



A380

Airplane Characteristics For Airport Planning AC

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AIRPLANE CHARACTERISTICS

HIGHLIGHTS

CONTRACTUAL ISSUE - MAR 30/05

Description of technical changes :

<u>SECTION</u>	<u>PAGE(S)</u>	<u>REASON FOR CHANGE</u>
L.E.P.	P1 to P3	Revised to reflect this revision indicating new, revised and/or deleted pages.
T0C	P1 to P3	Revised to reflect this revision.
1-1	P1	Revised paragraph "Correspondence".
4-4	P1	Revised page "Visibility from Cockpit in Static Position" : New illustration.
5-4-2	P1 to P4	New section "Grounding Points".
5-4-3	P1	Revised page "Ground Service Connections, Hydraulic System" update the type of reservoir filling connector.
5-5-1	P2	New page "Engine Starting Pneumatic Requirements, Engine Alliance GP 7200", Ambient Temperature - 40°C
5-5-2	P2	New page "Engine Starting Pneumatic Requirements, Engine Alliance GP 7200", Ambient Temperature + 15°C
5-5-3	P2	New page "Engine Starting Pneumatic Requirements, Engine Alliance GP 7200", Ambient Temperature + 55°C
6-1-3	P1 to P4	Updated pages "Engine Exhaust Velocities, Breakaway Power"
6-1-4	P1 to P4	Updated pages "Engine Exhaust Temperatures, Breakaway Power"
6-2	P2	New illustration "Airport and Community Noise Data"
6-3-1	P1	New illustration "Danger Areas of the Engines, Minimum Idle Power"
6-3-2	P1	New illustration "Danger Areas of the Engines, Max. Take-off Power"
6-3-3	P1	New illustration "Danger Areas of the Engines, Breakaway Power"
6-4-1	P1	New illustration "APU Exhaust Velocities and Temperatures, "ECS conditions"



AIRPLANE CHARACTERISTICS

LIST OF EFFECTIVE PAGES

CHAPTER/ SECTION	C	PAGES	DATE	CHAPTER/ SECTION	C	PAGES	DATE
LEP	R	1 TO 4	MAR 30/05	2-7		3	SEP 30/03
				2-7		4	SEP 30/03
ROR	R	1	MAR 30/05	2-7-1		1	SEP 30/03
TOC	R	1	MAR 30/05	2-7-2		1	SEP 30/03
TOC	R	2	MAR 30/05	2-7-2		2	SEP 30/03
TOC	R	3	MAR 30/05	2-7-3		1	SEP 30/03
1-0		1	JUL 01/02	2-7-3		2	SEP 30/03
1-1		1	JUN 30/04	2-7-4		1	JAN 30/04
				2-7-4		2	JAN 30/04
1-2		1	JAN 30/05	2-7-4		3	JUL 01/02
1-2		2	JAN 30/05				
1-2-1		1	JUL 01/02	2-7-5		1	JAN 30/04
1-2-1		2	JUL 01/02	2-7-5		2	JAN 30/04
1-2-1		3	JUL 01/02	2-7-5		3	JAN 30/04
2-0		1	JUL 01/02	2-7-6	R	1	MAR 30/05
2-1		1	JUL 01/02	2-7-6	N	2	MAR 30/05
				2-7-7		1	JUN 30/04
2-1-1		1	JAN 30/05	2-7-8		1	JUN 30/04
2-1-1		2	JAN 30/05	2-7-8		2	JUN 30/04
2-2		1	SEP 30/03	2-7-9		1	JUN 30/04
2-3		1	JAN 30/04				
2-3		2	SEP 30/03	3-0		1	JUL 01/02
2-4		1	JUL 01/02	3-1		1	JUL 01/02
2-4-1		1	JUL 01/02	3-2		1	JUL 01/02
2-4-1		2	JUL 01/02	3-2-1		1	JUL 01/02
2-4-1		3	SEP 30/03	3-2-1		2	JUL 01/02
2-5		1	JUL 01/02	3-2-1		3	JUL 01/02
				3-2-1		4	JUL 01/02
2-5-1		1	JUL 01/02	3-3		1	JUL 01/02
2-5-1		2	JUL 01/02				
2-5-1		3	SEP 30/03	3-3-1		1	JUL 01/02
				3-3-1		2	JUL 01/02
2-6		1	JUL 01/02	3-3-1		3	JUL 01/02
2-6-1		1	JUL 01/02	3-3-1		4	JUL 01/02
2-6-1		2	SEP 30/03				
2-6-1		3	JUL 01/02	3-3-2		1	JUL 01/02
				3-3-2		2	JUL 01/02
2-6-2		1	SEP 30/03	3-3-2		3	JUL 01/02
2-6-2		2	SEP 30/03	3-3-2		4	JUL 01/02
2-6-2		3	SEP 30/03	3-4		1	JUL 01/02
2-7		1	SEP 30/03				
2-7		2	JUL 01/02				



AIRPLANE CHARACTERISTICS

LIST OF EFFECTIVE PAGES

CHAPTER/ SECTION	C	PAGES	DATE	CHAPTER/ SECTION	C	PAGES	DATE
3-4-1		1	JUL 01/02	5-3		1	JUL 01/02
3-4-1		2	JUL 01/02	5-3-1		1	JUL 01/02
3-5		1	JUL 01/02	5-4		1	JUL 01/02
3-5-1		1	JUL 01/02	5-4-1		1	SEP 30/03
3-5-1		2	JUL 01/02	5-4-1		2	SEP 30/03
4-0	R	1	MAR 30/05	5-4-2	N	1	MAR 30/05
4-1		1	JUL 01/02	5-4-2	N	2	MAR 30/05
4-2		1	JUL 01/02	5-4-2	N	3	MAR 30/05
4-2		2	SEP 30/03	5-4-2	N	4	MAR 30/05
4-3	R	1	MAR 30/05	5-4-3	R	1	MAR 30/05
4-3	D	2	JUN 30/04	5-4-3		2	JUN 30/04
4-4	R	1	MAR 30/05	5-4-3		3	JAN 30/05
4-5		1	JUL 01/02	5-4-4		1	JAN 30/05
4-5-1		1	JUL 01/02	5-4-4		2	JUN 30/04
4-5-1		2	JUL 01/02	5-4-5		1	JAN 30/05
4-5-2		1	JUL 01/02	5-4-5		2	JAN 30/05
4-5-2		2	JUL 01/02	5-4-6		1	SEP 30/03
4-5-3		1	SEP 30/03	5-4-6		2	JUN 30/04
4-5-4		1	JUL 01/02	5-4-6		3	JUN 30/04
4-5-4		2	JUL 01/02	5-4-7		1	SEP 30/03
4-5-5		1	JUL 01/02	5-4-7		2	JUN 30/04
4-5-5		2	JUL 01/02	5-4-7		3	JUN 30/04
4-6		1	JAN 30/05	5-4-8		1	SEP 30/03
4-6		2	JAN 30/05	5-4-8		2	JAN 30/05
4-7		1	JUL 01/02	5-4-9	R	1	MAR 30/05
4-7		2	JUL 01/02	5-4-9		2	JAN 30/05
4-7		3	JUL 01/02	5-4-9	R	3	MAR 30/05
5-0	R	1	MAR 30/05	5-4-9		4	JAN 30/05
5-0	R	2	MAR 30/05	5-4-9	R	5	MAR 30/05
5-1		1	JUL 01/02	5-4-9		6	JAN 30/05
5-1-1		1	JUN 30/04	5-4-9	R	7	MAR 30/05
5-1-2		1	SEP 30/03	5-4-9		8	JAN 30/05
5-1-3		1	JAN 30/05	5-4-10		9	JAN 30/05
5-1-4		1	JUN 30/04	5-4-10		1	SEP 30/03
5-2		1	JUL 01/02	5-5		2	JAN 30/05
5-2		2	JUN 30/04	5-5-1		1	JUN 30/04
5-2-1		1	JUN 30/04	5-5-1	R	2	MAR 30/05
5-2-2		1	SEP 30/03				



AIRPLANE CHARACTERISTICS

LIST OF EFFECTIVE PAGES

CHAPTER/ SECTION	C	PAGES	DATE	CHAPTER/ SECTION	C	PAGES	DATE
5-5-2		1	JUN 30/04	6-2-1	N	1	MAR 30/05
5-5-2	R	2	MAR 30/05	6-3	R	1	MAR 30/05
5-5-3		1	JUN 30/04	6-3-1	N	1	MAR 30/05
5-5-3	R	2	MAR 30/05	6-3-2	N	1	MAR 30/05
5-6		1	JAN 30/04	6-3-3	N	1	MAR 30/05
5-6-1		1	JAN 30/04	6-4	R	1	MAR 30/05
5-6-2		1	JAN 30/04	6-4-1	R	1	MAR 30/05
5-7		1	SEP 30/03	6-4-2	N	1	MAR 30/05
5-7		2	SEP 30/03	7-0	R	1	MAR 30/05
6-0	R	1	MAR 30/05	7-1		1	SEP 30/03
6-1		1	JUL 01/02	7-1		2	SEP 30/03
6-1-1		1	JUL 01/02	7-1		3	SEP 30/03
6-1-1		2	JUL 01/02	7-2		1	SEP 30/03
6-1-2		1	JUL 01/02	7-2		2	SEP 30/03
6-1-2		2	JUL 01/02	7-3		1	JUL 01/02
6-1-3	R	1	MAR 30/05	7-3		2	SEP 30/03
6-1-3	R	2	MAR 30/05	7-4		1	JAN 30/04
6-1-3	R	3	MAR 30/05	7-4-1		1	JUL 01/02
6-1-3	R	4	MAR 30/05	7-4-1		2	JUL 01/02
6-1-4	R	1	MAR 30/05	7-4-2		1	JAN 30/04
6-1-4	R	2	MAR 30/05	7-4-3		1	SEP 30/03
6-1-4	R	3	MAR 30/05	7-4-3		2	SEP 30/03
6-1-4	R	4	MAR 30/05	7-5		1	JAN 30/05
6-1-5		1	JAN 30/05	7-5-1		1	JAN 30/05
6-1-5		2	JAN 30/05	7-5-1		2	JAN 30/05
6-1-5		3	JAN 30/05	7-5-1		3	JAN 30/05
6-1-5		4	JAN 30/05	7-5-1		4	JAN 30/05
6-1-6		1	JAN 30/05	7-6	R	1	MAR 30/05
6-1-6		2	JAN 30/05	7-6-1	N	1	MAR 30/05
6-1-6		3	JAN 30/05	7-6-1	N	2	MAR 30/05
6-1-6		4	JAN 30/05	7-6-1	N	3	MAR 30/05
6-1-7	D	1	JAN 30/05	7-6-1	N	4	MAR 30/05
6-1-7	D	2	JAN 30/05	7-7		1	JAN 30/05
6-1-7	D	3	JAN 30/05	7-7-1		1	JAN 30/05
6-1-7	D	4	JAN 30/05	7-7-1		2	JAN 30/05
6-1-8	D	1	JAN 30/05				
6-1-8	D	2	JAN 30/05				
6-1-8	D	3	JAN 30/05				
6-1-8	D	4	JAN 30/05				
6-2	R	1	MAR 30/05				



AIRPLANE CHARACTERISTICS

LIST OF EFFECTIVE PAGES

CHAPTER/ SECTION	C	PAGES	DATE
7-7-1		3	JAN 30/05
7-7-1		4	JAN 30/05
7-8	R	1	MAR 30/05
7-8-1		1	JUL 01/02
7-8-2	R	1	MAR 30/05
7-8-2	R	2	MAR 30/05
7-8-2	N	3	MAR 30/05
7-8-2	N	4	MAR 30/05
7-8-3		1	JUL 01/02
7-8-4		1	SEP 30/03
7-9		1	JAN 30/05
7-9-1		1	JAN 30/04
7-9-1		2	SEP 30/03
7-9-2		1	JAN 30/04
7-9-2		2	SEP 30/03
8-0		1	JAN 30/05
8-1		1	JAN 30/05
9-0		1	JUL 01/02
9-1		1	JUN 30/04
9-1		2	JUN 30/04
9-1		3	JUL 01/02
9-1		4	SEP 30/03
9-2		1	JUN 30/04
9-2		2	JUN 30/04
9-2		3	JUL 01/02
9-2		4	SEP 30/03
9-3		1	JUN 30/04
9-3		2	JUN 30/04
9-3		3	JUL 01/02
9-3		4	SEP 30/03
9-4		1	JUN 30/04
9-4		2	JUN 30/04
9-4		3	JUL 01/02
9-4		4	SEP 30/03



AIRPLANE CHARACTERISTICS

RECORD OF REVISIONS

REVISION NUMBER	ISSUE DATE	REVISION NUMBER	ISSUE DATE	REVISION NUMBER	ISSUE DATE
PRELIMINARY	JAN 01/02				
PRELIMINARY	APR 01/02				
PRELIMINARY	JUL 01/02				
PRELIMINARY	SEP 30/03				
PRELIMINARY	JAN 30/04				
PRELIMINARY	JUN 30/04				
PRELIMINARY	JAN 30/05				
00	MAR 30/05				



AIRPLANE CHARACTERISTICS

TABLE OF CONTENTS

1-0	SCOPE
1-1	Purpose
1-2	Introduction
1-2-1	Glossary
2-0	AIRPLANE DESCRIPTION
2-1	General Airplane Characteristics
2-1-1	General Airplane Characteristics Data
2-2	General Airplane Dimensions
2-3	Ground Clearances
2-4	Interior Arrangements - Plan View
2-4-1	Standard Configuration
2-5	Interior Arrangement - Cross-section
2-5-1	Typical Configuration
2-6	Cargo Compartments
2-6-1	Location and Dimensions
2-6-2	Loading Combinations
2-7	Door Clearances
2-7-1	Forward Doors
2-7-2	Main and Upper Deck Doors
2-7-3	Aft Doors
2-7-4	Aft Cargo Compartment Doors
2-7-5	Forward Cargo Compartment Doors
2-7-6	Nose Landing Gear Doors
2-7-7	Wing Landing Gear Doors
2-7-8	Body Landing Gear Doors
2-7-9	APU Doors
3-0	AIRPLANE PERFORMANCE
3-1	General Information
3-2	Payload/Range
3-2-1	ISA Conditions
3-3	Take-Off Weight Limitation
3-3-1	ISA Conditions
3-3-2	ISA + 15 °C (59 °F)
3-4	Landing Field Length
3-4-1	Landing Field Length
3-5	Final Approach Speed
3-5-1	Final Approach Speed
4-0	GROUND MANEUVERING
4-1	General Information
4-2	Turning Radii
4-3	Minimum Turning Radii
4-4	Visibility from Cockpit in Static Position
4-5	Runway and Taxiway Turn Paths
4-5-1	135° Turn - Runway to Taxiway
4-5-2	90° Turn - Runway to Taxiway
4-5-3	180° Turn on a Runway
4-5-4	90° Turn - Taxiway to Taxiway
4-5-5	135° Turn - Taxiway to Taxiway



AIRPLANE CHARACTERISTICS

TABLE OF CONTENTS (CONTINUED)

4-6	Runway Holding Bay (Apron)
4-7	Airplane Parking
5-0	TERMINAL SERVICING
5-1	Airplane Servicing Arrangements
5-1-1	Typical Ramp Layout - Two Bridges - Standard Servicing Via Main Deck and Upper Deck
5-1-2	Typical Ramp Layout - Two Bridges - Servicing Via Main Deck
5-1-3	Opportunities of Direct Upper Deck Access for Airport and Airlines
5-1-4	Typical Ramp Layout - Cargo Aircraft Servicing
5-2	Terminal Operation - Passenger Aircraft
5-2-1	Typical Turn-Round Time - Two Bridges - Standard Servicing Via Main Deck and Upper Deck
5-2-2	Typical Turn-Round Time - Two Bridges - Servicing Via Main Deck
5-2-3	Typical Turn-Round Time - Three Bridges - Servicing Via Main Deck and Upper Deck
5-3	Terminal Operation - Cargo Aircraft
5-3-1	Typical Turn-Round Time
5-4	Ground Service Connections
5-4-1	Ground Service Connections Layout
R 5-4-2	Grounding Points
R 5-4-3	Hydraulic System
5-4-4	Electrical System
5-4-5	Oxygen System
5-4-6	Fuel System
5-4-7	Pneumatic System
5-4-8	Potable Water System
5-4-9	Oil System
5-4-10	Toilet System
R 5-5	Engine Starting Pneumatic Requirements
R 5-5-1	Outside Air Temperature = -40 °C (122 °F)
R 5-5-2	Outside Air Temperature = 15 °C (59 °F)
R 5-5-3	Outside Air Temperature = 50 °C (-40 °F)
5-6	Ground Pneumatic Power Requirements
5-6-1	Heating
5-6-2	Cooling
5-7	Preconditioned Airflow Requirements
6-0	OPERATING CONDITIONS
6-1	Engine Exhaust Velocities and Temperatures
6-1-1	Engine Exhaust Velocities - Ground Idle Power
6-1-2	Engine Exhaust Temperatures - Ground Idle Power
R 6-1-3	Engine Exhaust Velocities - Breakaway Power
R 6-1-4	Engine Exhaust Temperatures - Breakaway Power
6-1-5	Engine Exhaust Velocities - Max. Take-Off Power
6-1-6	Engine Exhaust Temperatures - Max. Take-Off Power
R 6-2	Airport and Community Noise Data
R 6-2-1	Airport and Community Noise Data



AIRPLANE CHARACTERISTICS

TABLE OF CONTENTS (CONTINUED)

R 6-3	Danger Areas of the Engines
R 6-3-1	Danger Areas of the Engines - Ground Idle Power
R 6-3-2	Danger Areas of the Engines - Max. Take-Off Power
R 6-3-3	Danger Areas of the Engines - Breakaway Power
6-4	APU Exhaust Velocities and Temperatures
6-4-1	APU Exhaust Velocities and Temperatures
7-0	PAVEMENT DATA
7-1	General Information
7-2	Landing Gear Footprint
7-3	Maximum Pavements Loads
7-4	Landing Gear Loading on Pavement
7-4-1	Landing Gear Loading on Pavement
7-4-2	Wing Gear and Body Gear on Pavement
7-4-3	Wing Gear and Body Gear on Pavement
7-5	Flexible Pavement Requirements - US Army Corps of Engineers Design Method
7-5-1	Flexible Pavement Requirements - US Army Corps of Engineers Design Method S-77-1
R 7-6	Flexible Pavement Requirements - LCN Conversion
R 7-6-1	Flexible Pavement Requirements - LCN Conversion
7-7	Rigid Pavement Requirements - Portland Cement Association Design Method
7-7-1	Rigid Pavement Requirements - Portland Cement Association Design Method
R 7-8	Rigid Pavement Requirements - LCN Conversion
7-8-1	Radius of Relative Stiffness
R 7-8-2	Rigid Pavement Requirements - LCN Conversion
7-8-3	Radius of relative stiffness (Other Values of E and L)
7-8-4	Radius of relative stiffness (Other Values of E and L)
7-9	ACN/PCN Reporting System
7-9-1	Aircraft Classification Number - Flexible Pavement
7-9-2	Aircraft Classification Number - Rigid Pavement
8-0	DERIVATIVE AIRPLANES
8-1	Possible Future Derivative Airplanes
9-0	SCALED DRAWINGS
9-1	Scaled Drawing 1 in = 50 ft
9-2	Scaled Drawing 1 in = 100 ft
9-3	Scaled Drawing 1 cm = 500 cm
9-4	Scaled Drawing 1 cm = 1000 cm



AIRPLANE CHARACTERISTICS

1-0 SCOPE

1-1 Purpose

1-2 Introduction

1-2-1 Glossary



AIRPLANE CHARACTERISTICS

1-1 PURPOSE

This A380 AIRPLANE CHARACTERISTICS (AC) manual is issued for the A380-800 and A380-800F series aircraft to provide preliminary data needed by airport operators and airlines for airport facilities planning.

The A380-800 is a subsonic, very long range, very high capacity, civil transport aircraft.

There are two models in the A380-800 series :

- A380-841 model equipped with Rolls-Royce Trent 970 engine,
- A380-861 model equipped with Engine Alliance GP 7270 engine.

The A380-800F is a subsonic, very long range, civil freighter aircraft.

There are two models in the A380-800F series :

- A380-843F model equipped with Rolls-Royce Trent 977 engine,
- A380-863F model equipped with Engine Alliance GP 7277 engine.

In this manual, effectivity is managed as follows :

- by default, the data is effective for all A380-800 and A380-800F models,
- "A380-800/800F models" indicates that the related data or page is effective for all A380-800 and A380-800F models,
- "A380-800 models" restricts the effectivity of the related data or page to the A380-841 and A380-861 models,
- "A380-800F models" restricts the effectivity of the related data or page to the A380-843F and A380-863F models,
- the mention of a specific model (e.g. A380-841 model, A380-863F model, etc.) restricts the effectivity of the related data or page to that specific model.

This document conforms to NAS 3601.

The data contained in this manual is preliminary data and may be subject to change.

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AIRPLANE CHARACTERISTICS

1-2 INTRODUCTION

This manual comprises 9 chapters with a List of Effective Pages (L.E.P.) and a Table Of Contents (TOC) at the beginning of the manual.

Chapter 1 : SCOPE

Chapter 2 : AIRPLANE DESCRIPTION

This chapter contains general dimensional and other basic aircraft data.

It covers :

- aircraft dimensions and ground clearances,
- passengers and cargo compartments arrangement.

Chapter 3 : AIRPLANE PERFORMANCE

This chapter indicates the aircraft performance.

It covers :

- payload/range,
- take-off and landing runway requirements,
- landing approach speed.

Chapter 4 : GROUND MANEUVERING

This chapter provides the aircraft turning capability and maneuvering characteristics on the ground.

It includes :

- turning radii and visibility from the cockpit,
- runway and taxiway turn path.

Chapter 5 : TERMINAL SERVICING

This chapter provides information for the arrangement of ground handling and servicing equipment.

It covers :

- location and connections of ground servicing equipment,
- engines starting pneumatic and preconditioned airflow requirements.

Chapter 6 : OPERATING CONDITIONS

This chapter contains data and safety/environmental precautions related to engine and APU operation on the ground.

It includes :

- engine and APU exhaust velocities and temperatures data,
- engine noise data.



AIRPLANE CHARACTERISTICS

Chapter 7 : PAVEMENT DATA

This chapter contains the pavements data helpful for airport planning.

It gives :

- landing gear foot print and static load,
- charts for flexible pavements with Load Classification Number (LCN),
- charts for rigid pavements with LCN,
- Aircraft Classification Number (ACN), Pavement Classification Number (PCN), reporting system for flexible and rigid pavements.

Chapter 8 : DERIVATIVE AIRPLANES

This chapter gives relevant data of a possible new version with the associated size change.

Chapter 9 : SCALED DRAWINGS

This chapter contains different A380-800 and A380-800F scaled drawings.



AIRPLANE CHARACTERISTICS

1-2-1 GLOSSARY

1. List of Abbreviations

A/C	Aircraft
ACN	Aircraft Classification Number
APU	Auxiliary Power Unit
BLG	Body Landing Gear
CAS	Calibrated Air Speed
CBR	California Bearing Ratio
CG	Center of Gravity
C/L	Center Line
E	Young's Modulus
FAA	Federal Aviation Administration
FDL	Fuselage Datum Line
FR	Frame
FSTE	Full Size Trolley Equivalent
FWD	Forward
GPU	Ground Power Unit
GSE	Ground Support Equipment
ICAO	International Civil Aviation Organisation
ISA	International Standard Atmosphere
L	Left
L	Radius of relative stiffness
LCN	Load Classification Number
LPS	Last Pax Seating
MAC	Mean Aerodynamic Chord
MAX	Maximum
MIN	Minimum
MLW	Maximum Design Landing Weight
MRW	Maximum Design Ramp Weight
MTOW	Maximum Design Take-Off Weight
MTW	Maximum Design Taxi Weight
MZFW	Maximum Design Zero Fuel Weight
NLG	Nose Landing Gear
OAT	Outside Air Temperature
OWE	Operating Weight Empty
PAX	Passenger
PB/D	Passenger Boarding/Deboarding
PCN	Pavement Classification Number
R	Right
SLS	Sea Level Static condition
TBD	To Be Determined
TBIL	To Be Issued Later
ULD	Unit Load Device
US	United States
VF	Variable Frequency
Vref	Landing reference speed
WLG	Wing Landing Gear



AIRPLANE CHARACTERISTICS

2. Units of Measurement

°	degree (angle)
%	percent
°C	degree Celsius
°F	degree Fahrenheit
bar	bar
cm	centimeter
deg	degree (angle)
ft	foot
ft/s	foot per second
ft/s ²	foot per second squared
ft ²	square foot
ft ³	cubic foot
in	inch
kg	kilogram
kg/l	kilogram per liter
km/h	kilometer per hour
kt	knot
kVA	kiloVolt Ampere
l	liter
lb	pound
m	meter
m/s	meter per second
m ²	square meter
m ³	cubic meter
min	minute
mm	millimeter
MN/m ³	MegaNewton per cubic meter
MPa	MegaPascal
nm	nautical mile
pci	pound-force per cubic inch
psi	pound-force per square inch
t	tonne
US gal	United States gallon



AIRPLANE CHARACTERISTICS

3. Design Weight Terminology

Maximum Design Ramp Weight (MRW) :

Maximum weight for ground maneuver (including weight of taxi and runup fuel) as limited by aircraft strength and airworthiness requirements. It is also called Maximum Design Taxi Weight (MTW).

Maximum Design Landing Weight (MLW) :

Maximum weight for landing as limited by aircraft strength and airworthiness requirements.

Maximum Design Takeoff Weight (MTOW) :

Maximum weight for takeoff as limited by aircraft strength and airworthiness requirements. (This is the maximum weight at start of the take-off run).

Maximum Design Zero Fuel Weight (MZFW) :

Maximum permissible weight of the aircraft less usable fuel.

Operating Weight Empty (OWE) :

Weight of structure, powerplant, furnishings, systems, and other items of equipment that are an integral part of a particular aircraft configuration plus the operator's items.

The operator's items are the flight and cabin crew and their baggage, unusable fuel, engine oil, emergency equipment, toilet chemical and fluids, galley structure, catering equipment, seats, documents, etc.

Maximum Payload :

Maximum Design Zero Fuel Weight (MZFW) minus Operating Weight Empty (OWE).

Maximum Seating Capacity :

Maximum number of passengers specifically certified or anticipated for certification.

Maximum Cargo Volume :

Maximum usable volume available for cargo.

Usable Fuel :

Fuel available for aircraft propulsion.



AIRPLANE CHARACTERISTICS

2-0 AIRPLANE DESCRIPTION

2-1 General Airplane Characteristics

2-1-1 General Airplane Characteristics Data

2-2 General Airplane Dimensions

2-3 Ground Clearances

2-4 Interior Arrangements - Plan View

2-4-1 Standard Configuration

2-5 Interior Arrangements - Cross-section

2-5-1 Typical Configuration

2-6 Cargo Compartments

2-6-1 Location and Dimensions

2-6-2 Loading Combinations

2-7 Door Clearances

2-7-1 Forward Doors

2-7-2 Main and Upper Deck Doors

2-7-3 Aft Doors

2-7-4 Aft Cargo Compartment Doors

2-7-5 Forward Cargo Compartment Doors

2-7-6 Nose Landing Gear Doors

2-7-7 Wing Landing Gear Doors

2-7-8 Body Landing Gear Doors

2-7-9 APU Doors



AIRPLANE CHARACTERISTICS

2-1 GENERAL AIRPLANE CHARACTERISTICS



AIRPLANE CHARACTERISTICS

Airplane Model		A380-841	A380-861
Engines		TRENT 970	GP 7270
Maximum Design Ramp Weight (MRW)	kilograms	562 000	562 000
	pounds	1 238 998	1 238 998
Maximum Design TakeOff Weight (MTOW)	kilograms	560 000	560 000
	pounds	1 234 588	1 234 588
Maximum Design Landing Weight (MLW)	kilograms	386 000	386 000
	pounds	850 984	850 984
Maximum Design Zero Fuel Weight (MZFW)	kilograms	361 000	361 000
	pounds	795 869	795 869
Operating Weight Empty (OWE) - Typical	kilograms	270 015	270 281
	pounds	595 281	595 868
Maximum Payload	kilograms	90 985	90 718
	pounds	200 587	199 999
Standard Seating Capacity	Three-Class	555 (1)	555 (1)
Usable Fuel Capacity	liters	310 000	310 000
	US gallons	81 893	81 893
	kilograms (density = 0.785 kg/l)	247 502	247 502
	pounds	545 648	545 648
Volume of cargo compartments (2)	cubic meters	176.3	176.3
	cubic feet	6226	6226

NOTE : (1) 555 pax :

- main deck : First Class 22 and Tourist Class 334
- upper deck : Business Class 96 and Tourist Class 103

(2) Volume of cargo compartments :

- lower deck forward cargo compartment
(usable containerised volume) : 90 m³ (3 157 ft³)
- lower deck aft cargo compartment
(usable containerised volume) : 72 m³ (2 525 ft³)
- lower bulk cargo compartment
(usable volume) : 14.3 m³ (505 ft³)

General Airplane Characteristics Data
A380-800 Models



AIRPLANE CHARACTERISTICS

Airplane Model		A380-843F	A380-863F
Engines		TRENT 977	GP 7277
Maximum Design Ramp Weight (MRW)	kilograms	592 000	592 000
	pounds	1 305 136	1 305 136
Maximum Design TakeOff Weight (MTOW)	kilograms	590 000	590 000
	pounds	1 300 727	1 300 727
Maximum Design Landing Weight (MLW)	kilograms	427 000	427 000
	pounds	941 374	941 374
Maximum Design Zero Fuel Weight (MZFW)	kilograms	402 000	402 000
	pounds	886 258	886 258
Operating Weight Empty (OWE) - Typical	kilograms	250 560	250 826
	pounds	552 390	552 976
Maximum Payload	kilograms	151 440	151 174
	pounds	333 868	333 281
Usable Fuel Capacity	liters	310 000 (2)	310 000 (2)
	US gallons	81 893	81 893
	kilograms (density = 0.785 kg/l)	247 502	247 502
	pounds	545 648	545 648
Volume of cargo compartments (1)	cubic meters	938.4	938.4
	cubic feet	33 139	33 139

NOTE : (1) Volume of cargo compartments :

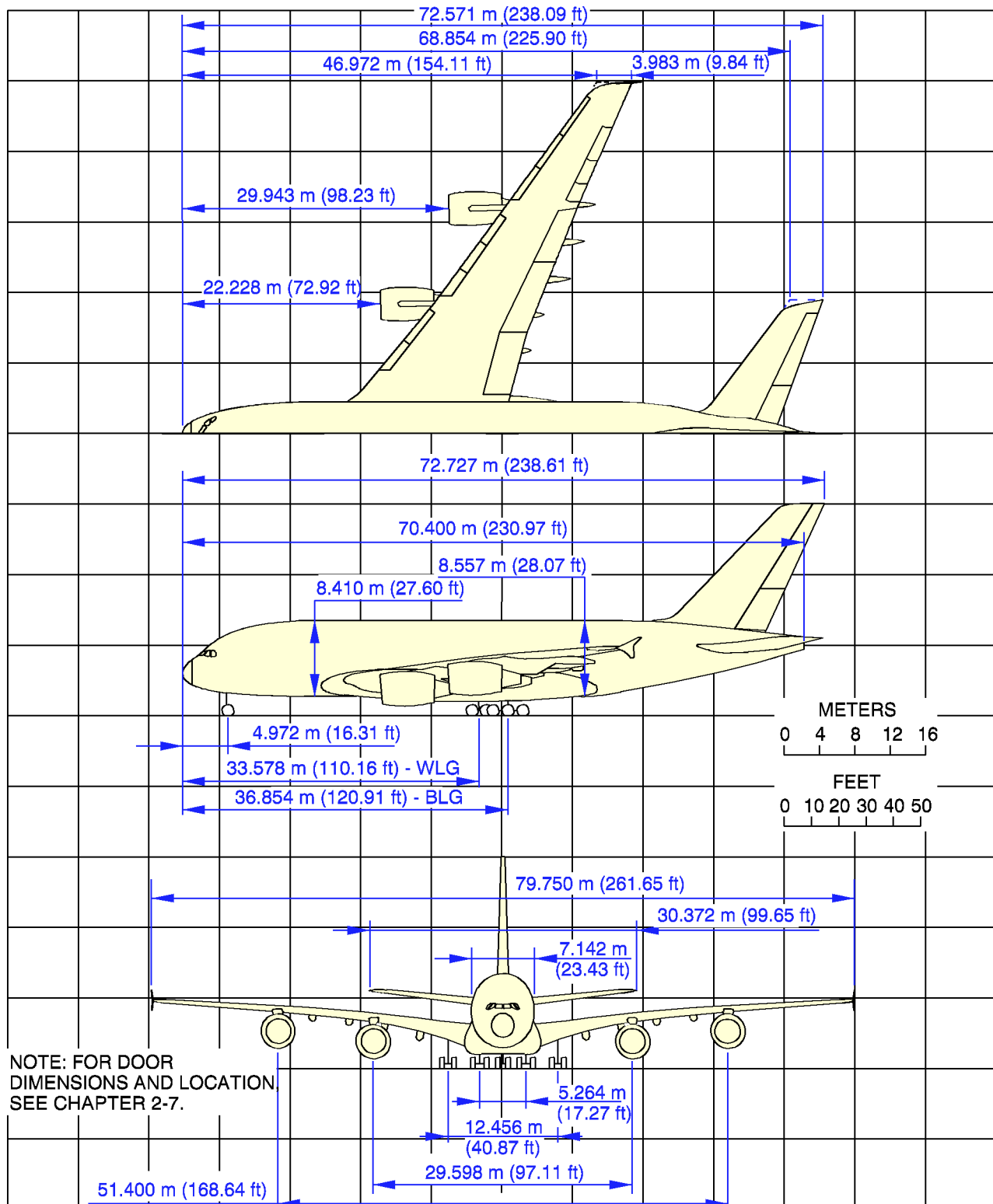
- lower deck forward cargo compartment
(usable containerised volume) : 90 m³ (3 157 ft³)
- lower deck aft cargo compartment
(usable containerised volume) : 72 m³ (2 525 ft³)
- lower bulk cargo compartment
(usable volume) : 18.4 m³ (650 ft³)
- main deck cargo compartment
(usable palletized volume) : 508 m³ (18 222 ft³)
- upper deck cargo compartment
(usable palletized volume) : 250 m³ (9 075 ft³)

(2) Usable fuel capacity with center tank : 355 850 L (94 005 US gal)

General Airplane Characteristics Data
A380-800F Models



AIRPLANE CHARACTERISTICS



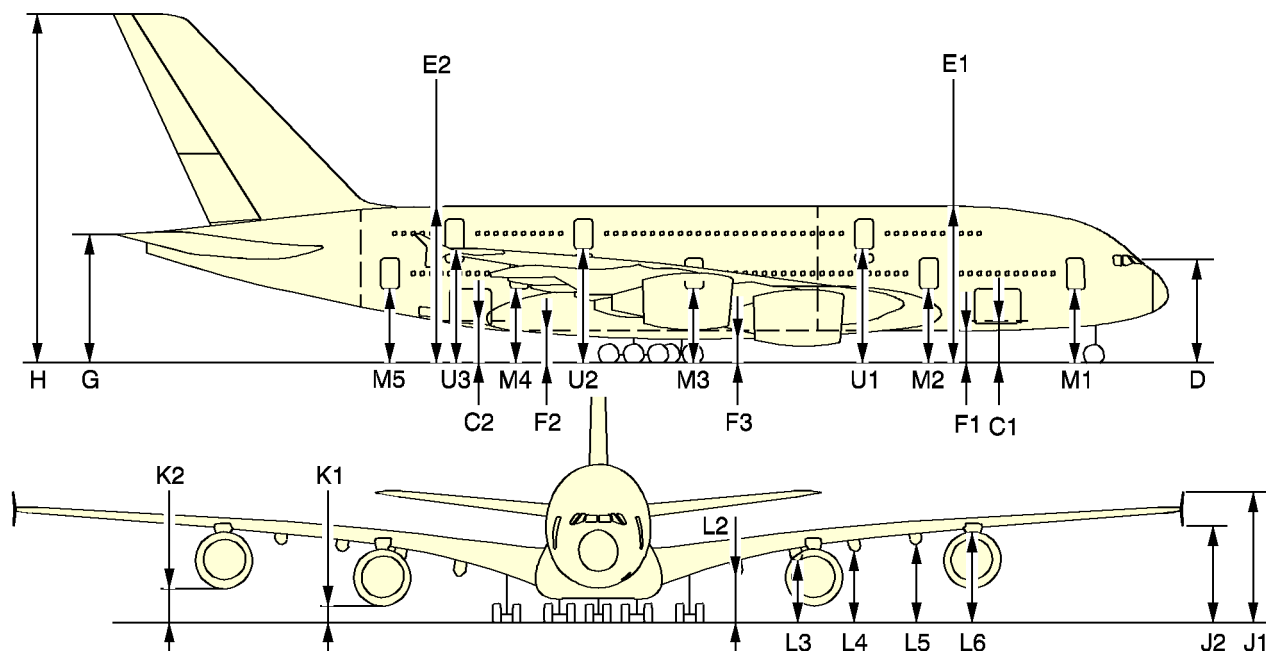
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General Airplane Dimensions
A380-800/800F Models



AIRPLANE CHARACTERISTICS



A/C CONFIGURATION	MRW (562t) FWD CG		MRW (562t) AFT CG		300t AFT CG (43%)		290t MID CG (36.5%)		A/C JACKED FDL = 7.2 m (23.95 ft)	
	m	ft	m	ft	m	ft	m	ft	m	ft
C1	3.05	10.0	3.11	10.2	3.30	10.8	3.19	10.5	5.12	16.8
C2	3.14	10.3	3.10	10.2	3.23	10.6	3.32	10.9	5.12	16.8
D	7.13	23.4	7.21	23.7	7.42	24.3	7.25	23.8	9.22	30.2
E1	10.76	35.3	10.81	35.5	11.00	36.1	10.90	35.8	12.82	42.1
E2	10.84	35.6	10.80	35.4	10.93	35.9	11.03	36.2	12.82	42.1
F1	2.35	7.7	2.40	7.9	2.59	8.5	2.49	8.2	4.41	14.5
F2	2.27	7.5	2.24	7.4	2.38	7.8	2.46	8.1	4.27	14.0
F3	1.66	5.4	1.66	5.5	1.82	6.0	1.82	6.0	3.68	12.1
G	9.21	30.2	9.11	29.9	9.20	30.2	9.43	30.9	11.14	36.6
H	24.18	79.3	24.08	79.0	24.17	79.3	24.40	80.1	26.11	85.7
J1	7.55	24.8	7.50	24.6	8.22	27.0	8.33	27.3	10.12	33.2
J2	5.27	17.3	5.22	17.1	5.94	19.5	6.05	19.8	7.84	25.7
K1	1.05	3.5	1.08	3.5	1.30	4.2	1.25	4.1	3.14	10.3
K2	1.90	6.2	1.90	6.2	2.27	7.4	2.27	7.5	4.13	13.5
L2	3.08	10.1	3.07	10.1	3.26	10.7	3.27	10.7	5.12	16.8
L3	4.10	13.4	4.08	13.4	4.31	14.1	4.34	14.2	6.18	20.3
L4	4.67	15.3	4.65	15.3	4.93	16.2	4.98	16.4	6.81	22.4
L5	5.01	16.4	4.99	16.4	5.34	17.5	5.40	17.7	7.22	23.7
L6	5.21	17.1	5.18	17.0	5.61	18.4	5.67	18.6	7.50	24.6
M1	5.07	16.6	5.14	16.9	5.34	17.5	5.19	17.0	7.15	23.5
M2	5.09	16.7	5.14	16.9	5.32	17.5	5.23	17.2	7.15	23.5
M3	5.13	16.8	5.13	16.8	5.29	17.3	5.29	17.4	7.15	23.5
M4	5.16	16.9	5.13	16.8	5.26	17.3	5.34	17.5	7.15	23.5
M5	5.18	17.0	5.12	16.8	5.25	17.2	5.37	17.6	7.15	23.5
U1	7.85	25.8	7.89	25.9	8.06	26.5	8.00	26.3	9.90	32.5
U2	7.90	25.9	7.88	25.9	8.03	26.3	8.07	26.5	9.90	32.5
U3	7.92	26.0	7.88	25.8	8.01	26.3	8.11	26.6	9.90	32.5

NOTE: MAXIMUM JACKING WEIGHT = 333 700 kg

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Ground clearances
A380-800 Models

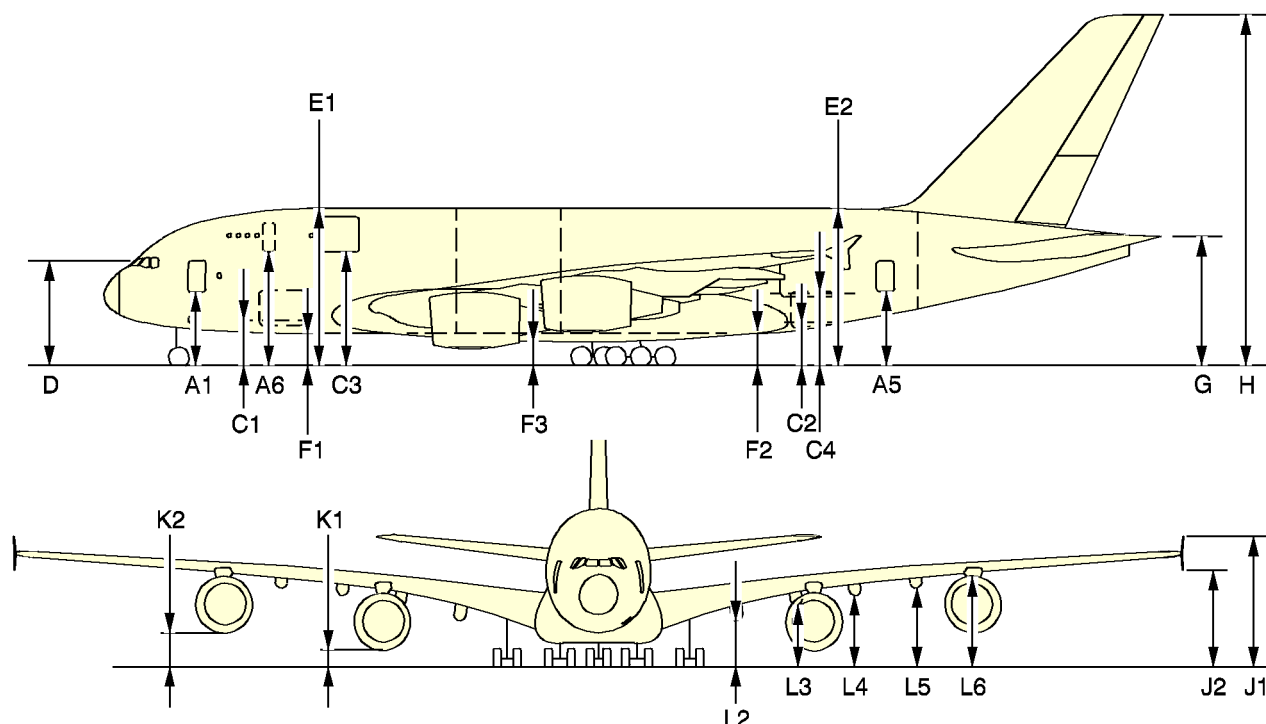
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2-3
Page 1
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AIRPLANE CHARACTERISTICS



A/C CONFIGURATION	MRW FWD CG		MRW AFT CG		300t AFT CG		OWE MID CG		A/C JACKED FDL = 7.3 m (24.0 ft)	
	m	ft	m	ft	m	ft	m	ft	m	ft
A1	5.03	16.5	5.12	16.8	5.34	17.5	5.21	17.1	7.25	23.8
A5	5.16	16.9	5.10	16.7	5.24	17.2	5.41	17.7	7.25	23.8
A6	7.80	25.6	7.87	25.8	8.08	26.5	7.99	26.2	10.00	32.8
C1	3.02	9.9	3.09	10.1	3.30	10.8	3.21	10.5	5.22	17.1
C2	3.12	10.2	3.07	10.1	3.22	10.6	3.36	11.0	5.22	17.1
C3	7.93	26.0	7.99	26.2	8.19	26.9	8.12	26.6	10.12	33.2
C4	5.15	16.9	5.10	16.7	5.25	17.2	5.38	17.7	7.25	23.8
D	7.09	23.3	7.19	23.6	7.41	24.3	7.27	23.8	9.32	30.6
E1	10.73	35.2	10.79	35.4	11.00	36.1	10.92	35.8	12.92	42.4
E2	10.83	35.5	10.78	35.4	10.92	35.8	11.07	36.3	12.92	42.4
F1	2.32	7.6	2.38	7.8	2.59	8.5	2.51	8.2	4.51	14.8
F2	2.26	7.4	2.22	7.3	2.37	7.8	2.49	8.2	4.37	14.3
F3	1.63	5.4	1.64	5.4	1.81	5.9	1.85	6.1	3.78	12.4
G	9.21	30.2	9.08	29.8	9.19	30.1	9.48	31.1	11.24	36.9
H	24.18	79.3	24.05	78.9	24.16	79.3	22.45	80.2	26.21	86.0
J1	7.54	24.7	7.48	24.5	8.21	26.9	8.37	27.5	10.22	33.5
J2	5.26	17.2	5.20	17.1	5.93	19.4	6.08	20.0	7.94	26.0
K1	1.03	3.4	1.05	3.5	1.29	4.2	1.28	4.2	3.24	10.6
K2	1.88	6.2	1.88	6.2	2.26	7.4	2.30	7.5	4.23	13.9
L2	3.05	10.0	3.05	10.0	3.25	10.7	3.30	10.8	5.22	17.1
L3	4.08	13.4	4.06	13.3	4.30	14.1	4.37	14.3	6.28	20.6
L4	4.65	15.3	4.63	15.2	4.93	16.2	5.02	16.5	6.91	22.7
L5	4.99	16.4	4.96	16.3	5.33	17.5	5.43	17.8	7.32	24.0
L6	5.19	17.0	5.16	16.9	5.60	18.4	5.71	18.7	7.60	24.9

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Ground clearances
A380-800F Models

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Page 2
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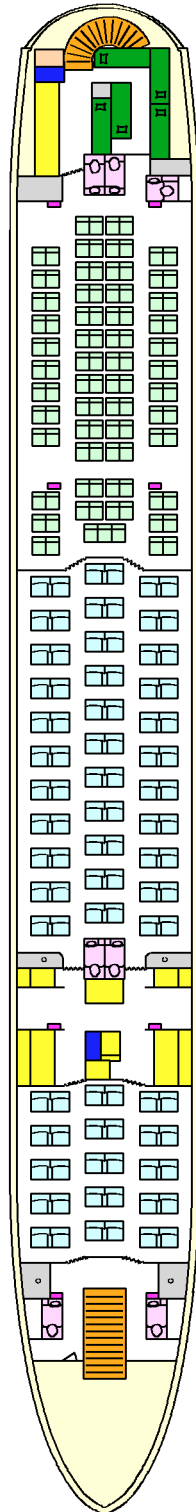


AIRPLANE CHARACTERISTICS

2-4 INTERIOR ARRANGEMENTS - PLAN VIEW



AIRPLANE CHARACTERISTICS



UPPER DECK

PASSENGER SEATS UPPER DECK (199 TOTAL)

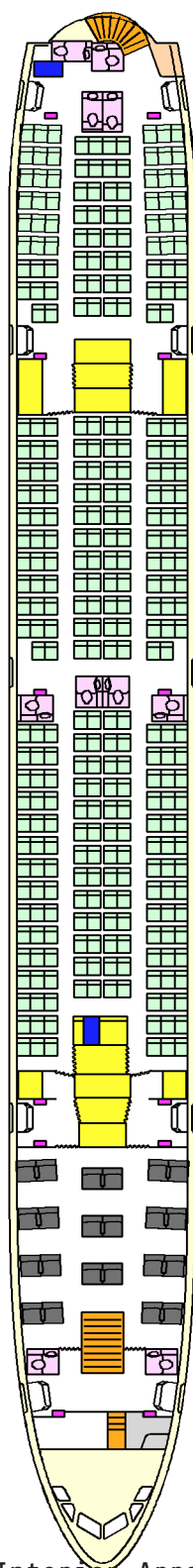
- BUSINESS CLASS 96 SEATS
- TOURIST CLASS 103 SEATS
- ATTENDANT SEATS 8
- COAT STOWAGE 6
- GALLEYS 8
- LAVATORIES 7
- STOWAGES 1
- LIFT 2
- STAIRS 2
- CREW REST BUNKS 5

Interior Arrangements - Plan View
Standard Configuration (Sheet 1/2)
A380-800 Models

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AIRPLANE CHARACTERISTICS



MAIN DECK

PASSENGER SEATS MAIN DECK (356 TOTAL)

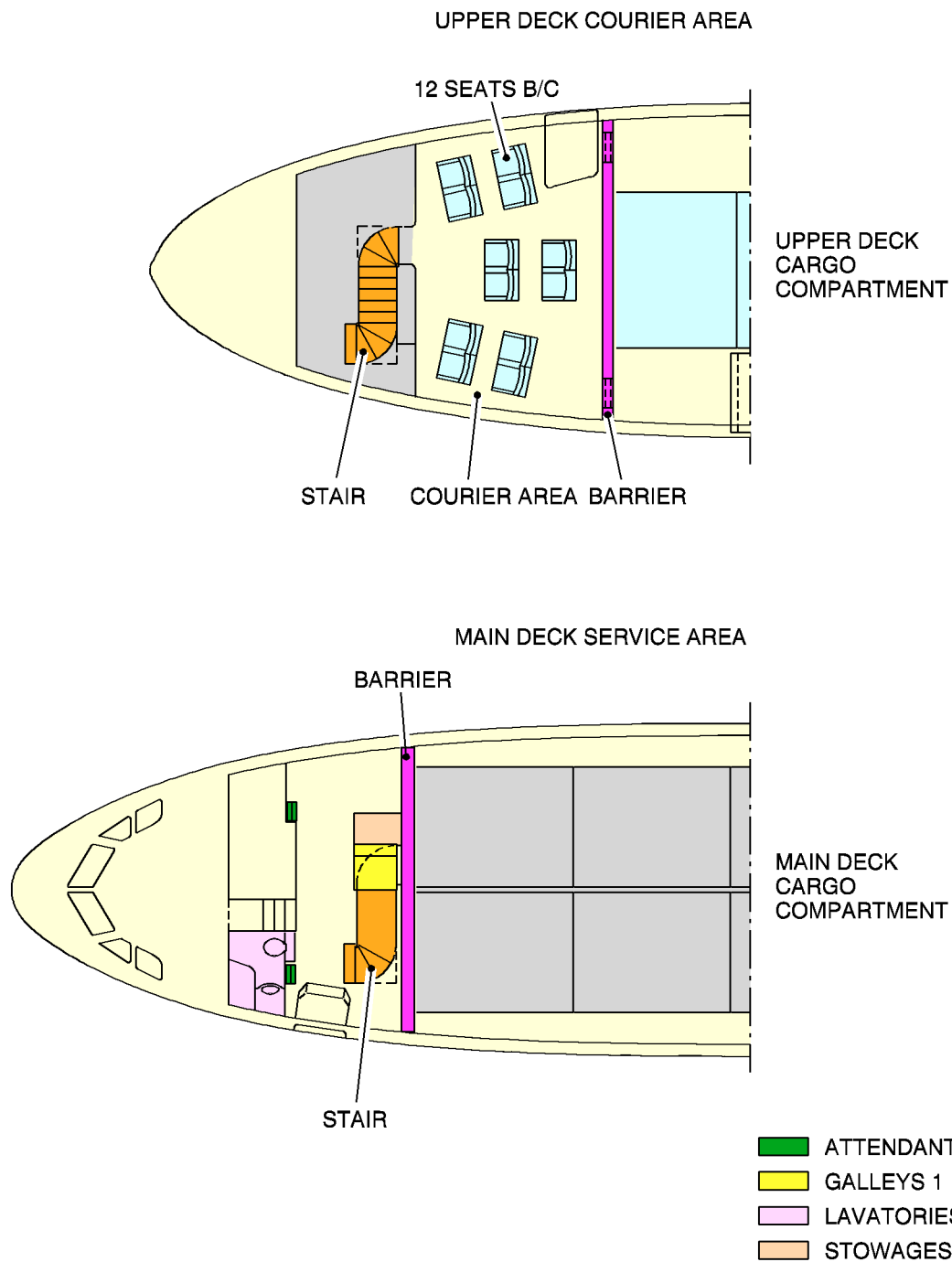
- FIRST CLASS 22 SEATS
- TOURIST CLASS 334 SEATS
- ATTENDANT SEATS 12
- COAT STOWAGE 1
- GALLEYS 9
- LAVATORIES 10
- STOWAGES 1
- LIFT 2
- STAIRS 2

Interior Arrangements - Plan View
Standard Configuration (Sheet 2/2)
A380-800 Models

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AIRPLANE CHARACTERISTICS



Interior Arrangements - Plan View
Standard Configuration
A380-800F Models

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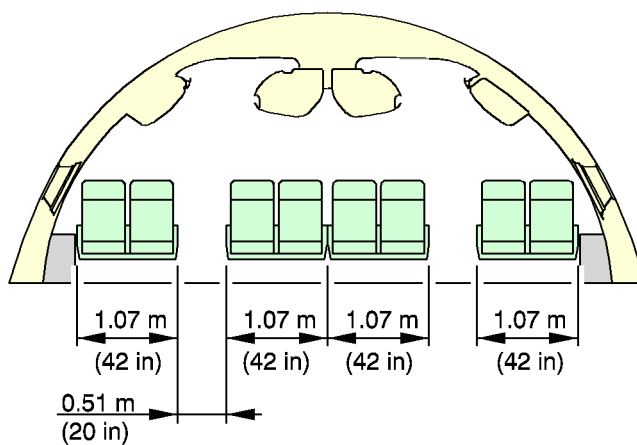
AIRPLANE CHARACTERISTICS

2-5 INTERIOR ARRANGEMENTS - CROSS-SECTION

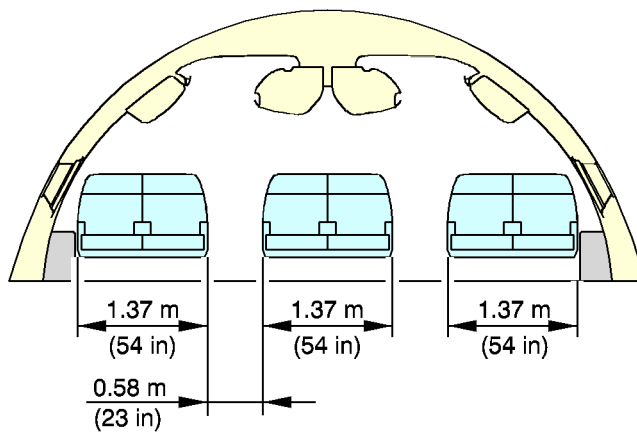


AIRPLANE CHARACTERISTICS

UPPER DECK
TOURIST CLASS 8 ABREAST



UPPER DECK
BUSINESS CLASS 6 ABREAST



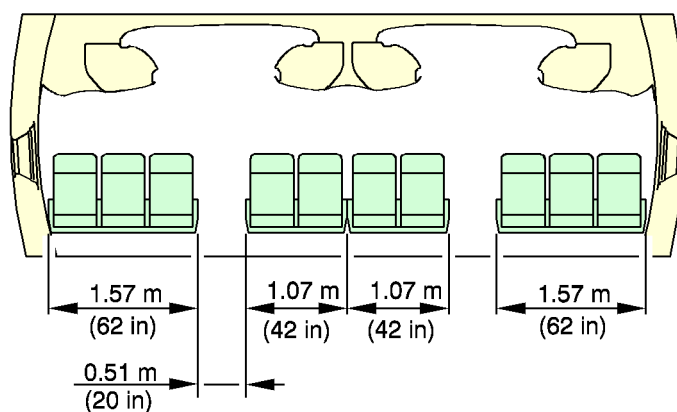
Interior Arrangements - Cross-section
Typical Configuration (Sheet 1/2)
A380-800 Models

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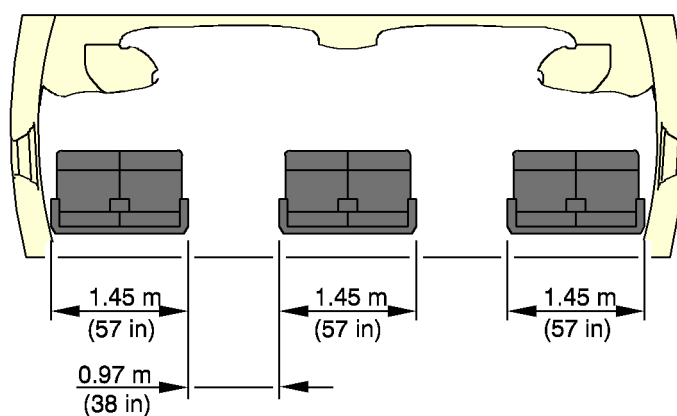


AIRPLANE CHARACTERISTICS

MAIN DECK
TOURIST CLASS 10 ABREAST



MAIN DECK
FIRST CLASS 6 ABREAST

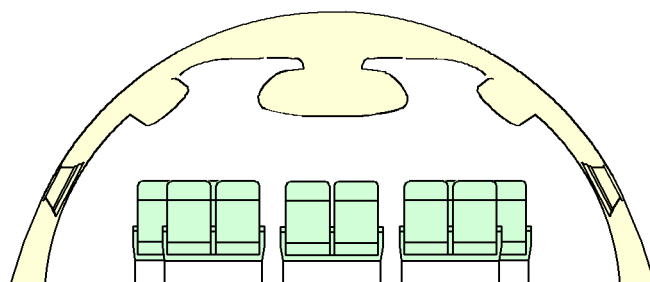


Interior Arrangements - Cross-section
Typical Configuration (Sheet 2/2)
A380-800 Models

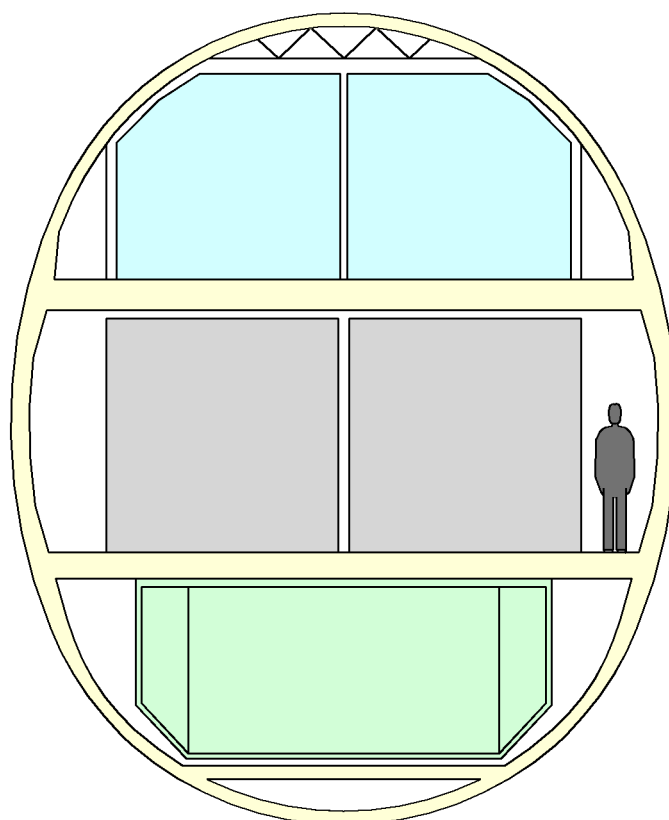
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AIRPLANE CHARACTERISTICS



UPPER DECK
COURIER AREA



UPPER DECK
CARGO COMPARTMENT

MAIN DECK
CARGO COMPARTMENT

LOWER DECK
CARGO COMPARTMENT

Interior Arrangements - Cross-section
Typical Configuration
A380-800F Models

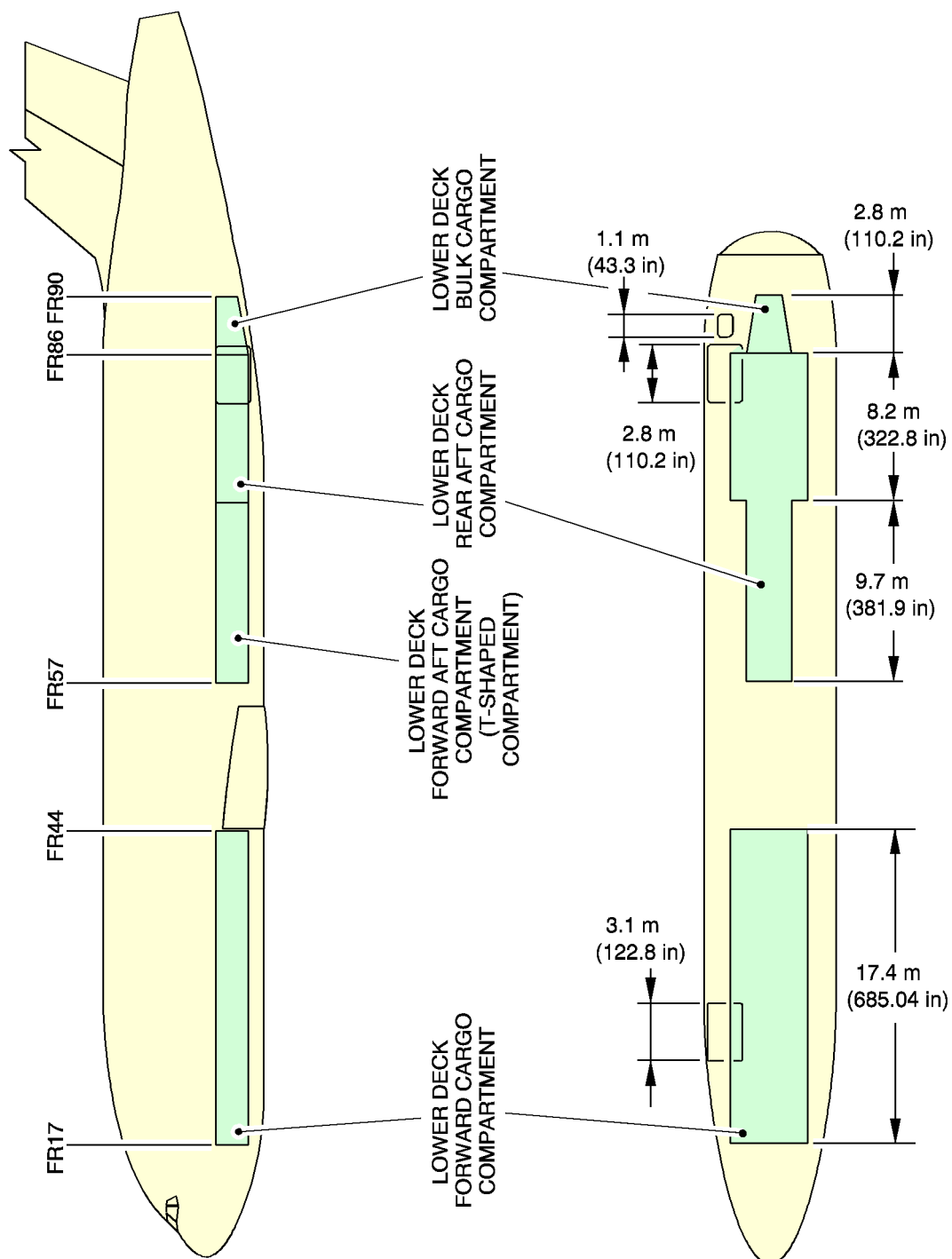
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AIRPLANE CHARACTERISTICS

2-6 CARGO COMPARTMENTS

AIRPLANE CHARACTERISTICS

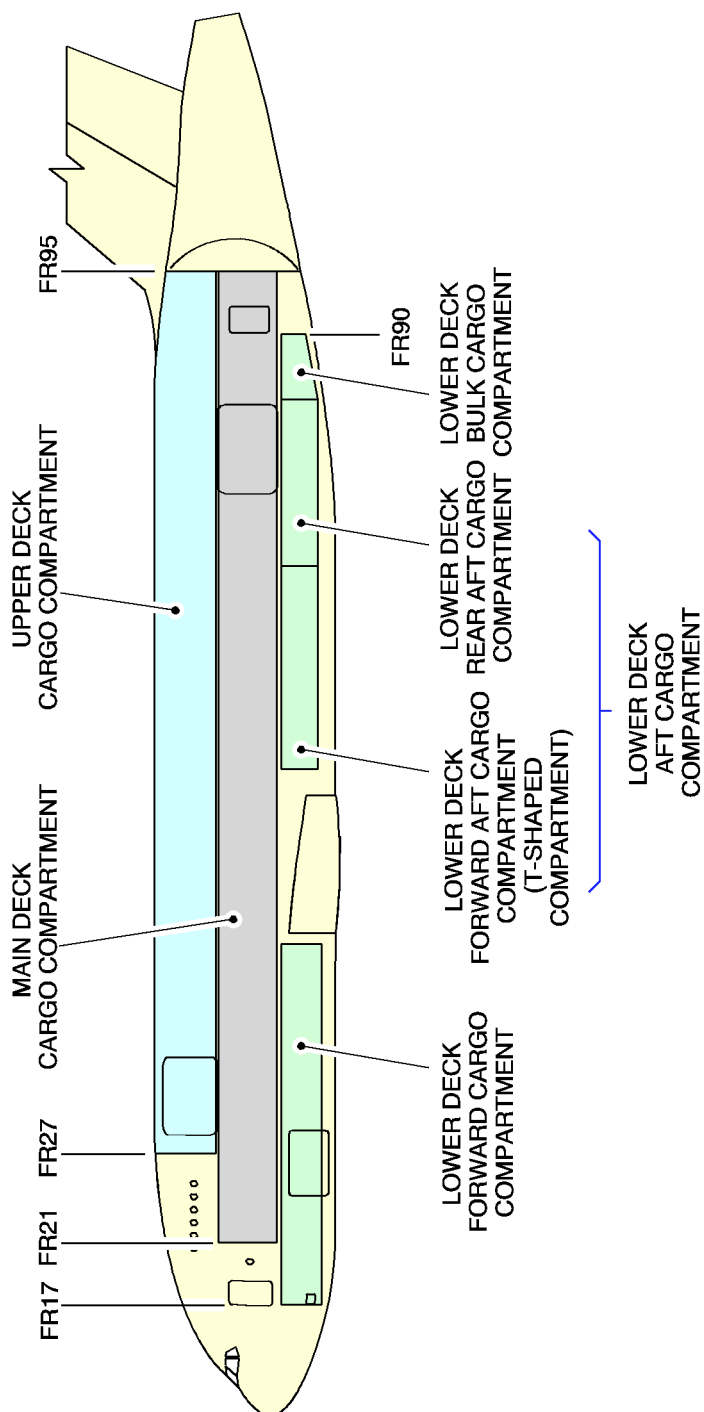


Cargo Compartments
Location and Dimensions
A380-800 Models

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AIRPLANE CHARACTERISTICS

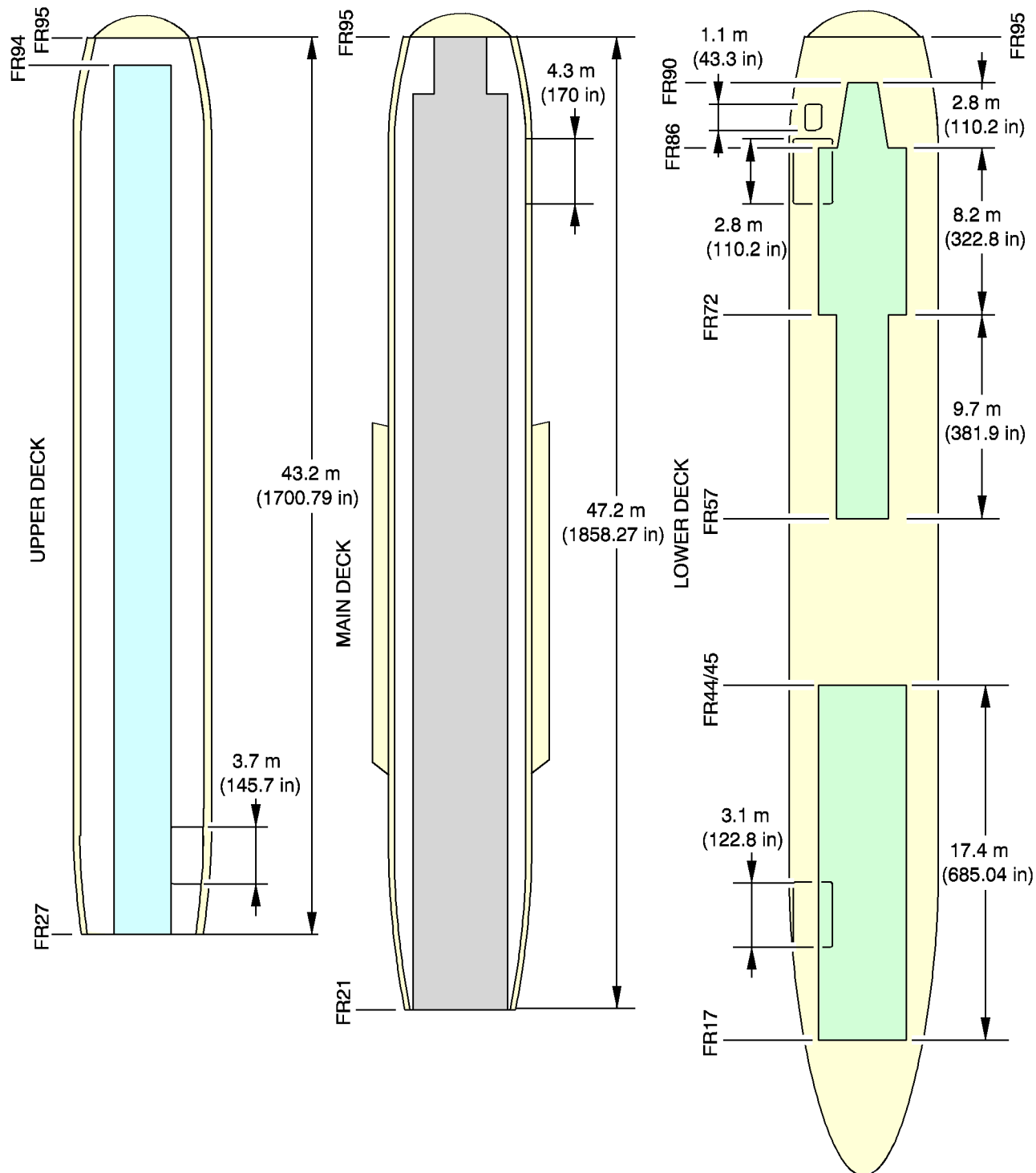


Cargo Compartments
Location and Dimensions (Sheet 1/2)
A380-800F Models

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AIRPLANE CHARACTERISTICS

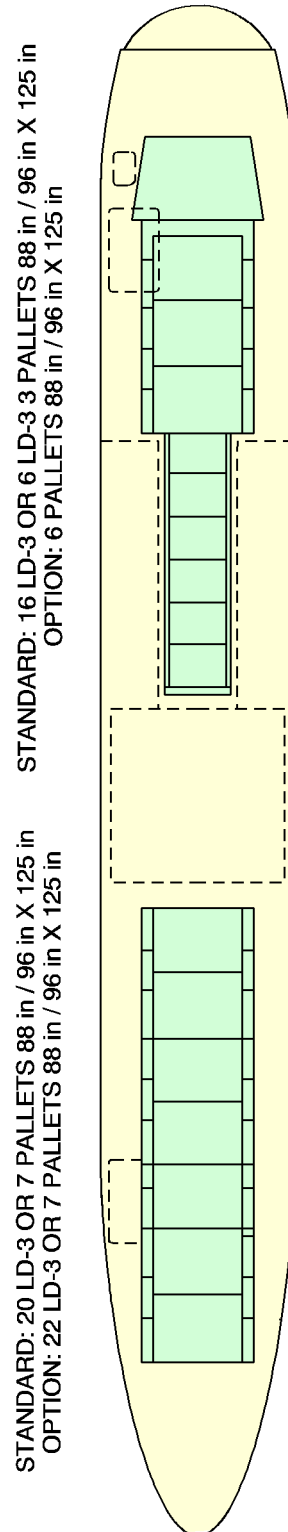


Cargo Compartments
Location and Dimensions (Sheet 2/2)
A380-800F Models

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AIRPLANE CHARACTERISTICS

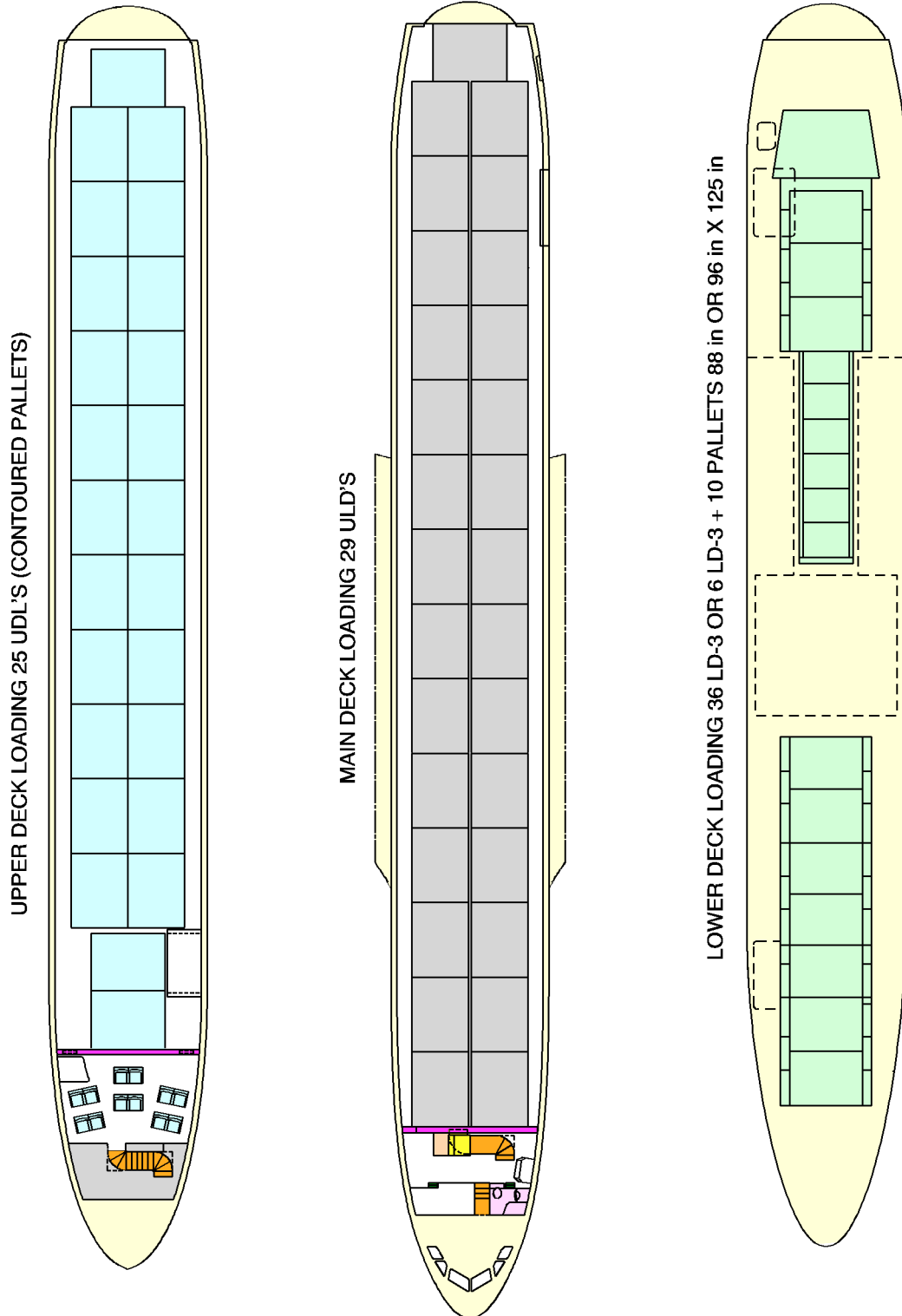


Cargo Compartments
Loading Combinations
A380-800 Models

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AIRPLANE CHARACTERISTICS

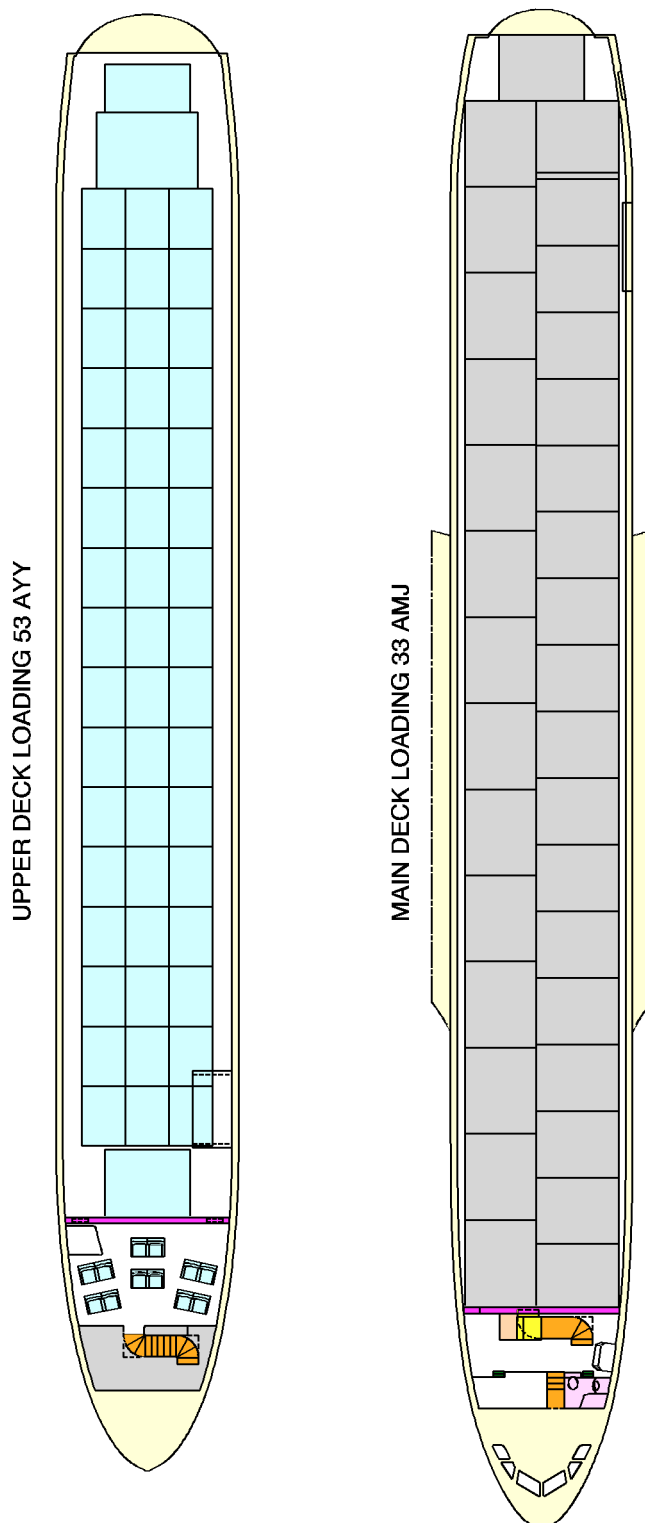


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Cargo Compartments
Loading Combinations
A380-800F Models



AIRPLANE CHARACTERISTICS

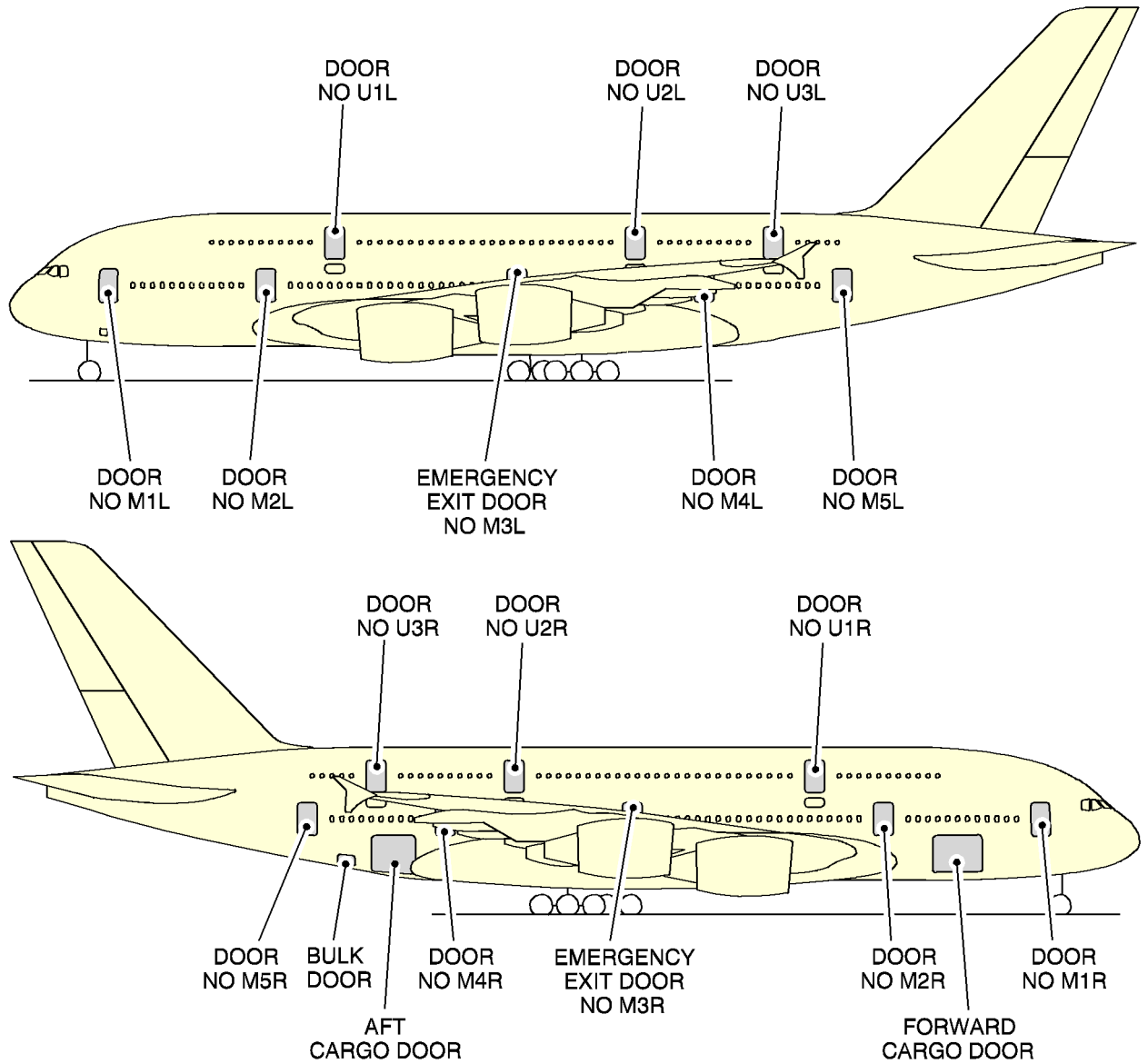


Cargo Compartments
Loading Combinations
A380-800F Models

L_AC_020602_0_FCM0_01_01



AIRPLANE CHARACTERISTICS

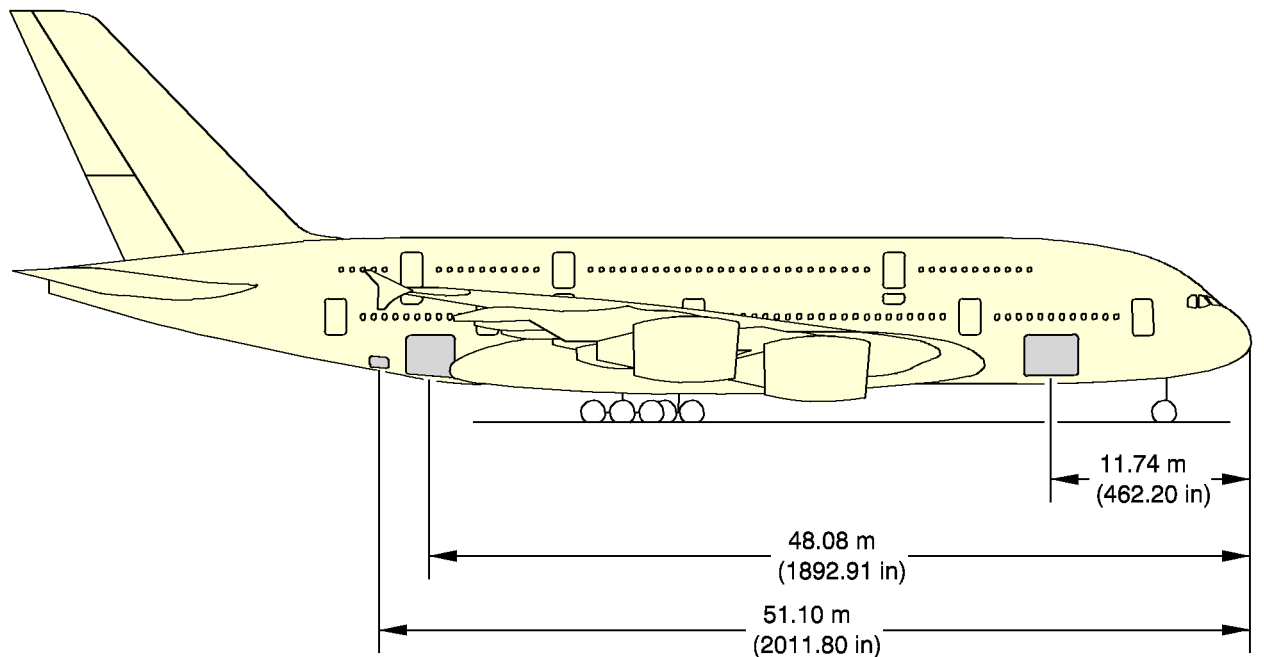
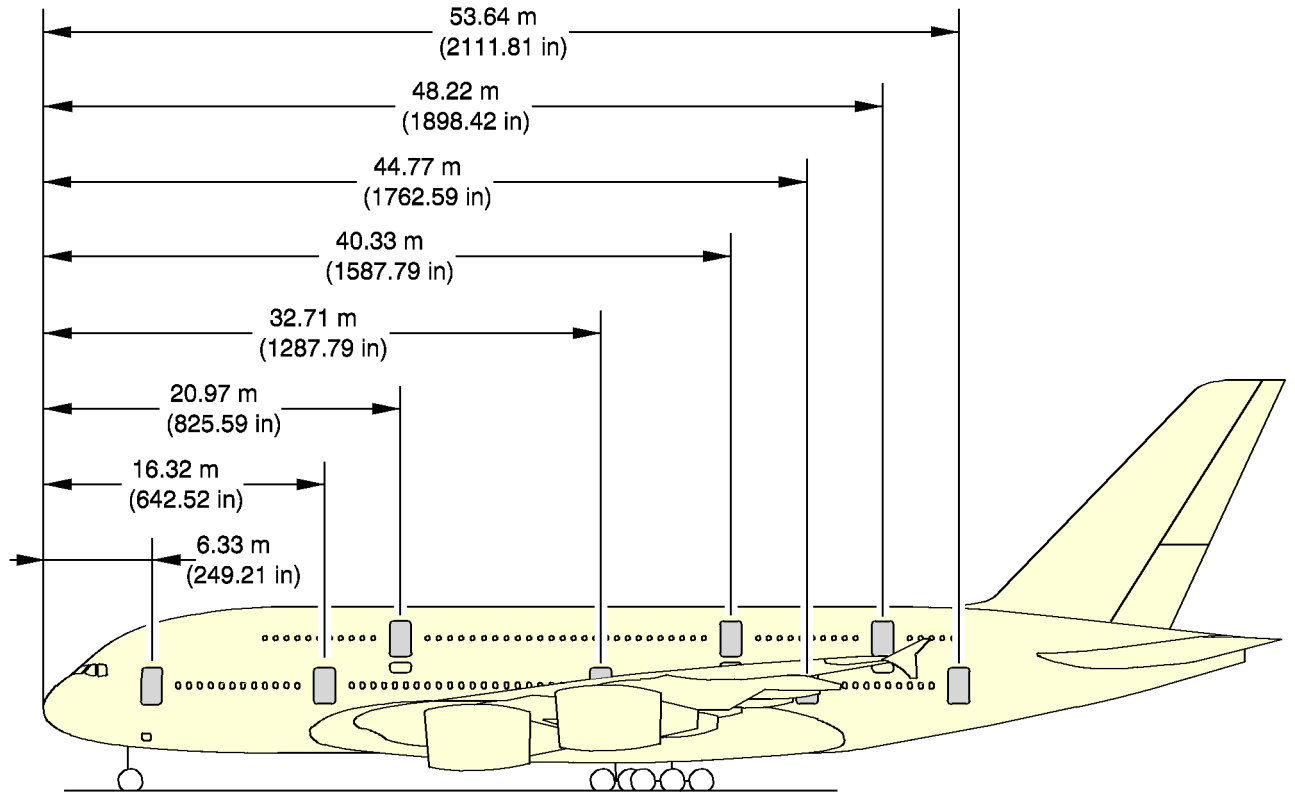


Door Clearances
Door Location (Sheet 1/2)
A380-800 Models

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AIRPLANE CHARACTERISTICS

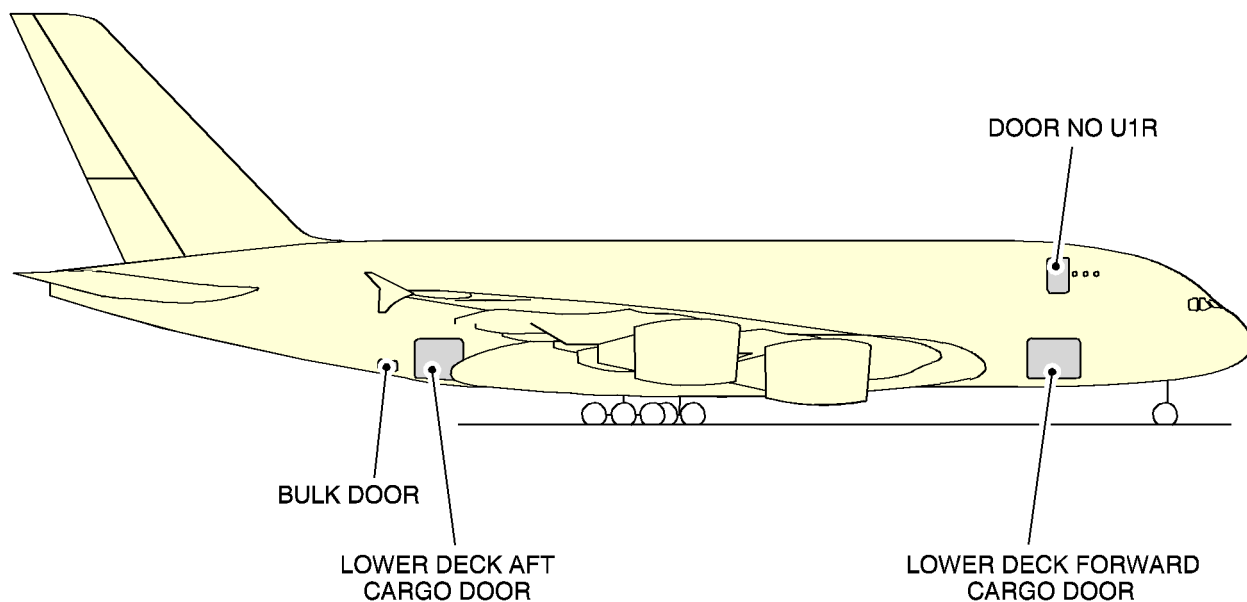
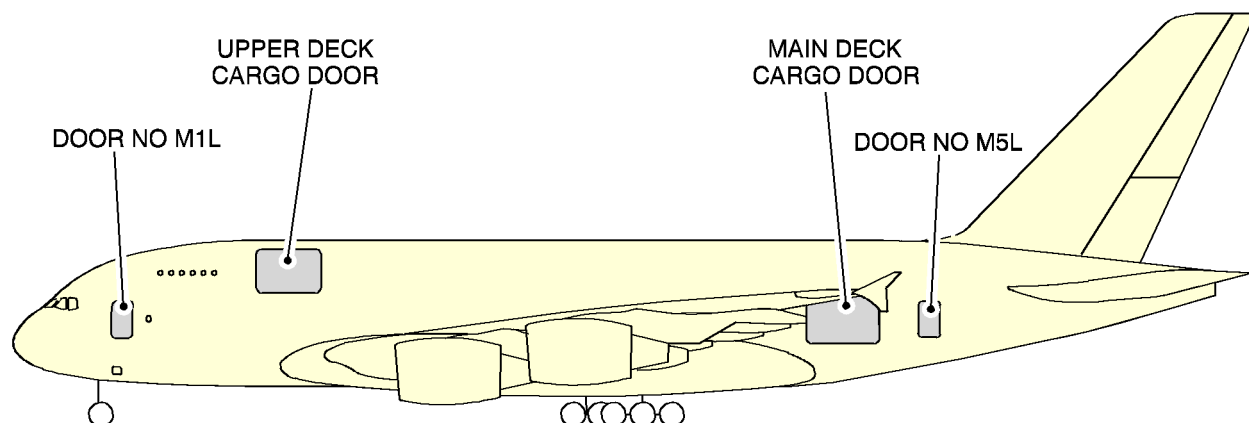


Door Clearances
Door Location (Sheet 2/2)
A380-800 Models

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AIRPLANE CHARACTERISTICS

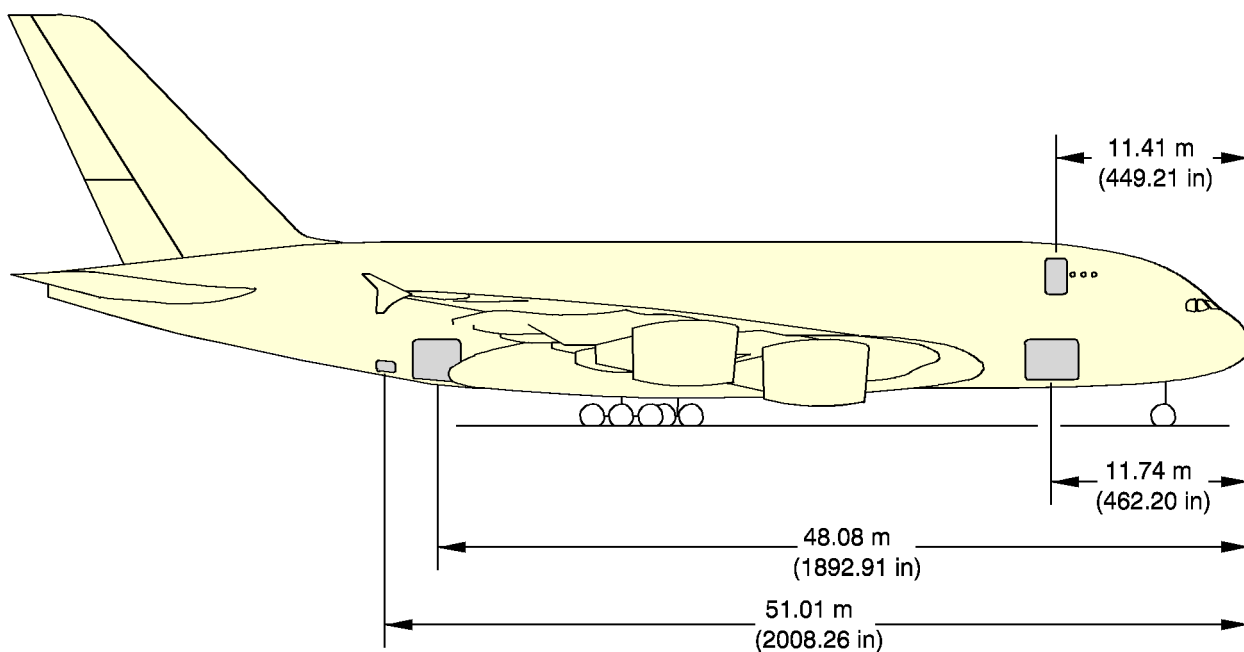
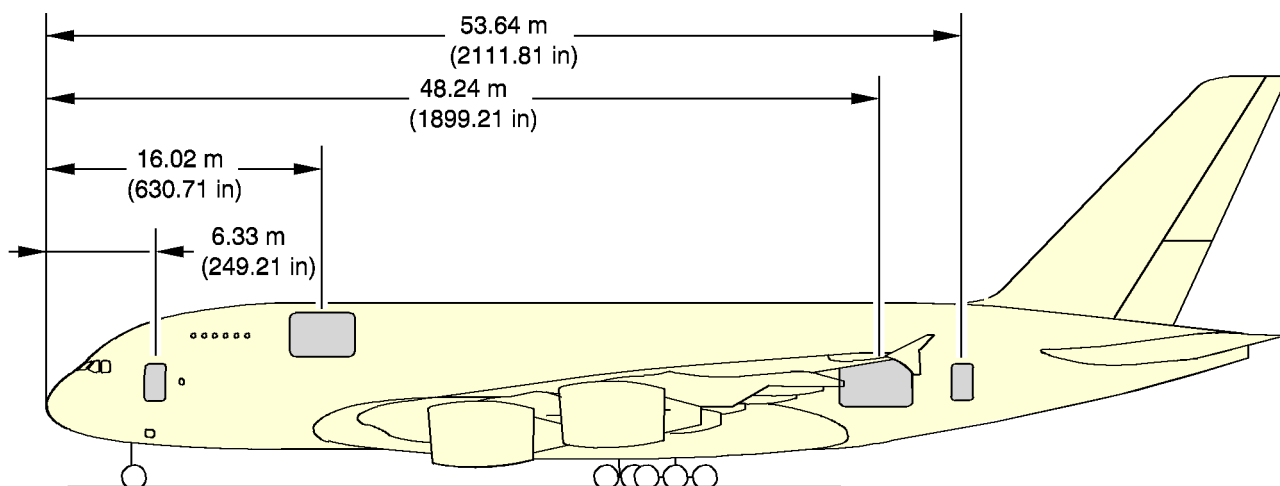


Door Clearances
Door Location (sheet 1/2)
A380-800F Models

L_AC_020700_0_FAM0_01_02



AIRPLANE CHARACTERISTICS

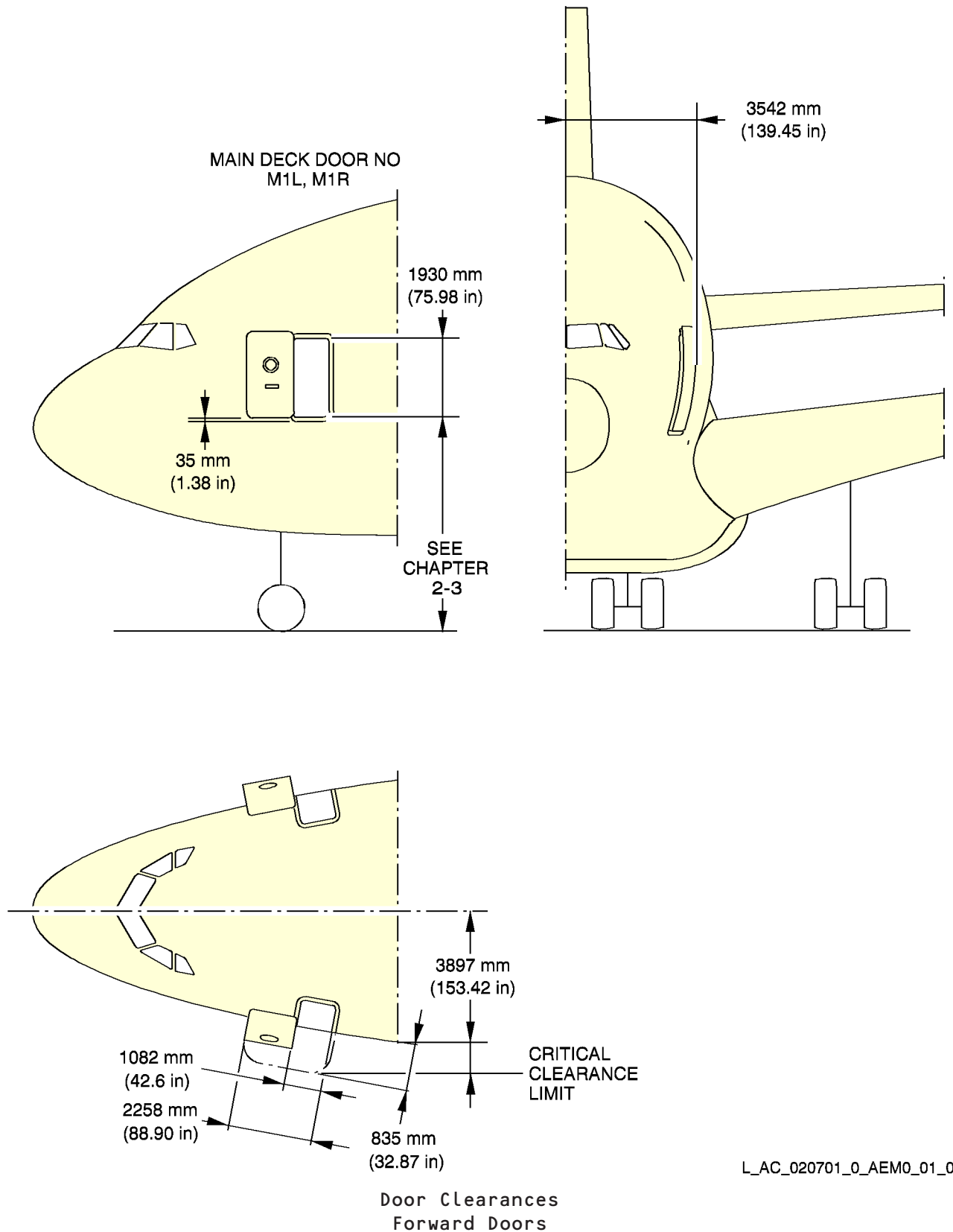


Door Clearances
Door Location (Sheet 2/2)
A380-800F Models

L_AC_020700_0_FCM0_01_02



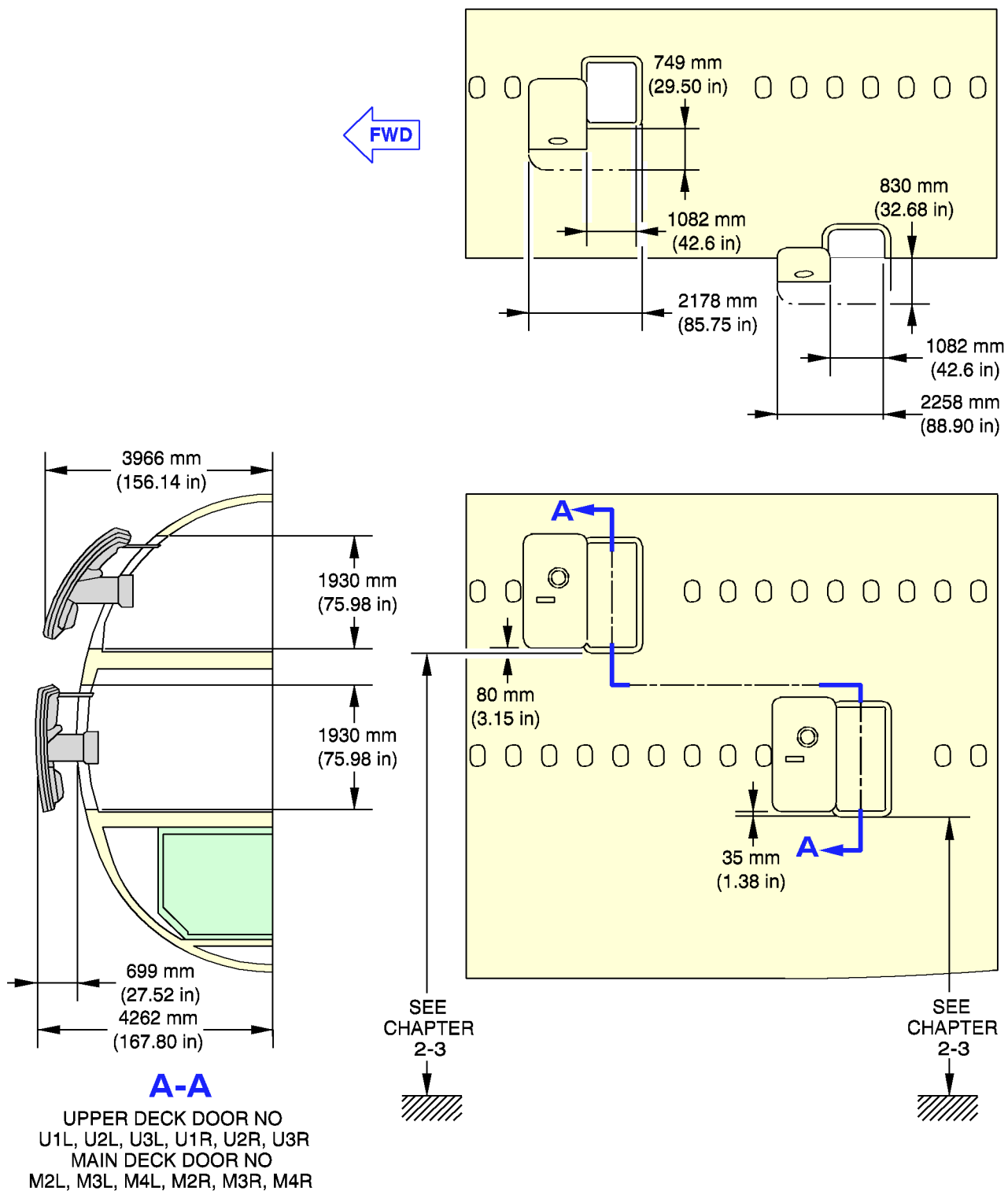
AIRPLANE CHARACTERISTICS



L_AC_020701_0_AEM0_01_01



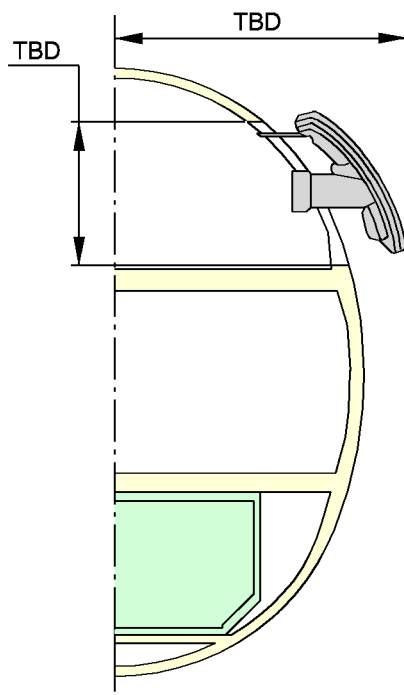
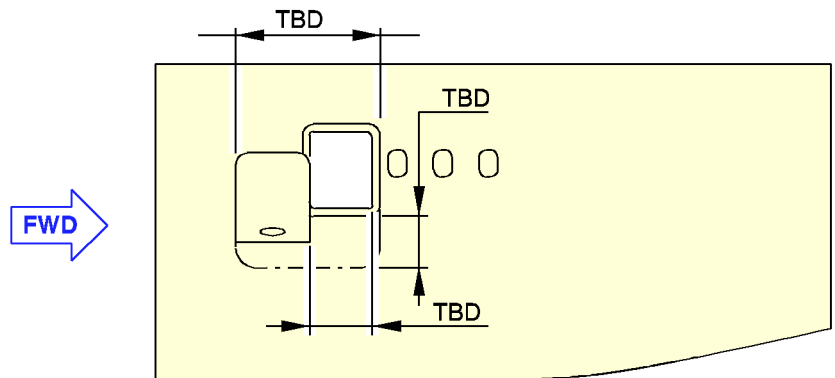
AIRPLANE CHARACTERISTICS



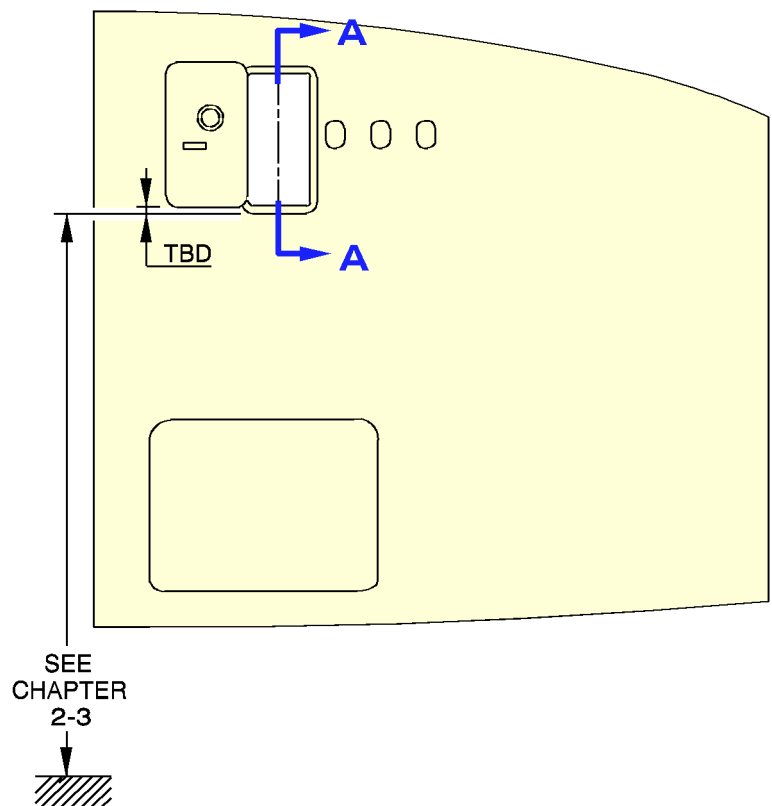
Door Clearances
Main and Upper Deck Doors
A380-800 Models

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AIRPLANE CHARACTERISTICS



A-A
UPPER DECK DOOR NO
U1R

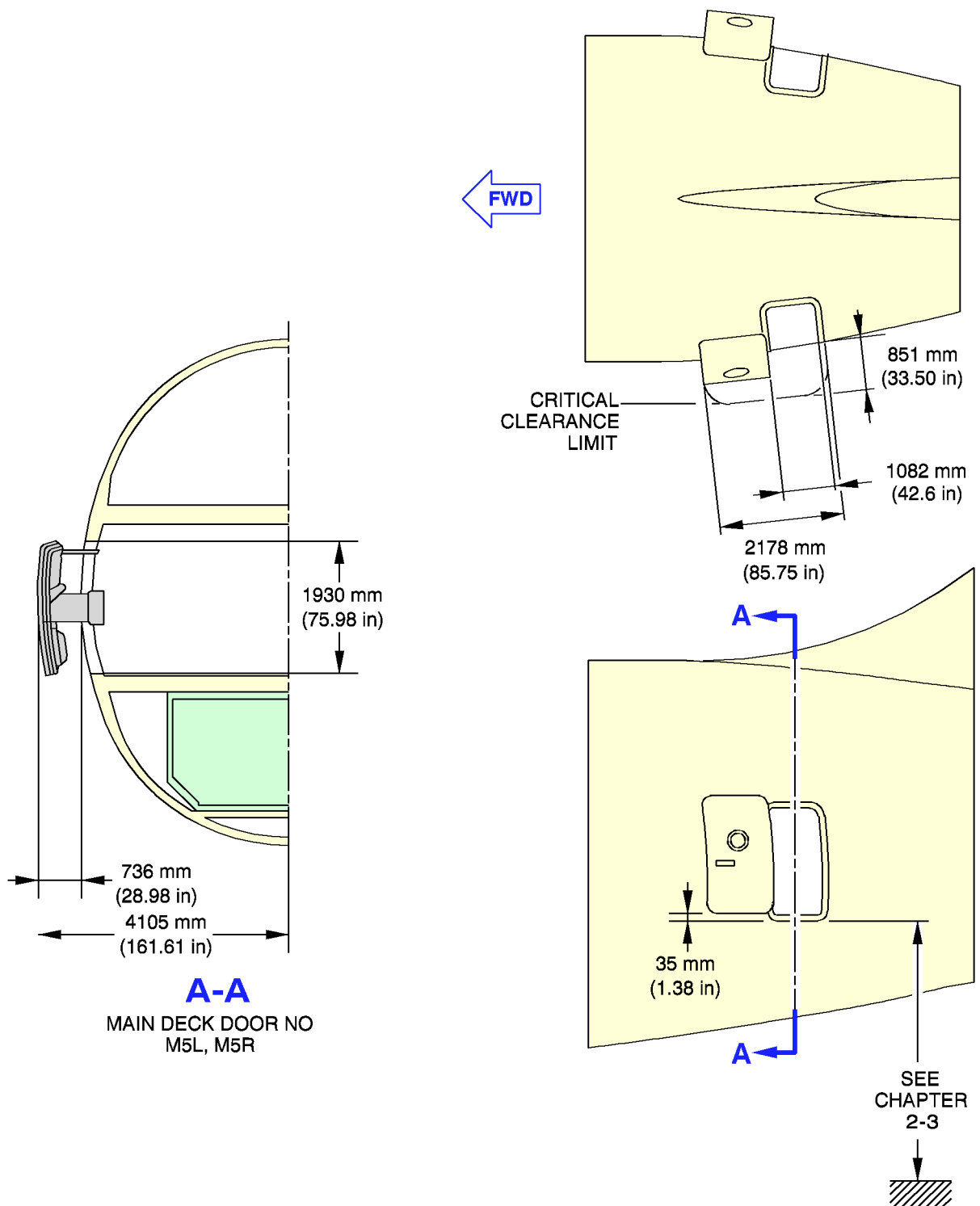


Door Clearances
Upper Deck Doors
A380-800F Models

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AIRPLANE CHARACTERISTICS

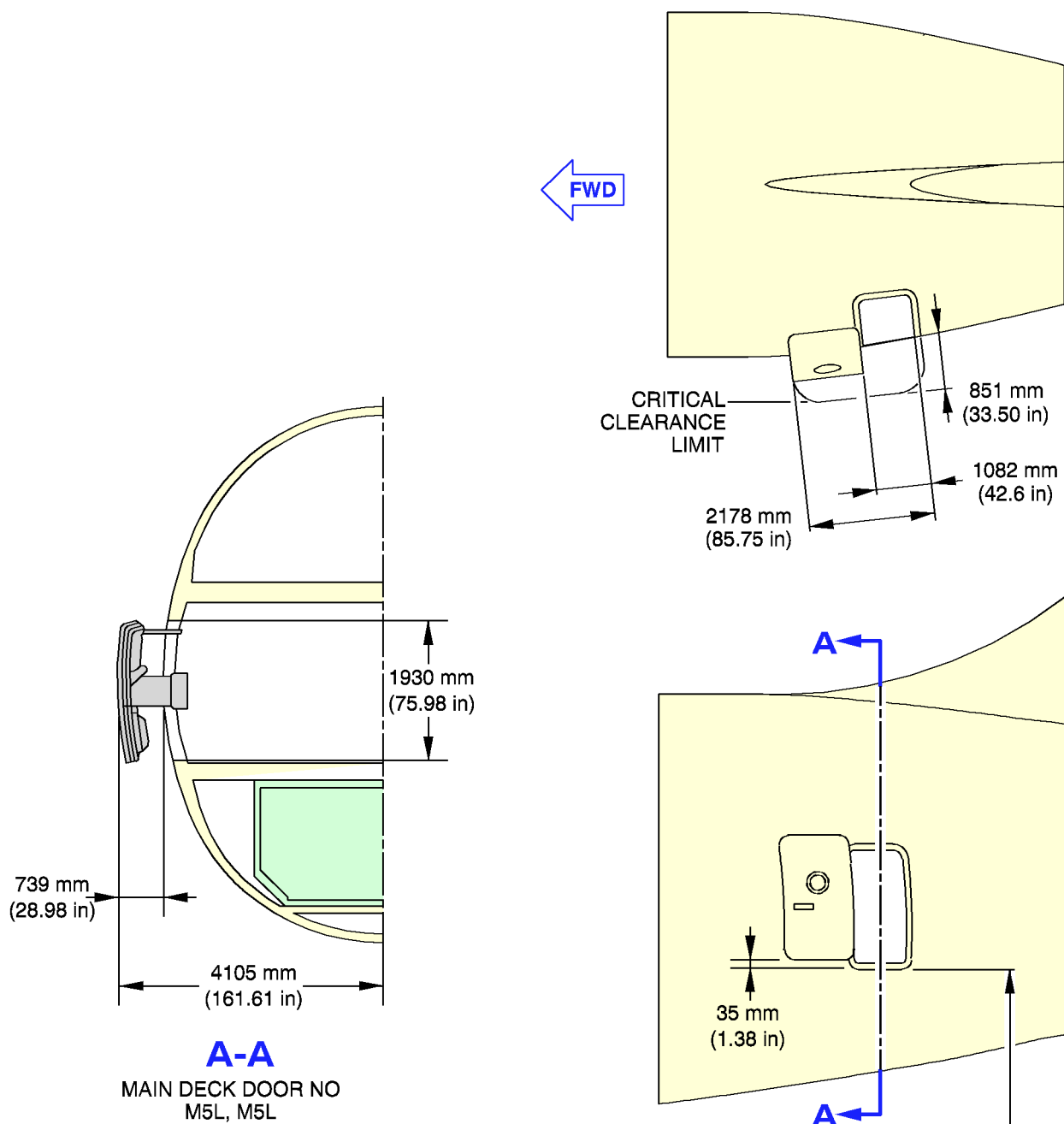


Door Clearances
Aft Doors
A380-800 Models

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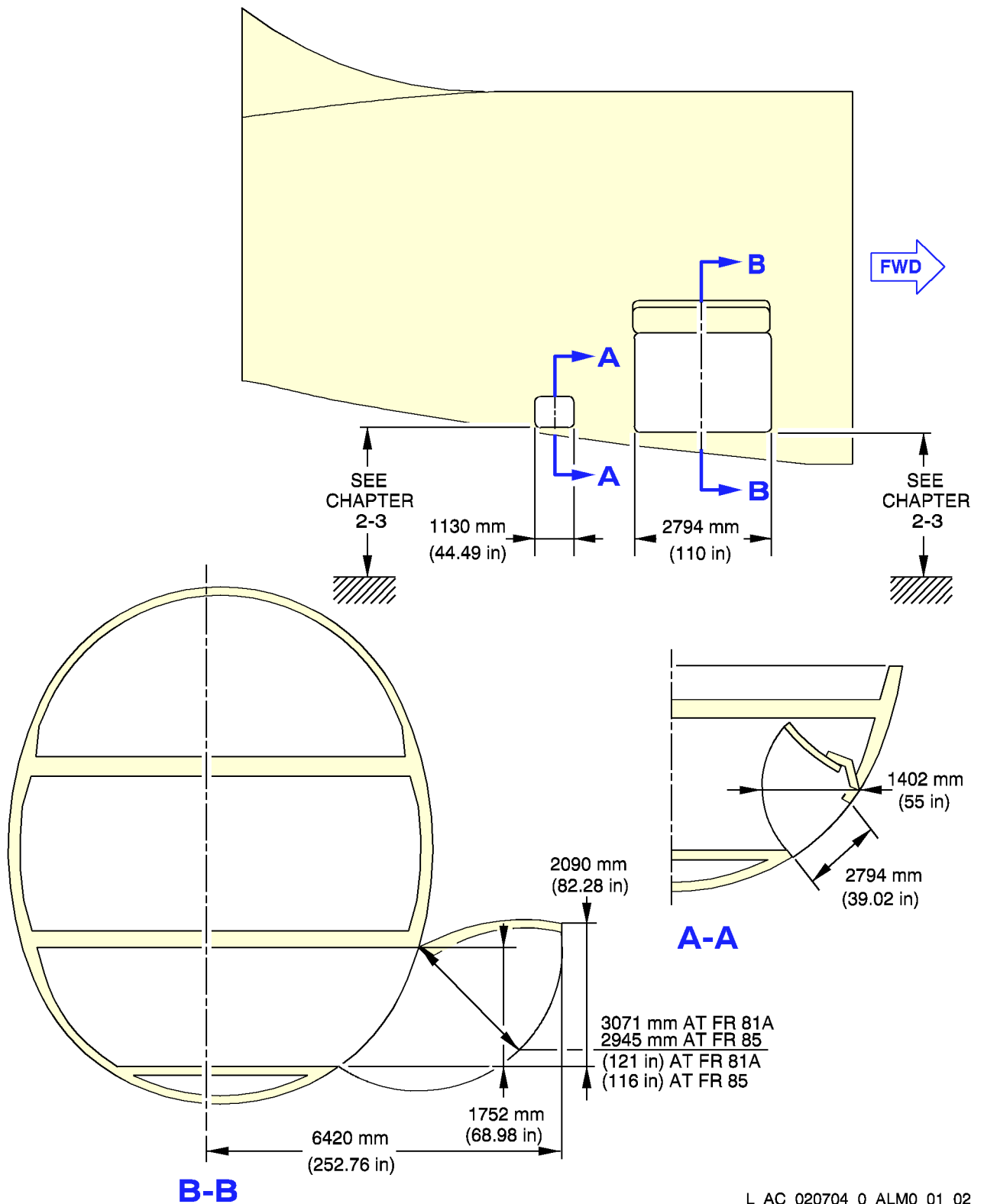
AIRPLANE CHARACTERISTICS



Door Clearances
Aft Doors
A380-800F Models

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AIRPLANE CHARACTERISTICS



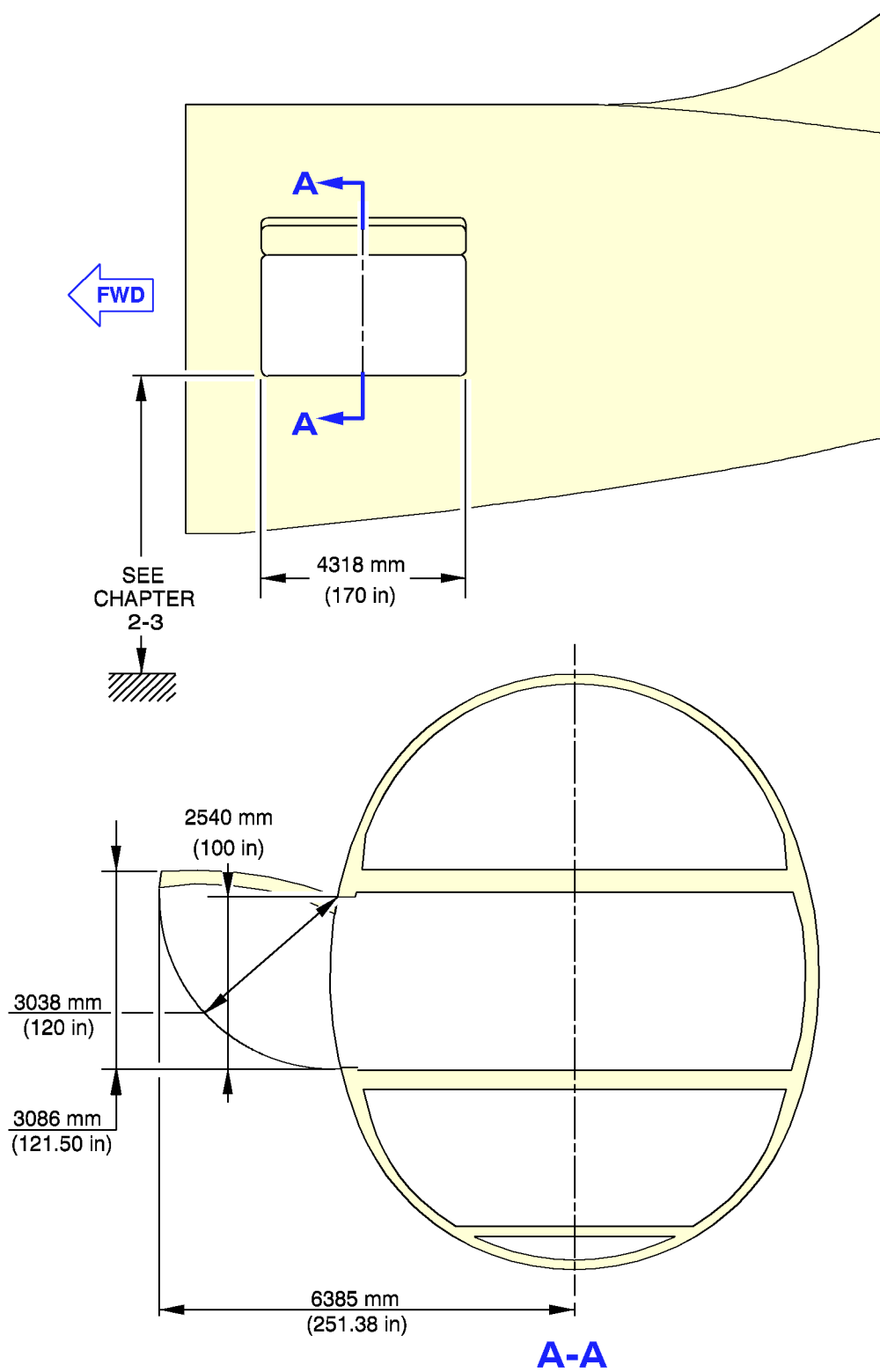
Door Clearances
Aft Cargo Compartment Doors
A380-800 Models

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AIRPLANE CHARACTERISTICS



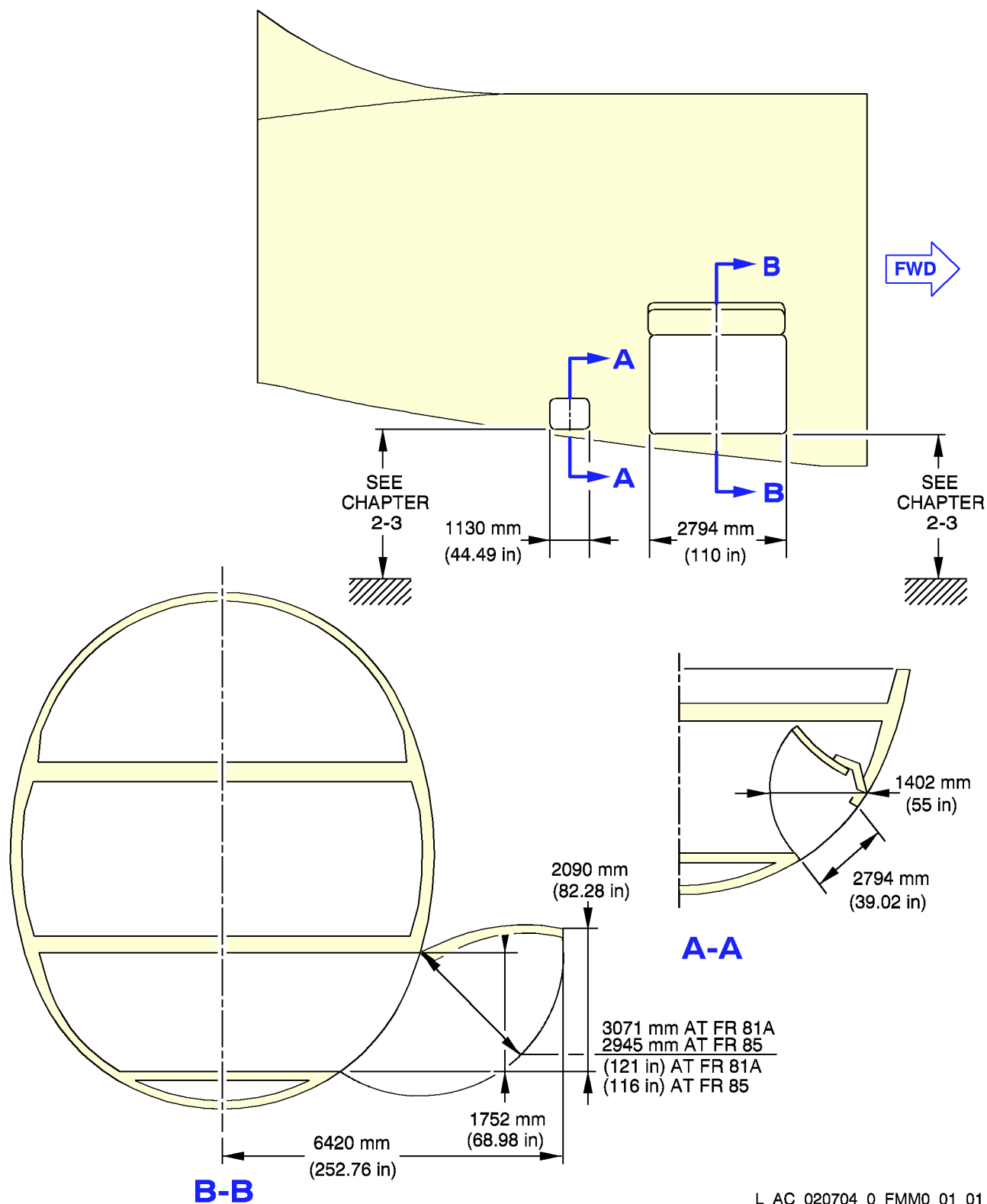
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Door Clearances
Aft Cargo Compartment Doors (Sheet 1/2)
A380-800F Models

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AIRPLANE CHARACTERISTICS

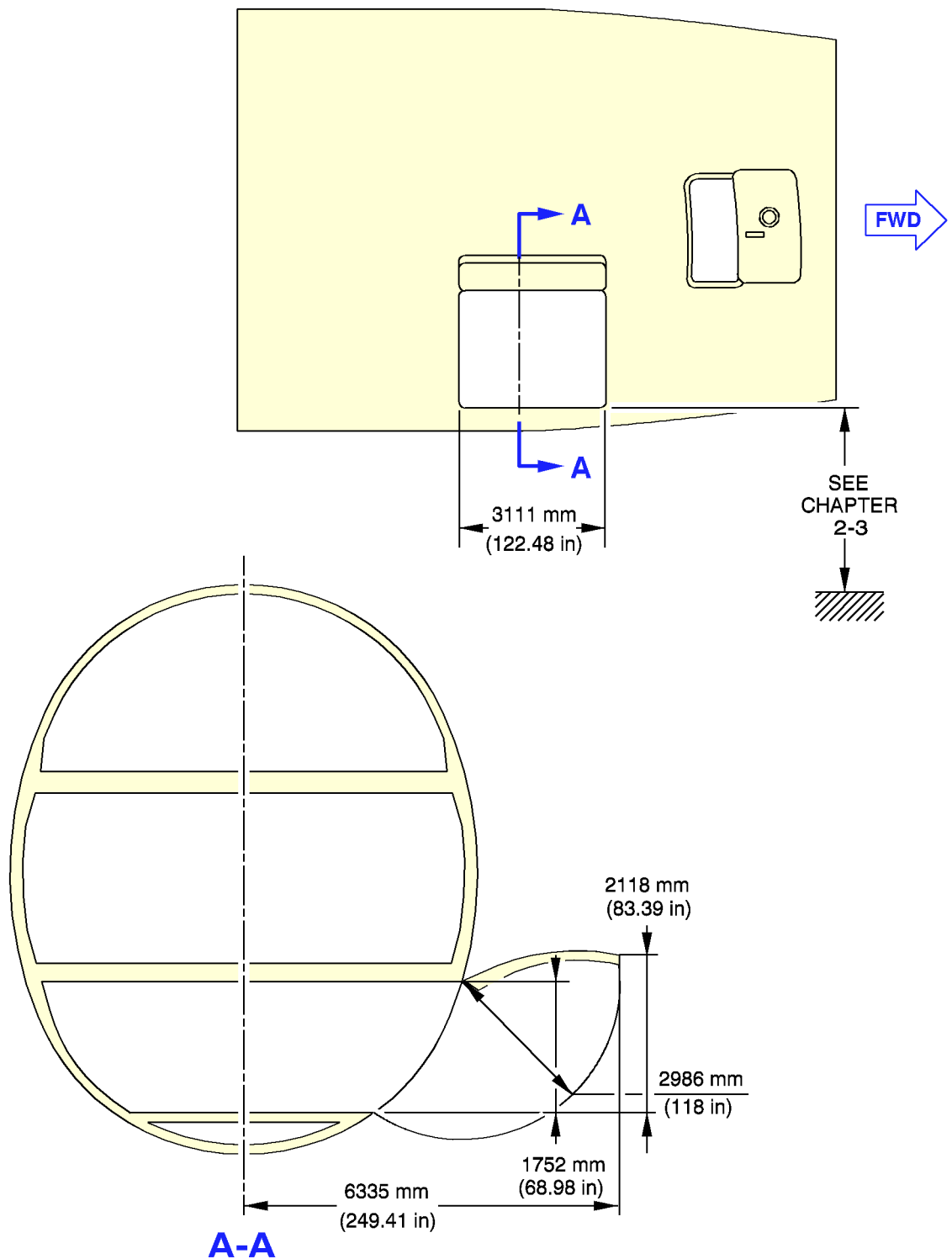


Door Clearances
Aft Cargo Compartment Doors (Sheet 2/2)
A380-800F Models

L_AC_020704_0_FMM0_01_01



AIRPLANE CHARACTERISTICS



R
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Door Clearances
Forward Cargo Compartment Doors
A380-800 Models

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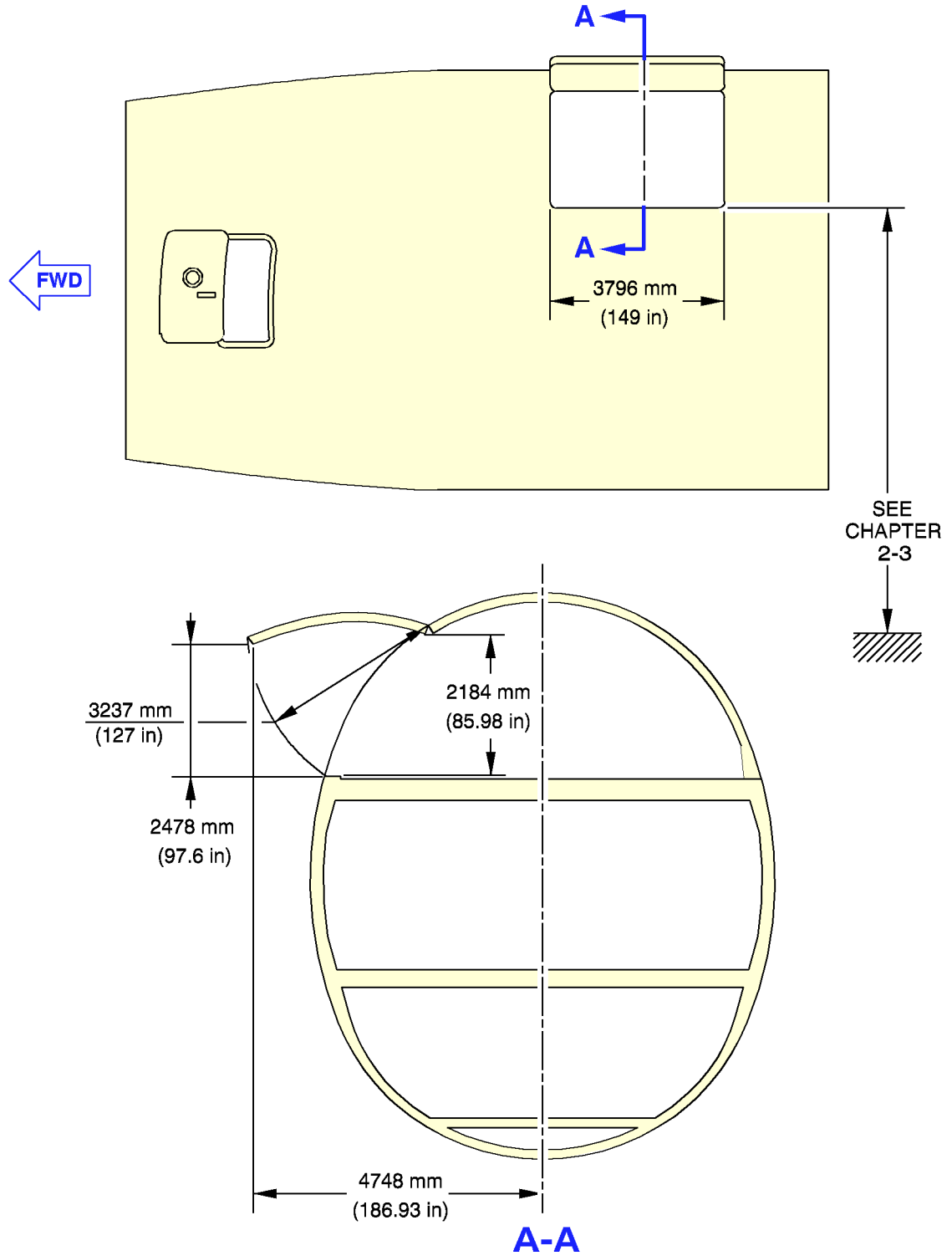
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2-7-5
Page 1
JAN 30/04



AIRPLANE CHARACTERISTICS



R
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R

Door Clearances
Left Forward Cargo Compartment Doors (Sheet 1/2)
A380-800F Models

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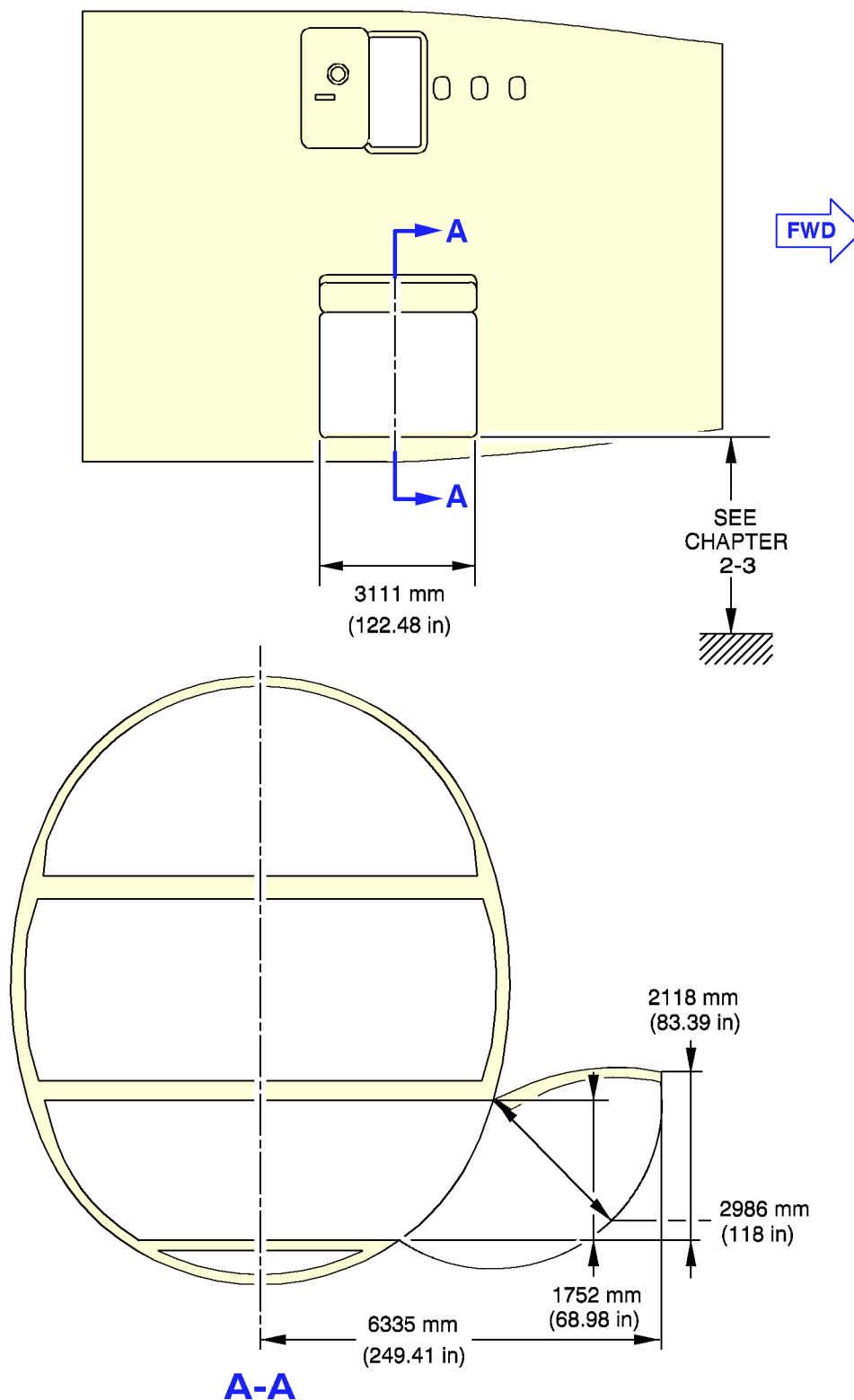
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2-7-5
Page 2
JAN 30/04



AIRPLANE CHARACTERISTICS



Door Clearances
Right Forward Cargo Compartment Doors (Sheet 2/2)
A380-800F Models

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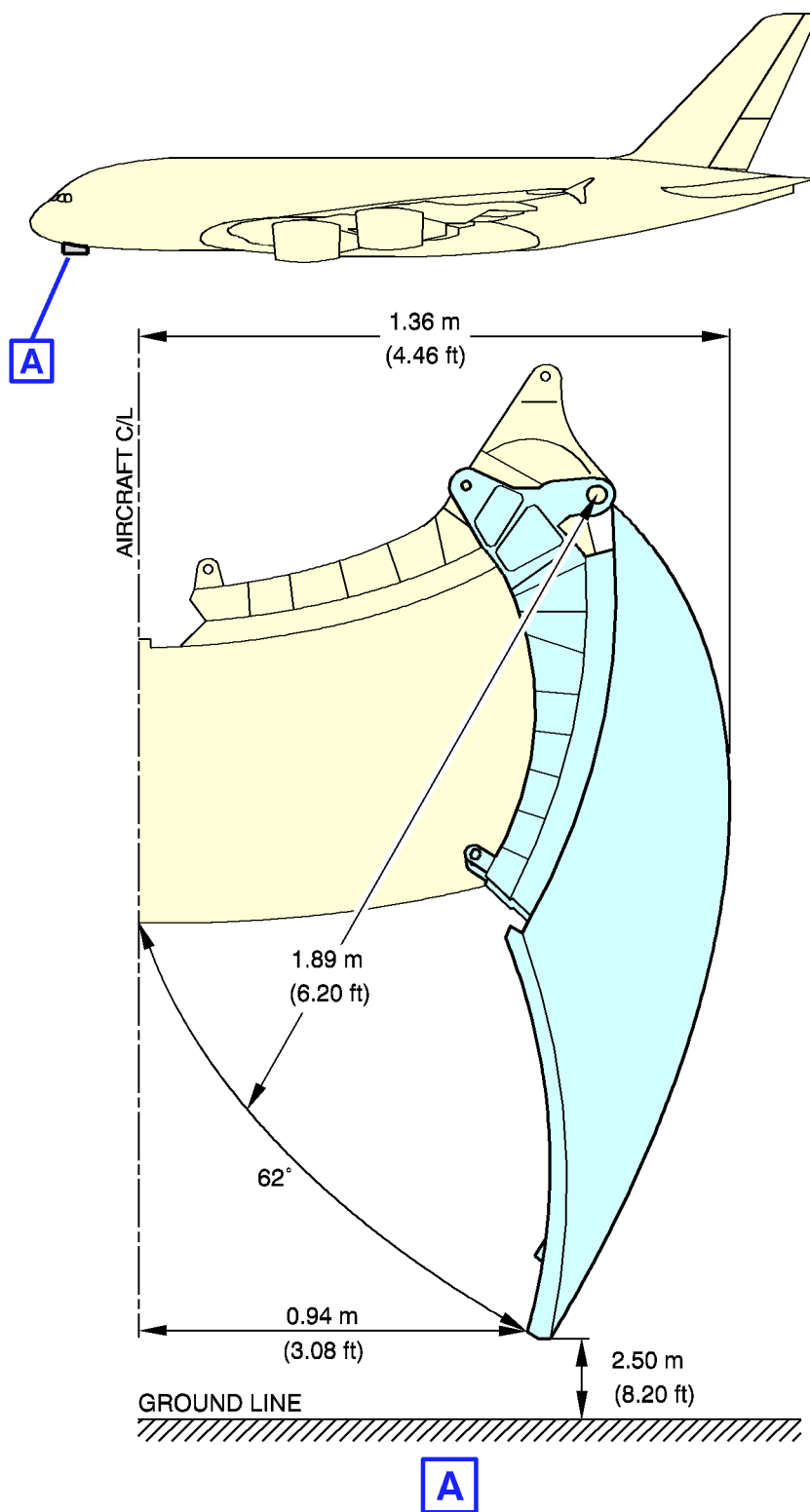
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2-7-5
Page 3
JAN 30/04



AIRPLANE CHARACTERISTICS

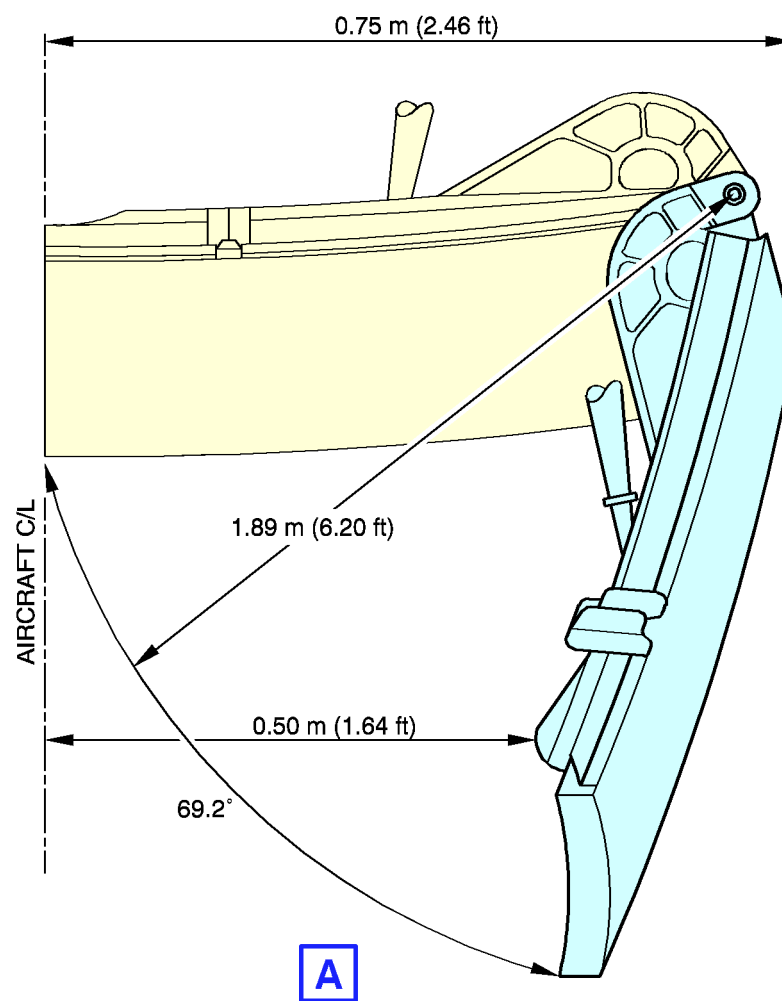
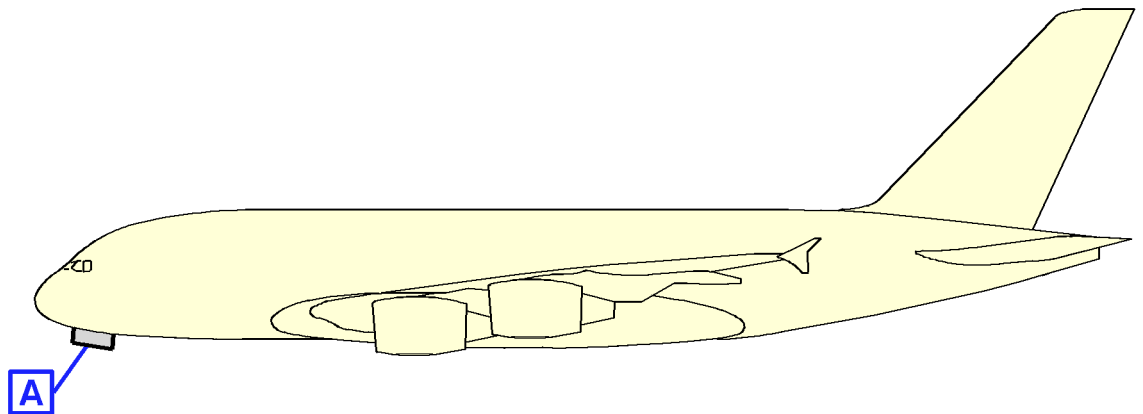


Ground Clearances
Forward Nose Landing Gear Doors
A380-800/800F Models

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AIRPLANE CHARACTERISTICS

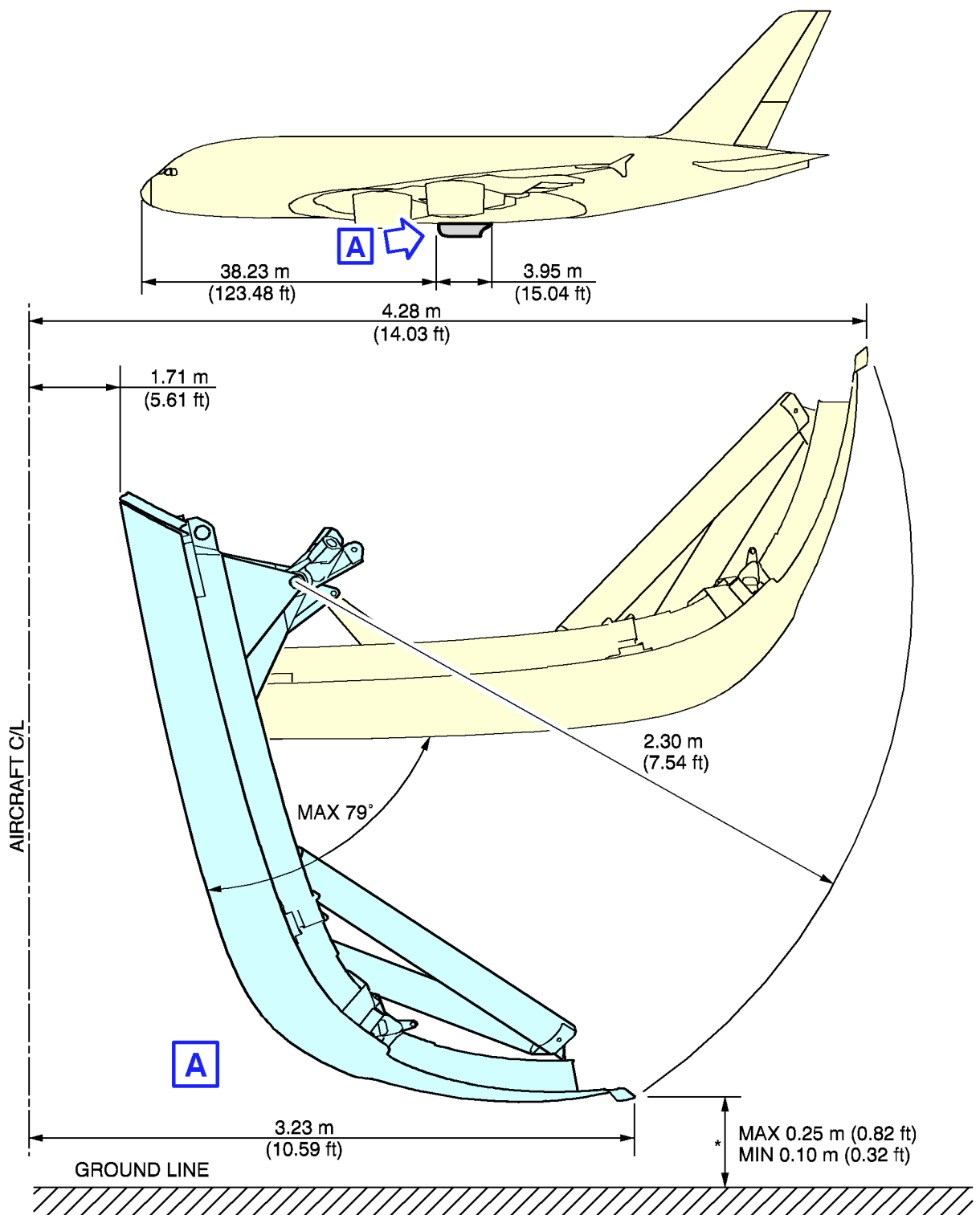


Ground Clearances
Aft Nose Landing Gear Doors
A380-800/800F Models

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AIRPLANE CHARACTERISTICS



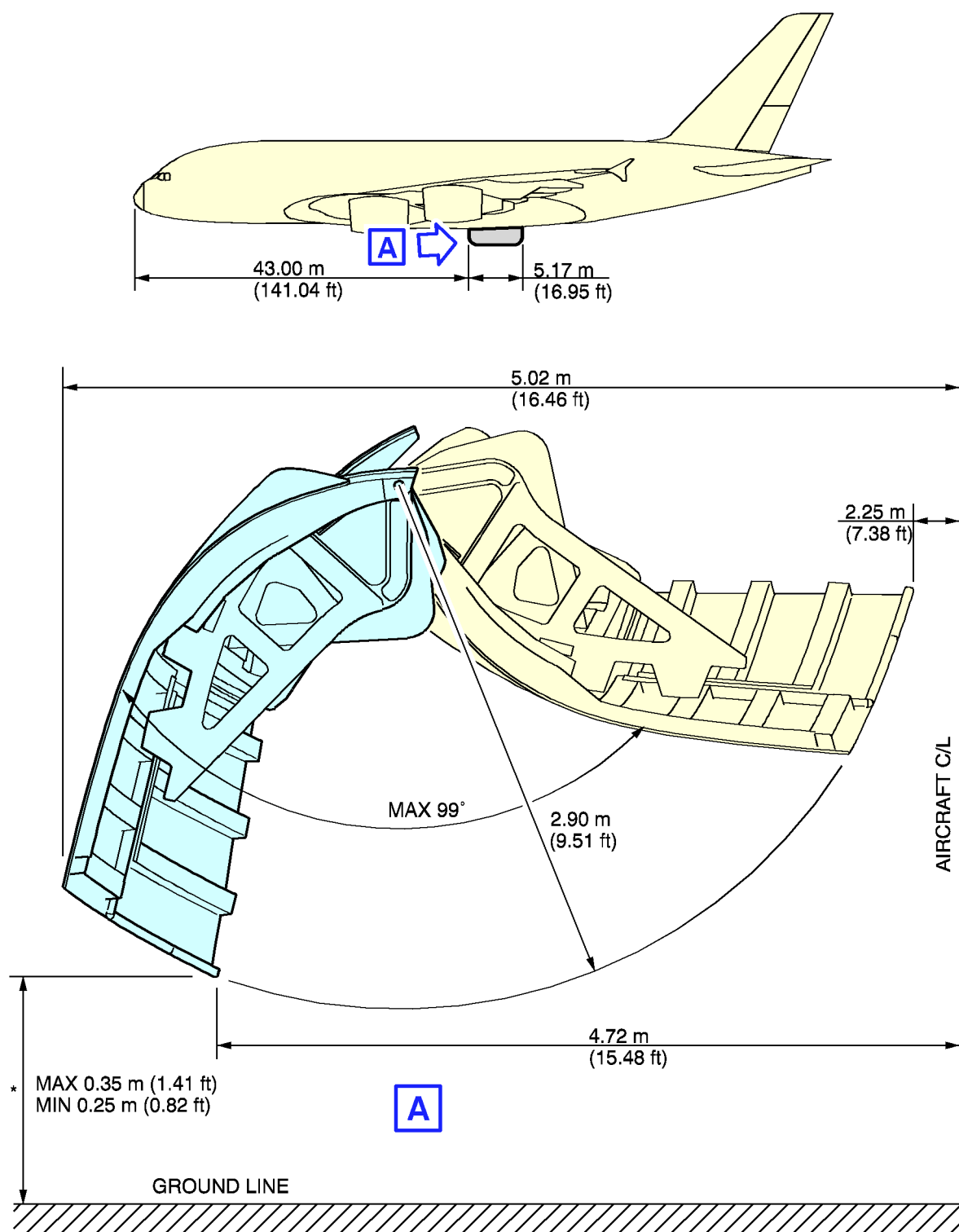
* DEPENDING ON CG POSITION AND AIRCRAFT WEIGHT

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Door Clearances
Wing Landing Gear Doors
A380-800/800F Models



AIRPLANE CHARACTERISTICS



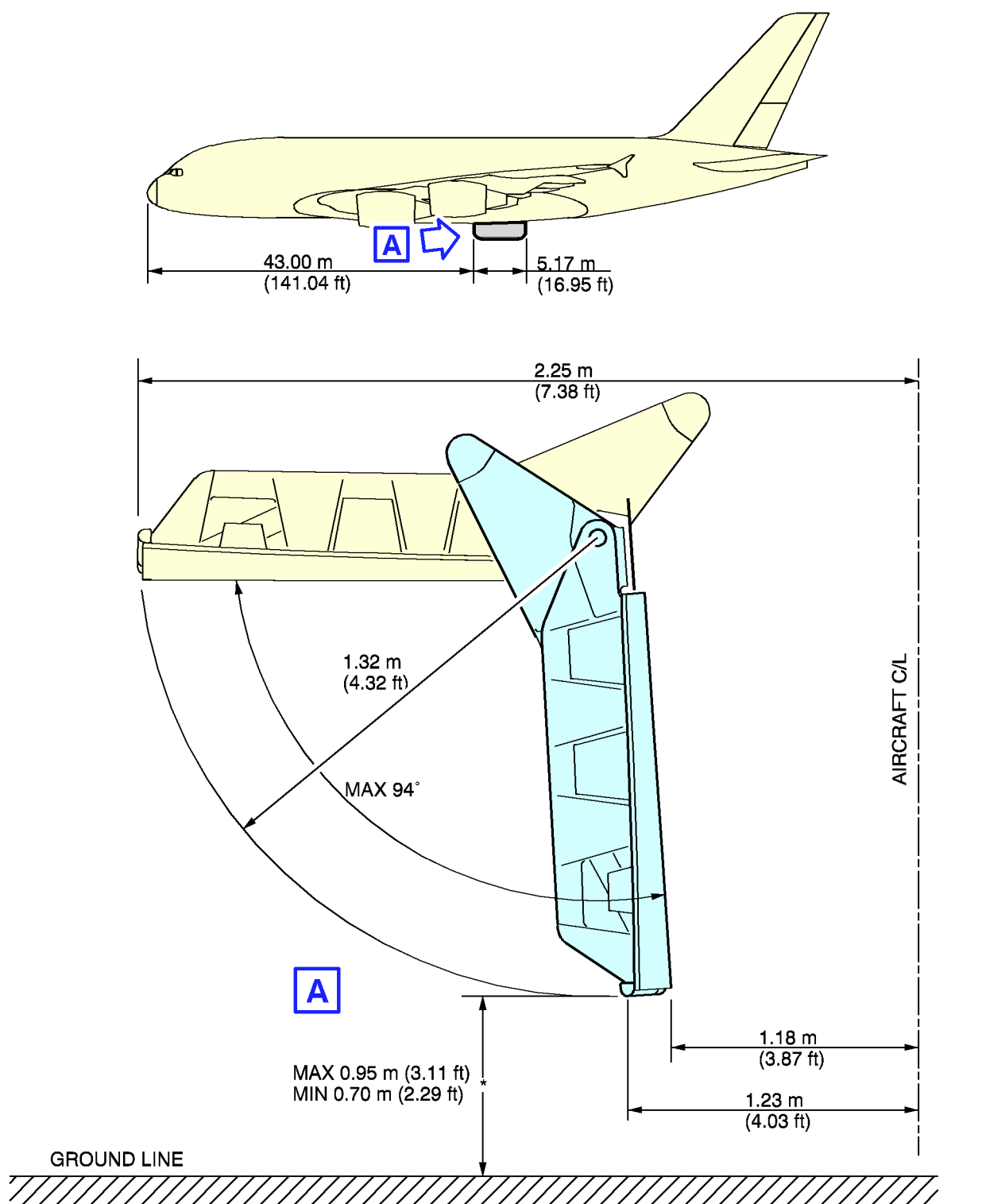
* DEPENDING ON CG POSITION AND AIRCRAFT WEIGHT

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Door Clearances
Body Landing Gear Doors (Sheet 1/2)
A380-800/800F Models



AIRPLANE CHARACTERISTICS



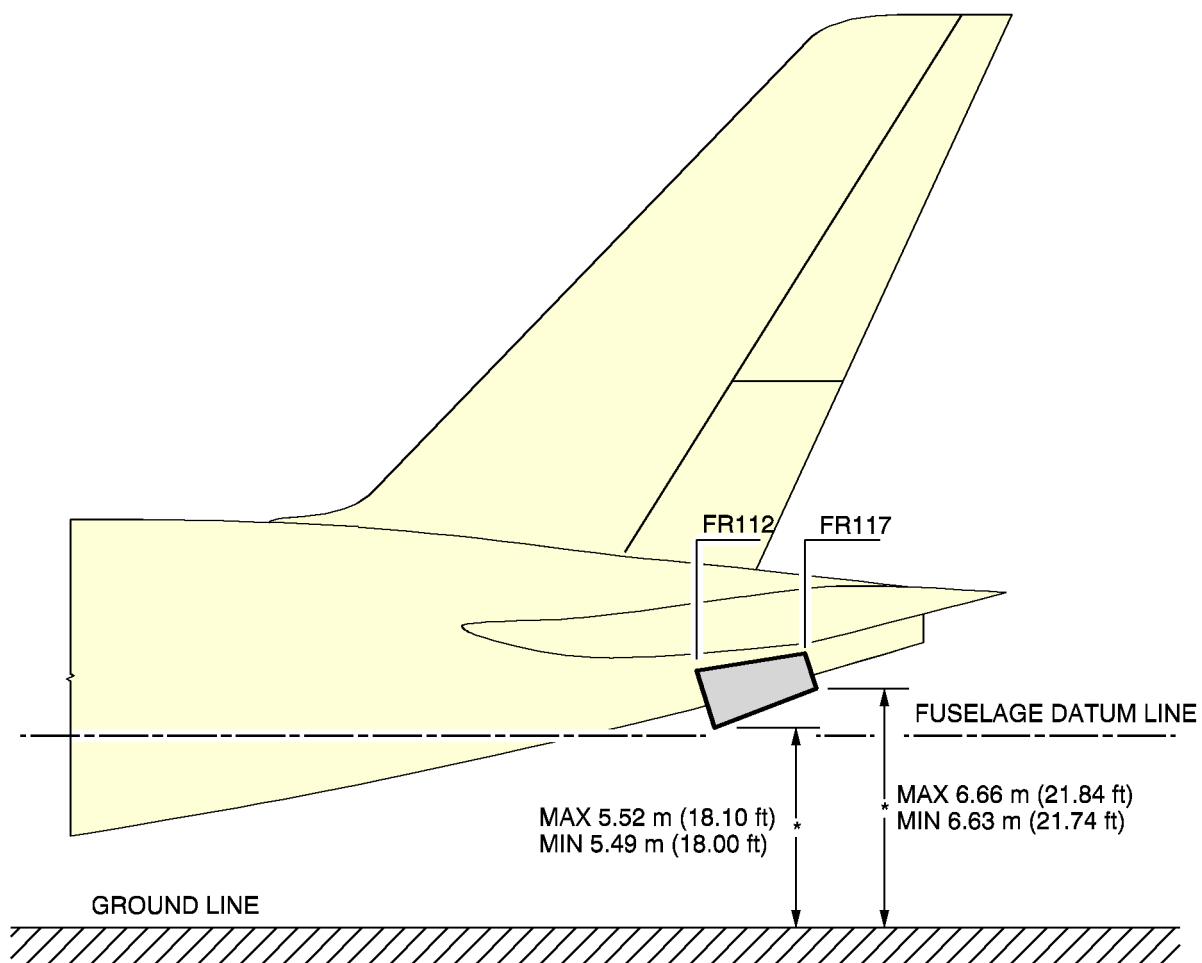
* DEPENDING ON CG POSITION AND AIRCRAFT WEIGHT

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Door Clearances
Body Landing Gear Doors (Sheet 2/2)
A380-800/800F Models



AIRPLANE CHARACTERISTICS



* DEPENDING ON CG POSITION AND AIRCRAFT WEIGHT

L_AC_020709_0_AEM0_01_01

Door Clearances
APU Doors
A380-800/800F Models



AIRPLANE CHARACTERISTICS

3-0 AIRPLANE PERFORMANCE

3-1 General Information

3-2 Payload/Range

3-2-1 ISA Conditions

3-3 Take Off Weight Limitation

3-3-1 ISA Conditions

3-3-2 ISA + 15 °C (59 °F)

3-4 Landing Field Length

3-4-1 Landing Field Length

3-5 Final Approach Speed

3-5-1 Final Approach Speed



AIRPLANE CHARACTERISTICS

3-1 General Information

Standard day temperatures for the altitudes shown are tabulated below :

Altitude		Standard Day Temperature	
FEET	METERS	°F	°C
0	0	59.0	15.0
2000	610	51.9	11.6
4000	1220	44.7	7.1
6000	1830	37.6	3.1
8000	2440	30.5	-0.8



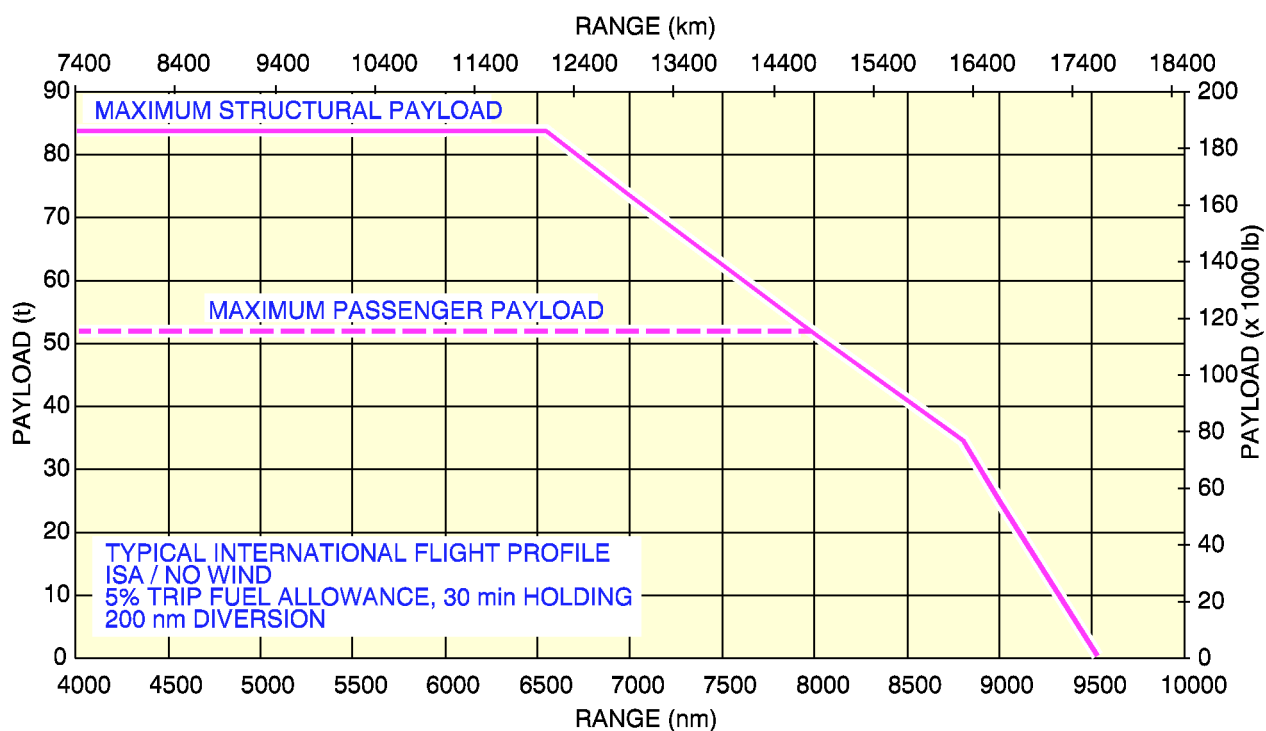
AIRPLANE CHARACTERISTICS

3-2 PAYLOAD/RANGE



AIRPLANE CHARACTERISTICS

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



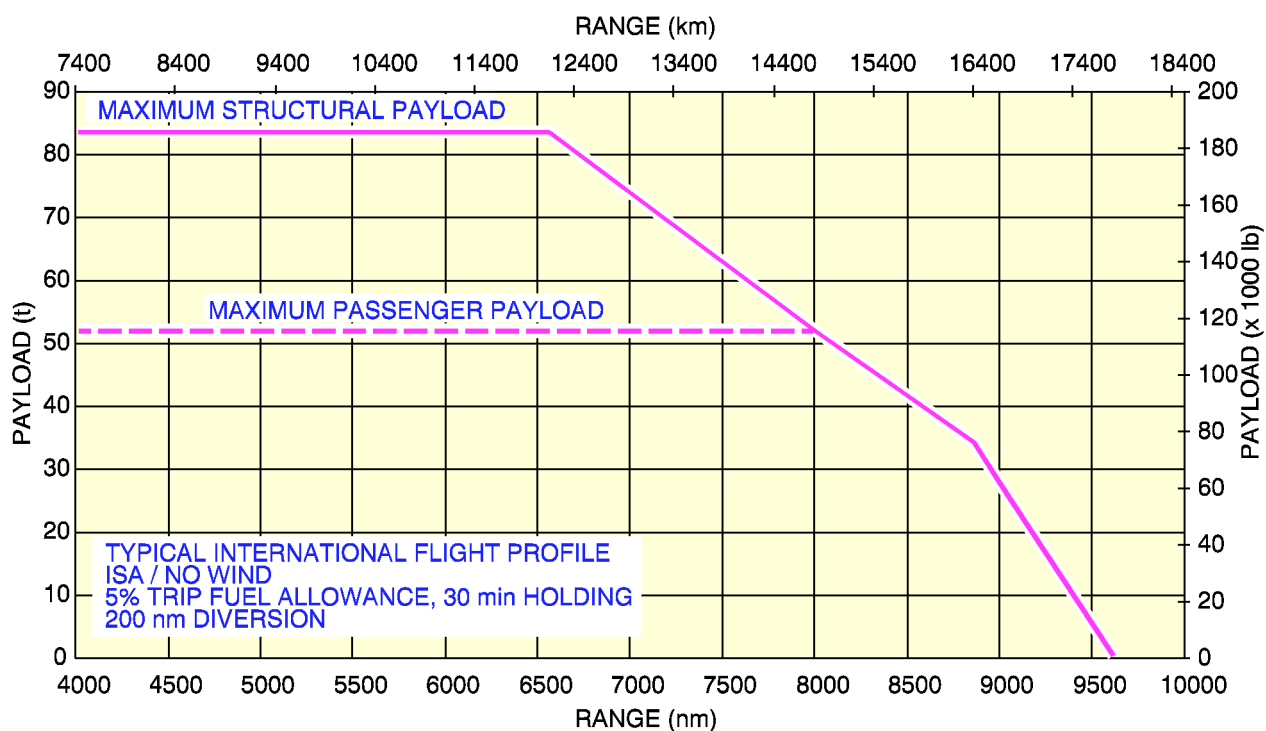
Payload/Range
ISA Conditions - TRENT 970 Engines
A380-841 Model

L_AC_030201_0_AAM0_01_01



AIRPLANE CHARACTERISTICS

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



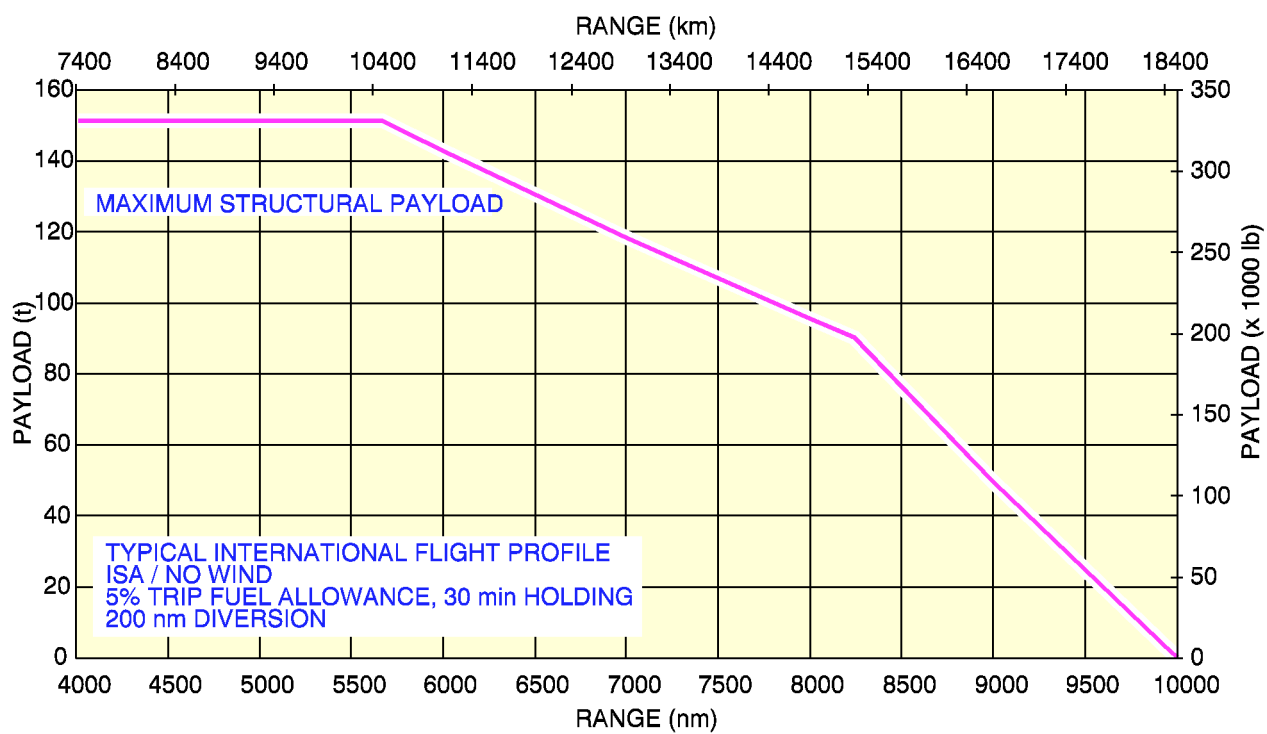
Payload/Range
ISA Conditions - GP 7270 Engines
A380-861 Model

L_AC_030201_0_ABM0_01_01



AIRPLANE CHARACTERISTICS

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



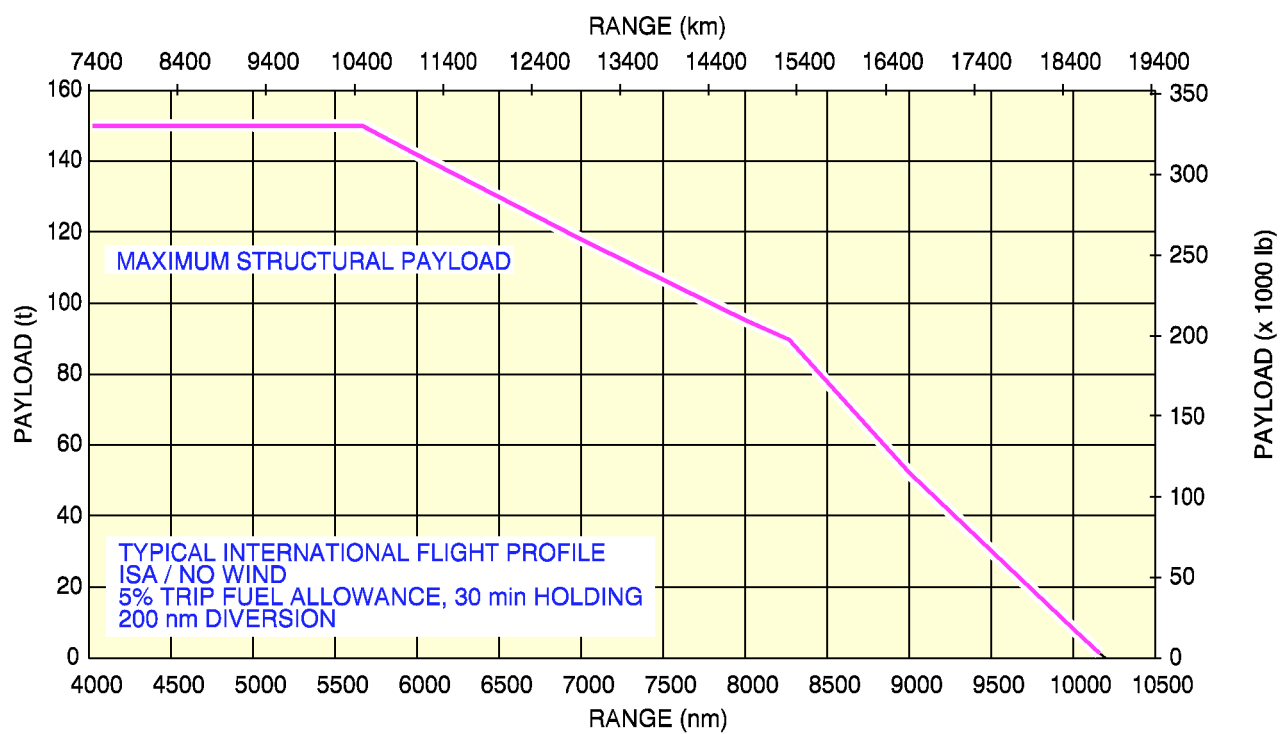
Payload/Range
ISA Conditions - TRENT 977 Engines
A380-843F Model

L_AC_030201_0_BAM0_01_01



AIRPLANE CHARACTERISTICS

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



Payload/Range
ISA Conditions - GP 7277 Engines
A380-863F Model

L_AC_030201_0_BBM0_01_01



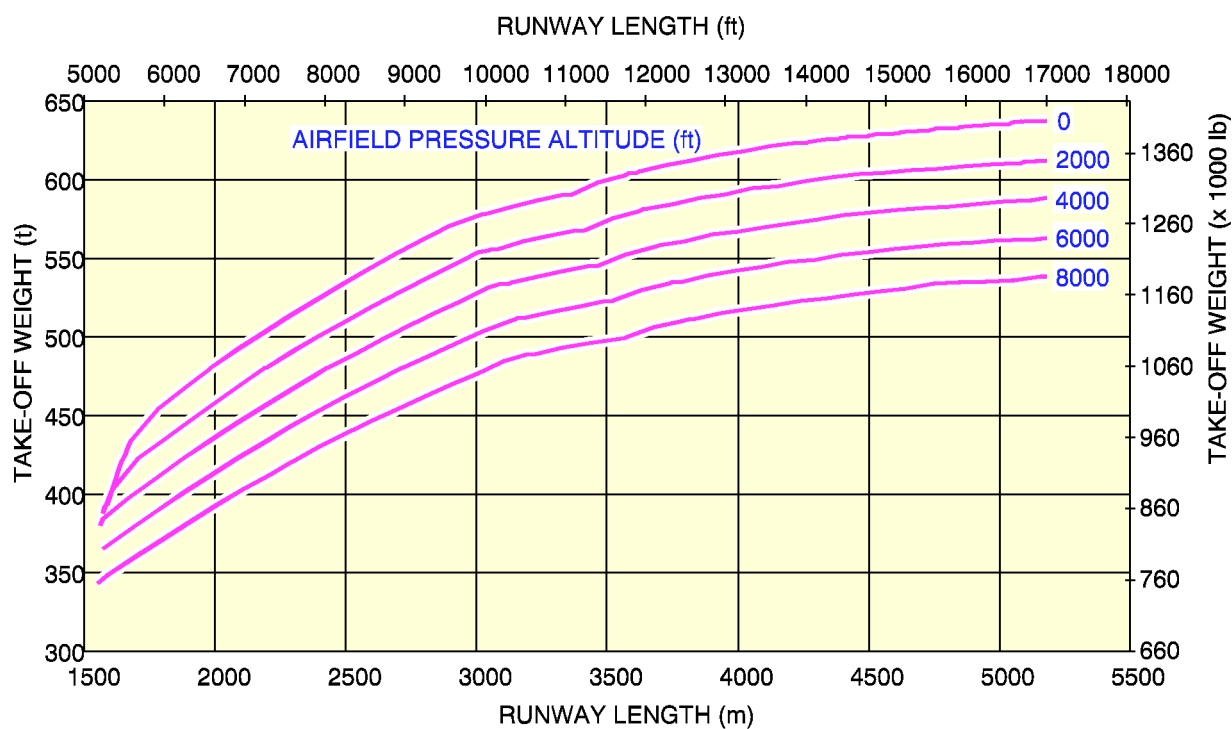
AIRPLANE CHARACTERISTICS

3-3 TAKE-OFF WEIGHT LIMITATION



AIRPLANE CHARACTERISTICS

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



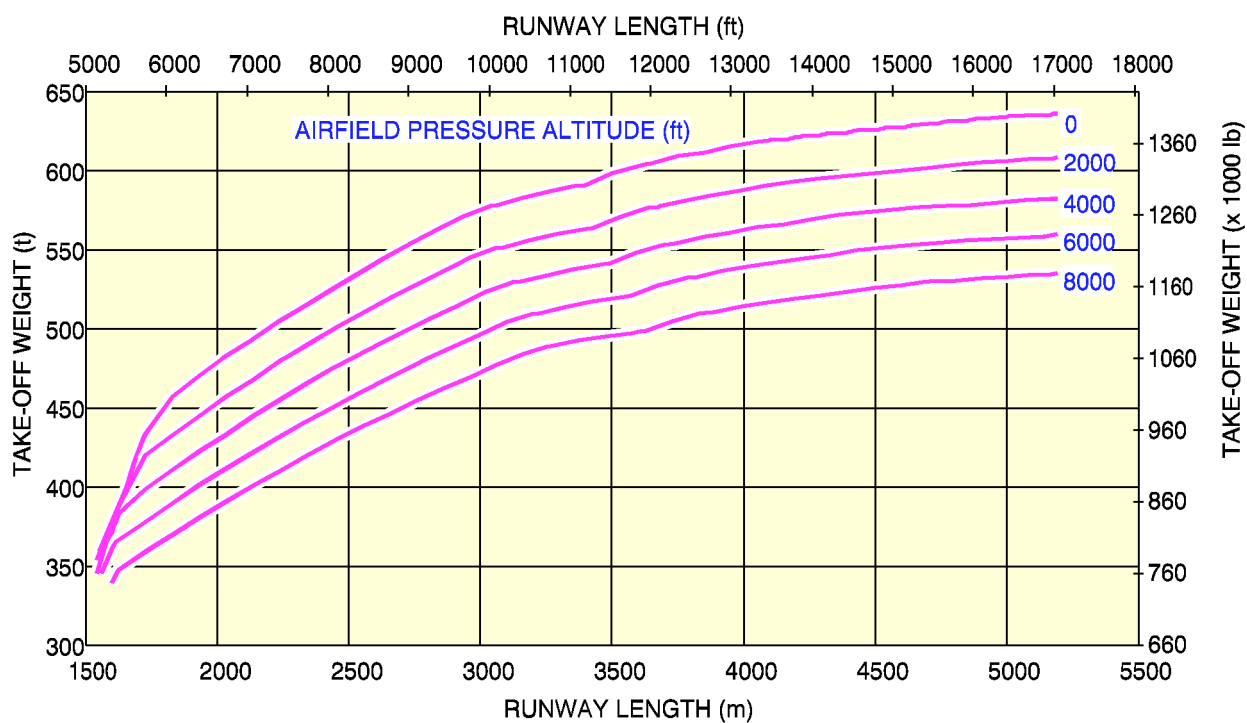
Take-Off Weight Limitation
ISA Conditions - TRENT 970 Engines
A380-841 Model

L_AC_030301_0_AAM0_01_01



AIRPLANE CHARACTERISTICS

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



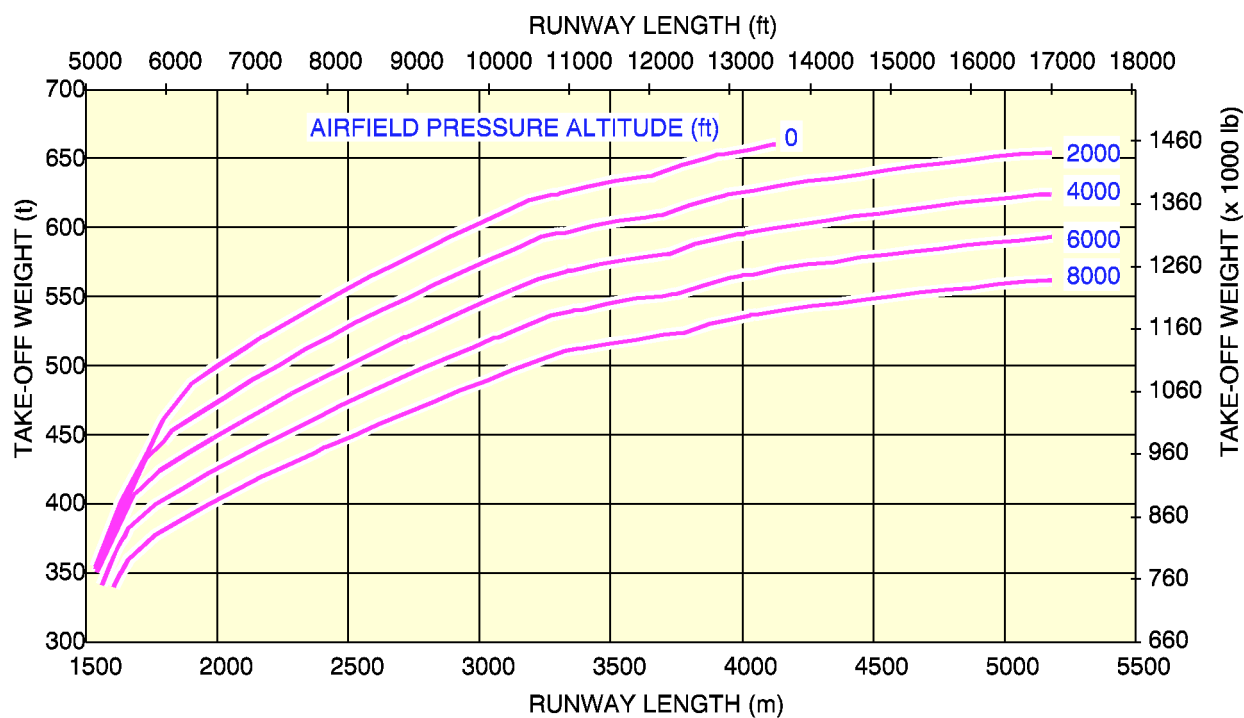
Take-Off Weight Limitation
ISA Conditions - GP 7270 Engines
A380-861 Model

L_AC_030301_0_ABM0_01_01



AIRPLANE CHARACTERISTICS

NOTE: THESE CURVES ARE GIVEN FOR INFORMATION ONLY.
THE APPROVED VALUES ARE STATED IN THE "OPERATING MANUALS"
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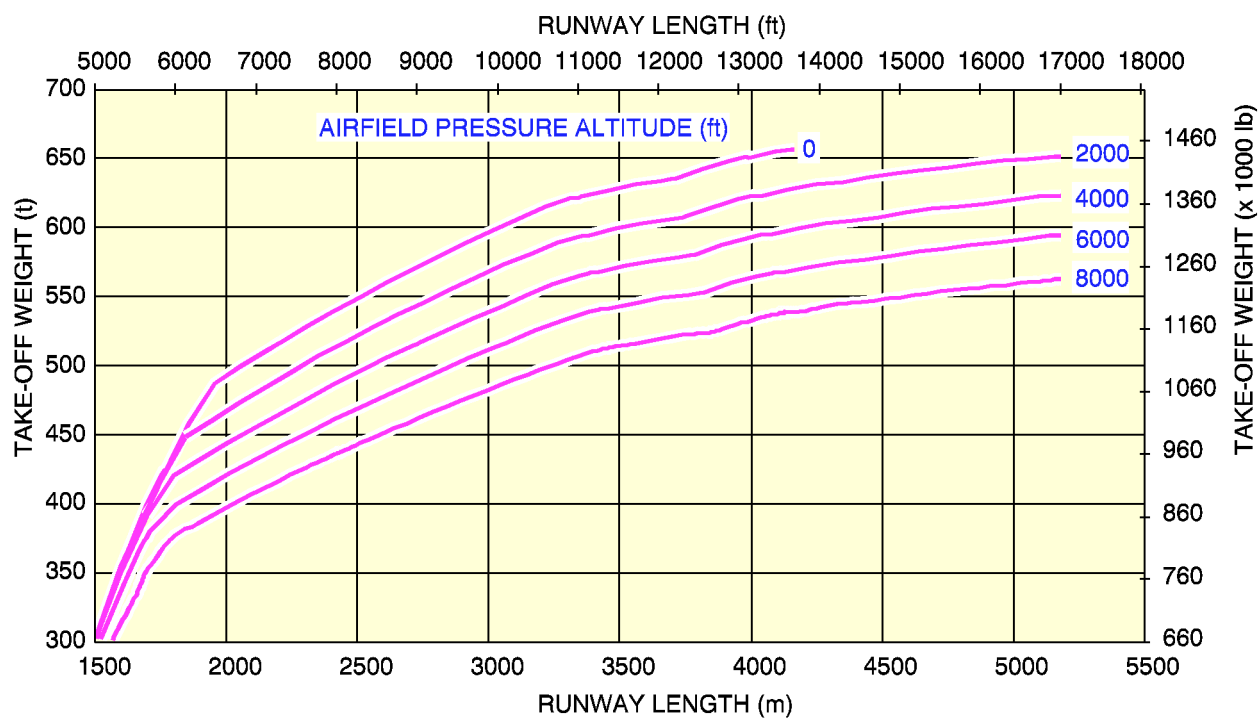
Take-Off Weight Limitation
ISA Conditions - TRENT 977 Engines
A380-843F Model

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AIRPLANE CHARACTERISTICS

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



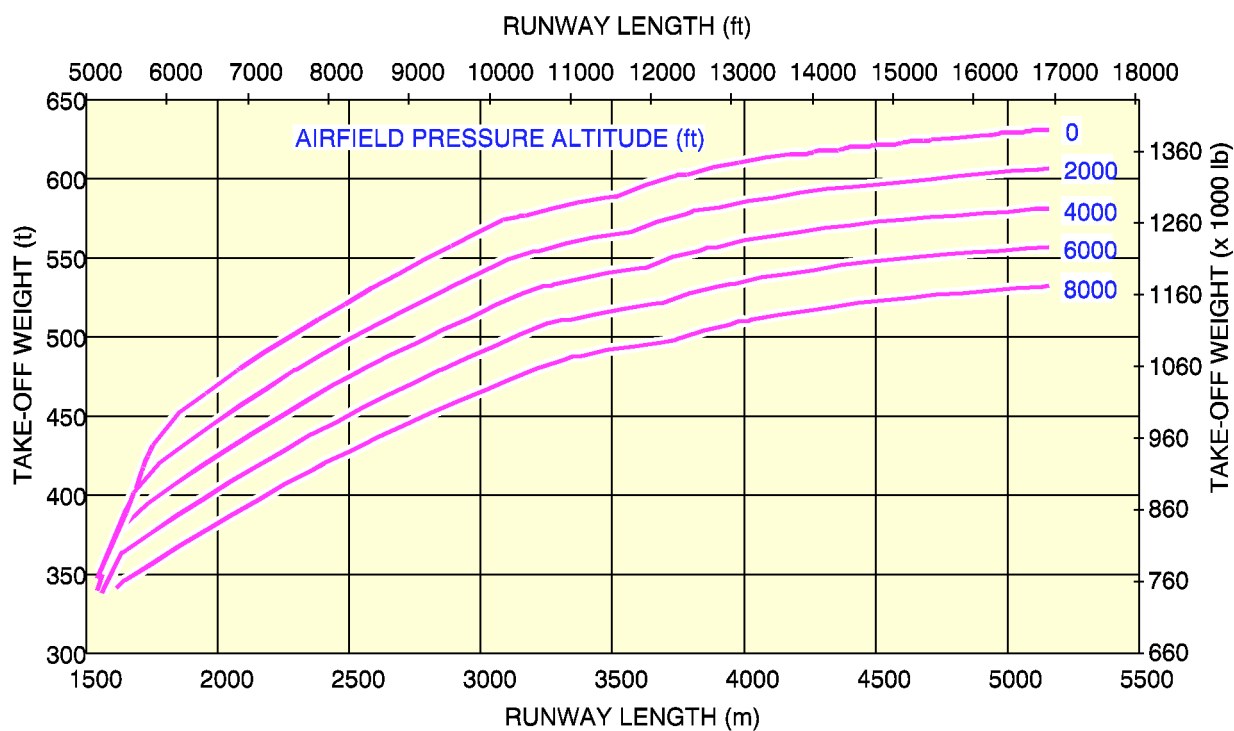
Take-Off Weight Limitation
ISA Conditions - GP 7277 Engines
A380-863F Model

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AIRPLANE CHARACTERISTICS

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



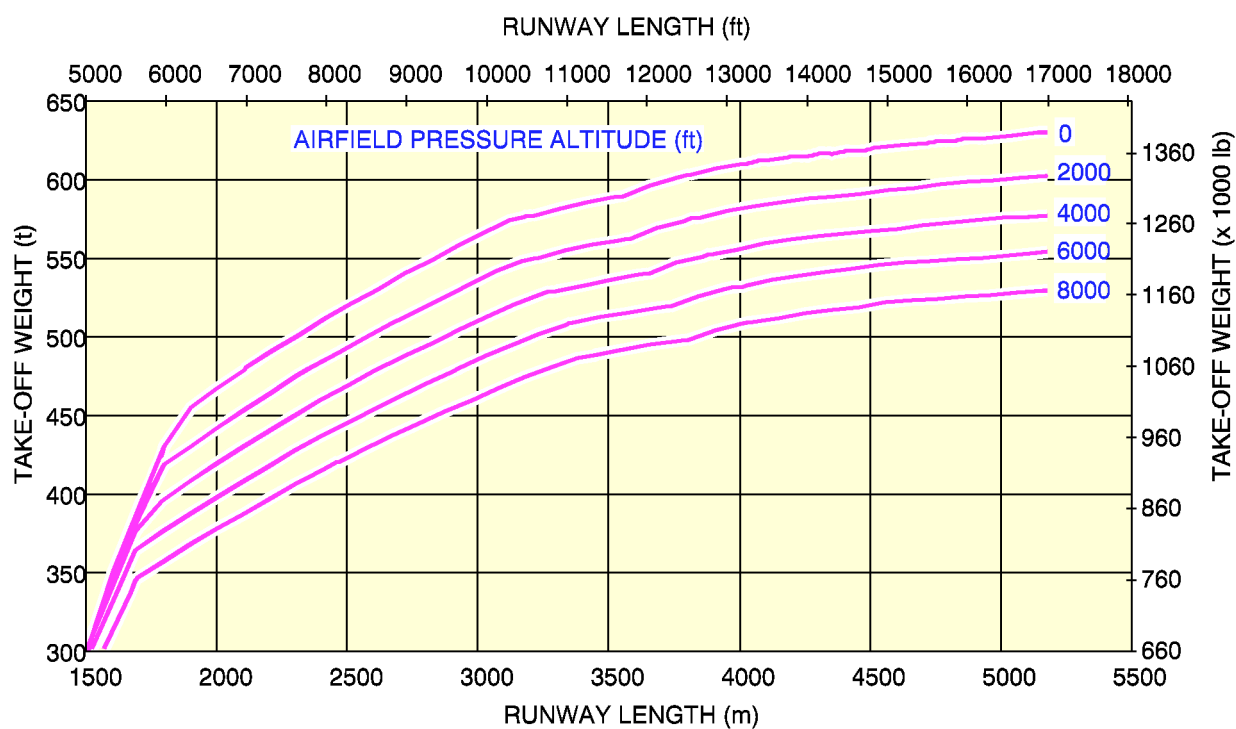
Take-Off Weight Limitation
ISA + 15 °C (59 °F) – TRENT 970 Engines
A380-841 Model

L_AC_030302_0_AAM0_01_01



AIRPLANE CHARACTERISTICS

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



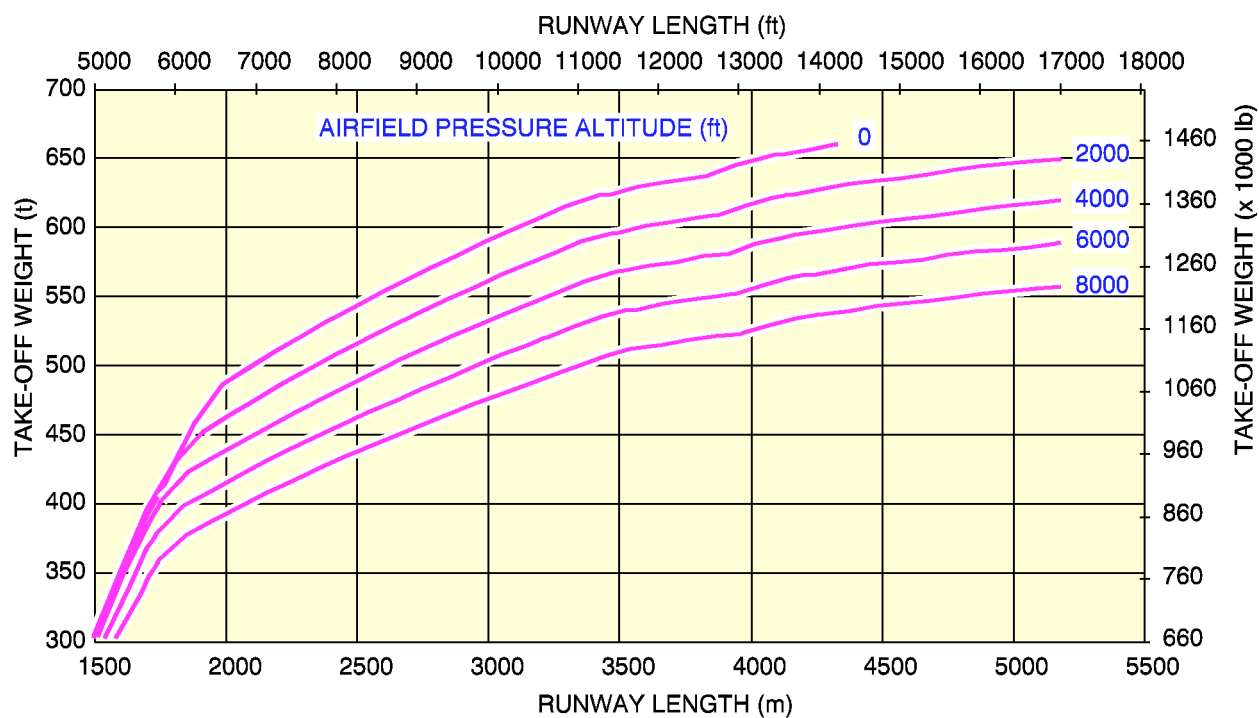
Take-Off Weight Limitation
ISA + 15 °C (59 °F) - GP 7270 Engines
A380-861 Model

L_AC_030302_0_ABM0_01_01



AIRPLANE CHARACTERISTICS

NOTE: THESE CURVES ARE GIVEN FOR INFORMATION ONLY.
THE APPROVED VALUES ARE STATED IN THE "OPERATING MANUALS"
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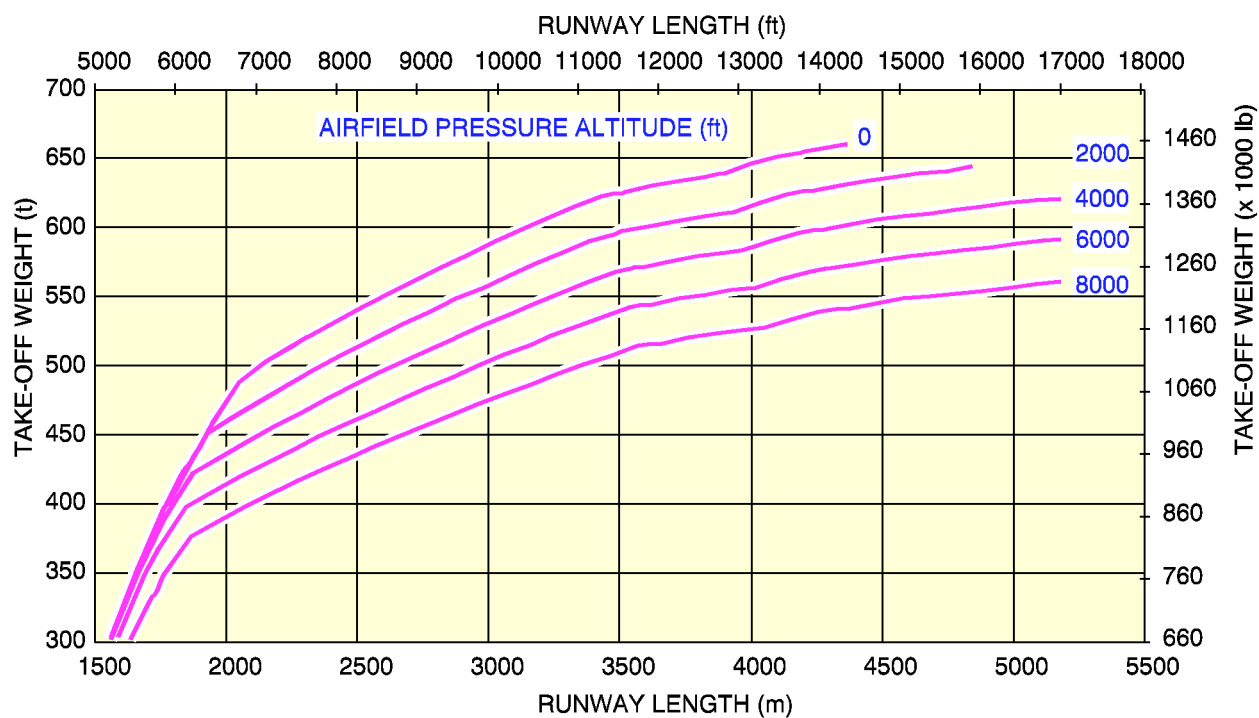
Take-Off Weight Limitation
ISA + 15 °C (59 °F) – TRENT 977 Engines
A380-843F Model

L_AC_030302_0_BAM0_01_01



AIRPLANE CHARACTERISTICS

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



Take-Off Weight Limitation
ISA + 15 °C (59 °F) - GP 7277 Engines
A380-863F Model

L_AC_030302_0_BBM0_01_01



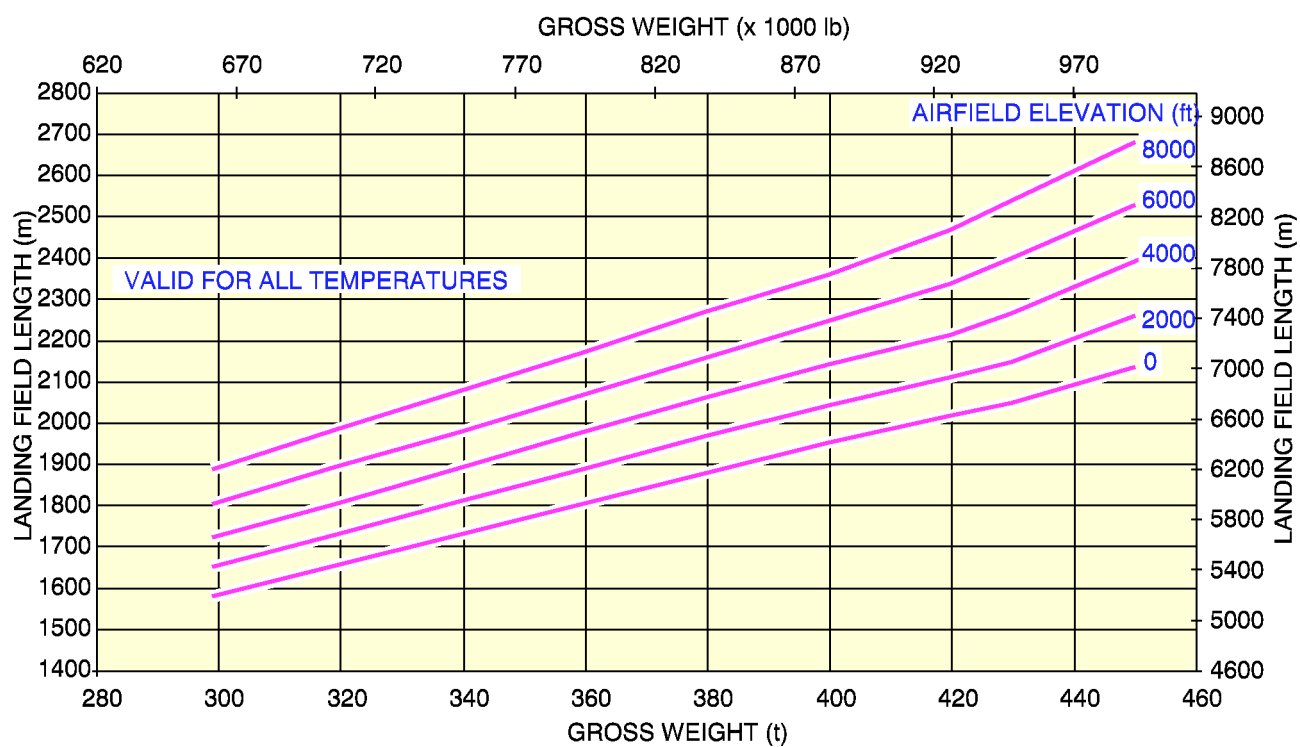
AIRPLANE CHARACTERISTICS

3-4 LANDING FIELD LENGTH



AIRPLANE CHARACTERISTICS

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



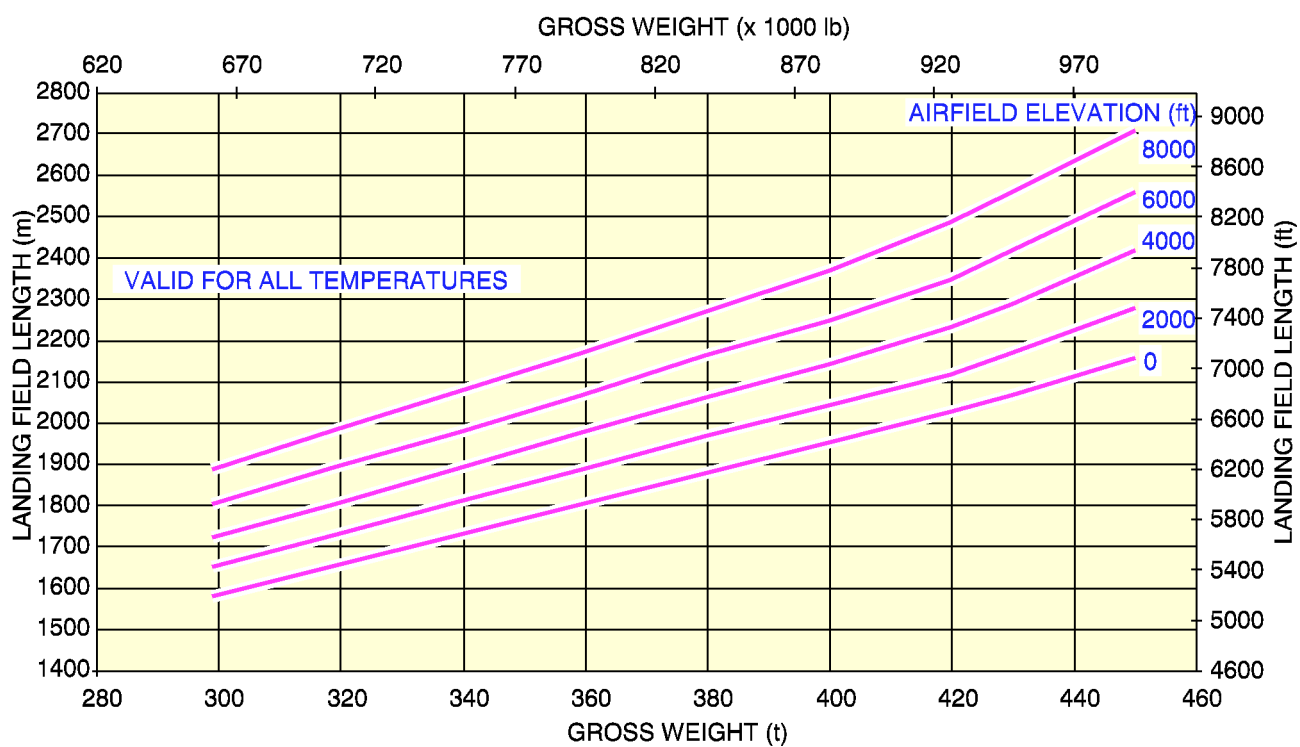
Landing Field Length
All Engines
A380-800 Models

L_AC_030401_0_AAM0_01_01



AIRPLANE CHARACTERISTICS

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



Landing Field Length
All Engines
A380-800F Models

L_AC_030401_0_BAM0_01_01



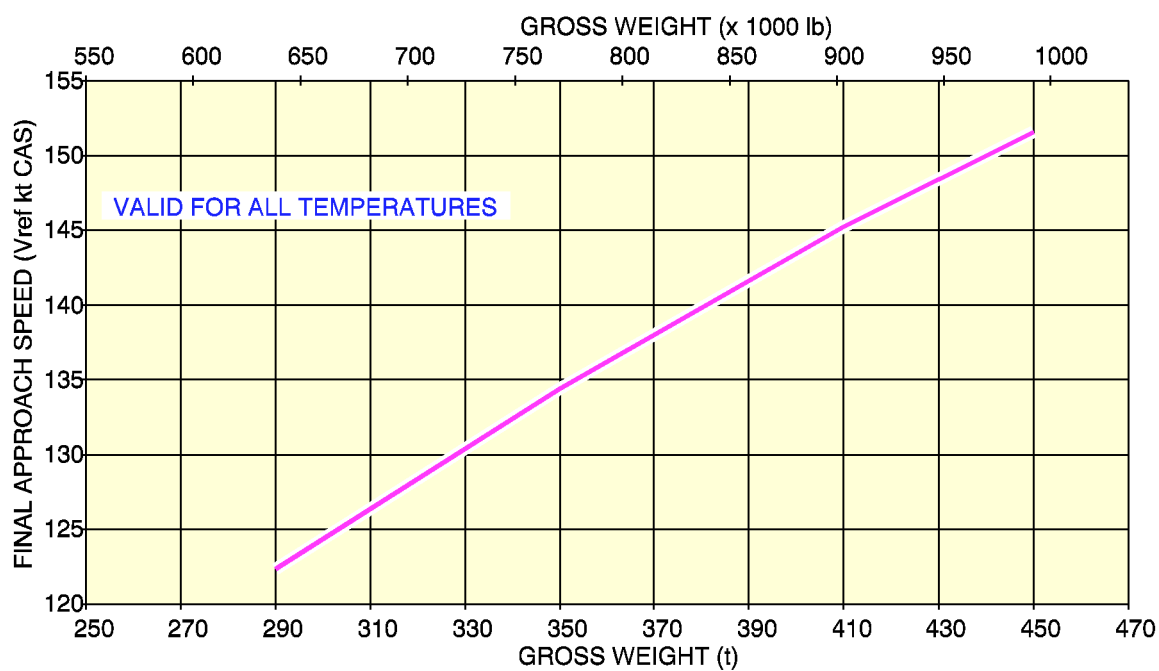
AIRPLANE CHARACTERISTICS

3-5 FINAL APPROACH SPEED



AIRPLANE CHARACTERISTICS

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



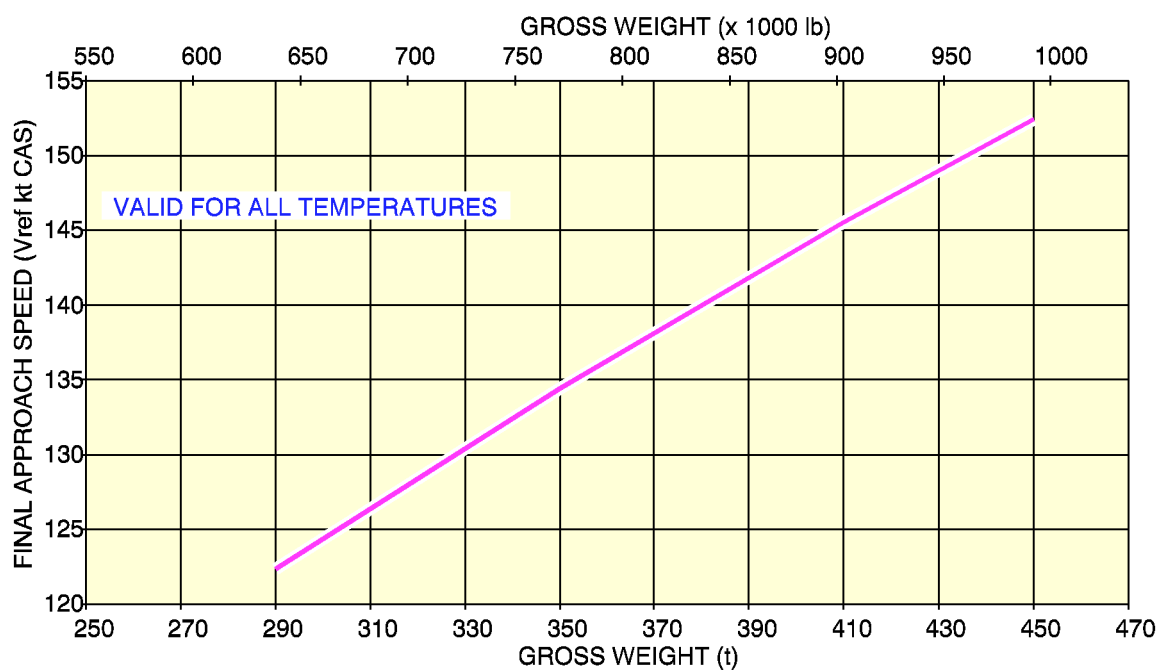
Final Approach Speed
All Engines
A380-800 Models

L_AC_030501_0_AAM0_01_01



AIRPLANE CHARACTERISTICS

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



Final Approach Speed
All Engines
A380-800F Models

L_AC_030501_0_BAM0_01_01



AIRPLANE CHARACTERISTICS

4-0 GROUND MANEUVERING

4-1 General Information

4-2 Turning Radii

4-3 Minimum Turning Radii

4-4 Visibility from Cockpit in Static Position

4-5 Runway and Taxiway Turn Paths

4-5-1 135° Turn - Runway to Taxiway

4-5-2 90° Turn - Runway to Taxiway

4-5-3 180° Turn on a Runway

4-5-4 90° Turn - Taxiway to Taxiway

4-5-5 135° Turn - Taxiway to Taxiway

4-6 Runway Holding Bay (Apron)

4-7 Airplane Parking



AIRPLANE CHARACTERISTICS

4-1 GENERAL INFORMATION

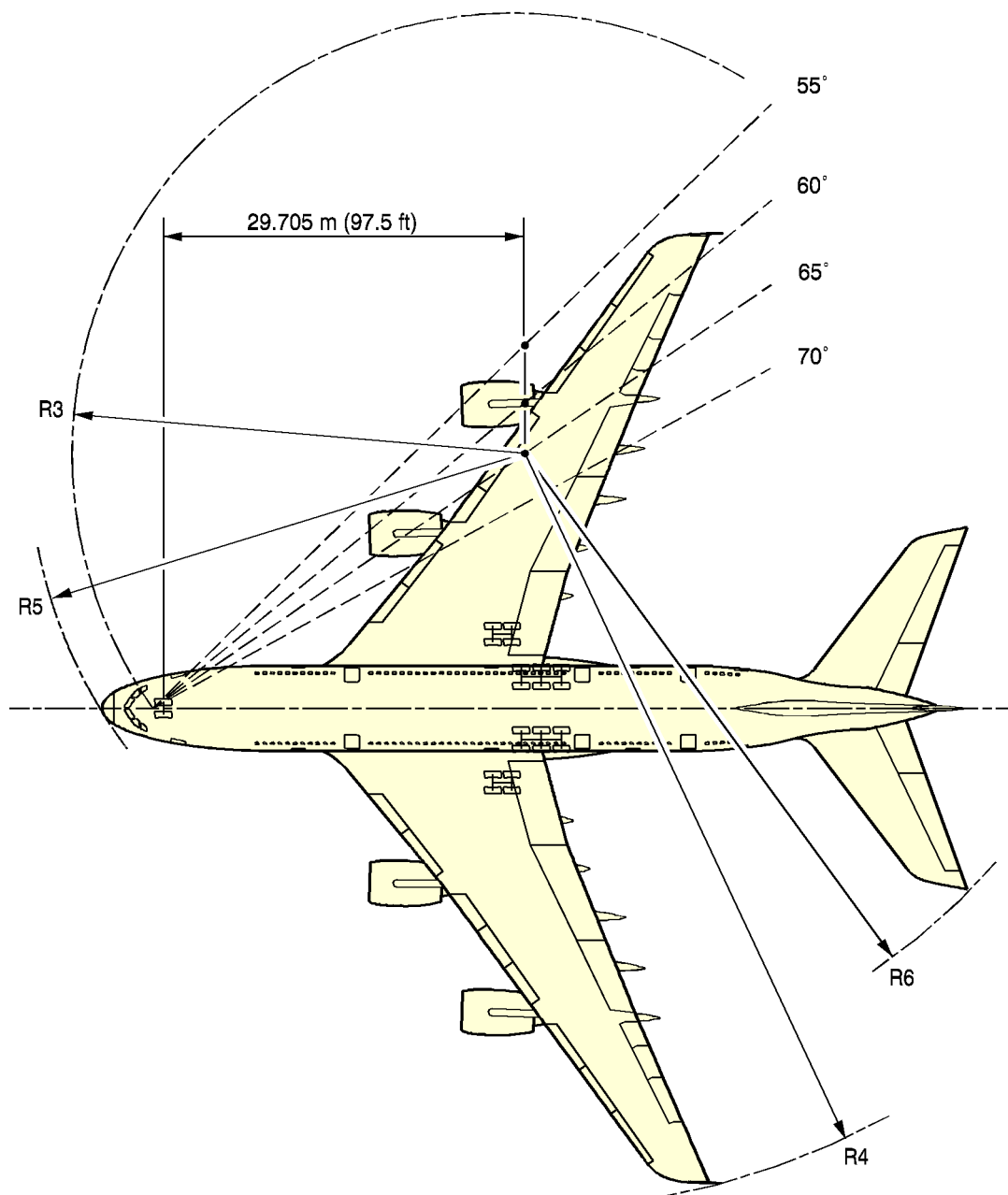
This section provides airplane turning capability and maneuvering characteristics.

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

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



AIRPLANE CHARACTERISTICS



NOTE: SEE PAGE 2 FOR DIMENSIONS

L_AC_040200_0_AAM0_01_03

Turning Radii
A380-800/800F Models



AIRPLANE CHARACTERISTICS

A380-800/800F TURNING RADII							
TYPE OF TURN	STEERING ANGLE	EFFECTIVE STEERING ANGLE		R3	R4	R5	R6
2	20°	17.9°	m	100.16	135.45	101.01	115.87
			ft	328.6	444.4	331.4	380.1
2	25°	22.7°	m	78.86	113.14	80.12	94.90
			ft	258.7	371.2	262.9	311.4
2	30°	27.5°	m	65.69	98.90	67.33	81.91
			ft	215.5	324.5	220.9	268.7
2	35°	32.1°	m	56.84	88.97	58.83	73.13
			ft	186.5	291.9	193.0	239.9
2	40°	36.6°	m	50.59	81.61	52.89	66.84
			ft	166.0	267.8	173.5	219.3
2	45°	41.0°	m	46.02	75.94	48.61	62.16
			ft	151.0	249.1	159.5	203.9
2	50°	45.1°	m	42.61	71.43	45.45	58.57
			ft	139.8	234.4	149.1	192.2
1	55°	51.2°	m	40.13	67.02	43.22	55.43
			ft	131.6	219.9	141.8	181.9
1	60°	57.3°	m	37.64	62.60	40.98	52.29
			ft	123.5	205.4	134.5	171.5
1	65°	63.4°	m	35.15	58.18	38.75	49.15
			ft	115.3	190.9	127.1	161.2
1	70°	69.5°	m	32.66	53.76	36.52	46.01
			ft	107.2	176.4	119.8	150.9

NOTE:

TYPE 1 TURNS USE :

ASYMMETRIC THRUST - BOTH ENGINES ON THE INSIDE OF THE TURN TO BE AT IDLE THRUST
DIFFERENTIAL BRAKING - BRAKING APPLIED TO THE WING GEAR WHEELS ON THE INSIDE OF THE TURN.

TYPE 2 TURNS USE :

SYMMETRIC THRUST AND NO BRAKING.

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R
R

Turning Radii
A300-800/800F Models

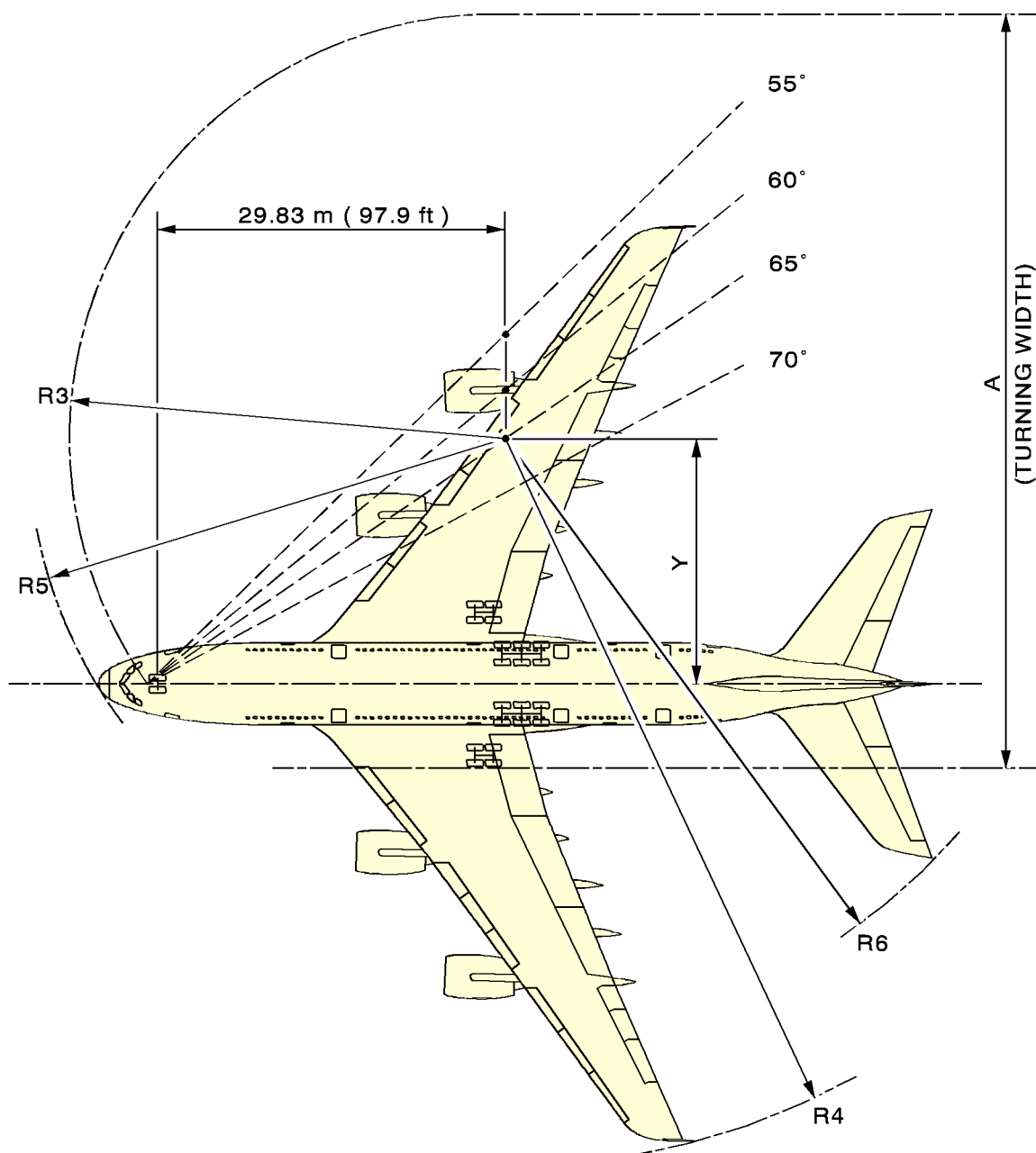
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4-2
Page 2
SEP 30/03



AIRPLANE CHARACTERISTICS



A380-800/800F Minimum Turning Radius									
Type of Turn	Steering Angle	Effective Steering Angle		Y	A	R3	R4	R5	R6
1	70°	69.5°	m	11.08	50.91	32.66	53.76	36.52	46.01
			ft	36.3	167.0	107.2	176.4	119.8	150.9

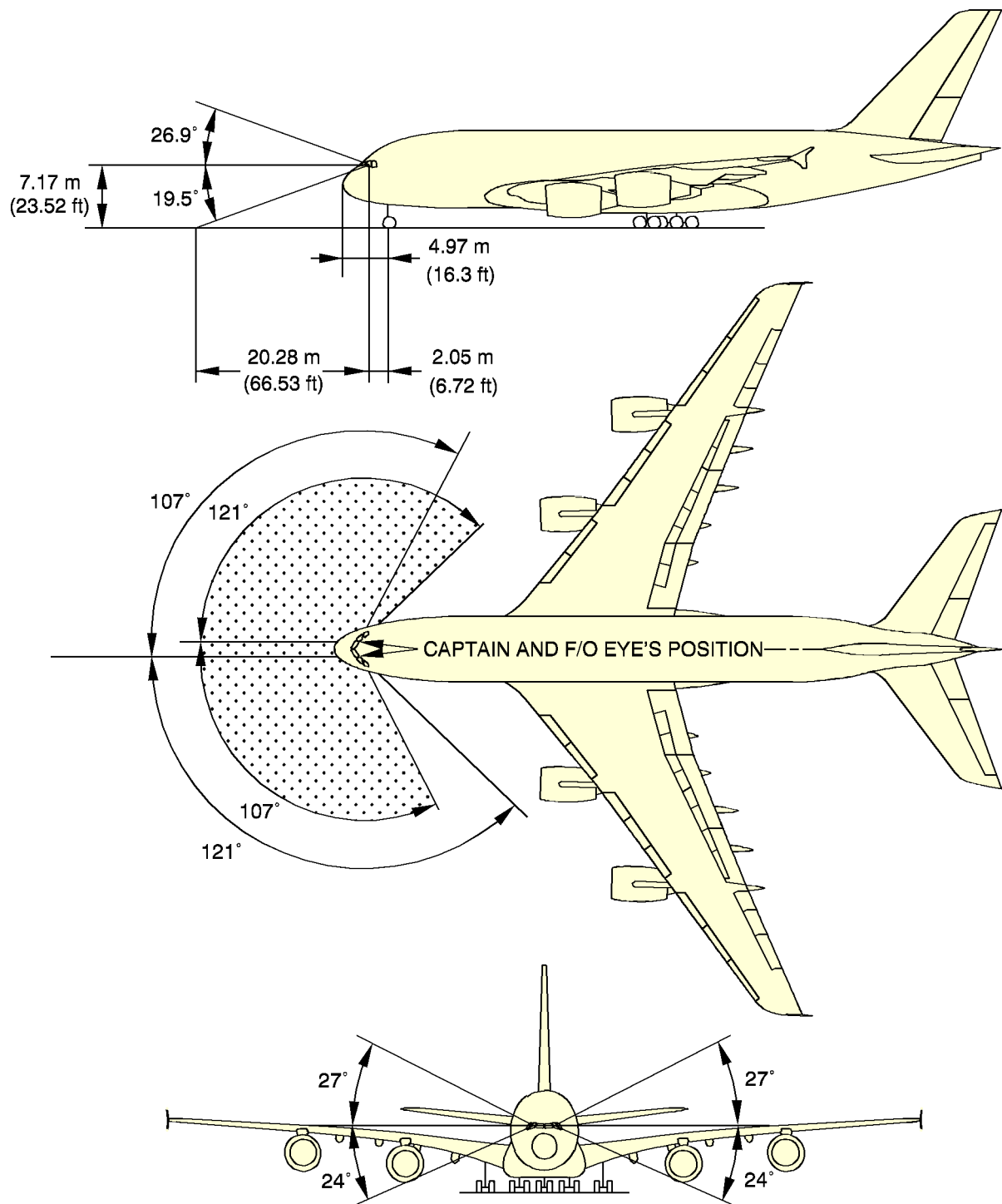
NOTE: TURN PERFORMED WITH ASYMMETRIC THRUST AND DIFFERENTIAL BRAKING

L_AC_040300_0_ACM0_01_02

Minimum Turning Radii
A380-800/800F Models



AIRPLANE CHARACTERISTICS



L_AC_040400_0_AAM0_01_02

Visibility from Cockpit in Static Position
A380-800/800F Models

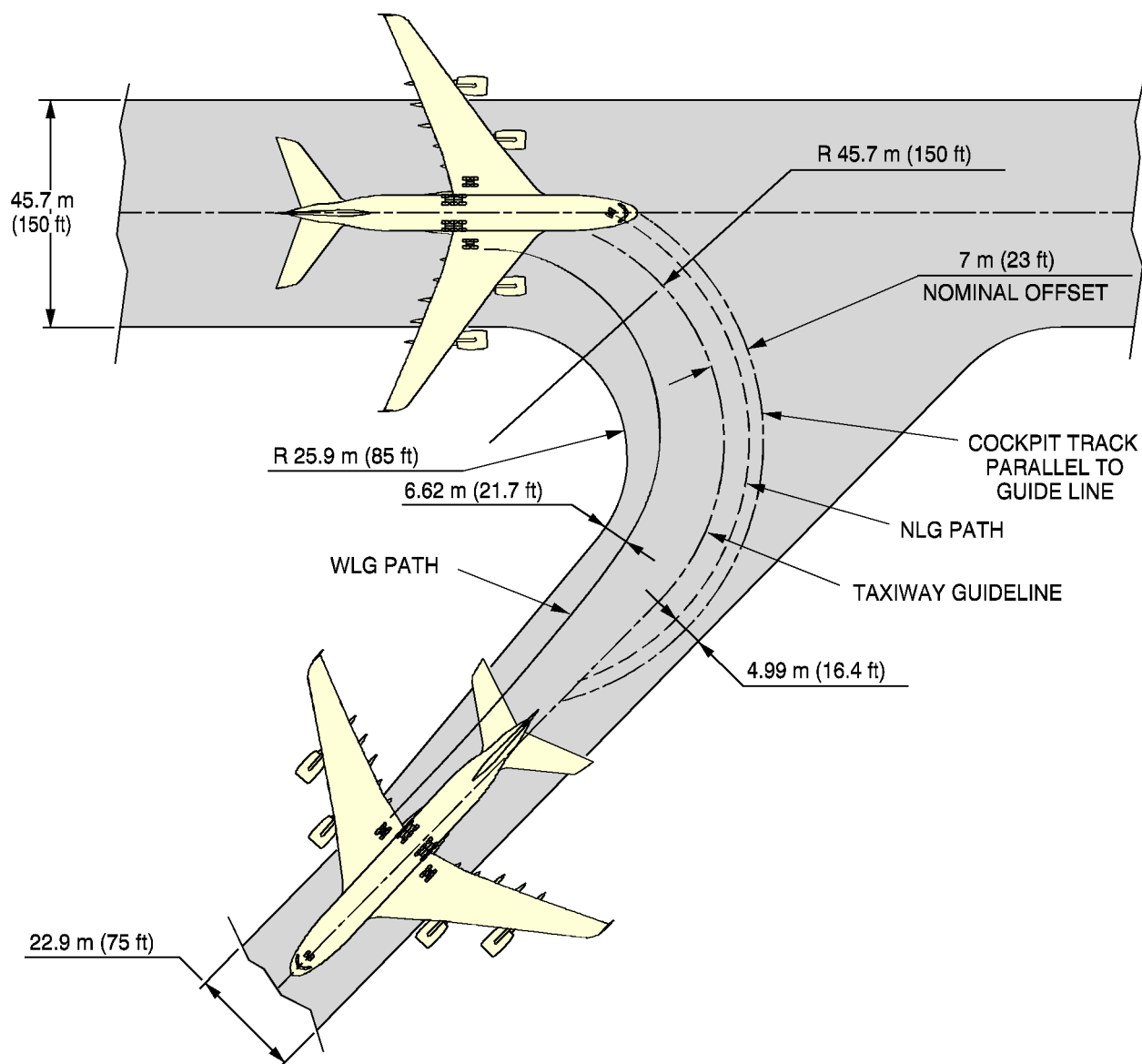


AIRPLANE CHARACTERISTICS

4-5 RUNWAY AND TAXIWAY TURN PATHS



AIRPLANE CHARACTERISTICS



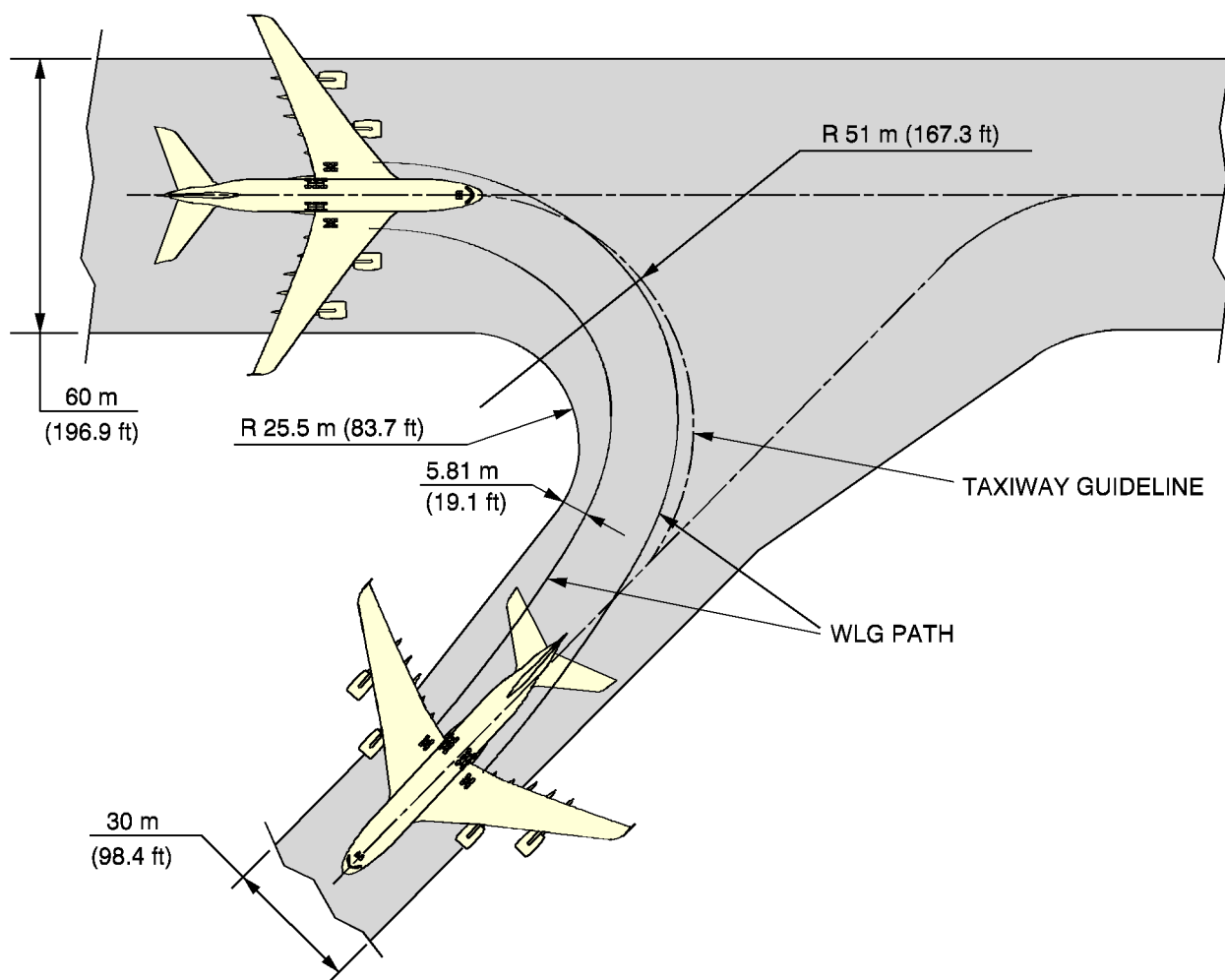
NOTE: FAA GROUP V JUDGEMENTAL OVERSTEER METHOD

L_AC_040501_0_AAM0_01_02

135° Turn - Runway to Taxiway
A380-800/800F Models



AIRPLANE CHARACTERISTICS



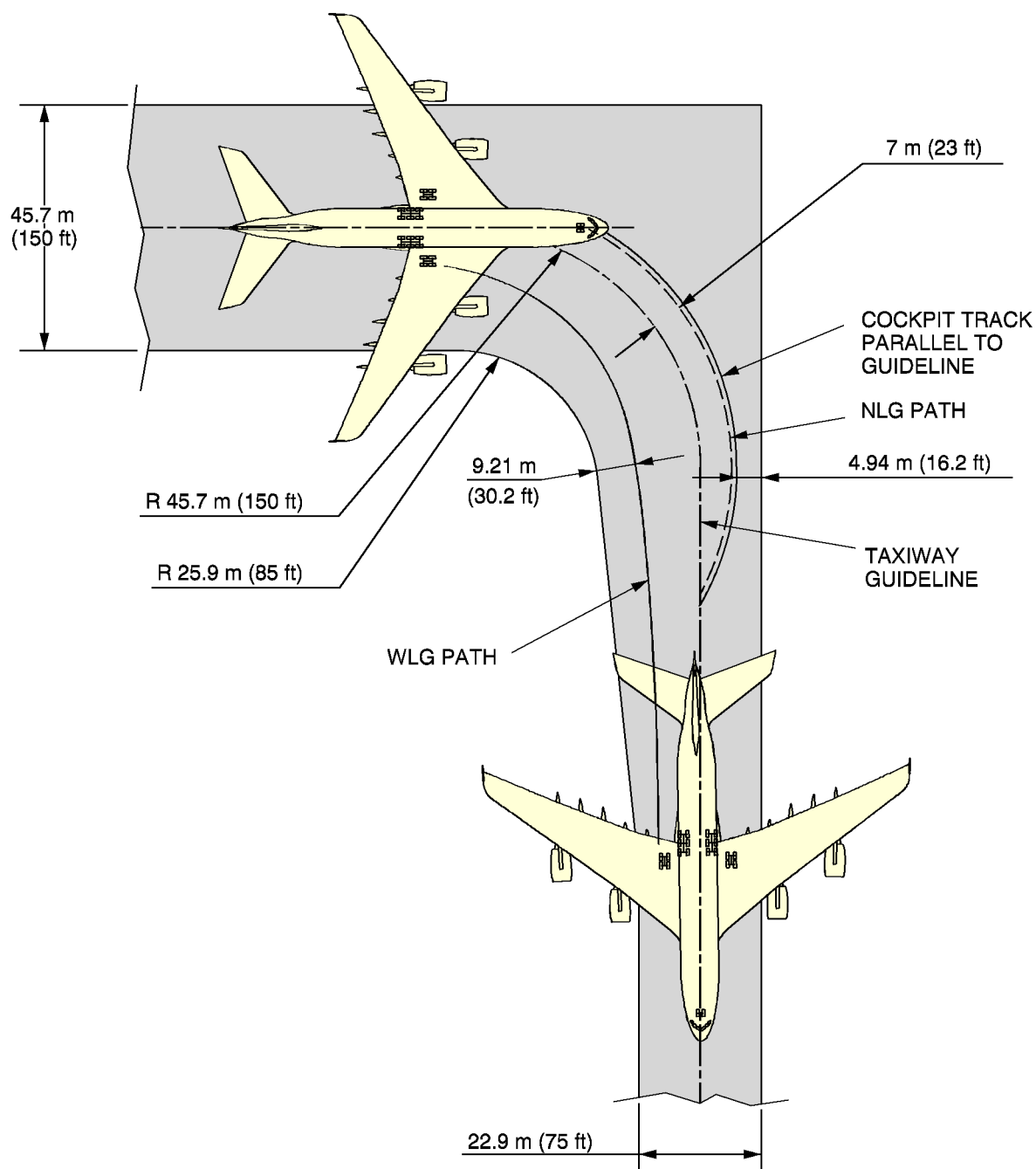
NOTE: FAA GROUP VI COCKPIT TRACKS CENTRELINE METHOD

L_AC_040501_0_ACM0_01_02

135° Turn - Runway to Taxiway
A380-800/800F Models



AIRPLANE CHARACTERISTICS



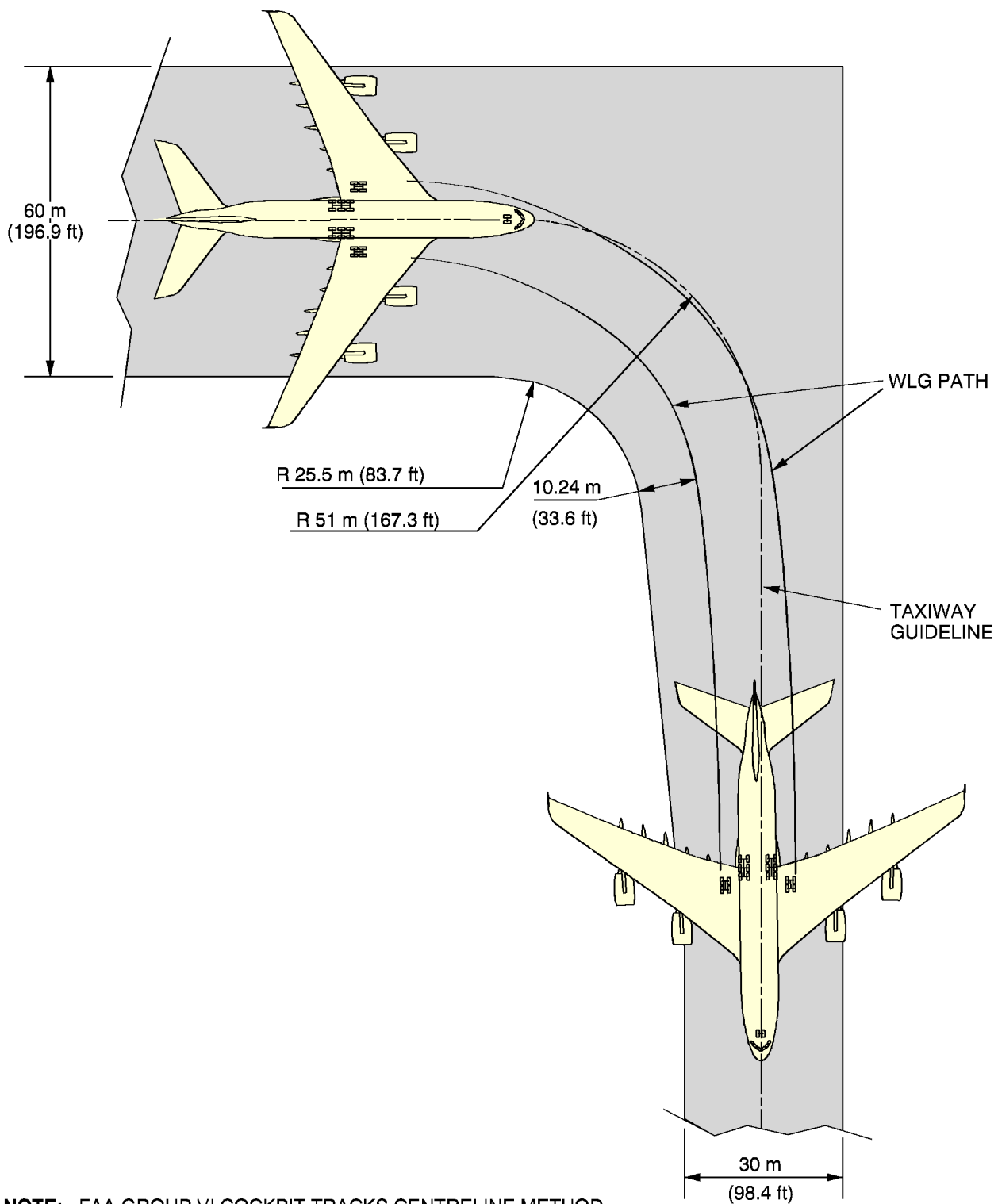
NOTE: FAA GROUP V JUDGEMENTAL OVERSTEER METHOD

L_AC_040502_0_AAM0_01_01

90° Turn - Runway to Taxiway
A380-800/800F Models



AIRPLANE CHARACTERISTICS



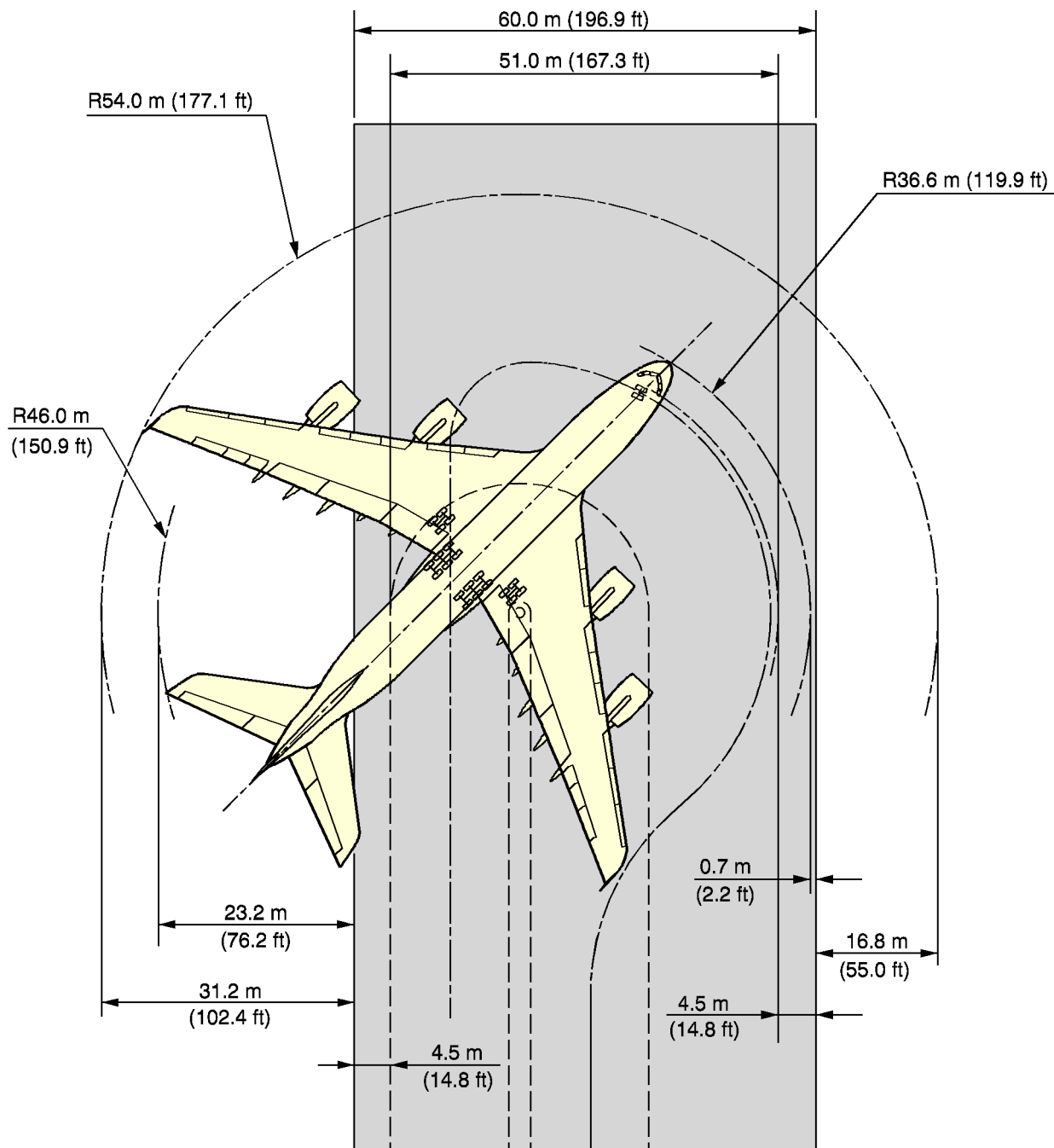
NOTE: FAA GROUP VI COCKPIT TRACKS CENTRELINE METHOD

L_AC_040502_0_ACM0_01_01

90° Turn - Runway to Taxiway
A380-800/800F Models



AIRPLANE CHARACTERISTICS



NOTE: 70° NOSE GEAR STEERING ASYMMETRIC THRUST AND BRAKING ON A 60.0 m (196.9 ft) WIDE RUNWAY.

L_AC_040503_0_AAM0_01_02

R
R

180° Turn on a Runway A380-800/800F Models

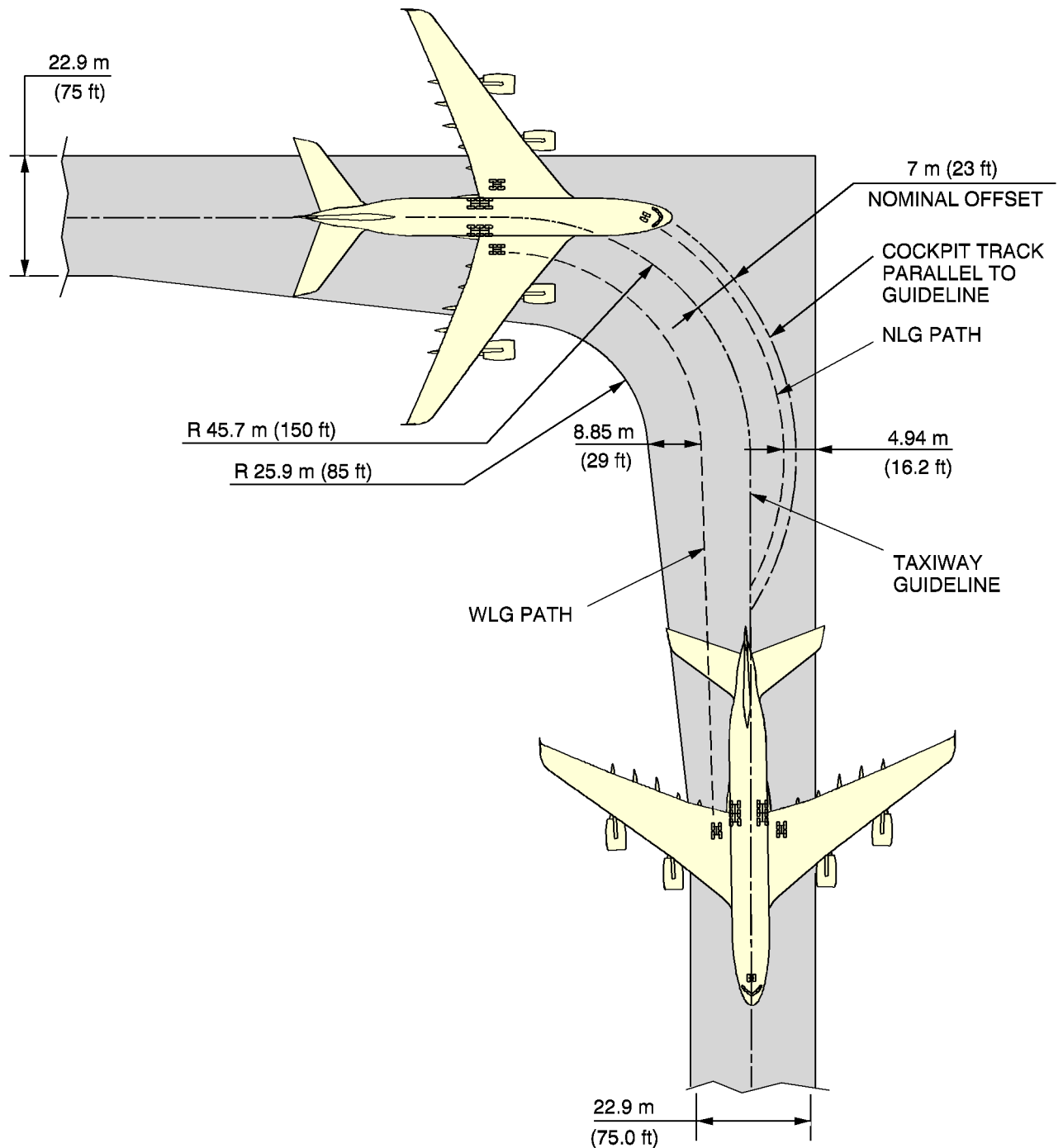
R

4-5-3
Page 1
SEP 30/03

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AIRPLANE CHARACTERISTICS



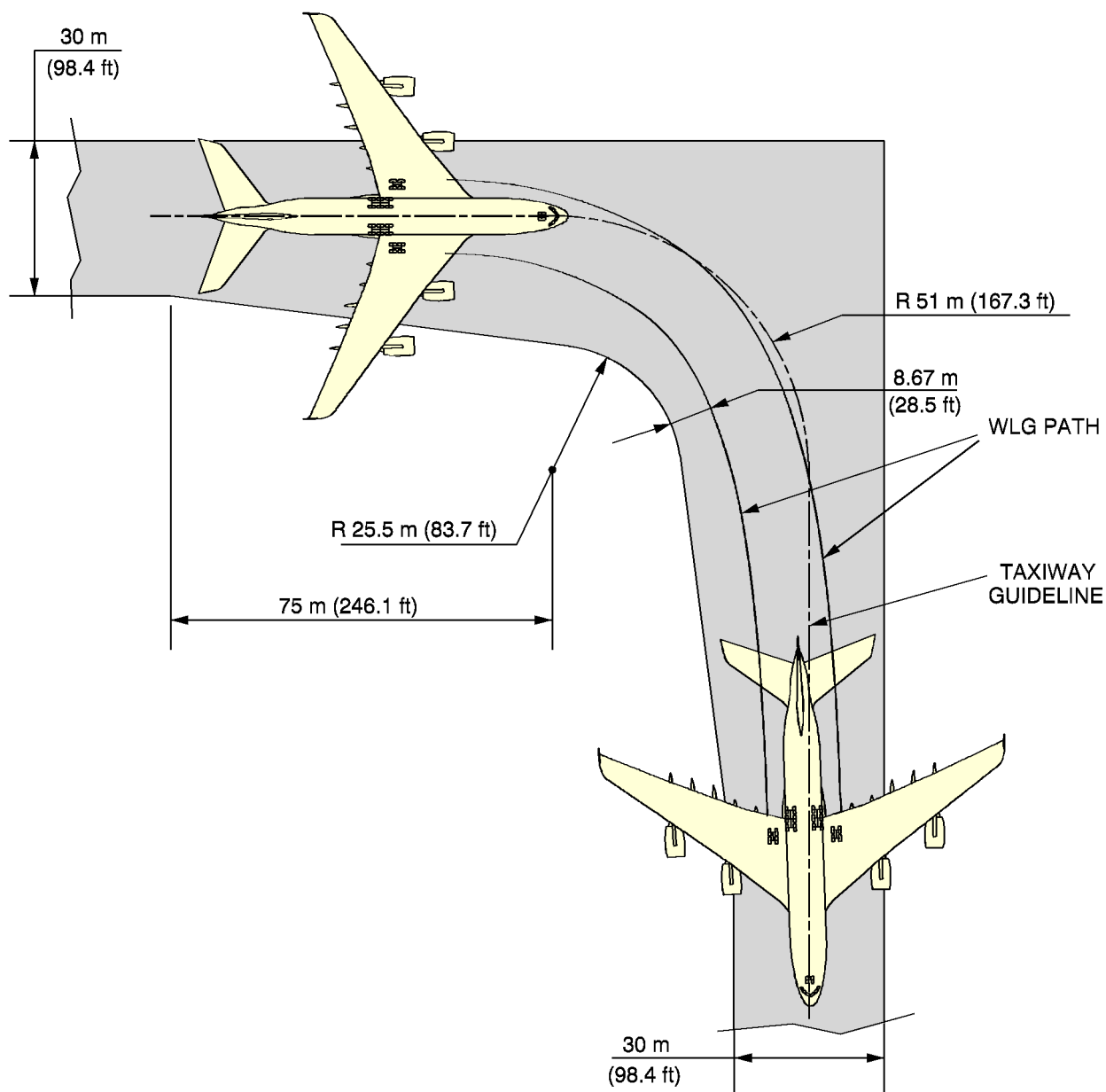
NOTE: FAA GROUP V JUDGEMENTAL OVERSTEER METHOD

L_AC_040504_0_AAM0_01_01

90° Turn - Taxiway to Taxiway
A380-800/800F Models



AIRPLANE CHARACTERISTICS



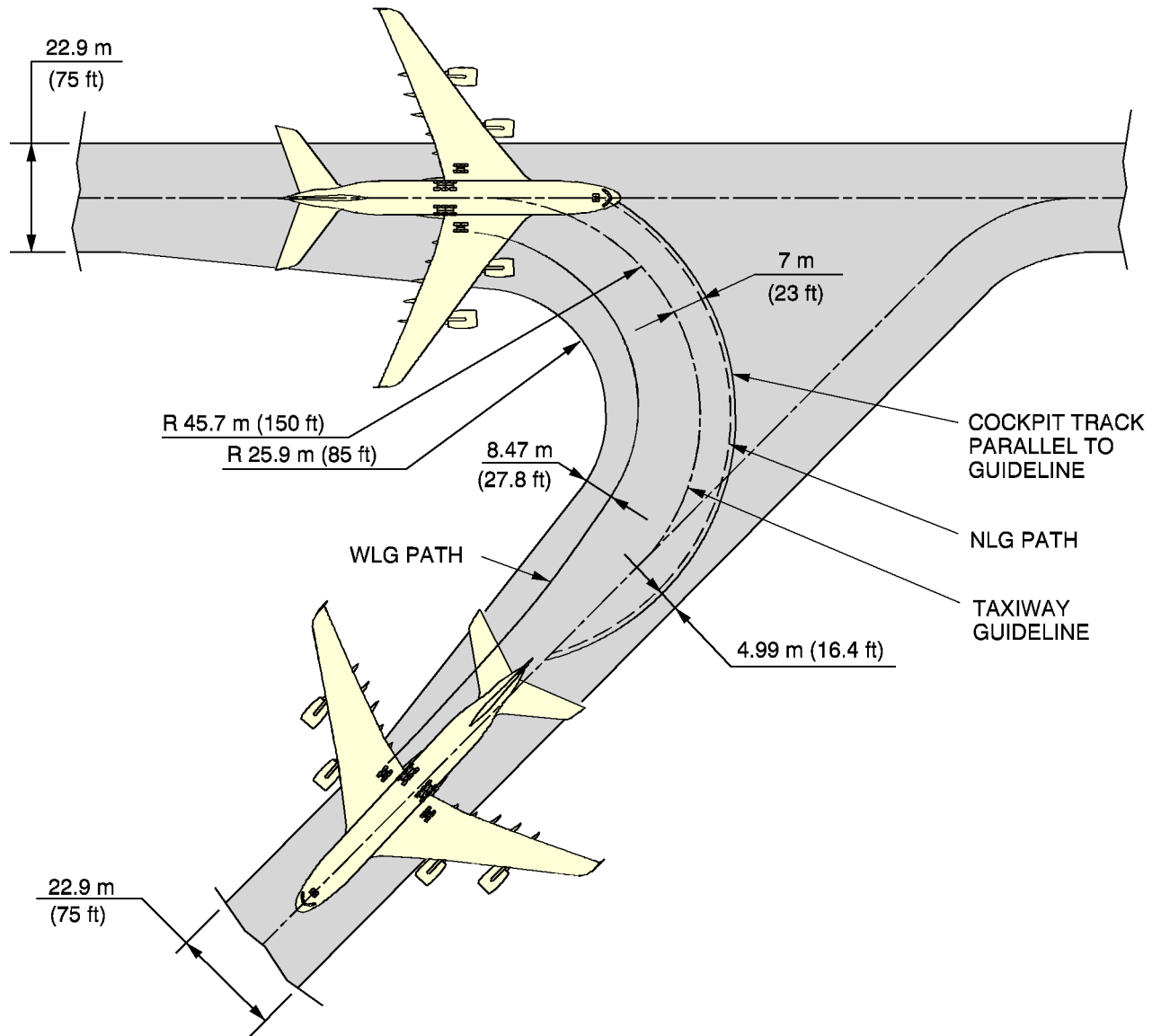
NOTE: FAA GROUP VI COCKPIT TRACKS CENTRELINE METHOD

L_AC_040504_0_ACM0_01_02

90° Turn - Taxiway to Taxiway
A380-800/800F Models



AIRPLANE CHARACTERISTICS



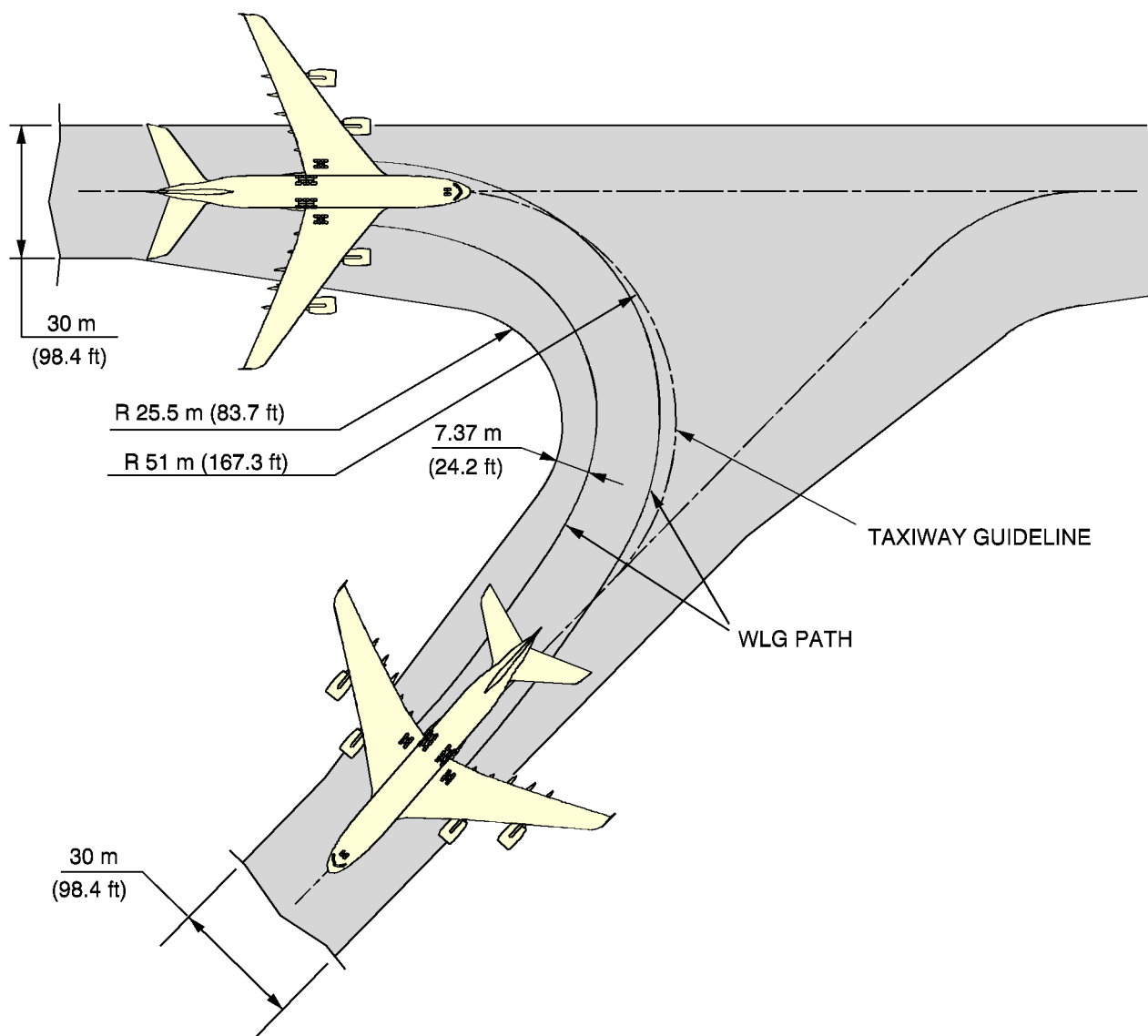
NOTE: FAA GROUP V JUDGEMENTAL OVERSTEER METHOD

L_AC_040505_0_AAM0_01_02

135° Turn - Taxiway to Taxiway
A380-800/800F Models



AIRPLANE CHARACTERISTICS



NOTE: FAA GROUP VI COCKPIT TRACKS CENTRELINE METHOD

L_AC_040505_0_ACM0_01_02

135° Turn - Taxiway to Taxiway
A380-800/800F Models

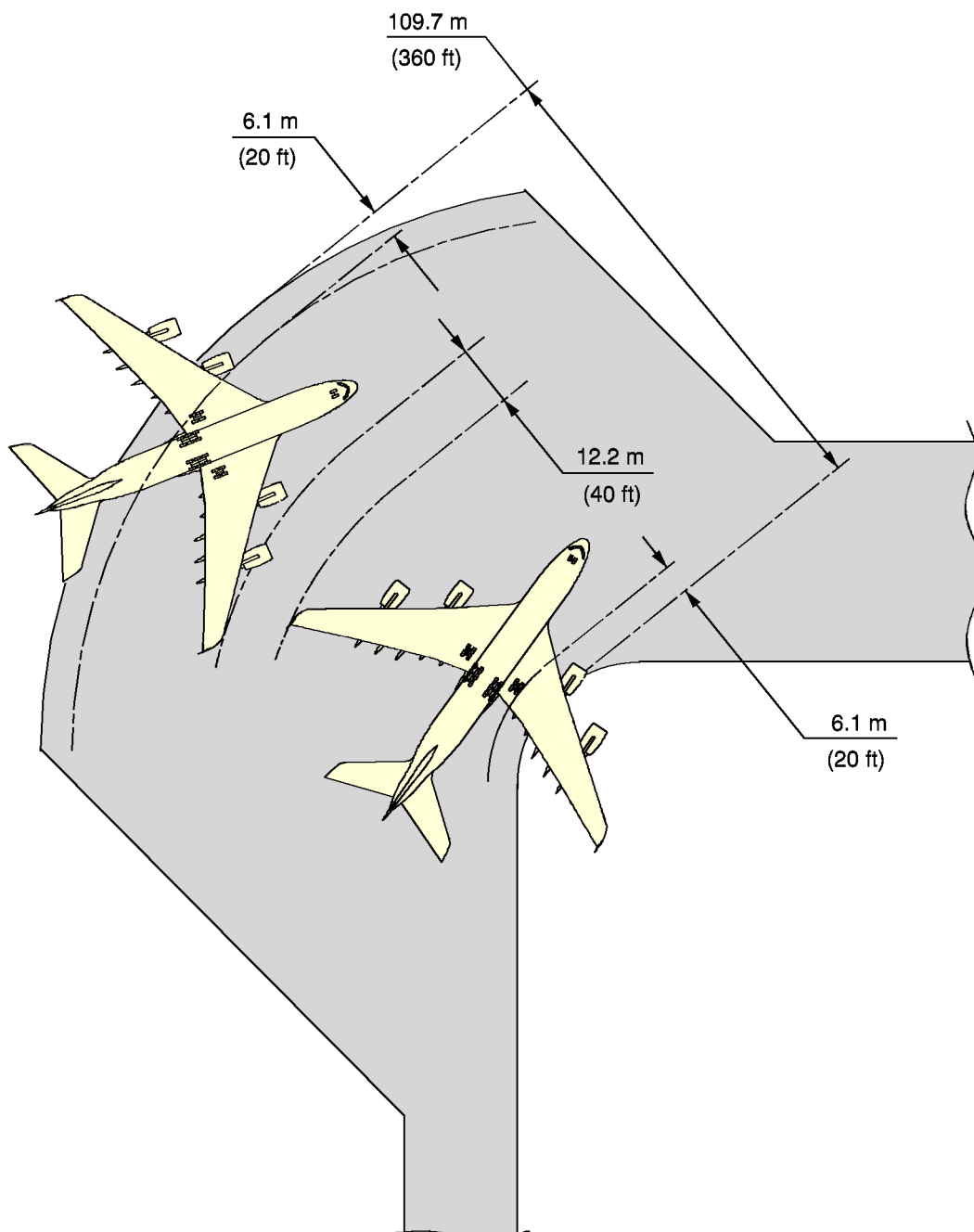


AIRPLANE CHARACTERISTICS

4-6 RUNWAY HOLDING BAY (APRON)



AIRPLANE CHARACTERISTICS



NOTE: COORDINATE WITH USING AIRLINE FOR SPECIFIC PLANNED OPERATING PROCEDURE

L_AC_040600_0_AAM0_01_01

Runway Holding Bay (Apron)
A380-800/800F Models



AIRPLANE CHARACTERISTICS

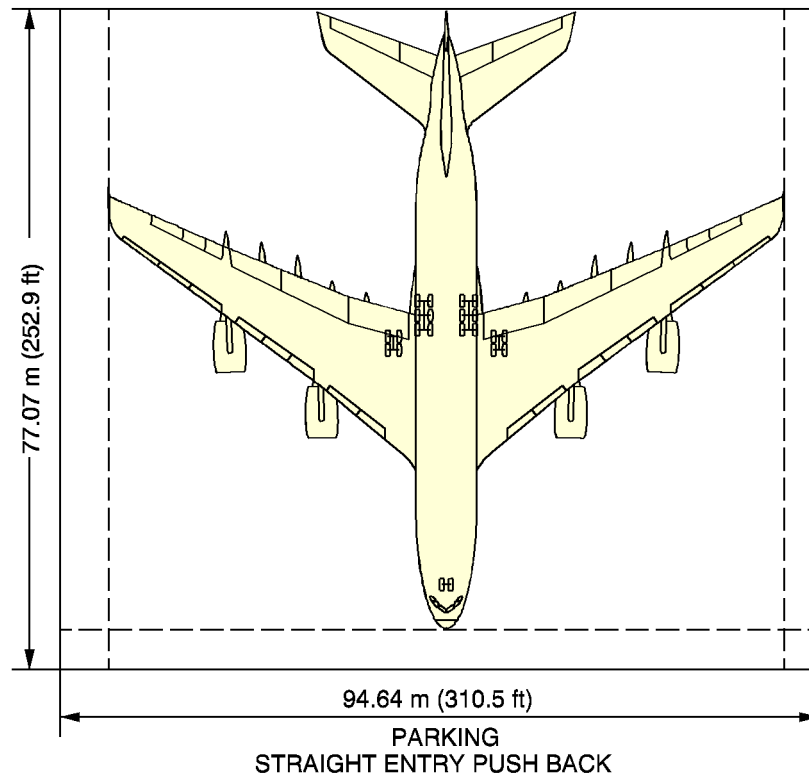
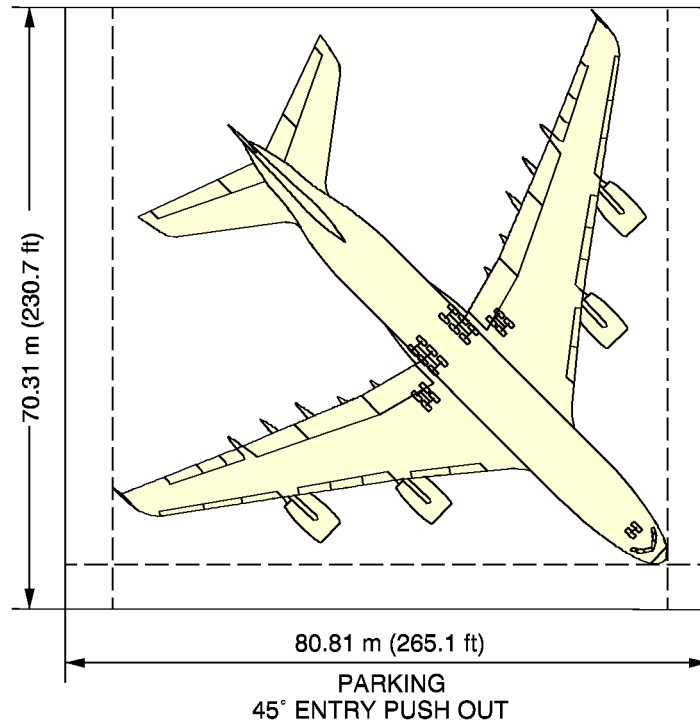
4-7 AIRPLANE PARKING

The following figures and charts show the rectangular space required for parking against the terminal building :

- Steering Geometry : Page 2
- Minimum Parking Space Requirements : Page 3



AIRPLANE CHARACTERISTICS

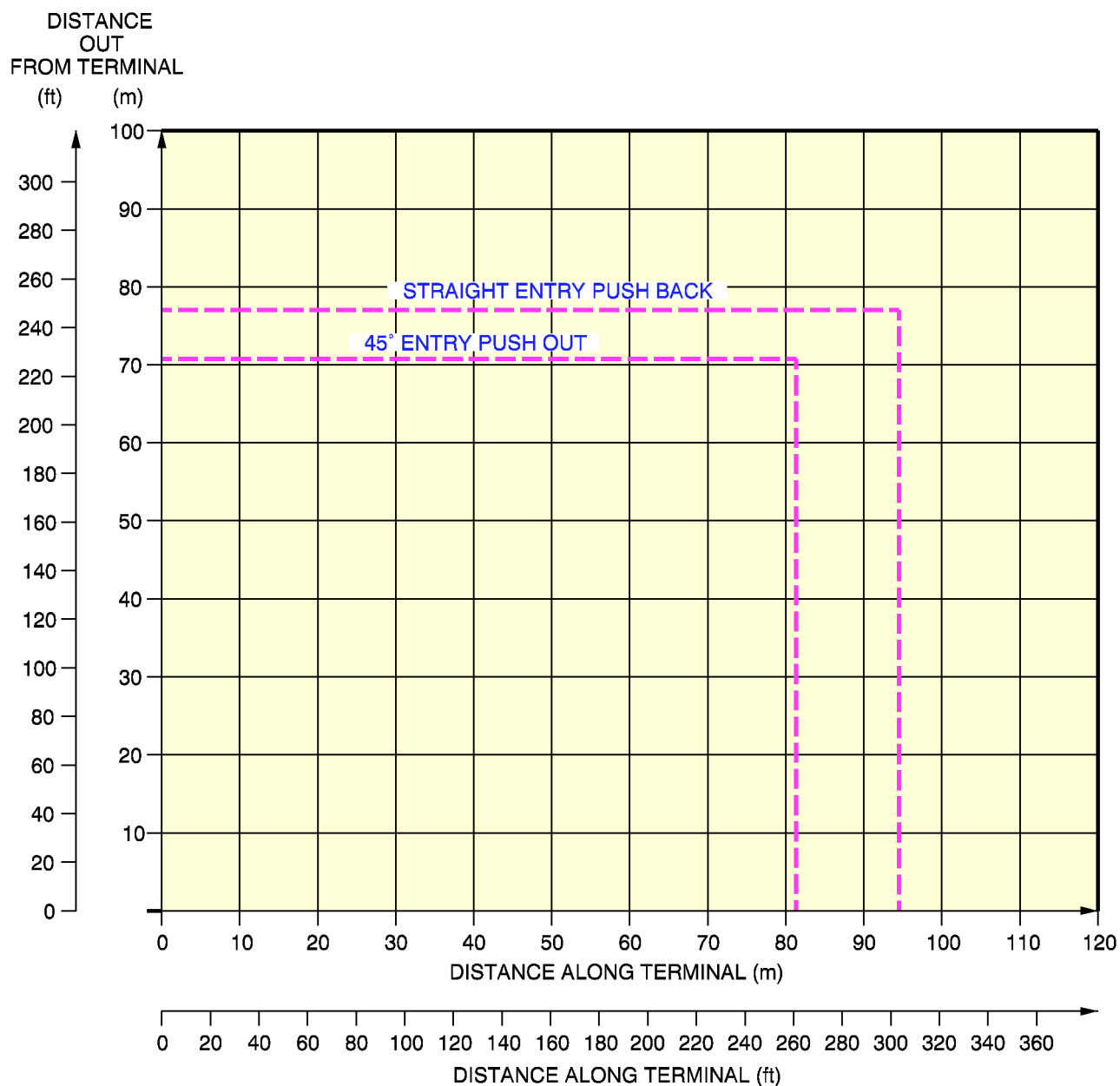


Airplane Parking
Steering Geometry
A380-800/800F Models

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AIRPLANE CHARACTERISTICS



Airplane Parking
Minimum Parking Space Requirements
A380-800/800F Models

L_AC_040700_0_ACM0_01_02



AIRPLANE CHARACTERISTICS

5-0 TERMINAL SERVICING

5-1 Airplane Servicing Arrangements

5-1-1 Typical Ramp Layout - Two Bridges - Standard Servicing Via Main and Upper Decks

5-1-2 Typical Ramp Layout - Two Bridges - Servicing Via Main Deck

5-1-3 Opportunities of Direct Upper Deck Access for Airport and Airlines

5-1-4 Typical Ramp Layout - Cargo Aircraft Servicing

5-2 Terminal Operation - Passenger Aircraft

5-2-1 Typical Turn-Round Time - Two Bridges - Standard Servicing Via Main and Upper Decks

5-2-2 Typical Turn-Round Time - Two Bridges - Servicing Via Main Deck

5-3 Terminal Operation - Cargo Aircraft

5-3-1 Typical Turn-Round Time

5-4 Ground Service Connections

5-4-1 Ground Service Connections Layout

5-4-2 Grounding Points

5-4-3 Hydraulic System

5-4-4 Electrical System

5-4-5 Oxygen System

5-4-6 Fuel System

5-4-7 Pneumatic System

5-4-8 Potable Water System

5-4-9 Oil System

5-4-10 Toilet System



AIRPLANE CHARACTERISTICS

5-5 Engine Starting Pneumatic Requirements

5-5-1 Outside Air Temperature = -40°C (-40°F)

5-5-2 Outside Air Temperature = 15°C (59°F)

5-5-3 Outside Air Temperature = 50°C (122°F)

5-6 Ground Pneumatic Power Requirements

5-6-1 Heating

5-6-2 Cooling

5-7 Preconditioned Airflow Requirements



AIRPLANE CHARACTERISTICS

5-1 AIRPLANE SERVICING ARRANGEMENTS

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

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

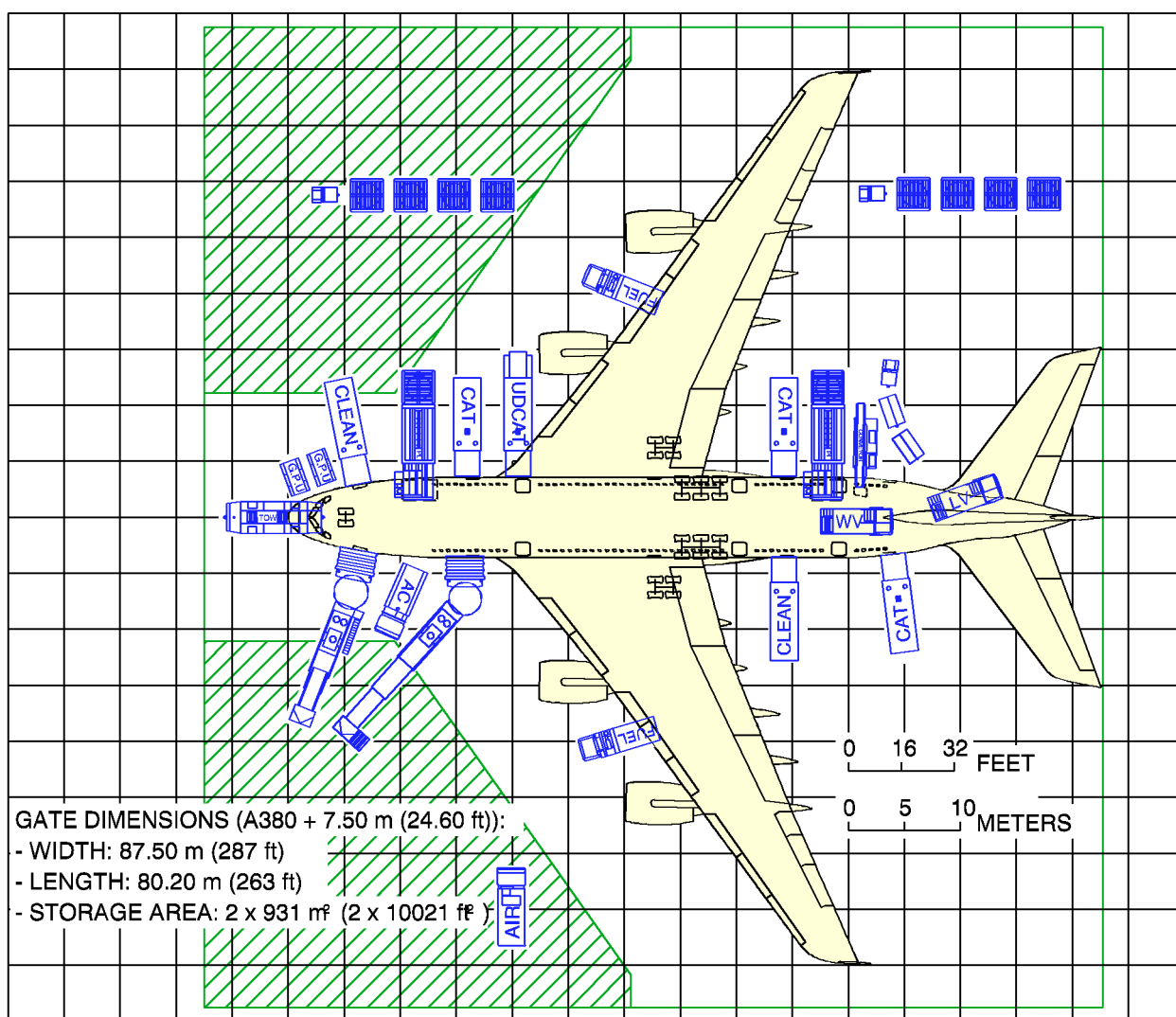
For each ramp layout, the associated typical turn-round time is given in a Chart in the section 5-2 for passenger aircraft and section 5-3 for cargo aircraft.



AIRPLANE CHARACTERISTICS

AC: AIR COND UNIT
AIR: AIR START UNIT
CAT: CATERING VEHICLE
CLEAN: CLEANING VEHICLE
CONVEYOR: CONVEYOR BELT
FUEL: FUEL HYDRANT DISPENSER

GPU: GROUND POWER UNIT
LV: LAVATORY VEHICLE
PL: PALLET/CONTAINER LOADER
TOW: TOWING TRACTOR
WV: POTABLE WATER VEHICLE



RL28/B1A/800/STD

Baseline Ramp Layout - Two Bridges
Servicing Via Main and Upper Decks
A380-800 Models

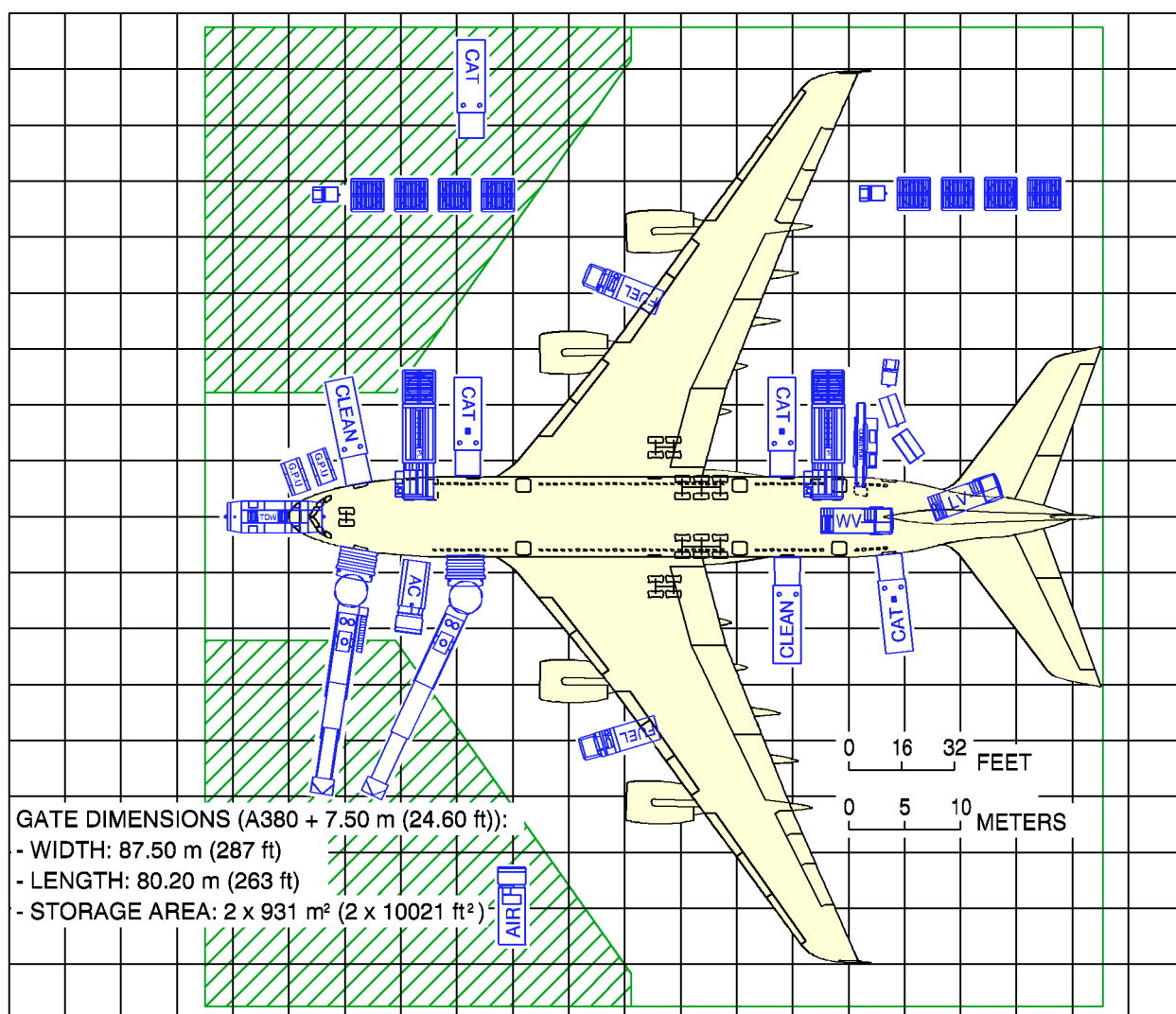
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AIRPLANE CHARACTERISTICS

AC: AIR COND UNIT
AIR: AIR START UNIT
CAT: CATERING VEHICLE
CLEAN: CLEANING VEHICLE
CONVEYOR: CONVEYOR BELT
FUEL: FUEL HYDRANT DISPENSER

GPU: GROUND POWER UNIT
LV: LAVATORY VEHICLE
PL: PALLET/CONTAINER LOADER
TOW: TOWING TRACTOR
WV: POTABLE WATER VEHICLE

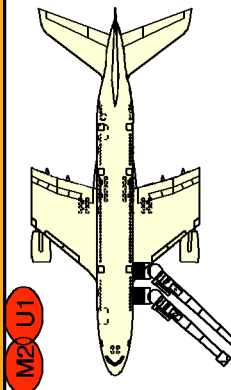
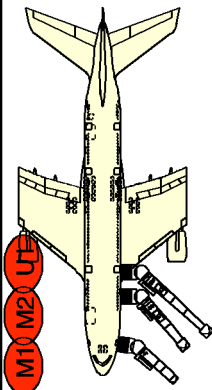
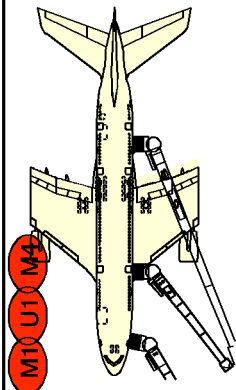


RL01/B1A/800/STD

Typical Ramp Layout - Two Bridges
Servicing Via Main Deck
A380-800 Models

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AIRPLANE CHARACTERISTICS

OPPORTUNITIES OF DIRECT UPPER DECK ACCESS FOR AIRPORTS & AIRLINES	
PRODUCT & SERVICE DIFFERENTIATION	TURN-ROUND TIME (TRT)
Vs BASELINE MAIN DECK (MD) ACCESS (M1/M2)	
	HIGH
	SIMILAR TO BASELINE MAIN DECK ACCESS
	SIMILAR TO BASELINE MD ACCESS (POTENTIAL FOR REDUCTION DEPENDING ON DE-/BOARDING PROCEDURES)
	REDUCED (UP TO 15%)
BENEFITS REALISED DEPEND LARGELY ON CABIN LAYOUT & BOARDING PROCEDURES	

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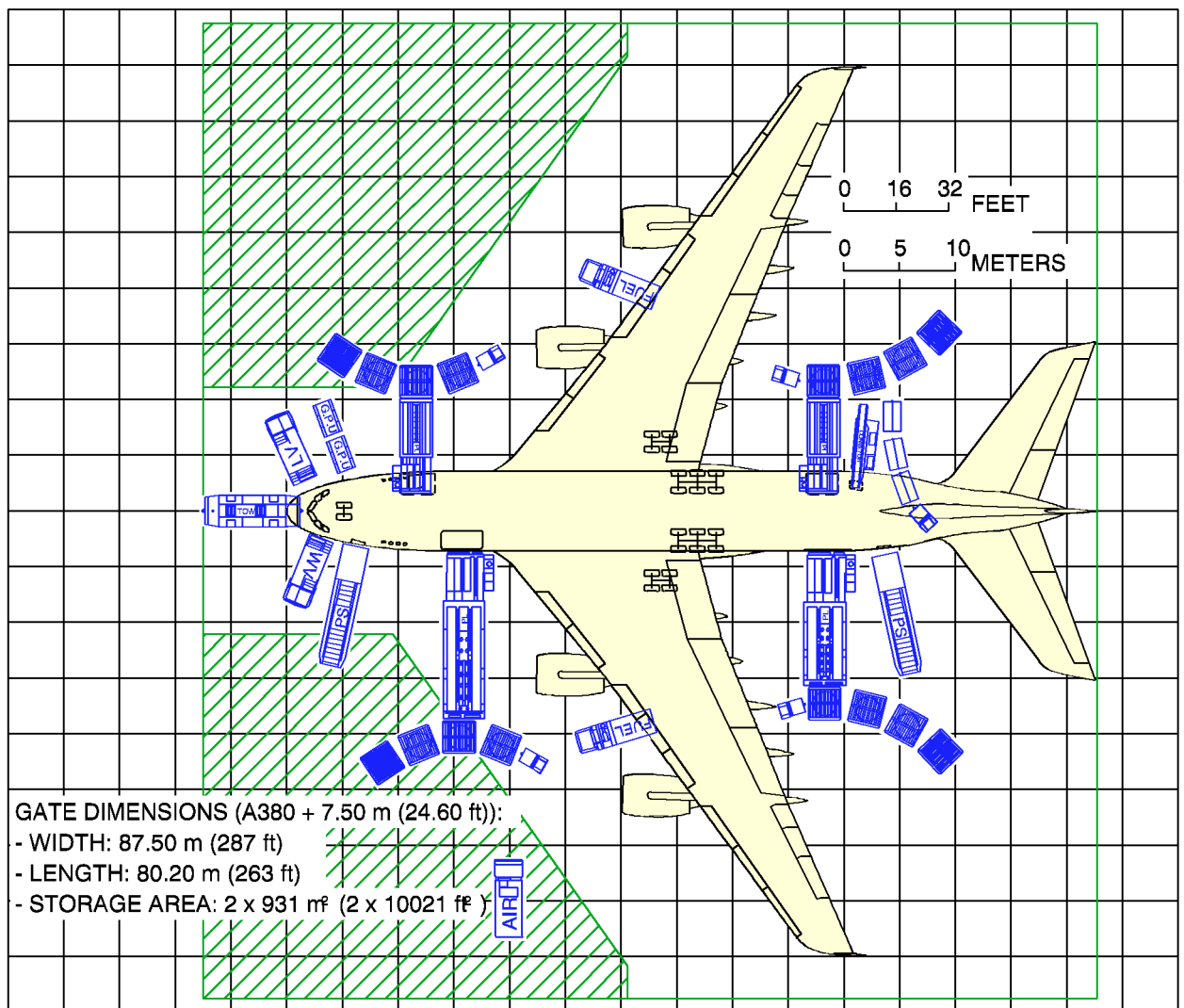
Opportunities of Direct Upper Deck Access
for Airport and Airlines



AIRPLANE CHARACTERISTICS

AC: AIR COND UNIT
AIR: AIR START UNIT
CONVEYOR: CONVEYOR BELT
FUEL: FUEL HYDRANT DISPENSER
GPU: GROUND POWER UNIT

LV: LAVATORY VEHICLE
PL: PALLET/CONTAINER LOADER
PS: PASSENGER STAIRS
TOW: TOWING TRACTOR
WV: POTABLE WATER VEHICLE





AIRPLANE CHARACTERISTICS

5-2 TERMINAL OPERATION - PASSENGER AIRCRAFT

This section provides typical turn-round time charts showing the typical times for ramp activities during aircraft turn-round.

Actual times may vary due to each operator's specific practice and operating conditions.

For each turn-round time chart, the associated typical ramp layout is given in section 5-1.



AIRPLANE CHARACTERISTICS

ASSUMED TURN-ROUND TIME PARAMETERS

PASSENGER BOARDING/DEBOARDING (PB/D) → 100% (555 pax) passenger exchange :

- Doors (type A – 42" wide) used : M1L and M2L (main deck) and U1R (upper deck).
- PB/D rate : boarding = 15 pax/min / deboarding = 25 pax/min
- Last Pax Seating Allowance (LPS) = + 4 min
- 60" stair flow rate : up-flow = 14 pax/min / down-flow = 18 pax/min

CARGO → Full LD-3 exchange (22 + 16) LD-3 and bulk exchange of 2 000 kg (4 409 lb) :

- LD-3 off-loading/loading times :
off-loading = 1.4 min/LD-3 / loading = 1.7 min/LD-3
- Pallet loading times :
off-loading = 2.5 min/pallet / loading = 2.9 min/pallet
- bulk off-loading/loading times :
off-loading = 9.2 min/t / loading = 10.5 min/t

REFUELLING → Block fuel for Nominal Range through 4 nozzles :

- 261 200 liters (67 364 US gallons) at 40 psi (48 min)
- dispenser positioning or removal = 3 min (fuel truck change) / if any = 5 min

CLEANING → Full cleaning :

- Crew adapted to match catering time

CATERING → Full catering :

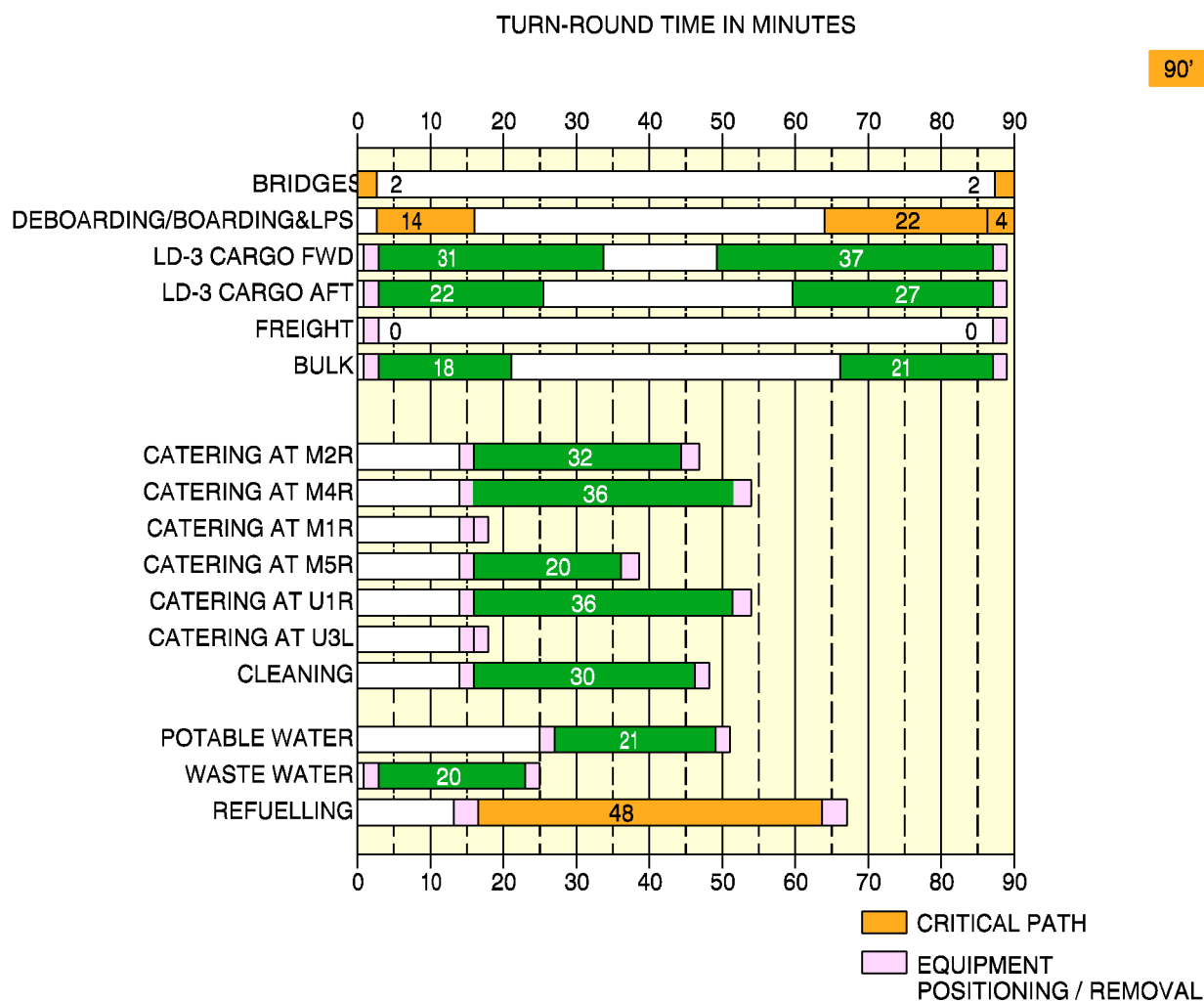
- average truck capacity = 30 Full Size Trolley Equivalent (FSTE)
- simultaneous catering and PB/D = not represented
- inbound/outbound FSTE = mixed in the same truck
- FSTE exchange time :
 - dedicated door-galley = 1.5 min/FSTE
 - cart circulation (1 seat zone) = + 0.5 min/FSTE
 - cart circulation (> 1 seat zone) = + 1.0 min/FSTE
 - via lift :
 - dedicated door to single lift = 2.0 min/FSTE

GROUND HANDLING/SERVICING

- start of operations :
 - bridges = t0 = 0
 - others = t0 + 1 min
- vehicle positioning/removal = 2 min (fuel truck excluded)
- upper deck vehicle positioning/removal = 3 min
- clearance between GSE = 0.5 m (20 in)
- Ground Power Unit (GPU) = up to 4 × 90 kVA
- air conditioning = two carts
- potable water (standard/option) = 1 700/2 500 liters (495/660 US gal) at 60 l/min (23 US gal/min).
- waste water = discharge and rinsing
- dollies per tractor = 4 to 6



AIRPLANE CHARACTERISTICS



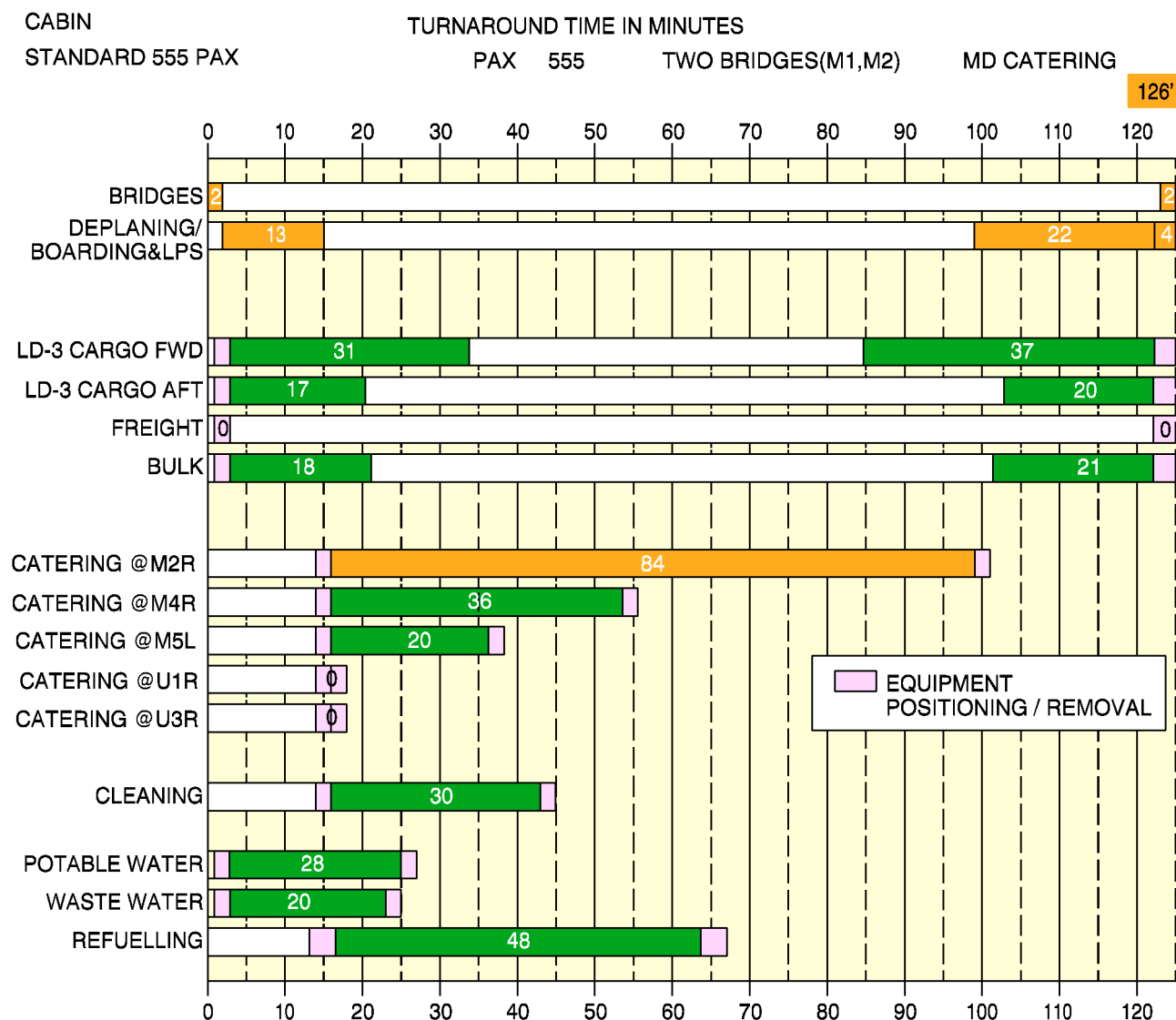
DB1A

Baseline Turn-Round Time - Two Bridges
Servicing Via Main and Upper Decks
A380-800 Models

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AIRPLANE CHARACTERISTICS



Typical Turn-Round Time - Two Bridges
Servicing Via Main Deck
A380-800 Models

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AIRPLANE CHARACTERISTICS

5-3 TERMINAL OPERATION - CARGO AIRCRAFT



AIRPLANE CHARACTERISTICS

The A380-800F can achieve turn-round times of 120 ± 20 minutes depending on ULD layouts on the three decks.

NOTE : These values are similar to other wide-body freighter aircraft in similar operating conditions.

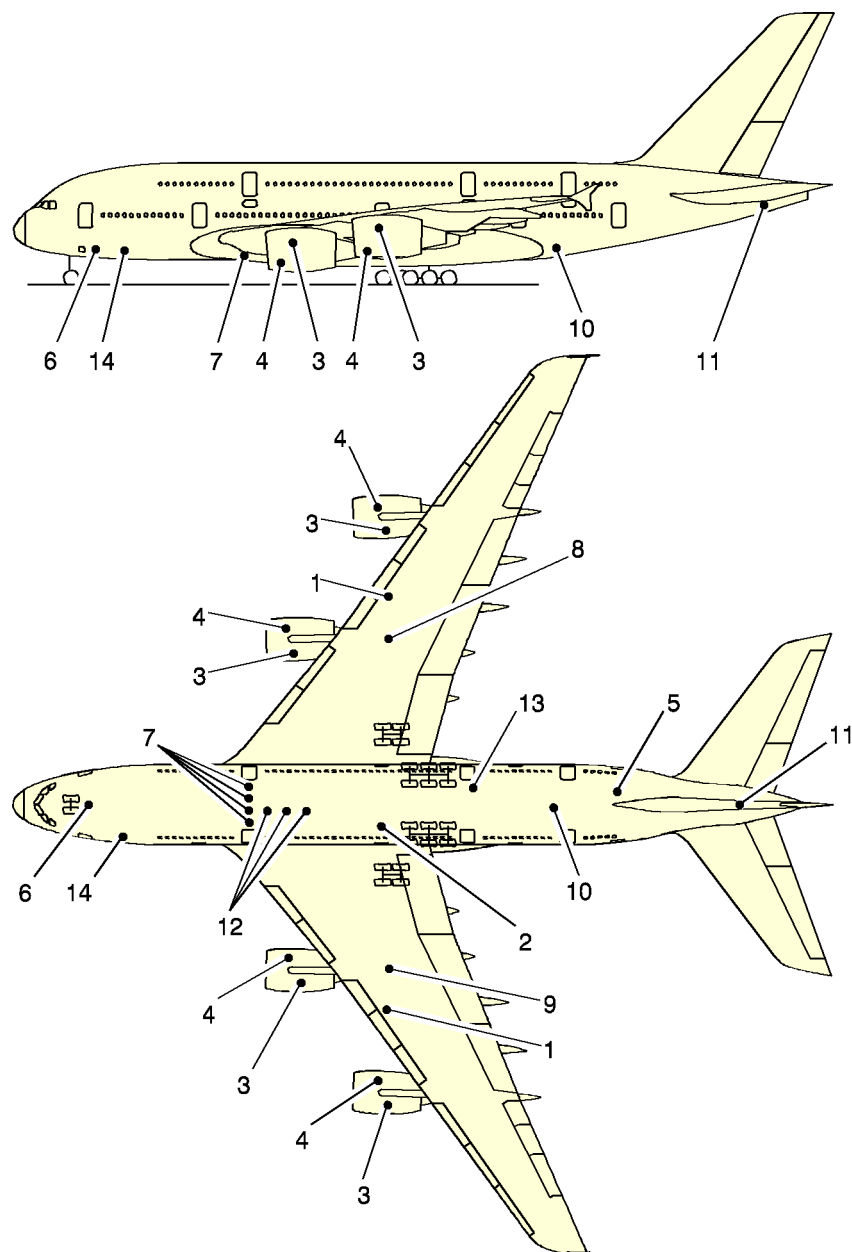
Typical Turn-Round Time
A380-800F Models



AIRPLANE CHARACTERISTICS

5-4 GROUND SERVICE CONNECTIONS

AIRPLANE CHARACTERISTICS



- 1 - PRESSURE REFUEL CONNECTORS
- 2 - HYDRAULIC RESERVOIR SERVICING PANEL
(RESERVOIR FILLING AND RESERVOIR PRESSURISATION)
- 3 - ENGINE OIL FILLING
- 4 - VF GENERATOR OIL FILLING
- 5 - TOILET AND WASTE SERVICE PANEL
- 6 - GROUND ELECTRICAL POWER
- 7 - LOW PRESSURE PRECONDITIONED AIR

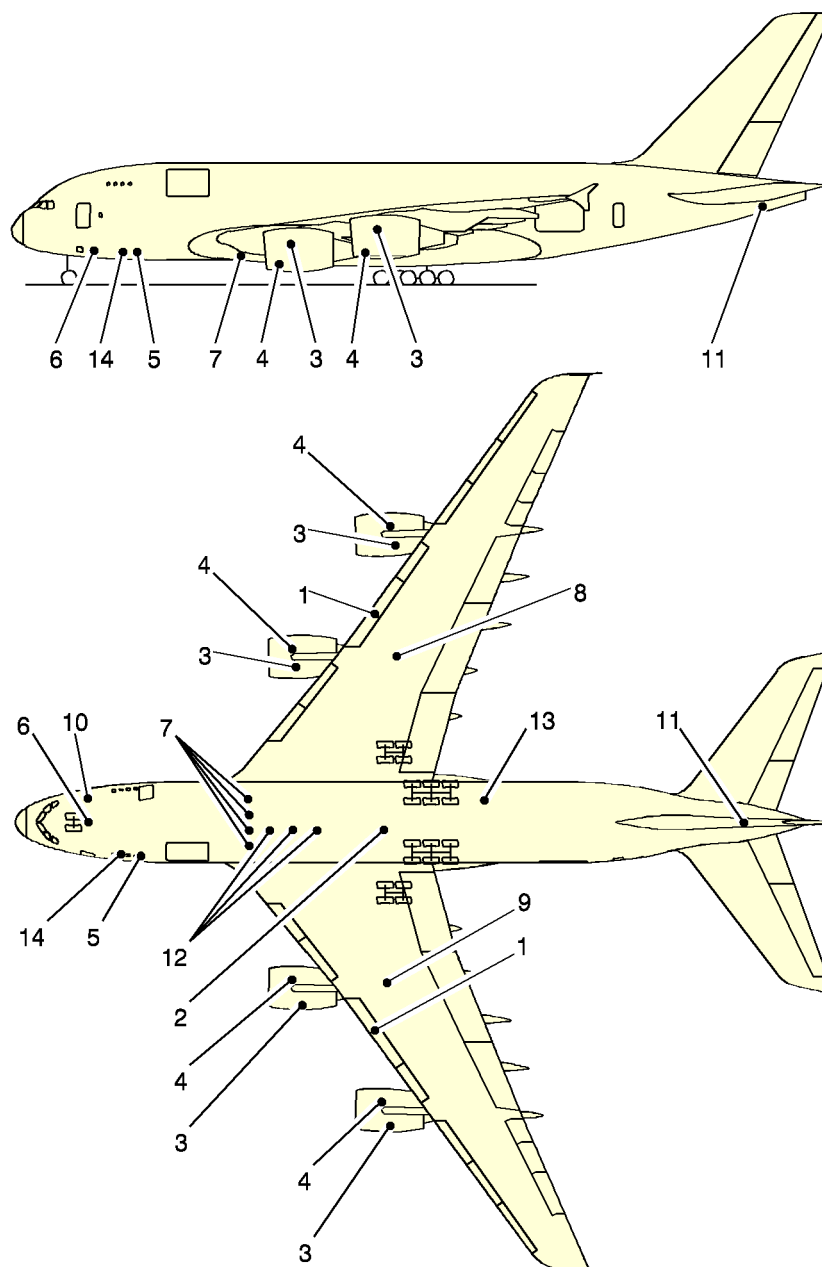
- 8 - YELLOW HYDRAULIC GROUND CONNECTOR
- 9 - GREEN HYDRAULIC GROUND CONNECTOR
- 10 - POTABLE WATER SERVICE PANEL
- 11 - APU OIL FILLING
- 12 - HIGH PRESSURE AIR ENGINE START
- 13 - REFUEL/DEFUEL CONTROL PANEL
- 14 - OXYGEN SYSTEM

DB1A

Ground Service Connections
Ground Service Connections Layout
A380-800 Models

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AIRPLANE CHARACTERISTICS



- | | |
|---|---------------------------------------|
| 1 - PRESSURE REFUEL CONNECTORS | 8 - YELLOW HYDRAULIC GROUND CONNECTOR |
| 2 - HYDRAULIC RESERVOIR SERVICING PANEL
(RESERVOIR FILLING AND RESERVOIR PRESSURISATION) | 9 - GREEN HYDRAULIC GROUND CONNECTOR |
| 3 - ENGINE OIL FILLING | 10 - POTABLE WATER SERVICE PANEL |
| 4 - VF GENERATOR OIL FILLING | 11 - APU OIL FILLING |
| 5 - TOILET AND WASTE SERVICE PANEL | 12 - HIGH PRESSURE AIR ENGINE START |
| 6 - GROUND ELECTRICAL POWER | 13 - REFUEL/DEFUEL CONTROL PANEL |
| 7 - LOW PRESSURE PRECONDITIONED AIR | 14 - OXYGEN SYSTEM |

DB1A

Ground Service Connections
Ground Service Connections Layout
A380-800F Models

L_AC_050401_0_ABM0_01_05



AIRPLANE CHARACTERISTICS

GROUNDING POINTS

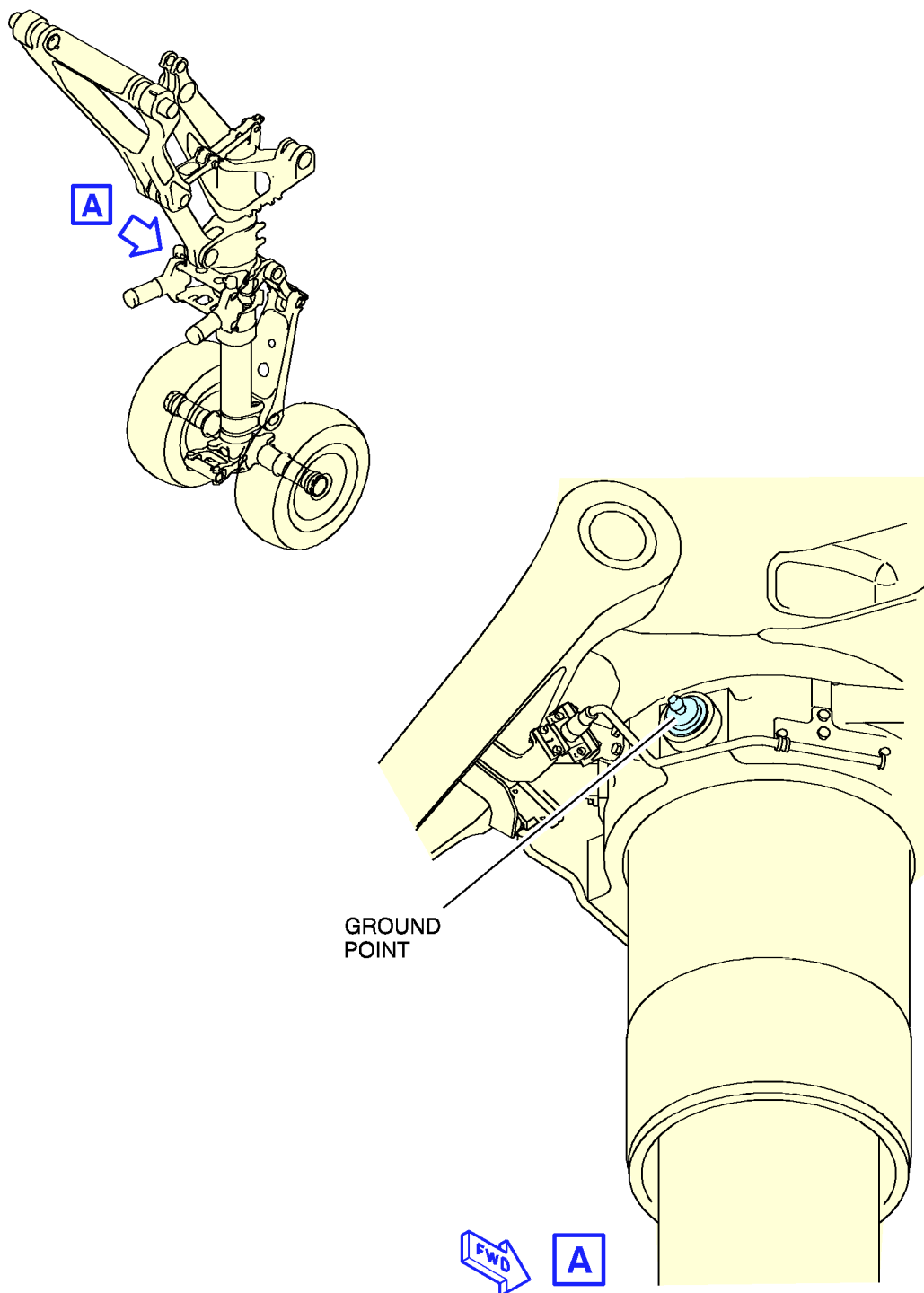
- On Nose Landing Gear
- On Left Wing Gear Leg
- On right Wing Gear Leg
- On Left Body Gear leg
(Outboard)
- On Left Body Gear leg
(Inboard)
- On right Body Gear leg
(Outboard)
- On right Body Gear leg
(Inboard)

DISTANCE: Meters (ft)		
AFT OF NOSE	FROM AIRPLANE CENTERLINE	MEAN HEIGHT FROM GROUND
5.713 (18.7)	182 (0.6) On the RH side	1.385 (4.5)
34.207 (112.2)	5.949 (19.5)	1.237 (4.0)
34.207 (112.2)	5.949 (19.5)	1.237 (4.0)
37.158 (121.9)	2.852 (9.4)	1.379 (4.5)
37.158 (121.9)	2.412 (7.9)	1.379 (4.5)
37.158 (121.9)	2.852 (9.4)	1.379 (4.5)
37.158 (121.9)	2.412 (7.9)	1.379 (4.5)

- (1) The grounding stud on each landing gear is designed for use with a clip-on connector, such as an Appleton TGR.
- (2) The grounding studs are used to connect the airplane to approved ground connection on the ramp or in the hangar for:
- refuel/defuel operations
 - maintenance operations
 - bad weather conditions.



AIRPLANE CHARACTERISTICS



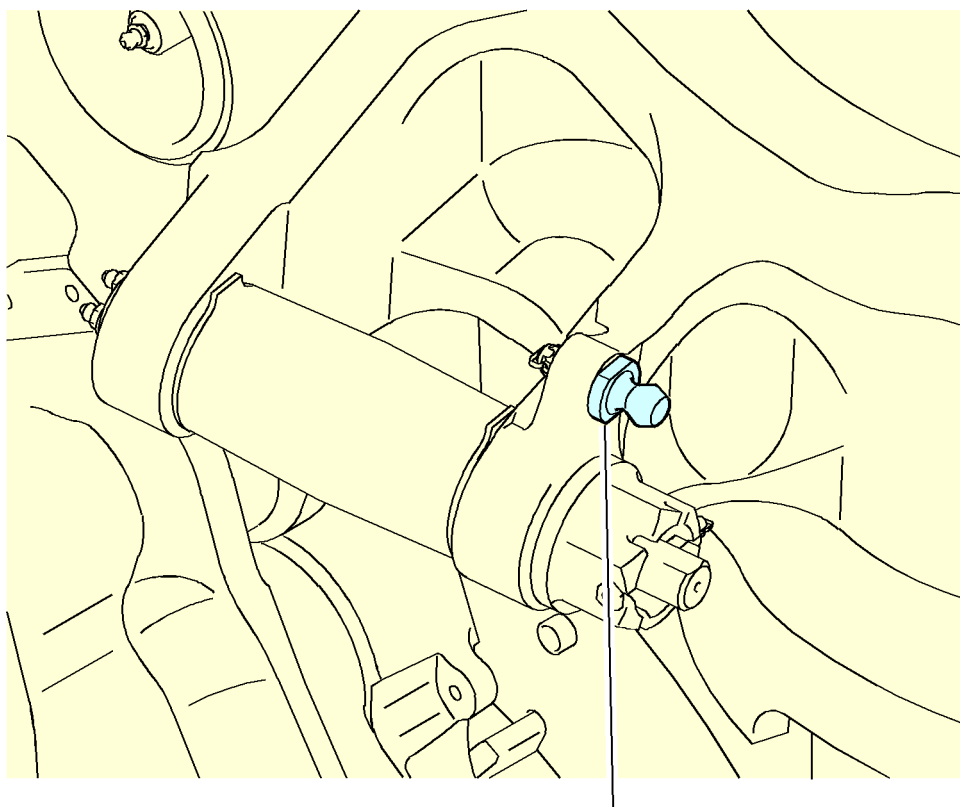
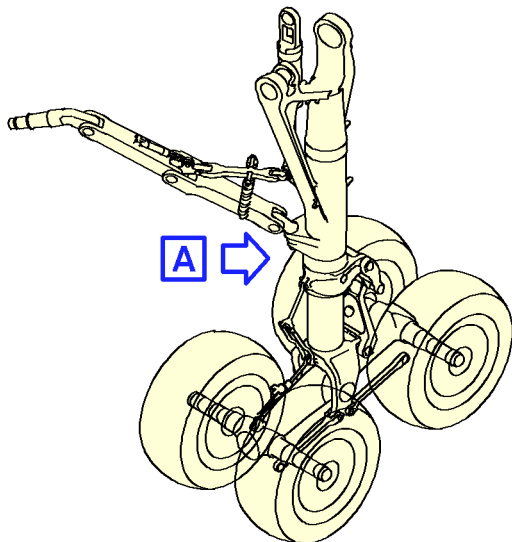
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Ground Point NLG
A380-800/800F Models

5-4-2
Page 2
MAR 30/05

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AIRPLANE CHARACTERISTICS



GROUND POINT

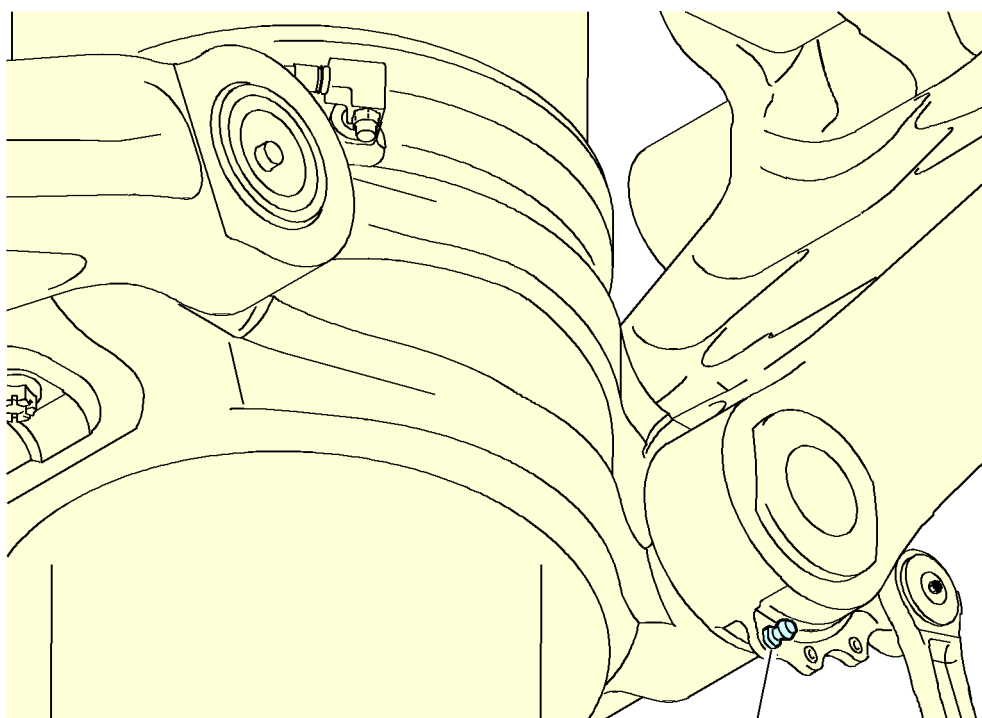
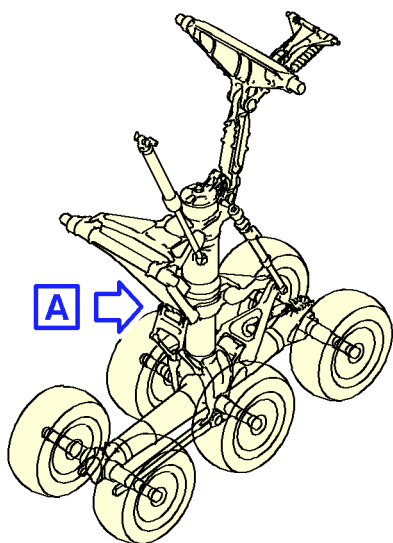
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Ground Points WLG
A380-800/800F Models

5-4-2
Page 3
MAR 30/05



AIRPLANE CHARACTERISTICS



GROUND
POINTS
(RIGHT ONE SHOWN LEFT ONE SIMILAR)

L_AC_050402_0_AEM0_01_00

Ground Points BLG
A380-800/800F Models

5-4-2
Page 4
MAR 30/05

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AIRPLANE CHARACTERISTICS

HYDRAULIC SYSTEM

A. Doors description :

- Green hydraulic ground connectors :
(Access door 198CB)
- Yellow hydraulic ground connector :
(Access door 198JB)
- Hydraulic Reservoir Servicing Panel :
(Access door 197CB)

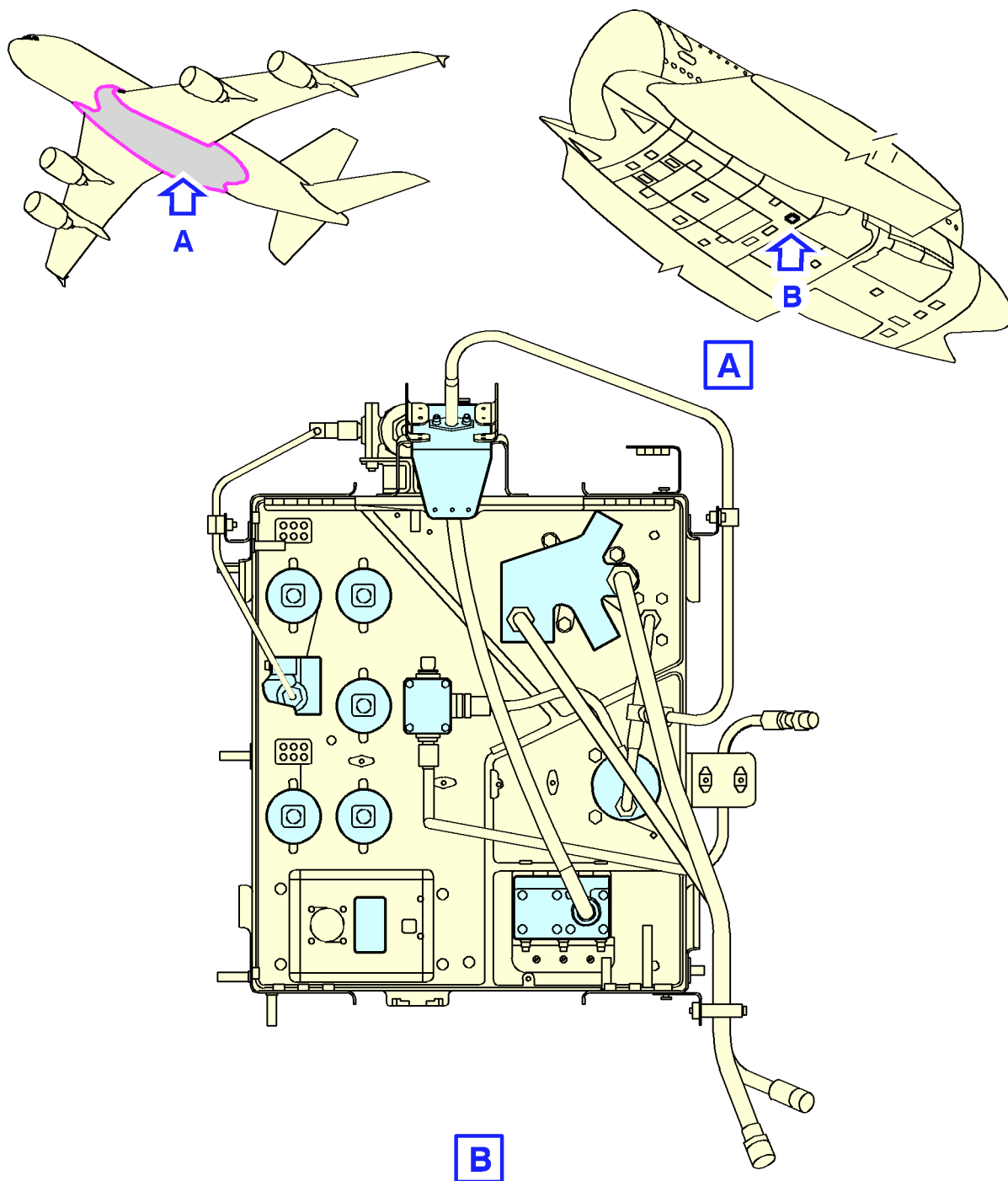
DISTANCE : Meters (ft)			
AFT OF NOSE	FROM AIRPLANE CENTERLINE		MEAN HEIGHT FROM GROUND
	R SIDE	L SIDE	
34.67 (113.7)		14.90 (48.88)	5.08 (16.66)
34.67 (113.7)	14.90 (48.88)		5.08 (16.66)
30.17 (98.98)		2.34 (7.67)	1.71 (5.61)

- (1) Reservoir pressurization
 - one connector ETRT0 V0.09.6, 1/4 in.
- (2) Reservoir filling
 - one connector AE96993E, 1/4 in.

Ground Service Connections
Hydraulic System
A380-800 Models



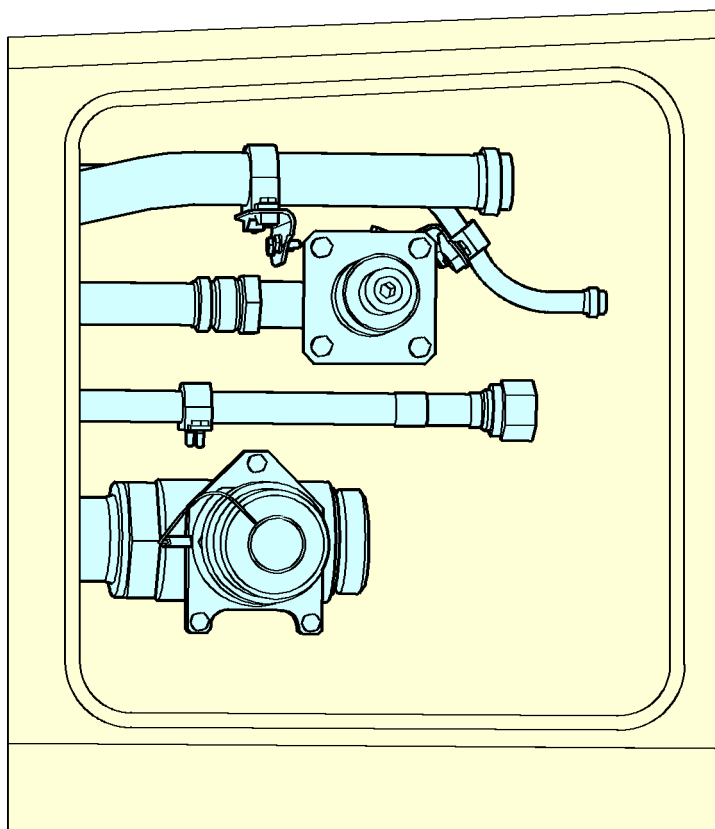
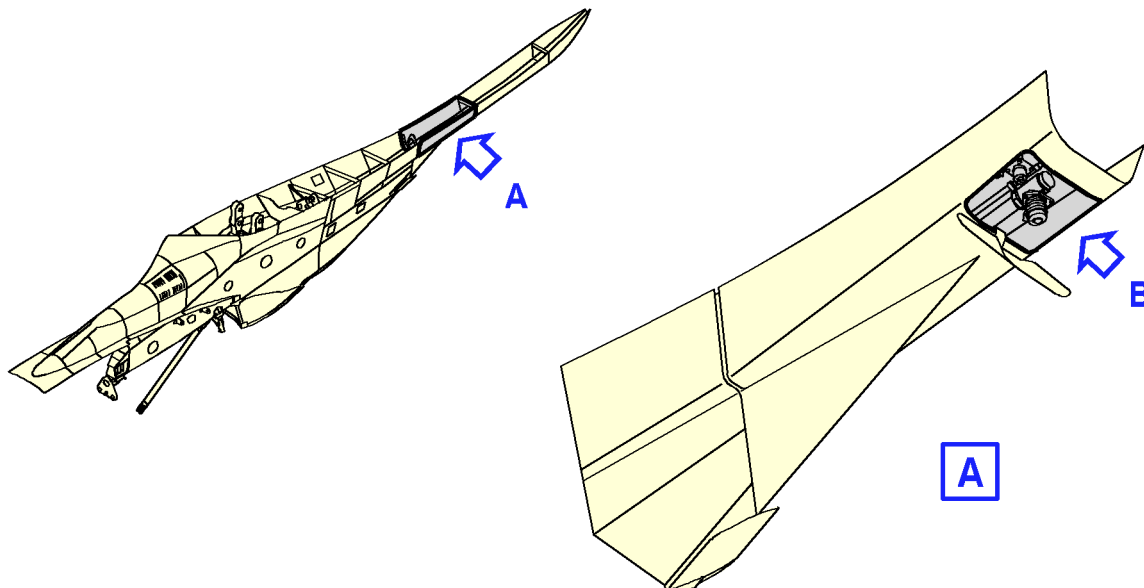
AIRPLANE CHARACTERISTICS



Ground Service Connections
Hydraulic Reservoir Servicing Panel
A380-800 models

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AIRPLANE CHARACTERISTICS



B

Ground Service Connections
Hydraulic Ground Connections
A380-800 models

L_AC_050403_0_DAM0_01_00



AIRPLANE CHARACTERISTICS

ELECTRICAL SYSTEM

A. Ground Service Panel for External Electrical Power Receptacles :

- Right side access door : 134AR

- Left side access door : 133AL

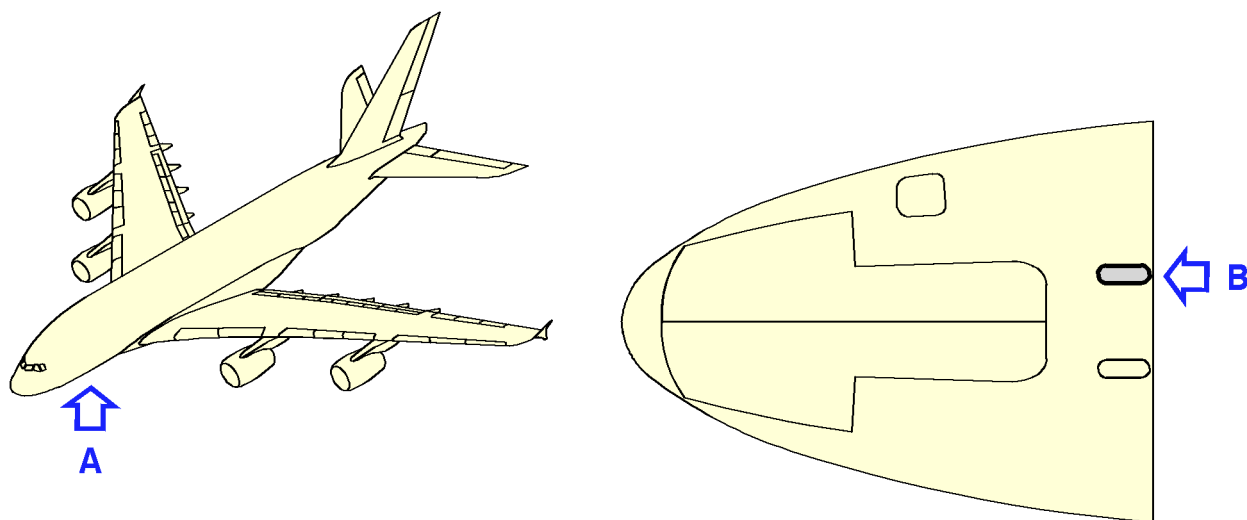
DISTANCE : Meters (ft)			
AFT OF NOSE	FROM AIRPLANE CENTERLINE		MEAN HEIGHT FROM GROUND
	R SIDE	L SIDE	
5.99 (19.65)	0.45 (1.47)		2.59 (8.49)
5.99 (19.65)		0.45 (1.47)	2.59 (8.49)

- (1) External Power Receptacles :
- four standard ISO R461 receptacles - 90 KVA each.
- (2) Power supply :
- three phase, 115V, 400 Hz.
- (3) Electrical connectors for servicing :
AC outlets : HUBBEL 5258
DC outlets : HUBBEL 7472
Vacuum cleaner outlets : HUBBEL 5258

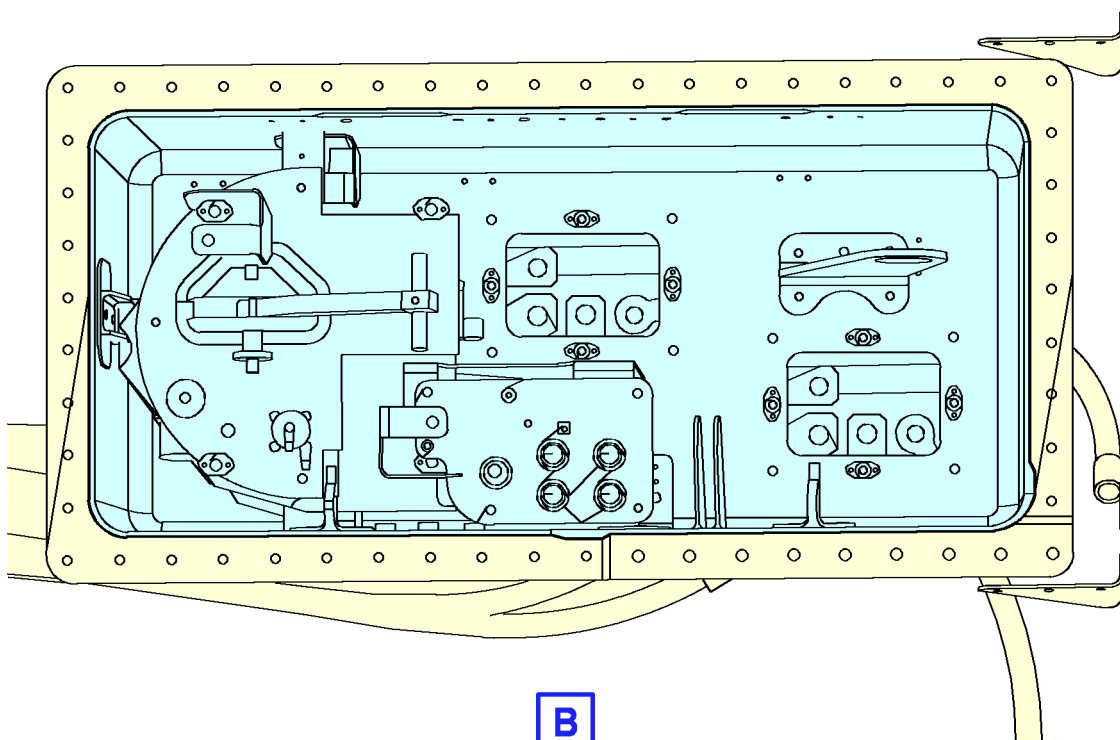
Ground Service Connections
Electrical System
A380-800 models



AIRPLANE CHARACTERISTICS



A



B

Ground Service Connections
Electrical Service Panel
A380-800 models

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AIRPLANE CHARACTERISTICS

OXYGEN SYSTEM

NOTE : INTERNAL CHARGING CONNECTION
PROVIDED

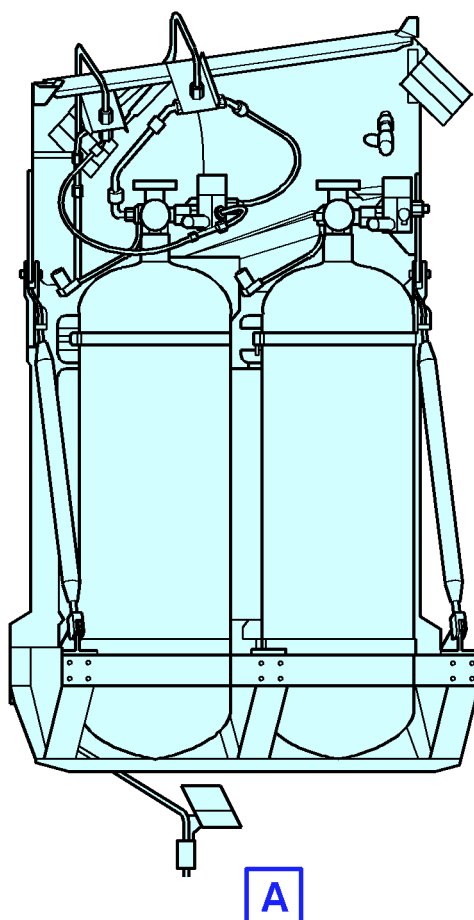
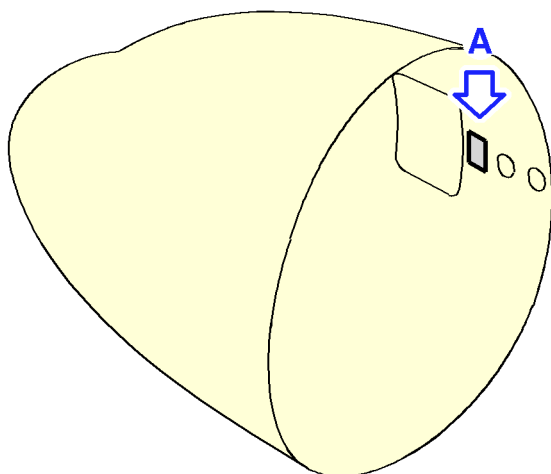
DISTANCE - $\frac{\text{Meters}}{(\text{ft. in.})}$			
FROM AIRPLANE NOSE	FROM AIRPLANE CENTERLINE		MEAN HEIGHT FROM GROUND
	R SIDE	L SIDE	
13,35 (43,8)	2,35 (7,7)	-	3,86 (12,7)

Zero, one or two service connections (external charging in the avionics compartment) MS22066 Std

Ground Service Connections
Oxygen System
A380-800 Models



AIRPLANE CHARACTERISTICS



Ground Service Connections
Oxygen System
A380-800 Models

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AIRPLANE CHARACTERISTICS

FUEL SYSTEM

A. Ground Service Panel for :

- Refuel/Defuel control panel :
(Access door 199KB)

DISTANCE : Meters (ft)			
AFT OF NOSE	FROM AIRPLANE CENTERLINE		MEAN HEIGHT FROM GROUND
	R SIDE	L SIDE	
48 (159.48)	0.65 (2.13)		2.98 (9.77)

B. Refuel/Defuel connectors

- refuel/defuel coupling, left
(Access door 522GB)
- refuel/defuel coupling, right
(Access door 622GB)

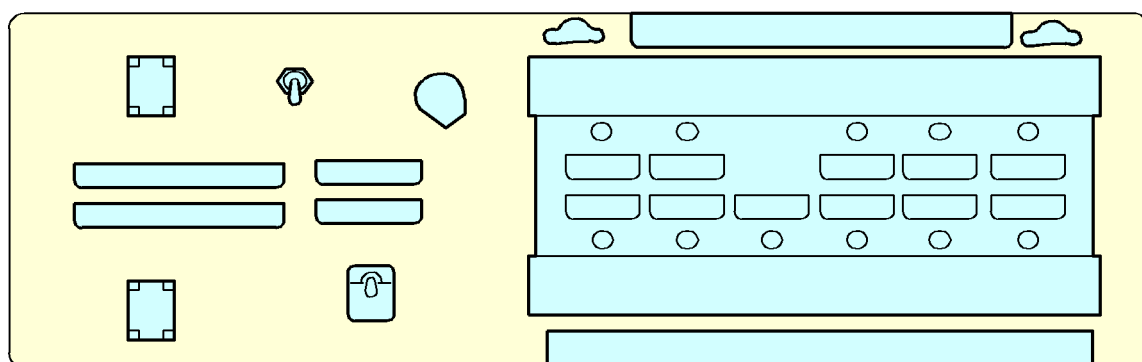
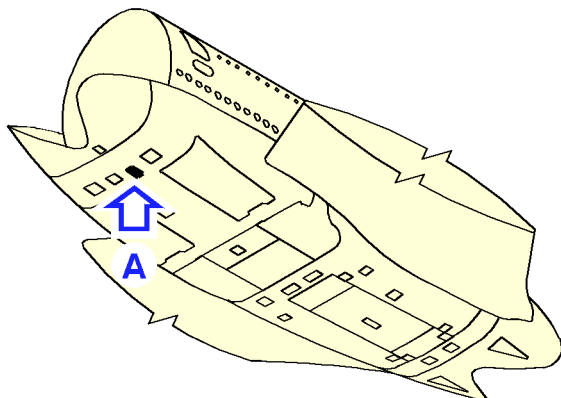
31.89 (104.62)		17.97 (58.95)	5.77 (18.93)
31.89 (104.62)	17.97 (58.95)		5.77 (18.93)

- (1) Refuel/Defuel couplings :
 - standard ISO R45, 2.5 in., two per wing
- (2) Refuel pressure :
 - max. pressure : 3.45 bar (50 psi)

Ground Service Connections
Fuel System
A380-800 Models



AIRPLANE CHARACTERISTICS



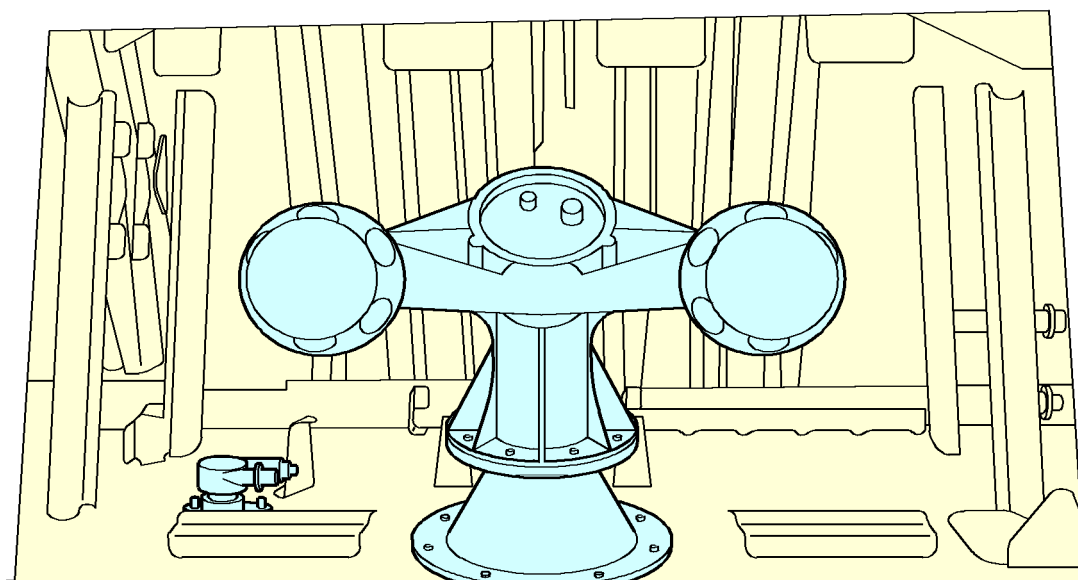
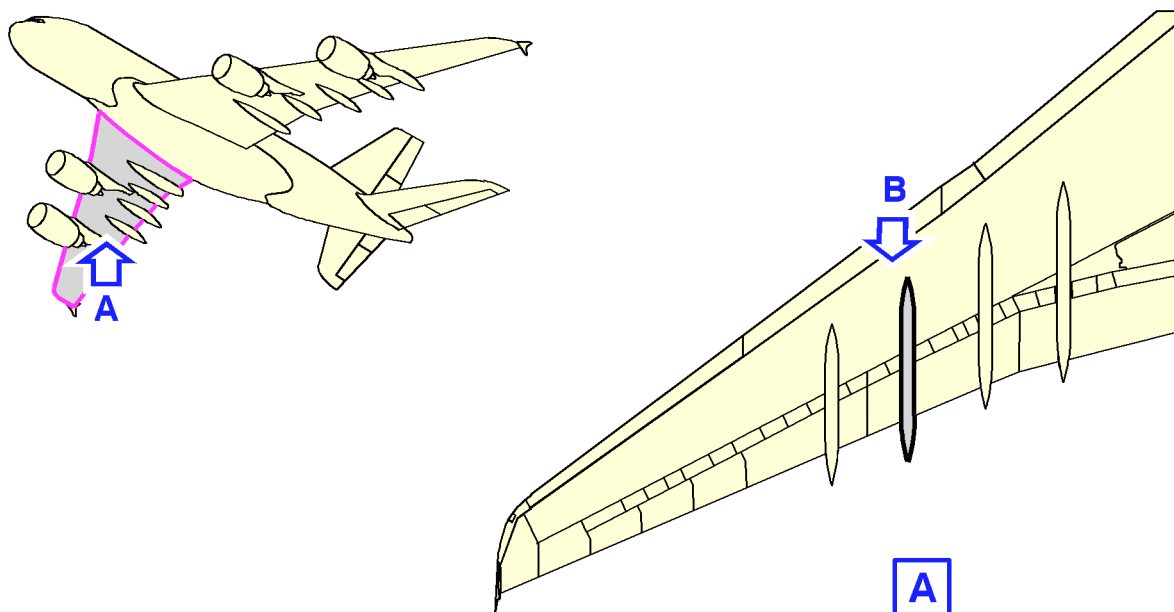
A

Ground Service Connections
Refuel/Defuel Control Panel
A380-800 Models

L_AC_050406_0_GAM0_01_00



AIRPLANE CHARACTERISTICS



Ground Service Connections
Pressure Refuel Connections
A380-800 models

L_AC_050406_0_EAM0_01_00



AIRPLANE CHARACTERISTICS

PNEUMATIC SYSTEM

A. Low Pressure Air Connectors for Preconditionned Air :

- access doors 191GB, 191JB

- access doors 192HB, 192KB

DISTANCE : Meters (ft)			
AFT OF NOSE	FROM AIRPLANE CENTERLINE		MEAN HEIGHT FROM GROUND
	R SIDE	L SIDE	
22.13 (72.6)		1.21 (3.97)	2.08 (6.82)
22.13 (72.6)	1.21 (3.97)		2.08 (6.82)

(1) Connectors :

- four standard MS33562 (IS01034), 8 in.

B. High Pressure Air Connectors for Cabin Heating, Cooling and Engine Starting :

- access doors 193BB

DISTANCE : Meters (ft)			
AFT OF NOSE	FROM AIRPLANE CENTERLINE		MEAN HEIGHT FROM GROUND
	R SIDE	L SIDE	
25.37 (83.23)		3.4 (11.15)	1.82 (5.97)

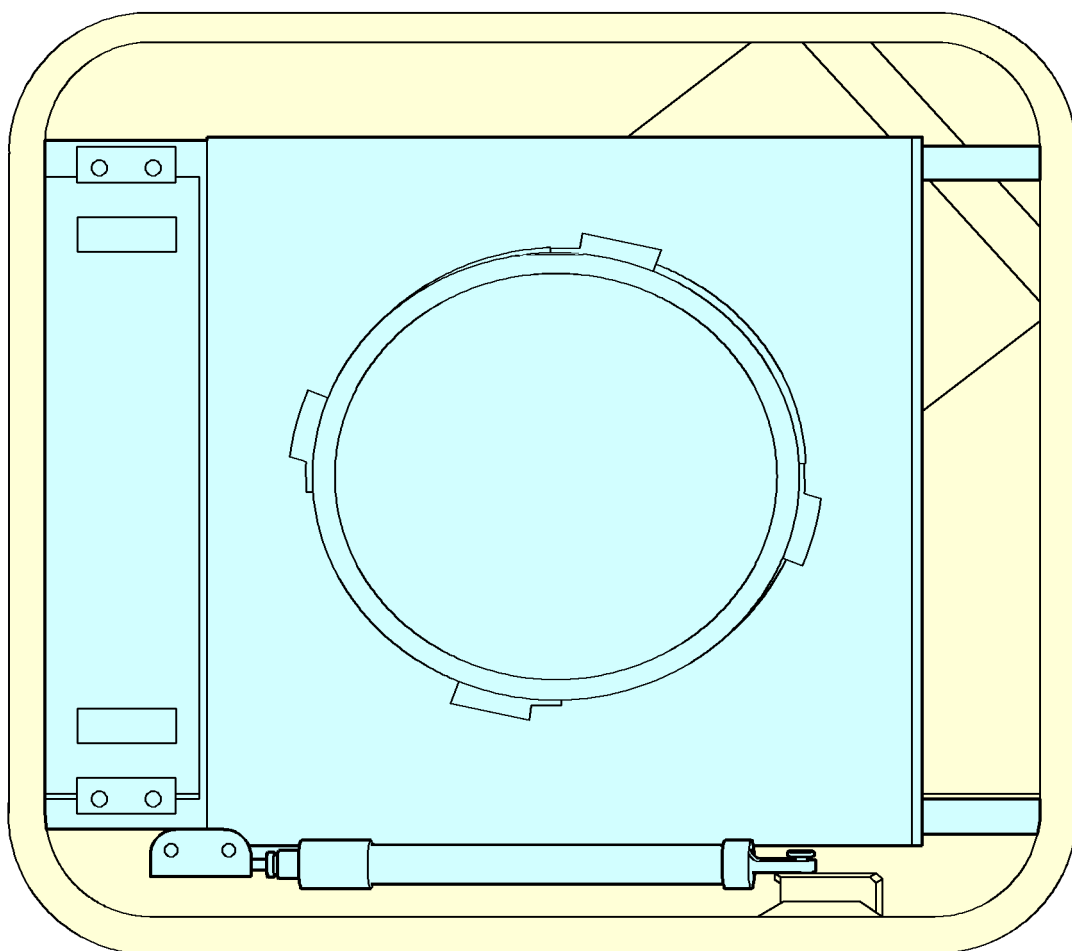
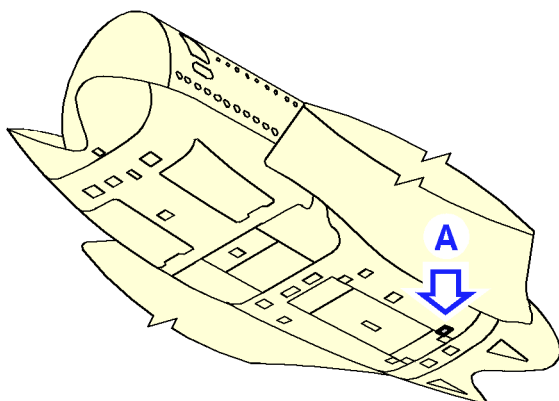
(1) Connectors :

- three standard MS33740 (IS02026), 3 in.

Ground Service Connections
Pneumatic System
A380-800 Models



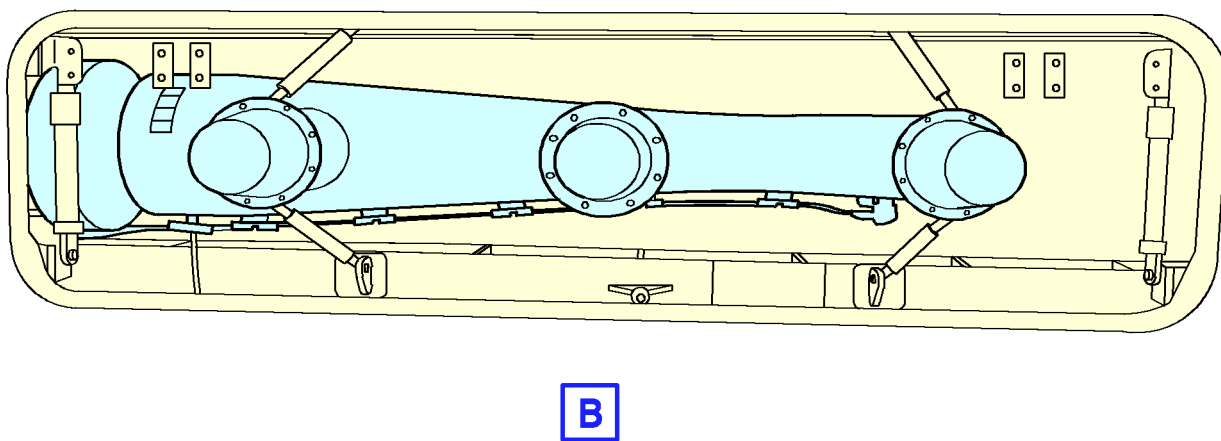
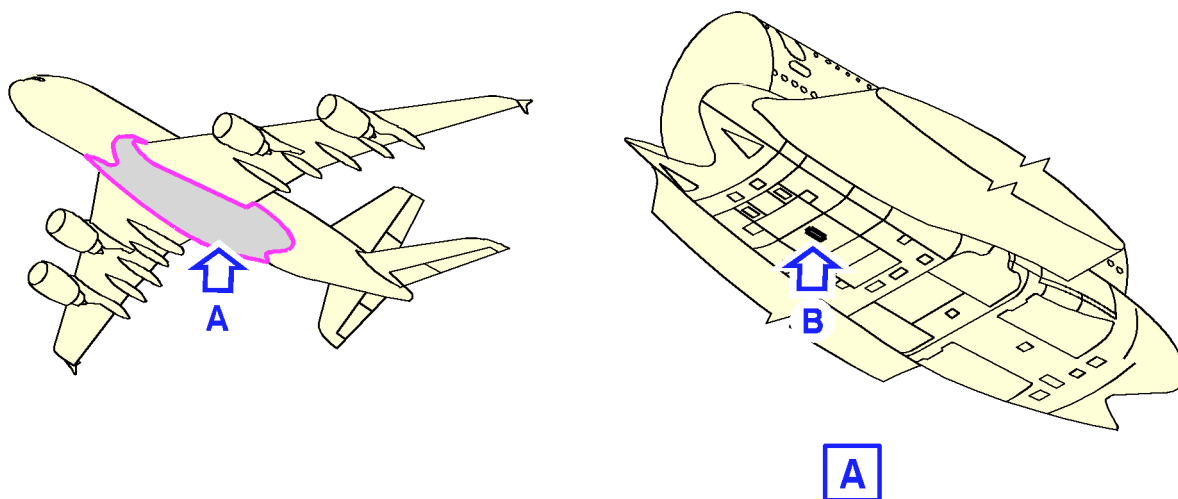
AIRPLANE CHARACTERISTICS



Ground Service Connections
Low Pressure Preconditioned Air
A380-800 Models

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AIRPLANE CHARACTERISTICS



Ground Service Connections
High Pressure Preconditioned Air
A380-800 models

L_AC_050407_0_FAM0_01_00



AIRPLANE CHARACTERISTICS

POTABLE WATER SYSTEM

A. Potable Water Ground Service Panel :

- access door 199NB

DISTANCE : Meters (ft)			
AFT OF NOSE	FROM AIRPLANE CENTERLINE		MEAN HEIGHT FROM GROUND
	R SIDE	L SIDE	
43.67 (143.27)		0.37 (1.21)	2.13 (6.99)

(1) Connectors :

- 3/4 in.

(2) Capacity :

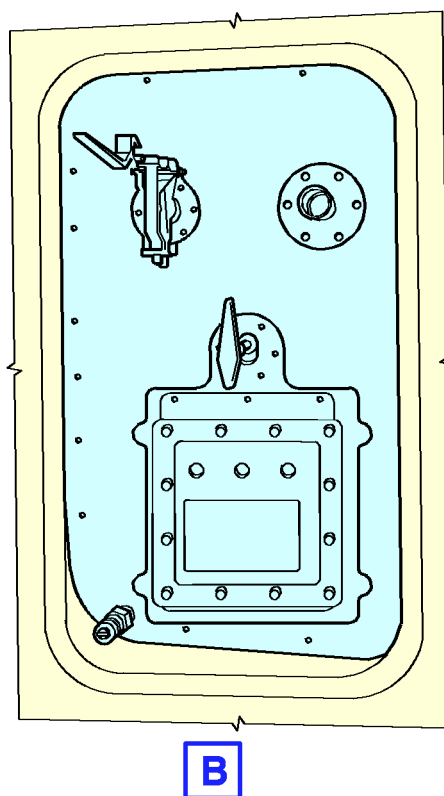
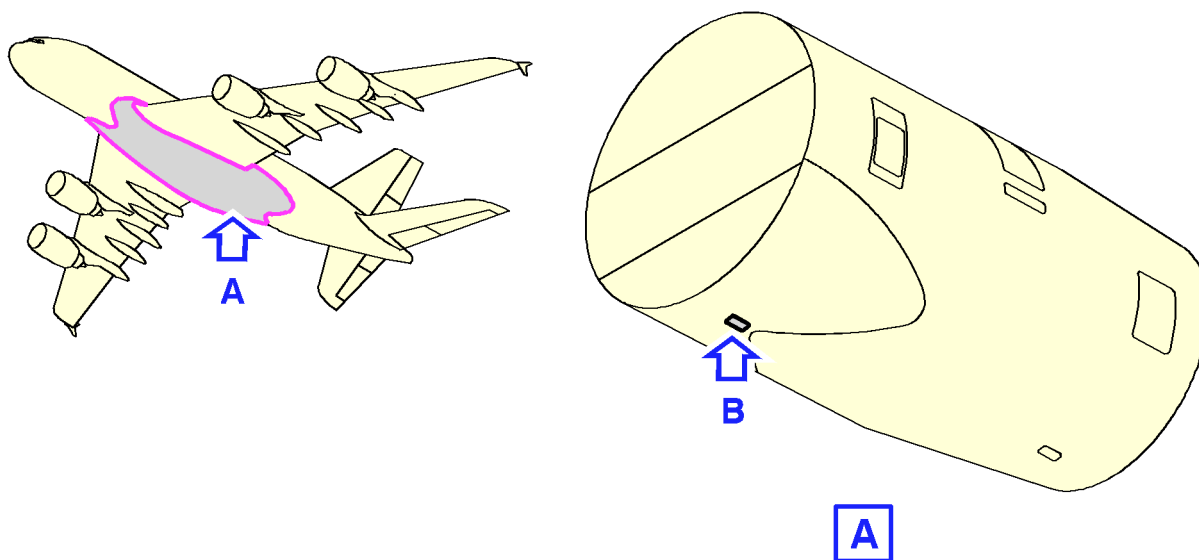
- standard configuration - six tanks : 1700 l (449 USgal)
- optional : 2266 l (598 USgal)

(3) Filling pressure :

- 50 lbf/in² (345 kPa)

Ground Service Connections
Potable Water System
A380-800 Models

AIRPLANE CHARACTERISTICS



B
Ground Service Connections
Potable Water Ground Service Panel
A380-800 Models

L_AC_050408_0_AAM0_01_00



AIRPLANE CHARACTERISTICS

OIL SYSTEM

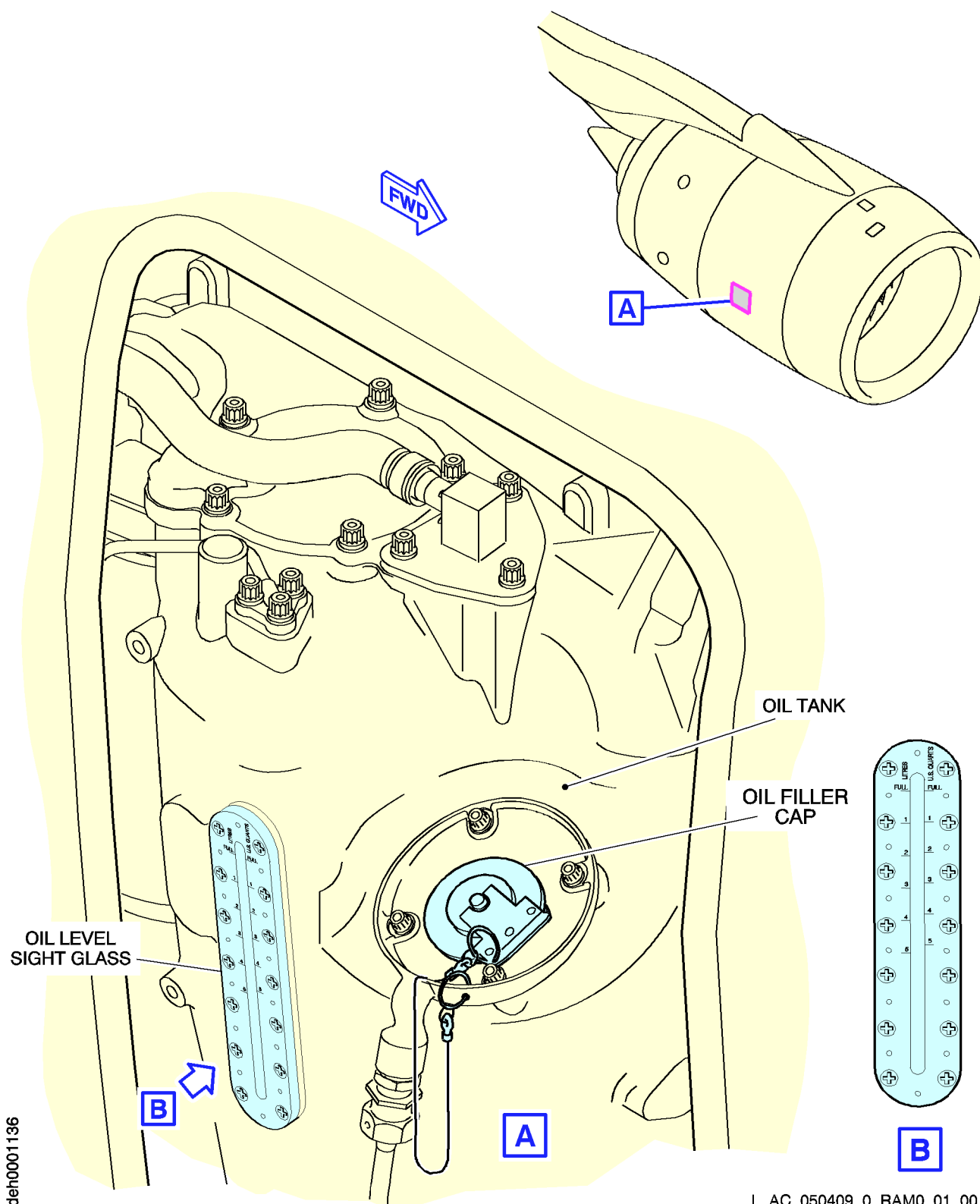
A. Engine oil servicing :

- Engine 1 (access door 416BR)
- Engine 2 (access door 426BR)
- Engine 3 (access door 436BR)
- Engine 4 (access door 446BR)

DISTANCE : Meters (ft)			
AFT OF NOSE	FROM AIRPLANE CENTERLINE		MEAN HEIGHT FROM GROUND
	R SIDE	L SIDE	
40.06 (131.43)		23.79 (78.05)	0.95
32.37 (106.20)		12.95 (42.49)	2.14
32.29 (105.94)	16.41 (53.84)		2.14
39.94 (131.04)	27.25 (89.40)		0.95

Ground Service Connections
Oil System
A380-800/800F Models

AIRPLANE CHARACTERISTICS



deh0001136

L_AC_050409_0_RAM0_01_00

Ground Service Connections
Engine Oil Servicing
A380-800 Models



AIRPLANE CHARACTERISTICS

OIL SYSTEM

B. VFG oil servicing :

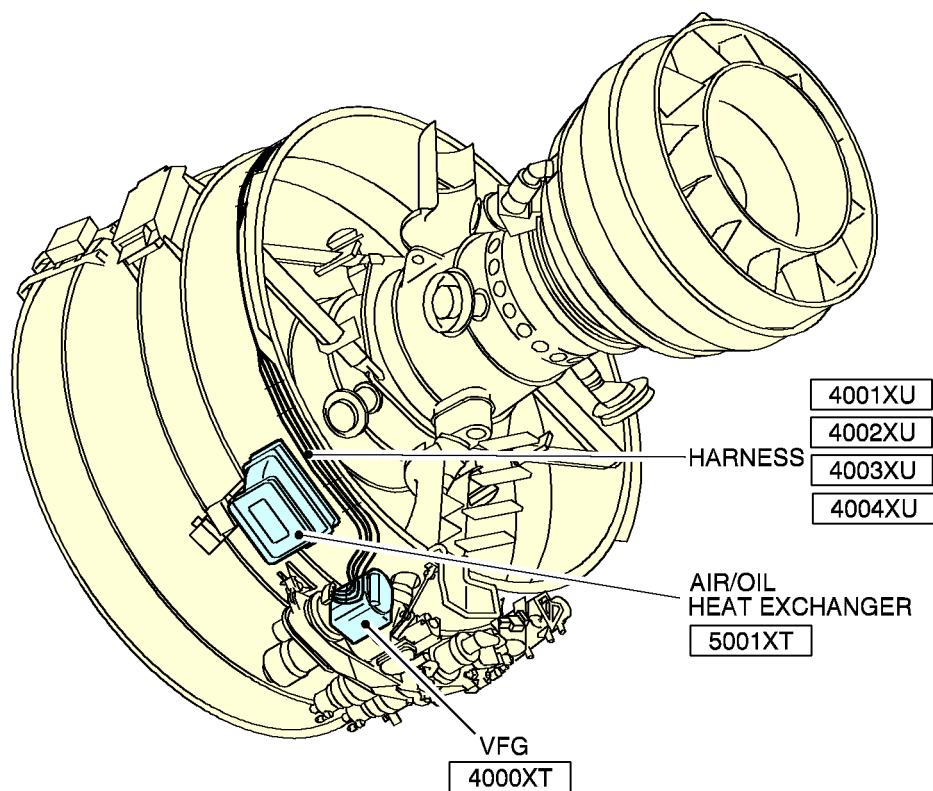
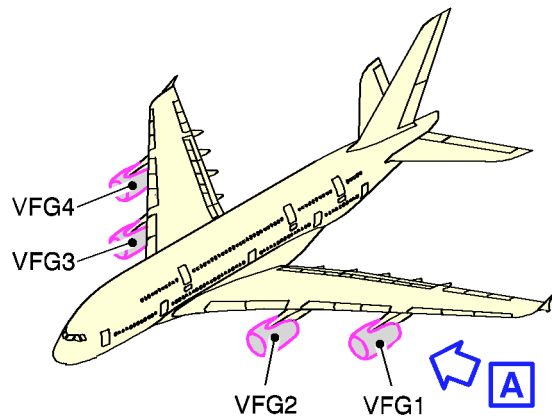
- Engine 1 (access door 415CL)
- Engine 2 (access door 425CL)
- Engine 3 (access door 435CL)
- Engine 4 (access door 445CL)

DISTANCE : Meters (ft)			
AFT OF NOSE	FROM AIRPLANE CENTERLINE		MEAN HEIGHT FROM GROUND
	R SIDE	L SIDE	
40.59 (133.17)		25.92 (85.04)	2.64 (8.66)
32.98 (108.20)		15.07 (49.44)	3.92 (12.53)
33.00 (108.27)	14.32 (46.98)		3.82 (12.53)
40.62 (133.27)	25.17 (82.58)		2.64 (8.66)

Ground Service Connections
Oil System
A380-800/800F Models



AIRPLANE CHARACTERISTICS



Ground Service Connections
VFG Oil Servicing
A380-800 Models

L_AC_050409_0_RBM0_01_00



AIRPLANE CHARACTERISTICS

OIL SYSTEM

C. Starter Oil Servicing :

- Engine 1

- Engine 2

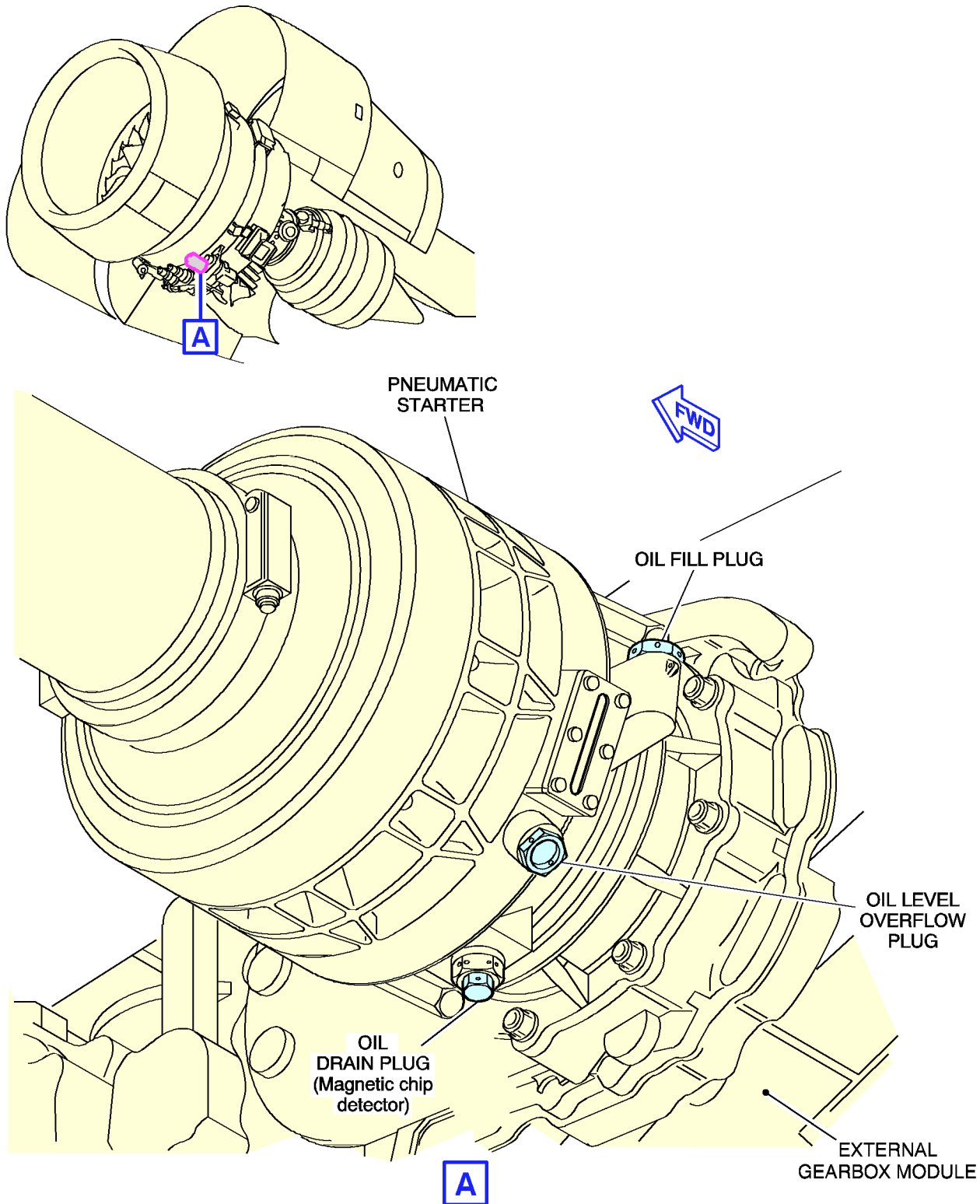
- Engine 3

- Engine 4

DISTANCE : Meters (ft)			
AFT OF NOSE	FROM AIRPLANE CENTERLINE		MEAN HEIGHT FROM GROUND
	R SIDE	L SIDE	
39.80 (130.58)		25.80 (84.64)	2.52 (8.27)
32.19 (105.61)		14.96 (49.08)	3.71 (12.17)
32.20 (105.64)	14.40 (47.24)		3.71 (12.17)
39.83 (130.67)	25.24 (82.80)		2.52 (8.27)

Ground Service Connections
Oil System
A380-800/800F Models

AIRPLANE CHARACTERISTICS



deh0001137

Ground Service Connections
Starter Oil Servicing
A380-800 Models

L_AC_050409_0_RCM0_01_00



AIRPLANE CHARACTERISTICS

OIL SYSTEM

D. APU Oil Filling :

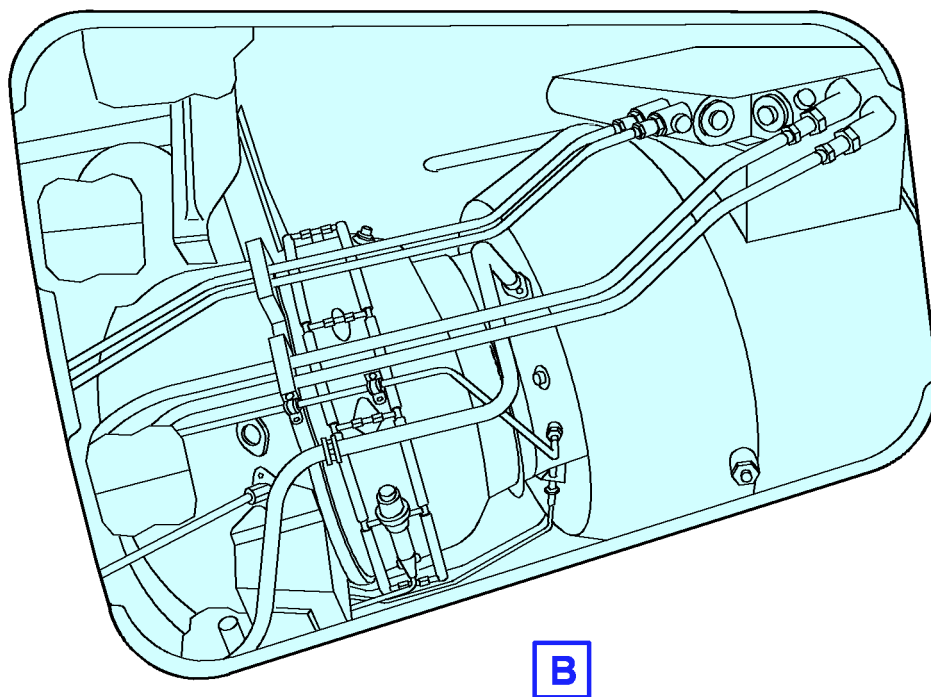
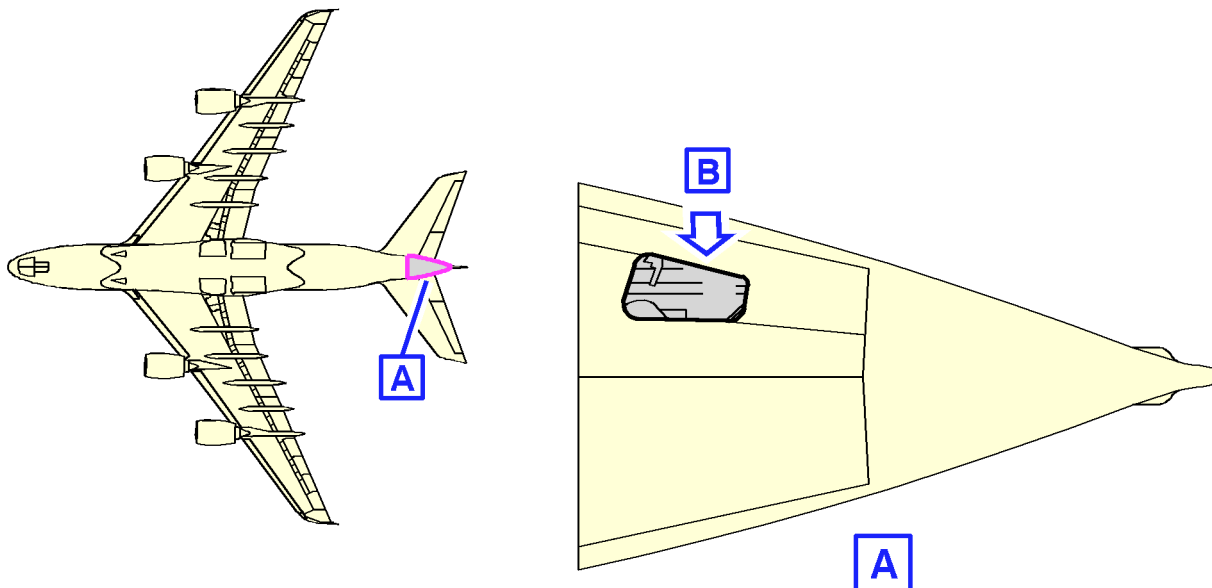
- access door 315BL

DISTANCE : Meters (ft)			
AFT OF NOSE	FROM AIRPLANE CENTERLINE		MEAN HEIGHT FROM GROUND
	R SIDE	L SIDE	
66.25 (217.35)		0.39 (1.28)	8.33 (27.33)

Ground Service Connections
APU Oil Servicing
A380-800 Models



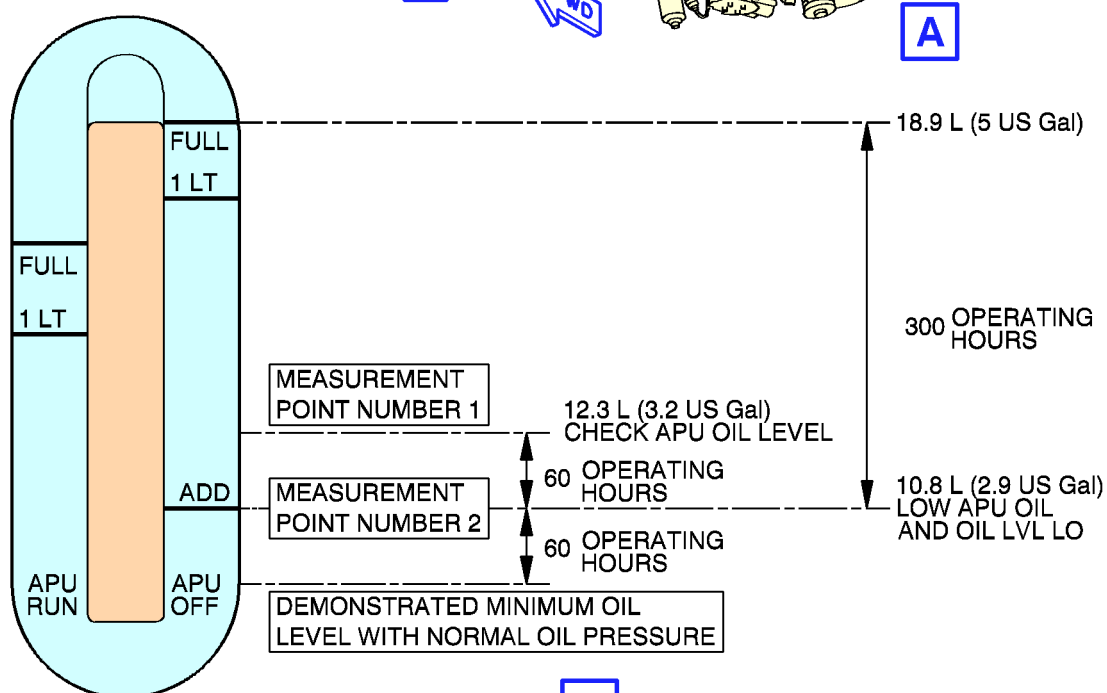
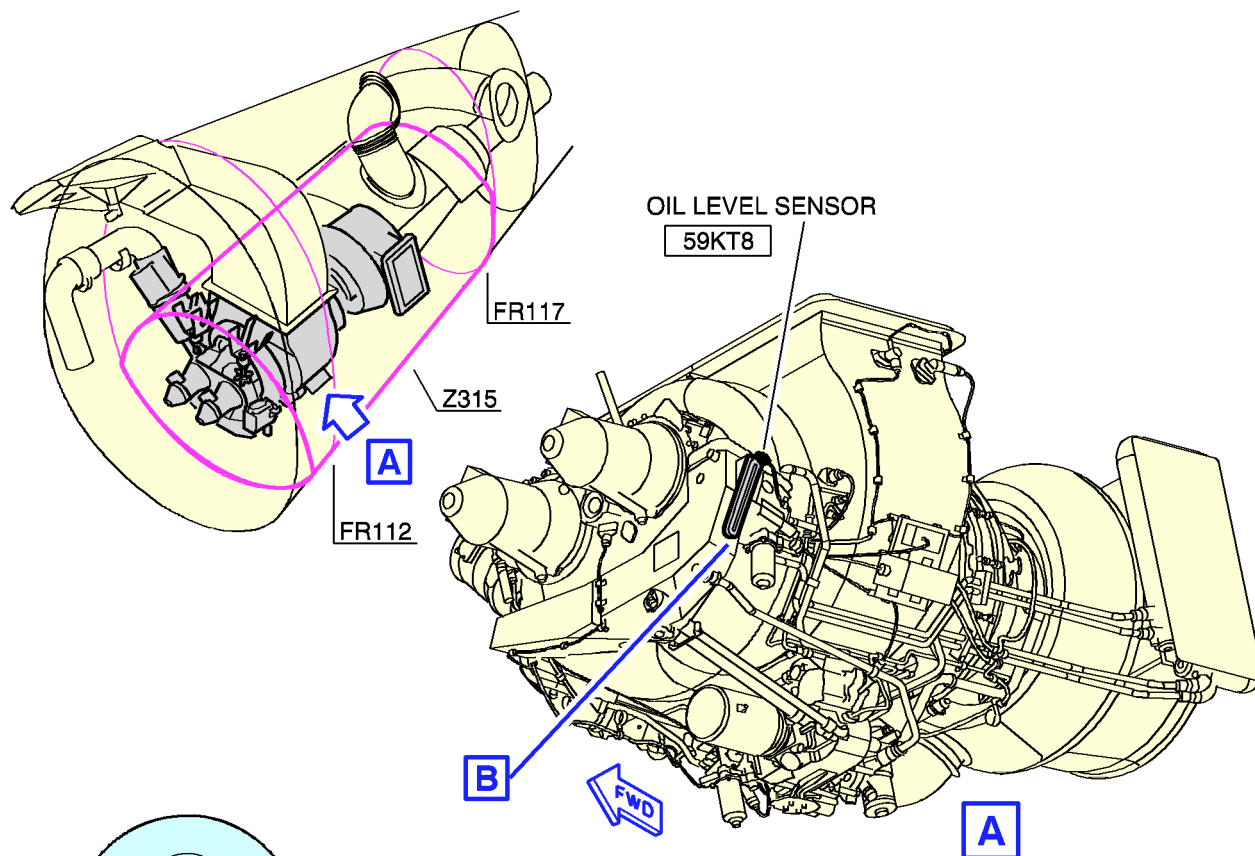
AIRPLANE CHARACTERISTICS



Ground Service Connections
APU Oil Servicing
A380-800 Models

L_AC_050409_0_DAM0_01_00

AIRPLANE CHARACTERISTICS



B

Ground Services Connections
APU Oil System
A380-800 Models

L_AC_050409_0_ACM0_01_00



AIRPLANE CHARACTERISTICS

VACUUM TOILET SYSTEM

A. Waste Water Ground Service Panel :

- access door TBC

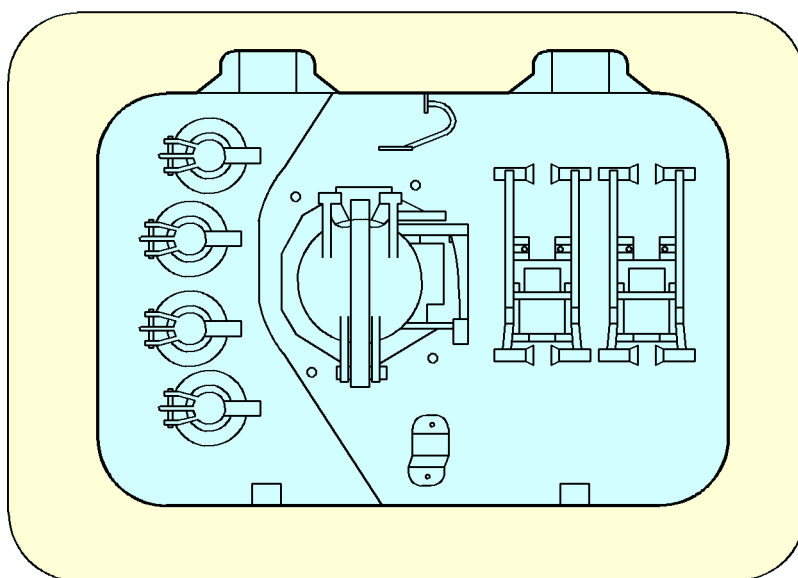
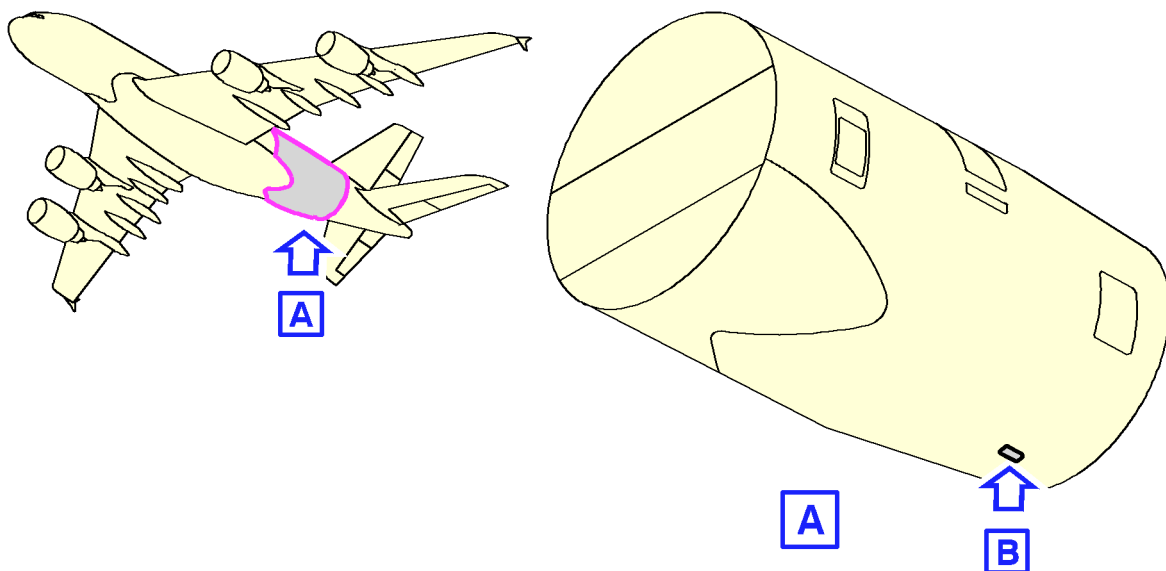
DISTANCE : Meters (ft)			
AFT OF NOSE	FROM AIRPLANE CENTERLINE		MEAN HEIGHT FROM GROUND
	R SIDE	L SIDE	
53.31 (174.90)		0.26 (0.85)	3.40 (11.15)

- (1) Connectors :
 - flushing and filling : 1 in.
 - draining : 4 in.
- (2) Capacity : 2100 l
- (3) Operating pressure : 50 psi
- (4) Flow rate : 40 l/min

Ground Service Connections
Vacuum Toilet System
A380-800 Models



AIRPLANE CHARACTERISTICS



Ground Service Connections
Vacuum Toilet System
A380-800 Models

L_AC_050410_0_AAM0_01_00

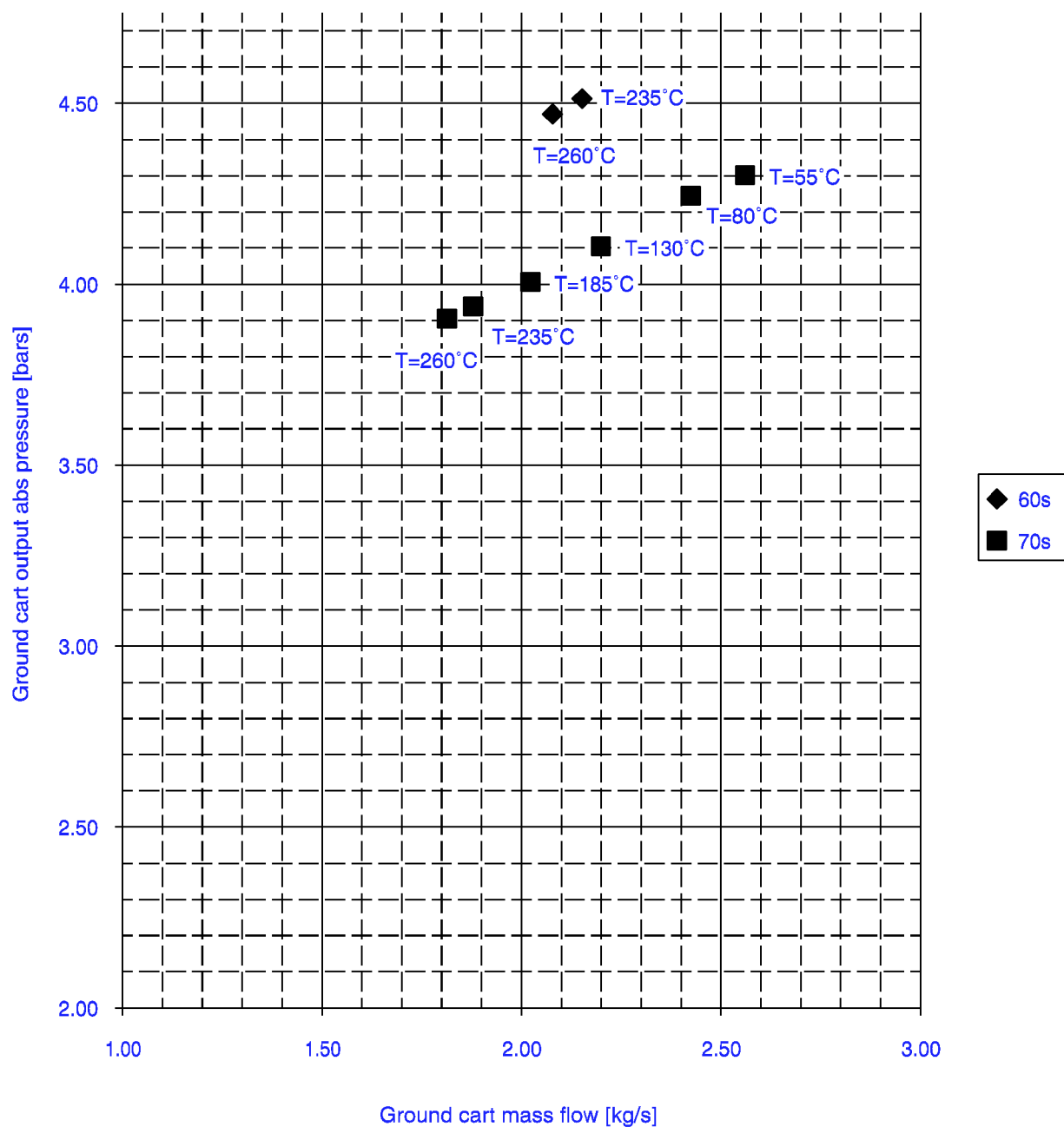


AIRPLANE CHARACTERISTICS

5-5 ENGINE STARTING PNEUMATIC REQUIREMENTS



AIRPLANE CHARACTERISTICS

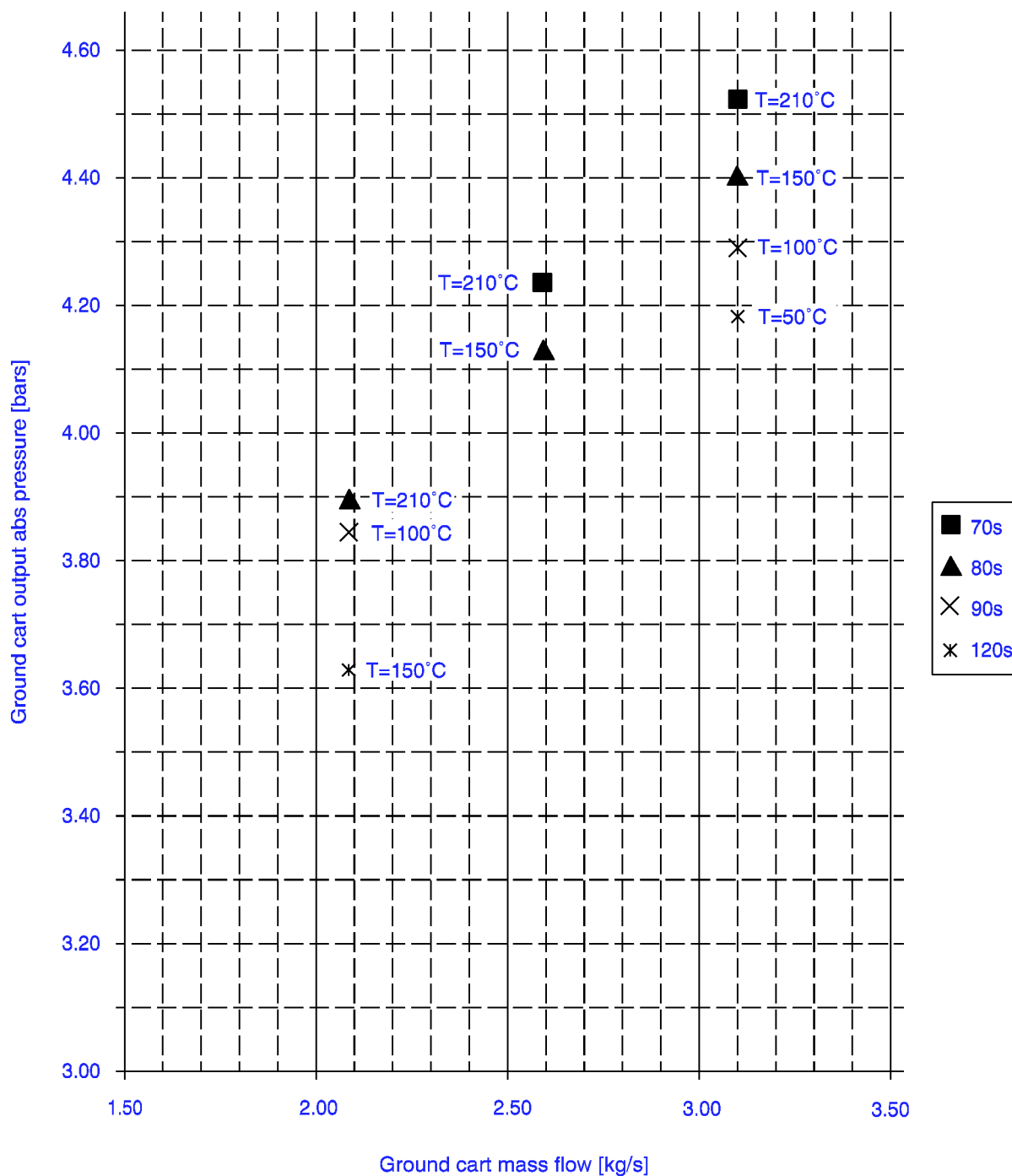


Engine Starting Pneumatic Requirements (three high pressure ground carts)
Ambient Temperature -40°C (-40°F)
Rolls Royce Trent 900

L_AC_050501_0_RAM0_01_00



AIRPLANE CHARACTERISTICS

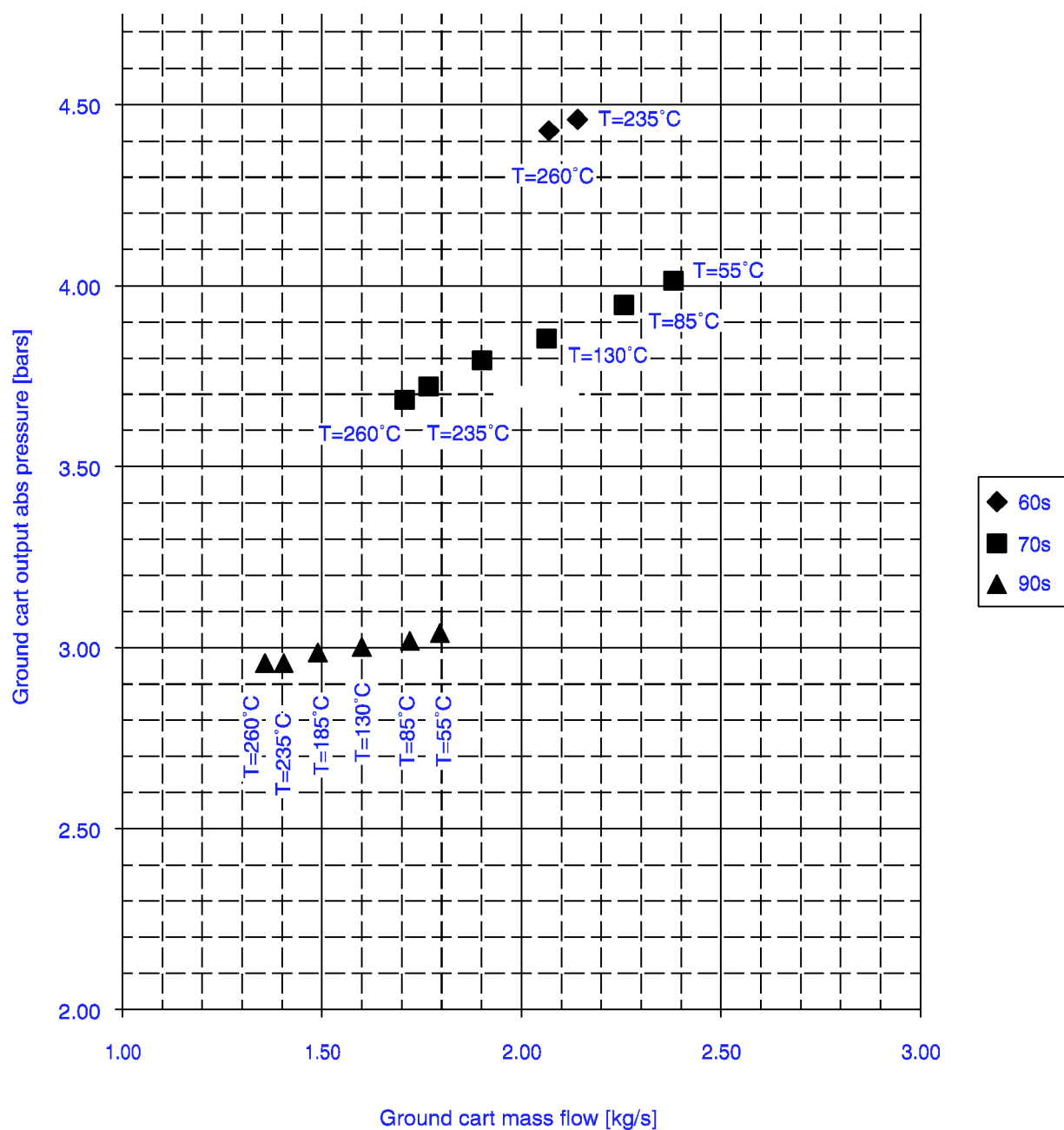


L_AC_050501_0_EAM0_01_01

Engine Starting Pneumatic Requirements (three high pressure ground carts)
Ambient Temperature -40°C (-40°F)
Engine Alliance GP7200



AIRPLANE CHARACTERISTICS

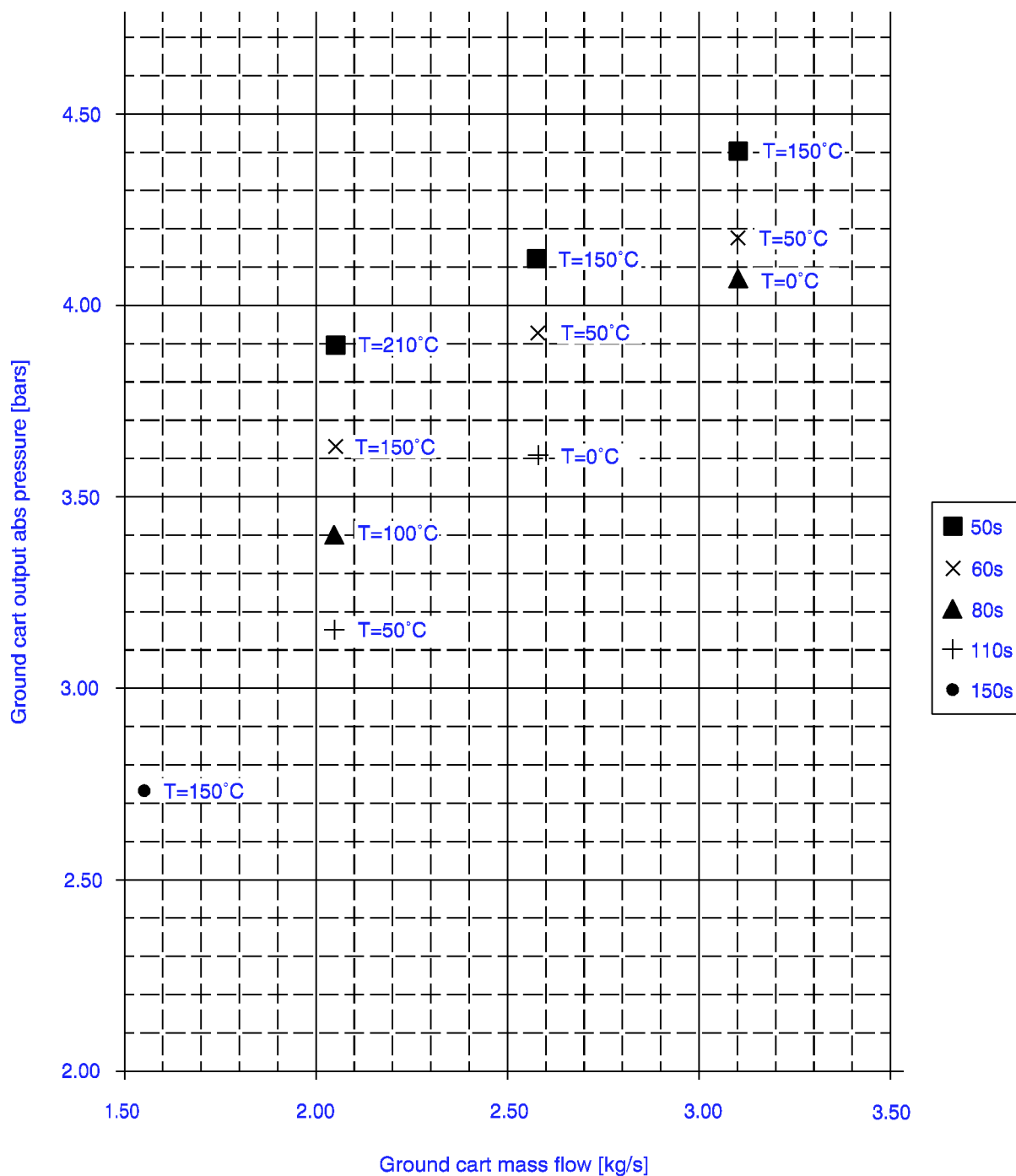


Engine Starting Pneumatic Requirements (three high pressure ground carts)
Ambient Temperature +15°C (+59°F)
Rolls Royce Trent 900

L_AC_050502_0_RAM0_01_00



AIRPLANE CHARACTERISTICS

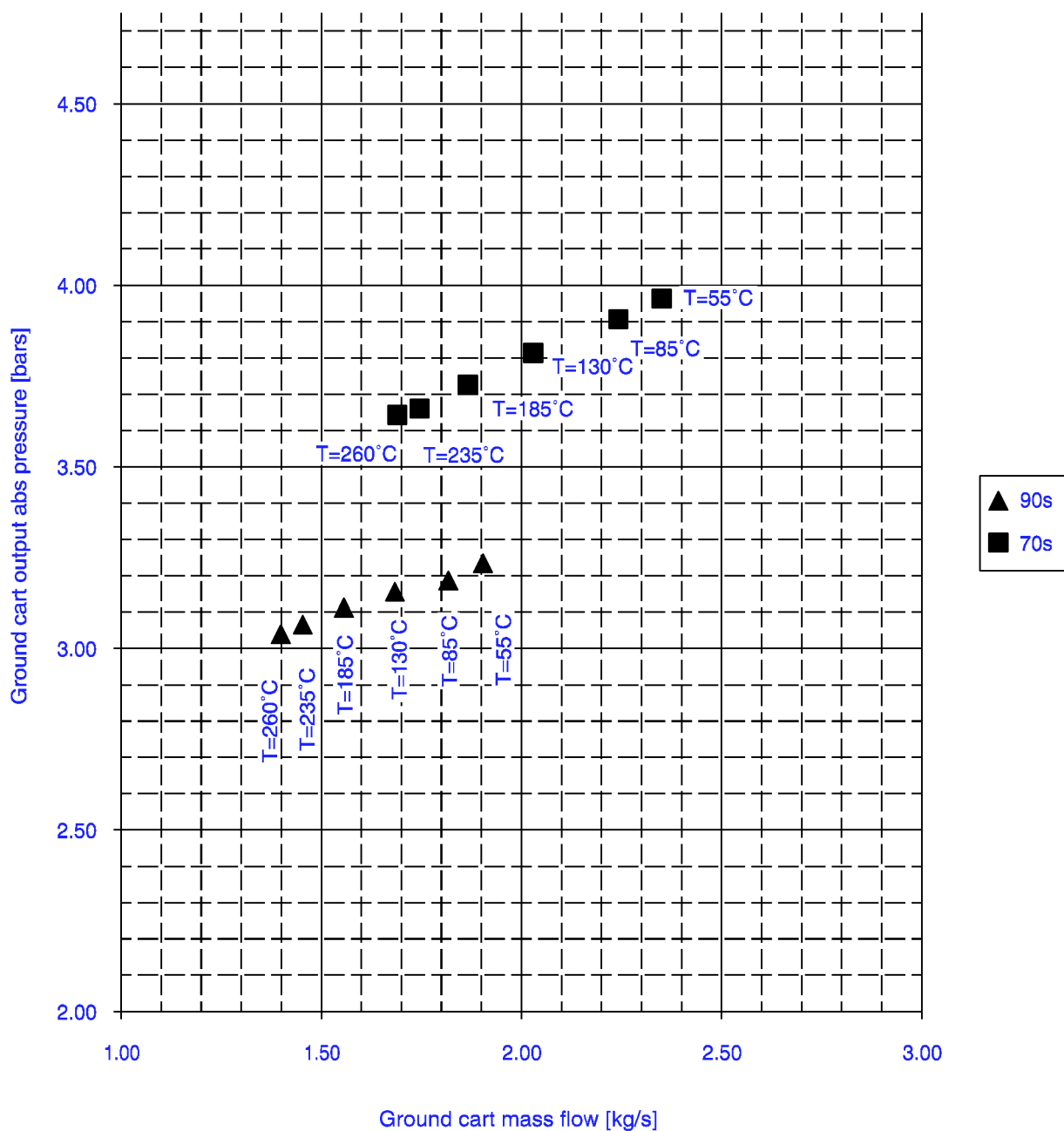


L_AC_050502_0_EAM0_01_02

Engine Starting Pneumatic Requirements (three high pressure ground carts)
Ambient Temperature +15°C (+59°F)
Engine Alliance GP7200



AIRPLANE CHARACTERISTICS

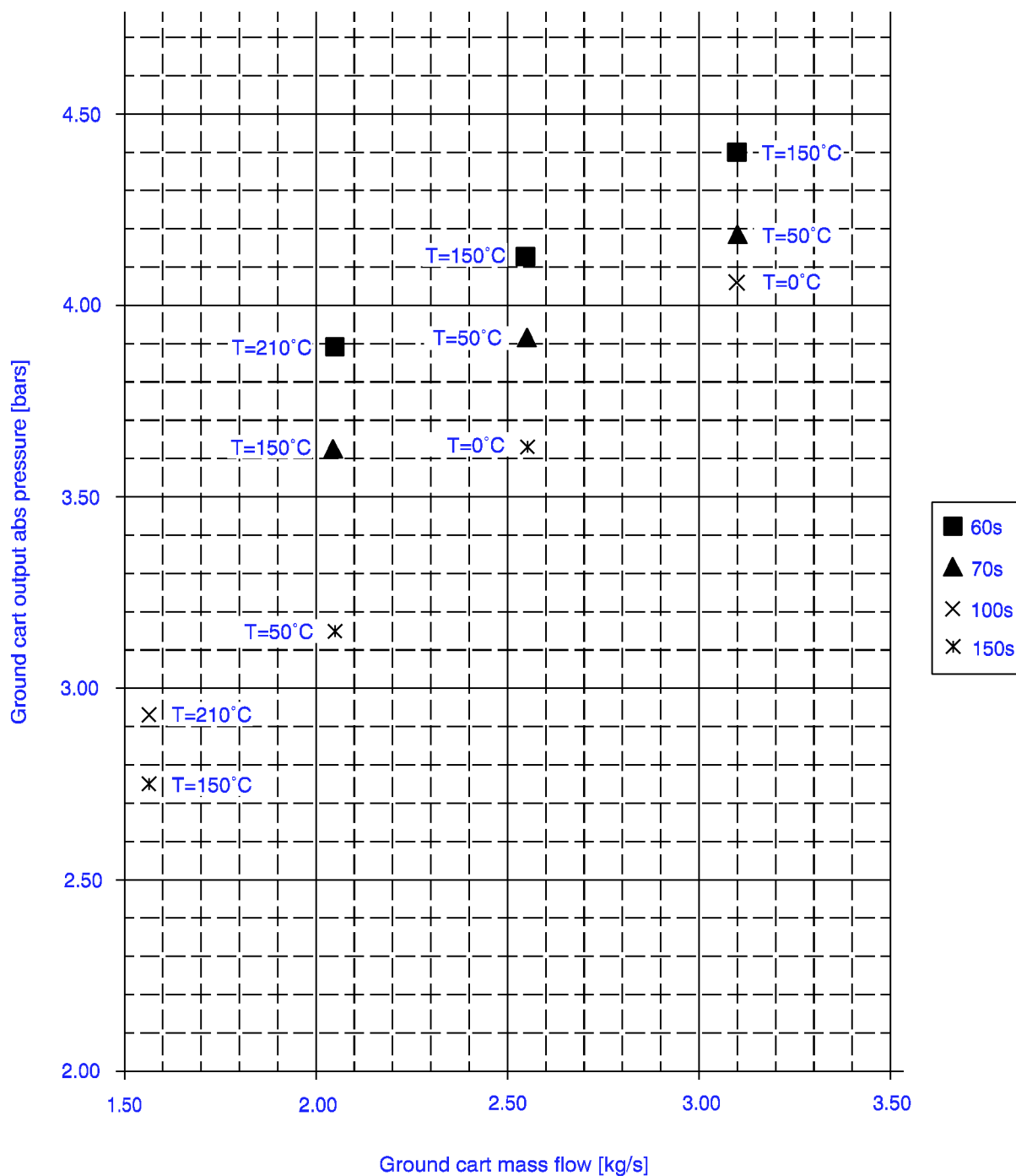


Engine Starting Pneumatic Requirements (three high pressure ground carts)
Ambient Temperature +55°C (+131°F)
Rolls Royce Trent 900

L_AC_050503_0_RAM0_01_00



AIRPLANE CHARACTERISTICS



L_AC_050503_0_EAM0_01_01

Engine Starting Pneumatic Requirements (three high pressure ground carts)
Ambient Temperature +55°C (+131°F)
Engine Alliance GP7200

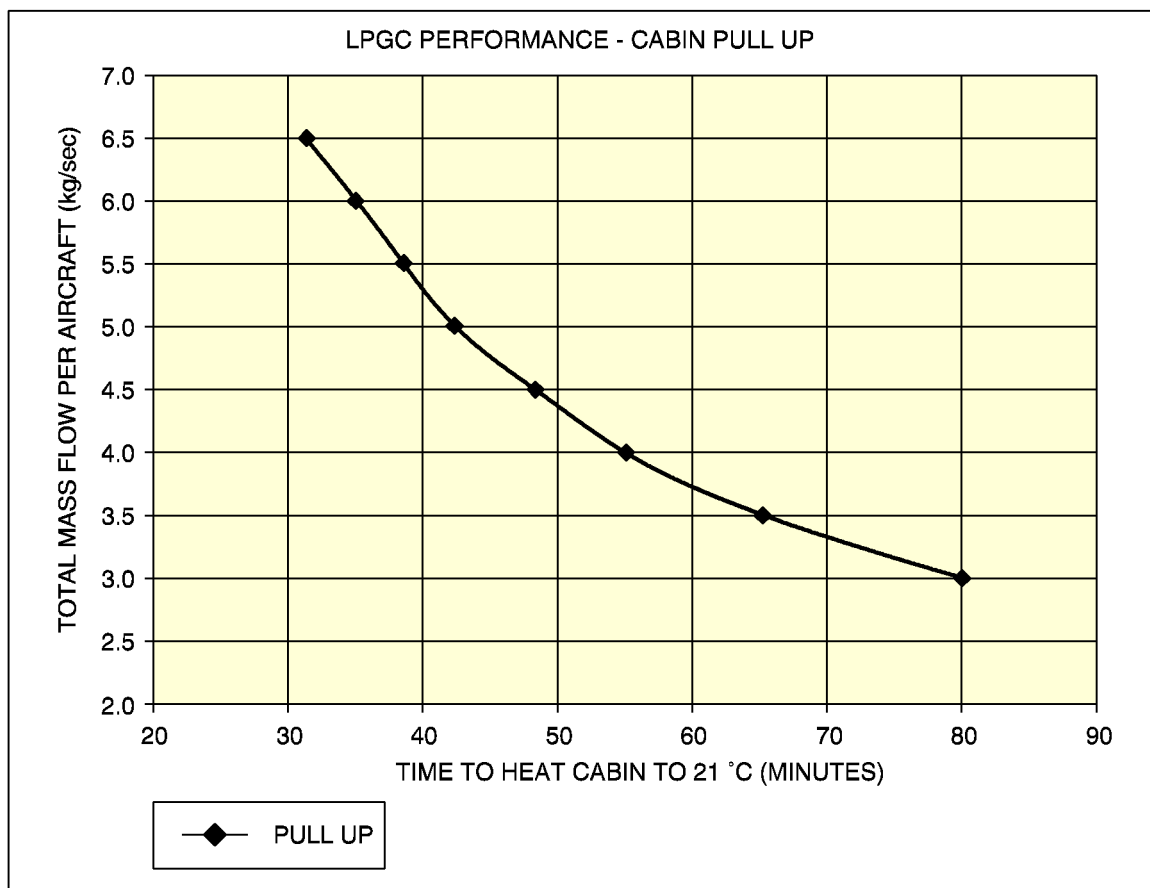


AIRPLANE CHARACTERISTICS

5-6 GROUND PNEUMATIC POWER REQUIREMENTS



AIRPLANE CHARACTERISTICS



PULL UP: INITIAL CABIN TEMPERATURE AT -23 °C, HEAT UP TO 21 °C ON GROUND,
TEMPERATURE AT THE GROUND CONNECTION: 70 °C

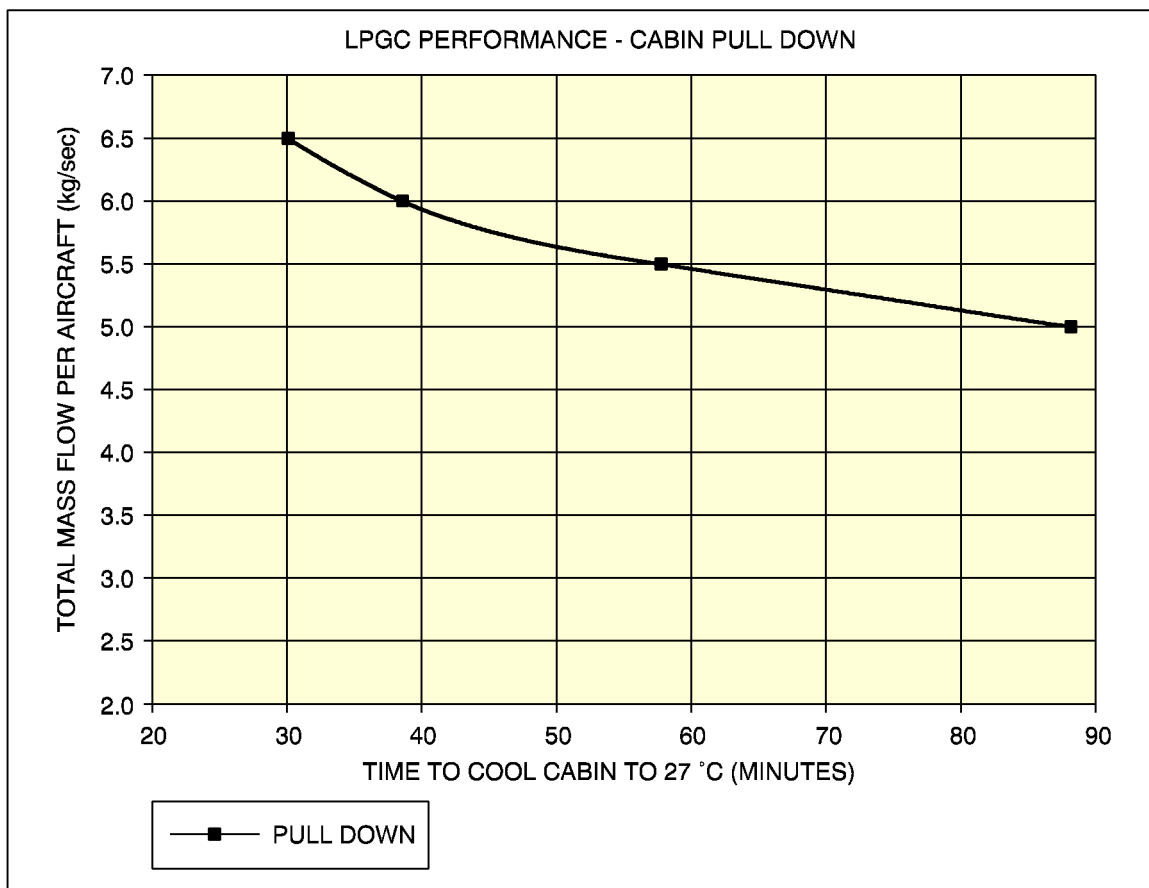
TOTAL LPGC AIR FLOW	TIME TO HEAT CABIN TO 21 °C (69.8 °C) ON GROUND PULL UP
kg/sec	min
3.0	80
3.5	65
4.0	55
4.5	48
5.0	42.5
5.5	38
6.0	35
6.5	31.6

L_AC_050601_0_AAM0_01_00

Ground Pneumatic Power Requirements Heating



AIRPLANE CHARACTERISTICS



SAME BOUNDARY CONDITIONS AS BEFORE

(IN ADDITION BLENDS DOWN FOR THE PULL DOWN CASE), HP AND LP FANS ON

PULL DOWN: INITIAL CABIN TEMPERATURE AT 38 °C, COOL DOWN TO 27 °C ON GROUND
TEMPERATURE AT THE GROUND CONNECTION: 1.5 °C

TOTAL LPGC AIR FLOW	TIME TO COOL CABIN TO 27 °C (80.6 °C) ON GROUND PULL DOWN
kg/sec	min
3.0	-
3.5	-
4.0	-
4.5	-
5.0	87
5.5	58
6.0	38
6.5	30

L_AC_050602_0_AAM0_01_00

Ground Pneumatic Power Requirements Cooling

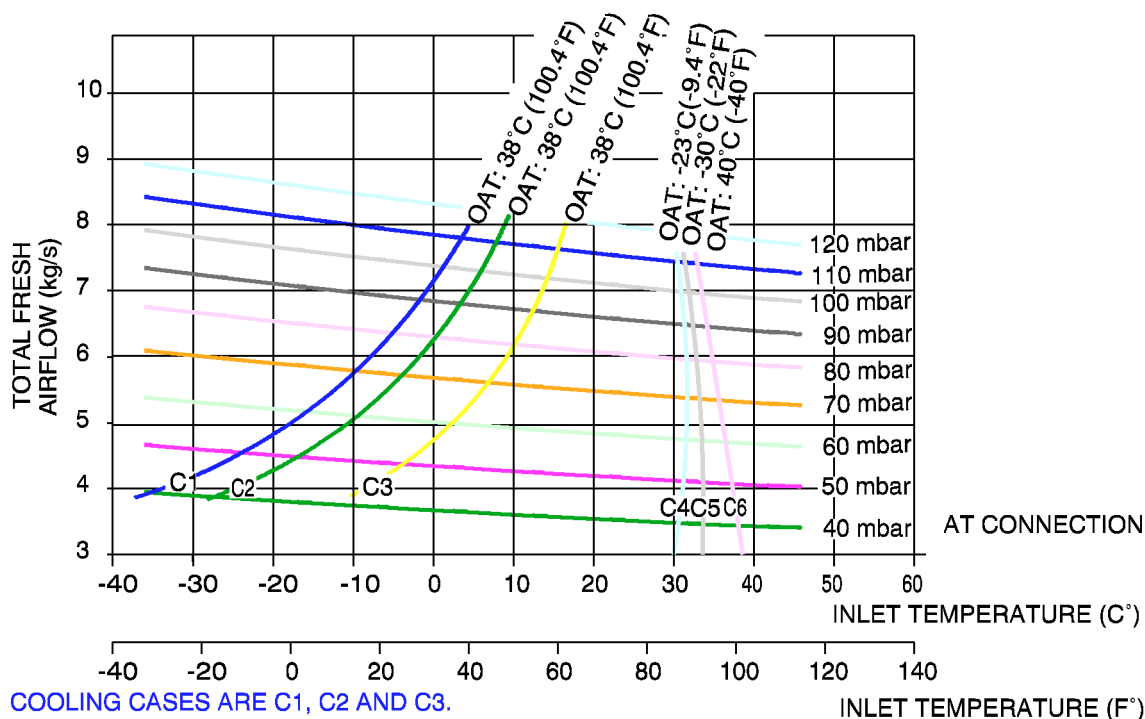


AIRPLANE CHARACTERISTICS

5-7 PRECONDITIONNED AIRFLOW REQUIREMENTS



AIRPLANE CHARACTERISTICS



COOLING CASES ARE C1, C2 AND C3.

HEATING CASES ARE C4, C5 AND C6.

C1 CURVE ASSUMES:

- LPGC AIR AT 45% RH
- AIRCRAFT CONFIGURED IN STANDARD ZONES
- CABIN TEMPERATURE: 27°C (80.6°F)
- MAX. PASSENGER LOAD, 19 ATTENDANTS, 5 CREW MEMBERS
- HP RECIRCULATION: ON (HP FILTER CONDITION: NEW CARTRIDGE)
- SOLAR RADIATION IS INCLUDED IN CALCULATIONS
- IFE: ON
- VIDEO OPERATION 75%, PC OPERATION 13%
- BOTH AVIONIC VALVES OFF
- CARGO VALVES ON (CARGO FLOW SETTING NORMAL)

C2 CURVE ASSUMES:

- SAME CONDITIONS AS C1 BUT WITH IFE OFF VIDEO OPERATION 0% PC OPERATION 0%

C3 CURVE ASSUMES:

- SAME CONDITIONS AS C1 BUT WITHOUT PASSENGERS

C4, C5 AND C6 CURVES ASSUME:

- LPGC AIR AT 45% RH
- AIRCRAFT CONFIGURED IN STANDARD ZONES
- CABIN TEMPERATURE: 21°C (69.8°F)
- NO PASSENGER, 0 ATTENDANT, 0 CREW MEMBER
- HP RECIRCULATION: ON (HP FILTER CONDITION: NEW CARTRIDGE)
- SOLAR RADIATION IS NOT INCLUDED
- IFE: OFF
- VIDEO OPERATION 0%, PC OPERATION 0%
- CABIN LIGHTING OFF, GALLEY POWER OFF
- BOTH AVIONIC VALVES OFF
- CARGO VALVES OFF (CARGO FLOW SETTING NORMAL)

NOTE: IFE = IN-FLIGHT ENTERTAINMENT SYSTEM.

OAT = OUTSIDE AIR TEMPERATURE.

L_AC_050700_0_AAM0_01_00

Preconditioned Airflow Requirements



AIRPLANE CHARACTERISTICS

6-0 OPERATING CONDITIONS

6-1 Engine Exhaust Velocities and Temperatures

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

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

6-1-3 Engine Exhaust Velocities - Breakaway Power

6-1-4 Engine Exhaust Temperatures - Breakaway Power

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

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

6-2 Airport and Community Noise Data

6-2-1 Airport and Community Noise Data

6-3 Danger Areas of the Engines

6-3-1 Ground Idle Power

6-3-2 Max. Take-Off Power

6-3-3 Breakaway Power

6-4 APU Exhaust Velocities and Temperatures

6-4-1 APU Exhaust Velocities and Temperatures

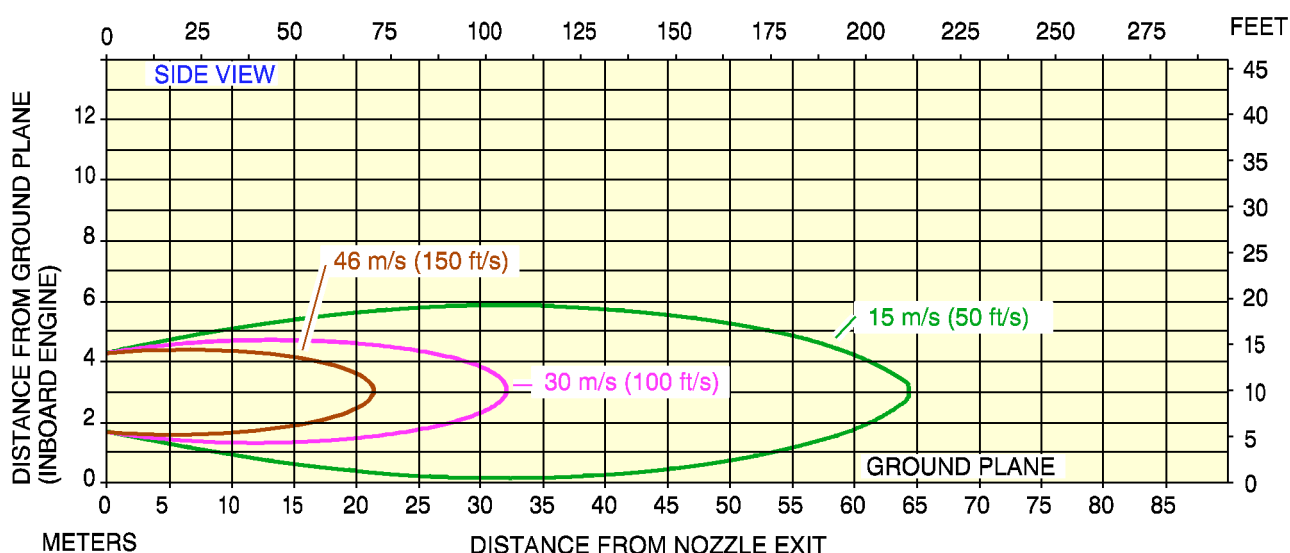
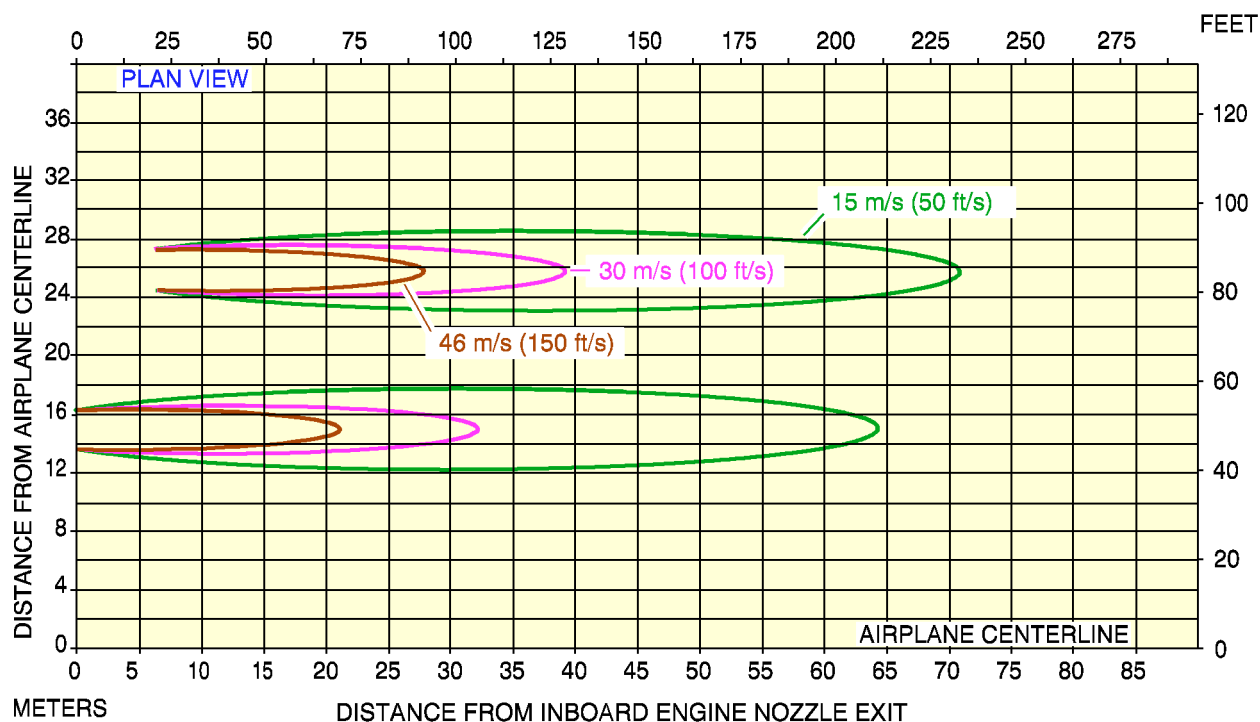


AIRPLANE CHARACTERISTICS

6-1 JET ENGINE EXHAUST VELOCITIES AND TEMPERATURES



AIRPLANE CHARACTERISTICS



NOTE: THE DATA GIVEN IS BASED ON THE FOLLOWING ASSUMPTIONS:

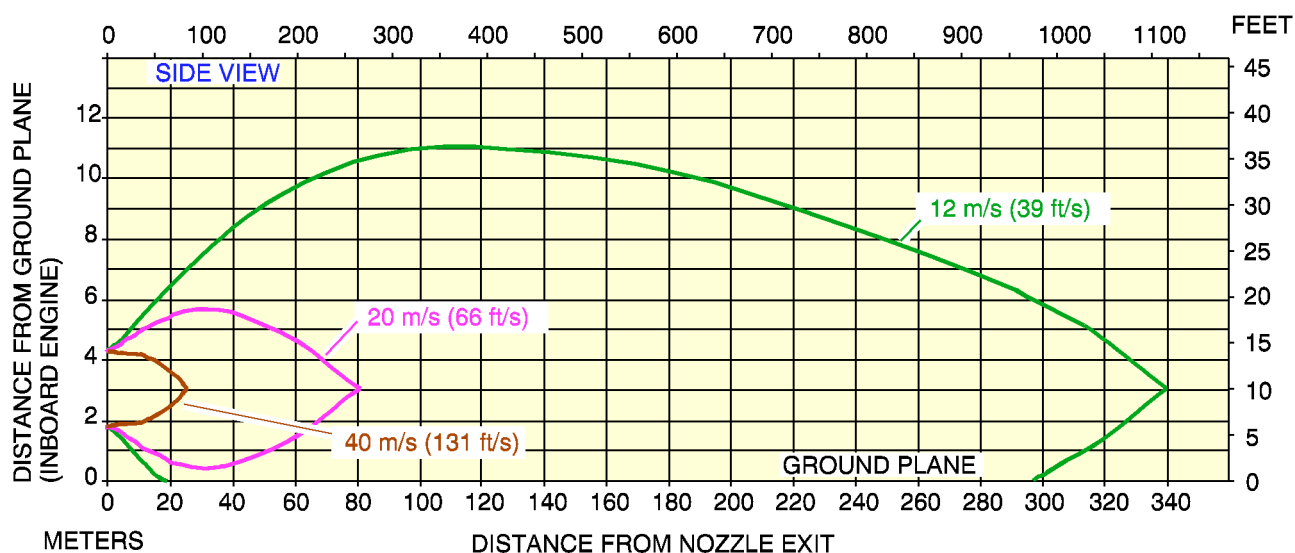
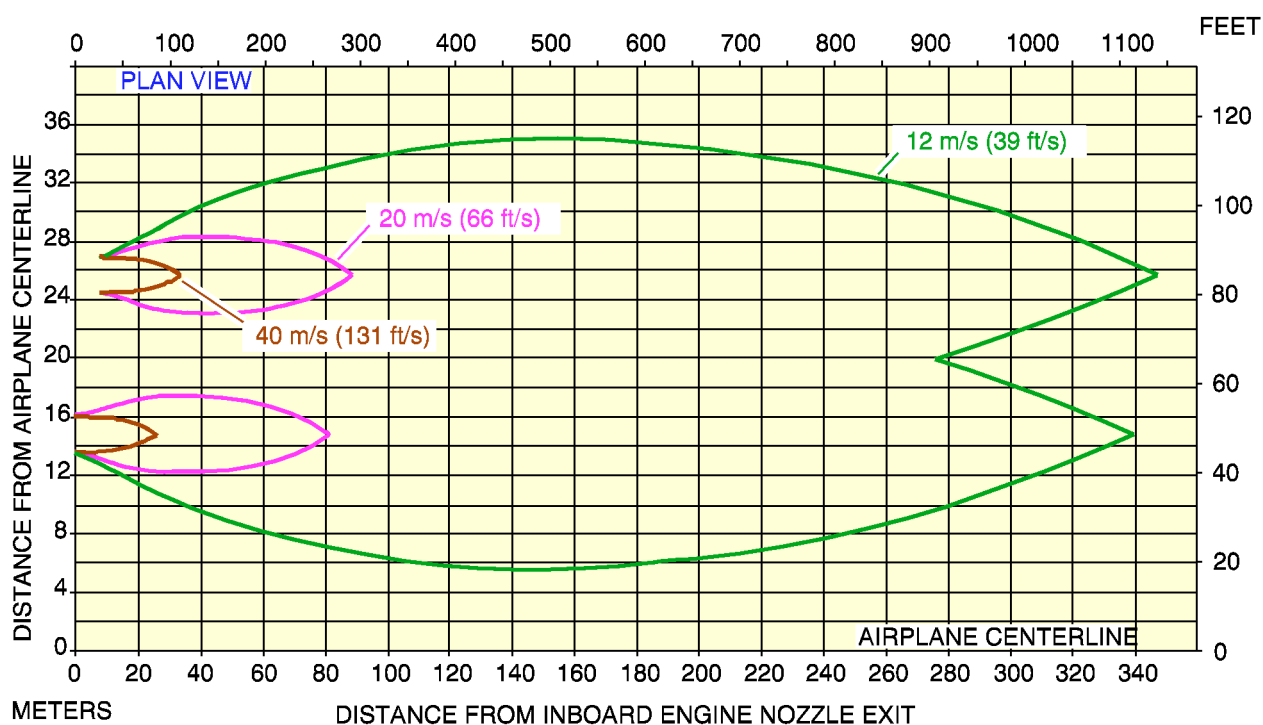
- SEA LEVEL STATIC CONDITIONS
- ISA + 15° C (59° F)
- NO WIND

Engine Exhaust Velocities
Ground Idle Power – TRENT 970/977 Engines
A380-841/843F Models

L_AC_060101_0_BAM0_01_01



AIRPLANE CHARACTERISTICS



NOTE: THE DATA GIVEN IS BASED ON THE FOLLOWING ASSUMPTIONS:

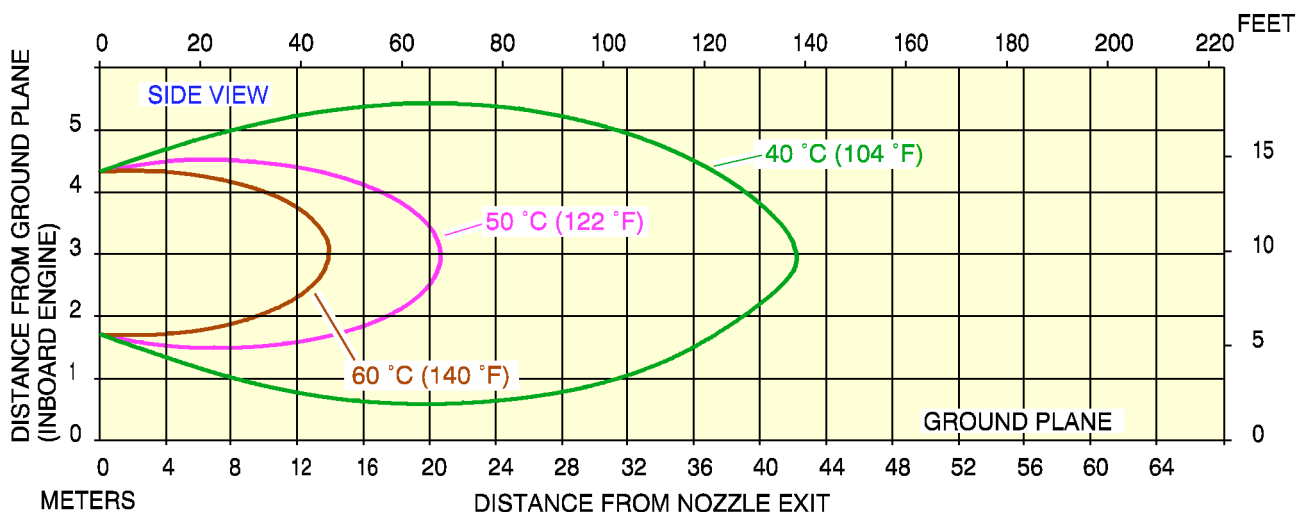
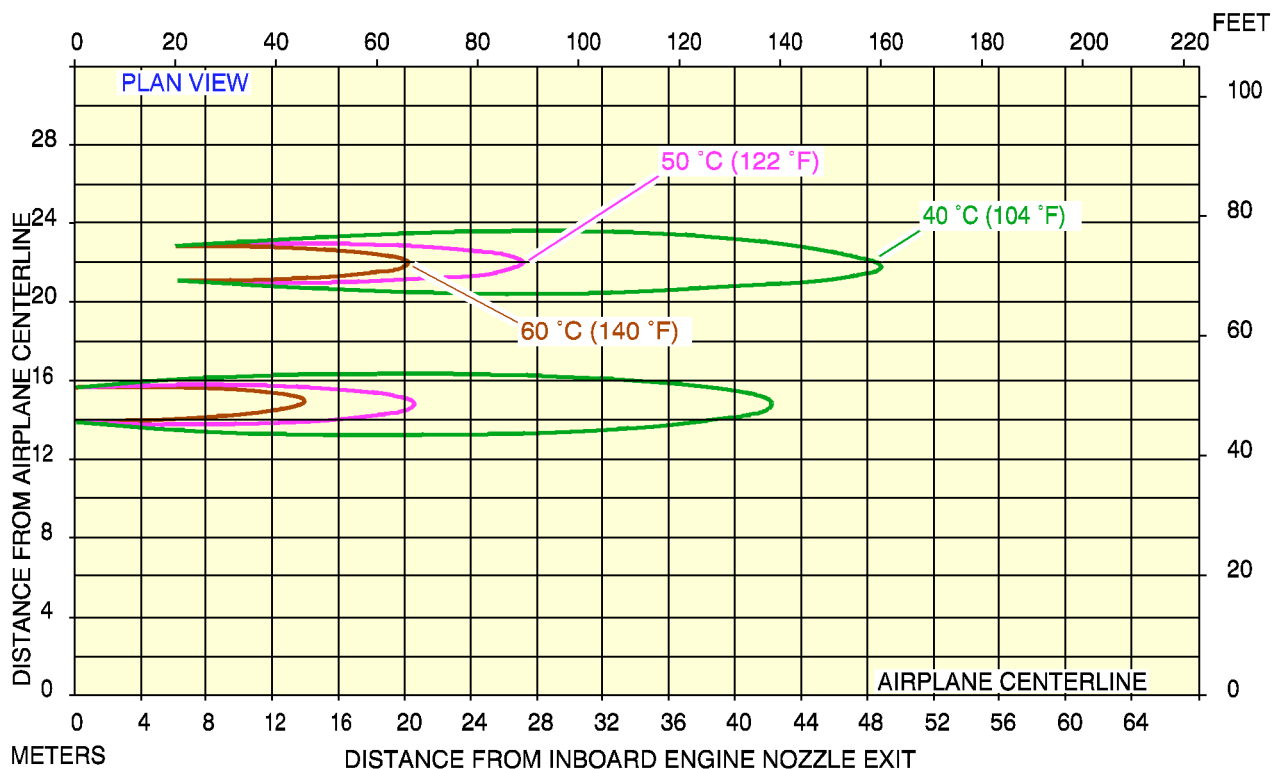
- SEA LEVEL STATIC CONDITIONS
- ISA CONDITIONS
- 20 kt (37 km/h) HEADWIND

Engine Exhaust Velocities
Ground Idle Power – GP 7270/7277 Engines
A380-861/863F Models

L_AC_060101_0_AAM0_01_00



AIRPLANE CHARACTERISTICS



NOTE: THE DATA GIVEN IS BASED ON THE FOLLOWING ASSUMPTIONS:

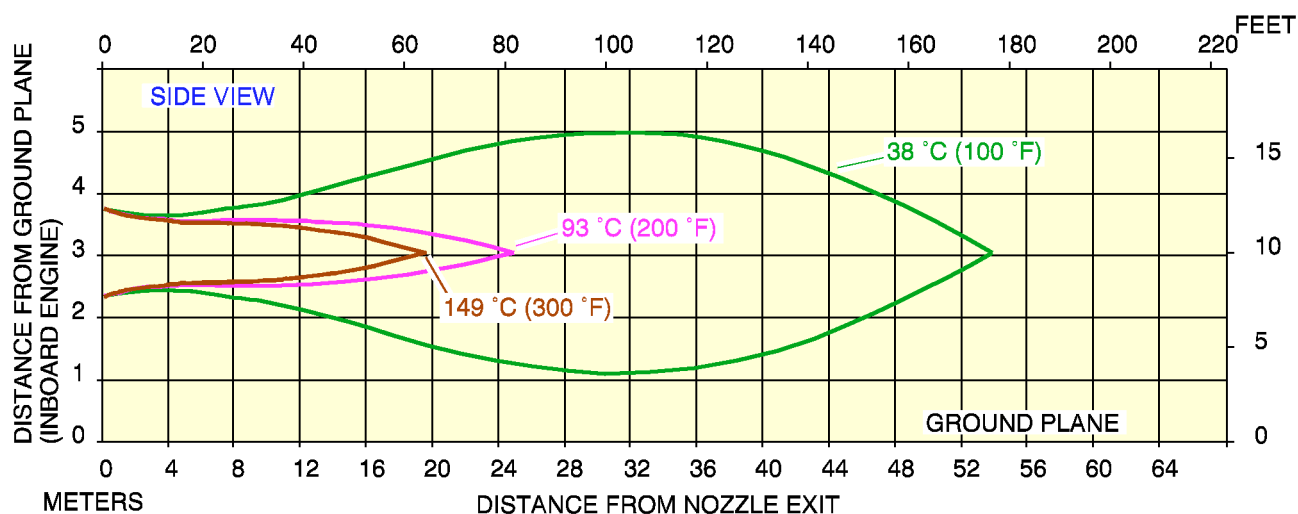
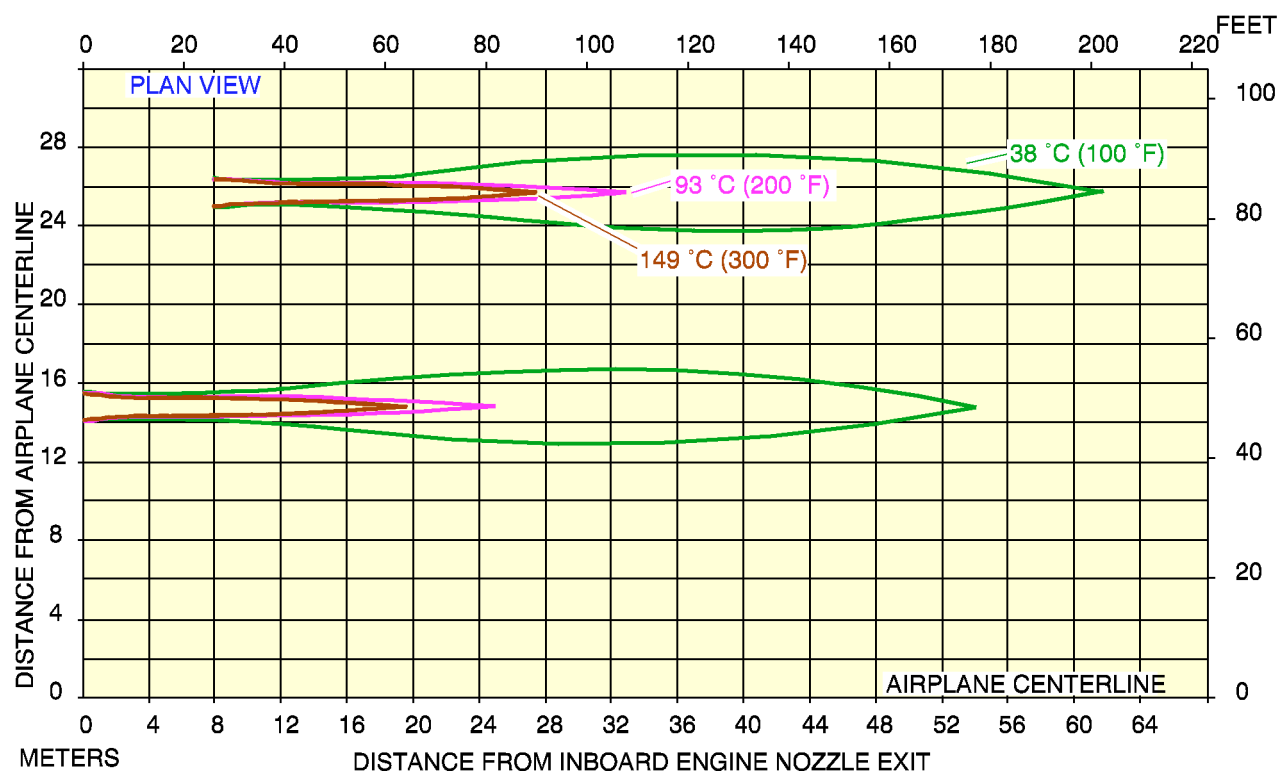
- SEA LEVEL STATIC CONDITIONS
- ISA + 15 °C (59 °F)
- NO WIND

Engine Exhaust Temperatures
Ground Idle Power - TRENT 970/977 Engines
A380-841/843F Models

L_AC_060102_0_BAM0_01_01



AIRPLANE CHARACTERISTICS



NOTE: THE DATA GIVEN IS BASED ON THE FOLLOWING ASSUMPTIONS:

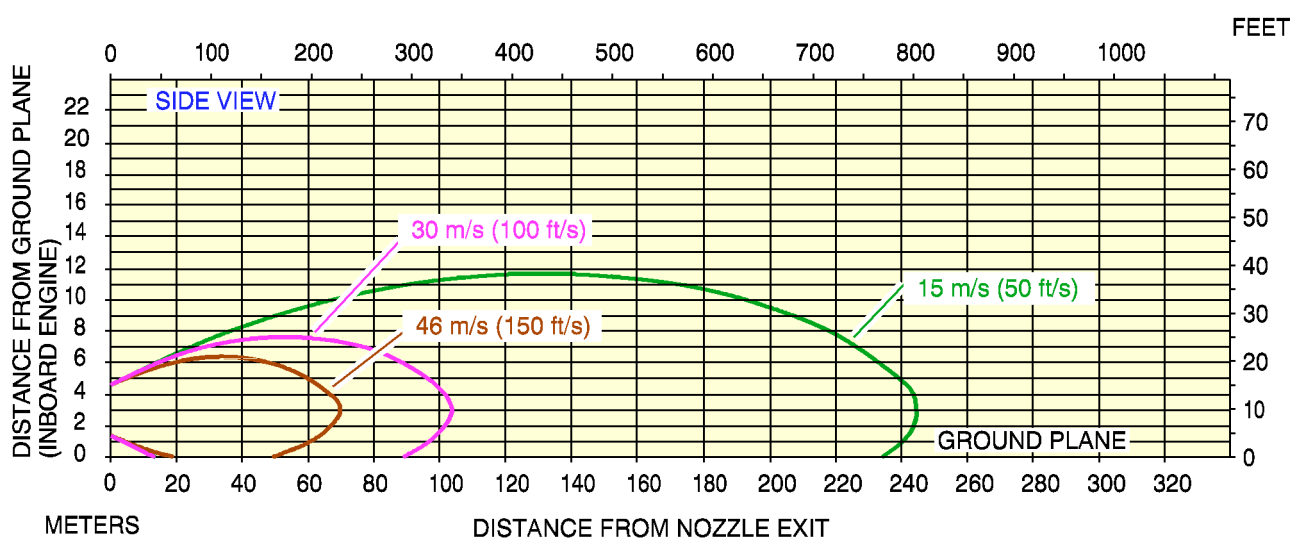
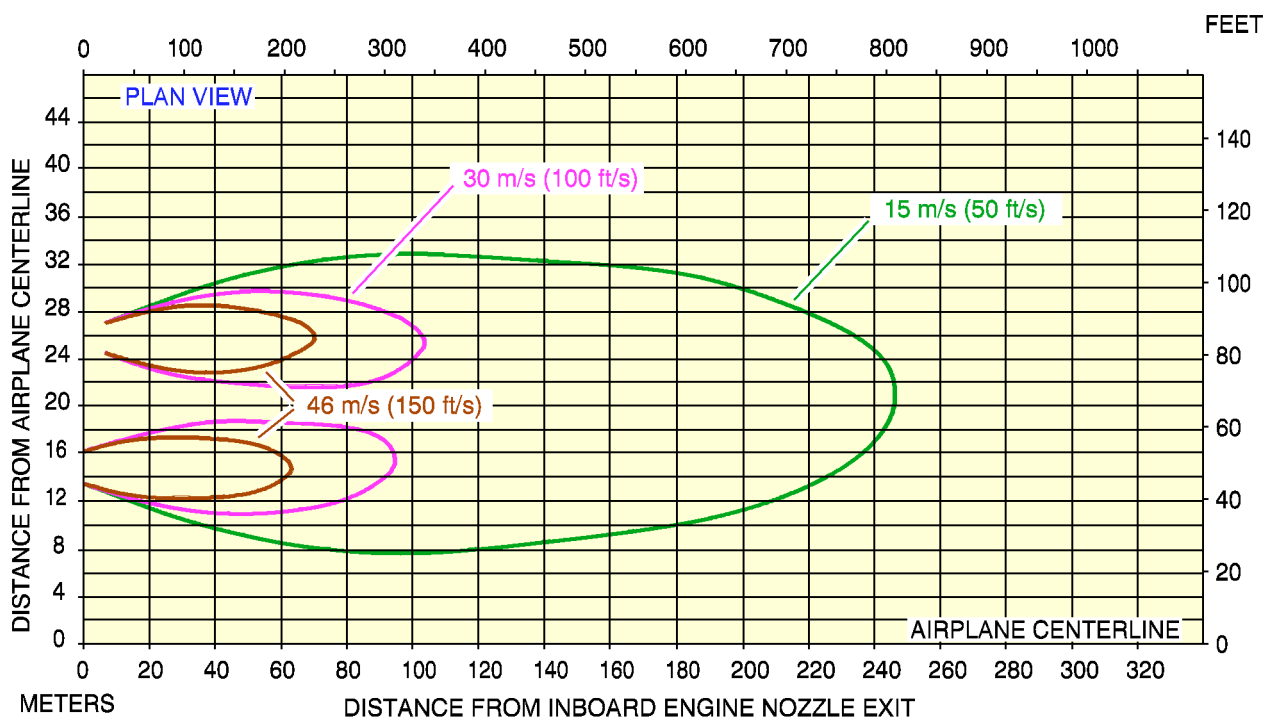
- SEA LEVEL STATIC CONDITIONS
- ISA CONDITIONS
- 20 kt (37 km/h) HEADWIND

Engine Exhaust Temperatures
Ground Idle Power – GP 7270/7277 Engines
A380-861/863F Models

L_AC_060102_0_AAM0_01_00



AIRPLANE CHARACTERISTICS



NOTE: THE DATA GIVEN IS BASED ON THE FOLLOWING ASSUMPTIONS:

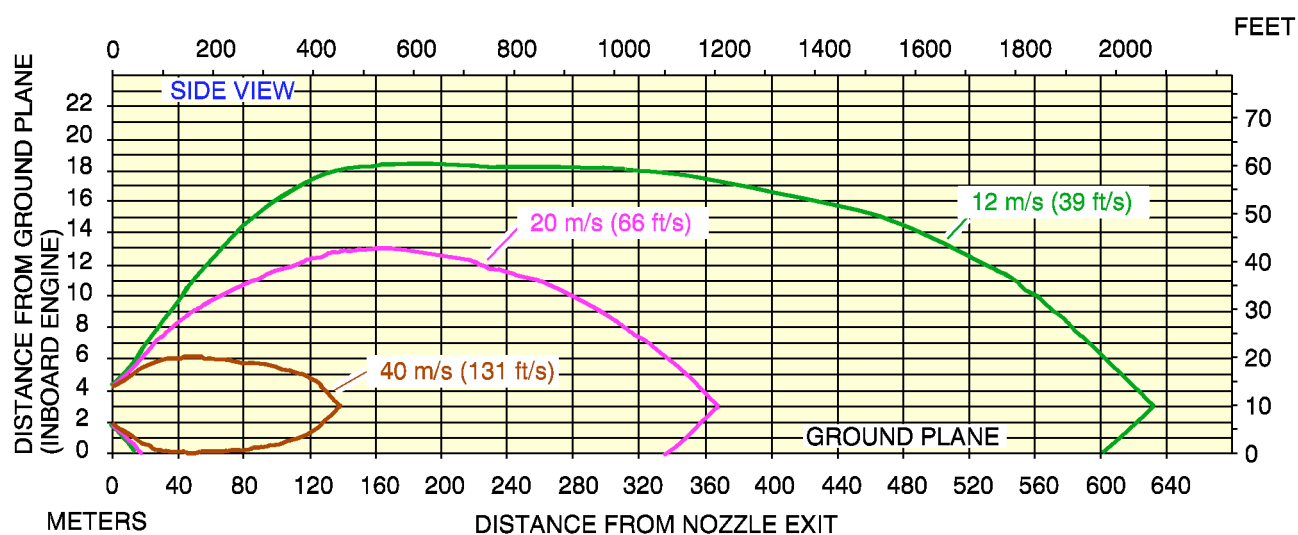
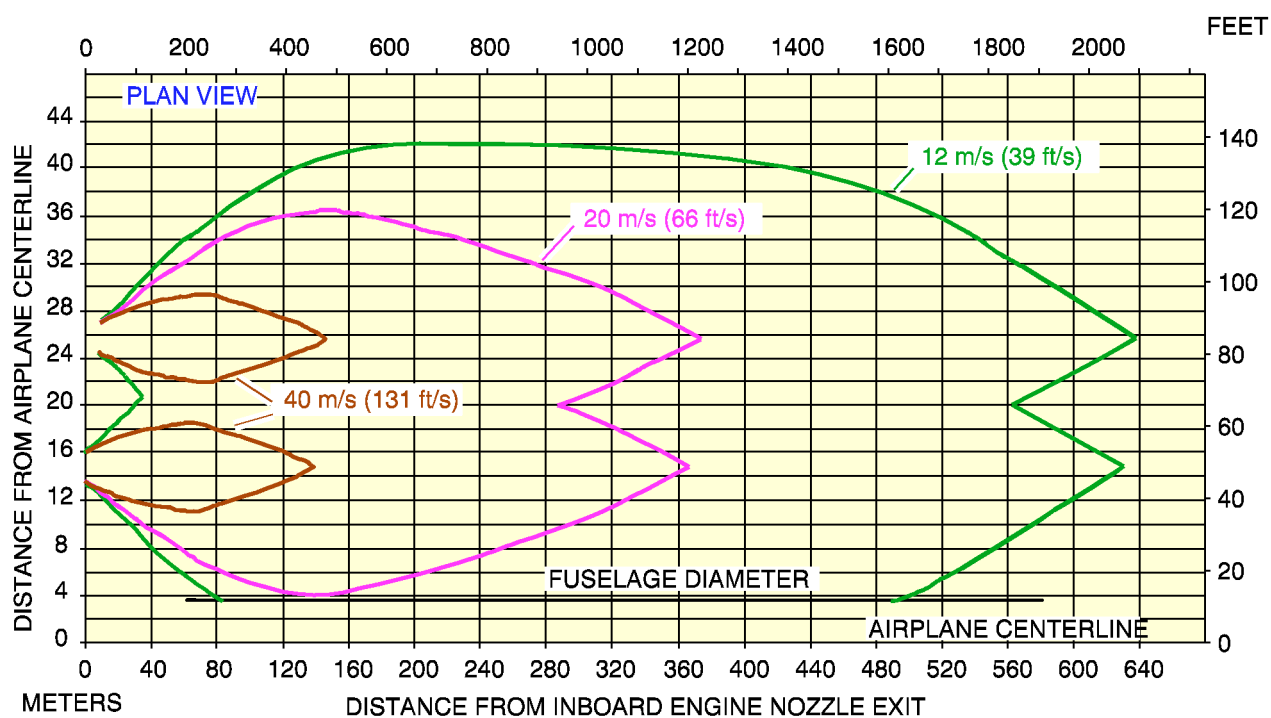
- SEA LEVEL STATIC CONDITIONS
- ISA + 15 °C (59 °F) CONDITIONS
- NO WIND

Engine Exhaust Velocities
Breakaway Power – TRENT 970 Engines
A380-841 Model

L_AC_060103_0_BAM0_01_02



AIRPLANE CHARACTERISTICS



NOTE: THE DATA GIVEN IS BASED ON THE FOLLOWING ASSUMPTIONS:

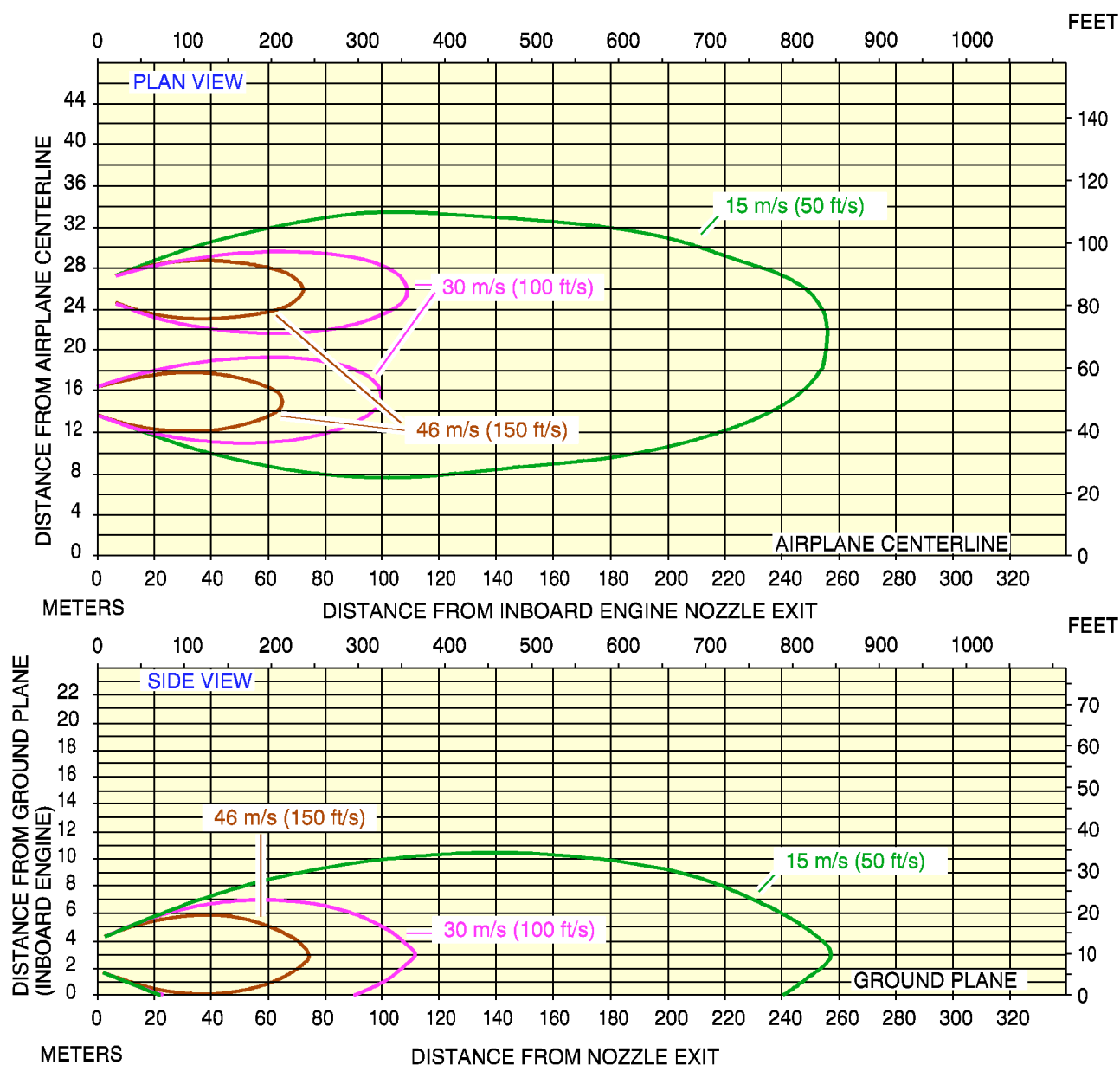
- SEA LEVEL STATIC CONDITIONS
- ISA CONDITIONS
- 20 kt (37 km/h) HEADWIND

Engine Exhaust Velocities
Breakaway Power - GP 7270 Engines
A380-861 Model

L_AC_060103_0_AAM0_01_03



AIRPLANE CHARACTERISTICS



NOTE: THE DATA GIVEN IS BASED ON THE FOLLOWING ASSUMPTIONS:

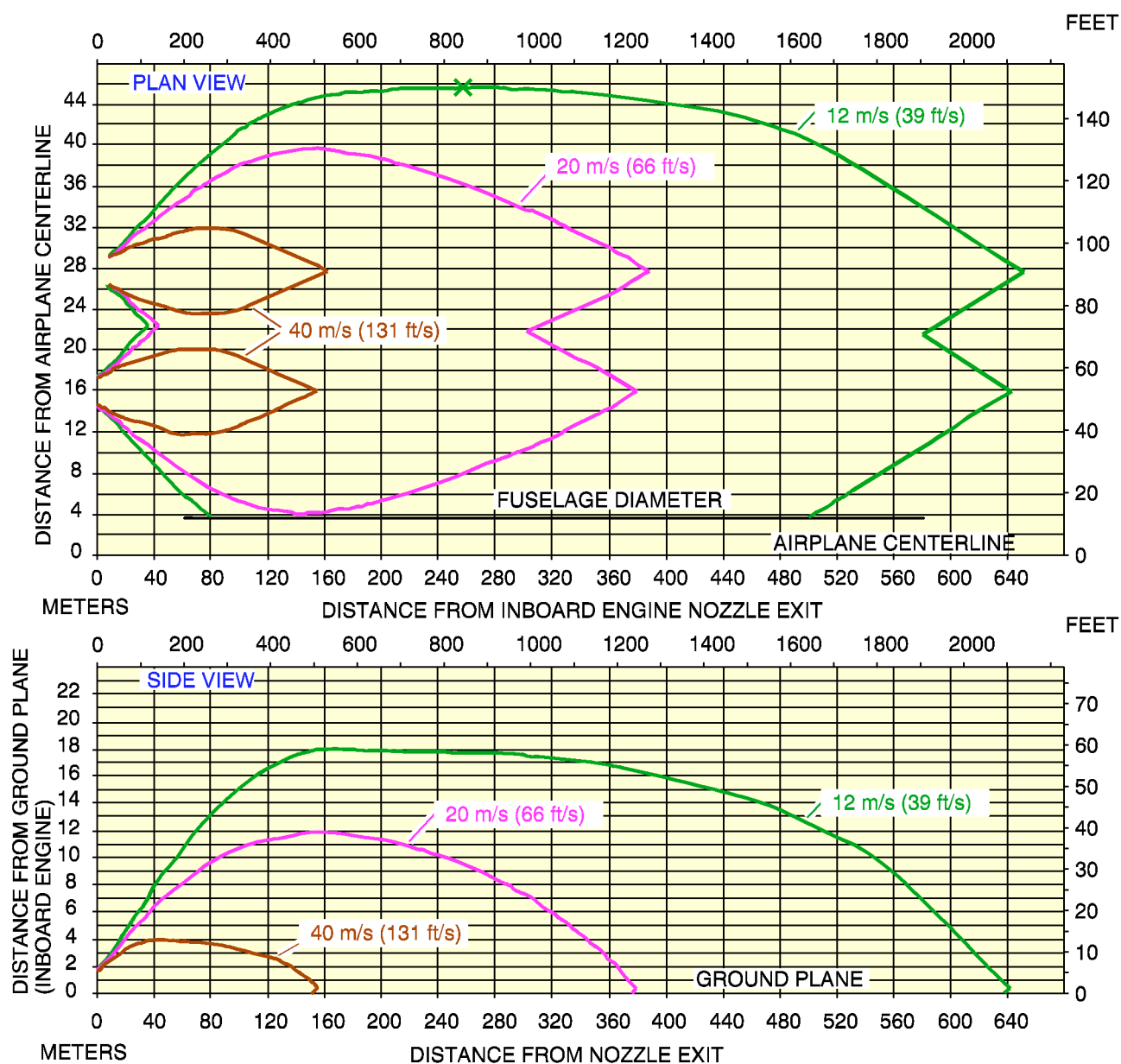
- SEA LEVEL STATIC CONDITIONS
- ISA + 15 °C (59 °F) CONDITIONS
- NO WIND

L_AC_060103_0_BBM0_01_02

Engine Exhaust Velocities
Breakaway Power – TRENT 977 Engines
A380-843F Model



AIRPLANE CHARACTERISTICS



NOTE: THE DATA GIVEN IS BASED ON THE FOLLOWING ASSUMPTIONS:

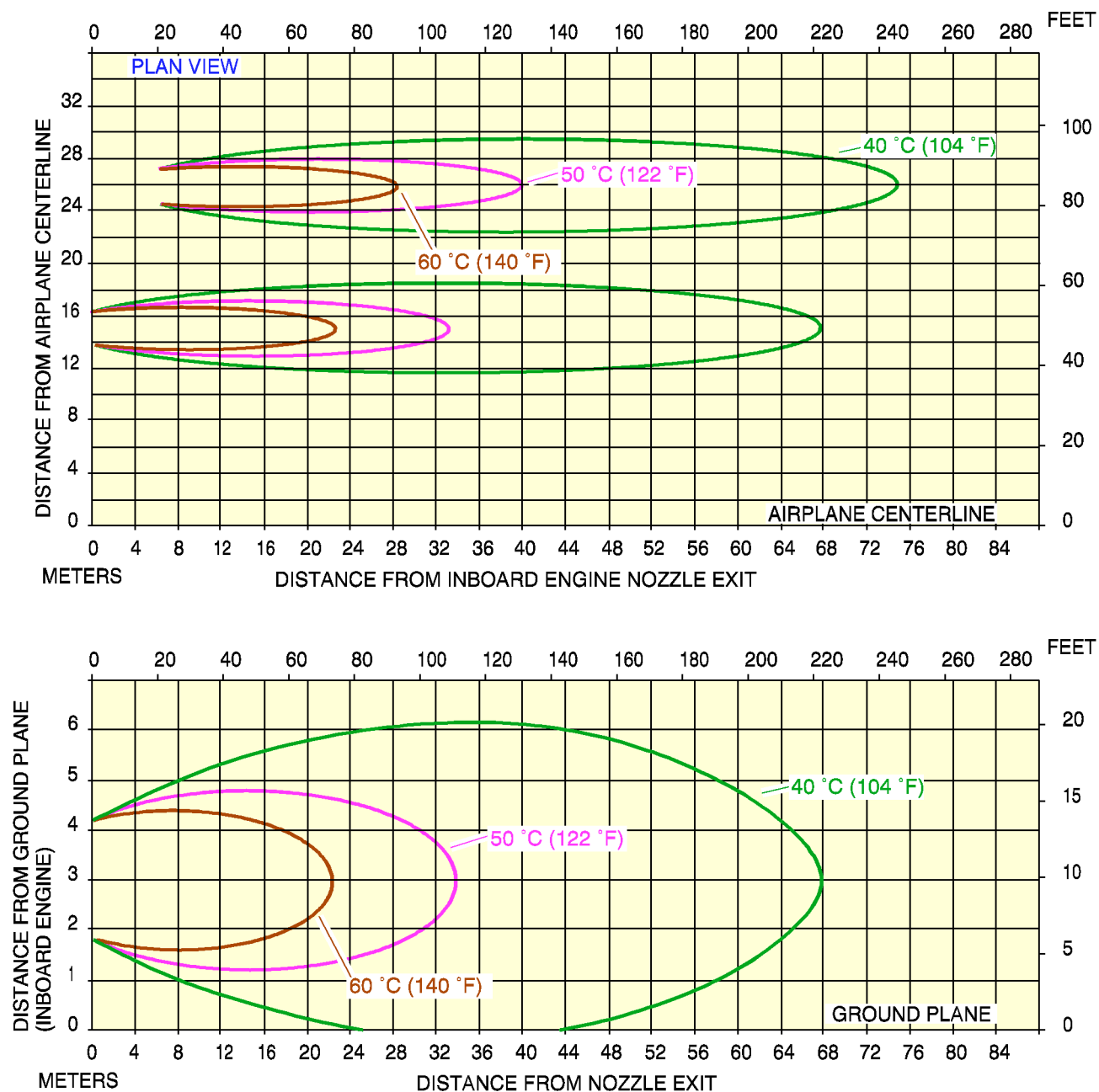
- SEA LEVEL STATIC CONDITIONS
- ISA CONDITIONS
- 20 kt (37 km/h) HEADWIND

Engine Exhaust Velocities
Breakaway Power - GP 7277 Engines
A380-863F Model

L_AC_060103_0_ABM0_01_03



AIRPLANE CHARACTERISTICS



NOTE: THE DATA GIVEN IS BASED ON THE FOLLOWING ASSUMPTIONS:

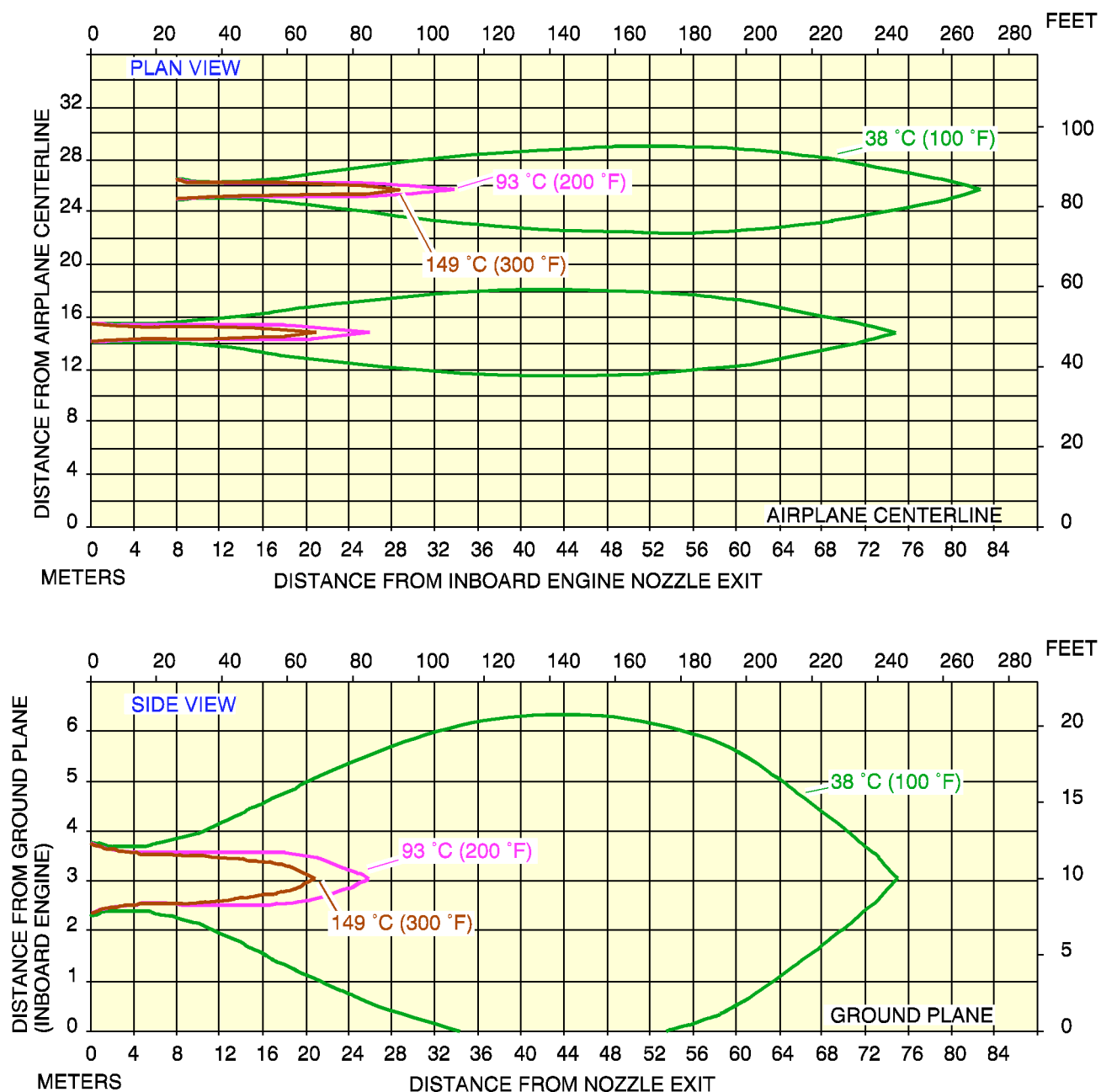
- SEA LEVEL STATIC CONDITIONS
- ISA + 15 °C (59 °F)
- NO WIND

Engine Exhaust Temperatures
Breakaway Power – TRENT 970 Engines
A380-841 Model

L_AC_060104_0_BAM0_01_02



AIRPLANE CHARACTERISTICS



NOTE: THE DATA GIVEN IS BASED ON THE FOLLOWING ASSUMPTIONS:

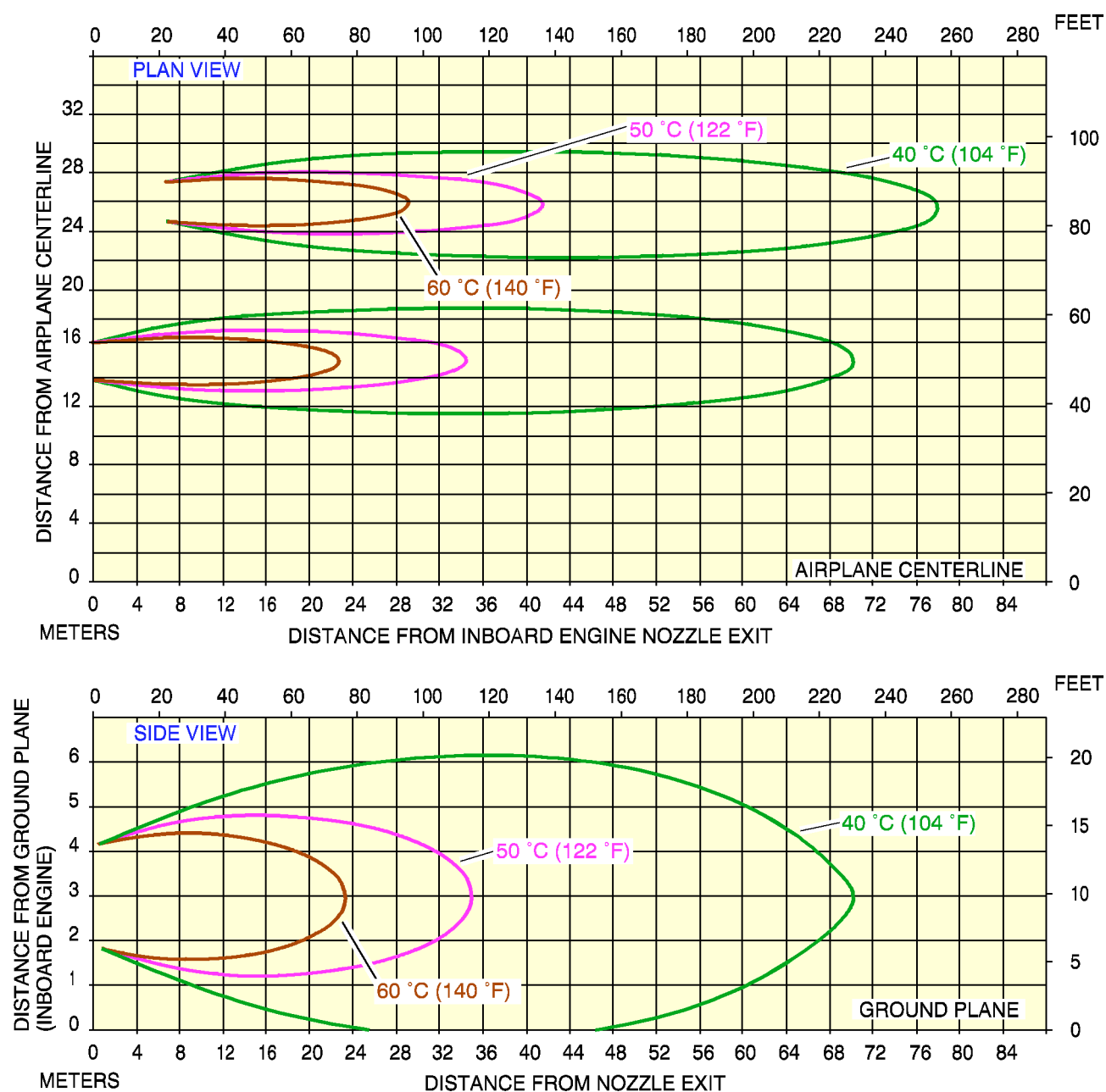
- SEA LEVEL STATIC CONDITIONS
- ISA CONDITIONS
- 20 kt (37 km/h) HEADWIND

Engine Exhaust Temperatures
Breakaway Power - GP 7270 Engines
A380-861 Model

L_AC_060104_0_AAM0_01_03



AIRPLANE CHARACTERISTICS



NOTE: THE DATA GIVEN IS BASED ON THE FOLLOWING ASSUMPTIONS:

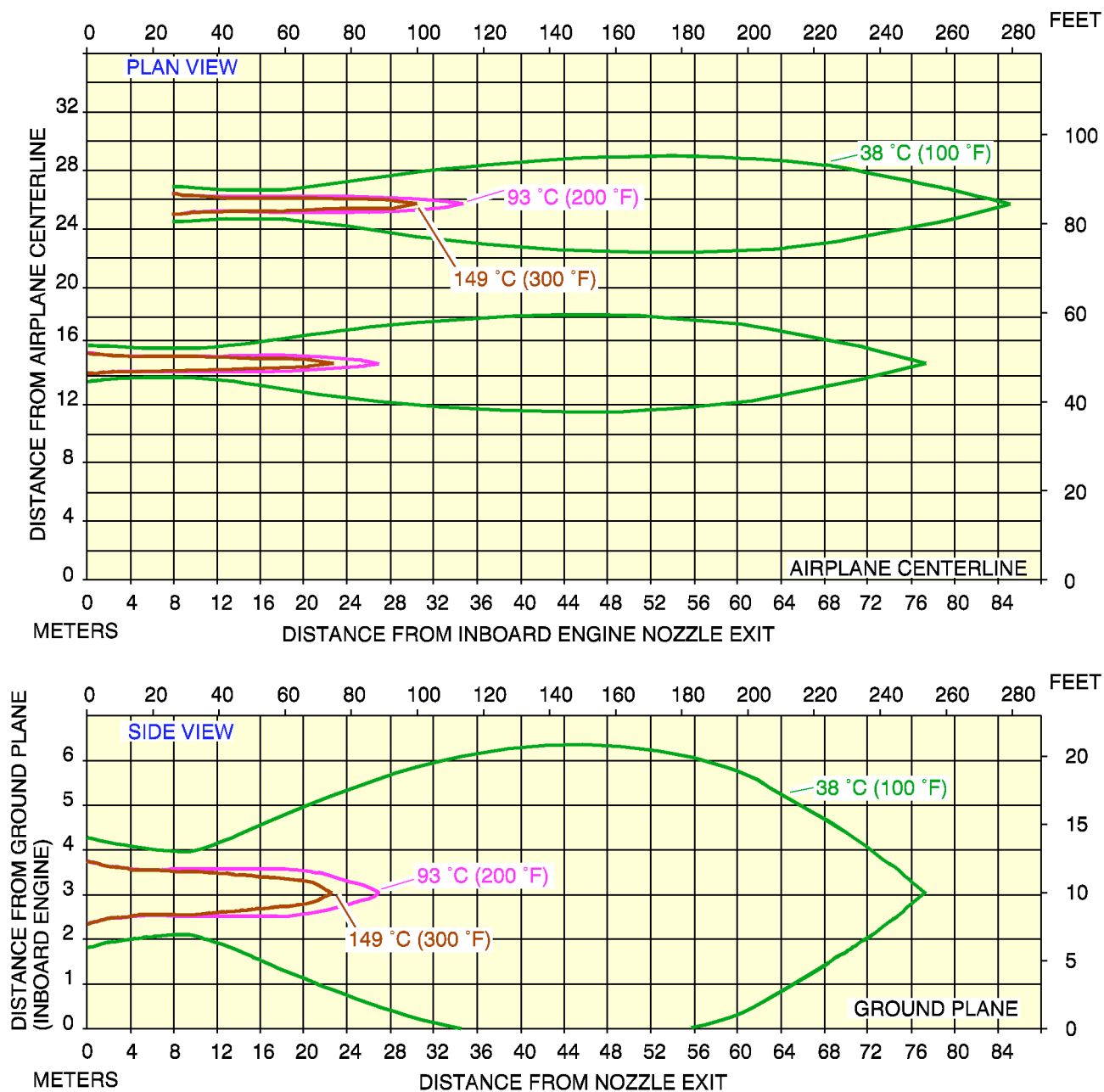
- SEA LEVEL STATIC CONDITIONS
- ISA + 15 °C (59 °F)
- NO WIND

Engine Exhaust Temperatures
Breakaway Power – TRENT 977 Engines
A380-843F Model

L_AC_060104_0_BBM0_01_02



AIRPLANE CHARACTERISTICS



NOTE: THE DATA GIVEN IS BASED ON THE FOLLOWING ASSUMPTIONS:

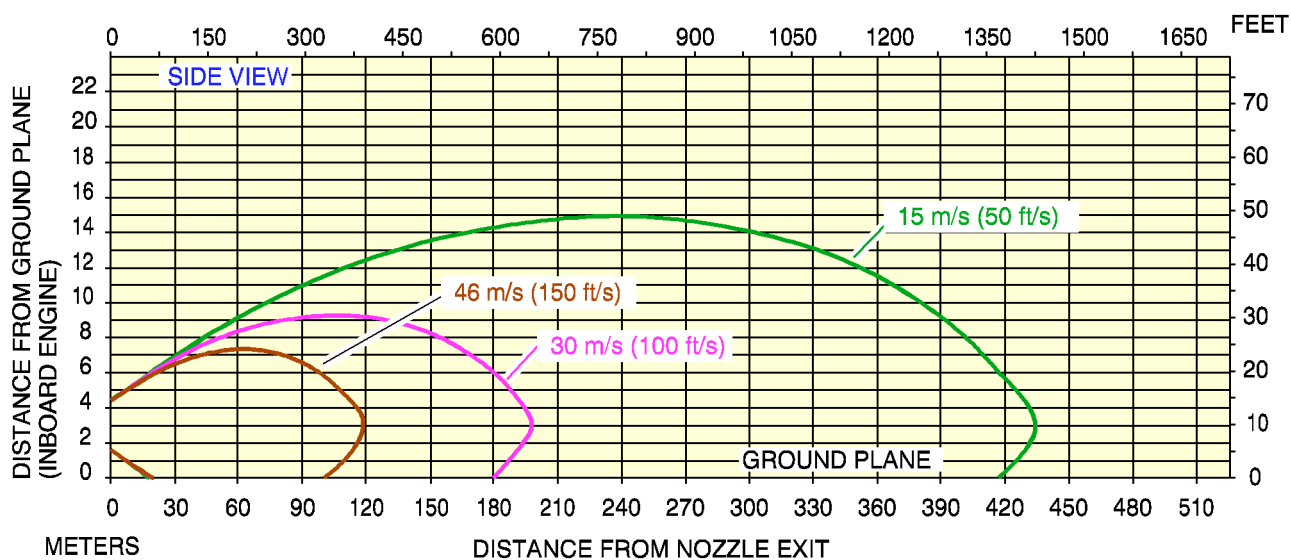
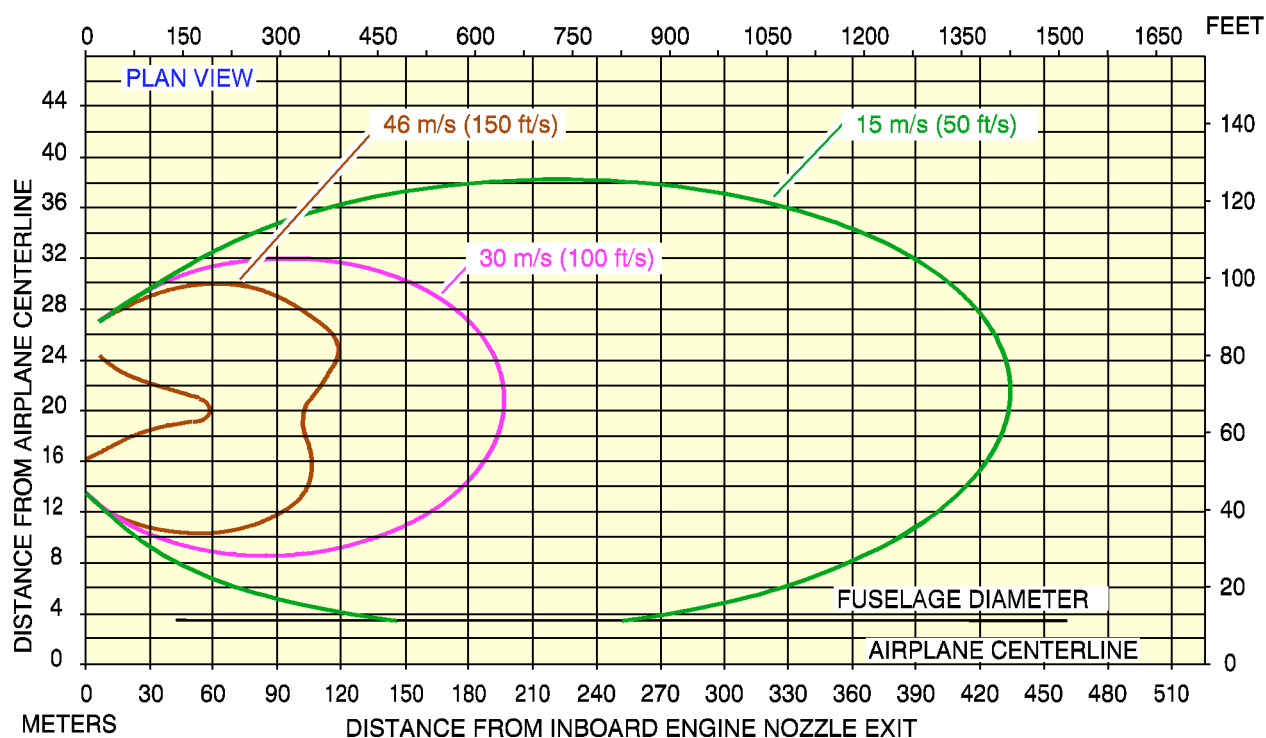
- SEA LEVEL STATIC CONDITIONS
- ISA CONDITIONS
- 20 kt (37 km/h) HEADWIND

Engine Exhaust Temperatures
Breakaway Power - GP 7277 Engines
A380-863F Model

L_AC_060104_0_ABM0_01_03



AIRPLANE CHARACTERISTICS



NOTE: THE DATA GIVEN IS BASED ON THE FOLLOWING ASSUMPTIONS:

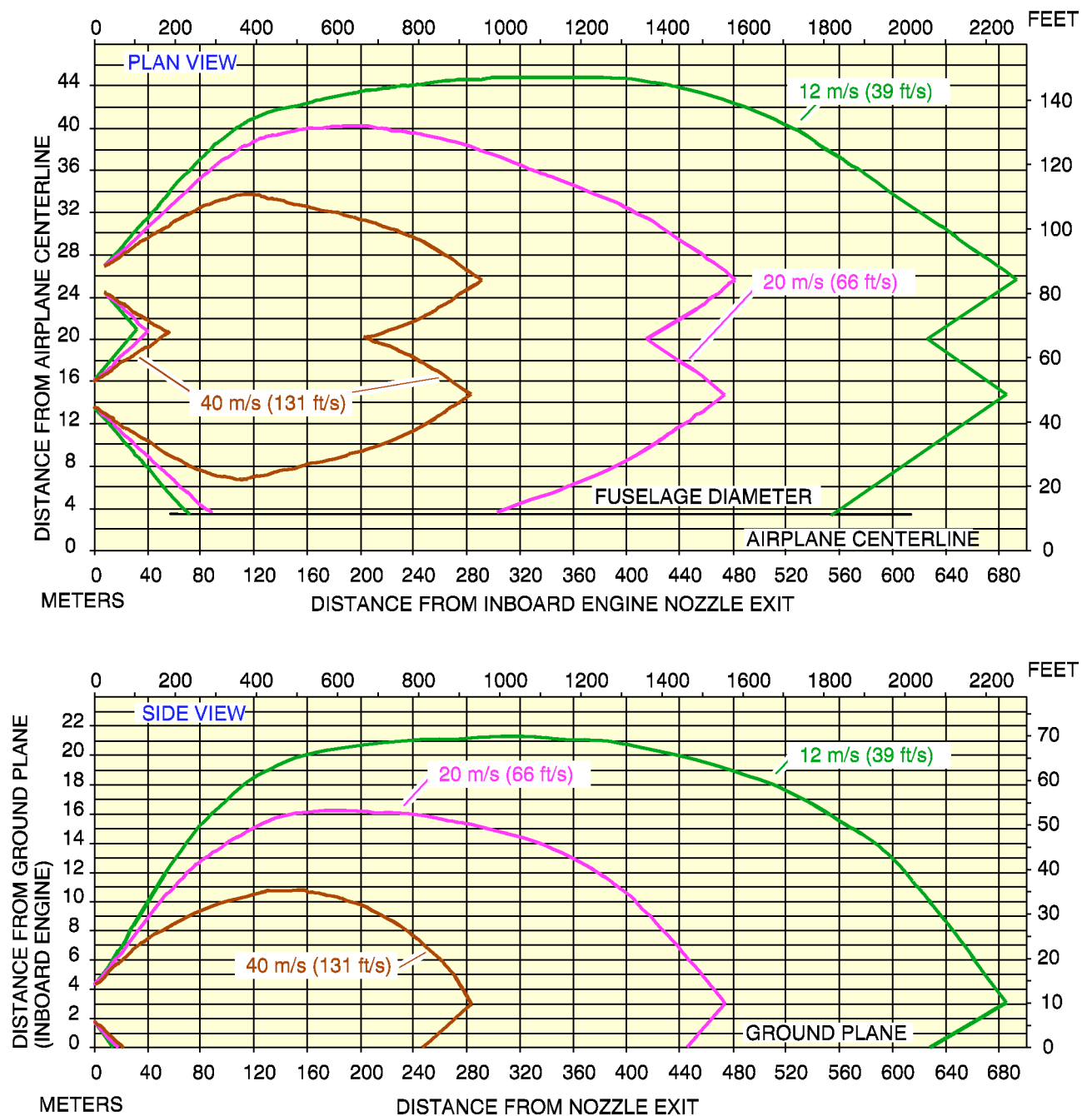
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- ISA + 15 °C (59 °F) CONDITIONS
- NO WIND

Engine Exhaust Velocities
Max. Take-Off Power – TRENT 970 Engines
A380-841 Model

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AIRPLANE CHARACTERISTICS



NOTE: THE DATA GIVEN IS BASED ON THE FOLLOWING ASSUMPTIONS:

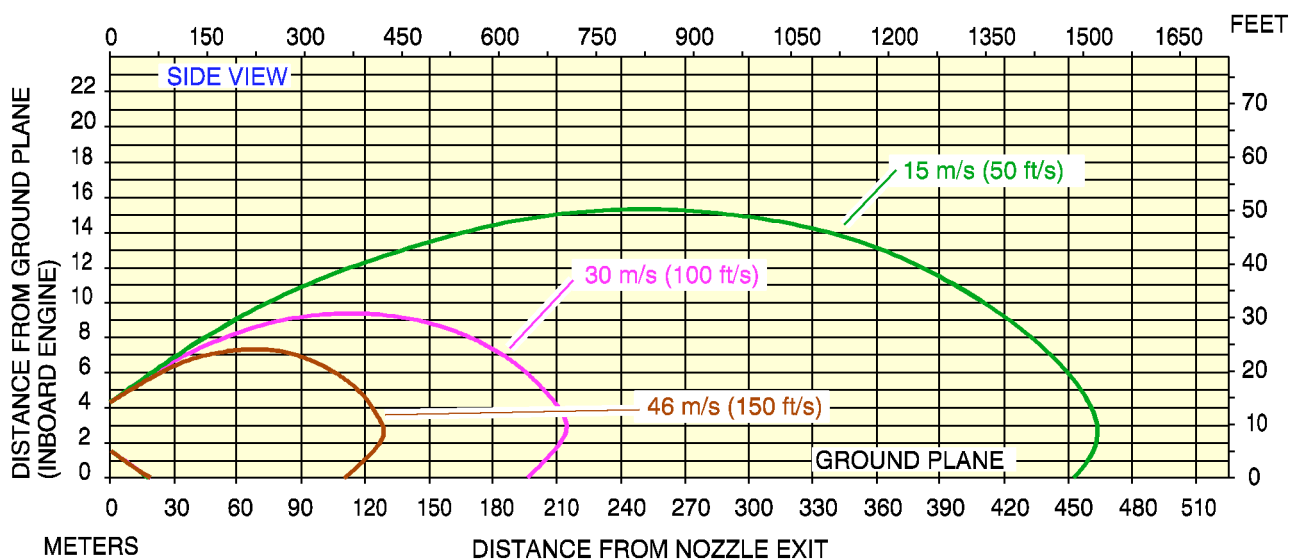
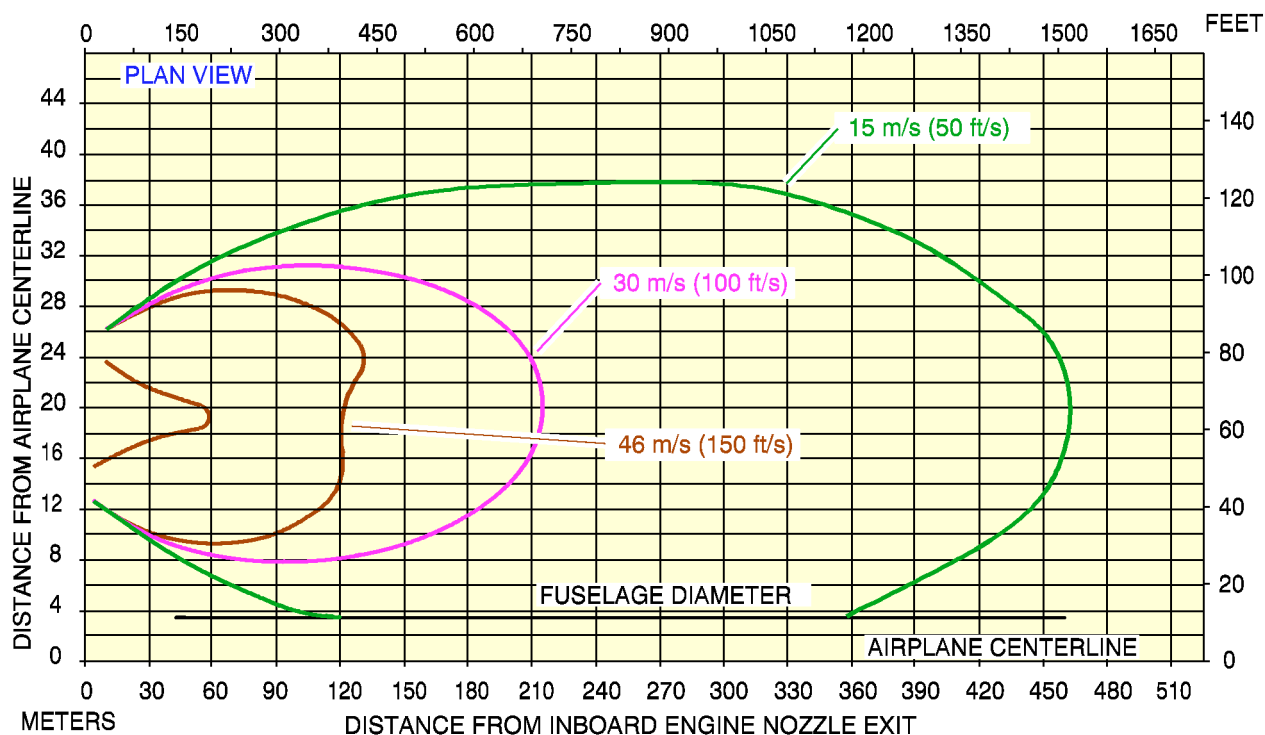
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- ISA CONDITIONS
- 20 kt (37 km/h) HEADWIND

Engine Exhaust Velocities
Max. Take-Off Power - GP 7270 Engines
A380-861 Model

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AIRPLANE CHARACTERISTICS



NOTE: THE DATA GIVEN IS BASED ON THE FOLLOWING ASSUMPTIONS:

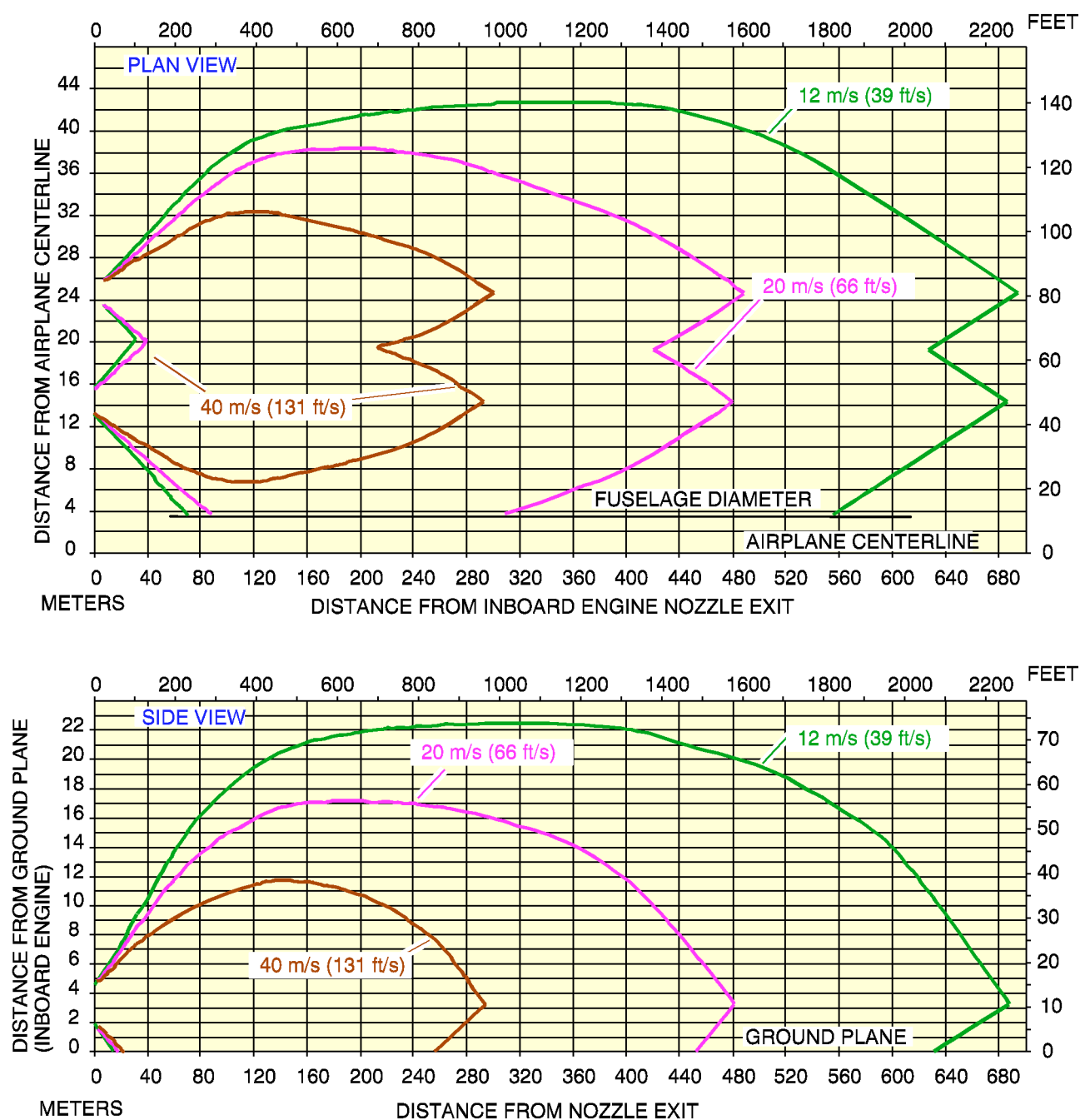
- SEA LEVEL STATIC CONDITIONS
- ISA + 15 °C (59 °F) CONDITIONS
- NO WIND

Engine Exhaust Velocities
Max Take-Off Power - TRENT 977 Engines
A380-843F Model

L_AC_060105_0_BBM0_01_03



AIRPLANE CHARACTERISTICS



NOTE: THE DATA GIVEN IS BASED ON THE FOLLOWING ASSUMPTIONS:

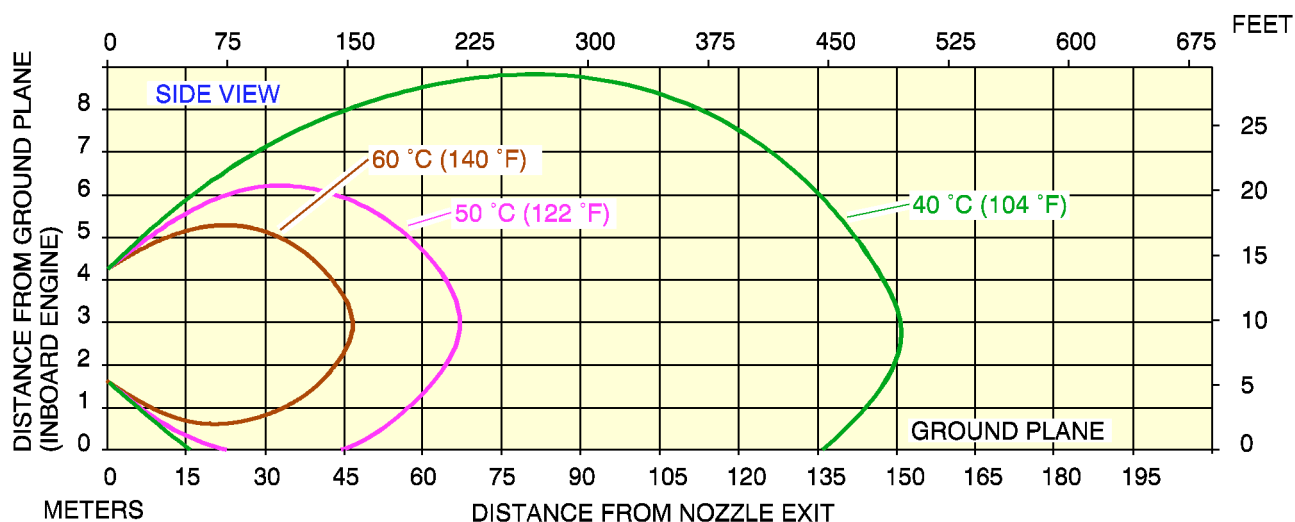
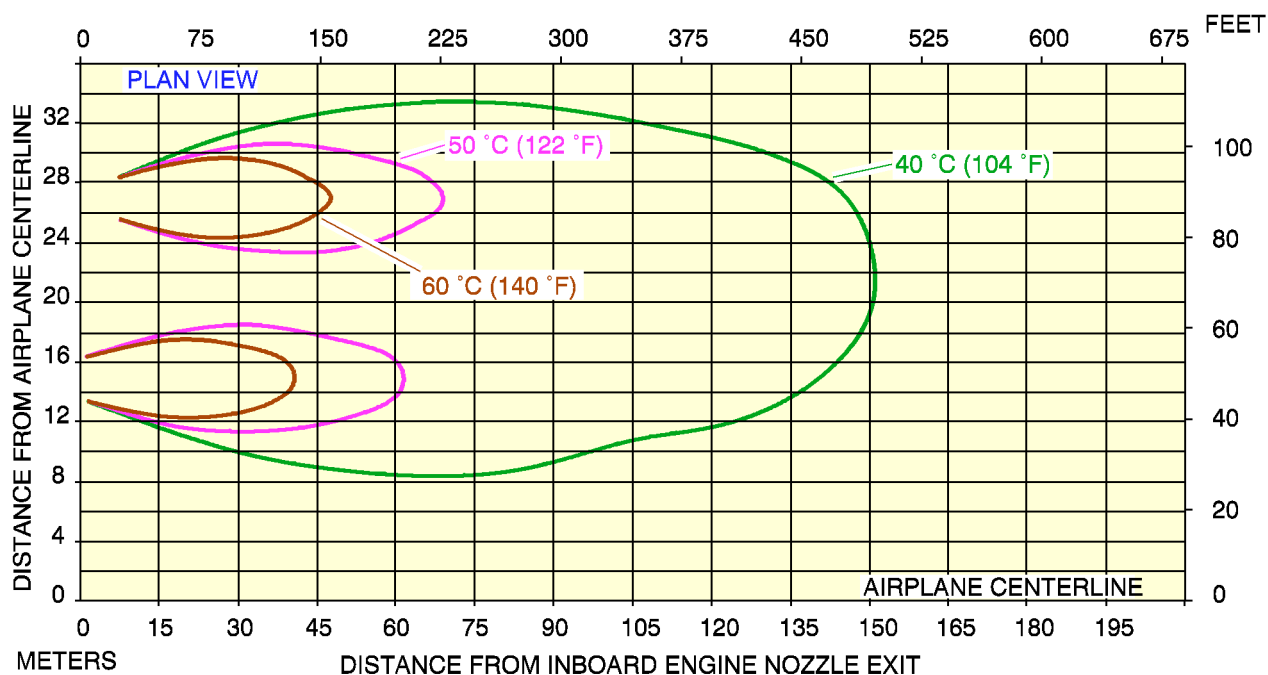
- SEA LEVEL STATIC CONDITIONS
- ISA CONDITIONS
- 20 kt (37 km/h) HEADWIND

Engine Exhaust Velocities
Max Take-Off Power – GP 7277 Engines
A380-863F Model

L_AC_060105_0_ABM0_01_03



AIRPLANE CHARACTERISTICS



NOTE: THE DATA GIVEN IS BASED ON THE FOLLOWING ASSUMPTIONS:

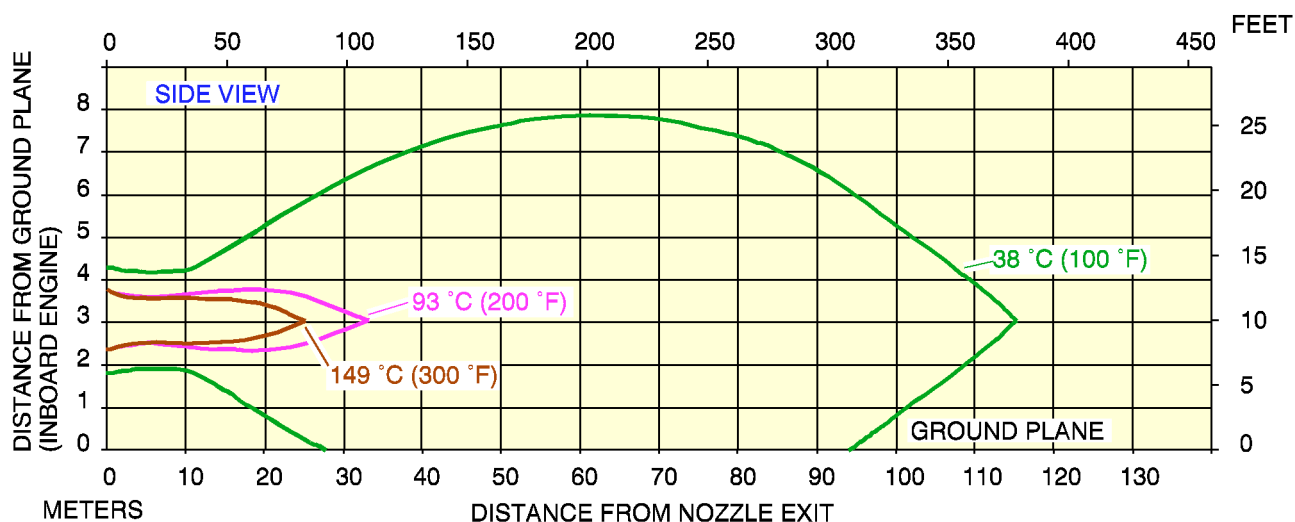
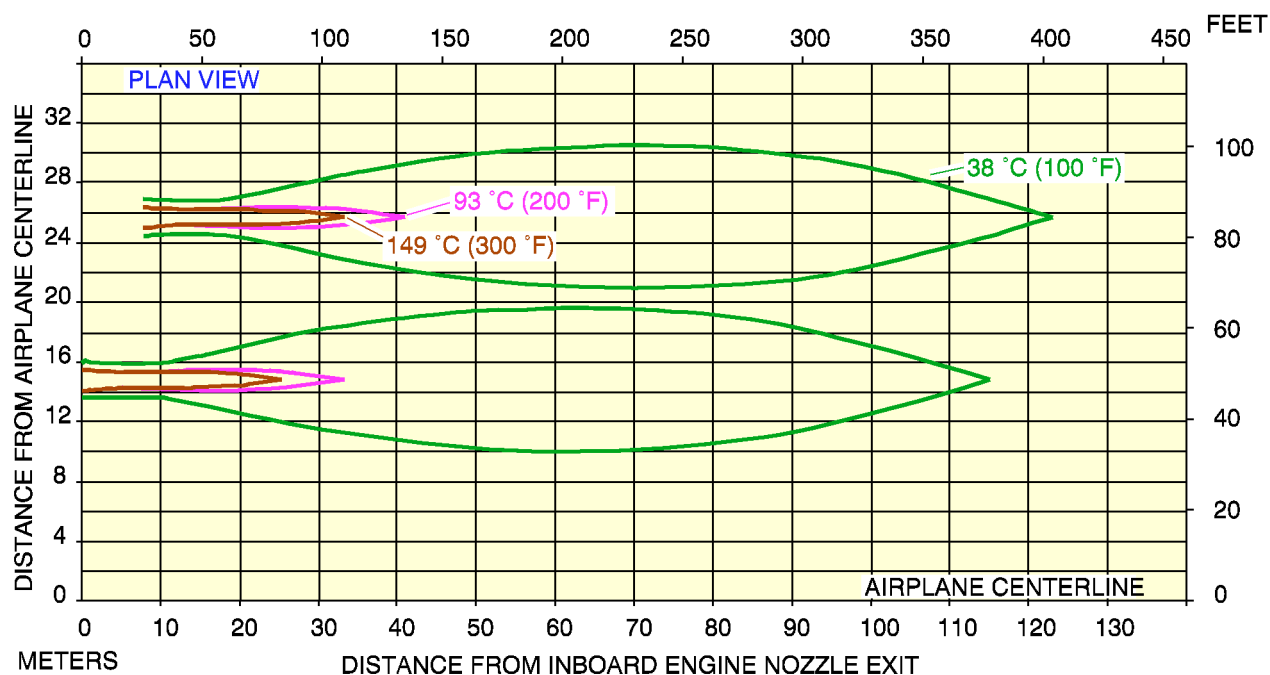
- SEA LEVEL STATIC CONDITIONS
- ISA + 15 °C (59 °F)
- NO WIND

Engine Exhaust Temperatures
Max Take-Off Power – TRENT 970 Engines
A380-841 Model

L_AC_060106_0_BAM0_01_03



AIRPLANE CHARACTERISTICS



NOTE: THE DATA GIVEN IS BASED ON THE FOLLOWING ASSUMPTIONS:

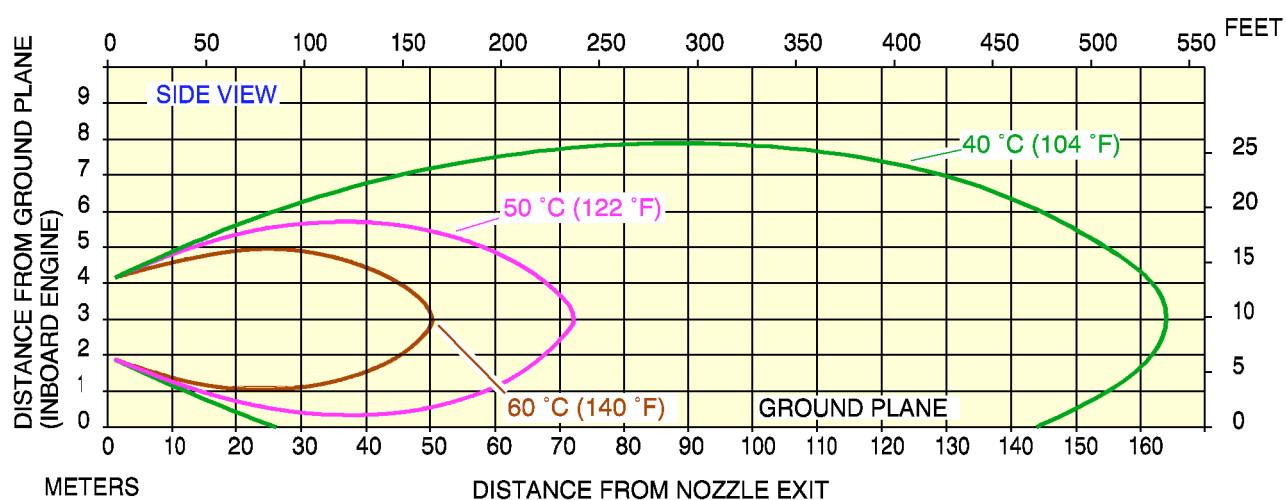
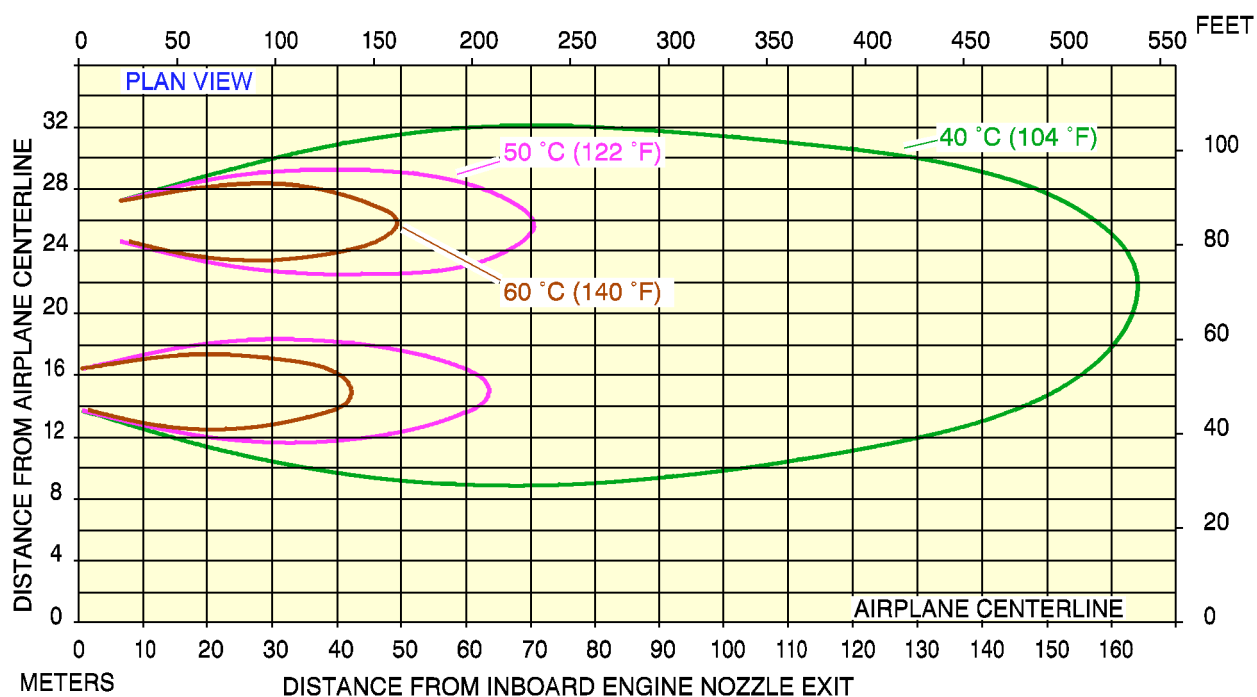
- SEA LEVEL STATIC CONDITIONS
- ISA CONDITIONS
- 20 kt (37 km/h) HEADWIND

Engine Exhaust Temperatures
Max Take-Off Power – GP 7270 Engines
A380-861 Model

L_AC_060106_0_AAM0_01_03



AIRPLANE CHARACTERISTICS



NOTE: THE DATA GIVEN IS BASED ON THE FOLLOWING ASSUMPTIONS:

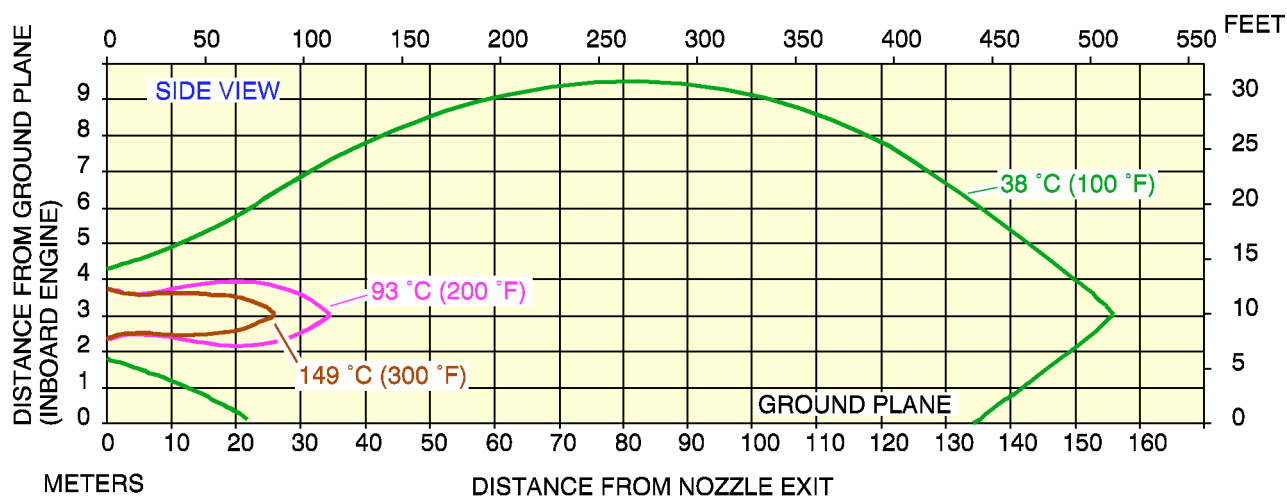
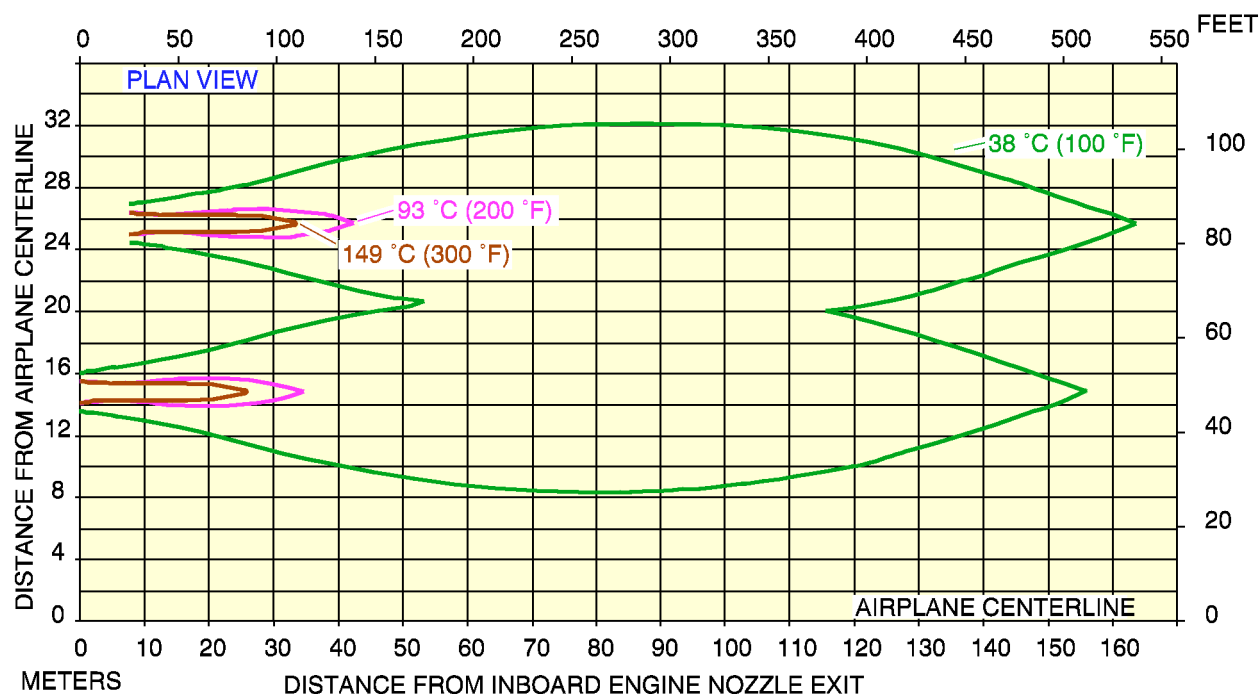
- SEA LEVEL STATIC CONDITIONS
- ISA + 15 °C (59 °F)
- NO WIND

Engine Exhaust Temperatures
Max Take-Off Power – TRENT 977 Engines
A380-843F Model

L_AC_060106_0_BBM0_01_03



AIRPLANE CHARACTERISTICS



NOTE: THE DATA GIVEN IS BASED ON THE FOLLOWING ASSUMPTIONS:

- SEA LEVEL STATIC CONDITIONS
- ISA CONDITIONS
- 20 kt (37 km/h) HEADWIND

Engine Exhaust Temperatures
Max Take-Off Power – GP 7277 Engines
A380-863F Model

L_AC_060106_0_ABM0_01_03

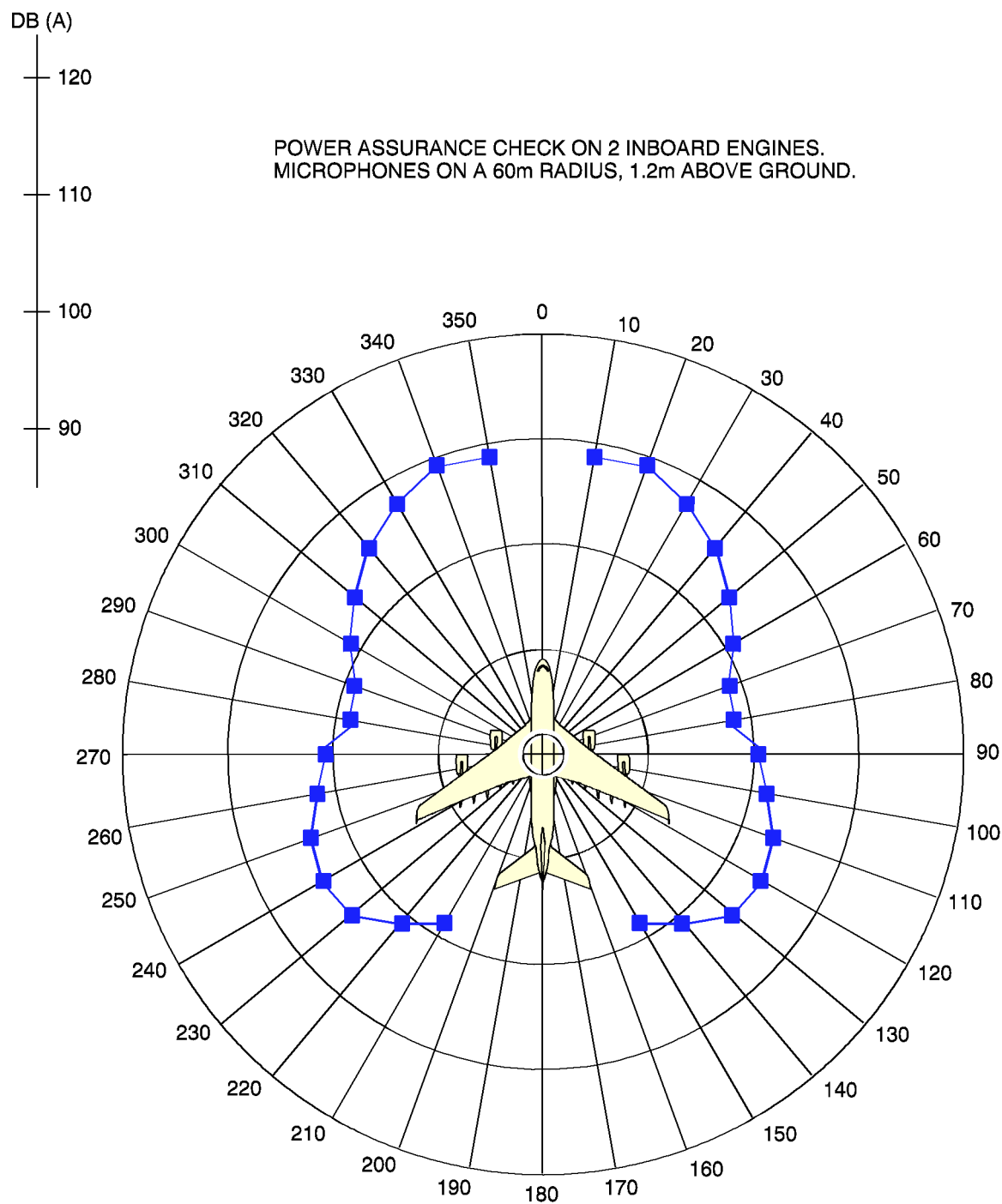


AIRPLANE CHARACTERISTICS

6-2 AIRPORT AND COMMUNITY NOISE DATA



AIRPLANE CHARACTERISTICS



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Airport and Community Noise Data
RR Trent 900 and EA GP7200
A380-800/800F Models

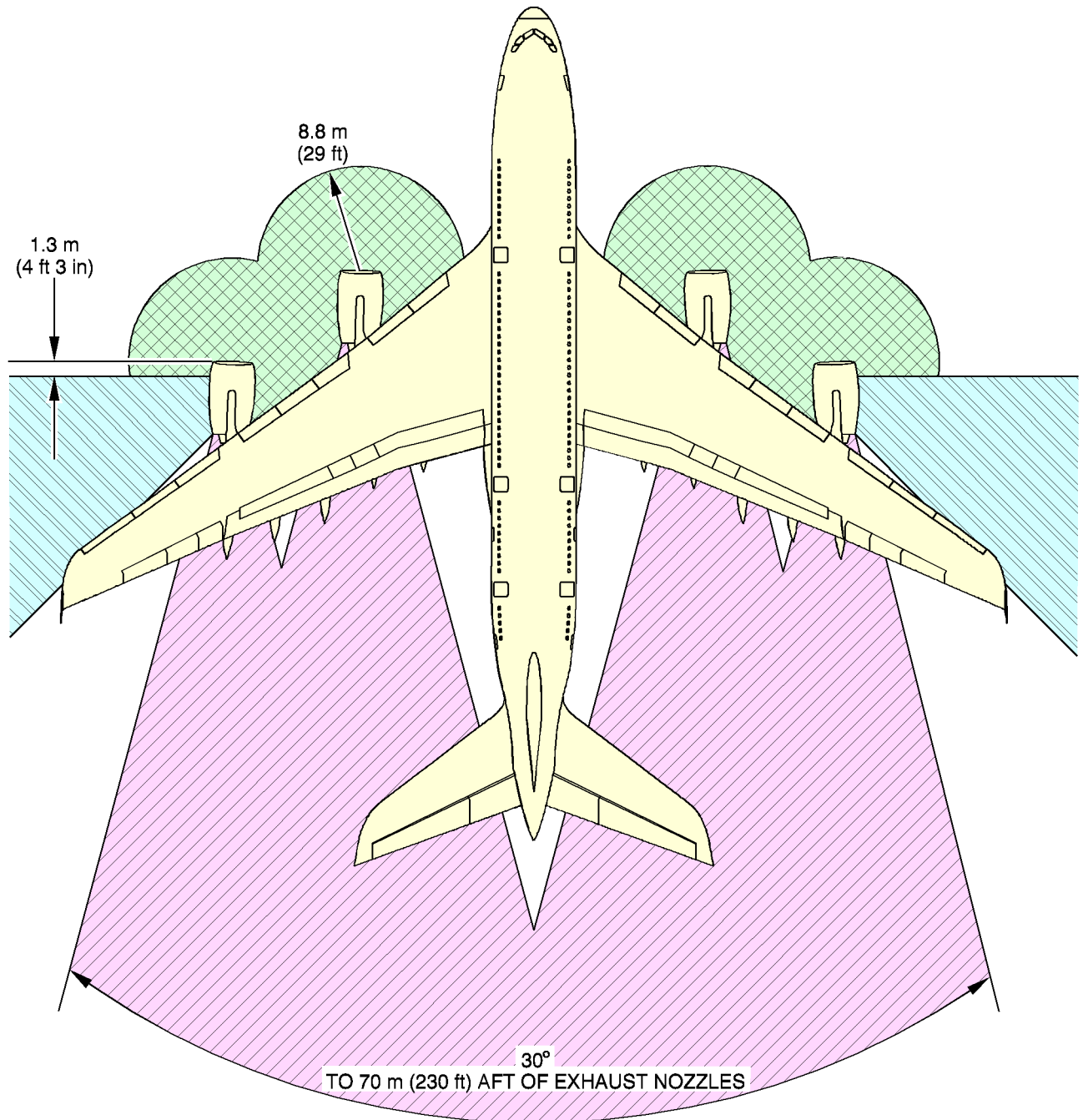





AIRPLANE CHARACTERISTICS

6-3 DANGER AREAS OF THE ENGINES



AIRPLANE CHARACTERISTICS



-  INTAKE SUCTION DANGER AREA MINIMUM IDLE POWER
-  EXHAUST DANGER AREA
-  ENTRY CORRIDOR

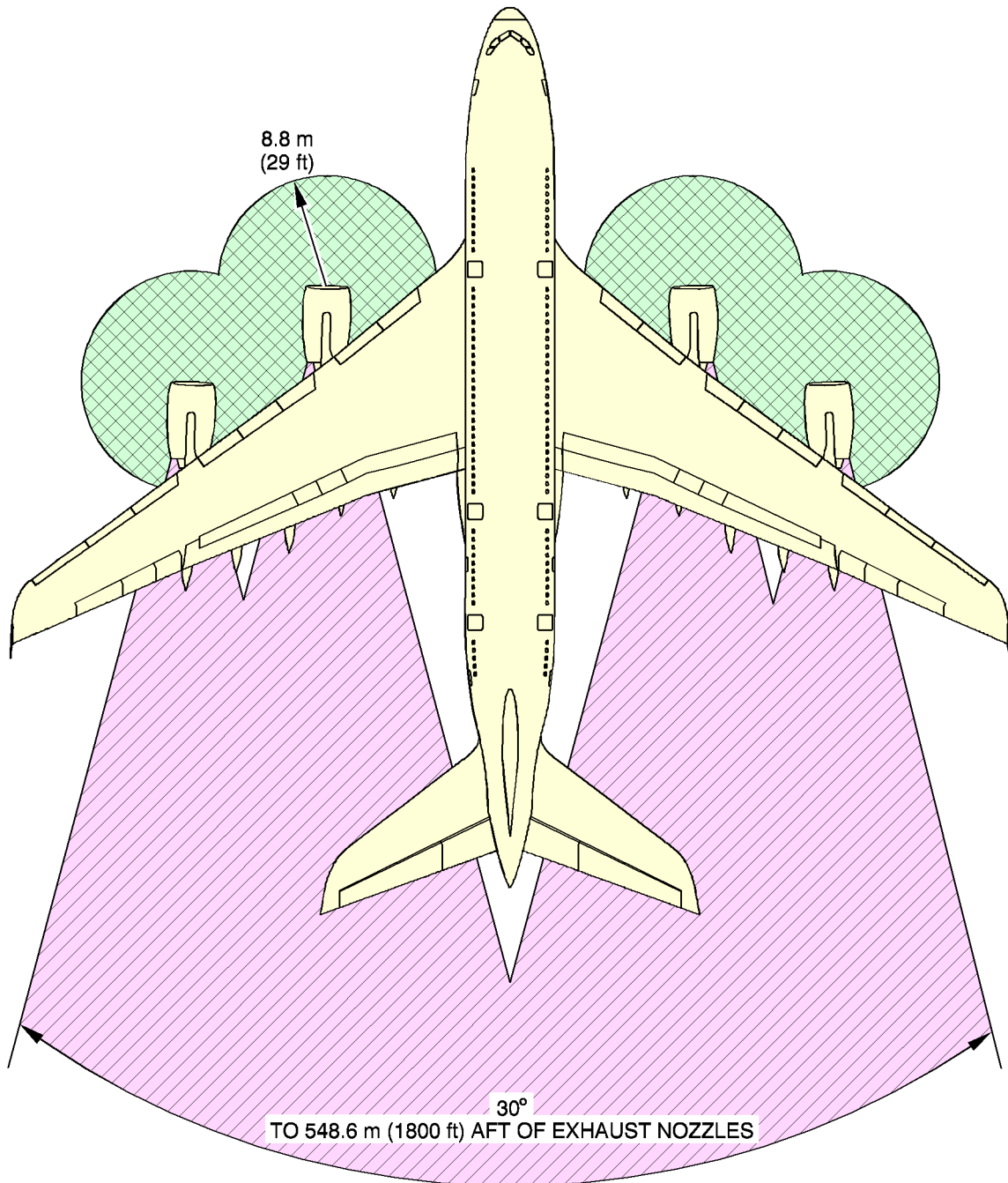
L_AC_060301_0_AAM0_01_00

Danger Areas of the Engines
Minimum Idle Power
Rolls Royce Trent 900

def0001513



AIRPLANE CHARACTERISTICS



INTAKE SUCTION DANGER AREA MAX TAKE-OFF POWER



EXHAUST DANGER AREA

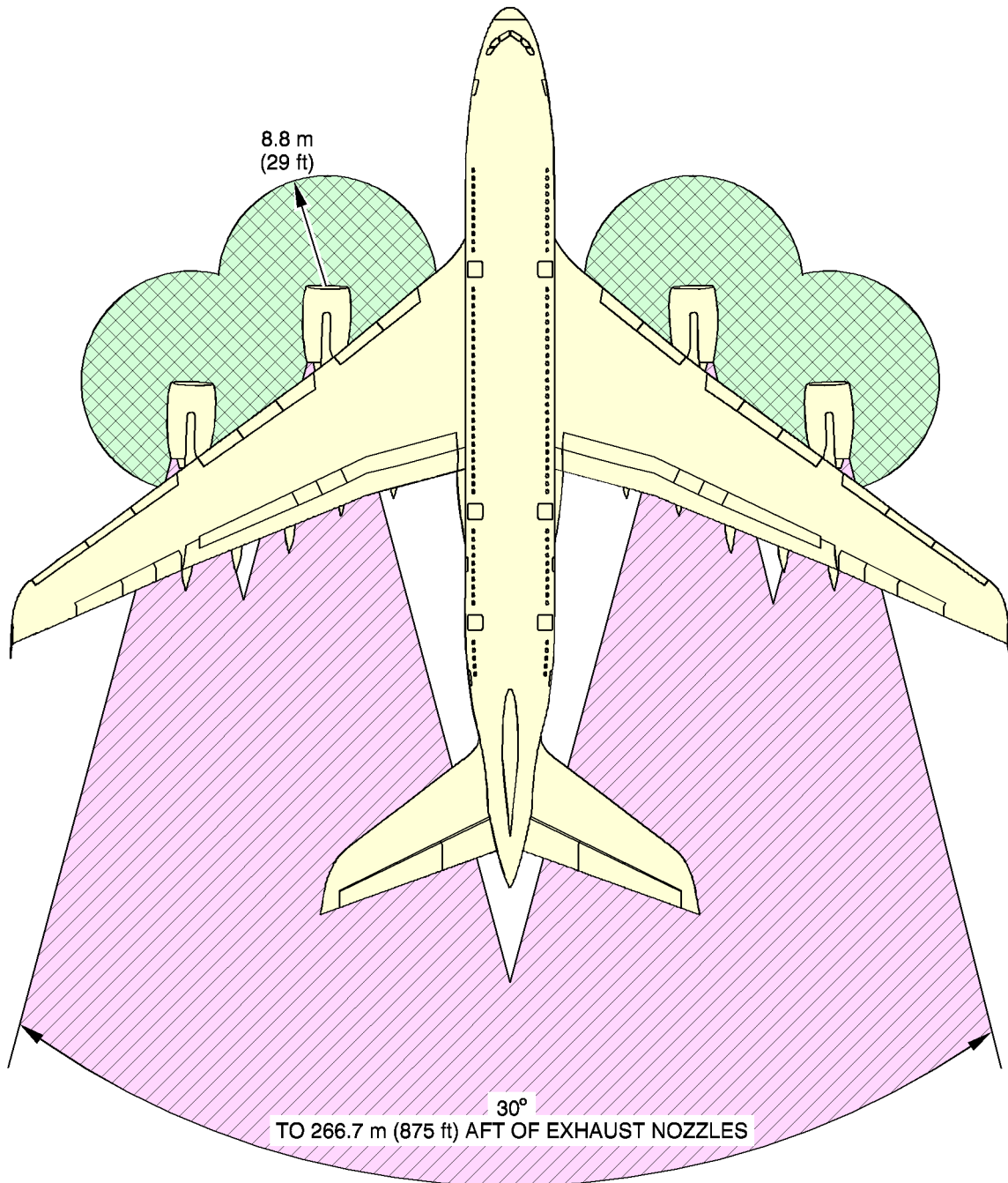
def0001515

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Danger Areas of the Engines
Max Take-Off Power
Rolls Royce Trent 900



AIRPLANE CHARACTERISTICS



INTAKE SUCTION DANGER AREA BREAKAWAY POWER



EXHAUST DANGER AREA

def0001514

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Danger Areas of the Engines
Breakaway Power
Rolls Royce Trent 900

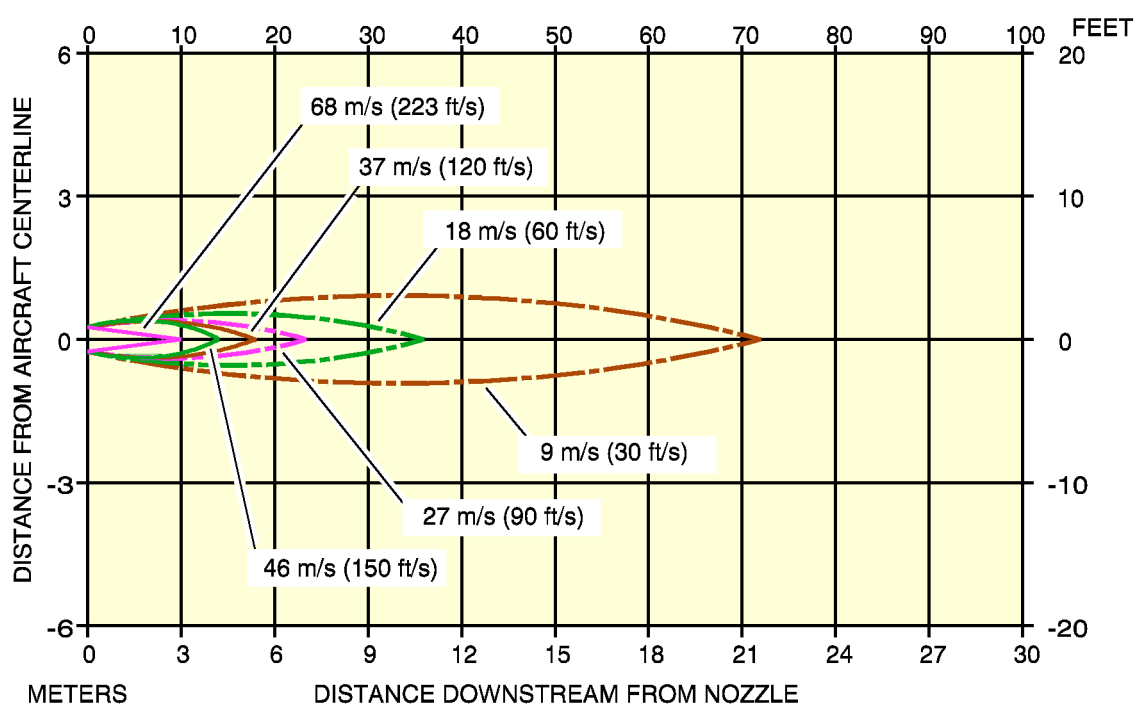
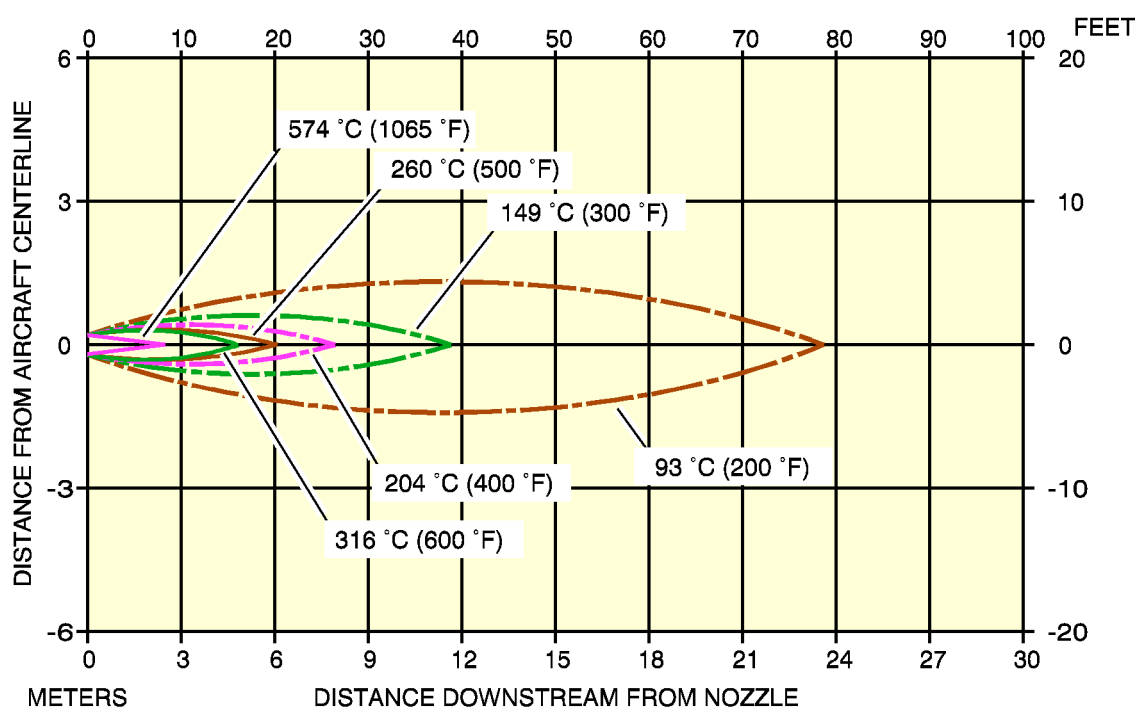


AIRPLANE CHARACTERISTICS

6-4 APU EXHAUST VELOCITIES AND TEMPERATURES



AIRPLANE CHARACTERISTICS



NOTE: THE DATA GIVEN IS BASED ON THE FOLLOWING ASSUMPTIONS:

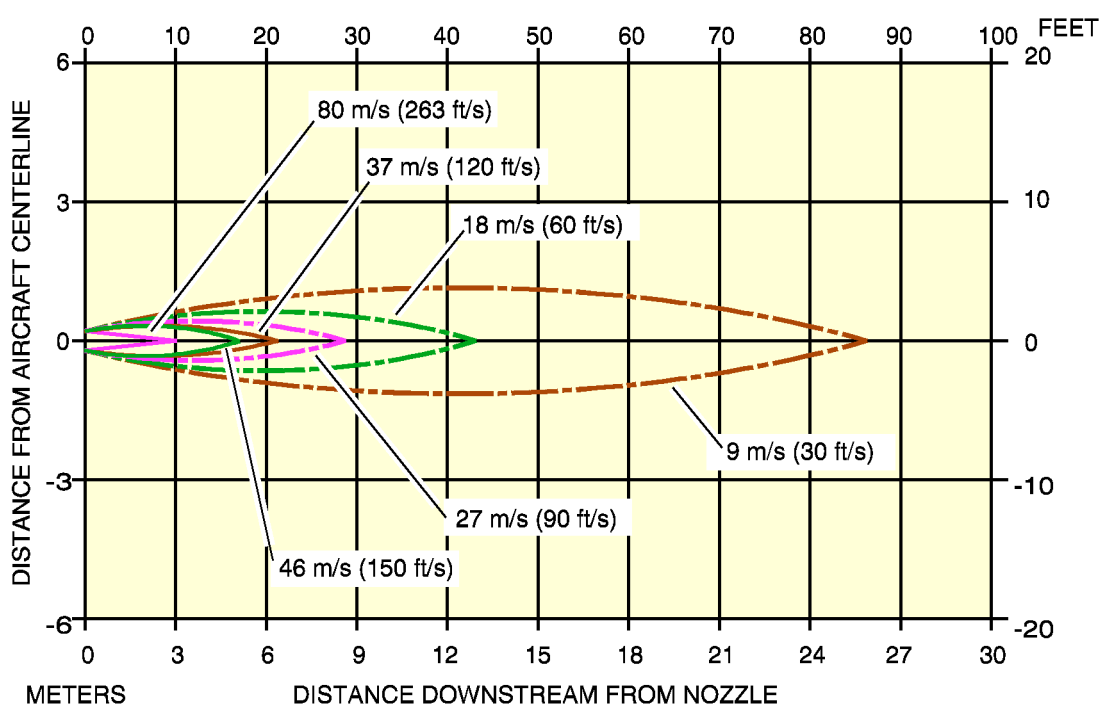
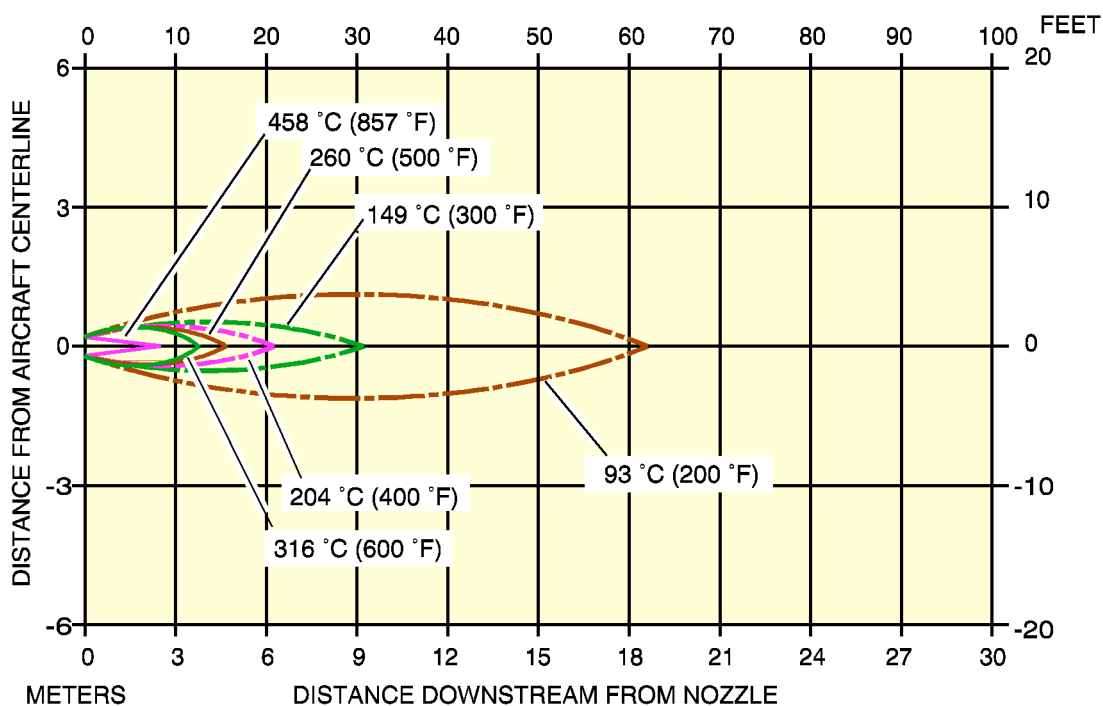
- SEA LEVEL STATIC CONDITIONS
- ISA + 23 °C (73 °F)
- NO WIND

L_AC_060401_0_AAM0_01_01

APU Exhaust Velocities and Temperatures
Max. ECS Conditions
A380-800 Models



AIRPLANE CHARACTERISTICS



NOTE: THE DATA GIVEN IS BASED ON THE FOLLOWING ASSUMPTIONS:

- SEA LEVEL STATIC CONDITIONS
- ISA + 23 °C (73 °F)
- NO WIND

L_AC_060402_0_AAM0_01_00

APU Exhaust Velocities and Temperatures
MES Conditions
A380-800 Models



AIRPLANE CHARACTERISTICS

7-0 PAVEMENT DATA

7-1 General Information

7-2 Landing Gear Footprint

7-3 Maximum Pavement Loads

7-4 Landing Gear Loading on Pavement

7-4-1 Landing Gear Loading on Pavement

7-4-2 Wing Gear and Body Gear Loading on Pavement

7-4-3 Wing Gear and Body Gear Loading on Pavement

7-5 Flexible Pavement Requirements - US Army Corps of Engineers Design Method

7-5-1 Flexible Pavement Requirements - US Army Corps of Engineers Design Method S-77-1

7-6 Flexible Pavement Requirements - LCN Conversion

7-6-1 Flexible Pavement Requirements - LCN Conversion

7-7 Rigid Pavement Requirements - Portland Cement Association Design Method

7-7-1 Rigid Pavement Requirements - Portland Cement Association Design Method

7-8 Rigid Pavement Requirements - LCN Conversion

7-8-1 Radius of Relative Stiffness

7-8-2 Rigid Pavement Requirements - LCN Conversion

7-8-3 Radius of Relative Stiffness (Other values of E and L)

7-8-4 Radius of Relative Stiffness (Other values of E and L)

7-9 ACN/PCN Reporting System - Flexible and Rigid Pavements

7-9-1 Aircraft Classification Number - Flexible Pavement

7-9-2 Aircraft Classification Number - Rigid Pavement



AIRPLANE CHARACTERISTICS

7-1 GENERAL INFORMATION

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

To aid in the interpolation between the discrete values shown, each airplane configuration is shown with a minimum range of five loads on the main landing gear.

All curves on the charts represent data at a constant specified tire pressure with:

- the airplane loaded to the maximum ramp weight
- the CG at its maximum permissible aft position.

Pavement requirements for commercial airplanes are derived from the static analysis of loads imposed on the main landing gear struts.

Section 7-2, presents basic data on the landing gear footprint configuration, maximum ramp weights and tire sizes and pressures.
Section 7-2 Page 1: Model -800 and Section 7-2 Page 2: Model -800F.

Section 7-3, shows maximum vertical and horizontal pavement loads for certain critical conditions at the tire-ground interfaces.

Section 7-3 Page 1: Model -800 and Section 7-3 Page 2: Model -800F.

Section 7-4 contains charts to find these loads throughout the stability limit of the airplane at rest on the pavement.
Section 7-4-1 Page 1: Model -800 and Section 7-4-1 Page 2: Model -800F.

Section 7-4-3 shows the distribution of the main landing gear load to the wing and body gears.
Section 7-4-3 Page 1: Model -800 and Section 7-4-3 Page 2: Model -800F.

These main landing gear loads are used as the point of entry to the pavement design charts which follow, interpolating load values where necessary.

Section 7-5-1 uses procedures in Instruction Report No. S-77-1 "Procedures for Development of CBR Design Curves", dated June 1977 to show flexible pavement design curves.

The report was prepared by the U.S. Army Corps Engineers Waterways Experiment Station, Soils and Pavement Laboratory, Vicksburg, Mississippi.
Section 7-5-1 Page 1: Model -800 and Section 7-5-1 Page 2: Model -800F.

The line showing 10 000 coverages is used to calculate the Aircraft Classification Number (ACN).

AIRPLANE CHARACTERISTICS

The procedure that follows is used to develop flexible pavement design curves such as those shown in Section 7-5-1.

1. With the scale for pavement thickness at the bottom and the scale for CBR at the top, an arbitrary line is drawn representing 10 000 coverages.
2. Incremental values of the weight on the main landing gear are then plotted.
3. Annual departure lines are drawn based on the load lines of the weight on the main landing gear that is shown on the graph.

Section 7-7-1 gives the rigid pavement design curves that have been prepared with the use of the Westergaard Equation. This is in general accordance with the procedures outlined in the Portland Cement Association publications, "Design of Concrete Airport Pavement", 1973 and "Computer Program for Airport Pavement Design", (Program PDILB), 1967 both by Robert G. Packard.

Section 7-7-1 Page 1: Model -800 and Section 7-7-1 Page 2: Model -800F.

The procedure that follows is used to develop rigid pavement design curves such as those shown in Section 7-7-1.

1. With the scale for pavement thickness on the left and the scale for allowable working stress on the right, an arbitrary line load line is drawn. This represents the main landing gear maximum weight to be shown.
2. All values of the subgrade modulus (k values) are then plotted.
3. Additional load lines for the incremental values of weight on the main landing gear are drawn on the basis of the curve for $k = 300$ already shown on the graph.

All Load Classification Number (LCN) curves shown in Section 7-6-1 and Section 7-8-2 have been developed from a computer program based on data provided in the International Civil Aviation Organisation (ICAO) document 7920-AN/865/2, Aerodrome Manual, Part 2, "Aerodrome Physical Characteristics", Second Edition, 1965.

The flexible pavement charts in Section 7-6-1 show LCN against equivalent single wheel load, and equivalent single wheel load against pavement thickness.

Section 7-6-1 Page 1: Model -800 and Section 7-6-1 Page 2: Model -800F.

The rigid pavement charts in Section 7-8-2 show LCN against equivalent single wheel load against radius of relative stiffness.

Section 7-8-2 Page 1: Model -800 and Section 7-8-2 Page 2: Model -800F.

AIRPLANE CHARACTERISTICS

Section 7-9 provides ACN data prepared according to the ACN/PCN system as referenced in ICAO Annex 14, "Aerodromes", Volume 1 Third Edition July 1999, incorporating Amendments 1 to 3.

The ACN/PCN system provides a standardized international airplane/pavement rating system replacing the various S, T, TT, LCN, AUW, ISWL, etc., rating systems used throughout the world.

ACN is the Aircraft Classification Number and PCN is the corresponding Pavement Classification Number.

An aircraft having an ACN equal to or less than the PCN can operate without restriction on the pavement.

Numerically the ACN is two times the derived single wheel load (expressed in thousands of kilograms).

The derived single wheel load is defined as the load on a single tire inflated to 1.25 MPa (181 psi) that would have the same pavement requirements as the aircraft.

Computationally, the ACN/PCN system uses PCA program PDILB for rigid pavement and S-77-1 for flexible pavements to calculate ACN values.

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

PCN			
PAVEMENT TYPE	SUBGRADE CATEGORY	TIRE-PRESSURE CATEGORY	EVALUATION METHOD
R-Rigid F-Flexible	A-High B-Medium C-Low D-Ultra Low	W-No Limit X-To 1.50 MPa (217 psi) Y-To 1.00 MPa (145 psi) Z-To 0.50 MPa (73 psi)	T-Technical U-Using aircraft

Section 7-9-1 page 1 (A380-800) and page 2 (A380-800F) show the aircraft ACN values for flexible pavements.

The four subgrade categories are :

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

Section 7-9-2 page 1 (A380-800) and page 2 (A380-800F) show the aircraft ACN for rigid pavements.

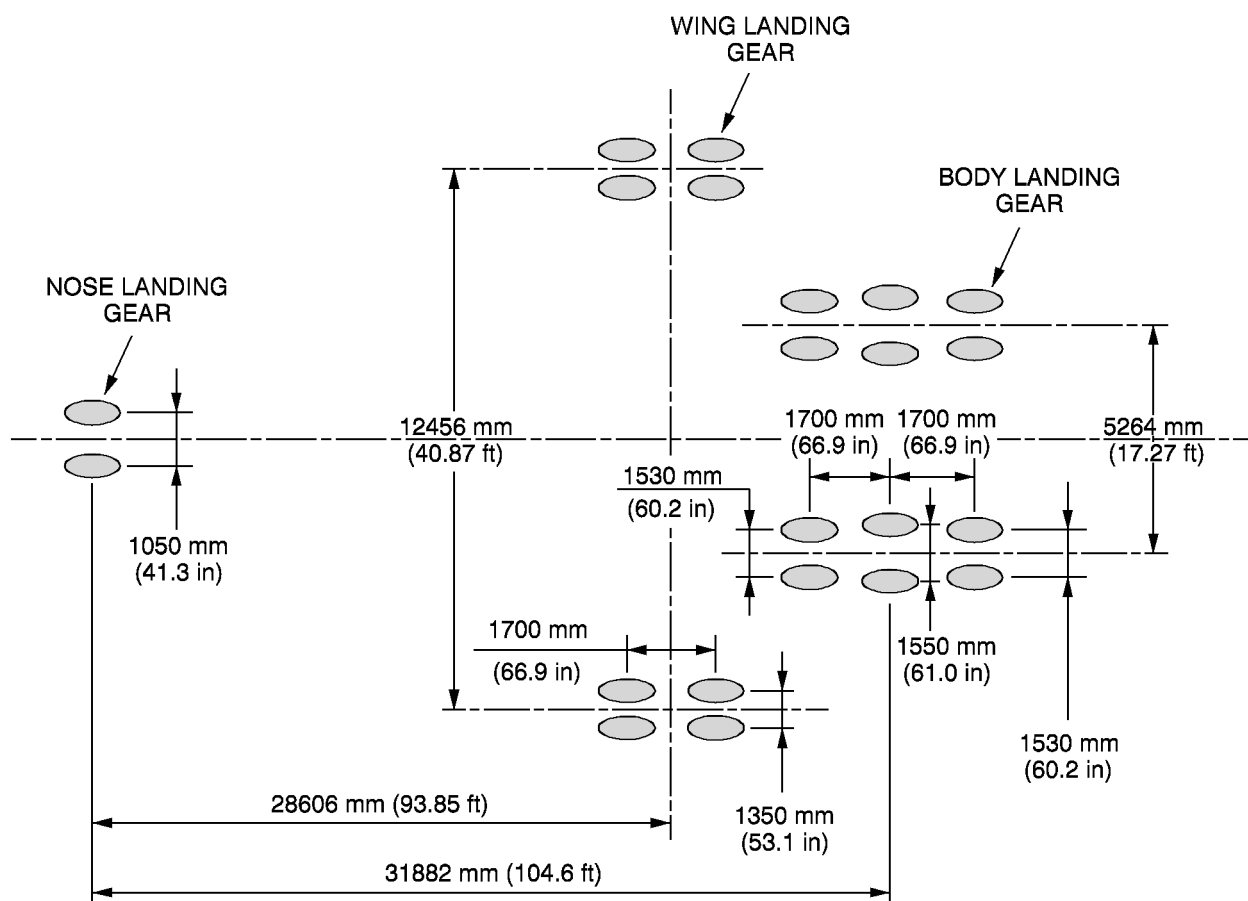
The four subgrade categories are :

- A High Strength Subgrade $k = 150 \text{ MN/m}^3$ (550 pci)
- B Medium Strength Subgrade $k = 80 \text{ MN/m}^3$ (300 pci)
- C Low Strength Subgrade $k = 40 \text{ MN/m}^3$ (150 pci)
- D Ultra Low Strength Subgrade $k = 20 \text{ MN/m}^3$ (75 pci)



AIRPLANE CHARACTERISTICS

MAXIMUM RAMP WEIGHT	562 000 kg (1 239 000 lb)
PERCENTAGE OF WEIGHT ON MAIN GEAR GROUP	SEE SHEET 7-4-1 PAGE 1
NOSE GEAR TIRE SIZE	1270 x 455R22 32PR
NOSE GEAR TIRE PRESSURE	14.1 bar (205 psi)
WING GEAR TIRE SIZE	1400 x 530R23 40PR
WING GEAR TIRE PRESSURE	15 bar (218 psi)
BODY GEAR TIRE SIZE	1400 x 530R23 40PR
BODY GEAR TIRE PRESSURE	15 bar (218 psi)



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R
R

Landing Gear Footprint
A380-800 Models

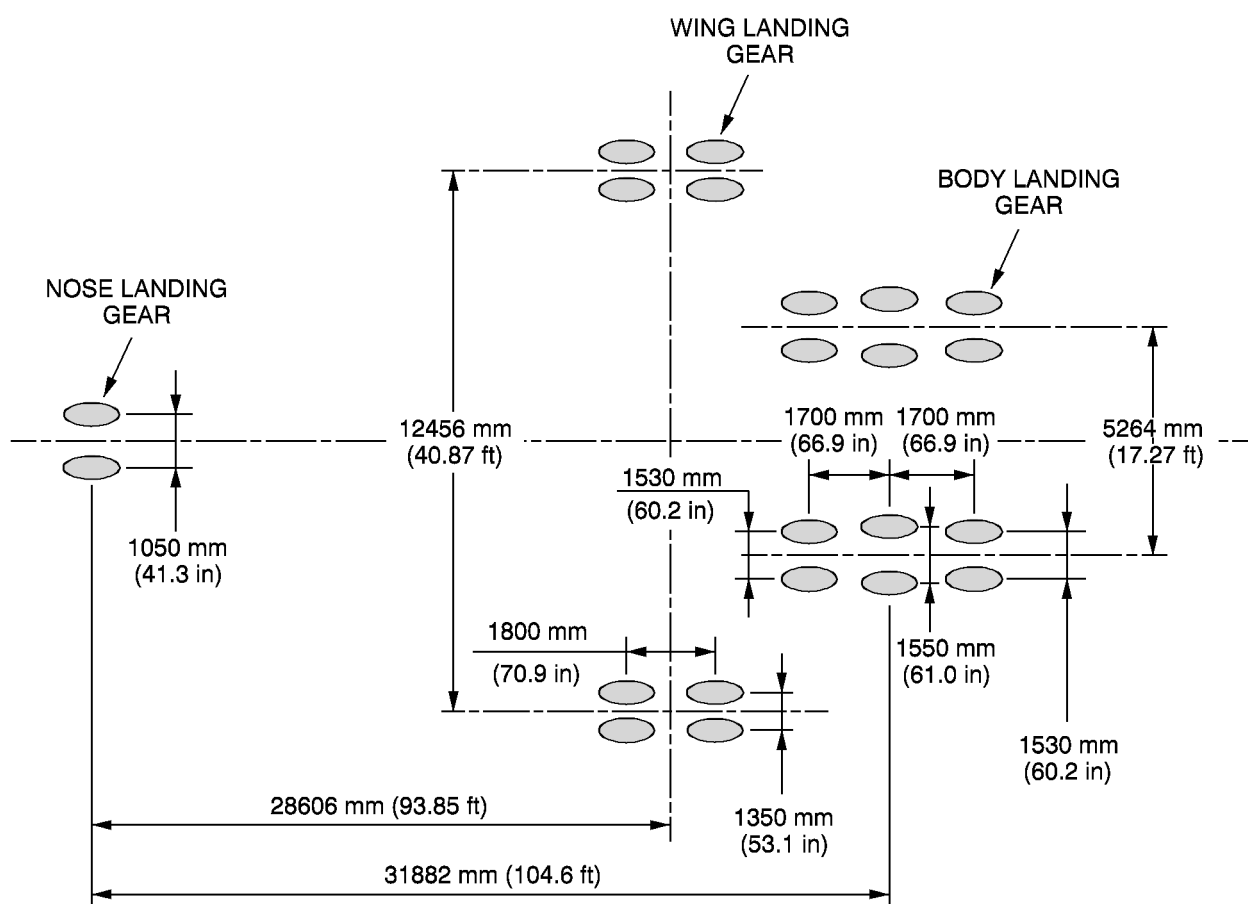
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7-2
Page 1
SEP 30/03

Printed in France

AIRPLANE CHARACTERISTICS

MAXIMUM RAMP WEIGHT	592 000 kg (1 305 125 lb)
PERCENTAGE OF WEIGHT ON MAIN GEAR GROUP	SEE SHEET 7-4-1 PAGE 2
NOSE GEAR TIRE SIZE	50 x 20R22 34PR
NOSE GEAR TIRE PRESSURE	14.7 bar (213 psi)
WING GEAR TIRE SIZE	1400 x 530R23 42PR
WING GEAR TIRE PRESSURE	15 bar (218 psi)
BODY GEAR TIRE SIZE	1400 x 530R23 42PR
BODY GEAR TIRE PRESSURE	15 bar (218 psi)



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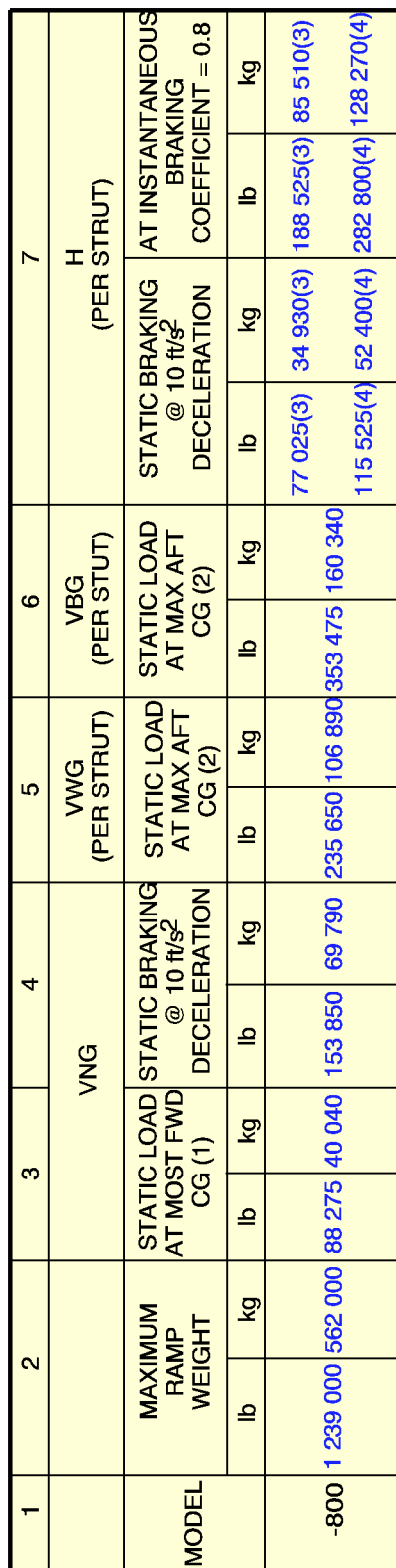
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Landing Gear Footprint A380-800F Models

R

7-2
Page 2
SEP 30/03

Printed in France

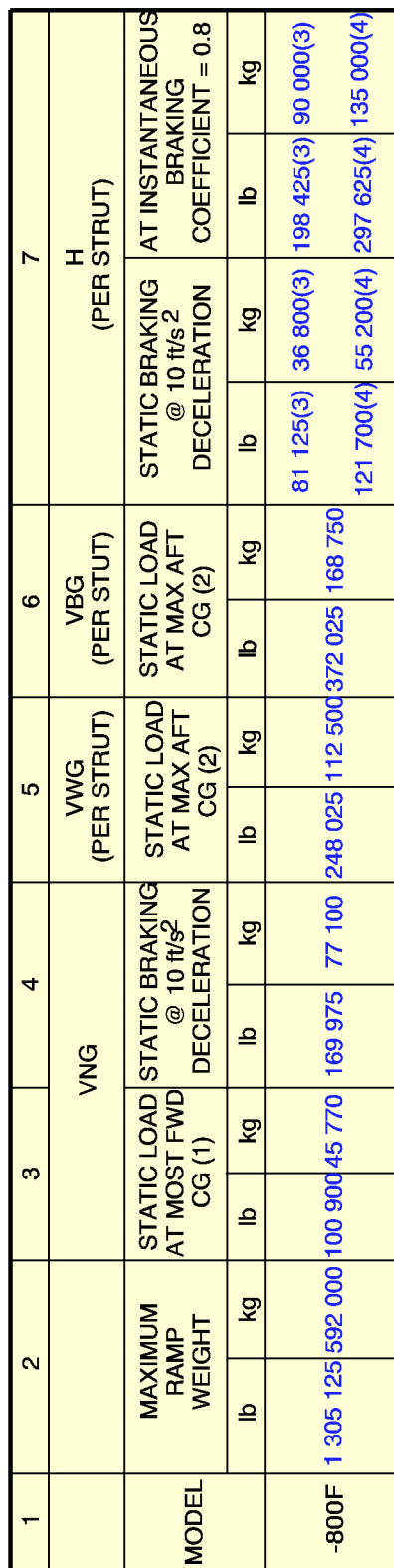


(4) BRAKED BODY GEAR

NOTE: ALL LOADS CALCULATED USING AIRPLANE MAXIMUM RAMP WEIGHT

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Maximum Pavement Loads A380-800 Models



(4) BRAKED BODY GEAR

NOTE: ALL LOADS CALCULATED USING AIRPLANE MAXIMUM RAMP WEIGHT

L_AC_070300_0_ACM0_01_03

Maximum Pavement Loads A380-800F Models



AIRPLANE CHARACTERISTICS

7-4 LANDING GEAR LOADING ON PAVEMENT

The Main Landing Gear Group consists of two Wing Gears (4 Wheel Bogies) plus two Body Gears (6 Wheel Bogies).

- A380-800 models :

In the example shown in Section 7-4-1 Page 1, the Gross Aircraft Weight is 450 tonnes (992 080 lb) and the percentage of weight on the Main Landing gear is 95.1 %.

For these conditions the total weight on the Main Landing Gear Group is 428 tonnes (943 580 lb).

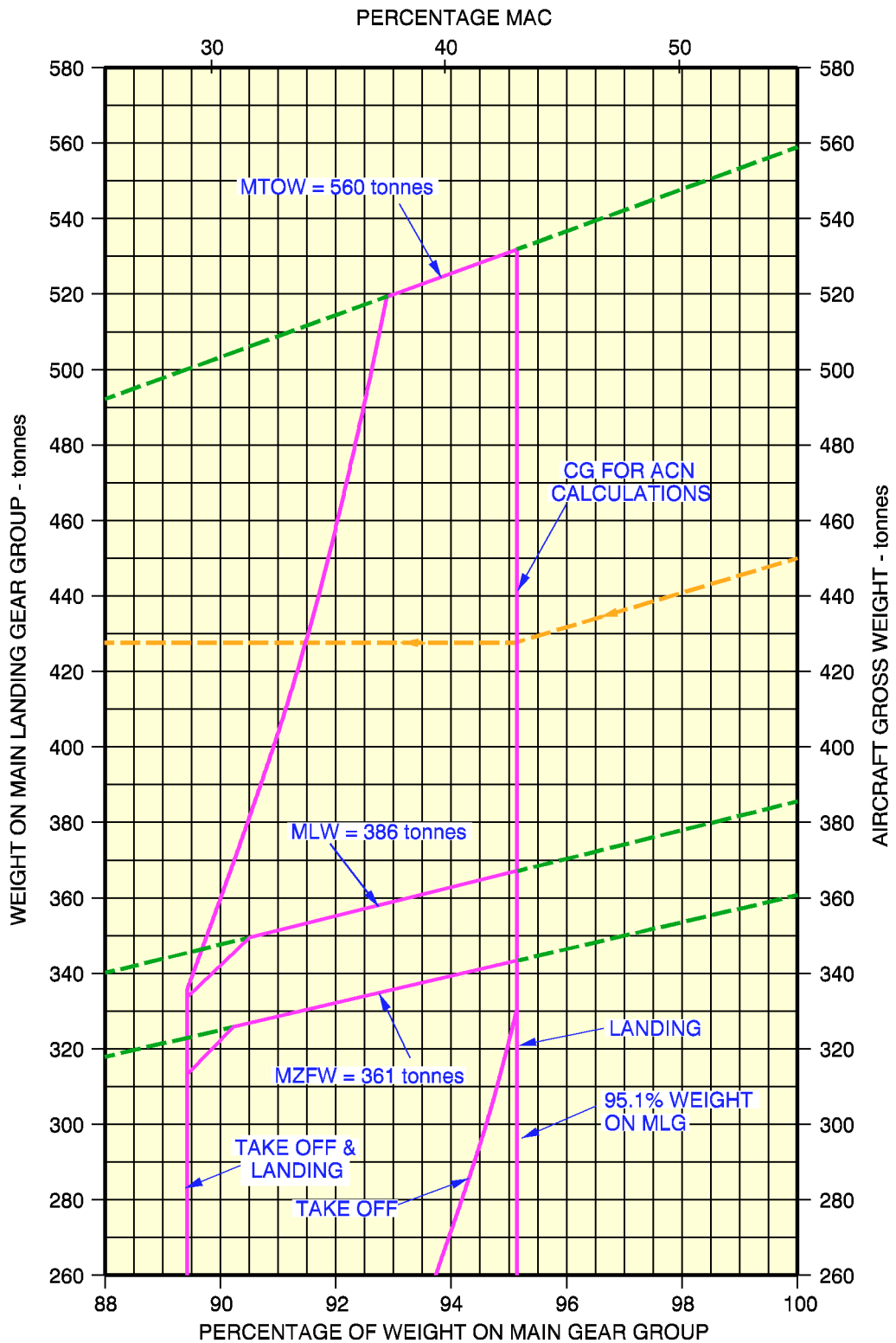
- A380-800F models :

In the example shown in Section 7-4-1 Page 2, the Gross Aircraft Weight is 450 tonnes (992 080 lb) and the percentage of weight on the Main Landing gear is 95 %.

For these conditions the total weight on the MLG Group is 427.5 tonnes (942 475 lb).



AIRPLANE CHARACTERISTICS

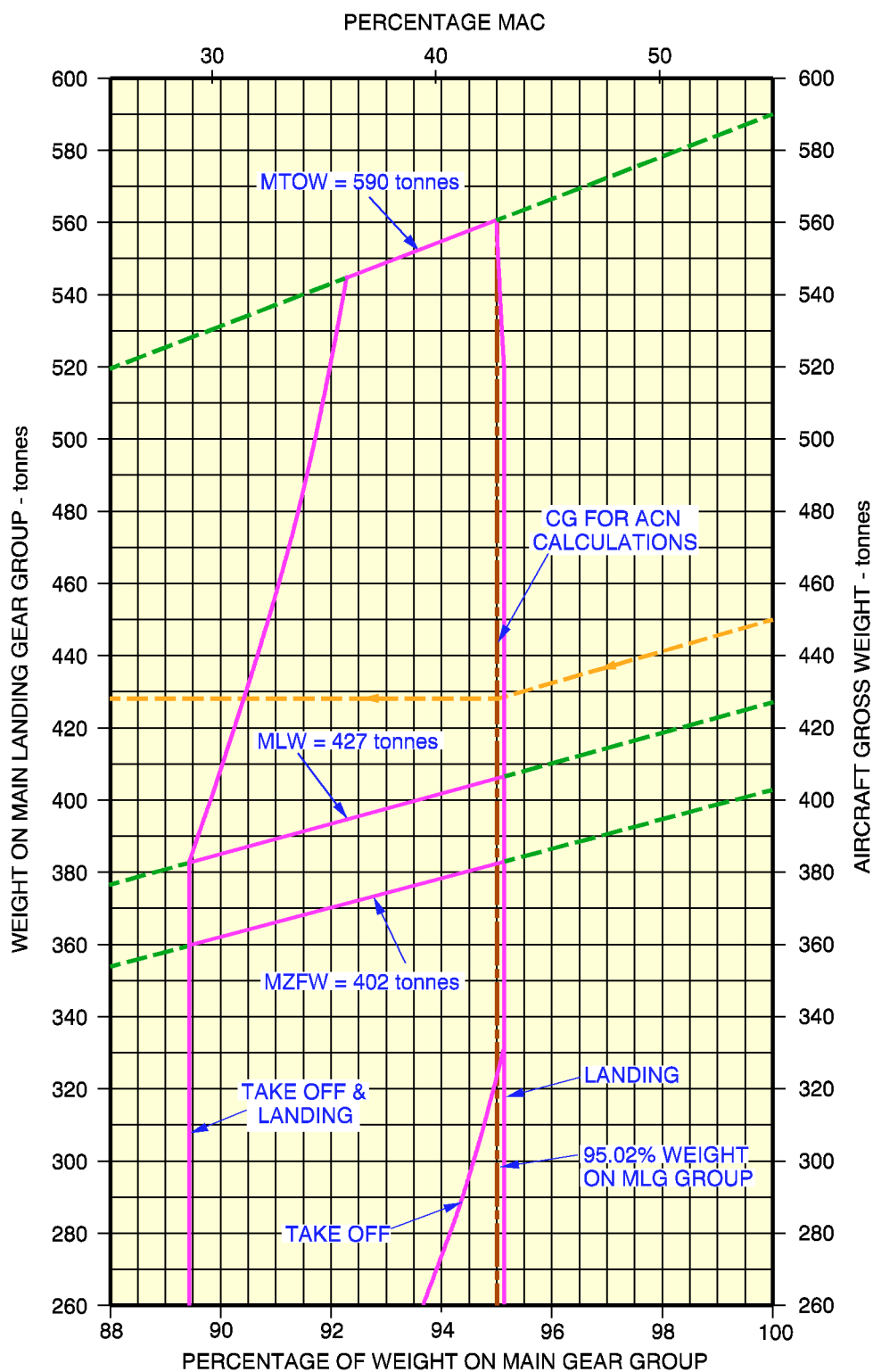


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Landing Gear Loading on Pavement
A380-800 Models



AIRPLANE CHARACTERISTICS



L_AC_070401_0_ACM0_01_03

Landing Gear Loading on Pavement
A380-800F Models



AIRPLANE CHARACTERISTICS

7-4-2 WING GEAR AND BODY GEAR LOADING ON PAVEMENT

The Main Landing Gear Group consists of two Wing Gears (4 Wheel Bogies) plus two Body Gears (6 Wheel Bogies).

- A380-800 models :

In the example shown in Section 7-4-3 Page 1, the Gross Aircraft Weight is 450 tonnes (992 080 lb) at Aft CG for ACN Calculations

(see Section 7-4-1, Page 1)

For these conditions the load on the two Wing Gears is 171.2 tonnes (377 430 lb) and the load on the two Body Gears is 256.8 tonnes (566 150 lb).

The total weight on the Main Landing Gear Group is 428 tonnes (943 580 lb)

- A380-800F models :

In the example shown in Section 7-4-3 Page 2, the Gross Aircraft Weight is 450 tonnes (992 080 lb) at Aft CG for ACN Calculations

(see Section 7-4-1, Page 2)

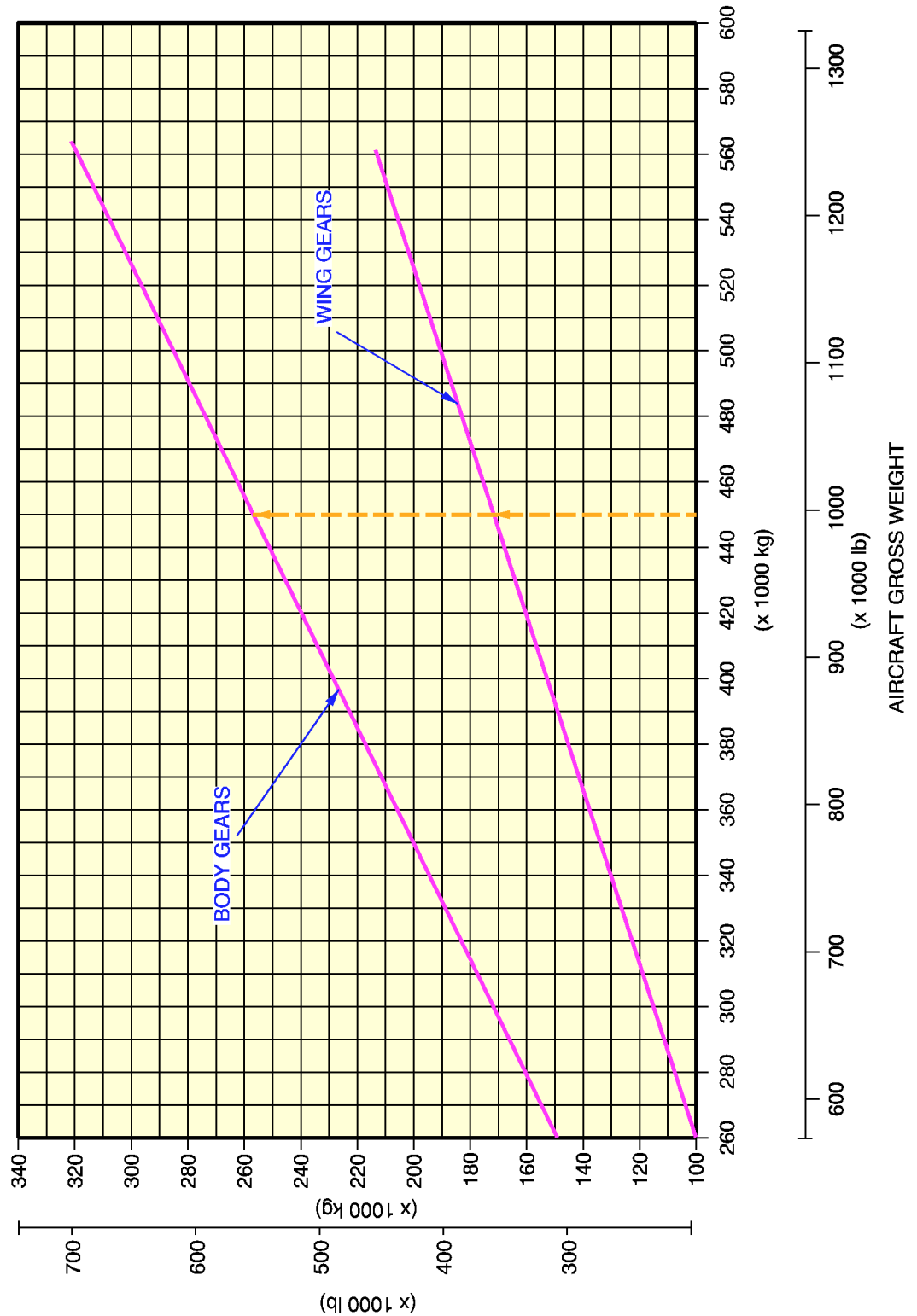
For these conditions the load on the two Wing Gears is 171 tonnes (376 990 lb) and the load on the two Body Gears is 256.5 tonnes (565 485 lb).

The total weight on the Main Landing Gear Group is 427.5 tonnes (942 475 lb)



AIRPLANE CHARACTERISTICS

CG FOR ACN CALCULATIONS: 43 % MAC
SEE SECTION 7-4-1 PAGE 1



LOAD ON BODY GEARS OR LOAD ON WING GEARS

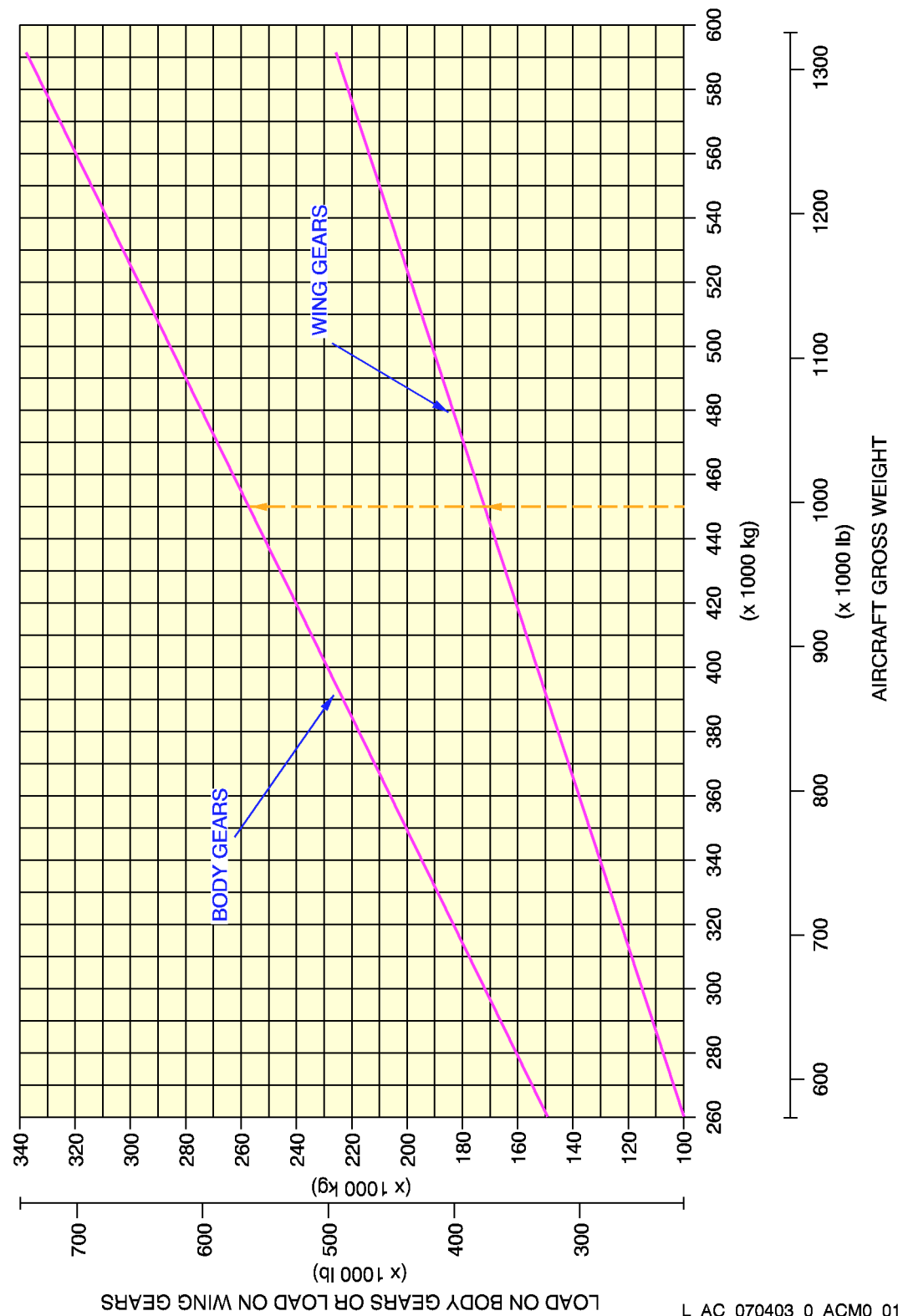
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Wing Gear and Body Gear Loading on Pavement
A380-800 Models



AIRPLANE CHARACTERISTICS

CG FOR ACN CALCULATIONS: 42.8 % MAC
SEE SECTION 7-4-1 PAGE 2



L_AC_070403_0_ACM0_01_02

Wing Gear and Body Gear Loading on Pavement
A380-800F Models



AIRPLANE CHARACTERISTICS

7-5 FLEXIBLE PAVEMENT REQUIREMENTS, U.S. ARMY CORPS OF ENGINEERS DESIGN METHOD

To find a Flexible Pavement Thickness, the Subgrade Strength (CBR), the Annual Departure Level and the weight on one Main Landing Gear must be known.

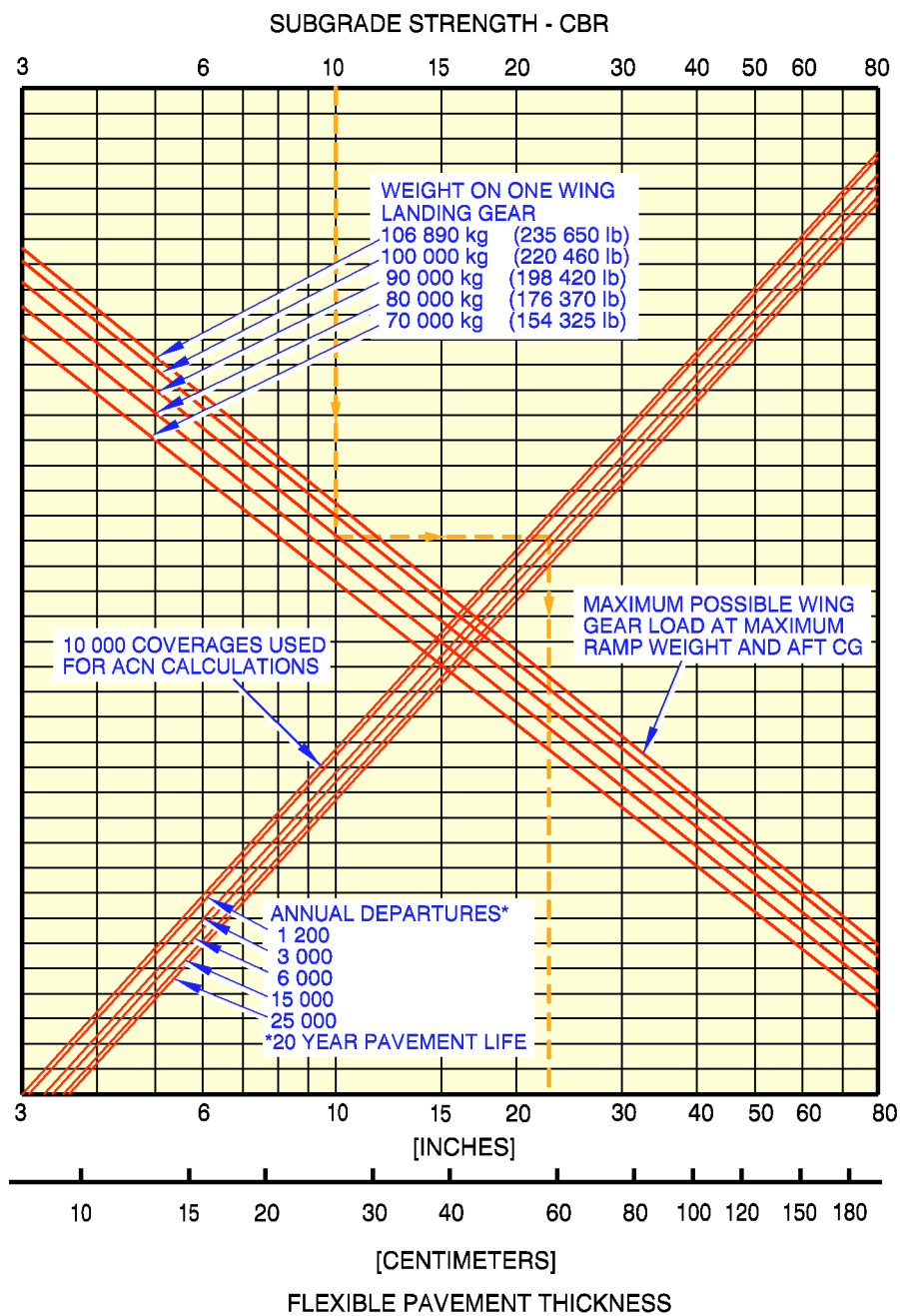
In the example shown in Section 7-5-1 Page 1 for:

- a CBR value of 10
- an Annual Departure Level of 3 000
- and the load on one Wing Landing Gear of 90 000 kg (198 420 lb)
the required Flexible Pavement Thickness is 58 cm (22.5 inches).

The line showing 10 000 Coverages is used to calculate Aircraft Classification Number (ACN).



AIRPLANE CHARACTERISTICS



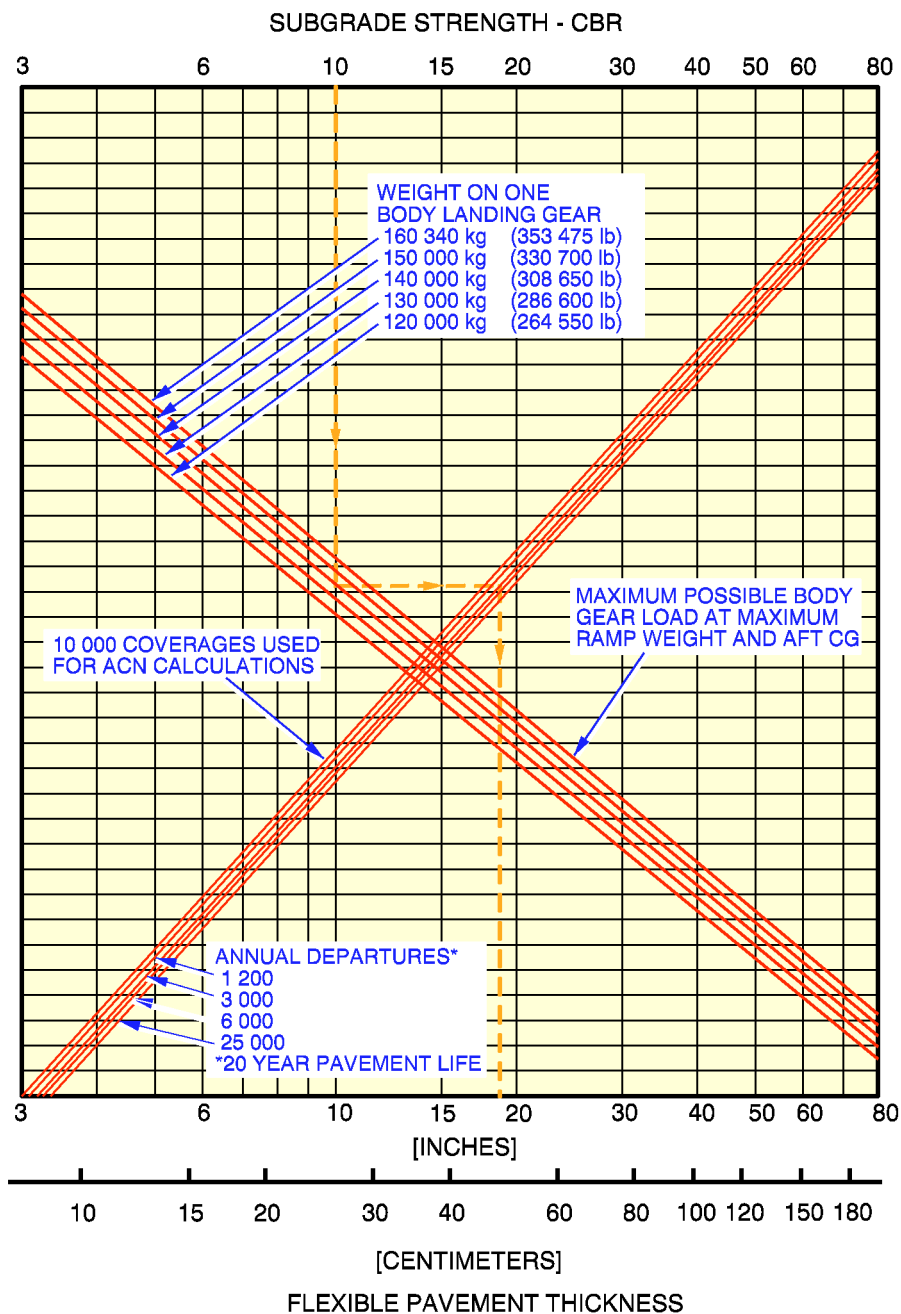
1400 x 530R23 40PR TIRES
TIRE PRESSURE CONSTANT AT 15.0 BAR (218 PSI)

L_AC_070501_0_AAM0_01_01

Flexible Pavement Requirements - 4 Wheel Bogie
A380-800 Models



AIRPLANE CHARACTERISTICS



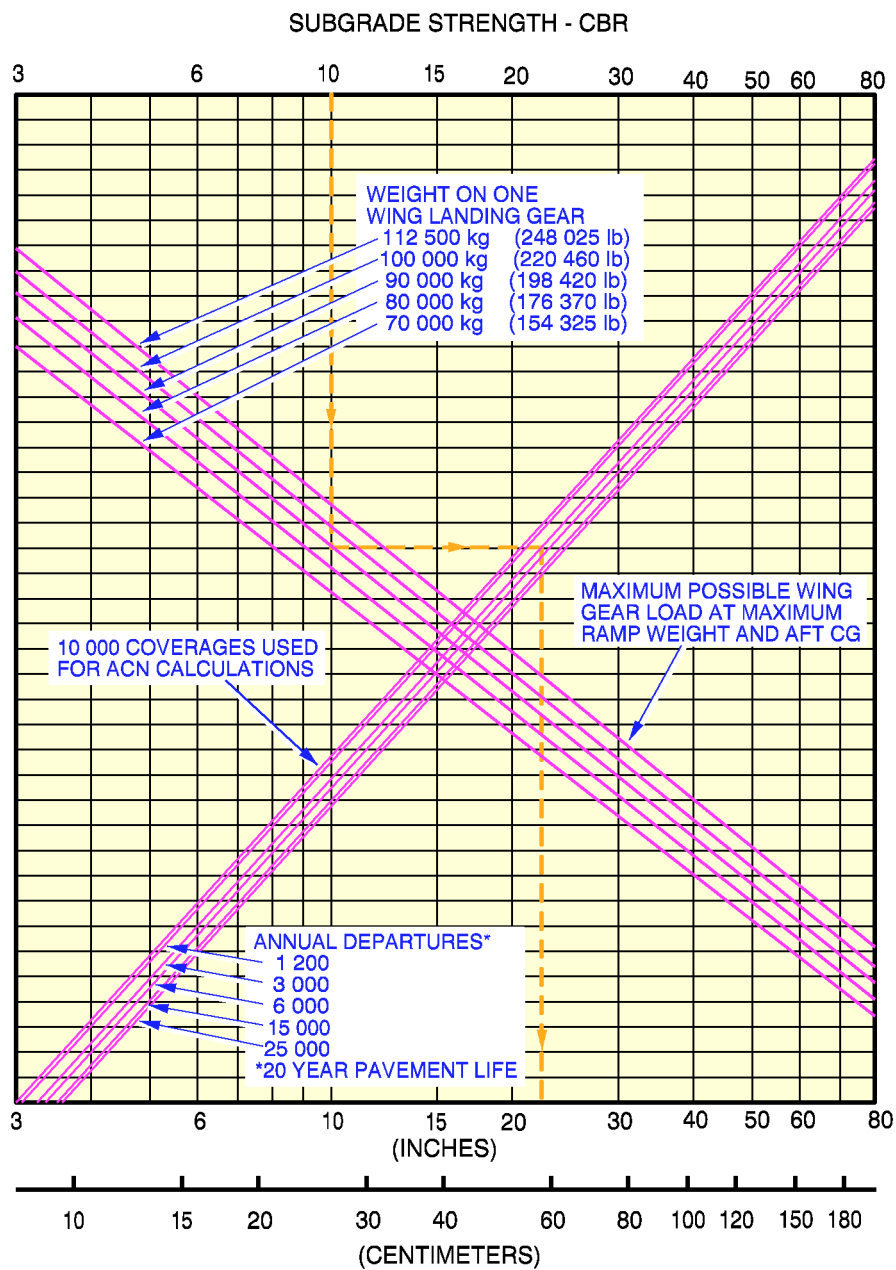
1400 x 530R23 40PR TIRES
TIRE PRESSURE CONSTANT AT 15.0 BAR (218 PSI)

L_AC_070501_0_ACM0_01_01

Flexible Pavement Requirements - 6 Wheel Bogie
A380-800 Models



AIRPLANE CHARACTERISTICS



FLEXIBLE PAVEMENT THICKNESS

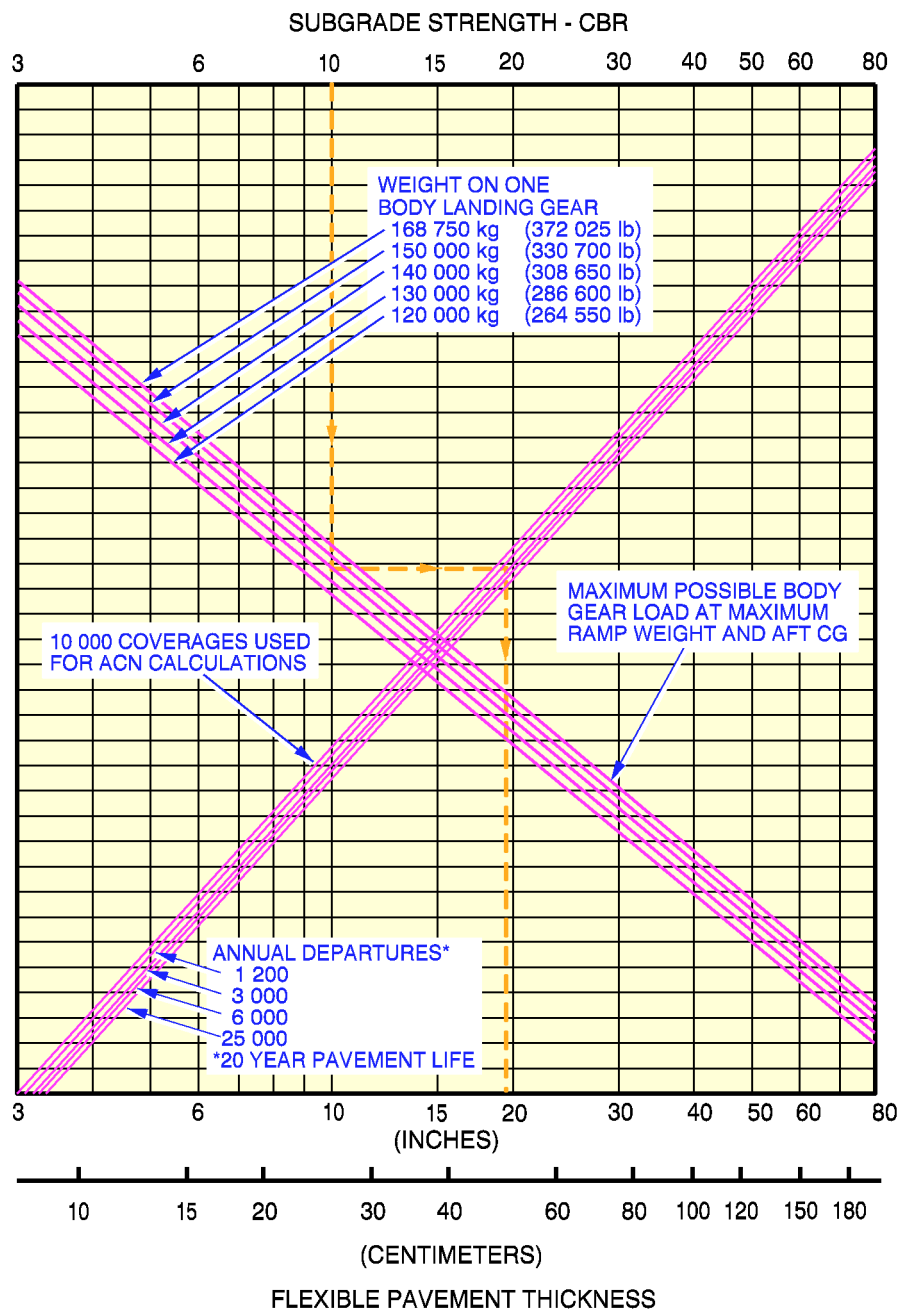
1400 x 530R23 42PR TIRES
TIRE PRESSURE CONSTANT AT 15 BAR (218 PSI)

L_AC_070501_0_AEM0_01_03

Flexible Pavement Requirements - 4 Wheel Bogie
A380-800F Models



AIRPLANE CHARACTERISTICS



1400 x 530R23 42PR TIRES
TIRE PRESSURE CONSTANT AT 15 BAR (218 PSI)

L_AC_070501_0_AGM0_01_03

Flexible Pavement Requirements - 6 Wheel Bogie
A380-800F Models



AIRPLANE CHARACTERISTICS

7-6 FLEXIBLE PAVEMENT REQUIREMENTS - LCN CONVERSION

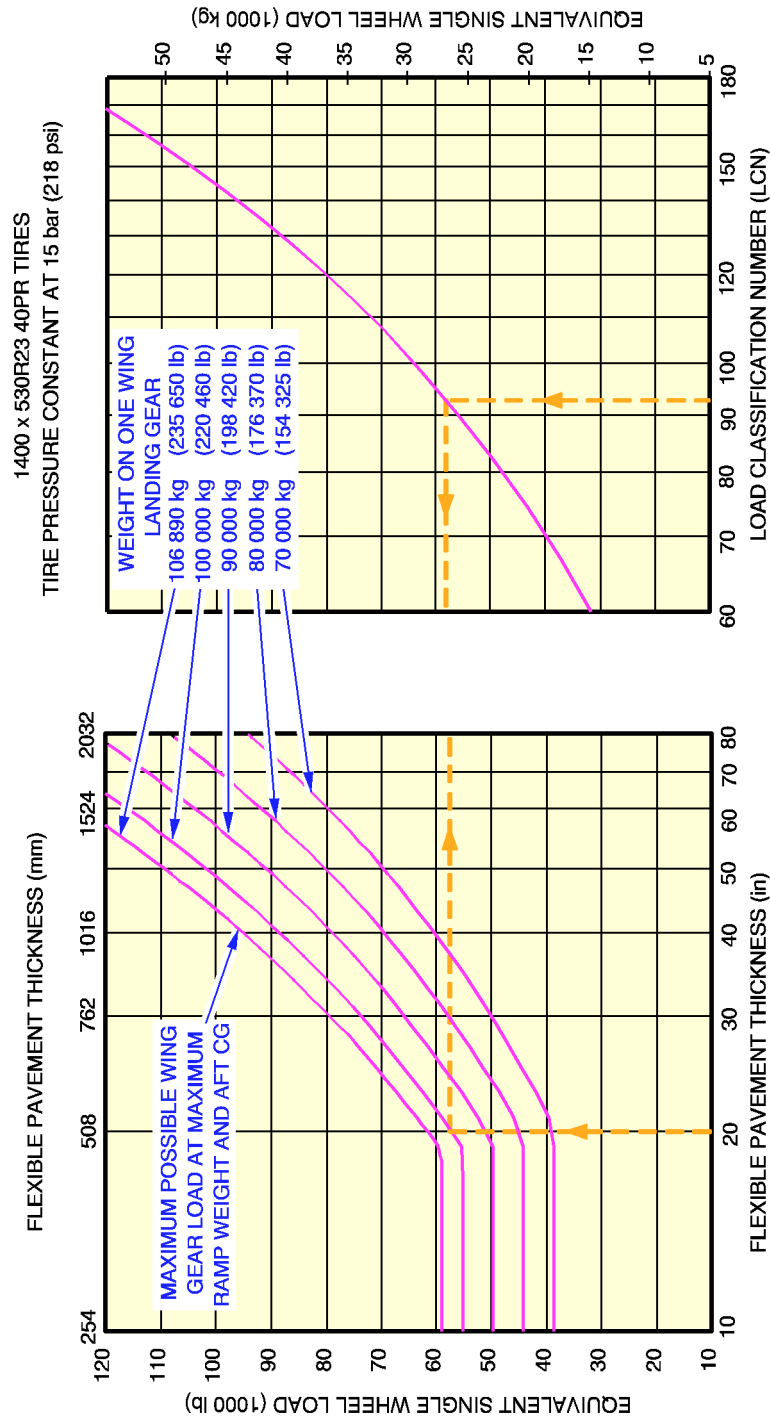
To find the airplane weight that a Flexible Pavement can support, the LCN of the pavement and the thickness (h) must be known.

In the typical example shown in Section 7-6-1 Page 1 the thickness (h) is shown at 508 mm (20 in.) with an LCN of 93.

For these conditions the weight on one Wing Landing Gear is 100 000 kg (220 460 lb).



AIRPLANE CHARACTERISTICS



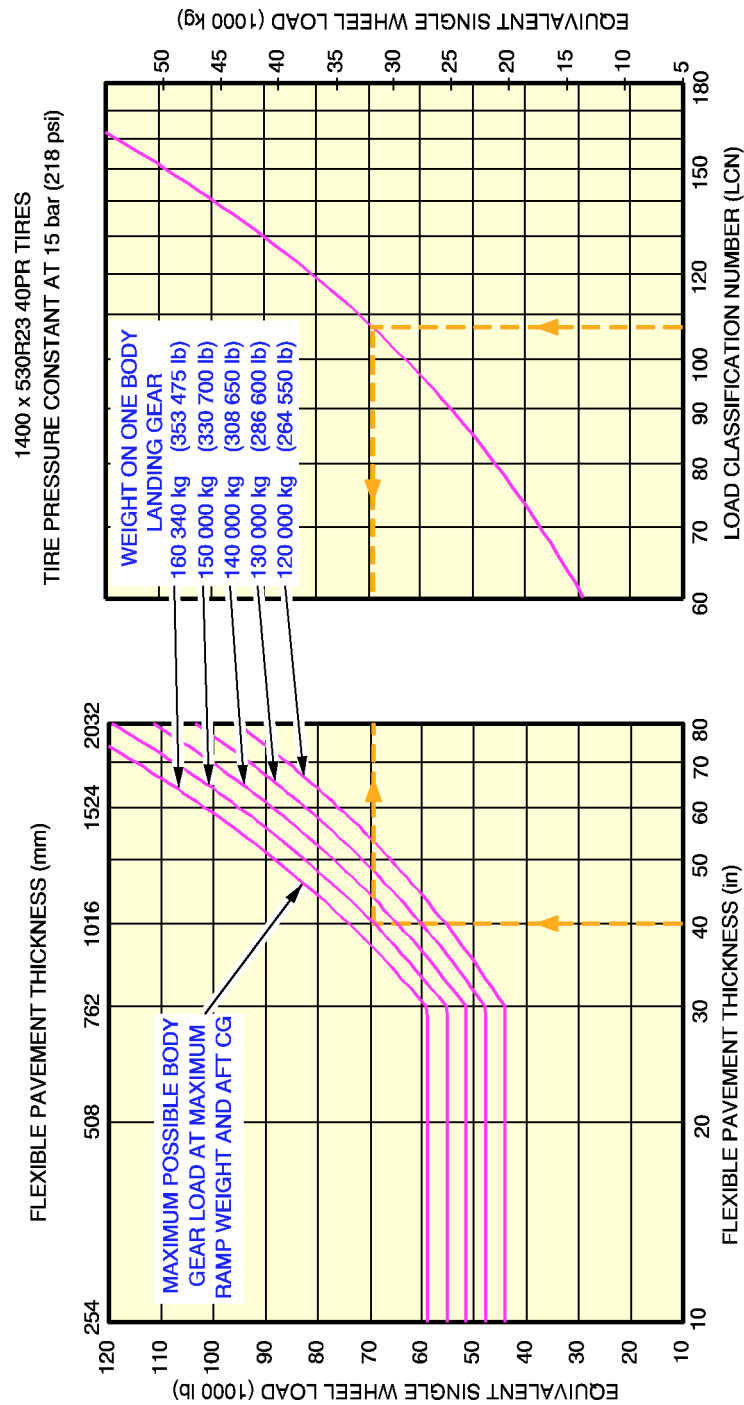
NOTE: EQUIVALENT SINGLE WHEEL LOADS ARE DERIVED BY METHODS SHOWN IN
ICAO AERODROME MANUAL PART 2 PAR 4.1.3 Second Edition 1965

L_AC_070601_0_AAA0_01_00

Flex Pavement Requirements LCN
Model - A380-800 (4 Wheel Bogie)



AIRPLANE CHARACTERISTICS



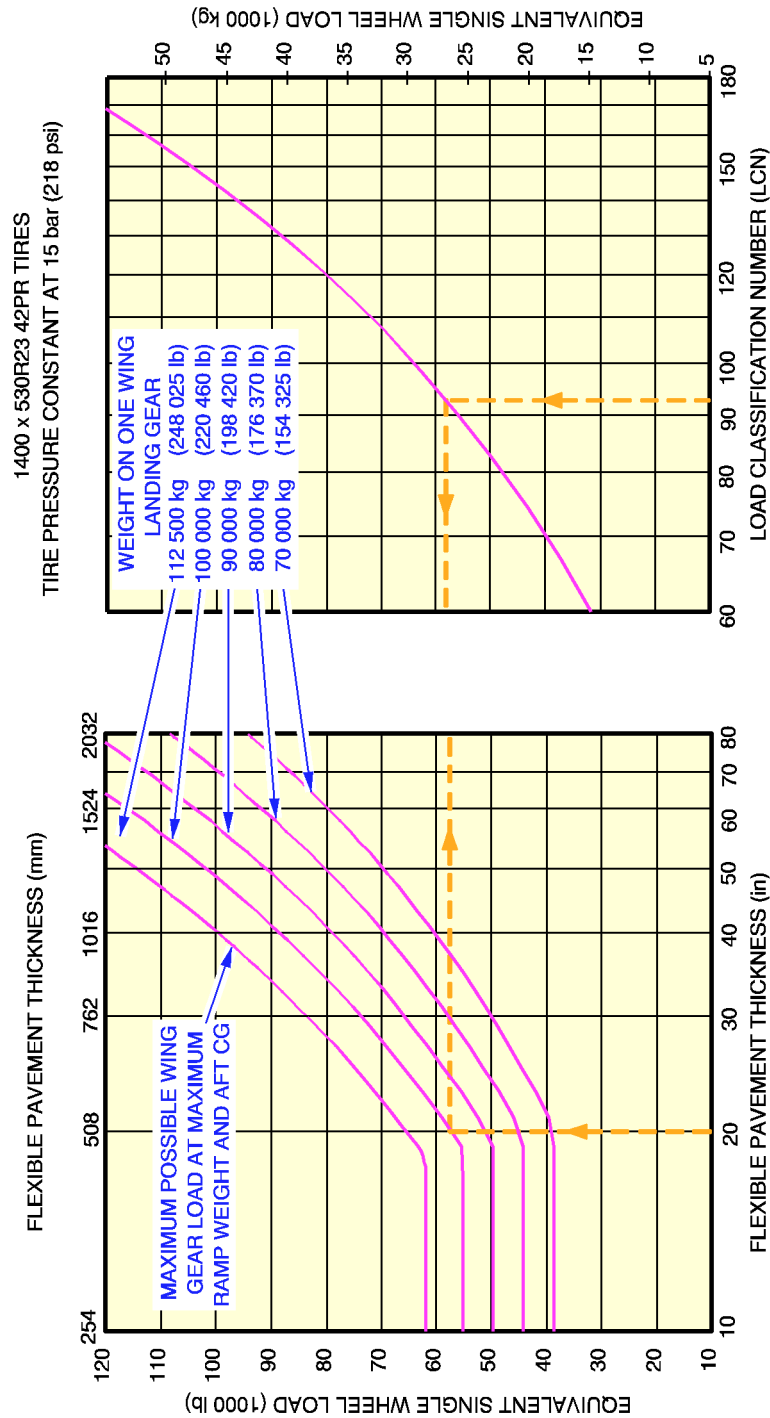
NOTE: EQUIVALENT SINGLE WHEEL LOADS ARE DERIVED BY METHODS SHOWN IN
ICAO AERODROME MANUAL PART 2 PAR 4.1.3 Second Edition 1965

L_AC_070601_0_AAB0_01_00

Flex Pavement Requirements LCN
Model - A380-800 (6 Wheel Bogie)



AIRPLANE CHARACTERISTICS



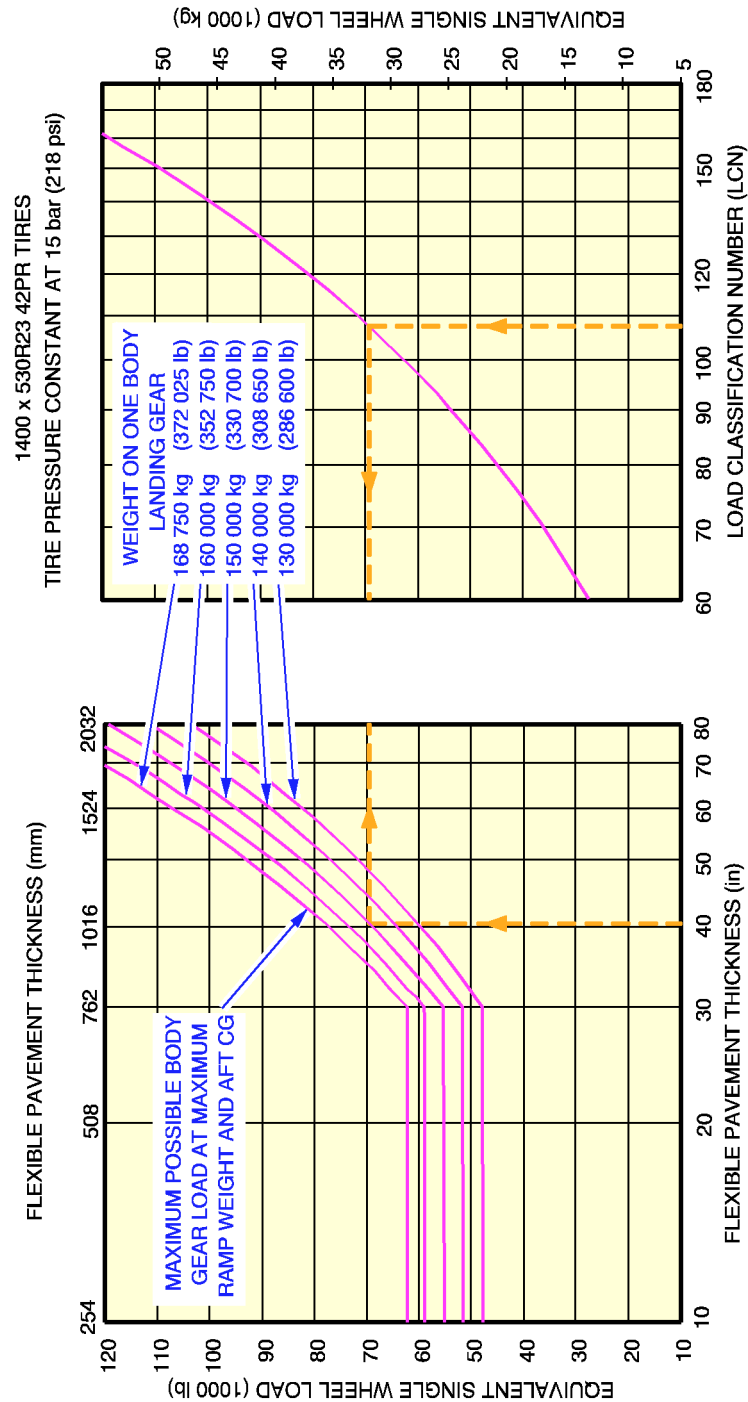
NOTE: EQUIVALENT SINGLE WHEEL LOADS ARE DERIVED BY METHODS SHOWN IN
ICAO AERODROME MANUAL PART 2 PAR 4.1.3 Second Edition 1965

L_AC_070601_0_AAC0_01_00

Flex Pavement Requirements LCN
Model - A380-800F (4 Wheel Bogie)



AIRPLANE CHARACTERISTICS



NOTE: EQUIVALENT SINGLE WHEEL LOADS ARE DERIVED BY METHODS SHOWN IN
ICAO AERODROME MANUAL PART 2 PAR 4.1.3 Second Edition 1965

L_AC_070601_0_AAD0_01_00

Flex Pavement Requirements LCN
Model - A380-800F (6 Wheel Bogie)



AIRPLANE CHARACTERISTICS

7-7 RIGID PAVEMENT REQUIREMENTS - PORTLAND CEMENT ASSOCIATION DESIGN METHOD

To determine a Rigid Pavement Thickness, the Subgrade Modulus (k), the allowable working stress and the weight on one Main Landing Gear must be known.

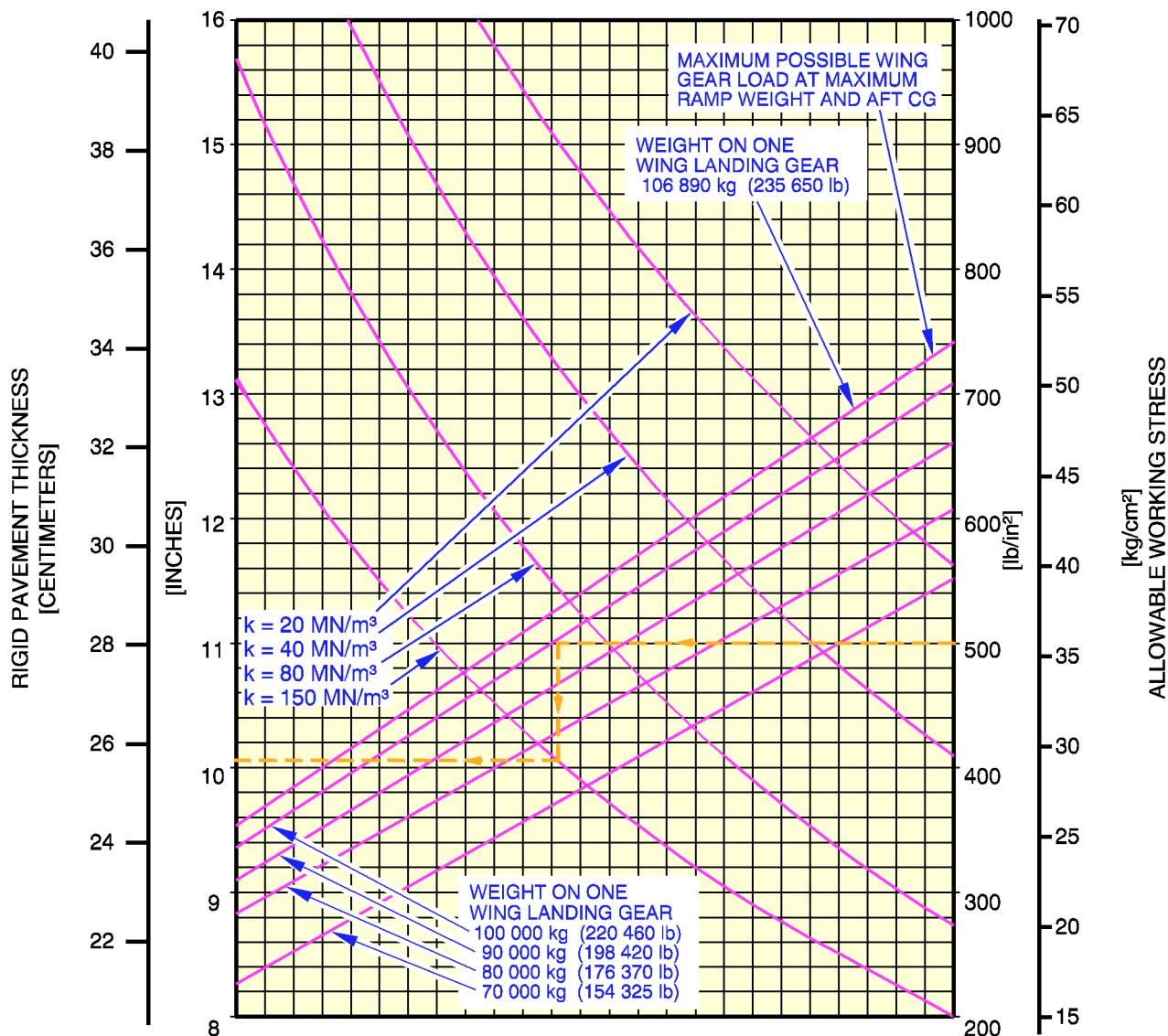
In the typical example shown in Section 7-7-1 Page 1 for:

- a k value of 550 lb/in³ (150 MN/m³)
 - an allowable working stress of 500 lb/in² (36 kg/cm²)
 - the load on one Wing Landing Gear of 100 000 kg (220 460 lb),
- the required Rigid Pavement Thickness is 25.5 cm (10.1 inches).



AIRPLANE CHARACTERISTICS

1400 x 530R23 40PR TIRES
TIRE PRESSURE CONSTANT = 15.0 BAR (218 PSI)



NOTES:
THE VALUES OBTAINED BY USING THE MAXIMUM LOAD REFERENCE LINE AND ANY VALUES FOR K ARE EXACT. FOR LOADS LESS THAN MAXIMUM, THE CURVES ARE EXACT FOR $K = 80 \text{ MN/m}^3$ BUT DEVIATE SLIGHTLY FOR ANY OTHER VALUES OF K

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

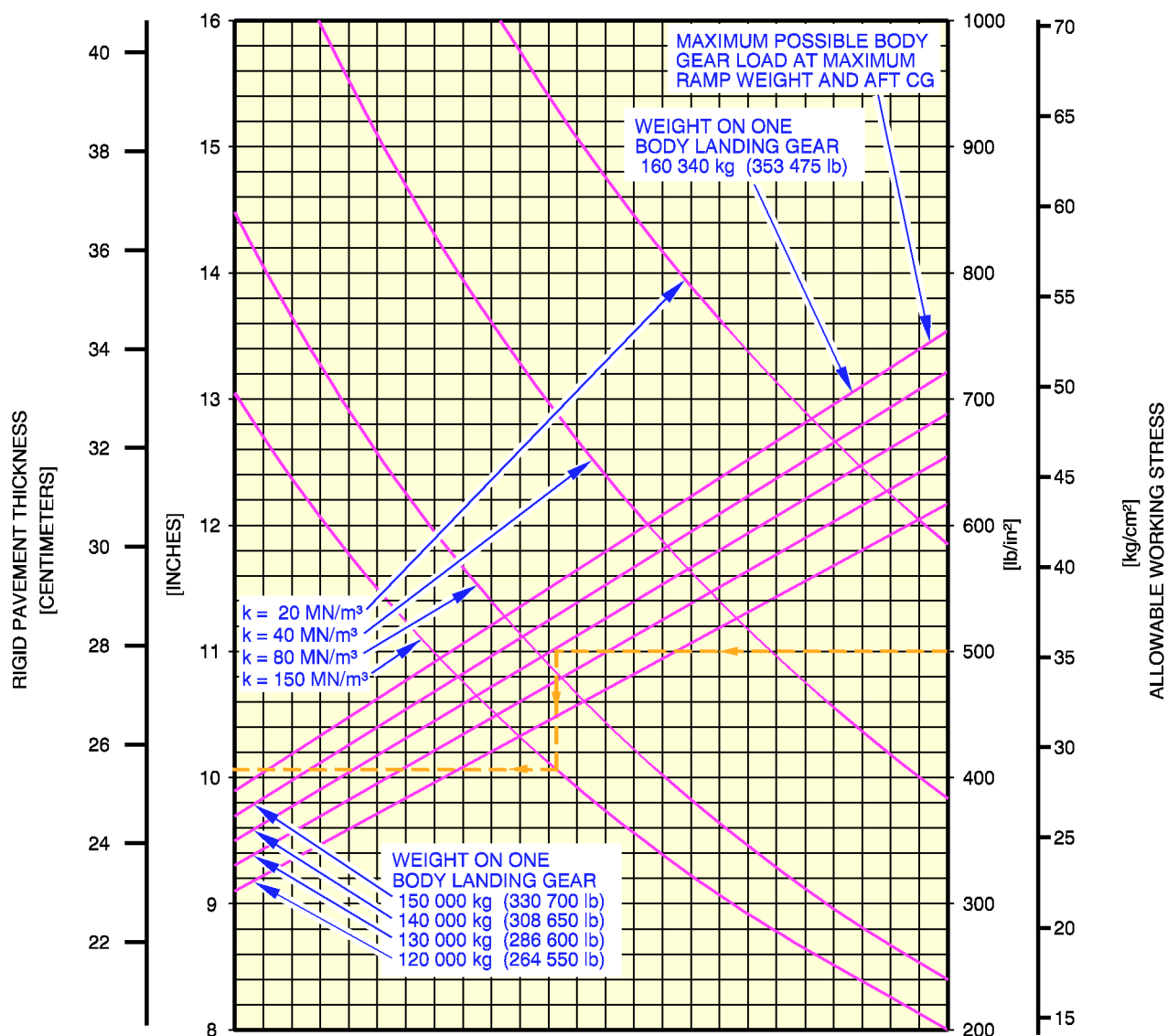
L_AC_070701_0_AAM0_01_01

Rigid Pavement Requirements - 4 Wheel Bogie
A380-800 Models



AIRPLANE CHARACTERISTICS

1400 x 530R23 40PR TIRES
TIRE PRESSURE CONSTANT = 15.0 BAR (218 PSI)



NOTES:
THE VALUES OBTAINED BY USING THE MAXIMUM LOAD REFERENCE LINE AND ANY VALUES FOR K ARE EXACT. FOR LOADS LESS THAN MAXIMUM, THE CURVES ARE EXACT FOR $K = 80 \text{ MN/m}^3$ BUT DEVIATE SLIGHTLY FOR ANY OTHER VALUES OF K

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

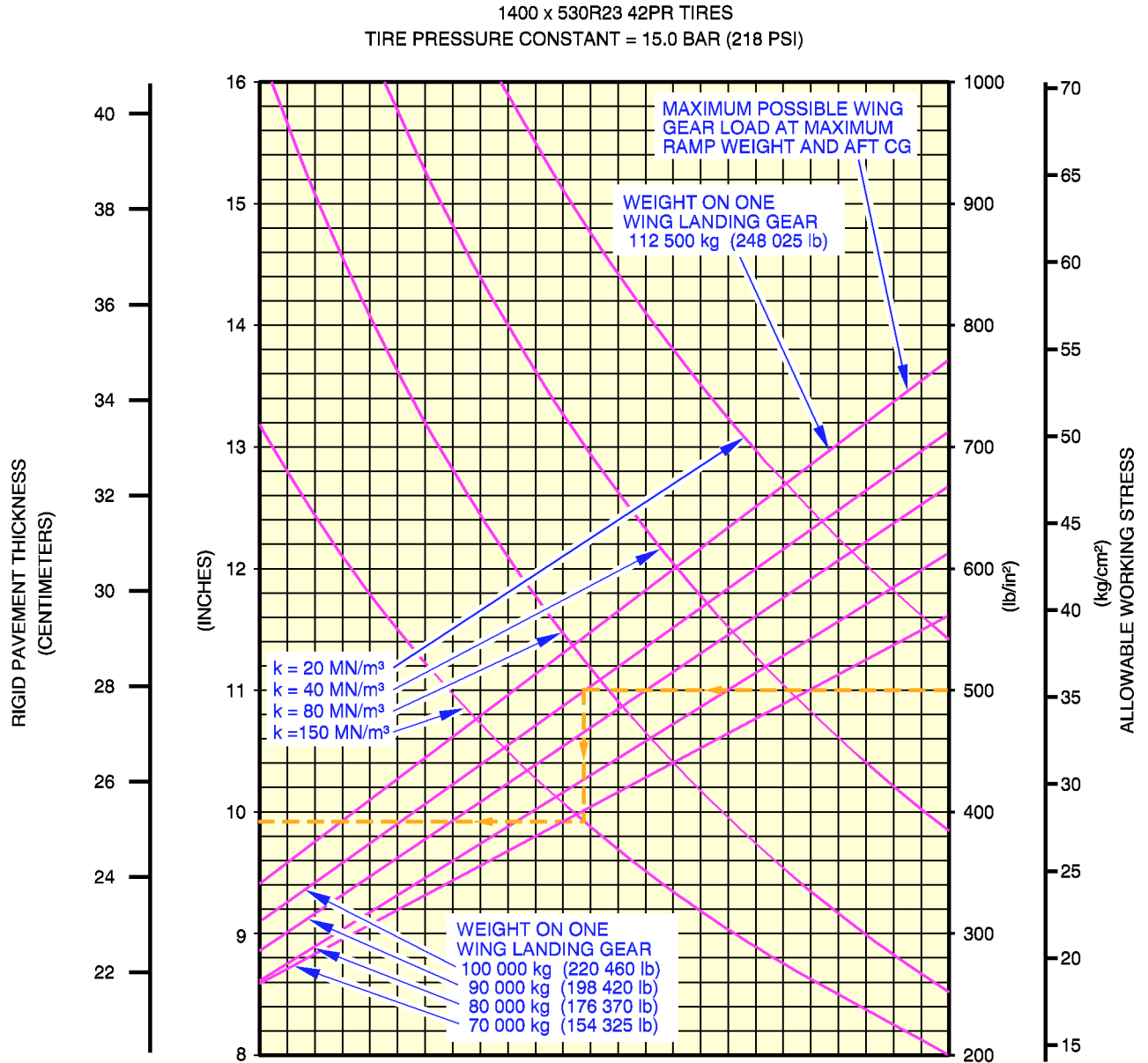
L_AC_070701_0_ACM0_01_01

Rigid Pavement Requirements - 6 Wheel Bogie
A380-800 Models

7-7-1
Page 2
JAN 30/05



AIRPLANE CHARACTERISTICS



NOTES:
THE VALUES OBTAINED BY USING THE MAXIMUM LOAD REFERENCE LINE AND ANY VALUES FOR K ARE EXACT. FOR LOADS LESS THAN MAXIMUM, THE CURVES ARE EXACT FOR $K = 80 \text{ MN/m}^3$ BUT DEVIATE SLIGHTLY FOR ANY OTHER VALUES OF K.

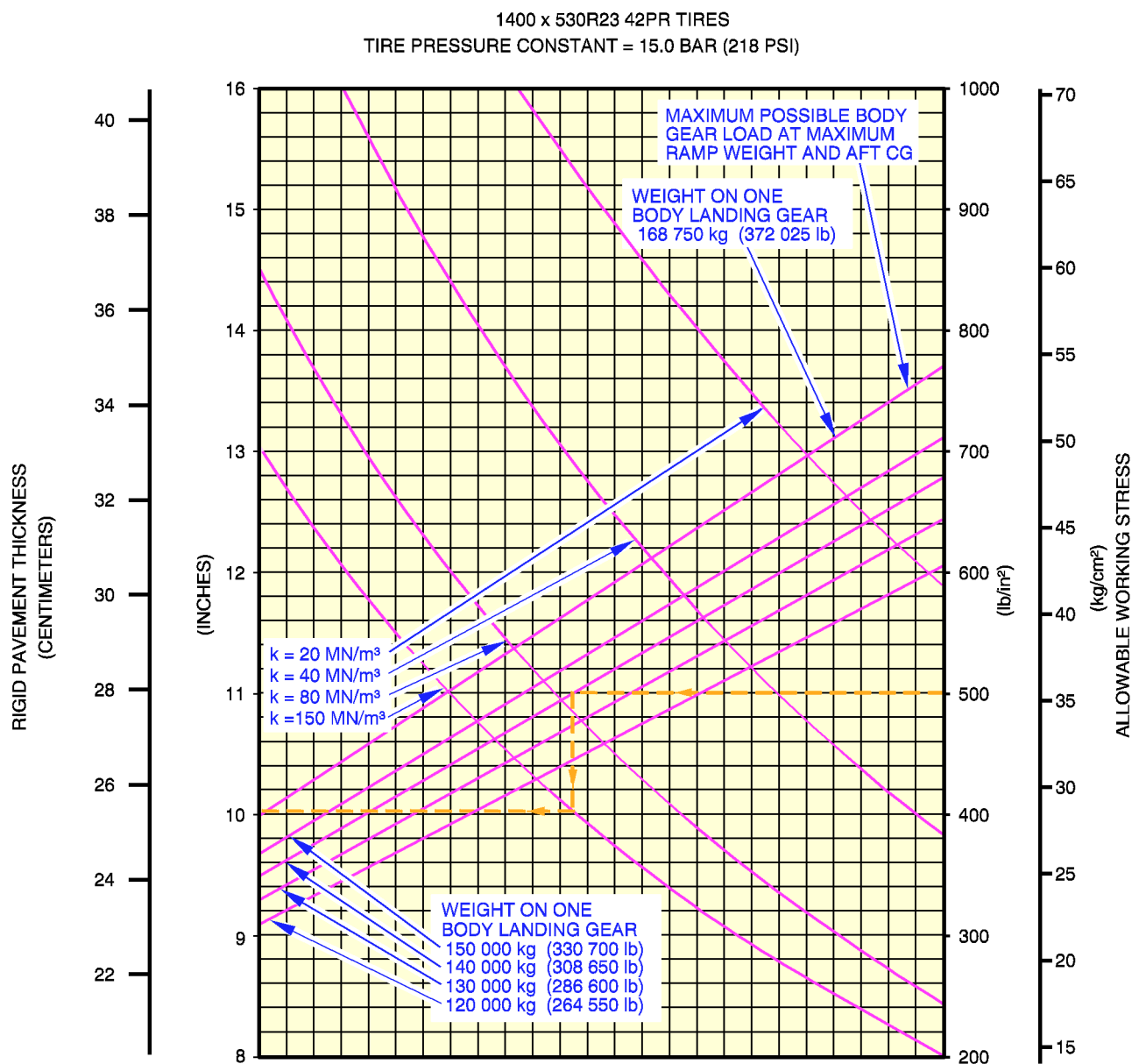
REFERENCE:
"DESIGN OF CONCRETE AIRPORT PAVEMENTS" AND "COMPUTER PROGRAM FOR AIRPORT PAVEMENT DESIGN - PROGRAM PDILB" PORTLAND CEMENT ASSOCIATION

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Rigid Pavement Requirements - 6 Wheel Bogie
A380-800F Models



AIRPLANE CHARACTERISTICS



L_AC_070701_0_AGM0_01_02

Rigid Pavement Requirements - 6 Wheel Bogie
A380-800F Models



AIRPLANE CHARACTERISTICS

7-8 RIGID PAVEMENT REQUIREMENTS - LCN CONVERSION

To find the airplane weight that a Rigid Pavement can support, the LCN of the pavement and the Radius of Relative Stiffness (L) must be Known.

In the typical example shown in Section 7-8-2 Page 1, The Radius of Relative Stiffness is shown at 1016 mm (40 in.) with an LCN of 101.

For these conditions the weight on one Wing Landing Gear is 100 000 kg (220 460 lb).



AIRPLANE CHARACTERISTICS

RADIUS OF RELATIVE STIFFNESS (L)
VALUES IN INCHES

$$L = 4 \sqrt{\frac{Ed^3}{12(1-\mu^2)k}} = 24.1652 \sqrt{\frac{d^3}{k}}$$

WHERE E = Young's Modulus = 4×10^6 psi

k = Subgrade Modulus, lbf/in³

d = Rigid Pavement Thickness, inches

μ = Poisson's Ratio = 0.15

d	k=75	k=100	k=150	k=200	k=250	k=300	k=350	k=400	k=550
6.0	31.48	29.30	26.47	24.63	23.30	22.26	21.42	20.72	19.13
6.5	33.43	31.11	28.11	26.16	24.74	23.64	22.74	22.00	20.31
7.0	35.34	32.89	29.72	27.65	26.15	24.99	24.04	23.25	21.47
7.5	37.22	34.63	31.29	29.12	27.54	26.32	25.32	24.49	22.61
8.0	39.06	36.35	32.85	30.57	28.91	27.62	26.58	25.70	23.74
8.5	40.88	38.04	34.37	31.99	30.25	28.91	27.81	26.90	24.84
9.0	42.67	39.71	35.88	33.39	31.58	30.17	29.03	28.08	25.93
9.5	44.43	41.35	37.36	34.77	32.89	31.42	30.23	29.24	27.00
10.0	46.18	42.97	38.83	36.14	34.17	32.65	31.42	30.39	28.06
10.5	47.90	44.57	40.28	37.48	35.45	33.87	32.59	31.52	29.11
11.0	49.60	46.16	41.71	38.81	36.71	35.07	33.75	32.64	30.14
11.5	51.28	47.72	43.12	40.13	37.95	36.26	34.89	33.74	31.16
12.0	52.94	49.27	44.52	41.43	39.18	37.44	36.02	34.84	32.17
12.5	54.59	50.80	45.90	42.72	40.40	38.60	37.14	35.92	33.17
13.0	56.22	52.32	47.27	43.99	41.61	39.75	38.25	36.99	34.16
13.5	57.83	53.82	48.63	45.26	42.80	40.89	39.35	38.06	35.14
14.0	59.43	55.31	49.98	46.51	43.98	42.02	40.44	39.11	36.12
14.5	61.02	56.78	51.31	47.75	45.16	43.15	41.51	40.15	37.08
15.0	62.59	58.25	52.63	48.98	46.32	44.26	42.58	41.19	38.03
15.5	64.15	59.70	53.94	50.20	47.47	45.36	43.64	42.21	38.98
16.0	65.69	61.13	55.24	51.41	48.62	46.45	44.70	43.23	39.92
16.5	67.23	62.56	56.53	52.61	49.75	47.54	45.74	44.24	40.85
17.0	68.75	63.98	57.81	53.80	50.88	48.61	46.77	45.24	41.78
17.5	70.26	65.38	59.08	54.98	52.00	49.68	47.80	46.23	42.70
18.0	71.76	66.78	60.34	56.15	53.11	50.74	48.82	47.22	43.61
19.0	74.73	69.54	62.84	58.48	55.31	52.84	50.84	49.17	45.41
20.0	77.66	72.27	65.30	60.77	57.47	54.91	52.84	51.10	47.19
21.0	80.55	74.96	67.74	63.04	59.62	56.96	54.81	53.01	48.95
22.0	83.41	77.63	70.14	65.28	61.73	58.98	56.75	54.89	50.69
23.0	86.24	80.26	72.52	67.49	63.83	60.98	58.68	56.75	52.41
24.0	89.04	82.86	74.87	69.68	65.90	62.96	60.58	58.59	54.11
25.0	91.81	85.44	77.20	71.84	67.95	64.92	62.46	60.41	55.79

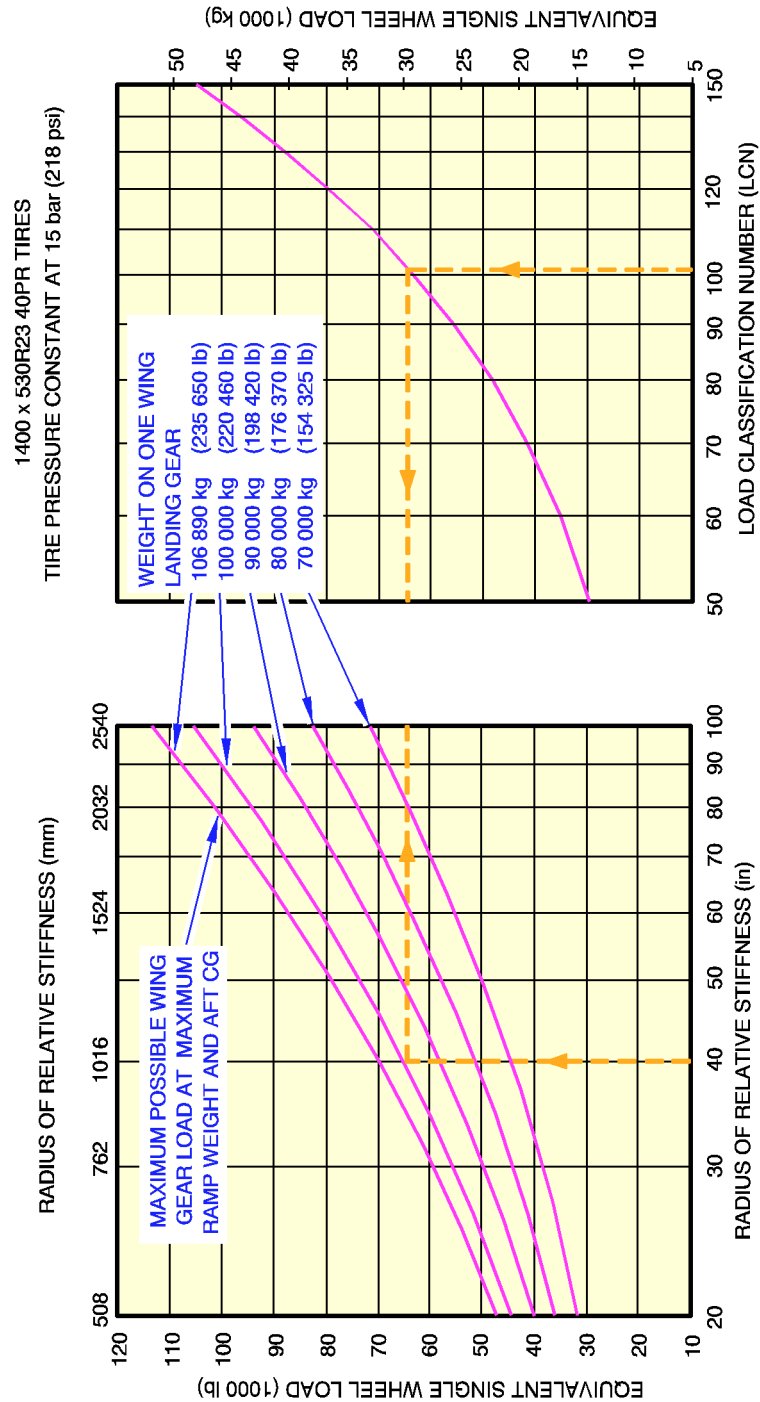
REFERENCE: PORTLAND CEMENT ASSOCIATION

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Radius of Relative Stiffness



AIRPLANE CHARACTERISTICS



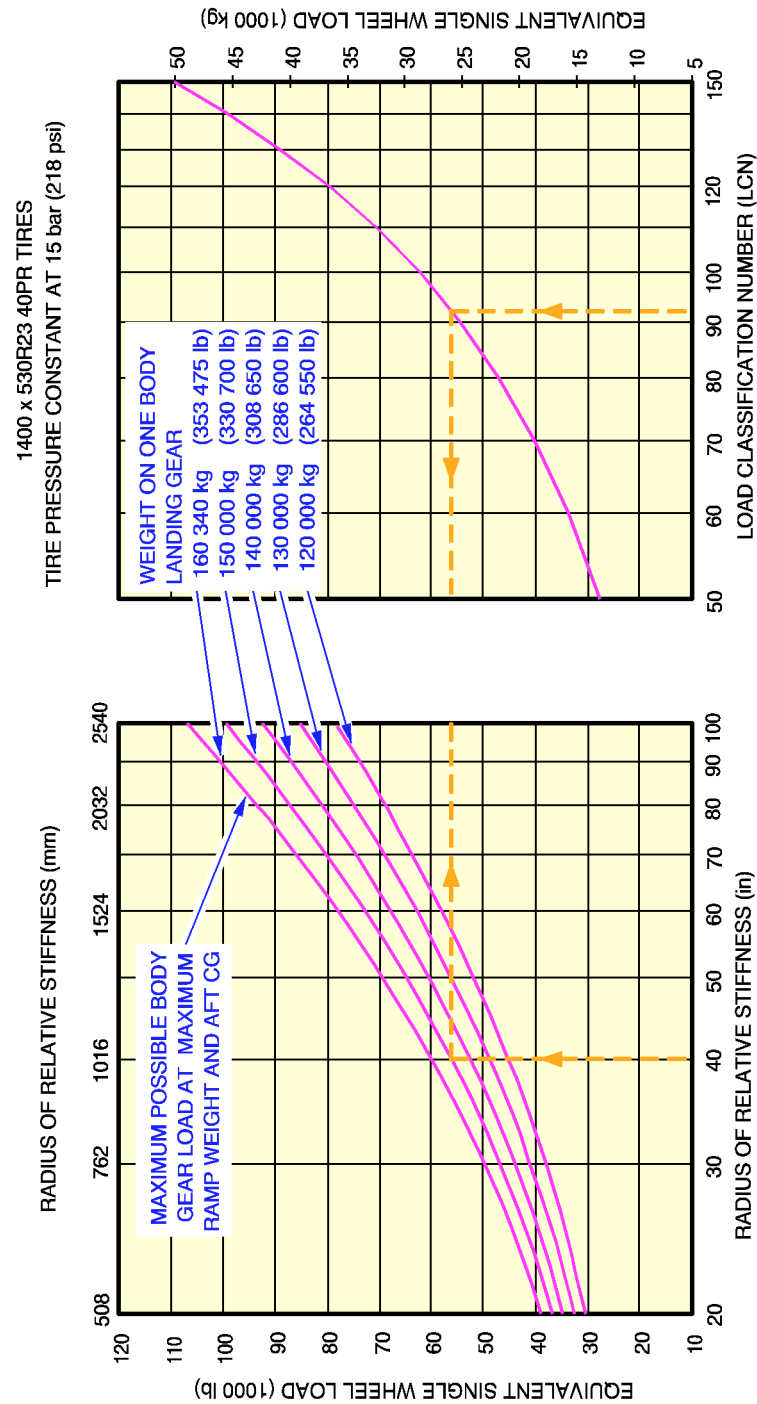
NOTE: EQUIVALENT SINGLE WHEEL LOADS ARE DERIVED BY METHODS SHOWN IN
ICAO AERODROME MANUAL PART 2 PAR 4.1.3 Second Edition 1965

L_AC_070802_0_AAA0_01_00

Rigid Pavement Requirements LCN
Model - A380-800 (4 Wheel Bogie)



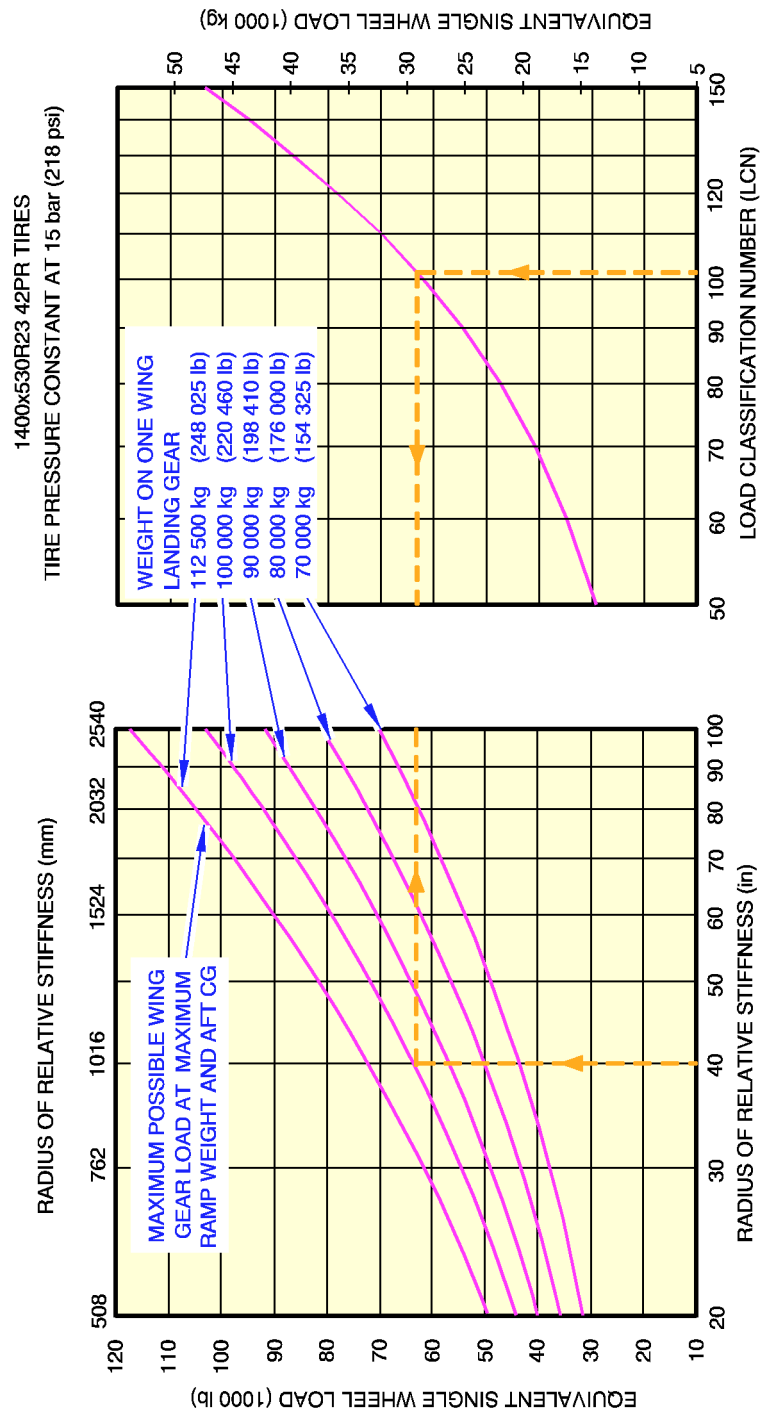
AIRPLANE CHARACTERISTICS



L_AC_070802_0_AAB0_01_01

Rigid Pavement Requirements LCN
Model - A380-800 (6 Wheel Bogie)

AIRPLANE CHARACTERISTICS

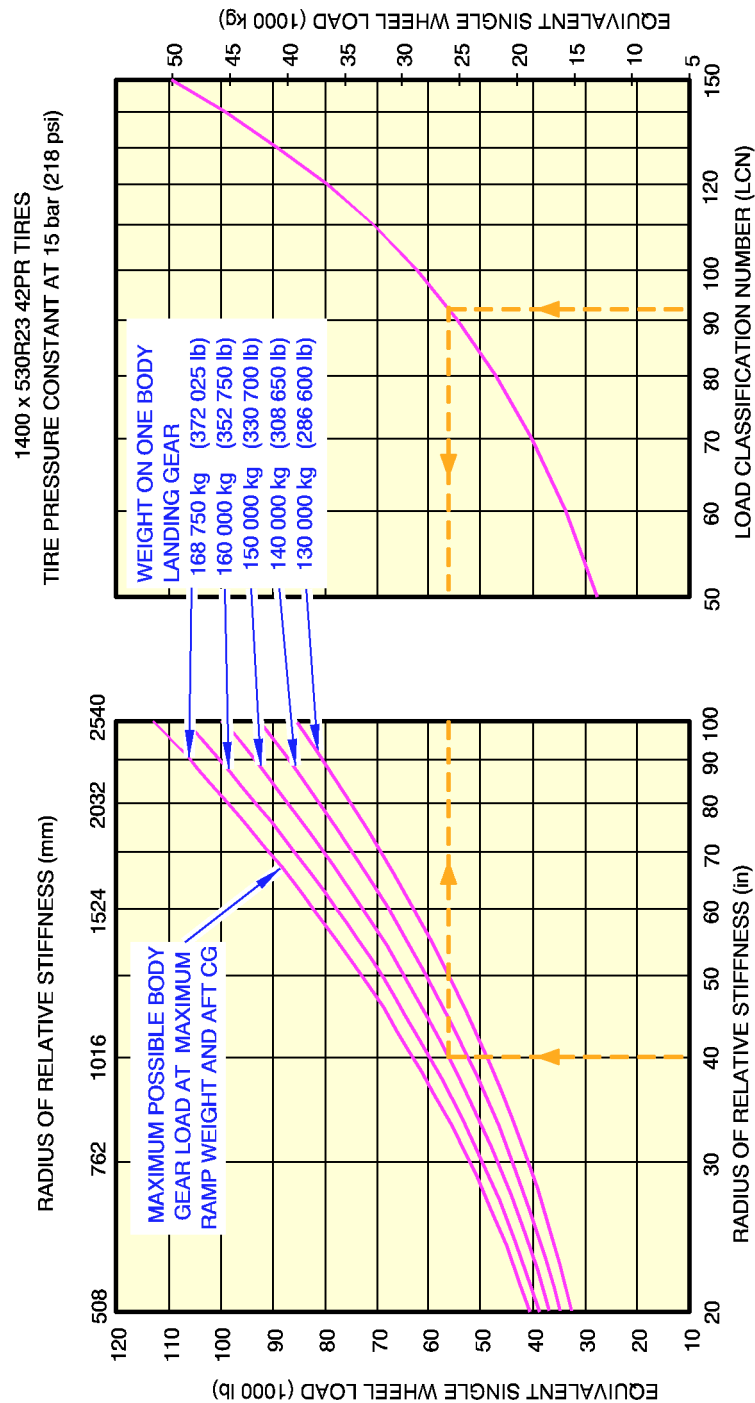


NOTE: EQUIVALENT SINGLE WHEEL LOADS ARE DERIVED BY METHODS SHOWN IN
ICAO AERODROME MANUAL PART 2 PAR 4.1.3 Second Edition 1965

L_AC_070802_0_AAC0_01_01

Rigid Pavement Requirements LCN
Model - A380-800F (4 Wheel Bogie)

AIRPLANE CHARACTERISTICS



NOTE: EQUIVALENT SINGLE WHEEL LOADS ARE DERIVED BY METHODS SHOWN IN
ICAO AERODROME MANUAL PART 2 PAR 4.1.3 Second Edition 1965

L_AC_070802_0_AAD0_01_01

Rigid Pavement Requirements LCN
Model - A380-800F (6 Wheel Bogie)



AIRPLANE CHARACTERISTICS

7-8-3 RADIUS OF RELATIVE STIFFNESS (Other values of E and "L")

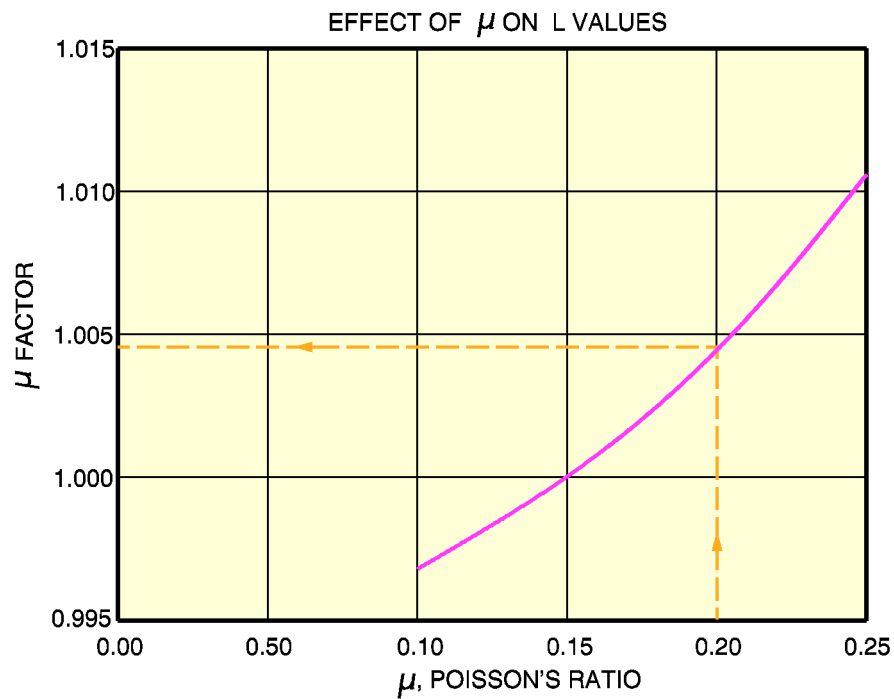
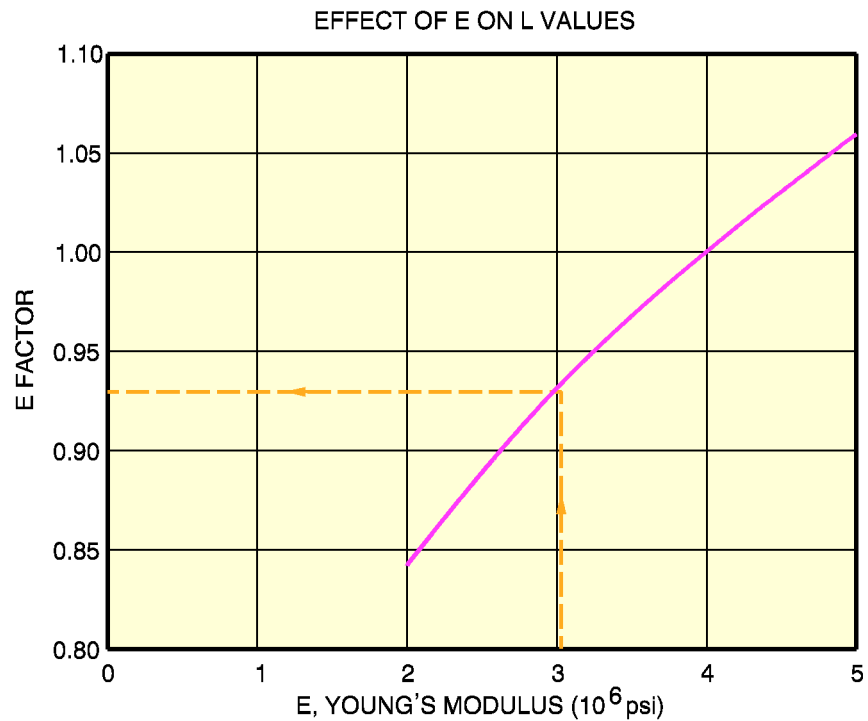
The chart of Section 7-8-1 Page 1 presents "L" values based on Young's Modulus (E) of 4 000 000 psi and Poisson's Ratio (μ) of 0.15.

For convenience in finding "L" values based on other values of E and μ , the curves of section 7-8-4 are included.

For example, to find an "L" value based on an E of 3 000 000 psi, the "E" factor of 0.931 is multiplied by the "L" value found in table of Section 7-8-1 Page 1.

The effect of variations of μ on the "L" value is treated in a similar manner.

AIRPLANE CHARACTERISTICS



NOTE: BOTH CURVES ON THIS PAGE ARE USED TO ADJUST THE L VALUES OF TABLE 7-8-1

L_AC_070804_0_AAM0_01_02

Radius of Relative Stiffness



AIRPLANE CHARACTERISTICS

7-9 ACN/PCN REPORTING SYSTEM

To find the ACN of an aircraft on flexible or rigid pavement, the aircraft gross weight and the subgrade strength must be known.

A380-800 model:

In the example shown in Section 7-9-1, Page 1, for:

- an Aircraft Gross Weight of 510 tonnes (1 124 360 lb)
 - medium subgrade strength (code B),
- the ACN for the flexible pavement is 61.

In the example shown in Section 7-9-2, Page 1, for the same Aircraft Gross Weight and medium subgrade strength (code B) the ACN for the rigid pavement is 58.5.

A380-800F model:

In the example shown in Section 7-9-1, Page 2, for:

- an Aircraft Gross Weight of 510 tonnes (1 124 360 lb)
 - an medium subgrade strength (code B),
- the ACN for the flexible pavement is 59.

In the example shown in Section 7-9-2, Page 2, for the same Aircraft Gross Weight and medium subgrade strength (code B) the ACN for the rigid pavement is 57

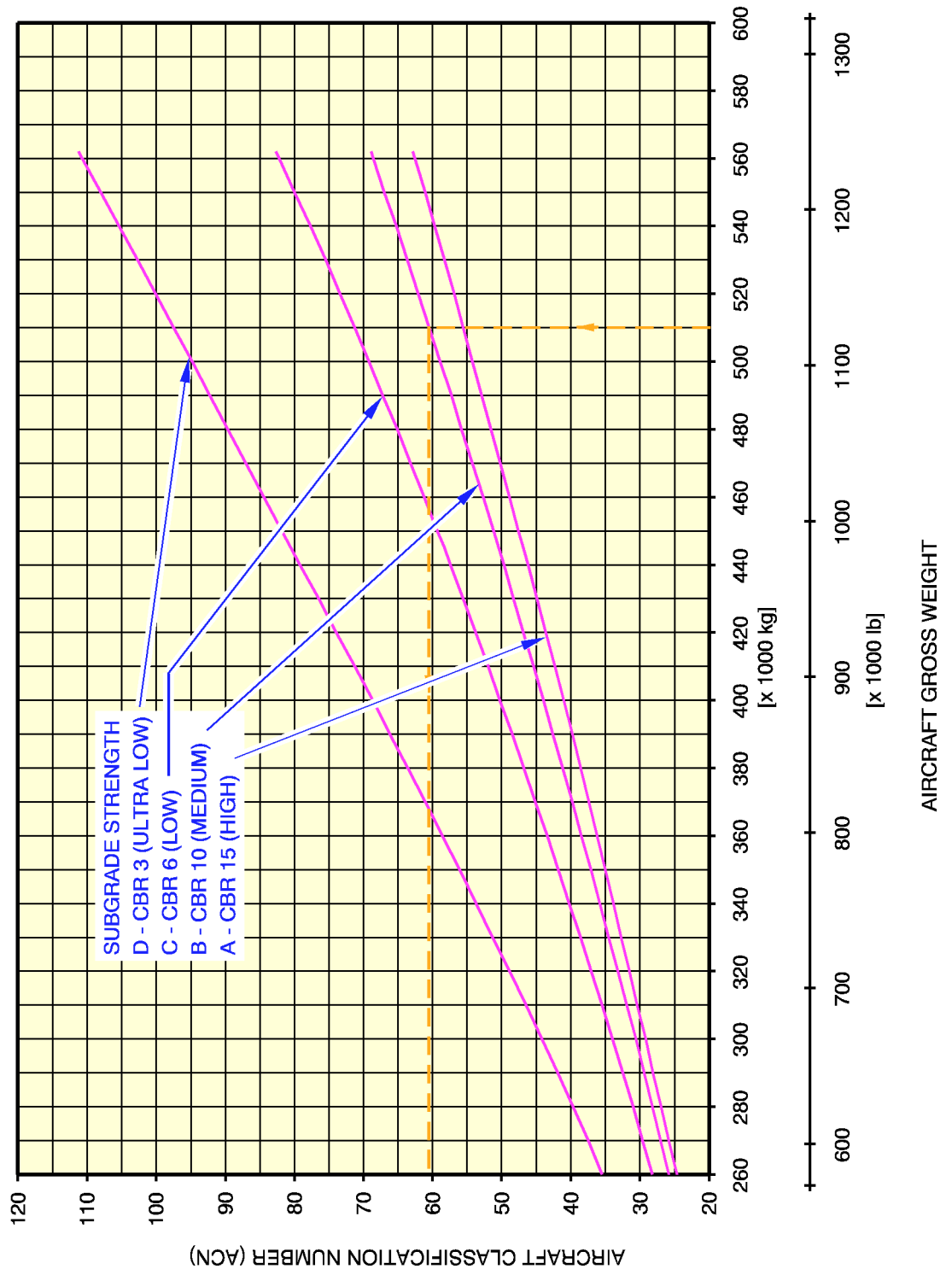
NOTE : An aircraft with an ACN equal to or less than the reported PCN can operate on that pavement, subject to a limitation on the tire pressure.
(Ref: ICAO Aerodrome Design Manual Part 3 Chapter 1 Second Edition 1983)



AIRPLANE CHARACTERISTICS

ACN WAS DETERMINED AS REFERENCED IN
ICAO AERODROME DESIGN MANUAL PART 3
CHAPTER 1 SECOND EDITION 1983.
CG USED FOR ACN CALCULATIONS: 43 % MAC.
SEE SECTION 7-4-1

1400x530R23 40PR TIRES
TIRE PRESSURE CONSTANT AT 15 bar (218 psi)



L_AC_070901_0_AAM0_01_06

Aircraft Classification Number - Flexible Pavement
A380-800 Models

R
R

R

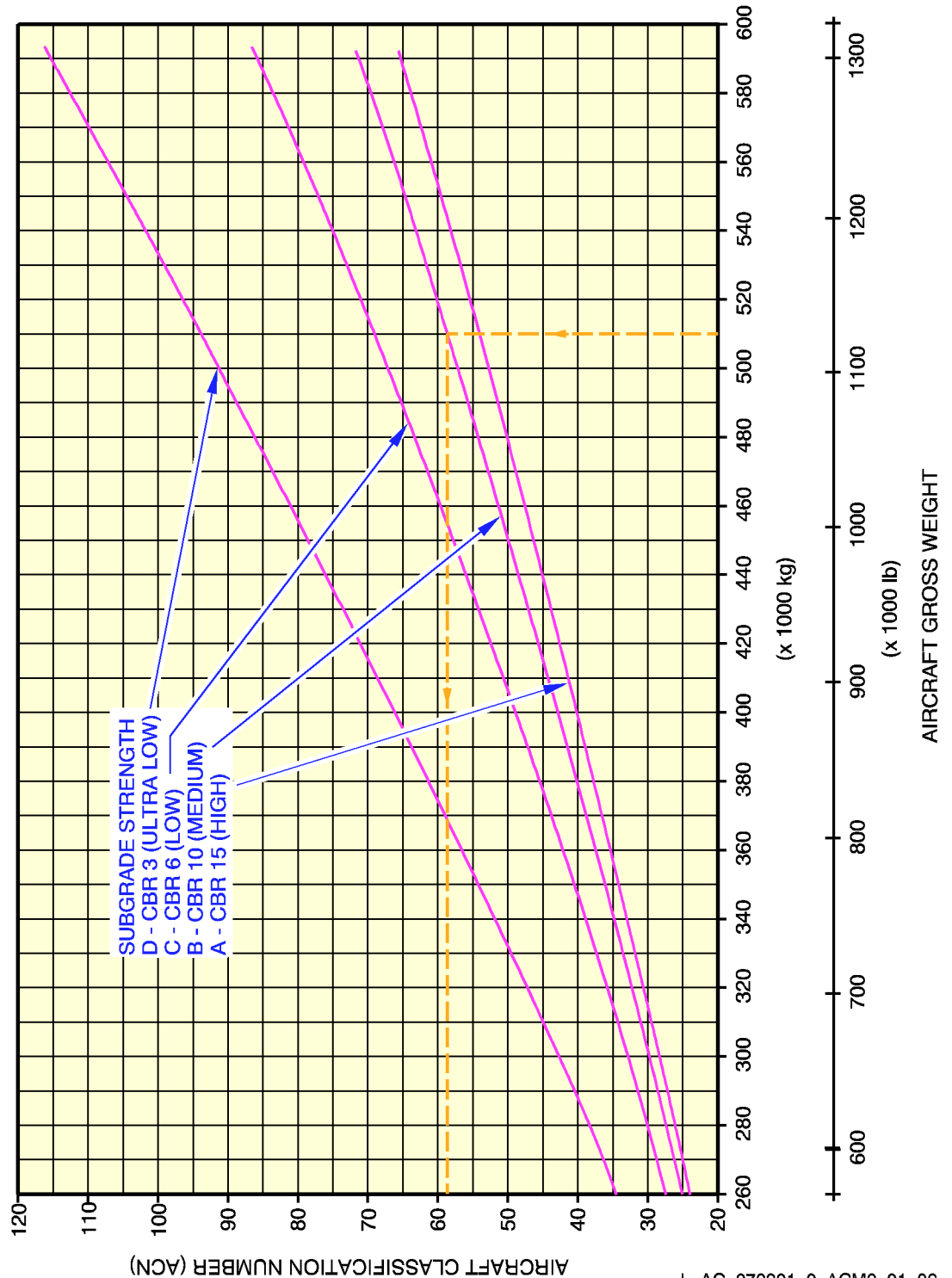
7-9-1
Page 1
JAN 30/04



AIRPLANE CHARACTERISTICS

ACN WAS DETERMINED AS REFERENCED IN
ICAO AERODROME DESIGN MANUAL PART 3
CHAPTER 1 SECOND EDITION 1983.
CG USED FOR ACN CALCULATION: 42.8 % MAC.
SEE SECTION 7-4

1400 x 530R23 42PR TIRES
TIRE PRESSURE CONSTANT AT 15.0 bar (218 psi)



L_AC_070901_0_ACM0_01_06

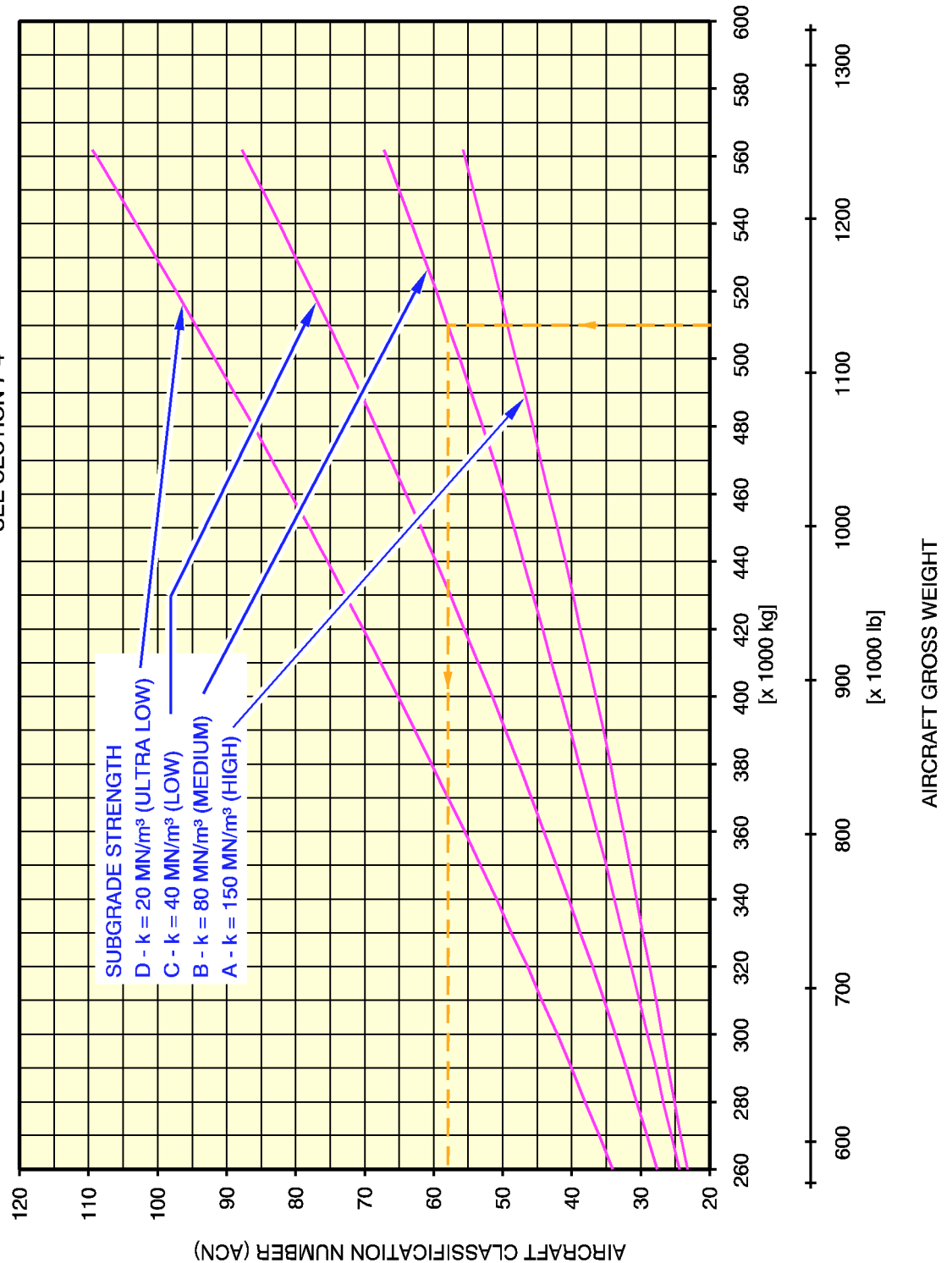
Aircraft Classification Number - Flexible Pavement
A380-800F Models



AIRPLANE CHARACTERISTICS

ACN WAS DETERMINED AS REFERENCED IN
ICAO AERODROME DESIGN MANUAL PART 3
CHAPTER 1 SECOND EDITION 1983.
CG USED FOR ACN CALCULATIONS: 43 % MAC.
SEE SECTION 7-4

1400x530R23 40PR TIRES
TIRE PRESSURE CONSTANT AT 15 bar (218 psi)



L_AC_070902_0_AAM0_01_06

Aircraft Classification Number - Rigid Pavement
A380-800 Models

R
R

R

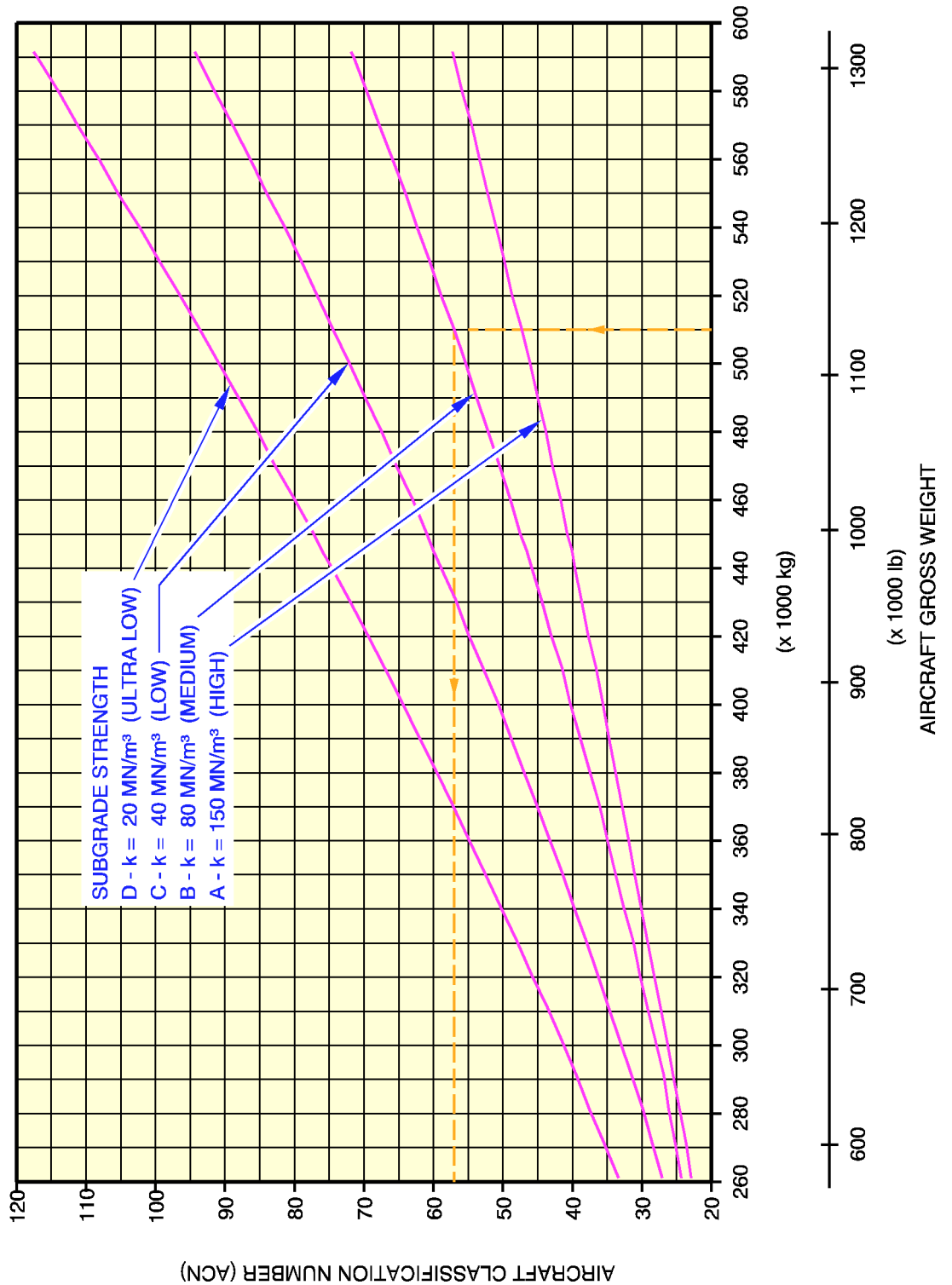
Printed in France

7-9-2
Page 1
JAN 30/04

AIRPLANE CHARACTERISTICS

ACN WAS DETERMINED AS REFERENCED IN
ICAO AERODROME DESIGN MANUAL PART 3
CHAPTER 1 SECOND EDITION 1983.
CG USED FOR ACN CALCULATION: 42.8 % MAC.
SEE SECTION 7-4

1400 x 530R23 42PR TIRES
TIRE PRESSURE CONSTANT AT 15.0 bar (218 psi)



Aircraft Classification Number - Rigid Pavement
A380-800F Models

L_AC_070902_0_ACM0_01_06



AIRPLANE CHARACTERISTICS

8-0 DERIVATIVE AIRPLANES

8-1 Possible Future Derivative Airplanes



AIRPLANE CHARACTERISTICS

8-1 POSSIBLE FUTURE DERIVATIVE AIRPLANES

A380 Family could be extended with several derivatives in order to provide additional capabilities to the operators.
Those derivatives could impact payload capacity or range or both.



AIRPLANE CHARACTERISTICS

9-0 SCALED DRAWINGS

9-1 Scaled Drawing - 1 in = 50 ft

9-2 Scaled Drawing - 1 in = 100 ft

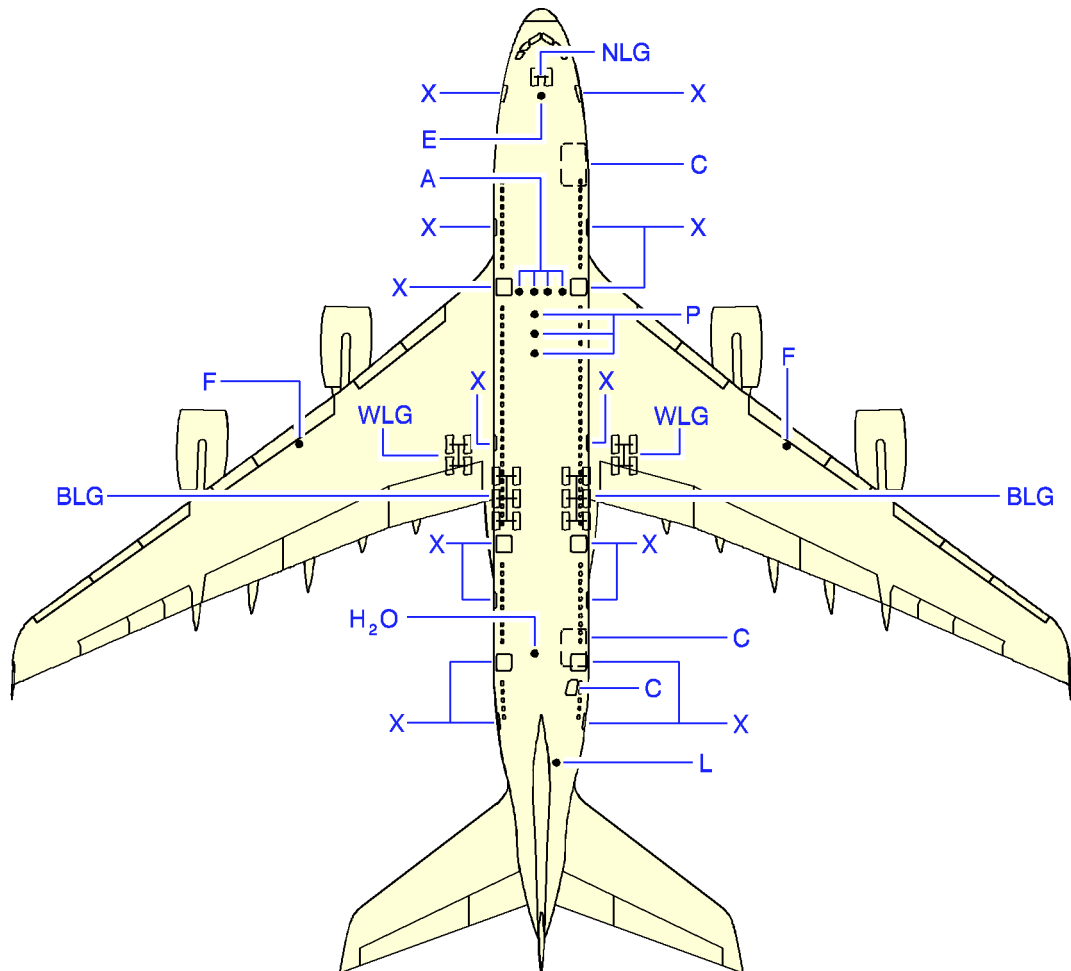
9-3 Scaled Drawing - 1 cm = 500 cm

9-4 Scaled Drawing - 1 cm = 1000 cm

NOTE : Reproduction of these scaled drawings can modify the scale. When printing or copying these drawings, adjust the scale if necessary.



AIRPLANE CHARACTERISTICS



- A AIR CONDITIONING
- B BULK CARGO COMPT DOOR
- BLG BODY LANDING GEAR
- C CARGO COMPT DOOR
- E ELECTRICAL
- F FUEL
- H₂O POTABLE WATER
- L LAVATORY
- NLG NOSE LANDING GEAR
- P PNEUMATIC
- WLG WING LANDING GEAR
- X PASSENGER/CREW DOOR

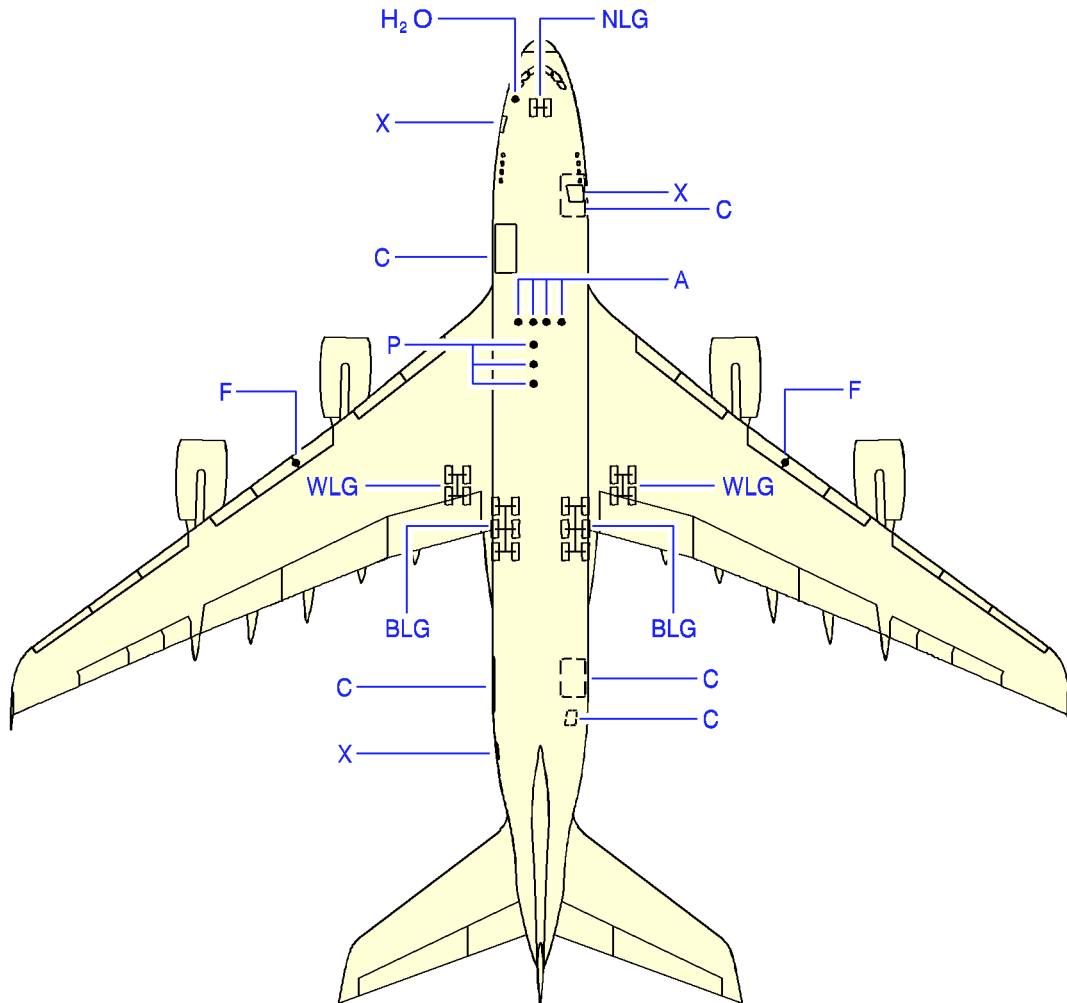
DB1A

L_AC_090100_0_AAM0_01_01

Scaled Drawing - 1 in = 50 ft
A380-800 Models



AIRPLANE CHARACTERISTICS



A	AIR CONDITIONING
B	BULK CARGO COMPT DOOR
BLG	BODY LANDING GEAR
C	CARGO COMPT DOOR
F	FUEL
H ₂ O	POTABLE WATER
L	LAVATORY
NLG	NOSE LANDING GEAR
P	PNEUMATIC
WLG	WING LANDING GEAR
X	COURIER/CREW DOOR

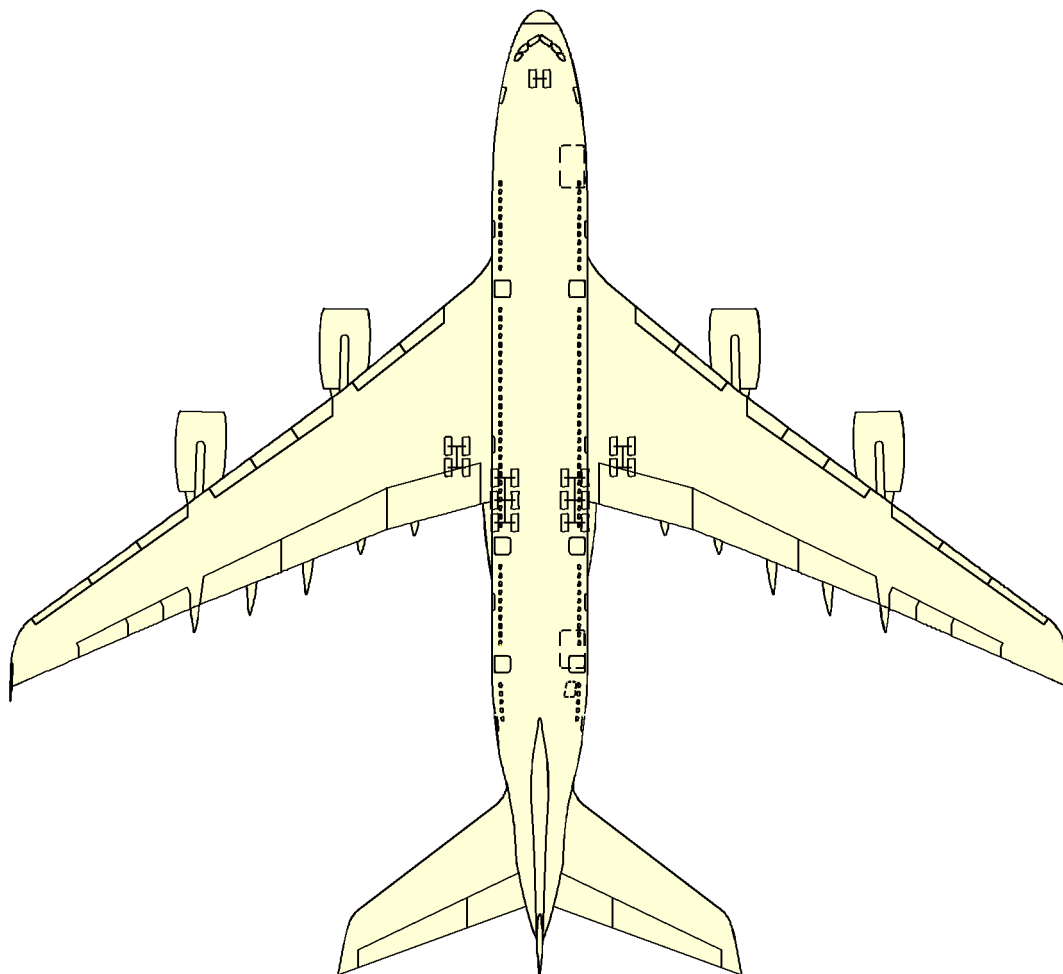
DB1A

L_AC_090100_0_ABM0_01_02

Scaled Drawing - 1 in = 50 ft
A380-800F Models



AIRPLANE CHARACTERISTICS



DB1A

L_AC_090100_0_BAM0_01_00

Scaled Drawing - 1 in = 50 ft
A380-800 Models

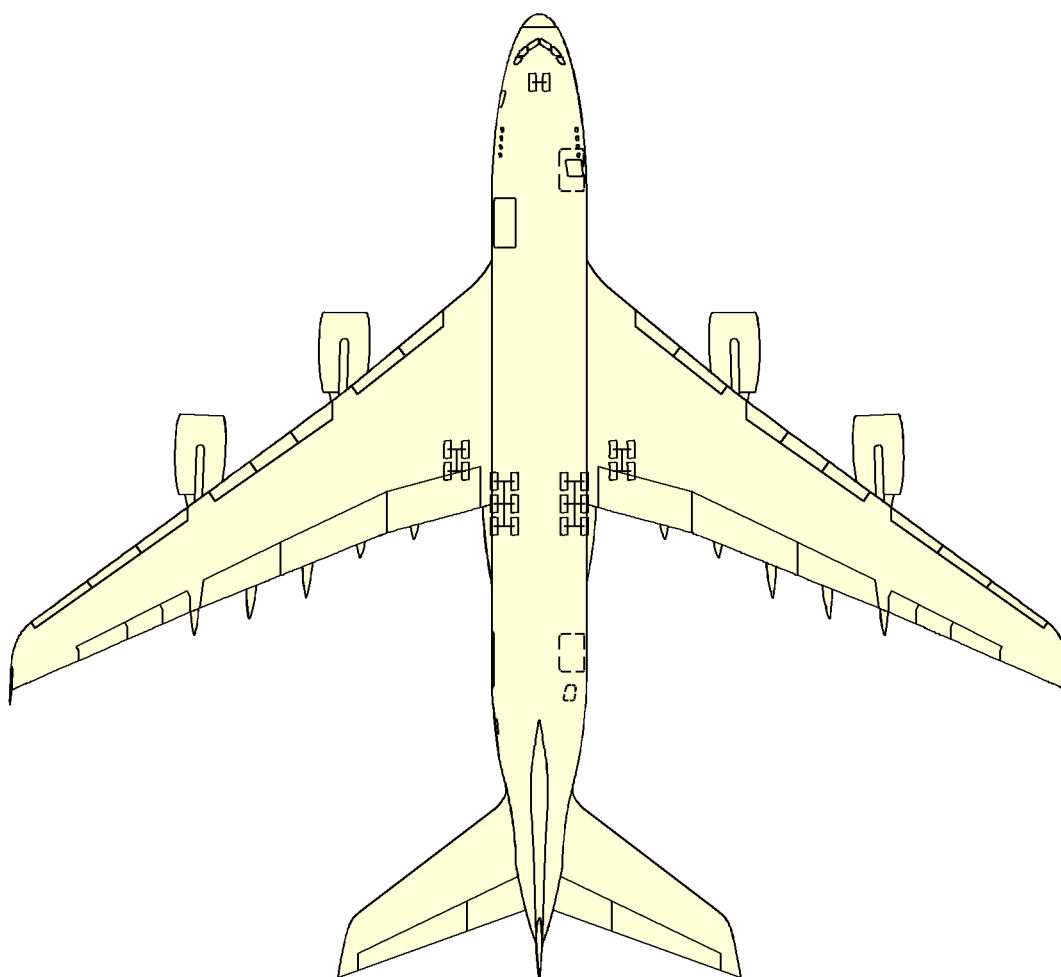
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9-1
Page 3
JUL 01/02



AIRPLANE CHARACTERISTICS



DB1A

L_AC_090100_0_BBM0_01_01

Scaled Drawing - 1 in = 50 ft
A380-800F Models

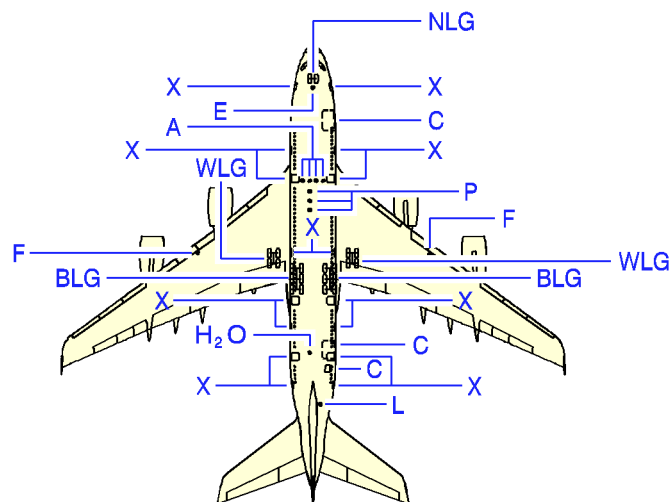
R

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9-1
Page 4
SEP 30/03



AIRPLANE CHARACTERISTICS



- A AIR CONDITIONING
- B BULK CARGO COMPT DOOR
- BLG BODY LANDING GEAR
- C CARGO COMPT DOOR
- E ELECTRICAL
- F FUEL
- H₂O POTABLE WATER
- L LAVATORY
- NLG NOSE LANDING GEAR
- P PNEUMATIC
- WLG WING LANDING GEAR
- X PASSENGER/CREW DOOR

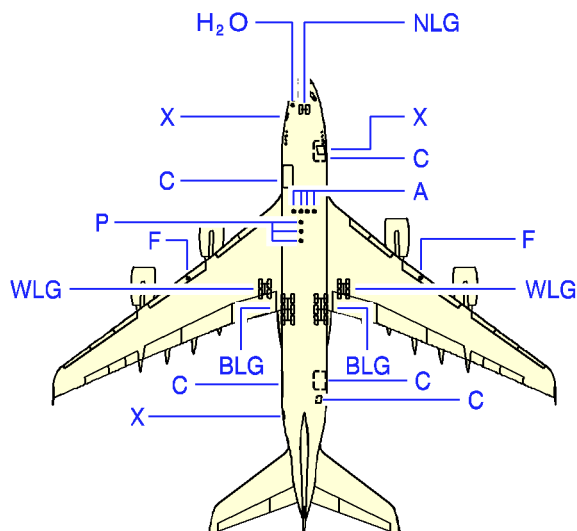
DB1A

L_AC_090200_0_AAM0_01_01

Scaled Drawing - 1 in = 100 ft
A380-800 Models



AIRPLANE CHARACTERISTICS



A	AIR CONDITIONING
B	BULK CARGO COMPT DOOR
BLG	BODY LANDING GEAR
C	CARGO COMPT DOOR
F	FUEL
H ₂ O	POTABLE WATER
L	LAVATORY
NLG	NOSE LANDING GEAR
P	PNEUMATIC
WL	WING LANDING GEAR
X	COURIER/CREW DOOR

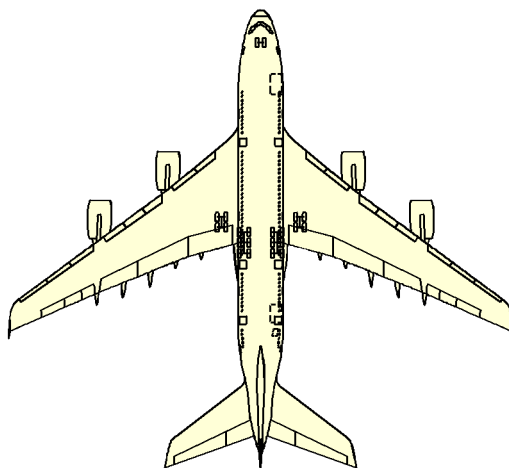
DB1A

L_AC_090200_0_ABM0_01_02

Scaled Drawing - 1 in = 100 ft
A380-800F Models



AIRPLANE CHARACTERISTICS



DB1A

L_AC_090200_0_BAM0_01_00

Scaled Drawing - 1 in = 100 ft
A380-800 Models

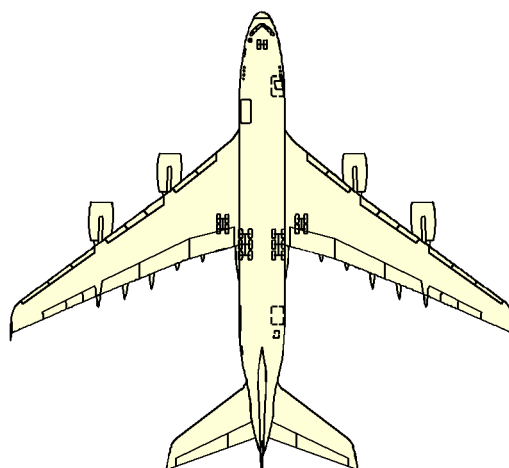
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9-2
Page 3
JUL 01/02



AIRPLANE CHARACTERISTICS



DB1A

L_AC_090200_0_BBM0_01_01

Scaled Drawing - 1 in = 100 ft
A380-800F Models

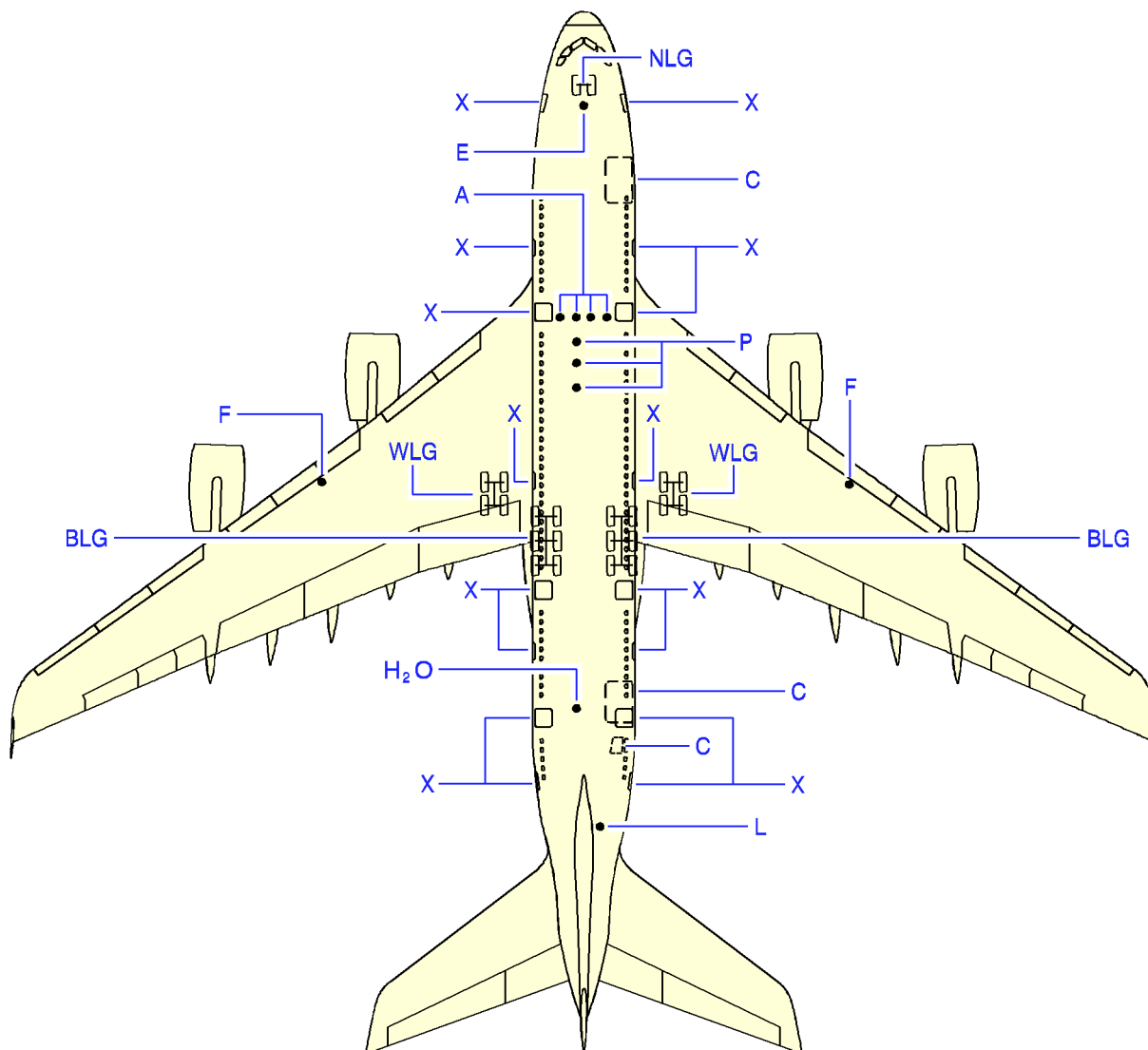
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9-2
Page 4
SEP 30/03



AIRPLANE CHARACTERISTICS



- A AIR CONDITIONING
- B BULK CARGO COMPT DOOR
- BLG BODY LANDING GEAR
- C CARGO COMPT DOOR
- E ELECTRICAL
- F FUEL
- H₂O POTABLE WATER
- L LAVATORY
- NLG NOSE LANDING GEAR
- P PNEUMATIC
- WLG WING LANDING GEAR
- X PASSENGER/CREW DOOR

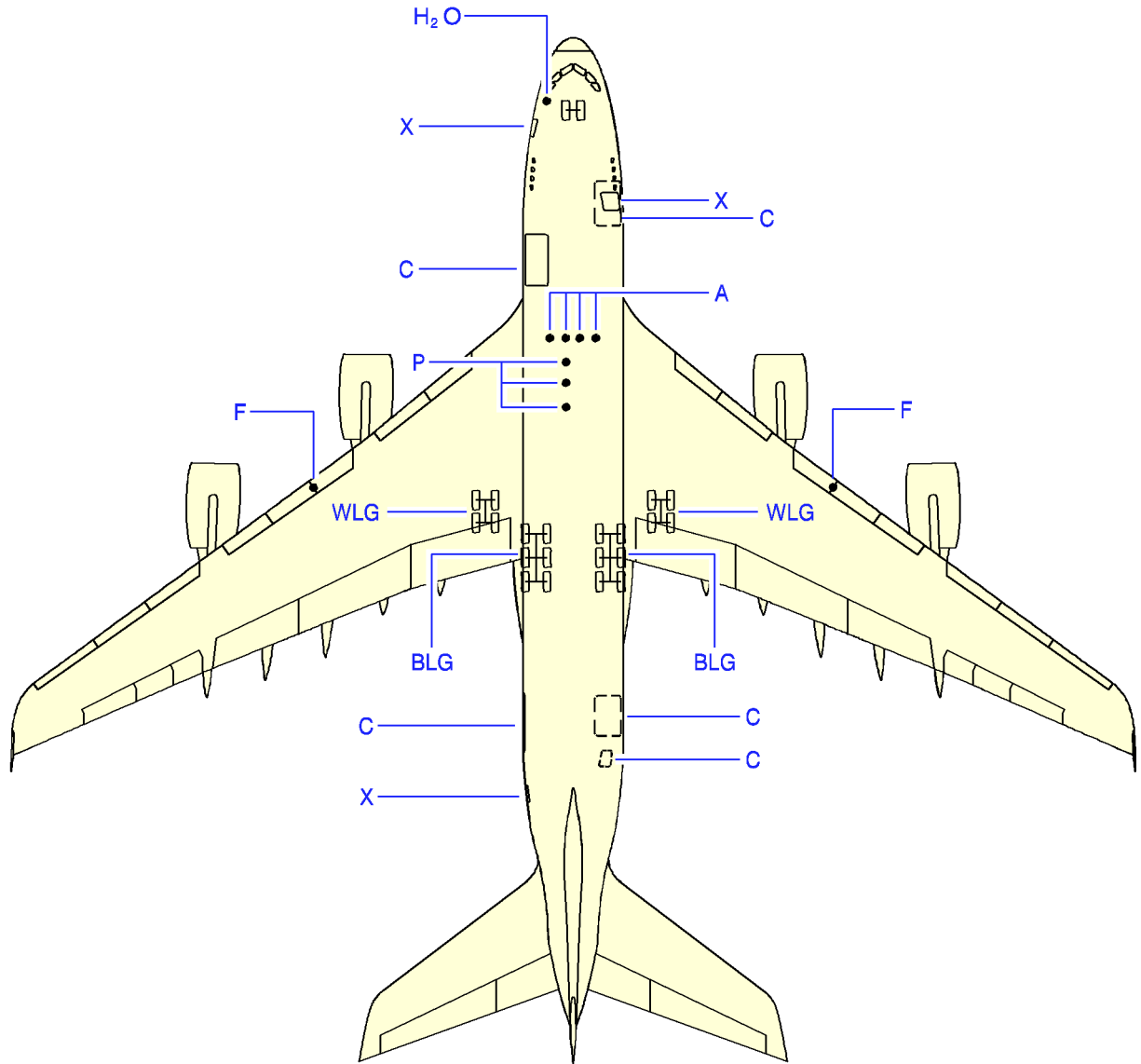
DB1A

L_AC_090300_0_AAM0_01_01

Scaled Drawing - 1 cm = 500 cm
A380-800 Models



AIRPLANE CHARACTERISTICS



- A AIR CONDITIONING
- B BULK CARGO COMPT DOOR
- BLG BODY LANDING GEAR
- C CARGO COMPT DOOR
- F FUEL
- H₂O POTABLE WATER
- L LAVATORY
- NLG NOSE LANDING GEAR
- P PNEUMATIC
- WLG WING LANDING GEAR
- X COURIER/CREW DOOR

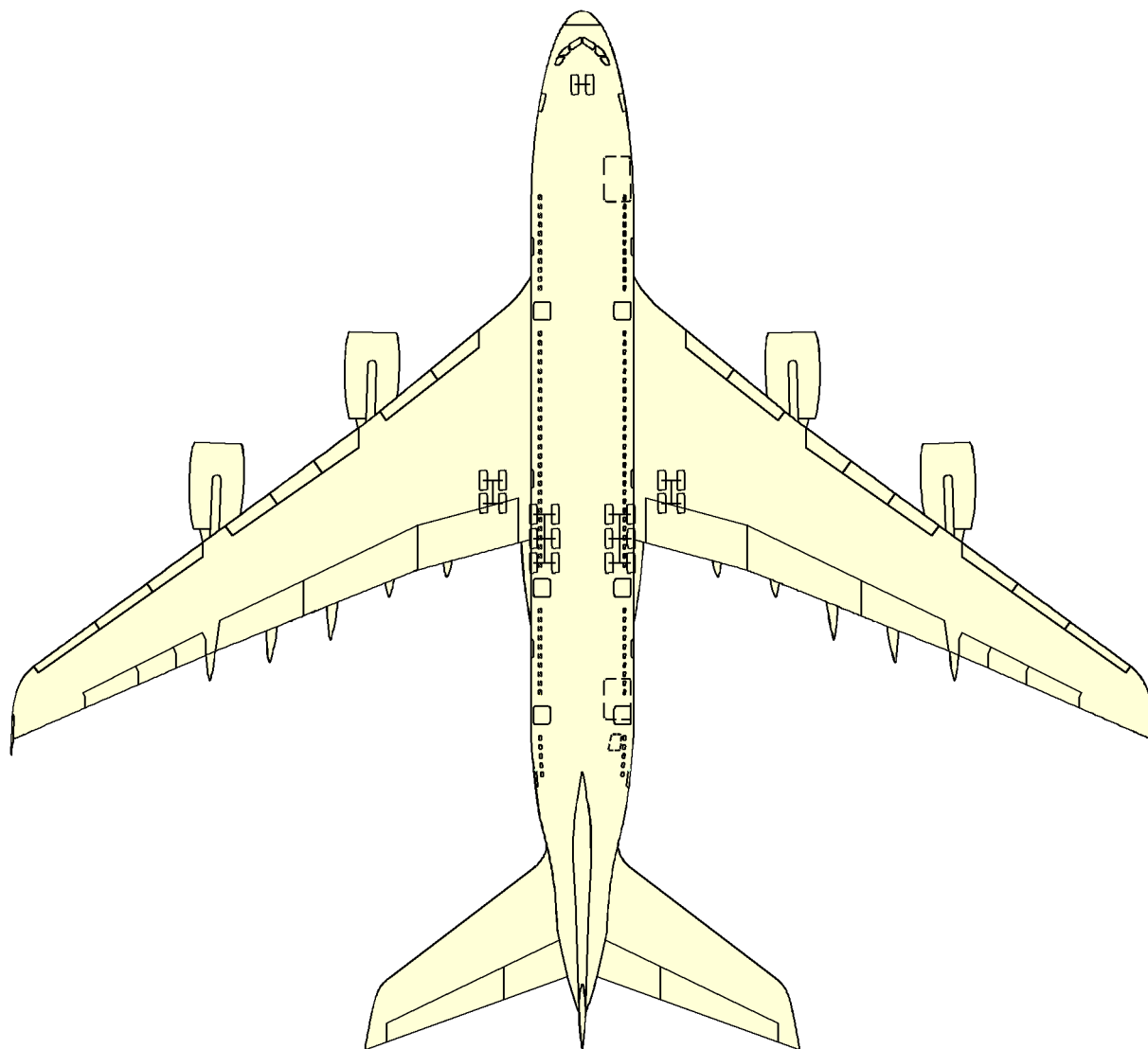
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L_AC_090300_0_ABM0_01_02

Scaled Drawing - 1 cm = 500 cm
A380-800F Models



AIRPLANE CHARACTERISTICS



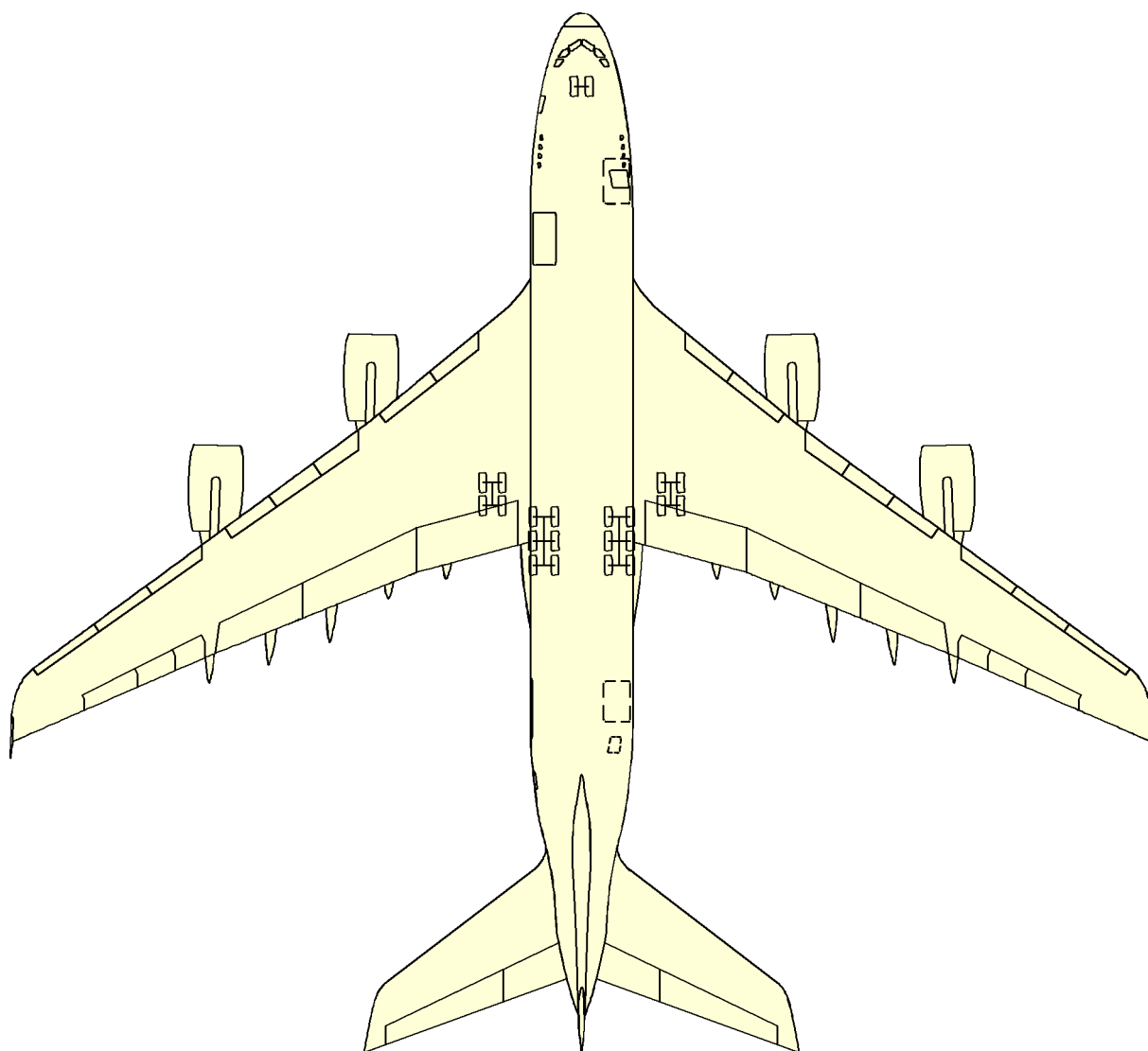
DB1A

L_AC_090300_0_BAM0_01_00

Scaled Drawing - 1 cm = 500 cm
A380-800 Models



AIRPLANE CHARACTERISTICS



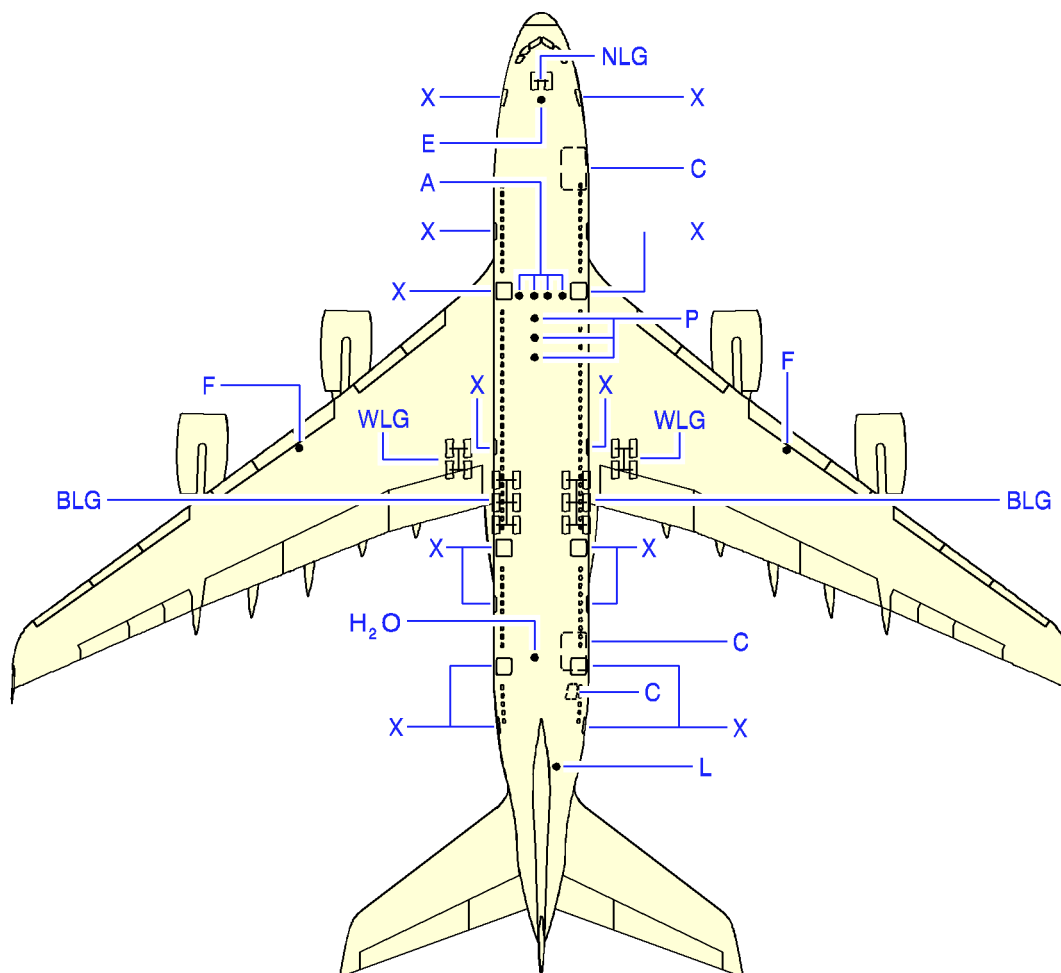
DB1A

L_AC_090300_0_BBM0_01_01

Scaled Drawing - 1 cm = 500 cm
A380-800F Models



AIRPLANE CHARACTERISTICS



- A AIR CONDITIONING
- B BULK CARGO COMPT DOOR
- BLG BODY LANDING GEAR
- C CARGO COMPT DOOR
- E ELECTRICAL
- F FUEL
- H₂O POTABLE WATER
- L LAVATORY
- NLG NOSE LANDING GEAR
- P PNEUMATIC
- WLG WING LANDING GEAR
- X PASSENGER/CREW DOOR

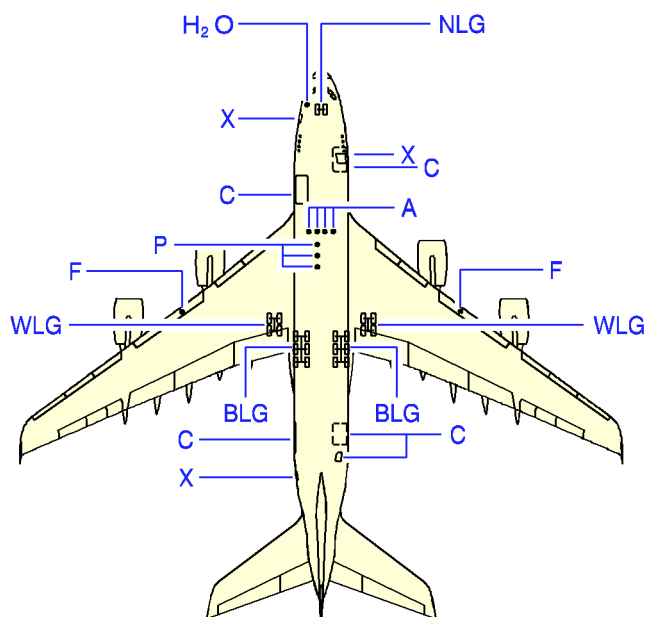
DB1A

L_AC_090400_0_AAM0_01_01

Scaled Drawing - 1 cm = 1000 cm
A380-800 Models



AIRPLANE CHARACTERISTICS



A	AIR CONDITIONING
B	BULK CARGO COMPT DOOR
BLG	BODY LANDING GEAR
C	CARGO COMPT DOOR
F	FUEL
H ₂ O	POTABLE WATER
L	LAVATORY
NLG	NOSE LANDING GEAR
P	PNEUMATIC
WLG	WING LANDING GEAR
X	COURIER/CREW DOOR

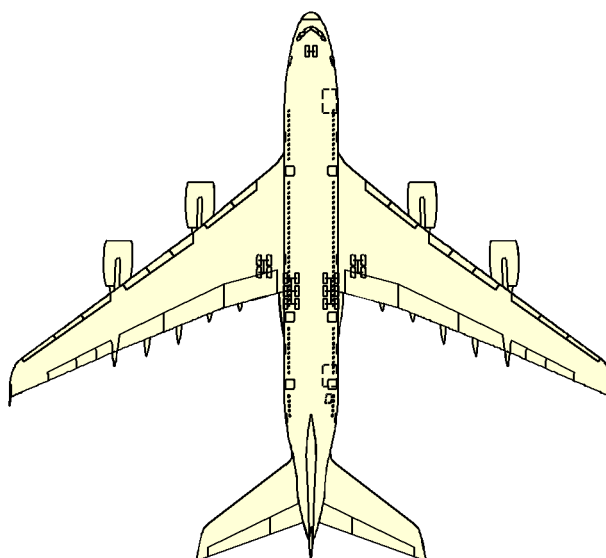
DB1A

L_AC_090400_0_ABM0_01_02

Scaled Drawing - 1 cm = 1000 cm
A380-800F Models



AIRPLANE CHARACTERISTICS



DB1A

L_AC_090400_0_BAM0_01_00

Scaled Drawing - 1 cm = 1000 cm
A380-800 Models

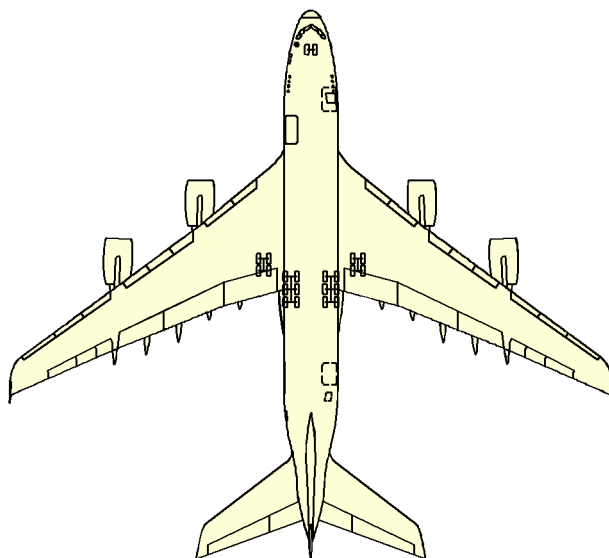
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9-4
Page 3
JUL 01/02



AIRPLANE CHARACTERISTICS



DB1A

L_AC_090400_0_BBM0_01_01

Scaled Drawing - 1 cm = 1000 cm
A380-800F Models

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9-4
Page 4
SEP 30/03