

Master

Airport planning publication APP

BD500-3AB48-22000-00
Issue No. 032

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Manufacturer:

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Applicable to: All

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This publication has been superseded by the
Aircraft Characteristics Publication (ACP).

Highlights

Issue 032

The listed changes are introduced in Issue 032, dated 2023-10-19, of this publication.

Data module code	Reason for change
BD500-A-J00-00-00-20AAA-018A-A	Changed Data Module To update the title to Aircraft Characteristics
BD500-A-J00-00-00-12AAA-030A-A	Changed Data Module To add A220 ACJ data
BD500-A-J00-00-00-17AAA-030A-A	Changed Data Module To add A220 ACJ data
BD500-A-J00-00-00-11AAA-030A-A	Changed Data Module To add the A220 ACJ data

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AIRBUS A220

June 01/2019

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I would like to receive notification of actions on this request. NOTE: Responses will only be sent by electronic mail			
Personal information			
Name:		*Aircraft model:	*Publication Month (PMC):
Title/Issue:	*Media Type: ☐ Paper ☐ Web	*Data Module Code (DMC):	*DMC issue date:
Title:		Originator's reference number:	

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Change record

Check in the following record that all earlier changes has been incorporated.

Issue	Incorporated Date	by (signature)	Issue	Incorporated Date	by (signature)
001	<u>Jul 29/2014</u>	<u>Initial issue</u>	020-01	<u>Sep 05/2019</u>	<u>Signature on file</u>
002	<u>Dec 19/2014</u>	<u>BCSG</u>	021	<u>Sep 19/2019</u>	<u>Signature on file</u>
003	<u>Sep 15/2015</u>	<u>BCSG</u>	021-01	<u>Oct 31/2019</u>	<u>Signature on file</u>
004	<u>Sep 24/2015</u>	<u>BCSG</u>	021-02	<u>Nov 07/2019</u>	<u>Signature on file</u>
005	<u>Mar 08/2016</u>	<u>BCSG</u>	022	<u>Nov 14/2019</u>	<u>Signature on file</u>
006	<u>Apr 20/2016</u>	<u>BCSG</u>	022-01	<u>Dec 12/2019</u>	<u>Signature on file</u>
007	<u>May 20/2016</u>	<u>BCSG</u>	023	<u>Dec 19/2019</u>	<u>Signature on file</u>
008	<u>Nov 17/2016</u>	<u>BCSG</u>	024	<u>Jan 16/2020</u>	<u>Signature on file</u>
009	<u>May 11/2017</u>	<u>Not released</u>	024-01	<u>Feb 06/2020</u>	<u>Signature on file</u>
010	<u>May 18/2017</u>	<u>BCSG</u>	025	<u>Feb 20/2020</u>	<u>Signature on file</u>
011	<u>Jun 15/2017</u>	<u>BCSG</u>	025-01	<u>Aug 27/2020</u>	<u>Signature on file</u>
012	<u>Oct 12/2017</u>	<u>BCSG</u>	026	<u>Sep 17/2020</u>	<u>Signature on file</u>
013	<u>Jan 25/2018</u>	<u>BCSG</u>	026-01	<u>Feb 25/2021</u>	<u>Signature on file</u>
014	<u>Feb 15/2018</u>	<u>BCSG</u>	026-02	<u>Mar 04/2021</u>	<u>Signature on file</u>
014-01	<u>Jun 07/2018</u>	<u>BCSG</u>	027-00	<u>Mar 18/2021</u>	<u>Signature on file</u>
015	<u>Jun 14/2018</u>	<u>BCSG</u>	27-01	<u>May 06/2021</u>	<u>Signature on file</u>
015-01	<u>Jul 26/2018</u>	<u>BCSG</u>	028-0	<u>May 20/2021</u>	<u>Signature on file</u>
016	<u>Aug 16/2018</u>	<u>BCSG</u>	28-01	<u>Jun 10/2021</u>	<u>Signature on file</u>
016-01	<u>Aug 23/2018</u>	<u>BCSG</u>	029-00	<u>Jun 17/2021</u>	<u>Signature on file</u>
017	<u>Sep 20/2018</u>	<u>BCSG</u>	030-00	<u>May 19/2022</u>	<u>Signature on file</u>
017-01	<u>Oct 04/2018</u>	<u>BCSG</u>	30-01	<u>Oct 13/2022</u>	<u>Signature on file</u>
018	<u>Oct 18/2018</u>	<u>BCSG</u>	031-00	<u>Oct 20/2022</u>	<u>Signature on file</u>
018-01	<u>Feb 21/2019</u>	<u>BCSG</u>	31-01	<u>Sep 21/2023</u>	<u>Signature on file</u>
019	<u>Mar 14/2019</u>	<u>BCSG</u>	031-02	<u>Sep 28/2023</u>	<u>Signature on file</u>
019-01	<u>May 30/2019</u>	<u>BCSG</u>	032-00	<u>Oct 19/2023</u>	<u>Signature on file</u>
020	<u>Jun 20/2019</u>	<u>Signature on file</u>			

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List of effective data modules

The listed documents are included in Issue 032, dated 2023-10-19, of this publication.

C = Changed data module

N = New data module

Document title	Data module code		Issue date	No. of pages	Applicable to
A220-100 Aircraft Characteristics - Introduction	BD500-A-J00-00-00-20AAA-018A-A	C	2023-09-15	3	50001-54999
Aircraft description - Technical data	BD500-A-J00-00-00-12AAA-030A-A	C	2023-09-08	34	50001-54999
Aircraft performance - Technical data	BD500-A-J00-00-00-13AAA-030A-A		2015-09-01	14	50001-54999
Ground maneuvering - Technical data	BD500-A-J00-00-00-19AAA-030A-A		2019-10-22	33	50001-54999
Terminal servicing - Technical data	BD500-A-J00-00-00-18AAA-030A-A		2022-09-30	40	50001-54999
Operating conditions - Technical data	BD500-A-J00-00-00-17AAA-030A-A	C	2023-09-08	14	50001-54999
Pavement data - Technical data	BD500-A-J00-00-00-11AAA-030A-A	C	2023-09-08	66	50001-54999
Derivative aircraft - Technical data	BD500-A-J00-00-00-22AAA-030A-A		2019-10-22	1	50001-54999
Scaled drawings - Technical data	BD500-A-J00-00-00-21AAA-030A-A		2019-10-22	2	50001-54999

Applicable to: All

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The listed documents are included in Issue 032, dated 2023-10-19, of this publication.

Document title	Data module code	Issue date	Applicable to
A220-100 Aircraft Characteristics - Introduction	BD500-A-J00-00-00-20AAA-018A-A	2023-09-15	50001-54999
Aircraft description - Technical data	BD500-A-J00-00-00-12AAA-030A-A	2023-09-08	50001-54999
Aircraft performance - Technical data	BD500-A-J00-00-00-13AAA-030A-A	2015-09-01	50001-54999
Ground maneuvering - Technical data	BD500-A-J00-00-00-19AAA-030A-A	2019-10-22	50001-54999
Terminal servicing - Technical data	BD500-A-J00-00-00-18AAA-030A-A	2022-09-30	50001-54999
Operating conditions - Technical data	BD500-A-J00-00-00-17AAA-030A-A	2023-09-08	50001-54999
Pavement data - Technical data	BD500-A-J00-00-00-11AAA-030A-A	2023-09-08	50001-54999
Derivative aircraft - Technical data	BD500-A-J00-00-00-22AAA-030A-A	2019-10-22	50001-54999
Scaled drawings - Technical data	BD500-A-J00-00-00-21AAA-030A-A	2019-10-22	50001-54999

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This publication has been superseded by the
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A220-100 Aircraft Characteristics - Introduction

Applicability: 50001-54999

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Table 1 References

Data Module/Technical Publication	Title
None	

Description

1 Scope of the publication

The A220-100 Aircraft Characteristics , prepared by Airbus, contains general data on the airport facilities, ramp, and runway areas necessary to operate the Airbus commercial aircraft model BD-500-1A10 (A220-100).

Since operational practices vary among airlines, specific data should be coordinated with the user airlines prior to facility design. For additional information, please contact Airbus.

The content of this publication will change as options and aircraft changes occur. Make sure that you refer to the latest release of this publication.

If there is a difference between the data contained in this publication and that given by the local regulatory authority, the data from the local regulatory authority must be obeyed.

2 Publication organization

This publication is divided into eight sections:

- Aircraft description
- Aircraft performance
- Ground maneuvering

- Terminal servicing
- Operating conditions
- Pavement data
- Derivative aircraft
- Scaled drawings

3 Dimensions and weight

Linear dimensions given in this publication are in inches. The metric equivalents are given in parentheses ().

Weight measures is given in pound (lb) with the metric equivalent in parentheses ().

4 Correspondence

The publications change request form is available online and is used to request technical changes to rectify any errors, omissions, or procedural inconsistencies (if applicable), etc. using the Airbus A220 Interactive Electronic Technical Publication (IETP) viewer.

5 Translation of publication

If all or part of this publication is translated, the official version is the English language version by Airbus.

6 Standard term definitions

Maximum design Taxi Weight (MTW)	Maximum weight at which an aircraft can move safely on the ground. This includes the fuel for these displacements and the takeoff run.
Maximum design Landing Weight (MLW)	Maximum weight for landing as limited by aircraft strength and airworthiness requirement.
Maximum design Take-Off Weight (MTOW)	Maximum weight for take off as limited by aircraft strength and airworthiness requirements. This includes weight of fuel for taxi and run-up.
Operational Weight Empty (OWE)	Weight of structure, power plant, furnishings, systems, unusable fuel and other items of equipment that are a necessary part of a particular aircraft configuration. Also included are certain standard items, personnel, equipment and supplies necessary for full operations, but does not include usable fuel or payload.
Maximum design Zero Fuel Weight (MZFW)	Maximum weight permitted before usable fuel and other usable agents must be loaded in defined sections of the aircraft, as limited by strength and airworthiness requirements.
Maximum cargo volume	The maximum space available for cargo.

**Maximum
seating capac-
ity**

The maximum number of passengers permitted based on certification requirements.

Usable fuel

Fuel available for aircraft propulsion and the Auxiliary Power Unit (APU).

7**Acronyms**

The first time an acronym is used it will be defined, and all subsequent uses will be in blue. When you mouse over the acronym the definition will appear. Acronyms are not plural in this publication.

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Aircraft description - Technical data

Applicability: 50001-54999

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References

Table 1 References

Data Module/Technical Publication	Title
None	

Description

1 Aircraft characteristics

1.1 Introduction

This data module contains general data about the Airbus model BD-500-1A10 (A220-100) characteristics. The structural weight limits, such as maximum ramp weight, and zero fuel weight are dependent on configuration. Refer to each aircraft's specified Weight and Balance Manual (WBM) BD500-3AB48-22100-00 and weight and balance report for structural limits and other weight information.

Refer to Table 2 and Table 3 for the aircraft characteristics.

Refer to Table 4 for the system fluid capacities.

Refer to Table 5 for the service fluid capacities.

1.2 Aircraft characteristics

Applicability: 50001-50061, 50063-50065, 50068, 50070, 50072-50077, 50079-54999

Table 2 Aircraft characteristics

Description	A220-100
Engines	2 Pure Power™ PW1519G ¹
Mode	Passenger

See applicability on the first page of the DM
BD500-A-J00-00-00-12AAA-030A-A

BD500-A-J00-00-00-12AAA-030A-A

Description	A220-100
Standard seating capacity	120
Maximum Ramp Weight (MRW)	141,500 lb (64,183 kg)
Maximum Take-Off Weight (MTOW)	140,500 lb (63,730 kg)
Maximum Landing Weight (MLW)	120,500 lb (54,658 kg)
Maximum Zero Fuel Weight (MZFW)	116,000 lb (52,617 kg)
Minimum Flight Weight (MFW)	77,000 lb (34,927 kg)
Maximum fuel tank capacity	5,756 US gal (21,805 L)
Unusable fuel	220.5 lb (100 kg)
Maximum cargo volume - Overhead bins	280 ft ³ (7,93 m ³)
1 Optional engine models: PW1521G and PW1524G	

Applicability: 50062, 50066-50067, 50069, 50071, 50077-50078, 50081

Table 3 Aircraft characteristics

Description	A220-100
Engines	2 Pure Power™ PW1519G ¹
Mode	Passenger
Maximum Ramp Weight (MRW)	135,000 lb (64,183 kg)
Maximum Take-Off Weight (MTOW)	134,000 lb (60,781 kg)
Maximum Landing Weight (MLW)	112,500 lb (51,029 kg)
Maximum Zero Fuel Weight (MZFW)	108,000 lb (48,987 kg)
Minimum Flight Weight (MFW)	77,000 lb (34,927 kg)
1 Optional engine models: PW1521G and PW1524G	

1.3 System fluid capacities

Table 4 System fluid capacities

Description	Volume	Weight
Engine fluids calculated with 8.24 lb/US gal (0,987 kg/L)		
Engine oil tank at 60 °F	6.5 US gal (24.4 L)	53.1 lb (24.1 kg)
Lines and internal engine oil	7.7 US gal (29.2 L)	63.5 lb (28.8 kg)
APU fluids calculated with 7.98 lb/US gal (0.956 kg/L)		

See applicability on the first page of the DM
BD500-A-J00-00-00-12AAA-030A-A

BD500-A-J00-00-00-12AAA-030A-A

Description	Volume	Weight
APU oil tank	1.94 US gal (7.3 L)	15.4 lb (7.0 kg)
APU lines and internal oil	0.84 US gal (3.2 L)	6.7 lb (3.0 kg)
Hydraulic fluids at 77 °F (25 °C) low density 8.20 lb/US gal (0.983 kg/L)		
System No. 1 reservoir	5.0 US gal (18.8 L)	40.8 lb (18.5 kg)
System No. 2 reservoir	4.33 US gal (16.4 L)	35.50 lb (16.1 kg)
System No. 3 reservoir	4.33 US gal (16.4 L)	35.50 lb (16.1 kg)
Systems and lines	34.6 US gal (131.0 L)	283.8 lb (128.7 kg)

1.4 Service fluid capacities

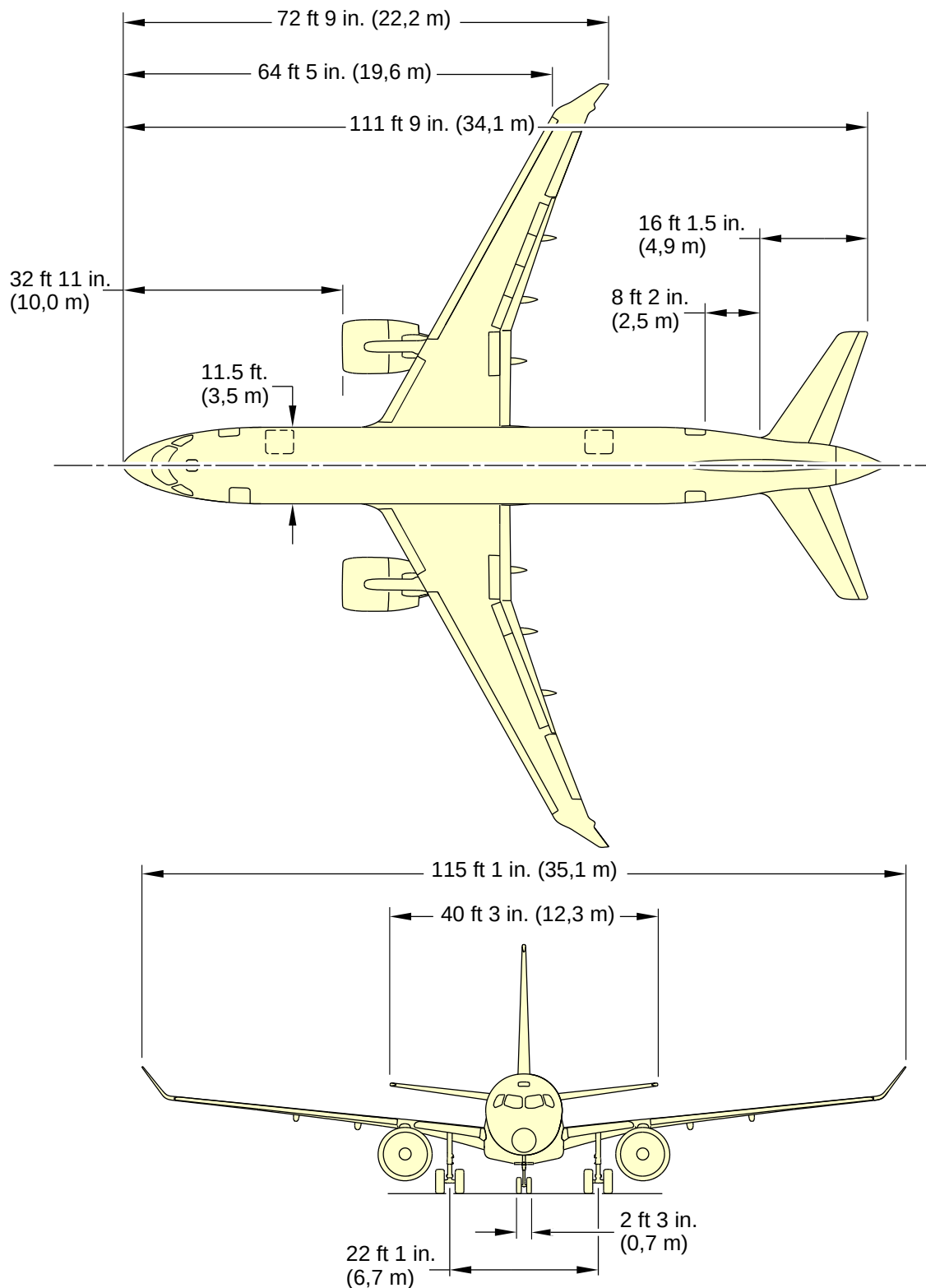
Table 5 Service fluid capacities

Description	Volume	Weight
Potable water at 60 °F (15,5 °C)		
Galley/Lavatory tank level 100%	41.9 US gal (158.8 L)	350.0 lb (158.8 kg)
Chemical toilet fluid at 60 °F (15,5 °C)		
Waste tank level 100%	38 US gal (143.8 L)	317.1 lb (143.8 kg)

2 Aircraft dimensions

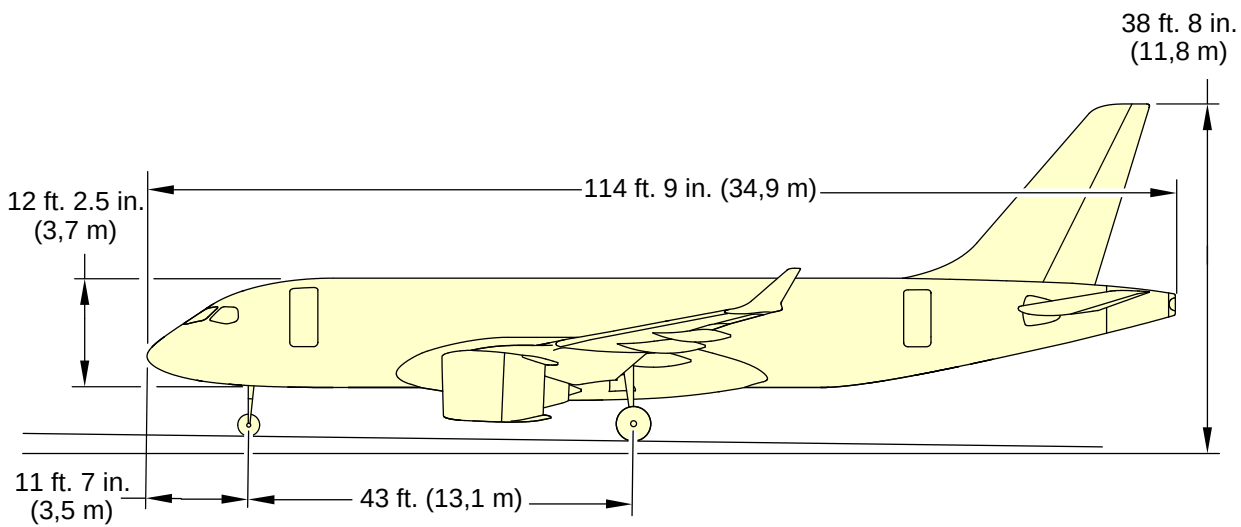
2.1 General aircraft dimensions

This section contains general data about the aircraft dimensions.



ICN-BD500-A-J000000-A-3AB48-22469-A-002-01

Figure 1 General aircraft dimensions - (Sheet 1 of 2)



ICN-BD500-A-J000000-A-3AB48-22470-A-003-01

Figure 1 General aircraft dimensions - (Sheet 2 of 2)

2.2 General aircraft area

Table 6 General aircraft area

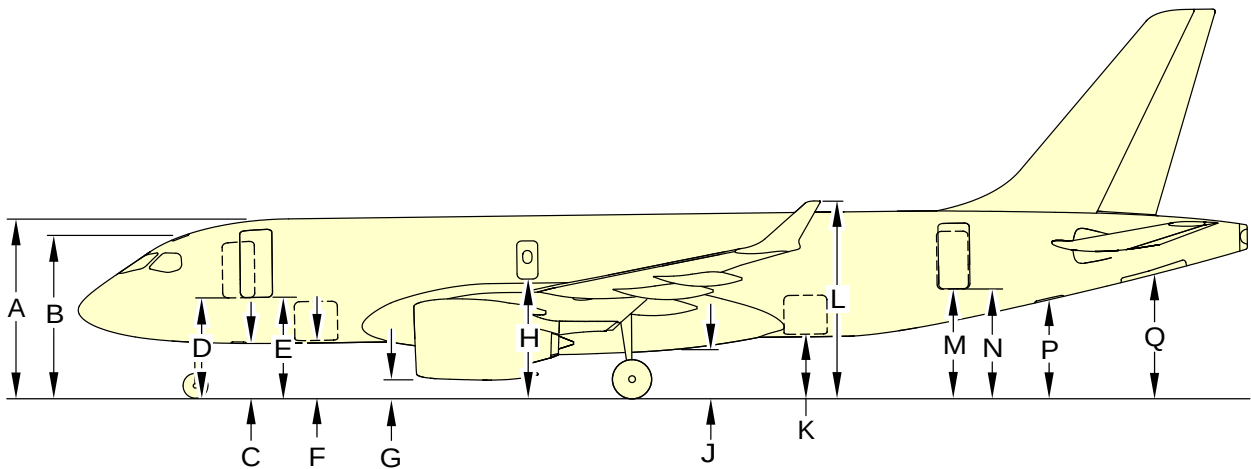
Description	A220-100
ESDU wing area (including ailerons, flaps, spoilers and area within the fuselage)	1209 ft ² (112.3 m ²)
Total horizontal stabilizer area (horizontal tail area and elevator area)	395 ft ² (36.6 m ²)
Total vertical stabilizer area (vertical tail area and rudder area)	304 ft ² (28.2 m ²)

3 Ground clearances

This section gives the height of various points of the aircraft, above the ground.

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

3.1 Ground clearances



Dimensions	Minimum	Maximum
A	17 ft 5 in.(5,3 m)	17 ft 10 in.(5,4 m)
B	15 ft 8 in.(4,8 m)	16 ft 2 in.(4,9 m)
C	5 ft 3 in.(1,6 m)	5 ft 8 in.(1,7 m)
D	9 ft 9 in.(3,0 m)	10 ft 2 in.(3,1 m)
E	9 ft 9 in.(3,0 m)	10 ft 2 in.(3,1 m)
F	5 ft 6 in.(1,7 m)	5 ft 11 in.(1,8 m)
G	1 ft 7 in.(0,5 m)	2 ft 0 in.(0,6 m)
H	11 ft 6 in.(3,5 m)	11 ft 11 in.(3,5 m)
J	4 ft 8 in.(1,4 m)	5 ft 1 in.(1,5 m)
K	6 ft 1 in.(1,8 m)	6 ft 7 in.(2,0 m)
L	19 ft 1 in.(5,8 m)	19 ft 18 in.(6,0 m)
M	10 ft 6 in.(3,2 m)	11 ft 2 in.(3,4 m)
N	10 ft 6 in.(3,2 m)	11 ft 2 in.(3,4 m)
P	9 ft 0 in.(2,8 m)	10 ft 1 in.(3,1 m)
Q	11 ft 8 in.(3,6 m)	12 ft 7 in.(3,8 m)

NOTES

Vertical clearances shown are the greatest possible variations in attitude due to the variation of aircraft weight and center of gravity.

ICN-BD500-A-J000000-A-3AB48-21709-A-001-01
Figure 2 Ground clearances

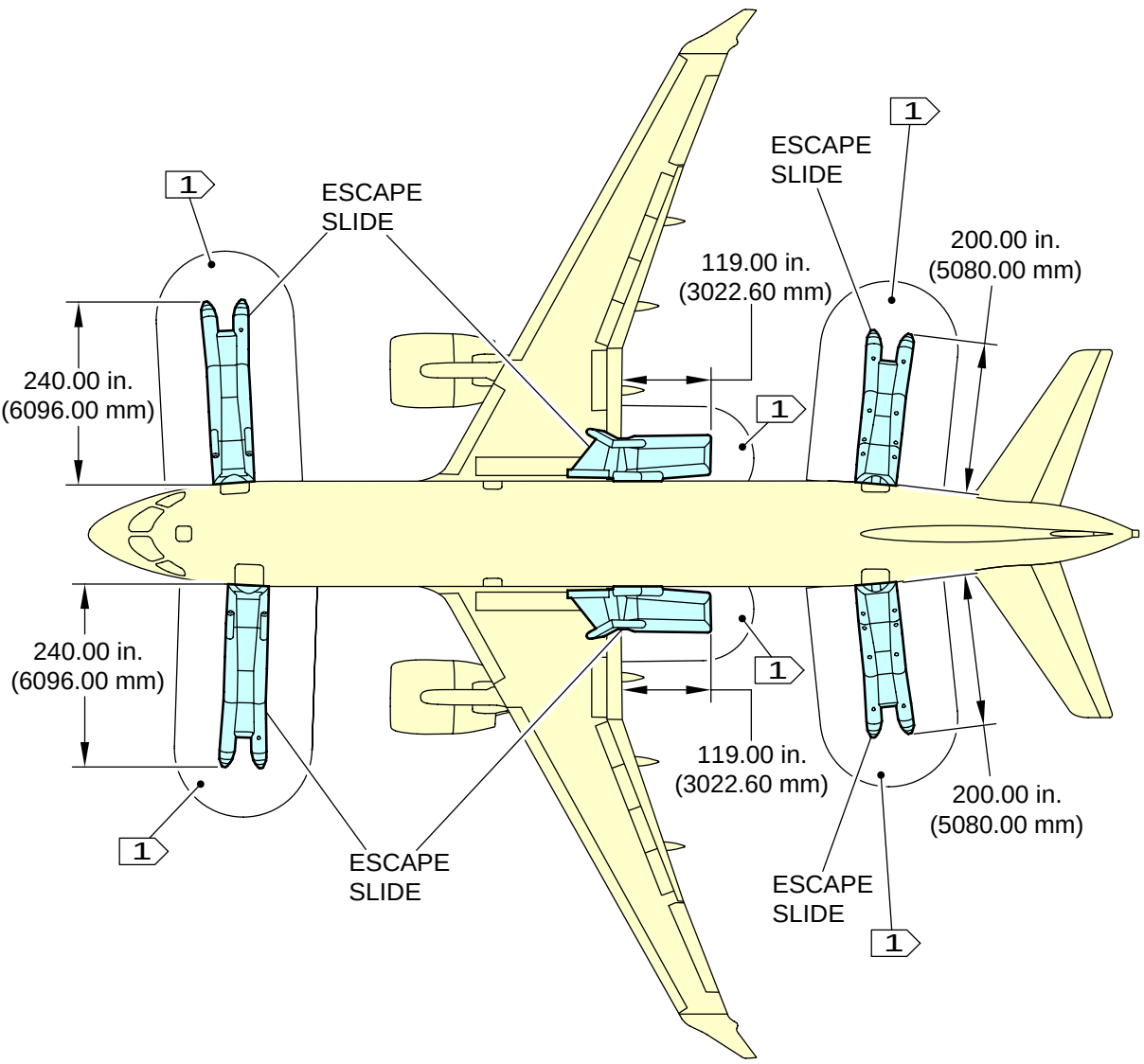
3.2 Ground clearances for evacuation slides

This section gives ground clearances for evacuation slides. Refer to Table 7 and Fig. 3 .

Table 7 Ground clearances for evacuation slides

Description	Dimensions
Forward Passenger Door (FPD) Slide	240 in. (6096 mm)
Forward Service Door (FSD) Slide	240 in. (6096 mm)
Aft Passenger Door (APD) Slide	200 in. (5080 mm)
Aft Service Door (ASD) Slide	200 in. (5080 mm)
Overwing Emergency Exit Door (OWEED) Slides (Left & Right sides)	119 in. (3022.60 mm)

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NOTE

1 Emergency evacuation ground area.

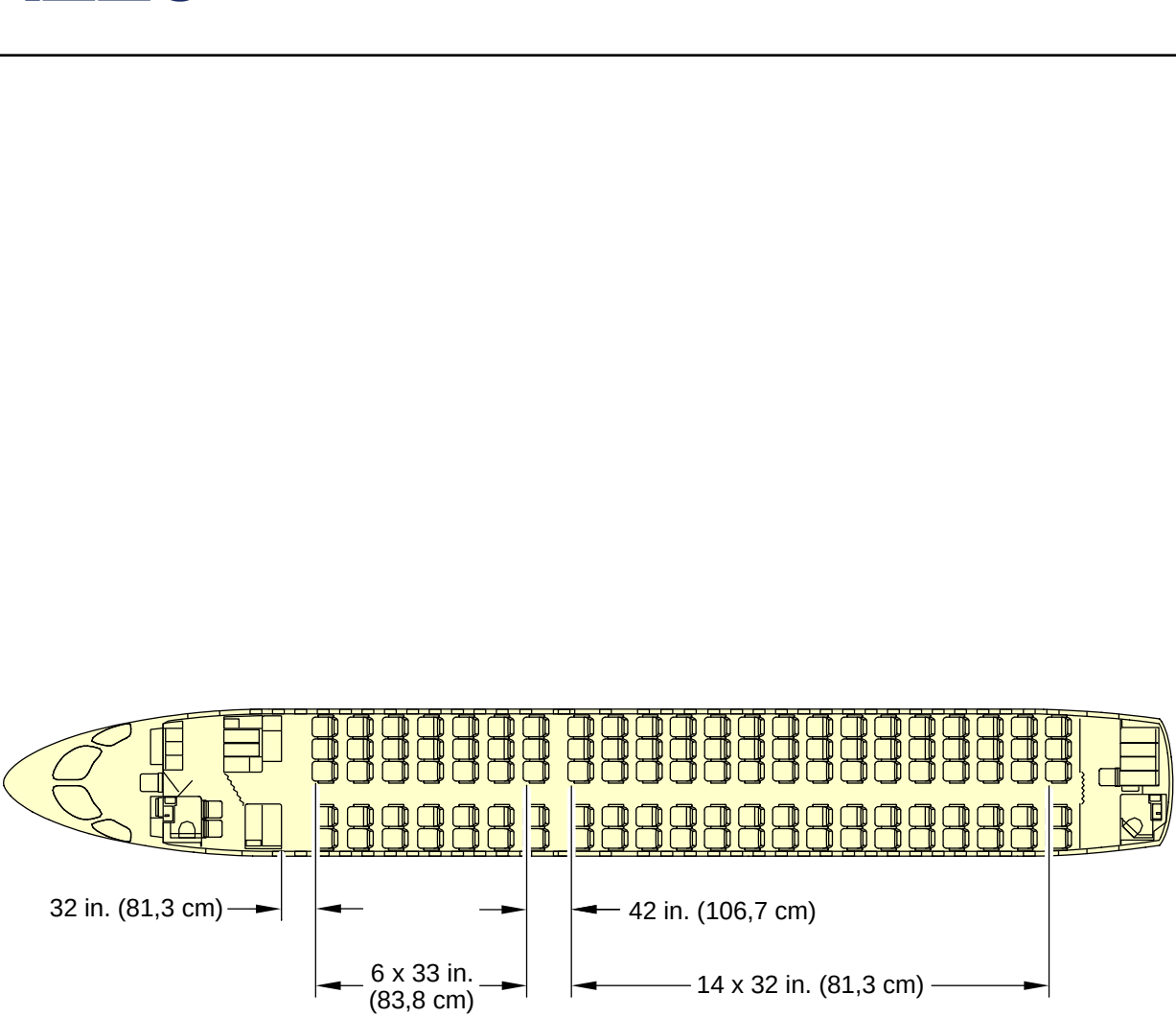
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Figure 3 Ground clearances for evacuation slides

4 Layout of passenger compartment accommodation

The passenger compartment includes the galley area, lavatory, and passenger seating area. The galleys and utility areas are isolated from the passenger area by partitions and curtains. Refer to Fig. 4 .

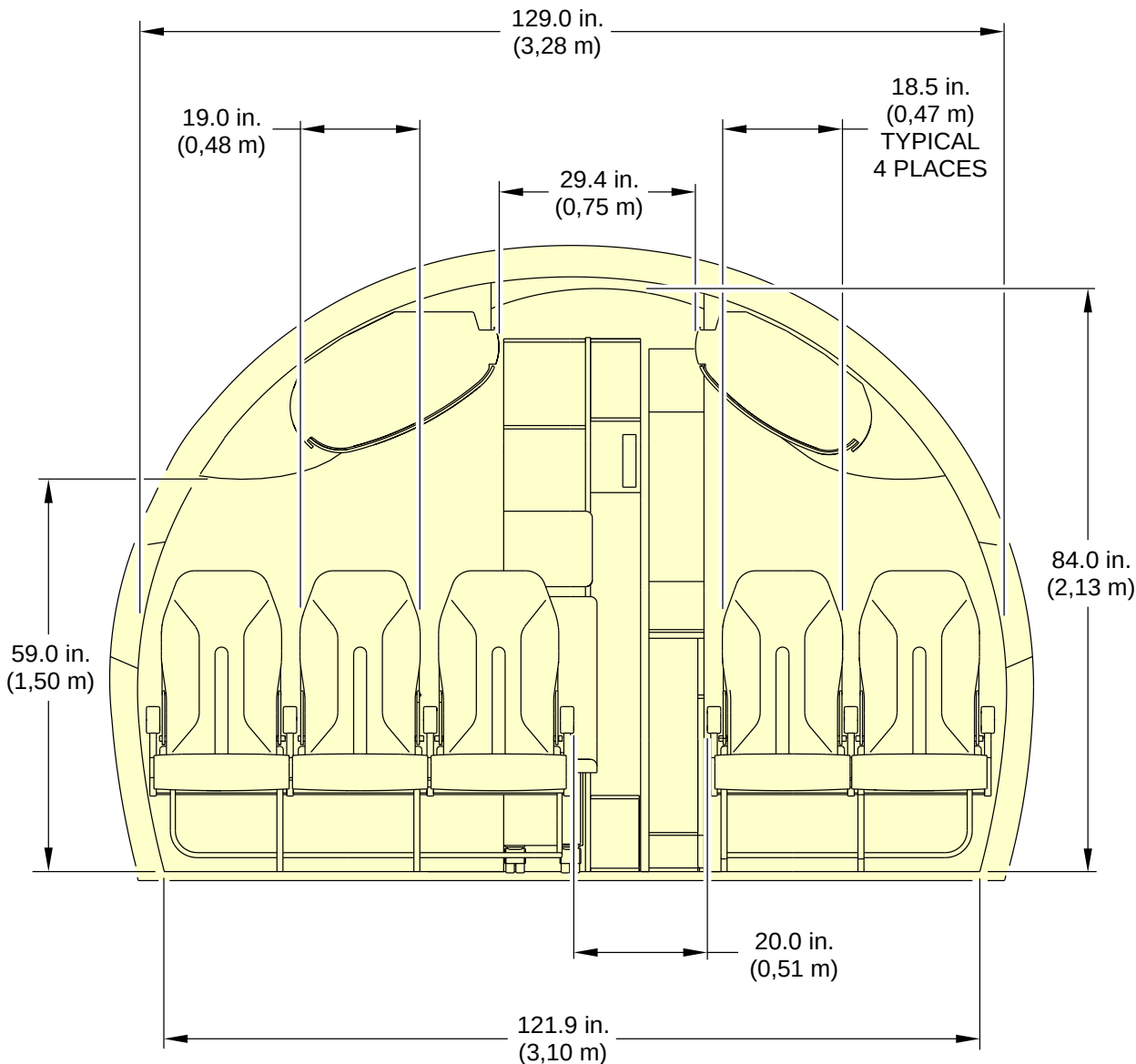
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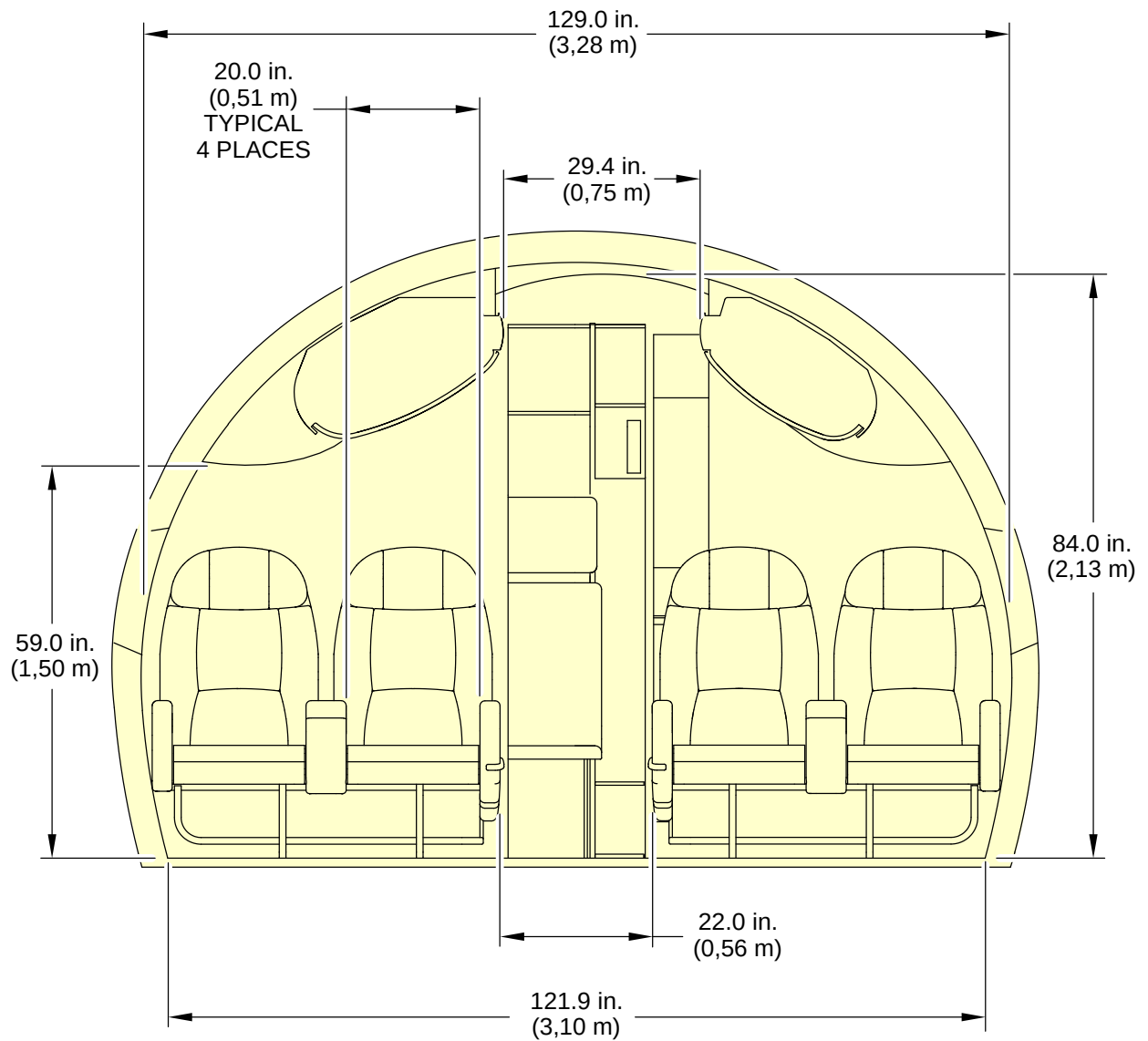
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Figure 4 Layout Of Passenger Accommodation (LOPA)

5 Passenger cross-section

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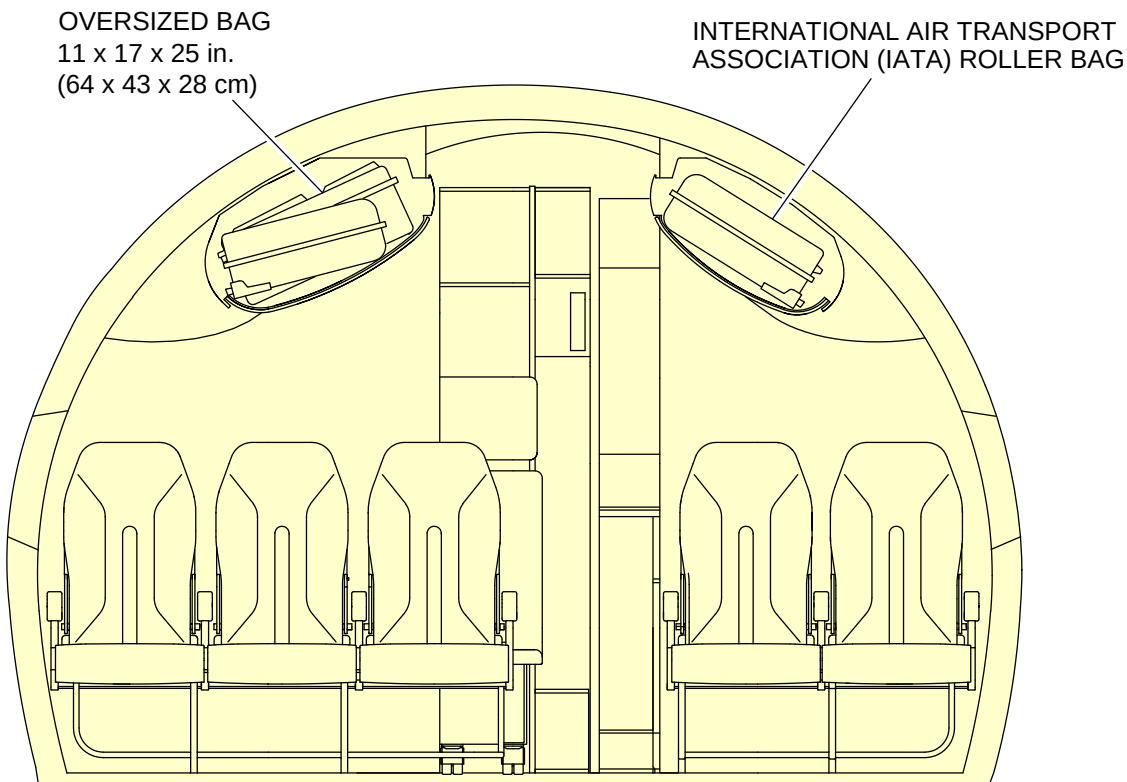


ICN-BD500-A-J061200-A-3AB48-00010-A-001-01
 Figure 5 Passenger cross-section (economy class)



ICN-BD500-A-J061200-A-3AB48-00011-A-001-01

Figure 6 Passenger cross-section (optional business class)



ICN-BD500-A-J061200-A-3AB48-00012-A-001-01
Figure 7 Overhead stowage bins

6 Cargo compartment

Two under-floor cargo compartments are provided, each with a dedicated outward-opening access door. The forward compartment is positioned between the forward equipment compartment and the Environmental Control System (ECS) distribution bay. The aft compartment is positioned between the mid equipment compartment and the water system bay. Refer to Fig. 8.

Both compartments are furnished with heavy duty floor panels and sidewall linings and are sealed to meet the requirements of a Class C compartment. Decompression and ventilation panels are provided as well. The compartment linings also incorporate provisions for compartment lighting, smoke detector, and fire extinguish.

The combined maximum weight loading of the cargo compartment is 8,290 lb (3 760 kg).

6.1 Cargo door nets

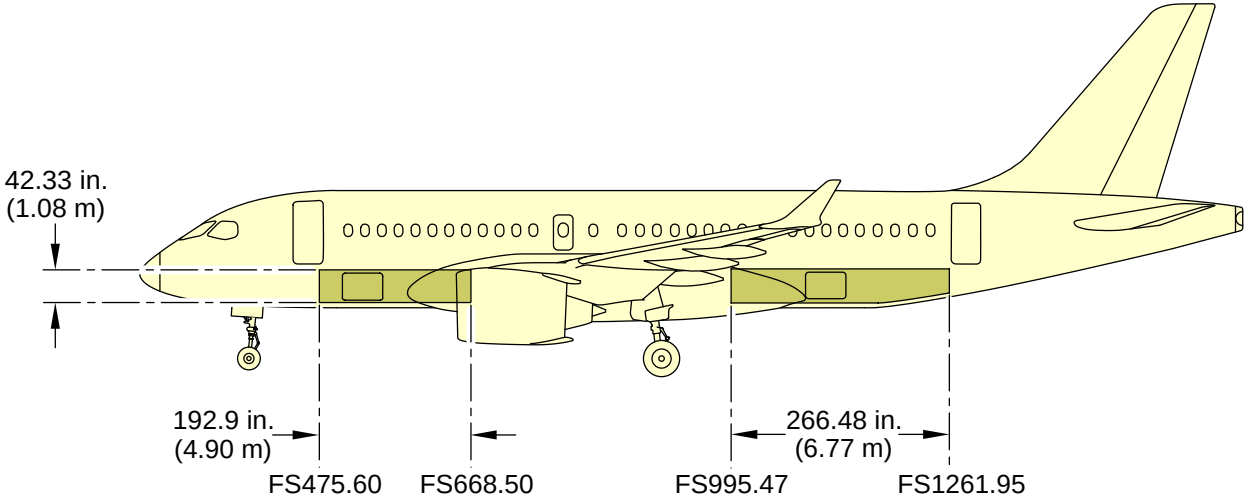
Protective nets are provided at the door area of each cargo compartment to prevent baggage from fouling the door due to in-flight shifting of the loads. Refer to Fig. 9.

6.2 Volumes – Cargo compartment

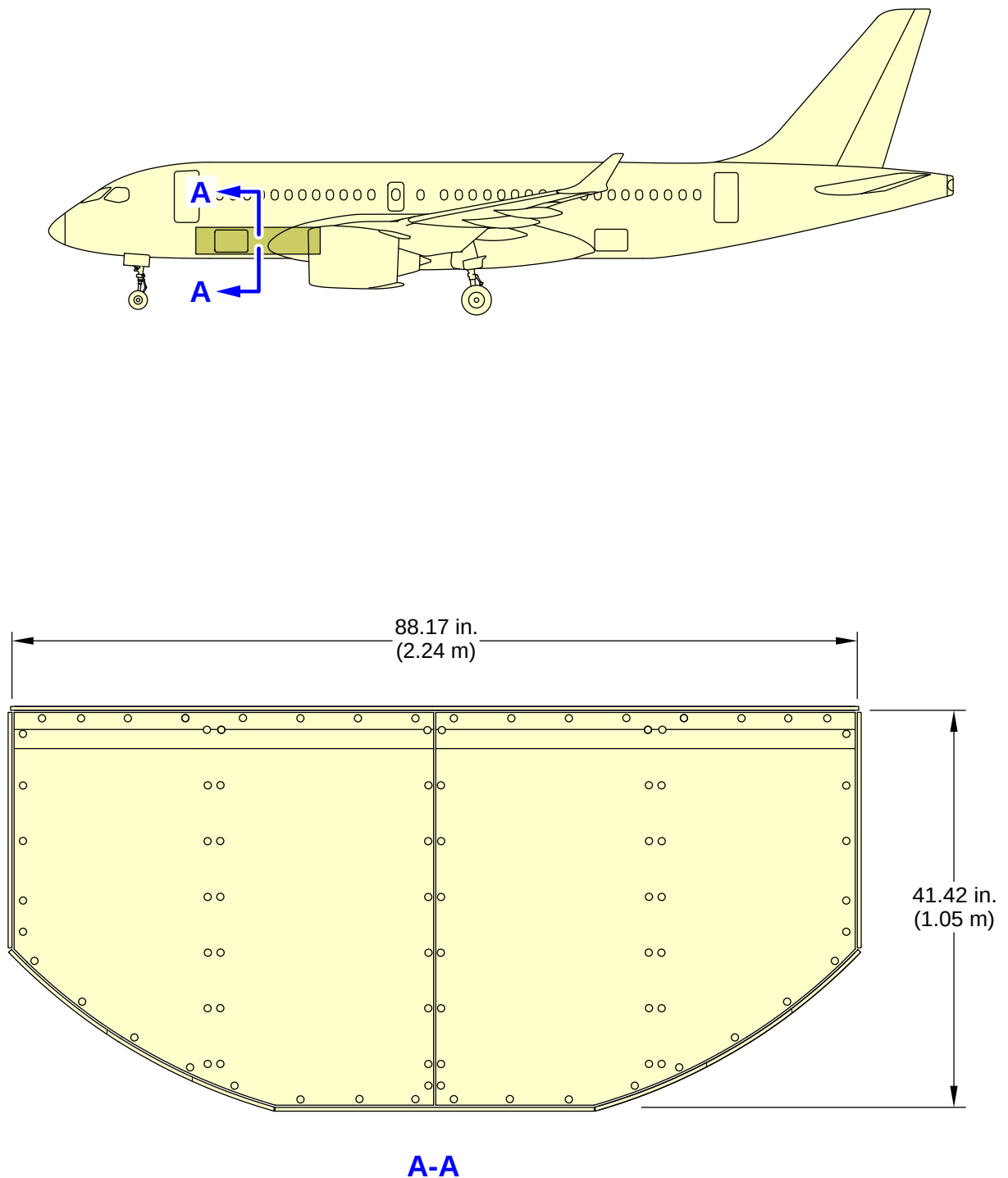
The estimated volume of the cargo compartments is based on geometric volume and accounts for the unusable area in the vicinity of the cargo doors. Table 8 lists the estimated wet volume of the cargo compartments.

Table 8 Cargo compartment volumes

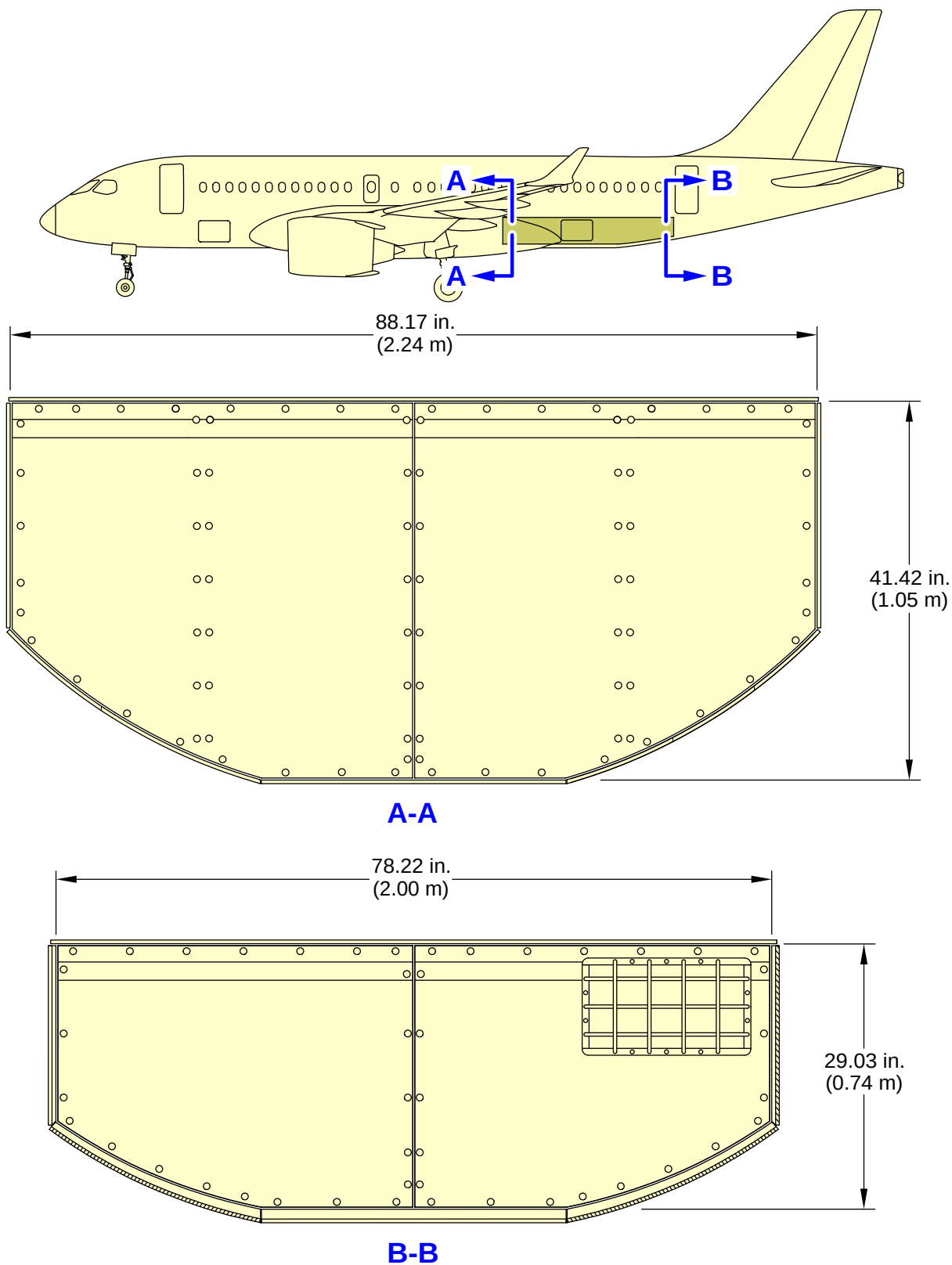
Description	Usable Volume		Maximum load	
	ft ³	m ³	lb	kg
Fwd cargo compartment	311	8.80	3742	1697
Aft cargo compartment	422	11.95	4548	2063



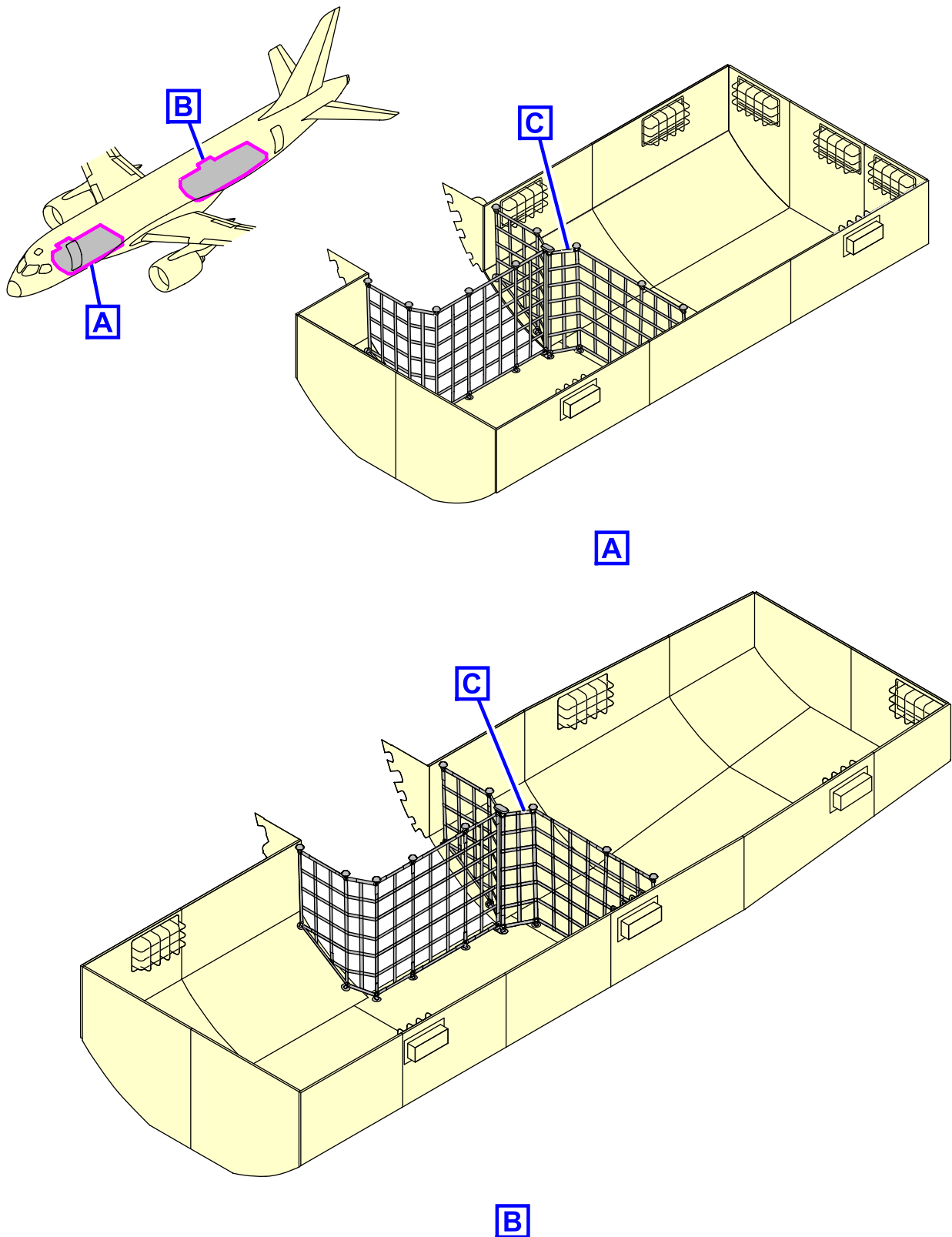
ICN-BD500-A-J084305-A-3AB48-10441-A-001-01
Figure 8 Aircraft cargo side view - (Sheet 1 of 3)



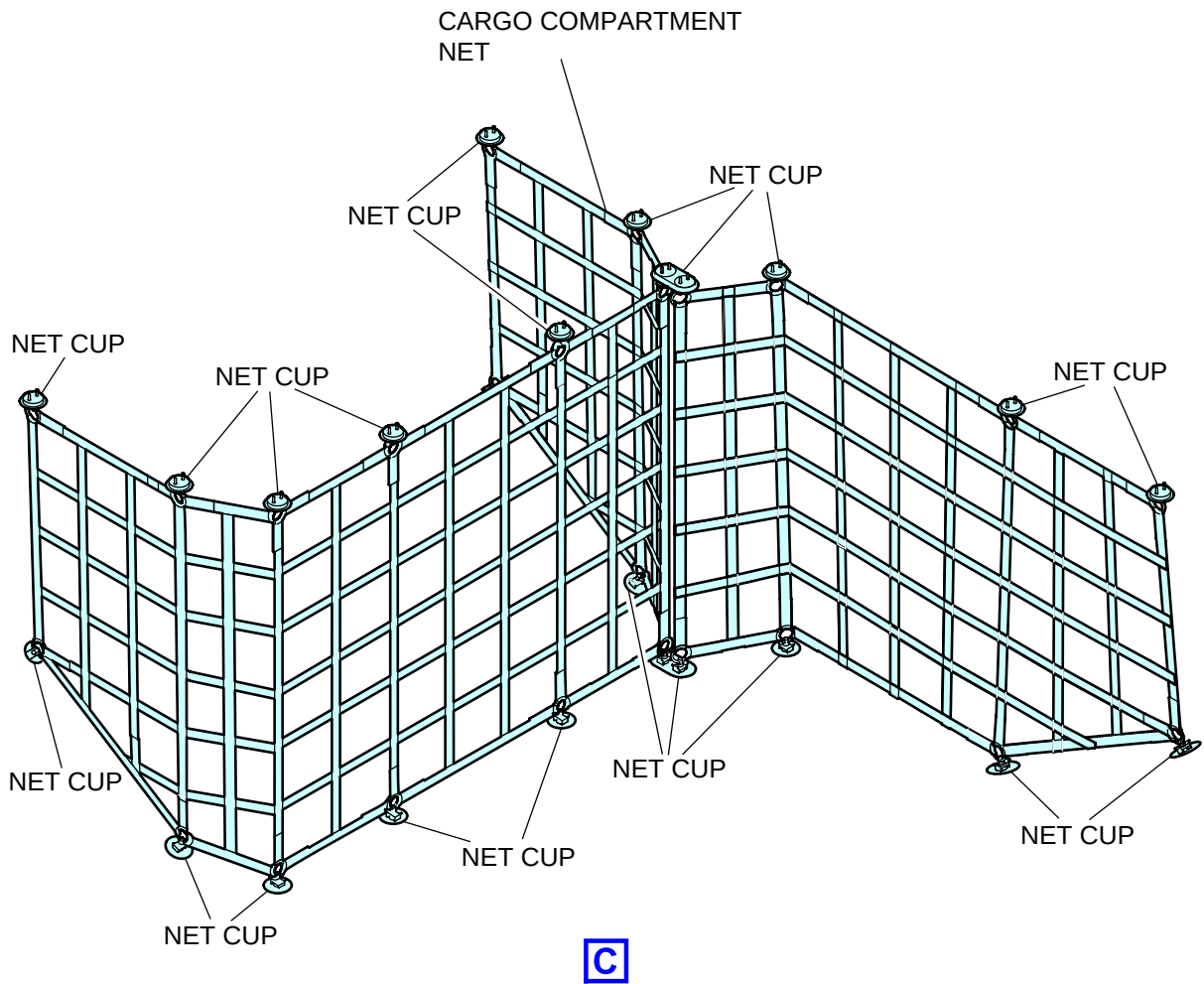
ICN-BD500-A-J084305-A-3AB48-10438-A-001-01
 Figure 8 Aircraft cargo side view - (Sheet 2 of 3)



ICN-BD500-A-J084305-A-3AB48-10440-A-001-01
Figure 8 Aircraft cargo side view - (Sheet 3 of 3)



ICN-BD500-A-J502200-C-3AB48-17798-A-001-01
Figure 9 Cargo nets - (Sheet 1 of 2)



ICN-BD500-A-J502200-C-3AB48-17809-A-001-01
 Figure 9 Cargo nets - (Sheet 2 of 2)

7 Door clearances and clear opening dimensions

A general description of the doors is as follows:

7.1 Passenger/Crew

Two semi-plug type doors on the left side of the aircraft provide access for passengers and crew. Door 1L is considered the primary entrance while door 2L provides a secondary entrance available for passenger loading/unloading as well as ground servicing.

Each door is classified as a type C floor level exit. Due to the sill height, every door incorporates an emergency evacuation slide system. In addition each one translates outwards from closed position, supported by a hinged arm to rest in open position.

Every door is operable from the exterior and interior of the aircraft and features an inspection window to allow verification of the outside conditions from the interior. The exterior operating handle has a linear motion and is interconnected to a vent flap system to provide pressure equalization between the aircraft and the ambient air prior to be opened.

Each door is fully lined and insulated to meet thermal and noise performance requirements.

For Passenger/Crew doors distance from the nose, refer to Fig. 11 Fig. 12 . For aft passenger door opening and clearances, refer to Fig. 13 .

7.2 Emergency exit

The over-wing emergency exits are type III semi-plug type doors.

The exits are provided with an operating handle with removable cover and are fitted with a standard sized passenger compartment window. Each door is fully lined and insulated to meet thermal and noise performance requirements.

The door rotates upwards from the closed position, supported by a hinged arm to rest in open position. The door opening sequence is automatically supported by the energy stored in its own mechanism.

For emergency access to the passenger compartment, the doors may be opened from an exterior handle.

Due to the exit path height from the ground, an off-wing evacuation slide system is provided.

For over-wing emergency exits distance from the nose, refer to Fig. 11 . For doors dimensions, refer to Table 9.

7.3 Flight compartment emergency exit

The flight compartment is outfitted with a single, inward-opening overhead escape hatch.

7.4 Cargo doors

Access doors are provided to allow cargo compartment loading and unloading.

The semi-plug forward and aft cargo doors are identical components, each hinged along the top edge of its frame.

Each door incorporates an exterior lock/unlock handle with linear motion that is interconnected to a vent flap system and provide pressure equalization between the aircraft and the ambient air prior to be opened.

An electrical actuation system with a switch panel, installed on the fuselage near each door, is provided to open and close the door.

Each door is fully lined and insulated to meet thermal and noise performance requirements.

For cargo doors distance from the nose, refer to Fig. 11 . For doors dimensions, refer to Table 9 . For forward cargo door opening and clearances, refer to Fig. 14 . For aft cargo door opening and clearances, refer to Fig. 15 .

7.5 Service doors

Two semi-plug type doors are provided on the right side of the aircraft to provide access for the forward (door 1R) and aft (door 2R) galley service areas.

Each door is classified as a type C floor level exit. Due to the sill height, each door incorporates an emergency evacuation slide system.

Each door translates outwards from the closed position, supported by a hinged arm and stabilizing system, to rest parallel to the fuselage in the open position.

Each door is operable from the exterior and interior of the aircraft and features an inspection window to allow verification of the outside conditions from the interior. The exterior operating handle has a linear motion and is interconnected to a vent flap system to provide pressure equalization between the aircraft and the ambient air prior to be opened.

Each door is fully lined and insulated to meet thermal and noise performance requirements.

For service doors distance from the nose, refer to Fig. 11 . For service doors dimensions, refer to Table 9 . For forward service door opening and clearances, refer to Fig. 16 . For aft service door opening and clearances, refer to Fig. 17 .

7.6 Forward avionics bay door

A plug-type door is provided in the forward fuselage to gain access to the pressurized forward equipment compartment. The door is fitted with a stowable operating handle.

For forward equipment compartment door distance from the nose, refer to Fig. 11 . For dimensions, refer to Table 9 .

7.7 Mid avionics bay door

A plug-type door is provided in the mid fuselage to gain access to the pressurized mid equipment compartment. The door is fitted with a stowable operating handle.

For mid equipment compartment door distance from the nose, refer to Fig. 11 . For dimensions, refer to Table 9 .

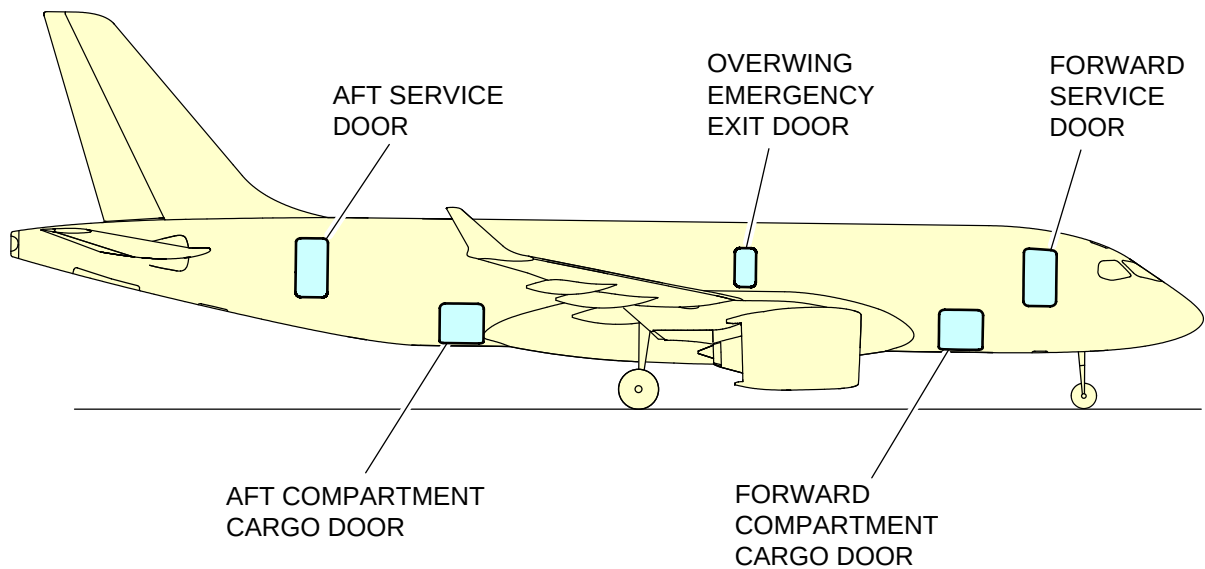
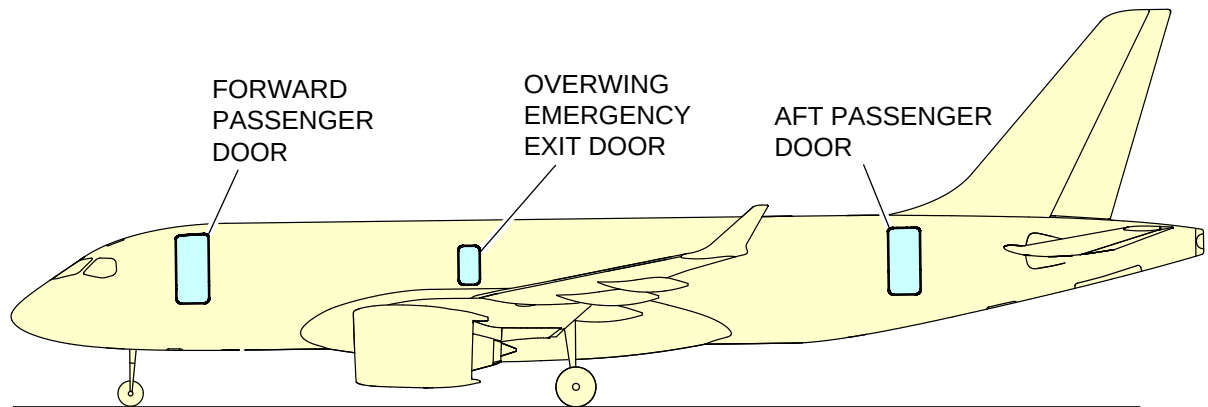
7.8 Aft equipment bay door

A door is provided in the aft fuselage to gain access to the unpressurized aft equipment compartment.

For aft equipment compartment door distance from the nose, refer to Fig. 11 . For dimensions, refer to Table 9 .

7.9 Doors identification

This section shows a general overview of the doors



ICN-BD500-A-J000000-A-3AB48-23216-A-001-01

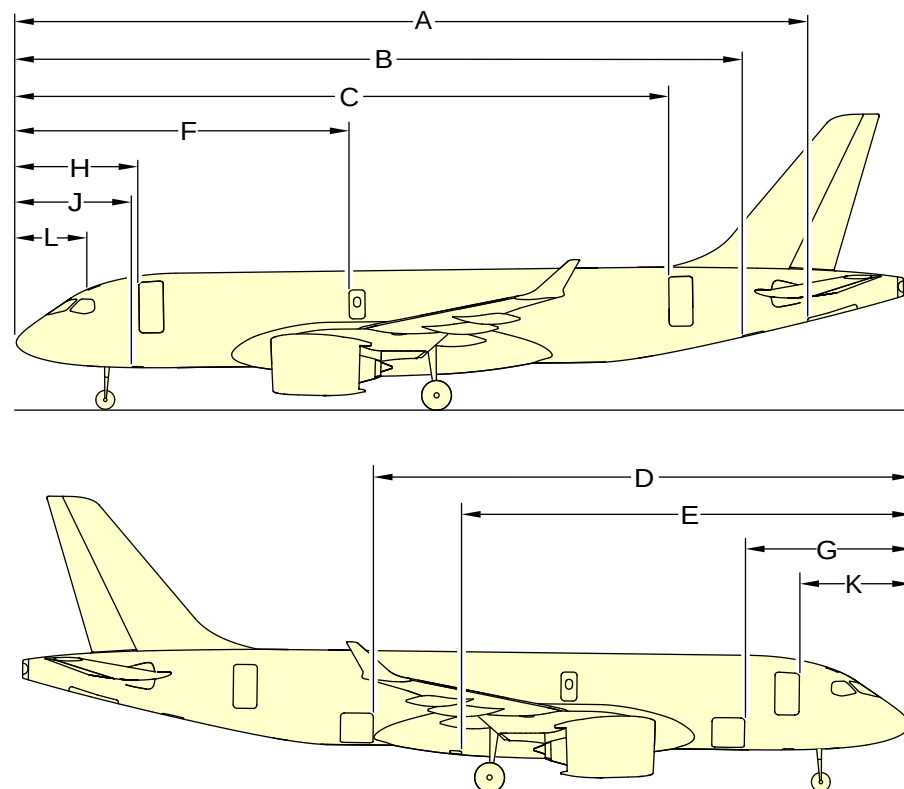
Figure 10 General door location

7.10 Access and exit doors dimensions

Table 9 Access and exit doors dimensions

Door	Height	Width
Main entrance door - Type C exit (door 1L)	6 ft 3 in. (1,9 m)	2 ft 6 in. (0,8 m)
Service door - Type C exit (door 1R)	5 ft 0 in. (1,5 m)	2 ft 6 in. (0,8 m)
Aft entrance door - Type C exit (door 2L)	6 ft 0 in. (1,8 m)	2 ft 6 in. (0,8 m)
Service door - Type C exit (door 2R)	5 ft 0 in. (1,5 m)	2 ft 6 in. (0,8 m)
Forward avionics bay door	2 ft 8 in. (0,81 m)	3 ft 8 in. (1,1 m)
Mid avionics bay door	2 ft 8 in. (0,81 m)	3 ft 8 in. (1,1 m)
Aft equipment bay door	3 ft 6 in. (1,08 m)	1 ft 11 in. (0,6 m)
Forward cargo compartment door	2 ft 8 in. (0,81 m)	3 ft 8 in. (1,1 m)
Aft cargo compartment door	2 ft 8 in. (0,81 m)	3 ft 8 in. (1,1 m)
Over-wing emergency exit	3 ft 6 in. (1,08 m)	1 ft 11 in. (0,59 m)
Flight compartment emergency exit	22 in. (0,559 m)	20 in. (0,508 m)

7.11 Door distance from nose



Dimensions	A220-100
A	102 ft 4 in. (31.2 m)
B	93 ft 10 in. (28.6 m)
C	84 ft 4 in. (25.7 m)
D	69 ft 4 in. (21.1 m)
E	58 ft 0 in. (17.7 m)
F	43 ft 0 in. (13.11 m)
G	21 ft 4 in. (6.5 m)
H	15 ft 10 in. (4.8 m)
J	15 ft 0 in. (4.6 m)
K	14 ft 3 in. (4.3 m)
L	9 ft 2 in. (2.8 m)

NOTE

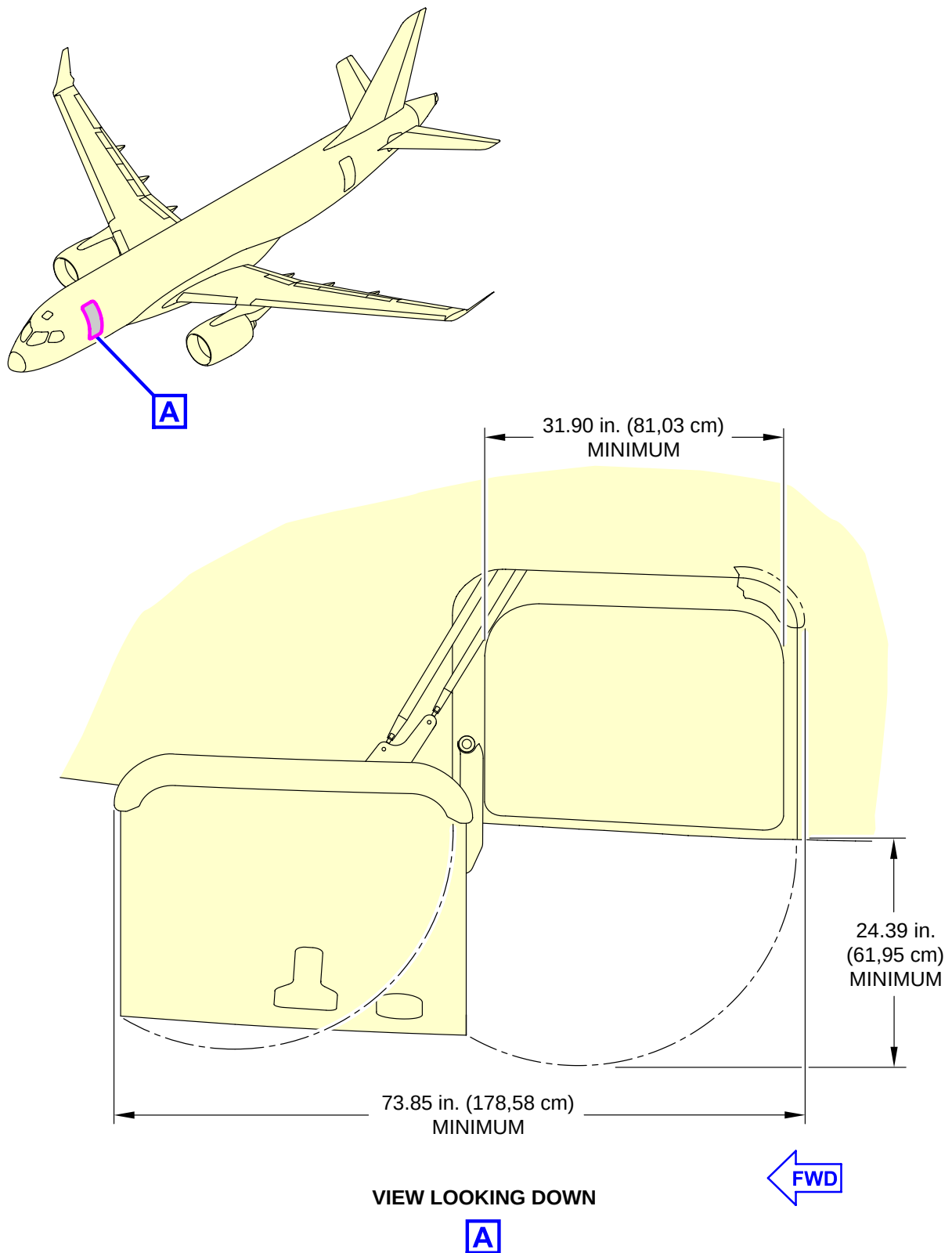
The values shown are the greatest possible variations in attitude due to the variation of aircraft weight and gravity.

ICN-BD500-A-J000000-A-3AB48-21712-A-003-01

Figure 11 Door distance from nose

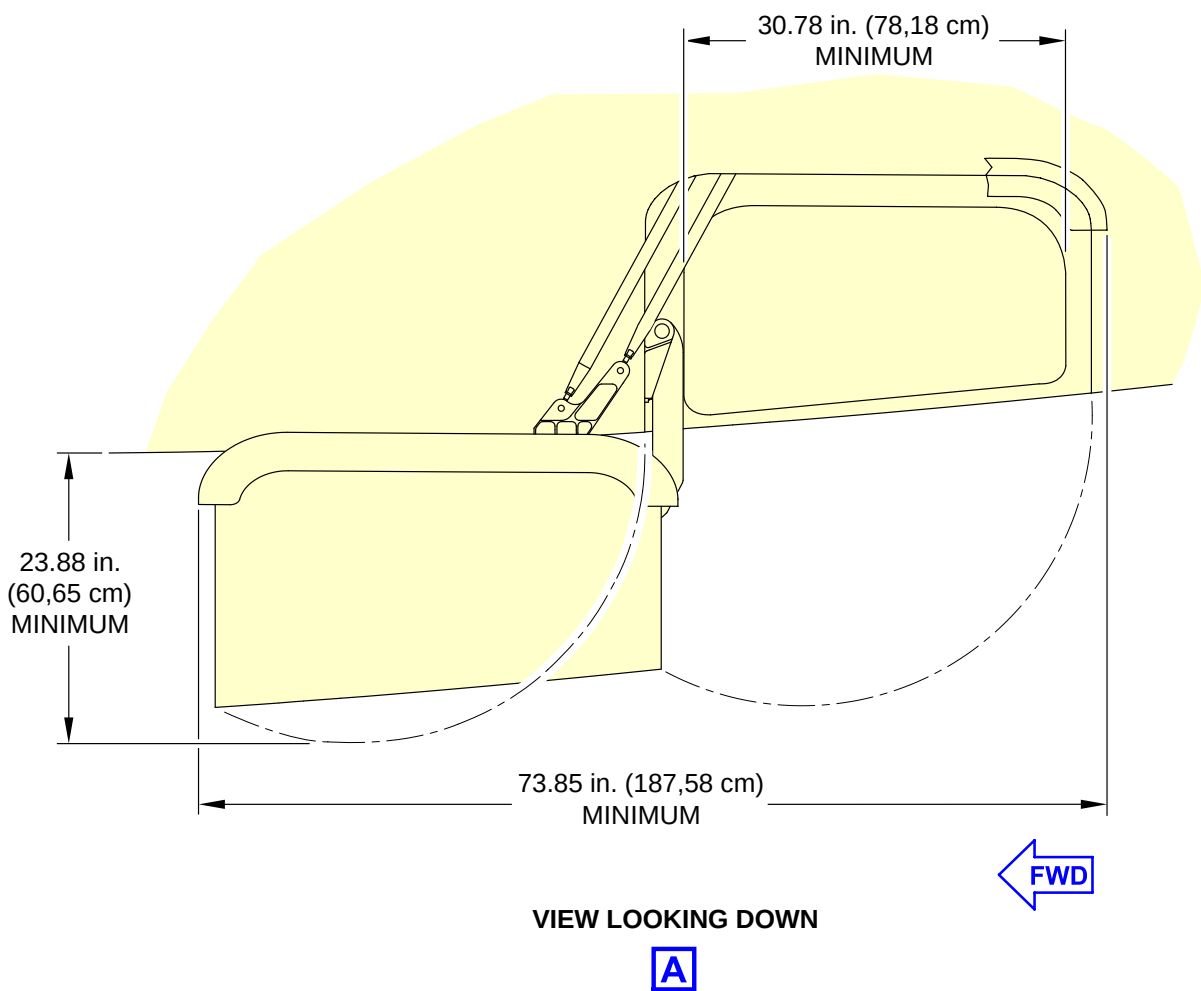
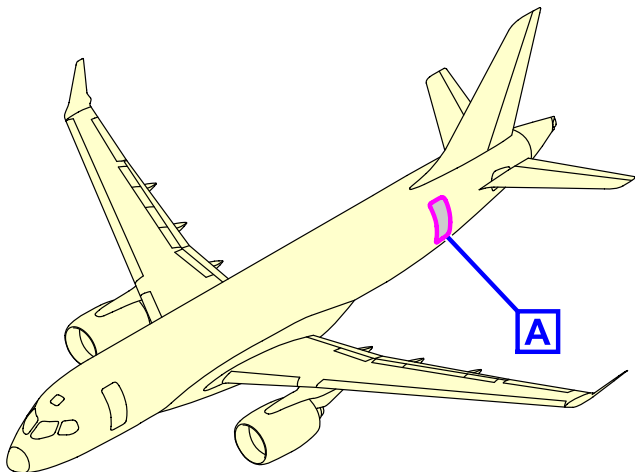
7.12 Door opening and clearance

This publication has been superseded by the
Aircraft Characteristics Publication (ACP).

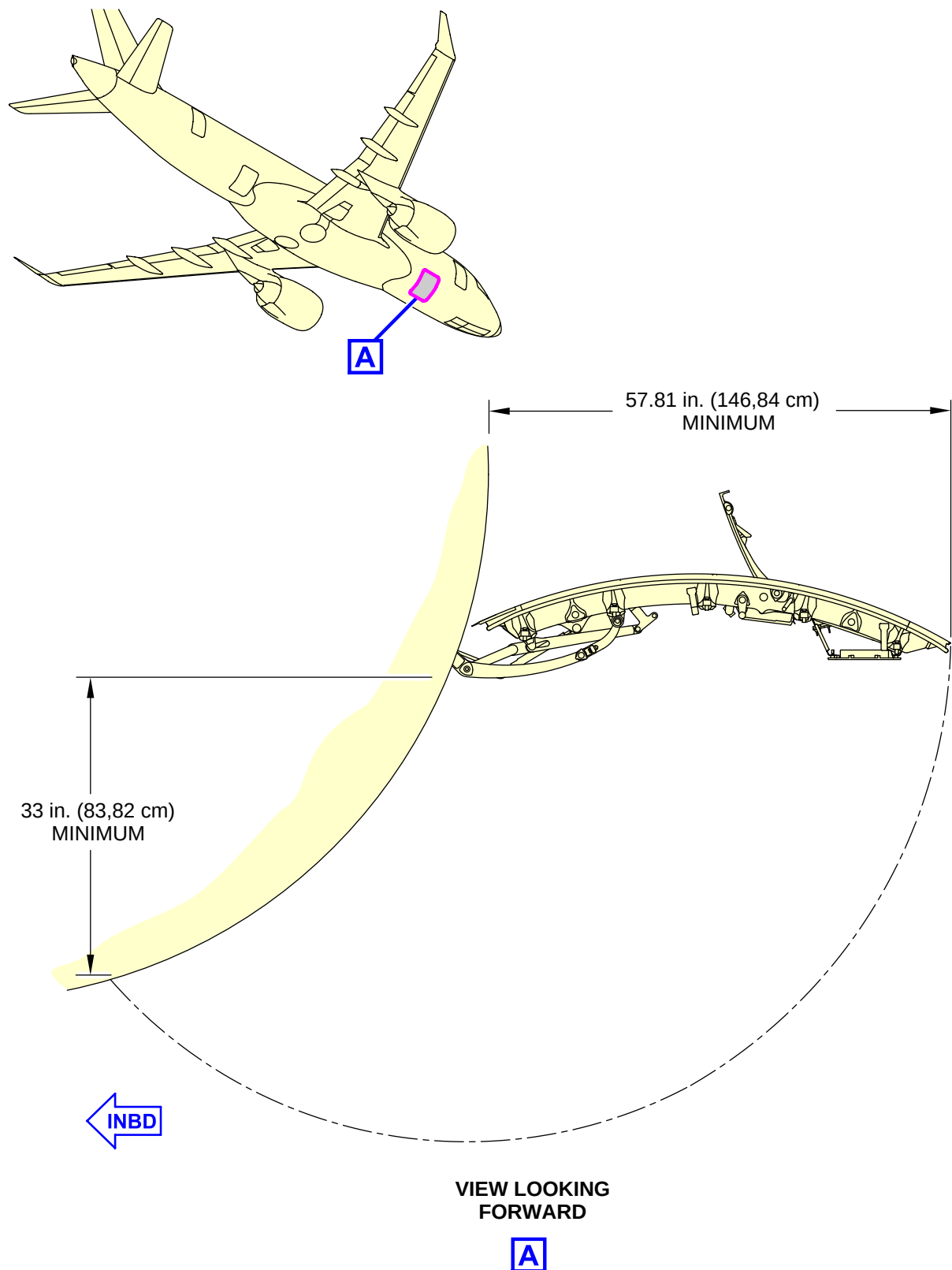


ICN-BD500-A-J061100-A-3AB48-00103-A-003-01

Figure 12 Forward passenger door opening and clearances

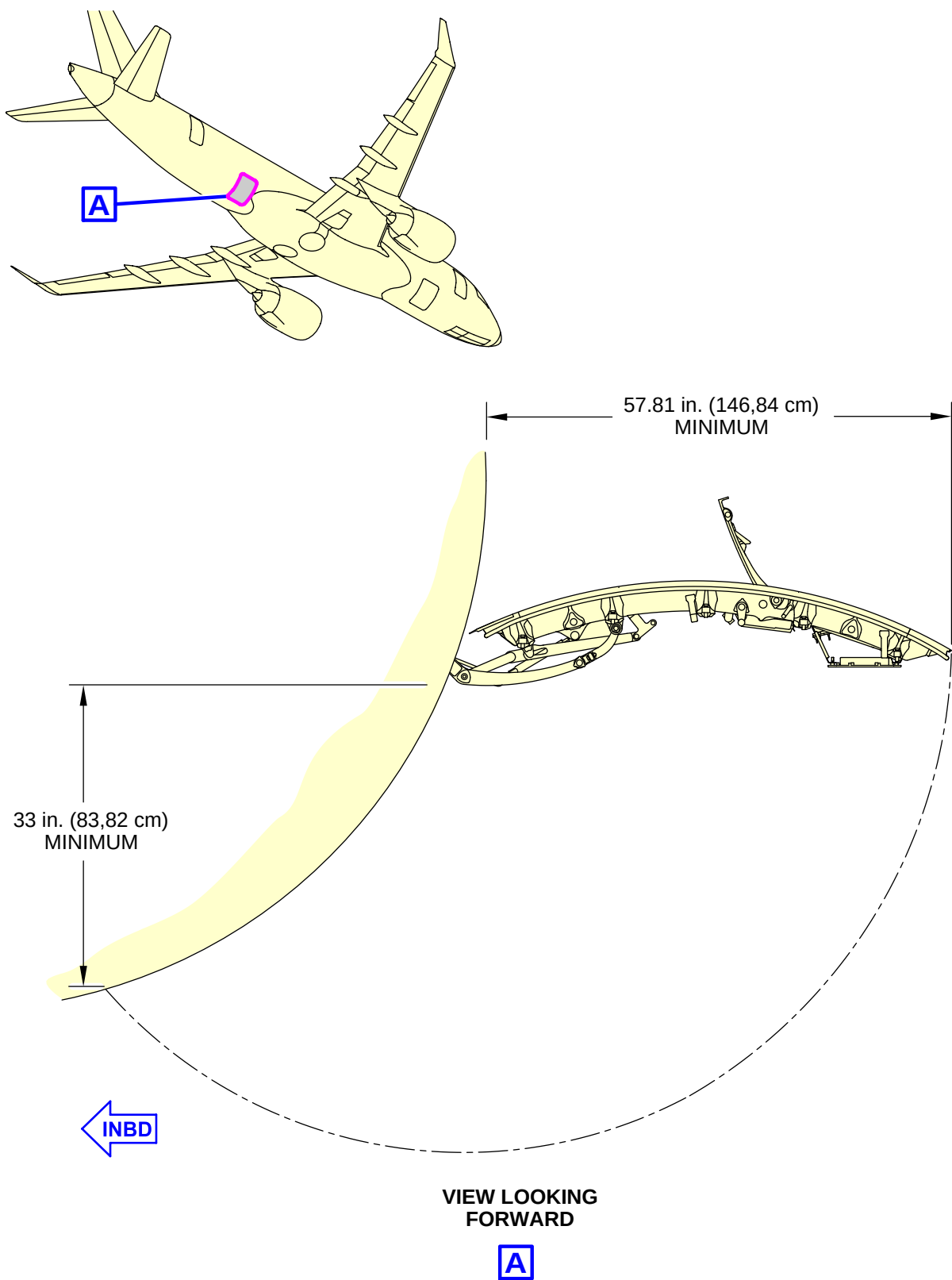


ICN-BD500-A-J061100-A-3AB48-00104-A-003-01
Figure 13 Aft passenger door opening and clearances



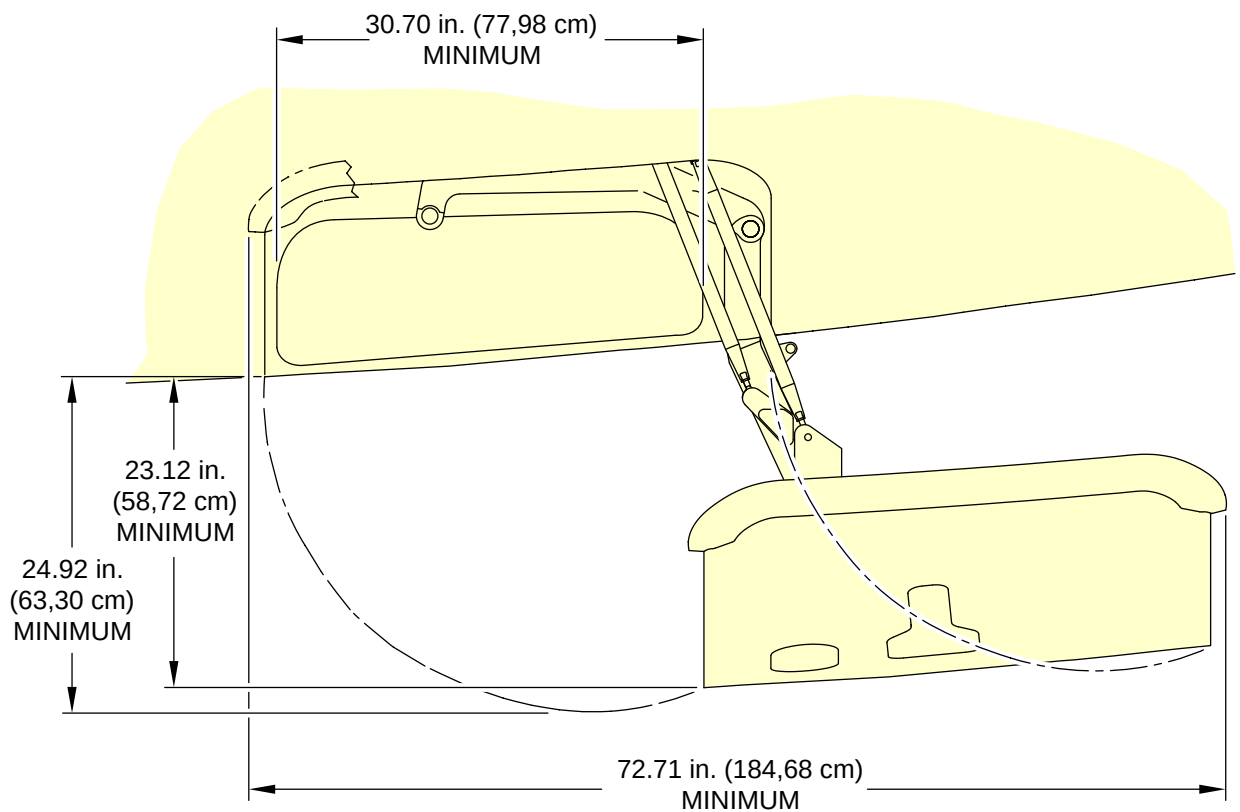
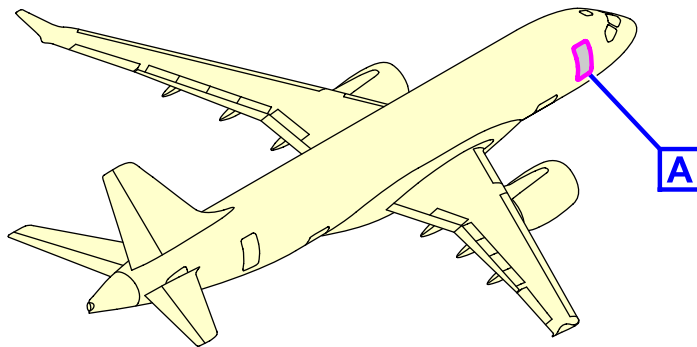
ICN-BD500-A-J061100-A-3AB48-00102-A-002-01

Figure 14 Forward cargo compartment door opening and clearances



ICN-BD500-A-J061100-A-3AB48-00101-A-002-01

Figure 15 Aft cargo compartment door opening and clearances

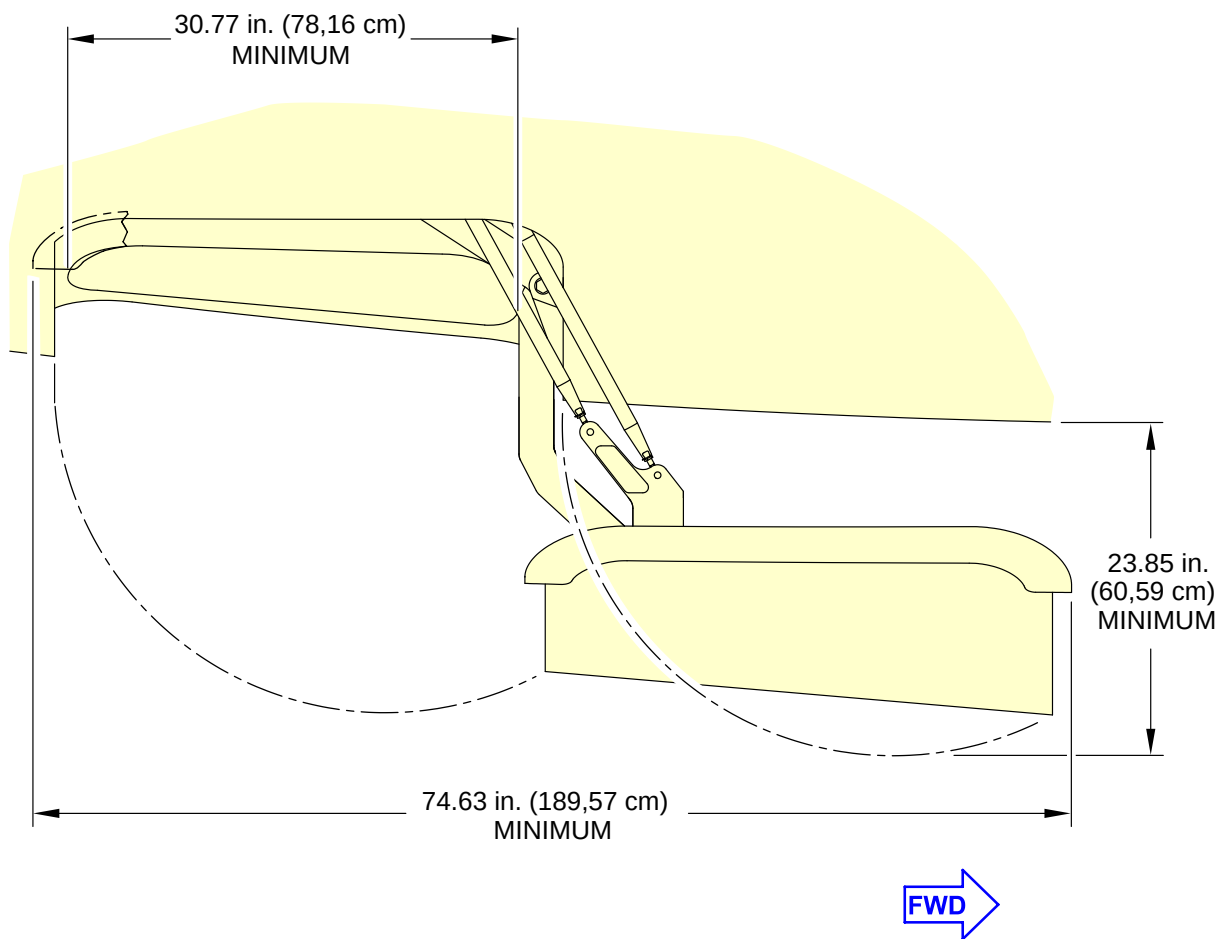
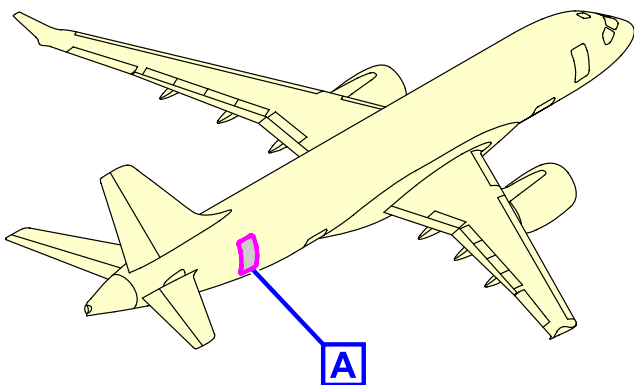


VIEW LOOKING DOWN



ICN-BD500-A-J061100-A-3AB48-00106-A-002-01

Figure 16 Forward service door opening and clearance



VIEW LOOKING DOWN



ICN-BD500-A-J061100-A-3AB48-00105-A-002-01

Figure 17 Aft service door opening and clearances

Aircraft performance - Technical data

Applicability: 50001-54999

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References

Table 1 References

Data Module/Technical Publication	Title
None	

Description

1 Introduction

This data module gives data about:

- Payload/Range
- Takeoff field length requirements
- Landing field length requirements
- Landing reference speed

The table below provides standard day temperature for pressure altitudes.

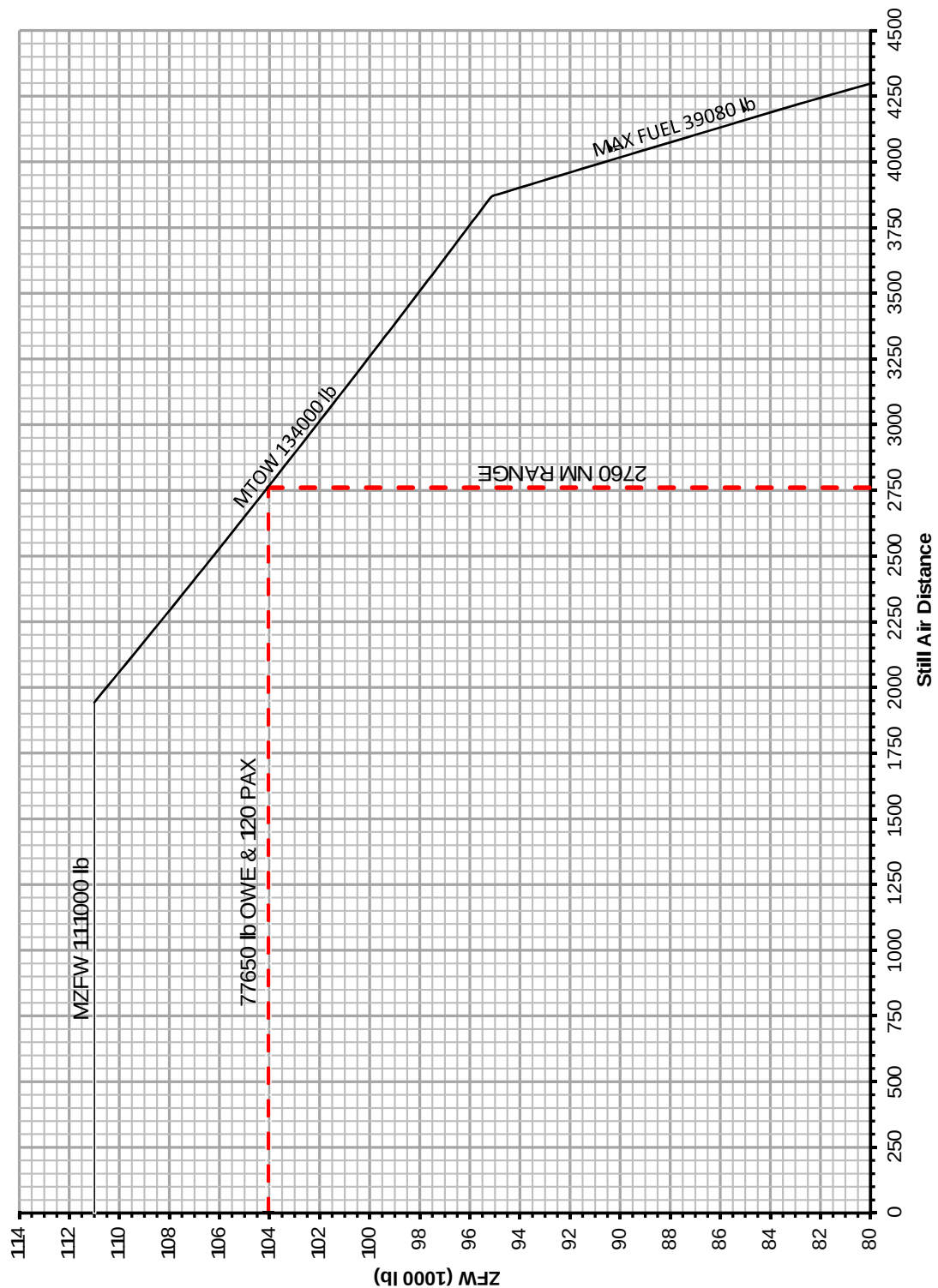
Table 2 Standard day temperature chart

Altitude		Standard day temperature	
Feet (ft.)	Meters (m)	°F	°C
0	0	59	15
2000	610	51.9	11
4000	1220	44.7	7.1
6000	1830	37.6	3.1
8000	2440	30.5	-0.8
10000	3050	23.3	-4.8

2 Payload/Range

This section gives information about the payload/range at ISA conditions.

This publication has been superseded by the Aircraft Characteristics Publication (ACP).



ICN-BD500-A-J000000-A-3AB48-23899-A-002-01

Figure 1 Zero Fuel Weight (ZFW) vs Range ISA

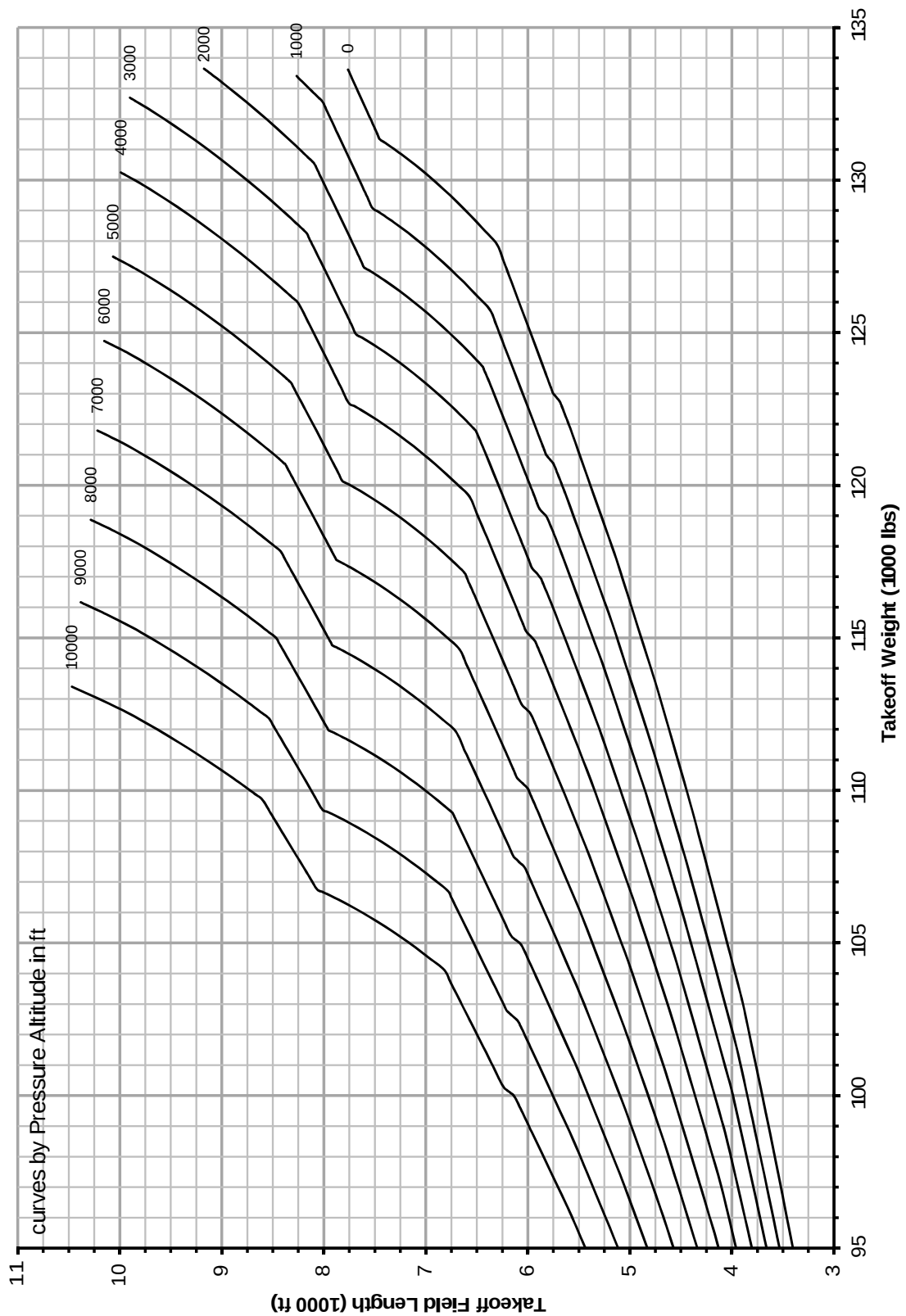
3 Takeoff field length requirements

For more information about aircraft performance, refer to the Aircraft Flight Manual (AFM) BD500-3AB48-22200-00.

For aircraft performance and field length requirements refer to:

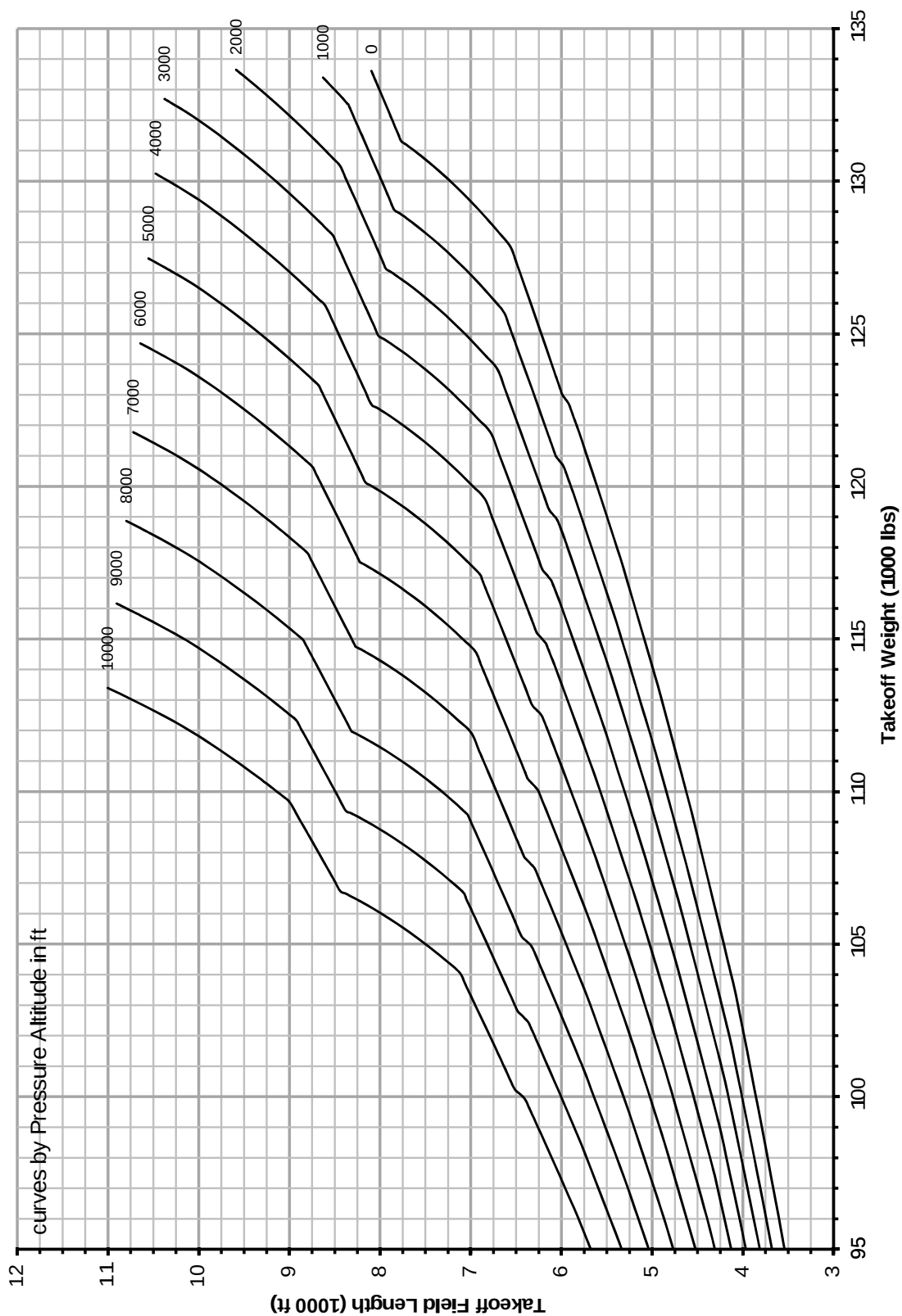
- Fig. 2 for the takeoff field length ISA - PW1519G.
- Fig. 3 for the takeoff field length ISA +15°C - PW1519G.
- Fig. 4 for the takeoff field length ISA - PW1521G.
- Fig. 5 for the takeoff field length ISA +15°C - PW1521G.
- Fig. 6 for the takeoff field length ISA - PW1524G.
- Fig. 7 for the takeoff field length ISA +15°C - PW1524G.

This publication has been superseded by the
Aircraft Characteristics Publication (ACP).



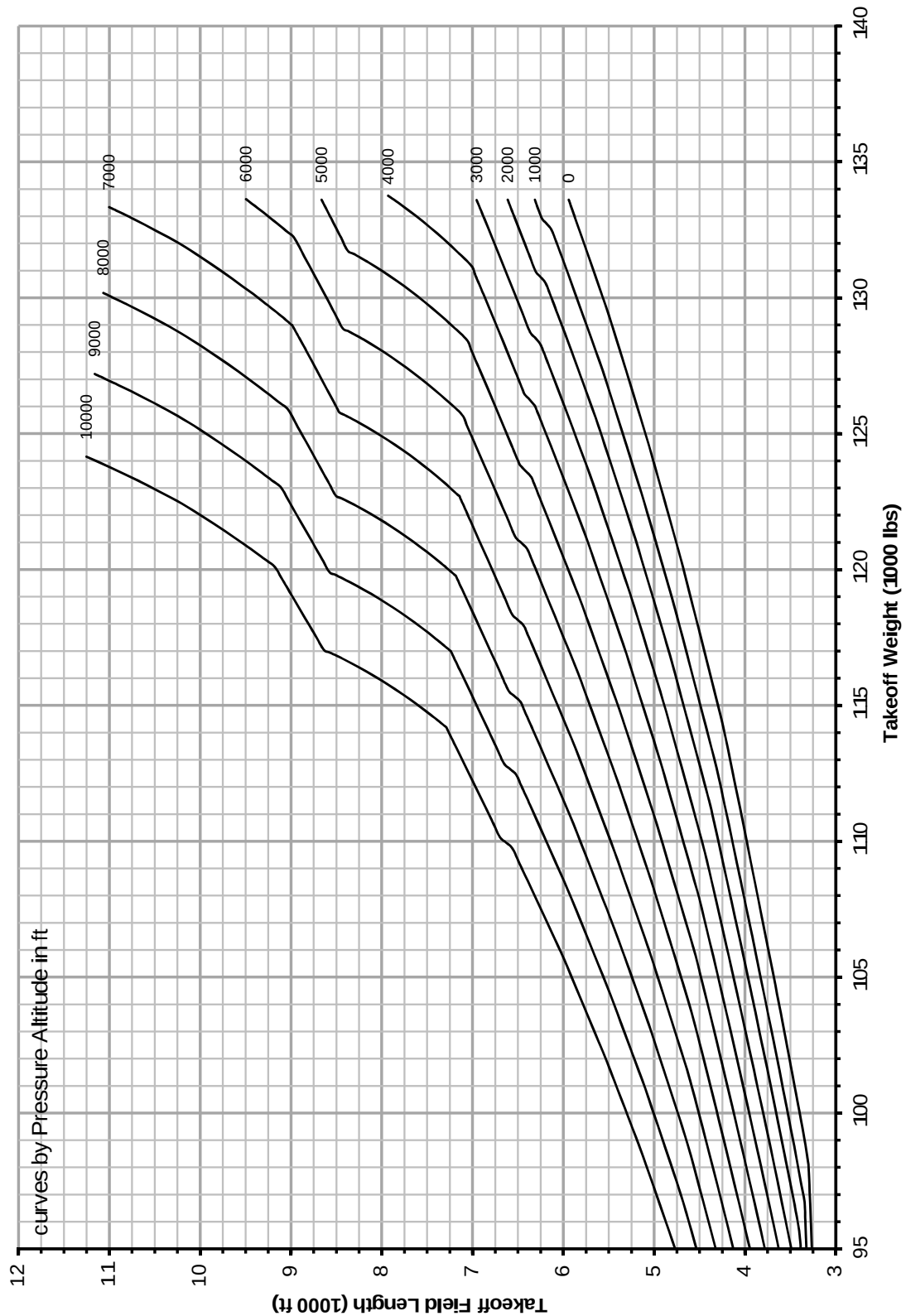
ICN-BD500-A-J000000-A-3AB48-01753-A-002-01

Figure 2 Takeoff field length - ISA - PW1519G



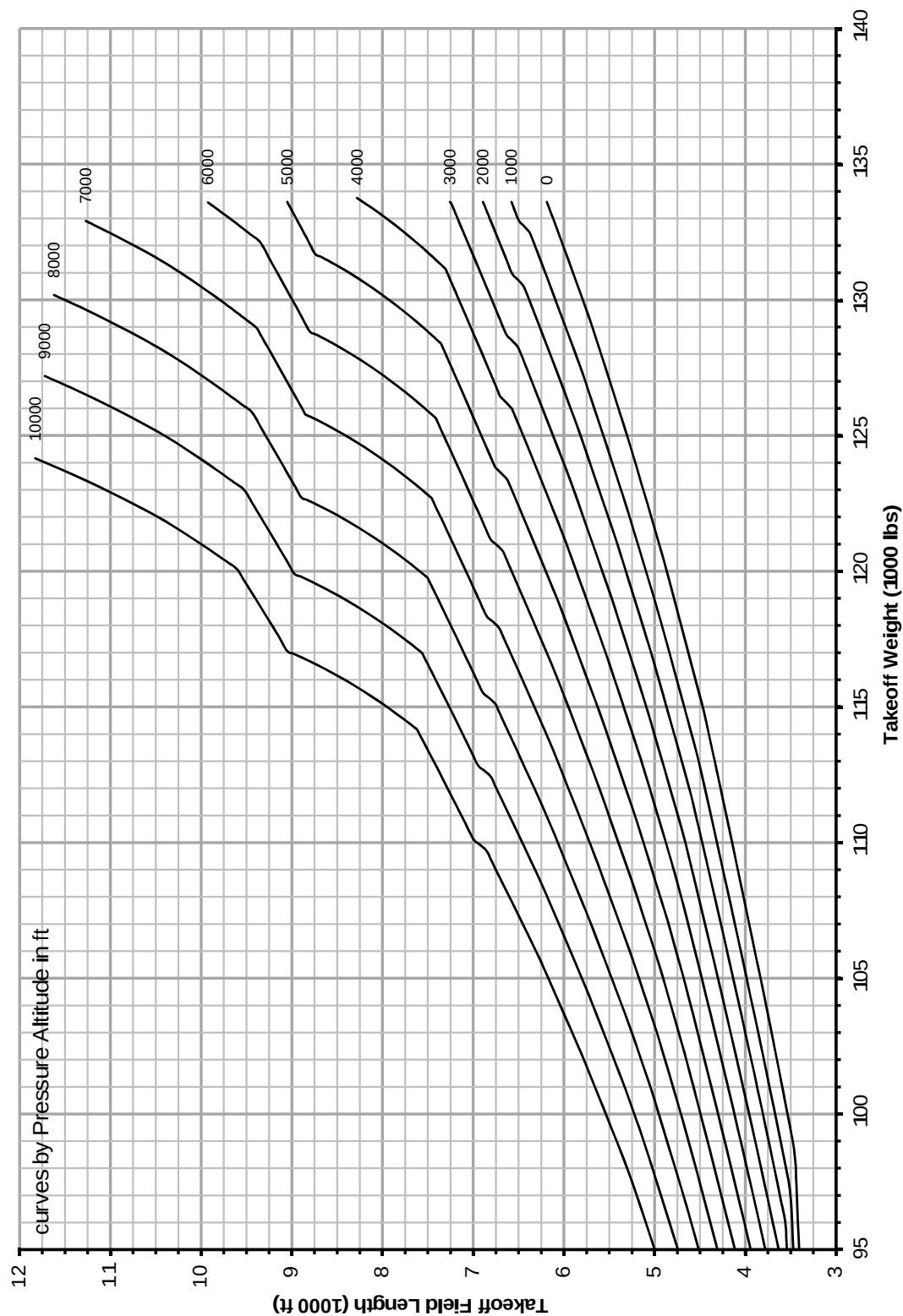
ICN-BD500-A-J000000-A-3AB48-01754-A-002-01

Figure 3 Takeoff field length ISA +15°C - PW1519G

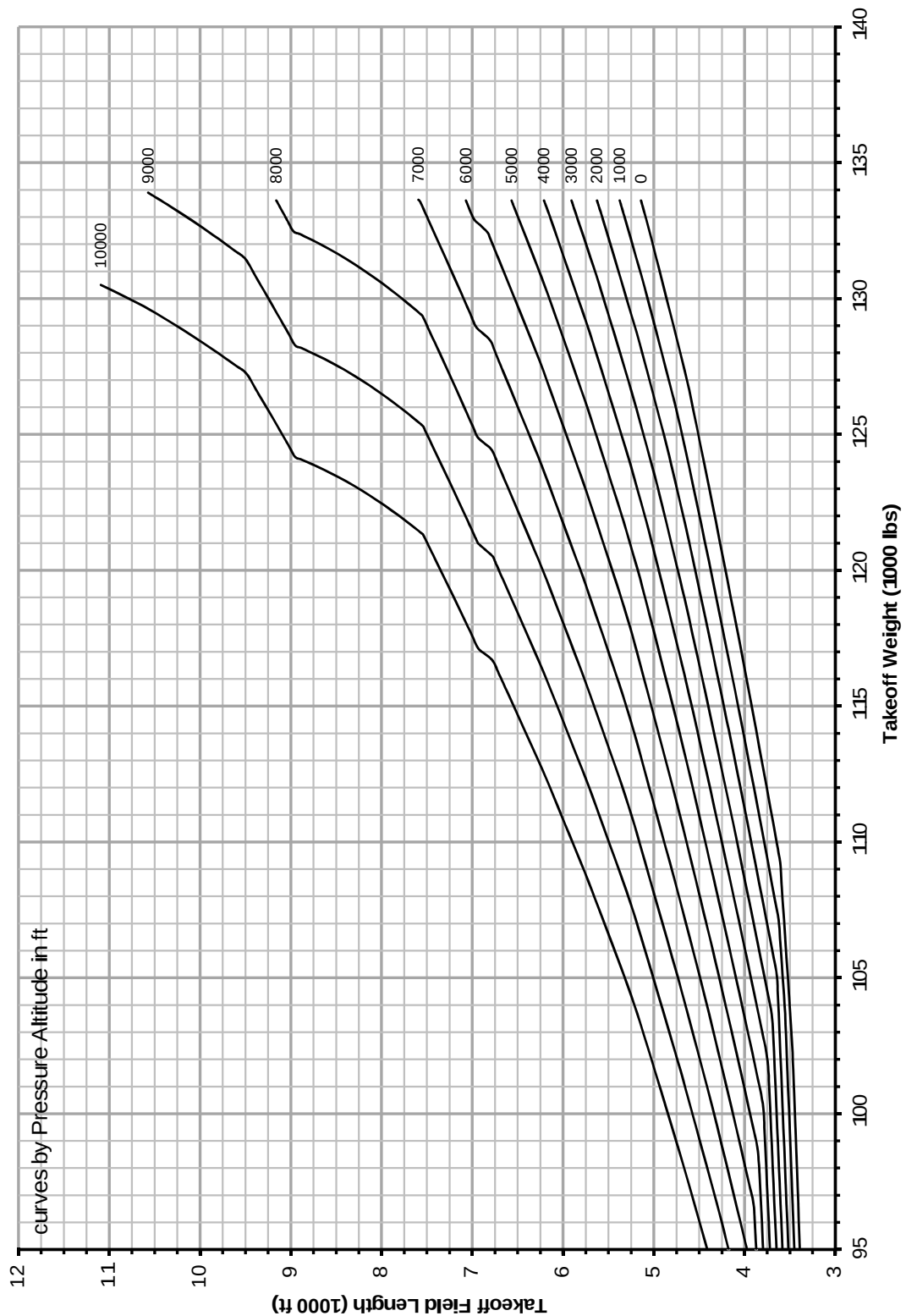


ICN-BD500-A-J000000-A-3AB48-29045-A-001-01

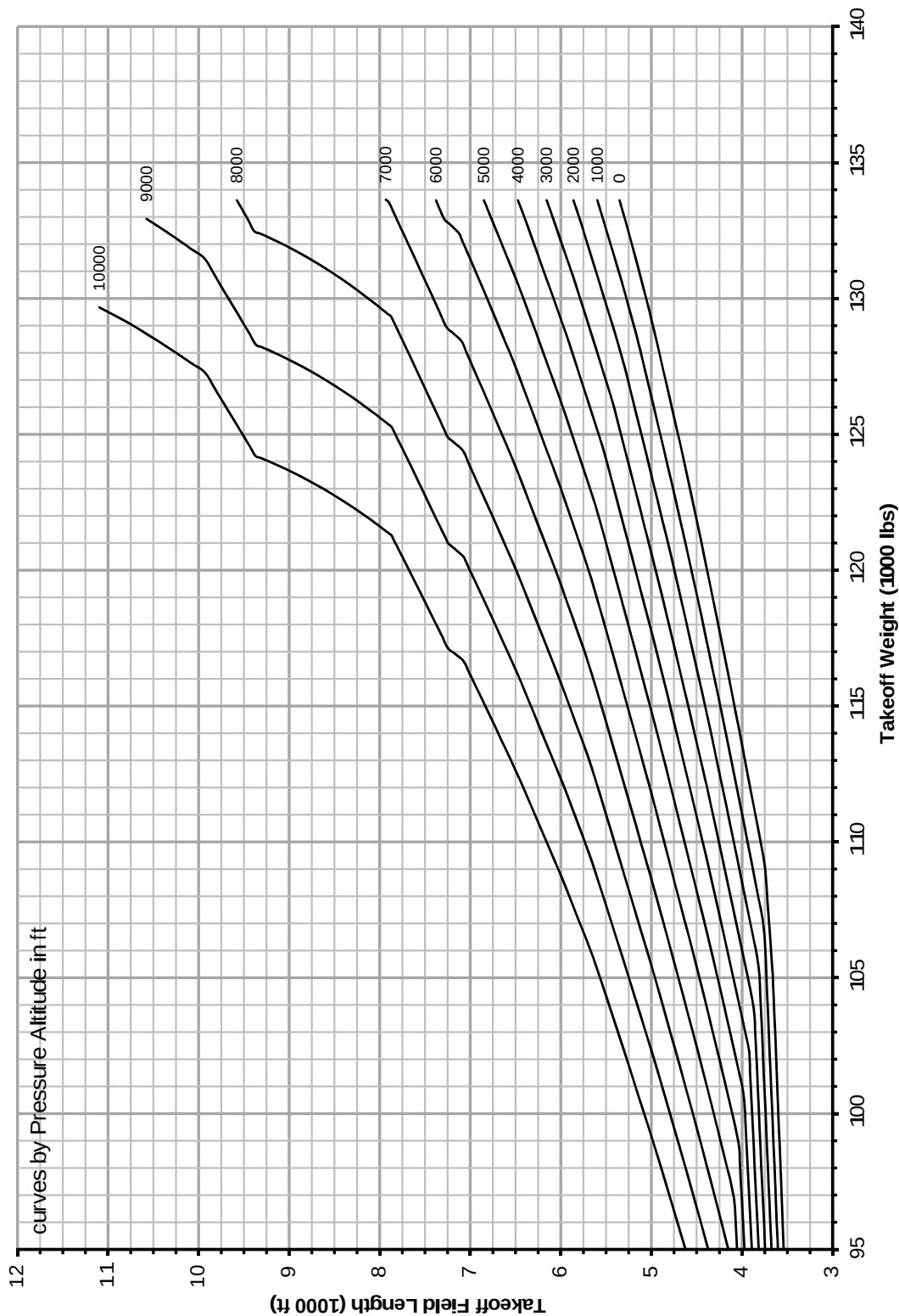
Figure 4 Takeoff field length ISA - PW1521G



ICN-BD500-A-J000000-A-3AB48-29046-A-001-01
Figure 5 Takeoff field length ISA +15°C - PW1521G



ICN-BD500-A-J000000-A-3AB48-29047-A-001-01
Figure 6 Takeoff field length ISA - PW1524G



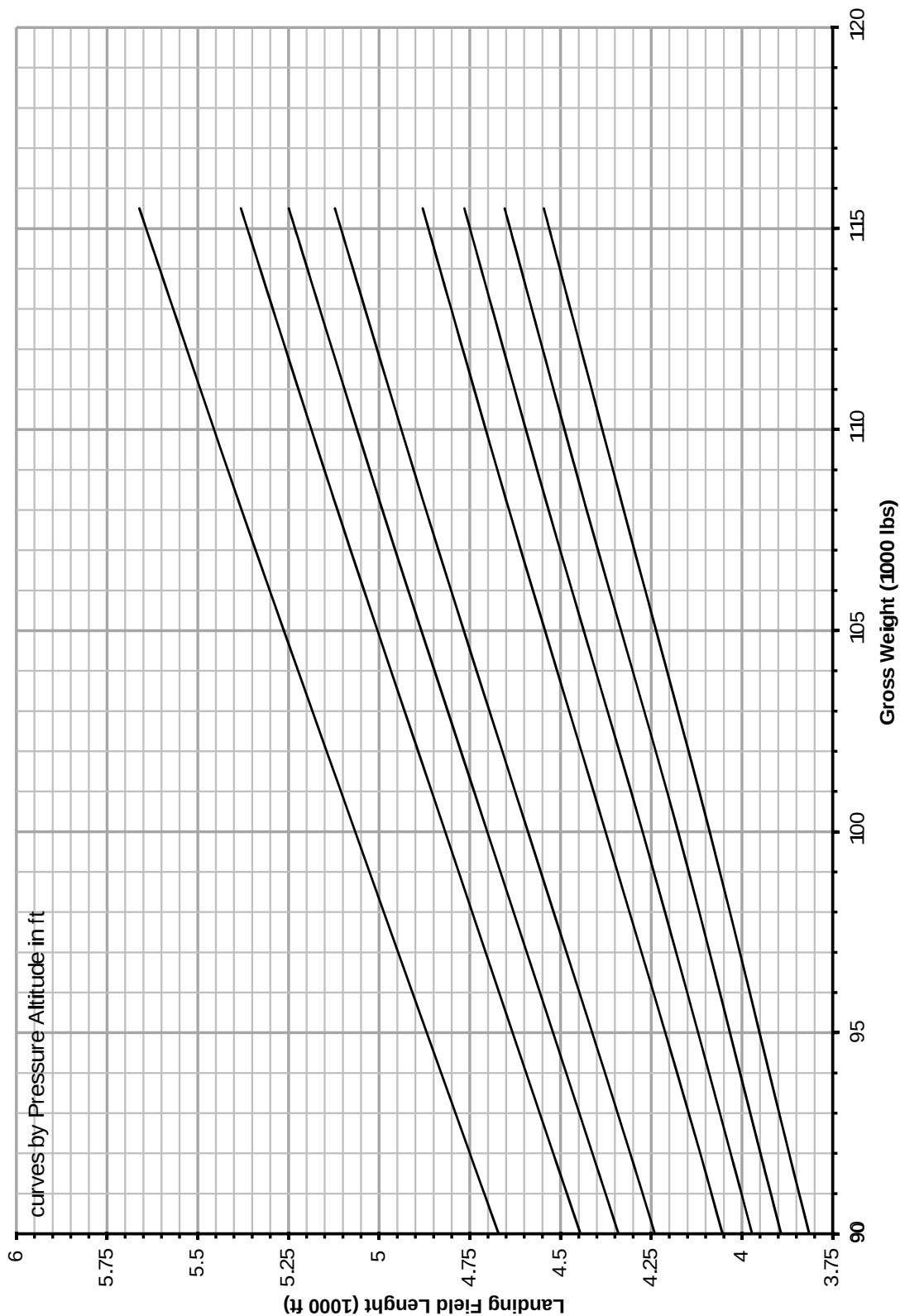
ICN-BD500-A-J000000-A-3AB48-29048-A-001-01
Figure 7 Takeoff field length ISA +15°C - PW1524G

4 Landing field length requirements

For more information about landing field, refer to the AFM BD500-3AB48-22200-00.

For landing field length requirements refer to Fig. 8 .

This publication has been superseded by the
Aircraft Characteristics Publication (ACP).

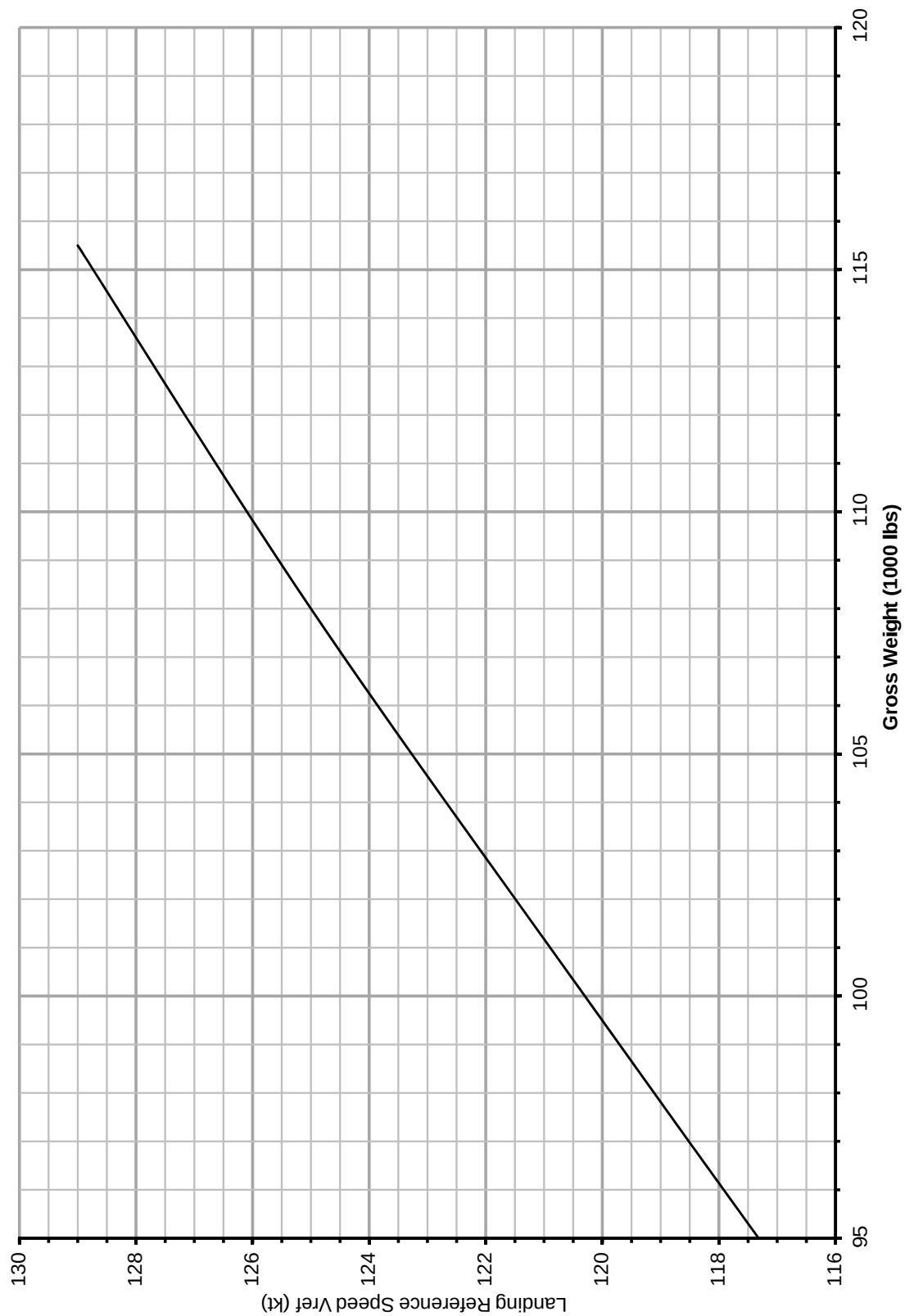


ICN-BD500-A-J000000-A-3AB48-01757-A-002-01
 Figure 8 Landing field length - Dry runway

5 Landing reference speed

This section gives information about the landing reference speed.

This publication has been superseded by the
Aircraft Characteristics Publication (ACP).



ICN-BD500-A-J000000-A-3AB48-23901-A-002-01
Figure 9 Landing reference speed

Ground maneuvering - Technical data

Applicability: 50001-54999

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References

Table 1 References

Data Module/Technical Publication	Title
None	

Description

1 Turning radii

1.1 Introduction

This data module contains data about the aircraft turning capability and maneuvering characteristics on the ground. The data is based on aircraft performance in good conditions of operation.

Thus, the values must be considered theoretical and used only as an aid. Refer to Table 2 for the values to use with Fig. 1 for the turn radii with 3 degree slip angle.

1.2 Landing gear turning radii, including minimum turning radii

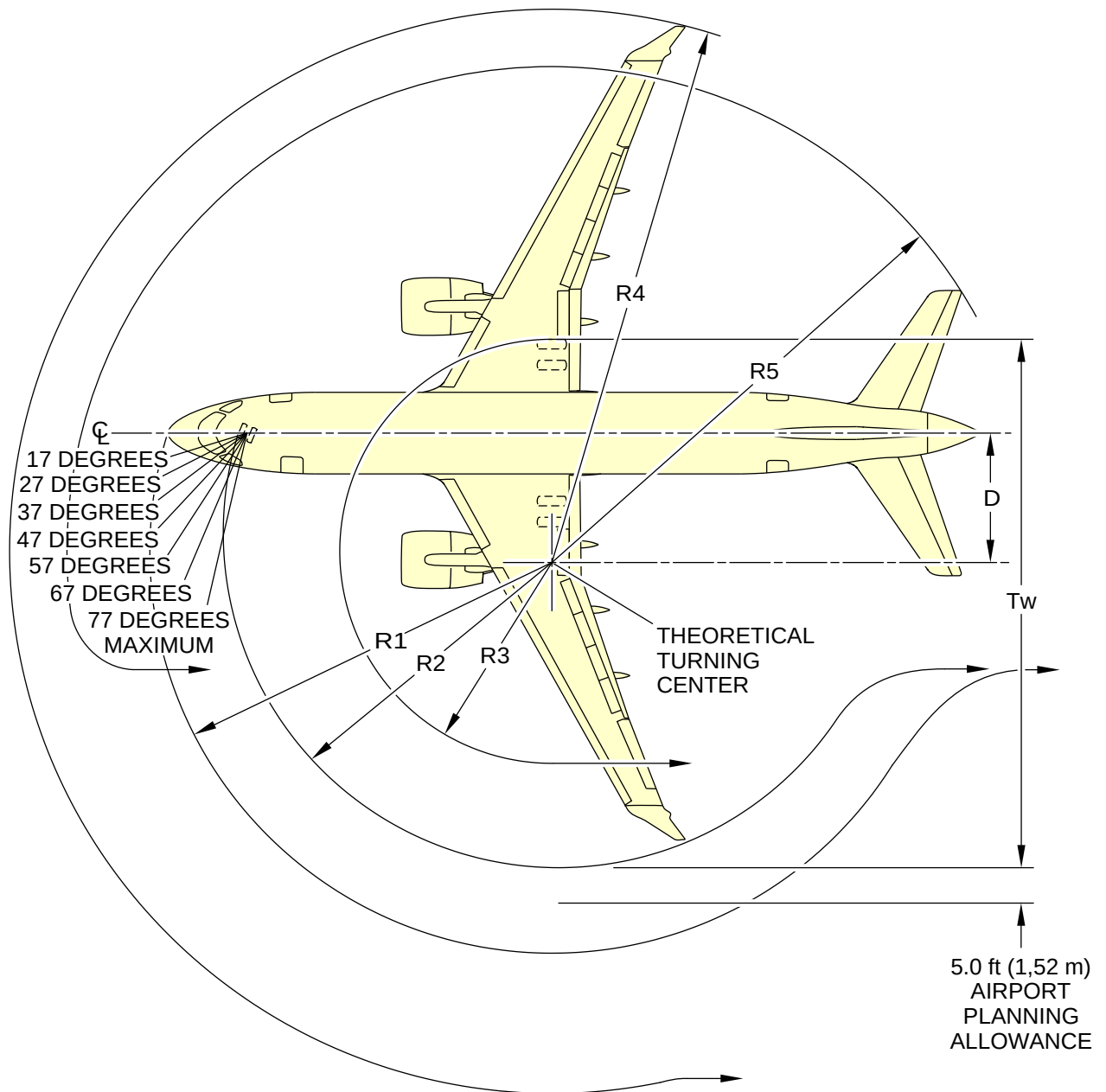
This publication has been superseded by the Aircraft Characteristics Publication (ACP).

Table 2 A220-100 turning radii for various nose wheel angles

Turning angle (in degrees) with 3 degree tire slip	Turning center to air-craft center line (D)	Nose tip (R1)	Nose gear outside face (R2)	Main gear outside face (R3)	Wing tip (R4)	Empennage tip (R5)	Minimum theoretical pavement width for 180 degrees turn (Tw= R2+R3)
17	1686.8 in. (42844.72 mm)	1807.5 in. (45910.50 mm)	1776.3 in. (45118.02 mm)	1845.6 in. (46878.24 mm)	2385.4 in. (60589.16 mm)	2046.7 in. (51986.18 mm)	3621.9 in. (91996.26 mm)
27	1012.1 in. (25707.34 mm)	1202.7 in. (30548.58 mm)	1148.4 in. (29169.36 mm)	1171 in. (29743.40 mm)	1715 in. (43561 mm)	1430.1 in. (36324.54 mm)	2319.4 in (58912.76 mm)
37	684.4 in. (17383.76 mm)	943.6 in (23967.44 mm)	869.3 in. (22080.22 mm)	843.2 in. (21417.28 mm)	1390.8 in. (35326.32 mm)	1154.2 in. (29316.68 mm)	1712.6 in. (43500.04 mm)
47	480.9 in. (12214.86 mm)	808.3 in (20530.82 mm)	717.6 in. (18227.04 mm)	639.8 in. (16250.92 mm)	1190.6 in. (30241.24 mm)	998.9 in. (25372.06 mm)	1357.3 in. (34475.42 mm)
57	334.9 in. (8506.46 mm)	730.9 in. (18564.86 mm)	627.9 in. (15948.66 mm)	493.2 in. (12527.28 mm)	1047.6 in. (26609.04 mm)	899.3 in. (22842.22 mm)	1121.1 in. (28475.94 mm)
67	218.9 in. (5560.06 mm)	685.5 in. (17411.70 mm)	572.7 in. (14546.58 mm)	377.8 in. (9596.12 mm)	934.7 in. (23741.38 mm)	830.1 in. (21084.54 mm)	950.4 in. (24140.16 mm)
77	119.1 in. (3025.14 mm)	660.4 in. (16774.16 mm)	541.7 in. (13759.18 mm)	277.9 in. (7058.66 mm)	838.2 in. (21290.28 mm)	779.4 in. (19796.76 mm)	819.6 in. (20817.84 mm)

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This publication has been superseded by the Aircraft Characteristics Publication (ACP).



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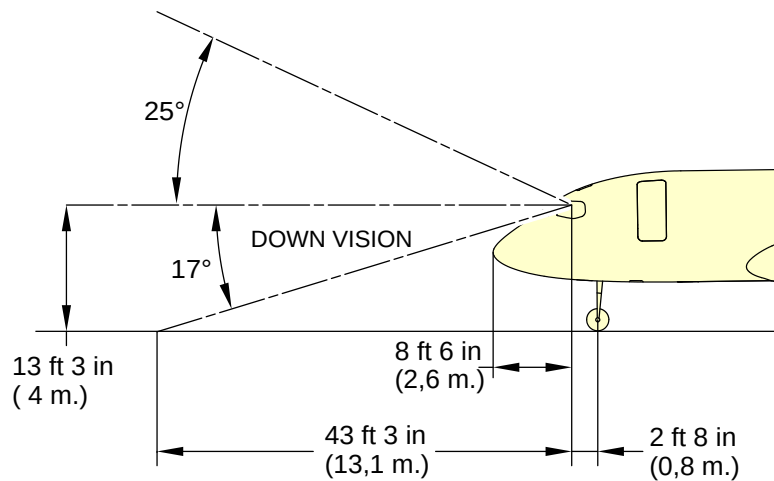
Figure 1 Turn radii

2 Visibility from cockpit in static position

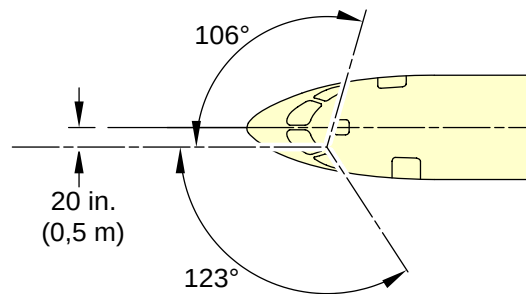
This section contains data about the visibility from cockpit in static position.

To see the diagram, refer to Fig. 2 .

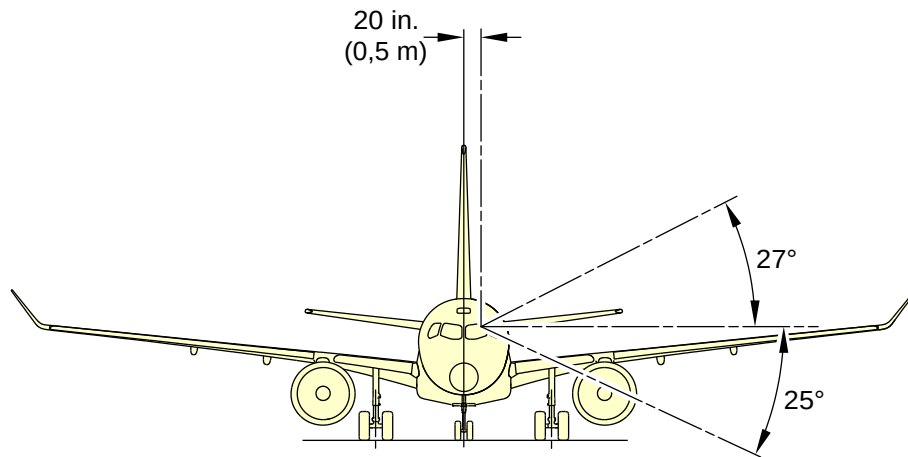
This publication has been superseded by the
Aircraft Characteristics Publication (ACP).



VISUAL ANGLES IN VERTICAL PLANE THROUGH PILOT'S EYE POSITION



VISUAL ANGLES IN HORIZONTAL PLANE THROUGH PILOT'S EYE POSITION



VISUAL ANGLE IN A PLANE PERPEDNDICULAR TO LONGITUDINAL AXIS THROUGH PILOT'S EYE POSITION

NOTES

1. Not to be used for landing approach visibility.
2. Not scale.

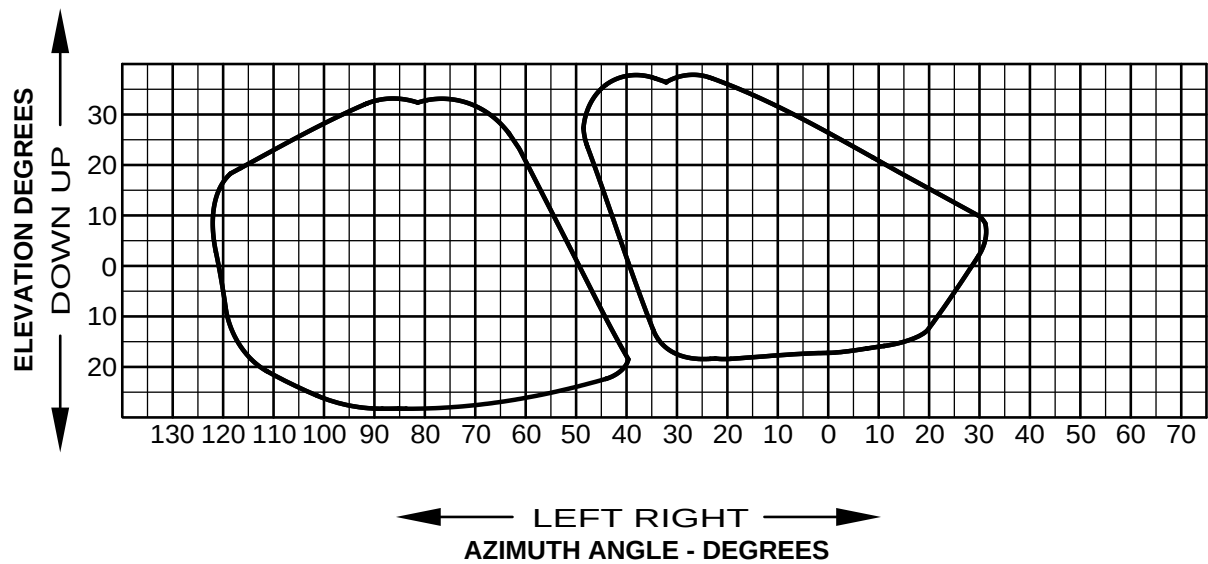
ICN-BD500-A-J000000-A-3AB48-22579-A-001-01

Figure 2 Visibility from cockpit in static position

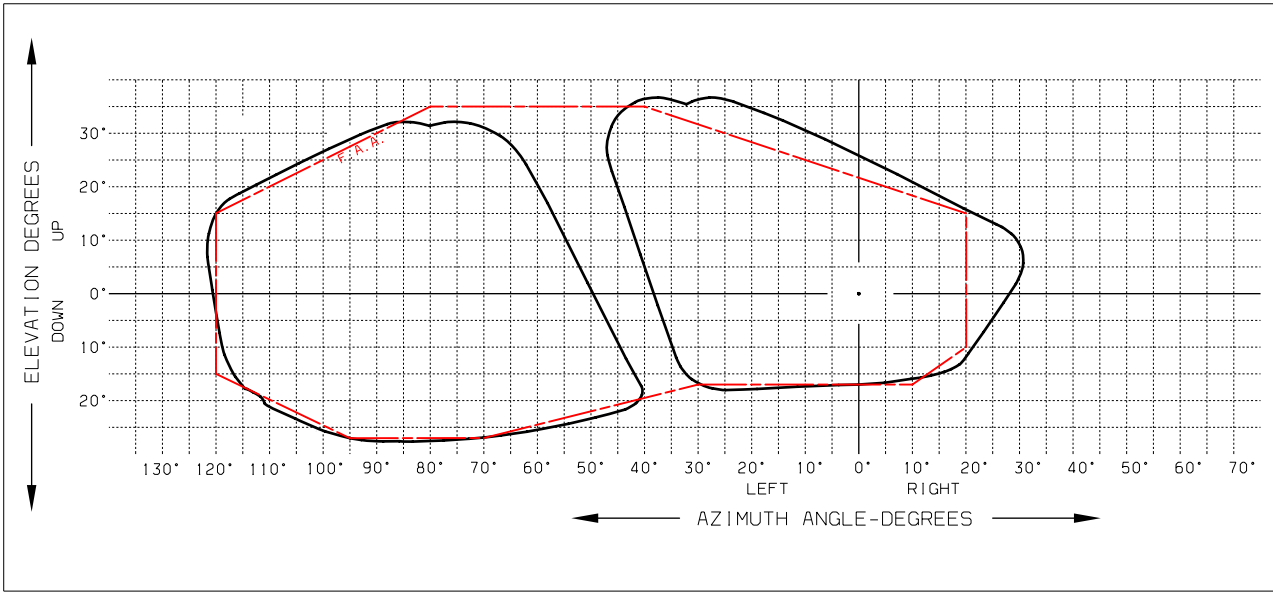
2.1 Clear areas of vision

To see the diagram, refer to Fig. 3 and Fig. 4 .

This publication has been superseded by the
Aircraft Characteristics Publication (ACP).



ICN-BD500-A-J092001-A-3AB48-00119-A-001-01
 Figure 3 Clear areas of vision



CSERIES CLEAR AREAS OF VISION
(SCALE 1:10)

--- FAA RECOMMENDED VISION AREA
— CSERIES

This Aircraft

ICN-BD500-A-J000000-A-3AB48-45615-A-001-01
Figure 4 A220 Clear areas of vision

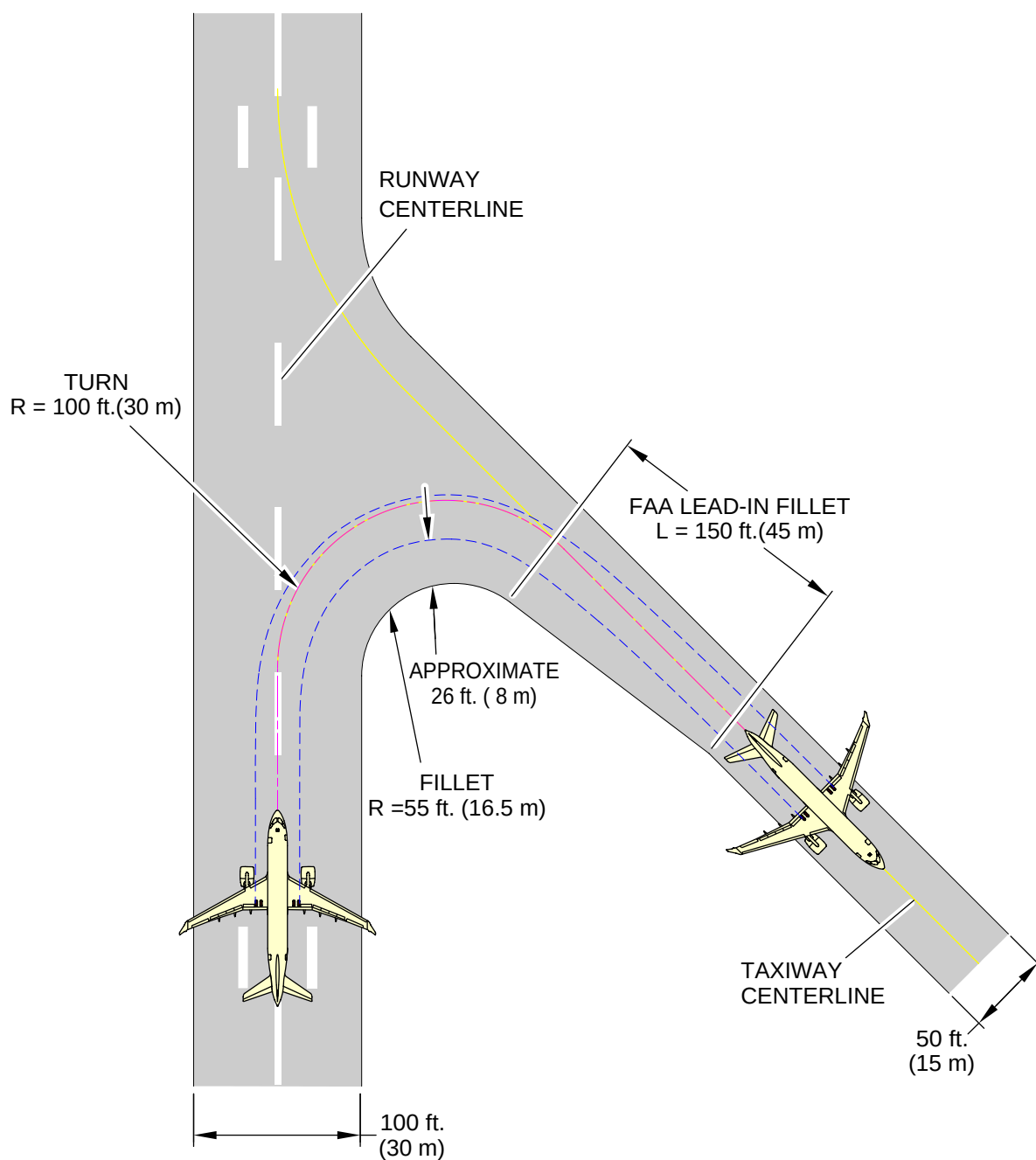
3 Runways and taxiways turn paths

This section contains data about the runways and taxiways turn paths.

3.1 More than 90° turn - Runway to taxiway - Cockpit over centerline method

To see the diagram, refer to Fig. 5 .

This publication has been superseded by the
Aircraft Characteristics Publication (ACP).



LEGEND

- Nose gear.
- Main gear.

NOTE

Coordinate with airline operator for the specific planned operating procedure.

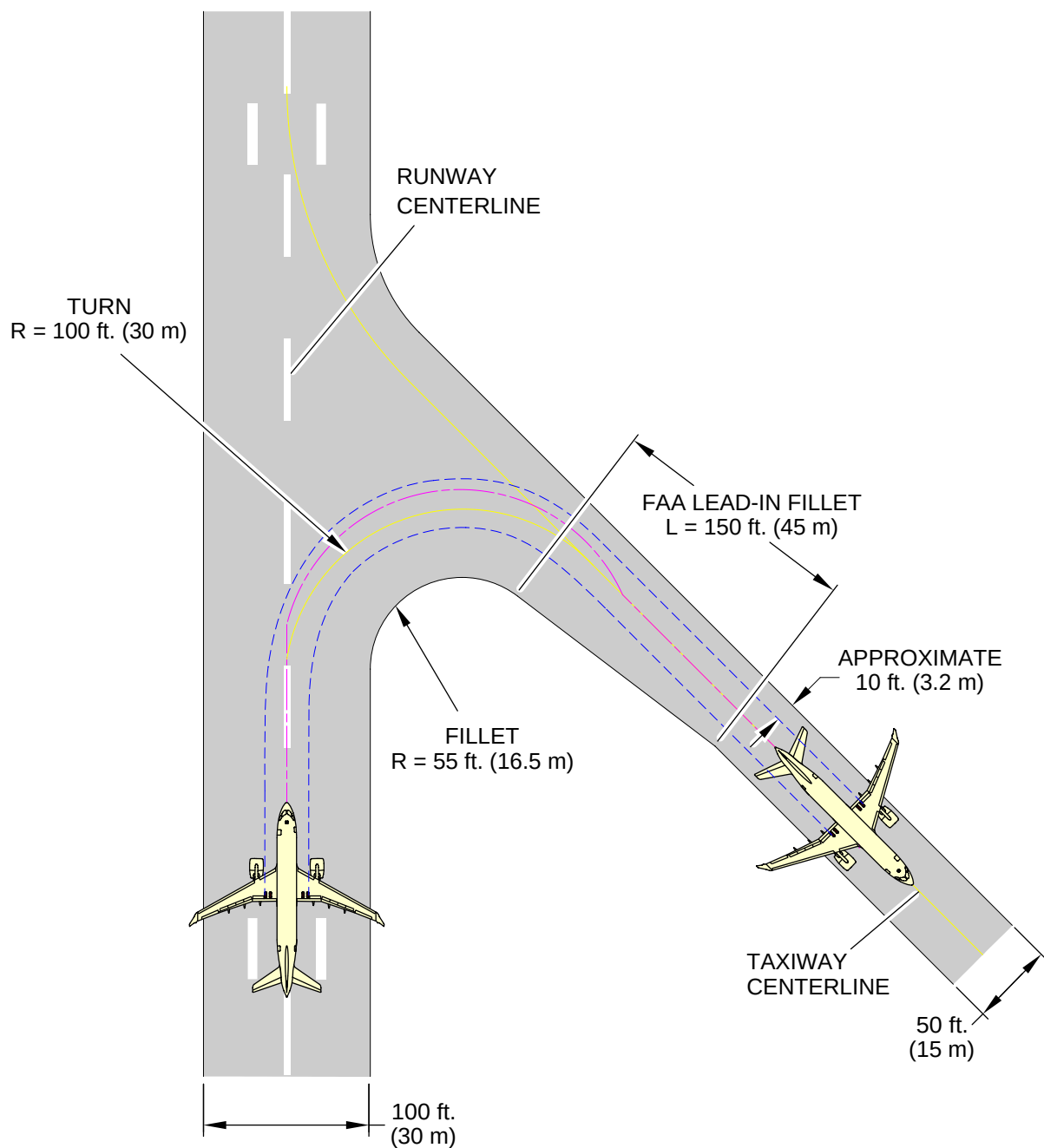
ICN-BD500-A-J000000-A-3AB48-22068-A-001-01

Figure 5 More than 90° turn - Runway to taxiway - Cockpit over centerline method

3.2 More than 90° turn - Runway to taxiway - Oversteering method

To see the diagram, refer to Fig. 6 .

This publication has been superseded by the
Aircraft Characteristics Publication (ACP).



LEGEND

- Nose gear.
- Main gear.

NOTE

Coordinate with airline operator for the specific planned operating procedure.

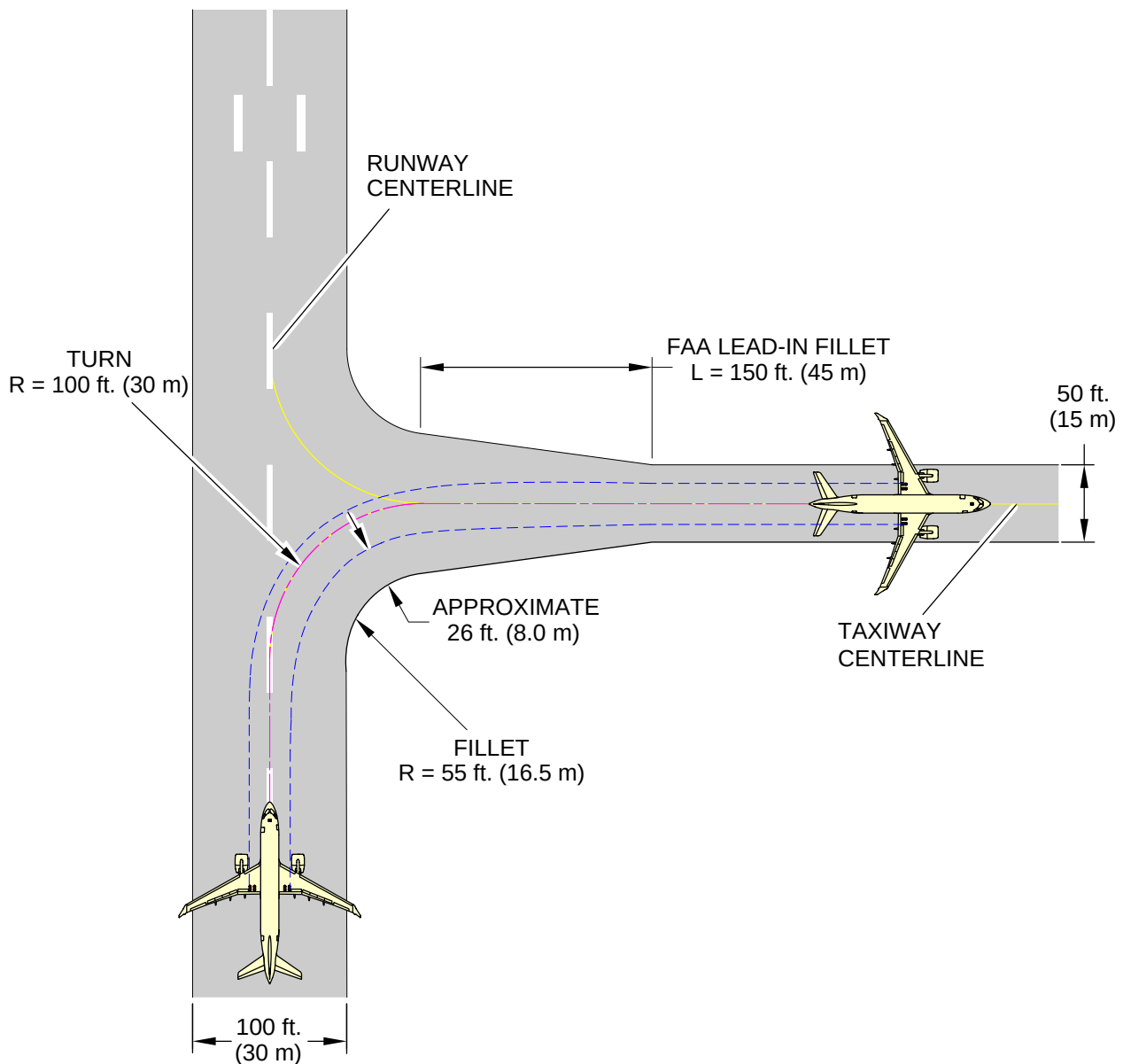
ICN-BD500-A-J000000-A-3AB48-22553-A-001-01

Figure 6 More than 90° turn - Runway to taxiway - Oversteering method

3.3 90° turn - Runway to taxiway - Cockpit over centerline method

To see the diagram, refer to Fig. 7 .

This publication has been superseded by the
Aircraft Characteristics Publication (ACP).



LEGEND

- Nose gear.
- Main gear.

NOTE

Coordinate with airline operator for the specific planned operating procedure.

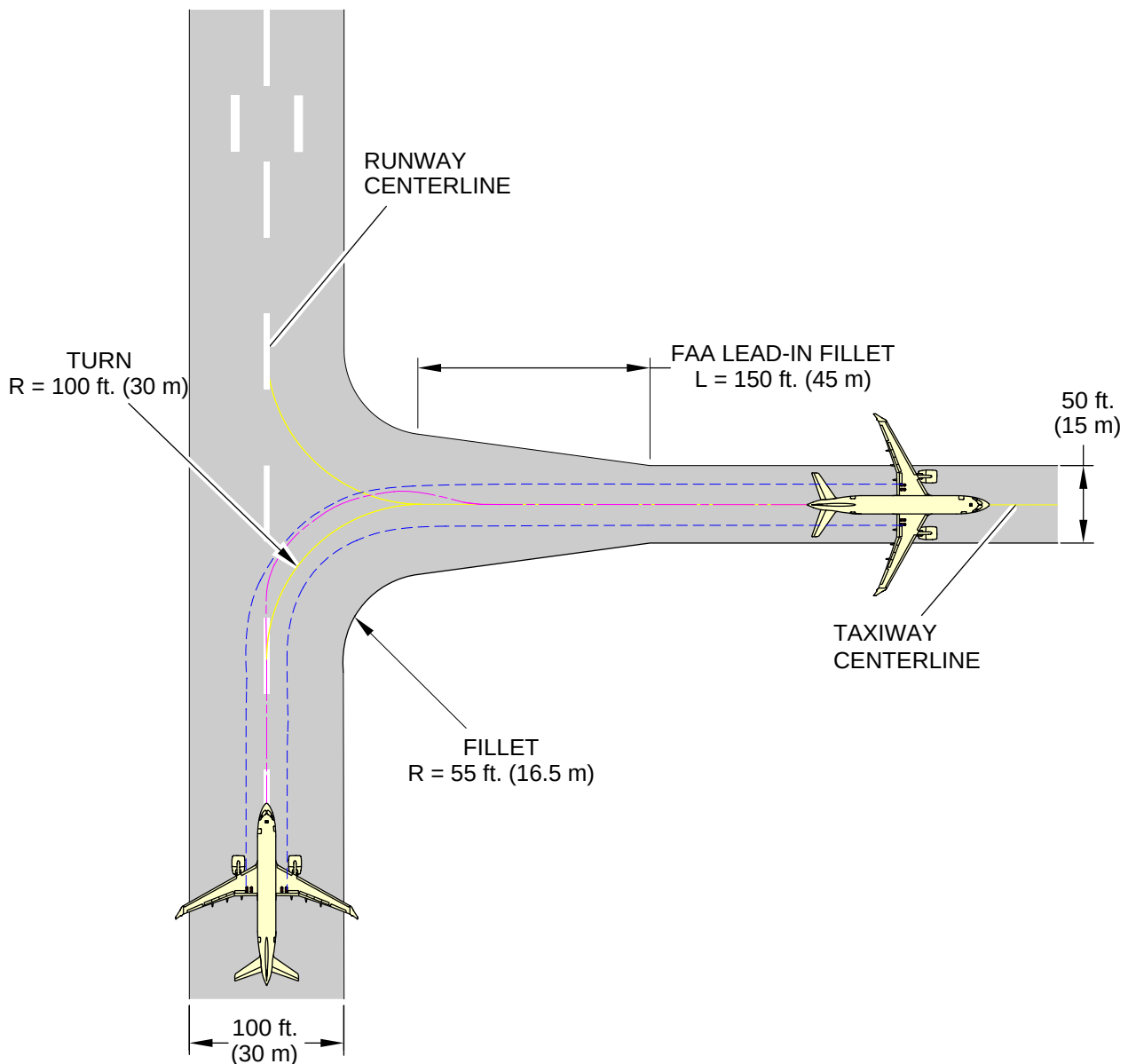
ICN-BD500-A-J000000-A-3AB48-22065-A-001-01

Figure 7 90° turn - Runway to taxiway - Cockpit over centerline method

3.4 90° turn - Runway to taxiway - Oversteering method

To see the diagram, refer to Fig. 8 .

This publication has been superseded by the
Aircraft Characteristics Publication (ACP).



LEGEND

- Nose gear.
- Main gear.

NOTE

Coordinate with airline operator for the specific planned operating procedure.

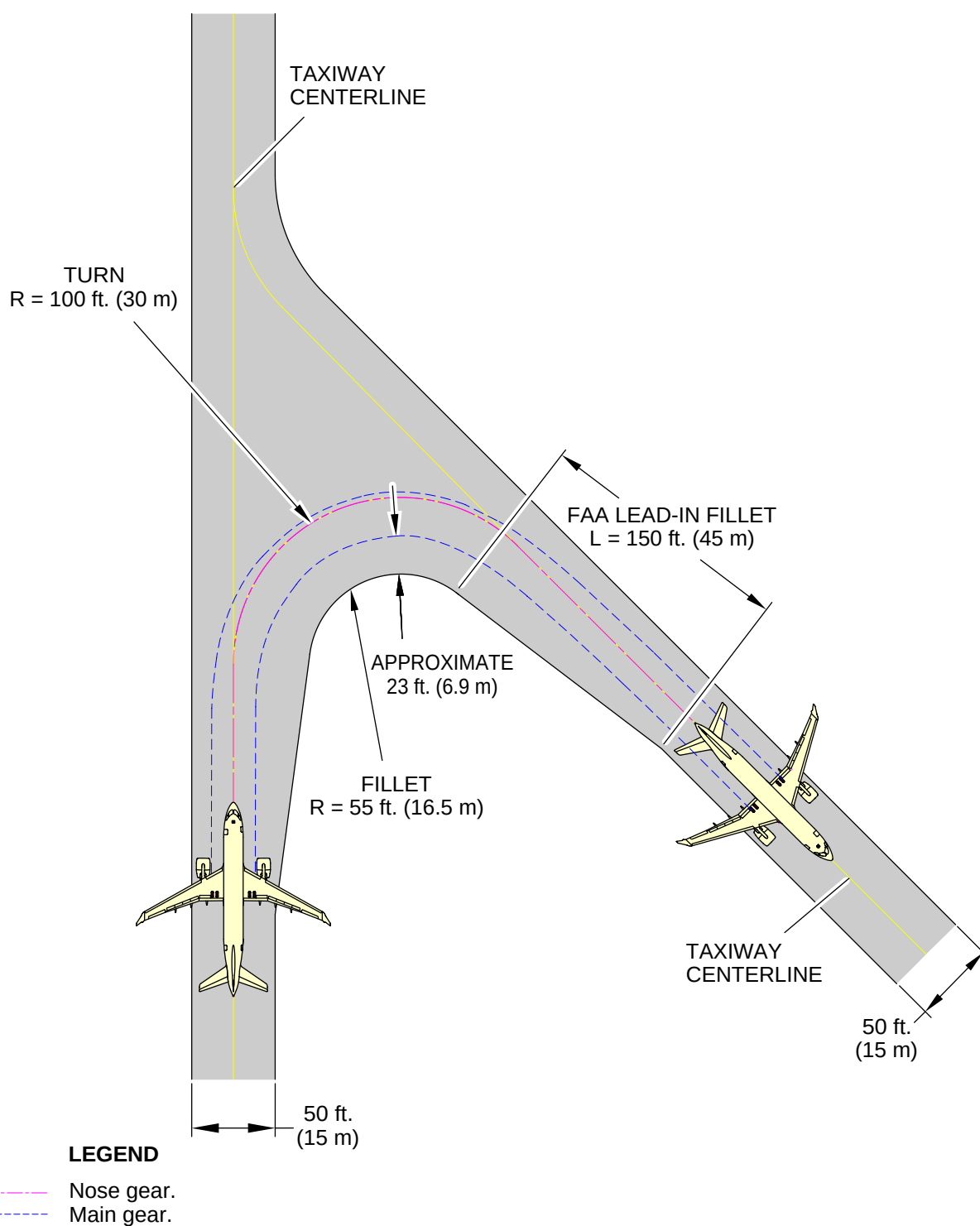
ICN-BD500-A-J000000-A-3AB48-22555-A-001-01

Figure 8 90° turn - Runway to taxiway - Oversteering method

3.5 More than 90° turn - Taxiway to taxiway - Cockpit over centerline method

To see the diagram, refer to Fig. 9 .

This publication has been superseded by the
Aircraft Characteristics Publication (ACP).



NOTE

Coordinate with airline operator for the specific planned operating procedure.

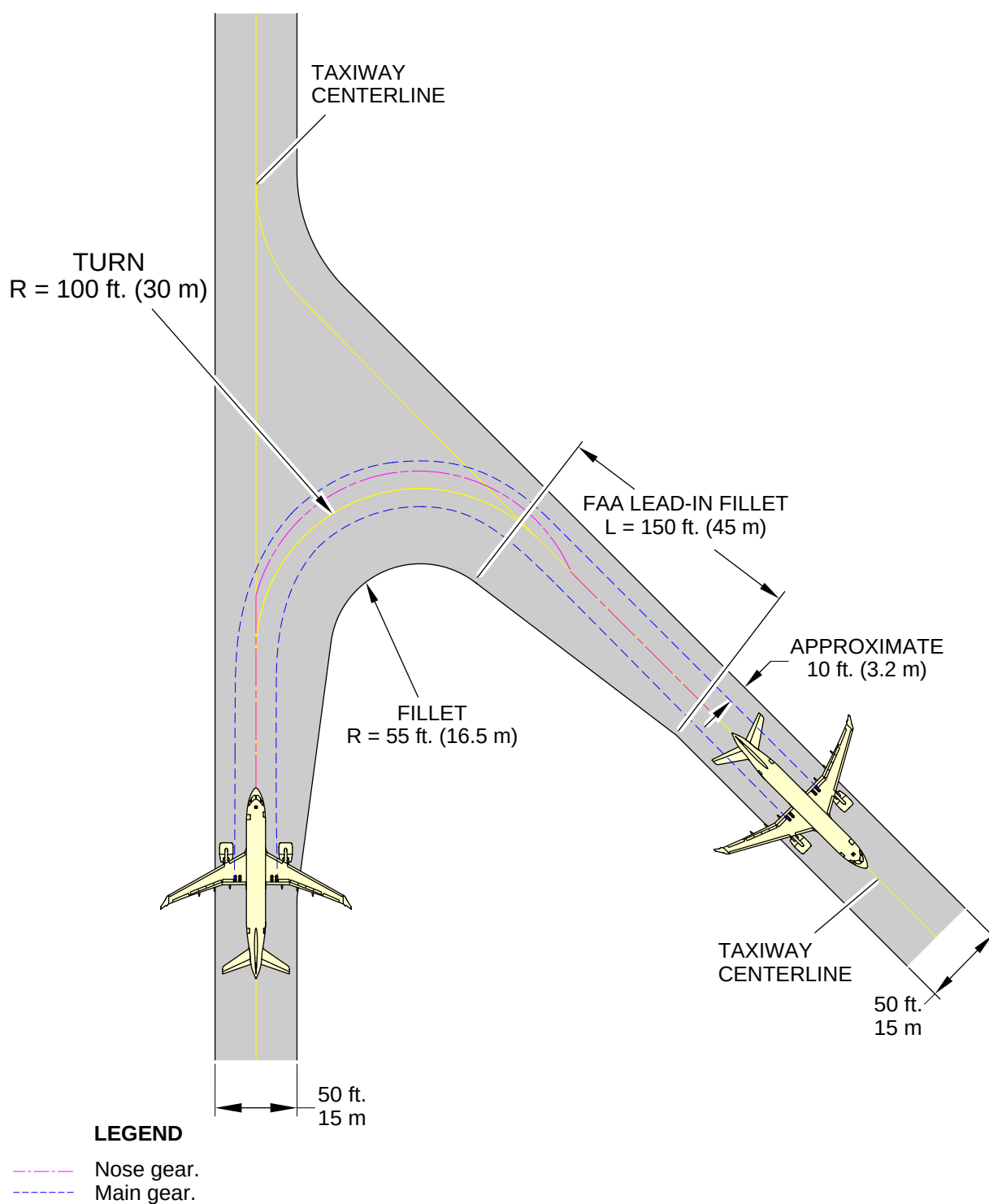
ICN-BD500-A-J000000-A-3AB48-22069-A-001-01

Figure 9 More than 90° turn - Taxiway to taxiway - Cockpit over centerline method

3.6 More than 90° turn - Taxiway to taxiway - Oversteering method

To see the diagram, refer to Fig. 10 .

This publication has been superseded by the
Aircraft Characteristics Publication (ACP).



NOTE

Coordinate with airline operator for the specific planned operating procedure.

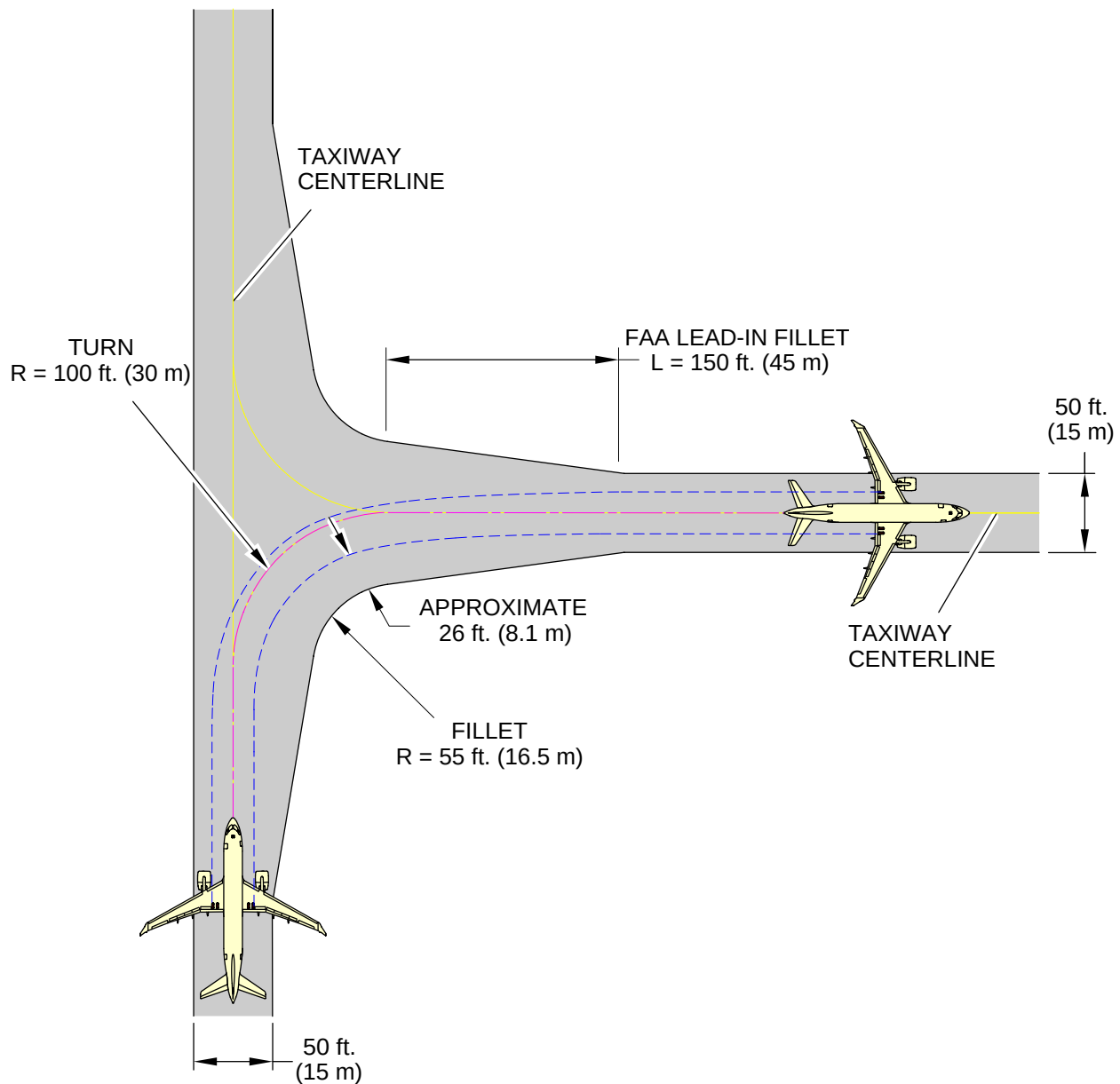
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Figure 10 More than 90° turn - Taxiway to taxiway - Oversteering method

3.7 90° turn - Taxiway to taxiway - Cockpit over centerline method

To see the diagram, refer to Fig. 11 .

This publication has been superseded by the
Aircraft Characteristics Publication (ACP).



LEGEND

- Nose gear.
- Main gear.

NOTE

Coordinate with airline operator for the specific planned operating procedure.

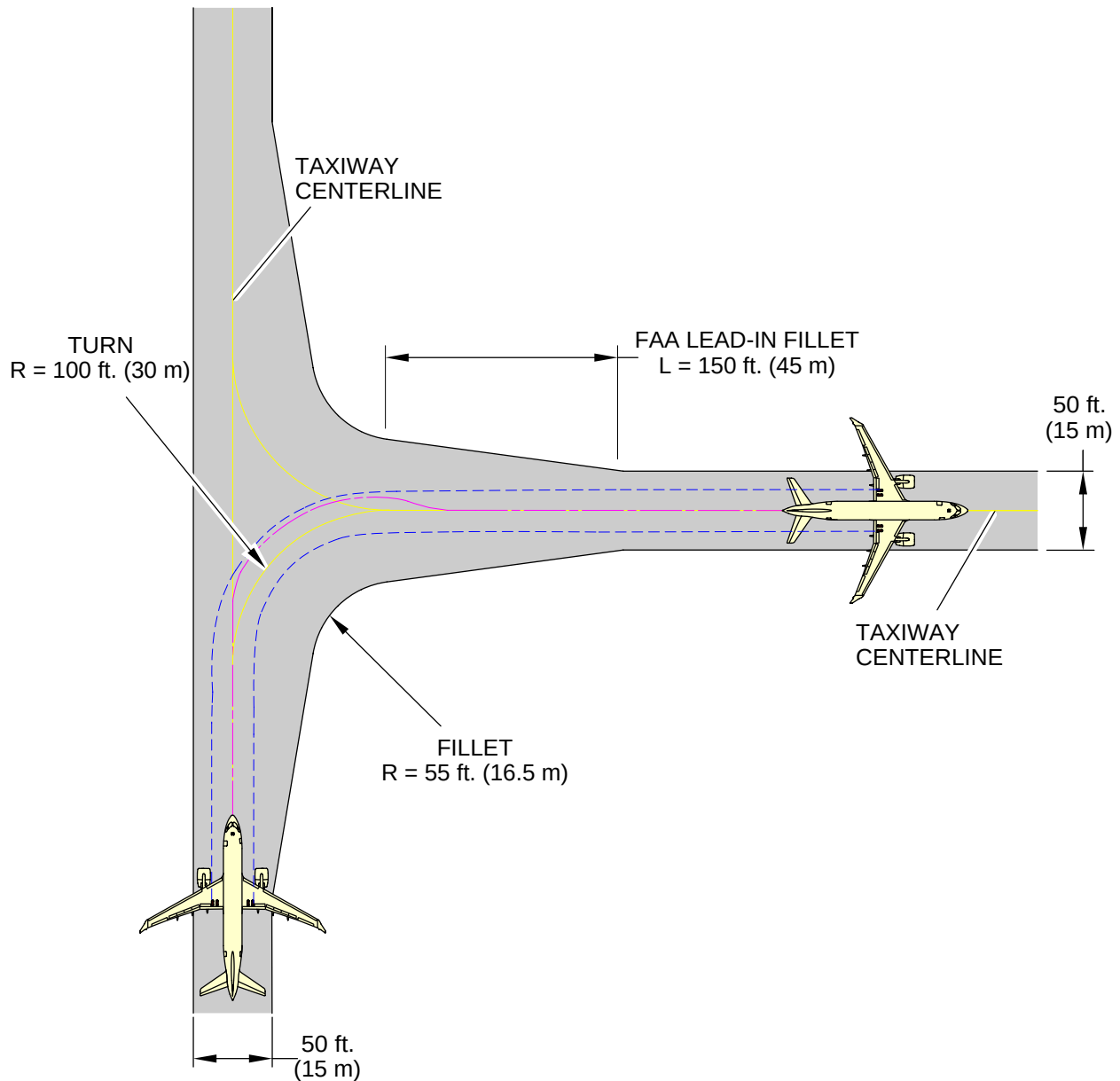
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Figure 11 90° turn - Taxiway to taxiway - Cockpit over centerline method

3.8 90° turn - Taxiway to taxiway - Oversteering method

To see the diagram, refer to Fig. 12

This publication has been superseded by the
Aircraft Characteristics Publication (ACP).



LEGEND

- Nose gear.
- Main gear.

NOTE

Coordinate with airline operator for the specific planned operating procedure.

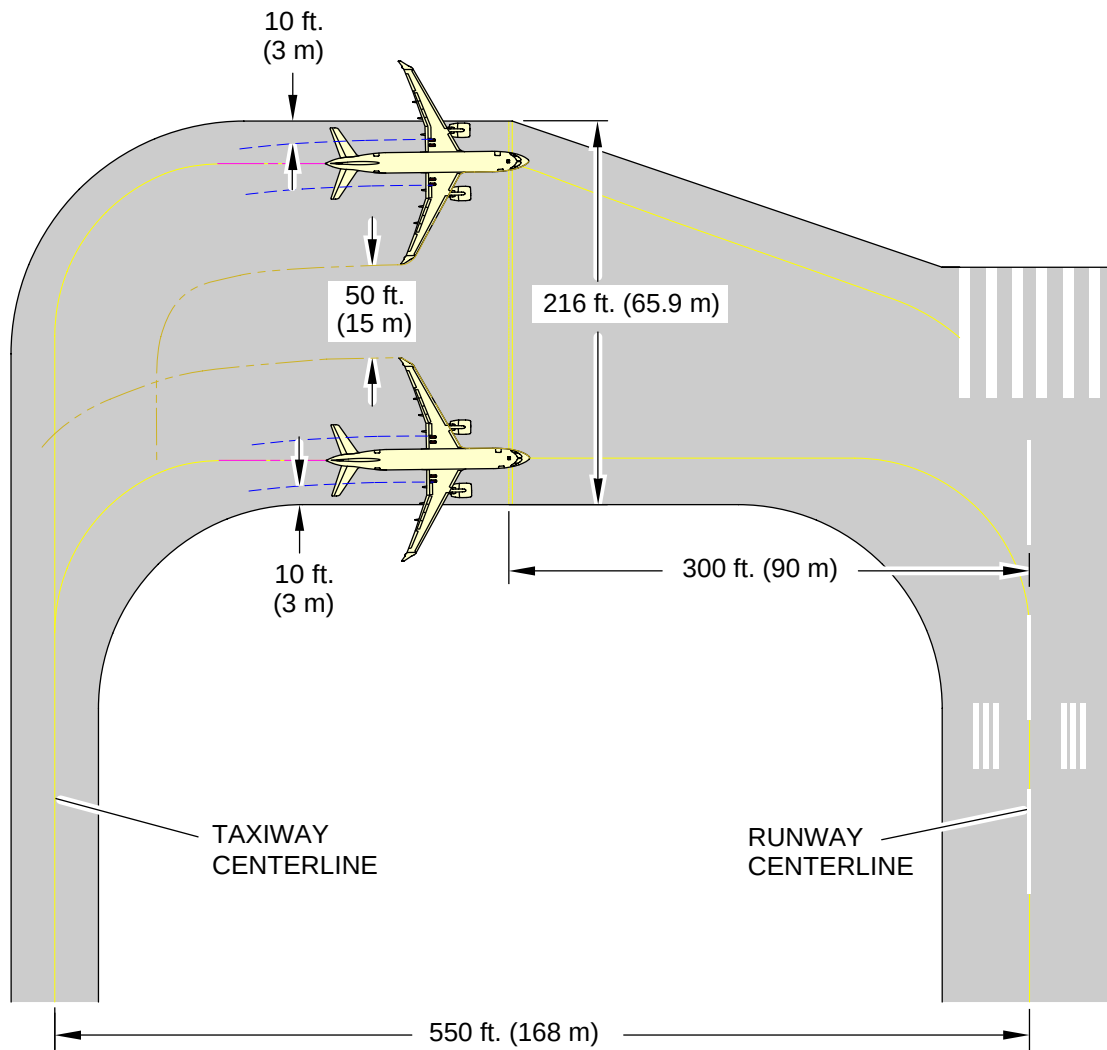
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Figure 12 90° turn - Taxiway to taxiway - Oversteering method

3.9 Runway holding bay (Apron)

To see the diagram, refer to Fig. 13 .

This publication has been superseded by the
Aircraft Characteristics Publication (ACP).



LEGEND

- Nose gear.
- Main gear.

NOTE

Coordinate with airline operator for the specific planned operating procedure.

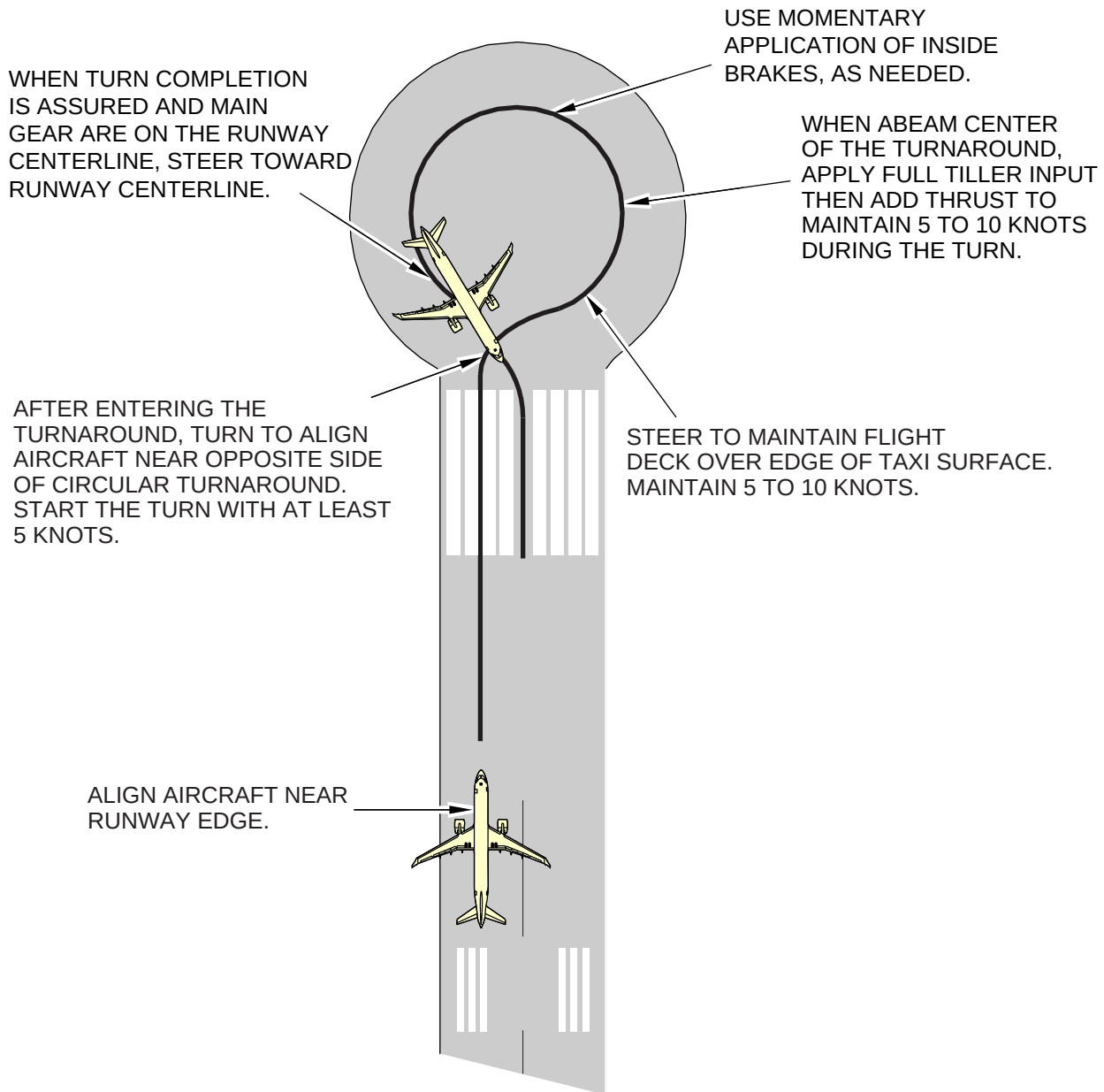
ICN-BD500-A-J000000-A-3AB48-22067-A-001-01

Figure 13 Runway holding bay (Apron)

3.10 Hammerhead Turnaround

To see the diagrams, refer to Fig. 14 and Fig. 15 .

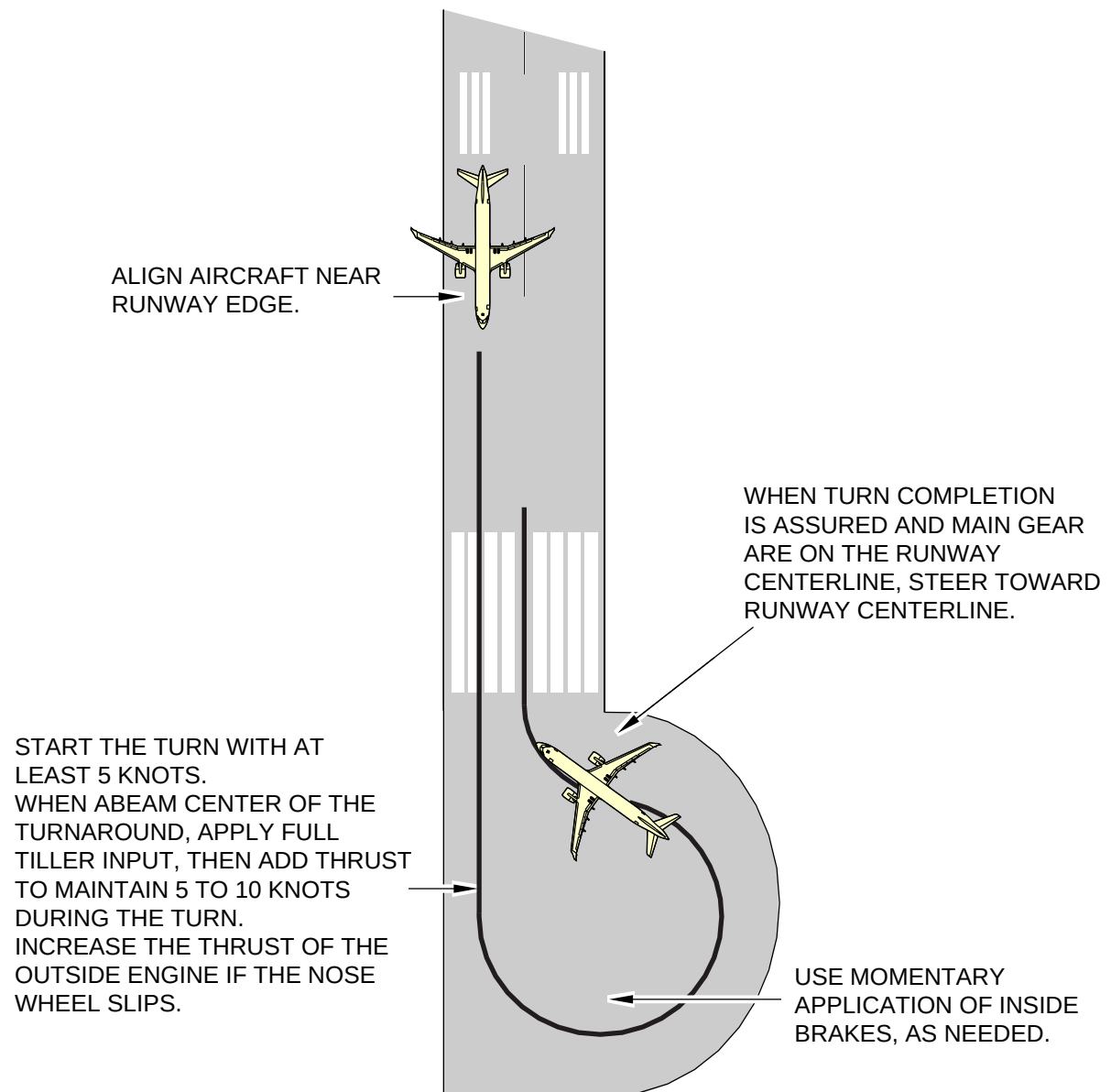
This publication has been superseded by the
Aircraft Characteristics Publication (ACP).



NOTE

Follow turnaround steering guidance cues if available.

ICN-BD500-A-J000000-A-3AB48-45728-A-001-01
Figure 14 Techniques when using a Hammerhead Turnaround



NOTE

Follow turnaround steering guidance cues if available.

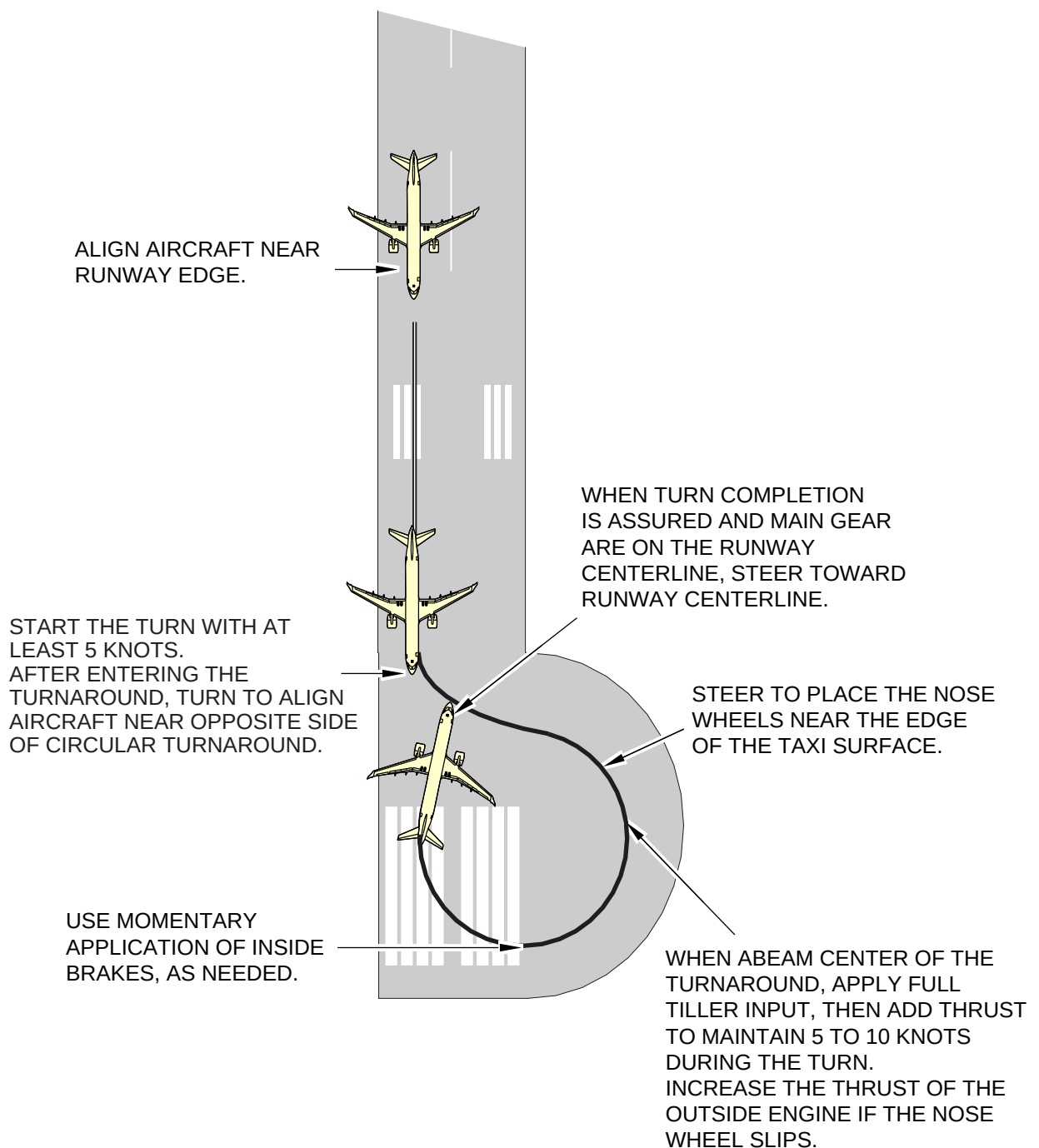
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Figure 15 Techniques when using a Hammerhead Turnaround

3.11 180 Degree (Pivot) Turns in Less than 147.6 feet (45 m)

To see the diagram, refer to Fig. 16 .

This publication has been superseded by the
Aircraft Characteristics Publication (ACP).



NOTE

Follow turnaround steering guidance cues if available.

ICN-BD500-A-J000000-A-3AB48-45730-A-001-01

Figure 16 180 Degree (Pivot) Turns in Less than 147.6 feet / 45 m

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This publication has been superseded by the
Aircraft Characteristics Publication (ACP).

Terminal servicing - Technical data

Applicability: 50001-54999

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References

Table 1 References

Data Module/Technical Publication	Title
None	

Description

1 Introduction

This data module contains data related to the preparation of an aircraft for flight from a terminal. This data is provided to show the general types of tasks involved in terminal operations. Each airline has different operating conditions and practices, which can result in changes in the operating procedures and time intervals to do the tasks specified. Because of this, requirements for ground operations should be approved with the specified airline(s) before ramp planning is started. This section presents the following topics:

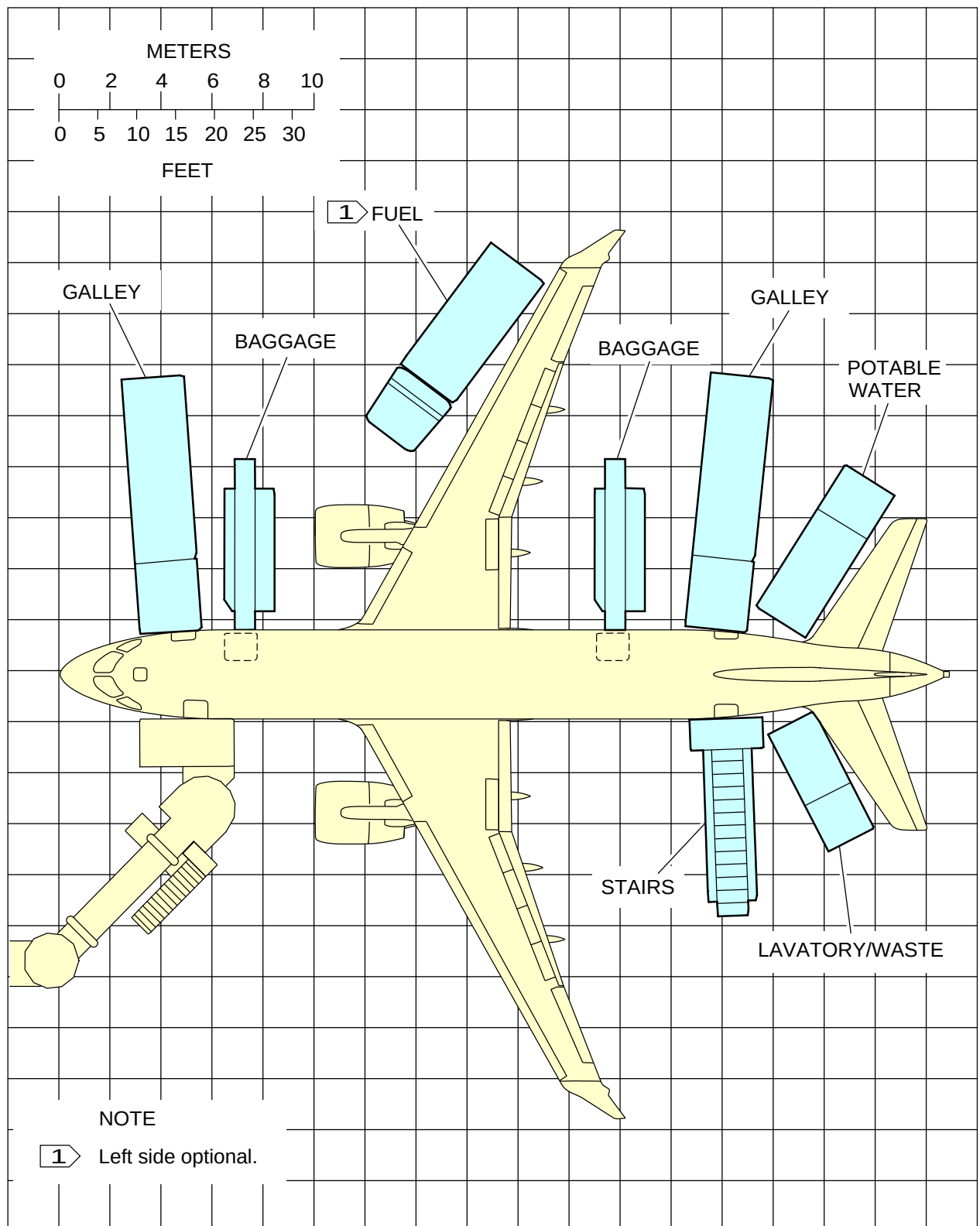
- Aircraft servicing arrangement
- Terminal operations
- Ground servicing connections
- Ground electrical power requirements
- Ground pneumatic power requirements – Engine starting
- Preconditioned airflow requirements – Air conditioning
- Ground towing requirements.

Note

All applicable procedures and limitations are provided in the Aircraft Maintenance Publication (AMP) BD500-3AB48-10200-00.

1.1 Aircraft servicing arrangement

Refer to Fig. 1 for the aircraft servicing arrangement.



ICN-BD500-A-J000000-A-3AB48-21739-A-001-01

Figure 1 Aircraft servicing arrangement

1.2 Terminal operations

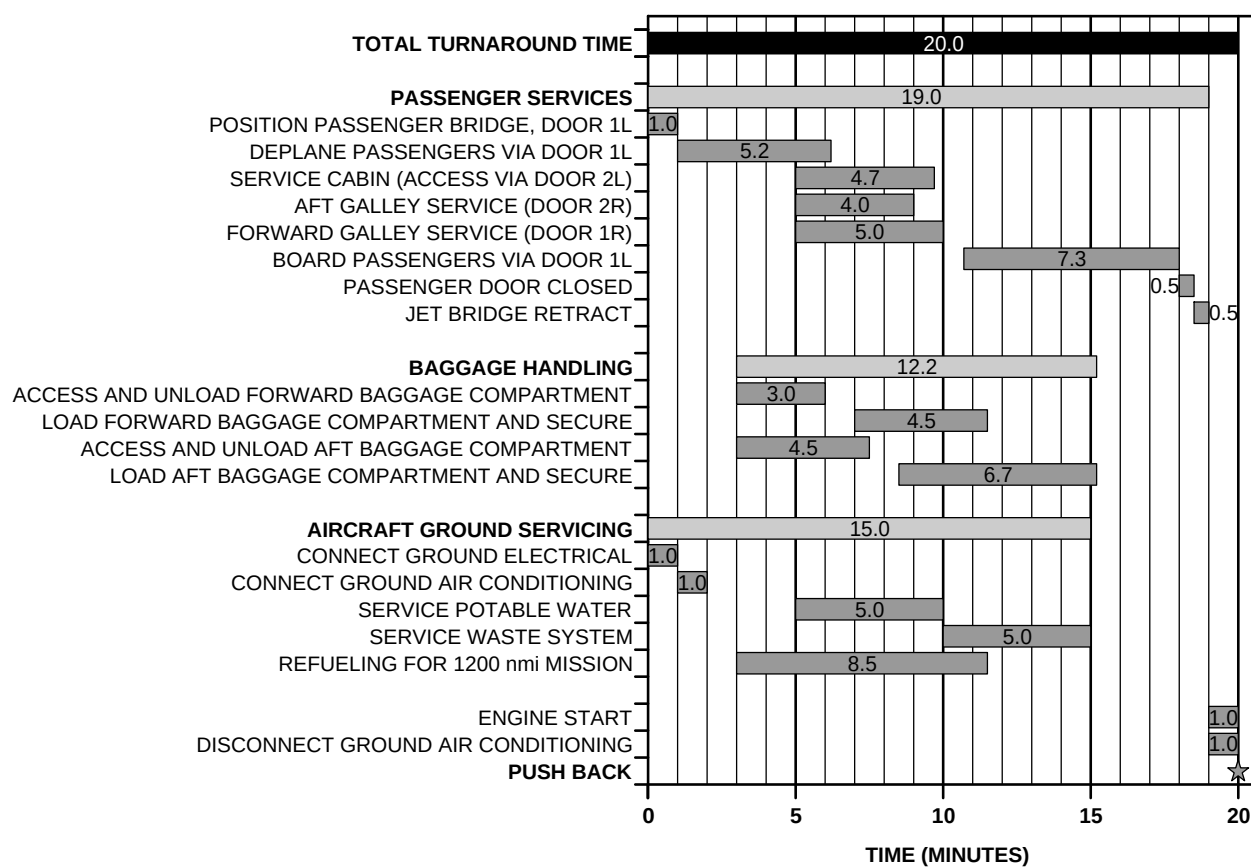
Refer to Fig. 2 for the turnaround station operations.

The turnaround time analysis is based on the following parameters:

- 100% Pax/baggage exchange
- 94 passengers (85% load factor) / 1 class / 1 door
- 2 Galley service trucks
- Water/Waste servicing is sequential
- Cabin servicing during available time
- Passenger deplane rate is 18 per minute per door
- Passenger boarding rate is 12 per minute per door
- 2 bulk-loading belt-loaders
- 45 bags forward, 67 bags aft (1.2 x 4 ft³ (1.2 X 0.11 m³) per passenger)
- Bag loading/unloading rates are 10 and 15 bags per minute
- Fuel loaded via one refuel/defuel adapter
- Refuel adapter rate at 50 psi (344.74 kPa) is as follows:
 - 1 When refueling three (3) tanks simultaneously (the center tank and two wing tanks), the refuel rate is 260 gpm (984 L/min).
 - 2 When refueling two (2) wing tanks, the refuel rate is 140 gpm (530 L/min).
 - 3 When refueling the center tank only, the refuel rate is 140 gpm (530 L/min).
- Mission range is 1200 NM (2222.4 km)
- Refueling performed while deplaning/boarding.

Note

All equipment is assumed to function properly and weather condition to be normal. This data is provided to illustrate the general scope and type of operations involved in a terminal gate environment. Varying operating practices and circumstances may result in different task sequences and durations.



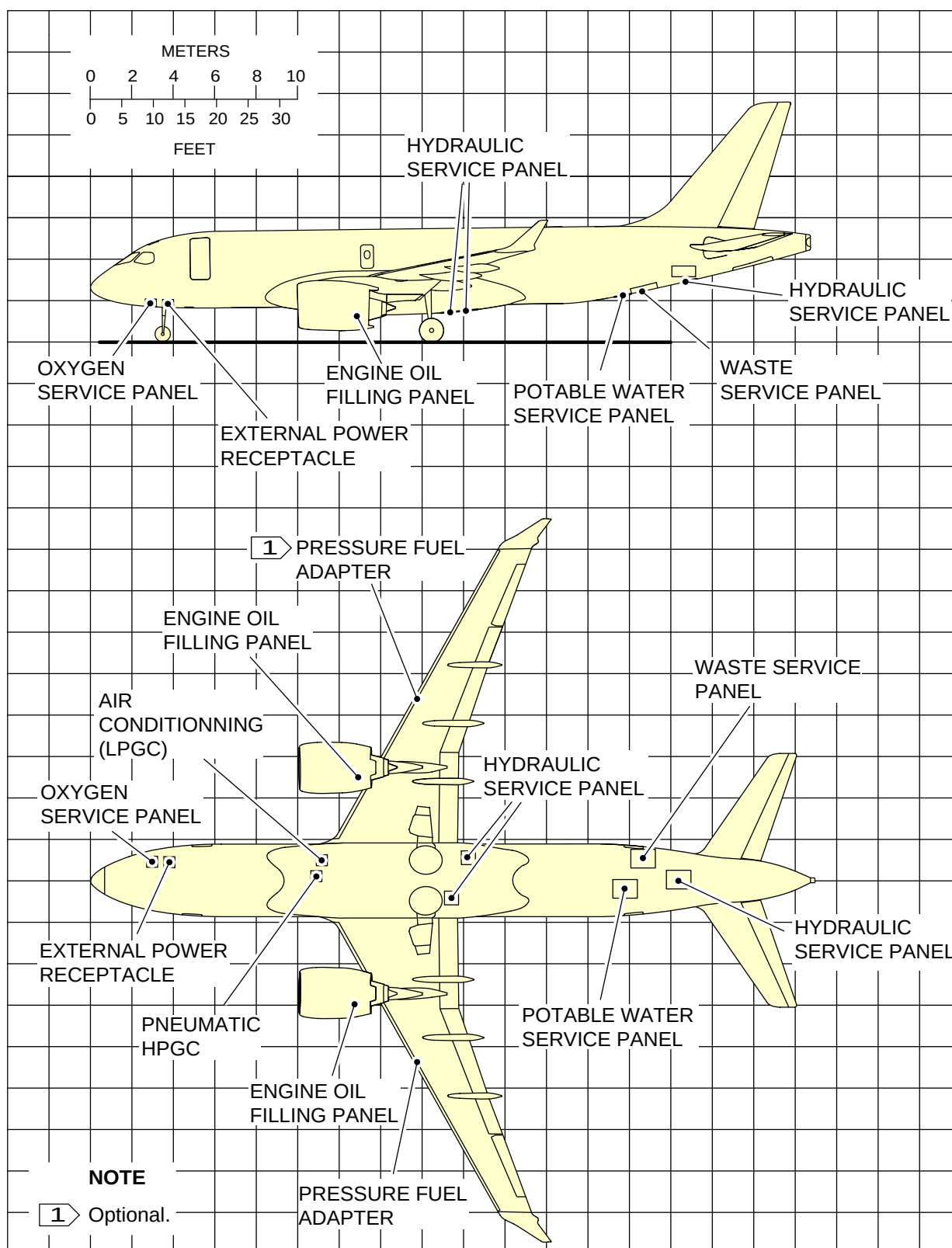
ICN-BD500-A-J000005-A-3AB48-00066-A-001-01
 Figure 2 Turnaround time analysis

1.3 Ground servicing connections

Refer to Fig. 3 for the ground servicing connection points. For servicing procedures, refer to the AMP.

All servicing points are designed and positioned to consider accessibility and compatibility with industry standard vehicles and other Ground Support Equipment (GSE). All applicable procedures and limitations are provided in the AMP.

This publication has been superseded by the
Aircraft Characteristics Publication (ACP).



ICN-BD500-A-J000000-A-3AB48-21914-A-001-01

Figure 3 Ground servicing connections

Table 2 Hydraulic system

Access	Aft of nose ft (m)	Position from aircraft Centerline		Mean height from ground ft (m)
		RH side ft (m)	LH side ft (m)	
System # 1 Access door 195CB	60.96 (18.58)	-	3.93 (8.20)	5.82 (1.77)
System # 2 Access door 195AB	58.543 (17.84)	2.795 (0.85)	-	5.57 (1.70)
System # 3 Aft equipment bay door	95.12 (28.99)	On centerline of the aircraft		8.77 (2.67)

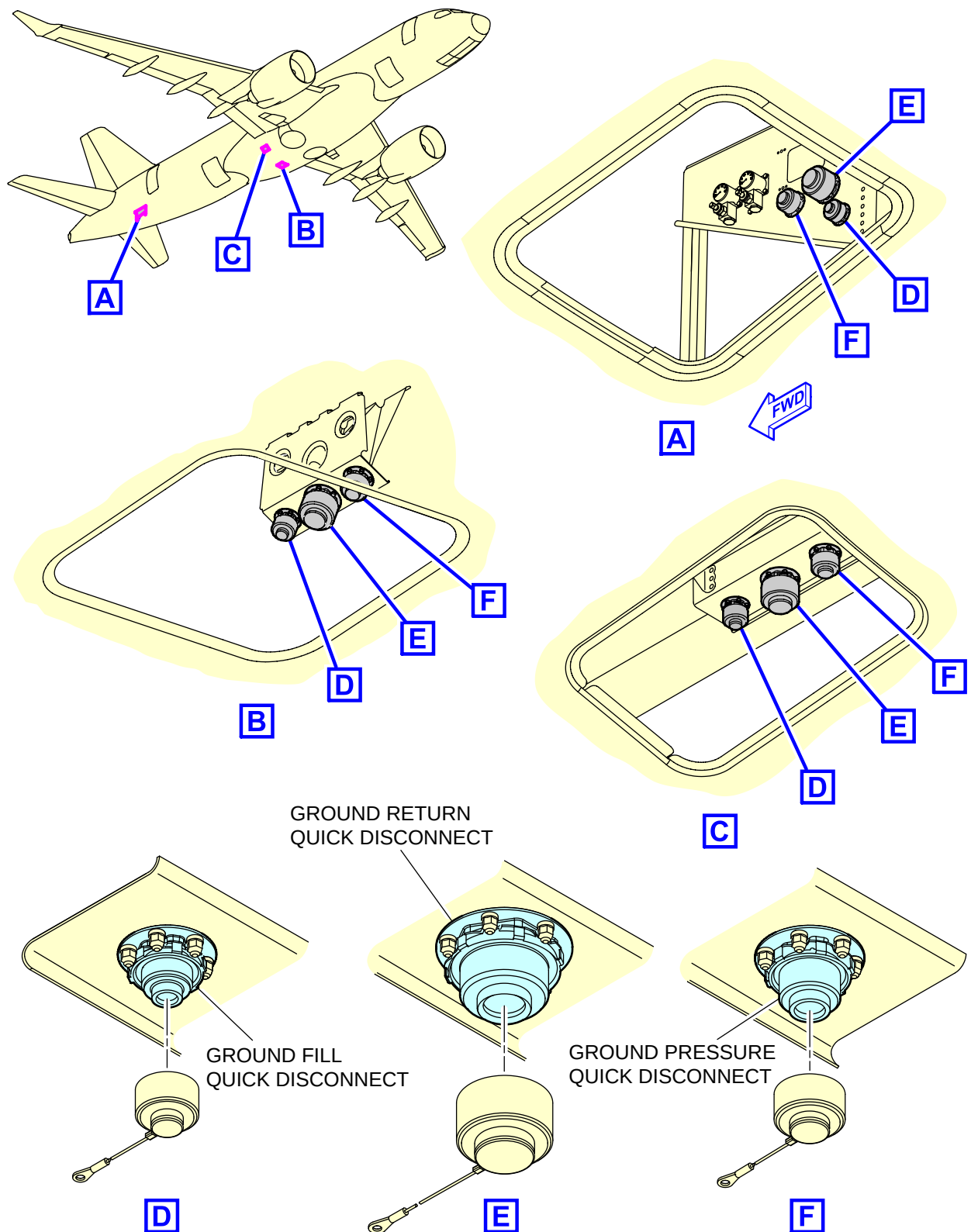
Note

All distances are approximate.

All height from ground distances are approximate and will vary with aircraft configuration and loading conditions.

Technical specifications

- Nominal pressure: 3000 psi (206.84 bar)
- Fitting connectors
 - Fitting dimension: Draining: 4 in. (10.16 cm)
 - Fitting dimension: Rinsing: 1 in. (2.54 cm)



ICN-BD500-A-J000000-A-3AB48-23353-A-001-01

Figure 4 Ground servicing system

Table 3 Hydraulic system - Accumulator charging

Access	Aft of nose ft (m)	Position from aircraft Centerline		Mean height from ground ft (m)
		RH side ft (m)	LH side ft (m)	
Aft equipment bay door	95.12 (28.99)	On centerline of the aircraft		8.77 (2.67)

Note

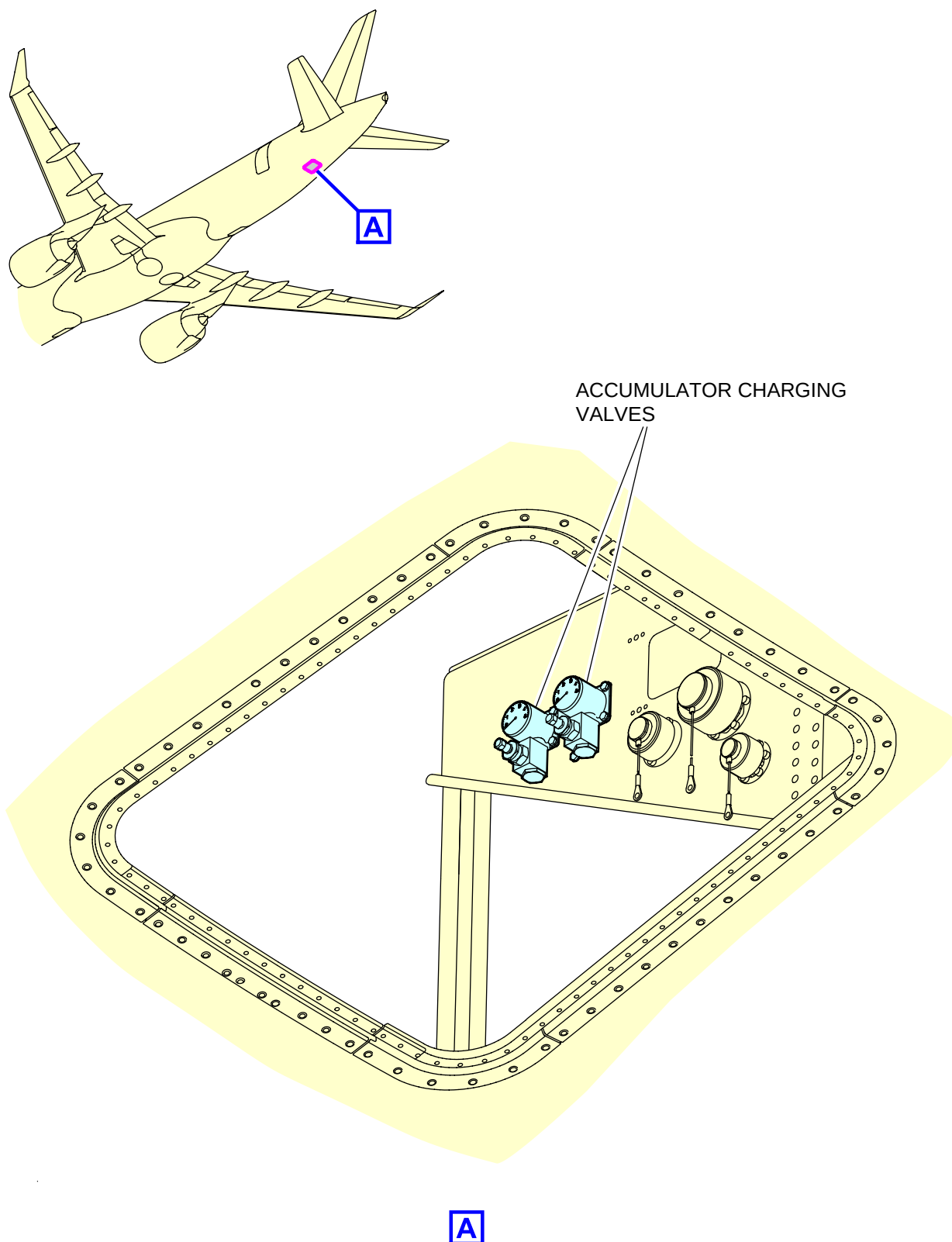
All distances are approximate.

All height from ground distances are approximate and will vary with aircraft configuration and loading conditions.

Technical specifications

- Operating pressure: 3000 psig (206.84 bar)
- Accumulator pressure gauge range: 0 to 5000 psig (344.74 bar)
- Gauge accuracy: ± 75 psig (5.17 bar)

This publication has been superseded by the
Aircraft Characteristics Publication (ACP)



A

ICN-BD500-A-J000000-A-3AB48-22071-A-001-01

Figure 5 Accumulator charging valves

Table 4 Waste system

Access	Aft of nose ft (m)	Position from aircraft Centerline		Mean height from ground ft (m)
		RH side ft (m)	LH side ft (m)	
Access door 146BR	86.80 (26.46)	-	1.21 (0.37)	7.14 (2.18)

Note

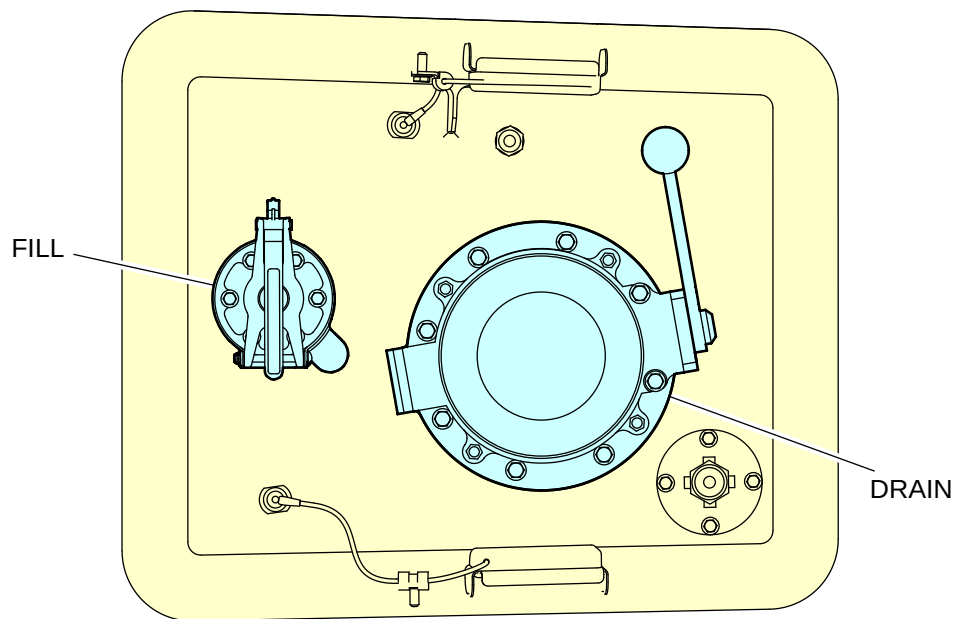
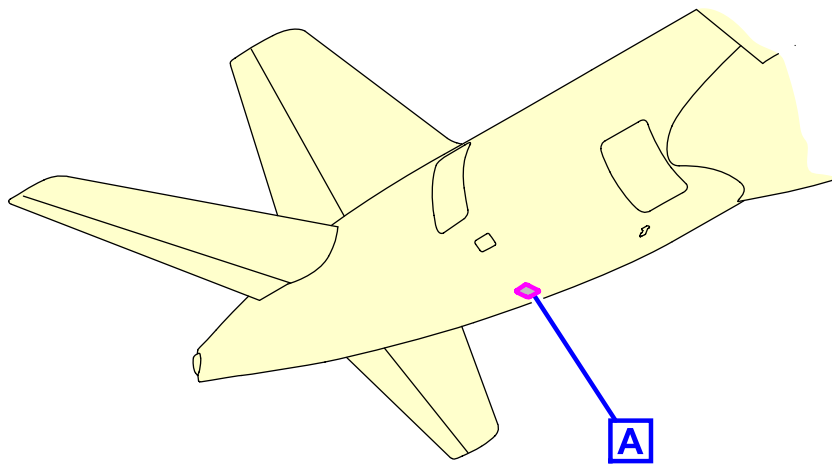
All distances are approximate.

All height from ground distances are approximate and will vary with aircraft configuration and loading conditions.

Technical specifications

- Usable volume: 38 U.S. gal (143.85 L)
- Fitting connectors
 - Fitting dimension: Draining: 4 in. (10.16 cm)
 - Fitting dimension: Rinsing: 1 in. (2.54 cm)

This publication has been superseded by the
Aircraft Characteristics Publication (ACP)



WASTE ACCESS PANEL

A

ICN-BD500-A-J000000-A-3AB48-22008-A-001-01

Figure 6 Waste system access panel

Table 5 Potable water system

Access	Aft of nose ft (m)	Position from aircraft Centerline		Mean height from ground ft (m)
		RH side ft (m)	LH side ft (m)	
Access door 146CR	84.75 (25.83)	3.661 (1.11)	-	7.75 (2.36)

Note

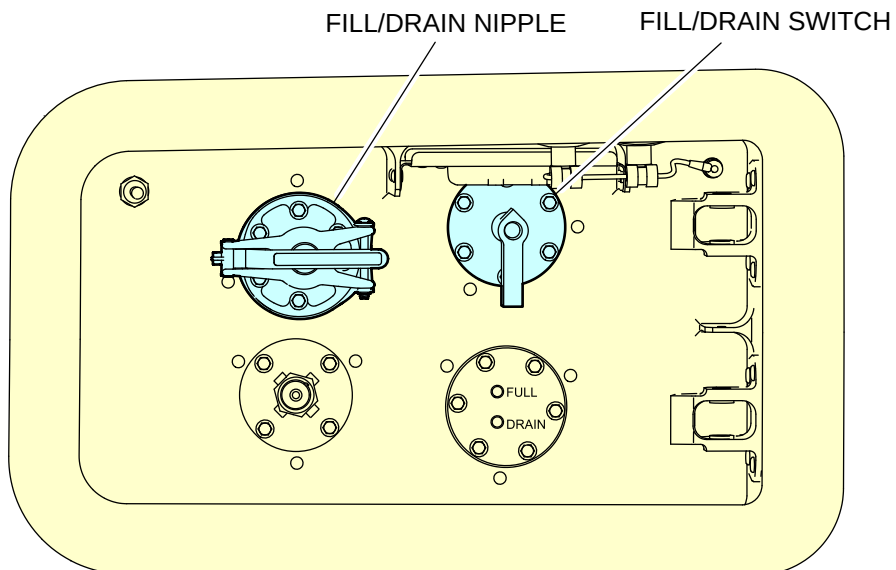
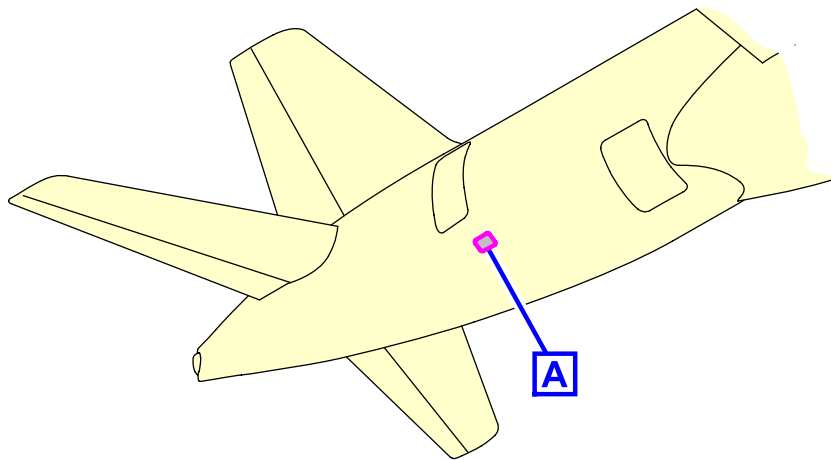
All distances are approximate.

All height from ground distances are approximate and will vary with aircraft configuration and loading conditions.

Technical specifications

- Usable volume: 42 U.S. gal (158.99 L)
- Fitting dimension: Filling/Draining: 3/4 in. (1.905 cm)

This publication has been superseded by the
Aircraft Characteristics Publication (ACP)



POTABLE WATER SERVICE PANEL

A

ICN-BD500-A-J000000-A-3AB48-22007-A-001-01

Figure 7 Potable water system service panel

Table 6 Pneumatic system

Access	Aft of nose ft (m)	Position from aircraft Centerline		Mean height from ground ft (m)
		RH side ft (m)	LH side ft (m)	
Low Pressure Ground Connection (LPGC) Access door 191BB	37.76 (11.51)	-	4.33 (1.32)	5.30 (1.61)
High Pressure Ground Connection (HPGC) Access door 191AB	37.38 (11.39)	-	1.30 (0.40)	4.62 (1.41)

Note

All distances are approximate.

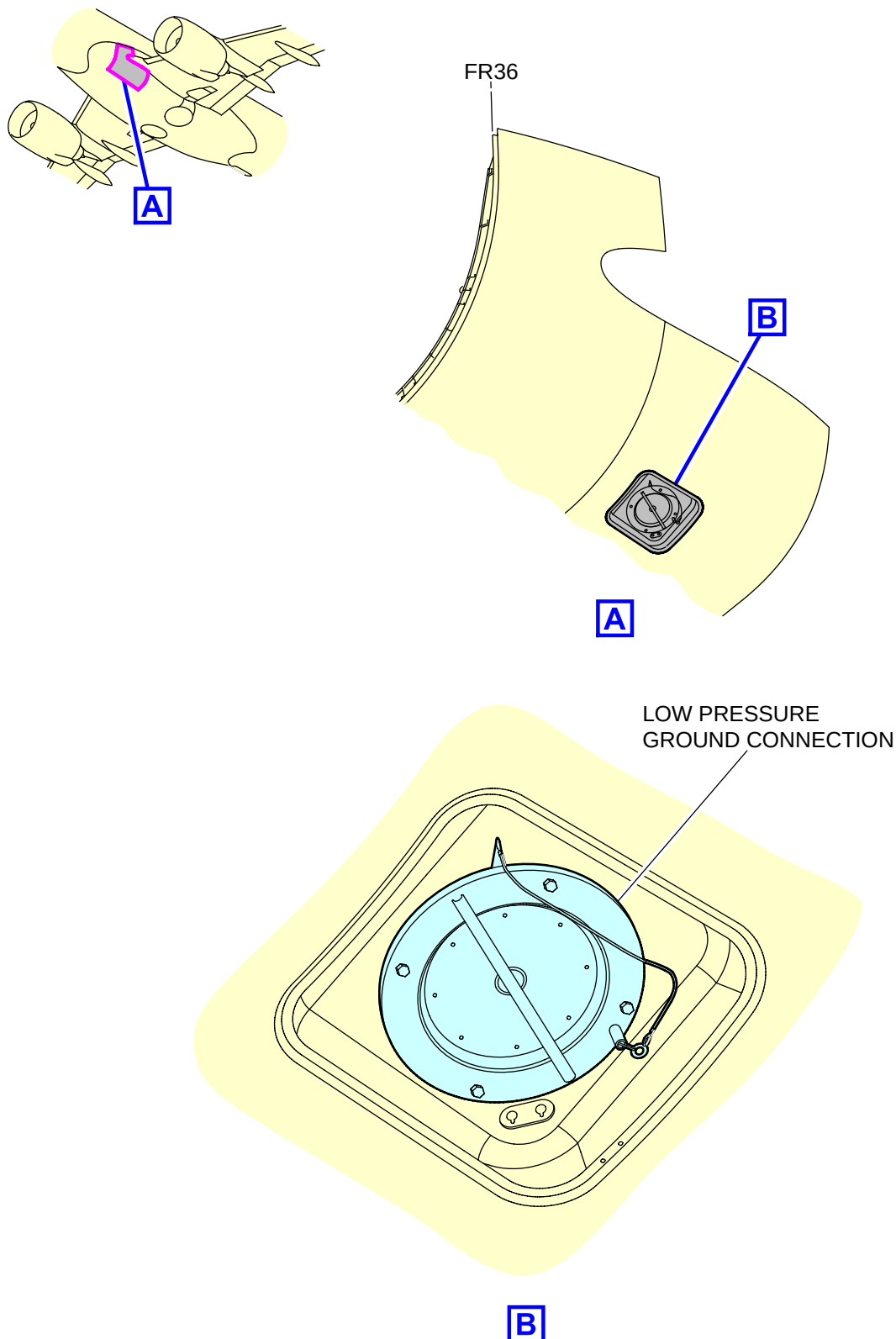
All height from ground distances are approximate and will vary with aircraft configuration and loading conditions.

Technical specifications- **LPGC Spec**

- Discharge pressure range: 0.7 to 1.0 psig maximum (0.05 to 0.07 bar maximum)
- Temp range: 41 to 122 °F maximum (5 to 50 °C maximum)
- Max airflow: 125 lb/min
- Fitting dimension: 8 in. (20.32 cm)
- LP Ground Cart Standard pneumatic connection per ISO 1034 or MS 33562

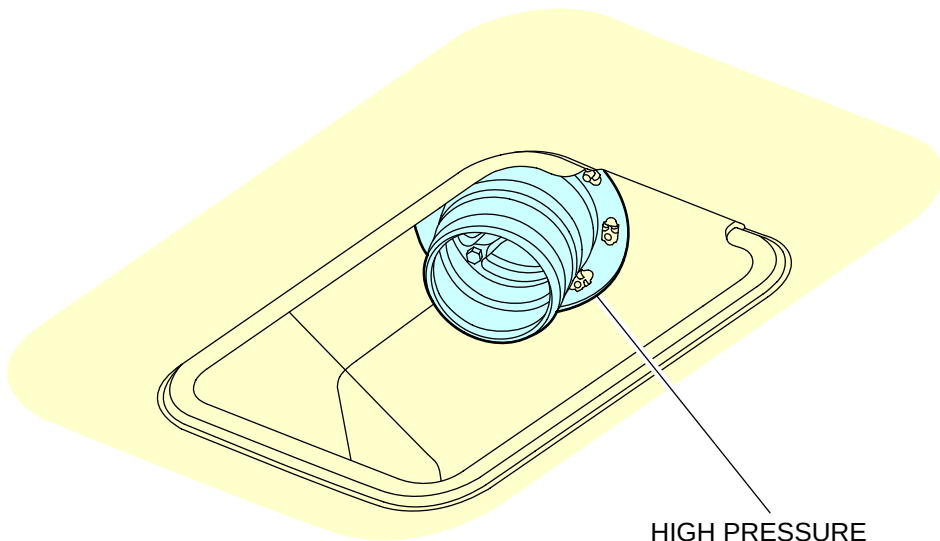
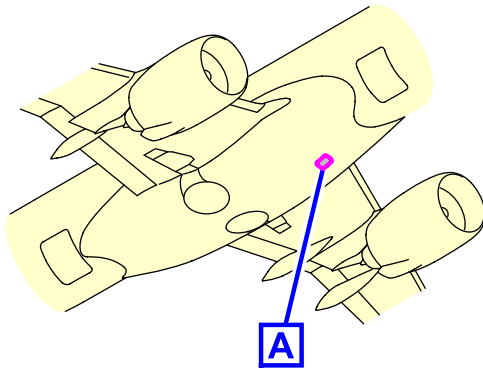
- **HPGC Spec**

- Bleed pressure range: 30 to 45 psig maximum (2.07 to 3.10 bar maximum)
- Bleed temperature range: 338 to 450 °F (170 to 232 °C)
- Airflow range: 100 to 140 lb/min
- Fitting dimension: 3 in. (7.62 cm)
- HP Ground Cart Standard pneumatic connection per ISO 2026 or MS 33740



ICN-BD500-A-J212100-C-3AB48-19016-A-002-01

Figure 8 Low pressure ground system



HIGH PRESSURE
GROUND CONNECTION

A

ICN-BD500-A-J361500-C-3AB48-15114-A-001-01
Figure 9 High pressure ground system

Table 7 Electrical System

Access	Aft of nose ft (m)	Position from aircraft Centerline		Mean height from ground ft (m)
		RH side ft (m)	LH side ft (m)	
Access door 115DL	11.71 (3.57)	-	2.68 (0.82)	6.37 (1.94)

Note

All distances are approximate.

All height from ground distances are approximate and will vary with aircraft configuration and loading conditions.

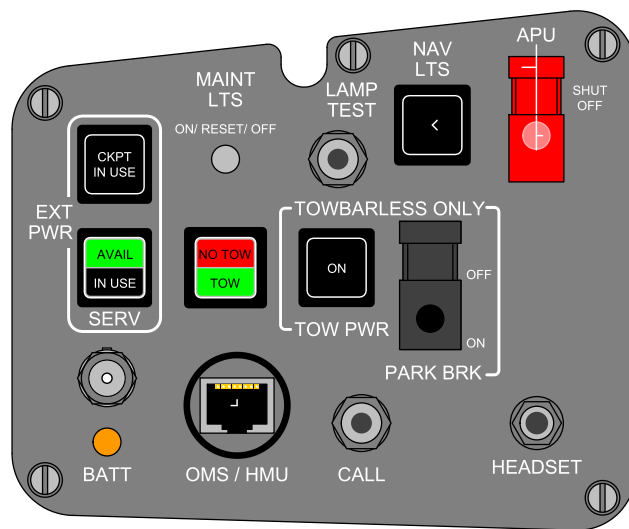
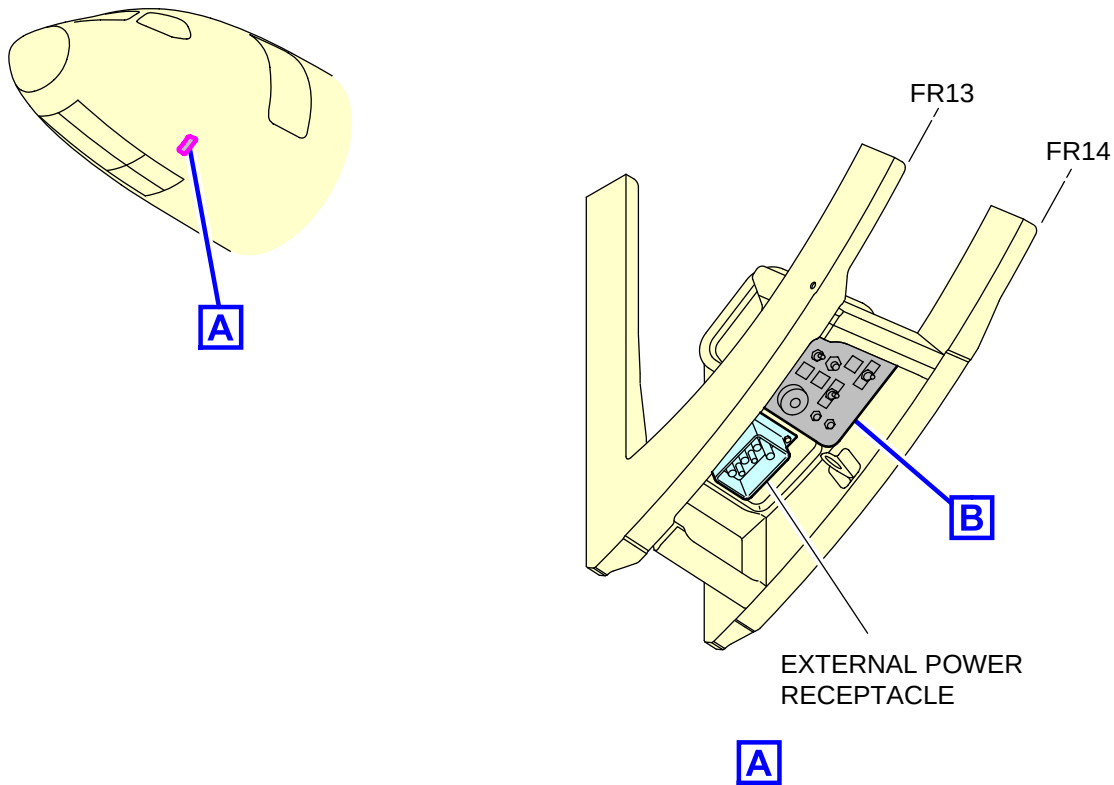
Technical specifications

- Power supply: 115 V Alternating Current (AC) External Power Receptacle

Note

For more specification about the electrical system, refer to Para. 1.4 .

This publication has been superseded by the
Aircraft Characteristics Publication (ACP)



**ELECTRICAL/TOWING
SERVICE PANEL**

B

ICN-BD500-A-J000000-A-3AB48-22070-A-001-01
Figure 10 Electrical service panel

Table 8 Oxygen system

Access	Aft of nose ft (m)	Position from aircraft Centerline		Mean height from ground ft (m)
		RH side ft (m)	LH side ft (m)	
Access door 115CL	10.20 (3.11)	-	2.60 (0.79)	6.44 (1.96)

Note

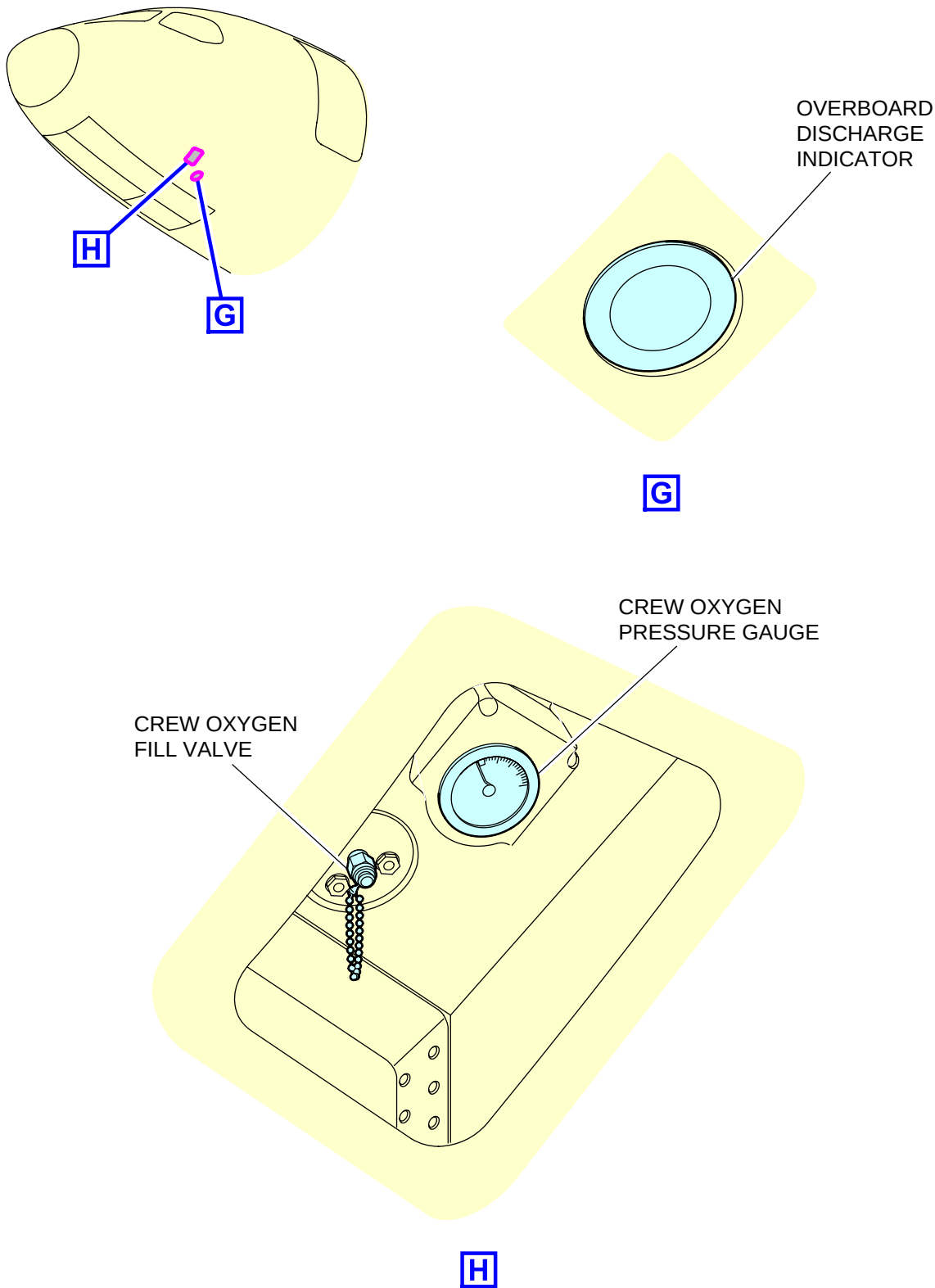
All distances are approximate.

All height from ground distances are approximate and will vary with aircraft configuration and loading conditions.

Technical specifications

- Nominal working pressure: 1850 psig (128 bar)
- Capacity: 77 ft³ (2180 L)

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Aircraft Characteristics Publication (ACP)



ICN-BD500-A-J351100-C-3AB48-20623-A-002-01
Figure 11 Crew oxygen system

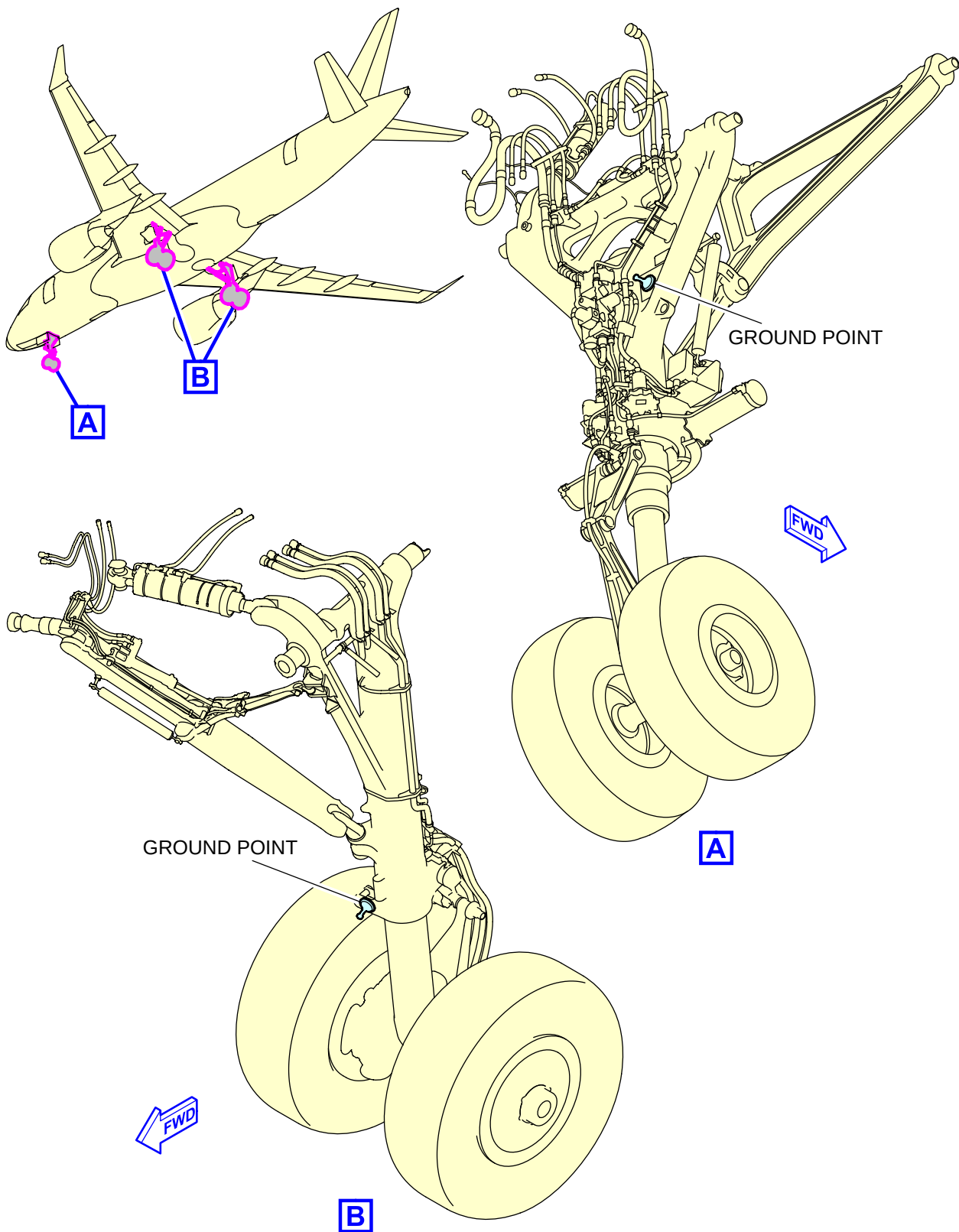
Table 9 Grounding points

Access	Aft of nose ft (m)	Position from aircraft Centerline	Mean height from ground ft (m)	LH side ft (m)
		RH side ft (m)		
Nose Landing Gear (NLG) leg	11.73 (3.58)	On aircraft centerline	5.00 (1.51)	
Left Main Landing Gear (MLG) leg	53.23 (16.23)	-	10.75 (3.27)	2.85 (0.87)
Right MLG leg	53.23 (16.23)	10.75 (3.27)	-	2.85 (0.87)
Right MLG leg	53.23 (16.23)	10.75 (3.27)	-	2.85 (0.87)
LH Refuel/Defuel Access door 621FB (Optional)	51.32 (15.64)	-	27.31 (8.32)	10.93 (3.33)
RH Refuel/Defuel Access door 521FB Fig. 13	51.32 (15.64)	27.31 (8.32)	-	10.93 (3.33)

Note

All distances are approximate.

All height from ground distances are approximate and will vary with aircraft configuration and loading conditions.



ICN-BD500-A-J000000-A-3AB48-22049-A-002-01

Figure 12 Landing gears grounding points

Table 10 Fuel system Refuel/Defuel adapter

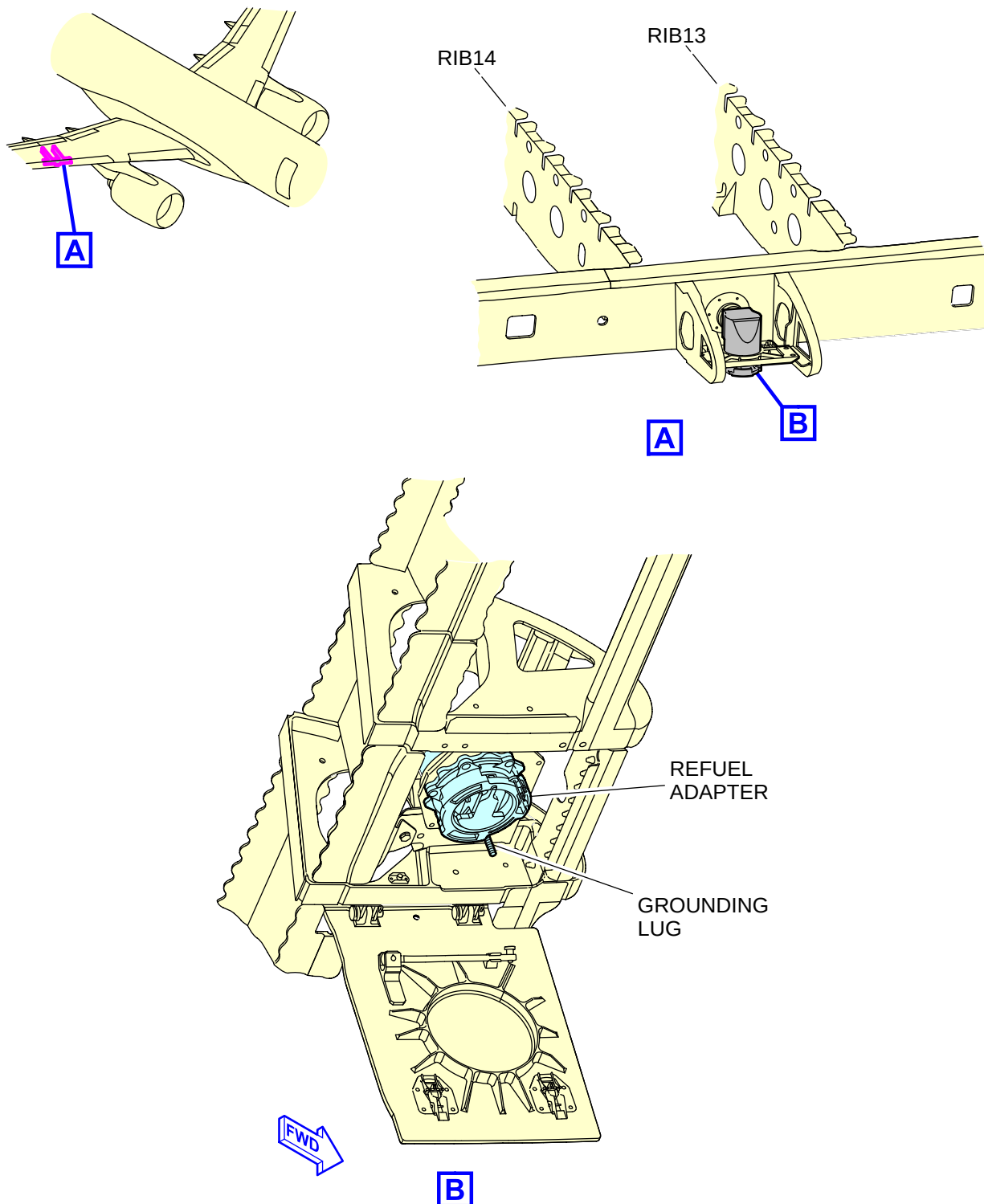
Access	Aft of nose ft (m)	Position from aircraft Centerline		Mean height from ground ft (m)
		RH side ft (m)	LH side ft (m)	
LH Refuel/Defuel Access door 621FB (Optional)	51.32 (15.64)	-	27.31 (8.32)	10.93 (3.33)
RH Refuel/Defuel Access door 521FB	51.32 (15.64)	27.31 (8.32)	-	10.93 (3.33)

Note

All distances are approximate.

All height from ground distances are approximate and will vary with aircraft configuration and loading conditions.

This publication has been superseded by the
Aircraft Characteristics Publication (ACP).



NOTES

1. Refuel adapter is optional on the left side.

ICN-BD500-A-J000000-A-3AB48-22099-A-002-01

Figure 13 Refuel adapter and grounding point

Table 11 Fuel system control panel

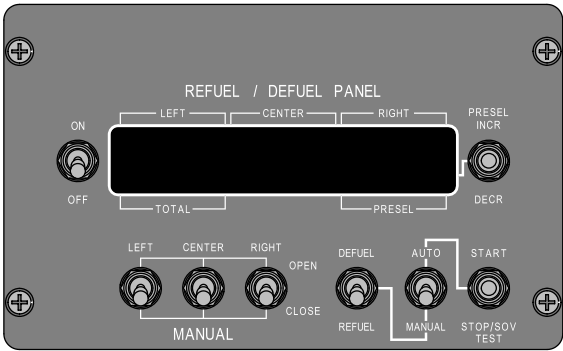
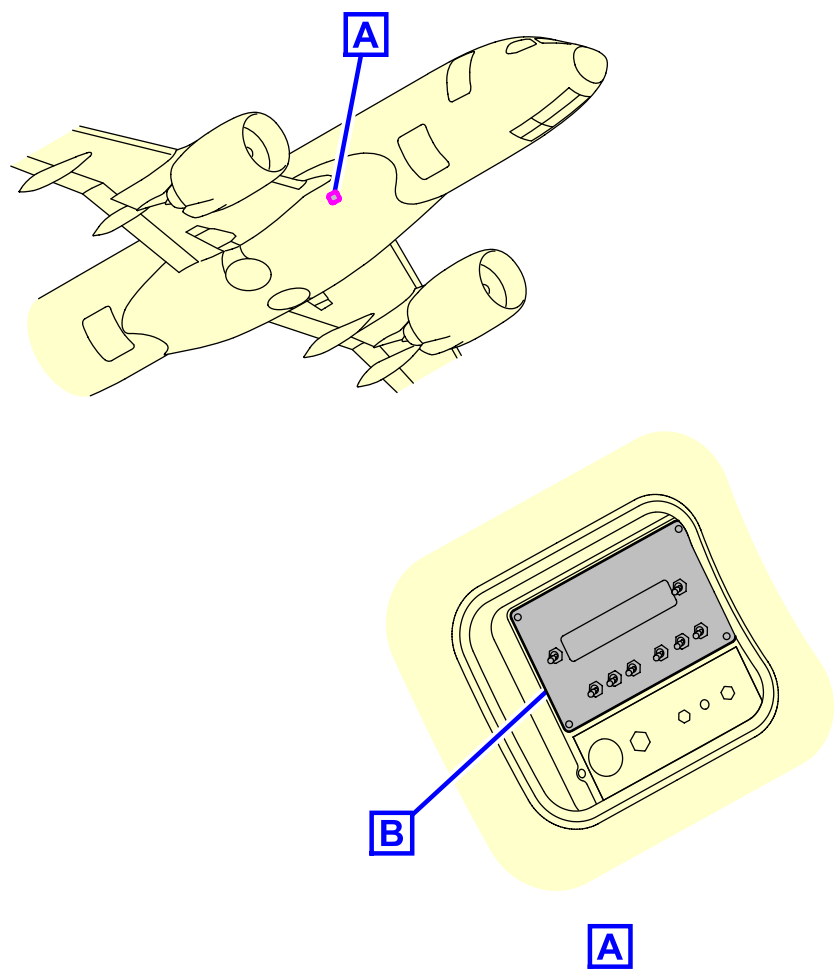
Access	Aft of nose ft (m)	Position from aircraft Centerline		Mean height from ground ft (m)
		RH side ft (m)	LH side ft (m)	
Access door 192AB	35.76 (10.9)	4.98 (1.52)	-	6.12 (1.86)

Note

All distances are approximate.

All height from ground distances are approximate and will vary with aircraft configuration and loading conditions.

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Aircraft Characteristics Publication (ACP)



REFUEL/DEFUEL CONTROL PANEL

B

ICN-BD500-A-J282300-C-3AB48-12260-A-001-01
Figure 14 Refuel/Defuel system

Table 12 Oil system

Access	Aft of nose ft (m)	Position from aircraft Centerline		Mean height from ground ft (m)
		RH side ft (m)	LH side ft (m)	
Engine Oil Filling Cap Access door (LH) 475CR (RH) 485CR	35.76 (10.9)	19.60 (5.97)	16.16 (4.93)	5.50 (1.68)

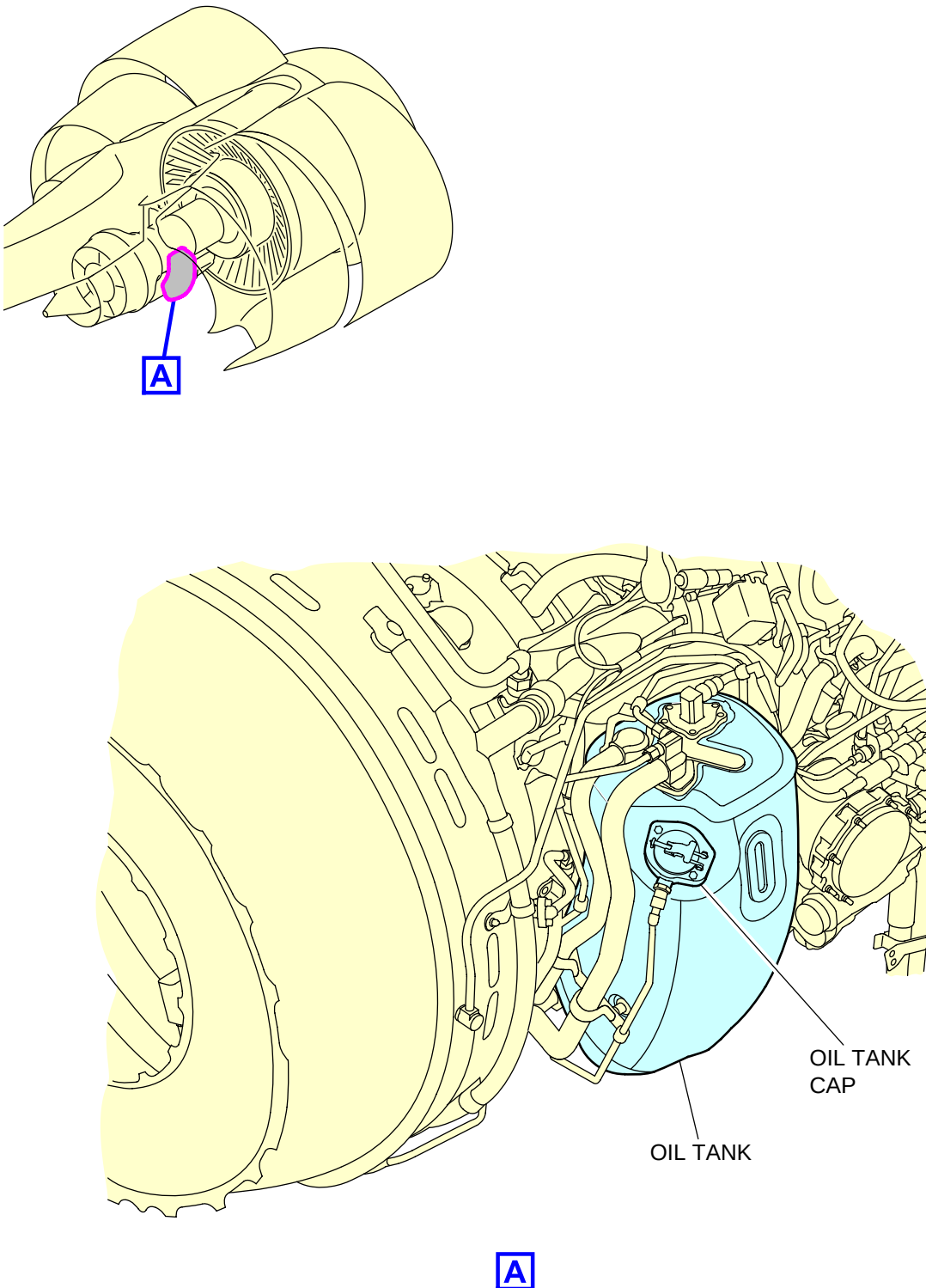
Note

All distances are approximate.

All height from ground distances are approximate and will vary with aircraft configuration and loading conditions.

Technical specifications

- Oil tank capacity: 6.8 U.S. gal (25.7 L)



ICN-BD500-A-J791100-C-3AB48-09787-A-001-01
Figure 15 Oil storage system

1.4 Ground electrical power requirements

The external power system is used to connect AC electrical power from a ground cart. There are no provisions to connect DC power from an external ground cart. External AC can be used to power the complete AC distribution system or only those buses that provide power to the passenger compartment.

Note

It is recommended to use ground cart standard 75 KVA and higher. Using ground cart 60 KVA standard can lead to the EICAS nuisance messages.

When the external AC power is connected to the aircraft, both the AVAIL light on the electrical panel and on the electrical/towing service panel illuminate. The Bus Power Control Unit (BPCU) 1 energizes the External Line Contactor (ELC) to connect external power to the aircraft when the EXT PWR PBA in the flight compartment electrical panel is selected ON. The BPCU 1 also provides protection features to protect aircraft systems from potential permanent damage. Following aircraft power-up, several critical systems (Fly-By-Wire, Electrical and others) run their Power-Up Built-In Test (PBIT). The main purpose of PBIT is to reduce the complexity of systems on-aircraft testing and removed failure dormancy, thereby decreasing the overall maintenance cost and reducing reliance upon external (pattern-programmed) test equipment for the operators. Any power interruption (Ground Power Unit (GPU) going offline or GPU power quality not meeting requirements) occurring during this critical phase may cause PBIT interruption and latch system failures which will require maintenance actions to clear. Depending on the latched faults, these power interruption events may potentially cause lengthy delays or flight cancellations which can negatively impact operators.

Refer to Table 13 for the external AC power requirements data.

Refer to Table 14 for the external power quality limitations data.

Refer to Table 15 for overcurrent protection ampere versus time delay.

Refer to Table 16 for overvoltage protection versus time delay.

Table 13 External AC power requirements

Voltage	Frequency
115 ±5 V	400 ±15 Hz

Table 14 External power quality limitations

Parameter	Setting limit	Response time
Overcurrent	Table 15	
Overvoltage (highest phase)	Table 16	
Redundant Overvoltage (highest phase)	130 ±3.3 V	0.75 ±0.055 sec
Undervoltage	107 ±2.0 V (lowest phase) or 108.5 ±2.0 V (3-phase average)	4.5 ±0.5 sec
Overfrequency	418 ±2 Hz	4.5 ±0.5 sec

Parameter	Setting limit	Response time
Underfrequency	382 $\pm$ 2 Hz	4 $\pm$ 0.5 sec
Phase sequence	A-B-C	0.1 sec
Open sequence	Lowest phase 15 $\pm$ 5 A and other phase greater than 30 $\pm$ 5 A	2.0 $\pm$ 0.5 sec

Table 15 Overcurrent protection ampere versus time delay

Current (A)	Time (s)
230 $\pm$ 12	300
336 $\pm$ 12	11.75
337 $\pm$ 12	11.05
346 $\pm$ 12	9.4
355 $\pm$ 12	8.2
370 $\pm$ 12	6.75
380 $\pm$ 12	6.1

Table 16 Overvoltage protection versus time delay

Voltage (V)	Time (s)
123	0.6
124	0.5
132	0.3
141	0.14
146	0.1
151	0.05

1.5 Engine starting pneumatic power requirements

The ground air supply requirements for engine starting are shown in Table 17 .

Conditions:

- Time allowed during start (to starter cutout) is 90 seconds
- Time-to-IDLE on ground is 45 seconds minimum
- No bleed air extraction is permitted during start sequence

Table 17 Ground pneumatic power requirements – Engine starting

ATS requirements	Inlet Pressure	Airflow
ISA day	45 psig 45 psia	150 lb/min 68.04 kg/min

1.6 Ground pneumatic power requirements

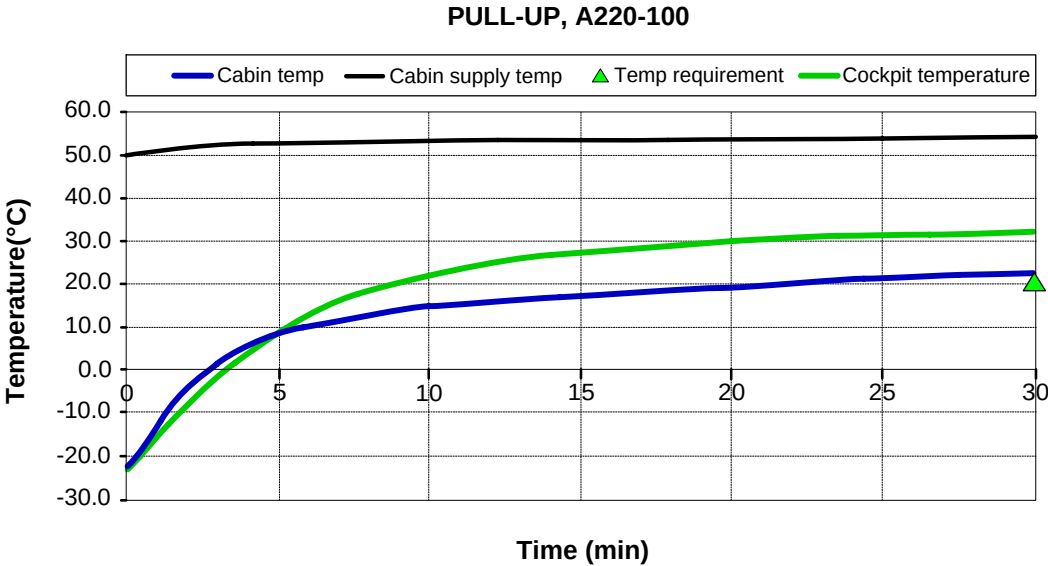
1.6.1 Heating

This section provides the ground pneumatic power requirements for heating the cabin with specific conditions.

Refer to Fig. 16 for heating pull-up graphic.

Table 18 Ground air supply requirements for heating (Pull up)

Requirements	Pressure	Airflow	Temperature
To heat cabin to 69.8 °F (21 °C) in 30 minutes Conditions - Outside air temperature: -40 °F (-40 °C) - Initial cabin and cockpit temperature: -9.4 °F (-23 °C) - Cockpit, FWD & AFT CABIN Temp Selector: Full Hot (86 °F (30 °C)) - Recirculation fan: On - Trim air: On - No passenger	31 psig (45.7 psia)	203 lb/min (92.1 kg/min)	280 °F (138 °C)



ICN-BD500-A-J000000-A-3AB48-22378-A-002-01
Figure 16 Ground pneumatic requirements - Heating

Table 19 Ground air supply requirements for heating at a steady state

Requirements	Pressure	Airflow	Temperature
Conditions - Outside air temperature: -40 °F (-40 °C) - Steady state Cockpit & Cabin temperature: 75.2 °F (24 °C) - Cockpit, FWD & AFT CABIN Temp Selector: Mid selection (75.2 °F (24 °C)) - Recirculation fan: On - Trim air: On - 15 passengers	25.4 psig (40.1 psia)	166 lb/min (73.3 kg/min)	253 °F (123 °C)

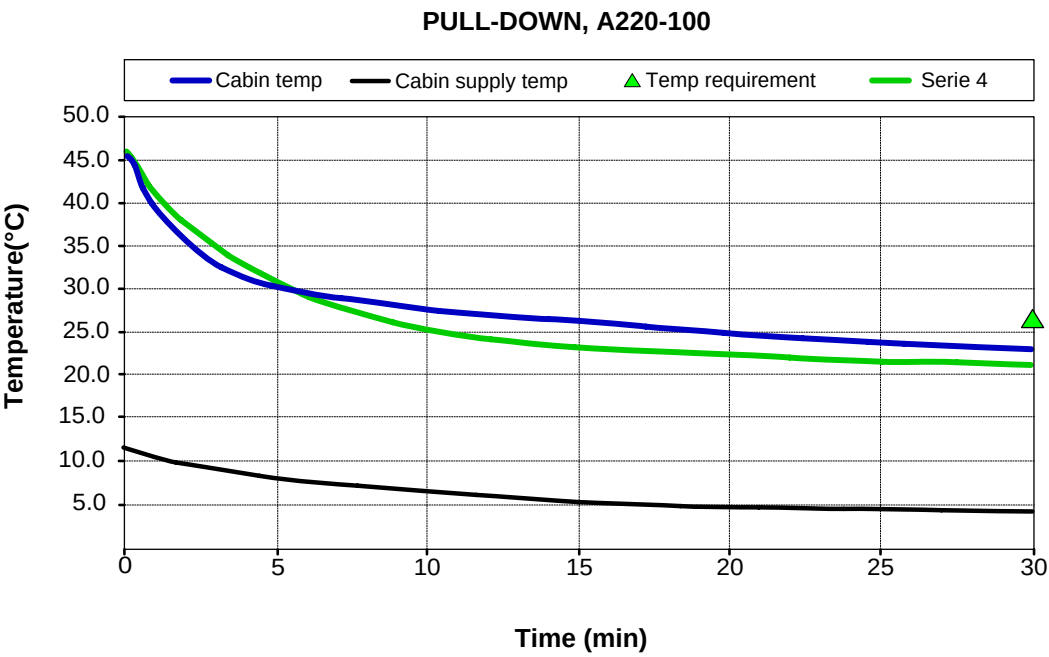
1.6.2 Cooling

This section provides the ground pneumatic power requirements for cooling the cabin with specific conditions.

Refer to Fig. 17 for the cooling pull-down graphic.

Table 20 Ground air supply requirements for cooling (Pull down)

Requirements	Pressure	Airflow	Temperature
To cool cabin to 80.6 °F (27 °C) in 30 minutes Conditions - Outside air temperature: 104 °F (40 °C) - Initial cabin and cockpit temperature: 114.8 °F (46 °C) - Cockpit, FWD & AFT CABIN Temp Selector: Full Cold (64.4 °F (18 °C)) - Recirculation fan: On - Trim air: On - No passenger	38 psig (52.7 psia)	140 lb/min (63.5 kg/min)	437 °F (225 °C)



ICN-BD500-A-J000000-A-3AB48-22379-A-002-01
Figure 17 Ground pneumatic requirements - Cooling

Table 21 Ground air supply requirements for cooling at a steady state

Requirements	Pressure	Airflow	Temperature
Conditions - Outside air temperature: 104 °F (40 °C) - Steady state Cockpit & Cabin temperature: 75.2 °F (24 °C) - Cockpit, FWD & AFT CABIN Temp Selector: Mid selection (75.2 °F (24 °C)) - Recirculation fan: On - Trim air: On - 130 passengers	31 psig (45.7 psia)	203 lb/min (92.1 kg/min)	280 °F (138 °C)

1.7 Preconditioned airflow requirements

The ground air supply requirements for air conditioning and airflow requirements are shown in Table 22 for the LPGC.

Table 22 Preconditioned airflow requirements

Requirements	Pressure	Airflow	Temperature
To cool cabin to 75.2 °F (24 °C) Conditions - Outside air temperature is 104 °F (40 °C) - Recirculation fan is on - 130 passenger	0.6 psig (15.2 psia) (4.1 kPa)	125 lb/min (54.4 kg/min)	41 °F (5 °C)
To heat cabin to 75.2 °F (24 °C) Conditions - Outside air temperature is -40 °F (-40 °C) - Recirculation fan is on - 15 passenger	0.6 psig (15.2 psia) (4.1 kPa)	125 lb/min (54.4 kg/min)	104 °F (40 °C)

1.8 Ground towing requirements

The aircraft is designed with means for conventional or towbarless towing. Information and procedures can be found for both in the Aircraft Maintenance Manual (AMM) 09.

Status on towbarless towing equipment qualification can be found in CS-SL-09-10-0001.

1.9 Aircraft

This section shows the chart to determine the draw bar pull and tow tractor mass requirement as a function of the following physical characteristics:

- Model: A220-100
- Number of engines at idle

- Slope

The chart is based on the engine type with the highest idle thrust level. Refer to Fig. 18 and Fig. 19 .

1.10 Towbar design guidelines

The towbar shall comply with the standards that follow:

- SAE AS 1614 - Main Line Aircraft Towbar Attach Fitting Interface
- ISO 8267-1 - Aircraft - Towbar Attachment Fitting - Interface Requirements - Part 1: Main Line Aircraft
- ISO 9667 - Aircraft Ground Support Equipment - Towbar
- SAE ARP 1915 - Aircraft Towbar

Recommended references

- IATA Airport Handling Manual AHM 958 - Functional Specification for an Aircraft Towbar
- EN 12312-7, Aircraft Ground Support Equipment - Specific Requirements - Part 7 Aircraft movement Equipment

A conventional type towbar is required which should be equipped with a damping system (to protect the nose gear against jerks) and with towing shear pins:

- A traction shear pin calibrated at 17,400 lbs (77 394 N),
- - A torsion pin calibrated at 59 940 In-lbs (6 772 N-m)

The towing head is designed according to SAE AS 1614, cat I.

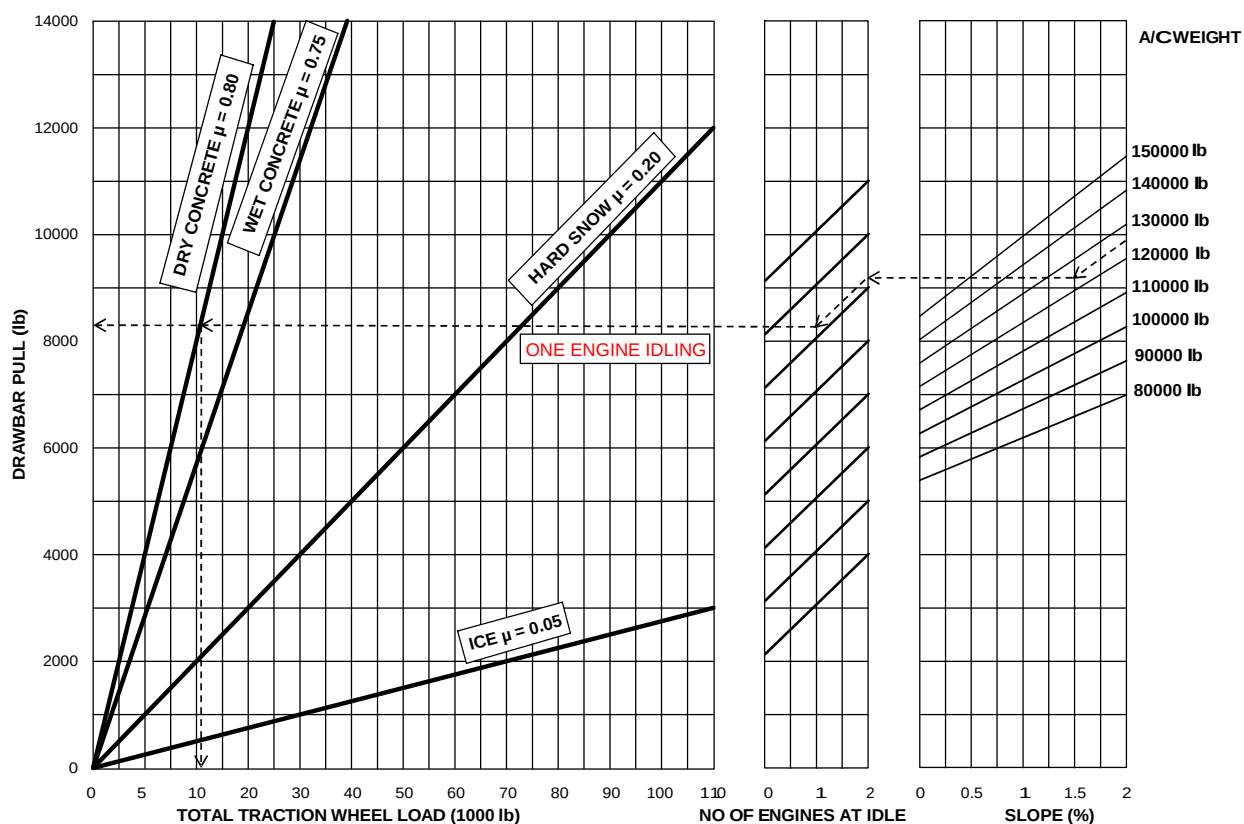
For towing and pushing operations, controls are provided to accommodate the following conditions:

- Aircraft not powered (see note below):
A control panel is provided on the left side of the aircraft by the nose NLG. A push-button on the control panel can be toggled to engage power to begin the towing sequence (Navigation lights are lit automatically). The parking brake can be deactivated by way of a switch located on this panel. Annunciation lights on the NLG indicate when the parking brake is deactivated and the aircraft is ready for towing.

Note

Availability of the controls to facilitate towing the aircraft with the flight deck vacant does not constitute an approval to conduct such operations.

- Aircraft powered, and flight deck occupied:
Two separate controls, one to deactivate the nose wheel steering, and one to deactivate the parking brake, are located in both the flight deck and on the control panel located in the vicinity of the nose landing gear. Headset jacks are provided on this control panel to allow for communication between personnel on the flight deck and on the ground. Annunciation lights on the control panel indicate when the aircraft is ready for towing.
With the torque links connected, towing up to ± 130 degrees nose wheel angle is possible. The ground towing requirements are described in the illustration below.
For more information related to towing, refer to the AMP.

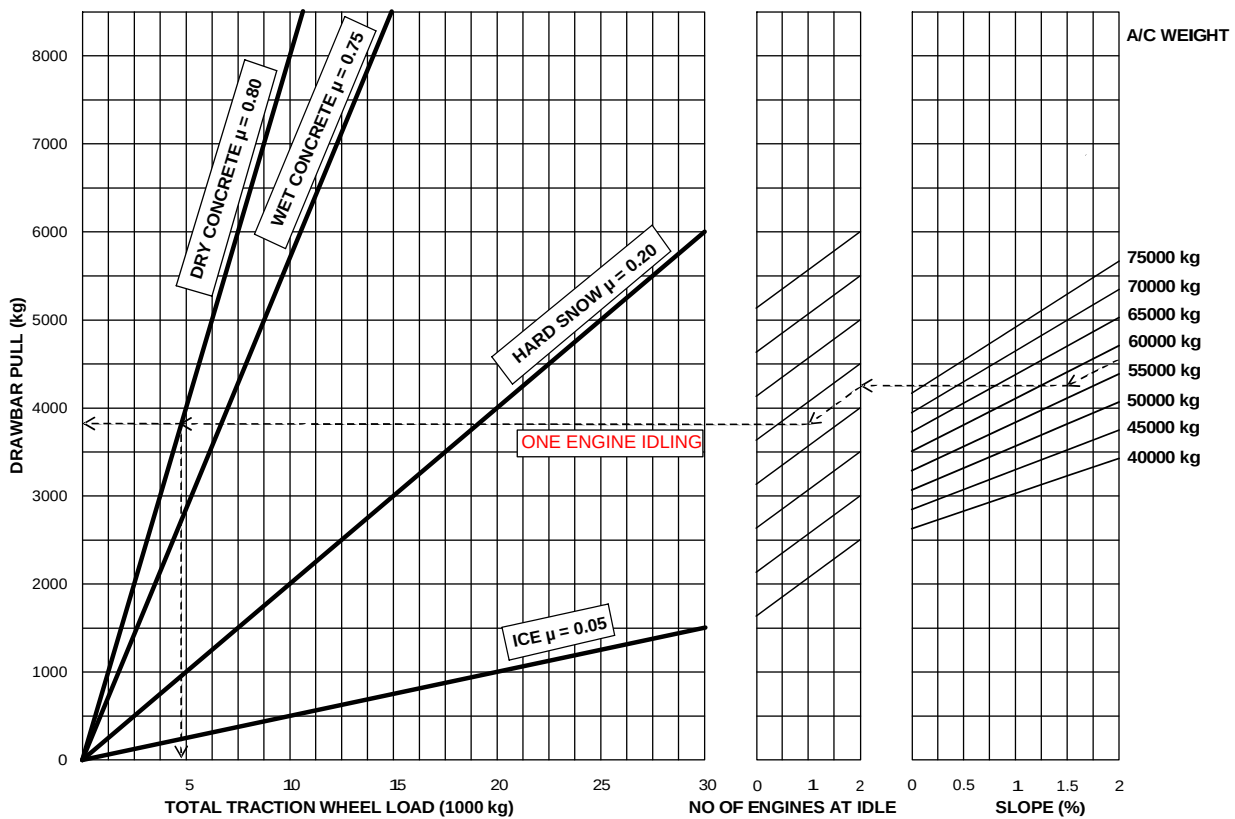


NOTES

1. Unusual breakaway conditions not reflected.
2. Estimated for rubber - tired tow vehicles.
3. Coefficient of friction (μ) approximate.
4. Example: At an aircraft gross weight of 125000lbs (56699 Kg), an uphill slope of 1.5%, with one engine ON and with a dry concrete surface, the corresponding draw bar pull or push required is 8000 lb (35.6 kN) and the total tractor weight of approximately 10 500 lbs (4762 Kg).

ICN-BD500-A-J000000-A-3AB48-22839-A-001-01

Figure 18 Ground towing requirements (imperial unit)



NOTES

1. Unusual breakaway conditions not reflected.
2. Estimated for rubber - tired tow vehicles.
3. Coefficient of friction (μ) approximate.
4. Example: At an aircraft gross weight of 125000lbs (56699 Kg), an uphill slope of 1.5%, with one engine ON and with a dry concrete surface, the corresponding draw bar pull or push required is 8000 l (35.6 kN) and the total tractor weight of approximately 10 500 lbs (4762 Kg).

ICN-BD500-A-J000000-A-3AB48-22840-A-001-01

Figure 19 Ground towing requirements (metric unit)

Operating conditions - Technical data

Applicability: 50001-54999

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Table 1 References

Data Module/Technical Publication	Title
BD500-A-J71-00-00AAA-012A-A	Power plant - General warnings and cautions and related safety data

Description

1 Introduction

This data module gives data on the engine noise levels and the intake and exhaust dangerous areas during normal operations. This section is divided into the subsections that follow:

- Engine dangerous areas
- Engine exhaust velocities and temperatures
- Auxiliary Power Unit (APU)

- Engine noise levels

Aircraft operating conditions and noise are important to airport and community planners. While an airport is a major element in a community transportation system and is vital to its growth, it must be a good neighbor. This can only be accomplished with proper planning. Because aircraft noise extends beyond the boundaries of the airport, it is vital to consider the impact on surroundings communities.

2 Engine dangerous areas

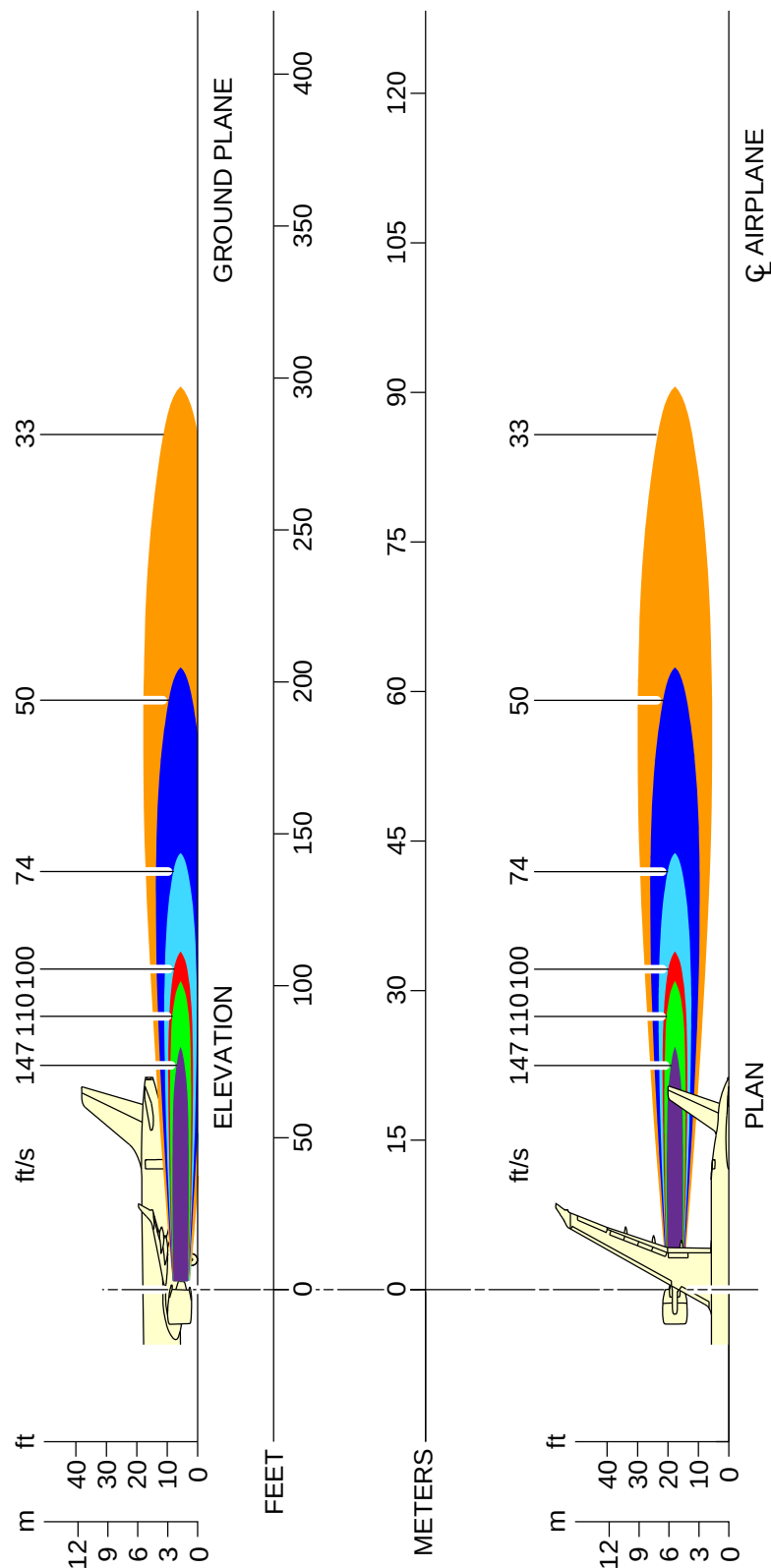
This section contains information about the danger areas of engines during a ground run up. Refer to BD500-A-J71-00-00-00AAA-012A-A for danger areas of engines.

3 Engine exhaust velocities and temperatures

This section shows the estimated engine exhaust plume velocity and temperature profiles during idle, breakaway, and maximum takeoff conditions.

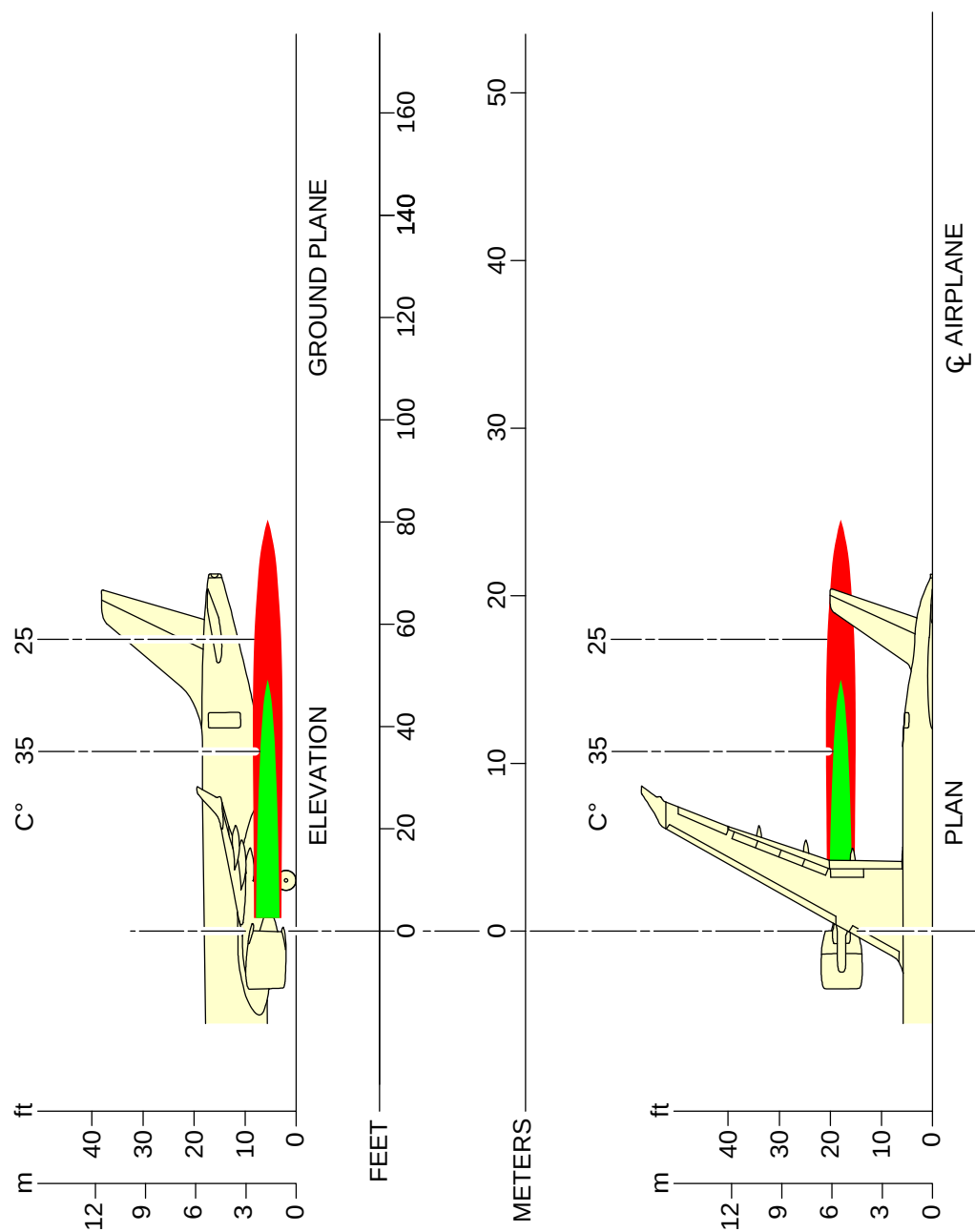
The exhaust plume profiles are provided from the engine nozzle exit plane, assuming sea level, static, ISA condition, without any wind and bleed extraction. They do not take into account an engine-to-engine variation or engine deterioration and do not account for interaction with the fuselage, ground or other engine plume. Refer to Fig. 1 thru Fig. 6

This publication has been superseded by the
Aircraft Characteristics Publication (ACP).

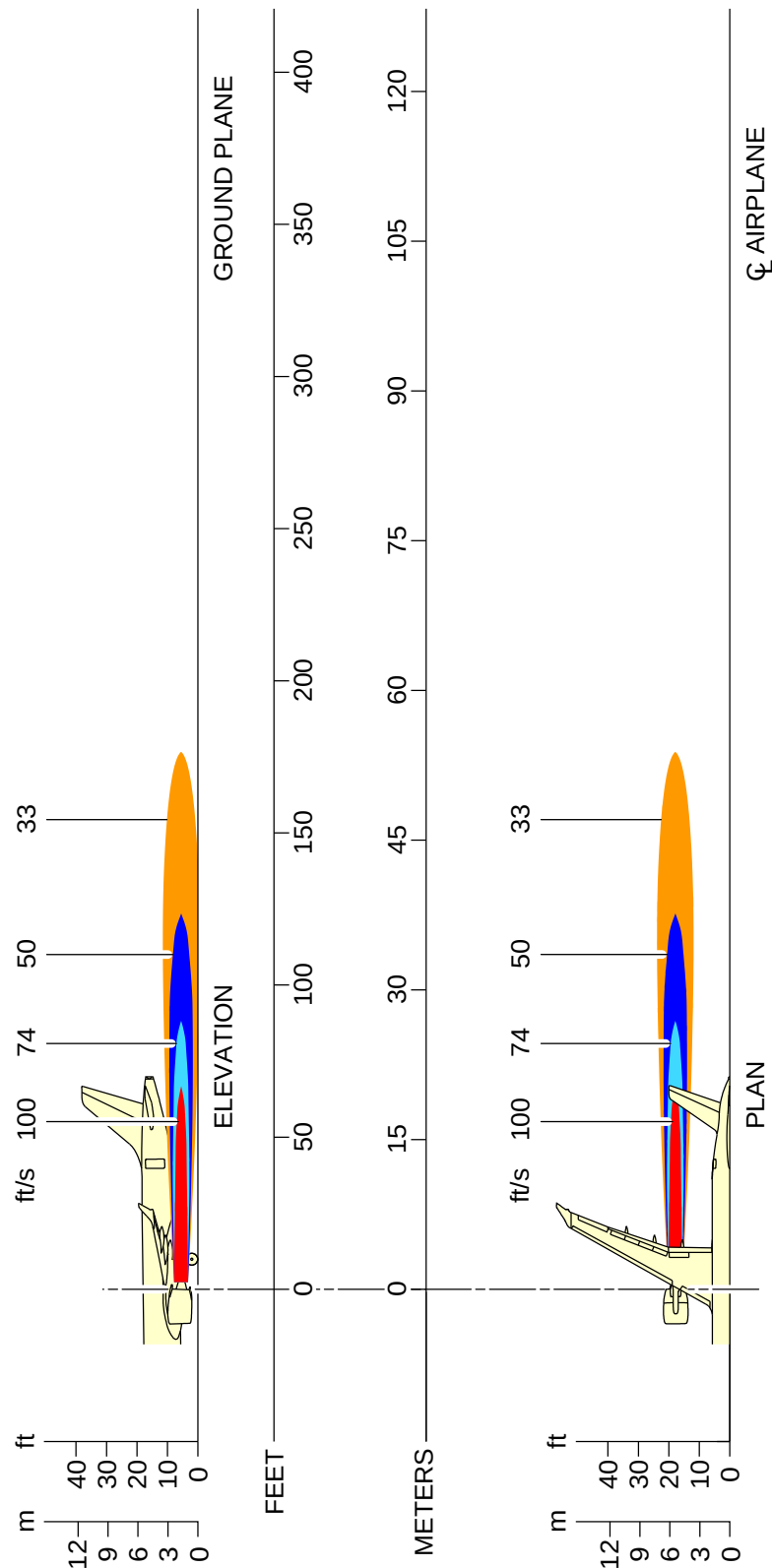


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Figure 1 Exhaust plume velocity profile / A220-100 Break-away thrust 2970 lbf

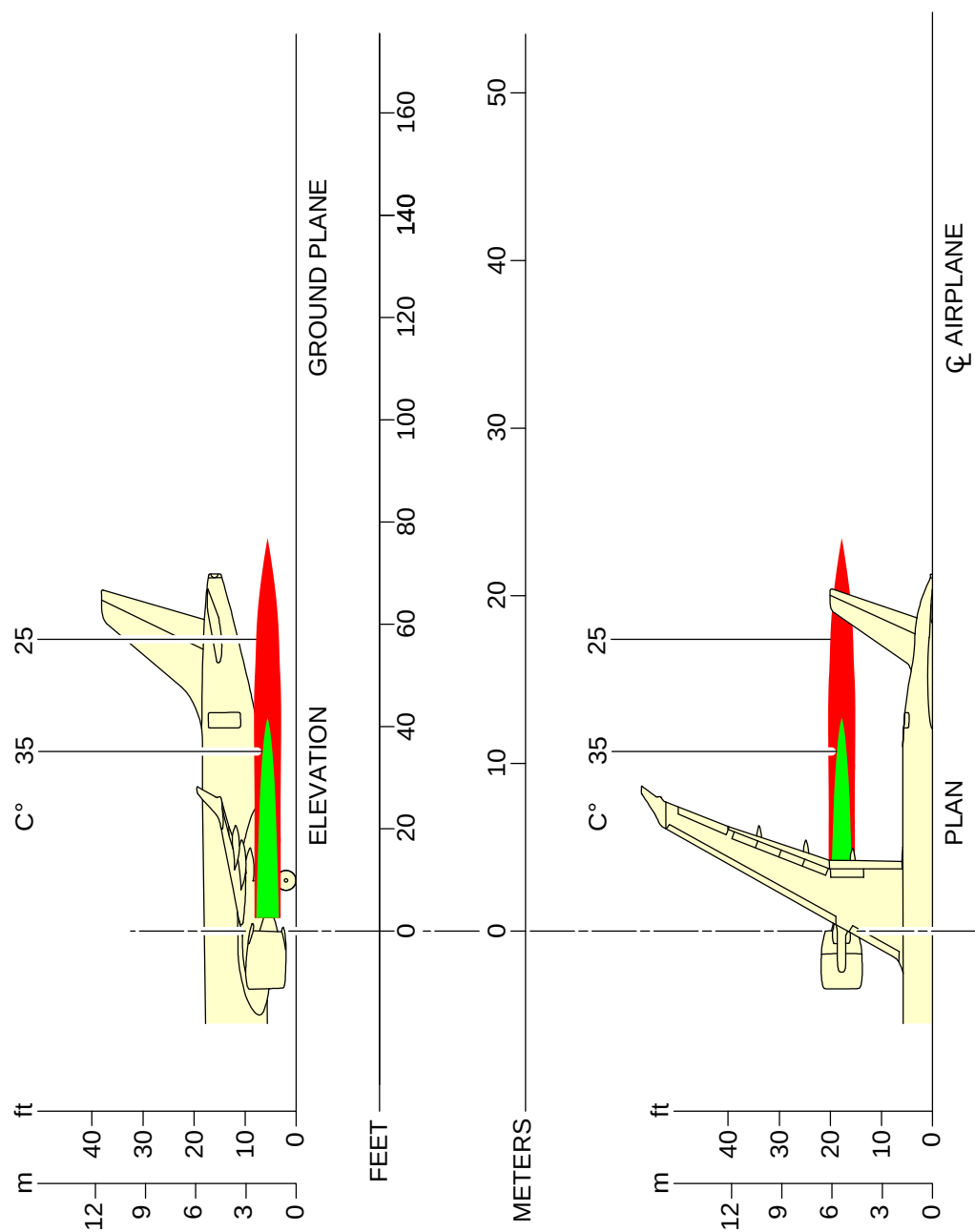


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Figure 2 Exhaust plume temperature profile / A220-100 Break-away thrust 2970 lbf

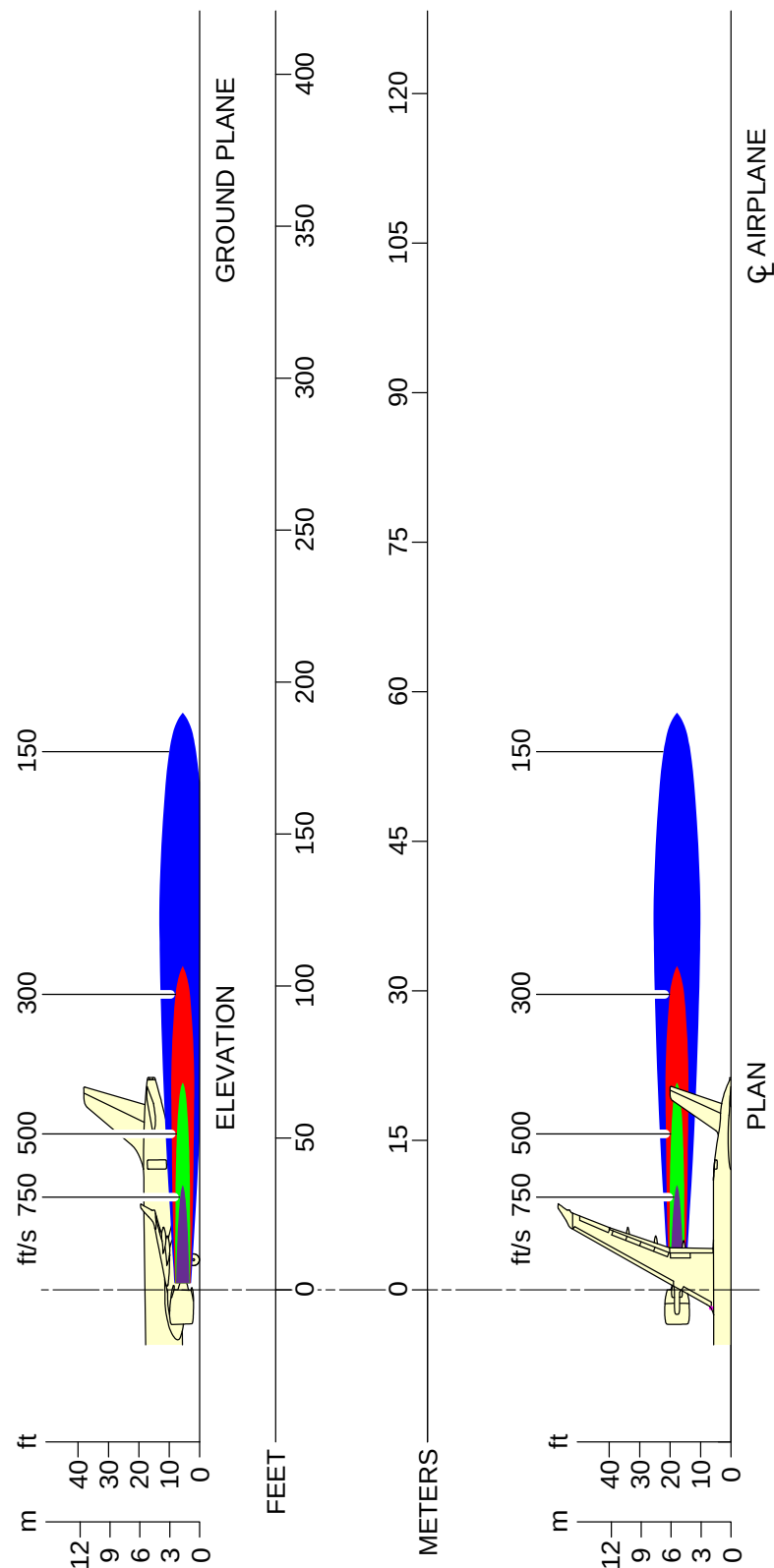


ICN-BD500-A-J000000-A-3AB48-27919-A-001-01

Figure 3 Exhaust plume velocity profile / Ground idle

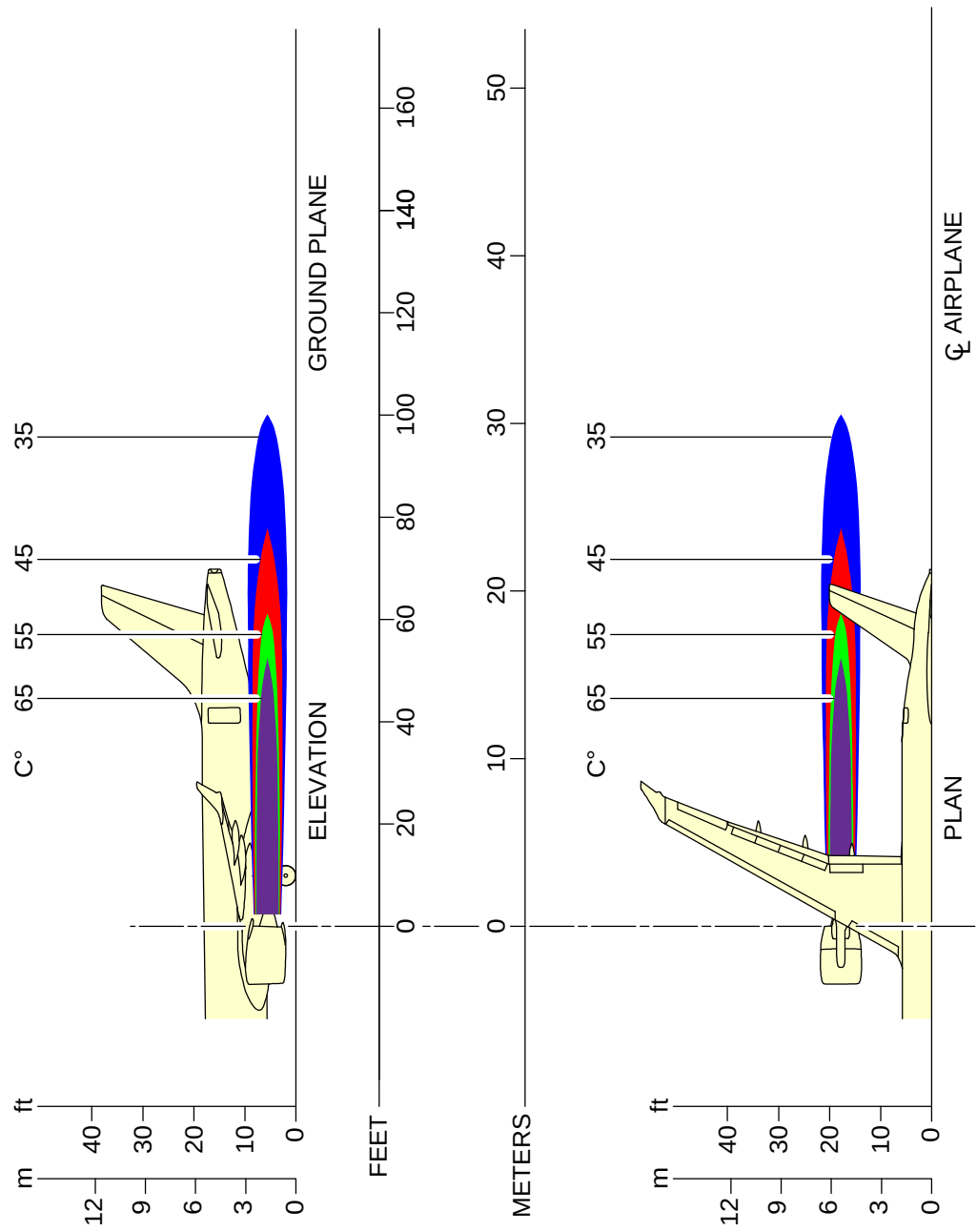


ICN-BD500-A-J000000-A-3AB48-27920-A-001-01
Figure 4 Exhaust plume temperature profile / Ground idle



ICN-BD500-A-J000000-A-3AB48-27921-A-001-01

Figure 5 Exhaust plume velocity profile / Maximum take-off at sea level static



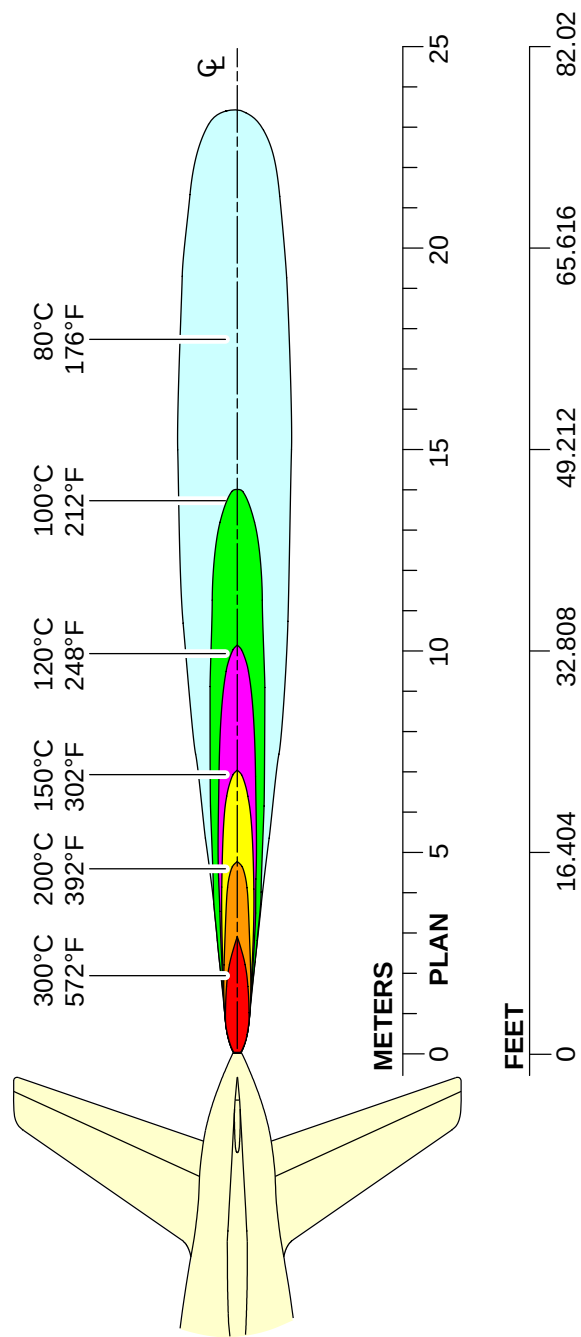
ICN-BD500-A-J000000-A-3AB48-27922-A-001-01

Figure 6 Exhaust plume temperature profile / Maximum take-off at sea level static

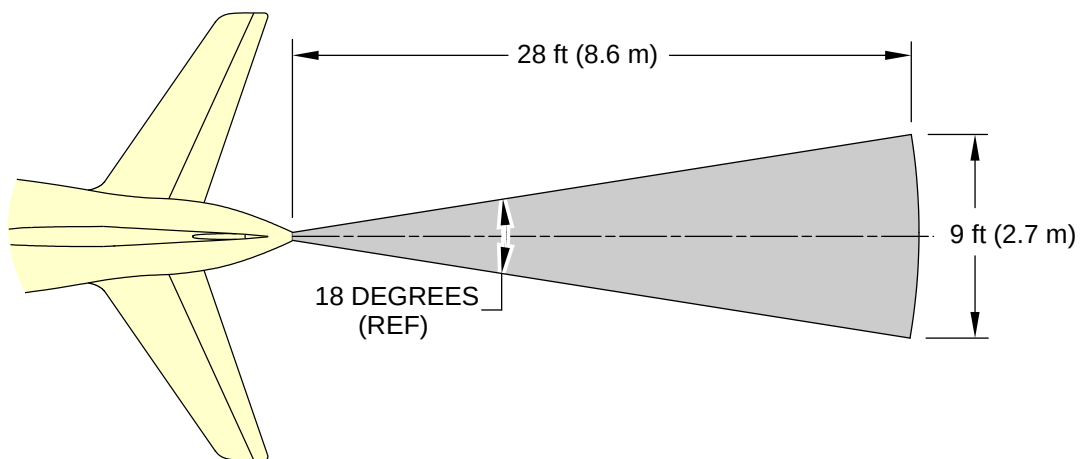
4 Auxiliary Power Unit (APU)

This section contains information about the danger areas of the APU when operated on the ground. Refer to Fig. 7 and Fig. 8 for danger areas and the exhaust plume temperature of the APU.

This publication has been superseded by the
Aircraft Characteristics Publication (ACP).



ICN-BD500-A-J000000-A-3AB48-47400-A-001-01
Figure 7 APU exhaust plume temperature



ICN-BD500-A-J000000-A-3AB48-47401-A-001-01

Figure 8 APU danger areas

5 Engine noise levels

The community noise levels must agree with FAR 36 Stage 3, ICAO Annex 16, Chapter 4, Chapter 516.

Refer to Table 2 for the demonstrated Effective Perceived Noise levels (EPNdB), limits, and the relative difference (margin of compliance) for the engines.

Applicability: 50001-50061, 50063-50065, 50068, 50070, 50072-50077, 50079-54999

Table 2 Engine noise levels

Engine <option code>	Weights		Measure- ment Points	Margins (EPNdB)		Margin Require- ment (EPNdB)
	MTOW <option code>	MLW <option code>	Description	Noise Limit (EPNdB)	Measured Level (EPNdB)	
PW1524G <72210003> <13000170>	134,000 lb (60,781 kg)	115,500 lb (52,390 kg) <1300270>	Approach	99.9	91.9	8.0 0
			Lateral	96.0	87.9	8.1 0
			Flyover	90.4	79.0	11.4 0
			Sum of smallest two individual margins:			16.1 2
			Sum of all individual margins:			27.5 10

Applicability: 50062, 50066-50067, 50069, 50071, 50077-50078, 50081

Table 3 Engine noise levels

Engine <option code>	Weights		Measure- ment Points	Margins (EPNdB)		Margin Require- ment (EPNdB)
	MTOW <option code>	MLW <option code>	Description	Noise Limit (EPNdB)	Measured Level (EPNdB)	
PW1524G <72210003> <13000170>	134,000 lb (60,781 kg)	112,500 lb (51,029 kg) <13000230>	Approach	99.9	91.9	8.0 0
			Lateral	96.0	87.9	8.1 0
			Flyover	90.4	79.0	11.4 0
			Sum of smallest two individual margins:			16.1 2
			Sum of all individual margins:			27.5 10

Applicability: 50069, 50071, 50078

Table 4 Engine noise levels

Engine <option code>	Weights		Measure- ment Points	Margins (EPNdB)		Margin Require- ment (EPNdB)
	MTOW <option code>	MLW <option code>	Description	Noise Limit (EPNdB)	Measured Level (EPNdB)	
PW1524G <72210003> <13000040>	138,000 lb (62,595 kg)	112,500 lb (51,029 kg) <13000230>	Approach	99.9	91.9	8.0 0
			Lateral	96.0	87.9	8.1 0

See applicability on the
first page of the DM
BD500-A-J00-00-00-17AAA-030A-A

BD500-A-J00-00-00-17AAA-030A-A

Engine <option code>	Weights		Measure- ment Points			Margins (EPNdB)	Margin Require- ment (EPNdB)
	MTOW <option code>	MLW <option code>	Description	Noise Limit (EPNdB)	Measured Level (EPNdB)		
			Flyover	90.4	79.0	11.4	0
			Sum of smallest two individual margins:			16.1	2
			Sum of all individual margins:			27.5	10

This publication has been superseded by the
Aircraft Characteristics Publication (ACP).

Pavement data - Technical data

Applicability: 50001-54999

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Table 1 References

Data Module/Technical Publication	Title
None	

Description

1

Introduction

This data module contains data related to the pavement design specifications, including aircraft footprints, pavement loading during standard operations, and aircraft/pavement rating systems. Also given are the flotation classification for different weights, fixed tire pressure, and aft Center of Gravity (CG), with the Aircraft Classification Number (ACN) methods.

This section is divided into the subsections that follow:

- ACN
- Landing gear footprint
- Maximum pavement load
- Landing gear loading on pavement

Note

Runway strength data shown in this publication is derived from available information and is a realistic estimate of capability at an average level of activity. It is not intended as a

maximum allowable weight or as an operating limitation. Many airport pavements are capable of supporting limited operations with gross weights in excess of published figures. Permissible operating weight, insofar as runway strengths are concerned, are a matter of agreement between the owner and user.

For more information about the Pavement Classification Number (PCN), please contact the concerned airport authority.

1.1 Aircraft Classification Number (ACN) / Pavement Classification Number (PCN) Introduction

1.1.1 Aircraft Classification Number (ACN)

The ACN value is a number which expresses the relative structural effect of an aircraft on different pavement types for specified standard subgrade strengths in terms of a standard single wheel load.

An aircraft will have eight (8) ACN numbers for any given aircraft weight and tire pressure: four (4) for flexible pavement and four (4) for rigid pavement.

1.1.2 Pavement Classification Number (PCN)

The PCN value is a number which expresses the relative load carrying capacity of a pavement in terms of a standard single wheel load.

An airport determined and published PCN can be compared with an aircraft's ACN. An aircraft that has an ACN equal to or less than the PCN of a given pavement can operate without restriction on the pavement. (Ref. International Civil Aviation Organization (ICAO) State Letter AN411.1.17-8019. Ref. US FAA Advisory Circular 150153355 15/06/83).

For example, if the published airport PCN is 52/R/B/Y/T, it means that the aircraft ACN must be less than 52 for rigid pavement type, with medium subgrade strength, and the tire pressure of the aircraft must be less than 145 psi (1.0 MPa). The PCN also shows that the value was arrived at through a technical review.

Table 2 Airport method to show Pavement Classification Number (PCN).

Pavement type	Pavement type	Tire pressure category psi (MPa)	Evaluation
R = Rigid F = Flexible	A = High B = Medium C = Low D = Ultra Low	W = No limit X = To 254 (1.75) Y = To 181 (1.25) Z = To 73 (0.5)	T = Technical U = Using aircraft

Table 3 Subgrade strength categories

Sub-grade categories	Flexible pavement		Rigid pavement	
	Characterization	CBR range	Characterization	k-Value Range
A	CBR 15	Above 13	k = 150MN/m ³ (550 pci)	Above 120MN/m ³ (442pci)

Sub-grade categories	Flexible pavement		Rigid pavement	
	CBR 10	From 8 to 13	k = 80MN/m3 (300 pci)	From 60 to 120 MN/m3 (221 to 442pci)
B	CBR 6	From 4 to 8	k = 80MN/m3 (300 pci)	From 25 to 60 MN/m3 (92 to 221pci)
C	CBR 3	Below 4	k=20MN/m3 (75pci)	Below 25 MN/m3 (92pci)
D				

1.1.3 Load Classification Number (LCN)

The Load Classification Number (LCN) is a method of flotation analysis by the ICAO.

An aircraft will have two (2) LCN numbers for any given aircraft weight and tire pressure: one (1) for rigid pavement usually concrete and second (2) for flexible pavement usually layered asphalt.

2 Aircraft Classification Number (ACN) results for most aft C.G. position

Refer to Table 4 for tabular format and Fig. 1 for graphical format for the ACN results for rigid pavement and Table 7 for tabular format and Fig. 2 for graphical format for the ACN results for flexible pavement.

Applicability: 50001-50061, 50063-50065, 50068, 50070, 50072-50077, 50079-54999

Table 4 Aircraft Classification Number (ACN) RESULTS FOR MOST AFT C.G. RIGID PAVEMENT

A/C Gross Weight (lb)	A/C Gross Weight (Kg)	MLG Load (lb)	MLG Load (Kg)	ACN High Strength K=150 MN/m3	ACN Medium Strength K=80 MN/m3	ACN Low Strength K=40 MN/m3	ACN Ultra-Low Strength K=20 MN/m3
141500	64183	131518	59655	37	39	41	43
140500	63729	130750	59307	37	39	41	43
140000	63502	130406	59151	37	39	41	43
139000	63049	129719	58839	37	39	41	42
138000	62595	129031	58527	36	38	40	42
137000	62142	128343	58215	36	38	40	42
136000	61688	127655	57903	36	38	40	42
135000	61234	126967	57591	36	38	40	41
134000	60781	126280	57279	35	37	39	41

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A/C Gross Weight (lb)	A/C Gross Weight (Kg)	MLG Load (lb)	MLG Load (Kg)	ACN High Strength K=150 MN/m ³	ACN Medium Strength K=80 MN/m ³	ACN Low Strength K=40 MN/m ³	ACN Ultra-Low Strength K=20 MN/m ³
133000	60327	125592	56967	35	37	39	41
132000	59874	124904	56655	35	37	39	41
131000	59420	124216	56343	35	37	39	40
130000	58967	123528	56031	34	36	38	40
129000	58513	122840	55719	34	36	38	40
128000	58059	122153	55407	34	36	38	40
127000	57606	121465	55095	34	36	38	39
126000	57152	120777	54783	34	36	37	39
125000	56699	120089	54471	33	35	37	39
124000	56245	119401	54159	33	35	37	38
123000	55791	118713	53847	33	35	37	38
122000	55338	118026	53535	33	35	36	38
121000	54884	117338	53223	32	34	36	38
120500	54657	116994	53067	32	34	36	38
120000	54431	116539	52861	32	34	36	37
119000	53977	115629	52448	32	34	36	37
118000	53523	114720	52036	32	33	35	37
117000	53070	113810	51623	31	33	35	36
116000	52616	112901	51210	31	33	35	36
115000	52163	111828	50724	31	32	34	36
114000	51709	110756	50238	30	32	34	35
113000	51255	109683	49751	30	32	33	35
112000	50802	108610	49264	30	31	33	35
111000	50348	107538	48778	29	31	33	34
110000	49895	106465	48291	29	31	32	34
109000	49441	105393	47805	29	30	32	33

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A/C Gross Weight (lb)	A/C Gross Weight (Kg)	MLG Load (lb)	MLG Load (Kg)	ACN High Strength K=150 MN/m ³	ACN Medium Strength K=80 MN/m ³	ACN Low Strength K=40 MN/m ³	ACN Ultra-Low Strength K=20 MN/m ³
108000	48987	104320	47318	28	30	32	33
107000	48534	103248	46832	28	30	31	33
106000	48080	102175	46345	28	29	31	32
105000	47627	101103	45859	27	29	31	32
104000	47173	100030	45372	27	29	30	32
103000	46720	98958	44886	27	28	30	31
102000	46266	97885	44399	26	28	29	31
101000	45812	96813	43913	26	28	29	30
100000	45359	95740	43426	26	27	29	30
99000	44905	94668	42940	25	27	28	30
98000	44452	93595	42453	25	26	28	29
97000	43998	92523	41967	25	26	28	29
96000	43544	91450	41480	24	26	27	28
95000	43091	90378	40994	24	25	27	28
94000	42637	89305	40508	24	25	26	28
93000	42184	88232	40021	23	25	26	27
92000	41730	87160	39535	23	24	26	27
91000	41276	86087	39048	23	24	25	27
90000	40823	85015	38562	22	24	25	26
89000	40369	83942	38075	22	23	25	26
88000	39916	82870	37589	22	23	24	25
87000	39462	81797	37102	21	23	24	25
86000	39008	80725	36616	21	22	24	25
85000	38555	79652	36129	21	22	23	24
84000	38101	78580	35643	20	22	23	24
83000	37648	77507	35156	20	21	22	23

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A/C Gross Weight (lb)	A/C Gross Weight (Kg)	MLG Load (lb)	MLG Load (Kg)	ACN High Strength K=150 MN/m ³	ACN Medium Strength K=80 MN/m ³	ACN Low Strength K=40 MN/m ³	ACN Ultra-Low Strength K=20 MN/m ³
82000	37194	76435	34670	20	21	22	23
81000	36740	75362	34183	19	21	22	23
80000	36287	74290	33697	19	20	21	22
79000	35833	73217	33210	19	20	21	22
78000	35380	72145	32724	18	19	21	22
77000	34926	71072	32237	18	19	20	21

Applicability: 50010-50017, 50020-50067

Table 5 Aircraft Classification Number (ACN) RESULTS FOR MOST AFT C.G. RIGID PAVEMENT

A/C Gross Weight (lb)	A/C Gross Weight (Kg)	MLG Load (lb)	MLG Load (Kg)	ACN High Strength K=150 MN/m ³	ACN Medium Strength K=80 MN/m ³	ACN Low Strength K=40 MN/m ³	ACN Ultra-Low Strength K=20 MN/m ³
135000	61234	126967	57591	36	38	40	41
134000	60781	126280	57279	35	37	39	41
133000	60327	125592	56967	35	37	39	41
132000	59874	124904	56655	35	37	39	41
131000	59420	124216	56343	35	37	39	40
130000	58967	123528	56031	34	36	38	40
129000	58513	122840	55719	34	36	38	40
128000	58059	122153	55407	34	36	38	40
127000	57606	121465	55095	34	36	38	39
126000	57152	120777	54783	34	36	37	39
125000	56699	120089	54471	33	35	37	39
124000	56245	119401	54159	33	35	37	38
123000	55791	118713	53847	33	35	37	38
122000	55338	118026	53535	33	35	36	38

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A/C Gross Weight (lb)	A/C Gross Weight (Kg)	MLG Load (lb)	MLG Load (Kg)	ACN High Strength K=150 MN/m ³	ACN Medium Strength K=80 MN/m ³	ACN Low Strength K=40 MN/m ³	ACN Ultra-Low Strength K=20 MN/m ³
121000	54884	117338	53223	32	34	36	38
120500	54657	116994	53067	32	34	36	38
120000	54431	116539	52861	32	34	36	37
119000	53977	115629	52448	32	34	36	37
118000	53523	114720	52036	32	33	35	37
117000	53070	113810	51623	31	33	35	36
116000	52616	112901	51210	31	33	35	36
115000	52163	111828	50724	31	32	34	36
114000	51709	110756	50238	30	32	34	35
113000	51255	109683	49751	30	32	33	35
112000	50802	108610	49264	30	31	33	35
111000	50348	107538	48778	29	31	33	34
110000	49895	106465	48291	29	31	32	34
109000	49441	105393	47805	29	30	32	33
108000	48987	104320	47318	28	30	32	33
107000	48534	103246	46832	28	30	31	33
106000	48080	102175	46345	28	29	31	32
105000	47627	101103	45859	27	29	31	32
104000	47173	100030	45372	27	29	30	32
103000	46720	98958	44886	27	28	30	31
102000	46266	97885	44399	26	28	29	31
101000	45812	96813	43913	26	28	29	30
100000	45359	95740	43426	26	27	29	30
99000	44905	94668	42940	25	27	28	30
98000	44452	93595	42453	25	26	28	29
97000	43998	92523	41967	25	26	28	29

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A/C Gross Weight (lb)	A/C Gross Weight (Kg)	MLG Load (lb)	MLG Load (Kg)	ACN High Strength K=150 MN/m ³	ACN Medium Strength K=80 MN/m ³	ACN Low Strength K=40 MN/m ³	ACN Ultra-Low Strength K=20 MN/m ³
96000	43544	91450	41480	24	26	27	28
95000	43091	90378	40994	24	25	27	28
94000	42637	89305	40508	24	25	26	28
93000	42184	88232	40021	23	25	26	27
92000	41730	87160	39535	23	24	26	27
91000	41276	86087	39048	23	24	25	27
90000	40823	85015	38562	22	24	25	26
89000	40369	83942	38075	22	23	25	26
88000	39916	82870	37589	22	23	24	25
87000	39462	81797	37102	21	23	24	25
86000	39008	80725	36616	21	22	24	25
85000	38555	79652	36129	21	22	23	24
84000	38101	78580	35643	20	22	23	24
83000	37648	77507	35156	20	21	22	23
82000	37194	76435	34670	20	21	22	23
81000	36740	75362	34183	19	21	22	23
80000	36287	74290	33697	19	20	21	22
79000	35833	73217	33210	19	20	21	22
78000	35380	72145	32724	18	19	21	22
77000	34926	71072	32237	18	19	20	21

Applicability: 50069, 50071, 50078

Table 6 Aircraft Classification Number (ACN) RESULTS FOR MOST AFT C.G. RIGID PAVEMENT

A/C Gross Weight (lb)	A/C Gross Weight (Kg)	MLG Load (lb)	MLG Load (Kg)	ACN High Strength K=150 MN/m ³	ACN Medium Strength K=80 MN/m ³	ACN Low Strength K=40 MN/m ³	ACN Ultra-Low Strength K=20 MN/m ³
139000	63049	129719	58839	37	39	41	42
138000	62595	129031	58527	36	38	40	42
137000	62142	128343	58215	36	38	40	42
136000	61688	127655	57903	36	38	40	42
135000	61234	126967	57591	36	38	40	41
134000	60781	126280	57279	35	37	39	41
133000	60327	125592	56967	35	37	39	41
132000	59874	124904	56655	35	37	39	41
131000	59420	124216	56343	35	37	39	40
130000	58967	123528	56031	34	36	38	40
129000	58513	122840	55719	34	36	38	40
128000	58059	122153	55407	34	36	38	40
127000	57606	121465	55095	34	36	38	39
126000	57152	120777	54783	34	36	37	39
125000	56699	120089	54471	33	35	37	39
124000	56245	119401	54159	33	35	37	38
123000	55791	118713	53847	33	35	37	38
122000	55338	118026	53535	33	35	36	38
121000	54884	117338	53223	32	34	36	38
120500	54657	116994	53067	32	34	36	38
120000	54431	116539	52861	32	34	36	37
119000	53977	115629	52448	32	34	36	37
118000	53523	114720	52036	32	33	35	37
117000	53070	113810	51623	31	33	35	36

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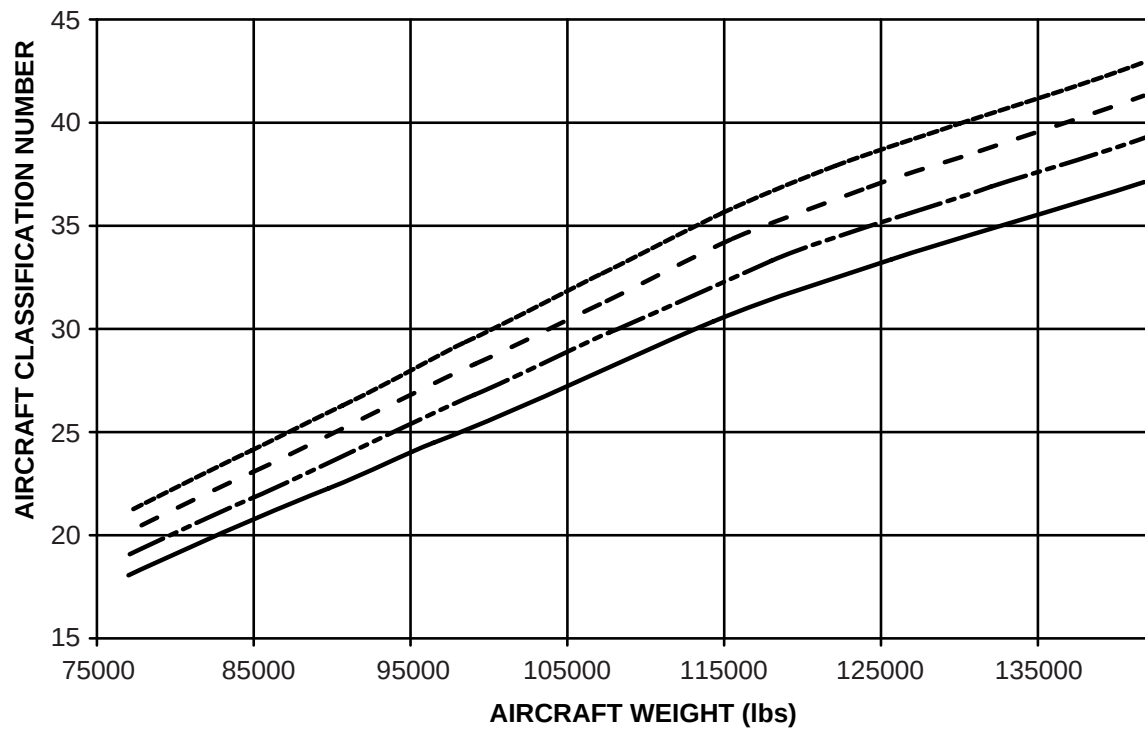
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A/C Gross Weight (lb)	A/C Gross Weight (Kg)	MLG Load (lb)	MLG Load (Kg)	ACN High Strength K=150 MN/m3	ACN Medium Strength K=80 MN/m3	ACN Low Strength K=40 MN/m3	ACN Ultra-Low Strength K=20 MN/m3
116000	52616	112901	51210	31	33	35	36
115000	52163	111828	50724	31	32	34	36
114000	51709	110756	50238	30	32	34	35
113000	51255	109683	49751	30	32	33	35
112000	50802	108610	49264	30	31	33	35
111000	50348	107538	48778	29	31	33	34
110000	49895	106465	48291	29	31	32	34
109000	49441	105393	47805	29	30	32	33
108000	48987	104320	47318	28	30	32	33
107000	48534	103248	46832	28	30	31	33
106000	48080	102175	46345	28	29	31	32
105000	47627	101103	45859	27	29	31	32
104000	47173	100030	45372	27	29	30	32
103000	46720	98958	44886	27	28	30	31
102000	46266	97885	44399	26	28	29	31
101000	45812	96813	43913	26	28	29	30
100000	45359	95740	43426	26	27	29	30
99000	44905	94668	42940	25	27	28	30
98000	44452	93595	42453	25	26	28	29
97000	43998	92523	41967	25	26	28	29
96000	43544	91450	41480	24	26	27	28
95000	43091	90378	40994	24	25	27	28
94000	42637	89305	40508	24	25	26	28
93000	42184	88232	40021	23	25	26	27
92000	41730	87160	39535	23	24	26	27
91000	41276	86087	39048	23	24	25	27

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A/C Gross Weight (lb)	A/C Gross Weight (Kg)	MLG Load (lb)	MLG Load (Kg)	ACN High Strength K=150 MN/m ³	ACN Medium Strength K=80 MN/m ³	ACN Low Strength K=40 MN/m ³	ACN Ultra-Low Strength K=20 MN/m ³
90000	40823	85015	38562	22	24	25	26
89000	40369	83942	38075	22	23	25	26
88000	39916	82870	37589	22	23	24	25
87000	39462	81797	37102	21	23	24	25
86000	39008	80725	36616	21	22	24	25
85000	38555	79652	36129	21	22	23	24
84000	38101	78580	35643	20	22	23	24
83000	37648	77507	35156	20	21	22	23
82000	37194	76435	34670	20	21	22	23
81000	36740	75362	34183	19	21	22	23
80000	36287	74290	33697	19	20	21	22
79000	35833	73217	33210	19	20	21	22
78000	35380	72145	32724	18	19	21	22
77000	34926	71072	32237	18	19	20	21

RIGID PAVEMENT - AFT CENTER OF GRAVITY A220-100



LEGEND

- Ultra low strength $k=20 \text{ mn/m}^3$.
- - - Low strength $k=40 \text{ mn/m}^3$.
- Medium strength $k=80 \text{ mn/m}^3$.
- High strength $k=150 \text{ mn/m}^3$.

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Figure 1 ACN results - Rigid pavement

Applicability: 50001-50061, 50063-50065, 50068, 50070, 50072-50077, 50079-54999

Table 7 Aircraft Classification Number (ACN) RESULTS FOR MOST AFT C.G. FLEXIBLE PAVEMENT

A/C Gross Weight (lb)	A/C Gross Weight (kg)	MLG Load (lb)	MLG Load (kg)	ACN High Strength CBR=15	ACN Medium Strength CBR=10	ACN Low Strength CBR=6	ACN Ultra-Low Strength CBR=3
141500	64183	131518	59655	33	34	38	43
140500	63729	130750	59307	33	34	37	43
140000	63502	130406	59151	33	34	37	42
139000	63049	129719	58839	32	33	37	42
138000	62595	129031	58527	32	33	37	42
137000	62142	128343	58215	32	33	36	42
136000	61688	127655	57903	32	33	36	41
135000	61234	126967	57591	32	33	36	41
134000	60781	126280	57279	31	32	36	41
133000	60327	125592	56967	31	32	35	41
132000	59874	124904	56655	31	32	35	40
131000	59420	124216	56343	31	32	35	40
130000	58967	123528	56031	31	32	35	40
129000	58513	122840	55719	30	31	34	40
128000	58059	122153	55407	30	31	34	39
127000	57606	121465	55095	30	31	34	39
126000	57152	120777	54783	30	31	34	39
125000	56699	120089	54471	30	31	33	38
124000	56245	119401	54159	29	30	33	38
123000	55791	118713	53847	29	30	33	38
122000	55338	118026	53535	29	30	33	38
121000	54884	117338	53223	29	30	33	37
120500	54657	116994	53067	29	30	32	37
120000	54431	116539	52861	28	30	32	37

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A/C Gross Weight (lb)	A/C Gross Weight (kg)	MLG Load (lb)	MLG Load (kg)	ACN High Strength CBR=15	ACN Medium Strength CBR=10	ACN Low Strength CBR=6	ACN Ultra-Low Strength CBR=3
119000	53977	115629	52448	28	29	32	37
118000	53523	114720	52036	28	29	32	36
117000	53070	113810	51623	28	29	31	36
116000	52616	112901	51210	27	29	31	36
115000	52163	111828	50724	27	28	31	35
114000	51709	110756	50238	27	28	30	35
113000	51255	109683	49751	27	28	30	35
112000	50802	108610	49264	26	27	30	34
111000	50348	107538	48778	26	27	29	34
110000	49895	106465	48291	26	27	29	33
109000	49441	105393	47805	25	26	29	33
108000	48987	104320	47318	25	26	28	33
107000	48534	103248	46832	25	26	28	32
106000	48080	102175	46345	25	25	28	32
105000	47627	101103	45859	24	25	27	31
104000	47173	100030	45372	24	25	27	31
103000	46720	98958	44886	24	25	27	31
102000	46266	97885	44399	23	24	26	30
101000	45812	96813	43913	23	24	26	30
100000	45359	95740	43426	23	24	26	29
99000	44905	94668	42940	23	23	25	29
98000	44452	93595	42453	22	23	25	29
97000	43998	92523	41967	22	23	25	28
96000	43544	91450	41480	22	22	24	28
95000	43091	90378	40994	21	22	24	27
94000	42637	89305	40508	21	22	23	27

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A/C Gross Weight (lb)	A/C Gross Weight (kg)	MLG Load (lb)	MLG Load (kg)	ACN High Strength CBR=15	ACN Medium Strength CBR=10	ACN Low Strength CBR=6	ACN Ultra-Low Strength CBR=3
93000	42184	88232	40021	21	21	23	27
92000	41730	87160	39535	21	21	23	26
91000	41276	86087	39048	20	21	22	26
90000	40823	85015	38562	20	21	22	25
89000	40369	83942	38075	20	20	22	25
88000	39916	82870	37589	20	20	21	25
87000	39462	81797	37102	19	20	21	24
86000	39008	80725	36616	19	19	21	24
85000	38555	79652	36129	19	19	20	23
84000	38101	78580	35643	18	19	20	23
83000	37648	77507	35156	18	18	20	23
82000	37194	76435	34670	18	18	19	22
81000	36740	75362	34183	18	18	19	22
80000	36287	74290	33697	17	17	19	21
79000	35833	73217	33210	17	17	18	21
78000	35380	72145	32724	17	17	18	21
77000	34926	71072	32237	16	17	18	20

Applicability: 50010-50017, 50020-50067*Table 8 Aircraft Classification Number (ACN) RESULTS FOR MOST AFT C.G. FLEXIBLE PAVEMENT*

A/C Gross Weight (lb)	A/C Gross Weight (kg)	MLG Load (lb)	MLG Load (kg)	ACN High Strength CBR=15	ACN Medium Strength CBR=10	ACN Low Strength CBR=6	ACN Ultra-Low Strength CBR=3
135000	61234	126967	57591	32	33	36	41
134000	60781	126280	57279	31	32	36	41
133000	60327	125592	56967	31	32	35	41
132000	59874	124904	56655	31	32	35	40

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BD500-A-J00-00-00-11AAA-030A-A

A/C Gross Weight (lb)	A/C Gross Weight (kg)	MLG Load (lb)	MLG Load (kg)	ACN High Strength CBR=15	ACN Medium Strength CBR=10	ACN Low Strength CBR=6	ACN Ultra-Low Strength CBR=3
131000	59420	124216	56343	31	32	35	40
130000	58967	123528	56031	31	32	35	40
129000	58513	122840	55719	30	31	34	40
128000	58059	122153	55407	30	31	34	39
127000	57606	121465	55095	30	31	34	39
126000	57152	120777	54783	30	31	34	39
125000	56699	120089	54471	30	31	33	38
124000	56245	119401	54159	29	30	33	38
123000	55791	118713	53847	29	30	33	38
122000	55338	118026	53535	29	30	33	38
121000	54884	117338	53223	29	30	33	37
120500	54657	116994	53067	29	30	32	37
120000	54431	116539	52861	28	30	32	37
119000	53977	115629	52448	28	29	32	37
118000	53523	114720	52036	28	29	32	36
117000	53070	113810	51623	28	29	31	36
116000	52616	112901	51210	27	29	31	36
115000	52163	111828	50724	27	28	31	35
114000	51709	110756	50238	27	28	30	35
113000	51255	109683	49751	27	28	30	35
112000	50802	108610	49264	26	27	30	34
111000	50348	107538	48778	26	27	29	34
110000	49895	106465	48291	26	27	29	33
109000	49441	105393	47805	25	26	29	33
108000	48987	104320	47318	25	26	28	33
107000	48534	103248	46832	25	26	28	32

A/C Gross Weight (lb)	A/C Gross Weight (kg)	MLG Load (lb)	MLG Load (kg)	ACN High Strength CBR=15	ACN Medium Strength CBR=10	ACN Low Strength CBR=6	ACN Ultra-Low Strength CBR=3
106000	48080	102175	46345	25	25	28	32
105000	47627	101103	45859	24	25	27	31
104000	47173	100030	45372	24	25	27	31
103000	46720	98958	44886	24	25	27	31
102000	46266	97885	44399	23	24	26	30
101000	45812	96813	43913	23	24	26	30
100000	45359	95740	43426	23	24	26	29
99000	44905	94668	42940	23	23	25	29
98000	44452	93595	42453	22	23	25	29
97000	43998	92523	41967	22	23	25	28
96000	43544	91450	41480	22	22	24	28
95000	43091	90378	40994	21	22	24	27
94000	42637	89305	40508	21	22	23	27
93000	42184	88232	40021	21	21	23	27
92000	41730	87160	39535	21	21	23	26
91000	41276	86087	39048	20	21	22	26
90000	40823	85015	38562	20	21	22	25
89000	40369	83942	38075	20	20	22	25
88000	39916	82870	37589	20	20	21	25
87000	39462	81797	37102	19	20	21	24
86000	39008	80725	36616	19	19	21	24
85000	38555	79652	36129	19	19	20	23
84000	38101	78580	35643	18	19	20	23
83000	37648	77507	35156	18	18	20	23
82000	37194	76435	34670	18	18	19	22
81000	36740	75362	34183	18	18	19	22

A/C Gross Weight (lb)	A/C Gross Weight (kg)	MLG Load (lb)	MLG Load (kg)	ACN High Strength CBR=15	ACN Medium Strength CBR=10	ACN Low Strength CBR=6	ACN Ultra-Low Strength CBR=3
80000	36287	74290	33697	17	17	19	21
79000	35833	73217	33210	17	17	18	21
78000	35380	72145	32724	17	17	18	21
77000	34926	71072	32237	16	17	18	20

Applicability: 50069, 50071, 50078

Table 9 Aircraft Classification Number (ACN) RESULTS FOR MOST AFT C.G. FLEXIBLE PAVEMENT

A/C Gross Weight (lb)	A/C Gross Weight (kg)	MLG Load (lb)	MLG Load (kg)	ACN High Strength CBR=15	ACN Medium Strength CBR=10	ACN Low Strength CBR=6	ACN Ultra-Low Strength CBR=3
139000	63049	129719	58839	32	33	37	42
138000	62595	129031	58527	32	33	37	42
137000	62142	128343	58215	32	33	36	42
136000	61688	127655	57903	32	33	36	41
135000	61234	126967	57591	32	33	36	41
134000	60781	126280	57279	31	32	36	41
133000	60327	125592	56967	31	32	35	41
132000	59874	124904	56655	31	32	35	40
131000	59420	124216	56343	31	32	35	40
130000	58967	123528	56031	31	32	35	40
129000	58513	122840	55719	30	31	34	40
128000	58059	122153	55407	30	31	34	39
127000	57606	121465	55095	30	31	34	39
126000	57152	120777	54783	30	31	34	39
125000	56699	120089	54471	30	31	33	38
124000	56245	119401	54159	29	30	33	38
123000	55791	118713	53847	29	30	33	38

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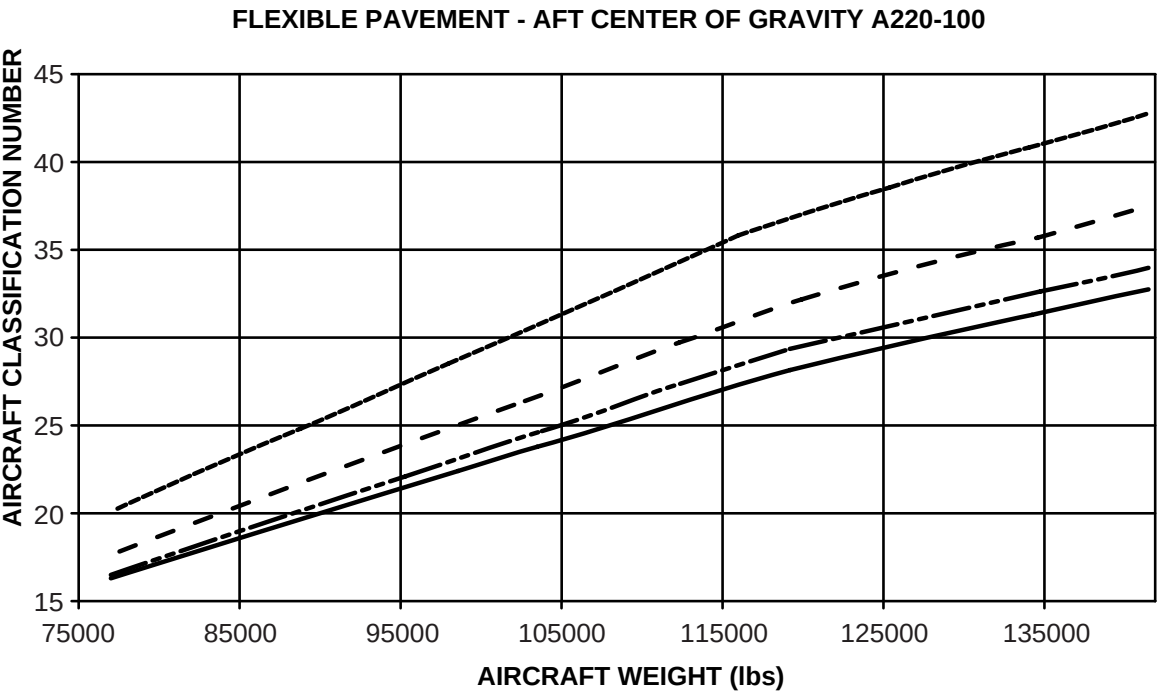
A220

A/C Gross Weight (lb)	A/C Gross Weight (kg)	MLG Load (lb)	MLG Load (kg)	ACN High Strength CBR=15	ACN Medium Strength CBR=10	ACN Low Strength CBR=6	ACN Ultra-Low Strength CBR=3
122000	55338	118026	53535	29	30	33	38
121000	54884	117338	53223	29	30	33	37
120500	54657	116994	53067	29	30	32	37
120000	54431	116539	52861	28	30	32	37
119000	53977	115629	52448	28	29	32	37
118000	53523	114720	52036	28	29	32	36
117000	53070	113810	51623	28	29	31	36
116000	52616	112901	51210	27	29	31	36
115000	52163	111828	50724	27	28	31	35
114000	51709	110756	50238	27	28	30	35
113000	51255	109683	49751	27	28	30	35
112000	50802	108610	49264	26	27	30	34
111000	50348	107538	48778	26	27	29	34
110000	49895	106465	48291	26	27	29	33
109000	49441	105393	47805	25	26	29	33
108000	48987	104320	47318	25	26	28	33
107000	48534	103248	46832	25	26	28	32
106000	48080	102175	46345	25	25	28	32
105000	47627	101103	45859	24	25	27	31
104000	47173	100030	45372	24	25	27	31
103000	46720	98958	44886	24	25	27	31
102000	46266	97885	44399	23	24	26	30
101000	45812	96813	43913	23	24	26	30
100000	45359	95740	43426	23	24	26	29
99000	44905	94668	42940	23	23	25	29
98000	44452	93595	42453	22	23	25	29

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A/C Gross Weight (lb)	A/C Gross Weight (kg)	MLG Load (lb)	MLG Load (kg)	ACN High Strength CBR=15	ACN Medium Strength CBR=10	ACN Low Strength CBR=6	ACN Ultra-Low Strength CBR=3
97000	43998	92523	41967	22	23	25	28
96000	43544	91450	41480	22	22	24	28
95000	43091	90378	40994	21	22	24	27
94000	42637	89305	40508	21	22	23	27
93000	42184	88232	40021	21	21	23	27
92000	41730	87160	39535	21	21	23	26
91000	41276	86087	39048	20	21	22	26
90000	40823	85015	38562	20	21	22	25
89000	40369	83942	38075	20	20	22	25
88000	39916	82870	37589	20	20	21	25
87000	39462	81797	37102	19	20	21	24
86000	39008	80725	36616	19	19	21	24
85000	38555	79652	36129	19	19	20	23
84000	38101	78580	35643	18	19	20	23
83000	37648	77507	35156	18	18	20	23
82000	37194	76435	34670	18	18	19	22
81000	36740	75362	34183	18	18	19	22
80000	36287	74290	33697	17	17	19	21
79000	35833	73217	33210	17	17	18	21
78000	35380	72145	32724	17	17	18	21
77000	34926	71072	32237	16	17	18	20



LEGEND

- Ultra low strength california bearing ratio=3.
- - - Low strength california bearing ratio=6.
- Medium strength california bearing ratio=10.
- High strength california bearing ratio=15.

ICN-BD500-A-J000000-C-3AB48-57664-A-003-01

Figure 2 ACN results - Flexible pavement

3 Aircraft Classification Number (ACN) results for most forward C.G. positions

Refer to Table 10 for tabular format and Fig. 3 for graphical format for the ACN results for rigid pavement and Table 13 for tabular format and Fig. 4 for graphical format for the ACN results for flexible pavement.

Applicability: 50001-50061, 50063-50065, 50068, 50070, 50072-50077, 50079-54999

Table 10 Aircraft Classification Number (ACN) RESULTS FOR MOST FWD C.G. RIGID PAVEMENT

A/C Gross Weight (lb)	A/C Gross Weight (Kg)	MLG Load (lb)	MLG Load (kg)	ACN High Strength K=150 MN/m ³	ACN Medium Strength K=80 MN/m ³	ACN Low Strength K=40 MN/m ³	ACN Ultra-Low Strength K=20 MN/m ³
141500	64183	128471	58273	36	38	40	42
140500	63729	127450	57810	36	38	40	42
140000	63502	127008	57609	36	38	40	41
139000	63049	126123	57208	35	37	39	41
138000	62595	125238	56806	35	37	39	41
137000	62142	124353	56405	35	37	39	40
136000	61688	123469	56004	34	36	38	40
135000	61234	122584	55603	34	36	38	40
134000	60781	121699	55201	34	36	38	39
133000	60327	120814	54800	34	36	37	39
132000	59874	119929	54398	33	35	37	39
131000	59420	119044	53997	33	35	37	38
130000	58967	118160	53596	33	35	36	38
129000	58513	117275	53195	32	34	36	38
128000	58059	116390	52793	32	34	36	37
127000	57606	115505	52392	32	34	36	37
126000	57152	114620	51990	32	33	35	37
125000	56699	113736	51589	31	33	35	36
124000	56245	112851	51188	31	33	35	36
123000	55791	111966	50786	31	32	34	36

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A/C Gross Weight (lb)	A/C Gross Weight (Kg)	MLG Load (lb)	MLG Load (kg)	ACN High Strength K=150 MN/m ³	ACN Medium Strength K=80 MN/m ³	ACN Low Strength K=40 MN/m ³	ACN Ultra-Low Strength K=20 MN/m ³
122000	55338	111081	50385	30	32	34	35
121000	54884	110196	49984	30	32	34	35
120500	54657	109754	49783	30	32	34	35
120000	54431	109267	49562	30	32	33	35
119000	53977	108292	49120	30	31	33	34
118000	53523	107318	48678	29	31	33	34
117000	53070	106344	48236	29	31	32	34
116000	53070	105370	47794	29	30	32	33
115000	52616	104400	47355	28	30	32	33
114000	52163	103429	46914	28	30	31	33
113000	51255	102459	46474	28	29	31	32
112000	50802	101489	46034	27	29	31	32
111000	50348	100519	45594	27	29	30	32
110000	49895	99548	45154	27	28	30	31
109000	49441	98578	44714	27	28	30	31
108000	48987	97608	44274	26	28	29	31
107000	48534	96638	43834	26	27	29	30
106000	48080	95668	43394	26	27	29	30
105000	47627	94697	42953	25	27	28	30
104000	47173	93727	42513	25	27	28	29
103000	46720	92757	42073	25	26	28	29
102000	46266	91787	41633	24	26	27	29
101000	45812	90816	41193	24	26	27	28
100000	45359	89846	40753	24	25	27	28
99000	44905	88876	40313	24	25	26	28
98000	44452	87906	39873	23	25	26	27

See applicability on the
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BD500-A-J00-00-00-11AAA-030A-A

A/C Gross Weight (lb)	A/C Gross Weight (Kg)	MLG Load (lb)	MLG Load (kg)	ACN High Strength K=150 MN/m ³	ACN Medium Strength K=80 MN/m ³	ACN Low Strength K=40 MN/m ³	ACN Ultra-Low Strength K=20 MN/m ³
97000	43998	86935	39433	23	24	26	27
96000	43544	85965	38993	23	24	25	26
95000	43091	84995	38553	22	24	25	26
94000	42637	84025	38113	22	23	25	26
93000	42184	83055	37673	22	23	24	25
92000	41730	82084	37232	21	23	24	25
91000	41276	81114	36792	21	22	24	25
90000	40823	80144	36352	21	22	23	24
89000	40369	79174	35912	21	22	23	24
88000	39916	78203	35472	20	21	23	24
87000	39462	77233	35032	20	21	22	23
86000	39008	76263	34592	20	21	22	23
85000	38555	75293	34152	19	21	22	23
84000	38101	74322	33711	19	20	21	22
83000	37648	73352	33271	19	20	21	22
82000	37194	72382	32831	18	20	21	22
81000	36740	71412	32391	18	19	20	21
80000	36287	70442	31951	18	19	20	21
79000	35833	69471	31511	18	19	20	21
78000	35380	68501	31071	17	18	19	20
77000	34926	67531	30631	17	18	19	20

Applicability: 50010-50017, 50020-50067

Table 11 Aircraft Classification Number (ACN) RESULTS FOR MOST FWD C.G. RIGID PAVEMENT

A/C Gross Weight (lb)	A/C Gross Weight (Kg)	MLG Load (lb)	MLG Load (kg)	ACN High Strength K=150 MN/m ³	ACN Medium Strength K=80 MN/m ³	ACN Low Strength K=40 MN/m ³	ACN Ultra-Low Strength K=20 MN/m ³
135000	61234	122584	55603	34	36	38	40
134000	60781	121699	55201	34	36	38	39
133000	60327	120814	54800	34	36	37	39
132000	59874	119929	54398	33	35	37	39
131000	59420	119044	53997	33	35	37	38
130000	58967	118160	53596	33	35	36	38
129000	58513	117275	53195	32	34	36	38
128000	58059	116390	52793	32	34	36	37
127000	57606	115505	52392	32	34	36	37
126000	57152	114620	51990	32	33	35	37
125000	56699	113736	51589	31	33	35	36
124000	56245	112851	51188	31	33	35	36
123000	55791	111966	50786	31	32	34	36
122000	55338	111081	50385	30	32	34	35
121000	54884	110196	49984	30	32	34	35
120500	54657	109754	49783	30	32	34	35
120000	54431	109267	49562	30	32	33	35
119000	53977	108292	49120	30	31	33	34
118000	53523	107318	48678	29	31	33	34
117000	53070	106344	48236	29	31	32	34
116000	53070	105370	47794	29	30	32	33
115000	52616	104400	47355	28	30	32	33
114000	52163	103429	46914	28	30	31	33
113000	51255	102459	46474	28	29	31	32

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A/C Gross Weight (lb)	A/C Gross Weight (Kg)	MLG Load (lb)	MLG Load (kg)	ACN High Strength K=150 MN/m ³	ACN Medium Strength K=80 MN/m ³	ACN Low Strength K=40 MN/m ³	ACN Ultra-Low Strength K=20 MN/m ³
112000	50802	101489	46034	27	29	31	32
111000	50348	100519	45594	27	29	30	32
110000	49895	99548	45154	27	28	30	31
109000	49441	98578	44714	27	28	30	31
108000	48987	97608	44274	26	28	29	31
107000	48534	96638	43834	26	27	29	30
106000	48080	95668	43394	26	27	29	30
105000	47627	94697	42953	25	27	28	30
104000	47173	93727	42513	25	27	28	29
103000	46720	92757	42073	25	26	28	29
102000	46266	91787	41633	24	26	27	29
101000	45812	90816	41193	24	26	27	28
100000	45359	89846	40753	24	25	27	28
99000	44905	88876	40313	24	25	26	28
98000	44452	87906	39873	23	25	26	27
97000	43998	86935	39433	23	24	26	27
96000	43544	85965	38993	23	24	25	26
95000	43091	84995	38553	22	24	25	26
94000	42637	84025	38113	22	23	25	26
93000	42184	83055	37673	22	23	24	25
92000	41730	82084	37232	21	23	24	25
91000	41276	81114	36792	21	22	24	25
90000	40823	80144	36352	21	22	23	24
89000	40369	79174	35912	21	22	23	24
88000	39916	78203	35472	20	21	23	24
87000	39462	77233	35032	20	21	22	23

A/C Gross Weight (lb)	A/C Gross Weight (Kg)	MLG Load (lb)	MLG Load (kg)	ACN High Strength K=150 MN/m ³	ACN Medium Strength K=80 MN/m ³	ACN Low Strength K=40 MN/m ³	ACN Ultra-Low Strength K=20 MN/m ³
86000	39008	76263	34592	20	21	22	23
85000	38555	75293	34152	19	21	22	23
84000	38101	74322	33711	19	20	21	22
83000	37648	73352	33271	19	20	21	22
82000	37194	72382	32831	18	20	21	22
81000	36740	71412	32391	18	19	20	21
80000	36287	70442	31951	18	19	20	21
79000	35833	69471	31511	18	19	20	21
78000	35380	68501	31071	17	18	19	20
77000	34926	67531	30631	17	18	19	20

Applicability: 50069, 50071, 50078

Table 12 Aircraft Classification Number (ACN) RESULTS FOR MOST FWD C.G. RIGID PAVEMENT

A/C Gross Weight (lb)	A/C Gross Weight (Kg)	MLG Load (lb)	MLG Load (kg)	ACN High Strength K=150 MN/m ³	ACN Medium Strength K=80 MN/m ³	ACN Low Strength K=40 MN/m ³	ACN Ultra-Low Strength K=20 MN/m ³
139000	63049	126123	57208	35	37	39	41
138000	62595	125238	56806	35	37	39	41
137000	62142	124353	56405	35	37	39	40
136000	61688	123469	56004	34	36	38	40
135000	61234	122584	55603	34	36	38	40
134000	60781	121699	55201	34	36	38	39
133000	60327	120814	54800	34	36	37	39
132000	59874	119929	54398	33	35	37	39
131000	59420	119044	53997	33	35	37	38
130000	58967	118160	53596	33	35	36	38

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A/C Gross Weight (lb)	A/C Gross Weight (Kg)	MLG Load (lb)	MLG Load (kg)	ACN High Strength K=150 MN/m ³	ACN Medium Strength K=80 MN/m ³	ACN Low Strength K=40 MN/m ³	ACN Ultra-Low Strength K=20 MN/m ³
129000	58513	117275	53195	32	34	36	38
128000	58059	116390	52793	32	34	36	37
127000	57606	115505	52392	32	34	36	37
126000	57152	114620	51990	32	33	35	37
125000	56699	113736	51589	31	33	35	36
124000	56245	112851	51188	31	33	35	36
123000	55791	111966	50786	31	32	34	36
122000	55338	111081	50385	30	32	34	35
121000	54884	110196	49984	30	32	34	35
120500	54657	109754	49783	30	32	34	35
120000	54431	109267	49562	30	32	33	35
119000	53977	108292	49120	30	31	33	34
118000	53523	107318	48678	29	31	33	34
117000	53070	106344	48236	29	31	32	34
116000	53070	105370	47794	29	30	32	33
115000	52616	104400	47355	28	30	32	33
114000	52163	103429	46914	28	30	31	33
113000	51255	102459	46474	28	29	31	32
112000	50802	101489	46034	27	29	31	32
111000	50348	100519	45594	27	29	30	32
110000	49895	99548	45154	27	28	30	31
109000	49441	98578	44714	27	28	30	31
108000	48987	97608	44274	26	28	29	31
107000	48534	96638	43834	26	27	29	30
106000	48080	95668	43394	26	27	29	30
105000	47627	94697	42953	25	27	28	30

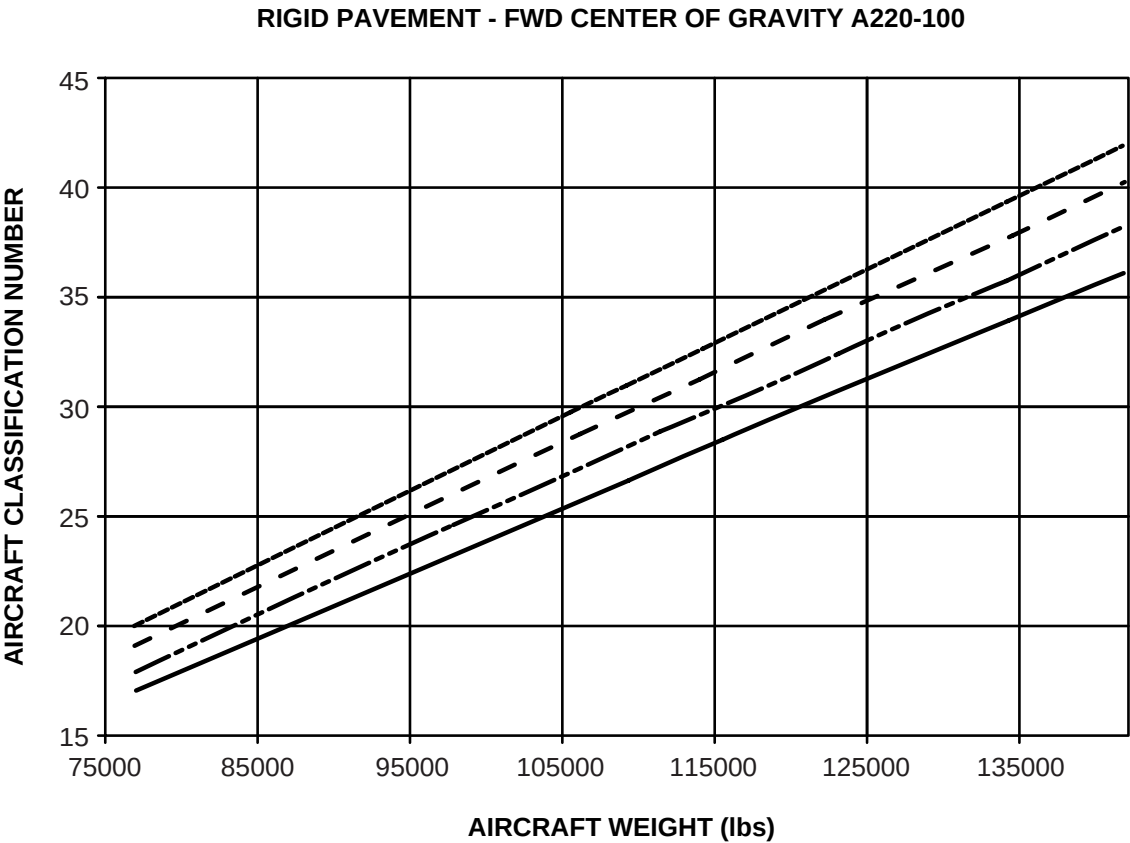
A/C Gross Weight (lb)	A/C Gross Weight (Kg)	MLG Load (lb)	MLG Load (kg)	ACN High Strength K=150 MN/m ³	ACN Medium Strength K=80 MN/m ³	ACN Low Strength K=40 MN/m ³	ACN Ultra-Low Strength K=20 MN/m ³
104000	47173	93727	42513	25	27	28	29
103000	46720	92757	42073	25	26	28	29
102000	46266	91787	41633	24	26	27	29
101000	45812	90816	41193	24	26	27	28
100000	45359	89846	40753	24	25	27	28
99000	44905	88876	40313	24	25	26	28
98000	44452	87906	39873	23	25	26	27
97000	43998	86935	39433	23	24	26	27
96000	43544	85965	38993	23	24	25	26
95000	43091	84995	38553	22	24	25	26
94000	42637	84025	38113	22	23	25	26
93000	42184	83055	37673	22	23	24	25
92000	41730	82084	37232	21	23	24	25
91000	41276	81114	36792	21	22	24	25
90000	40823	80144	36352	21	22	23	24
89000	40369	79174	35912	21	22	23	24
88000	39916	78203	35472	20	21	23	24
87000	39462	77233	35032	20	21	22	23
86000	39008	76263	34592	20	21	22	23
85000	38555	75293	34152	19	21	22	23
84000	38101	74322	33711	19	20	21	22
83000	37648	73352	33271	19	20	21	22
82000	37194	72382	32831	18	20	21	22
81000	36740	71412	32391	18	19	20	21
80000	36287	70442	31951	18	19	20	21
79000	35833	69471	31511	18	19	20	21

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A/C Gross Weight (lb)	A/C Gross Weight (Kg)	MLG Load (lb)	MLG Load (kg)	ACN High Strength K=150 MN/m ³	ACN Medium Strength K=80 MN/m ³	ACN Low Strength K=40 MN/m ³	ACN Ultra-Low Strength K=20 MN/m ³
78000	35380	68501	31071	17	18	19	20
77000	34926	67531	30631	17	18	19	20

This publication has been superseded by the Aircraft Characteristics Publication (ACP).



LEGEND

- Ultra low strength $k=20 \text{ mn/m}^3$.
- - - Low strength $k=40 \text{ mn/m}^3$.
- Medium strength $k=80 \text{ mn/m}^3$.
- High strength $k=150 \text{ mn/m}^3$.

ICN-BD500-A-J000000-C-3AB48-57665-A-003-01
Figure 3 ACN results - Rigid pavement

Applicability: 50001-50061, 50063-50065, 50068, 50070, 50072-50077, 50079-54999

Table 13 Aircraft Classification Number (ACN) RESULTS FOR MOST FWD C.G. FLEXIBLE PAVEMENT

A/C Gross Weight (lb)	A/C Gross Weight (Kg)	MLG Load (lb)	MLG Load (kg)	ACN High Strength CBR=15	ACN Medium Strength CBR=10	ACN Low Strength CBR=6	ACN Ultra-Low Strength CBR=3
141500	64183	128471	58273	32	33	36	42
140500	63729	127450	57810	32	33	36	41
140000	63502	127008	57609	32	33	36	41
139000	63049	126123	57208	31	32	36	41
138000	62595	125238	56806	31	32	35	40
137000	62142	124353	56405	31	32	35	40
136000	61688	123469	56004	31	32	35	40
135000	61234	122584	55603	30	31	34	39
134000	60781	121699	55201	30	31	34	39
133000	60327	120814	54800	30	31	34	39
132000	59874	119929	54398	29	31	33	38
131000	59420	119044	53997	29	30	33	38
130000	58967	118160	53596	29	30	33	38
129000	58513	117275	53195	29	30	32	37
128000	58059	116390	52793	28	29	32	37
127000	57606	115505	52392	28	29	32	37
126000	57152	114620	51990	28	29	32	36
125000	56699	113736	51589	28	29	31	36
124000	56245	112851	51188	27	28	31	36
123000	55791	111966	50786	27	28	31	35
122000	55338	111081	50385	27	28	30	35
121000	54884	110196	49984	27	28	30	35
120500	54657	109754	49783	27	28	30	35
120000	54431	109267	49562	26	27	30	34

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A/C Gross Weight (lb)	A/C Gross Weight (Kg)	MLG Load (lb)	MLG Load (kg)	ACN High Strength CBR=15	ACN Medium Strength CBR=10	ACN Low Strength CBR=6	ACN Ultra-Low Strength CBR=3
119000	54204	108292	49120	26	27	29	34
118000	53533	107318	48678	26	27	29	34
117000	53070	106344	48236	26	26	29	33
116000	52389	105370	47794	25	26	28	33
115000	52163	104400	47355	25	26	28	33
114000	51709	103429	46914	25	26	28	32
113000	51255	102459	46474	25	25	28	32
112000	50802	101489	46034	24	25	27	31
111000	50348	100519	45594	24	25	27	31
110000	49895	99548	45154	24	24	27	31
109000	49441	98578	44714	24	24	26	30
108000	48987	97608	44274	23	24	26	30
107000	48534	96638	43834	23	24	26	30
106000	48080	95668	43394	23	23	25	29
105000	47627	94697	42953	23	23	25	29
104000	47173	93727	42513	22	23	25	29
103000	46720	92757	42073	22	23	25	28
102000	46266	91787	41633	22	22	24	28
101000	45812	90816	41193	22	22	24	28
100000	45359	89846	40753	21	22	24	27
99000	44905	88876	40313	21	22	23	27
98000	44452	87906	39873	21	21	23	26
97000	43998	86935	39433	21	21	23	26
96000	43544	85965	38993	20	21	22	26
95000	43091	84995	38553	20	20	22	25
94000	42637	84025	38113	20	20	22	25

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A/C Gross Weight (lb)	A/C Gross Weight (Kg)	MLG Load (lb)	MLG Load (kg)	ACN High Strength CBR=15	ACN Medium Strength CBR=10	ACN Low Strength CBR=6	ACN Ultra-Low Strength CBR=3
93000	42184	83055	37673	20	20	22	25
92000	41730	82084	37232	19	20	21	24
91000	41276	81114	36792	19	19	21	24
90000	40823	80144	36352	19	19	21	24
89000	40369	79174	35912	19	19	20	23
88000	39916	78203	35472	18	19	20	23
87000	39462	77233	35032	18	18	20	22
86000	39008	76263	34592	18	18	19	22
85000	38555	75293	34152	18	18	19	22
84000	38101	74322	33711	17	17	19	21
83000	37648	73352	33271	17	17	19	21
82000	37194	72382	32831	17	17	18	21
81000	36740	71412	32391	17	17	18	20
80000	36287	70442	31951	16	16	18	20
79000	35833	69471	31511	16	16	17	20
78000	35380	68501	31071	16	16	17	19
77000	34926	67531	30631	16	16	17	19

Applicability: 50010-50017, 50020-50067

Table 14 Aircraft Classification Number (ACN) RESULTS FOR MOST FWD C.G. FLEXIBLE PAVEMENT

A/C Gross Weight (lb)	A/C Gross Weight (Kg)	MLG Load (lb)	MLG Load (kg)	ACN High Strength CBR=15	ACN Medium Strength CBR=10	ACN Low Strength CBR=6	ACN Ultra-Low Strength CBR=3
135000	61234	122584	55603	30	31	34	39
134000	60781	121699	55201	30	31	34	39
133000	60327	120814	54800	30	31	34	39
132000	59874	119929	54398	29	31	33	38

See applicability on the first page of the DM
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BD500-A-J00-00-00-11AAA-030A-A

A/C Gross Weight (lb)	A/C Gross Weight (Kg)	MLG Load (lb)	MLG Load (kg)	ACN High Strength CBR=15	ACN Medium Strength CBR=10	ACN Low Strength CBR=6	ACN Ultra-Low Strength CBR=3
131000	59420	119044	53997	29	30	33	38
130000	58967	118160	53596	29	30	33	38
129000	58513	117275	53195	29	30	32	37
128000	58059	116390	52793	28	29	32	37
127000	57606	115505	52392	28	29	32	37
126000	57152	114620	51990	28	29	32	36
125000	56699	113736	51589	28	29	31	36
124000	56245	112851	51188	27	28	31	36
123000	55791	111966	50786	27	28	31	35
122000	55338	111081	50385	27	28	30	35
121000	54884	110196	49984	27	28	30	35
120500	54657	109754	49783	27	28	30	35
120000	54431	109267	49562	26	27	30	34
119000	54204	108292	49120	26	27	29	34
118000	53533	107318	48678	26	27	29	34
117000	53070	106344	48236	26	26	29	33
116000	52389	105370	47794	25	26	28	33
115000	52163	104400	47355	25	26	28	33
114000	51709	103429	46914	25	26	28	32
113000	51255	102459	46474	25	25	28	32
112000	50802	101489	46034	24	25	27	31
111000	50348	100519	45594	24	25	27	31
110000	49895	99548	45154	24	24	27	31
109000	49441	98578	44714	24	24	26	30
108000	48987	97608	44274	23	24	26	30
107000	48534	96638	43834	23	24	26	30

See applicability on the first page of the DM
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A/C Gross Weight (lb)	A/C Gross Weight (Kg)	MLG Load (lb)	MLG Load (kg)	ACN High Strength CBR=15	ACN Medium Strength CBR=10	ACN Low Strength CBR=6	ACN Ultra-Low Strength CBR=3
106000	48080	95668	43394	23	23	25	29
105000	47627	94697	42953	23	23	25	29
104000	47173	93727	42513	22	23	25	29
103000	46720	92757	42073	22	23	25	28
102000	46266	91787	41633	22	22	24	28
101000	45812	90816	41193	22	22	24	28
100000	45359	89846	40753	21	22	24	27
99000	44905	88876	40313	21	22	23	27
98000	44452	87906	39873	21	21	23	26
97000	43998	86935	39433	21	21	23	26
96000	43544	85965	38993	20	21	22	26
95000	43091	84995	38553	20	20	22	25
94000	42637	84025	38113	20	20	22	25
93000	42184	83055	37673	20	20	22	25
92000	41730	82084	37232	19	20	21	24
91000	41276	81114	36792	19	19	21	24
90000	40823	80144	36352	19	19	21	24
89000	40369	79174	35912	19	19	20	23
88000	39916	78203	35472	18	19	20	23
87000	39462	77233	35032	18	18	20	22
86000	39008	76263	34592	18	18	19	22
85000	38555	75293	34152	18	18	19	22
84000	38101	74322	33711	17	17	19	21
83000	37648	73352	33271	17	17	19	21
82000	37194	72382	32831	17	17	18	21
81000	36740	71412	32391	17	17	18	20

A/C Gross Weight (lb)	A/C Gross Weight (Kg)	MLG Load (lb)	MLG Load (kg)	ACN High Strength CBR=15	ACN Medium Strength CBR=10	ACN Low Strength CBR=6	ACN Ultra-Low Strength CBR=3
80000	36287	70442	31951	16	16	18	20
79000	35833	69471	31511	16	16	17	20
78000	35380	68501	31071	16	16	17	19
77000	34926	67531	30631	16	16	17	19

Applicability: 50069, 50071, 50078

Table 15 Aircraft Classification Number (ACN) RESULTS FOR MOST FWD C.G. FLEXIBLE PAVEMENT

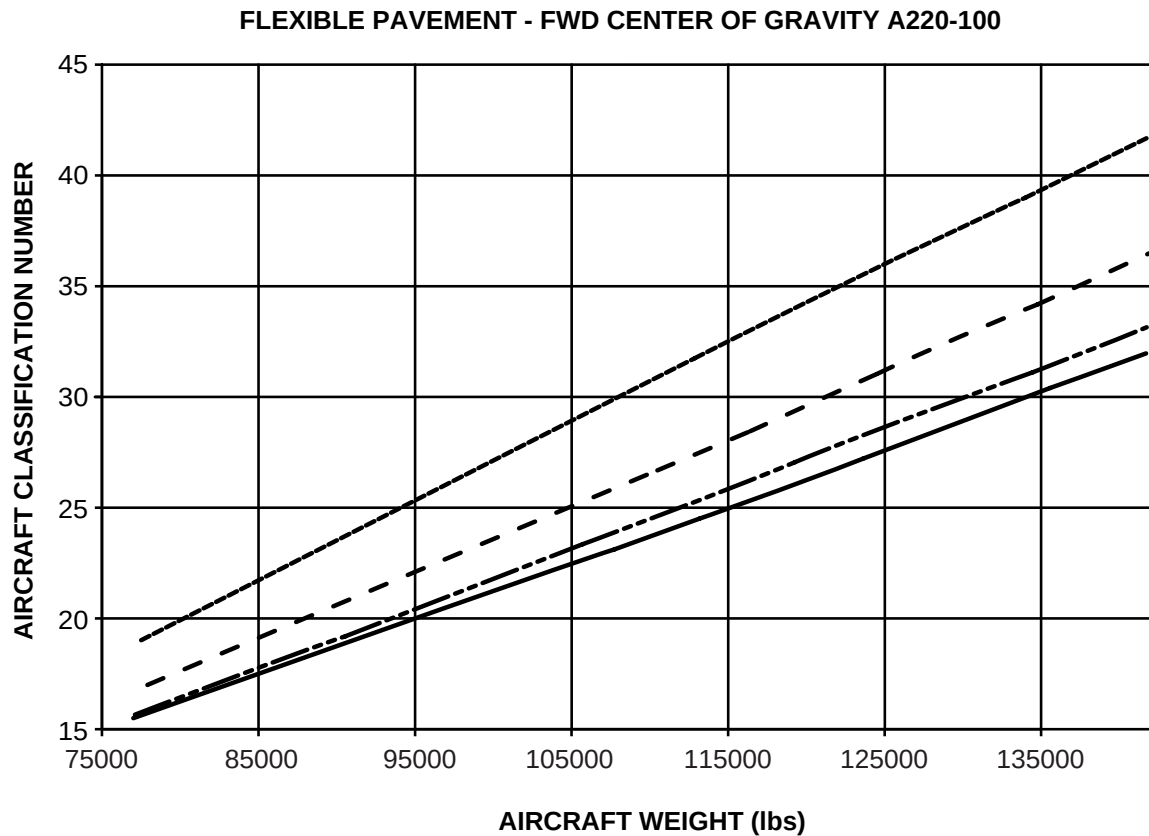
A/C Gross Weight (lb)	A/C Gross Weight (Kg)	MLG Load (lb)	MLG Load (kg)	ACN High Strength CBR=15	ACN Medium Strength CBR=10	ACN Low Strength CBR=6	ACN Ultra-Low Strength CBR=3
139000	63049	126123	57208	31	32	36	41
138000	62595	125238	56806	31	32	35	40
137000	62142	124353	56405	31	32	35	40
136000	61688	123469	56004	31	32	35	40
135000	61234	122584	55603	30	31	34	39
134000	60781	121699	55201	30	31	34	39
133000	60327	120814	54800	30	31	34	39
132000	59874	119929	54398	29	31	33	38
131000	59420	119044	53997	29	30	33	38
130000	58967	118160	53596	29	30	33	38
129000	58513	117275	53195	29	30	32	37
128000	58059	116390	52793	28	29	32	37
127000	57606	115505	52392	28	29	32	37
126000	57152	114620	51990	28	29	32	36
125000	56699	113736	51589	28	29	31	36
124000	56245	112851	51188	27	28	31	36
123000	55791	111966	50786	27	28	31	35

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A/C Gross Weight (lb)	A/C Gross Weight (Kg)	MLG Load (lb)	MLG Load (kg)	ACN High Strength CBR=15	ACN Medium Strength CBR=10	ACN Low Strength CBR=6	ACN Ultra-Low Strength CBR=3
122000	55338	111081	50385	27	28	30	35
121000	54884	110196	49984	27	28	30	35
120500	54657	109754	49783	27	28	30	35
120000	54431	109267	49562	26	27	30	34
119000	54204	108292	49120	26	27	29	34
118000	53533	107318	48678	26	27	29	34
117000	53070	106344	48236	26	26	29	33
116000	52389	105370	47794	25	26	28	33
115000	52163	104400	47355	25	26	28	33
114000	51709	103429	46914	25	26	28	32
113000	51255	102459	46474	25	25	28	32
112000	50802	101489	46034	24	25	27	31
111000	50348	100519	45594	24	25	27	31
110000	49895	99548	45154	24	24	27	31
109000	49441	98578	44714	24	24	26	30
108000	48987	97608	44274	23	24	26	30
107000	48534	96638	43834	23	24	26	30
106000	48080	95668	43394	23	23	25	29
105000	47627	94697	42953	23	23	25	29
104000	47173	93727	42513	22	23	25	29
103000	46720	92757	42073	22	23	25	28
102000	46266	91787	41633	22	22	24	28
101000	45812	90816	41193	22	22	24	28
100000	45359	89846	40753	21	22	24	27
99000	44905	88876	40313	21	22	23	27
98000	44452	87906	39873	21	21	23	26

A/C Gross Weight (lb)	A/C Gross Weight (Kg)	MLG Load (lb)	MLG Load (kg)	ACN High Strength CBR=15	ACN Medium Strength CBR=10	ACN Low Strength CBR=6	ACN Ultra-Low Strength CBR=3
97000	43998	86935	39433	21	21	23	26
96000	43544	85965	38993	20	21	22	26
95000	43091	84995	38553	20	20	22	25
94000	42637	84025	38113	20	20	22	25
93000	42184	83055	37673	20	20	22	25
92000	41730	82084	37232	19	20	21	24
91000	41276	81114	36792	19	19	21	24
90000	40823	80144	36352	19	19	21	24
89000	40369	79174	35912	19	19	20	23
88000	39916	78203	35472	18	19	20	23
87000	39462	77233	35032	18	18	20	22
86000	39008	76263	34592	18	18	19	22
85000	38555	75293	34152	18	18	19	22
84000	38101	74322	33711	17	17	19	21
83000	37648	73352	33271	17	17	19	21
82000	37194	72382	32831	17	17	18	21
81000	36740	71412	32391	17	17	18	20
80000	36287	70442	31951	16	16	18	20
79000	35833	69471	31511	16	16	17	20
78000	35380	68501	31071	16	16	17	19
77000	34926	67531	30631	16	16	17	19



LEGEND

- Ultra low strength california bearing ratio=3.
- - - Low strength california bearing ratio=6.
- . - Medium strength california bearing ratio=10.
- High strength california bearing ratio=15.

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Figure 4 ACN results - Flexible pavement

4 Load Classification Number (LCN) results for most aft C.G. positions

Refer to Table 16 for tabular format and Fig. 5 for graphical format for the LCN results for rigid pavement and Table 19 for tabular format and Fig. 6 for graphical format for the LCN results for flexible pavement.

Applicability: 50001-50061, 50063-50065, 50068, 50070, 50072-50077, 50079-54999

Table 16 Load Classification Number (LCN) RESULTS FOR MOST AFT C.G. RIGID PAVEMENT

Aircraft Weight (lbs)	Aircraft Weight (Kg)	Tire Pressure (psi)	L = 30 inches		L = 40 inches		L = 50 inches	
			ESWL	LCN	ESWL	LCN	ESWL	LCN
77000	34926	200	22634	38	23691	40	24850	43
78000	35380	200	23013	39	24081	41	25254	44
79000	35833	200	23391	39	24472	41	25659	44
80000	36287	200	23769	40	24863	42	26063	45
81000	36740	200	24147	40	25254	42	26467	45
82000	37194	200	24525	41	25645	43	26871	46
83000	37648	200	24904	42	26035	44	27275	47
84000	38101	200	25282	42	26426	44	27679	47
85000	38555	200	25660	43	26817	45	28083	48
86000	39008	200	26038	44	27208	46	28488	49
87000	39462	200	26416	44	27599	46	28892	49
88000	39916	200	26795	45	27989	47	29296	50
89000	40369	200	27173	45	28380	47	29700	50
90000	40823	200	27551	46	28771	48	30104	51
91000	41276	200	27929	47	29162	49	30508	52
92000	41730	200	28307	47	29552	49	30912	52
93000	42184	200	28686	48	29943	50	31317	53
94000	42637	200	29064	48	30334	50	31721	53
95000	43091	200	29442	49	30725	51	32125	54
96000	43544	200	29820	50	31116	52	32529	55
97000	43998	200	30198	50	31506	52	32933	55

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Aircraft Weight (lbs)	Aircraft Weight (Kg)	Tire Pressure (psi)	L = 30 inches		L = 40 inches		L = 50 inches	
			ESWL	LCN	ESWL	LCN	ESWL	LCN
98000	44452	200	30577	51	31897	53	33337	56
99000	44905	200	30955	52	32288	54	33741	57
100000	45359	200	31333	52	32679	54	34146	57
101000	45812	200	31711	53	33069	55	34550	58
102000	46266	200	32089	53	33460	55	34954	58
103000	46719	200	32468	54	33851	56	35358	59
104000	47173	200	32846	55	34242	57	35762	60
105000	47627	200	33224	55	34633	57	36166	60
106000	48080	200	33602	56	35023	58	36570	61
107000	48534	200	33980	56	35414	58	36974	61
108000	48987	200	34359	57	35805	59	37379	62
109000	49441	200	34737	58	36196	60	37783	63
110000	49895	200	35115	58	36587	60	38187	63
111000	50348	200	35493	59	36977	61	38591	64
112000	50802	200	35871	60	37368	62	38995	65
113000	51255	200	36250	60	37759	62	39399	65
114000	51709	200	36628	61	38150	63	39803	66
115000	52163	200	37006	61	38540	63	40208	66
116000	52616	200	37384	62	38931	64	40612	67
117000	53070	200	37686	62	39245	65	40939	67
118000	53523	200	37987	63	39559	65	41266	67
119000	53977	200	38288	63	39872	66	41593	68
120000	54431	200	38589	64	40186	67	41921	68
120500	54657	200	38740	64	40343	67	42084	68
121000	54884	200	38868	64	40477	67	42216	68
122000	55338	200	39125	65	40746	67	42481	69
123000	55791	200	39382	65	41015	68	42745	69

Aircraft Weight (lbs)	Aircraft Weight (Kg)	Tire Pressure (psi)	L = 30 inches		L = 40 inches		L = 50 inches	
			ESWL	LCN	ESWL	LCN	ESWL	LCN
124000	56245	200	39639	65	41283	68	43010	69
125000	56699	200	39895	66	41552	68	43274	70
126000	57152	200	40152	66	41821	69	43539	70
127000	57606	200	40409	66	42089	69	43803	70
128000	58059	200	40666	67	42358	69	44068	71
129000	58513	200	40923	67	42627	70	44332	71
130000	58966	200	41179	67	42895	70	44596	71
131000	59420	200	41436	68	43164	70	44861	72
132000	59874	200	41693	68	43433	70	45125	72
133000	60327	200	41950	68	43702	71	45390	72
134000	60781	200	42207	69	43970	71	45654	73
135000	61234	200	42463	69	44239	71	45919	73
136000	61688	200	42720	69	44508	72	46183	73
137000	62142	200	42977	70	44776	72	46448	74
138000	62595	200	43234	70	45045	72	46712	74
139000	63049	200	43491	70	45314	73	46977	74
140000	63502	200	43748	71	45583	73	47241	75
140500	63729	200	43876	71	45717	73	47373	75
141500	64183	200	44134	71	45985	73	47651	75

Applicability: 50010-50017, 50020-50067

Table 17 Load Classification Number (LCN) RESULTS FOR MOST AFT C.G. RIGID PAVEMENT

Aircraft Weight (lbs)	Aircraft Weight (Kg)	Tire Pressure (psi)	L = 30 inches		L = 40 inches		L = 50 inches	
			ESWL	LCN	ESWL	LCN	ESWL	LCN
77000	34926	200	22634	38	23691	40	24850	43
78000	35380	200	23013	39	24081	41	25254	44
79000	35833	200	23391	39	24472	41	25659	44

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Aircraft Weight (lbs)	Aircraft Weight (Kg)	Tire Pressure (psi)	L = 30 inches		L = 40 inches		L = 50 inches	
			ESWL	LCN	ESWL	LCN	ESWL	LCN
80000	36287	200	23769	40	24863	42	26063	45
81000	36740	200	24147	40	25254	42	26467	45
82000	37194	200	24525	41	25645	43	26871	46
83000	37648	200	24904	42	26035	44	27275	47
84000	38101	200	25282	42	26426	44	27679	47
85000	38555	200	25660	43	26817	45	28083	48
86000	39008	200	26038	44	27208	46	28488	49
87000	39462	200	26416	44	27599	46	28892	49
88000	39916	200	26795	45	27989	47	29296	50
89000	40369	200	27173	45	28380	47	29700	50
90000	40823	200	27551	46	28771	48	30104	51
91000	41276	200	27929	47	29162	49	30508	52
92000	41730	200	28307	47	29552	49	30912	52
93000	42184	200	28686	48	29943	50	31317	53
94000	42637	200	29064	48	30334	50	31721	53
95000	43091	200	29442	49	30725	51	32125	54
96000	43544	200	29820	50	31116	52	32529	55
97000	43998	200	30198	50	31506	52	32933	55
98000	44452	200	30577	51	31897	53	33337	56
99000	44905	200	30955	52	32288	54	33741	57
100000	45359	200	31333	52	32679	54	34146	57
101000	45812	200	31711	53	33069	55	34550	58
102000	46266	200	32089	53	33460	55	34954	58
103000	46719	200	32468	54	33851	56	35358	59
104000	47173	200	32846	55	34242	57	35762	60
105000	47627	200	33224	55	34633	57	36166	60
106000	48080	200	33602	56	35023	58	36570	61

Aircraft Weight (lbs)	Aircraft Weight (Kg)	Tire Pressure (psi)	L = 30 inches		L = 40 inches		L = 50 inches	
			ESWL	LCN	ESWL	LCN	ESWL	LCN
107000	48534	200	33980	56	35414	58	36974	61
108000	48987	200	34359	57	35805	59	37379	62
109000	49441	200	34737	58	36196	60	37783	63
110000	49895	200	35115	58	36587	60	38187	63
111000	50348	200	35493	59	36977	61	38591	64
112000	50802	200	35871	60	37368	62	38995	65
113000	51255	200	36250	60	37759	62	39399	65
114000	51709	200	36628	61	38150	63	39803	66
115000	52163	200	37006	61	38540	63	40208	66
116000	52616	200	37384	62	38931	64	40612	67
117000	53070	200	37686	62	39245	65	40939	67
118000	53523	200	37987	63	39559	65	41266	67
119000	53977	200	38288	63	39872	66	41593	68
120000	54431	200	38589	64	40186	67	41921	68
120500	54657	200	38740	64	40343	67	42084	68
121000	54884	200	38868	64	40477	67	42216	68
122000	55338	200	39125	65	40746	67	42481	69
123000	55791	200	39382	65	41015	68	42745	69
124000	56245	200	39639	65	41283	68	43010	69
125000	56699	200	39895	66	41552	68	43274	70
126000	57152	200	40152	66	41821	69	43539	70
127000	57606	200	40409	66	42089	69	43803	70
128000	58059	200	40666	67	42358	69	44068	71
129000	58513	200	40923	67	42627	70	44332	71
130000	58966	200	41179	67	42895	70	44596	71
131000	59420	200	41436	68	43164	70	44861	72
132000	59874	200	41693	68	43433	70	45125	72

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Aircraft Weight (lbs)	Aircraft Weight (Kg)	Tire Pressure (psi)	L = 30 inches		L = 40 inches		L = 50 inches	
			ESWL	LCN	ESWL	LCN	ESWL	LCN
133000	60327	200	41950	68	43702	71	45390	72
134000	60781	200	42207	69	43970	71	45654	73
135000	61234	200	42463	69	44239	71	45919	73

Applicability: 50069, 50071, 50078

Table 18 Load Classification Number (LCN) RESULTS FOR MOST AFT C.G. RIGID PAVEMENT

Aircraft Weight (lbs)	Aircraft Weight (Kg)	Tire Pressure (psi)	L = 30 inches		L = 40 inches		L = 50 inches	
			ESWL	LCN	ESWL	LCN	ESWL	LCN
77000	34926	200	22634	38	23691	40	24850	43
78000	35380	200	23013	39	24081	41	25254	44
79000	35833	200	23391	39	24472	41	25659	44
80000	36287	200	23769	40	24863	42	26063	45
81000	36740	200	24147	40	25254	42	26467	45
82000	37194	200	24525	41	25645	43	26871	46
83000	37648	200	24904	42	26035	44	27275	47
84000	38101	200	25282	42	26426	44	27679	47
85000	38555	200	25660	43	26817	45	28083	48
86000	39008	200	26038	44	27208	46	28488	49
87000	39462	200	26416	44	27599	46	28892	49
88000	39916	200	26795	45	27989	47	29296	50
89000	40369	200	27173	45	28380	47	29700	50
90000	40823	200	27551	46	28771	48	30104	51
91000	41276	200	27929	47	29162	49	30508	52
92000	41730	200	28307	47	29552	49	30912	52
93000	42184	200	28686	48	29943	50	31317	53
94000	42637	200	29064	48	30334	50	31721	53
95000	43091	200	29442	49	30725	51	32125	54

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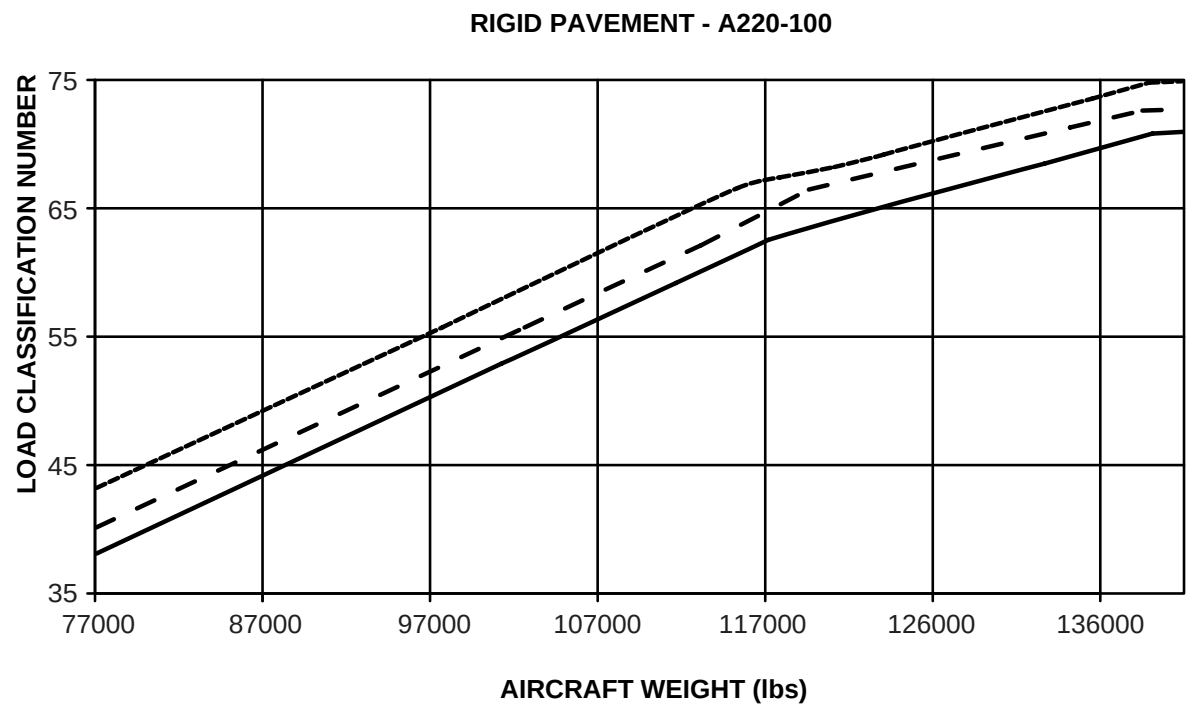
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Aircraft Weight (lbs)	Aircraft Weight (Kg)	Tire Pressure (psi)	L = 30 inches		L = 40 inches		L = 50 inches	
			ESWL	LCN	ESWL	LCN	ESWL	LCN
96000	43544	200	29820	50	31116	52	32529	55
97000	43998	200	30198	50	31506	52	32933	55
98000	44452	200	30577	51	31897	53	33337	56
99000	44905	200	30955	52	32288	54	33741	57
100000	45359	200	31333	52	32679	54	34146	57
101000	45812	200	31711	53	33069	55	34550	58
102000	46266	200	32089	53	33460	55	34954	58
103000	46719	200	32468	54	33851	56	35358	59
104000	47173	200	32846	55	34242	57	35762	60
105000	47627	200	33224	55	34633	57	36166	60
106000	48080	200	33602	56	35023	58	36570	61
107000	48534	200	33980	56	35414	58	36974	61
108000	48987	200	34359	57	35805	59	37379	62
109000	49441	200	34737	58	36196	60	37783	63
110000	49895	200	35115	58	36587	60	38187	63
111000	50348	200	35493	59	36977	61	38591	64
112000	50802	200	35871	60	37368	62	38995	65
113000	51255	200	36250	60	37759	62	39399	65
114000	51709	200	36628	61	38150	63	39803	66
115000	52163	200	37006	61	38540	63	40208	66
116000	52616	200	37384	62	38931	64	40612	67
117000	53070	200	37686	62	39245	65	40939	67
118000	53523	200	37987	63	39559	65	41266	67
119000	53977	200	38288	63	39872	66	41593	68
120000	54431	200	38589	64	40186	67	41921	68
120500	54657	200	38740	64	40343	67	42084	68
121000	54884	200	38868	64	40477	67	42216	68

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Aircraft Weight (lbs)	Aircraft Weight (Kg)	Tire Pressure (psi)	L = 30 inches		L = 40 inches		L = 50 inches	
			ESWL	LCN	ESWL	LCN	ESWL	LCN
122000	55338	200	39125	65	40746	67	42481	69
123000	55791	200	39382	65	41015	68	42745	69
124000	56245	200	39639	65	41283	68	43010	69
125000	56699	200	39895	66	41552	68	43274	70
126000	57152	200	40152	66	41821	69	43539	70
127000	57606	200	40409	66	42089	69	43803	70
128000	58059	200	40666	67	42358	69	44068	71
129000	58513	200	40923	67	42627	70	44332	71
130000	58966	200	41179	67	42895	70	44596	71
131000	59420	200	41436	68	43164	70	44861	72
132000	59874	200	41693	68	43433	70	45125	72
133000	60327	200	41950	68	43702	71	45390	72
134000	60781	200	42207	69	43970	71	45654	73
135000	61234	200	42463	69	44239	71	45919	73
136000	61688	200	42720	69	44508	72	46183	73
137000	62142	200	42977	70	44776	72	46448	74
138000	62595	200	43234	70	45045	72	46712	74
139000	63049	200	43491	70	45314	73	46977	74



LEGEND

- Radius of relative stiffness L=50.00 in. (1270.00 mm).
- - - Radius of relative stiffness L=40.00 in. (1016.00 mm).
- Radius of relative stiffness L=30.00 in. (762.00 mm).

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Figure 5 LCN results - Rigid pavement

Applicability: 50001-50061, 50063-50065, 50068, 50070, 50072-50077, 50079-54999

Table 19 Load Classification Number (LCN) RESULTS FOR MOST AFT C.G. FLEXIBLE PAVEMENT

Aircraft Weight (lbs)	Aircraft Weight (Kg)	Tire Pressure (psi)	Pavement Thickness 10 inches		Pavement Thickness 15 inches		Pavement Thickness 20 inches		Pavement Thickness 30 inches	
			ESWL	LCN	ESWL	LCN	ESWL	LCN	ESWL	LCN
77000	34926	200	17768	31	18843	34	21213	39	25068	45
78000	35380	200	18036	31	19154	34	21557	40	25466	46
79000	35833	200	18304	32	19464	35	21901	40	25863	46
80000	36287	200	18572	32	19775	35	22246	41	26261	47
81000	36740	200	18841	33	20086	36	22590	41	26658	47
82000	37194	200	19109	33	20396	36	22934	42	27055	48
83000	37648	200	19377	34	20707	37	23278	42	27453	48
84000	38101	200	19645	34	21018	37	23622	43	27850	49
85000	38555	200	19913	35	21328	38	23966	43	28247	49
86000	39008	200	20181	35	21639	38	24310	44	28645	50
87000	39462	200	20449	36	21949	39	24654	44	29042	50
88000	39916	200	20717	36	22260	39	24998	45	29440	51
89000	40369	200	20986	37	22571	40	25342	45	29837	51
90000	40823	200	21254	37	22881	40	25687	46	30234	52
91000	41276	200	21522	37	23192	41	26031	46	30632	53
92000	41730	200	21790	38	23503	41	26375	47	31029	53
93000	42184	200	22058	38	23813	42	26719	47	31426	54
94000	42637	200	22326	39	24124	42	27063	48	31824	54
95000	43091	200	22594	39	24434	43	27407	48	32221	55
96000	43544	200	22863	40	24745	43	27751	49	32619	55
97000	43998	200	23131	40	25056	44	28095	49	33016	56
98000	44452	200	23399	41	25366	44	28439	50	33413	56
99000	44905	200	23667	41	25677	45	28783	50	33811	57
100000	45359	200	23935	42	25988	45	29128	51	34208	57

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Aircraft Weight (lbs)	Aircraft Weight (Kg)	Tire Pressure (psi)	Pavement Thickness 10 inches		Pavement Thickness 15 inches		Pavement Thickness 20 inches		Pavement Thickness 30 inches	
			ESWL	LCN	ESWL	LCN	ESWL	LCN	ESWL	LCN
101000	45812	200	24203	42	26298	46	29472	51	34605	58
102000	46266	200	24471	43	26609	46	29816	52	35003	58
103000	46719	200	24739	43	26919	47	30160	52	35400	59
104000	47173	200	25008	43	27230	47	30504	53	35798	60
105000	47627	200	25276	44	27541	48	30848	53	36195	60
106000	48080	200	25544	44	27851	48	31192	54	36592	61
107000	48534	200	25812	45	28162	49	31536	54	36990	61
108000	48987	200	26080	45	28473	49	31880	55	37387	62
109000	49441	200	26348	46	28783	50	32224	55	37784	62
110000	49895	200	26616	46	29094	50	32568	56	38182	63
111000	50348	200	26884	47	29404	51	32913	56	38579	63
112000	50802	200	27153	47	29715	51	33257	57	38977	64
113000	51255	200	27421	48	30026	52	33601	57	39374	64
114000	51709	200	27689	48	30336	52	33945	58	39771	65
115000	52163	200	27957	49	30647	53	34289	58	40169	65
116000	52616	200	28225	49	30958	53	34633	59	40566	66
117000	53070	200	28493	49	31228	53	34931	59	40908	66
118000	53523	200	28660	49	31498	53	35229	60	41250	67
119000	53977	200	28907	50	31768	54	35527	60	41591	67
120000	54431	200	29135	50	32038	54	35825	61	41933	68
120500	54657	200	29248	50	32173	54	35974	61	42104	68
121000	54884	200	29334	50	32276	54	36087	61	42234	68
122000	55338	200	29506	50	32482	55	36314	61	42494	69
123000	55791	200	29678	51	32689	55	36541	62	42753	69
124000	56245	200	29850	51	32895	55	36768	62	43013	69
125000	56699	200	30022	51	33101	56	36995	62	43273	70

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Aircraft Weight (lbs)	Aircraft Weight (Kg)	Tire Pressure (psi)	Pavement Thickness 10 inches		Pavement Thickness 15 inches		Pavement Thickness 20 inches		Pavement Thickness 30 inches	
			ESWL	LCN	ESWL	LCN	ESWL	LCN	ESWL	LCN
126000	57152	200	30194	52	33307	56	37222	62	43532	70
127000	57606	200	30366	52	33513	56	37448	63	43792	71
128000	58059	200	30538	52	33719	57	37675	63	44052	71
129000	58513	200	30710	53	33925	57	37902	63	44312	71
130000	58966	200	30882	53	34131	57	38129	63	44571	72
131000	59420	200	31054	53	34337	58	38356	64	44831	72
132000	59874	200	31226	53	34544	58	38583	64	45091	73
133000	60327	200	31398	54	34750	58	38810	64	45350	73
134000	60781	200	31570	54	34956	59	39037	64	45610	73
135000	61234	200	31742	54	35162	59	39264	65	45870	74
136000	61688	200	31914	55	35368	59	39491	65	46130	74
137000	62142	200	32086	55	35574	60	39717	65	46389	75
138000	62595	200	32258	55	35780	60	39944	65	46649	75
139000	63049	200	32430	56	35986	60	40171	66	46909	75
140000	63502	200	32602	56	36192	61	40398	66	47168	76
140500	63729	200	32688	56	36295	61	40512	66	47298	76
141500	64183	200	32880	56	36527	61	40766	66	47589	76

Applicability: 50010-50017, 50020-50067

Table 20 Load Classification Number (LCN) RESULTS FOR MOST AFT C.G. FLEXIBLE PAVEMENT

Aircraft Weight (lbs)	Aircraft Weight (Kg)	Tire Pressure (psi)	Pavement Thickness 10 inches		Pavement Thickness 15 inches		Pavement Thickness 20 inches		Pavement Thickness 30 inches	
			ESWL	LCN	ESWL	LCN	ESWL	LCN	ESWL	LCN
77000	34926	200	17768	31	18843	34	21213	39	25068	45
78000	35380	200	18036	31	19154	34	21557	40	25466	46
79000	35833	200	18304	32	19464	35	21901	40	25863	46

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Aircraft Weight (lbs)	Aircraft Weight (Kg)	Tire Pressure (psi)	Pavement Thickness 10 inches		Pavement Thickness 15 inches		Pavement Thickness 20 inches		Pavement Thickness 30 inches	
			ESWL	LCN	ESWL	LCN	ESWL	LCN	ESWL	LCN
80000	36287	200	18572	32	19775	35	22246	41	26261	47
81000	36740	200	18841	33	20086	36	22590	41	26658	47
82000	37194	200	19109	33	20396	36	22934	42	27055	48
83000	37648	200	19377	34	20707	37	23278	42	27453	48
84000	38101	200	19645	34	21018	37	23622	43	27850	49
85000	38555	200	19913	35	21328	38	23966	43	28247	49
86000	39008	200	20181	35	21639	38	24310	44	28645	50
87000	39462	200	20449	36	21949	39	24654	44	29042	50
88000	39916	200	20717	36	22260	39	24998	45	29440	51
89000	40369	200	20986	37	22571	40	25342	45	29837	51
90000	40823	200	21254	37	22881	40	25687	46	30234	52
91000	41276	200	21522	37	23192	41	26031	46	30632	53
92000	41730	200	21790	38	23503	41	26375	47	31029	53
93000	42184	200	22058	38	23813	42	26719	47	31426	54
94000	42637	200	22326	39	24124	42	27063	48	31824	54
95000	43091	200	22594	39	24434	43	27407	48	32221	55
96000	43544	200	22863	40	24745	43	27751	49	32619	55
97000	43998	200	23131	40	25056	44	28095	49	33016	56
98000	44452	200	23399	41	25366	44	28439	50	33413	56
99000	44905	200	23667	41	25677	45	28783	50	33811	57
100000	45359	200	23935	42	25988	45	29128	51	34208	57
101000	45812	200	24203	42	26298	46	29472	51	34605	58
102000	46266	200	24471	43	26609	46	29816	52	35003	58
103000	46719	200	24739	43	26919	47	30160	52	35400	59
104000	47173	200	25008	43	27230	47	30504	53	35798	60
105000	47627	200	25276	44	27541	48	30848	53	36195	60

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Aircraft Weight (lbs)	Aircraft Weight (Kg)	Tire Pressure (psi)	Pavement Thickness 10 inches		Pavement Thickness 15 inches		Pavement Thickness 20 inches		Pavement Thickness 30 inches	
			ESWL	LCN	ESWL	LCN	ESWL	LCN	ESWL	LCN
106000	48080	200	25544	44	27851	48	31192	54	36592	61
107000	48534	200	25812	45	28162	49	31536	54	36990	61
108000	48987	200	26080	45	28473	49	31880	55	37387	62
109000	49441	200	26348	46	28783	50	32224	55	37784	62
110000	49895	200	26616	46	29094	50	32568	56	38182	63
111000	50348	200	26884	47	29404	51	32913	56	38579	63
112000	50802	200	27153	47	29715	51	33257	57	38977	64
113000	51255	200	27421	48	30026	52	33601	57	39374	64
114000	51709	200	27689	48	30336	52	33945	58	39771	65
115000	52163	200	27957	49	30647	53	34289	58	40169	65
116000	52616	200	28225	49	30958	53	34633	59	40566	66
117000	53070	200	28453	49	31228	53	34931	59	40908	66
118000	53523	200	28680	49	31498	53	35229	60	41250	67
119000	53977	200	28907	50	31768	54	35527	60	41591	67
120000	54431	200	29135	50	32038	54	35825	61	41933	68
120500	54657	200	29248	50	32173	54	35974	61	42104	68
121000	54884	200	29384	50	32276	54	36087	61	42234	68
122000	55338	200	29506	50	32482	55	36314	61	42494	69
123000	55791	200	29678	51	32689	55	36541	62	42753	69
124000	56245	200	29850	51	32895	55	36768	62	43013	69
125000	56699	200	30022	51	33101	56	36995	62	43273	70
126000	57152	200	30194	52	33307	56	37222	62	43532	70
127000	57606	200	30366	52	33513	56	37448	63	43792	71
128000	58059	200	30538	52	33719	57	37675	63	44052	71
129000	58513	200	30710	53	33925	57	37902	63	44312	71
130000	58966	200	30882	53	34131	57	38129	63	44571	72

See applicability on the first page of the DM
BD500-A-J00-00-00-11AAA-030A-A

BD500-A-J00-00-00-11AAA-030A-A

Aircraft Weight (lbs)	Aircraft Weight (Kg)	Tire Pressure (psi)	Pavement Thickness 10 inches		Pavement Thickness 15 inches		Pavement Thickness 20 inches		Pavement Thickness 30 inches	
			ESWL	LCN	ESWL	LCN	ESWL	LCN	ESWL	LCN
131000	59420	200	31054	53	34337	58	38356	64	44831	72
132000	59874	200	31226	53	34544	58	38583	64	45091	73
133000	60327	200	31398	54	34750	58	38810	64	45350	73
134000	60781	200	31570	54	34956	59	39037	64	45610	73
135000	61234	200	31742	54	35162	59	39264	65	45870	74

Applicability: 50069, 50071, 50078

Table 21 Load Classification Number (LCN) RESULTS FOR MOST AIR C.G. FLEXIBLE PAVEMENT

Aircraft Weight (lbs)	Aircraft Weight (Kg)	Tire Pressure (psi)	Pavement Thickness 10 inches		Pavement Thickness 15 inches		Pavement Thickness 20 inches		Pavement Thickness 30 inches	
			ESWL	LCN	ESWL	LCN	ESWL	LCN	ESWL	LCN
77000	34926	200	17768	31	18843	34	21213	39	25068	45
78000	35380	200	18036	31	19154	34	21557	40	25466	46
79000	35833	200	18304	32	19464	35	21901	40	25863	46
80000	36287	200	18572	32	19775	35	22246	41	26261	47
81000	36740	200	18841	33	20086	36	22590	41	26658	47
82000	37194	200	19109	33	20396	36	22934	42	27055	48
83000	37648	200	19377	34	20707	37	23278	42	27453	48
84000	38101	200	19645	34	21018	37	23622	43	27850	49
85000	38555	200	19913	35	21328	38	23966	43	28247	49
86000	39008	200	20181	35	21639	38	24310	44	28645	50
87000	39462	200	20449	36	21949	39	24654	44	29042	50
88000	39916	200	20717	36	22260	39	24998	45	29440	51
89000	40369	200	20986	37	22571	40	25342	45	29837	51
90000	40823	200	21254	37	22881	40	25687	46	30234	52
91000	41276	200	21522	37	23192	41	26031	46	30632	53

See applicability on the first page of the DM
BD500-A-J00-00-00-11AAA-030A-A

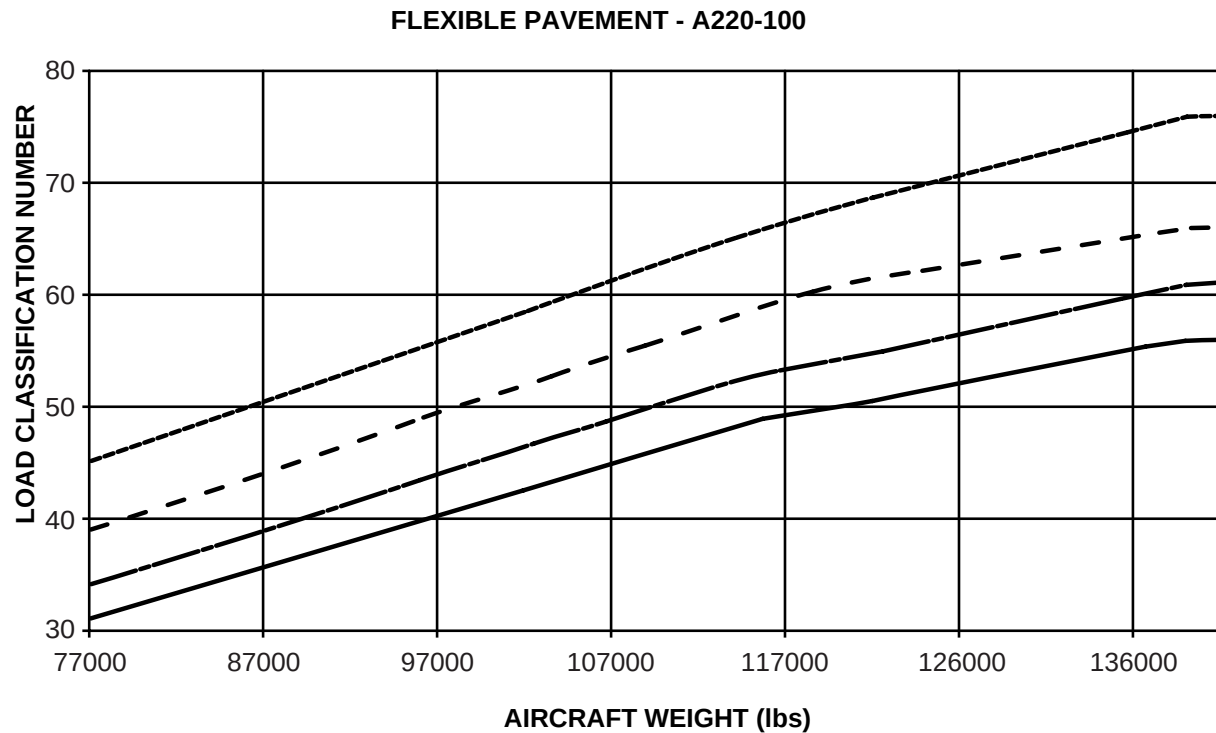
BD500-A-J00-00-00-11AAA-030A-A

Aircraft Weight (lbs)	Aircraft Weight (Kg)	Tire Pressure (psi)	Pavement Thickness 10 inches		Pavement Thickness 15 inches		Pavement Thickness 20 inches		Pavement Thickness 30 inches	
			ESWL	LCN	ESWL	LCN	ESWL	LCN	ESWL	LCN
92000	41730	200	21790	38	23503	41	26375	47	31029	53
93000	42184	200	22058	38	23813	42	26719	47	31426	54
94000	42637	200	22326	39	24124	42	27063	48	31824	54
95000	43091	200	22594	39	24434	43	27407	48	32221	55
96000	43544	200	22863	40	24745	43	27751	49	32619	55
97000	43998	200	23131	40	25056	44	28095	49	33016	56
98000	44452	200	23399	41	25366	44	28439	50	33413	56
99000	44905	200	23667	41	25677	45	28783	50	33811	57
100000	45359	200	23935	42	25988	45	29128	51	34208	57
101000	45812	200	24203	42	26298	46	29472	51	34605	58
102000	46266	200	24471	43	26609	46	29816	52	35003	58
103000	46719	200	24739	43	26919	47	30160	52	35400	59
104000	47173	200	25008	43	27230	47	30504	53	35798	60
105000	47627	200	25276	44	27541	48	30848	53	36195	60
106000	48080	200	25544	44	27851	48	31192	54	36592	61
107000	48534	200	25812	45	28162	49	31536	54	36990	61
108000	48987	200	26080	45	28473	49	31880	55	37387	62
109000	49441	200	26348	46	28783	50	32224	55	37784	62
110000	49895	200	26616	46	29094	50	32568	56	38182	63
111000	50348	200	26884	47	29404	51	32913	56	38579	63
112000	50802	200	27153	47	29715	51	33257	57	38977	64
113000	51255	200	27421	48	30026	52	33601	57	39374	64
114000	51709	200	27689	48	30336	52	33945	58	39771	65
115000	52163	200	27957	49	30647	53	34289	58	40169	65
116000	52616	200	28225	49	30958	53	34633	59	40566	66
117000	53070	200	28493	49	31268	53	34977	59	40963	66

See applicability on the first page of the DM
BD500-A-J00-00-00-11AAA-030A-A

BD500-A-J00-00-00-11AAA-030A-A

Aircraft Weight (lbs)	Aircraft Weight (Kg)	Tire Pressure (psi)	Pavement Thickness 10 inches		Pavement Thickness 15 inches		Pavement Thickness 20 inches		Pavement Thickness 30 inches	
			ESWL	LCN	ESWL	LCN	ESWL	LCN	ESWL	LCN
118000	53523	200	28680	49	31498	53	35229	60	41250	67
119000	53977	200	28907	50	31768	54	35527	60	41591	67
120000	54431	200	29135	50	32038	54	35825	61	41933	68
120500	54657	200	29248	50	32173	54	35974	61	42104	68
121000	54884	200	29334	50	32276	54	36087	61	42234	68
122000	55338	200	29506	50	32482	55	36314	61	42494	69
123000	55791	200	29678	51	32689	55	36541	62	42753	69
124000	56245	200	29850	51	32895	55	36768	62	43013	69
125000	56699	200	30022	51	33101	56	36995	62	43273	70
126000	57152	200	30194	52	33307	56	37222	62	43532	70
127000	57606	200	30366	52	33513	56	37448	63	43792	71
128000	58059	200	30538	52	33719	57	37675	63	44052	71
129000	58513	200	30710	53	33925	57	37902	63	44312	71
130000	58966	200	30882	53	34131	57	38129	63	44571	72
131000	59420	200	31054	53	34337	58	38356	64	44831	72
132000	59874	200	31226	53	34544	58	38583	64	45091	73
133000	60327	200	31398	54	34750	58	38810	64	45350	73
134000	60781	200	31570	54	34956	59	39037	64	45610	73
135000	61234	200	31742	54	35162	59	39264	65	45870	74
136000	61688	200	31914	55	35368	59	39491	65	46130	74
137000	62142	200	32086	55	35574	60	39717	65	46389	75
138000	62595	200	32258	55	35780	60	39944	65	46649	75
139000	63049	200	32430	56	35986	60	40171	66	46909	75

**LEGEND**

- Radius of relative stiffness L=30.00 in. (762.00 mm).
- - - Radius of relative stiffness L=20.00 in. (508.00 mm).
- . - Radius of relative stiffness L=15.00 in. (381.00 mm).
- _____ Radius of relative stiffness L=10.00 in. (254.00 mm).

ICN-BD500-A-J000000-C-3AB48-57668-A-003-01

Figure 6 LCN results - Flexible pavement

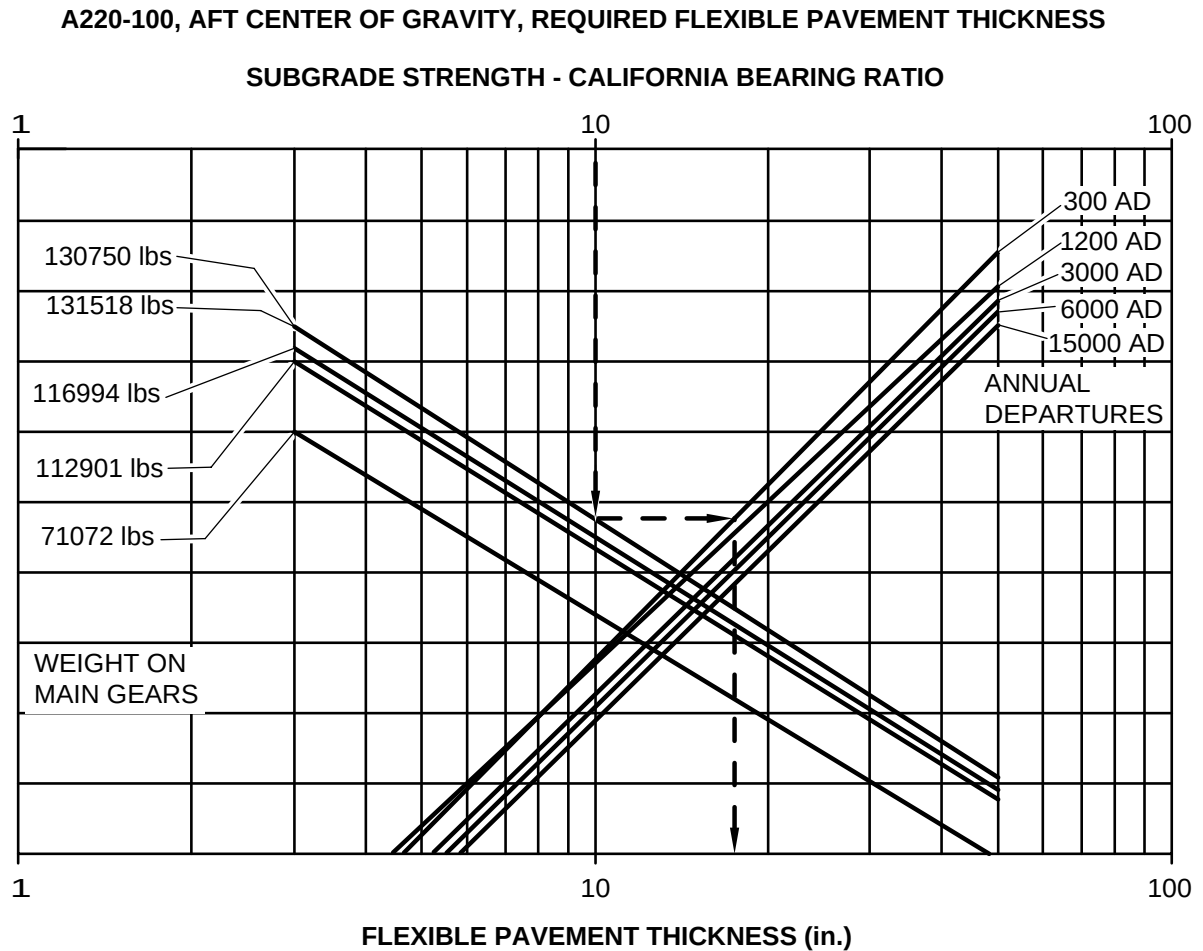
5 Required Pavement Thickness

An essential parameter to calculate the PCN is the required pavement thickness. Fig. 7 and Fig. 8. provide a graphical way to determine the required rigid or flexible pavement thickness based on the pavement strength, aircraft load applied to the pavement, and the annual departure rate. Normally, each airport calculates the PCN based on the different aircraft types which operate to and from that airport considering the number of annual departure for each aircraft type. Using the graphs in this section, one can conclude on the impact of annual departure on required pavement thickness. This material gives the user another mean to evaluate the considered airport for operating the A220 more realistically based on more realistic number of annual departure.

Note

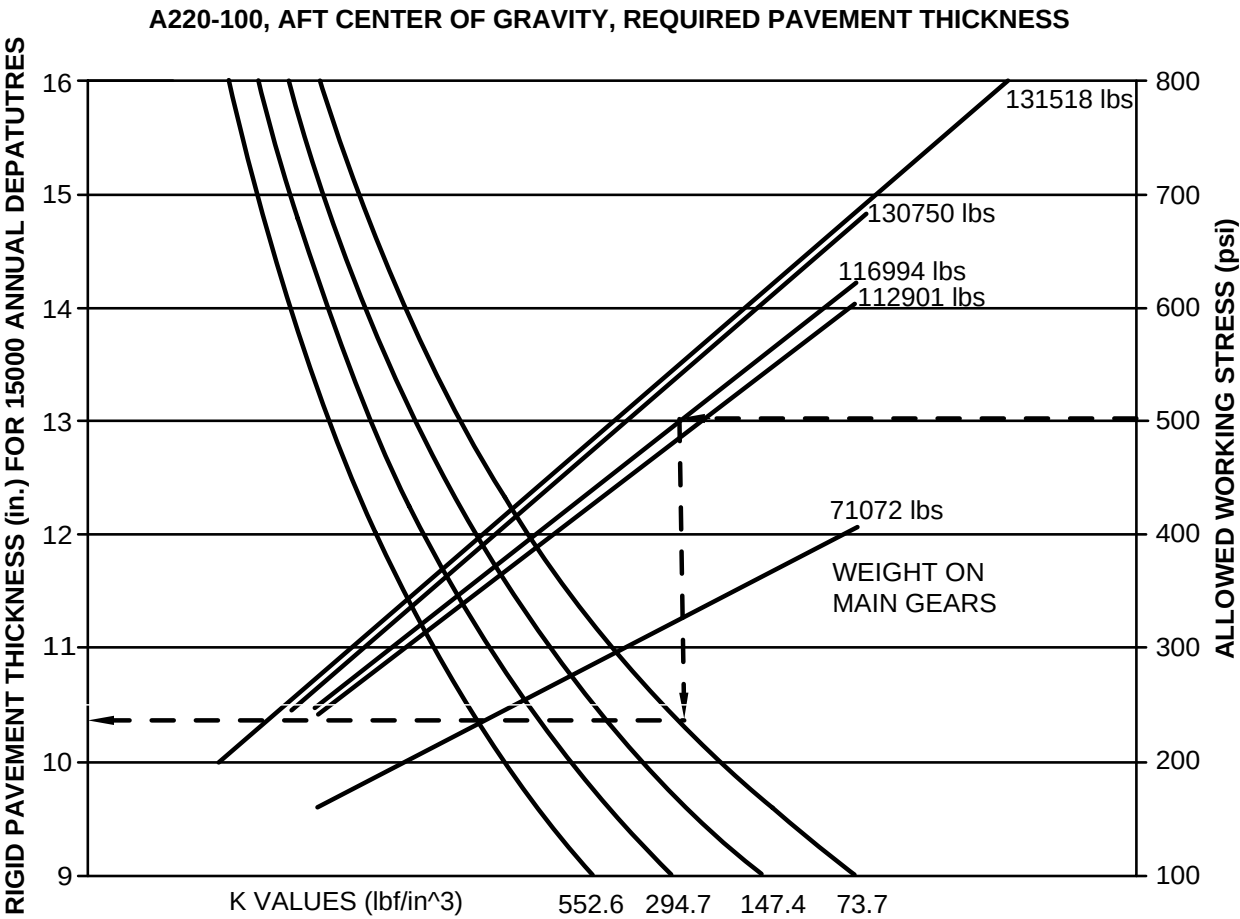
Number of annual departure starts from 300 (close to 1 flight per day). In fact, this gives the reader a better idea about required pavement thickness on those small airports that might not have a very high usage rate.

This publication has been superseded by the
Aircraft Characteristics Publication (ACP).



ICN-BD500-A-J000000-C-3AB48-57669-A-003-01

Figure 7 Flexible pavement required thickness



ICN-BD500-A-J000000-C-3AB48-57670-A-003-01
Figure 8 Rigid pavement required thickness

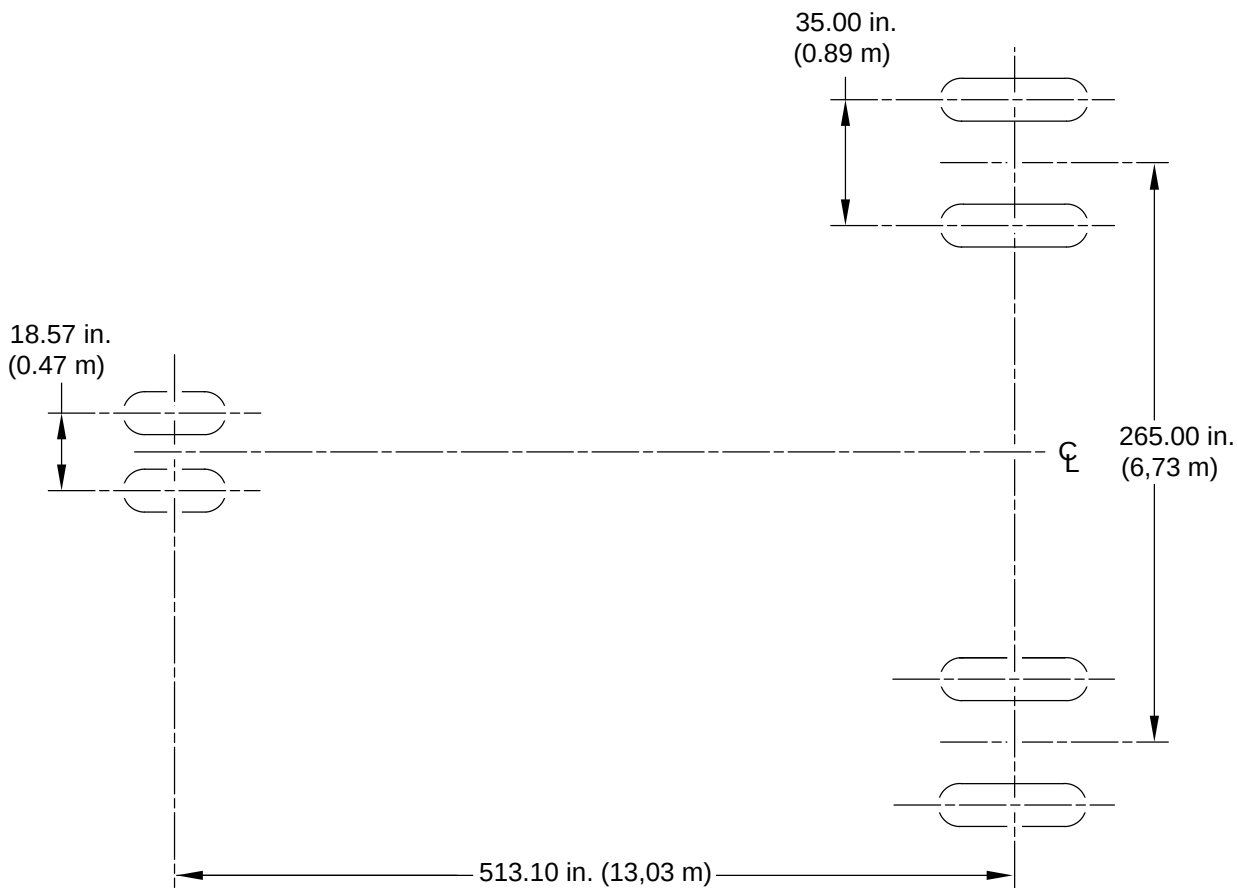
6 Landing gear footprint

Refer to Fig. 9 for the landing gear footprint.

Table 22 Landing gear footprint

Aircraft (A/C) code	A-B-C-D-E-F-G-H-I-J-K-L-M-N
Percentage of weight on main gear group	Refer to section 4
Nose gear tire size	27 x 8.5 R12 16 PR
Nose gear tire pressure	146 PSIG (10 Bar)
Main gear tire size	H42 x 15.0 R21 26 PR
Main gear tire pressure	189 PSIG (13.0 Bar)

This publication has been superseded by the
Aircraft Characteristics Publication (ACP).



NOTE

Not to scale.

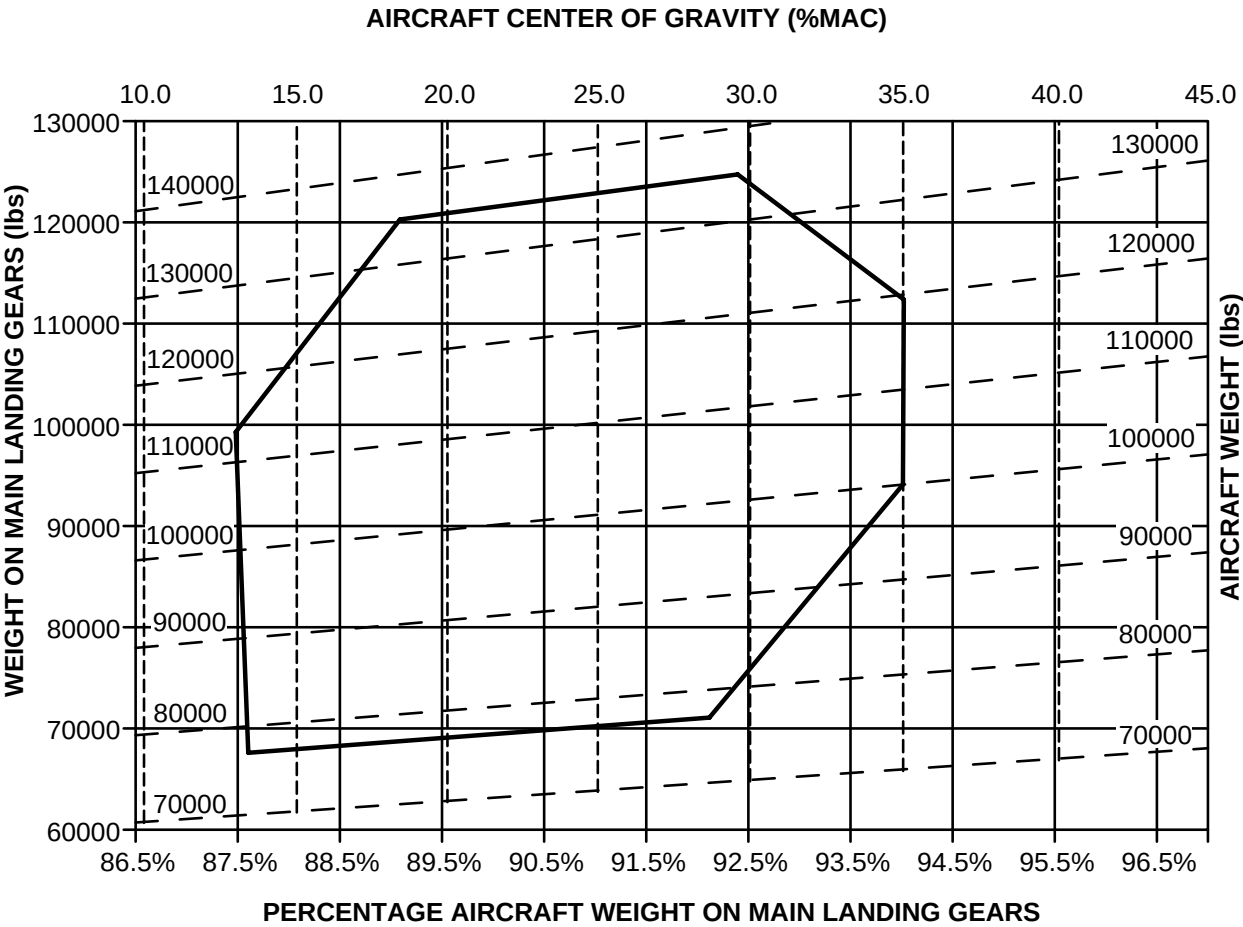
ICN-BD500-A-J000000-A-3AB48-21628-A-002-01
Figure 9 Landing gear footprint

7 Maximum pavement loads

The maximum pavement load is given at aircraft CG, weight on Main Landing Gear (MLG) and aircraft weight.

Refer to Fig. 10 for graphical format.

This publication has been superseded by the
Aircraft Characteristics Publication (ACP).



LEGEND

- Aircraft center of gravity.
- - - Aircraft weight.
- A220-100 ground center of gravity envelope.

ICN-BD500-A-J000000-C-3AB48-58656-A-001-01
Figure 10 Maximum Pavement Load

Derivative aircraft - Technical data

Applicability: 50001-54999

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Table 1 References

Data Module/Technical Publication	Title
None	

Description

This section will be updated if new derivatives of the BD-500-1A10 (A220-100) model are manufactured.

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This publication has been superseded by the
Aircraft Characteristics Publication (ACP).

Scaled drawings - Technical data

Applicability: 50001-54999

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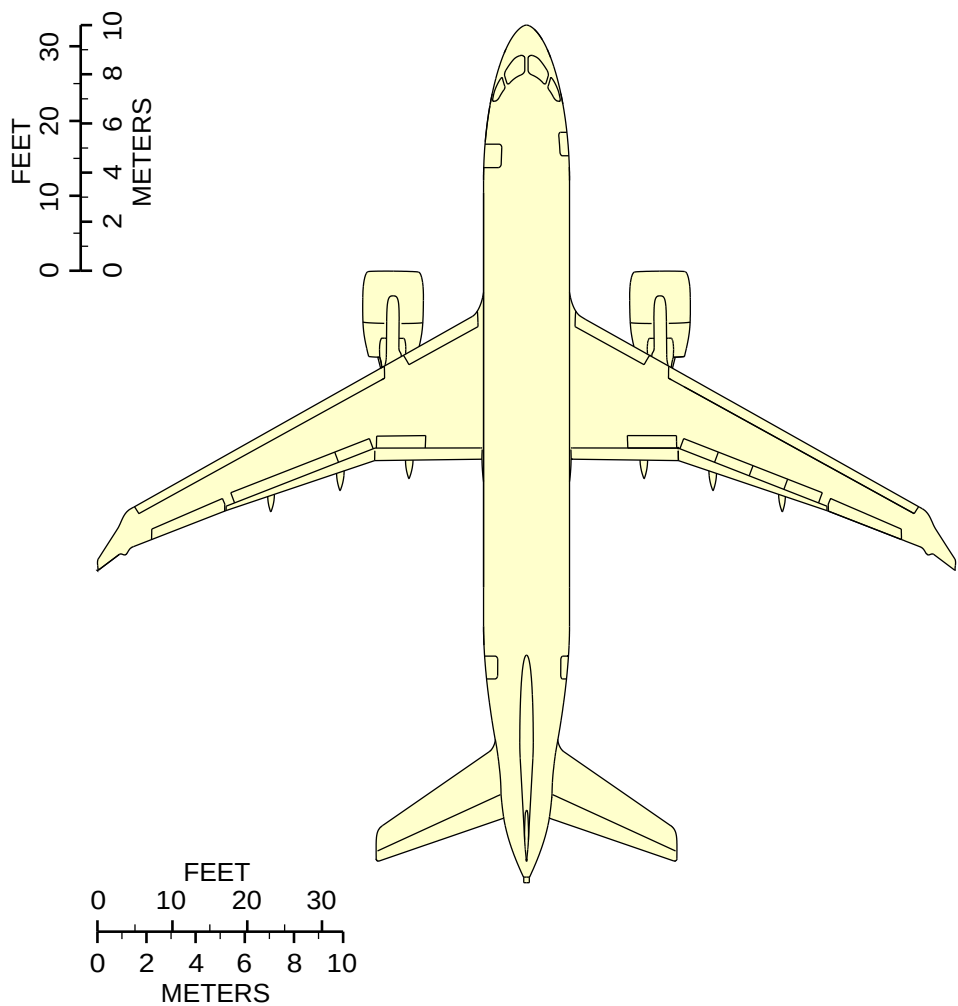
Data Module/Technical Publication	Title
None	

Description

1

Introduction

This data module contains the scaled drawings for the Airbus A220 BD500-1A10 (A220-100). It can be used to plan and to verify runway, ramp, and maintenance facility layouts. Refer to Fig. 1 for the scaled drawing.



NOTES

1. Scale: 1 in. = 25 ft (1 cm = 3 m)
2. When printing this illustration, make sure to adjust for proper scaling.

ICN-BD500-A-J000000-A-3AB48-23312-A-001-01
Figure 1 Scaled drawing