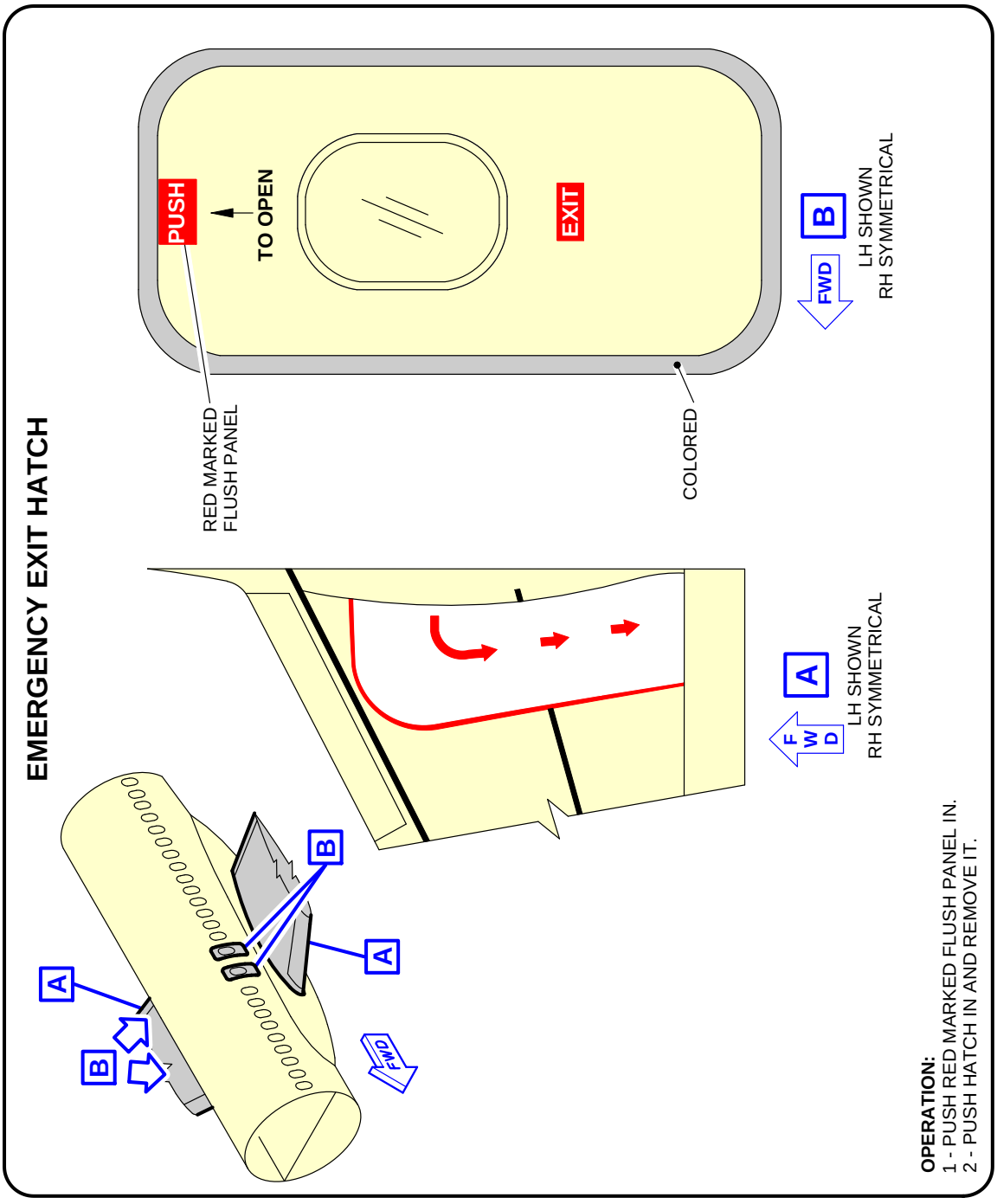
Pax/Crew Doors
FIGURE-10-0-0-991-036-A01

****ON A/C A320-200 A320neo**



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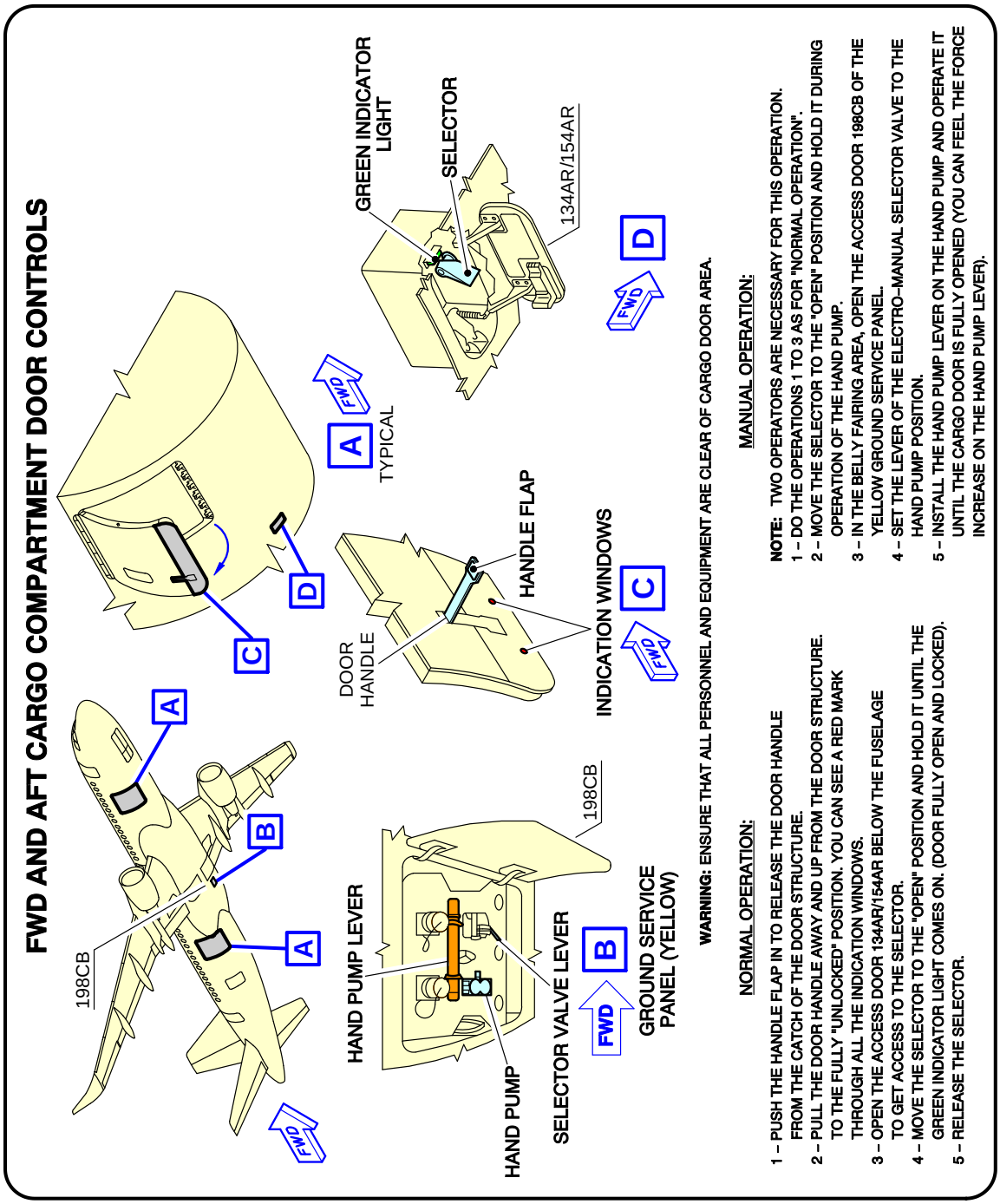
Emergency Exit Hatch
FIGURE-10-0-0-991-037-A01

****ON A/C A320-200 A320neo**



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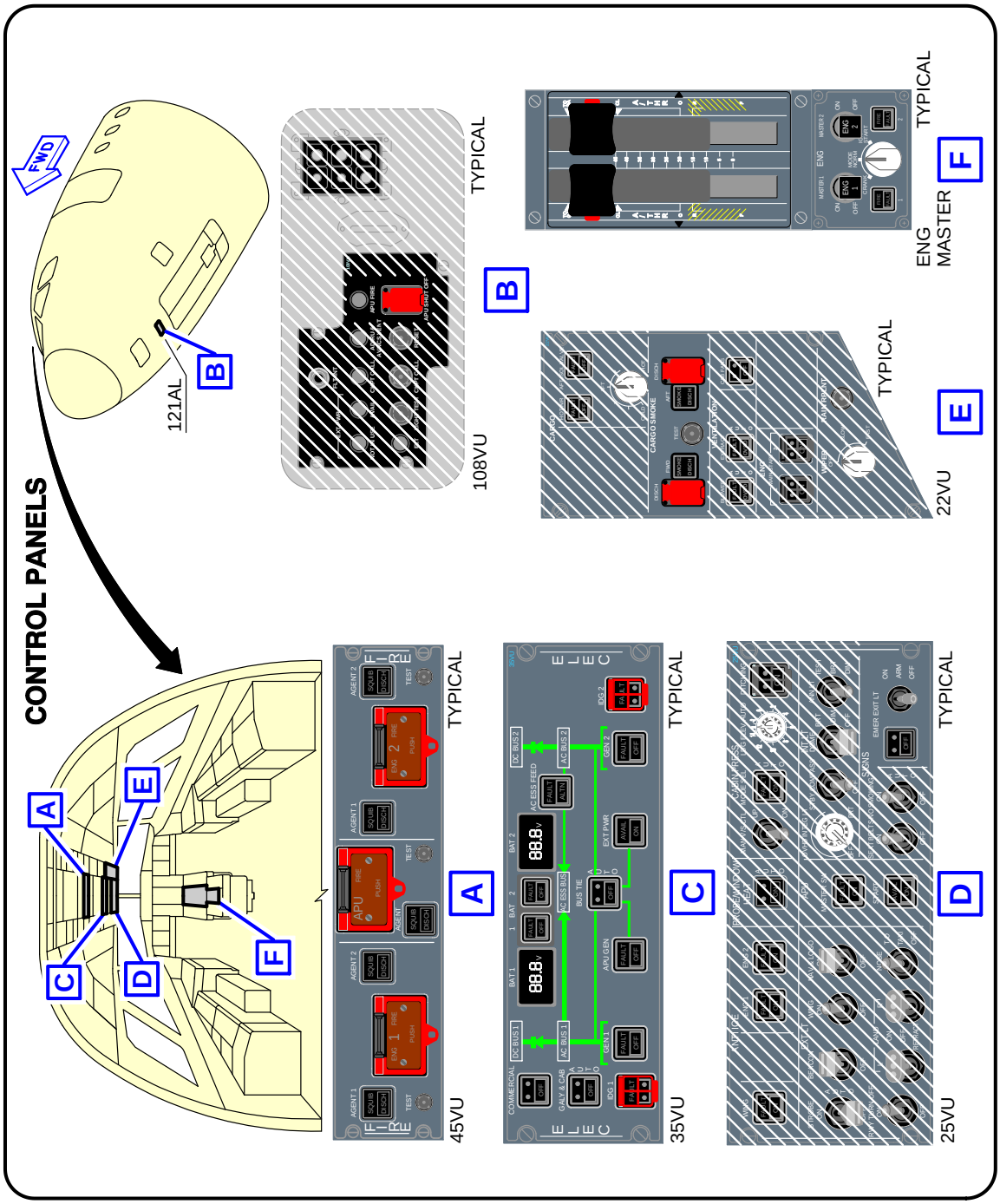
FWD and AFT Lower Deck Cargo Doors
FIGURE-10-0-0-991-038-A01

****ON A/C A320-200 A320neo**



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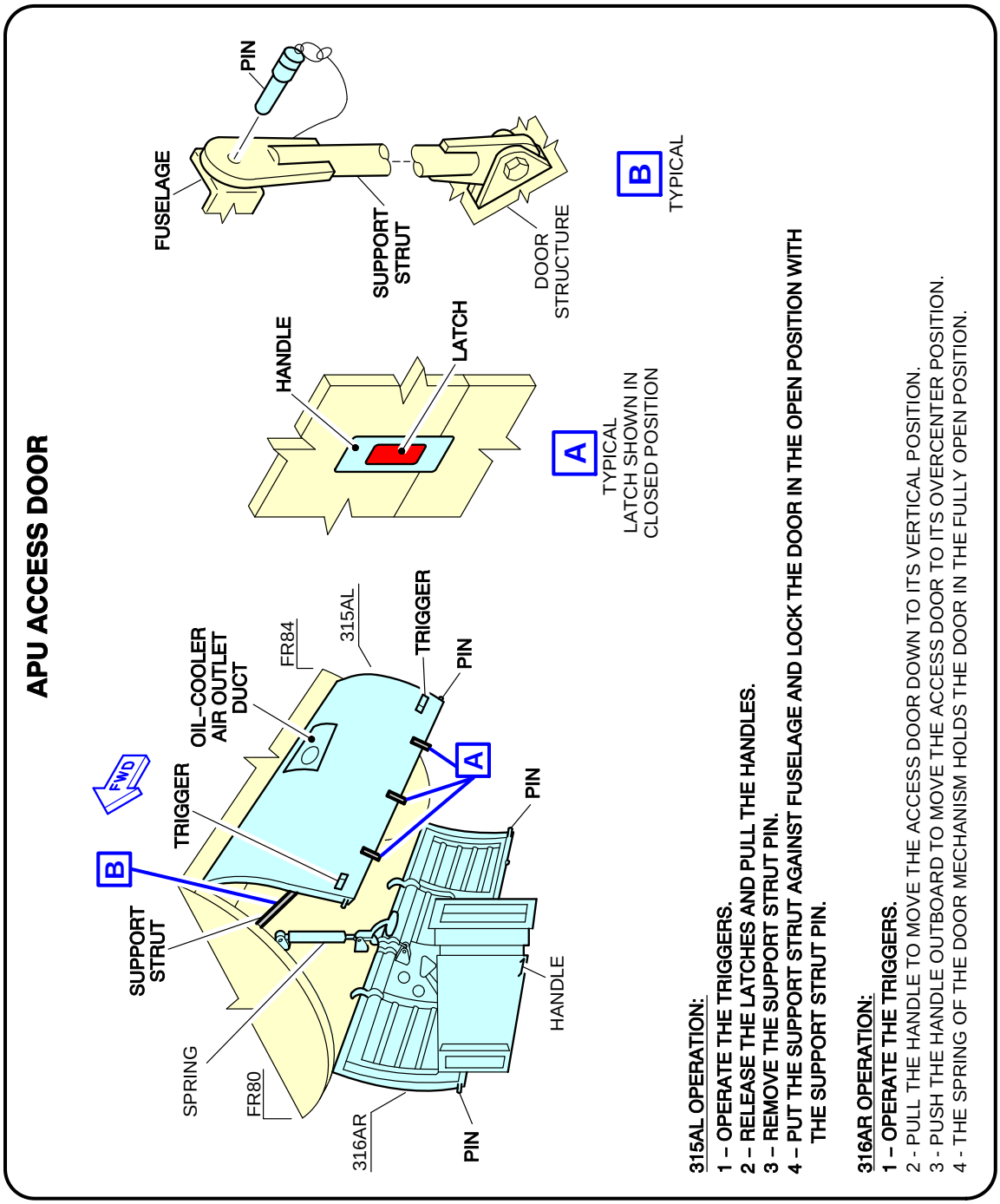
Control Panels
FIGURE-10-0-0-991-039-A01

****ON A/C A320-200 A320neo**



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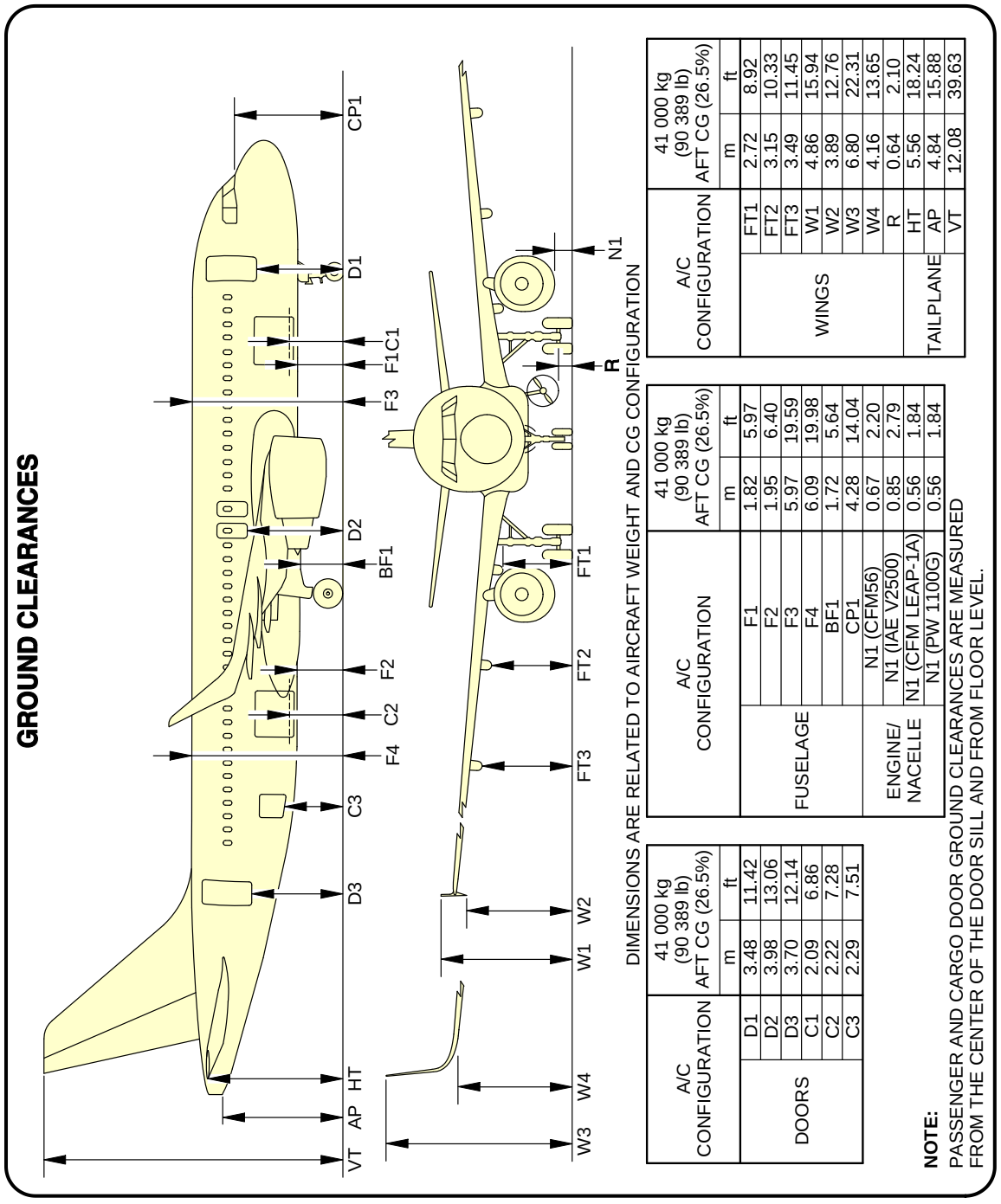
APU Access Door
FIGURE-10-0-0-991-040-A01

****ON A/C A320-200 A320neo**



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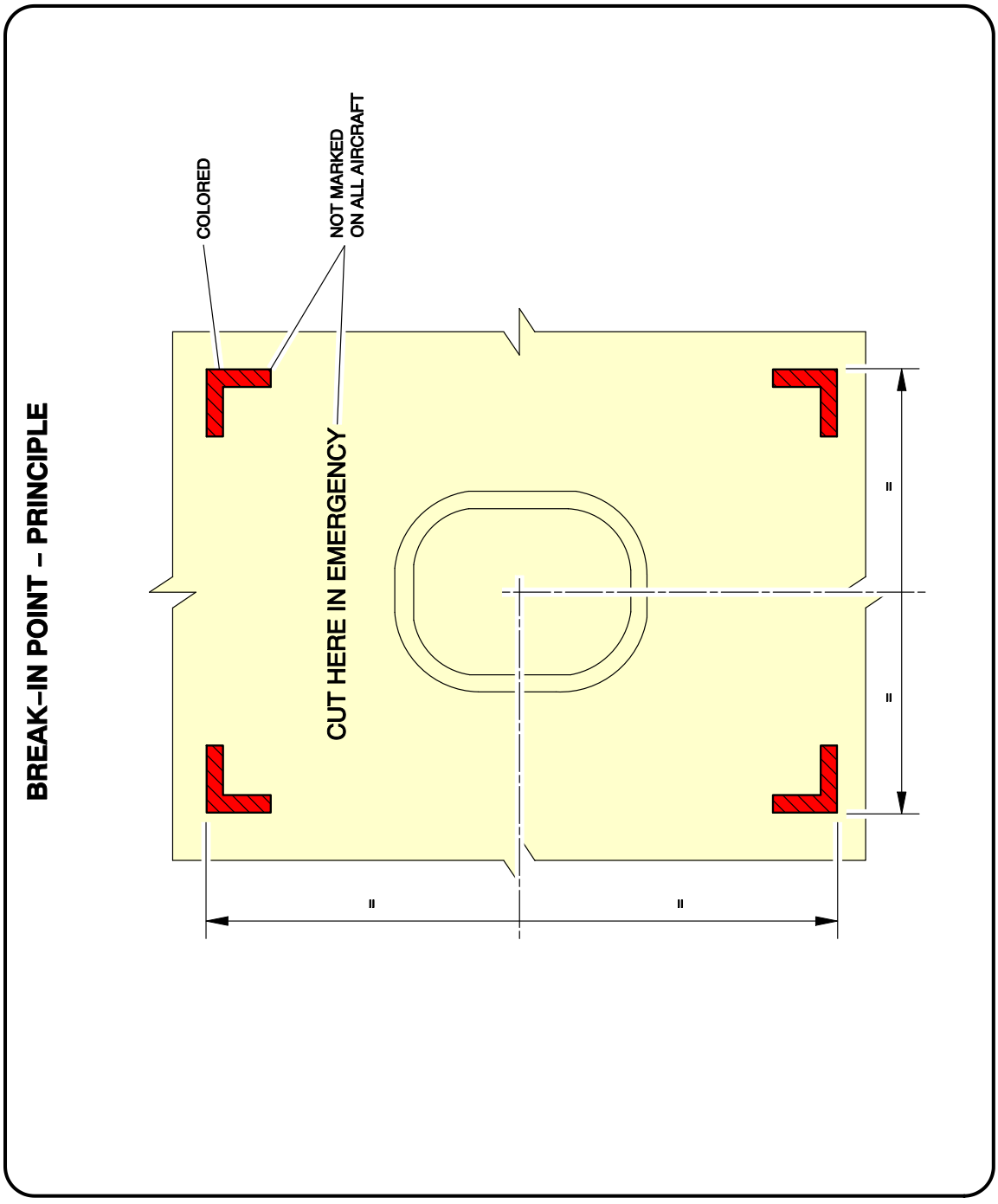
Aircraft Ground Clearances
FIGURE-10-0-0-991-041-A01

****ON A/C A320-200 A320neo**



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Structural Break-in Points
FIGURE-10-0-0-991-042-A01