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AIRCRAFT CHARACTERISTICS AIRPORT AND MAINTENANCE PLANNING

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

HIGHLIGHTS

Revision No. 31 - May 01/23

LOCATIONS	CHG	DESCRIPTIONS OF CHANGE
	CODE	
CHAPTER 1		
Section 1-1		
Subject 1-1-0		
Purpose	R	PART EFFECTIVITY ADDED/REVISED/ DELETED
Section 1-2		
Subject 1-2-0		
Glossary	R	PART EFFECTIVITY ADDED/REVISED/ DELETED
CHAPTER 2		
Section 2-1		
Subject 2-1-1		
General Aircraft Characteristics Data	R	PART EFFECTIVITY ADDED/REVISED/ DELETED
Section 2-2		
Subject 2-2-0		
General Aircraft Dimensions	R	PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE General Aircraft Dimensions	R	DELETED "for A321NEO-ACF and A321NEO-XLR" FROM THE ILLUSTRATION AND SHEET TITLES. REPLACED AIRCRAFT EFFECTIVITY A321NEO BY A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED
Section 2-3		
Subject 2-3-0		
Ground Clearances	R	PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Ground Clearances - Wing Tip Fence	R	

LOCATIONS	CHG	DESCRIPTIONS OF CHANGE
	CODE	
FIGURE Ground Clearances - Sharklet	R	
FIGURE Ground Clearances	R	DELETED "for A321NEO-ACF" FROM THE ILLUSTRATION AND SHEET TITLES. REPLACED AIRCRAFT EFFECTIVITY A321NEO BY A321NEO-ACF IN THE ILLUSTRATION.
FIGURE Ground Clearances	R	DELETED "for A321NEO-XLR" FROM THE ILLUSTRATION AND SHEET TITLES. DELETED INFORMATION RELATED TO SHARKLET BOTTOM "W2" FROM THE ILLUSTRATION. DELETED INFORMATION RELATED TO EMERGENCY HATCH 1 (D2) FROM THE ILLUSTRATION AND REPLACED "D3" BY "D2", "D4" BY "D3" AND "D5" BY "D4" IN THE ILLUSTRATION. REPLACED AIRCRAFT EFFECTIVITY A321NEO BY A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION.
FIGURE Ground Connections	R	DELETED "for A321NEO-XLR" FROM THE ILLUSTRATION AND SHEET TITLES. REPLACED AIRCRAFT EFFECTIVITY A321NEO BY A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED
FIGURE Ground Clearances - Trailing Edge Flaps - Extended	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Ground Clearances - Flap Tracks - Extended	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED

LOCATIONS	CHG	DESCRIPTIONS OF CHANGE
	CODE	
FIGURE Ground Clearances - Flap Tracks - Retracted	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION.
		PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Ground Clearances - Flap Tracks - 1 + F	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED
		PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Ground Clearances - Aileron Down	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION.
	_	PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Ground Clearances - Aileron Up	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED
	Р	PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Ground Clearances - Spoilers - Extended	К	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION.
		ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Ground Clearances - Leading Edge Slats - Extended	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/
		DELETED
Section 2-4		
Subject 2-4-1		
Interior Arrangements - Plan View	К	DELETED

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

LOCATIONS	CHG	DESCRIPTIONS OF CHANGE
FIGURE Interior Arrangements - Plan View	R	DELETED "for A321NEO-ACF" FROM THE
- Typical Configuration - Single-Class, High Density		REPLACED AIRCRAFT EFFECTIVITY A321NEO BY A321NEO-ACF IN THE ILLUSTRATION. ILLUSTRATION REVISED
FIGURE Interior Arrangements - Plan View - Typical Configuration - Two-Class	R	DELETED "for A321NEO-ACF and A321NEO-XLR" FROM THE ILLUSTRATION TITLE. REPLACED AIRCRAFT EFFECTIVITY A321NEO BY A321NEO-ACF AND
		A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED
Section 2-5 Subject 2-5-0		
Interior Arrangements - Cross Section	R	PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Interior Arrangements - Cross Section - Economy Class, 6 Abreast - Wider Aisle	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Interior Arrangements - Cross Section - First-Class	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
Section 2-6 Subject 2-6-0		
Cargo Compartments	R	PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Cargo Compartments - Locations and Dimensions	R	REPLACED AIRCRAFT EFFECTIVITY A321NEO BY A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED

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LOCATIONS	CHG CODE	DESCRIPTIONS OF CHANGE
FIGURE Cargo Compartments - Loading Combinations	R	ADDED AIRCRAFT EFFECTIVITY FOR A321NEO-ACF IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Cargo Compartments - Loading Combinations	R	DELETED "for A321NEO-ACF" FROM THE ILLUSTRATION AND SHEET TITLES. REPLACED AIRCRAFT EFFECTIVITY A321NEO BY A321NEO-ACF IN THE ILLUSTRATION.
FIGURE Cargo Compartments - Locations	R	ILLUSTRATION REVISED DELETED "for A321NEO-XLR" FROM THE ILLUSTRATION AND SHEET TITLES. REPLACED AIRCRAFT EFFECTIVITY A321NEO BY A321NEO-XLR IN THE ILLUSTRATION.
FIGURE Cargo Compartments - Dimensions	R	ILLUSTRATION REVISED DELETED "for A321NEO-XLR" FROM THE ILLUSTRATION AND SHEET TITLES. REPLACED AIRCRAFT EFFECTIVITY A321NEO BY A321NEO-XLR IN THE ILLUSTRATION.
FIGURE Cargo Compartments - Loading Combinations	R	ILLUSTRATION REVISED DELETED "for A321NEO-XLR" FROM THE ILLUSTRATION AND SHEET TITLES. REPLACED AIRCRAFT EFFECTIVITY A321NEO BY A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED
Section 2-7 Subject 2-7-0		
Door Clearances	R	PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Door Identification and Location - Door Identification	R	DELETED "for A321NEO-ACF and A321NEO-XLR" FROM THE ILLUSTRATION AND SHEET TITLES. REPLACED AIRCRAFT EFFECTIVITY A321NEO BY A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

LOCATIONS	CHG	DESCRIPTIONS OF CHANGE
	CODE	
	R	ADDED AIRCRAFT EFFECTIVITIES FOR
FIGURE Doors Clearances - Forward		A321NEO-ACF AND A321NEO-XLR IN THE
Passenger/Crew Doors		ILLUSTRATION.
		ILLUSTRATION REVISED
		PART EFFECTIVITY ADDED/REVISED/
		DELETED
	R	DELETED "for A321NEO-ACF and
FIGURE Doors Clearances - Emergency		A321NEO-XLR" FROM THE ILLUSTRATION
Exits		AND SHEET TITLES.
		REPLACED AIRCRAFT EFFECTIVITY
		A321NEO BY A321NEO-ACF AND
		A321NEO-XLR IN THE ILLUSTRATION.
		ILLUSTRATION REVISED
	R	ADDED AIRCRAFT EFFECTIVITIES FOR
FIGURE Doors Clearances - Aft Passenger/		A321NEO-ACF AND A321NEO-XLR IN THE
Crew Doors		ILLUSTRATION.
		ILLUSTRATION REVISED
		PART EFFECTIVITY ADDED/REVISED/
		DELETED
	R	ADDED AIRCRAFT EFFECTIVITIES FOR
FIGURE Door Clearances - Forward Cargo		A321NEO-ACF AND A321NEO-XLR IN THE
Compartment Door		ILLUSTRATION.
		ILLUSTRATION REVISED
		PART EFFECTIVITY ADDED/REVISED/
		DELETED
FICURE Dears Clearanaea Aft Cargo	R	ADDED AIRCRAFT EFFECTIVITIES FOR
Comportment Deer		A321NEO-ACF AND A321NEO-XLR IN THE
		ILLUSTRATION.
		ILLUSTRATION REVISED
		PART EFFECTIVITY ADDED/REVISED/
	_	
FIGURE Doors Clearances - Bulk Cargo	R	ADDED AIRCRAFT EFFECTIVITIES FOR
Compartment Door		A321NEO-ACF AND A321NEO-XLR IN THE
		ILLUSTRATION.
		PARTEFFECTIVITY ADDED/REVISED/
FIGURE Doors Clearances - Main Landing	R	
Gear Doors		A321NEO-ACF AND A321NEO-XLR IN THE
		ILLUSTRATION.
		ILLUSTRATION REVISED

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LOCATIONS	CHG CODE	DESCRIPTIONS OF CHANGE
FIGURE Doors Clearances - Radome	R	PART EFFECTIVITY ADDED/REVISED/ DELETED ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED
FIGURE Doors Clearances - APU and Nose Landing Gear Doors	R	PART EFFECTIVITY ADDED/REVISED/ DELETED ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
Section 2-8 Subject 2-8-0		
Escape Slides	R	PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Escape Slides - Location	R	DELETED "for A321NEO-ACF and A321NEO-XLR" FROM THE ILLUSTRATION AND SHEET TITLES. REPLACED AIRCRAFT EFFECTIVITY A321NEO BY A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED
FIGURE Escape Slides - Dimensions	R	DELETED "for A321NEO-ACF and A321NEO-XLR" FROM THE ILLUSTRATION AND SHEET TITLES. REPLACED AIRCRAFT EFFECTIVITY A321NEO BY A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED
Section 2-9 Subject 2-9-0		
Landing Gear	R	PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Landing Gear - Main Landing Gear - Twin-Wheel	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED

LOCATIONS	CHG CODE	DESCRIPTIONS OF CHANGE
FIGURE Landing Gear - Main Landing Gear Dimensions - Twin-Wheel	R	PART EFFECTIVITY ADDED/REVISED/ DELETED ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED
FIGURE Landing Gear - Nose Landing Gear	R	PART EFFECTIVITY ADDED/REVISED/ DELETED ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED
FIGURE Landing Gear - Nose Landing Gear Dimensions	R	PART EFFECTIVITY ADDED/REVISED/ DELETED ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED PART FFFECTIVITY ADDED/REVISED/
Landing Gear Maintenance Pits		DELETED
FIGURE Landing Gear Maintenance Pits - Maintenance Pit Envelopes	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Landing Gear Maintenance Pits - Maintenance Pit Envelopes	к	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
Section 2-10		
Subject 2-10-0		
Exterior Lighting	K	DELETED

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FIGURE Exterior Lighting	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Exterior Lighting	N	ADDED AN ILLUSTRATION RELATED TO MFRL.
FIGURE Exterior Lighting	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Exterior Lighting	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Exterior Lighting	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Exterior Lighting	N	ADDED AN ILLUSTRATION RELATED TO THE LIGHT BEAM FOR MFRL. ILLUSTRATION ADDED
Section 2-11 Subject 2-11-0		
Antennas and Probes Location	R	PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Antennas and Probes - Location	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED

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LOCATIONS	CHG CODE	DESCRIPTIONS OF CHANGE
Section 2-12		
Subject 2-12-0		
Auxiliary Power Unit	R	PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Auxiliary Power Unit - Access Doors	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Auxiliary Power Unit - General Layout	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
Engine and Nacelle	R	MODIFY THE INFORMATION RELATED TO ENGINE AND NACELLE FOR CFM56 ENGINE. MODIFY THE INFORMATION RELATED TO ENGINE AND NACELLE FOR IAE V2500 ENGINE. ADDED THE INFORMATION RELATED TO ENGINE AND NACELLE FOR CFM LEAP- 1A ENGINE. MODIFY THE INFORMATION RELATED TO ENGINE AND NACELLE FOR PW1100G ENGINE. PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Power Plant Handling - Major Dimensions - PW 1100G Engine	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Power Plant Handling - Fan Cowls - PW 1100G Engine	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED

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LOCATIONS	CHG CODE	DESCRIPTIONS OF CHANGE
FIGURE Power Plant Handling - Thrust Reverser Halves - PW 1100G Engine	R	PART EFFECTIVITY ADDED/REVISED/ DELETED ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/
FIGURE Power Plant Handling - Major Dimensions - CFM LEAP-1A Engine	R	DELETED ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Power Plant Handling - Major Dimensions - CFM LEAP-1A Engine	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Power Plant Handling - Fan Cowls - CFM LEAP-1A Engine	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Power Plant Handling - Thrust Reverser Halves - CFM LEAP-1A Engine	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
Section 2-13 Subject 2-13-0		
Leveling, Symmetry and Alignment	R	PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Location of the Leveling Points	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED

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LOCATIONS	CHG CODE	DESCRIPTIONS OF CHANGE
		PART EFFECTIVITY ADDED/REVISED/ DELETED
Section 2-14 Subject 2-14-0		
Jacking for Maintenance	R	PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Jacking for Maintenance - Jacking Point Locations	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Jacking for Maintenance - Forward Jacking Point	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Jacking for Maintenance - Wing Jacking Points	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Jacking for Maintenance - Safety Stay	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Jacking for Maintenance - Jacking Design	R	DELETED "for A321NEO and A321NEO- ACF" FROM THE ILLUSTRATION AND SHEET TITLES. MODIFIED THE ILLUSTRATION RELATED TO JACKING DESIGN FOR A321NEO AND A321NEO- ACF. ADDED AIRCRAFT EFFECTIVITY FOR A321NEO-ACF. ILLUSTRATION REVISED

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LOCATIONS	CHG CODE	DESCRIPTIONS OF CHANGE
FIGURE Jacking for Maintenance - Jacking Design	R	DELETED "A321NEO-XLR" FROM THE ILLUSTRATION AND SHEET TITLES. MODIFIED THE ILLUSTRATION RELATED TO JACKING DESIGN FOR A321NEO-XLR. REPLACED AIRCRAFT EFFECTIVITY A321NEO BY A321NEO-XLR. ILLUSTRATION REVISED
FIGURE Jacking for Maintenance - Location of Shoring Cradles	ĸ	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
CHAPTER 3 Section 3-1 Subject 3-1-0		
General Information	R	PART EFFECTIVITY ADDED/REVISED/ DELETED
Section 3-3 Subject 3-3-3	_	
Aerodrome Reference Code	R	PART EFFECTIVITY ADDED/REVISED/ DELETED
CHAPTER 4 Section 4-1 Subject 4-1-0		
General Information	R	PART EFFECTIVITY ADDED/REVISED/ DELETED
Section 4-2 Subject 4-2-0		
Turning Radii	R	PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Turning Radii, No Slip Angle - (Sheet 1)	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO- XLR IN THE ILLUSTRATION. ADDED A NOTE "DEPENDING ON AIRCRAFT CONFIGURATION" IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED

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LOCATIONS	CHG CODE	DESCRIPTIONS OF CHANGE
FIGURE Turning Radii, No Slip Angle - (Sheet 2)	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
Section 4-3 Subject 4-3-0		
Minimum Turning Radii	R	DELETED
FIGURE Minimum Turning Radii	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO- XLR IN THE ILLUSTRATION. ADDED A NOTE "DEPENDING ON AIRCRAFT CONFIGURATION" IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
Section 4-4 Subject 4-4-0		
Visibility from Cockpit in Static Position	R	PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Visibility from Cockpit in Static Position	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DEI ETED
FIGURE Binocular Visibility Through Windows from Captain Eye Position	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
Section 4-5 Subject 4-5-0		
Runway and Taxiway Turn Paths	R	PART EFFECTIVITY ADDED/REVISED/ DELETED
Subject 4-5-1		

LOCATIONS	CHG CODE	DESCRIPTIONS OF CHANGE
135° Turn - Runway to Taxiway	R	PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE 135° Turn - Runway to Taxiway - Cockpit Over Centerline Method	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO- XLR IN THE ILLUSTRATION. ADDED A NOTE "DEPENDING ON AIRCRAFT CONFIGURATION" IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE 135° Turn - Runway to Taxiway - Judgemental Oversteering Method	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO- XLR IN THE ILLUSTRATION. ADDED A NOTE "DEPENDING ON AIRCRAFT CONFIGURATION" IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
Subject 4-5-2	R	
90° Turn - Runway to Taxiway		DELETED
FIGURE 90° Turn - Runway to Taxiway - Cockpit Over Centerline Method	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO- XLR IN THE ILLUSTRATION. ADDED A NOTE "DEPENDING ON AIRCRAFT CONFIGURATION" IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED ADDED AIRCRAFT EFFECTIVITIES
FIGURE 90° Turn - Runway to Taxiway - Judgemental Oversteering Method Subject 4-5-3		FOR A321NEO-ACF AND A321NEO- XLR IN THE ILLUSTRATION. ADDED A NOTE "DEPENDING ON AIRCRAFT CONFIGURATION" IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED

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LOCATIONS	CHG CODE	DESCRIPTIONS OF CHANGE
180° Turn on a Runway	R	PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE 180° Turn on a Runway - Edge of Runway Method	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO- XLR IN THE ILLUSTRATION. ADDED A NOTE "DEPENDING ON AIRCRAFT CONFIGURATION" IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
Subject 4-5-4		
135° Turn - Taxiway to Taxiway	R	DELETED
FIGURE 135° Turn - Taxiway to Taxiway - Cockpit Over Centerline Method	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO- XLR IN THE ILLUSTRATION. ADDED A NOTE "DEPENDING ON AIRCRAFT CONFIGURATION" IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
Subject 4-5-5	_	
90° Turn - Taxiway to Taxiway	R	PARTEFFECTIVITY ADDED/REVISED/ DELETED
FIGURE 90° Turn - Taxiway to Taxiway - Cockpit Over Centerline Method	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO- XLR IN THE ILLUSTRATION. ADDED A NOTE "DEPENDING ON AIRCRAFT CONFIGURATION" IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
Section 4-6 Subject 4-6-0		
Runway Holding Bay (Apron)	R	PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Runway Holding Bay (Apron)	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO- XLR IN THE ILLUSTRATION. ADDED

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LOCATIONS	CHG CODE	DESCRIPTIONS OF CHANGE
		A NOTE "DEPENDING ON AIRCRAFT CONFIGURATION" IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
Section 4-7 Subject 4-7-0		
Minimum Line-Up Distance Corrections	R	PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Minimum Line-Up Distance Corrections - 90° Turn on Runway Entry	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO- XLR IN THE ILLUSTRATION. ADDED A NOTE "DEPENDING ON AIRCRAFT CONFIGURATION" IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Minimum Line-Up Distance Corrections - 180° Turn on Runway Turn Pad	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO- XLR IN THE ILLUSTRATION. ADDED A NOTE "DEPENDING ON AIRCRAFT CONFIGURATION" IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Minimum Line-Up Distance Corrections - 180° Turn on Runway Width	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO- XLR IN THE ILLUSTRATION. ADDED A NOTE "DEPENDING ON AIRCRAFT CONFIGURATION" IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
Section 4-8 Subject 4-8-0		
Aircraft Mooring	R	PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Aircraft Mooring	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION.



LOCATIONS	CHG CODE	DESCRIPTIONS OF CHANGE
CHAPTER 5		ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
Section 5-1 Subject 5-1-1		
Aircraft Servicing Arrangements	R	PART EFFECTIVITY ADDED/REVISED/ DELETED
Subject 5-1-2	_	
Typical Ramp Layout - Open Apron	R	PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Typical Ramp Layout - Open Apron - Bulk Loading FIGURE Typical Ramp Layout - Open Apron - ULD Loading	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO- XLR IN THE ILLUSTRATION. ADDED A NOTE "DEPENDING ON AIRCRAFT CONFIGURATION" IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO- XLR IN THE ILLUSTRATION. ADDED A NOTE "DEPENDING ON AIRCRAFT CONFIGURATION" IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/
Subject 5-1-3		DELETED
Typical Ramp Layout - Gate	R	PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Typical Ramp Layout - Gate	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO- XLR IN THE ILLUSTRATION. ADDED A NOTE "DEPENDING ON AIRCRAFT CONFIGURATION" IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
Section 5-2		



LOCATIONS	CHG CODE	DESCRIPTIONS OF CHANGE
Subject 5-2-0		
Terminal Operations - Full Servicing Turn Round Time	R	PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Full Servicing Turn Round Time Chart	R	DELETED "for A321NEO-ACF" FROM THE ILLUSTRATION AND SHEET TITLES. REPLACED AIRCRAFT EFFECTIVITY A321NEO BY A321NEO-ACF IN THE ILLUSTRATION.
FIGURE Full Servicing Turn Round Time Chart with 206 Seats - Full Servicing Turn Round Time Chart for CLS	R	DELETED "for A321NEO-XLR" FROM THE ILLUSTRATION TITLE. REPLACED AIRCRAFT EFFECTIVITY A321NEO BY A321NEO-XLR IN THE ILLUSTRATION.
FIGURE Full Servicing Turn Round Time Chart with 206 Seats - Full Servicing Turn Round Time Chart for Bulk Loading System	R	DELETED "for A321NEO-XLR" FROM THE ILLUSTRATION TITLE. REPLACED AIRCRAFT EFFECTIVITY A321NEO BY A321NEO-XLR IN THE ILLUSTRATION.
FIGURE Full Servicing Turn Round Time Chart with 244 Seats - Full Servicing Turn Round Time Chart for CLS	R	DELETED "for A321NEO-XLR" FROM THE ILLUSTRATION TITLE. REPLACED AIRCRAFT EFFECTIVITY A321NEO BY A321NEO-XLR IN THE ILLUSTRATION.
FIGURE Full Servicing Turn Round Time Chart with 244 Seats - Full Servicing Turn Round Time Chart for Bulk Loading System	R	DELETED "for A321NEO-XLR" FROM THE ILLUSTRATION TITLE. REPLACED AIRCRAFT EFFECTIVITY A321NEO BY A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED
Section 5-3 Subject 5-3-0 Terminal Operations -Transit Turn Round Time	R	PART EFFECTIVITY ADDED/REVISED/ DELETED

LOCATIONS	CHG CODE	DESCRIPTIONS OF CHANGE
FIGURE Outstation Turn Round Time Chart	R	DELETED "for A321NEO-ACF" FROM THE ILLUSTRATION AND SHEET TITLES. REPLACED AIRCRAFT EFFECTIVITY FOR A321NEO BY A321NEO-ACF IN THE ILLUSTRATION. ILLUSTRATION REVISED
Section 5-4 Subject 5-4-1		
Ground Service Connections Layout	R	PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Ground Service Connections Layout	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
Subject 5-4-2		
Grounding (Earthing) Points	R	PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Ground Service Connections - Grounding (Earthing) Points - Landing Gear	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/
FIGURE Ground Service Connections - Grounding (Earthing) Points - Wing (If Installed)	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO- XLR IN THE ILLUSTRATION. ADDED A NOTE "DEPENDING ON AIRCRAFT CONFIGURATION" IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/
FIGURE Ground Service Connections - Grounding (Earthing) Point - Avionics Compartment Door-Frame	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

LOCATIONS	CHG CODE	DESCRIPTIONS OF CHANGE
FIGURE Ground Service Connections - Grounding (Earthing) Point - Engine Air Intake (If Installed)	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
Subject 5-4-3	_	
Hydraulic Servicing	R	DELETED
FIGURE Ground Service Connections - Green System Ground Service Panel	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Ground Service Connections - Blue System Ground Service Panel	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Ground Service Connections - Yellow System Ground Service Panel	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Ground Service Connections - RAT	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
Subject 5-4-4		
Electrical System	R	DELETED
FIGURE Ground Service Connections - External Power Receptacles	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED

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LOCATIONS	CHG CODE	DESCRIPTIONS OF CHANGE
		PART EFFECTIVITY ADDED/REVISED/ DELETED
Subject 5-4-5		
Oxygen System	R	PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Ground Service Connections - Oxygen System	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
Subject 5-4-6		
Fuel System	R	PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Ground Service Connections - Refuel/Defuel Control Panel	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Ground Service Connections - Refuel/Defuel Couplings	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Ground Service Connections - Overwing Gravity-Refuel Cap (If Installed)	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Ground Service Connections - Overpressure Protectors and NACA Vent Intake	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED

LOCATIONS	CHG	DESCRIPTIONS OF CHANGE
	CODE	
FIGURE Primary Protection - Unpressurized- Compartment Ventilation Air-Intake	R	DELETED "for A321NEO-XLR" FROM THE ILLUSTRATION AND SHEET TITLES. REPLACED AIRCRAFT EFFECTIVITY FOR A321NEO BY A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED
Subject 5-4-7		
Pneumatic System	R	PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Ground Service Connections - LP and HP Ground Connectors	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
Subject 5-4-8	_	
Oil System	R	PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Ground Service Connections - APU Oil Tank	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Ground Service Connections - Engine Oil Tank – CFM LEAP-1A Series Engine	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Ground Service Connections - IDG Oil Tank – CFM LEAP-1A Series Engine	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED

LOCATIONS	CHG	DESCRIPTIONS OF CHANGE
	CODE	
FIGURE Ground Service Connections - Starter Oil Tank – CFM LEAP-1A Series Engine	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Ground Service Connections - Engine Oil Tank – PW 1100G Series Engine	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Ground Service Connections - IDG Oil Tank – PW 1100G Series Engine	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Ground Service Connections - Starter Oil Tank – PW 1100G Series Engine	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
Subject 5-4-9		
Potable Water System	R	PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Ground Service Connections - Potable Water Ground Service Panels	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Ground Service Connections - Potable Water Tank Location Subject 5-4-10	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED

LOCATIONS	CHG CODE	DESCRIPTIONS OF CHANGE
Waste Water System	R	PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Ground Service Connections - Waste Water Ground Service Panel	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Ground Service Connections - Waste Tank Location	R	REPLACED AIRCRAFT EFFECTIVITY A321NEO BY A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. DELETED "for A321NEO-ACF" FROM THE ILLUSTRATION TITLE.
Section 5-5 Subject 5-5-0		
Engine Starting Pneumatic Requirements	R	PART EFFECTIVITY ADDED/REVISED/ DELETED
Section 5-6 Subject 5-6-0		
Ground Pneumatic Power Requirements	R	PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Ground Pneumatic Power Requirements - Heating	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Ground Pneumatic Power Requirements - Cooling	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
Section 5-7 Subject 5-7-0		
Preconditioned Airflow Requirements	R	PART EFFECTIVITY ADDED/REVISED/ DELETED

LOCATIONS	CHG CODE	DESCRIPTIONS OF CHANGE
FIGURE Preconditioned Airflow Requirements	R	ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
Section 5-8 Subject 5-8-0		
Ground Towing Requirements	R	PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Ground Towing Requirements - PW 1100G Engine	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
Section 5-9 Subject 5-9-0		
De-Icing and External Cleaning	R	PART EFFECTIVITY ADDED/REVISED/ DELETED
CHAPTER 6 Section 6-1 Subject 6-1-0		
Engine Exhaust Velocities and Temperatures	R	PART EFFECTIVITY ADDED/REVISED/ DELETED
Subject 6-1-1		
Engine Exhaust Velocities Contours - Ground Idle Power	R	PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Engine Exhaust Velocities - Ground Idle Power – CFM LEAP-1A Engine	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/
FIGURE Engine Exhaust Velocities - Ground Idle Power – PW 1100G Engine	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED

LOCATIONS	CHG	DESCRIPTIONS OF CHANGE
	CODE	
Engine Exhaust Temperatures Contours - Ground Idle Power	R	PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Engine Exhaust Temperatures - Ground Idle Power – CFM LEAP-1A Engine	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/
FIGURE Engine Exhaust Temperatures - Ground Idle Power – PW 1100G Engine	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
Subject 6-1-3		
Engine Exhaust Velocities Contours - Breakaway Power	R	PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Engine Exhaust Velocities - Breakaway Power 12% MTO – CFM LEAP- 1A Engine	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Engine Exhaust Velocities - Breakaway Power 12% MTO – PW 1100G Engine	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DEI ETED
FIGURE Engine Exhaust Velocities - Breakaway Power 24% MTO – CFM LEAP- 1A Engine	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED

LOCATIONS	CHG CODE	DESCRIPTIONS OF CHANGE
FIGURE Engine Exhaust Velocities - Breakaway Power 24% MTO – PW 1100G Engine	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
Subject 6-1-4	R	PART EFFECTIVITY ADDED/REVISED/
Engine Exhaust Temperatures Contours - Breakaway Power	K	DELETED
FIGURE Engine Exhaust Temperatures - Breakaway Power 12% MTO - CFM LEAP- 1A Engine	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/
FIGURE Engine Exhaust Temperatures - Breakaway Power 12% MTO - PW 1100G Engine	R	DELETED ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Engine Exhaust Temperatures - Breakaway Power 24% MTO - CFM LEAP- 1A Engine	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/
FIGURE Engine Exhaust Temperatures - Breakaway Power 24% MTO - PW 1100G Engine	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DEI ETED
Subject 6-1-5		
Engine Exhaust Velocities Contours - Takeoff Power	R	PART EFFECTIVITY ADDED/REVISED/ DELETED

LOCATIONS	CHG	DESCRIPTIONS OF CHANGE
	CODE	
FIGURE Engine Exhaust Velocities - Takeoff Power – CFM LEAP-1A Engine	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION.
FIGURE Engine Exhaust Velocities - Takeoff Power – PW 1100G Engine	R	ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
Subject 6-1-6		
Engine Exhaust Temperatures Contours - Takeoff Power	R	PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Engine Exhaust Temperatures - Takeoff Power - CFM LEAP-1A Engine	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/
FIGURE Engine Exhaust Temperatures - Takeoff Power - PW 1100G Engine	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
Section 6-3		
Subject 6-3-0		
Danger Areas of Engines	R	PART EFFECTIVITY ADDED/REVISED/ DELETED
Subject 6-3-1	_	
Ground Idle Power	R	DELETED
FIGURE Danger Areas of the Engines - CFM LEAP-1A Engine	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED

LOCATIONS	CHG CODE	DESCRIPTIONS OF CHANGE
FIGURE Danger Areas of the Engines - PW 1100G Engine	R	PART EFFECTIVITY ADDED/REVISED/ DELETED ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
Subject 6-3-2		
Breakaway Power	R	PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Danger Areas of the Engines - CFM LEAP-1A Engine	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Danger Areas of the Engines - PW 1100G Engine	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
Subject 6-3-3		
Take Off Power	R	PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Danger Areas of the Engine - CFM LEAP-1A Engine	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Danger Areas of the Engine - PW 1100G Engine	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
Section 6-4 Subject 6-4-1		

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LOCATIONS	CHG CODE	DESCRIPTIONS OF CHANGE
APU - APIC & GARRETT	R	PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Exhaust Velocities and Temperatures - APU – APIC & GARRETT	R	ADDED AIRCRAFT EFFECTIVITIES FOR A321NEO-ACF AND A321NEO-XLR IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
CHAPTER 7 Section 7-1		
Subject 7-1-0		
General Information	R	PART EFFECTIVITY ADDED/REVISED/ DELETED
Section 7-2 Subject 7-2-0		
Landing Gear Footprint	R	PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Landing Gear Footprint	R	ADDED AIRCRAFT EFFECTIVITY FOR A321NEO-ACF IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Landing Gear Footprint	R	DELETED "for A321NEO-XLR" FROM THE ILLUSTRATION AND SHEET TITLES. REPLACED AIRCRAFT EFFECTIVITY A321NEO BY A321NEO-XLR THE ILLUSTRATION. ILLUSTRATION REVISED
Section 7-3		
Maximum Pavement Loads	R	PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Maximum Pavement Loads for A321NEO	R	ADDED AIRCRAFT EFFECTIVITY FOR A321NEO-ACF IN THE ILLUSTRATION. ILLUSTRATION REVISED PART EFFECTIVITY ADDED/REVISED/ DELETED
FIGURE Maximum Pavement Loads	R	DELETED "for A321NEO-XLR" FROM THE ILLUSTRATION AND SHEET TITLES.

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LOCATIONS	CHG CODE	DESCRIPTIONS OF CHANGE
		REPLACED AIRCRAFT EFFECTIVITY A321NEO BY A321NEO-XLR THE ILLUSTRATION. ILLUSTRATION REVISED
Section 7-4 Subject 7-4-0		
Landing Gear Loading on Pavement	R	PART EFFECTIVITY ADDED/REVISED/ DELETED
Section 7-5 Subject 7-5-0	_	
Flexible Pavement Requirements - US Army Corps of Engineers Design Method	R	PART EFFECTIVITY ADDED/REVISED/ DELETED
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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

SCOPE

1-1-0 Introduction

| **ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

Purpose

1. General

The A321 AIRCRAFT CHARACTERISTICS – AIRPORT AND MAINTENANCE PLANNING (AC) manual is issued for A321-100 and A321-200 series aircraft equipped with wing-tip fences or sharklets, to provide necessary data to airport operators, airlines and Maintenance/Repair Organizations (MRO) for airport and maintenance facilities planning.

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

The new engine option together with the large wingtip devices (sharklets) and a very innovative cabin, A321neo is the most cost-efficient aircraft ever. In its maximum seating capacity, A321neo can accommodates up to 244 passengers and shows the lowest seat mile cost on the single-aisle aircraft market.

A321neo has three versions:

- A321neo
- A321LR
- A321XLR.

A321neo is perfectly suited to fit into very competitive markets with a maximum passenger range of 3 400 nm (6 297 km) in a high-density layout.

A321LR flies up to 4 000 nm (7 408 km) with 206 passengers because of the installation of Additional Centre Tanks (ACTs). Ideally suited to fly transatlantic routes, A321LR allows the airlines to go into new long-haul markets that were not accessed before with the available single-aisle aircraft. Operators can make the cabin in a single-class layout or in a state of the art two class configuration which includes full-flat seats for a true long-haul comfort.

A321XLR extends the range up to 4 700 nm (8 705 km) with an increased maximum takeoff weight of 101 tons. A321XLR has a permanent Rear Centre Tank (RCT) (carrying 12900 I (3408 US gal) of fuel) and an optional forward ACT.

Unbeatable in fuel efficiency, A321neo offers outstanding environmental performance with 20% lower fuel burn per seat and reduced carbon dioxide emissions. It also contributes to a 50% of noise reduction compared to A321ceo.

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

1-2-0 Glossary

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

<u>Glossary</u>

1. List of Abbreviations

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

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

MLGMain Landing GearNLGNose Landing GearOATOutside Air TemperaturePAXPassengerPBBPassenger Boarding Bridge
NLGNose Landing GearOATOutside Air TemperaturePAXPassengerPBBPassenger Boarding Bridge
OATOutside Air TemperaturePAXPassengerPBBPassenger Boarding Bridge
PAX Passenger PBB Passenger Boarding Bridge
PBB Passenger Boarding Bridge
PCA Portland Cement Association
PCN Pavement Classification Number
PRM Passenger with Reduced Mobility
R Right
RH Right Hand
ULD Unit Load Device
US United States
WV Weight Variant
Y/C Tourist Class

- 2. Design Weight Terminology
 - Maximum Design Ramp Weight (MRW): Maximum weight for ground maneuver (including weight of taxi and run-up fuel) as limited by aircraft strength and airworthiness requirements. It is also called Maximum Design Taxi Weight (MTW).
 - Maximum Design Landing Weight (MLW): Maximum weight for landing as limited by aircraft strength and airworthiness requirements.
 - Maximum Design Takeoff Weight (MTOW):
 Maximum weight for takeoff as limited by aircraft strength and airworthiness requirements. (This is the maximum weight at start of the take-off run).
 - Maximum Design Zero Fuel Weight (MZFW): Maximum permissible weight of the aircraft without usable fuel.
 - Maximum Seating Capacity: Maximum number of passengers specifically certified or anticipated for certification.
 - Usable Volume: Usable volume available for cargo, pressurized fuselage, passenger compartment and cockpit.
 - Water Volume:

Maximum volume of cargo compartment.

- Usable Fuel: Fuel available for aircraft propulsion.

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

AIRCRAFT DESCRIPTION

2-1-1 General Aircraft Characteristics Data

| **ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

General Aircraft Characteristics Data

**ON A/C A321-100

1. The following table gives characteristics of A321-100 models, these data are specific to each weight variant:

Aircraft Characteristics						
	WV000 WV002 WV003					
Maximum Ramp Weight (MRW)	83 400 kg	83 400 kg	85 400 kg	78 400 kg		
Maximum Taxi Weight (MTW)	(183 865 lb)	(183 865 lb)	(188 275 lb)	(172 842 lb)		
Maximum Take-Off Weight	83 000 kg	83 000 kg	85 000 kg	78 000 kg		
(MTOW)	(182 984 lb)	(182 984 lb)	(187 393 lb)	(171 961 lb)		
Maximum Landing Weight (MLW)	73 500 kg	74 500 kg	74 500 kg	73 500 kg		
	(162 040 lb)	(164 244 lb)	(164 244 lb)	(162 040 lb)		
Maximum Zero Fuel Weight	69 500 kg	70 500 kg	70 500 kg	69 500 kg		
(MZFW)	(153 221 lb)	(155 426 lb)	(155 426 lb)	(153 221 lb)		

Aircraft Characteristics							
WV005 WV006 WV007 WV008							
Maximum Ramp Weight (MRW)	83 400 kg	78 400 kg	80 400 kg	89 400 kg			
Maximum Taxi Weight (MTW)	(183 865 lb)	(172 842 lb)	(177 252 lb)	(197 093 lb)			
Maximum Take-Off Weight	83 000 kg	78 000 kg	80 000 kg	89 000 kg			
(MTOW)	(182 984 lb)	(171 961 lb)	(176 370 lb)	(196 211 lb)			
Maximum Landing Weight (MLW)	75 000 kg	74 500 kg	73 500 kg	75 500 kg			
	(165 347 lb)	(164 244 lb)	(162 040 lb)	(166 449 lb)			
Maximum Zero Fuel Weight	71 000 kg	70 500 kg	69 500 kg	71 500 kg			
(MZFW)	(156 528 lb)	(155 426 lb)	(153 221 lb)	(157 630 lb)			

**ON A/C A321-200

2. The following table gives characteristics of A321-200 models, these data are specific to each weight variant:

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

Aircraft Characteristics						
WV000 WV001 WV002 WV						
Maximum Ramp Weight (MRW)	89 400 kg	93 400 kg	89 400 kg	91 400 kg		
Maximum Taxi Weight (MTW)	(197 093 lb)	(205 912 lb)	(197 093 lb)	(201 502 lb)		
Maximum Take-Off Weight	89 000 kg	93 000 kg	89 000 kg	91 000 kg		
(MTOW)	(196 211 lb)	(205 030 lb)	(196 211 lb)	(200 621 lb)		
Maximum Landing Weight (MLW)	75 500 kg	77 800 kg	77 800 kg	77 800 kg		
	(166 449 lb)	(171 520 lb)	(171 520 lb)	(171 520 lb)		
Maximum Zero Fuel Weight	71 500 kg	73 800 kg	73 800 kg	73 800 kg		
(MZFW)	(157 630 lb)	(162 701 lb)	(162 701 lb)	(162 701 lb)		

Aircraft Characteristics						
WV004 WV005 WV006						
Maximum Ramp Weight (MRW)	87 400 kg	85 400 kg	83 400 kg	83 400 kg		
Maximum Taxi Weight (MTW)	(192 684 lb)	(188 275 lb)	(183 865 lb)	(183 865 lb)		
Maximum Take-Off Weight	87 000 kg	85 000 kg	83 000 kg	83 000 kg		
(MTOW)	(191 802 lb)	(187 393 lb)	(182 984 lb)	(182 984 lb)		
Maximum Landing Weight (MLW)	75 500 kg	75 500 kg	75 500 kg	73 500 kg		
	(166 449 lb)	(166 449 lb)	(166 449 lb)	(162 040 lb)		
Maximum Zero Fuel Weight	71 500 kg	71 500 kg	71 500 kg	69 500 kg		
(MZFW)	(157 630 lb)	(157 630 lb)	(157 630 lb)	(153 221 lb)		

Aircraft Characteristics						
WV008 WV009 WV010 W						
Maximum Ramp Weight (MRW)	80 400 kg	78 400 kg	85 400 kg	93 900 kg		
Maximum Taxi Weight (MTW)	(177 252 lb)	(172 842 lb)	(188 275 lb)	(207 014 lb)		
Maximum Take-Off Weight	80 000 kg	78 000 kg	85 000 kg	93 500 kg		
(MTOW)	(176 370 lb)	(171 961 lb)	(187 393 lb)	(206 132 lb)		
Maximum Landing Weight (MLW)	73 500 kg	73 500 kg	77 800 kg	77 800 kg		
	(162 040 lb)	(162 040 lb)	(171 520 lb)	(171 520 lb)		
Maximum Zero Fuel Weight	69 500 kg	69 500 kg	73 800 kg	73 800 kg		
(MZFW)	(153 221 lb)	(153 221 lb)	(162 701 lb)	(162 701 lb)		

**ON A/C A321neo

3. The following table gives characteristics of A321NEO models, these data are specific to each weight variant:

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

Aircraft Characteristics							
	WV050	WV051	WV052	WV053	WV056	WV063	WV065
Maximum Ramp	89 400 kg	89 400 kg	93 900 kg	93 900 kg	92 900 kg	91 400 kg	90 900 kg
Weight (MRW)	(197	(197	(207	(207	(204	(201	(200
Maximum Taxi Weight	093 lb)	093 lb)	014 lb)	014 lb)	809 lb)	502 lb)	400 lb)
(MTW)							
Maximum Take-Off	89 000 kg	89 000 kg	93 500 kg	93 500 kg	92 500 kg	91 000 kg	90 500 kg
Weight (MTOW)	(196	(196	(206	(206	(203	(200	(199
	211 lb)	211 lb)	132 lb)	132 lb)	928 lb)	621 lb)	518 lb)
Maximum Landing	77 300 kg	79 200 kg	77 300 kg	79 200 kg	77 300 kg	79 200 kg	79 200 kg
Weight (MLW)	(170	(174	(170	(174	(170	(174	(174
	417 lb)	606 lb)	417 lb)	606 lb)	417 lb)	606 lb)	606 lb)
Maximum Zero Fuel	73 300 kg	75 600 kg	73 300 kg	75 600 kg	73 300 kg	75 600 kg	75 600 kg
Weight (MZFW)	(161	(166	(161	(166	(161	(166	(166
	599 lb)	669 lb)	599 lb)	669 lb)	599 lb)	669 lb)	669 lb)

Air	rcraft Characteristics	6	
	WV067	WV070	WV080
Maximum Ramp Weight (MRW)	90 400 kg	80 400 kg	95 400 kg
Maximum Taxi Weight (MTW)	(199 298 lb)	(177 252 lb)	(210 321 lb)
Maximum Take-Off Weight (MTOW)	90 000 kg	80 000 kg	95 000 kg
	(198 416 lb)	(176 370 lb)	(209 439 lb)
Maximum Landing Weight (MLW)	79 200 kg	71 500 kg	79 200 kg
	(174 606 lb)	(157 630 lb)	(174 606 lb)
Maximum Zero Fuel Weight (MZFW)	75 600 kg	67 000 kg	75 600 kg
	(166 669 lb)	(147 710 lb)	(166 669 lb)

| **ON A/C A321neo-ACF

4. The following table gives characteristics of A321NEO-ACF models, these data are specific to each weight variant:

Aircraft Characteristics					
	WV067	WV071	WV072		
Maximum Ramp Weight (MRW)	90 400 kg	97 400 kg	97 400 kg		
Maximum Taxi Weight (MTW)	(199 298 lb)	(214 730 lb)	(214 730 lb)		
Maximum Take-Off Weight (MTOW)	90 000 kg	97 000 kg	97 000 kg		
	(198 416 lb)	(213 848 lb)	(213 848 lb)		
Maximum Landing Weight (MLW)	79 200 kg	77 300 kg	79 200 kg		
	(174 606 lb)	(170 417 lb)	(174 606 lb)		
Maximum Zero Fuel Weight (MZFW)	75 600 kg	73 300 kg	75 600 kg		

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

Aircraft Characteristics					
WV067 WV071 WV072					
	(166 669 lb)	(161 599 lb)	(166 669 lb)		

**ON A/C A321neo-XLR

5. The following table gives characteristics of A321NEO-XLR models, these data are specific to each weight variant:

	Aircraft Characteristics	
	WV099	WV100
Maximum Ramp Weight (MRW)	101 400 kg	101 400 kg
Maximum Taxi Weight (MTW)	(223 549 lb)	(223 549 lb)
Maximum Take-Off Weight	101 000 kg	101 000 kg
(MTOW)	(222 667 lb)	(222 667 lb)
Maximum Landing Weight (MLW)	77 300 kg	79 200 kg
	(170 417 lb)	(174 606 lb)
Maximum Zero Fuel Weight	73 300 kg	75 600 kg
(MZFW)	(161 599 lb)	(166 669 lb)

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

6. The following table gives characteristics of A321-100, A321-200, A321NEO, A321NEO-ACF and A321NEO-XLR models, these data are common to each weight variant:

Aircraft Characteristics										
Standard Seating	185 (Single-Class)									
Capacity	202 (Single-Class) for A321NEO-ACF									
Usable Fuel Capacity (density = 0.785 kg/l)		A321CEO CFM Engine	A321CEO IAE Engine	A321NEO	A321N EO-ACF	A321NEO-XLR				
	Total Wing Fuel	15 850 l (4 187 US gal)	15 500 I (4 095 US gal)	15 290 I (4 039 US gal)	15 380 I (4 063 US gal)	15 328 I (4 049 US gal)				
	Center Tank Fuel	8 200 I (2 166 US gal)	8 200 I (2 166 US gal)							
	ACT1	x	х	х	3 121 I (824 US gal)	Х				
	ACT2	Х	Х	Х	3 121	Х				

Aircraft Characteristics									
					(824 US gal)				
	ACT4 / 4.1 / FWD	Х	Х	Х	3 121 I (824 US gal)	3 120 I (824 US gal)			
	RCT	Х	Х	Х	Х	13 100 l (3 461 US gal)			
	Maximum Total Aircraft- Fuel	24 050 I (6 353 US gal)	23 700 I (6 261 US gal)	23 490 I (6 205 US gal)	32 943 I (8 703 US gal)	39 748 I (10 500 US gal)			
Pressurized Fuselage Volume (A/C non equipped)	418 m ³ (14 762 ft ³)								
Passenger Compartment Volume	155 m³ (5 474 ft³)								
Cockpit Volume	9 m³ (318 ft³)								
Usable Volume, FWD CC		22.81 m ³ (806 ft ³)							
		16.19 m ³ (572 ft ³)							
Usable Volume, AFT CC		23.03 m ³ (813 ft ³)							
		17.96 m ³ (634 ft ³)							
		13.25 m ³ (468 ft ³)							
Usable Volume, Bulk CC	5.88 m ³ (208 ft ³)								
Water Volume, FWD CC	25.42 m ³ (898 ft ³)								
Water Volume, AFT CC	25.69 m ³ (907 ft ³)								
Water Volume, Bulk CC	7.76 m ³ (274 ft ³)								

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

2-2-0 General Aircraft Dimensions

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

General Aircraft Dimensions

1. This section provides general aircraft dimensions.

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200



RELATED TO AIRCRAFT ATTITUDE AND WEIGHT.

N_AC_020200_1_0050101_01_04

General Aircraft Dimensions Wing Tip Fence (Sheet 1 of 4) FIGURE-2-2-0-991-005-A01
AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200



NOTE: RELATED TO AIRCRAFT ATTITUDE AND WEIGHT.

N_AC_020200_1_0050104_01_02

General Aircraft Dimensions Wing Tip Fence (Sheet 2 of 4) FIGURE-2-2-0-991-005-A01

2-2-0

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200



NOTE: RELATED TO AIRCRAFT ATTITUDE AND WEIGHT.

N_AC_020200_1_0050103_01_02

General Aircraft Dimensions Sharklet (Sheet 3 of 4) FIGURE-2-2-0-991-005-A01

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200



NOTE: RELATED TO AIRCRAFT ATTITUDE AND WEIGHT.

N_AC_020200_1_0050105_01_02

General Aircraft Dimensions Sharklet (Sheet 4 of 4) FIGURE-2-2-0-991-005-A01

2-2-0

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**ON A/C A321neo





N_AC_020200_1_0100101_01_01

General Aircraft Dimensions (Sheet 1 of 2) FIGURE-2-2-0-991-010-A01



**ON A/C A321neo



NOTE: RELATED TO AIRCRAFT ATTITUDE AND WEIGHT.

N_AC_020200_1_0100102_01_01

General Aircraft Dimensions (Sheet 2 of 2) FIGURE-2-2-0-991-010-A01

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321neo-ACF A321neo-XLR



RELATED TO AIRCRAFT ATTITUDE AND WEIGHT.

N_AC_020200_1_0120101_01_00

General Aircraft Dimensions (Sheet 1 of 2) FIGURE-2-2-0-991-012-A01

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

| **ON A/C A321neo-ACF A321neo-XLR



NOTE: RELATED TO AIRCRAFT ATTITUDE AND WEIGHT.

N_AC_020200_1_0120102_01_00

General Aircraft Dimensions (Sheet 2 of 2) FIGURE-2-2-0-991-012-A01

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©A321

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

2-3-0 Ground Clearances

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

Ground Clearances

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

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

The dimensions are given for:

- A light weight, for an A/C in maintenance configuration with a mid CG,
- An aircraft at Maximum Ramp Weight with a FWD CG and an AFT CG,
- Aircraft on jacks, FDL at 4.60 m (15.09 ft).
- <u>NOTE</u> : Passenger and cargo door ground clearances are measured from the center of the door sill and from floor level.



**ON A/C A321-100 A321-200





N_AC_020300_1_0050101_01_07

Ground Clearances Wing Tip Fence (Sheet 1 of 2) FIGURE-2-3-0-991-005-A01

2-3-0

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200

				MR 39 400 F	W (WV g (197	0) 093 lb)		MRW 93 (207	(WV11 900 kg 014 lb)		OE 46 85 (103 3	:W 56 kg	A/C JA	CKED
A/C	CONFIGURATION		FWD (17.	5%)	AFT (38	CG %)	FWD (19) CG	AFT (36.8	CG 8%)	000	25%)	(15.0 (15.0	9 ft)
			E	ft	E	ft	E	ft	E	ft	E	ft	E	ft
	DOOR 1	5	3.394	11.135	3.481	11.420	3.393	11.131	3.466	11.371	3.501	11.486	4.132	13.556
PASSENGER	EMERGENCY HATCH 1	D2	3.898	12.788	3.906	12.814	3.889	12.759	3.895	12.778	4.005	13.139	4.535	14.878
DOORS	EMERGENCY HATCH 2	ß	3.904	12.808	3.907	12.818	3.895	12.778	3.897	12.785	4.012	13.162	4.535	14.878
	DOOR 2	D 4	3.627	11.899	3.531	11.584	3.608	11.837	3.526	11.568	3.735	12.253	4.132	13.556
	FWD CARGO DOOR	Ω	1.817	5.961	1.886	6.187	1.814	5.951	1.872	6.141	1.925	6.315	2.532	8.307
CARGO	AFT CARGO DOOR	C2	1.976	6.482	1.920	6.299	1.961	6.433	1.913	6.276	2.083	6.833	2.532	8.307
	BULK CARGO DOOR	C3	2.219	7.280	2.143	7.030	2.202	7.224	2.137	7.011	2.327	7.634	2.749	9.019
REFERENCE POINT	PILOT VIEW	CP1	4.193	13.756	4.302	14.114	4.194	13.759	4.286	14.061	4.301	14.110	4.959	16.269
	BOTTOM FWD	μ	1.730	5.675	1.790	5.872	1.726	5.662	1.777	5.830	1.837	6.026	2.434	7.985
	BOTTOM AFT	E2	1.881	6.171	1.823	5.980	1.866	6.122	1.816	5.958	1.989	6.525	2.434	7.985
FUSELAGE	TOP FWD	Е	5.874	19.271	5.932	19.461	5.870	19.258	5.919	19.419	5.982	19.625	6.575	21.571
	TOP AFT	Е4	6.026	19.770	5.965	19.570	6.010	19.717	5.958	19.547	6.134	20.124	6.575	21.571
	BELLY FAIRING	BF1	1.648	5.406	1.633	5.357	1.636	5.367	1.623	5.324	1.755	5.757	2.256	7.401
	FLAP TRACK 2	Т2	2.641	8.664	2.625	8.612	2.630	8.628	2.616	8.582	2.749	9.019	3.248	10.656
	FLAP TRACK 3	Т3	3.075	10.088	3.055	10.022	3.063	10.049	3.046	9.993	3.182	10.439	3.677	12.063
MING	FLAP TRACK 4	T4	3.411	11.190	3.385	11.105	3.399	11.151	3.376	11.076	3.519	11.544	4.005	13.140
	WING TIP FENCE TOP	٧	4.775	15.666	4.736	15.538	4.761	15.620	4.728	15.511	4.882	16.017	5.353	17.562
	WING TIP FENCE BOTTOM	W2	3.803	12.477	3.766	12.355	3.790	12.434	3.758	12.329	3.911	12.831	4.383	14.379
	HORIZONTAL TAIL PLANE	노	5.472	17.952	5.339	17.516	5.449	17.877	5.336	17.506	5.579	18.303	5.930	19.455
TAILPLANE	APU EXHAUST	AP	4.757	15.606	4.615	15.141	4.733	15.528	4.612	15.131	4.864	15.958	5.203	17.070
	VERTICAL TAIL PLANE	L ∠	11.993	39.347	11.856	38.897	11.970	39.271	11.853	38.887	12.101	39.701	12.445	40.830
	CFM 5A NACELLE LOW POINT	ź	0.601	1.971	0.609	1.998	0.592	1.942	0.599	1.965	0.709	2.326	1.239	4.064
ENGINE/ NACELLE	CFM 5B NACELLE LOW POINT	ž	0.601	1.971	0.609	1.998	0.593	1.945	0.599	1.965	0.709	2.326	1.239	4.064
	V2500 NACELLE LOW POINT	ź	0.783	2.568	0.787	2.582	0.773	2.536	0.777	2.549	0.890	2.919	1.416	4.645
NOTE: PASSENGER OF THE DOOF	AND CARGO DOOR GRI 3 SILL AND FROM FLOO	OUN R LE	D CLE/	ARANCE	ES ARE	MEASU	JRED F	ROM T	HE CEI	NTER				

N_AC_020300_1_0050103_01_01

Ground Clearances Wing Tip Fence (Sheet 2 of 2) FIGURE-2-3-0-991-005-A01

2-3-0



**ON A/C A321-100 A321-200





N_AC_020300_1_0300101_01_03

Ground Clearances Sharklet (Sheet 1 of 2) FIGURE-2-3-0-991-030-A01

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2-3-0

Ground Clearances
Sharklet (Sheet 2 of 2)
FIGURE-2-3-0-991-030-A01

N_AC_020300_1_0300103_01_01

A/C JACKED FDL = 4.60 m (15.09 ft) 15.265 11.076 3.519 11.544 4.005 13.140 3.895 12.778 4.005 13.139 4.535 14.878 4.012 13.162 4.535 14.878 3.735 12.253 4.132 13.556 9.019 7.985 3.248 10.656 3.182 10.439 3.677 12.063 19.455 5.203 17.070 4.132 13.556 16.269 7.985 23.927 4.645 8.307 5.919 19.419 5.982 19.625 6.575 21.571 6.026 19.770 5.965 19.570 6.010 19.717 5.958 19.547 6.134 20.124 6.575 21.571 7.401 11.993 39.347/11.856 38.897 11.970 39.271/11.853 38.887 12.101 39.701/12.445 40.830 4.064 4.064 1.925 6.315 2.532 8.307 # 2.532 2.749 2.434 2.256 7.293 5.930 1.239 1.239 1.416 13.720 4.653 4.301 14.110 4.959 6.026 2.434 E 6.833 2.919 3.501 11.486 7.634 22.381 2.326 6.525 5.757 2.749 9.019 18.303 15.958 2.326 OEW 46 856 kg (103 300 lb) CG (25%) ŧ 2.083 1.755 6.822 4.182 5.579 4.864 0.709 2.327 1.837 1.989 0.709 0.890 E 21.876 13.215 15.131 11.371 12.778 3.897 12.785 3.608 11.837 3.526 11.568 6.187 1.814 5.951 1.872 6.141 2.641 8.664 2.625 8.612 2.630 8.628 2.616 8.582 17.506 7.011 14.061 5.324 6.276 5.830 5.958 9.993 1.965 2.549 1.965 PASSENGER AND CARGO DOOR GROUND CLEARANCES ARE MEASURED FROM THE CENTER OF THE DOOR SILL AND FROM FLOOR LEVEL. AFT CG (36.88%) ŧ MRW (WV11) 93 900 kg (207 014 lb) 1.913 1.816 4.612 0.599 3.466 4.286 1.623 4.028 5.336 2.137 3.063 10.049 3.046 11.151 3.376 21.984 6.668 0.599 0.777 1.777 ε 13.323 15.528 3.393 11.131 3.898 12.788 3.906 12.814 3.889 12.759 6.433 13.759 19.461 5.870 19.258 5.367 7.224 17.877 1.942 1.945 2.536 5.662 6.122 # FWD CG (19%) 1.961 3.399 2.202 4.733 0.592 0.773 3.904 12.808 3.907 12.818 3.895 1.866 5.357 1.636 6.701 5.449 0.593 4.194 1.726 4.061 ε 13.241 6.299 7.030 21.902 15.141 3.394 11.135 3.481 11.420 3.627 |11.899| 3.531 |11.584| 14.114 10.022 11.105 17.516 5.872 5.980 1.998 1.998 2.582 MRW (WV0) 89 400 kg (197 093 lb) ± AFT CG (38%) 0.609 1.817 5.961 1.886 1.920 4.615 2.143 4.302 1.790 10.088 3.055 11.190 3.385 1.823 5.932 5.406 1.633 22.030 6.676 13.369 4.036 5.339 0.609 0.787 Ε 15.606 7.280 13.756 17.952 5.675 6.171 1.976 6.482 19.271 1.971 2.568 1.971 FWD CG (17.5%) ŧ 2.219 3.411 1.730 6.715 4.193 1.881 5.874 1.648 3.075 4.075 5.472 0.601 0.783 4.757 0.601 ε BF1 CP1 D2 ВЗ D4 С C2 S F3 F4 T2 ۲ ۲ W2 ЧP ź ž 5 ۲L 4 5 μ Ч 노 ž EMERGENCY HATCH 2 EMERGENCY HATCH 1 'ERTICAL TAIL PLANE FWD CARGO DOOR BULK CARGO DOOR AFT CARGO DOOR **CFM 5A NACELLE CFM 5B NACELLE** V2500 NACELLE LOW POINT SHARKLET TOP FLAP TRACK 3 FLAP TRACK 4 **BELLY FAIRING** FLAP TRACK 2 BOTTOM FWD APU EXHAUST PILOT VIEW **BOTTOM AFT** HORIZONTAL TAIL PLANE A/C CONFIGURATION POINT SHARKLET LOW POINT TOP FWD DOOR 2 TOP AFT BOTTOM DOOR ' LOW REFERENCE POINT PASSENGER FUSELAGE TAILPLANE ENGINE/ NACELLE CARGO DOORS DOORS MING NOTE:

**ON A/C A321-100 A321-200

©A321

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING



**ON A/C A321neo



NOTE:

PASSENGER AND CARGO DOOR GROUND CLEARANCES ARE MEASURED FROM THE CENTER OF THE DOOR SILL AND FROM FLOOR LEVEL. N_AC_020300_1_0340101_01_01

> Ground Clearances FIGURE-2-3-0-991-034-A01



**ON A/C A321neo-ACF



			MF	RW		47 00 (103 6	00 kg 617 lb)	A/C JA	CKED
A/C CON	FIGURATION	FWD C	G (19%)	AFT CG	(36.9%)	CG (25%)	FDL = 4.60	m (15.09 ft)
		m	ft	m	ft	m	ft	m	ft
	D1	3.39	11.12	3.47	11.38	3.50	11.48	4.13	13.55
	D2	3.80	12.47	3.83	12.57	3.93	12.89	4.46	14.63
	D3	3.89	12.76	3.90	12.80	4.01	13.16	4.54	14.90
DOORS	D4	3.61	11.84	3.53	11.58	3.73	12.24	4.13	13.55
	C1	1.99	6.53	2.05	6.73	2.10	6.89	2.71	8.89
	C2	2.14	7.02	2.09	6.86	2.26	7.41	2.71	8.89
	C3	2.20	7.22	2.14	7.02	2.33	7.64	2.75	9.02
	F1	1.73	5.68	1.78	5.84	1.84	6.04	2.43	7.97
F2		1.87	6.14	1.82	5.97	1.99	6.53	2.43	7.97
	FUSELAGE F3		19.26	5.92	19.42	5.98	19.62	6.58	21.59
FUSELAGE	F4	6.01	19.72	5.96	19.55	6.13	20.11	6.58	21.59
	BF1	1.64	5.38	1.62	5.31	1.76	5.77	2.26	7.41
	CP1	4.19	13.75	4.29	14.07	4.30	14.11	4.96	16.27
WINCE	W1	6.70	21.98	6.67	21.88	6.82	22.38	7.29	23.92
WINGS	W2	4.06	13.32	4.03	13.22	4.18	13.71	4.65	15.26
	HT	5.45	17.88	5.34	17.52	5.58	18.31	5.93	19.46
TAILPLANE	AP	4.73	15.52	4.61	15.12	4.86	15.94	5.20	17.06
	VT	11.97	39.27	11.85	38.88	12.10	39.70	12.45	40.85
	N1 (CFM LEAP-1A)	0.46	1.51	0.47	1.54	0.58	1.90	1.13	3.71
	N1 (PW 1100G)	0.46	1.51	0.47	1.54	0.58	1.90	1.13	3.71

NOTE:

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

N_AC_020300_1_0480101_01_00

Ground Clearances FIGURE-2-3-0-991-048-A01



| **ON A/C A321neo-XLR

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N_AC_020300_1_0490101_01_01

Ground Clearances (Sheet 1 of 2) FIGURE-2-3-0-991-049-A01

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

| **ON A/C A321neo-XLR

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				MKW 1014 (2235	(WV0) 400 kg 549 lb)		0E 52 0((114 6	:W 00 kg 40 lb)		CKED
	AC CONFIGURATION		FWI (17.	0 CG .5%)	AFT (35	.CG 3%)	C (255	ບ (ຈ	(15.0	11 00 tf)
			ш	ft	Е	ft	ш	ft	u	ft
	DOOR 1	D1	3.375	11.072	3.462	11.358	3.487	11.440	4.132	13.556
PASSENGER DOORS	EMERGENCY HATCH 2	D2	3.875	12.713	3.881	12.732	3.953	12.969	4.535	14.878
	DOOR 2	D3	3.514	11.528	3.485	11.433	3.577	11.735	4.132	13.556
	DOOR 3	D4	3.585	11.761	3.497	11.473	3.624	11.889	4.132	13.556
	FWD CARGO DOOR	G	1.796	5.892	1.866	6.122	1.901	6.236	2.532	8.307
CARGO	AFT CARGO DOOR	C2	1.939	6.361	1.890	6.200	1.994	6.541	2.532	8.307
C NOCA	BULK CARGO DOOR	ខ	2.180	7.152	2.111	6.925	2.227	7.306	2.749	9.019
REFERENCE POINT	PILOT VIEW	CP1	4.177	13.704	4.285	14.058	4.298	14.101	4.959	16.269
	BOTTOM FWD	F1	1.708	5.603	1.769	5.803	1.809	5.935	2.434	7.985
	BOTTOM AFT	F2	1.844	6.049	1.792	5.879	1.898	6.227	2.434	7.985
FUSELAGE	TOP FWD	F3	5.852	19.199	5.911	19.393	5.952	19.527	6.575	21.571
	TOP AFT	F4	5.988	19.645	5.934	19.468	6.041	19.819	6.575	21.571
	BELLY FAIRING	BF1	1.616	5.301	1.606	5.269	1.687	5.534	2.256	7.401
	FLAP TRACK 2	Т2	2.609	8.559	2.598	8.523	2.680	8.792	3.248	10.656
	FLAP TRACK 3	Т3	3.042	9.980	3.027	9.931	3.112	10.209	3.677	12.063
	FLAP TRACK 4	Т4	3.378	11.082	3.357	11.013	3.445	11.302	4.005	13.139
	SHARKLET TOP	W1	6.718	22.040	6.679	21.912	6.777	22.234	7.324	24.028
	HORIZONTAL TAIL PLANE	НT	5.425	17.798	5.302	17.395	5.450	17.880	5.930	19.455
TAILPLANE	APU EXHAUST	AP	4.709	15.449	4.577	15.016	4.730	15.518	5.203	17.070
	VERTICAL TAIL PLANE	ΥT	11.946	39.192	11.818	38.772	11.968	39.265	12.445	40.830
	PW NACELLE FRONT LOW POINT	Ŋ	0.653	2.142	0.682	2.237	0.741	2.431	1.340	4.396
ENGINE/	PW 1100 NACELLE LOW POINT	۶	0.450	1.476	0.465	1.525	0.532	1.745	1.120	3.674
NAUELLE	CFM NACELLE FRONT LOW POINT	N	0.618	2.027	0.647	2.122	0.706	2.316	1.305	4.281
	CFM LEAP NACELLE LOW POINT	N	0.450	1.476	0.465	1.525	0.532	1.745	1.120	3.674

N_AC_020300_1_0490102_01_01

Ground Clearances (Sheet 2 of 2) FIGURÈ-2-3-0-991-049-A01

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| **ON A/C A321neo-XLR

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N_AC_020300_1_0500101_01_00

Ground Connections (Sheet 1 of 2) FIGURE-2-3-0-991-050-A01

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

| **ON A/C A321neo-XLR

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		10	MRW 01 400 kg	(WV0) (223 549	(q	OE 52 00 (114 6	:W 00 kg (40 lb)	A/C JA	CKED
	0	FWD CG	; (17.5%)	AFT CO	3 (38%)	:) CG (:	25%)	FDL = 4.60	m (15.09 ft)
		٤	ft	E	ff	٤	ff	E	ft
GEN SYSTEMS	OS	2.185	7.169	2.279	7.477	2.300	7.546	2.950	9.678
CONDITIONED	PC1	1.665	5.463	1.684	5.525	1.748	5.735	2.340	7.677
AIR	PC2	1.731	5.679	1.753	5.751	1.816	5.958	2.410	7.907
EL COUPLING RH	RF1	3.505	11.499	3.499	11.480	3.578	11.739	4.150	13.615
JEL COUPLING 4 - OPTIONAL	RF2	3.505	11.499	3.499	11.480	3.578	11.739	4.150	13.615
FUEL PANEL	RF3	1.934	6.345	1.945	6.381	2.014	6.608	2.600	8.530
IND ELECTRICAL	GP1	1.877	6.158	1.977	6.486	1.994	6.542	2.650	8.694
ET SERVICING	T01	2.527	8.291	2.444	8.018	2.568	8.425	3.080	10.105
ATER FILLING	WA1	2.617	8.586	2.534	8.314	2.658	8.720	3.170	10.400
TER DRAINAGE	WD	1.911	6.270	1.808	5.932	1.944	6.378	2.440	8.005
-WD CARGO JOR CONTROL	CD1	1.814	5.951	1.884	6.181	1.918	6.293	2.550	8.366
CLS CONTROL	cc1	1.716	5.630	1.776	5.827	1.816	5.958	2.440	8.005
AFT CARGO OR CONTROL	CD2	1.937	6.355	1.888	6.194	1.992	6.535	2.530	8.300
CLS CONTROL	CC2	1.855	6.086	1.799	5.902	1.907	6.256	2.440	8.005

N_AC_020300_1_0500102_01_00

Ground Connections (Sheet 2 of 2) FIGURE-2-3-0-991-050-A01

2-3-0

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| **ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



			FLAPS E	XTENDED			
DESCRIPTION		A/C IN MAII CONFIGL MID	NTENANCE JRATION CG	MAXIMU WEIGHT	M RAMP FWD CG	MAXIMU WEIGHT	M RAMP AFT CG
		m	ft	m	ft	m	ft
FLAP 1 INBD	А	2.49	8.17	2.37	7.78	2.34	7.68
FLAP 1 TAB INBD	В	1.95	6.40	1.83	6.00	1.80	5.91
FLAP 1 OUTBD	С	2.71	8.89	2.60	8.53	2.57	8.43
FLAP 2 INBD	D	2.84	9.32	2.73	8.96	2.70	8.86
FLAP 2 TAB OUTBD	Е	3.53	11.58	3.41	11.19	3.37	11.06
FLAP 2 OUTBD	F	3.74	12.27	3.62	11.88	3.58	11.75

N_AC_020300_1_0220101_01_01

Ground Clearances Trailing Edge Flaps - Extended FIGURE-2-3-0-991-022-A01



| **ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



			FLAP TRACI	KS EXTENDE	D		
DESCRIPTION	١	A/C IN MAII CONFIGU MID	NTENANCE JRATION CG	MAXIMU WEIGHT	M RAMP FWD CG	MAXIMU WEIGHT	M RAMP AFT CG
		m	ft	m	ft	m	ft
FLAP TRACK 2	А	1.91	6.27	1.79	5.87	1.76	5.77
FLAP TRACK 3	В	2.31	7.58	2.19	7.19	2.15	7.05
FLAP TRACK 4	С	2.96	9.71	2.84	9.32	2.79	9.15

N_AC_020300_1_0450101_01_00

Ground Clearances Flap Tracks - Extended FIGURE-2-3-0-991-045-A01

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

| **ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



			FLAP TRACK	S RETRACTE	ĒD		
DESCRIPTION	١	A/C IN MAII CONFIGU MID	NTENANCE JRATION CG	MAXIMU WEIGHT	M RAMP FWD CG	MAXIMU WEIGHT	M RAMP AFT CG
		m	ft	m	ft	m	ft
FLAP TRACK 2	А	2.70	8.86	2.60	8.53	2.58	8.46
FLAP TRACK 3	В	3.10	10.17	3.00	9.84	2.97	9.74
FLAP TRACK 4	С	3.50	11.48	3.39	11.12	3.36	11.02

N_AC_020300_1_0230101_01_01

Ground Clearances Flap Tracks - Retracted FIGURE-2-3-0-991-023-A01

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

| **ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



			FLAP	TRACKS 1+F			
DESCRIPTION		A/C IN MAII CONFIGL MID	NTENANCE JRATION CG	MAXIMU WEIGHT	M RAMP FWD CG	MAXIMU WEIGHT	M RAMP AFT CG
		m	ft	m	ft	m	ft
FLAP TRACK 2	А	1.95	6.40	1.85	6.07	1.83	6.00
FLAP TRACK 3	В	2.31	7.58	2.21	7.25	2.18	7.15
FLAP TRACK 4	С	2.89	9.48	2.78	9.12	2.75	9.02

N_AC_020300_1_0460101_01_00

Ground Clearances Flap Tracks - 1 + F FIGURE-2-3-0-991-046-A01

2-3-0



| **ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



			AILERC	N DOWN			
DESCRIPTION		A/C IN MAII CONFIGL MID	NTENANCE JRATION CG	MAXIMU WEIGHT	M RAMP FWD CG	MAXIMU WEIGHT	M RAMP AFT CG
		m	ft	m	ft	m	ft
AILERON INBD	A	3.81	12.50	3.70	12.14	3.67	12.04
AILERON OUTBD	В	4.15	13.62	4.03	13.22	4.00	13.12

N_AC_020300_1_0240101_01_01

Ground Clearances Aileron Down FIGURE-2-3-0-991-024-A01



| **ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



			AILEF	RON UP			
DESCRIPTION		A/C IN MAII CONFIGL MID	NTENANCE JRATION CG	MAXIMU WEIGHT	M RAMP FWD CG	MAXIMU WEIGHT	M RAMP AFT CG
		m	ft	m	ft	m	ft
AILERON INBD	A	4.33	14.21	4.22	13.85	4.19	13.75
AILERON OUTBD	В	4.53	14.86	4.42	14.50	4.37	14.34

N_AC_020300_1_0470101_01_00

Ground Clearances Aileron Up FIGURE-2-3-0-991-047-A01

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



		S	POILERS EXT	rended			
DESCRIPTION		A/C IN MAII CONFIGL MID	NTENANCE JRATION CG	MAXIMU WEIGHT	M RAMP FWD CG	MAXIMU WEIGHT	M RAMP AFT CG
		m	ft	m	ft	m	ft
SPOILER 1 INBD	А	3.74	12.27	3.63	11.91	3.61	11.84
SPOILER 1 OUTBD	В	4.04	13.25	3.94	12.93	3.92	12.86
SPOILER 2 INBD	С	4.08	13.39	3.97	13.02	3.95	12.96
SPOILER 2/3	D	4.20	13.78	4.10	13.45	4.07	13.35
SPOILER 3/4	Е	4.34	14.24	4.23	13.88	4.20	13.78
SPOILER 4/5	F	4.46	14.63	4.35	14.27	4.32	14.17
SPOILER 5 OUTBD	G	4.59	15.06	4.48	14.70	4.45	14.60

N_AC_020300_1_0250101_01_01

Ground Clearances Spoilers - Extended FIGURE-2-3-0-991-025-A01

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



LEADING EDGE SLATS EXTENDED							
DESCRIPTION		A/C IN MAINTENANCE CONFIGURATION MID CG		MAXIMUM RAMP WEIGHT FWD CG		MAXIMUM RAMP WEIGHT AFT CG	
		m	ft	m	ft	m	ft
SLAT 1 INBD	А	2.58	8.46	2.47	8.10	2.50	8.20
SLAT 1 OUTBD	В	2.98	9.78	2.88	9.45	2.89	9.48
SLAT 2 INBD	С	3.07	10.07	2.96	9.71	2.97	9.74
SLAT 2/3	D	3.36	11.02	3.25	10.66	3.25	10.66
SLAT 3/4	Е	3.61	11.84	3.50	11.48	3.49	11.45
SLAT 4/5	F	3.85	12.63	3.74	12.27	3.72	12.20
SLAT 5 OUTBD	G	4.08	13.39	3.96	12.99	3.94	12.93

N_AC_020300_1_0260101_01_01

Ground Clearances Leading Edge Slats - Extended FIGURE-2-3-0-991-026-A01

2-3-0

©A321

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

2-4-1 Interior Arrangements - Plan View

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

Interior Arrangements - Plan View

1. This section gives the typical interior configuration.



**ON A/C A321-100 A321-200 A321neo



Interior Arrangements - Plan View Typical Configuration - Single-Class, High Density FIGURE-2-4-1-991-004-A01



**ON A/C A321-100 A321-200 A321neo



Interior Arrangements - Plan View Typical Configuration - Two-Class FIGURE-2-4-1-991-006-A01



**ON A/C A321neo-ACF



Interior Arrangements - Plan View Typical Configuration - Single-Class, High Density FIGURE-2-4-1-991-011-A01

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**ON A/C A321neo-ACF A321neo-XLR



Interior Arrangements - Plan View Typical Configuration - Two-Class FIGURE-2-4-1-991-012-A01

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

2-5-0 Interior Arrangements - Cross Section

| **ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

Interior Arrangements - Cross Section

1. This section provides the typical configuration.



**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

6 ABREAST-WIDER AISLE



N_AC_020500_1_0050101_01_01

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

2-5-0

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**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

6 ABREAST-WIDER SEAT



N_AC_020500_1_0050102_01_03

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



**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

4 ABREAST-FIRST CLASS



N_AC_020500_1_0060101_01_01

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

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

2-6-0 Cargo Compartments

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

Cargo Compartments

1. This section gives the cargo compartments locations, dimensions and loading combinations.
AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200 A321neo



NOTE: VALID FOR A321-100, A321-200, AND A321 NEO.

N_AC_020600_1_0040101_01_01

Cargo Compartments Locations and Dimensions FIGURE-2-6-0-991-004-A01

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

| **ON A/C A321neo-ACF A321neo-XLR



NOTE: VALID FOR A321 NEO-ACF.

N_AC_020600_1_0070101_01_02

Cargo Compartments Locations and Dimensions FIGURE-2-6-0-991-007-A01



| **ON A/C A321-100 A321-200 A321neo A321neo-ACF



NOTE: VALID FOR A321-100, A321-200, A321 NEO AND A321 NEO-ACF.

N_AC_020600_1_0120101_01_01

Cargo Compartments Loading Combinations FIGURE-2-6-0-991-012-A01

2-6-0

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321neo-ACF

NOTE:



Loading Combinations FIGURE-2-6-0-991-013-A01



**ON A/C A321neo-XLR



WITH REGULAR WASTE TANK



WITH OPTION INCREASED WASTE TANK

NOTE: VALID FOR A321 NEO-XLR.

N_AC_020600_1_0140101_01_00

Cargo Compartments Locations FIGURE-2-6-0-991-014-A01

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| **ON A/C A321neo-XLR



WITH REGULAR WASTE TANK



WITH OPTION INCREASED WASTE TANK

NOTE: VALID FOR A321 NEO-XLR.

N_AC_020600_1_0150101_01_00

Cargo Compartments Dimensions FIGURE-2-6-0-991-015-A01

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| **ON A/C A321neo-XLR



NOTE: ACT (OPTIONAL) VALID FOR A321 NEO-XLR.

N_AC_020600_1_0160101_01_00

Cargo Compartments Loading Combinations FIGURE-2-6-0-991-016-A01

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©A321

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

2-7-0 Door Clearances and Location

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

Door Clearances

- 1. This section provides door identification and location.
 - <u>NOTE</u>: Dimensions of the ground clearances are approximate and will vary with tire type, weight and balance and other special conditions.



**ON A/C A321-100 A321-200 A321neo





N_AC_020700_1_0040101_01_01

Door Identification and Location Door Identification (Sheet 1 of 2) FIGURE-2-7-0-991-004-A01

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**ON A/C A321-100 A321-200 A321neo





N_AC_020700_1_0040102_01_01

Door Identification and Location Door Location (Sheet 2 of 2) FIGURE-2-7-0-991-004-A01

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

| **ON A/C A321neo-ACF A321neo-XLR





N_AC_020700_1_0470101_01_00

Door Identification and Location Door Identification (Sheet 1 of 2) FIGURE-2-7-0-991-047-A01

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

| **ON A/C A321neo-ACF A321neo-XLR





N_AC_020700_1_0470102_01_01

Door Identification and Location Door Location (Sheet 2 of 2) FIGURE-2-7-0-991-047-A01

2-7-0

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



Doors Clearances Forward Passenger/Crew Doors FIGURE-2-7-0-991-033-A01



**ON A/C A321-100 A321-200 A321neo



N_AC_020700_1_0340101_01_01

Doors Clearances Emergency Exits FIGURE-2-7-0-991-034-A01

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

| **ON A/C A321neo-ACF A321neo-XLR



Doors Clearances Emergency Exits FIGURE-2-7-0-991-046-A01

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



N_AC_020700_1_0350101_01_01

Doors Clearances Aft Passenger/Crew Doors FIGURE-2-7-0-991-035-A01



**ON A/C A321-100 A321-200





N_AC_020700_1_0360101_01_00

Door Clearances Forward Cargo Compartment Door FIGURE-2-7-0-991-036-A01

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

| **ON A/C A321neo A321neo-ACF A321neo-XLR



N_AC_020700_1_0370101_01_00

Door Clearances Forward Cargo Compartment Door FIGURE-2-7-0-991-037-A01

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



N_AC_020700_1_0380101_01_01

Doors Clearances Aft Cargo Compartment Door FIGURE-2-7-0-991-038-A01

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



N_AC_020700_1_0390101_01_01

Doors Clearances Bulk Cargo Compartment Door FIGURE-2-7-0-991-039-A01

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**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR





Doors Clearances Main Landing Gear Doors FIGURE-2-7-0-991-040-A01

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

| **ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



N_AC_020700_1_0410101_01_00

Doors Clearances Radome FIGURE-2-7-0-991-041-A01

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| **ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



NOTE: VALUE OF CG: 25% RC.

N_AC_020700_1_0420101_01_00



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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

2-8-0 Escape Slides

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

Escape Slides

1. General

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

**ON A/C A321-100 A321-200 A321neo

2. Location

Slides/rafts facilities are provided at the following location:

- One single or dual lane slide at each door 1 and 4 (total 04)
- One single lane slide at each door 2 and 3 (total 04).

| **ON A/C A321neo-ACF A321neo-XLR

3. Location

Slides/rafts facilities are provided at the following locations:

- One single or dual lane slide at each door 1 and 4 (total 04)
- One single lane slide at each door 3 (total 02)
- One dual lane overwing slide at each wing (total 2).



**ON A/C A321-100 A321-200 A321neo



NOTE: LH SHOWN, RH SYMMETRICAL.

N_AC_020800_1_0070101_01_04

Escape Slides Location FIGURE-2-8-0-991-007-A01

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200 A321neo



N_AC_020800_1_0080101_01_03

Escape Slides Dimensions FIGURE-2-8-0-991-008-A01



**ON A/C A321neo-ACF A321neo-XLR



NOTE: LH SHOWN, RH SYMMETRICAL.

N_AC_020800_1_0100101_01_01

Escape Slides Location FIGURE-2-8-0-991-010-A01

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

| **ON A/C A321neo-ACF A321neo-XLR



N_AC_020800_1_0110101_01_01

Escape Slides Dimensions FIGURE-2-8-0-991-011-A01

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

2-9-0 Landing Gear

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

Landing Gear

1. General

The landing gear is of the conventional retractable tricycle type comprising:

- Two main gears with twin-wheel,
- A twin-wheel nose gear.

The main landing gears are located under the wing and retract sideways towards the fuselage centerline.

The nose landing gear retracts forward into a fuselage compartment located between FR9 and FR20.

The landing gears and landing gear doors are operated and controlled electrically and hydraulically.

In abnormal operation, the landing gear can be extended by gravity.

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

- 2. Main Landing Gear
 - A. Twin-Wheel

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

3. Nose Landing Gear

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

4. Nose Wheel Steering

2-9-0

@A321

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

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

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

- 5. Landing Gear Servicing Points
 - A. General

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

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

B. Charging Pressure

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

- 6. Braking
 - A. General

The four main wheels are equipped with carbon multidisc brakes.

The braking system is electrically controlled and hydraulically operated.

The braking system has four braking modes plus autobrake and anti-skid systems:

- Normal braking with anti-skid capability,
- Alternative braking with anti-skid capability,
- Alternative braking without anti-skid capability,
- Parking brake with full pressure application capability only.
- B. In-Flight Wheel Braking

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

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



**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



FIGURE-2-9-0-991-016-A01



**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



Landing Gear Main Landing Gear - Twin-Wheel (Sheet 2 of 2) FIGURE-2-9-0-991-016-A01

2-9-0



**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



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Landing Gear Main Landing Gear Dimensions - Twin-Wheel FIGURE-2-9-0-991-017-A01



**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



2-9-0



**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



FIGURE-2-9-0-991-018-A01

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

| **ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



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2-9-0
AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

Landing Gear Maintenance Pits

1. Description

The minimum maintenance pit envelopes for the landing-gear shock absorber removal are shown in FIGURE 2-9-0-991-026-A and FIGURE 2-9-0-991-027-A.

All dimensions shown are minimum dimensions with zero clearances.

The dimensions for the pits have been determined as follows:

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

Dimensions for elevators and associated mechanisms must be added to those in FIGURE 2-9-0-991-026-A and FIGURE 2-9-0-991-027-A.

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

| **ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



Landing Gear Maintenance Pits Maintenance Pit Envelopes FIGURE-2-9-0-991-026-A01



**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



N_AC_020900_1_0270101_01_00

Landing Gear Maintenance Pits Maintenance Pit Envelopes FIGURE-2-9-0-991-027-A01

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

2-10-0 Exterior Lighting

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

Exterior Lighting

1. General

This section provides the location of the aircraft exterior lighting.

EXTERIOR LIGHTING						
ITEM	DESCRIPTION					
1	RIGHT NAVIGATION LIGHT (GREEN)					
2	TAIL NAVIGATION LIGHT (WHITE)					
3	LEFT NAVIGATION LIGHT (RED)					
4	RETRACTABLE LANDING LIGHT					
5	RUNWAY TURN OFF LIGHT					
6	TAXI LIGHT					
7	TAKE-OFF LIGHT					
8	LOGO LIGHT					
9	UPPER ANTI-COLLISION LIGHT/BEACON (RED)					
10	LOWER ANTI-COLLISION LIGHT/BEACON (RED)					
11	WING STROBE LIGHT (HIGH INTENSITY, WHITE)					
12	TAIL STROBE LIGHT (HIGH INTENSITY, WHITE)					
13	WING/ENGINE SCAN LIGHT					
14	WHEEL WELL LIGHT (DOME)					
15	CARGO COMPARTMENT FLOOD LIGHT					
	MULTIFUNCTIONAL RUNWAY LIGHT (MFRL)					
16	The MFRL is a set of LEDs lights that are installed on the aircraft which includes					
	the retractable landing light and the complete set of NLG lights (two runway turn-off					
	lights, one taxi light and one take-off light).					



| **ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



Exterior Lighting FIGURE-2-10-0-991-013-A01

2-10-0

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

| **ON A/C A321neo A321neo-ACF A321neo-XLR

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Exterior Lighting 2-10-0-991-022-A01

2-10-0

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| **ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



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Exterior Lighting FIGURE-2-10-0-991-014-A01

2-10-0

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| **ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



Exterior Lighting FIGURE-2-10-0-991-015-A01

2-10-0



| **ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR







N_AC_021000_1_0200101_01_00

Exterior Lighting FIGURE-2-10-0-991-020-A01

2-10-0

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321neo A321neo-ACF A321neo-XLR

I



-331-024-701

2-10-0

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

2-11-0 Antennas and Probes Location

| **ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

Antennas and Probes Location

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

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



Antennas and Probes Location FIGURE-2-11-0-991-004-A01

2-11-0

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

2-12-0 Power Plant

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

Auxiliary Power Unit

1. General

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

2. Controls and Indication

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



**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



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

N_AC_021200_1_0070101_01_01

Auxiliary Power Unit Access Doors FIGURE-2-12-0-991-007-A01



**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



N_AC_021200_1_0080101_01_01

Auxiliary Power Unit General Layout FIGURE-2-12-0-991-008-A01

2-12-0

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

| **ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

Engine and Nacelle

**ON A/C A321-100 A321-200

- 1. Engine and Nacelle CFM56 Engine
 - A. Engine

The aircraft has two CFM International CFM56 engines that supply power to the aircraft. The engines are turbofan engines that have:

- A high bypass ratio,
- A Full Authority Digital Engine Control (FADEC),
- A fuel system,
- An oil system,
- An air system,
- A thrust reverser system,
- An ignition system and a start system.

The engine has:

Two compressor turbine assemblies:

- The Low Pressure (LP) compressor turbine assembly,
- The High Pressure (HP) compressor turbine assembly.

Each turbine operates its associated compressor via a shaft.

- One accessory gearbox,
- One combustion chamber.

The engine operates as follows:

- (1) The LP compressor, compresses the air.
- (2) Then, the air is divided into two flows:
 - Most of the air flows out of the core engine, and provides most of the engine thrust.
 - The remaining air enters the core engine.
- (3) The HP compressor compresses the air that enters the core engine.
- (4) The fuel is added to and mixed with the compressed air of the core engine. The mixture is ignited in the combustion chamber.
- (5) The gas that results from combustion drives the HP and the LP turbines.
 - The rotation speed of the fan provides the N1 engine parameter.
 - The rotation speed of the HP rotor provides the N2 engine parameter.
 - The N1 and N2 engine parameters appear on the Engine/Warning Display (E/ WD).
 - The N1 and N2 engine parameters are current rotation speeds displayed in percentage.

The FADEC uses:





- The N1 engine parameter to compute the applicable engine thrust,
- The N1 and N2 engine parameters for engine control and monitoring.

B. Nacelle

The cowls enclose the periphery of the engine so as to form the engine nacelle. Each engine is housed in a nacelle suspended from a pylon attached below the wing. The nacelle installation is designed to provide cooling and ventilation air for engine accessories mounted along the fan and core casing. The nacelle provides:

- Protection for the engine and the accessories
- Airflow around the engine during its operation
- Lighting protection
- HIRF and EMI attenuation.

2. Engine and Nacelle - IAE V2500 Engine

A. Engine

The aircraft has two International Aero Engines V2500 engines that supply power to the aircraft.

The engines are turbofan engines that have:

- A high bypass ratio,
- A Full Authority Digital Engine Control (FADEC),
- A fuel system,
- An oil system,
- An air system,
- A thrust reverser system,
- An ignition system and a start system.
- The engine has:

Two compressor turbine assemblies:

- The Low Pressure (LP) compressor turbine assembly,
- The High Pressure (HP) compressor turbine assembly.

Each turbine operates its associated compressor via a shaft.

- One accessory gearbox,
- One combustion chamber.

The engine operates as follows:

- (1) The LP compressor, compresses the air.
- (2) Then, the air is divided into two flows:
 - Most of the air flows out of the core engine, and provides most of the engine thrust.
 - The remaining air enters the core engine.
- (3) The HP compressor compresses the air that enters the core engine.
- (4) The fuel is added to and mixed with the compressed air of the core engine. The mixture is ignited in the combustion chamber.

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

- (5) The gas that results from combustion drives the HP and the LP turbines.
 - The rotation speed of the fan provides the N1 engine parameter.
 - The rotation speed of the HP rotor provides the N2 engine parameter.
 - The N1 and N2 engine parameters appear on the Engine/Warning Display (E/ WD).
 - The N1 and N2 engine parameters are current rotation speeds displayed in percentage.

The FADEC uses:

- The N1 engine parameter to compute the applicable engine thrust,
- The N1 and N2 engine parameters for engine control and monitoring.

B. Nacelle

The cowls enclose the periphery of the engine so as to form the engine nacelle. Each engine is housed in a nacelle suspended from a pylon attached below the wing. The nacelle installation is designed to provide cooling and ventilation air for engine accessories mounted along the fan and core casing. The nacelle provides:

- Protection for the engine and the accessories
- Airflow around the engine during its operation
- Lighting protection
- HIRF and EMI attenuation.

**ON A/C A321neo A321neo-ACF A321neo-XLR

- 3. Engine and Nacelle CFM LEAP-1A Engine
 - A. Engine

The aircraft has two CFM International LEAP-1A engines that supply power to the aircraft. The engines are turbofan engines that have:

- A high bypass ratio,
- A Full Authority Digital Engine Control (FADEC),
- A fuel system,
- An oil system,
- An air system,
- A thrust reverser system,
- An ignition system and a start system.

The engine has:

Two compressor turbine assemblies:

- The Low Pressure (LP) compressor turbine assembly,
- The High Pressure (HP) compressor turbine assembly.

Each turbine operates its associated compressor via a shaft.

- One accessory gearbox,
- One combustion chamber.

The engine operates as follows:

(1) The LP compressor, compresses the air.

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- (2) Then, the air is divided into two flows:
 - Most of the air flows out of the core engine, and provides most of the engine thrust.
 - The remaining air enters the core engine.
- (3) The HP compressor compresses the air that enters the core engine.
- (4) The fuel is added to and mixed with the compressed air of the core engine. The mixture is ignited in the combustion chamber.
- (5) The gas that results from combustion drives the HP and the LP turbines.
 - The rotation speed of the fan provides the N1 engine parameter.
 - The rotation speed of the HP rotor provides the N2 engine parameter.
 - The N1 and N2 engine parameters appear on the Engine/Warning Display (E/ WD).
 - The N1 and N2 engine parameters are current rotation speeds displayed in percentage.

The FADEC uses:

- The N1 engine parameter to compute the applicable engine thrust,
- The N1 and N2 engine parameters for engine control and monitoring.

B. Nacelle

The cowls enclose the periphery of the engine so as to form the engine nacelle. Each engine is housed in a nacelle suspended from a pylon attached below the wing. The nacelle installation is designed to provide cooling and ventilation air for engine accessories mounted along the fan and core casing. The nacelle provides:

- Protection for the engine and the accessories
- Airflow around the engine during its operation
- Lighting protection
- HIRF and EMI attenuation.
- 4. Engine and Nacelle PW1100G Engine
 - A. Engine

The aircraft has two Pratt & Whitney's Pure Power PW1100G engines that supply power to the aircraft.

The engines are turbofan engines that have:

- A high bypass ratio,
- A Full Authority Digital Engine Control (FADEC),
- A fuel system,
- An oil system,
- An air system,
- A thrust reverser system,
- An ignition system and a start system.

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

Two compressor turbine assemblies:

- The Low Pressure (LP) compressor turbine assembly,
- The High Pressure (HP) compressor turbine assembly.

Each turbine operates its associated compressor via a shaft.

- One accessory gearbox,
- One combustion chamber.

The engine operates as follows:

- (1) The LP compressor, compresses the air.
- (2) Then, the air is divided into two flows:
 - Most of the air flows out of the core engine, and provides most of the engine thrust.
 - The remaining air enters the core engine.
- (3) The HP compressor compresses the air that enters the core engine.
- (4) The fuel is added to and mixed with the compressed air of the core engine. The mixture is ignited in the combustion chamber.
- (5) The gas that results from combustion drives the HP and the LP turbines.
 - The rotation speed of the fan provides the N1 engine parameter.
 - The rotation speed of the HP rotor provides the N2 engine parameter.
 - The N1 and N2 engine parameters appear on the Engine/Warning Display (E/ WD).
 - The N1 and N2 engine parameters are current rotation speeds displayed in percentage.

The FADEC uses:

- The N1 engine parameter to compute the applicable engine thrust,
- The N1 and N2 engine parameters for engine control and monitoring.
- B. Nacelle

The cowls enclose the periphery of the engine so as to form the engine nacelle. Each engine is housed in a nacelle suspended from a pylon attached below the wing. The nacelle installation is designed to provide cooling and ventilation air for engine accessories mounted along the fan and core casing. The nacelle provides:

- Protection for the engine and the accessories
- Airflow around the engine during its operation
- Lighting protection
- HIRF and EMI attenuation.



**ON A/C A321-100 A321-200





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**ON A/C A321-100 A321-200



Power Plant Handling Major Dimensions - CFM56 Series Engine FIGURE-2-12-0-991-036-A01

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**ON A/C A321-100 A321-200



NOTE: APPROXIMATE DIMENSIONS.

m (ft)	a	А	В	С
	42°27	1.8 (5.9)	1.5 (4.9)	1.3 (4.3)
AFT	55°15	2.0 (6.6)	1.8 (5.9)	1.7 (5.6)
	40°40	1.8 (5.9)	1.4 (4.6)	1.3 (4.3)
FWD	52°56	2.0 (6.6)	1.7 (5.6)	1.6 (5.2)

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Power Plant Handling Fan Cowls - CFM56 Series Engine FIGURE-2-12-0-991-037-A01

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200



NOTE: APPROXIMATE DIMENSIONS.

CAUTION DO NOT ACTUATE SLATS: - WITH THRUST REVERSER COWLS 45° OPEN POSITION

- WITH BLOCKER DOORS OPEN AND THRUST REVERSER

COWLS AT 35° AND 45° OPEN POSITION.

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Power Plant Handling Thrust Reverser Cowls - CFM56 Series Engine FIGURE-2-12-0-991-038-A01

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**ON A/C A321-100 A321-200



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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200



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

NOTE: ALL SIZES GIVEN ON THIS ILLUSTRATION ARE APPROXIMATE

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Power Plant Handling Major Dimensions - IAE V2500 Series Engine FIGURE-2-12-0-991-040-A01

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**ON A/C A321-100 A321-200



Power Plant Handling Thrust Reverser Halves - IAE V2500 Series Engine FIGURE-2-12-0-991-042-A01

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| **ON A/C A321neo A321neo-ACF A321neo-XLR



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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

| **ON A/C A321neo A321neo-ACF A321neo-XLR



N_AC_021200_1_0500101_01_02

Power Plant Handling Fan Cowls - PW 1100G Engine FIGURE-2-12-0-991-050-A01

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

| **ON A/C A321neo A321neo-ACF A321neo-XLR



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

NOTE:

B AND C DEPENDING ON AIRCRAFT CONFIGURATION.

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Power Plant Handling Thrust Reverser Halves - PW 1100G Engine FIGURE-2-12-0-991-051-A01

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321neo A321neo-ACF A321neo-XLR





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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

| **ON A/C A321neo A321neo-ACF A321neo-XLR



Power Plant Handling Major Dimensions - CFM LEAP-1A Engine FIGURE-2-12-0-991-057-A01

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| **ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

2-13-0 Leveling, Symmetry and Alignment

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

Leveling, Symmetry and Alignment

1. Quick Leveling

There are three alternative procedures to level the aircraft:

- Quick leveling procedure with Air Data/Inertial Reference Unit (ADIRU).
- Quick leveling procedure with a spirit level in the passenger compartment.
- Quick leveling procedure with a spirit level in the FWD cargo compartment.
- 2. Precise Leveling

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

3. Symmetry and Alignment Check

Possible deformation of the aircraft is measured by photogrammetry.
AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



N_AC_021300_1_0050101_01_00

Location of the Leveling Points FIGURE-2-13-0-991-005-A01

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

2-14-0 Jacking

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

Jacking for Maintenance

- 1. Aircraft Jacking Points for Maintenance
 - A. General
 - (1) The A321 can be jacked:
 - At not more than 69 000 kg (152 119 lb),
 - Within the limits of the permissible wind speed when the aircraft is not in a closed environment.
 - B. Primary Jacking Points
 - (1) The aircraft is provided with three primary jacking points:
 - One located under the forward fuselage (FR8),
 - Two located under the wings (one under each wing, located at the intersection of RIB9 and the datum of the rear spar).
 - (2) Three jack adapters are used as intermediary parts between the aircraft and the jacks:
 - One male spherical jack adapter of 19 mm (0.75 in) radius, forming part of the aircraft structure (FR8),
 - Two wing jack pads (one attached to each wing at RIB9 with 2 bolts) for the location of the jack adaptor.
 - Wing jack pads are ground equipment.
 - C. Auxiliary Jacking Points (Safety Stay)
 - (1) When the aircraft is on jacks, it is recommended that a safety stay be placed under the fuselage, between FR73 and FR74, to prevent tail tipping caused by accidental displacement of the center of gravity.
 - (2) The safety stay must not be used to lift the aircraft.
 - (3) A male spherical ball pad with a 19 mm (0.75 in) radius, forming part of the aircraft structure, is provided for using the safety stay.
- 2. Jacks and Safety Stay
 - A. Jack Design
 - (1) The maximum permitted loads given in the table in FIGURE 2-14-0-991-038-A are the maximum loads applicable on jack fittings.



- (2) In the fully retracted position (jack stroke at minimum), the height of the jack is such that the jack may be placed beneath the aircraft in the most adverse conditions, namely, tires deflated and shock absorbers depressurized. In addition, there must be a clearance of approximately 50 mm (1.97 in) between the aircraft jacking point and the jack upper end.
- (3) The lifting jack stroke enables the aircraft to be jacked up so that the fuselage longitudinal datum line (aircraft center line) is parallel to the ground, with a clearance of 100 mm (3.94 in) between the main landing gear wheels and the ground. This enables the landing gear extension/retraction tests to be performed.
- 3. Shoring Cradles

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

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

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



		x		Y		MAXIMUM LOAD ELIGIBLE
		m	ft	m	ft	daN
FORWARD FUSEL	AGE A	2.74	8.99	0	0	6 800
WING JACKING	В	21.83	71.62	6.50	21.33	33 400
POINT	Β'	21.83	71.62	-6.50	-21.33	33 400
SAFETY STAY	С	39.5	129.59	0	0	2 000

NOTE:

SAFETY STAY IS NOT USED FOR JACKING.

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Jacking for Maintenance Jacking Point Locations FIGURE-2-14-0-991-038-A01



| **ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



Jacking for Maintenance Forward Jacking Point FIGURE-2-14-0-991-039-A01

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**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



FIGURE-2-14-0-991-040-A01



| **ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



FIGURE-2-14-0-991-041-A01

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200

FUSELAGE DATUM LINE FORWARD JACK	WING JACK		FR73	STAY N	
	WING JACK FORWARD WING JACK	M			
	TYPICAL JACK INSTALLATION SHOWN				
	DECODIDION	DISTA JACKING AND	NCE BETW G/SAFETY F THE GROU	E BETWEEN AFETY POINTS E GROUND	
CONFIGURATION	DESCRIPTION	L (FORWARD JACK)	M (WING JACK)	N (SAFETY STAY)	
	- NLG SHOCK ABSORBER DEFLATED AND NLG TIRES FLAT - MLG STANDARD TIRES, WITH STANDARD SHOCK ABSORBERS	1 603 mm (63.11 in)	3 124 mm (122.99 in)	3 635 mm (143.11 in)	
- AIRCRAFT ON WHEELS	TIRES FLAT SHOCK ABSORBERS DEFLATED	1 654 mm (65.12 in)	2 761 mm (108.70 in)	2 889 mm (113.74 in)	
	STANDARD TIRES STANDARD SHOCK ABSORBERS	1 924 mm (75.75 in)	3 125 mm (123.03 in)	3 341 mm (131.54 in)	
- AIRCRAFT ON JACKS (FORWARD JACK AND WING JACKS)	STANDARD TIRES MLG SHOCK ABSORBERS EXTENDED WITH WHEEL CLEARANCE OF 120 mm (4.72 in) FOR MLG RETRACTION OR EXTENSION	2 605 mm (102.56 in)	3 706 mm (145.91 in)	3 830 mm (150.79 in)	
PARALLEL TO THE GROUND	STANDARD TIRES MLG SHOCK ABSORBERS EXTENDED WITH WHEEL CLEARANCE OF 770 mm (30.31 in) FOR REPLACEMENT OF THE MLG	3 255 mm (128.15 in)	4 356 mm (171.50 in)	4 480 mm (176.38 in)	
- AIRCRAFT ON FORWARD JACK - MLG WHEELS ON THE GROUND	STANDARD TIRES NLG SHOCK ABSORBERS EXTENDED WITH WHEEL CLEARANCE OF 60 mm (2.36 in) FOR NLG RETRACTION OR EXTENSION	2 371 mm (93.35 in)	NA	2 930 mm (115.35 in)	

NOTE:

THE SAFETY STAY IS NOT USED FOR JACKING.

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Jacking for Maintenance Jacking Design FIGURE-2-14-0-991-042-A01

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

| **ON A/C A321neo A321neo-ACF



	CG			HEIGHT			
CONFIGURATION	POSITION	L		М		Ν	
	(% MAC)	m	ft	m	ft	m	ft
	12	1 92	6.30	3.33 LH	10.93 LH	3.12	10.24
AIRCRAFT ON WHEELS, SHOCK-ABSORBERS	12	1.02		2.77 RH	9.09 RH		10.24
DEFLATED, TIRES DEFLATED (RH)	11	2 10	6 80	3.31 LH	10.86 LH	2.02	0.61
	41	2.10	0.03	2.77 RH	9.09 RH	2.93	9.01
AIRCRAFT ON JACKS, FDL AT 5.26 m (17.26 ft), AIRCRAFT FUSELAGE PARALLEL TO THE GROUND, SHOCK-ABSORBERS EXTENDED, CLEARANCE OF MAIN GEAR WHEELS = 0.70 m (2.30 ft) (STANDARD TIRES 01), CLEARANCE OF NOSE GEAR WHEELS = 0.99 m (3.25 ft) (STANDARD TIRES 01))	N/A	3.28	10.76	4.43	14.53	4.52	14.83
AIRCRAFT ON WHEELS (STANDARD TIRES 01)) MAXIMUM JACKING WEIGHT = 69 000 kg (152 119 lb)	12	1.88	6.17	3.22	10.56	3.48	11.42
	41	2.05	6.73	3.20	10.50	3.29	10.79
AIRCRAFT ON WHEELS	12	1.92	6.30	3.27	10.73	3.53	11.58
OEW = 48 725 kg (107 420 lb)	41	2.14	7.02	3.26	10.70	3.31	10.86

NOTE:

01 STANDARD TIRES: NOSE LANDING GEAR = 762 x 233.52 R15 MAIN LANDING GEAR = 1 270 x 455 R22

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Jacking for Maintenance Jacking Design (Sheet 1 of 2) FIGURE-2-14-0-991-068-A01

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

| **ON A/C A321neo A321neo-ACF

	CG	HEIGHT						
CONFIGURATION	POSITION	L		М		N		
	(% MAC)	m	ft	m	ft	m	ft	
AIRCRAFT ON WHEELS, NLG SHOCK- ABSORBER DEFLATED AND TIRES	12	1.6	5.25	3.13	10.27	3.65	11.98	
ABSORBER (RH) (STANDARD SHOCK-	37	1.61	5.28	3.12	10.24	3.62	11.88	
AIRCRAFT ON JACKS, FDL PARALLEL TO THE GROUND AT 4.56 m (14.96 ft), SHOCK-ABSORBERS EXTENDED (STANDARD TIRES 01), FOR MLG RETRACTION/EXTENSION OR MLG REPLACEMENT MAKE SURE CLEARANCE OF 0.95 m (3.12 ft) FROM GROUND TO BOTTOM OF MAIN FITTING OR MAKE SURE CLEARANCE OF MLG WHEELS = 0.12 m (0.39 ft)	N/A	2.61	8.56	3.71	12.17	3.83	12.57	
AIRCRAFT ON JACKS, FDL PARALLEL TO THE GROUND AT 5.21 m (17.09 ft), SHOCK-ABSORBERS EXTENDED (STANDARD TIRES 01), FOR REPLACEMENT OF MLG SHOCK-ABSORBER MAKE SURE CLEARANCE OF 1.6 m (5.25 ft) FROM GROUND TO BOTTOM OF MAIN FITTING OR MAKE SURE CLEARANCE OF MLG WHEELS = 0.77 m (2.53 ft)	N/A	3.26	10.7	4.36	14.3	4.48	14.7	
AIRCRAFT ON JACK WITH MLG WHEELS ON GROUND, NLG SHOCK-ABSORBER EXTENDED (STANDARD TIRES 01), FOR NLG RETRACTION/EXTENSION OR	12	2.37	7.78	3.13	10.27	2.95	9.68	
REPLACEMENT OF NLG SHOCK-ABSORBER MAKE SURE CLEARANCE OF 1 m (3.28 ft) FROM GROUND TO BOTTOM OF TURNING TUBE OR MAKE SURE CLEARANCE OF NOSE GEAR WHEELS = 0.60 m (1.97 ft)	37	2.37	7.78	3.12	10.24	2.92	9.58	

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

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Jacking for Maintenance Jacking Design2 of 2) 2-14-0-991-068-A01

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| **ON A/C A321neo-XLR



	CG	CG POSITION L				HEIGHT			
CONFIGURATION	POSITION			М		Ν			
	(% MAC)	m	ft	m	ft	m	ft		
	12	1 02	6.30	3.27 LH	10.73 LH	3.07	10.07		
AIRCRAFT ON WHEELS, SHOCK-ABSORBERS	12	1.32		2.78 RH	9.12 RH		10.07		
DEFLATED, TIRES DEFLATED (RH)	11	2 1 1	6.02	3.26 LH	10.70 LH	2 00	0.49		
	41	2.11	0.92	2.78 RH	9.12 RH	2.89	9.40		
AIRCRAFT ON JACKS, FDL AT 5.26 m (17.26 ft), AIRCRAFT FUSELAGE PARALLEL TO THE GROUND, SHOCK-ABSORBERS EXTENDED, CLEARANCE OF MAIN GEAR WHEELS = 0.70 m (2.30 ft) (STANDARD TIRES 01), CLEARANCE OF NOSE GEAR WHEELS = 1 m (3.28 ft) (STANDARD TIRES 01))	N/A	3.28	10.76	4.43	14.53	4.52	14.83		
AIRCRAFT ON WHEELS (STANDARD TIRES 01)) MAXIMUM JACKING WEIGHT = 69 000 kg (152 119 lb)	12	1.88	6.17	3.17	10.40	3.39	11.12		
	41	2.06	6.76	3.17	10.40	3.21	10.53		
AIRCRAFT ON WHEELS	12	1.93	6.33	3.21	10.53	3.42	11.22		
OEW = 49 208 kg (108 485 lb)	41	2.16	7.09	3.20	10.50	3.19	10.47		

NOTE:

01 STANDARD TIRES: NOSE LANDING GEAR = 762 x 233.52 R15 MAIN LANDING GEAR = 1 270 x 455 R22

N_AC_021400_1_0690101_01_01

Jacking for Maintenance Jacking Design (Sheet 1 of 2) FIGURE-2-14-0-991-069-A01

2-14-0

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

| **ON A/C A321neo-XLR

	CG			HEI	GHT		
CONFIGURATION	POSITION	L		М		Ν	
	(% MAC)	m	ft	m	ft	m	ft
AIRCRAFT ON WHEELS, NLG SHOCK- ABSORBER DEFLATED AND TIRES	12	1.6	5.25	3.13	10.27	3.65	11.98
DEFLATED, MLG STANDARD SHOCK- ABSORBER (RH) (STANDARD TIRES 01)	37	1.61	5.28	3.12	10.24	3.62	11.88
AIRCRAFT ON JACKS, FDL PARALLEL TO THE GROUND AT 4.56 m (14.96 ft), SHOCK-ABSORBERS EXTENDED (STANDARD TIRES 01), FOR MLG RETRACTION/EXTENSION OR MLG REPLACEMENT MAKE SURE CLEARANCE OF 0.95 m (3.12 ft) FROM GROUND TO BOTTOM OF MAIN FITTING OR MAKE SURE CLEARANCE OF MLG WHEELS = 0.12 m (0.39 ft)	N/A	2.61	8.56	3.71	12.17	3.83	12.57
AIRCRAFT ON JACKS, FDL PARALLEL TO THE GROUND AT 5.21 m (17.09 ft), SHOCK-ABSORBERS EXTENDED (STANDARD TIRES 01), FOR REPLACEMENT OF MLG SHOCK-ABSORBER MAKE SURE CLEARANCE OF 1.6 m (5.25 ft) FROM GROUND TO BOTTOM OF MAIN FITTING OR MAKE SURE CLEARANCE OF MLG WHEELS = 0.77 m (2.53 ft)	N/A	3.26	10.7	4.36	14.3	4.48	14.7
AIRCRAFT ON JACK WITH MLG WHEELS ON GROUND, NLG SHOCK-ABSORBER EXTENDED (STANDARD TIRES 01), FOR NLG RETRACTION/EXTENSION OR	12	2.37	7.78	3.13	10.27	2.95	9.68
REPLACEMENT OF NLG SHOCK-ABSORBER MAKE SURE CLEARANCE OF 1 m (3.28 ft) FROM GROUND TO BOTTOM OF TURNING TUBE OR MAKE SURE CLEARANCE OF NOSE GEAR WHEELS = 0.60 m (1.97 ft)	37	2.37	7.78	3.12	10.24	2.92	9.58

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

N_AC_021400_1_0690102_01_00

Jacking for Maintenance Jacking Design2 of 2) 2-14-0-991-069-A01

2-14-0

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



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

N_AC_021400_1_0440101_01_00

Jacking for Maintenance Location of Shoring Cradles FIGURE-2-14-0-991-044-A01

2-14-0

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200 A321neo

Jacking of the Landing Gear

1. General

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

- <u>NOTE</u>: You can lift the aircraft at Maximum Ramp Weight (MRW).
- <u>NOTE</u>: The load at each jacking position is the load required to give a 25.4 mm (1 in) clearance between the ground and the tire.

**ON A/C A321-100 A321-200

2. Main Gear Jacking

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

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

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

The reactions at each of the jacking points are shown in the table, see FIGURE 2-14-0-991-061-A.

**ON A/C A321neo

3. Main Gear Jacking

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

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

It is also possible to jack the main gear using a cantilever jack. The reactions at each of the jacking points are shown in the table, see FIGURE 2-14-0-991-064-A.

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200

4. Nose Gear Jacking

For nose gear jacking, a 19 mm (0.75 in) radius ball pad is fitted under the lower end of the shock-absorber sliding tube. Jacking can be accomplished either by placing a jack directly under the ball pad, or using an adapter fitting provided with an identical ball pad. The reactions at each of the jacking points are shown in the table, see FIGURE 2-14-0-991-061-A.

**ON A/C A321neo

5. Nose Gear Jacking

For nose gear jacking, a 19 mm (0.75 in) radius ball pad is fitted under the lower end of the shock-absorber sliding tube. Jacking can be accomplished either by placing a jack directly under the ball pad, or using an adapter fitting provided with an identical ball pad. The reactions at each of the jacking points are shown in the table, see FIGURE 2-14-0-991-064-A.



**ON A/C A321-100 A321-200 A321neo



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

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Jacking of the Landing Gear MLG Jacking Point Location - Twin Wheels FIGURE-2-14-0-991-024-A01

2-14-0

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**ON A/C A321-100 A321-200 A321neo



FIGURE-2-14-0-991-025-A01

2-14-0

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200 A321neo



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

N_AC_021400_1_0280101_01_00

Jacking of the Landing Gear NLG Jacking - Point Location FIGURE-2-14-0-991-028-A01

2-14-0

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200

A321-100/-200 WV011					
MAXIMUM DESIGN TAXI WEIGHT (MTW)	93 900 kg (207 014 lb)				
MAXIMUM DESIGN TAKE-OFF WEIGHT (MTOW)	93 500 kg (206 132 lb)				
MAXIMUM LOAD VALUE TO BE APPLIED ON NLG JACKING POINT	9 000 kg (19 842 lb)				
NUMBER OF JACKING POINTS ON ONE MLG	1				
MAXIMUM LOAD VALUE TO BE APPLIED ON MLG JACKING POINT (LEFT OR RIGHT)	44 500 kg (98 106 lb)				

N_AC_021400_1_0610101_01_00

Jacking of the Landing Gear Maximum Load Capacity to Lift Each Jacking Point FIGURE-2-14-0-991-061-A01

2-14-0

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321neo

A321 NEO WV052 AND WV053						
MAXIMUM DESIGN TAXI WEIGHT (MTW)	93 900 kg (207 014 lb)					
MAXIMUM DESIGN TAKE-OFF WEIGHT (MTOW)	93 500 kg (206 132 lb)					
MAXIMUM LOAD VALUE TO BE APPLIED ON NLG JACKING POINT	12 207 kg (26 912 lb)					
NUMBER OF JACKING POINTS ON ONE MLG	1					
MAXIMUM LOAD VALUE TO BE APPLIED ON MLG JACKING POINT (LEFT OR RIGHT)	59 103 kg (130 300 lb)					

N_AC_021400_1_0640101_01_00

Jacking of the Landing Gear Maximum Load Capacity to Lift Each Jacking Point FIGURE-2-14-0-991-064-A01

2-14-0

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@A321

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

AIRCRAFT PERFORMANCE

3-1-0 General Information

| **ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

General Information

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

Standard Day Temperatures for the Altitudes							
Alti	tude	Standard Day Temperature					
FEET	METERS	°F °C					
0	0	59.0	15.0				
2 000	610	51.9	11.1				
4 000	1 220	44.7	7.1				
6 000	1 830	37.6	3.1				
8 000	2 440	30.5	-0.8				

©A321

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

3-2-1 Payload / Range - ISA Conditions

**ON A/C A321-100 A321-200 A321neo

Payload/Range - ISA Conditions

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

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200



N_AC_030201_1_0190101_01_00

Payload/Range - ISA Conditions FIGURE-3-2-1-991-019-A01

3-2-1

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200



N_AC_030201_1_0200101_01_00

Payload/Range - ISA Conditions Sharklet FIGURE-3-2-1-991-020-A01

3-2-1



**ON A/C A321neo



Payload/Range - ISA Condition: FIGURE-3-2-1-991-021-A01

3-2-1



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

**ON A/C A321-100 A321-200 A321neo

Take-Off Weight Limitation - ISA Conditions

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

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200



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

N_AC_030301_1_0070101_01_00

Take-Off Weight Limitation - ISA Conditions CFM56 Series Engine FIGURE-3-3-1-991-007-A01

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200



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

N_AC_030301_1_0080101_01_00

Take-Off Weight Limitation - ISA Conditions IAE V2500 Series Engine FIGURE-3-3-1-991-008-A01

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321neo



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

N_AC_030301_1_0100101_01_00

Take-Off Weight Limitation - ISA Conditions LEA-1A Series Engine FIGURE-3-3-1-991-010-A01

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321neo



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

N_AC_030301_1_0110101_01_00

Take-Off Weight Limitation - ISA Conditions PW Engines FIGURE-3-3-1-991-011-A01

©A321

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

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

**ON A/C A321-100 A321-200 A321neo

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

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

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200



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

N_AC_030302_1_0070101_01_00

Take-Off Weight Limitation - ISA +15°C (+27°F) Conditions CFM56 Series Engine FIGURE-3-3-2-991-007-A01

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200



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

N_AC_030302_1_0080101_01_00

Take-Off Weight Limitation - ISA +15°C (+27°F) Conditions IAE V2500 Series Engine FIGURE-3-3-2-991-008-A01

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321neo



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

N_AC_030302_1_0100101_01_00

Take-Off Weight Limitation - ISA +15°C (+27°F) Conditions LEAP-1A Series Engine FIGURE-3-3-2-991-010-A01

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321neo



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

N_AC_030302_1_0110101_01_00

Take-Off Weight Limitation - ISA +15°C (+27°F) Conditions PW Engines FIGURE-3-3-2-991-011-A01

@A321

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

3-3-3 Aerodrome Reference Code

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

Aerodrome Reference Code

1. A321-100, A321-200, A321neo, A321neo-ACF and A321neo-XLR are classified as code 4C as per ICAO Aerodrome Reference Code.


3-4-1 Landing Field Length - ISA Conditions

**ON A/C A321-100 A321-200 A321neo

Landing Field Length - ISA Conditions

1. This section provides the landing field length.

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200



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

N_AC_030401_1_0070101_01_01

Landing Field Length - ISA Conditions CFM56 Series Engine FIGURE-3-4-1-991-007-A01

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200



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

N_AC_030401_1_0080101_01_01

Landing Field Length - ISA Conditions IAE V2500 Series Engine FIGURE-3-4-1-991-008-A01

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321neo



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

N_AC_030401_1_0090101_01_00

Landing Field Length - ISA Conditions Leap Engines FIGURE-3-4-1-991-009-A01

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**ON A/C A321neo



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

N_AC_030401_1_0100101_01_00

Landing Field Length - ISA Conditions PW Engines FIGURE-3-4-1-991-010-A01

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©A321

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

3-5-0 Final Approach Speed

**ON A/C A321-100 A321-200 A321neo

Final Approach Speed

**ON A/C A321-100 A321-200

- 1. Final Approach Speed
 - A. This section gives the final approach speed which is the indicated airspeed at threshold in the landing configuration at the certificated maximum flap setting and Maximum Landing Weight (MLW) at standard atmospheric conditions. The approach speed is used to classify the aircraft into Aircraft Approach Category, a grouping of aircraft based on the indicated airspeed at threshold.
 - B. The final approach speed is 140 kt at a MLW of 75 500 kg (166 449 lb) and classifies the aircraft into the Aircraft Approach Category C.

<u>NOTE</u> : This value is given for information only.

C. The final approach speed is 142 kt at a MLW of 77 800 kg (171 520 lb) and classifies the aircraft into the Aircraft Approach Category D.

<u>NOTE</u> : This value is given for information only.

**ON A/C A321neo

- 2. Final Approach Speed
 - A. This section gives the final approach speed which is the indicated airspeed at threshold in the landing configuration at the certificated maximum flap setting and MLW at standard atmospheric conditions. The approach speed is used to classify the aircraft into Aircraft Approach Category, a grouping of aircraft based on the indicated airspeed at threshold.
 - B. The final approach speed is 136 kt at a MLW of 79 200 kg (174 606 lb) and classifies the aircraft into the Aircraft Approach Category C.

<u>NOTE</u> : This value is given for information only.

©A321

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

GROUND MANEUVERING

4-1-0 General Information

| **ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

General Information

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

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

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

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

4-2-0 Turning Radii

| **ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR Turning Radii

1. This section provides the turning radii.

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



NOTE:

FOR STEERING DIMENSION TABLE SEE SHEET 2. APPLICABLE FOR A321-100 AND A321-200.

DEPENDING ON AIRCRAFT CONFIGURATION.

TURN TYPE:

1. ASYMMETRIC THRUST DIFFERENTIAL BRAKING

(PIVOTTING ON ONE MAIN GEAR).

2. SYMMETRIC THRUST NO BRAKING.

N_AC_040200_1_0070101_01_03

Turning Radii, No Slip Angle (Sheet 1) FIGURE-4-2-0-991-007-A01

4-2-0

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

			_						-	-									-			
e S	Ħ		190	159	139	124	114	105	66	94	6	86	83	81	66	94	89	86	83	80		ល្ម
ΨĒ	E		57.9	48.5	42.2	37.8	34.6	32.1	30.2	28.6	27.4	26.3	25.4	24.7	30.1	28.5	27.2	26.2	25.3	24.5	ІІТІАТЕ	ALL. DURIN
R5 NOSE	H.		172	141	122	109	66	92	87	83	80	77	76	74	87	83	80	77	75	74		ING AT AKING
	٤		52.3	43.1	37.2	33.1	30.2	28.1	26.5	25.3	24.3	23.6	23.1	22.7	26.4	25.2	24.2	23.5	23.0	22.6	SAKING	BRAKI IAL BR
	KLET ft		215	181	158	141	128	117	108	101	94	88	83	78	108	100	93	87	82	77	NN. TIAL BI	ERENT
VING	SHAR	٤	65.5	55.2	48.1	42.9	38.9	35.6	32.9	30.7	28.6	26.9	25.3	23.9	32.8	30.5	28.5	26.6	25.0	23.4		NO DIFFERE PLYING DIFFE
R4 - V	STIP CE	Ħ	212	178	155	138	125	114	105	98	91	85	80	76	105	97	91	85	79	74	ITHE SI	
	WING	٤	64.7	54.3	47.3	42.1	38.1	34.8	32.1	29.8	27.8	26.1	24.5	23.1	32.0	29.7	27.6	25.8	24.1	22.6	IG ON ⁻ RN; AN	N; AND BY AP
NLG NLG	Ħ		166	135	114	66	89	81	74	70	66	63	61	59	74	69	65	62	60	58	ENDIN	E TUR -YPE 1
	ε		50.7	41.1	34.7	30.3	27.0	24.6	22.7	21.2	20.0	19.1	18.4	17.9	22.6	21.1	19.9	19.0	18.3	17.8	NS DEF	
J.O	H.		170	136	113	96	83	72	63	56	49	43	38	33	63	55	48	42	37	32	2 TURN NG TH	IG THE JOSE F
LM	Ε		51.9	41.6	34.5	29.3	25.2	22.0	19.3	16.9	14.9	13.1	11.5	10.1	19.1	16.8	14.7	12.9	11.2	9.6	TYPE : T DURI	DURIN HAN TH
LG LG	Ħ		145	112	88	71	58	47	38	31	24	18	13	ω	38	30	23	17	12	7	E 1 OR THRUS	HRUST UES TI
RMR	E		44.3	34.0	26.9	21.7	17.6	14.4	11.7	9.4	7.3	5.5	3.9	2.5	11.5	9.2	7.1	5.3	3.6	2.0		
RAMP WEIGHT	EFFECTIVE STEERING ANGLE		19.6	24.5	29.4	34.3	39.2	44.0	48.8	53.6	58.3	63.0	67.4	71.6	49.1	54.0	58.8	63.6	68.4	73.1	, AIRLINES MAY US RNS USE: ASYMME TUS	RNS USE: SYMMET IBLE TO GET LOWE -E TURN.
MAXIMUM	STEERING ANGLE	(Ban)	20	25	30	35	40	45	50	55	60	65	70	75 (MAX)	50	55	60	65	70	75 (MAX)	E: ABOVE 50° TYPE 1 TU	TYPE 2 TU IT IS POSS THE WHOL
	TURN TYPE		2	2	2	2	2	2	2	2	2	2	2	2	-	-	-	-	-	-	NOTI	

N_AC_040200_1_0080101_01_01

Turning Radii, No Slip Angle (Sheet 2) FIGURE-4-2-0-991-008-A01

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

4-3-0 Minimum Turning Radii

| **ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR Minimum Turning Radii

1. This section provides the minimum turning radii.



**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



TYPE	STEERING	EFFECTIVE		Y	A	R3	R4 V	R5	R6	
OF TURN	ANGLE (DEG)	STEERING ANGLE				NLG	WING TIP FENCE	SHARKLET	NOSE	THS
1		73.1°	m	5.1	27.7	17.8	22.6	23.4	22.6	24.5
	75 (IVIAA)		ft	17	91	58	74	77	74	80
2		71.6°	m	5.6	28.3	17.9	23.1	23.9	22.7	24.7
	75 (IVIAA)		ft	18	93	59	76	78	74	81

NOTE:

DEPENDING ON AIRCRAFT CONFIGURATION.

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

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

N_AC_040300_1_0040101_01_03

Minimum Turning Radii FIGURE-4-3-0-991-004-A01



4-4-0 Visibility from Cockpit in Static Position

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

Visibility from Cockpit in Static Position

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



**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



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

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

FIRST OFFICER FIXED WINDOW 110° 100° °06 FIRST OFFICER SLIDING WINDOW 80° 20° °09 50° 40° FIRST OFFICER WINDSHIELD 30° 20° PILOT EYE POSITION (CAPTAIN POSITION) 10° EXAMPLE: WHEN CAPTAIN TURNS HIS HEAD BY 80° LEFT, VISIBILITY WILL BE 35° UP AND 25° DOWN THROUGH THE SLIDING WINDOW FRAME. ° CAPTAIN WINDSHIELD 10° 20° ŝ 40° CAPTAIN FIELD OF VIEW SHOWN. FIRST OFFICER FIELD OF VIEW SYMMETRICAL. CAPTAIN SLIDING WINDOW 50° °00 °07 80° °06 120° 110° 100° AS 580 B CAPTAIN FIXED WINDOW -A320 30° 20° 10° 35° 30° 10° 20° 25° ° N_AC_040400_1_0050101_01_00

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

4-4-0

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

4-5-0 Runway and Taxiway Turn Paths

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

Runway and Taxiway Turn Paths

1. Runway and Taxiway Turn Paths.

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

4-5-1 135° Turn - Runway to Taxiway

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

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

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



NOTE: FAA GROUP III FACILITIES. DEPENDING ON AIRCRAFT CONFIGURATION.

N_AC_040501_1_0060101_01_04

135° Turn - Runway to Taxiway Cockpit Over Centerline Method FIGURE-4-5-1-991-006-A01

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



NOTE: FAA GROUP III FACILITIES. DEPENDING ON AIRCRAFT CONFIGURATION.

N_AC_040501_1_0070101_01_04

135° Turn - Runway to Taxiway Judgemental Oversteering Method FIGURE-4-5-1-991-007-A01

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

4-5-2 90° Turn - Runway to Taxiway

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

90° Turn - Runway to Taxiway

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

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

| **ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



NOTE: FAA GROUP III FACILITIES. DEPENDING ON AIRCRAFT CONFIGURATION.

N_AC_040502_1_0060101_01_04

90° Turn - Runway to Taxiway Cockpit Over Centerline Method FIGURE-4-5-2-991-006-A01

4-5-2

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



NOTE: FAA GROUP III FACILITIES. DEPENDING ON AIRCRAFT CONFIGURATION.

N_AC_040502_1_0070101_01_04

90° Turn - Runway to Taxiway Judgemental Oversteering Method FIGURE-4-5-2-991-007-A01

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

4-5-3 180° Turn on a Runway

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

180° Turn on a Runway

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



**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



NOTE:

DEPENDING ON AIRCRAFT CONFIGURATION.

N_AC_040503_1_0020101_01_06



AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



DEPENDING ON AIRCRAFT CONFIGURATION.

N_AC_040503_1_0020102_01_04

180° Turn on a Runway Center of Runway Method (Sheet 2 of 2) FIGURE-4-5-3-991-002-A01

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

4-5-4 135° Turn - Taxiway to Taxiway

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

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

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



NOTE: FAA GROUP III FACILITIES. DEPENDING ON AIRCRAFT CONFIGURATION.

N_AC_040504_1_0070101_01_02

135° Turn - Taxiway to Taxiway Cockpit Over Centerline Method (Sheet 1 of 2) FIGURE-4-5-4-991-007-A01

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



NOTE: FAA GROUP III FACILITIES. DEPENDING ON AIRCRAFT CONFIGURATION.

N_AC_040504_1_0070102_01_02

135° Turn - Taxiway to Taxiway Judgemental Oversteering Method (Sheet 2 of 2) FIGURE-4-5-4-991-007-A01

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

4-5-5 90° Turn - Taxiway to Taxiway

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

90° Turn - Taxiway to Taxiway

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



**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



NOTE: FAA GROUP III FACILITIES. DEPENDING ON AIRCRAFT CONFIGURATION.

N_AC_040505_1_0040101_01_02

90° Turn - Taxiway to Taxiway Cockpit Over Centerline Method (Sheet 1 of 2) FIGURE-4-5-5-991-004-A01

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

| **ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



NOTE: FAA GROUP III FACILITIES. DEPENDING ON AIRCRAFT CONFIGURATION.

N_AC_040505_1_0040102_01_02

90° Turn - Taxiway to Taxiway Judgemental Oversteering Method (Sheet 2 of 2) FIGURE-4-5-5-991-004-A01

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

4-6-0 Runway Holding Bay (Apron)

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

Runway Holding Bay (Apron)

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

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



NOTE: APPLICABLE FOR A321-100 AND A321-200. DEPENDING ON AIRCRAFT CONFIGURATION.

N_AC_040600_1_0040101_01_03

Runway Holding Bay (Apron) FIGURE-4-6-0-991-004-A01

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

4-7-0 Minimum Line-Up Distance Corrections

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

Minimum Line-Up Distance Corrections

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

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

2. 90° Turn on Runway Entry

This section gives the minimum line-up distance correction for a 90° turn on runway entry. This maneuver consists in a 90° turn at minimum turn radius. It starts with the edge of the MLG at a distance of 3 m (10 ft) from the taxiway edge, and finishes with the aircraft aligned on the centerline of the runway, see FIGURE 4-7-0-991-020-A.

During the turn, all the clearances must meet the minimum value of 3 m (10 ft) for this category of aircraft as recommended in ICAO Annex 14.

3. 180° Turn on Runway Turn Pad

This section gives the minimum line-up distance correction for a 180° turn on the runway turn pad.

This maneuver consists in a 180° turn at minimum turn radius on a runway turn pad with standard ICAO geometry.

It starts with the edge of the MLG at a distance of 3 m (10 ft) from the pavement edge, and it finishes with the aircraft aligned on the centerline of the runway, see FIGURE 4-7-0-991-021-A. During the turn, all the clearances must meet the minimum value of 3 m (10 ft) for this category of aircraft as recommended in ICAO Annex 14.

4. 180° Turn on Runway Width

This section gives the minimum line-up distance correction for a 180° turn on the runway width. For this maneuver, the pavement width is considered to be the runway width, which is a frozen parameter (30 m (100 ft), 45 m (150 ft) and 60 m (200 ft)).

As per the standard operating procedures for the "180° turn on runway" (described in the Flight Crew Operating Manual), the aircraft is initially angled with respect to the runway centerline when starting the 180° turn, see FIGURE 4-7-0-991-022-A.

The value of this angle depends on the aircraft type and is mentioned in the FCOM.

During the turn, all the clearances must meet the minimum value of 3 m (10 ft) for this category of aircraft as recommended in ICAO Annex 14.



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

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

| **ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



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

90° TURN ON RUNWAY ENTRY													
			30 m (WIDE R	(100 ft) UNWAY		45 m (150 ft)/60 m (200 ft) WIDE RUNWAY							
AIRCRAFT TYPE	MAX STEERING ANGLE	N DIS	MINIMUN TANCE C	1 LINE-UF ORRECT	o ION	MINIMUM LINE-UP DISTANCE CORRECTION							
		ON T	ODA	ON ASDA		ON TODA		ON A	SDA				
A321	75°	13.9 m	46 ft	30.8 m	101 ft	12.6 m	41 ft	29.5 m	97 ft				

NOTE:

DEPENDING ON AIRCRAFT CONFIGURATION.

N_AC_040700_1_0200101_01_01

Minimum Line-Up Distance Corrections 90° Turn on Runway Entry FIGURE-4-7-0-991-020-A01

4-7-0

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

| **ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



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

180° TURN ON RUNWAY TURN PAD													
	MAX STEERING ANGLE	30 m (100 ft) WIDE RUNWAY				45 m (150 ft)/60 m (200 ft) WIDE RUNWAY							
AIRCRAFT TYPE		MINIMUM LINE-UP DISTANCE CORRECTION			REQU MINII PAVEI	JIRED MUM MENT	MINIMUM LINE-UP DISTANCE CORRECTION		REQU MINI PAVE	REQUIRED MINIMUM PAVEMENT			
		ON T	ODA	ON A	SDA	WIDTH		ON T	ODA	ON A	SDA	VVIL	ЛН
A321	75°	21.4 m	70 ft	38.3 m	126 ft	35.3 m	116 ft	21 m	69 ft	37.9 m	124 ft	40.3 m	132 ft

NOTE:

DEPENDING ON AIRCRAFT CONFIGURATION.

N_AC_040700_1_0210101_01_01

Minimum Line-Up Distance Corrections 180° Turn on Runway Turn Pad FIGURE-4-7-0-991-021-A01

4-7-0

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



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

180° TURN ON RUNWAY WIDTH									
AIRCRAFT TYPE	MAX STEERING ANGLE	30 m (WIDE R	45 m (150 ft)/60 m (200 ft) WIDE RUNWAY						
		MINIMUM LINE-UP DISTANCE CORRECTION		MINIMUM LINE-UP DISTANCE CORRECTION					
		ON TODA ON ASDA		ON T	ODA	ON A	ASDA		
A321	75°	NOT PC	21.0 m	69 ft	37.9 m	124 ft			

NOTE:

DEPENDING ON AIRCRAFT CONFIGURATION.

"NOT POSSIBLE" MEANS THAT IT IS NOT POSSIBLE FOR THE AIRCRAFT TO TURN ON SUCH A RUNWAY WIDTH WITH THE GIVEN ASSUMPTIONS DEFINED IN THIS SECTION (4-7-0) WHILE MAINTAINING THE MINIMUM 3 m (10 ft) MARGIN RECOMMENDED BY ICAO. N_AC_040700_1_0220101_01_01

Minimum Line-Up Distance Corrections 180° Turn on Runway Width FIGURE-4-7-0-991-022-A01

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

4-8-0 Aircraft Mooring

| **ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR Aircraft Mooring

1. This section provides information on aircraft mooring.



| **ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



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

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

TERMINAL SERVICING

5-1-1 Aircraft Servicing Arrangements

| **ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

Aircraft Servicing Arrangements

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

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

This table gives the symbols used on servicing diagrams.

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

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

5-1-2 Typical Ramp Layout - Open Apron

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

Typical Ramp Layout - Open Apron

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

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



**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



Typical Ramp Layout Open Apron - Bulk Loading FIGURE-5-1-2-991-005-A01

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**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



Typical Ramp Layout Open Apron - ULD Loading FIGURE-5-1-2-991-010-A01

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

5-1-3 Typical Ramp Layout - Gate

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

Typical Ramp Layout - Gate

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

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



| **ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



Typical Ramp Layout Gate FIGURE-5-1-3-991-003-A01

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

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

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

Terminal Operations - Full Servicing Turn Round Time

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

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

**ON A/C A321-100 A321-200 A321neo

2. Assumptions used for full servicing turn round time chart

FIGURE 5-2-0-991-007-A

A. PASSENGER HANDLING

185 pax: 16 F/C + 169 Y/C.

All passengers deplane and board the aircraft.

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

Equipment positioning + opening door = +2 min.

Closing door + equipment removal = +1.5 min.

No Passenger with Reduced Mobility (PRM) on board. Deplaning:

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

Boarding:

- 185 pax at door 1L
- Boarding rate = 12 pax/min
- Last Pax Seating allowance (LPS) + headcounting = +2 min.
- B. CARGO

2 cargo loaders + 1 belt loader. Opening door + equipment positioning = +2 min. Equipment removal + closing door = +1.5 min. 100% cargo exchange (baggage only):

- FWD cargo compartment: 5 containers
- AFT cargo compartment: 5 containers
- Bulk cargo compartment: 500 kg (1 102 lb).

Container unloading/loading times:

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

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

Bulk unloading/loading times:

- Unloading = 150 kg/min (331 lb/min)
- Loading = 120 kg/min (265 lb/min).
- C. REFUELING

20 000 I (5 283 US gal) at 50 psig (3.45 bars-rel), one hose (right wing). Dispenser positioning/removal + connection/disconnection times = +2.5 min.

D. CLEANING

Cleaning is performed in available time.

E. CATERING

1 catering truck for servicing galleys sequentially at doors 1R and 4R. Equipment positioning + opening door = +2 min. Closing door + equipment removal = +1.5 min. Time to drive from one door to the other = +2 min. Full Size Trolley Equivalent (FSTE) to unload and load: 14 FSTE - 4 FSTE at door 1R

- 10 FSTE at door 4R.

Time for trolley exchange = 1.2 min per FSTE.

- F. GROUND HANDLING/GENERAL SERVICING Start of operations:
 - Bridges/stairs: t0 = 0
 - Other equipment: t = t0 + 1 min.
 Ground Power Unit (GPU): up to 90 kVA.
 Air conditioning: one hose.
 Potable water servicing: 100% uplift, 200 I (53 US gal).
 Toilet servicing: draining + rinsing.

**ON A/C A321neo-ACF

3. Assumptions used for full servicing turn round time chart

FIGURE 5-2-0-991-009-A

A. PASSENGER HANDLING

202 pax (all Y/C). All passengers deplane and board the aircraft. 1 PBB used at door 1L. Equipment positioning + opening door = +2 min. Closing door + equipment removal = +1.5 min. No PRM on board. Deplaning:

- 202 pax at door 1L

```
- Deplaning rate = 20 pax/min
```

Boarding:

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

- 202 pax at door 1L
- Boarding rate = 12 pax/min
- LPS allowance + headcounting = +2 min.

B. CARGO

2 cargo loaders + 1 belt loader.

Opening door + equipment positioning = +2 min. Equipment removal + closing door = +1.5 min. 100% cargo exchange (baggage only):

- FWD cargo compartment: 5 containers
- AFT cargo compartment: 5 containers
- Bulk cargo compartment: 500 kg (1 102 lb).

Container unloading/loading times:

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

Bulk unloading/loading times:

- Unloading = 150 kg/min (331 lb/min)
- Loading = 120 kg/min (265 lb/min).

C. REFUELING

20 000 l (5 283 US gal) at 50 psig (3.45 bars-rel), one hose (right wing). No optional coupling.

Dispenser positioning/removal + connection/disconnection times = +2.5 min. Refuelling with passengers on board: No

D. CLEANING

Cleaning is performed in available time.

E. CATERING

1 catering truck for servicing galleys sequentially at doors 1R and 4R. Equipment positioning + opening door = +2 min. Closing door + equipment removal = +1.5 min. Time to drive from one door to the other = +2 min. FSTE to unload and load: 11 FSTE

- 4 FSTE at door 1R
- 7 FSTE at door 4R.

Time for trolley exchange = 1.2 min per FSTE. Maximum catering time = +13.2 min.

F. GROUND HANDLING/GENERAL SERVICING Start of operations:

- Bridges/stairs: t0 = 0

- Other equipment: t = t0 + 1 min.

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

Air conditioning: one hose.

Potable water servicing: 100% uplift, 200 I (53 US gal).

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

Toilet servicing: draining + rinsing.

G. SECURITY/SAFETY CHECKS No security or safety checks are applicable.

**ON A/C A321neo-XLR

4. Assumptions used for full servicing turn round time chart for 206 seats with Cargo Loading System (CLS)

FIGURE 5-2-0-991-011-A

A. PASSENGER HANDLING

206 pax (all Y/C).

All passengers deplane and board the aircraft.

1 PBB used at door 1L.

No PRM on board.

Deplaning:

- 206 pax at door 1L
- Deplaning rate = 20 pax/min
- Stairs deplaning rate = 18 pax/min.

Boarding:

- 206 pax at door 1L
- Boarding rate = 12 pax/min
- Stairs boarding rate = 12 pax/min
- LPS allowance + headcounting = +2 min.
- B. CARGO

2 cargo loaders + 1 belt loader.

100% cargo exchange (baggage only):

- FWD cargo compartment: 5 containers
- AFT cargo compartment: 3 containers
- Bulk cargo compartment: 500 kg (1 102 lb). Container unloading/loading times:
- Unloading = 1.5 min/container
- Loading = 1.5 min/container.

C. REFUELING

32 450 I (8 572 US gal) at 50 psig (3.45 bars-rel). No optional coupling. Refuelling with passengers on board: Yes

D. CLEANING

Cleaning is performed in available time.

E. CATERING

2 catering truck for servicing galleys sequentially at doors 1R and 4R. FSTE to unload and load: 14 FSTE

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

- 7 FSTE at door 1R

7 FSTE at door 4R.
 Time for trolley exchange = 1.2 min per FSTE.
 Additional time for crossing = 0.5 min.
 Maximum catering time = +16.8 min.

- F. GROUND HANDLING/GENERAL SERVICING Potable water servicing: 100% uplift. Waste water servicing: draining + rinsing.
- G. SECURITY/SAFETY CHECKS No security or safety checks are applicable.
- 5. Assumptions used for full servicing turn round time chart for 206 seats with bulk loading system FIGURE 5-2-0-991-013-A
 - A. PASSENGER HANDLING 206 pax (all Y/C).
 All passengers deplane and board the aircraft.
 1 PBB used at door 1L.
 No PRM on board.
 Deplaning:
 - 206 pax at door 1L
 - Deplaning rate = 20 pax/min
 - Stairs deplaning rate = 18 pax/min.

Boarding:

- 206 pax at door 1L
- Boarding rate = 12 pax/min
- Stairs boarding rate = 12 pax/min
- LPS allowance + headcounting = +2 min.
- B. CARGO

2 belt loaders.

100% cargo exchange (baggage only):

- FWD cargo compartment: 93 items
- AFT cargo compartment: 113 items
- Bulk cargo compartment: 500 kg (1 102 lb).
- Item unloading/loading times:
- Unloading = 15 item/min
- Loading = 10 item/min.
- C. REFUELING

32 450 I (8 572 US gal) at 50 psig (3.45 bars-rel).

No optional coupling.

Refuelling with passengers on board: Yes



D. CLEANING

Cleaning is performed in available time.

E. CATERING

2 catering truck for servicing galleys sequentially at doors 1R and 4R. FSTE to unload and load: 14 FSTE

- 7 FSTE at door 1R
- 7 FSTE at door 4R.

Time for trolley exchange = 1.2 min per FSTE. Additional time for crossing = 0.5 min. Maximum catering time = +16.8 min.

- F. GROUND HANDLING/GENERAL SERVICING Potable water servicing: 100% uplift.
 Waste water servicing: draining + rinsing.
- G. SECURITY/SAFETY CHECKS No security or safety checks are applicable.
- 6. Assumptions used for full servicing turn round time chart for 244 seats with Cargo Loading System (CLS)

FIGURE 5-2-0-991-012-A

- A. PASSENGER HANDLING 244 pax (all Y/C).
 All passengers deplane and board the aircraft.
 1 PBB used at door 1L.
 No PRM on board.
 Deplaning:
 - 244 pax at door 1L
 - Deplaning rate = 20 pax/min
 - Stairs deplaning rate = 18 pax/min.

Boarding:

- 244 pax at door 1L
- Boarding rate = 12 pax/min
- Stairs boarding rate = 12 pax/min
- LPS allowance + headcounting = +2 min.
- B. CARGO

2 cargo loaders.

100% cargo exchange (baggage only):

- FWD cargo compartment: 5 containers
- AFT cargo compartment: 3 containers
- Bulk cargo compartment: 500 kg (1 102 lb).

Container unloading/loading times:

@A321

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

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

32 450 I (8 572 US gal) at 50 psig (3.45 bars-rel). No optional coupling. Refuelling with passengers on board: Yes

D. CLEANING

Cleaning is performed in available time.

E. CATERING

2 catering truck for servicing galleys sequentially at doors 1R and 4R. FSTE to unload and load: 7 FSTE

- 3 FSTE at door 1R
- 4 FSTE at door 4R.
 Time for trolley exchange = 1.2 min per FSTE.
 Additional time for crossing = 0.5 min.
 Maximum catering time = +8.4 min.
- F. GROUND HANDLING/GENERAL SERVICING Potable water servicing: 100% uplift. Waste water servicing: draining + rinsing.
- G. SECURITY/SAFETY CHECKS No security or safety checks are applicable.
- 7. Assumptions used for full servicing turn round time chart for 244 seats with bulk loading system FIGURE 5-2-0-991-014-A
 - A. PASSENGER HANDLING

244 pax (all Y/C).All passengers deplane and board the aircraft.1 PBB used at door 1L.No PRM on board.Deplaning:

- 244 pax at door 1L
- Deplaning rate = 20 pax/min
- Stairs deplaning rate = 18 pax/min.
- Boarding:
- 244 pax at door 1L
- Boarding rate = 12 pax/min
- Stairs boarding rate = 12 pax/min
- LPS allowance + headcounting = +2 min.
- B. CARGO

2 belt loaders.

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

100% cargo exchange (baggage only):

- FWD cargo compartment: 110 items
- AFT cargo compartment: 134 items
- Bulk cargo compartment: 500 kg (1 102 lb).

Item unloading/loading times:

- Unloading = 15 item/min
- Loading = 10 item/min.
- C. REFUELING

32 450 I (8 572 US gal) at 50 psig (3.45 bars-rel). No optional coupling. Refuelling with passengers on board: Yes

D. CLEANING

Cleaning is performed in available time.

E. CATERING

2 catering truck for servicing galleys sequentially at doors 1R and 4R. FSTE to unload and load: 7 FSTE

- 3 FSTE at door 1R
- 4 FSTE at door 4R.

Time for trolley exchange = 1.2 min per FSTE. Additional time for crossing = 0.5 min. Maximum catering time = +8.4 min.

- F. GROUND HANDLING/GENERAL SERVICING Potable water servicing: 100% uplift. Waste water servicing: draining + rinsing.
- G. SECURITY/SAFETY CHECKS No security or safety checks are applicable.

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200 A321neo

TRT: 52 min



GSE POSITIONING/REMOVAL
ACTIVITY
CRITICAL PATH

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Full Servicing Turn Round Time Chart FIGURE-5-2-0-991-007-A01



**ON A/C A321neo-ACF



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GSE POSITIONING/REMOVAL/MOVING ACTIVITY TIME

CRITICAL PATH

N_AC_050200_1_0090101_01_02

Full Servicing Turn Round Time Chart FIGURE-5-2-0-991-009-A01

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**ON A/C A321neo-XLR





GSE POSITIONING/REMOVAL/MOVING ACTIVITY TIME

CRITICAL PATH

N_AC_050200_1_0110101_01_00

Full Servicing Turn Round Time Chart with 206 Seats Full Servicing Turn Round Time Chart for CLS FIGURE-5-2-0-991-011-A01



**ON A/C A321neo-XLR





GSE POSITIONING/REMOVAL/MOVING ACTIVITY TIME

CRITICAL PATH

N_AC_050200_1_0130101_01_00

Full Servicing Turn Round Time Chart with 206 Seats Full Servicing Turn Round Time Chart for Bulk Loading System FIGURE-5-2-0-991-013-A01

5-2-0

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**ON A/C A321neo-XLR



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GSE POSITIONING/REMOVAL/MOVING ACTIVITY TIME

CRITICAL PATH

N_AC_050200_1_0120101_01_00

Full Servicing Turn Round Time Chart with 244 Seats Full Servicing Turn Round Time Chart for CLS FIGURE-5-2-0-991-012-A01



**ON A/C A321neo-XLR



GSE POSITIONING/REMOVAL/MOVING ACTIVITY TIME

CRITICAL PATH

N_AC_050200_1_0140101_01_00

Full Servicing Turn Round Time Chart with 244 Seats Full Servicing Turn Round Time Chart for Bulk Loading System FIGURE-5-2-0-991-014-A01

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

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

| **ON A/C A321-100 A321-200 A321neo A321neo-ACF

Terminal Operations - Transit Turn Round Time

1. This section provides a typical turn round time chart showing the typical time for ramp activities during aircraft turn round. Actual times may vary due to each operator's specific practices, resources, equipment and operating conditions.

**ON A/C A321-100 A321-200 A321neo

2. Assumptions used for transit turn round time chart

FIGURE 5-3-0-991-004-A

- A. PASSENGER HANDLING 220 pax (all Y/C).
 All passengers deplane and board the aircraft.
 2 stairways used at doors 1L and 4L.
 Equipment positioning + opening door = +2 min.
 Closing door + equipment removal = +1.5 min.
 No Passenger with Reduced Mobility (PRM) on board.
 Deplaning:
 - 110 pax at door 1L
 - 110 pax at door 4L
 - Deplaning rate = 20 pax/min. per door

Boarding:

- 110 pax at door 1L
- 110 pax at door 4L
- Boarding rate = 12 pax/min. per door
- Last Pax Seating allowance (LPS) + headcounting = +2 min.
- B. CARGO
 - 2 cargo loaders.

Opening door + equipment positioning = +2 min. Equipment removal + closing door = +1.5 min. 100% cargo exchange :

- FWD cargo compartment: 5 containers
- AFT cargo compartment: 5 containers

Container unloading/loading times:

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

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

- C. REFUELING No refueling.
- D. CLEANING Cleaning is performed in available time.
- E. CATERING One catering truck for servicing the galleys as required.
- F. GROUND HANDLING/GENERAL SERVICING Start of operations:
 - Bridges/stairs: t0 = 0

Other equipment: t = t0.
Ground Power Unit (GPU): up to 90 kVA.
Air conditioning: one hose.
No potable water servicing.
No toilet servicing.

**ON A/C A321neo-ACF

- 3. Assumptions used for transit turn round time chart FIGURE 5-3-0-991-007-A
 - A. PASSENGER HANDLING 202 pax (all Y/C).
 All passengers deplane and board the aircraft.
 2 Stairs used at door 1L and 4L.
 Equipment positioning + opening door = +2 min.
 Closing door + equipment removal = +1.5 min.
 No PRM on board.
 Deplaning:
 - 101 pax at door 1L
 - 101 pax at door 4L
 - Deplaning rate = 20 pax/min. per door
 - Boarding:
 - 101 pax at door 1L
 - 101 pax at door 4L
 - Boarding rate = 12 pax/min. per door
 - LPS + headcounting = +2 min.

B. CARGO

2 cargo loaders.

Opening door + equipment positioning = +2 min. Equipment removal + closing door = +1.5 min. 100% cargo exchange:

- FWD cargo compartment: 5 containers

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

- AFT cargo compartment: 5 containers
- Bulk compartment: 500 kg (1 102 lb).

Container unloading/loading times:

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

Bulk unloading/loading times:

- Unloading = 150 kg/min (331 lb/min)
- Loading = 120 kg/min (265 lb/min).
- C. REFUELING

20 000 I (5 283 US gal) at 50 psig (3.45 bars-rel). No optional coupling. Dispenser positioning/removal + connection/disconnection times = +2.5 min. Refuelling with passengers on board: No.

D. CLEANING

Cleaning is performed in available time.

E. CATERING

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

Full Size Trolley Equivalent (FSTE) to unload and load: 11 FSTE

- 4 FSTE at door 1R
- 7 FSTE at door 4R.

Time for trolley exchange = 1.2 min per FSTEMaximum catering time = +13.2 min.

F. GROUND HANDLING/GENERAL SERVICING Start of operations:

- Bridges/stairs: t0 = 0

- Other equipment: t = t0.

GPU: up to 90 kVA.

Air conditioning: one hose.

Potable water servicing: 100% uplift, 200 I (53 US gal). Toilet servicing: draining + rinsing.

G. SECURITY/SAFETY CHECKS No safety or security checks are available.

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200 A321neo



TRT: 23 min



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Outstation Turn Round Time Chart FIGURE-5-3-0-991-004-A01



| **ON A/C A321neo-ACF





GSE POSITIONING/REMOVAL ACTIVITY CRITICAL PATH

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Outstation Turn Round Time Chart FIGURE-5-3-0-991-007-A01

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

5-4-1 Ground Service Connections

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

Ground Service Connections Layout

1. This section provides the ground service connections layout.

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



- 1 GROUND ELECTRICAL POWER CONNECTOR
- 2 OXYGEN SYSTEM
- 3 NLG GROUNDING (EARTHING) POINT
- 4 POTABLE WATER DRAIN PANEL
- 5 LOW PRESSURE AIR PRE-CONDITIONING
- 6 HIGH PRESSURE AIR PRE-CONDITIONING
- 7 REFUEL/DEFUEL INTEGRATED PANEL
- 8 IDG/STARTER OIL SERVICING
- 9 ENGINE OIL SERVICING
- 10 OVERPRESSURE PROTECTOR
- 11 REFUEL/DEFUEL COUPLINGS (OPTIONAL-LH WING)

- 12 OVERWING REFUEL (IF INSTALLED)
- 13 NACA VENT INTAKE
- 14 YELLOW HYDRAULIC-SYSTEM SERVICE PANEL
- 15 BLUE HYDRAULIC-SYSTEM SERVICE PANEL
- 16 ACCUMULATOR CHARGING (GREEN SYSTEM) AND RESERVOIR DRAIN (GREEN SYSTEM)
- 17 GREEN HYDRAULIC-SYSTEM SERVICE PANEL
- 18 MLG GROUNDING (EARTHING) POINT
- 19 WASTE WATER SERVICE PANEL
- 20 POTABLE WATER SERVICE PANEL
- 21 APU OIL SERVICING

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Ground Service Connections Layout FIGURE-5-4-1-991-007-A01

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

5-4-2 Grounding Points

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

Grounding (Earthing) Points

1. Grounding (Earthing) Points

	DISTANCE					
		FROM AIRCRAF	MEAN HEIGHT			
	AFT OF NOSE	LH SIDE	RH SIDE	FROM GROUND		
On Nose Landing Gear	5.07 m	On Centerline		0.94 m		
leg:	(16.63 ft)			(3.08 ft)		
On left Main Landing	21.97 m	3.79 m	_	1.07 m		
Gear leg:	(72.08 ft)	(12.43 ft)	-	(3.51 ft)		
On right Main Landing	21.97 m		3.79 m	1.07 m		
Gear leg:	(72.08 ft)		(12.43 ft)	(3.51 ft)		

- A. The grounding (earthing) stud on each landing gear leg is designed for use with a clip-on connector (such as Appleton TGR).
- B. The grounding (earthing) studs are used to connect the aircraft to an approved ground (earth) connection on the ramp or in the hangar for:
 - Refuel/defuel operations,
 - Maintenance operations,
 - Bad weather conditions.
 - <u>NOTE</u>: In all other conditions, the electrostatic discharge through the tire is sufficient. If the aircraft is on jacks for retraction and extension checks or for the removal/ installation of the landing gear, the grounding (earthing) alternative points (if installed) are:
 - In the hole on the avionics-compartment lateral right door-frame (on FR14),
 - On the engine nacelles,
 - Adjacent to the high-pressure connector,
 - On the wing upper surfaces.



| **ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



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Ground Service Connections Grounding (Earthing) Points - Landing Gear FIGURE-5-4-2-991-007-A01



| **ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



Ground Service Connections Grounding (Earthing) Points - Wing (If Installed) FIGURE-5-4-2-991-008-A01



| **ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



Ground Service Connections Grounding (Earthing) Point - Avionics Compartment Door-Frame FIGURE-5-4-2-991-018-A01

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| **ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



Grounding (Earthing) Point - Engine Air Intake (If Installed) FIGURE-5-4-2-991-019-A01
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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

5-4-3 Hydraulic System

| **ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

Hydraulic Servicing

1. Access

ACCESS		DISTANCE				
		FROM AIRCRAF	T CENTERLINE	MEAN HEIGHT		
	AFT OF NOSE	LH SIDE	RH SIDE	FROM GROUND		
Green System:	23.44 m	1.27 m		1.76 m		
Access Door 197CB	(76.90 ft)	(4.17 ft)		(5.77 ft)		
Yellow System:	23.44 m		1.27 m	1.76 m		
Access Door 198CB	(76.90 ft)		(4.17 ft)	(5.77 ft)		
Blue System:	24.49 m	1.27 m		1.76 m		
Access Door 197EB	(80.35 ft)	(4.17 ft)		(5.77 ft)		

2. Reservoir Pressurization

ACCESS	DISTANCE			
		FROM AIRCRAF	T CENTERLINE	MEAN HEIGHT
	AFT OF NOSE	LH SIDE	RH SIDE	FROM GROUND
Access Door 195BB	19.92 m	0.25 m		1.74 m
Access Door 19586	(65.35 ft)	(0.82 ft)		(5.71 ft)

3. Accumulator Charging

Four MIL-PRF-6164 connections:

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

	DISTANCE				
ACCESS		FROM AIRCRAF	T CENTERLINE	MEAN HEIGHT	
	AFT OF NOSE	LH SIDE	RH SIDE	FROM GROUND	
Yellow System Accumulator: Access Door 196BB	19.92 m (65.35 ft)		0.25 m (0.82 ft)	1.74 m (5.71 ft)	
Green System Accumulator: Left MLG Door	21.04 m (69.03 ft)	0.25 m (0.82 ft)		3.20 m (10.50 ft)	
Blue System Accumulator: Access Door 195BB	19.92 m (65.35 ft)	0.25 m (0.82 ft)		1.74 m (5.71 ft)	
Yellow System Braking Accumulator: Access Door 196BB	19.92 m (65.35 ft)		0.25 m (0.82 ft)	1.74 m (5.71 ft)	

4. Reservoir Filling

Centralized filling capability on the Green System ground service panel:

ACCESS	DISTANCE				
		FROM AIRCRAF	FROM AIRCRAFT CENTERLINE		
	AFT OF NOSE	LH SIDE	RH SIDE	FROM GROUND	
Access Door 107CB	23.44 m	1.27 m		1.76 m	
	(76.90 ft)	(4.17 ft)		(5.77 ft)	

Filling: Ground pressurized supply or hand pump.

5. Reservoir Drain

Three 3/8 in. self-sealing connections:

ACCESS	DISTANCE			
	AFT OF NOSE	FROM AIRCRAFT CENTERLINE		MEAN HEIGHT
		LH SIDE	RH SIDE	FROM GROUND
Yellow System:	19.92 m		0.25 m	1.74 m

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

	DISTANCE			
ACCESS		FROM AIRCRAF	T CENTERLINE	MEAN HEIGHT
	AFT OF NOSE	LH SIDE	RH SIDE	FROM GROUND
Access Door 196BB	(65.35 ft)		(0.82 ft)	(5.71 ft)
Green System:	21.04 m	0.25 m		3.20 m
Left MLG Door	(69.03 ft)	(0.82 ft)		(10.5 ft)
Blue System:	24.49 m	1.27 m		1.76 m
Access Door 197EB	(80.35 ft)	(4.17 ft)		(5.77 ft)

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

6. Ground Test

On each ground service panel:

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



**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



FIGURE-5-4-3-991-004-A01



**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR





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



**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

| **ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



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

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

5-4-4 Electrical System

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

Electrical System

1. Electrical System

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

		DIST	ANCE	
ACCESS	AFT OF NOSE FROM AIRCRAFT CENTERLINE		T CENTERLINE	MEAN HEIGHT
	ALL OL NOSE	LH SIDE	RH SIDE	FROM GROUND
A/C External Power: Access Door 121AL	2.55 m (8.37 ft)	On cer	nterline	2.00 m (6.56 ft)

<u>NOTE</u> : Distances are approximate.

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

B. Power Supply:

- Three-phase, 115/200V, 400 Hz.
- C. Electrical Connectors for Servicing:
 - AC outlets: HUBBELL 5258
 - DC outlets: HUBBELL 7472.

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



| **ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



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

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

5-4-5 Oxygen System

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

Oxygen System

1. Oxygen System

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

2. Technical Specifications

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

<u>NOTE</u> : External charging in the avionics compartment.



| **ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



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

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

5-4-6 Fuel System

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

Fuel System

1. Refuel/Defuel Control Panel

		DISTANCE			
ACCESS	AFT OF NOSE	POSITION FROM AIRCRAFT CENTERLINE FROM			
		LH SIDE	RH SIDE		
Refuel/Defuel Integrated Panel: Access Door 192MB	20.65 m (67.75 ft)	-	1.8 m (5.91 ft)	1.8 m (5.91 ft)	

2. Refuel/Defuel Connectors

		DISTANCE				
ACCESS	AFT OF NOSE	POSITION FROM AIRCRAFT CENTERLINE				
		LH SIDE	RH SIDE			
Refuel/Defuel Coupling, Left: Access Panel 522HB (Optional)	21.84 m (71.65 ft)	9.83 m (32.25 ft)	-	3.65 m (11.98 ft)		
Refuel/Defuel Coupling, Right: Access Panel 622HB	21.84 m (71.65 ft)	-	9.83 m (32.25 ft)	3.65 m (11.98 ft)		
Overwing Gravity- Refuel Cap	23.35 m (76.61 ft)	12.4 m (40.68 ft)	12.4 m (40.68 ft)	3.7 m (12.14 ft)		

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

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

- B. Refuel Pressure:
 - Maximum Pressure: 3.45 bar (50 psi).
- C. Average Flow Rate:
 - 1250 l/min (330 US gal/min).

3. Overpressure Protectors and NACA Vent Intake

		DISTANCE				
ACCESS	AFT OF NOSE	AFT OF NOSE AIRCRAFT CENTERLINE				
		LH SIDE	RH SIDE			
Surge Tank Overpressure- Protector: Access Panel 550CB (650CB)	24.61 m (80.74 ft)	14.9 m (48.88 ft)	14.9 m (48.88 ft)	4.32 m (14.17 ft)		
Wing Tank Overpressure- Protector: Access Panel 540PB (640PB)	24.2 m (79.40 ft)	12.15 m (39.86 ft)	12.15 m (39.86 ft)	4.1 m (13.45 ft)		
NACA Vent Intake: Access Panel 550AB (650AB)	24.05 m (78.90 ft)	13.7 m (44.95 ft)	13.7 m (44.95 ft)	4.02 m (13.19 ft)		

<u>NOTE</u> : Distances are approximate.



| **ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR





NOTE: STANDARD CONFIGURATION OF REFUEL/DEFUEL PANEL.

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



| **ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



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



| **ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



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



**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



Ground Service Connections Overpressure Protectors and NACA Vent Intake FIGURE-5-4-6-991-004-B01



| **ON A/C A321neo-XLR





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Primary Protection Unpressurized-Compartment Ventilation Air-Intake FIGURE-5-4-6-991-006-A01

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

5-4-7 Pneumatic System

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

Pneumatic System

1. High Pressure Air Connector

		DIST	ANCE	
ACCESS		FROM AIRCRAFT CENTERLINE		MEAN HEIGHT
	ALL OL NOSE	LH SIDE	RH SIDE	FROM GROUND
HP Connector: Access Door 191DB	17.25 m (56.59 ft)	0.84 m (2.76 ft)	-	1.76 m (5.77 ft)

A. Connector:

- One standard 3 in. ISO 2026 connection.

2. Low Pressure Air Connector

		DIST	ANCE	
ACCESS		FROM AIRCRAFT CENTERLINE		MEAN HEIGHT
AFTO	ALL OL NOSE	LH SIDE	RH SIDE	FROM GROUND
LP Connector: Access Door 191CB	16.72 m (54.86 ft)	1.11 m (3.64 ft)	-	1.73 m (5.68 ft)

A. Connector:

- One standard 8 in. SAE AS4262 connection.



| **ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



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

5-4-7

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

5-4-8 Oil System

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

Oil System

**ON A/C A321-100 A321-200

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

	DISTANCE			
ACCESS		FROM AIRCRAF	T CENTERLINE	MEAN HEIGHT
ACCECC	AFT OF NOSE	ENGINE 1 (LH)	ENGINE 2 (RH)	FROM GROUND
Engine oil gravity-filling-				
cap:	17.38 m	6.63 m	4.82 m	1.46 m
Access door: 437BL (LH), 447BL (RH)	(57.02 ft)	(21.75 ft)	(15.81 ft)	(4.79 ft)
Engine oil pressure-	17.26 m	6.49 m	4.74 m	1.42 m
filling-port:	(56.63 ft)	(21.29 ft)	(15.55 ft)	(4.66 ft)

<u>NOTE</u> : Distances are approximate.

- A. Tank capacity:
 - Full level: 19.6 I (5 US gal),
 - Usable: 9.46 I (3 US gal).
- B. Maximum delivery pressure required: 1.72 bar (25 psi). Maximum delivery flow required: 180 l/h (48 US gal/h).
- IDG Oil Replenishment for CFM56 Series Engine (See FIGURE 5-4-8-991-004-A): One pressure filling connection per engine: OMP 2506-18 plus one connection overflow: OMP 2505-18.

	DISTANCE			
ACCESS		FROM AIRCRAF	T CENTERLINE	MEAN HEIGHT
	AFT OF NOSE	ENGINE 1 (LH)	ENGINE 2 (RH)	FROM GROUND
IDG oil-pressure-filling connection: Access door: 438AR (LH),	16.46 m (54.00 ft)	6.90 m (22.64 ft)	5.52 m (18.11 ft)	0.68 m (2.23 ft)

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

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

<u>NOTE</u> : Distances are approximate.

- A. Tank capacity: 5 I (1 US gal).
- B. Delivery pressure required: 0.34 bar (5 psi) to 2.76 bar (40 psi) at the IDG inlet.
- 3. Starter Oil Replenishment for CFM56 Series Engine (See FIGURE 5-4-8-991-005-A): One gravity filling cap per engine.

	DISTANCE			
ACCESS	AFT OF NOSE	FROM AIRCRAFT CENTERLINE		MEAN HEIGHT
		ENGINE 1 (LH)	ENGINE 2 (RH)	
				GROUND
Starter-oil filling	16.81 m	5.30 m	6.20 m	0.76 m
connection:	(55.15 ft)	(17.39 ft)	(20.34 ft)	(2.49 ft)

<u>NOTE</u> : Distances are approximate.

- A. Tank capacity: 0.8 I (0.21 US gal).
- 4. Engine Oil Replenishment for IAE V2500 Series Engine (See FIGURE 5-4-8-991-006-B): One gravity filling cap per engine.

	DISTANCE			
ACCESS	AFT OF NOSE	FROM AIRCRAF	T CENTERLINE	MEAN HEIGHT
ACCESS		ENGINE 1 (LH)	ENGINE 2 (RH)	FROM GROUND
Engine oil gravity-filling- cap: Access door: 437BL (LH), 447BL (RH)	16.50 m (54.13 ft)	6.56 m (21.52 ft)	4.92 m (16.14 ft)	1.22 m (4.00 ft)

<u>NOTE</u> : Distances are approximate.

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

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

- Usable: 23.50 I (6 US gal).
- 5. IDG Oil Replenishment for IAE V2500 Series Engine (See FIGURE 5-4-8-991-007-B): One pressure filling connection per engine: 2506-2 plus one overflow connection: 2505-2.

ACCESS	DISTANCE			
		FROM AIRCRAFT CENTERLINE		MEAN HEIGHT
	AFT OF NOSE	ENGINE 1 (LH)	ENGINE 2 (RH)	FROM
				GROUND
IDG oil-pressure-filling	17.06 m	5.42 m	6.04 m	0.80 m
connection:	(55.97 ft)	(17.78 ft)	(19.82 ft)	(2.62 ft)

<u>NOTE</u> : Distances are approximate.

- A. Tank capacity: 4.10 I (1 US gal).
- 6. Starter Oil Replenishment for IAE V2500 Series Engine (See FIGURE 5-4-8-991-008-B): One gravity filling cap per engine.

ACCESS	DISTANCE			
	AFT OF NOSE	FROM AIRCRAFT CENTERLINE		MEAN HEIGHT
		ENGINE 1 (LH)	ENGINE 2 (RH)	FROM GROUND
Starter-oil filling	19.66 m	5.30 m	6.14 m	0.75 m
connection:	(64.50 ft)	(17.39 ft)	(20.14 ft)	(2.46 ft)

<u>NOTE</u> : Distances are approximate.

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

| **ON A/C A321neo A321neo-ACF A321neo-XLR

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

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

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

<u>NOTE</u> : Distances are approximate.

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

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

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

<u>NOTE</u> : Distances are approximate.

- A. IDG oil tank capacity: 5.7 I (2 US gal) (additional amount of 0.9 I (0.2 US gal) is necessary to ensure a complete filling).
- B. Maximum servicing pressure:
 - 0.5 bar (7 psi), when "DESHONS" tool is used.
 - 2.41 bar (35 psi), when other tools are used.
- 9. Starter Oil Replenishment for CFM LEAP-1A Series Engine (See FIGURE 5-4-8-991-012-A): One gravity filling cap per engine.

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

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

<u>NOTE</u> : Distances are approximate.

- A. Tank capacity: 0.5 I (0.1 US gal).
- 10. Engine Oil Replenishment for PW 1100G Series Engine (See FIGURE 5-4-8-991-013-A): One gravity filling cap per engine.

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

<u>NOTE</u> : Distances are approximate.

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

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

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

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

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

<u>NOTE</u> : Distances are approximate.

- IDG oil tank capacity: 5.4 I (1 US gal) plus 1.93 I (0.5 US gal) for external system (Air Oil Heat Exchanger / Oil Cooler).
 Usable capacity: 0.6 I (0.2 US gal).
- B. Maximum delivery pressure required: 2.41 bar (35 psi).
 Maximum delivery flow required: Not specified, based on the requirements from the supplier.
- 12. Starter Oil Replenishment for PW 1100G Series Engine (See FIGURE 5-4-8-991-015-A): One gravity filling cap per engine.

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

<u>NOTE</u> : Distances are approximate.

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

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

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

	DISTANCE			
ACCESS	AFT OF NOSE	FROM AIRCRAFT CENTERLINE		MEAN HEIGHT
		ENGINE 1 (LH)	ENGINE 2 (RH)	FROM GROUND
GTCP 36-300	42.42 m	0.30 m	-	4.83 m

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

	DISTANCE			
ACCESS	AFT OF NOSE	FROM AIRCRAFT CENTERLINE		MEAN HEIGHT
		ENGINE 1 (LH)	ENGINE 2 (RH)	FROM GROUND
	(139.17 ft)	(0.98 ft)		(15.85 ft)
APS 3200	42.42 m	0.30 m	_	4.78 m
	(139.17 ft)	(0.98 ft)	-	(15.68 ft)
131-9	42.32 m (138.85 ft)	0.35 m (1.15 ft)	-	4.32 m (14.17 ft)

<u>NOTE</u> : Distances are approximate.

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



**ON A/C A321-100 A321-200





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**ON A/C A321-100 A321-200



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

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**ON A/C A321-100 A321-200





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

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**ON A/C A321-100 A321-200



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

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**ON A/C A321-100 A321-200



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

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**ON A/C A321-100 A321-200



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

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| **ON A/C A321neo A321neo-ACF A321neo-XLR



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

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321neo A321neo-ACF A321neo-XLR



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

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| **ON A/C A321neo A321neo-ACF A321neo-XLR



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

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

| **ON A/C A321neo A321neo-ACF A321neo-XLR



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

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321neo A321neo-ACF A321neo-XLR



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

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

| **ON A/C A321neo A321neo-ACF A321neo-XLR



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

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

5-4-9 Potable Water System

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

Potable Water System

1. Potable Water Ground Service Panels

	DISTANCE			
ACCESS		POSITION FROM		
	AFT OF NOSE	AIRCRAFT CENTERLINE		
		LH SIDE	RH SIDE	
Potable-Water	38.2 m	0.3 m		2.6 m
Service Panel:	(125 22 ft)	(0.08 ft)	-	2.0 III (9.52 ft)
Access Door 171AL	(125.55 ft)	(0.96 ft)		(0.55 II)
Potable-Water	11.8 m	0 15 m		1 75 m
Drain Panel:	(38 71 ft)	(0.13 fr)	-	(5 7/ ft)
Access Door 133AL	(30.7 1 11)	(0.43 11)		(0.7411)

<u>NOTE</u> : Distances are approximate.

- 2. Technical Specifications
 - A. Connectors:
 - (1) On the potable-water service panel (Access Door 171AL)
 - Fill/Drain Nipple 3/4 in. (ISO 17775).
 - One ground air-pressure connector.
 - (2) On the potable-water drain panel (Access Door 133AL)
 - Drain Nipple 3/4 in. (ISO 17775).
 - B. Usable capacity:
 - Standard configuration one tank: 200 I (53 US gal).
 - C. Filling pressure:
 - 3.45 bar (50 psi).
 - D. Typical flow rate:
 - 50 l/min (13 US gal/min).



AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



Ground Service Connections Potable Water Ground Service Panels FIGURE-5-4-9-991-029-A01

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

| **ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

5-4-10 Waste Water System

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

Waste Water System

1. Waste Water System

	DISTANCE			
ACCESS	AFT OF NOSE AIRCRAFT CEN		N FROM CENTERLINE	
		LH SIDE	RH SIDE	
Waste-Water				
Ground Service	38.2 m		0.8 m	2.8 m
Panel:	(125.33 ft)	-	(2.62 ft)	(9.19 ft)
Access door 172AR				

<u>NOTE</u> : Distances are approximate.

- 2. Technical Specifications
 - A. Connectors:
 - Draining: 4 in. (ISO 17775).
 - Flushing and filling: 1 in. (ISO 17775).
 - B. Usable waste tank capacity:
 - Standard configuration one tank: 177 I (47 US gal).
 - A321NEO-ACF- one tank: 250 I (66 US gal).
 - C. Waste tank Rinsing:
 - Operating pressure: 3.45 bar (50 psi).
 - D. Waste tank Precharge:
 - 10 I (3 US gal).



AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

| **ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR





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

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**ON A/C A321-100 A321-200 A321neo



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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

| **ON A/C A321neo-ACF A321neo-XLR



Ground Service Connections Waste Tank Location FIGURE-5-4-10-991-005-A01

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

5-5-0 Engine Starting Pneumatic Requirements

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

Engine Starting Pneumatic Requirements

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

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

- A. The pressure at HPGC must not be more than 60 psig (75 psia) and less than 33 psig (48 psia). The temperature must be less than 220 °C (428 °F).
- B. The recommended pressure at HPGC is 40 psig (55 psia).
- C. The OAT and the ASU performances (see the technical data from the ASU manufacturer) effect the ASU output temperature.

**ON A/C A321-100 A321-200

CFM56 Series Engines for an OAT between -40 °C (-104 °F) and 55 °C (131 °F) or between -40 °F (-4 °C) and 131 °F (55 °C) at Sea Level

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

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

3. IAE-V2500 Series Engines for an OAT between -40 °C (-104 °F) and 55 °C (131 °F) or between -40 °F (-4 °C) and 131 °F (55 °C) at Sea Level

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

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

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

**ON A/C A321neo A321neo-ACF A321neo-XLR

4. CFM Leap Engines for an OAT between -40 °C (-104 °F) and 55 °C (131 °F) or between -40 °F (-4 °C) and 131 °F (55 °C) at Sea Level

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

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

5. PW1100G Engines for an OAT between -40 °C (-104 °F) and 55 °C (131 °F) or between -40 °F (-4 °C) and 131 °F (55 °C) at Sea Level

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

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

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

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

5-6-0 Ground Pneumatic Power Requirements

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

Ground Pneumatic Power Requirements

1. General

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

ABBREVIATION	DEFINITION
A/C	Aircraft
АНМ	Aircraft Handling Manual
АММ	Aircraft Maintenance Manual
GC	Ground Connection
GSE	Ground Service Equipment
IFE	In-Flight Entertainment
OAT	Outside Air Temperature
PCA	Pre-Conditioned Air

- A. The air flow rates and temperature requirements for the GSE, provided in Sections 5.6 and 5.7, are given at A/C ground connection.
 - <u>NOTE</u>: The cooling capacity of the equipment (kW) is only indicative and is not sufficient by itself to ensure the performance (outlet temperature and flow rate combinations are the requirements needed for ground power). An example of cooling capacity calculation is given in Section 5.7.

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

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

This section provides the ground pneumatic power requirements for:

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

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

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR





 OAT ISA -38° C (-36.4° F); GC INLET +70° C (+158° F); EMPTY CABIN; IFE OFF; NO SOLAR LOAD; LIGHTS ON; GALLEYS OFF; RECIRCULATION FANS ON

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

5-6-0

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

PULL DOWN PERFORMANCE



TIME TO COOL CABIN TO +27° C (+80.6° F) ON GROUND (min)

 OAT ISA +23° C (+73.4° F); GC INLET +2° C (+35.6° F); EMPTY CABIN; IFE OFF; NO SOLAR LOAD; LIGHTS ON; GALLEYS OFF; RECIRCULATION FANS ON

OAT ISA +23° C (+73.4° F); GC INLET -10° C (+14° F); EMPTY CABIN; IFE OFF; NO SOLAR LOAD; LIGHTS ON; GALLEYS OFF; RECIRCULATION FANS ON

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

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

5-7-0 Preconditioned Airflow Requirements

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

Preconditioned Airflow Requirements

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

These settings are not intended to be used for operation (they are not a substitute for the settings given in the AMM). They are based on theoretical simulations and give the picture of a real steady state.

The purpose of the air conditioning (cooling) operation (described in the AMM) is to maintain the cabin temperature below 27 °C (80.6 °F) during boarding (therefore it is not a steady state).

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**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



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

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

5-8-0 Ground Towing Requirements

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

Ground Towing Requirements

1. This section gives information on aircraft towing.

This aircraft is designed with means for standard or towbarless towing. Information/procedures can be found for both in AMM 09.

Status on towbarless towing equipment qualification can be found in ISI 09.11.00001.

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

One towbar fitting is installed at the front of the leg.

The main landing gears have attachment points for towing or debogging (for details, refer ARM 07).

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

- Aircraft weight,
- Number of engines at idle,
- Slope.

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

2. Towbar design guidelines

The aircraft towbar shall comply with the following standards:

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

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

- A traction shear pin calibrated at 9 425 daN (21 188 lbf),
- A torsion pin calibrated at 826 m.daN (6 092 lbf.ft).

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

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200



EXAMPLE HOW TO DETERMINE THE MASS REQUIREMENT TO TOW A A321 AT 80 000 kg, AT 1.5% SLOPE, 1 ENGINE AT IDLE AND FOR WET TARMAC CONDITIONS:

- ON THE RIGHT HAND SIDE OF THE GRAPH, CHOOSE THE RELEVANT AIRCRAFT WEIGHT (80 000 kg),
 FROM THIS POINT DRAW A PARALLEL LINE TO THE REQUIRED SLOPE PERCENTAGE (1.5%),
- FROM THE POINT OBTAINED DRAW A STRAIGHT HORIZONTAL LINE UNTIL N₀. OF ENGINES AT IDLE = 2.
- FROM THIS POINT DRAW A PARALLEL LINE TO THE REQUESTED No. OF ENGINES (1),
- FROM THIS POINT DRAW A STRAIGHT HORIZONTAL LINE TO THE DRAWBAR PULL AXIS

- THE Y-COORDINATE OBTAINED IS THE NECESSARY DRAWBAR PULL FOR THE TRACTOR (4 900 kg), - SEARCH THE INTERSECTION WITH THE "WET CONCRETE" LINE

THE OBTAINED X-COORDINATE IS THE TOTAL TRACTION WHEEL LOAD (8 660 kg).

NOTE

USE A TRACTOR WITH A LIMITED DRAWBAR PULL TO PREVENT LOADS ABOVE THE TOW-BAR SHEAR-PIN CAPACITY. N_AC_050800_1_0010401_01_06

> Ground Towing Requirements FIGURE-5-8-0-991-001-D01

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321neo A321neo-ACF A321neo-XLR



EXAMPLE HOW TO DETERMINE THE MASS REQUIREMENT TO TOW A A321 AT 100 000 kg, AT 1.5% SLOPE, 1 ENGINE AT IDLE AND FOR WET TARMAC CONDITIONS:

- ON THE RIGHT HAND SIDE OF THE GRAPH, CHOOSE THE RELEVANT AIRCRAFT WEIGHT (100 000 kg), FROM THIS POINT DRAW A PARALLEL LINE TO THE REQUIRED SLOPE PERCENTAGE (1.5%),
- FROM THE POINT OBTAINED DRAW A STRAIGHT HORIZONTAL LINE UNTIL N₀. OF ENGINES AT IDLE = 2.
- FROM THIS POINT DRAW A PARALLEL LINE TO THE REQUESTED No. OF ENGINES (1),
- FROM THIS POINT DRAW A STRAIGHT HORIZONTAL LINE TO THE DRAWBAR PULL AXIS

- THE Y-COORDINATE OBTAINED IS THE NECESSARY DRAWBAR PULL FOR THE TRACTOR (6 300 kg), - SEARCH THE INTERSECTION WITH THE "WET CONCRETE" LINE

THE OBTAINED X-COORDINATE IS THE TOTAL TRACTION WHEEL LOAD (10 990 kg).

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

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Ground Towing Requirements PW 1100G Engine (Sheet 1 of 2) FIGURE-5-8-0-991-001-G01

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321neo A321neo-ACF A321neo-XLR



EXAMPLE HOW TO DETERMINE THE MASS REQUIREMENT TO TOW A A321 AT 100 000 kg, AT 1.5% SLOPE, 1 ENGINE AT IDLE AND FOR WET TARMAC CONDITIONS:

- ON THE RIGHT HAND SIDE OF THE GRAPH, CHOOSE THE RELEVANT AIRCRAFT WEIGHT (100 000 kg),
 FROM THIS POINT DRAW A PARALLEL LINE TO THE REQUIRED SLOPE PERCENTAGE (1.5%),
- FROM THE POINT OBTAINED DRAW A STRAIGHT HORIZONTAL LINE UNTIL N₀. OF ENGINES AT IDLE = 2.
- FROM THIS POINT DRAW A PARALLEL LINE TO THE REQUESTED No. OF ENGINES (1),
- FROM THIS POINT DRAW A STRAIGHT HORIZONTAL LINE TO THE DRAWBAR PULL AXIS

- THE Y-COORDINATE OBTAINED IS THE NECESSARY DRAWBAR PULL FOR THE TRACTOR (6 300 kg), - SEARCH THE INTERSECTION WITH THE "WET CONCRETE" LINE

THE OBTAINED X-COORDINATE IS THE TOTAL TRACTION WHEEL LOAD (10 990 kg).

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

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Ground Towing Requirements CFM LEAP-1A Engine (Sheet 2 of 2) FIGURE-5-8-0-991-001-G01

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

5-9-0 De-Icing and External Cleaning

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

De-Icing and External Cleaning

1. De-Icing and External Cleaning on Ground

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

2. De-Icing

AIRCRAFT TYPE	Wing Top (Both	Wing Top Surface (Both Sides)		Wingtip Devices (Both Inside and Outside Surfaces) (Both Sides)		HTP Top Surface (Both Sides)		VTP (Both Sides)	
	m²	ft²	m²	ft²	m²	ft²	m²	ft²	
A321	103	1 109	2	22	27	291	43	463	
A321 Sharklet/neo	103	1 109	10	108	27	291	43	463	

AIRCRAFT TYPE	Fuselage (Top Thirc	Top Surface d - 120° Arc)	Nacelle a (Top Third (All En	nd Pylon - 120° Arc) igines)	Total De-Iced Area		
	m²	ft²	m²	ft²	m²	ft²	
A321	167	1 798	24	258	365	3 929	
A321 Sharklet/neo	167	1 798	24	258	373	4 015	

<u>NOTE</u> : Dimensions are approximate.

3. External Cleaning

AIRCRAFT TYPE	Wing Top Surface (Both Sides)		Wing Lower Surface (Including Flap Track Fairing) (Both Sides)		Wingtip Devices (Both Inside and Outside Surfaces) (Both Sides)	
	m²	ft²	m²	ft²	m²	ft²
A321	103	1 109	109	1 173	2	22
A321 Sharklet/neo	103	1 109	109	1 173	10	108

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

AIRCRAFT TYPE	HTP Top Surface (Both Sides)		HTP Lower Surface (Both Sides)		VTP (Both Sides)	
	m²	ft²	m²	ft²	m²	ft²
A321	27	291	27	291	43	463
A321 Sharklet/neo	27	291	27	291	43	463

AIRCRAFT TYPE	Fuselage and Belly Fairing		Nacelle (All E	and Pylon ngines)	Total Cleaned Area	
	m²	ft²	m²	ft²	m²	ft²
A321	510	5 490	73	786	895	9 634
A321 Sharklet/neo	510	5 490	73	786	902	9 709

<u>NOTE</u> : Dimensions are approximate.

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

OPERATING CONDITIONS

6-1-0 Engine Exhaust Velocities and Temperatures

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

Engine Exhaust Velocities and Temperatures

**ON A/C A321-100 A321-200

1. General

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

| **ON A/C A321neo A321neo-ACF A321neo-XLR

2. General

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

The MTO data are presented at the maximum thrust rating. The Breakaway data are presented at a rating that corresponds to the minimum thrust level necessary to start the movement of the A/C from a static position at its maximum ramp weight. Breakaway thrust corresponds to 12% MTO if applied on both engines and 24% MTO when applied on a single engine (Idle thrust on the other engine).

The Idle data, provided by the engine manufacturer, are calculated for operational conditions ISA +15K (+15°C), Sea Level, Static and no headwind. In the charts, the longitudinal distances are measured from the inboard engine core-nozzle exit section. The lateral distances are measured from the aircraft fuselage centerline.

The effects of on-wing installation are not taken into account. The effects of ground proximity are not taken into account for PW 1100G engines, but they are taken into account for the CFM LEAP-1A engines.

The velocity contours are presented at 50 ft/s (15 m/s), 100 ft/s (30 m/s) and 150 ft/s (46 m/s).

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

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

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

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

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

Engine Exhaust Velocities Contours - Ground Idle Power

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



AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200



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6-1-1

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200



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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

| **ON A/C A321neo A321neo-ACF A321neo-XLR





6-1-1

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

| **ON A/C A321neo A321neo-ACF A321neo-XLR



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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

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

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

Engine Exhaust Temperatures Contours - Ground Idle Power

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

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200



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6-1-2

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200



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Engine Exhaust Temperatures Ground Idle Power – IAE V2500 Series Engine FIGURE-6-1-2-991-008-A01

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

| **ON A/C A321neo A321neo-ACF A321neo-XLR



Engine Exhaust Temperatures Ground Idle Power – CFM LEAP-1A Engine FIGURE-6-1-2-991-013-A01

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

| **ON A/C A321neo A321neo-ACF A321neo-XLR



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Engine Exhaust Temperatures Ground Idle Power – PW 1100G Engine FIGURE-6-1-2-991-014-A01

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

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

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

Engine Exhaust Velocities Contours - Breakaway Power

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

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

| **ON A/C A321neo A321neo-ACF A321neo-XLR



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Engine Exhaust Velocities Breakaway Power 12% MTO – CFM LEAP-1A Engine FIGURE-6-1-3-991-011-A01

6-1-3

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

| **ON A/C A321neo A321neo-ACF A321neo-XLR



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Engine Exhaust Velocities Breakaway Power 12% MTO – PW 1100G Engine FIGURE-6-1-3-991-012-A01

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

| **ON A/C A321neo A321neo-ACF A321neo-XLR



Engine Exhaust Velocities Breakaway Power 24% MTO – CFM LEAP-1A Engine FIGURE-6-1-3-991-019-A01

6-1-3

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

| **ON A/C A321neo A321neo-ACF A321neo-XLR



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Engine Exhaust Velocities Breakaway Power 24% MTO – PW 1100G Engine FIGURE-6-1-3-991-020-A01

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**ON A/C A321-100 A321-200



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Engine Exhaust Velocities Breakaway Power - CFM56 Series Engine FIGURE-6-1-3-991-023-A01

6-1-3

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200



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Engine Exhaust Velocities Breakaway Power - IAE V2500 Series Engine FIGURE-6-1-3-991-024-A01

6-1-3

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

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

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

Engine Exhaust Temperatures Contours - Breakaway Power

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

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

| **ON A/C A321neo A321neo-ACF A321neo-XLR



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Engine Exhaust Temperatures Breakaway Power 12% MTO - CFM LEAP-1A Engine FIGURE-6-1-4-991-017-A01

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

| **ON A/C A321neo A321neo-ACF A321neo-XLR



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Engine Exhaust Temperatures Breakaway Power 12% MTO - PW 1100G Engine FIGURE-6-1-4-991-018-A01

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

| **ON A/C A321neo A321neo-ACF A321neo-XLR



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Engine Exhaust Temperatures Breakaway Power 24% MTO - CFM LEAP-1A Engine FIGURE-6-1-4-991-019-A01

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

| **ON A/C A321neo A321neo-ACF A321neo-XLR



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Engine Exhaust Temperatures Breakaway Power 24% MTO - PW 1100G Engine FIGURE-6-1-4-991-020-A01

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**ON A/C A321-100 A321-200



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**ON A/C A321-100 A321-200



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6-1-4

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

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

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

Engine Exhaust Velocities Contours - Takeoff Power

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



**ON A/C A321-100 A321-200

TAKEOFF POWER



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6-1-5

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**ON A/C A321-100 A321-200



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Engine Exhaust Velocities Takeoff Power – IAE V2500 Series Engine FIGURE-6-1-5-991-008-A01

6-1-5

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

| **ON A/C A321neo A321neo-ACF A321neo-XLR



Engine Exhaust Velocities Takeoff Power – CFM LEAP-1A Engine FIGURE-6-1-5-991-013-A01

6-1-5

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

| **ON A/C A321neo A321neo-ACF A321neo-XLR



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Engine Exhaust Velocities Takeoff Power – PW 1100G Engine FIGURE-6-1-5-991-014-A01

VELOCITY = ft/s (m/s)

6-1-5

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

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

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

Engine Exhaust Temperatures Contours - Takeoff Power

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

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200



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Engine Exhaust Temperatures Takeoff Power – CFM56-5B Series Engine FIGURE-6-1-6-991-007-A01

6-1-6

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200



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Engine Exhaust Temperatures Takeoff Power – IAE V2500 Series Engine FIGURE-6-1-6-991-008-A01

6-1-6

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

| **ON A/C A321neo A321neo-ACF A321neo-XLR



Engine Exhaust Temperatures Takeoff Power - CFM LEAP-1A Engine FIGURE-6-1-6-991-013-A01

6-1-6

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

| **ON A/C A321neo A321neo-ACF A321neo-XLR



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Engine Exhaust Temperatures Takeoff Power - PW 1100G Engine FIGURE-6-1-6-991-014-A01

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

6-3-0 Danger Areas of Engines

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

Danger Areas of Engines

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

©A321

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

6-3-1 Ground Idle Power

| **ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR Ground Idle Power

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



**ON A/C A321-100 A321-200





NOTE:

INLET SUCTION DANGER AREA



ENTRY CORRIDOR

EXHAUST WAKE DANGER AREA

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Danger Areas of the Engines CFM56-5B Series Engine FIGURE-6-3-1-991-009-A01



**ON A/C A321-100 A321-200





EXHAUST DANGER AREA

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Danger Areas of the Engines IAE V2500 Series Engine FIGURE-6-3-1-991-010-A01

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

| **ON A/C A321neo A321neo-ACF A321neo-XLR



NOTE:





ENTRY CORRIDOR



EXHAUST DANGER AREA

N_AC_060301_1_0150101_01_02

Danger Areas of the Engines CFM LEAP-1A Engine FIGURE-6-3-1-991-015-A01

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

| **ON A/C A321neo A321neo-ACF A321neo-XLR



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

NOTE:



INTAKE SUCTION DANGER AREA MINIMUM IDLE POWER

ENTRY CORRIDOR



EXHAUST DANGER AREA

N_AC_060301_1_0160101_01_02

Danger Areas of the Engines PW 1100G Engine FIGURE-6-3-1-991-016-A01

©A321

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

6-3-2 Breakaway Power

| **ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR Breakaway Power

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



**ON A/C A321-100 A321-200



TO 74.7 m (245 ft) AFT OF COMMON NOZZLE ASSEMBLY (CNA) INCLUDES CROSS WIND EFFECT

NOTE:

INTAKE SUCTION DANGER AREA MAX. TAKEOFF POWER



EXHAUST WAKE DANGER AREA

N_AC_060302_1_0070101_01_03

Danger Areas of the Engines CFM56-5B Series Engine FIGURE-6-3-2-991-007-A01



**ON A/C A321-100 A321-200





NOTE:

EXHAUST DANGER AREA

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Danger Areas of the Engines IAE V2500 Series Engine FIGURE-6-3-2-991-008-A01
AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

| **ON A/C A321neo A321neo-ACF A321neo-XLR



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

NOTE:



EXHAUST DANGER AREA

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Danger Areas of the Engines CFM LEAP-1A Engine FIGURE-6-3-2-991-013-A01

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

| **ON A/C A321neo A321neo-ACF A321neo-XLR



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

NOTE:





EXHAUST DANGER AREA

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Danger Areas of the Engines PW 1100G Engine FIGURE-6-3-2-991-014-A01

©A321

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

6-3-3 Max Take Off Power

| **ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

Take Off Power

**ON A/C A321-100 A321-200 A321neo

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



AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200



TO 275 m (900 ft) AFT OF COMMON NOZZLE ASSEMBLY (CNA) INCLUDES CROSS WIND EFFECT

NOTE:



INTAKE SUCTION DANGER AREA

EXHAUST WAKE DANGER

N_AC_060303_1_0110101_01_01

Danger Areas of the Engine CFM56-5B Series Engine FIGURE-6-3-3-991-011-A01

6-3-3

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200





NOTE:





EXHAUST DANGER AREA

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Danger Areas of the Engine IAE V2500 Series Engine FIGURE-6-3-3-991-012-A01

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

| **ON A/C A321neo A321neo-ACF A321neo-XLR



NOTE:



INTAKE SUCTION DANGER AREA MAX. TAKEOFF POWER



EXHAUST DANGER AREA

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

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

| **ON A/C A321neo A321neo-ACF A321neo-XLR



TO 243 m (797.4 ft) AFT OF COMMON NOZZLE ASSEMBLY (CNA) INCLUDES CROSS WIND EFFECT

NOTE:

INTAKE SUCTION DANGER AREA MAX. TAKEOFF POWER

EXHAUST DANGER AREA

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

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

6-4-1 APU

| **ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR APU - APIC & GARRETT

1. This section gives APU exhaust velocities and temperatures.

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR



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Exhaust Velocities and Temperatures APU – APIC & GARRETT FIGURE-6-4-1-991-004-A01

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©A321

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

PAVEMENT DATA

7-1-0 General Information

| **ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

General Information

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

To aid in the interpolation between the discrete values shown, each aircraft configuration is shown with a minimum range of five loads on the Main Landing Gear (MLG).

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

- The aircraft loaded to the Maximum Ramp Weight (MRW),
- The CG at its maximum permissible aft position.

Pavement requirements for commercial aircraft are derived from the static analysis of loads imposed on the MLG struts.

Landing Gear Footprint:

Section 07-02-00 presents basic data on the landing gear footprint configuration, MRW and tire sizes and pressures.

Maximum Pavement Loads:

Section 07-03-00 shows maximum vertical and horizontal pavement loads for certain critical conditions at the tire-ground interfaces.

Landing Gear Loading on Pavement:

The curves related to the landing gear loading on pavement are not given in section 07-04-00. Because the relationship between the aircraft weight, the center of gravity and the landing gear loading on the pavement is not strictly linear, it cannot be shown in chart format. But you can find in section 07-03-00 the maximum vertical and horizontal pavement loads for some critical conditions at the tire/ground interfaces for all the operational weight variants of the aircraft. For questions that are related to landing gear loading on pavement, contact Airbus.

Flexible Pavement Requirements - US Army Corps of Engineers Design Method:

7-1-0

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

The flexible pavement requirements curves as per U.S. Army Corps of Engineers Design Method are not given in section 07-05-00 since the related data is available through free software.

Sections 07-02-00 and 07-03-00 give all the inputs data required for the use of such software. For questions that are related to the flexible pavement requirements, contact Airbus.

Flexible Pavement Requirements - LCN Conversion Method:

The Load Classification Number (LCN) curves are not given in section 07-06-00 since the LCN system for reporting pavement strength is old and are replaced by the ICAO recommended ACN/PCN system in 1983 and ACR/PCR system in 2020. For questions that are related to the LCN system, contact Airbus.

Rigid Pavement Requirements - PCA (Portland Cement Association) Design Method: The rigid pavement requirements curves as per as Portland Cement Association Design Method are not given in section 07-07-00 since the related data is available through free software. Sections 07-02-00 and 07-03-00 give all the inputs data required for the use of such software. For questions that are related to the rigid pavement requirements, contact Airbus.

Rigid Pavement Requirements - LCN Conversion:

The Load Classification Number (LCN) curves are not given in section 07-08-00 since the LCN system for reporting pavement strength is old and are replaced by the ICAO recommended ACN/PCN system in 1983 and ACR/PCR system in 2020.

For questions that are related to the LCN system, contact Airbus.

ACN/PCN Reporting System:

Section 07-09-00 gives ACN data prepared according to the ACN/PCN system as referenced in ICAO Annex 14, "Aerodromes", Volume 1 "Aerodrome Design and Operations".

Eighth Edition July 2018, incorporating Amendments 1 to 14 and ICAO doc 9157, "Aerodrome Design Manual", part 3 "Pavements" Second Edition 1983.

The ACN/PCN system is applicable until November 2024.

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

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

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

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

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

The airport authority must select the method of pavement analysis.

The results of their analysis should be reported using the following format:



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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

		PCN		
PAVEMENT TYPE	SUBGRADE CATEGORY	TIRE PRESSURE CATEGORY	EVALUATION METHOD	
R – Rigid	A – High	W – No Pressure Limit	T – Technical	
F – Flexible	B – Medium	X – High Pressure Limited to 1.75 MPa (254 psi)	U – Using Aircraft	
	C – Low	Y – Medium Pressure Limited to 1.25 MPa (181 psi)		
	D – Ultra Low	Z – Low Pressure Limited to 0.5 MPa (73 psi)		

Section 07-09-00 shows the aircraft ACN values.

For flexible pavements, the four subgrade categories (CBR) are:

CBR 15
CBR 10
CBR 6
CBR 3

For rigid pavements, the four subgrade categories (k) are:

A. High Strength	k = 150 MN/m ³ (550 pci)
B. Medium Strength	k = 80 MN/m ³ (300 pci)
C. Low Strength	k = 40 MN/m³ (150 pci)
D. Ultra Low Strength	k = 20 MN/m ³ (75 pci)

ACR/PCR Reporting System:

Section 07-10-00 gives ACR data prepared according to the ACR/PCR system as referenced in ICAO Annex 14, "Aerodromes", Volume 1 "Aerodrome Design and Operations".

Eight Edition July 2018, incorporating Amendments 1 to 15 and ICAO doc 9157, "Aerodrome Design Manual", part 3 "Pavements" Third Edition 2021.

The ACR/PCR system is effective from November 2020 and will be applicable in November 2024.

ACR is the Aircraft Classification Rating and PCR is the related Pavement Classification Rating. An aircraft with an ACR less than or equal to the PCR can operate without restriction on the pavement.

Numerically the ACR is two times the derived single-wheel load expressed in hundreds of kilograms.

The derived single-wheel load is calculated as the load on a single tire inflated to 1.50 Mpa (218 psi) that can have the same pavement requirements as the aircraft.

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

Computationally the ACR/PCR system relies on the Linear Elastic Analysis (LEA). The ACR are computed with the official ICAO-ACR software.

States can start their own methods for PCR determination, which agree with the overall parameters of the ACR/PCR method.

The results of their analysis should be reported with the following format:

		PCR	
PAVEMENT TYPE	SUBGRADE CATEGORY	TIRE PRESSURE CATEGORY	EVALUATION METHOD
R – Rigid	A – High	W – No Pressure Limit	T – Technical
F – Flexible	B – Medium	X – High Pressure Limited to 1.75 MPa (254 psi)	U – Using Aircraft
	C – Low	Y – Medium Pressure Limited to 1.25 MPa (181 psi)	
	D – Ultra Low	Z – Low Pressure Limited to 0.5 MPa (73 psi)	

Section 07-10-00 shows the aircraft ACR value.

For flexible and rigid pavement, the four subgrade categories are defined based on the subgrade modulus of elasticity (E):

A. High Strength $E = 200 \text{ Mpa} (29\ 008 \text{ psi})$ B. Medium Strength $E = 120 \text{ Mpa} (17\ 405 \text{ psi})$ C. Low Strength $E = 80 \text{ Mpa} (11\ 603 \text{ psi})$ D. Ultra Low Strength $E = 50 \text{ Mpa} (7\ 252 \text{ psi})$

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

7-2-0 Landing Gear Footprint

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

Landing Gear Footprint

1. This section gives data about the landing gear footprint in relation with the aircraft MRW and tire sizes and pressures.

The landing-gear footprint information is given for all the operational weight variants of the aircraft.

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100



0.927	m
(3.041	ft)

WEIGHT VARIANT	MAXIMUM RAMP WEIGHT	PERCENTAGE OF WEIGHT ON MAIN GEAR GROUP	NOSE GEAR TIRE SIZE	NOSE GEAR TIRE PRESSURE	MAIN GEAR TIRE SIZE	MAIN GEAR TIRE PRESSURE
A321-100	83 400 kg	95.7%	30x8.8R15	10.8 bar	1 270x455R22	13.6 bar
WV000	(183 875 lb)		(30x8.8-15)	(157 psi)	(49x18-22)	(197 psi)
A321-100	83 400 kg	95.7%	30x8.8R15	10.8 bar	1 270x455R22	13.6 bar
WV002	(183 875 lb)		(30x8.8-15)	(157 psi)	(49x18-22)	(197 psi)
A321-100	85 400 kg	95.7%	30x8.8R15	11 bar	1 270x455R22	13.9 bar
WV003	(188 275 lb)		(30x8.8-15)	(160 psi)	(49x18-22)	(202 psi)
A321-100	78 400 kg	95.7%	30x8.8R15	10.1 bar	1 270x455R22	12.8 bar
WV004	(172 850 lb)		(30x8.8-15)	(146 psi)	(49x18-22)	(186 psi)
A321-100	83 400 kg	95.7%	30x8.8R15	10.8 bar	1 270x455R22	13.6 bar
WV005	(183 875 lb)		(30x8.8-15)	(157 psi)	(49x18-22)	(197 psi)
A321-100	78 400 kg	95.7%	30x8.8R15	10.1 bar	1 270x455R22	12.8 bar
WV006	(172 850 lb)		(30x8.8-15)	(146 psi)	(49x18-22)	(186 psi)
A321-100	80 400 kg	95.7%	30x8.8R15	10.8 bar	1 270x455R22	13.6 bar
WV007	(177 250 lb)		(30x8.8-15)	(157 psi)	(49x18-22)	(197 psi)
A321-100	89 400 kg	94.9%	30x8.8R15	11.6 bar	1 270x455R22	14.6 bar
WV008	(197 100 lb)		(30x8.8-15)	(168 psi)	(49x18-22)	(212 psi)

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Landing Gear Footprint FIGURE-7-2-0-991-028-A01

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-200



WEIGHT VARIANT	MAXIMUM RAMP WEIGHT	PERCENTAGE OF WEIGHT ON MAIN GEAR GROUP	NOSE GEAR TIRE SIZE	NOSE GEAR TIRE PRESSURE	MAIN GEAR TIRE SIZE	MAIN GEAR TIRE PRESSURE
A321-200	89 400 kg	95.5%	30x8.8R15	11.6 bar	1 270x455R22	14.6 bar
WV000	(197 100 lb)		(30x8.8-15)	(168 psi)	(49x18-22)	(212 psi)
A321-200	93 400 kg	95.3%	30x8.8R15	11.6 bar	1 270x455R22	15 bar
WV001	(205 900 lb)		(30x8.8-15)	(168 psi)	(49x18-22)	(218 psi)
A321-200	89 400 kg	95.5%	30x8.8R15	11.6 bar	1 270x455R22	14.6 bar
WV002	(197 100 lb)		(30x8.8-15)	(168 psi)	(49x18-22)	(212 psi)
A321-200	91 400 kg	95.4%	30x8.8R15	11.6 bar	1 270x455R22	15 bar
WV003	(201 500 lb)		(30x8.8-15)	(168 psi)	(49x18-22)	(218 psi)
A321-200	87 400 kg	95.7%	30x8.8R15	11.6 bar	1 270x455R22	14.6 bar
WV004	(192 675 lb)		(30x8.8-15)	(168 psi)	(49x18-22)	(212 psi)
A321-200	85 400 kg	95.2%	30x8.8R15	11 bar	1 270x455R22	13.9 bar
WV005	(188 275 lb)		(30x8.8-15)	(160 psi)	(49x18-22)	(202 psi)
A321-200	83 400 kg	95.4%	30x8.8R15	10.8 bar	1 270x455R22	13.6 bar
WV006	(183 875 lb)		(30x8.8-15)	(157 psi)	(49x18-22)	(197 psi)
A321-200	83 400 kg	95.4%	30x8.8R15	10.8 bar	1 270x455R22	13.6 bar
WV007	(183 875 lb)		(30x8.8-15)	(157 psi)	(49x18-22)	(197 psi)
A321-200 WV008 (CG 40.51%)	80 400 kg (177 250 lb)	95.6%	30x8.8R15 (30x8.8-15)	10.8 bar (157 psi)	1 270x455R22 (49x18-22)	13.6 bar (197 psi)
A321-200 WV008 (CG 39.71%)	80 400 kg (177 250 lb)	95.4%	30x8.8R15 (30x8.8-15)	10.8 bar (157 psi)	1 270x455R22 (49x18-22)	13.6 bar (197 psi)
A321-200 WV009 (CG 40.08%)	78 400 kg (172 850 lb)	95.5%	30x8.8R15 (30x8.8-15)	10.1 bar (146 psi)	1 270x455R22 (49x18-22)	12.8 bar (186 psi)
A321-200 WV009 (CG 39.21%)	78 400 kg (172 850 lb)	95.2%	30x8.8R15 (30x8.8-15)	10.1 bar (146 psi)	1 270x455R22 (49x18-22)	12.8 bar (186 psi)
A321-200	85 400 kg	95.2%	30x8.8R15	11 bar	1 270x455R22	13.9 bar
WV010	(188 275 lb)		(30x8.8-15)	(160 psi)	(49x18-22)	(202 psi)
A321-200	93 900 kg	95.2%	30x8.8R15	11.6 bar	1 270x455R22	15 bar
WV011	(207 025 lb)		(30x8.8-15)	(168 psi)	(49x18-22)	(218 psi)

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Landing Gear Footprint FIGURE-7-2-0-991-035-A01

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

| **ON A/C A321neo A321neo-ACF



WEIGHT VARIANT	MAXIMUM RAMP WEIGHT	PERCENTAGE OF WEIGHT ON MAIN GEAR GROUP	NOSE GEAR TIRE SIZE	NOSE GEAR TIRE PRESSURE	WING GEAR TIRE SIZE	WING GEAR TIRE PRESSURE
A321NEO	89 400 kg	95.5%	30x8.8R15	11.6 bar	1 270x455R22	14.6 bar
WV050 (CG 38.02%)	(197 100 lb)		(30x8.8-15)	(168 psi)	(49x18-22)	(212 psi)
A321NEO	89 400 kg	95.3%	30x8.8R15	11.6 bar	1 270x455R22	14.6 bar
WV050 (CG 37%)	(197 100 lb)		(30x8.8-15)	(168 psi)	(49x18-22)	(212 psi)
A321NEO	89 400 kg	95.5%	30x8.8R15	11.6 bar	1 270x455R22	14.6 bar
WV051 (CG 38.02%)	(197 100 lb)		(30x8.8-15)	(168 psi)	(49x18-22)	(212 psi)
A321NEO	89 400 kg	95.3%	30x8.8R15	11.6 bar	1 270x455R22	14.6 bar
WV051 (CG 37%)	(197 100 lb)		(30x8.8-15)	(168 psi)	(49x18-22)	(212 psi)
A321NEO	93 900 kg	95.2%	30x8.8R15	11.6 bar	1 270x455R22	15 bar
WV052	(207 025 lb)		(30x8.8-15)	(168 psi)	(49x18-22)	(218 psi)
A321NEO	93 900 kg	95.2%	30x8.8R15	11.6 bar	1 270x455R22	15 bar
WV053	(207 025 lb)		(30x8.8-15)	(168 psi)	(49x18-22)	(218 psi)
A321NEO	92 900 kg	95.3%	30x8.8R15	11.6 bar	1 270x455R22	15 bar
WV056 (CG 37.12%)	(204 800 lb)		(30x8.8-15)	(168 psi)	(49x18-22)	(218 psi)
A321NEO	92 900 kg	95.3%	30x8.8R15	11.6 bar	1 270x455R22	15 bar
WV056 (CG 37%)	(204 800 lb)		(30x8.8-15)	(168 psi)	(49x18-22)	(218 psi)
A321NEO	91 400 kg	95.4%	30x8.8R15	11.6 bar	1 270x455R22	15 bar
WV063 (CG 37.5%)	(201 500 lb)		(30x8.8-15)	(168 psi)	(49x18-22)	(218 psi)
A321NEO	91 400 kg	95.3%	30x8.8R15	11.6 bar	1 270x455R22	15 bar
WV063 (CG 37%)	(201 500 lb)		(30x8.8-15)	(168 psi)	(49x18-22)	(218 psi)
A321NEO	90 900 kg	95.4%	30x8.8R15	11.6 bar	1 270x455R22	15 bar
WV065 (CG 37.62%)	(200 400 lb)		(30x8.8-15)	(168 psi)	(49x18-22)	(218 psi)

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Landing Gear Footprint (Sheet 1 of 2) FIGURE-7-2-0-991-038-A01

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

| **ON A/C A321neo A321neo-ACF

WEIGHT VARIANT	MAXIMUM RAMP WEIGHT	PERCENTAGE OF WEIGHT ON MAIN GEAR GROUP	NOSE GEAR TIRE SIZE	NOSE GEAR TIRE PRESSURE	WING GEAR TIRE SIZE	WING GEAR TIRE PRESSURE
A321NEO	90 900 kg	95.3%	30x8.8R15	11.6 bar	1 270x455R22	15 bar
WV065 (CG 37%)	(200 400 lb)		(30x8.8-15)	(168 psi)	(49x18-22)	(218 psi)
A321NEO	90 400 kg	95.5%	30x8.8R15	11.6 bar	1 270x455R22	15 bar
WV067	(199 300 lb)		(30x8.8-15)	(168 psi)	(49x18-22)	(218 psi)
A321NEO	80 400 kg	95.1%	30x8.8R15	10.8 bar	1 270x455R22	13.6 bar
WV070 (CG 38.71%)	(177 250 lb)		(30x8.8-15)	(157 psi)	(49x18-22)	(197 psi)
A321NEO	80 400 kg	94.7%	30x8.8R15	10.8 bar	1 270x455R22	13.6 bar
WV070 (CG 37%)	(177 250 lb)		(30x8.8-15)	(157 psi)	(49x18-22)	(197 psi)
A321NEO	97 400 kg	95.0%	30x8.8R15	11.6 bar	1 270x455R22	15.7 bar
WV071	(214 725 lb)		(30x8.8-15)	(168 psi)	(49x18-22)	(228 psi)
A321NEO	97 400 kg	95.0%	30x8.8R15	11.6 bar	1 270x455R22	15.7 bar
WV072	(214 725 lb)		(30x8.8-15)	(168 psi)	(49x18-22)	(228 psi)
A321NEO	95 400 kg	95.2%	30x8.8R15	11.6 bar	1 270x455R22	15.7 bar
WV080	(210 325 lb)		(30x8.8-15)	(168 psi)	(49x18-22)	(228 psi)

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Landing Gear Footprint (Sheet 2 of 2) FIGURE-7-2-0-991-038-A01

7-2-0

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

| **ON A/C A321neo-XLR

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WEIGHT VARIANT	MAXIMUM RAMP WEIGHT	PERCENTAGE OF WEIGHT ON MAIN GEAR GROUP	NOSE GEAR TIRE SIZE	NOSE GEAR TIRE PRESSURE	MAIN GEAR TIRE SIZE	MAIN GEAR TIRE PRESSURE
A321NEO XLR	101 400 kg	94.8%	30x8.8R15	12.2 bar	1 270x455R22	16.2 bar
WV099	(223 550 lb)		(30x8.8-15)	(177 psi)	(49x18-22)	(235 psi)
A321NEO XLR	101 400 kg	94.8%	30x8.8R15	12.2 bar	1 270x455R22	16.2 bar
WV100	(223 550 lb)		(30x8.8-15)	(177 psi)	(49x18-22)	(235 psi)

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Landing Gear Footprint FIGURE-7-2-0-991-039-A01

7-2-0

©A321

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

7-3-0 Maximum Pavement Loads

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

Maximum Pavement Loads

1. This section gives maximum vertical and horizontal pavement loads for some critical conditions at the tire-ground interfaces.

The maximum pavement loads are given for all the operational weight variants of the aircraft.

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100

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						(5)			
			V _(NG) MA V(MG) MA H MA	XIMUM VE XIMUM VE XIMUM HO	RTICAL NOSE GEAN RTICAL MAIN GEAR RIZONTAL GROUNI	R GROUND R GROUND I D LOAD FR(LOAD AT F OAD AT AF OM BRAKIN	WD CG -T CG G	
-	-	7	3		4	2			9
				ON)	(1)	V(MG) (PEI	R STRUT)	H (PEF	R STRUT)
	WEIGHT VARIANT	MAXIMUM RAMP WEIGHT	STATIC L FWD	OAD AT CG	STATIC BRAKING AT 10 ft/s ² DECELERATION	STATIC L AFT	OAD AT CG	STEADY BRAKING AT 10 ft/s ² DECELERATION	AT INSTANTANEOUS BRAKING COEFFICIENT = 0.8
	A321-100	83 400 kg	8 570 kg	17.5%	13 730 kg	39 910 kg	41%	12 960 kg	31 920 kg
	WV000	(183 875 lb)	(18 900 lb)	MAC (a)	(30 275 lb)	(87 975 lb)	MAC (a)	(28 575 lb) ^(b)	(70 375 lb) (b)
	A321-100	83 400 kg	8 570 kg	17.5%	13 730 kg	39 910 kg	41%	12 960 kg	31 920 kg
	WV002	(183 875 lb)	(18 900 lb)	MAC (a)	(30 275 lb)	(87 975 lb)	MAC (a)	(28 575 lb) ^(b)	(70 375 lb) (b)
	A321-100	85 400 kg	8 600 kg	18.3%	13 880 kg	40 860 kg	41%	13 270 kg	32 690 kg
	WV003	(188 275 lb)	(18 950 lb)	MAC (a)	(30 600 lb)	(90 100 lb)	MAC (a)	(29 250 lb) ^(b)	(72 075 lb) (b)
	A321-100	78 400 kg	8 480 kg	15.4%	13 340 kg	37 510 kg	41%	12 180 kg	30 010 kg
	WV004	(172 850 lb)	(18 675 lb)	MAC (a)	(29 425 lb)	(82 700 lb)	MAC (a)	(26 850 lb) ^(b)	(66 150 lb) (b)
	A321-100	83 400 kg	8 570 kg	17.5%	13 730 kg	39 910 kg	41%	12 960 kg	31 920 kg
	WV005	(183 875 lb)	(18 900 lb)	MAC (a)	(30 275 lb)	(87 975 lb)	MAC (a)	(28 575 lb) ^(b)	(70 375 lb) (b)
N AC	A321-100	78 400 kg	8 480 kg	15.4%	13 340 kg	37 510 kg	41%	12 180 kg	30 010 kg
	WV006	(172 850 lb)	(18 675 lb)	MAC (a)	(29 425 lb)	(82 700 lb)	MAC (a)	(26 850 lb) ^(b)	(66 150 lb) ^(b)
070300	A321-100	80 400 kg	8 510 kg	16.3%	13 490 kg	38 470 kg	41%	12 490 kg	30 770 kg
	WV007	(177 250 lb)	(18 750 lb)	MAC (a)	(29 750 lb)	(84 800 lb)	MAC (a)	(27 550 lb) ^(b)	(67 850 lb) (b)
0 1 033	A321-100	89 400 kg	9 180 kg	17.5%	14 690 kg	42 430 kg	38%	13 890 kg	33 950 kg
	WV008	(197 100 lb)	(20 225 lb)	MAC (a)	(32 375 lb)	(93 550 lb)	MAC (a)	(30 625 lb) (b)	(74 825 lb) (b)
0101 01 03	NOTE: (a) LOADS C (b) BRAKED	ALCULATED MAIN GEAR.	USING AIRC	CRAFT AT N	ARW.				

Maximum Pavement Loads for A321-100 FIGURE-7-3-0-991-033-A01

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-200

D CG	9	H (PER STRUT)	TEADY BRAKING AT INSTANTANEOUS AT 10 ft/s ² BRAKING DECELERATION COEFFICIENT = 0.8	13 890 kg (75 325 lb) (c) (75 325 lb) (c)	14 510 kg (c) 35 590 kg (c) (78 475 lb) (c)	13 890 kg (c) 34 160 kg (c) (75 325 lb) (c)	14 200 kg (c) 34 880 kg (c) (76 900 lb) (c)	13 580 kg (c) 33 440 kg (c) (73 725 lb) (c)
-OAD AT FW OAD AT AFT M BRAKING		R STRUT)	DAD AT S CG	38% MAC (a)	37% MAC (a)	38% MAC (a)	37.49% MAC (a)	38.53% MAC (a)
R GROUND L GROUND L D LOAD FRO	5	V(MG) (PEF	STATIC LO AFT (42 700 kg (94 150 lb)	44 490 kg (98 100 lb)	42 700 kg (94 150 lb)	43 600 kg (96 125 lb)	41 810 kg (92 175 lb)
RTICAL NOSE GEAF RTICAL MAIN GEAR RIZONTAL GROUNI	4	(1	STATIC BRAKING AT 10 ft/s ² DECELERATION	14 190 kg (31 275 lb)	14 110 kg (31 100 lb)	14 190 kg (31 275 lb)	14 120 kg (31 125 lb)	13 880 kg (30 600 lb)
XIMUM VER XIMUM VER XIMUM HO		ON)	CG AT CG	17.5% MAC (a)	17.5% MAC (b)	17.5% MAC (a)	17.5% MAC (b)	17.5% MAC (a)
V _(NG) MA V _(MG) MA H MA	e e		STATIC L FWD	8 680 kg (19 150 lb)	8 640 kg (19 050 lb)	8 680 kg (19 150 lb)	8 640 kg (19 050 lb)	8 490 kg (18 725 lb)
	2		MAXIMUM RAMP WEIGHT	89 400 kg (197 100 lb)	93 400 kg (205 900 lb)	89 400 kg (197 100 lb)	91 400 kg (201 500 lb)	87 400 kg (192 675 lb)
	.		WEIGHT VARIANT	A321-200 WV000	A321-200 WV001	A321-200 WV002	A321-200 WV003	A321-200 WV004

NOTE: (a) LOADS CALCULATED USING AIRCRAFT AT MRW. (b) LOADS CALCULATED USING AIRCRAFT AT 89 000 kg (196 200 lb). (c) BRAKED MAIN GEAR.

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Maximum Pavement Loads for A321-200 (Sheet 1 of 2) FIGURE-7-3-0-991-044-A01

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V(MG)

(DNG)

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-200

6 H (PER STRUT)	R STRUT)	AT INSTANTANEOUS BRAKING COEFFICIENT = 0.8	32 530 kg (c) (71 700 lb) (c)	31 820 kg (c) (70 150 lb) (c)	31 820 kg (c) (70 150 lb)	30 740 kg (c) (67 750 lb)	30 670 kg (c) (67 625 lb)	29 940 kg (c) (66 000 lb) (c)	29 870 kg (c) (65 850 lb)	32 530 kg (c) (71 700 lb)	35 770 kg _(c) (78 875 lb)
	H (PEF	STEADY BRAKING AT 10 ft/s ² DECELERATION	13 270 kg (29 250 lb)	12 960 kg (28 575 lb) ^(c)	12 960 kg (28 575 lb) ^(c)	12 490 kg (c) (27 550 lb) ^(c)	12 490 kg (c) (27 550 lb)	12 180 kg (26 850 lb) ^(c)	12 180 kg (26 850 lb) ^(c)	13 270 kg (29 250 lb) ^(c)	14 590 kg (32 175 lb) ^(c)
	R STRUT)		39.1% MAC (a)	39.7% MAC (a)	39.7% MAC (a)	40.51% MAC (a)	39.71% MAC (a)	40.08% MAC (a)	39.21% MAC (a)	39.1% MAC (a)	36.88% MAC (a)
1 2 3 4 5 6 V(NG) V(MG) (PER STRUT) H (PER STRUT)	STATIC L(AFT (40 660 kg (89 625 lb)	39 770 kg (87 675 lb)	39 770 kg (87 675 lb)	38 420 kg (84 700 lb)	38 340 kg (84 525 lb)	37 420 kg (82 500 lb)	37 330 kg (82 300 lb)	40 660 kg (89 625 lb)	44 720 kg (98 575 lb)	
4	(5	STATIC BRAKING AT 10 ft/s ² DECELERATION	14 030 kg (30 925 lb)	13 710 kg (30 225 lb)	13 710 kg (30 225 lb)	13 480 kg (29 725 lb)	13 480 kg (29 725 lb)	13 330 kg (29 375 lb)	13 330 kg (29 375 lb)	14 030 kg (30 925 lb)	14 110 kg (31 125 lb)
	V(NG	CG AT	17.5% MAC (a)	17.5% MAC (a)	17.5% MAC (a)	16.28% MAC (a)	16.28% MAC (a)	15.41% MAC (a)	15.41% MAC (a)	17.5% MAC (a)	17.5% MAC (b)
1 2 3 4 5 6 V(NG) V(MG) (PER STRUT) H (PER STRUT)	STATIC LC FWD (8 760 kg (19 325 lb)	8 560 kg (18 875 lb)	8 560 kg (18 875 lb)	8 510 kg (18 750 lb)	8 510 kg (18 750 lb)	8 470 kg (18 675 lb)	8 470 kg (18 675 lb)	8 760 kg (19 325 lb)	8 640 kg (19 050 lb)	
2		MAXIMUM RAMP WEIGHT	85 400 kg (188 275 lb)	83 400 kg (183 875 lb)	83 400 kg (183 875 lb)	80 400 kg (177 250 lb)	80 400 kg (177 250 lb)	78 400 kg (172 850 lb)	78 400 kg (172 850 lb)	85 400 kg (188 275 lb)	93 900 kg (207 025 lb)
-		WEIGHT VARIANT	A321-200 WV005	A321-200 WV006	A321-200 WV007	A321-200 WV008 (CG 40.51%)	A321-200 WV008 (CG 39.71%)	A321-200 WV009 (CG 40.08%)	A321-200 WV009 (CG 39.21%)	A321-200 WV010	A321-200 WV011

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NOTE: (a) LOADS CALCULATED USING AIRCRAFT AT MRW. (b) LOADS CALCULATED USING AIRCRAFT AT 89 000 kg (196 200 lb). (c) BRAKED MAIN GEAR.

Maximum Pavement Loads for A321-200 (Sheet 2 of 2) FIGURE-7-3-0-991-044-A01

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

| **ON A/C A321neo A321neo-ACF

(DMG)

(NG)

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Maximum Pavement Loads for A321NEO (Sheet 1 of 2) FIGURE-7-3-0-991-047-A01

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

| **ON A/C A321neo A321neo-ACF

6 STRUT)	AT INSTANTANEOUS BRAKING COEFFICIENT = 0.8	34 840 kg (76 825 lb) (c)	34 700 kg (76 500 lb) (c)	34 650 kg (76 400 lb) (c)	34 520 kg (76 100 lb) (c)	30 590 kg (67 425 lb) (c)	30 450 kg (67 125 lb) (c)	37 030 kg (81 625 lb) (c)	37 030 kg (81 625 lb) (c)	36 310 kg (80 050 lb) (c)	
	н (рек	STEADY BRAKING AT 10 ft/s ² DECELERATION	14 200 kg (31 325 lb) (c)	A321NEO B0 900 kg 8 640 kg 17.5% 14 120 kg 33.62% 14 130 kg 34.700 kg 34.700 kg 34.700 kg 34.650 kg 37.62% 14 130 kg 37.65% (76 500 lb) (c) (76 100 lb)	15 140 kg (33 375 lb) (c)	14 830 kg (32 675 lb) (c)					
	STRUT)	DAD AT CG	37% MAC (a)	37.62% MAC (a)	37% MAC (a)	37.76 % MAC (a)	38.71% MAC (a)	37% MAC (a)	36.07% MAC (a)	36.07% MAC (a)	36.53% MAC (a)
5	V(MG) (PEF	STATIC LO AFT	43 550 kg (96 025 lb)	43 380 kg (95 625 lb)	43 320 kg (95 500 lb)	43 150 kg (95 150 lb)	38 230 kg (84 300 lb)	38 060 kg (83 900 lb)	46 280 kg (102 025 lb)	46 280 kg (102 025 lb)	45 390 kg (100 075 lb)
4	(5	STATIC BRAKING AT 10 ft/s ² DECELERATION	14 110 kg (31 100 lb)	14 120 kg (31 125 lb)	14 120 kg (31 125 lb)	14 100 kg (31 075 lb)	13 460 kg (29 675 lb)	13 460 kg (29 675 lb)	14 100 kg (31 075 lb)	14 100 kg (31 075 lb)	14 100 kg (31 075 lb)
	^V (NG	STATIC LOAD AT FWD CG	17.5% MAC (b)	17.5% MAC (b)	17.5% MAC (b)	17.5% MAC (b)	16.28% MAC (a)	16.28% MAC (a)	17.5% MAC (b)	17.5% MAC (b)	17.5% MAC (b)
e			8 640 kg (19 050 lb)	8 640 kg (19 050 lb)	8 640 kg (19 050 lb)	8 640 kg (19 050 lb)	8 490 kg (18 700 lb)	8 490 kg (18 700 lb)	8 640 kg (19 050 lb)	8 640 kg (19 050 lb)	8 640 kg (19 050 lb)
2		MAXIMUM RAMP WEIGHT	91 400 kg (201 500 lb)	90 900 kg (200 400 lb)	90 900 kg (200 400 lb)	90 400 kg (199 300 lb)	80 400 kg (177 250 lb)	80 400 kg (177 250 lb)	97 400 kg (214 725 lb)	97 400 kg (214 725 lb)	95 400 kg (210 325 lb)
~		WEIGHT VARIANT	A321NEO WV063 (CG 37%)	A321NEO WV065 (CG 37.62%)	A321NEO WV065 (CG 37%)	A321NEO WV067	A321NEO WV070 (CG 38.71%)	A321NEO WV070 (CG 37%)	A321NEO WV071	A321NEO WV072	A321NEO WV080

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NOTE: (a) LOADS CALCULATED USING AIRCRAFT AT MRW. (b) LOADS CALCULATED USING AIRCRAFT AT 89 000 kg (196 200 lb). (c) BRAKED MAIN GEAR

Maximum Pavement Loads for A321NEO (Sheet 2 of 2) FIGURE-7-3-0-991-047-A01

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| **ON A/C A321neo-XLR

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9	(STRUT)	AT INSTANTANEOUS BRAKING COEFFICIENT = 0.8	38 450 kg (84 775 lb) (c)	38 450 kg (84 775 lb) (c)
	н (рек	STEADY BRAKING AT 10 ft/s ² DECELERATION	15 760 kg (34 750 lb) (c)	15 760 kg (34 750 lb) (c)
	RUT)	OAD AT CG	35.12% MAC (a)	35.12% MAC (a)
2	V _(MG) (PEI	STATIC L AFT	48 060 kg (105 950 lb)	48 060 kg (105 950 lb)
7	(5	STATIC BRAKING AT 10 ft/s ² DECELERATION	14 090 kg (31 050 lb)	14 090 kg (31 050 lb)
	V(NC	-OAD AT CG	17.5% MAC (b)	17.5% MAC (b)
		STATIC I FWD	8 640 kg (19 050 lb)	8 640 kg (19 050 lb)
2		MAXIMUM RAMP WEIGHT	101 400 kg (223 550 lb)	101 400 kg (223 550 lb)
+		WEIGHT VARIANT	A321NEO XLR WV099	A321NEO XLR WV100

V_(NG) MAXIMUM VERTICAL NOSE GEAR GROUND LOAD AT FWD CG V_(MG) MAXIMUM VERTICAL MAIN GEAR GROUND LOAD AT AFT CG H MAXIMUM HORIZONTAL GROUND LOAD FROM BRAKING

V(MG)

V(NG)

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Maximum Pavement Loads FIGURE-7-3-0-991-046-A01



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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

7-4-0 Landing Gear Loading on Pavement

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

Landing Gear Loading on Pavement

1. The curves related to the landing gear loading on pavement are not given in section 07-04-00. Because the relationship between the aircraft weight, the center of gravity and the landing gear loading on the pavement is not strictly linear, it cannot be shown in chart format. But you can find in section 07-03-00 the maximum vertical and horizontal pavement loads for some critical conditions at the tire/ground interfaces for all the operational weight variants of the aircraft. For questions that are related to landing gear loading on pavement, contact Airbus.

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

7-5-0 Flexible Pavement Requirements - U.S. Army Corps of Engineers Design Method

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

Flexible Pavement Requirements - US Army Corps of Engineers Design Method

1. The flexible pavement requirements curves as per as U.S. Army Corps of Engineers Design Method are not given in section 07-05-00 since the related data is available through free software.

Sections 07-02-00 and 07-03-00 give all the inputs data required for the use of such software.

<u>NOTE</u>: The U.S. Army Corps of Engineers Design Method for flexible pavements is being gradually superseded by mechanistic-empirical design methods mostly relying on Linear Elastic Analysis (LEA). The number of parameters considered by such methods is not applicable for a chart format and the use of dedicated pavement-design software is necessary.

For questions that are related to the flexible pavement requirements, contact Airbus.

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

7-6-0 Flexible Pavement Requirements - LCN Conversion

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

Flexible Pavement Requirements - LCN Conversion

 The Load Classification Number (LCN) curves are not given in section 07-06-00 since the LCN system for the reporting pavement strength is old and are replaced by the ICAO recommended ACN/PCN system in 1983 and ACR/PCR system in 2020. For questions that are related to the LCN system, contact Airbus.

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

7-7-0 Rigid Pavement Requirements - Portland Cement Association Design Method

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

Rigid Pavement Requirements - Portland Cement Association Design Method

- 1. The rigid-pavement requirements curves as per as Portland Cement Association Design Method are not given in section 07-07-00 since the related data is available through free software. Sections 07-02-00 and 07-03-00 give all the inputs data required for the use of such software.
 - <u>NOTE</u>: The Portland Cement Association Design Method for rigid pavements is being gradually superseded by mechanistic-empirical design methods mostly relying on Finite Element Analysis (FEM). The number of parameters considered by such methods is not applicable for a chart format and the use of dedicated pavement-design software is necessary.

For questions that are related to the rigid pavement requirements, contact Airbus.

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

7-8-0 Rigid Pavement Requirements - LCN Conversion

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

Rigid Pavement Requirements - LCN Conversion

 The Load Classification Number (LCN) curves are not given in section 07-08-00 since the LCN system for the reporting pavement strength is old and are replaced by the ICAO recommended ACN/PCN system in 1983 and ACR/PCR system in 2020. For questions that are related to the LCN system, contact Airbus.

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

7-9-0 ACN/PCN Reporting System - Flexible and Rigid Pavements

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

Aircraft Classification Number - Flexible and Rigid Pavements

1. This section gives data about the Aircraft Classification Number (ACN) for an aircraft gross weight in relation with standard subgrade strength values for flexible and rigid pavement.

To find the ACN of an aircraft on flexible and rigid pavement, you must know the aircraft gross weight and the subgrade strength.

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

| **ON A/C A321-100 A321-200 A321neo A321neo-ACF

2. Aircraft Classification Number - ACN table

The tables in FIGURE 7-9-0-991-019-A, FIGURE 7-9-0-991-022-A and FIGURE 7-9-0-991-025-A give ACN data in tabular format for all the operational weight variants.

As an approximation, use a linear interpolation in order to get the ACN at the required operating weight using the following equation:

ACN = ACN min + (ACN max - ACN min) x (Operating weight - 47 000 kg)/(MRW - 47 000 kg)

Please note that the interpolation error may reach 5% to 10%.

As an approximation, use a linear interpolation in order to get the aircraft weight at the pavement PCN using the following equation:

Operating weight = 47 000 kg + (MRW - 47 000 kg) x (PCN - ACN min)/(ACN max - ACN min)

Please note that the interpolation error may reach up to 5%.

With ACN max = ACN calculated at the MRW in the table and with ACN min = ACN calculated at 47 000 kg.

For questions or specific calculation regarding ACN/PCN Reporting System, contact Airbus.

**ON A/C A321neo-XLR

3. Aircraft Classification Number - ACN table

The table in FIGURE 7-9-0-991-028-A gives ACN data in tabular format for all the operational weight variants of the aircraft.

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

As an approximation, use a linear interpolation in order to get the ACN at the required operating weight using the following equation:

ACN = ACN min + (ACN max - ACN min) x (Operating weight - 52 000 kg)/(MRW - 52 000 kg)

Please note that the interpolation error may reach 5% to 10%.

As an approximation, use a linear interpolation in order to get the aircraft weight at the pavement PCN using the following equation:

Operating weight = 52 000 kg + (MRW - 52 000 kg) x (PCN - ACN min)/(ACN max - ACN min)

Please note that the interpolation error may reach up to 5%.

With ACN max = ACN calculated at the MRW in the table and with ACN min = ACN calculated at 52 000 kg.

For questions or specific calculation regarding ACN/PCN Reporting System, contact Airbus.

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100

WEIGHT		LOAD ON ONE MAIN	TIRE PRESSURE (MPa)	SI	ACN RIGID P/ JBGRAD	I FOR AVEN ES - I	IENT MN/m³	ACN FOR FLEXIBLE PAVEMENT SUBGRADES - CBR			
VARIANT	IVIASS (Kg)	(%)		High 150	Medium 80	Low 40	Ultra-low 20	High 15	Medium 10	Low 6	Ultra-low 3
A321-100	83 400	47.8	1.36	51	54	57	59	45	48	53	59
WV000	47 000	47.8		26	28	29	31	23	24	26	30
A321-100	83 400	47.8	1.26	51	54	57	59	45	48	53	59
WV002	47 000	47.8	1.30	26	28	29	31	23	24	26	30
A321-100	85 400	47.9	1.39	53	56	59	61	47	49	55	60
WV003	47 000	47.8		26	28	29	31	23	24	26	30
A321-100	78 400	47.8	1 29	47	50	52	54	42	43	49	55
WV004	47 000	47.8	1.20	25	27	29	30	23	24	26	30
A321-100	83 400	47.8	1.36	51	54	57	59	45	48	53	59
WV005	47 000	47.8		26	28	29	31	23	24	26	30
A321-100	78 400	47.8	1 20	47	50	52	54	42	43	49	55
WV006	47 000	47.8	1.20	25	27	29	30	23	24	26	30
A321-100	80 400	47.8	1.26	49	52	54	57	43	45	51	56
WV007	47 000	47.8	1.36	26	28	29	31	23	24	26	30
A321-100	89 400	47.5	1.46	56	59	62	64	49	52	57	63
WV008	47 000	47.4	1.40	26	28	29	31	23	24	26	30

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ACN Table for A321-100 FIGURE-7-9-0-991-019-A01

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-200

WEIGHT		LOAD ON ONE MAIN	TIRE PRESSURE	TIRE RIGID PAVEMENT FLEXIBLE SUBGRADES - MN/m ³ SUBGRADES							I FOR PAVEMENT DES - CBR		
VARIANT	MASS (Kg)	(%)	(MPa)	High 150	Medium 80	Low 40	Ultra-low 20	High 15	Medium 10	Low 6	Ultra-low 3		
A321-200	89 400	47.8	1.46	57	60	62	65	50	52	58	64		
WV000	47 000	47.8	1.40	27	28	30	31	24	24	26	30		
A321-200	93 400	47.6	1 50	60	63	66	68	52	55	61	67		
WV001	47 000	47.6	1.50	27	28	30	31	24	24	26	30		
A321-200	89 400	47.8	1 /6	57	60	62	65	50	52	58	64		
WV002	47 000	47.8	1.40	27	28	30	31	24	24	26	30		
A321-200	91 400	47.7	1 50	59	62	64	67	51	54	60	65		
WV003	47 000	47.7	1.50	27	28	30	31	24	24	26	30		
A321-200	87 400	47.8	1.46	55	58	61	63	48	51	56	62		
WV004	47 000	47.8		27	28	30	31	24	24	26	30		
A321-200	85 400	47.6	1.39	53	56	58	61	46	49	54	60		
WV005	47 000	47.6		26	28	29	30	23	24	26	30		
A321-200	83 400	47.7	1.36	51	54	57	59	45	47	53	59		
WV006	47 000	47.7		26	27	29	30	23	24	26	30		
A321-200	83 400	47.7	1.36	51	54	57	59	45	47	53	59		
WV007	47 000	47.7		26	27	29	30	23	24	26	30		
A321-200	80 400	47.8	4.00	49	52	54	57	43	45	51	56		
WV008 (CG 40.51%)	47 000	47.8	1.30	26	28	29	30	23	24	26	30		
A321-200	80 400	47.7	4.00	49	52	54	56	43	45	50	56		
WV008 (CG 39.71%)	47 000	47.7	1.36	26	27	29	30	23	24	26	30		
A321-200	78 400	47.7	4.00	47	49	52	54	42	43	49	55		
WV009 (CG 40.08%)	47 000	47.7	1.28	25	27	29	30	23	24	26	30		
A321-200	78 400	47.6	1 00	46	49	52	54	41	43	49	55		
WV009 (CG 39.21%)	47 000	47.6	1.20	25	27	29	30	23	24	26	30		
A321-200	85 400	47.6	4.00	53	56	58	61	46	49	54	60		
WV010	47 000	47.6	1.39	26	28	29	30	23	24	26	30		
A321-200	93 900	47.6	4 50	61	63	66	69	53	56	61	67		
WV011	47 000	47.6	1.50	27	28	30	31	24	24	26	30		

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ACN Table for A321-200 FIGURE-7-9-0-991-022-A01

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

| **ON A/C A321neo A321neo-ACF

WEIGHT	ALL UP	LOAD ON ONE MAIN		SL	ACN F RIGID PA\ JBGRADE	FOR /EME S - M	NT N/m³	ACN FOR FLEXIBLE PAVEMENT SUBGRADES - CBR				
VARIANT	MASS (kg)	GEAR LEG (%)	(MPa)	HIGH 150	MEDIUM 80	LOW 40	ULTRA -LOW 20	HIGH 15	MEDIUM 10	LOW 6	ULTRA -LOW 3	
A321NEO	89 400	47.8	1.46	57	60	62	65	50	52	58	64	
WV050 (CG 38.02%)	47 000	47.8	1.40	27	28	30	31	24	24	26	30	
A321NEO	89 400	47.6	1.46	57	60	62	64	49	52	58	63	
WV050 (CG 37%)	47 000	47.6	1.40	26	28	29	31	24	24	26	30	
A321NEO WV051 (CG 38.02%)	89 400	47.8	1.46	57	60	62	65	50	52	58	64	
WV051 (CG 38.02%)	47 000	47.8	1.40	27	28	30	31	24	24	26	30	
A321NEO	89 400	47.6	1.46	57	60	62	64	49	52	58	63	
WV051 (CG 37%)	47 000	47.6	1.40	26	28	29	31	24	24	26	30	
A321NEO	93 900	47.6	1 50	61	63	66	69	53	56	61	67	
WV052	47 000	47.6	1.50	27	28	30	31	24	24	26	30	
A321NEO	93 900	47.6	1.50	61	63	66	69	53	56	61	67	
WV053	47 000	47.6		27	28	30	31	24	24	26	30	
A321NEO WV056 (CG 37.12%)	92 900	47.7	1.50	60	63	65	68	52	55	61	66	
	47 000	47.6		27	28	30	31	24	24	26	30	
A321NEO	92 900	47.6	1.50	60	63	65	68	52	55	61	66	
WV056 (CG 37%)	47 000	47.6		27	28	30	31	24	24	26	30	
A321NEO	91 400	47.7	1 50	59	62	64	67	51	54	60	65	
WV063 (CG 37.5%)	47 000	47.7	1.50	27	28	30	31	24	24	26	30	
A321NEO	91 400	47.7	1 50	59	62	64	66	51	54	59	65	
A321NEO WV063 (CG 37%)	47 000	47.6	1.50	27	28	30	31	24	24	26	30	
A321NEO	90 900	47.7	1 50	58	61	64	66	51	53	59	65	
WV065 (CG 37.62%)	47 000	47.7	1.50	27	28	30	31	24	24	26	30	
A321NEO	90 900	47.7	1 50	58	61	64	66	51	53	59	65	
WV065 (CG 37%)	47 000	47.6	1.50	27	28	30	31	24	24	26	30	
A321NEO	90 400	47.7	1 50	58	61	64	66	50	53	59	64	
WV067	47 000	47.7	1.50	27	28	30	31	24	24	26	30	
A321NEO	80 400	47.6	1 36	49	51	54	56	43	45	50	56	
WV070 (CG 38.71%)	47 000	47.5	1.50	26	27	29	30	23	24	26	30	
A321NEO	80 400	47.3	1 36	48	51	54	56	43	45	50	56	
WV070 (CG 37%)	47 000	47.3	1.50	26	27	29	30	23	23	25	30	
A321NEO	97 400	47.5	1 57	64	67	70	72	55	58	64	70	
WV071	47 000	47.5	1.57	27	28	30	31	24	24	26	30	
A321NEO	97 400	47.5	1 57	64	67	70	72	55	58	64	70	
WV072	47 000	47.5	1.57	27	28	30	31	24	24	26	30	
A321NEO	95 400	47.6	1 57	62	65	68	70	54	57	63	68	
WV080	47 000	47.6	1.57	27	28	30	31	24	24	26	30	

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ACN Table for A321NEO FIGURE-7-9-0-991-025-A01
AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

| **ON A/C A321neo-XLR

I

	NO				
R EMENT :- CBR	ULTRA-L(3	23	34	73	34
E PAV	9 POW	67	29	67	29
	MEDIUM 10	61	27	61	27
	HIGH 15	58	27	58	27
R MENT - MN/m³	ULTRA-LOW 20	75	35	75	35
CN FO PAVEI	LOW 40	73	34	73	34
RIGID SUBGR/	MEDIUM 80	02	32	02	32
	HIGH 150	67	31	67	31
TIRE PRESSURE (MPa)		1 60	70.1	1 60	70.1
LOAD ON ONE MAIN	LOAD ON ONE MAIN GEAR LEG (%)		47.4	47.4	47.4
ALL UP MASS (kg)		101 400	52 000	101 400	52 000
WEIGHT VARIANT		A321NEO XLR	660/W	A321NEO XLR	WV100

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ACN Table FIGURE-7-9-0-991-028-A01

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

7-10-0 ACR/PCR Reporting System - Flexible And Rigid Pavements

**ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR

ACR/PCR Reporting System - Flexible and Rigid Pavements

1. The ACR/PCR system has been developed by the ICAO to overcome the deficiencies of the ACN/PCN system. Significant advances in pavement design methods had occurred since its development in the late 1970s early 1980s, leading to inconsistencies with the pavement-strength-rating system.

The ACR/PCR system entails new procedures for the determination of both the ACR and the PCR that are consistent with the current pavement design procedures. This allows to capture the effects of the improved characteristics of new pavement materials as well as modern landing gear configurations, thus leading to an improved accuracy.

This section gives data about the Aircraft Classification Rating (ACR) for the maximum ramp weight in relation with standard subgrade strength values for flexible and rigid pavement. To determine the ACR at other aircraft gross weight, use the official ICAO-ACR software.

- <u>NOTE</u>: An aircraft with an ACR equal to or less than the reported PCR can operate on that pavement, subject to any limitation on the tire pressure. (Ref: ICAO Aerodrome Design Manual, Part 3, Third Edition 2020).
- 2. Aircraft Classification Rating ACR Table

The tables in FIGURE 7-10-0-991-001-A, FIGURE 7-10-0-991-002-A, FIGURE 7-10-0-991-011-A and FIGURE 7-10-0-991-012-A give ACR data in tabular format for all the operational weight variants of the aircraft.

For questions or specific calculation related to ACR/PCR Reporting System, contact Airbus.

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100

R EMENT - MPa	ULTRA-LOW 50	540	540	550	490	540	490	510	580
E PAV	LOW 80	480	480	490	440	480	440	450	520
AC FLEXIBL SUBGR	MEDIUM 120	430	430	450	400	430	400	410	470
	HIGH 200	400	400	410	370	400	370	380	440
R MENT S - MPa	ULTRA-LOW 50	590	590	610	540	590	540	560	640
CR FO PAVE RADES	LOW 80	570	570	590	530	570	530	550	620
RIGID SUBGF	MEDIUM 120	550	550	570	510	550	510	530	600
	HIGH 200	530	530	550	480	530	480	510	580
TIRE	TIRE PRESSURE (MPa)		1.36	1.39	1.28	1.36	1.28	1.36	1.46
LOAD ON ONE MAIN	LOAD ON ONE MAIN GEAR LEG (%)		47.8	47.9	47.8	47.8	47.8	47.8	47.5
	ALL UP (Kg)		83 400	85 400	78 400	83 400	78 400	80 400	89 400
WEIGHT VARIANT N		A321-100 WV000	A321-100 WV002	A321-100 WV003	A321-100 WV004	A321-100 WV005	A321-100 WV006	A321-100 WV007	A321-100 WV008

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ACR Table FIGURE-7-10-0-991-001-A01

7-10-0

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**ON A/C A321-200

R /EMENT 8 - MPa	ULTRA-LOW 50	590	620	590	610	570	550	530	530	510	510	490	490	550	630
CR FO E PAV RADES	LOW 80	520	550	520	540	510	490	470	470	450	450	440	430	490	550
	MEDIUM 120	470	500	470	490	460	440	430	430	410	410	400	400	440	500
	HIGH 200	440	460	440	450	430	410	400	400	380	380	370	370	410	470
DR EMENT S - MPa	ULTRA-LOW 50	640	680	640	660	630	600	590	590	560	560	540	540	600	680
CR FO PAVE	LOW 80	620	660	620	640	610	590	570	570	550	540	520	520	590	660
	MEDIUM 120	610	640	610	630	590	570	550	550	530	530	510	500	570	640
	HIGH 200	580	620	580	600	570	540	530	530	500	500	480	480	540	620
TIRE	(MPa)	1.46	1.50	1.46	1.50	1.46	1.39	1.36	1.36	1.36	1.36	1.28	1.28	1.39	1.50
LOAD ON ONE MAIN		47.8	47.6	47.8	47.7	47.8	47.6	47.7	47.7	47.8	47.7	47.7	47.6	47.6	47.6
ALL UP MASS	(kg)	89 400	93 400	89 400	91 400	87 400	85 400	83 400	83 400	80 400	80 400	78 400	78 400	85 400	93 900
WEIGHT	VARIANI	A321-200 WV000	A321-200 WV001	A321-200 WV002	A321-200 WV003	A321-200 WV004	A321-200 WV005	A321-200 WV006	A321-200 WV007	A321-200 WV008 (CG 40.51%)	A321-200 WV008 (CG 39.71%)	A321-200 WV009 (CG 40.08%)	A321-200 WV009 (CG 39.21%)	A321-200 WV010	A321-200 WV011

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ACR Table FIGURE-7-10-0-991-002-A01

7-10-0

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

| **ON A/C A321neo A321neo-ACF

	NO.									
R EMENT - MPa	ULTRA-L 50	590	590	590	590	630	630	620	620	610
E PAV	LOW 80	520	520	520	520	550	550	550	550	540
	MEDIUM 120	470	470	470	470	500	500	500	500	100
	HIGH 200	440	440	440	440	470	470	460	460	150
R MENT 5 - MPa	ULTRA-LOW 50	640	640	640	640	680	680	670	670	GEO
CR FO PAVEI RADES	LOW 80	620	620	620	620	660	660	650	650	640
RIGID SUBGF	MEDIUM 120	610	610	610	610	640	640	640	640	620
	HIGH 200	580	580	580	580	620	620	610	610	600
TIRE	(MPa)	1.46	1.46	1.46	1.46	1.50	1.50	1.50	1.50	1 50
LOAD ON ONE MAIN	GEAR LEG (%)	47.8	47.6	47.8	47.6	47.6	47.6	47.7	47.6	7 7 7
ALL UP	(RA) COMIN	89 400	89 400	89 400	89 400	93 900	93 900	92 900	92 900	01 100
WEIGHT	VAKIANI	A321NEO WV050 (CG 38.02%)	A321NEO WV050 (CG 37%)	A321NEO WV051 (CG 38.02%)	A321NEO WV051 (CG 37%)	A321NEO WV052	A321NEO WV053	A321NEO WV056 (CG 37.12%)	A321NEO WV056 (CG 37%)	A321NEO

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ACR Table (Sheet 1 of 2) FIGURE-7-10-0-991-011-A01

7-10-0

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

| **ON A/C A321neo A321neo-ACF

WEIGHT	ALL UP	LOAD ON ONE MAIN	TIRE	ACR FOR RIGID PAVEMENT SUBGRADES - MPa				ACR FOR FLEXIBLE PAVEMENT SUBGRADES - MPa			
VARIANT	MASS (kg)	GEAR LEG (%)	(MPa)	HIGH 200	MEDIUM 120	LOW 80	ULTRA -LOW 50	HIGH 200	MEDIUM 120	LOW 80	ULTRA -LOW 50
A321NEO WV063 (CG 37%)	91 400	47.7	1.50	600	620	640	660	450	490	530	610
A321NEO WV065 (CG 37.62%)	90 900	47.7	1.50	600	620	640	660	450	490	530	600
A321NEO WV065 (CG 37%)	90 900	47.7	1.50	600	620	640	660	450	480	530	600
A321NEO WV067	90 400	47.7	1.50	590	620	640	650	450	480	530	600
A321NEO WV070 (CG 38.71%)	80 400	47.6	1.36	500	530	540	560	380	410	450	510
A321NEO WV070 (CG 37%)	80 400	47.3	1.36	500	520	540	560	380	410	450	500
A321NEO WV071	97 400	47.5	1.57	650	680	690	710	490	530	580	660
A321NEO WV072	97 400	47.5	1.57	650	680	690	710	490	530	580	660
A321NEO WV080	95 400	47.6	1.57	640	660	680	700	480	520	570	640

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ACR Table (Sheet 2 of 2) FIGURE-7-10-0-991-011-A01

7-10-0

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

| **ON A/C A321neo-XLR

I

R FOR PAVEMENT DES - MPa	OW ULTRA-LOW 80 50	690 690	
ACF FLEXIBLE SUBGRA	MEDIUM 1 120	560	00
	HIGH 200	510	
NENT MENT S - MPa	ULTRA-LOW 50	750	
CR FO PAVE RADES	LOW 80	730	
RIGID SUBGF	MEDIUM 120	710	
	HIGH 200	069	
TIRE PRESSURE	(MPa)	1.62	
LOAD ON ONE MAIN GEAD LEG	GLAN LEG (%)	47.4	
ALL UP		101 400	
WEIGHT	VARIANI	A321NEO XLR WV099	A 321NEO XI R

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ACR Table FIGURE-7-10-0-991-012-A01

7-10-0

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

SCALED DRAWINGS

8-0-0 SCALED DRAWINGS

| **ON A/C A321-100 A321-200 A321neo A321neo-ACF A321neo-XLR Scaled Drawings

1. This section provides the scaled drawings.

<u>NOTE</u>: When printing this drawing, make sure to adjust for proper scaling.



**ON A/C A321-100 A321-200



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

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Scaled Drawing FIGURE-8-0-0-991-004-A01

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**ON A/C A321neo



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

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Scaled Drawing FIGURE-8-0-0-991-007-A01

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**ON A/C A321neo-ACF A321neo-XLR

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

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Scaled Drawing FIGURE-8-0-0-991-008-A01

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

AIRCRAFT RESCUE AND FIRE FIGHTING

10-0-0 AIRCRAFT RESCUE AND FIRE FIGHTING

**ON A/C A321-100 A321-200 A321neo

Aircraft Rescue and Fire Fighting

1. Aircraft Rescue and Fire Fighting Charts

This sections provides data related to aircraft rescue and fire fighting. The figures contained in this section are the figures that are in the Aircraft Rescue and Fire Fighting Charts poster available for download on AIRBUSWorld and the Airbus website.

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200 A321neo

Char THE NUMBER AND ARRANGEMENT OF THE INDIVIDUAL ITEMS VARY WITH THE CUSTOMERS. FIGURES CONTAINED IN THIS POSTER ARE AVAILABLE SEPARATELY IN THE CHAPTER 10 OF THE "AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING" DOCUMENT. :: MAR 2022 : N_RF_000000_1_A321000 Fighting THIS CHART GIVES THE GENERAL LAYOUT OF THE A321 STANDARD VERSION. REVISION DATE: N REFERENCE : N SHEET 2/2 AIRBUS S.A.S. 2018 . All rights reserved. Aircraft Rescue and Fire **AIRBU** Ŭ ARF NOTE: AIRBUS S.A.S CUSTOMER SERVICES TECHNICAL DATA SUPPORT AND SERVICES 31707 BLAGNAC CEDEX FRANCE 0 Ц С N **ISSUED BY:**

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Front Page FIGURE-10-0-0-991-065-A01

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200 A321neo



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Highly Flammable and Hazardous Materials and Components FIGURE-10-0-0-991-044-A01



**ON A/C A321neo



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Highly Flammable and Hazardous Materials and Components for A321NEO-ACF FIGURE-10-0-0-991-066-A01



**ON A/C A321neo



Highly Flammable and Hazardous Materials and Components for A321NEO-XLR FIGURE-10-0-0-991-064-A01

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200 A321neo



Batteries Location and Access FIGURE-10-0-0-991-058-A01

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**ON A/C A321-100 A321-200 A321neo



Wheel/Brake Overheat Wheel Safety Area (Sheet 1 of 2) FIGURE-10-0-0-991-045-A01

GA321

**ON A/C A321-100 A321-200 A321neo

BRAKE OVERHEAT AND LANDING GEAR FIRE
WARNING: BE VERY CAREFUL WHEN THERE IS A BRAKE OVERHEAT AND/OR LANDING GEAR FIRE. THERE IS A RISK OF TIRE EXPLOSION AND/OR WHEEL RIM BURST THAT CAN CAUSE DEATH OR INJURY. MAKE SURE THAT YOU OBEY THE SAFETY PRECAUTIONS THAT FOLLOW.
THE PROCEDURES THAT FOLLOW GIVE RECOMMENDATIONS AND SAFETY PRECAUTIONS FOR THE COOLING OF VERY HOT BRAKES AFTER ABNORMAL OPERATIONS SUCH AS A REJECTED TAKE-OFF OR OVERWEIGHT LANDING. FOR THE COOLING OF BRAKES AFTER NORMAL TAXI-IN, REFER TO YOUR COMPANY PROCEDURES.
BRAKE OVERHEAT:
1 - GET THE BRAKE TEMPERATURE FROM THE COCKPIT OR USE A REMOTE MEASUREMENT TECHNIQUE. THE REAL TEMPERATURE OF THE BRAKES CAN BE MUCH HIGHER THAN THE TEMPERATURE SHOWN ON THE ECAM. NOTE: AT HIGH TEMPERATURES (>800°C), THERE IS A RISK OF WARPING OF THE LANDING GEAR STRUTS AND AXLES.
2 - Approach the landing gear with extreme caution and from an oblique angle in the direction of the Tire shoulder. Do not go into the rim hazard area and only go in the tire hazard area with caution. (Ref Fig. Wheel/Brake overheat hazard areas). If possible, stay in a vehicle.
3 - Look at the condition of the Tires: If the tires are still inflated (fuse plugs not melted), there is a risk of tire explosion and rim Burst. Do not use cooling fans because they can prevent operation of the fuse plugs.
4 - USE WATER MIST TO DECREASE THE TEMPERATURE OF THE COMPLETE WHEEL AND BRAKE ASSEMBLY. USE A TECHNIQUE THAT PREVENTS SUDDEN COOLING. SUDDEN COOLING CAN CAUSE WHEEL CRACKS OR RIM BURST. DO NOT APPLY WATER, FOAM OR CO2. THESE COOLING AGENTS (AND ESPECIALLY CO2, WHICH HAS A VERY STRONG COOLING EFFECT) CAN CAUSE THERMAL SHOCKS AND BURST OF HOT PARTS.
LANDING GEAR FIRE:
CAUTION: AIRBUS RECOMMENDS THAT YOU DO NOT USE DRY POWDERS OR DRY CHEMICALS ON HOT BRAKES OR LANDING GEAR FIRES. THESE AGENTS CAN CHANGE INTO SOLID OR ENAMELED DEPOSITS. THEY CAN DECREASE THE SPEED OF HEAT DISSIPATION WITH A POSSIBLE RISK OF PERMANENT STRUCTURAL DAMAGE TO THE BRAKES, WHEELS OR WHEEL AXLES.
1 – IMMEDIATELY STOP THE FIRE:
A) APPROACH THE LANDING GEAR WITH EXTREME CAUTION AND FROM AN OBLIQUE ANGLE IN THE DIRECTION OF THE TIRE SHOULDER. DO NOT GO INTO THE RIM HAZARD AREA AND ONLY GO IN THE TIRE HAZARD AREA WITH CAUTION. IF POSSIBLE, STAY IN A VEHICLE.
B) USE LARGE AMOUNTS OF WATER, WATER MIST; IF THE FUEL TANKS ARE AT RISK, USE FOAM. USE A TECHNIQUE THAT PREVENTS SUDDEN COOLING. SUDDEN COOLING CAN CAUSE WHEEL CRACKS OR RIM BURST.
C) DO NOT USE FANS OR BLOWERS.

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Wheel/Brake Overheat Recommendations (Sheet 2 of 2) FIGURE-10-0-0-991-045-A01

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200 A321neo



Composite Materials FIGURE-10-0-0-991-046-A01



**ON A/C A321neo



Composite Materials for A321NEO-ACF and A321NEO-XLR FIGURE-10-0-0-991-062-A01

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200 A321neo



L/G Ground Lock Safety Devices FIGURE-10-0-0-991-047-A01

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200 A321neo



Emergency Evacuation Devices FIGURE-10-0-0-991-048-A01



**ON A/C A321neo



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Emergency Evacuation Devices for A321NEO-ACF and A321NEO-XLR FIGURE-10-0-0-991-060-A01

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200 A321neo



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Pax/Crew Doors and Emergency Exits FIGURE-10-0-0-991-049-A01



**ON A/C A321neo



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Overwing Emergency Doors for A321NEO-ACF and A321NEO-XLR FIGURE-10-0-0-991-063-A01

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**ON A/C A321-100 A321-200 A321neo



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FWD and AFT Lower Deck Cargo Doors FIGURE-10-0-0-991-050-A01

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200 A321neo



Control Panels FIGURE-10-0-0-991-051-A01

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AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200 A321neo



APU Access Door FIGURE-10-0-0-991-052-A01 N_AC_100000_1_0520101_01_01

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200



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Aircraft Ground Clearances for A321-100, A321-200 and A321NEO FIGURE-10-0-0-991-053-A01



**ON A/C A321neo



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Aircraft Ground Clearances for A321NEO-ACF FIGURE-10-0-0-991-068-A01

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321neo



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Aircraft Ground Clearances for A321NEO-XLR FIGURE-10-0-0-991-069-A01

AIRCRAFT CHARACTERISTICS - AIRPORT AND MAINTENANCE PLANNING

**ON A/C A321-100 A321-200 A321neo



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Structural Break-in Points FIGURE-10-0-0-991-054-A01