



QUICK REFERENCE HANDBOOK



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 A320/A321 QUICK REFERENCE HANDBOOK	TRANSMITTAL LETTER	1/2
		20 MAY 14

Issue date: 20 MAY 14

This is the QUICK REFERENCE HANDBOOK major event publication at issue date 20 MAY 14 for the A320/A321 and replacing last issue dated 11 APR 14

QRH PAGE GEN.02A PROVIDES ADDITIONAL GUIDANCE TO MANAGE THE QRH UPDATES.

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Please incorporate this major event revision as follow:

	Localization Subsection Title	Remove	Insert
			Rev. Date
	PLP-LESS LIST OF EFFECTIVE SECTIONS/SUBSECTIONS	ALL	20 MAY 14
*	PLP-LEDU LIST OF EFFECTIVE DOCUMENTARY UNITS	ALL	20 MAY 14
	OEBPROC-PLP-LEOEB LIST OF EFFECTIVE OPERATIONS ENGINEERING BULLETIN	ALL	20 MAY 14
*	OEBPROC-PLP-SOH SUMMARY OF HIGHLIGHTS	ALL	20 MAY 14
	OEBPROC-47 HYD ENG PUMP LO PR followed by a HYD RSVR OVHT	ALL	20 MAY 14

* Preliminary pages that may be removed from the QRH binder

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 A320/A321 QUICK REFERENCE HANDBOOK	PRELIMINARY PAGES LIST OF EFFECTIVE SECTIONS/SUBSECTIONS	1/2
		20 MAY 14

M⁽¹⁾	Localization	Subsection Title	Rev. Date
R	PLP-LESS	LIST OF EFFECTIVE SECTIONS/SUBSECTIONS	20 MAY 14
	PLP-LETDU	LIST OF EFFECTIVE TEMPORARY DOCUMENTARY UNITS	27 NOV 13
	GEN	General	06 MAR 14
	ABN-21	Air Conditioning/Ventilation/Pressurization	15 FEB 13
	ABN-22	Auto Flight	27 NOV 13
	ABN-24	Electrical	06 MAR 14
	ABN-25	Equipment	15 FEB 13
	ABN-26	Fire Protection	27 NOV 13
	ABN-27	Flight Controls	06 MAR 14
	ABN-28	Fuel	06 MAR 14
	ABN-29	Hydraulic	06 MAR 14
	ABN-30	Ice and Rain Protection	15 FEB 13
	ABN-31	Indicating / Recording Systems	12 MAR 13
	ABN-32	Landing Gear	12 MAR 13
	ABN-34	Navigation	06 MAR 14
	ABN-36	Pneumatic	11 DEC 13
	ABN-70	Engines	27 NOV 13
	ABN-80	Miscellaneous	06 MAR 14
	NP-NP	Normal Procedures	06 MAR 14
	NP-NCL	Normal Checklist	12 MAR 13
	PER-A	Speeds	06 MAR 14
	PER-B	Fuel Penalty Factors	06 MAR 14
	PER-C	Landing Performance Assessment	06 MAR 14
	PER-D	Landing Distance without Failure	06 MAR 14
	PER-24	Landing Distance with Electrical System Failure	06 MAR 14
	PER-27	Landing Distance with Flight Controls System Failure	06 MAR 14
	PER-27A	Landing Distance with Slats Flaps System Failure	06 MAR 14
	PER-29	Landing Distance with Hydraulic System Failure	06 MAR 14
	PER-30	Landing Distance with Anti Ice System Failure	06 MAR 14
	PER-32	Landing Distance with Brake System Failure	06 MAR 14
	PER-34	Landing Distance with Navigation System Failure	06 MAR 14
	PER-36	Landing Distance with Bleed System Failure	06 MAR 14
	PER-70	Landing Distance with Engine System Failure	06 MAR 14
	PER-E	One Engine Inoperative	06 MAR 14
	PER-G	All Engines Operative	06 MAR 14
	PER-H	Flight Without Cabin Pressurization	06 MAR 14
	PER-I	Miscellaneous	06 MAR 14
	OPS	Operational Data	12 MAR 13
R	OEBPROC-PLP-LEOEB	LIST OF EFFECTIVE OPERATIONS ENGINEERING BULLETIN	20 MAY 14

(1) Evolution code : N=New, R=Revised, E=Effectivity, M=Moved

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 A320/A321 QUICK REFERENCE HANDBOOK	PRELIMINARY PAGES LIST OF EFFECTIVE TEMPORARY DOCUMENTARY UNITS	1/2
		27 NOV 13

M ⁽¹⁾	Localization	DU Title	DU identification	DU date
	ABN-31	Multiple Undue ECAM Alerts	00013755.0001001	08 FEB 13
	Criteria: 31-1276, P8671, P9824 Applicable to: MSN 2649-3120 <i>Impacted DU: NONE</i> <u>Reason for issue:</u> <i>This Temporary Revision is issued to give a procedure to the crew in the case of multiple suspected undue ECAM alerts.</i>			

	ABN-80	Computer Reset Table	NG00824	
	ABN-80	Computer Reset Table - 21 - Air Conditioning/Ventilation/Pressurization	00013737.0001001	21 AUG 13
	Criteria: K6443, K9458 Applicable to: MSN 2649 <i>Impacted DU: 00010908 Computer Reset Table - 21 - Air Conditioning/Ventilation/Pressurization</i>			
	ABN-80	Computer Reset Table - 21 - Air Conditioning/Ventilation/Pressurization	00013737.0002001	21 AUG 13
	Criteria: K10463, K6443, K9458 Applicable to: MSN 2927-3120 <i>Impacted DU: 00010908 Computer Reset Table - 21 - Air Conditioning/Ventilation/Pressurization</i> <u>Reason for issue:</u> <i>This Temporary DU is issued for aircraft with the Air Conditioning System Controller 1803B0000-02, in order to provide Operators with the ACSC C/B reset procedure to apply in the case of a "PACK REGUL FAULT" triggered on ground.</i>			
	ABN-80	Computer Reset Table - 32 - Landing Gear	00014916.0001001	23 AUG 13
	Criteria: SA Applicable to: ALL <i>Impacted DU: 00014915 Computer Reset Table - 32 - Landing Gear</i> <u>Reason for issue:</u> <i>The BSCU reset procedure for WHEEL N/W STRG FAULT is amended with a temporary procedure, in order to better address the spurious alerts that are currently encountered in-service.</i> - Under the very specific conditions defined in the procedure, the flight crews can continue the flight without troubleshooting after a successful BSCU reset. - For aircraft with BSCU standard 10: The root cause of the spurious alerts that were triggered during taxiing with BSCU standard 10 has been cancelled. Therefore, the associated reset procedure has been removed. - The BSCU reset procedure for BRAKES SYS FAULT or BRAKES BSCU CH FAULT is amended in order to improve the wording to comply with Aircraft behavior.			

(1) Evolution code : N=New, R=Revised, E=Effectivity

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This table gives, for each delivered aircraft, the cross reference between:

- The Manufacturing Serial Number (MSN).
- The Fleet Serial Number (FSN) of the aircraft as known by AIRBUS S.A.S.
- The registration number of the aircraft as known by AIRBUS S.A.S.
- The aircraft model.

M ⁽¹⁾	MSN	FSN	Registration Number	Model
	1219		VQ-BOE	321-211
	1233		VQ-BOD	321-211
	1276		VQ-BRM	321-231
	1843		VQ-BRN	321-231
	2649		VP-BJH	320-232
	2927		VQ-BRO	321-231
	2933		VQ-BRU	321-232
	3034		VP-BGH	321-232
	3120		VP-BRD	321-232

(1) Evolution code : N=New, R=Revised

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 A320/A321 QUICK REFERENCE HANDBOOK	PRELIMINARY PAGES LIST OF MODIFICATIONS	1/6
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M ⁽¹⁾	MODIFICATION	Linked SB	Incorp. Date	Title
	P2590		11 APR 12	NAVIGATION - INSTALL A BENDIX TCAS II COLLISION AVOIDANCE SYSTEM
	Applicable to: MSN 1219-1233, 2927-3120			
	K10494		17 JUL 12	AIRBORNE AUXILIARY POWER - GENERAL - INSTALL APIC APS3200 APU AS STANDARD (REPLACES HONEYWELL GTCP36-300)
	Applicable to: MSN 2649-3120			
	K2113		11 APR 12	FUSELAGE - REAR FUSELAGE SECTION 16A - DEFINE A321 BASIC STRUCTURE
	Applicable to: MSN 1219-1843, 2927-3120			
	P6251		11 APR 12	ICE AND RAIN PROTECTION-WINDSHIELD RAIN PROTECTION-INTRODUCE MODIFIED GAGE ASSY WITH INPUT VALUE FUNCTION SUPPRESSED
	Applicable to: ALL			
	22-1269 04		26 JUL 13	AUTO FLIGHT - FMGC - INSTALL FMGC HWL H2C12 (RELEASE 1A) ON CFM A/C.
	Applicable to: MSN 1219-1233			
	P4801		17 JUL 12	ELECTRICAL POWER-GENERAL-DEFINE NEW ELECTRICAL GENERATION CONCEPT FOR SINGLE AISLE A/C
	Applicable to: MSN 2649-3120			
	K6054		11 APR 12	EQUIPMENT/FURNISHINGS - MISCELLANEOUS EMERGENCY EQUIPMENT - INSTALL A SEXTANT ELT WITH CONTROL PANEL IN COCKPIT
	Applicable to: MSN 1219-1233			
	K1806		11 APR 12	ELECTRICAL POWER-AC/DC ESSENTIAL POWER DISTRIBUTION-PROVIDE PROVISIONS FOR ETOPS-
	Applicable to: ALL			
	P7175		17 JUL 12	ELECTRICAL POWER - GENERAL - INSTALL A COMMERCIAL SHEDDING PUSH-BUTTON SWITCH IN COCKPIT
	Applicable to: MSN 1843-3120			
	J1334		11 APR 12	LANDING GEAR-MLG-LGCIU-INTRODUCTION OF STANDARD UNIT P/N A4C
	Applicable to: ALL			
	22-1089 10		11 APR 12	AUTOFLIGHT - FMGC - INSTALL HONEYWELL FMS2 WITH CFM ENGINES
	Applicable to: MSN 1219-1233			
	P9355		17 JUL 12	NAVIGATION - WEATHER RADAR SYSTEM - REMOVE WXR TRANSCIEVER COLLINS -623 AND DEACTIVATE PWS (ANTI-MOD 32740/26560)
	Applicable to: MSN 2927-3120			
	27-1182 04		15 FEB 13	FLIGHT CONTROL - ELAC SYSTEM - INTRODUCE ELAC L93 SOFTWARE STANDARD.
	Applicable to: MSN 1276-1843			
	P1573		11 APR 12	ENGINE CONTROLS-MODIFY POWER SUPPLY FOR HP FUEL SOLENOID
	Applicable to: ALL			
	K5213		11 APR 12	AIR CONDITIONING-PACK TEMPERATURE CTRL- INTRODUCE MODIFIED PACK TEMPERATURE CONTROLLER
	Applicable to: ALL			
	P5071		11 APR 12	ICE AND RAIN PROTECTION-WINSHIELD RAIN PROTECTION-ACTIVATION OF RAIN REPELLENT SYS.(FLUID COMPATIBLE WITH OZONE RULES)
	Applicable to: ALL			
	P6054		11 APR 12	NAVIGATION - MMR - ACTIVATE GPS PRIMARY FUNCTION (HYBRID) IN SEXTANT MMR (WITH HONEYWELL OR LITTON ADIRU)
	Applicable to: MSN 1219-1843			
	J0071		11 APR 12	WINGS-WING TIP FENCES-INTRODUCE WING TIPS INCLUDING FENCES-
	Applicable to: ALL			
	K9458		12 MAR 13	AIR CONDITIONING - PACK TEMPERATURE CONTROL - INSTALL IMPROVED AIR COND. SYSTEM CONTROLLER PN 1803B0000-01
	Applicable to: MSN 2649-3120			



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M ⁽¹⁾	MODIFICATION	Linked SB	Incorp. Date	Title
	K2450	49-1072 05	30 MAY 12	AIRBORNE AUXILIARY POWER UNIT - INTRODUCE APIC APS-3200
	Applicable to: ALL			
	P7188	34-1345 02	17 JUL 12	NAVIGATION - EGPWS - ACTIVATE OBSTACLE OPTION ON THE EGPWS
	Applicable to: ALL			
	P5474		30 MAY 12	AUTOFLIGHT-FAC-INTRODUCE FAC STD P/N BAM0514
	Applicable to: MSN 1276			
	P7382		17 JUL 12	CERTIFICATION DOCUMENTS - GENERAL - MANAGE A321-232 TYPE DESIGN
	Applicable to: MSN 2927-3034			
	P4766		30 MAY 12	NAVIGATION - SINGLE PWS - COLLINS SINGLE PWS ACTIVATION
	Applicable to: MSN 1276-1843			
	27-1183 02		30 MAY 12	FLIGHT CONTROL - ELAC - ACTIVATE HIGH ALTITUDE UPSETS VMO/MMO OVERSHOOT PROTECTION FUNCTION ON ELAC.
	Applicable to: MSN 1276-1843			
	P3112		30 MAY 12	NAVIGATION - INSTALL A TCAS II COLLINS SYSTEM
	Applicable to: MSN 1276-2649			
	P6044		11 APR 12	ICE AND RAIN PROTECTION-WINSHIELD- RAIN PROTECTION-INTRODUCE MODIFIED GAGE ASSY -P/N 4020W35-2
	Applicable to: ALL			
	P0091		17 JUL 12	OXYGEN - FLIGHT CREW SYSTEM - INSTALL A 77.1 CU/FT BOTTLE IN COMPOSITE MATERIAL -
	Applicable to: MSN 2649-3120			
	K7755	25-1305 06	17 JUL 12	EQUIPMENT FURNISHINGS-CURTAINS AND PARTITIONS-MODIFIED INTRUSION AND PENETRATION RESISTANT COCKPIT DOOR
	Applicable to: ALL			
	P5895		11 APR 12	NAVIGATION-GPWS-INTRODUCE EGPWS P/N 206-206 AND INHIBIT AUTOMATIC DEACTIVATION ENHANCED FUNCTIONS
	Applicable to: ALL			
	P2316		11 APR 12	AUTO FLIGHT - ACTIVATE WINDSHEAR FUNCTION
	Applicable to: ALL			
	P6183		11 APR 12	NAVIGATION - MMR - REMOVE COLLINS MMR PROVIDING ILS (FM IMMUNE) AND GPS PRIMARY FUNCTION (PREVIOUS SPEC.)
	Applicable to: MSN 1219-1843			
	P5613		12 MAR 13	NAVIGATION - TCAS - INSTALL COLLINS TCAS TTR921 WITH COLLINS ATC TPR901
	Applicable to: MSN 1843-2649			
	49-1071 12		30 MAY 13	AIRBORNE AUXILIARY POWER - POWER PLANT - REPLACE THE HONEYWELL APU 131-9(A) WITH AN HONEYWELL APU GTOP36-300
	Applicable to: MSN 1219-1233			
	K4457		11 APR 12	A.P.U.-POWER PLANT-INTRODUCE ALLIED SIGNAL APU 131-9(A)
	Applicable to: MSN 1219-1233, 2649-3120			
	J0513		30 MAY 12	ICE AND RAIN PROTECTION - WING ICE PROTECTION - ETOPS CIRCUIT BREAKERS 1DL AND 2DL - TRANSFER POWER SUPPLY.
	Applicable to: ALL			
	P4576		17 JUL 12	LANDING GEAR-ALTERNATE BRAKING- INTRODUCE MODIFIED ALTERNATE BRAKING SYSTEM
	Applicable to: MSN 2649-3120			
	P5768		12 MAR 13	ELEC PWR-AC EMERGENCY GENERATION- ACTIVATE A319/A321 ELECTRICAL EMERGENCY CONFIGURATION ON A320 A/C
	Applicable to: MSN 2649			
	P1044		11 APR 12	GENERAL - COMPLEMENT OF BASIC DEFINITION FOLLOWING ESSENTIAL MAP DEVELOPMENT -
	Applicable to: ALL			



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	J0006		11 APR 12	FUEL- INSTALL A CENTRE TANK SYSTEM-
	Applicable to: ALL			
	46-1018 20		12 MAR 13	INFORMATION SYSTEMS - ATIMS - FANS B INSTALLATION AND ACTIVATION
	Applicable to: MSN 2649			
	00-1066 06		30 MAY 12	GENERAL - DESIGN WEIGHTS - OPERATE WITH DUAL OPERATIONAL WEIGHTS (MTOW 89T/93T - MLW 77.8T - MZFW 73.8T)
	Applicable to: MSN 1276-1843			
	P4234		11 APR 12	ICE AND RAIN PROTECTION-WINDSHIELD RAIN PROTECTION-DEACTIVATION OF RAIN REPELLENT SYSTEM
	Applicable to: ALL			
	P6952	34-1245 03	17 JUL 12	NAVIGATION-ADIRS-INSTALL LITTON ADIRU 4 MCU STANDARD 0314 (A318 COEFF CFM ADDED)
	Applicable to: MSN 1219-1233, 2927-3120			
	P7520	22-1090 11	17 JUL 12	AUTOFLIGHT-FMGC-INSTALL FMGC IAE C13042BA01 (EQUIPPED WITH FMS2 HONEYWELL)
	Applicable to: MSN 1276-3120			
	P8256		17 JUL 12	AUTO FLIGHT - FLIGHT AUGMENTATION COMPUTER - INSTALL FAC STANDARD BAM0617 FOR A318
	Applicable to: MSN 1276-3120			
	P6954		17 JUL 12	AUTO-FLIGHT - FLIGHT AUGMENTATION COMPUTER (FAC) - INTRODUCE FAC SOFTWARE "BAM0616"
	Applicable to: MSN 1276-3120			
	P4230		11 APR 12	POWER PLANT-GENERAL-INTRODUCE CFM56-5B/P
	Applicable to: MSN 1219-1233			
	22-1270 04		15 FEB 13	AUTO FLIGHT - FMGC - INSTALL FMGC HWL H2111 (RELEASE 1A) ON IAE AND PW A/C.
	Applicable to: MSN 1276-3120			
	P4642		11 APR 12	NAVIGATION - WEATHER RADAR SYSTEM - ACTIVATE DUAL PREDICTIVE WINDSHEAR FUNCTION
	Applicable to: MSN 1219-1233, 2927-3120			
	P9107	31-1267 03 31-1300 02	17 JUL 12	INDICATING/RECORDING SYSTEMS - FLIGHT WARNING COMPUTER (FWC) - INSTALL FWC STANDARD H2F3
	Applicable to: ALL			
	P4647		17 JUL 12	NAVIGATION - WEATHER RADAR SYSTEM - ACTIVATE COLLINS DUAL PREDICTIVE WINDSHEAR SYSTEM
	Applicable to: MSN 2649-3120			
	P5168		11 APR 12	NAVIGATION - MMR - INSTALL COLLINS MMR PROVIDING ILS AND GPS FUNCTION
	Applicable to: ALL			
	P5971		30 MAY 12	NAVIGATION - TCAS - INSTALL COLLINS TCAS COMPUTER TTR-920 P/N 622-8971-322 (WITH CHANGE 7)
	Applicable to: MSN 1276			
	31-1334 04		30 MAY 12	INDICATING/RECORDING SYSTEMS - FLIGHT WARNING COMPUTER (FWC) - INSTALL FWC STANDARD H2-F5
	Applicable to: MSN 1276-1843			
	K6537		30 MAY 12	GENERAL - DESIGN WEIGHT - INCREASE A321-200 DESIGN WEIGHT TO 93,0T MTOW 77,8T MLW AND 73,8T MZFW (W.V. 001)
	Applicable to: MSN 1276-1843			
	P1875		11 APR 12	AIR CONDITIONING - PROVIDE EMERGENCY POWER SUPPLY FOR AFT CARGO COMPT HEATING CONTROLLER FOR EROPS -
	Applicable to: MSN 1219-1233, 2649			
	P9824	31-1276 01	17 JUL 12	INDICATING/RECORDING SYSTEMS-ELECTRONIC INSTRUMENT SYSTEM(EIS)-INSTALL DISPLAY MANAGEMENT COMPUTER SOFTWARE EIS2 S7
	Applicable to: MSN 2649-3120			
	P1872		11 APR 12	AIR CONDITIONING - INSTALL CIRCUIT BREAKER FOR REAR CARGO COMPT VALVE SUPPLY FOR EROPS -
	Applicable to: MSN 1219-2649			



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M ⁽¹⁾	MODIFICATION	Linked SB	Incorp. Date	Title
	K10009		17 JUL 12	EQUIPMENT/FURNISHINGS - CURTAINS AND PARTITIONS - INSTALL IMPROVED STRIKES FOR COCKPIT DOOR
Applicable to: MSN 2649-3120				
	P7125		17 JUL 12	INDICATING RECORDING SYSTEM-FWC- INTRODUCE FWC STANDARD H2 F1
Applicable to: ALL				
	P8671		17 JUL 12	INDICATING/RECORDING SYSTEMS-ELECTRONIC INSTRUMENT SYSTEM(EIS)- INSTALL DISPLAY MANAGEMENT COMPUTER SOFTWARE EIS2 S4-2
Applicable to: MSN 2649-3120				
	J2527		12 MAR 13	FUEL - QUANTITY INDICATING - INSTALL FUEL QUANTITY INDICATING COMPUTER STANDARD 13.10
Applicable to: MSN 2649				
	P4089		12 MAR 13	AUTO FLIGHT-FMGC-REDUCE VAPP FOR A320 CFM/IAE
Applicable to: MSN 2649				
	P4502		11 APR 12	INFORMATION SYSTEM - AIR TRAFFIC AND INFORMATION SYSTEM (ATIMS) - INSTALL ATSU COMPUTER FOR ACARS
Applicable to: ALL				
	P6777		17 JUL 12	INFORMATION SYSTEM-ATIMS- UPGRADE ATSU HARDWARE FOR NEW ARINC 429 I/O BOARD
Applicable to: MSN 1843-3120				
	J2360		12 MAR 13	FUEL - QUANTITY INDICATION - INTRODUCE FUEL LEAK DETECTION
Applicable to: MSN 2649				
	P6578		17 JUL 12	INDICATING RECORDING SYSTEMS- EIS-INSTALL DMC, DU AND DISKETTES FOR EIS2
Applicable to: MSN 2649-3120				
	73-1100 02		06 MAR 14	ENGINE FUEL AND CONTROL- FADEC SYSTEM- INSTALL ECU SOFTWARE STANDARD 5BS2 ON CFM56-5B ENGINES.
Applicable to: MSN 1219-1233				
	25-1444 02		11 APR 12	EQUIPMENT/FURNISHINGS - CURTAINS AND PARTITIONS - INTRODUCE PPTC FOR COCKPIT DOOR STRIKE PROTECTION
Applicable to: MSN 1219-1843				
	P5638	34-1261 12	17 JUL 12	NAVIGATION-STANDBY DATA : ALTITUDE AND HEADING - INSTALL INTEGRATED STANDBY INSTRUMENT SYSTEM (ISIS)
Applicable to: MSN 1276-3120				
	P7278		17 JUL 12	INDICATING/RECORDING SYSTEM-EIS2- INSTALL MODIFIED EIS2 SOFTWARE
Applicable to: MSN 2649-3120				
	K10143	23-1293 02	17 JUL 12	EQUIPMENT/FURNISHINGS - MISC. EMERGENCY EQUIPMENT-INSTALL ELT(406AF) WITH PROG. DONGLE AND RCP IN COCKPIT - THALES
Applicable to: MSN 2649-3120				
	P0160		12 MAR 13	OXYGEN - FLIGHT CREW OXYGEN - INSTALL A 115 CU/FT STEEL OXYGEN CYLINDER -
Applicable to: MSN 2649				
	P3341		11 APR 12	LANDING GEAR - WHEELS AND BRAKES - INSTALL MESSIER GOODRICH WHEELS AND BRAKES ON A321
Applicable to: MSN 1219-1843, 2927-3120				
	J2153		30 MAY 12	FUEL-CERTIFICATION OF FUEL SYSTEM- (LOW PRESSURE SYSTEM) FOR THE OPERATION 0 TO 2 ACTS
Applicable to: MSN 1276-1843, 2927-3120				
	K10463		30 MAY 13	AIR CONDITIONING - PACK TEMPERATURE CONTROL - INSTALL AIR CONDITIONING CONTROLLER P/N 1803B0000-02
Applicable to: MSN 2927-3120				
	P9126	22-1203 02	17 JUL 12	AUTOFLIGHT - FMGC - INSTALL FMGC IAE/PW STD P1110 (WITH FMS2 HONEYWELL) ON A/C FITTED WITH IAE OR PW POWERPLANTS
Applicable to: MSN 1276-3120				
	P4319		11 APR 12	AUTO FLIGHT - FCU - DEFINE FLIGHT DIRECTOR ENGAGEMENT IN CROSSED BARS AT GO AROUND
Applicable to: ALL				



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	P2217		11 APR 12	INDICATING/RECORDING SYSTEMS - FWS - INTRODUCE C3 STD
	Applicable to: ALL			
	46-1032 03		12 MAR 13	INFORMATION SYSTEMS - ATIMS - INSTALL ATSU CSB5 WITH H/W -A10
	Applicable to: MSN 2649			
	22-1102 02		27 NOV 13	AUTO FLIGHT - FLIGHT AUGMENTATION COMPUTER - INSTALL FAC STANDARD BAM0617.
	Applicable to: MSN 1276-1843			
	K10516		17 JUL 12	AIRBORNE AUXILIARY POWER - CONTROL AND MONITORING - INTRODUCE HONEWELL VECB WITH SOFTWARE -04
	Applicable to: MSN 2927-3120			
	K8400		17 JUL 12	COMMUNICATIONS-CIDS-INTRODUCE ENHANCED CIDS (A318 VERSION) AND RELATED SYSTEMS ON SINGLE AISLE FAMILY
	Applicable to: MSN 2649-3120			
	P6985		17 JUL 12	NAVIGATION - ADIRS - INSTALL HONEYWELL ADIRU 4MCU P/N HG2030AE21 (A318 COEFF CFM ADDED)
	Applicable to: MSN 2649-3120			
	P8799	34-1352 01	17 JUL 12	NAVIGATION- GPWS - USE LATERAL GPS POSITION WITH AUTOMATIC DESELECTION
	Applicable to: MSN 1219, 1276-3120			
	P7062		17 JUL 12	OXYGEN - CREW OXYGEN - INSTALL ALTERNATIVE 115CU FT FLIGHT CREW OXYGEN CYLINDER COMPOSITE SCOTT P/N 897940-15
	Applicable to: MSN 2927-3120			
	K7790		17 JUL 12	DOORS-PASSENGER COMPARTMENT FIXED INTERIOR DOORS-INSTALL ELECTRICAL COCKPIT DOOR RELEASE SYSTEM
	Applicable to: ALL			
	P5591		11 APR 12	NAVIGATION - MMR - INSTALL SEXTANT MMR PROVIDING ILS (FM IMMUNE)
	Applicable to: MSN 1219-1843			
	K0070		11 APR 12	AIR CONDITIONING - CARGO COMPARTMENT - VENTILATION - INSTALL SYSTEM IN AFT COMPARTMENT -
	Applicable to: MSN 1219-2649			
	K0064		11 APR 12	LIGHTS - EXTERIOR LIGHTS - INSTALL SYNCHRONIZED STROBE LIGHTS
	Applicable to: ALL			
	P3878		11 APR 12	FLIGHT CONTROLS-INTRODUCE ELAC STD L69J
	Applicable to: ALL			
	J1617		12 MAR 13	FLIGHT CONTROLS-GENERAL- DELETION OF L.A.F. FEATURE FROM A320 A/C (SERIAL SOLUTION)
	Applicable to: MSN 2649			
	P5706	31-1257 01	30 MAY 12	INDICATING RECORDING SYSTEM-FWC- INTRODUCE FWC STANDARD H2/E3P
	Applicable to: ALL			
	K6345		17 JUL 12	GENERAL - DESIGN WEIGHTS - INCREASE A321-200 DESIGN WEIGHTS TO 77.8 T MLW AND 73.8 T MZFW (WEIGHT VARIANT 002)
	Applicable to: MSN 2927-3120			
	P4885		11 APR 12	NAVIGATION - GPWS - ACTIVATE ENHANCED FUNCTIONS OF THE EGPWS
	Applicable to: ALL			
	P7455		17 JUL 12	ELECTRICAL POWER-GENERAL-CHANGE IFE POWER SUPPLY BUSBARS INTO SHEDDABLE BUSBARS 220XP AND 212PP
	Applicable to: MSN 1843-3120			
	K6156		11 APR 12	AIR CONDITIONING-PACK TEMP.CTRL INTRODUCE MODIFIED PACK TEMP. CTRL P/N 759D0000-02
	Applicable to: ALL			
	P1970	23-1024 48 23-1049 24	11 APR 12	COMMUNICATIONS - INSTALL HF1 FOR EROPS
	Applicable to: MSN 1219-1233, 1843-3120			



Continued from the previous page

M ⁽¹⁾	MODIFICATION	Linked SB	Incorp. Date	Title
	K6443		12 MAR 13	AIR CONDITIONING-AIR COOLING- INSTALL A NEW ECS
	Applicable to: MSN 2649-3120			
	P4983		11 APR 12	AUTO-FLIGHT-FAC INTRODUCE FAC STD BAM 0513
	Applicable to: ALL			
	P4539		11 APR 12	AUTOFLIGHT-FLIGHT CONTROL UNIT- (FCU) INTRODUCE SEXTANT MODULAR FCU
	Applicable to: ALL			
	P4121		11 APR 12	EXHAUST-THRUST REVERSER CONTROL AND INDICATING-ACTIVATE ADDITIONAL THRUST REVERSER LOCK CONTROL
	Applicable to: ALL			
	K3901		12 MAR 13	COMMUNICATIONS-CIDS-INTRODUCE MODIFIED DIRECTOR POWER SUPPLY PRINCIPLE
	Applicable to: MSN 2649			
	K5638		30 MAY 12	EQUIPMENT/FURNISHINGS-MISCELLANEOUS EMERGENCY EQUIPMENT-INSTALL ELT CEIS A06V2 WITH CONTROL PANEL IN COCKPIT
	Applicable to: MSN 1276-1843			
	P5451		11 APR 12	ELECTRICAL POWER - GENERAL - AC-DC MAIN DISTRIBUTION - INSTALL AC-DC SHEDDABLE BUSBARS
	Applicable to: ALL			
	P5669		11 APR 12	NAVIGATION - TCAS - INSTALL ALLIED SIGNAL TCAS COMPUTER P/N 066-50000-2220 (WITH CHANGE 7.0)
	Applicable to: MSN 1219-1233, 2927-3120			
	P8710		12 MAR 13	NAVIGATION - WEATHER RADAR SYSTEM - INSTALL COLLINS TRANSCEIVER FULLY COMPLIANT WITH MULTI-SCAN FUNCTION
	Applicable to: MSN 2649			
	P6703	22-1102 02 22-1226 03	30 MAY 12	AUTO-FLIGHT-FLIGHT AUGMENTATION COMPUTER-INTRODUCE FAC SOFTWARE STANDARD P/N B397BAM0515
	Applicable to: MSN 1276-3120			

(1) Evolution code : N=New, R=Revised, E=Effectivity

 A320/A321 QUICK REFERENCE HANDBOOK	GENERAL TABLE OF CONTENTS	GEN 1/2 06 MAR 14

Important.....	GEN.01A
General Information.....	GEN.02A

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	GENERAL	GEN.01A
		06 MAR 14

IMPORTANT

Ident.: GEN-A-00010781.0001001 / 03 JAN 11
Applicable to: ALL

SCOPE

The QRH contains some specific procedures which are not displayed on the ECAM.
As a general rule, the procedures displayed on the ECAM are not provided in the QRH (refer to FCOM PRO/ABN).

Ident.: GEN-A-00010782.0001001 / 08 FEB 13
Applicable to: ALL

TASKSHARING FOR ABN/EMER PROC

- For all abnormal/emergency procedures, the tasksharing is as follows :
- PF - Pilot flying - Responsible for the :
 - Thrust levers
 - Flight path and airspeed control
 - Aircraft configuration (request configuration change)
 - Navigation
 - Communications
 - PNF - Pilot non flying - Responsible for the :
 - Monitoring and reading aloud the ECAM and checklists
 - Performing required actions or actions requested by the PF, if applicable
 - Using engine master switches, cockpit C/Bs, IR and guarded switches with PF's confirmation (except on ground).

Ident.: GEN-A-00010783.0001001 / 16 AUG 10
Applicable to: ALL

ECAM CLEAR

DO NOT CLEAR ECAM WITHOUT CROSS-CONFIRMATION OF BOTH PILOTS.

Ident.: GEN-A-00010784.0001001 / 16 AUG 10
Applicable to: ALL

ABN/EMER PROC INITIATION

- Procedures are initiated on pilot flying command.
- No action will be taken (apart from audio warning cancel through MASTER WARN light) until :
- The appropriate flight path is established, and
 - The aircraft is at least 400 ft above the runway, if a failure occurs during takeoff, approach, or go-around. (In some emergency cases, provided the appropriate flight path is established, the pilot flying may initiate actions before this height).

Ident.: GEN-A-00010786.0001001 / 16 AUG 10
Applicable to: ALL

NORMAL CHECKLIST

Normal C/L are initiated by the PF and read by the PNF.
The PF shall respond after having checked the existing configuration. When both pilots have to respond, "BOTH" is indicated.

Ident.: GEN-A-00014868.0001001 / 08 FEB 13
Applicable to: ALL

DEFINITIONS OF WARNINGS, CAUTIONS AND NOTES

The following are the official definitions of warnings, cautions and notes taken directly from the JAR25/CS-25 and applicable to Airbus flight operation documentation:

WARNING	An operating procedure, technique, etc. that may result in personal injury or loss of life if not followed.
CAUTION	An operating procedure, technique, etc. that may result in damage to equipment if not followed.
NOTE	An operating procedure, technique, etc. considered essential to emphasize. Information contained in notes may also be safety related.

GENERAL INFORMATION

Ident.: GEN-B-00015488.0001001 / 24 FEB 14
Applicable to: ALL

QRH REVISION DATE

The update of the FCOM does not necessarily result in the update of the QRH. Therefore, the revision dates of the QRH and of the FCOM may differ.

Ident.: GEN-B-00013808.0001001 / 23 MAR 11
Applicable to: ALL

EFFECTIVITY

As QRH is published at aircraft level, each paper page has only one effectivity.

Ident.: GEN-B-00013795.0001001 / 28 FEB 14
Applicable to: ALL

PAGE NUMBERING

The page numbering follows the following rules:

01A, 02A, 02B,.. : Numbering and Index (A, B, ...) for GEN, ABN, OPS, OEB PROC sections

Note: For these sections, the procedures start with the index A and for long procedures (more than one page), the index continues with B, C...

1/10, 3/5, ... : Numbering for NP-NP, PER

C1, C2 : Back cover page interior

C3 : Back cover page exterior

"BLANK" : Index of an intentionally left blank paper page created to ensure the correct format of the next chapter (begins on recto page)

Ident.: GEN-B-00013809.0001001 / 08 FEB 13
Applicable to: ALL

PRELIMINARY PAGES WITHIN THE QRH BINDER

It is essential for Airlines to correctly manage the updates of the QRH. For this purpose, Airbus publishes Preliminary Pages (PLP) with each QRH revision. These PLP are used as reference documents for Airlines to manage the QRH updates, e.g. easily insert the revisions, identify the modifications that impact the QRH, get a synthesis of changes introduced with each revision. However, when the QRH revisions have been incorporated in accordance with the information given in the PLP, these pages do not bring operational added value and therefore are no longer useful in the QRH binder for any operational purposes. Therefore, to minimize the size of the QRH binder on board the aircraft and to optimize the operational use of the QRH, Airbus has no objection that the Airlines remove the PLP from the QRH after the revisions have been incorporated in the QRH and all checks performed to confirm the revisions have been correctly incorporated. You will find below the list of PLP that may be removed from the QRH binder :

- The Filing Instructions (FI)
- The List of Effective Documentary Units (the LESS is the reference)
- The List Of Modifications (LOM)
- The Summary Of Highlights (SOH)
- The front pages of all QRH sections
- The Table Of Contents (TOC) of the General section

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 A320/A321 QUICK REFERENCE HANDBOOK	ABNORMAL AND EMERGENCY PROCEDURES	21.01A 15 FEB 13
CABIN OVERPRESSURE		
Ident.: ABN-21-00010788.0001001 / 08 FEB 13 Applicable to: ALL		
Apply the following procedure (not displayed on ECAM) in case of total loss of the cabin pressure control leading to overpressure PACK 1 or 2..... OFF BLOWER + EXTRACT..... OVRD <i>Cabin air is extracted overboard.</i> ΔP..... FREQUENTLY MONITOR ● If $\Delta P > 9$ PSI: PACK 1+2..... OFF LAND ASAP Before 10 min from landing: PACK 1+2..... OFF BLOWER + EXTRACT..... AUTO CAUTION Check that ΔP is zero before opening the doors.		

 A320/A321 QUICK REFERENCE HANDBOOK	ABNORMAL AND EMERGENCY PROCEDURES	BLANK
		15 FEB 13

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LOSS OF FMS DATA IN DESCENT / APPROACH (SEVERE RESET)

Ident.: ABN-22-00010790.0001001 / 08 FEB 13
Applicable to: ALL

AP/FD lateral and vertical selected modes, and A/THR, are available immediately after the reset. If necessary, the pilot may perform the FCU selections for short-term navigation.

When the FMS has automatically recovered:

- The database cycle may have changed
- The FMGS does not autotune the ILS and ADF
- The FMS position bias is lost
- Lateral and vertical managed modes cannot re-engage
- The “**CAB PR LDG ELEV FAULT**” message is displayed on the ECAM
- A “MAP NOT AVAIL” message may be displayed on one ND.

Depending on the flight phase, apply the following procedure(s) as appropriate:

■ INITIAL APPROACH OR CLOSE TO ILS INTERCEPTION:

● When the system has recovered:

Access the RAD NAV Page, and manually tune the ILS (preferably using IDENT). Enter the ILS course, if a frequency has been entered.

Fly in selected speed.

- Note:
- LOC and G/S guidance modes are available
 - VLS speed is still available and displayed on the PFD
 - Missed approach trajectory is not available.

■ DESCENT (IF TIME PERMITS) :

● When the system has recovered:

Select the initial database

Perform DIR TO a downpath waypoint. Select heading, if required.

Perform a LAT REV at the downpath waypoint and redefine the DESTINATION in the NEW DEST field.

Redefine the arrival and/or the approach procedure.

Select the FUEL PRED Page, and enter the GW.

Activate the APPROACH phase.

Enter destination data on the PERF APPR Page, as required. Managed speed is available.

 A320/A321 QUICK REFERENCE HANDBOOK	ABNORMAL AND EMERGENCY PROCEDURES	BLANK
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 A320/A321 QUICK REFERENCE HANDBOOK	ABNORMAL AND EMERGENCY PROCEDURES	24.01A
		06 MAR 14

ELEC EMER CONFIG SYS REMAINING

ELEC EMER CONFIG SYS REMAINING	EMER GEN RUNNING	BAT ONLY	
		IN FLIGHT	ON THE GROUND

Ident.: ABN-24-SYN-00010792.0002001 / 08 FEB 13
Applicable to: MSN 2927-3120

AIR COND PRESS	PRESS AUTO SYS 1	Norm	Norm	Norm
	MAN PRESS CTL	Inop	Inop	Inop ^(a)
	RAM AIR	Norm	Norm	Norm
	PACK VALVE 1	Norm	Closure Inop	Closure Inop
	PACK VALVE 2	Closure Inop	Closure Inop	Closure Inop ^(a)
	AVIONIC VENT	Norm	Norm	Partial

Ident.: ABN-24-SYN-00010792.0004001 / 08 FEB 13
Applicable to: MSN 1276-1843

AIR COND PRESS	PRESS AUTO SYS 1	Norm	Norm	Norm
	MAN PRESS CTL	Inop	Inop	Inop ^(a)
	RAM AIR	Norm	Norm	Norm
	PACK VALVE 1	Norm	Closure Inop	Closure Inop
	PACK VALVE 2	Closure Inop	Closure Inop	Closure Inop ^(a)
	AVIONIC VENT	Norm	Norm	Partial
	AFT CRG ISOL VALVE	Norm	Inop	Inop

Ident.: ABN-24-SYN-00010792.0006001 / 08 FEB 13
Applicable to: MSN 1219-1233, 2649

AIR COND PRESS	PRESS AUTO SYS 1	Norm	Norm	Norm
	MAN PRESS CTL	Inop	Inop	Inop ^(a)
	RAM AIR	Norm	Norm	Norm
	PACK VALVE 1	Norm	Closure Inop	Closure Inop
	PACK VALVE 2	Closure Inop	Closure Inop	Closure Inop ^(a)
	AVIONIC VENT	Norm	Norm	Partial
	AFT CRG ISOL VALVE	Norm	Inop	Inop
	AFT CRG HEAT	Norm	Inop	Inop

Ident.: ABN-24-SYN-00010793.0001001 / 08 FEB 13
Applicable to: ALL

FMGS	FMGC (NAV FUNCTION)	N° 1 only	Inop	Inop
	MCDU	N° 1 only	Inop	Inop
	FAC	N° 1 only	Inop	Inop
	FCU	ch 1 only	ch 1 only	ch 1 only

Ident.: ABN-24-SYN-00010794.0001001 / 08 FEB 13
Applicable to: MSN 1276

COM	VHF 1	Norm	Norm	Norm
	RMP 1	Norm	Norm	Norm
	ACP (Capt, F/O)	Norm	Norm	Norm
	CIDS	Norm	Norm	Norm
	INTERPHONE	Norm	Norm	Norm
	CVR	Norm	Inop	Inop
	LOUDSPEAKER 1	Norm	Norm	Norm



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ELEC EMER CONFIG SYS REMAINING	EMER GEN RUNNING	BAT ONLY	
		IN FLIGHT	ON THE GROUND

Ident.: ABN-24-SYN-00010794.0002001 / 08 FEB 13
Applicable to: MSN 1219-1233, 1843-3120

COM	VHF 1	Norm	Norm	Norm
	HF1	Norm	Inop	Inop
	RMP 1	Norm	Norm	Norm
	ACP (Capt, F/O)	Norm	Norm	Norm
	CIDS	Norm	Norm	Norm
	INTERPHONE	Norm	Norm	Norm
	CVR	Norm	Inop	Inop
	LOUDSPEAKER 1	Norm	Norm	Norm

Ident.: ABN-24-SYN-00010795.0001001 / 08 FEB 13
Applicable to: ALL

EMER EQPT	CREW OXY	Norm	Norm ^(b)	Norm ^(b)
	PAX OXY mask release (auto + man)	Norm	Inop	Inop
	SLIDES ARM/WARN	Norm	Norm	Norm

Ident.: ABN-24-SYN-00010796.0002001 / 08 FEB 13
Applicable to: ALL

FIRE	ENG 1 LOOP	A only	A only	A only
	ENG 2 LOOP	B only	B only	B only
	APU LOOP	Inop	Inop	Inop ^(a)
	CARGO SMOKE DET	Channel 1	Inop	Inop
	ENG FIRE EXT.	Bottle 1 only	Bottle 1 only	Bottle 1 only
	APU FIRE EXT.	Squib A only	Squib A only	Squib A only
	CARGO FIRE EXT.	Inop	Inop	Inop ^(a)
	APU AUTO EXT.	Inop	Inop	Inop ^(a)

Ident.: ABN-24-SYN-00010797.0002001 / 08 FEB 13
Applicable to: ALL

FLT CTL	ELAC	N° 1 only	N° 1+ N° 2	N°1+ N°2 ^(d)
	SEC	N° 1 only	N° 1	N° 1 ^(d)
	FCDC	N° 1 only	Inop	Inop
	SFCC	N° 1 only	N° 1 only	N° 1 only
	Flaps POS ind	Norm	Norm	Norm ^(c)

Ident.: ABN-24-SYN-00010798.0001001 / 07 MAY 13
Applicable to: MSN 2649

FUEL	LP VALVE	Norm	Norm	Norm
	FQI channel 1	Norm	Inop	Inop
	X FEED VALVE	Norm	Inop	Inop
	INTERTANK TRANSFER VALVE	Norm	Inop	Inop

Ident.: ABN-24-SYN-00010798.0002001 / 07 MAY 13
Applicable to: MSN 1219-1843, 2927-3120

FUEL	LP VALVE	Norm	Norm	Norm
	FQI channel 1	Norm	Inop	Inop
	X FEED VALVE	Norm	Inop	Inop



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ELEC EMER CONFIG SYS REMAINING	EMER GEN RUNNING	BAT ONLY	
		IN FLIGHT	ON THE GROUND

Ident.: ABN-24-SYN-00010799.0001001 / 08 FEB 13
 Applicable to: ALL

HYD	FIRE VALVES	Norm	Norm	Norm

Ident.: ABN-24-SYN-00010800.0002001 / 08 FEB 13
 Applicable to: ALL

ICE - RAIN	WING A.ICE	Norm	Inop	Inop
	ENG A. ICE VALVE	Open	Open	Open
	CAPT PITOT	Norm	Norm	Norm ^(c)
	CAPT AOA	Norm	Inop	Inop
	RAIN REPELLENT (CAPT)	Norm	Norm	Norm

Ident.: ABN-24-SYN-00010801.0002001 / 08 FEB 13
 Applicable to: ALL

EIS	PFD 1	Norm	Norm	Norm ^(c)
	ND 1	Norm	Inop	Inop
	ECAM upper disp.	Norm	Norm	Norm ^(c)
	DMC 1 or 3	Norm	Norm	Norm ^(c)
	SDAC 1, FWC 1	Norm	Norm	Norm ^(c)
	ECAM CONT. panel	Norm	Norm	Norm
FLT INS	CLOCKS	Norm	Norm	Norm

Ident.: ABN-24-SYN-00011060.0001001 / 08 FEB 13
 Applicable to: MSN 1219-1843

L/G	LGCIU SYS 1	Norm	Norm	Norm
	BRK PRESS IND	Norm	Norm	Norm
	PARK BRK	Norm	Norm	Norm

Ident.: ABN-24-SYN-00011060.0002001 / 08 FEB 13
 Applicable to: MSN 2649-3120

L/G	LGCIU SYS 1	Norm	Norm	Norm
	ABCU	Norm	Norm	Norm
	BRK PRESS IND	Norm	Norm	Norm
	PARK BRK	Norm	Norm	Norm

Ident.: ABN-24-SYN-00010802.0001001 / 08 FEB 13
 Applicable to: ALL

LIGHTS	EMER CKPT	Norm	Norm	Norm
	EMER CAB	Norm	Norm	Norm



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ELEC EMER CONFIG SYS REMAINING	EMER GEN RUNNING	BAT ONLY	
		IN FLIGHT	ON THE GROUND

Ident.: ABN-24-SYN-00010803.0006001 / 20 DEC 13
Applicable to: MSN 1219-1233

NAV	IR	N° 1 only ^(e)	N° 1 only ^(e)	N° 1 only ^(e)
	ADR	N° 1 only	N° 1 only	N° 1 only
	ADF	N° 1 only	Inop	Inop
	VOR	N° 1 only	N° 1 only	N° 1 only ^(c)
	MMR	N° 1 only	N° 1 only	N° 1 only ^(c)
	DME	N° 1 only	Inop	Inop
	DDRMI	Norm	Norm	Norm ^(c)
	ATC	N° 1 only	Inop	Inop
	STBY HORIZON	Norm	Norm	Norm
	STBY COMP (LT)	Norm	Norm	Norm
	STBY ALTI (VIB)	Norm	Inop	Inop

Ident.: ABN-24-SYN-00010803.0012001 / 20 DEC 13
Applicable to: MSN 1276-3120

NAV	IR	N° 1 only ^(e)	N° 1 only ^(e)	N° 1 only ^(e)
	ADR	N° 1 only	N° 1 only	N° 1 only
	ADF	N° 1 only	Inop	Inop
	VOR	N° 1 only	N° 1 only	N° 1 only ^(c)
	MMR	N° 1 only	N° 1 only	N° 1 only ^(c)
	DME	N° 1 only	Inop	Inop
	DDRMI	Norm	Norm	Norm ^(c)
	ATC	N° 1 only	Inop	Inop
	ISIS	Norm	Norm	Norm

Ident.: ABN-24-SYN-00010804.0002001 / 08 FEB 13
Applicable to: ALL

PNEU	ENG 1 BLEED	Norm	BMC 1 inop	BMC 1 inop
	ENG 2 BLEED	BMC 2 inop	BMC 2 inop	BMC 2 inop
	APU BLEED	Inop	Inop	Inop ^(a)
	X BLEED (MAN CTL)	Norm	Inop	Inop

Ident.: ABN-24-SYN-00010805.0001001 / 08 FEB 13
Applicable to: ALL

APU	ECB - STARTER	Norm ^(f)	Inop	Inop ^(a)
	FUEL LP VALVE	Norm	Norm	Norm
	FUEL PUMP	Norm	Norm	Norm

Ident.: ABN-24-SYN-00010806.0003001 / 08 FEB 13
Applicable to: MSN 1219-1233

PWR PLT	FADEC	A + B ^(g)	A + B ^(g)	A + B ^(g)
	IGNITION	A only	A only	A only
	HP FUEL VALVE closure	Norm	Norm	Norm



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ELEC EMER CONFIG SYS REMAINING	EMER GEN RUNNING	BAT ONLY	
		IN FLIGHT	ON THE GROUND

Ident.: ABN-24-SYN-00010806.0004001 / 08 FEB 13
Applicable to: MSN 1276-3120

PWR PLT	FADEC	A + B ^(h)	A + B ^(h)	A + B ^(h)
	IGNITION	A only	A only	A only
	HP FUEL VALVE closure	Norm	Norm	Norm

Ident.: ABN-24-SYN-00010808.0001001 / 08 FEB 13
Applicable to: ALL

MISC	MECH HORN	Norm	Norm	Norm

- (a) Restored, when speed is below 100 kt.
- (b) Crew oxygen valve inoperative.
- (c) Lost, when speed is below 50 kt.
- (d) Lost 30 s after last engine shutdown.
- (e) IR2 and IR3 are lost 5 min after failure of the main generators. But, if IR3 replaces IR1 (ATT-HDG selector at CAPT3), IR3 remains supplied
- (f) For APU start only.
- (g) Channels A and B are self-powered above 12 % N2. If N2 is below 12 % , only Channel A is powered.
- (h) Channels A and B are self-powered above 10 % N2. If N2 is below 10 % , only Channel A is powered.

ELEC EMER CONFIG SUMMARY

CRUISE

Ident.: ABN-24-SUM-00010634.0002001 / 28 FEB 14
Applicable to: MSN 2649

MAX SPD..... 320 KT

ALTN LAW : PROT LOST
ONLY CAPT PITOT AND AOA HEATED

FUEL: CTR TK UNUSABLE.
FUEL GRAVITY FEEDING

COM: VHF1, HF1 , ATC1, RMP1, only

NAV: ILS1, VOR1, GPS1 (if MMR is installed) only

For **Landing Performance** assessment, refer to QRH PER-C

CRUISE

Ident.: ABN-24-SUM-00010634.0003001 / 28 FEB 14
Applicable to: MSN 1219-1843, 2927-3120

MAX SPD..... 320 KT

ALTN LAW : PROT LOST
ONLY CAPT PITOT AND AOA HEATED

FUEL: CTR TK USABLE BY GRAVITY: 2 t (4 400 lb) UNUSABLE
FUEL GRAVITY FEEDING

COM: VHF1, HF1 , ATC1, RMP1, only

NAV: ILS1, VOR1, GPS1 (if MMR is installed) only

For **Landing Performance** assessment, refer to QRH PER-C

APPROACH

Ident.: ABN-24-SUM-00010636.0002001 / 15 MAY 12
Applicable to: ALL

CAT 2 INOP
MINIMUM RAT SPEED 140 KT
SLATS FLAPS SLOW
FOR LANDING.....USE FLAP 3

● When L/G down: USE MAN PITCH TRIM (DIRECT LAW).

LANDING

Ident.: ABN-24-SUM-00010637.0002001 / 17 AUG 10
Applicable to: ALL

FLARE: Only 2 spoilers per wing. Direct law

SPOILERS: Only 2 per wing

NO REVERSER

BRAKING: ALTERNATE without antiskid
MAX BRK PR 1000 PSI

NO NOSEWHEEL STEERING

GO-AROUND

Ident.: ABN-24-SUM-00010638.0002001 / 15 MAY 12
Applicable to: ALL

● When L/G unlocked:

ALTN LAW : PROT LOST

COCKPIT DOOR FAULT

Ident.: ABN-25-00010810.0002001 / 08 FEB 13
 Applicable to: ALL

This procedure should be applied, if the Cockpit Door Locking System (CDLS) fails. This failure is indicated when the FAULT light on the center pedestal's COCKPIT DOOR panel comes on.
 In the case of a DC BUS 2 fault, no FAULT indication appears on the center pedestal's COCKPIT DOOR panel. The CDLS is not electrically-supplied, and is inoperative.

CKPT DOOR CONT panel CHECK
This panel is located on the overhead panel. It is used to identify the faulty CDLS item, and to verify the status of the pressure sensors and the three electrical latches (referred to as strikes).

- **If one or more electrical latches (strikes) are faulty:**
 The cockpit door is not intrusion-proof if two or more electrical latches are faulty.
 The system may be recovered by performing the following steps:
 Cockpit door..... OPEN
 COCKPIT DOOR sw..... SET to UNLOCK
 After 30 s:
 COCKPIT DOOR sw..... SET to NORM
- **If two pressure sensors are faulty:**
 Automatic latch release is not available, in case of cockpit decompression.
- **If no LED on the CKPT DOOR CONT panel is on:**
 The CDLS control unit is faulty, therefore, the cockpit door might unlock automatically. If it does not, consider using the mechanical override system to unlock the door.

 A320/A321 QUICK REFERENCE HANDBOOK	ABNORMAL AND EMERGENCY PROCEDURES	BLANK
		15 FEB 13

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SMOKE/FUMES/AVNCS SMOKE

Ident.: ABN-26-A-00010813.0002001 / 07 OCT 13
Applicable to: ALL

LAND ASAP

IF PERCEPTIBLE SMOKE APPLY IMMEDIATELY:

● **IF REQUIRED:**

- CREW OXY MASKS..... USE/100%/EMERG
- BLOWER..... OVRD
- EXTRACT..... OVRD
- CAB FANS..... OFF
- GALY & CAB..... OFF
- SIGNS..... ON
- CKPT/CAB COM..... ESTABLISH

● **IF SMOKE SOURCE IMMEDIATELY OBVIOUS,
ACCESSIBLE, AND EXTINGUISHABLE:**

- FAULTY EQPT.....ISOLATE

● **IF SMOKE SOURCE NOT IMMEDIATELY
ISOLATED:**

- DIVERSION..... INITIATE
- DESCENT INITIATE
- Descent to FL 100, or MEA-MORA, or minimum
obstacle clearance altitude*

● **AT ANY TIME of the procedure, if SMOKE/FUMES
becomes the GREATEST THREAT :**

- REMOVAL OF SMOKE/FUMES.....CONSIDER
- ELEC EMER CONFIG.....CONSIDER
- Refer to the end of the procedure to Set ELEC
EMER CONFIG*





SMOKE/FUMES/AVNCS SMOKE (Cont'd)



- At ANY TIME of the procedure, if situation becomes **UNMANAGEABLE** :
IMMEDIATE LANDING.....CONSIDER

Ident.: ABN-26-A-00010814.0003001 / 27 NOV 12
Applicable to: MSN 1219-1276

AIR COND SMOKE/CAB EQUIPMENT SMOKE

- IF AIR COND SMOKE SUSPECTED:

APU BLEED.....OFF
BLOWER.....AUTO
EXTRACT.....AUTO
CARGO AFT ISOL VALVE.....OFF
PACK 1.....OFF

- If smoke continues:

PACK 1.....ON
PACK 2.....OFF

- If smoke still continues:

PACK 2.....ON
BLOWER.....OVRD
EXTRACT.....OVRD

REMOVAL OF SMOKE/FUMES..... CONSIDER

- IF CAB EQUIPMENT SMOKE SUSPECTED:

- If smoke continues:

EMER EXIT LIGHT.....ON
BUS TIE.....OFF
GEN 2.....OFF
SMOKE DISSIPATION.....CHECK
FAULTY EQPT.....SEARCH/ISOLATE



SMOKE/FUMES/AVNCS SMOKE (Cont'd)



- **If smoke still continues or if faulty equipment confirmed isolated:**
 - GEN 2..... ON
 - BUS TIE.....AUTO
 - **If faulty equipment not confirmed isolated, before L/G extension:**
 - GEN 2..... ON
 - BUS TIE.....AUTO
- REMOVAL OF SMOKE/FUMES..... CONSIDER

Ident.: ABN-26-A-00010814.0004001 / 27 NOV 12
Applicable to: MSN 2927-3120

AIR COND SMOKE/CAB EQUIPMENT SMOKE

- **IF AIR COND SMOKE SUSPECTED:**
 - APU BLEED..... OFF
 - BLOWER..... AUTO
 - EXTRACT..... AUTO
 - PACK 1..... OFF
 - **If smoke continues:**
 - PACK 1..... ON
 - PACK 2..... OFF
 - **If smoke still continues:**
 - PACK 2..... ON
 - BLOWER..... OVRD
 - EXTRACT..... OVRD
- REMOVAL OF SMOKE/FUMES..... CONSIDER
- **IF CAB EQUIPMENT SMOKE SUSPECTED:**
 - **If smoke continues:**
 - EMER EXIT LIGHT..... ON





SMOKE/FUMES/AVNCS SMOKE (Cont'd)



COMMERCIAL..... OFF
SMOKE DISSIPATION..... CHECK
FAULTY EQPT..... SEARCH/ISOLATE

- **If smoke still continues or if faulty equipment confirmed isolated:**

COMMERCIAL..... NORM
REMOVAL OF SMOKE/FUMES..... CONSIDER

Ident.: ABN-26-A-00010814.0007001 / 27 NOV 12
Applicable to: MSN 1843-2649

AIR COND SMOKE/CAB EQUIPMENT SMOKE

- **IF AIR COND SMOKE SUSPECTED:**

APU BLEED..... OFF
BLOWER..... AUTO
EXTRACT..... AUTO
CARGO AFT ISOL VALVE..... OFF
PACK 1..... OFF

- **If smoke continues:**

PACK 1..... ON
PACK 2..... OFF

- **If smoke still continues:**

PACK 2..... ON
BLOWER..... OVRD
EXTRACT..... OVRD

REMOVAL OF SMOKE/FUMES..... CONSIDER

- **IF CAB EQUIPMENT SMOKE SUSPECTED:**

- **If smoke continues:**

EMER EXIT LIGHT..... ON
COMMERCIAL..... OFF



SMOKE/FUMES/AVNCS SMOKE (Cont'd)



SMOKE DISSIPATION..... CHECK
 FAULTY EQPT..... SEARCH/ISOLATE

- **If smoke still continues or if faulty equipment confirmed isolated:**

COMMERCIAL.....NORM

REMOVAL OF SMOKE/FUMES..... CONSIDER

Ident.: ABN-26-A-00010815.0001001 / 28 JAN 11
 Applicable to: ALL

UNDETERMINED/AVNCS/ELECTRICAL SMOKE

- **IF SMOKE SOURCE CAN NOT BE DETERMINED AND STILL CONTINUES OR AVNCS/ELECTRICAL SMOKE SUSPECTED:**

ELEC EMER CONFIG..... CONSIDER

- **IF SMOKE DISAPPEARS WITHIN 5 MINUTES:**

NORMAL VENTILATION..... RESTORE

Ident.: ABN-26-A-00010816.0001001 / 28 JAN 11
 Applicable to: MSN 1219-1233, 2649-3120

TO SET ELEC EMER CONFIG

EMER ELEC GEN 1 LINE.....OFF

EMER ELEC PWR..... MAN ON

- **WHEN EMER GEN AVAIL:**

APU GEN OFF

GEN 2..... OFF

ELEC EMER CONFIG

APPLY ECAM PROCEDURE, BUT DO NOT RESET GEN, EVEN IF REQUESTED BY ECAM.

- **JUST BEFORE L/G EXTENSION:**

GEN 2..... ON



SMOKE/FUMES/AVNCS SMOKE (Cont'd)

↑

EMER ELEC GEN 1LINE..... ON

Ident.: ABN-26-A-00010816.0002001 / 28 JAN 11
 Applicable to: MSN 1276-1843

TO SET ELEC EMER CONFIG

EMER ELEC GEN 1 LINE.....OFF
 EMER ELEC PWR..... MAN ON

● **WHEN EMER GEN AVAIL:**

APU GEN.....OFF
 GEN 2..... OFF

ELEC EMER CONFIG

APPLY ECAM PROCEDURE, BUT DO NOT RESET GEN, EVEN IF REQUESTED BY ECAM.

● **AT 3 min OR 2 000 ft AAL BEFORE LANDING:**

GEN 2..... ON
 EMER ELEC GEN 1 LINE.....ON

● **WHEN A/C IS STOPPED:**

ALL GEN.....OFF

REMOVAL OF SMOKE/FUMES

Ident.: ABN-26-00010811.0001001 / 07 OCT 13
Applicable to: MSN 2649

- EMER EXIT LIGHT..... ON

● If fuel vapors:

CAB FANS..... ON

PACK 1+2..... OFF

● If no fuel vapors:

CAB FANS..... OFF

PACK FLOW..... HI

LDG ELEV..... 10 000 FT/MEA-MORA

DESCENT (FL 100, or MEA-MORA, or minimum obstacle clearance altitude)..... INITIATE

ATC..... NOTIFY

SMOKE/FUMES/AVNCS SMOKE PROC.... CONTINUE

While descending, continue applying the appropriate steps of the SMOKE/FUMES/AVNCS SMOKE procedure depending on the suspected smoke source.

● At FL 100 OR MEA-MORA:

APU MASTER SW (if in ELEC EMER CONFIG)... ON

PACK 1+2..... OFF

MODE SEL..... MAN

MAN V/S CTL..... FULL UP

RAM AIR..... ON

APU MASTER SW..... OFF

● If smoke persists, open CKPT window:

MAX SPEED.....200 KT

COCKPIT DOOR.....OPEN

HEADSETS..... ON

PNF COCKPIT WINDOW..... OPEN

NWS A320/A321 FLEET AS PER AIRCRAFT ALLOCATION TABLE



REMOVAL OF SMOKE/FUMES (Cont'd)



● When window is open:

NON-AFFECTED PACK(s)..... ON
VISUAL WARNINGS (noisy CKPT).. MONITOR
SMOKE/FUMES/AVNCS SMOKE PROC.....
..... CONTINUE

REMOVAL OF SMOKE/FUMES

Ident.: ABN-26-00010811.0002001 / 07 OCT 13
Applicable to: MSN 1219-1843, 2927-3120

EMER EXIT LIGHT..... ON

● If fuel vapors:

CAB FANS..... ON
PACK 1+2..... OFF

● If no fuel vapors:

CAB FANS..... OFF
ECON FLOW..... OFF

LDG ELEV..... 10 000 FT/MEA-MORA
DESCENT (FL 100, or MEA-MORA, or minimum obstacle
clearance altitude)..... INITIATE
ATC..... NOTIFY

SMOKE/FUMES/AVNCS SMOKE PROC..... CONTINUE

*While descending, continue applying the appropriate
steps of the SMOKE/FUMES/AVNCS SMOKE
procedure depending on the suspected smoke source.*

● At FL 100 or MEA-MORA:

APU MASTER SW (if in ELEC EMER CONF)..... ON
PACK 1+2..... OFF
MODE SEL..... MAN
MAN V/S CTL..... FULL UP



REMOVAL OF SMOKE/FUMES (Cont'd)



RAM AIR.....ON

APU MASTER SW.....OFF

● **If smoke persists, open CKPT window:**

MAX SPEED.....200 KT

COCKPIT DOOR.....OPEN

HEADSETS.....ON

PNF COCKPIT WINDOW.....OPEN

● **When window is open:**

NON AFFECTED PACK(s).....ON

VISUAL WARNINGS (noisy CKPT)..MONITOR

SMOKE/FUMES/AVNCS SMOKE PROC.....

.....CONTINUE

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LANDING WITH SLATS OR FLAPS JAMMED

Ident.: ABN-27-00010817.0001001 / 28 FEB 14
 Applicable to: MSN 2649

LANDING CONF.....DETERMINE
Refer to QRH PER-27A Landing Distance with Slats and Flaps System Failure

- **Repeat the following until landing configuration is reached:**
 SPEED SEL..... VFE NEXT - 5 kt
Decelerate towards VFE NEXT - 5 kt but not below VLS. In case of turbulence, to avoid VFE exceedance, the pilot may decide to decelerate to a lower speed, but not below VLS.

Note:
 - The autopilot may be used down to 500 ft AGL. As it is not tuned for abnormal configurations, its behavior can be less than optimum and must be monitored
 - Approach with selected speed is recommended
 - A/THR is recommended, except in the case of a G+B SYS LO PR warning
 - OVERSPEED warning, and VLS displayed on the PFD, are computed according to the actual flaps/slats position
 - VFE and VFE NEXT are displayed on the PFD according to the FLAPS' lever position. If not displayed, use the placard speeds
 - If VLS is greater than VFE NEXT (overweight landing case), the FLAPS lever can be set in the required next position, while the speed is reduced to follow VLS reduction as surfaces extend. The VFE warning threshold should not be triggered. In this case, disconnect the A/THR. A/THR can be re-engaged when the landing configuration is established.

As speed reduces through VFE NEXT:

FLAPS LEVER.....ONE STEP DOWN

- **When landing configuration is established:**
 DECELERATE TO CALCULATED APPROACH SPEED IN FINAL APPROACH

FOR GO AROUND

The table below provides the MAX SPEEDS for the abnormal configurations.

- **If SLATS FAULT:**
 - **For circuit:**
 MAINTAIN SLATS/FLAPS CONFIGURATION
 Recommended speed: MAX SPEED - 10 kt
 - **For diversion:**
 SELECT CLEAN CONFIGURATION
 Recommended flaps retraction speed: between MAX SPEED - 10 kt and MAX SPEED.
 Recommended diversion speed: MAX SPEED - 10 kt.
- **If FLAPS FAULT:**
 - **For circuit:**
 MAINTAIN SLATS/FLAPS CONFIGURATION
 Recommended speed: MAX SPEED - 10 kt



LANDING WITH SLATS OR FLAPS JAMMED (Cont'd)



- For diversion:
- If FLAPS jammed at 0:

SELECT CLEAN CONFIGURATION

Note:

Recommended speed for slats retraction is between MAX SPEED - 10 kt and MAX SPEED of actual slat/flap position.

Normal operating speeds
- If FLAPS jammed > 0:

MAINTAIN SLAT/FLAP CONFIGURATION

Recommended speed for diversion: MAX SPEED - 10 kt

Note:

- In the majority of cases, VFE on PFD is equal to the MAX SPEED. In this case, VFE can be used as MAX SPEED. In case the SPD LIM flag is displayed on the PFD, use the MAX SPEED displayed on the ECAM status page

- In some cases, MAX SPEED - 10 kt may be a few knots higher than the VFE. In this situation, pilot may follow the VFE

- In case of a go-around with CONF FULL selected, the L/G NOT DOWN warning is triggered at landing gear retraction.

MAX SPEED					
Flaps Slats	F = 0	0 < F ≤ 1	1 < F ≤ 2	2 < F ≤ 3	F > 3
S = 0	NO LIMITATION	215 kt	200 kt	185 kt	177 kt (Not allowed)
0 < S < 1	230 kt				177 kt
S = 1					
1 < S ≤ 3	200 kt		200 kt	185 kt	
S > 3	177 kt		177 kt	177 kt	177 kt

CAUTION

For flight with SLATS or FLAPS extended, fuel consumption is increased. Refer to the fuel flow indication. As a guideline, determine the fuel consumption in clean configuration at the same altitude without airspeed limitation (e.g. From ALTERNATE FLIGHT PLANNING tables) and multiply this result by the applicable Fuel Penalty Factor provided in the QRH *Refer to QRH/PER-B Fuel Penalty Factors Tables*, to obtain the fuel penalty required to reach the destination in the current configuration.

LANDING WITH SLATS OR FLAPS JAMMED

Ident.: ABN-27-00010817.0005001 / 28 FEB 14
Applicable to: MSN 1219-1233

LANDING CONF.....DETERMINE

Refer to QRH PER-27A Landing Distance with Slats and Flaps System Failure



LANDING WITH SLATS OR FLAPS JAMMED (Cont'd)



- **Repeat the following until landing configuration is reached:**
 SPEED SEL..... VFE NEXT - 5 kt
Decelerate towards VFE NEXT - 5 kt but not below VLS. In case of turbulence, to avoid VFE exceedance, the pilot may decide to decelerate to a lower speed, but not below VLS.
- Note:
 - The autopilot may be used down to 500 ft AGL. As it is not tuned for abnormal configurations, its behavior can be less than optimum and must be monitored
 - Approach with selected speed is recommended
 - A/THR is recommended, except in the case of a G+B SYS LO PR warning
 - OVERSPEED warning, and VLS displayed on the PFD, are computed according to the actual flaps/slats position
 - VFE and VFE NEXT are displayed on the PFD according to the FLAPS' lever position. If not displayed, use the placard speeds
 - If VLS is greater than VFE NEXT (overweight landing case), the FLAPS lever can be set in the required next position, while the speed is reduced to follow VLS reduction as surfaces extend. The VFE warning threshold should not be triggered. In this case, disconnect the A/THR. A/THR can be re-engaged when the landing configuration is established.

As speed reduces through VFE NEXT:

FLAPS LEVER.....ONE STEP DOWN

- **When landing configuration is established:**
 DECELERATE TO CALCULATED APPROACH SPEED IN FINAL APPROACH

FOR GO AROUND

The table below provides the MAX SPEEDS for the abnormal configurations.

■ If SLATS FAULT:

- **For circuit:**
 MAINTAIN SLATS/FLAPS CONFIGURATION
 Recommended speed: MAX SPEED - 10 kt
- **For diversion:**
 SELECT CLEAN CONFIGURATION
 Recommended flaps retraction speed: between MAX SPEED - 10 kt and MAX SPEED.
 Recommended diversion speed: MAX SPEED - 10 kt.

■ If FLAPS FAULT:

- **For circuit:**
 MAINTAIN SLATS/FLAPS CONFIGURATION
 Recommended speed: MAX SPEED - 10 kt
- **For diversion:**
 - **If FLAPS jammed at 0:**
 SELECT CLEAN CONFIGURATION

Note: Recommended speed for slats retraction is between MAX SPEED - 10 kt and MAX SPEED of actual slat/flap position.



LANDING WITH SLATS OR FLAPS JAMMED (Cont'd)



Normal operating speeds

■ If FLAPS jammed > 0:

MAINTAIN SLAT/FLAP CONFIGURATION

Recommended speed for diversion: MAX SPEED - 10 kt

Note:

- In the majority of cases, VFE on PFD is equal to the MAX SPEED. In this case, VFE can be used as MAX SPEED. In case the SPD LIM flag is displayed on the PFD, use the MAX SPEED displayed on the ECAM status page

- In some cases, MAX SPEED - 10 kt may be a few knots higher than the VFE. In this situation, pilot may follow the VFE

- In case of a go-around with CONF FULL selected, the L/G NOT DOWN warning is triggered at landing gear retraction.

MAX SPEED

Flaps	F = 0	0 < F ≤ 1	1 < F ≤ 2	2 < F ≤ 3	F > 3			
Slats								
S = 0	NO LIMITATION	215 kt	215 kt	195 kt	190 kt (Not allowed)			
0 < S < 1	230 kt				190 kt			
S = 1								
1 < S ≤ 3	215 kt		215 kt	195 kt	190 kt			
S > 3	190 kt		190 kt	190 kt				

CAUTION

For flight with SLATS or FLAPS extended, fuel consumption is increased. Refer to the fuel flow indication. As a guideline, determine the fuel consumption in clean configuration at the same altitude without airspeed limitation (e.g. From ALTERNATE FLIGHT PLANNING tables) and multiply this result by the applicable Fuel Penalty Factor provided in the QRH *Refer to QRH/PER-B Fuel Penalty Factors Tables*, to obtain the fuel penalty required to reach the destination in the current configuration.

LANDING WITH SLATS OR FLAPS JAMMED

Ident.: ABN-27-00010817.0035001 / 28 FEB 14
Applicable to: MSN 1276-1843, 2927-3120

LANDING CONF.....DETERMINE

Refer to QRH PER-27A Landing Distance with Slats and Flaps System Failure



NWS A320/A321 FLEET AS PER AIRCRAFT ALLOCATION TABLE

LANDING WITH SLATS OR FLAPS JAMMED (Cont'd)



- **Repeat the following until landing configuration is reached:**
SPEED SEL..... VFE NEXT - 5 kt

Decelerate towards VFE NEXT - 5 kt but not below VLS. In case of turbulence, to avoid VFE exceedance, the pilot may decide to decelerate to a lower speed, but not below VLS.

- Note:
- The autopilot may be used down to 500 ft AGL. As it is not tuned for abnormal configurations, its behavior can be less than optimum and must be monitored
 - Approach with selected speed is recommended
 - A/THR is recommended, except in the case of a G+B SYS LO PR warning
 - OVERSPEED warning, and VLS displayed on the PFD, are computed according to the actual flaps/slats position
 - VFE and VFE NEXT are displayed on the PFD according to the FLAPS' lever position. If not displayed, use the placard speeds
 - If VLS is greater than VFE NEXT (overweight landing case), the FLAPS lever can be set in the required next position, while the speed is reduced to follow VLS reduction as surfaces extend. The VFE warning threshold should not be triggered. In this case, disconnect the A/THR. A/THR can be re-engaged when the landing configuration is established.

As speed reduces through VFE NEXT:

FLAPS LEVER.....ONE STEP DOWN

- **When landing configuration is established:**
DECELERATE TO CALCULATED APPROACH SPEED IN FINAL APPROACH

FOR GO AROUND

The table below provides the MAX SPEEDS for the abnormal configurations.

■ If SLATS FAULT:

- **For circuit:**
MAINTAIN SLATS/FLAPS CONFIGURATION
Recommended speed: MAX SPEED - 10 kt
- **For diversion:**
SELECT CLEAN CONFIGURATION
Recommended flaps retraction speed: between MAX SPEED - 10 kt and MAX SPEED.
Recommended diversion speed: MAX SPEED - 10 kt.

■ If FLAPS FAULT:

- **For circuit:**
MAINTAIN SLATS/FLAPS CONFIGURATION
Recommended speed: MAX SPEED - 10 kt
- **For diversion:**
 - **If FLAPS jammed at 0:**
SELECT CLEAN CONFIGURATION

Note: Recommended speed for slats retraction is between MAX SPEED - 10 kt and MAX SPEED of actual slat/flap position.



LANDING WITH SLATS OR FLAPS JAMMED (Cont'd)



Normal operating speeds

■ If FLAPS jammed > 0:

MAINTAIN SLAT/FLAP CONFIGURATION

Recommended speed for diversion: MAX SPEED - 10 kt

- Note:
- In the majority of cases, VFE on PFD is equal to the MAX SPEED. In this case, VFE can be used as MAX SPEED. In case the SPD LIM flag is displayed on the PFD, use the MAX SPEED displayed on the ECAM status page
 - In some cases, MAX SPEED - 10 kt may be a few knots higher than the VFE. In this situation, pilot may follow the VFE
 - In case of a go-around with CONF FULL selected, the L/G NOT DOWN warning is triggered at landing gear retraction.

MAX SPEED						
Slats	Flaps	F = 0	0 < F ≤ 1	1 < F ≤ 2	2 < F ≤ 3	F > 3
S = 0	NO LIMITATION	235 kt	225 kt	215 kt	195 kt	190 kt (Not allowed)
0 < S < 1						190 kt
S = 1						
1 < S ≤ 3	215 kt		215 kt	195 kt		
S > 3	190 kt		190 kt	190 kt	190 kt	

CAUTION

For flight with SLATS or FLAPS extended, fuel consumption is increased. Refer to the fuel flow indication. As a guideline, determine the fuel consumption in clean configuration at the same altitude without airspeed limitation (e.g. From ALTERNATE FLIGHT PLANNING tables) and multiply this result by the applicable Fuel Penalty Factor provided in the QRH *Refer to QRH/PER-B Fuel Penalty Factors Tables*, to obtain the fuel penalty required to reach the destination in the current configuration.

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		06 MAR 14

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 A320/A321 QUICK REFERENCE HANDBOOK	ABNORMAL AND EMERGENCY PROCEDURES	27.03A 06 MAR 14
SIDESTICK / RUDDER PEDALS STIFF		
Ident.: ABN-27-00010822.0001001 / 08 FEB 13 Applicable to: ALL		
Even if the autopilot is disengaged, the sidestick and/or the rudder pedals may be stiff. This may affect either: - Both sidesticks (CAPT and F/O) at the same time, but not the rudder pedals, or - One sidestick and the rudder pedals at the same time. The piloting technique remains the same: The aircraft remains responsive. However, the flight crew should keep in mind that they may need to use extra force on the sidesticks and/or the rudder pedals. AP DISENGAGEMENT..... CONFIRM CONSIDER TRANSFERRING CONTROL TO PNF ● For decrab, rollout, or engine failure: BE PREPARED TO APPLY EXTRA FORCE ON RUDDER PEDAL		

 A320/A321 QUICK REFERENCE HANDBOOK	ABNORMAL AND EMERGENCY PROCEDURES	27.04A 06 MAR 14
RUDDER JAM		
Ident.: ABN-27-00010819.0001001 / 08 FEB 13 Applicable to: ALL		
Rudder jamming may be detected by undue (and adverse) pedal movement during rolling maneuvers. This is because the yaw damper orders can no longer be sent to the rudder, but are fed back to the pedals. Use ECAM F/CTL SD page for a visual check of the rudder position. FOR APPROACH AVOID LANDING WTH CROSSWIND from the side where the rudder is deflected. MAX CROSSWIND for LDG 15 kt AUTO BRK.....DO NOT USE FOR LANDING.....USE NORMAL CONF SPEED AND TRAJECTORY.....STABILIZE ASAP LDG DIST PROC.....APPLY ON GROUND DIFFERENTIAL BRAKING.....USE ASAP <i>Do not use asymmetric reverse thrust.</i> <i>Use nosewheel steering handle below 70 kt.</i>		

 A320/A321 QUICK REFERENCE HANDBOOK	ABNORMAL AND EMERGENCY PROCEDURES	27.05A 06 MAR 14
STABILIZER JAM		
Ident.: ABN-27-00010821.0001001 / 08 FEB 13 Applicable to: ALL		
The ELACs may not detect a stabilizer jam when the pitch trim wheel is jammed. The flight control normal law remains active in this case and there is no ECAM warning. AP OFF MAN PITCH TRIM.....CHECK <i>The pitch trim wheel may not be fully jammed, the force needed may be higher than usual.</i> ● If MAN TRIM available: TRIM FOR NEUTRAL ELEV <i>If manual pitch trim is available, trim to maintain the elevator at the zero position (indications on ECAM F/CTL SD page).</i> APPR PROC ● If MAN TRIM not available: FOR LDG.....USE FLAP 3 <i>Do not select configuration full so as not to degrade the handling qualities.</i> GPWS LDG FLAP 3..... ON CAT 2 INOP		

FUEL IMBALANCE

Ident.: ABN-28-00010825.0002001 / 24 FEB 14
Applicable to: MSN 2649

FOB..... CHECK

Compare the FOB + FU, with the FOB at departure.
If the difference is significant, or if the FOB + FU decreases, suspect a fuel leak.

CAUTION	A fuel imbalance may indicate a fuel leak. Do not apply this procedure, if a fuel leak is suspected. <i>Refer to QRH ABN-28 FUEL LEAK.</i>

FUEL X FEED..... ON

- **On the lighter side and in the center tank:**
FUEL PUMPS.....OFF
- **When fuel is balanced:**
FUEL PUMPS (WING + CTR)..... ON
FUEL X FEED..... OFF

FUEL IMBALANCE

Ident.: ABN-28-00010825.0003001 / 24 FEB 14
Applicable to: MSN 1219-1843, 2927-3120

FOB..... CHECK

Compare the FOB + FU, with the FOB at departure.
If the difference is significant, or if the FOB + FU decreases, suspect a fuel leak.

CAUTION	A fuel imbalance may indicate a fuel leak. Do not apply this procedure, if a fuel leak is suspected. <i>Refer to QRH ABN-28 FUEL LEAK.</i>

FUEL X FEED..... ON

CTR TK L+R XFR..... OFF

- **On the lighter side:**
FUEL PUMPS.....OFF
- **When fuel is balanced:**
FUEL PUMPS..... ON
CTR TK L+R XFR..... ON
FUEL X FEED..... OFF



FUEL LEAK

Ident.: ABN-28-00010823.0009001 / 08 FEB 13

Applicable to: MSN 2649

A fuel leak may be detected, if:

- The sum of FOB and FU significantly less than FOB at engine start or is decreasing, or
- A passenger observes fuel spray from engine/pylon or wingtip/sharklet, or
- The total fuel quantity is decreasing at an abnormal rate, or
- A fuel imbalance is developing, or
- Fuel quantity in a tank is decreasing too fast (leak from engine/pylon, or hole in a tank), or
- The Fuel flow is excessive (leak from engine), or
- Fuel is smelt in the cabin.
- The destination EFOB turns to amber on the F.PLN (or on the FUEL PRED) page, or
- "DEST EFOB BELOW MIN" appears on the MCDU scratchpad.

If visibility permits, leak source may be identified by a visual check from the cabin.

WHEN A LEAK IS CONFIRMED

LAND ASAP

■ Leak from engine/pylon confirmed:

Engine fuel leak can be confirmed by excessive fuel flow indication, or a visual check.

THR LEVER (of affected engine)..... IDLE

ENG MASTER (of affected engine)..... OFF

FUEL X FEED..... USE AS RQRD

If the leak stops, the crossfeed valve can now be opened to re-balance fuel quantity, or to enable use of fuel from both wings. Do not restart the engine.

■ Leak from engine/pylon not confirmed or leak not located:

Stop any fuel transfer, and then monitor the depletion rate of each inner tank, to determine if the leak is from an engine or a wing (case 1), or from the Center tank or the APU feeding line (case 2).

FUEL X FEED..... MAINTAIN CLOSED

The crossfeed valve must remain closed to prevent the leak from affecting both sides.

CTR TK PUMP 1+2..... OFF

Each engine is fed via its associated inner tank only.

INNER TANK FUEL QUANTITIES..... MONITOR

Monitor the depletion rate of each inner tank.

■ CASE 1: If one inner tank depletes faster than the other by at least 300 kg (660 lb) in less than 30 min:

An engine leak may still be suspected. Therefore:

THR LEVER (engine on leaking side)..... IDLE

ENG MASTER (engine on leaking side)..... OFF

CTR TK PUMP 1+2..... ON

FUEL LEAK..... MONITOR

● If leak stops:

If the inner tank fuel quantity of the affected side stops decreasing, the engine leak is confirmed and stopped.

FUEL X FEED..... USE AS RQRD

The crossfeed valves can now be opened to re-balance fuel quantity, or to enable use of fuel from both wings. Do not restart the engine.



FUEL LEAK (Cont'd)



● **If leak continues (after engine shutdown):**

The inner tank fuel quantity of the affected side continues to decrease. If the leak has not stopped after engine shut down, a leak from the wing may be suspected.

ENGINE RESTART..... CONSIDER

CAUTION	Do not apply the FUEL IMBALANCE procedure. Approach and landing can be done, even with one full wing/one empty wing.

■ **CASE 2: If both inner tanks deplete at a similar rate:**

A leak from the Center tank or the APU feeding line may be suspected.

● **If fuel smell in the cabin:**

APU (if ON)..... OFF
This prevents additional fuel loss through the APU feeding line.

● **When fuel quantity in one inner tank is less than 3 t (6 600 lb):**

CTR TK PUMP 1+2..... ON

FOR LANDING

CAUTION	Do not use reversers.

FUEL LEAK

Ident.: ABN-28-00010823.0027001 / 08 FEB 13
 Applicable to: MSN 1219-1843, 2927-3120

- A fuel leak may be detected, if:
- The sum of FOB and FU significantly less than FOB at engine start or is decreasing, or
 - A passenger observes fuel spray from engine/pylon or wingtip/sharklet, or
 - The total fuel quantity is decreasing at an abnormal rate, or
 - A fuel imbalance is developing, or
 - Fuel quantity in a tank is decreasing too fast (leak from engine/pylon, or hole in a tank), or
 - A tank is overflowing (due to pipe rupture in a tank), or
 - The Fuel flow is excessive (leak from engine), or
 - Fuel is smelt in the cabin.
 - The destination EFOB turns to amber on the F.PLN (or on the FUEL PRED) page, or
 - "DEST EFOB BELOW MIN" appears on the MCDU scratchpad.

If visibility permits, leak source may be identified by a visual check from the cabin.

WHEN A LEAK IS CONFIRMED

LAND ASAP

■ **Leak from engine/pylon confirmed:**

Engine fuel leak can be confirmed by excessive fuel flow indication, or a visual check.

THR LEVER (of affected engine)..... IDLE
 ENG MASTER (of affected engine)..... OFF



FUEL LEAK (Cont'd)



FUEL X FEED.....USE AS RQRD

If the leak stops, the crossfeed valve can now be opened to re-balance fuel quantity, or to enable use of fuel from both wings. Do not restart the engine.

■ **Leak from engine/pylon not confirmed or leak not located:**

Stop any fuel transfer, and then monitor the depletion rate of each wing tank, to determine if the leak is from an engine or a wing (case 1), or from the Center tank or the APU feeding line (case 2).

FUEL X FEED..... MAINTAIN CLOSED

The crossfeed valve must remain closed to prevent the leak from affecting both sides.

CTR TK L+R XFR..... OFF

Each engine is fed via its associated wing tank only.

WING TANK FUEL QUANTITIES..... MONITOR

Monitor the depletion rate of each wing tank.

■ **CASE 1: If one wing tank depletes faster than the other by at least 300 kg (660 lb) in less than 30 min:**

An engine leak may still be suspected. Therefore:

THR LEVER (engine on leaking side).....IDLE

ENG MASTER (engine on leaking side).....OFF

FUEL LEAK..... MONITOR

● **If leak stops:**

If the wing tank fuel quantity of the affected side stops decreasing, the engine leak is confirmed and stopped.

CTR TK L+R XFR..... ON

FUEL X FEED.....USE AS RQRD

The crossfeed valves can now be opened to re-balance fuel quantity, or to enable use of fuel from both wings. Do not restart the engine.

● **If leak continues (after engine shutdown):**

The wing tank fuel quantity of the affected side continues to decrease. If the leak has not stopped after engine shut down, a leak from the wing may be suspected.

ENGINE RESTART..... CONSIDER

CTR TK XFR (non-leaking side).....ON

CAUTION	Do not apply the FUEL IMBALANCE procedure. Approach and landing can be done, even with one full wing/one empty wing.

■ **CASE 2: If both wing tanks deplete at a similar rate:**

A leak from the Center tank or the APU feeding line may be suspected.

● **If fuel smell in the cabin:**

APU (if ON).....OFF

This prevents additional fuel loss through the APU feeding line.

● **When fuel quantity in one wing tank is less than 3 t (6 600 lb):**

CTR TK L+R XFR..... ON



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		06 MAR 14
FUEL LEAK (Cont'd)		
FOR LANDING 		
CAUTION Do not use reversers.		

GRVTY FUEL FEEDING

Ident.: ABN-28-00010824.0001001 / 08 FEB 13
Applicable to: ALL

ENG MODE SEL..... IGN
AVOID NEGATIVE G FACTOR
DETERMINE GRAVITY FEED CEILING

Consult the following table to determine the flight altitude limitation.

Flight conditions at time of gravity feeding	Gravity feed ceiling
Flight time above FL 300 more than 30 min (Fuel deaerated)	Current FL ⁽¹⁾
Flight time above FL 300 less than 30 min (Fuel non-deaerated)	FL 300 ⁽¹⁾
Aircraft flight level never exceeded FL 300 (Fuel non-deaerated)	FL 150 ⁽¹⁾ , or 7 000 ft above takeoff airport, whichever is higher

(1) For JET B, gravity feed ceiling is FL 100 in all cases.

DESCEND TO GRAVITY FEED CEILING (if applicable).

- When reaching gravity feed ceiling:

FUEL X FEED..... OFF
- If no fuel leak and for aircraft handling:

If no fuel leak, and for flight with only one engine running (this engine being fed by gravity), apply the following:

FUEL X FEED..... ON

BANK ANGLE..... 1 ° WING DOWN ON LIVE ENGINE SIDE

RUDDER TRIM..... USE
- When fuel imbalance reaches 1 000 kg (2 200 lb):

BANK ANGLE..... 2 ° or 3 ° WING DOWN ON LIVE ENG SIDE

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 A320/A321 QUICK REFERENCE HANDBOOK	ABNORMAL AND EMERGENCY PROCEDURES	28.05A
		06 MAR 14

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 A320/A321 QUICK REFERENCE HANDBOOK	ABNORMAL AND EMERGENCY PROCEDURES	28.06A 06 MAR 14
ACT UNUSABLE PROC		
Ident.: ABN-28-00010828.0006001 / 19 MAR 11 Applicable to: MSN 1276-1843, 2927-3120		
■ If only ACT 1 unusable (ACT 2 empty): ACT..... AUTO <i>This stops the pump dry running.</i> ■ If only ACT 2 unusable (ACT 1 empty): ACT..... AUTO <i>This stops the pump dry running.</i> ● If ZFCG is not known, or if ZFCG is aft of 36.5 %: CTR TK XFR..... OFF <i>This ensures that at least 2 t of fuel will remain in the center tank. Keeping this fuel in the center tank helps to keep the center of gravity forward. The <u>FUEL</u> CTR TK XFR OFF caution will be displayed. Disregard the associated ECAM procedure. The <u>FUEL</u> AUTO TRANSFER FAULT caution will be displayed when a wing tank quantity reaches 5 000 kg. Disregard the associated ECAM procedure.</i> ■ If both ACT unusable: ACT..... AUTO <i>This stops the pump dry running.</i> ● If ZFCG is between 30 % and 32.5 %: CTR TK XFR..... OFF <i>This ensures that at least 2 t of fuel will remain in the center tank. Keeping this fuel in the center tank helps to keep the center of gravity forward. The <u>FUEL</u> CTR TK XFR OFF caution will be displayed. Disregard the associated ECAM procedure. The <u>FUEL</u> AUTO TRANSFER FAULT caution will be displayed when a wing tank quantity reaches 5 000 kg. Disregard the associated ECAM procedure.</i> ● If ZFCG is not known, or if ZFCG is aft of 32.5 %: CTR TK XFR..... OFF <i>This ensures that at least 2 t of fuel will remain in the center tank. Keeping this fuel in the center tank helps to keep the center of gravity forward. The <u>FUEL</u> CTR TK XFR OFF caution will be displayed. Disregard the associated ECAM procedure. The <u>FUEL</u> AUTO TRANSFER FAULT caution will be displayed when a wing tank quantity reaches 5 000 kg. Disregard the associated ECAM procedure.</i> MAXIMUM FLIGHT TIME..... 2 h 30 min <i>Ensures aft CG limits are not exceeded.</i>		

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		06 MAR 14

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HYD B + Y SYS LO PR SUMMARY

CRUISE

Ident.: ABN-29-SUM1-00010689.0001001 / 28 FEB 14
Applicable to: ALL

MAX SPD..... 320/0.77

MANEUVER WITH CARE

Flight controls remain in normal law.

FUEL: Increased fuel consumption (Refer to QRH PER-B)

For **Landing Performance** assessment, refer to QRH PER-C.

APPROACH

Ident.: ABN-29-SUM1-00010691.0001001 / 08 FEB 13
Applicable to: MSN 2649

CAT 2 INOP

SLATS SLOW/FLAPS SLOW

● **L/G gravity extension:**

GRVTY GEAR EXTN handcrank.....PULL AND TURN
(Rotate the handle clockwise 3 turns until mechanical stop)

L/G LEVER.....DOWN

GEAR DOWN indications.....CHECK

APPROACH

Ident.: ABN-29-SUM1-00010691.0002001 / 08 FEB 13
Applicable to: MSN 1219-1843, 2927-3120

CAT 2 INOP

SLATS SLOW/FLAPS SLOW

FOR LANDING.....USE FLAP 3

GPWS LDG FLAP 3.....ON

● **L/G gravity extension:**

GRVTY GEAR EXTN handcrank.....PULL AND TURN
(Rotate the handle clockwise 3 turns until mechanical stop)

L/G LEVER.....DOWN

GEAR DOWN indications.....CHECK

LANDING

Ident.: ABN-29-SUM1-00010692.0001001 / 22 MAR 11
Applicable to: ALL

FLARE Only one ELEV and two spoilers per wing

SPOILERS Only 2 per wing

REVERSER Only N°1

BRAKING NORMAL

NO NOSEWHEEL STEERING

GO-AROUND

Ident.: ABN-29-SUM1-00010693.0001001 / 28 FEB 14
Applicable to: ALL

NO GEAR RETRACTION

FUEL: Increased fuel consumption (Refer to QRH PER-B)

HYD G + B SYS LO PR SUMMARY

CRUISE

Ident.: ABN-29-SUM2-00010696.0001001 / 28 FEB 14
Applicable to: ALL

SPD BRK.....DO NOT USE
MAX SPD.....320/0.77
MANEUVER WITH CARE
ALTN LAW : PROT LOST
FUEL: Increased fuel consumption (Refer to QRH PER-B)
For **Landing Performance** assessment, refer to QRH PER-C.

APPROACH

Ident.: ABN-29-SUM2-00010698.0001001 / 08 FEB 13
Applicable to: ALL

CAT 2 INOP
SLATS JAMMED/FLAPS SLOW
ATHR.....OFF
FOR LANDING.....USE FLAP 3
GPWS LDG FLAP 3.....ON

- **When SPD 200 kt:**
 - **L/G gravity extension:**

GRVTY GEAR EXTN handcrank.....PULL AND TURN
(Rotate the handle clockwise 3 turns until mechanical stop)
L/G LEVER.....DOWN
GEAR DOWN.....CHECK
- **When L/G down: USE MAN PITCH TRIM**
 - **For Flaps extension:**

SPD SEL.....VFE NEXT - 5 KT
- **When in landing CONF and in final approach:**

DECELERATE TO CALCULATED VAPP

LANDING

Ident.: ABN-29-SUM2-00010699.0001001 / 18 AUG 10
Applicable to: MSN 1219-1843

FLARE: Only one ELEV and two spoilers per wing. No ailerons.
A/C slightly sluggish – Direct law
SPOILERS: Only 2 per wing
REVERSER: Only N°2
BRAKING: ALTERNATE
NO NOSE WHEEL STEERING

LANDING

Ident.: ABN-29-SUM2-00010699.0002001 / 22 MAR 11
Applicable to: MSN 2649-3120

FLARE: Only one ELEV and two spoilers per wing. No ailerons.
A/C slightly sluggish – Direct law
SPOILERS: Only 2 per wing
REVERSER: Only N°2
BRAKING: ALTERNATE



Continued from the previous page

GO-AROUND

Ident.: ABN-29-SUM2-00010700.0001001 / 28 FEB 14
Applicable to: ALL

- NO GEAR RETRACTION
- FUEL:** Increased fuel consumption (Refer to QRH PER-B)
- **For circuit:**
MAINTAIN SLATS/FLAPS CONFIGURATION
Recommended speed: MAX SPD - 10 kt
 - **For diversion:**
SELECT CLEAN CONFIGURATION
 - **If Slats jammed at zero:**
Normal operating speeds (MAX SPEED = 250 kt)
 - **If Slats jammed above zero:**
Recommended speed: MAX SPD - 10 kt

HYD G + Y SYS LO PR SUMMARY

CRUISE

Ident.: ABN-29-SUM3-00010703.0001001 / 28 FEB 14
Applicable to: MSN 2649

MAX SPD..... 320/0.77

MANEUVER WITH CARE

NO STABILIZER

ALTN LAW : PROT LOST

FUEL: Increased fuel consumption (Refer to QRH PER-B)

For **Landing Performance** assessment, refer to QRH PER-C.

CRUISE

Ident.: ABN-29-SUM3-00010703.0002001 / 28 FEB 14
Applicable to: MSN 1219-1843, 2927-3120

MAX SPD..... 320/0.77

MANEUVER WITH CARE

NO STABILIZER

ALTN LAW : PROT LOST

FUEL: Increased fuel consumption (Refer to QRH PER-B)

For **Landing Performance** assessment, refer to QRH PER-C.

APPROACH

Ident.: ABN-29-SUM3-00010705.0001001 / 08 FEB 13
Applicable to: ALL

CAT 2 INOP

SLATS SLOW / FLAPS JAMMED

FOR LANDING..... USE FLAP 3

GPWS FLAP MODE..... OFF

● **For Flaps extension:**

SPD SEL..... VFE NEXT - 5KT

● **When in CONF 3:**

DECELERATE TO CALCULATED VAPP

● **When in CONF 3 and VAPP:**

Stabilize at VAPP before L/G down, to be trimmed for approach.

● **L/G gravity extension:**

GRVTY GEAR EXTN handcrank..... PULL AND TURN

(Rotate the handle clockwise 3 turns until mechanical stop)

L/G LEVER..... DOWN

GEAR DOWN..... CHECK

Disregard "USE MANUAL PITCH TRIM".

MAN TRIM Unusable

LANDING

Ident.: ABN-29-SUM3-00010706.0001001 / 07 MAY 13
Applicable to: ALL

FLARE: PITCH AUTHORITY REDUCED (No stabilizer).

MAN TRIM Unusable

When Flaps jammed close to zero, consider tailstrike clearance.

Only 1 spoiler per wing – Direct law

SPOILERS: Only 1 per wing

NO REVERSER



Continued from the previous page

LANDING	
BRAKING:	BRK Y ACCU PR ONLY (7 applications) MAX BRK PR 1 000 PSI
NO NOSEWHEEL STEERING	
GO-AROUND	
Ident.: ABN-29-SUM3-00010707.0001001 / 28 FEB 14 Applicable to: ALL	
NO GEAR RETRACTION	
FUEL:	Increased fuel consumption (Refer to QRH PER-B)
● For circuit:	MAINTAIN SLATS/FLAPS CONFIGURATION Maintain speed close to VAPP (due to pitch trim unusable)
● For diversion:	■ If Flaps jammed at zero: SELECT CLEAN CONFIGURATION Maintain speed close to VAPP (due to pitch trim unusable) ■ If Flaps jammed above zero: MAINTAIN SLATS/FLAPS CONFIG Maintain speed close to VAPP (due to pitch trim unusable)

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DOUBLE AOA HEAT FAILURE

Ident.: ABN-30-00010831.0002001 / 08 FEB 13
Applicable to: ALL

- **If icing conditions cannot be avoided:**
One of affected ADRs..... OFF
NAV ADR DISAGREE

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DISPLAY UNIT FAILURE		
Ident.: ABN-31-00010833.0002001 / 08 FEB 13 Applicable to: MSN 2649-3120		
■ Affected DU flashes intermittently: This phenomenon may be due to Intermittent Electrical Power Supply Interruptions. It is evidenced by one, or a combination, of the following: - Flashing of PFD, ND, ECAM DUs (blank screen or INVALID DATA message), - Flashing of MCDU, - Intermittent flight control law reversion. ■ If the captain side is affected: Captain PFD, captain ND, ECAM DUs or MCDU 1 is(are) affected. GEN 1 OFF ■ If DUs do not stop flashing: GEN 1 ON ■ If DUs stop flashing: GEN 1 KEEP OFF <i>Keep the generator OFF for the rest of the flight.</i> RUD TRIM..... CHECK/RESET <i>Intermittent Electrical Power Supply Interruptions may cause offset in the rudder trim. Check the need of the rudder trim to be reset using the sideslip indication.</i> AP and/or A/THR.....AS RQRD APU START..... CONSIDER ■ If the first officer side is affected: First officer PFD, first officer ND, lower ECAM or MCDU 2 is(are) affected. GEN 2 OFF ■ If DUs do not stop flashing: GEN 2 ON ■ If DUs stop flashing: GEN 2 KEEP OFF <i>Keep the generator OFF for the rest of the flight.</i> RUD TRIM..... CHECK/RESET <i>Intermittent Electrical Power Supply Interruptions may cause offset in the rudder trim. Check the need of the rudder trim to be reset using the sideslip indication.</i> AP and/or A/THR.....AS RQRD APU START..... CONSIDER ■ DU is blank (with or without a large letter “F” in amber), or the display is distorted: DU (affected).....AS RQRD <i>The DU can be switched off.</i> ECAM/ND XFR (if the ECAM DUs are affected)..... USE <i>Transfer SD to the F/O or CAPT ND.</i> PFD/ND XFR (if the EFIS DUs are affected).....USE ■ INVALID DISPLAY UNIT message is displayed: This may be caused by a DU failure. FOR AUTOMATIC DU RECOVERY WAIT MORE THAN 40 s		



DISPLAY UNIT FAILURE (Cont'd)



- **If DU is automatically recovered:**
No crew action is required.
- **If DU is not recovered:**
Non-recovered DU..... AS RQRD
The DU can be switched off.
- **INVALID DATA message appears (not on all DUs):**
EIS DMC SWITCHING..... AS RQRD
- **If unsuccessful:**
DU (affected)..... OFF THEN ON

Note: The ND display may disappear, if too many waypoints and associated information are displayed. Reduce the range, or deselect WPT or CSTR, and the display will automatically recover, after about 30 s.

- **INVALID DATA message appears on all DUs:**
The autopilot, autothrust and MCDU navigation data are still available, and may be used.
FOR AUTOMATIC DUs RECOVERY WAIT MORE THAN 40 s
- **If all DUs are automatically recovered:**
No crew action is required.
- **If one or more DUs are not recovered:**
Non-recovered DUs..... OFF FOR 40 s
Non-recovered DUs..... BACK ON sequentially
 - **If the initial failure re-occurs (INVALID DATA message appears on all DUs), when switching a given DU back ON:**
Apply the entire procedure again, from the beginning.
Leave this specific DU permanently OFF.
- **Inversion of the EWD and the SD:**
ECAM UPPER DISPLAY OFF THEN ON
The same action on the EIS DMC SWITCHING selector produces the same effect.

DISPLAY UNIT FAILURE

Ident.: ABN-31-00010833.0001001 / 08 FEB 13
Applicable to: MSN 1219-1843

- **Affected DU flashes intermittently:**
This phenomenon may be due to Intermittent Electrical Power Supply Interruptions. It is evidenced by one, or a combination, of the following:
 - Flashing of PFD, ND, ECAM DUs (blank screen or diagonal line),
 - Flashing of MCDU,
 - Intermittent flight control law reversion.
- **If the captain side is affected:**
Captain PFD, captain ND, Upper ECAM or MCDU 1 is(are) affected.
GEN 1..... OFF



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DISPLAY UNIT FAILURE (Cont'd)



■ If DUs do not stop flashing:

GEN 1..... ON

■ If DUs stop flashing:

GEN 1.....KEEP OFF

Keep the generator OFF for the rest of the flight.

RUD TRIM..... CHECK/RESET

Intermittent Electrical Power Supply Interruptions may cause offset in the rudder trim. Check the need of the rudder trim to be reset using the sideslip indication.

AP and/or A/THR.....AS RQRD

APU START..... CONSIDER

■ If the first officer side is affected:

First officer PFD, first officer ND, lower ECAM or MCDU 2 is(are) affected.

GEN 2.....OFF

■ If DUs do not stop flashing:

GEN 2..... ON

■ If DUs stop flashing:

GEN 2.....KEEP OFF

Keep the generator OFF for the rest of the flight.

RUD TRIM..... CHECK/RESET

Intermittent Electrical Power Supply Interruptions may cause offset in the rudder trim. Check the need of the rudder trim to be reset using the sideslip indication.

AP and/or A/THR.....AS RQRD

APU START..... CONSIDER

■ Affected DU is blank or the display is distorted:

DU (affected).....AS RQRD

The DU can be switched off.

ECAM/ND XFR (if the ECAM DUs are affected)..... USE

Transfer SD to F/O or CAPT ND.

PFD/ND XFR (if the EFIS DUs are affected).....USE

■ Diagonal line on the affected DU:

This failure may be caused by a DMC FAULT, or a communication interruption between the DMC and DU.

EIS DMC SWITCHING..... AS RQRD

● If unsuccessful:

DU (affected)..... OFF THEN ON

Note:

The ND display may disappear, if too many waypoints and associated information are displayed. Reduce the range, or deselect WPT or CSTR, and the display will automatically recover, after about 30 s.

■ Inversion of the EWD and the SD:

ECAM UPPER DISPLAY OFF THEN ON

The same action on the EIS DMC SWITCHING selector produces the same effect.

■ **Affected DU is blank or the display is distorted:**

DU (affected).....AS RQRD

The DU can be switched off.

ECAM/ND XFR (if the ECAM DUs are affected)..... USE

Transfer SD to F/O or CAPT ND.

PFD/ND XFR (if the EFIS DUs are affected).....USE

■ **Diagonal line on the affected DU:**

This failure may be caused by a DMC FAULT, or a communication interruption between the DMC and DU.

EIS DMC SWITCHING..... AS RQRD

● **If unsuccessful:**

DU (affected)..... OFF THEN ON

Note: *The ND display may disappear, if too many waypoints and associated information are displayed. Reduce the range, or deselect WPT or CSTR, and the display will automatically recover, after about 30 s.*

■ **Inversion of the EWD and the SD:**

ECAM UPPER DISPLAY OFF THEN ON

The same action on the EIS DMC SWITCHING selector produces the same effect.

ECAM SINGLE DISPLAY

Ident.: ABN-31-00010834.0001001 / 08 FEB 13
Applicable to: ALL

- Only the EWD is available. There is no SD on the other DUs.
- **To call a SYS page:**
PRESS AND MAINTAIN the SYS Page key on the ECP.
 - **Overflow on the STATUS Page:**
PRESS AND MAINTAIN the STS key on the ECP
The first page of STATUS appears.
RELEASE IT, THEN PRESS AGAIN WITHIN 2 s
The second page of STATUS appears.
CONTINUE UNTIL THE OVERFLOW ARROW DISAPPEARS.
When the STS key is released for more than 2 s, the EWD reappears.

MULTIPLE UNDUE ECAM ALERTS

Ident.: TDU / ABN-31-00013755.0001001 / 08 FEB 13
Applicable to: MSN 2649-3120

In the case of multiple undue ECAM alerts concerning:

- ENG 1(2) N1(N2) (EGT) (FF) OVER LIMIT or
- ENG 1(2) N1(N2) (EGT) (EPR) (FF) DISCREPANCY or,
- NAV ATT(ALT) (HDG) DISCREPANCY or,
- NAV FM/GPS POS DISAGREE or,
- FUEL F.USED/FOB DISAGREE or,
- MINIMUM or HUNDRED ABOVE callouts,

possibly associated with EFIS red flags, apply the below procedure:

AFFECTED PARAMETERS.....CROSSCHECK

Crosscheck the affected parameters on the E/WD, PFD, ND or on the related SD page to confirm that the alerts are spurious.

- **If it is confirmed that the ECAM alerts are spurious, identify the faulty DMC:**

EIS DMC SWITCH.....CAPT 3

DMC 3 replaces DMC 1. If the undue alerts stop, DMC 1 is the faulty DMC.

- **If unsuccessful:**

EIS DMC SWITCH.....F/O 3

DMC 3 replaces DMC 2. If the undue alerts stop, DMC 2 is the faulty DMC.

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LOSS OF BRAKING

Ident.: ABN-32-00010835.0001001 / 08 FEB 13
Applicable to: ALL

- **If no braking available:**
REV..... MAX
BRAKE PEDALS..... RELEASE
A/SKID & N/W STRG..... OFF
BRAKE PEDALS..... PRESS
MAX BRK PR..... 1000 PSI
- **If still no braking:**
PARKING BRAKE.....SHORT AND SUCCESSIVE APPLICATIONS



RESIDUAL BRAKING

Ident.: ABN-32-00010839.0001001 / 08 FEB 13

Applicable to: ALL

- **In flight:**

BRAKE PEDALS.....APPLY SEVERAL TIMES

Press the brake pedals several times. This could set to zero the residual pressure on the alternate system.

- **If residual pressure remains:**

A/SKID & N/W STRG selector..... KEEP ON

- **If autobrake is available:**

FOR LANDING..... AUTO/BRK MED

Using MED mode gives immediate priority to normal braking upon landing gear touchdown, which cancels residual alternate pressure.

- **If autobrake is not available:**

JUST AFTER TOUCHDOWN.....APPLY BRAKING

Pressing the brake pedals gives immediate priority to normal braking, which cancels residual alternate pressure.

Beware of possible braking asymmetry after touchdown, which can be controlled by using the pedals.

Note: *If tire damage is suspected after landing, inspection of the tires is required before taxi.*

If the tire is deflated but not damaged, the aircraft can be taxied at low speed with the following limitations :

- 1. If one tire is deflated on one or more gears (ie. a maximum of three tires), the speed should be limited to 7 kt when turning.*
- 2. If two tires are deflated on the same main gear (the other main gear tires not being deflated) speed should be limited to 3 kt, and the nose wheel steering angle should be limited to 30 °.*

L/G GRAVITY EXTENSION

Ident.: ABN-32-00010836.0004001 / 08 FEB 13
Applicable to: MSN 1219-1843

CAUTION	Do not apply this procedure if at least one green triangle is displayed on each landing gear on the <u>WHEEL</u> SD page. This is sufficient to confirm that the landing gear is downlocked. Disregard any possible <u>L/G GEAR NOT DOWN</u> ECAM alert at 750 ft RA and any possible GPWS "TOO LOW GEAR" aural alert.

GRAVITY GEAR EXTN handcrank.....PULL AND TURN
Rotate the handle clockwise 3 turns until reaching the mechanical stop, even if resistance is felt.
L/G lever.....DOWN
GEAR DOWN indications (if available).....CHECK

- Note:
- 1. Depending on aircraft speed, the display may show the landing gear doors in the amber transit position.
 - 2. In the event of gravity extension, caused by the failure of both LGCIUs, landing gear position indications on ECAM are lost. LDG GEAR light on LDG GEAR control panel remain available, if LGCIU 1 is electrically supplied.
 - 3. The L/G LGCIU 2 FAULT or BRAKES SYS 1(2) FAULT warning may be spuriously triggered after a gravity extension.
 - 4. If the three green downlock arrows are not on, it is possible that the handcrank is not at the mechanical stop. Check that the handcrank is firmly against the mechanical stop.

CAUTION	Nosewheel steering is lost.

■ **If successful:**

Do not reset the free-fall system: This will avoid such undesirable effects as further loss of fluid, in the event of a leak, or possible landing gear unlocking, in the event of a gear selector valve jamming in the UP position.

Note: *The free-fall system may be reset in flight after use for training. If the green hydraulic system is available, resetting the free-fall system allows the landing gear doors to be closed and the nosewheel steering to operate.*
The flight crew should not reset the free-fall system on the ground after flight.

■ **If unsuccessful:**

LDG WITH ABNORMAL L/G procedure.....APPLY

L/G GRAVITY EXTENSION

Ident.: ABN-32-00010836.0013001 / 08 FEB 13
Applicable to: MSN 2649-3120

CAUTION	Do not apply this procedure if at least one green triangle is displayed on each landing gear on the <u>WHEEL</u> SD page. This is sufficient to confirm that the landing gear is downlocked. Disregard any possible <u>L/G GEAR NOT DOWN</u> ECAM alert at 750 ft RA and any possible GPWS "TOO LOW GEAR" aural alert.

GRAVITY GEAR EXTN handcrank.....PULL AND TURN
Rotate the handle clockwise 3 turns until reaching the mechanical stop, even if resistance is felt.





L/G GRAVITY EXTENSION (Cont'd)



L/G lever..... DOWN
GEAR DOWN indications (if available)..... CHECK

- Note:
1. Depending on aircraft speed, the display may show the landing gear doors in the amber transit position.
 2. In the event of gravity extension, caused by the failure of both LGCIUs, landing gear position indications on ECAM are lost. LDG GEAR light on LDG GEAR control panel remain available, if LGCIU 1 is electrically supplied.
 3. The L/G LGCIU 2 FAULT or BRAKES SYS 1(2) FAULT warning may be spuriously triggered after a gravity extension.
 4. If the three green downlock arrows are not on, it is possible that the handcrank is not at the mechanical stop. Check that the handcrank is firmly against the mechanical stop.

■ If successful:

Do not reset the free-fall system: This will avoid such undesirable effects as further loss of fluid, in the event of a leak, or possible landing gear unlocking, in the event of a gear selector valve jamming in the UP position.

- Note:
- The free-fall system may be reset in flight after use for training. If the green hydraulic system is available, resetting the free-fall system allows the landing gear doors to be closed.
 - The flight crew should not reset the free-fall system on the ground after flight.

■ If unsuccessful:

LDG WITH ABNORMAL L/G procedure..... APPLY

 A320/A321 QUICK REFERENCE HANDBOOK	ABNORMAL AND EMERGENCY PROCEDURES	32.04A
		12 MAR 13

LANDING WITH ABNORMAL L/G

Ident.: ABN-32-00010838.0003001 / 08 FEB 13
Applicable to: ALL

CAUTION	Do not apply this procedure if at least one green triangle is displayed on each landing gear on the <u>WHEEL</u> SD page. This is sufficient to confirm that the landing gear is downlocked. Disregard any possible <u>L/G GEAR NOT DOWN</u> ECAM alert at 750 ft RA and any possible GPWS "TOO LOW GEAR" aural alert.

PREPARATION

CABIN CREW.....NOTIFY
ATC.....NOTIFY
GALY & CAB pb-sw..... OFF
Consider fuel reduction to a safe minimum.

● **If NOSE L/G abnormal:**
CG location (if possible)..... AFT
- 10 passengers from front to rear moves the CG roughly 4 % aft.
- 10 passengers from mid to rear moves the CG roughly 2.5 % aft.

● **If one MAIN L/G abnormal:**
FUEL IMBALANCE.....CONSIDER
Open the fuel X-FEED valve and switch off the pumps on the side with landing gear normally extended.

OXYGEN CREW SUPPLY..... OFF
SIGNS.....ON
CABIN and COCKPIT.....PREPARE
- Loose equipment secured.
- Survival equipment prepared.
- Belts and shoulder harness locked.

APPROACH

GPWS SYS.....OFF
L/G lever..... CHECK DOWN
GRVTY GEAR EXTN handcrank..... TURN BACK TO NORMAL
AUTOBRAKE.....DO NOT ARM
EMER EXIT LT.....ON
CABIN REPORT.....OBTAIN
A/SKID & N/W STRG.....OFF
MAX BRAKE PR.....1000 PSI

● **If one or both MAIN L/G abnormal:**
GROUND SPOILERS..... DO NOT ARM

BEFORE LANDING

RAM AIR.....ON
BRACE FOR IMPACT..... ORDER

● **If the external light condition is poor at landing:**
DOME LT..... DIM





LANDING WITH ABNORMAL L/G (Cont'd)



FLARE, TOUCH DOWN AND ROLL OUT

Engines should be shut down sufficiently early to ensure fuel is shut off before the nacelles impact, but sufficiently late to ensure adequate hydraulic supplies for the flight controls.

Engine pumps continue to supply adequate hydraulic pressure for 30 s after first engine shutdown.

REVERSE..... DO NOT USE

● **If NOSE L/G abnormal:**

NOSE..... MAINTAIN UP

After touchdown, keep the nose off the runway by use of the elevator. Then, lower the nose on to the runway before elevator control is lost.

BRAKES (compatible with elevator efficiency)..... APPLY

ENG MASTERS..... OFF

Shutdown the engines before nose impact.

● **If one MAIN L/G abnormal:**

ENG MASTERS..... OFF

At touchdown, shut down both engines.

FAILURE SIDE WING..... MAINTAIN UP

Use roll control, as necessary, to maintain the unsupported wing up as long as possible.

DIRECTIONAL CONTROL..... MAINTAIN

Use rudder and brakes (maximum 1 000 PSI) to maintain the runway axis as long as possible.

● **If both MAIN L/G abnormal:**

ENG MASTERS..... OFF

Shut down the engines in the flare, before touchdown.

PITCH ATTITUDE (at touchdown)..... NOT LESS THAN 6°

WHEN A/C STOPPED

ENG (all) and APU FIRE pushbutton..... PUSH

Pressing the ENG FIRE pb shuts off the related hydraulic pressure within a short time.

ENG (all) and APU AGENT..... DISCH

■ **If Evacuation required:**

EVACUATION..... INITIATE

■ **If Evacuation not required:**

CABIN CREW and PASSENGERS (PA)..... NOTIFY

Ensure that all the landing gears are secured before initiating the disembarkation (before switching OFF the seat belts signs).

ASYMMETRIC BRAKING

Ident.: ABN-32-00010837.0001001 / 08 FEB 13
Applicable to: MSN 2649-3120

Normal braking is faulty, or the green hydraulic system is in low pressure, and all brakes of one gear are released.

Apply brake progressively on the available side. Counter swing with the rudder.
Avoid crosswind in excess of 10 knots from the side of the available brake.

- **If only one reverse is available:**
Do not use Reverse on the side of the available brake.

LDG DIST PROC.....APPLY

 A320/A321 QUICK REFERENCE HANDBOOK	ABNORMAL AND EMERGENCY PROCEDURES	BLANK
		12 MAR 13

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ADR CHECK PROC

Ident.: ABN-34-00015281.0001001 / 03 MAR 14
Applicable to: ALL

For the ADR CHECK procedure, apply the UNRELIABLE SPEED INDICATION procedure. *Refer to QRH ABN-34.01A-UNRELIABLE SPEED INDICATION.*

UNRELIABLE SPEED INDICATION / ADR CHECK PROC

Ident.: ABN-34-A-00012020.0002001 / 08 FEB 13
Applicable to: ALL

- **If the safe conduct of the flight is impacted:**

MEMORY ITEMS

AP/FD.....	OFF
A/THR.....	OFF
PITCH/THRUST:	
Below THRUST RED ALT.....	15°/TOGA
Above THRUST RED ALT and Below FL 100.....	10°/CLB
Above THRUST RED ALT and Above FL 100.....	5°/CLB
FLAPS (if CONF 0(1)(2)(3)).....	MAINTAIN CURRENT CONF
FLAPS (if CONF FULL).....	SELECT CONF 3 AND MAINTAIN
SPEEDBRAKES.....	CHECK RETRACTED
L/G.....	UP
When at, or above MSA or Circuit Altitude:	
Level off for troubleshooting	
GPS ALTITUDE.....	Display on MCDU

Ident.: ABN-34-A-00012021.0004001 / 08 FEB 13
Applicable to: MSN 2933-3120

- **To level off for troubleshooting:**

AP/FD.....	OFF
A/THR.....	OFF

Note: Check the actual slat/flap configuration on ECAM, since flap auto-retraction may occur.

PITCH / THRUST FOR INITIAL LEVEL OFF				
SLATS / FLAPS EXTENDED				
CONF	Speed	Above 78 t	78 t - 66 t	Below 66 t
		Pitch (°) / Thrust (% N1)		
3	F	4.0 / 69.5	4.0 / 65.3	4.0 / 60.7
2	F	7.0 / 67.7	7.0 / 63.5	7.0 / 59.0
1 + F	S	3.0 / 66.5	3.0 / 62.5	3.0 / 57.8
1	S	7.5 / 64.4	7.5 / 60.3	7.5 / 55.7
CLEAN				
FL	Speed	Pitch (°) / Thrust (% N1)		
Below FL 250	265 kt	3.5 / 69.2	2.5 / 66.8	1.5 / 64.3
FL 250 - FL 280	300 kt	2.0 / 80.0	1.5 / 78.3	1.0 / 76.4
Above FL 280	M 0.76	2.5 / 82.7	2.0 / 81.0	1.5 / 78.3



UNRELIABLE SPEED INDICATION
/ ADR CHECK PROC (Cont'd)



FLYING TECHNIQUE TO STABILIZE SPEED

Adjust pitch in order to fly the required flight path.
When target pitch is reached, flying intended flight path, adjust thrust to target:
If the aircraft pitch tends to increase, aircraft is slow, then increase thrust;
If the aircraft pitch tends to decrease, aircraft is fast, then decrease thrust.

Ident.: ABN-34-A-00012021.0007001 / 08 FEB 13
Applicable to: MSN 2649

- To level off for troubleshooting:
- AP/FD..... OFF
- A/THR..... OFF

Note: Check the actual slat/flap configuration on ECAM, since flap auto-retraction may occur.

PITCH / THRUST FOR INITIAL LEVEL OFF				
SLATS / FLAPS EXTENDED				
CONF	Speed	Above 67 t	67 t - 57 t	Below 57 t
		Pitch (°) / Thrust (% N1)		
3	F	7.5 / 61.8	7.5 / 57.5	7.5 / 53.0
2	F	9.0 / 61.6	9.0 / 57.3	9.0 / 52.8
1 + F	S	4.5 / 60.2	4.5 / 56.1	4.5 / 51.2
1	S	7.5 / 58.0	7.5 / 53.9	7.5 / 48.9
CLEAN				
FL	Speed	Pitch (°) / Thrust (% N1)		
Below FL 200	250 kt	4.0 / 62.4	3.0 / 60.1	2.0 / 58.3
FL 200 - FL 320	275 kt	3.0 / 73.4	2.0 / 71.6	1.5 / 70.2
Above FL 320	M 0.76	2.5 / 79.2	2.5 / 78.1	2.0 / 77.0

FLYING TECHNIQUE TO STABILIZE SPEED

Adjust pitch in order to fly the required flight path.
When target pitch is reached, flying intended flight path, adjust thrust to target:
If the aircraft pitch tends to increase, aircraft is slow, then increase thrust;
If the aircraft pitch tends to decrease, aircraft is fast, then decrease thrust.

Ident.: ABN-34-A-00012021.0008001 / 08 FEB 13
Applicable to: MSN 1276-1843, 2927

- To level off for troubleshooting:
- AP/FD..... OFF
- A/THR..... OFF

Note: Check the actual slat/flap configuration on ECAM, since flap auto-retraction may occur.



UNRELIABLE SPEED INDICATION
 / ADR CHECK PROC (Cont'd)



PITCH / THRUST FOR INITIAL LEVEL OFF				
SLATS / FLAPS EXTENDED				
CONF	Speed	Above 81 t	81 t - 68 t	Below 68 t
		Pitch (°) / Thrust (% N1)		
3	F	4.0 / 70.7	4.0 / 66.4	4.0 / 61.5
2	F	7.0 / 68.9	7.0 / 64.6	7.0 / 59.9
1 + F	S	3.5 / 67.6	3.0 / 63.8	3.0 / 58.6
1	S	7.5 / 65.5	7.5 / 61.4	7.5 / 56.5
CLEAN				
FL	Speed	Pitch (°) / Thrust (% N1)		
Below FL 200	270 kt	3.5 / 69.0	2.5 / 66.1	1.5 / 63.7
FL 200 - FL 280	300 kt	2.0 / 78.9	1.5 / 75.9	1.0 / 73.9
Above FL 280	M 0.76	2.5 / 83.7	2.5 / 81.6	2.0 / 79.0

FLYING TECHNIQUE TO STABILIZE SPEED

Adjust pitch in order to fly the required flight path.

When target pitch is reached, flying intended flight path, adjust thrust to target:

If the aircraft pitch tends to increase, aircraft is slow, then increase thrust;

If the aircraft pitch tends to decrease, aircraft is fast, then decrease thrust.

Ident.: ABN-34-A-00012021.0010001 / 08 FEB 13
 Applicable to: MSN 1219-1233

- To level off for troubleshooting:

AP/FD..... OFF

A/THR..... OFF

Note: Check the actual slat/flap configuration on ECAM, since flap auto-retraction may occur.

PITCH / THRUST FOR INITIAL LEVEL OFF				
SLATS / FLAPS EXTENDED				
CONF	Speed	Above 81 t	81 t - 68 t	Below 68 t
		Pitch (°) / Thrust (% N1)		
3	F	4.0 / 71.4	4.0 / 66.7	4.0 / 61.4
2	F	6.5 / 69.6	6.5 / 64.7	6.5 / 59.7
1 + F	S	3.0 / 67.9	3.0 / 63.4	3.0 / 58.5
1	S	7.0 / 66.5	7.0 / 62.2	7.0 / 57.0
CLEAN				
FL	Speed	Pitch (°) / Thrust (% N1)		
Below FL 200	270 kt	3.5 / 71.8	2.5 / 68.3	1.5 / 66.2
FL 200 - FL 280	300 kt	2.0 / 83.5	1.5 / 81.6	1.0 / 80.0
Above FL 280	M 0.76	2.5 / 87.4	2.0 / 85.8	1.5 / 83.8

FLYING TECHNIQUE TO STABILIZE SPEED

Adjust pitch in order to fly the required flight path.



UNRELIABLE SPEED INDICATION
 / ADR CHECK PROC (Cont'd)



When target pitch is reached, flying intended flight path, adjust thrust to target:
If the aircraft pitch tends to increase, aircraft is slow, then increase thrust;
If the aircraft pitch tends to decrease, aircraft is fast, then decrease thrust.

Ident.: ABN-34-A-00012033.0002001 / 03 MAR 14
 Applicable to: ALL

WHEN FLIGHT PATH IS STABILIZED

PROBE/WINDOW HEAT.....ON

TECHNICAL RECOMMENDATIONS:

- Respect Stall Warning
- To monitor speed, refer to IRS Ground Speed, or GPS Ground Speed variations
- **If remaining altitude indication is unreliable:**
 - Do not use FPV and/or V/S, which are affected.
 - ATC altitude is affected. Notify the ATC.
 - Refer to GPS altitude: altitude variations may be used to control level flight, and is an altitude cue.
 - Refer to Radio Altimeter.

CAUTION	If the failure is due to radome destruction, the drag will increase and therefore N1 must be increased by 5 %. Fuel flow will increase by about 27 %.

AFFECTED ADR IDENTIFICATION:

Crosscheck all speed indications and *Refer to the Operating Speeds table of the QRH In Flight Performance Section (for F, S speeds) or Refer to Severe Turbulence table of QRH Operational Data Section (for speed in clean conf):*

- **If at least one ADR is reliable:**
 - Faulty ADR(s).....OFF
 - REMAINING AIR DATA.....CONFIRM
 - Alternate sources may be used to evaluate the air data:*
 - GPS altitude
 - GPS and IRS Ground Speeds, taking into account altitude and wind effect.
- **If affected ADR(s) cannot be identified or all ADRs are affected:**
 - ONE ADR.....KEEP ON
Keep one ADR ON to maintain the STALL WARNING protection.
 - TWO ADRs.....OFF
This prevents the flight control laws from using two coherent but unreliable ADR data.
 - LDG CONF.....USE FLAP 3
 - APP SPD.....VLS +10
 - LDG DIST PROC.....APPLY
- **To return to departure airport:**
 - Keep takeoff configuration preferably.



UNRELIABLE SPEED INDICATION
/ ADR CHECK PROC (Cont'd)



Refer to Approaches tables.

- **To accelerate and clean up after takeoff:**

Accelerate and clean up the aircraft in level flight:
THRUST..... CLB
FLAPS..... RETRACT
Retract from 3 or 2 to 1, once CLB thrust is set.
Retract from 1 to 0, when the aircraft pitch is lower than the pitch for S speed (*Refer to Level-Off table*)
Once in clean configuration, *Refer to Climb, Cruise and Descent tables, Refer to Approaches tables* for flight continuation.

■ **Other cases:**

Refer to Climb, Cruise and Descent tables, Refer to Approaches tables for flight continuation.

Ident.: ABN-34-A-00012022.0007001 / 24 FEB 14
Applicable to: MSN 2649

CLIMB

Set the thrust to CL.

CLEAN				
FL	Speed	Above 67 t	67 t - 57 t	Below 57 t
		Pitch (°) / Thrust (% N1)		
Below FL 50	250 kt	10.0 / CLB	10.5 / CLB	11.5 / CLB
FL 50 - FL 100		9.0 / CLB	9.5 / CLB	10.0 / CLB
FL 100 - FL 150		8.0 / CLB	8.5 / CLB	8.5 / CLB
FL 150 - FL 200		7.0 / CLB	7.0 / CLB	7.0 / CLB
FL 200 - FL 250	275 kt	5.0 / CLB	5.0 / CLB	5.0 / CLB
FL 250 - FL 320		4.0 / CLB	4.0 / CLB	4.0 / CLB
Above FL 320	M 0.76	3.5 / CLB	3.5 / CLB	3.5 / CLB

CRUISE

Adjust N1 to maintain approximate level flight with pitch attitude held constant.
When time permits *Refer to QRH OPS SEVERE TURBULENCE* and adjust pitch to maintain level flight.

CLEAN				
FL	Speed	Above 67 t	67 t - 57 t	Below 57 t
		Pitch (°) / Thrust (% N1)		
Below FL 200	250 kt	4.0 / 62.4	3.0 / 60.1	2.0 / 58.3
FL 200 - FL 320	275 kt	3.0 / 73.4	2.0 / 71.6	1.5 / 70.2
Above FL 320	M 0.76	2.5 / 79.2	2.5 / 78.1	2.0 / 77.0

DESCENT

Set the thrust to IDLE.



UNRELIABLE SPEED INDICATION
/ ADR CHECK PROC (Cont'd)



CLEAN				
FL	Speed	Above 67 t	67 t - 57 t	Below 57 t
		Pitch (°) / Thrust (% N1)		
Above FL 320	M 0.76	-0.5 / IDLE	-1.0 / IDLE	-1.5 / IDLE
FL 320 - FL 200	275 kt	0.0 / IDLE	-0.5 / IDLE	-1.5 / IDLE
FL 200 - FL 100	250 kt	1.5 / IDLE	0.5 / IDLE	-0.5 / IDLE
Below FL 100	250 kt	1.0 / IDLE	0.0 / IDLE	-1.0 / IDLE
Below FL 100	G-DOT	2.0 / IDLE	2.5 / IDLE	2.5 / IDLE

Ident.: ABN-34-A-00012022.0004001 / 24 FEB 14
Applicable to: MSN 2933-3120

CLIMB

Set the thrust to CL.

CLEAN				
FL	Speed	Above 78 t	78 t - 66 t	Below 66 t
		Pitch (°) / Thrust (% N1)		
Below FL 50	265 kt	9.0 / CLB	9.5 / CLB	10.5 / CLB
FL 50 - FL 100		8.0 / CLB	8.5 / CLB	9.5 / CLB
FL 100 - FL 150		7.0 / CLB	7.5 / CLB	8.0 / CLB
FL 150 - FL 200		6.5 / CLB	6.5 / CLB	7.0 / CLB
FL 200 - FL 250		5.5 / CLB	5.5 / CLB	5.5 / CLB
FL 250 - FL 280	300 kt	3.0 / CLB	3.0 / CLB	3.0 / CLB
Above FL 280	M 0.76	3.5 / CLB	3.5 / CLB	3.5 / CLB

CRUISE

Adjust N1 to maintain approximate level flight with pitch attitude held constant.
When time permits *Refer to QRH OPS SEVERE TURBULENCE* and adjust pitch to maintain level flight.

CLEAN				
FL	Speed	Above 78 t	78 t - 66 t	Below 66 t
		Pitch (°) / Thrust (% N1)		
Below FL 250	265 kt	3.5 / 69.2	2.5 / 66.8	1.5 / 64.3
FL 250 - FL 280	300 kt	2.0 / 80.0	1.5 / 78.3	1.0 / 76.4
Above FL 280	M 0.76	2.5 / 82.7	2.0 / 81.0	1.5 / 78.3

DESCENT

Set the thrust to IDLE.

CLEAN				
FL	Speed	Above 78 t	78 t - 66 t	Below 66 t
		Pitch (°) / Thrust (% N1)		
Above FL 280	M 0.76	-1.0 / IDLE	-1.5 / IDLE	-2.5 / IDLE
FL 280 - FL 250	300 kt	-1.0 / IDLE	-1.5 / IDLE	-2.5 / IDLE



UNRELIABLE SPEED INDICATION / ADR CHECK PROC (Cont'd)



CLEAN				
FL	Speed	Above 78 t	78 t - 66 t	Below 66 t
		Pitch (°) / Thrust (% N1)		
FL 250 - FL 100	265 kt	0.5 / IDLE	-0.5 / IDLE	-1.5 / IDLE
Below FL 100	265 kt	0.5 / IDLE	-0.5 / IDLE	-2.0 / IDLE
Below FL 100	G-DOT	2.0 / IDLE	2.0 / IDLE	2.0 / IDLE

Ident.: ABN-34-A-00012022.0010001 / 24 FEB 14
Applicable to: MSN 1219-1233

CLIMB

Set the thrust to CL.

CLEAN				
FL	Speed	Above 81 t	81 t - 68 t	Below 68 t
		Pitch (°) / Thrust (% N1)		
Below FL 50	270 kt	8.5 / CLB	9.0 / CLB	10.0 / CLB
FL 50 - FL 100		7.5 / CLB	8.0 / CLB	8.5 / CLB
FL 100 - FL 150		7.0 / CLB	7.0 / CLB	7.5 / CLB
FL 150 - FL 200		5.5 / CLB	5.5 / CLB	6.0 / CLB
FL 200 - FL 270	300 kt	3.5 / CLB	3.5 / CLB	3.5 / CLB
FL 270 - FL 280		2.5 / CLB	2.5 / CLB	2.5 / CLB
Above FL 280	M 0.76	3.0 / CLB	3.0 / CLB	3.0 / CLB

CRUISE

Adjust N1 to maintain approximate level flight with pitch attitude held constant.
When time permits *Refer to QRH OPS SEVERE TURBULENCE* and adjust pitch to maintain level flight.

CLEAN				
FL	Speed	Above 81 t	81 t - 68 t	Below 69 t
		Pitch (°) / Thrust (% N1)		
Below FL 200	270 kt	3.5 / 71.8	2.5 / 68.3	1.5 / 66.2
FL 200 - FL 280	300 kt	2.0 / 83.5	1.5 / 81.6	1.0 / 80.0
Above FL 280	M 0.76	2.5 / 87.4	2.0 / 85.8	1.5 / 83.8

DESCENT

Set the thrust to IDLE.

CLEAN				
FL	Speed	Above 81 t	81 t - 68 t	Below 68 t
		Pitch (°) / Thrust (% N1)		
Above FL 280	M 0.76	-1.5 / IDLE	-1.5 / IDLE	-2.5 / IDLE
FL 280 - FL 200	300 kt	-1.0 / IDLE	-2.0 / IDLE	-3.0 / IDLE
FL 200 - FL 100	270 kt	0.5 / IDLE	-0.5 / IDLE	-2.0 / IDLE



UNRELIABLE SPEED INDICATION
/ ADR CHECK PROC (Cont'd)



CLEAN				
FL	Speed	Above 81 t	81 t - 68 t	Below 68 t
		Pitch (°) / Thrust (% N1)		
Below FL 100	270 kt	0.0 / IDLE	-1.0 / IDLE	-2.5 / IDLE
Below FL 100	G-DOT	1.5 / IDLE	1.5 / IDLE	1.5 / IDLE

Ident.: ABN-34-A-00012022.0008001 / 24 FEB 14
Applicable to: MSN 1276-1843, 2927

CLIMB

Set the thrust to CL.

CLEAN				
FL	Speed	Above 81 t	81 t - 68 t	Below 68 t
		Pitch (°) / Thrust (% N1)		
Below FL 50	270 kt	8.5 / CLB	9.0 / CLB	10.0 / CLB
FL 50 - FL 100		8.0 / CLB	8.0 / CLB	9.0 / CLB
FL 100 - FL 150		7.0 / CLB	7.0 / CLB	8.0 / CLB
FL 150 - FL 200		6.0 / CLB	6.0 / CLB	6.5 / CLB
FL 200 - FL 250	300 kt	4.0 / CLB	4.0 / CLB	4.0 / CLB
FL 250 - FL 280		3.5 / CLB	3.0 / CLB	3.0 / CLB
Above FL 280	M 0.76	3.5 / CLB	3.5 / CLB	3.5 / CLB

CRUISE

Adjust N1 to maintain approximate level flight with pitch attitude held constant.
When time permits *Refer to QRH OPS SEVERE TURBULENCE* and adjust pitch to maintain level flight.

CLEAN				
FL	Speed	Above 81 t	81 t - 68 t	Below 68 t
		Pitch (°) / Thrust (% N1)		
Below FL 200	270 kt	3.5 / 69.0	2.5 / 66.1	1.5 / 63.7
FL 200 - FL 280	300 kt	2.0 / 78.9	1.5 / 75.9	1.0 / 73.9
Above FL 280	M 0.76	2.5 / 83.7	2.5 / 81.6	2.0 / 79.0

DESCENT

Set the thrust to IDLE.

CLEAN				
FL	Speed	Above 81 t	81 t - 68 t	Below 68 t
		Pitch (°) / Thrust (% N1)		
Above FL 280	M 0.76	-1.0 / IDLE	-1.5 / IDLE	-2.0 / IDLE
FL 280 - FL 200	300 kt	-0.5 / IDLE	-1.5 / IDLE	-2.5 / IDLE
FL 200 - FL 100	270 kt	0.5 / IDLE	-0.5 / IDLE	-1.5 / IDLE



UNRELIABLE SPEED INDICATION
 / ADR CHECK PROC (Cont'd)



CLEAN				
FL	Speed	Above 81 t	81 t - 68 t	Below 68 t
		Pitch (°) / Thrust (% N1)		
Below FL 100	270 kt	0.5 / IDLE	-0.5 / IDLE	-2.0 / IDLE
Below FL 100	G-DOT	2.0 / IDLE	2.0 / IDLE	2.0 / IDLE

Ident.: ABN-34-A-00012578.0013001 / 08 FEB 13
 Applicable to: MSN 2649

INITIAL AND INTERMEDIATE APPROACH IN LEVEL FLIGHT

The approach phase between Green Dot speed (clean configuration) and the landing configuration (CONF 3), is flown in level flight.

LANDING GEAR UP IN LEVEL FLIGHT				
CONF	Speed (kts)	Above 67 t	67 t - 57 t	Below 57 t
		Pitch (°) / Thrust (% N1)		
0	G-DOT	5.5 / 55.7	5.5 / 51.5	6.0 / 47.3
1	S	7.5 / 58.2	7.5 / 54.0	7.5 / 49.0
1 + F ⁽¹⁾	S	4.5 / 60.2	4.5 / 56.1	4.5 / 51.2
2	F	9.0 / 61.7	9.0 / 57.3	9.0 / 52.8
LANDING GEAR DOWN IN LEVEL FLIGHT (EXPECT GRVTY EXTENSION)				
3	F	7.5 / 67.2	7.5 / 62.7	7.5 / 57.9

(1) Due to the fact that the speed is unreliable, the SFCC may select the 1 + F configuration in approach, instead of 1.

FINAL APPROACH AT STANDARD - 3 ° DESCENT FLIGHT PATH

LANDING GEAR DOWN				
CONF	Speed (kts)	Above 67 t	67 t - 55 t	Below 57 t
		Pitch (°) / Thrust (% N1)		
3	VLS + 10	4.5 / 48.0	4.5 / 44.4	4.5 / 41.4

FLYING TECHNIQUE TO STABILIZE SPEED

Adjust pitch in order to fly the required flight path.
 When target pitch is reached, flying intended flight path, adjust thrust to target.
If the aircraft pitch tends to increase, aircraft is slow, then increase thrust.
If the aircraft pitch tends to decrease, aircraft is fast, then decrease thrust.

Ident.: ABN-34-A-00012578.0014001 / 08 FEB 13
 Applicable to: MSN 2933-3120

INITIAL AND INTERMEDIATE APPROACH IN LEVEL FLIGHT

The approach phase between Green Dot speed (clean configuration) and the landing configuration (CONF 3), is flown in level flight.



UNRELIABLE SPEED INDICATION
/ ADR CHECK PROC (Cont'd)



LANDING GEAR UP IN LEVEL FLIGHT				
CONF	Speed (kts)	Above 78 t	78 t - 66 t	Below 66 t
		Pitch (°) / Thrust (% N1)		
0	G-DOT	5.0 / 62.2	5.0 / 58.5	5.0 / 53.8
1	S	7.5 / 64.4	7.5 / 60.3	7.5 / 55.8
1+F ⁽¹⁾	S	3.0 / 66.5	3.0 / 62.5	3.0 / 57.8
2	F	7.0 / 67.5	7.0 / 63.6	7.0 / 59.0
LANDING GEAR DOWN IN LEVEL FLIGHT (EXPECT GRVTY EXTENSION)				
3	F	4.0 / 73.8	4.0 / 69.9	4.0 / 64.9

(1) Due to the fact that the speed is unreliable, the SFCC may select the 1 + F configuration in approach, instead of 1.

FINAL APPROACH AT STANDARD - 3 ° DESCENT FLIGHT PATH

LANDING GEAR DOWN				
CONF	Speed (kts)	Above 78 t	78 t - 66 t	Below 66 t
		Pitch (°) / Thrust (% N1)		
3	VLS + 10	2.0 / 58.8	2.0 / 54.9	1.5 / 50.9

FLYING TECHNIQUE TO STABILIZE SPEED

Adjust pitch in order to fly the required flight path.
When target pitch is reached, flying intended flight path, adjust thrust to target.
If the aircraft pitch tends to increase, aircraft is slow, then increase thrust.
If the aircraft pitch tends to decrease, aircraft is fast, then decrease thrust.

Ident.: ABN-34-A-00012578.0004001 / 08 FEB 13
Applicable to: MSN 1219-1233

INITIAL AND INTERMEDIATE APPROACHI IN LEVEL FLIGHT

The approach phase between Green Dot speed (clean configuration) and the landing configuration (CONF 3), is flown in level flight.

LANDING GEAR UP IN LEVEL FLIGHT				
CONF	Speed (kts)	Above 81 t	81 t - 68 t	Below 68 t
		Pitch (°) / Thrust (% N1)		
0	G-DOT	5.0 / 64.4	5.0 / 60.4	5.0 / 55.2
1	S	7.0 / 66.5	7.0 / 62.3	7.0 / 57.2
1 + F ⁽¹⁾	S	3.0 / 67.9	3.0 / 63.4	3.0 / 58.5
2	F	6.5 / 69.2	6.5 / 64.8	6.5 / 59.8
LANDING GEAR DOWN IN LEVEL FLIGHT (EXPECT GRVTY EXTENSION)				
3	F	4.0 / 75.9	4.0 / 71.7	4.0 / 66.0

(1) Due to the fact that the speed is unreliable, the SFCC may select the 1 + F configuration in approach, instead of 1.



UNRELIABLE SPEED INDICATION
 / ADR CHECK PROC (Cont'd)



FINAL APPROACH AT STANDARD - 3 ° DESCENT FLIGHT PATH

LANDING GEAR DOWN				
CONF	Speed (kts)	Above 81 t	81 t - 68 t	Below 68 t
		Pitch (°) / Thrust (% N1)		
3	VLS + 10	1.5 / 60.4	1.5 / 55.7	1.0 / 50.5

FLYING TECHNIQUE TO STABILIZE SPEED
 Adjust pitch in order to fly the required flight path.
 When target pitch is reached, flying intended flight path, adjust thrust to target.
If the aircraft pitch tends to increase, aircraft is slow, then increase thrust.
If the aircraft pitch tends to decrease, aircraft is fast, then decrease thrust.

Ident.: ABN-34-A-00012578.0016001 / 08 FEB 13
 Applicable to: MSN 1276-1843, 2927

INITIAL AND INTERMEDIATE APPROACH IN LEVEL FLIGHT

The approach phase between Green Dot speed (clean configuration) and the landing configuration (CONF 3), is flown in level flight.

LANDING GEAR UP IN LEVEL FLIGHT				
CONF	Speed (kts)	Above 81 t	81 t - 68 t	Below 68 t
		Pitch (°) / Thrust (% N1)		
0	G-DOT	5.0 / 63.4	5.0 / 59.4	5.0 / 54.6
1	S	7.5 / 65.6	7.5 / 61.4	7.5 / 56.6
1 + F ⁽¹⁾	S	3.5 / 67.6	3.0 / 63.8	3.0 / 58.6
2	F	7.0 / 68.5	7.0 / 64.7	7.0 / 59.9
LANDING GEAR DOWN IN LEVEL FLIGHT (EXPECT GRVTY EXTENSION)				
3	F	4.0 / 74.8	4.0 / 71.0	4.0 / 65.8

(1) Due to the fact that the speed is unreliable, the SFCC may select the 1 + F configuration in approach, instead of 1.

FINAL APPROACH AT STANDARD - 3 ° DESCENT FLIGHT PATH

LANDING GEAR DOWN				
CONF	Speed (kts)	Above 81 t	81 t - 68 t	Below 68 t
		Pitch (°) / Thrust (% N1)		
3	VLS + 10	2.0 / 60.0	2.0 / 56.0	1.5 / 51.6

FLYING TECHNIQUE TO STABILIZE SPEED
 Adjust pitch in order to fly the required flight path.
 When target pitch is reached, flying intended flight path, adjust thrust to target.
If the aircraft pitch tends to increase, aircraft is slow, then increase thrust.
If the aircraft pitch tends to decrease, aircraft is fast, then decrease thrust.

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		06 MAR 14

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ADR 1 + 2 + 3 FAULT

Ident.: ABN-34-C-00010844.0116001 / 18 NOV 11
Applicable to: MSN 1276-1843

The ECAM does not display this procedure. In the case of a triple ADR failure, the ECAM only displays dual ADR warnings.

ADR P/B (all)..... OFF
STBY INST USE

Note: Disregard ECAM actions for AIR DATA SWTG and ATC since these have no effect in the case of a total loss of ADRs.

F/CTL ALTN LAW
(PROT LOST)

Note: When the aircraft is in clean configuration, the flight control law reverts to direct law.

Note: The STALL WARNING is lost.

MAX SPEED..... 320/0.82

See the following table for the IAS/M relationship for 0.82

FL	390	370	350	330	310	290	280 and below
MAX SPD	252	265	278	290	305	315	320

WHEN L/G DN: DIRECT LAW

At landing gear extension, control reverts to direct law in pitch, as well as in roll .

Note: Use manual control of cabin pressurization.

MODE SEL.....MAN
MAN V/S CTL.....AS RQRD

Ident.: ABN-34-C-00010844.0018001 / 18 NOV 11
Applicable to: MSN 1219-1233, 2649-3120

The ECAM does not display this procedure. In the case of a triple ADR failure, the ECAM only displays dual ADR warnings.

ADR P/B (all)..... OFF
STBY INST USE

Note: Disregard ECAM actions for AIR DATA SWTG and ATC since these have no effect in the case of a total loss of ADRs.

F/CTL ALTN LAW
(PROT LOST)

MAX SPEED..... 320/0.82

See the following table for the IAS/M relationship for 0.82

FL	390	370	350	330	310	290	280 and below
MAX SPD	252	265	278	290	305	315	320

WHEN L/G DN: DIRECT LAW

At landing gear extension, control reverts to direct law in pitch, as well as in roll .



ADR 1 + 2 + 3 FAULT (Cont'd)



Note:

Use manual control of cabin pressurization.

MODE SEL.....MAN

MAN V/S CTL.....AS RQRD

Ident.: ABN-34-C-00012012.0002001 / 30 JAN 13

Applicable to: ALL

STATUS	
MAX SPEED..... 320/0.82 RUD WITH CARE ABV 160 kt See ⁽¹⁾ APPR PROC: FOR LDG..... USE FLAP 3 GPWS LDG FLAP 3..... ON APPR SPD..... VREF + 10 KT LDG DIST PROC..... APPLY ● FOR L/G GRVTY EXTN (not on the ECAM): GRVTY GEAR EXTN handcrank..... PULL AND TURN L/G LEVER..... DOWN WHEN L/G DN: DIRECT LAW ● DURING FINAL APPR MAN V/S CTL..... FULL UP Note: In case of a go-around, respect maximum speed 215 kt in CONF 1+F, due to the loss of flap auto retraction to CONF 1.	INOP SYS ATT LIMIT OVSP LIMIT ALPHA LIMIT ADR 1+2+3 WINDSHEAR DET RUD TRV LIM 1+2 A/THR AP 1+2 GPWS Other INOP SYS CAB PR 1+2 RAT auto extension ATC ALTI MODE TCAS  L/G RETRACT
CAUTION Check that the outflow valve is fully open, and that cabin altitude is at airfield elevation before opening the doors.	

⁽¹⁾ At slats' extension, full rudder travel authority is recovered.

NAV FM / GPS POS DISAGREE

Ident.: ABN-34-D-00010843.0002001 / 08 FEB 13

Applicable to: MSN 1219, 1276-3120

A/C POS.....

CHECK

The following procedure is not displayed on the ECAM:

- **If the ECAM alert is displayed during takeoff initiation:**
Continue takeoff and monitor navigation.
- **If the ECAM alert is displayed during Climb, Cruise, or Descent:**
Check accuracy on the MCDU PROG page:
 - **If the ESTIMATED accuracy is below the REQUIRED accuracy:**
NAV mode and ND ARC/ROSE NAV may be used.
 - **If the ESTIMATED accuracy is above the REQUIRED accuracy:**
HDG/TRK mode and raw data must be used.

When possible, compare the positions of both FM's with the GPIRS position, on the MCDU POSITION MONITOR page:

- **If one FM position agrees with the onside GPIRS position:**
Use the associated AP/FD.
- **If not:**
Deselect GPS and use raw data.
- **If the ECAM alert is displayed during ILS/LOC approach (LOC green):**
Continue the approach.
- **If the ECAM alert is displayed during a RNP approach:**
Go around if visual references are not sufficient.
- **If the ECAM alert is displayed during a GLS  approach:**
Go around if visual references are not sufficient.
- **If the ECAM alert is displayed during a VOR, VOR-DME, NDB, or NDB-DME approach:**
Select HDG or TRK, and use raw data.

Ident.: ABN-34-D-00010843.0006001 / 08 FEB 13

Applicable to: MSN 1233

A/C POS.....

CHECK

The following procedure is not displayed on the ECAM:

- **If the ECAM alert is displayed during takeoff initiation:**
Continue takeoff and monitor navigation.
- **If the ECAM alert is displayed during Climb, Cruise, or Descent:**
Check accuracy on the MCDU PROG page:
 - **If the ESTIMATED accuracy is below the REQUIRED accuracy:**
NAV mode and ND ARC/ROSE NAV may be used.





NAV FM / GPS POS DISAGREE (Cont'd)



- **If the ESTIMATED accuracy is above the REQUIRED accuracy:**

HDG/TRK mode and raw data must be used.

Consider switching off the terrain functions of the GPWS.

When possible, compare the positions of both FMs with the GPIRS position, on the MCDU POSITION MONITOR page:

- **If one FM position agrees with the onside GPIRS position:**

Use the associated AP/FD.

- **If not:**

Deselect GPS and use raw data.

- **If the ECAM alert is displayed during ILS/LOC approach (LOC green):**

Continue the approach.

- **If the ECAM alert is displayed during a RNP approach:**

Go around if visual references are not sufficient.

- **If the ECAM alert is displayed during a GLS  approach:**

Go around if visual references are not sufficient.

- **If the ECAM alert is displayed during a VOR, VOR-DME, NDB, or NDB-DME approach:**

Select HDG or TRK, and use raw data.

EGPWS ALERTS

Ident.: ABN-34-00010840.0005001 / 08 FEB 13
 Applicable to: ALL

CAUTION	During night or IMC conditions, apply the procedure immediately. Do not delay reaction for diagnosis. During daylight VMC conditions, with terrain and obstacles clearly in sight, the alert may be considered cautionary. Take positive corrective action until the alert stops or a safe trajectory is ensured.

■ **“PULL UP” - “TERRAIN AHEAD PULL UP”-“OBSTACLE AHEAD PULL UP”:**

Simultaneously:

AP..... OFF
 PITCH..... PULL UP

Pull to full backstick and maintain in that position.

THRUST LEVERS..... TOGA
 SPEED BRAKES lever..... CHECK RETRACTED
 BANK..... WINGS LEVEL or ADJUST

● **When flight path is safe and the warning stops:**

Decrease pitch attitude and accelerate.

● **When speed is above VLS, and vertical speed is positive:**

Clean up aircraft as required.

■ **“TERRAIN TERRAIN” - “TOO LOW TERRAIN”:**

Adjust the flight path or initiate a go-around.

■ **"TERRAIN AHEAD" - "OBSTACLE AHEAD":**

Adjust the flight path. Stop descent. Climb and/or turn, as necessary, based on analysis of all available instruments and information.

■ **“SINK RATE” - “DON’T SINK”:**

Adjust pitch attitude and thrust to silence the alert.

■ **“TOO LOW GEAR” - “TOO LOW FLAPS”:**

Perform a go-around.

■ **“GLIDE SLOPE”:**

Establish the aircraft on the glideslope, or set the G/S MODE pb to OFF, if flight below the glideslope is intentional (non precision approach (NPA)).

IR ALIGNMENT IN ATT MODE

Ident.: ABN-34-00010845.0002001 / 08 FEB 13
 Applicable to: ALL

If IR alignment is lost, the navigation mode is inoperative (red ATT flag on PFD and red HDG flag on ND). Aircraft attitude and heading may be recovered by applying the following procedure.
 Aircraft must stay level with constant speed during 30 s.

- MODE SELECTOR..... ATT
 ALIGN light on during 30 s.
 ATT MODE displayed on CDU.
- LEVEL A/C ATTITUDE..... HOLD
 CONSTANT A/C SPEED..... MAINTAIN
 DISPLAY SYS switch..... AFFECTED SYS
 DISPLAY DATA switch..... HDG

■ MCDU INITIALIZATION:

- DATA (MCDU KEY)..... PRESS
 The DATA INDEX page is displayed.
- IRS MONITOR (2L KEY).....PRESS
 The IRS MONITOR page is displayed.
- A/C HEADING..... ENTER
 The flight crew must enter the heading in the SET HDG field (5R KEY).

■ CDU INITIALIZATION:

- Depending on the CDU keyboard installed, an “H” may be written on the “5” key:
- If “H” is written on the “5” key:
- H KEY.....PRESS
 Degree marker, 0 decimal point, ENT and CLR lights come on.
- A/C HEADING..... ENTER
- If “H” is not written on the “5” key:
- A/C HEADING..... ENTER
 Enter aircraft magnetic heading on CDU keyboard. Then press ENT key to enter data.
 Example : to enter heading 320 °, dial 3, 2, 0, 0 then press ENT.
 Heading will be displayed on the associated ND.
 “HDG-ATT MODE” will be displayed on CDU.

Due to IR drift, magnetic heading has to be periodically crosschecked with standby compass and updated if required.

TCAS WARNINGS

Ident.: ABN-34-00010841.0008001 / 08 FEB 13
Applicable to: ALL

- **Traffic advisory: “TRAFFIC” messages:**
Do not perform a maneuver based on a TA alone.

- **Resolution advisory : All “CLIMB” and “DESCEND” or “MAINTAIN VERTICAL SPEED MAINTAIN” or “ADJUST VERTICAL SPEED ADJUST” or “MONITOR VERTICAL SPEED” type messages:**
 AP (if engaged)..... OFF
 BOTH FDs..... OFF
 Respond promptly and smoothly to an RA by adjusting or maintaining the pitch, as required, to reach the green area and/or avoid the red area of the vertical speed scale.

Note: Avoid excessive maneuvers while aiming to keep the vertical speed just outside the red area of the VSI, and within the green area. If necessary, use the full speed range between V_{amax} and V_{MAX}.

- Respect stall, GPWS, or windshear warning.
Notify ATC.

- **GO AROUND procedure must be performed when an RA “CLIMB” or “INCREASE CLIMB” is triggered on final approach:**

Note: Resolution Advisories (RA) are inhibited below 900 ft.

- **When “CLEAR OF CONFLICT” is announced:**
 Resume normal navigation in accordance with ATC clearance.
 AP/FD can be re-engaged as desired.

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 A320/A321 QUICK REFERENCE HANDBOOK	ABNORMAL AND EMERGENCY PROCEDURES	36.01A 11 DEC 13
AIR ENG 1+2 BLEED FAULT		
Ident.: ABN-36-00010847.0002001 / 03 DEC 13 Applicable to: ALL		
Apply this procedure when both engine bleed supply systems are failed. In this configuration, the CAB PR EXCESS CAB ALT may trigger. In this case, apply the ECAM procedure associated to the CAB PR EXCESS CAB ALT before continuing this paper procedure. ■ If either <u>AIR</u> ENG 1 BLEED FAULT or <u>AIR</u> ENG 1 BLEED ABNORM PR and If either <u>AIR</u> ENG 2 BLEED FAULT or <u>AIR</u> ENG 2 BLEED ABNORM PR: X BLEED SHUT ENG 1+2 BLEED OFF THEN ON <i>Attempt one reset only. If the fault occurs again, consider reset unsuccessful.</i> ● If unsuccessful (no ENG BLEED recovered): DESCENT TO FL 100/MEA-MORA.....INITIATE ENG 1+2 BLEED OFF APU BLEED..... OFF APU..... START WING A.ICE..... OFF AVOID ICING CONDITIONS ● When below FL 200 and APU AVAIL: WING A.ICE..... KEEP OFF APU BLEED..... ON ■ If APU BLEED available: MAX FL 200 ENG 1+2 BLEED..... ON APU BLEED..... OFF ● If no ENG BLEED recovered: APU BLEED..... ON ENG 1+2 BLEED..... OFF ● If PACK 1 inoperative: X BLEED..... OPEN ■ If APU BLEED not available: DESCENT TO FL 100/MEA-MORA..... CONTINUE APU BLEED..... OFF ● When at or below FL 100/MEA-MORA: ENG 1+2 BLEED..... ON ● If no ENG BLEED recovered: ENG 1+2 BLEED..... OFF ● When DIFF PR < 1 PSI: RAM AIR..... ON MAX FL..... 100/MEA-MORA ● If ice accretion during approach: APPR SPD..... VLS + 10 KT		





AIR ENG 1+2 BLEED FAULT (Cont'd)



LDG DIST PROC..... APPLY

■ In all other cases:

Applicable when at least one engine bleed supply system is failed due to LEAK, ENG FIRE, Start Air Valve Failed Open:

DESCENT TO FL 100/MEA-MORA..... INITIATE
X BLEED..... SHUT
ENG 1+2 BLEED..... OFF
APU BLEED..... OFF
APU..... START
WING A.ICE..... OFF
AVOID ICING CONDITIONS

■ If only AIR ENG 2 BLEED FAULT or AIR ENG 2 BLEED ABNORM PR:

● When at or below FL 100/MEA-MORA:

ENG 2 BLEED..... ON

● If no ENG 2 BLEED recovered:

ENG 2 BLEED..... OFF

● When DIFF PR < 1 PSI:

RAM AIR..... ON

MAX FL..... 100/MEA-MORA

● If ice accretion during approach:

APPR SPD..... VLS + 10 KT

LDG DIST PROC..... APPLY

■ If only AIR ENG 1 BLEED FAULT or AIR ENG 1 BLEED ABNORM PR:

● When at or below FL 200 and APU AVAIL:

WING A.ICE..... KEEP OFF

APU BLEED..... ON

■ If APU BLEED available:

MAX FL 200

ENG 1 BLEED..... ON

APU BLEED..... OFF

● If no ENG 1 BLEED recovered:

APU BLEED..... ON

ENG 1 BLEED..... OFF

■ If APU BLEED not available:

DESCENT TO FL 100/MEA-MORA..... CONTINUE

APU BLEED..... OFF

● When at or below FL 100/MEA-MORA:

ENG 1 BLEED..... ON

● If no ENG 1 BLEED recovered:

ENG 1 BLEED..... OFF



AIR ENG 1+2 BLEED FAULT (Cont'd)



- When DIFF PR < 1 PSI:**
RAM AIR..... ON
MAX FL..... 100/MEA-MORA
- If ice accretion during approach:**
APPR SPD..... VLS + 10 KT
LDG DIST PROC..... APPLY

■ If neither AIR ENG 1(2) BLEED FAULT nor AIR ENG 1(2) BLEED ABNORM PR on any side:

- When at or below FL 100/MEA-MORA**
and
DIFF PR < 1 PSI:
RAM AIR..... ON
MAX FL..... 100/MEA-MORA
- If ice accretion during approach:**
APPR SPD..... VLS + 10 KT
LDG DIST PROC..... APPLY

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ENG DUAL FAILURE - FUEL REMAINING

Ident.: ABN-70-A-00010849.0005001 / 03 FEB 11
Applicable to: MSN 1219-1233

As long as none of the engines recover, the flight crew should apply this paper procedure and then, if time permits, clear ECAM alerts and check the ECAM. STATUS page.

LAND ASAP

ENG MODE SEL.....IGN
THRUST LEVERS.....IDLE
OPTIMUM RELIGHT SPD.....300 KT

In the case of a speed indication failure (volcanic ash), Pitch attitude for optimum relight speed is:

WEIGHT	Pitch (°)
At or below 60 000 kg/132 000 lb	-4.5
70 000 kg/154 000 lb	-3.5
80 000 kg/176 000 lb	-2.5

At 300 kt, the aircraft can fly up to about 2 nm/1 000 ft.

LANDING STRATEGY.....DETERMINE

Determine whether a runway can be reached, or the most appropriate place for a forced landing/ditching.

EMER ELEC PWR.....MAN ON
VHF1/HF1 /ATC1.....USE
ATC.....NOTIFY
FAC 1.....OFF THEN ON

Resetting FAC 1 also enables rudder trim recovery, even if no indication is available.

- IF NO RELIGHT AFTER 30 SEC:
ENG MASTERS.....OFF 30 S/ON
Unassisted start attempts can be repeated until successful, or until APU bleed is available.
- IF UNSUCCESSFUL:
CREW OXY MASKS (Above FL 100).....ON
- WHEN BELOW FL 250
APU (IF AVAIL).....START
- WHEN BELOW FL 200
WING ANTI ICE.....OFF
APU BLEED.....ON
ENG MASTERS (one at a time).....OFF 30 S/ON

Ident.: ABN-70-A-00010849.0014001 / 03 FEB 11
Applicable to: MSN 2649

As long as none of the engines recover, the flight crew should apply this paper procedure and then, if time permits, clear ECAM alerts and check the ECAM. STATUS page.

LAND ASAP

ENG MODE SEL.....IGN
THRUST LEVERS.....IDLE



ENG DUAL FAILURE - FUEL REMAINING (Cont'd)



OPTIMUM RELIGHT SPD..... 280 KT

Note: In the case of an “ENG DUAL FAILURE” during high power operations (i.e. climb, cruise), it is mandatory to fly at or above the optimum relight speed in order to prevent engine core lock.

In the case of a speed indication failure (volcanic ash), Pitch attitude for optimum relight speed is:

WEIGHT	Pitch (°)
At or below 50 000 kg/110 000 lb	-2.5
60 000 kg/132 000 lb	-1.5
70 000 kg/154 000 lb	-0.5

At 280 kt, the aircraft can fly up to about 2.2 nm per 1 000 ft (with no wind).

LANDING STRATEGY..... DETERMINE

Determine whether a runway can be reached, or the most appropriate place for a forced landing/ditching.

EMER ELEC PWR..... MAN ON

VHF1/HF1  /ATC1..... USE

ATC..... NOTIFY

FAC 1..... OFF THEN ON

Resetting FAC 1 also enables rudder trim recovery, even if no indication is available.

● IF NO RELIGHT AFTER 30 SEC:

ENG MASTERS..... OFF 30 S/ON

Unassisted start attempts can be repeated until successful, or until APU bleed is available.

● IF UNSUCCESSFUL:

CREW OXY MASKS (Above FL 100)..... ON

● WHEN BELOW FL 250

APU (IF AVAIL)..... START

● WHEN BELOW FL 200

WING ANTI ICE..... OFF

APU BLEED..... ON

ENG MASTERS (one at a time)..... OFF 30 S/ON

Ident.: ABN-70-A-00010849.0015001 / 03 FEB 11
Applicable to: MSN 2927-3120

As long as none of the engines recover, the flight crew should apply this paper procedure and then, if time permits, clear ECAM alerts and check the ECAM. STATUS page.

LAND ASAP

ENG MODE SEL..... IGN

THRUST LEVERS..... IDLE



ENG DUAL FAILURE - FUEL REMAINING (Cont'd)



OPTIMUM RELIGHT SPD.....280 KT

Note: In the case of an “**ENG DUAL FAILURE**” during high power operations (i.e. climb, cruise), it is mandatory to fly at or above the optimum relight speed in order to prevent engine core lock.

In the case of a speed indication failure (volcanic ash), Pitch attitude for optimum relight speed is:

WEIGHT	Pitch (°)
At or below 60 000 kg/132 000 lb	-2.5
70 000 kg/154 000 lb	-1.5
80 000 kg/176 000 lb	-0.5

At 280 kt, the aircraft can fly up to about 2.4 nm per 1 000 ft (with no wind).

LANDING STRATEGY.....DETERMINE

Determine whether a runway can be reached, or the most appropriate place for a forced landing/ditching.

EMER ELEC PWR.....MAN ON

VHF1/HF1  /ATC1.....USE

ATC.....NOTIFY

FAC 1.....OFF THEN ON

Resetting FAC 1 also enables rudder trim recovery, even if no indication is available.

● IF NO RELIGHT AFTER 30 SEC:

ENG MASTERS.....OFF 30 S/ON

Unassisted start attempts can be repeated until successful, or until APU bleed is available.

● IF UNSUCCESSFUL:

CREW OXY MASKS (Above FL 100).....ON

● WHEN BELOW FL 250

APU (IF AVAIL).....START

● WHEN BELOW FL 200

WING ANTI ICE.....OFF

APU BLEED.....ON

ENG MASTERS (one at a time).....OFF 30 S/ON

Ident.: ABN-70-A-00010849.0033001 / 21 MAR 11
Applicable to: MSN 1276-1843

Apply first the following actions required by the ECAM **ENG DUAL FAILURE** (if not already done) :

LAND ASAP

EMER ELEC PWR (if EMER GEN not in line).....MAN ON

THR LEVERS.....IDLE

FAC 1.....OFF THEN ON

ENG MODE SEL.....IGN

Then, as long as none of the engines recover, apply the following paper procedure, and if time permits, clear ECAM alerts, and check the ECAM STATUS page.



ENG DUAL FAILURE - FUEL REMAINING (Cont'd)



OPTIMUM RELIGHT SPD..... 280 KT

Note: In the case of an “ENG DUAL FAILURE” during high power operations (i.e. climb, cruise), it is mandatory to fly at or above the optimum relight speed in order to prevent engine core lock.

In the case of a speed indication failure (volcanic ash), Pitch attitude for optimum relight speed is:

WEIGHT	Pitch (°)
At or below 60 000 kg/132 000 lb	-2.5
70 000 kg/154 000 lb	-1.5
80 000 kg/176 000 lb	-0.5

At 280 kt, the aircraft can fly up to about 2.4 nm per 1 000 ft (with no wind).

LANDING STRATEGY..... DETERMINE

Determine whether a runway can be reached, or the most appropriate place for a forced landing/ditching.

VHF1/HF1  /ATC1..... USE

ATC..... NOTIFY

● IF NO RELIGHT AFTER 30 SEC:

ENG MASTERS..... OFF 30 S/ON

Unassisted start attempts can be repeated until successful, or until APU bleed is available.

● IF UNSUCCESSFUL:

CREW OXY MASKS (Above FL 100)..... ON

● WHEN BELOW FL 250

APU (IF AVAIL)..... START

● WHEN BELOW FL 200

WING ANTI ICE..... OFF

APU BLEED..... ON

ENG MASTERS (one at a time)..... OFF 30 S/ON



ENG DUAL FAILURE - FUEL REMAINING (Cont'd)



Ident.: ABN-70-A-00012034.0040001 / 03 FEB 11
Applicable to: MSN 2649

- When APU bleed is available or if engine restart is definitively considered impossible:
OPTIMUM SPEED.....REFER TO TABLE BELOW

GREEN DOT SPEED WITH ALL ENGINES INOPERATIVE (KNOTS)			
Weight (1 000 kg)	At or below FL 200	FL 300	FL 400
78	236	246	256
76	232	242	252
72	224	234	244
68	216	226	236
64	208	218	228
60	200	210	220
56	192	202	212
52	184	194	204
48	176	186	196
44	168	178	188
40	160	170	180

At green dot speed, the aircraft can fly up to approximately 2.5 nm per 1 000 ft (with no wind).
Average rate of descent is approximately 1 600 ft/min.

CABIN AND COCKPIT..... PREPARE
CABIN SIGNS..... ON
COMMERCIAL..... OFF
USE RUDDER WITH CARE

- WHEN BELOW FL 150
RAM AIR..... ON



ENG DUAL FAILURE - FUEL REMAINING (Cont'd)



Ident.: ABN-70-A-00012034.0061001 / 03 FEB 11
Applicable to: MSN 1219-1276

- When APU bleed is available or if engine restart is definitively considered impossible:
OPTIMUM SPEED.....REFER TO TABLE BELOW

GREEN DOT SPEED WITH ALL ENGINES INOPERATIVE (KNOTS)			
Weight (1 000 kg)	At or below FL 200	FL 300	FL 400
94	251	261	271
92	248	258	268
88	242	252	262
86	239	249	259
84	236	246	256
82	233	243	253
80	230	240	250
78	227	237	247
76	224	234	244
74	221	231	241
72	218	228	238
70	215	225	235
68	212	222	232
66	209	219	229
64	206	216	226
62	203	213	223
60	200	210	220
58	197	207	217
56	194	204	214
54	191	201	211
52	188	198	208

At green dot speed, the aircraft can fly up to approximately 2.5 nm per 1 000 ft (with no wind).
Average rate of descent is approximately 1 700 ft/min.

CABIN AND COCKPIT..... PREPARE
CABIN SIGNS..... ON
GALY & CAB..... OFF
USE RUDDER WITH CARE

- WHEN BELOW FL 150
RAM AIR..... ON



ENG DUAL FAILURE - FUEL REMAINING (Cont'd)



Ident.: ABN-70-A-00012034.0077001 / 03 FEB 11
Applicable to: MSN 1843, 2927-3120

- **When APU bleed is available or if engine restart is definitively considered impossible:**
OPTIMUM SPEED.....REFER TO TABLE BELOW

GREEN DOT SPEED WITH ALL ENGINES INOPERATIVE (KNOTS)			
Weight (1 000 kg)	At or below FL 200	FL 300	FL 400
94	251	261	271
92	248	258	268
88	242	252	262
86	239	249	259
84	236	246	256
82	233	243	253
80	230	240	250
78	227	237	247
76	224	234	244
74	221	231	241
72	218	228	238
70	215	225	235
68	212	222	232
66	209	219	229
64	206	216	226
62	203	213	223
60	200	210	220
58	197	207	217
56	194	204	214
54	191	201	211
52	188	198	208

At green dot speed, the aircraft can fly up to approximately 2.5 nm per 1 000 ft (with no wind).
Average rate of descent is approximately 1 700 ft/min

CABIN AND COCKPIT.....PREPARE
CABIN SIGNS.....ON
COMMERCIAL.....OFF
USE RUDDER WITH CARE

- **WHEN BELOW FL 150**
RAM AIR.....ON

Ident.: ABN-70-A-00012035.0001001 / 21 MAR 11
Applicable to: MSN 2649

APPROACH PREPARATION

Note: Final descent slope, when configured (CONF 3 ; L/G DOWN) will be approximately 1.2 nm per 1 000 ft (with no wind).



ENG DUAL FAILURE - FUEL REMAINING (Cont'd)



BARO..... SET
CREW MASKS/OXY SUPPLY (below FL 100)..... OFF

Ident.: ABN-70-A-00012035.0002001 / 21 MAR 11
Applicable to: MSN 1219-1843, 2927-3120

APPROACH PREPARATION

Note: Final descent slope, when configured (CONF 3 and L/G DOWN) will be approximately 1.1 nm per 1 000 ft (with no wind).

BARO..... SET
CREW MASKS/OXY SUPPLY (below FL 100)..... OFF

Ident.: ABN-70-A-00012035.0004001 / 21 MAR 11
Applicable to: MSN 1276-1843, 2927

IF FORCED LANDING ANTICIPATED

APPROACH

FOR LDG..... USE FLAP 3
Only slats extend, and slowly.

MIN APPR SPEED..... 160 KT
VAPP..... DETERMINE

Vapp is the maximum between VREF + 30 kt/160 kt:

Weight (1 000 kg)	52	56	60	64	68	72	76	80	84	88	92	94
Vapp	160	160	160	160	163	167	171	174	178	181	185	187

● At a suitable altitude (not below 3 000 ft AGL), configure the aircraft for landing (CONF 3 ; L/G DOWN):

● When in CONF 3 and VAPP:
GRAVITY GEAR EXTN handcrank..... PULL AND TURN
Flight controls revert to direct law at landing gear extension. Wait for CONF 3 and VAPP before extending the landing gear to enable the aircraft to be trimmed for approach. Disregard "USE MAN PITCH TRIM" on the PFD, because the stabilizer is frozen in the position where it was at, when the windmilling was insufficient to provide hydraulic power.

● When L/G downlocked
L/G lever..... DOWN
APPROACH SPEED..... ADJUST
Adjust the speed to the above given Vapp. Nevertheless, to reach the landing field/runway, the approach speed may be adjusted up to 215 kt (max speed with slats extended).

GND SPLR..... ARM
MAX BRK PR..... 1000 PSI

AT 2 000 FT AGL

CABIN..... NOTIFY FOR LANDING

AT 500 FT AGL

BRACE FOR IMPACT..... ORDER



ENG DUAL FAILURE - FUEL REMAINING (Cont'd)



AT TOUCHDOWN

ENG MASTERS..... OFF

APU MASTER SW..... OFF

BRAKES ON ACCU ONLY

AFTER LANDING

● When the aircraft has stopped:

PARKING BRK..... ON

ATC..... NOTIFY

FIRE pushbutton (ENG and APU)..... PUSH

AGENTS (ENG and APU)..... DISCH

Engine Agent 2 is not available.

■ If Evacuation required:

EVACUATION..... INITIATE

ELT  CHECK EMITTING

If not, switch on the transmitter.

■ If Evacuation not required:

CABIN CREW and PASSENGERS (PA)..... NOTIFY

Ident.: ABN-70-A-00012036.0007001 / 21 MAR 11

Applicable to: MSN 2649

IF FORCED LANDING ANTICIPATED

APPROACH

FOR LDG..... USE FLAP 3

Only slats extend, and slowly.

MIN APPR SPEED..... 150 KT

VAPP..... DETERMINE

Vapp is the maximum between VREF + 25 kt/150 kt:

Weight (1 000 kg)	40	44	48	52	56	60	64	68	72	76	78
Vapp	150	150	150	150	150	154	159	163	167	171	172

● At a suitable altitude (not below 3 000 ft AGL), configure the aircraft for landing (CONF 3 ; L/G DOWN):

● When in CONF 3 and VAPP:

GRAVITY GEAR EXTN handcrank..... PULL AND TURN

Flight controls revert to direct law at landing gear extension. Wait for CONF 3 and VAPP before extending the landing gear to enable the aircraft to be trimmed for approach. Disregard "USE MAN PITCH TRIM" on the PFD, because the stabilizer is frozen in the position where it was at, when the windmilling was insufficient to provide hydraulic power.

● When L/G downlocked

L/G lever..... DOWN

APPROACH SPEED..... ADJUST

Adjust the speed to the above given Vapp. Nevertheless, to reach the landing field/runway, the approach speed may be adjusted up to 200 kt (max speed with slats extended).



ENG DUAL FAILURE - FUEL REMAINING (Cont'd)



GND SPLR..... ARM
MAX BRK PR..... 1000 PSI

AT 2 000 FT AGL

CABIN.....NOTIFY FOR LANDING

AT 500 FT AGL

BRACE FOR IMPACT..... ORDER

AT TOUCHDOWN

ENG MASTERS..... OFF
APU MASTER SW..... OFF
BRAKES ON ACCU ONLY

AFTER LANDING

- When the aircraft has stopped:

PARKING BRK.....ON
ATC.....NOTIFY
FIRE pushbutton (ENG and APU).....PUSH
AGENTS (ENG and APU).....DISCH
Engine Agent 2 is not available.

■ If Evacuation required:

EVACUATION.....INITIATE
ELT  CHECK EMITTING
If not, switch on the transmitter.

■ If Evacuation not required:

CABIN CREW and PASSENGERS (PA).....NOTIFY

Ident.: ABN-70-A-00012036.0011001 / 21 MAR 11
Applicable to: MSN 1219-1233

IF FORCED LANDING ANTICIPATED

APPROACH

FOR LDG.....USE FLAP 3
Only slats extend, and slowly.
MIN APPR SPEED..... 160 KT
VAPP..... DETERMINE
Vapp is the maximum between VREF + 30 kt/160 kt:



Weight (1 000 kg)	52	56	60	64	68	72	76	80	84	88	92	94
Vapp	160	160	160	160	163	167	170	174	178	181	185	186

ENG DUAL FAILURE - FUEL REMAINING (Cont'd)



- **At a suitable altitude (not below 3 000 ft AGL), configure the aircraft for landing (CONF 3 ; L/G DOWN):**
 - **When in CONF 3 and VAPP:**

GRAVITY GEAR EXTN handcrank..... PULL AND TURN
Flight controls revert to direct law at landing gear extension. Wait for CONF 3 and VAPP before extending the landing gear to enable the aircraft to be trimmed for approach. Disregard "USE MAN PITCH TRIM" on the PFD, because the stabilizer is frozen in the position where it was at, when the windmilling was insufficient to provide hydraulic power.
 - **When L/G downlocked**

L/G lever..... DOWN
APPROACH SPEED..... ADJUST
Adjust the speed to the above given Vapp. Nevertheless, to reach the landing field/runway, the approach speed may be adjusted up to 215 kt (max speed with slats extended).
- GND SPLR..... ARM
MAX BRK PR..... 1000 PSI

AT 2 000 FT AGL

CABIN.....NOTIFY FOR LANDING

AT 500 FT AGL

BRACE FOR IMPACT.....ORDER

AT TOUCHDOWN

ENG MASTERS..... OFF
APU MASTER SW..... OFF
BRAKES ON ACCU ONLY

AFTER LANDING

- **When the aircraft has stopped:**

PARKING BRK.....ON
ATC.....NOTIFY
FIRE pushbutton (ENG and APU).....PUSH
AGENTS (ENG and APU).....DISCH
Engine Agent 2 is not available.
- **If Evacuation required:**

EVACUATION.....INITIATE
ELT  CHECK EMITTING
If not, switch on the transmitter.
- **If Evacuation not required:**

CABIN CREW and PASSENGERS (PA).....NOTIFY



ENG DUAL FAILURE - FUEL REMAINING (Cont'd)



Ident.: ABN-70-A-00012036.0015001 / 21 MAR 11
Applicable to: MSN 2933-3120

IF FORCED LANDING ANTICIPATED

APPROACH

FOR LDG.....USE FLAP 3
Only slats extend, and slowly.
MIN APPR SPEED..... 160 KT
VAPP..... DETERMINE
Vapp is the maximum between VREF + 30 kt/160 kt:

Weight (1 000 kg)	52	56	60	64	68	72	76	80	84	86
Vapp	160	160	160	160	163	167	171	174	178	180

- At a suitable altitude (not below 3 000 ft AGL), configure the aircraft for landing (CONF 3 ; L/G DOWN):
 - When in CONF 3 and VAPP:

GRAVITY GEAR EXTN handcrank..... PULL AND TURN
Flight controls revert to direct law at landing gear extension. Wait for CONF 3 and VAPP before extending the landing gear to enable the aircraft to be trimmed for approach. Disregard "USE MAN PITCH TRIM" on the PFD, because the stabilizer is frozen in the position where it was at, when the windmilling was insufficient to provide hydraulic power.
 - When L/G downlocked

L/G lever..... DOWN
APPROACH SPEED..... ADJUST
Adjust the speed to the above given Vapp. Nevertheless, to reach the landing field/runway, the approach speed may be adjusted up to 215 kt (max speed with slats extended).

GND SPLR..... ARM
MAX BRK PR..... 1000 PSI

AT 2 000 FT AGL

CABIN.....NOTIFY FOR LANDING

AT 500 FT AGL

BRACE FOR IMPACT..... ORDER

AT TOUCHDOWN

ENG MASTERS..... OFF
APU MASTER SW..... OFF
BRAKES ON ACCU ONLY

AFTER LANDING

- When the aircraft has stopped:

PARKING BRK.....ON
ATC.....NOTIFY
FIRE pushbutton (ENG and APU).....PUSH



ENG DUAL FAILURE - FUEL REMAINING (Cont'd)



AGENTS (ENG and APU).....DISCH
Engine Agent 2 is not available.

■ **If Evacuation required:**

 EVACUATION.....INITIATE
 ELT  CHECK EMITTING
If not, switch on the transmitter.

■ **If Evacuation not required:**

 CABIN CREW and PASSENGERS (PA).....NOTIFY

Ident.: ABN-70-A-00012037.0004001 / 21 MAR 11
 Applicable to: MSN 1276-1843, 2927

IF DITCHING ANTICIPATED

APPROACH

FOR LDG.....USE FLAP 3
Only slats extend, and slowly.

MIN APPR SPEED.....160 KT
 VAPP.....DETERMINE
Vapp is the maximum between VREF + 30 kt/160 kt:

Weight (1 000 kg)	52	56	60	64	68	72	76	80	84	88	92	94
Vapp	160	160	160	160	163	167	171	174	178	181	185	187

- **At a suitable altitude (not below 3 000 ft AGL), configure the aircraft for ditching (CONF 3 ; L/G UP)**

L/G lever.....CHECK UP

AT 2 000 FT AGL

CABIN.....NOTIFY FOR DITCHING
 DITCHING pushbutton.....ON
Prefer ditching parallel to the swell.
If that causes a strong crosswind, ditch into the wind.
In all cases, touch down with a pitch attitude of approximately 11 °.
Minimize aircraft vertical speed.

AT 500 FT AGL

BRACE FOR IMPACT.....ORDER

AT TOUCHDOWN

ENG MASTERS.....OFF
 APU MASTER SW.....OFF

AFTER DITCHING

ATC (VHF 1).....NOTIFY
 FIRE pushbutton (ENG and APU).....PUSH
 AGENT (ENG and APU).....DISCH
Engine Agent 2 is not available.

EVACUATION.....INITIATE



ENG DUAL FAILURE - FUEL REMAINING (Cont'd)



ELT  CHECK EMITTING
If not, switch on the transmitter.

Ident.: ABN-70-A-00012037.0007001 / 21 MAR 11
Applicable to: MSN 2649

IF DITCHING ANTICIPATED

APPROACH

FOR LDG.....USE FLAP 3
Only slats extend, and slowly.

MIN APPR SPEED..... 150 KT

VAPP..... DETERMINE
Vapp is the maximum between VREF + 25 kt/150 kt:

Weight (1 000 kg)	40	44	48	52	56	60	64	68	72	76	78
Vapp	150	150	150	150	150	154	159	163	167	171	172

● At a suitable altitude (not below 3 000 ft AGL), configure the aircraft for ditching (CONF 3 ; L/G UP)
L/G lever..... CHECK UP

AT 2 000 FT AGL

CABIN..... NOTIFY FOR DITCHING

DITCHING pushbutton..... ON
Prefer ditching parallel to the swell.
If that causes a strong crosswind, ditch into the wind.
In all cases, touch down with a pitch attitude of approximately 11 °.
Minimize aircraft vertical speed.

AT 500 FT AGL

BRACE FOR IMPACT..... ORDER

AT TOUCHDOWN

ENG MASTERS..... OFF

APU MASTER SW..... OFF

AFTER DITCHING

ATC (VHF 1).....NOTIFY

FIRE pushbutton (ENG and APU).....PUSH

AGENT (ENG and APU)..... DISCH
Engine Agent 2 is not available.

EVACUATION..... INITIATE

ELT  CHECK EMITTING
If not, switch on the transmitter.



ENG DUAL FAILURE - FUEL REMAINING (Cont'd)



Ident.: ABN-70-A-00012037.0011001 / 21 MAR 11
Applicable to: MSN 1219-1233

IF DITCHING ANTICIPATED

APPROACH

FOR LDG.....USE FLAP 3
Only slats extend, and slowly.
MIN APPR SPEED..... 160 KT
VAPP..... DETERMINE
Vapp is the maximum between VREF + 30 kt/160 kt:

Weight (1 000 kg)	52	56	60	64	68	72	76	80	84	88	92	94
Vapp	160	160	160	160	163	167	170	174	178	181	185	186

- **At a suitable altitude (not below 3 000 ft AGL), configure the aircraft for ditching (CONF 3 ; L/G UP)**
L/G lever..... CHECK UP

AT 2 000 FT AGL

CABIN..... NOTIFY FOR DITCHING
DITCHING pushbutton..... ON
Prefer ditching parallel to the swell.
If that causes a strong crosswind, ditch into the wind.
In all cases, touch down with a pitch attitude of approximately 11 °.
Minimize aircraft vertical speed.

AT 500 FT AGL

BRACE FOR IMPACT..... ORDER

AT TOUCHDOWN

ENG MASTERS..... OFF
APU MASTER SW..... OFF

AFTER DITCHING

ATC (VHF 1).....NOTIFY
FIRE pushbutton (ENG and APU).....PUSH
AGENT (ENG and APU)..... DISCH
Engine Agent 2 is not available.
EVACUATION..... INITIATE
ELT  CHECK EMITTING
If not, switch on the transmitter.

Ident.: ABN-70-A-00012037.0015001 / 21 MAR 11
Applicable to: MSN 2933-3120

IF DITCHING ANTICIPATED

APPROACH

FOR LDG.....USE FLAP 3
Only slats extend, and slowly.
MIN APPR SPEED..... 160 KT



ENG DUAL FAILURE - FUEL REMAINING (Cont'd)



VAPP..... DETERMINE
Vapp is the maximum between VREF + 30 kt/160 kt:

Weight (1 000 kg)	52	56	60	64	68	72	76	80	84	86
Vapp	160	160	160	160	163	167	171	174	178	180

- At a suitable altitude (not below 3 000 ft AGL), configure the aircraft for ditching (CONF 3 ; L/G UP)
L/G lever..... CHECK UP

AT 2 000 FT AGL
CABIN..... NOTIFY FOR DITCHING
DITCHING pushbutton..... ON
*Prefer ditching parallel to the swell.
If that causes a strong crosswind, ditch into the wind.
In all cases, touch down with a pitch attitude of approximately 11 °.
Minimize aircraft vertical speed.*

AT 500 FT AGL
BRACE FOR IMPACT..... ORDER

AT TOUCHDOWN
ENG MASTERS..... OFF
APU MASTER SW..... OFF

AFTER DITCHING
ATC (VHF 1).....NOTIFY
FIRE pushbutton (ENG and APU).....PUSH
AGENT (ENG and APU)..... DISCH
Engine Agent 2 is not available.
EVACUATION..... INITIATE
ELT  CHECK EMITTING
If not, switch on the transmitter.

ENG DUAL FAILURE - NO FUEL REMAINING

Ident.: ABN-70-B-00010848.0045001 / 17 MAR 11

Applicable to: MSN 2649

The flight crew should apply this paper procedure and then, if time permits, clear ECAM warnings and check the ECAM STATUS page.

THRUST LEVERS..... IDLE
 FAC 1.....OFF THEN ON
Resetting FAC 1 also enables rudder trim recovery, even if no indication is available.

OPTIMUM SPEED.....220 KT/GREEN DOT
Initially, fly 220 kt, because the PFD may not display the correct green dot speed. Then fly the green dot speed according to the following table:

GREEN DOT SPEED WITH ALL ENGINES INOPERATIVE (KNOTS)			
Weight (1 000 kg)	At or below FL 200	FL 300	FL 400
68	216	226	236
64	208	218	228
60	200	210	220
56	192	202	212
52	184	194	204
48	176	186	196
44	168	178	188
40	160	170	180

At green dot speed, the aircraft can fly up to approximately 2.5 nm per 1 000 ft (with no wind). Average rate of descent is approximately 1 600 ft/min .

LANDING STRATEGY.....DETERMINE
Determine whether a runway can be reached or the most appropriate place for a forced landing/ditching.

EMER ELEC POWER (if EMER GEN not in line).....MAN ON
 VHF1/HF1  /ATC1.....USE
 ATC..... NOTIFY
 CREW OXY MASKS (Above FL 100).....ON
 CABIN AND COCKPIT..... PREPARE
 SIGNS.....ON
 COMMERCIAL..... OFF
 USE RUDDER WITH CARE

● **WHEN BELOW FL 150**

RAM AIR..... ON

Ident.: ABN-70-B-00010848.0048001 / 17 MAR 11

Applicable to: MSN 1219-1233

The flight crew should apply this paper procedure and then, if time permits, clear ECAM warnings and check the ECAM STATUS page.

THRUST LEVERS..... IDLE
 FAC 1.....OFF THEN ON
Resetting FAC 1 also enables rudder trim recovery, even if no indication is available.



ENG DUAL FAILURE - NO FUEL REMAINING (Cont'd)



OPTIMUM SPEED.....240 KT/GREEN DOT
Initially, fly 240 kt, because the PFD may not display the correct green dot speed. Then fly the green dot speed according to the following table:

GREEN DOT SPEED WITH ALL ENGINES INOPERATIVE (KNOTS)			
Weight (1 000 kg)	At or below FL 200	FL 300	FL 400
80	230	240	250
78	227	237	247
76	224	234	244
74	221	231	241
72	218	228	238
70	215	225	235
68	212	222	232
66	209	219	229
64	206	216	226
62	203	213	223
60	200	210	220
58	197	207	217
56	194	204	214
54	191	201	211
52	188	198	208

At green dot speed, the aircraft can fly up to approximately 2.5 nm per 1 000 ft (with no wind). Average rate of descent is approximately 1 700 ft/min .

LANDING STRATEGY.....DETERMINE
Determine whether a runway can be reached or the most appropriate place for a forced landing/ditching.
EMER ELEC POWER (if EMER GEN not in line).....MAN ON
VHF1/HF1  /ATC1.....USE
ATC..... NOTIFY
CREW OXY MASKS (Above FL 100).....ON
CABIN AND COCKPIT..... PREPARE
SIGNS.....ON
GALY & CAB.....OFF
USE RUDDER WITH CARE
● WHEN BELOW FL 150
RAM AIR..... ON



Ident.: ABN-70-B-00010848.0169001 / 17 MAR 11
Applicable to: MSN 1276-1843

Apply first the following actions required by the ECAM ENG DUAL FAILURE (if not already done) :

EMER ELEC PWR (if EMER GEN not in line).....MAN ON
THRUST LEVERS..... IDLE
FAC 1.....OFF THEN ON

Then apply the following paper procedure, and if time permits, clear ECAM alerts, and check the ECAM STATUS page.

ENG DUAL FAILURE - NO FUEL REMAINING (Cont'd)



OPTIMUM SPEED.....240 KT/GREEN DOT
Initially, fly 240 kt, because the PFD may not display the correct green dot speed. Then fly the green dot speed according to the following table:

GREEN DOT SPEED WITH ALL ENGINES INOPERATIVE (KNOTS)			
Weight (1 000 kg)	At or below FL 200	FL 300	FL 400
80	230	240	250
78	227	237	247
76	224	234	244
74	221	231	241
72	218	228	238
70	215	225	235
68	212	222	232
66	209	219	229
64	206	216	226
62	203	213	223
60	200	210	220
58	197	207	217
56	194	204	214
54	191	201	211
52	188	198	208

At green dot speed, the aircraft can fly up to approximately 2.5 nm per 1 000 ft (with no wind). Average rate of descent is approximately 1 700 ft/min .

LANDING STRATEGY.....DETERMINE
Determine whether a runway can be reached or the most appropriate place for a forced landing/ditching.
VHF1/HF1  /ATC1.....USE
ATC..... NOTIFY
CREW OXY MASKS (Above FL 100)..... ON
CABIN AND COCKPIT..... PREPARE
SIGNS..... ON
COMMERCIAL..... OFF
USE RUDDER WITH CARE
● **WHEN BELOW FL 150**
RAM AIR..... ON

Ident.: ABN-70-B-00010848.0088001 / 17 MAR 11
Applicable to: MSN 2927-3120

The flight crew should apply this paper procedure and then, if time permits, clear ECAM warnings and check the ECAM STATUS page.

THRUST LEVERS..... IDLE
FAC 1..... OFF THEN ON
Resetting FAC 1 also enables rudder trim recovery, even if no indication is available.



ENG DUAL FAILURE - NO FUEL REMAINING (Cont'd)



OPTIMUM SPEED.....240 KT/GREEN DOT
Initially, fly 240 kt, because the PFD may not display the correct green dot speed. Then fly the green dot speed according to the following table:

GREEN DOT SPEED WITH ALL ENGINES INOPERATIVE (KNOTS)			
Weight (1 000 kg)	At or below FL 200	FL 300	FL 400
80	230	240	250
78	227	237	247
76	224	234	244
74	221	231	241
72	218	228	238
70	215	225	235
68	212	222	232
66	209	219	229
64	206	216	226
62	203	213	223
60	200	210	220
58	197	207	217
56	194	204	214
54	191	201	211
52	188	198	208

At green dot speed, the aircraft can fly up to approximately 2.5 nm per 1 000 ft (with no wind). Average rate of descent is approximately 1 700 ft/min .

LANDING STRATEGY.....DETERMINE
Determine whether a runway can be reached or the most appropriate place for a forced landing/ditching.
EMER ELEC POWER (if EMER GEN not in line).....MAN ON
VHF1/HF1  /ATC1.....USE
ATC..... NOTIFY
CREW OXY MASKS (Above FL 100).....ON
CABIN AND COCKPIT..... PREPARE
SIGNS.....ON
COMMERCIAL.....OFF
USE RUDDER WITH CARE
● WHEN BELOW FL 150
RAM AIR..... ON

Ident.: ABN-70-B-00012038.0001001 / 17 MAR 11
Applicable to: MSN 2649

COMMON ACTIONS FOR THE APPROACH

APPROACH PREPARATION

Note: Final descent slope, when configured (CONF 3/ L/G DOWN), will be approximately 1.2 N/m per 1 000 ft (with no wind).

BARO.....SET
CREW MASKS/OXY SUPPLY (below FL 100).....OFF



ENG DUAL FAILURE - NO FUEL REMAINING (Cont'd)



Ident.: ABN-70-B-00012038.0002001 / 17 MAR 11
Applicable to: MSN 1219-1843, 2927-3120

COMMON ACTIONS FOR THE APPROACH

APPROACH PREPARATION

Note: Final descent slope, when configured (CONF 3; L/G DOWN), will be approximately 1.1 N/m per 1 000 ft (with no wind).

BARO..... SET
CREW MASKS/OXY SUPPLY (below FL 100)..... OFF

Ident.: ABN-70-B-00012039.0004001 / 17 MAR 11
Applicable to: MSN 1276-1843, 2927

IF FORCED LANDING ANTICIPATED

APPROACH

FOR LDG..... USE FLAP 3
Only slats extend, and slowly.
MIN APPR SPEED..... 160 KT
VAPP..... DETERMINE
Vapp is the maximum between VREF + 30 kt/160 kt.

Weight (1 000 kg)	52	56	60	64	68	72	76	80	84	88	92	94
Vapp	160	160	160	160	163	167	171	174	178	181	185	187

- At a suitable altitude (not below 3 000 ft AGL), configure the aircraft for landing (CONF 3 ; L/G DOWN)
 - When in CONF 3 and VAPP
GRAVITY GEAR EXTN handcrank..... PULL AND TURN
Flight controls revert to direct law at landing gear extension. Wait for CONF 3 and VAPP before extending the landing gear to enable the aircraft to be trimmed for approach. Disregard "USE MAN PITCH TRIM" on the PFD, because the stabilizer is frozen in the position where it was at, when the windmilling was insufficient to provide hydraulic power.
 - When L/G downlocked
L/G lever..... DOWN
APPROACH SPEED..... ADJUST
Adjust the speed to the determined Vapp. Nevertheless, to reach the landing field/runway, the approach speed may be adjusted up to 215 kt (max speed with slats extended).

GND SPLR..... ARM
MAX BRK PR..... 1000 PSI

AT 2 000 FT AGL

CABIN..... NOTIFY FOR LANDING

AT 500 FT AGL

BRACE FOR IMPACT..... ORDER

AT TOUCHDOWN

ENG MASTERS..... OFF
BRAKES ON ACCU ONLY



ENG DUAL FAILURE - NO FUEL REMAINING (Cont'd)



AFTER LANDING

- When the aircraft has stopped :
PARKING BRK.....ON
ATC.....NOTIFY
 - If Evacuation required :
EVACUATION.....INITIATE
ELT  CHECK EMITTING
If not, switch on the transmitter
 - If Evacuation not required :
CABIN CREW and PASSENGERS (PA).....NOTIFY

Ident.: ABN-70-B-00012039.0007001 / 21 NOV 11
Applicable to: MSN 2649

IF FORCED LANDING ANTICIPATED

APPROACH

FOR LDG.....USE FLAP 3
Only slats extend, and slowly.
MIN APPR SPEED.....150 KT
VAPP..... DETERMINE
Vapp is the maximum between VREF + 25 kt/150 kt.

Weight (1000 kg)	40	44	48	52	56	60	64	68	72	76	78
Vapp	150	150	150	150	150	154	159	163	167	171	172

- At a suitable altitude (not below 3 000 ft AGL), configure the aircraft for landing (CONF 3 ; L/G DOWN)
 - When in CONF 3 and VAPP
GRAVITY GEAR EXTN handcrank.....PULL AND TURN
Flight controls revert to direct law at landing gear extension. Wait for CONF 3 and VAPP before extending the landing gear to enable the aircraft to be trimmed for approach. Disregard "USE MAN PITCH TRIM" on the PFD, because the stabilizer is frozen in the position where it was at, when the windmilling was insufficient to provide hydraulic power.
 - When L/G downlocked
L/G lever.....DOWN
APPROACH SPEED.....ADJUST
Adjust the speed to the determined Vapp. Nevertheless, to reach the landing field/runway, the approach speed may be adjusted up to 200 kt (max speed with slats extended).
GND SPLR.....ARM
MAX BRK PR.....1000 PSI

AT 2 000 FT AGL

CABIN.....NOTIFY FOR LANDING

AT 500 FT AGL

BRACE FOR IMPACT.....ORDER



ENG DUAL FAILURE - NO FUEL REMAINING (Cont'd)



AT TOUCHDOWN
ENG MASTERS..... OFF
BRAKES ON ACCU ONLY

AFTER LANDING

- **When the aircraft has stopped :**
PARKING BRK.....ON
ATC.....NOTIFY
 - **If Evacuation required :**
EVACUATION.....INITIATE
ELT  CHECK EMITTING
If not, switch on the transmitter
 - **If Evacuation not required :**
CABIN CREW and PASSENGERS (PA).....NOTIFY

Ident.: ABN-70-B-00012039.0011001 / 17 MAR 11

Applicable to: MSN 1219-1233

IF FORCED LANDING ANTICIPATED
APPROACH
FOR LDG.....USE FLAP 3
Only slats extend, and slowly.
MIN APPR SPEED..... 160 KT
VAPP..... DETERMINE
Vapp is the maximum between VREF + 30 kt/160 kt.

Weight (1 000 kg)	52	56	60	64	68	72	76	80	84	88	92	94
Vapp	160	160	160	160	163	167	170	174	178	181	185	186

- **At a suitable altitude (not below 3 000 ft AGL), configure the aircraft for landing (CONF 3 ; L/G DOWN)**
 - **When in CONF 3 and VAPP**
GRAVITY GEAR EXTN handcrank..... PULL AND TURN
Flight controls revert to direct law at landing gear extension. Wait for CONF 3 and VAPP before extending the landing gear to enable the aircraft to be trimmed for approach. Disregard "USE MAN PITCH TRIM" on the PFD, because the stabilizer is frozen in the position where it was at, when the windmilling was insufficient to provide hydraulic power.
 - **When L/G downlocked**
L/G lever..... DOWN
APPROACH SPEED..... ADJUST
Adjust the speed to the determined Vapp. Nevertheless, to reach the landing field/runway, the approach speed may be adjusted up to 215 kt (max speed with slats extended).
GND SPLR..... ARM
MAX BRK PR..... 1000 PSI

AT 2 000 FT FEET AGL
CABIN.....NOTIFY FOR LANDING



ENG DUAL FAILURE - NO FUEL REMAINING (Cont'd)



AT 500 FT FEET AGL
BRACE FOR IMPACT..... ORDER

AT TOUCHDOWN
ENG MASTERS..... OFF
BRAKES ON ACCU ONLY

- AFTER LANDING
- When the aircraft has stopped :
PARKING BRK.....ON
ATC.....NOTIFY
 - If Evacuation required :
EVACUATION.....INITIATE
ELT  CHECK EMITTING
If not, switch on the transmitter
 - If Evacuation not required :
CABIN CREW and PASSENGERS (PA).....NOTIFY

Ident.: ABN-70-B-00012039.0015001 / 17 MAR 11
Applicable to: MSN 2933-3120

IF FORCED LANDING ANTICIPATED

APPROACH
FOR LDG.....USE FLAP 3
Only slats extend, and slowly.
MIN APPR SPEED..... 160 KT
VAPP..... DETERMINE
Vapp is the maximum between VREF + 30 kt/160 kt.

Weight (1 000 kg)	52	56	60	64	68	72	76	80	84	86
Vapp	160	160	160	160	163	167	171	174	178	180

- At a suitable altitude (not below 3 000 ft AGL), configure the aircraft for landing (CONF 3 ; L/G DOWN)
- When in CONF 3 and VAPP
GRAVITY GEAR EXTN handcrank..... PULL AND TURN
Flight controls revert to direct law at landing gear extension. Wait for CONF 3 and VAPP before extending the landing gear to enable the aircraft to be trimmed for approach. Disregard "USE MAN PITCH TRIM" on the PFD, because the stabilizer is frozen in the position where it was at, when the windmilling was insufficient to provide hydraulic power.
- When L/G downlocked
L/G lever..... DOWN
APPROACH SPEED..... ADJUST
Adjust the speed to the determined Vapp. Nevertheless, to reach the landing field/runway, the approach speed may be adjusted up to 215 kt (max speed with slats extended).
GND SPLR..... ARM
MAX BRK PR..... 1000 PSI



ENG DUAL FAILURE - NO FUEL REMAINING (Cont'd)



AT 2 000 FT AGL
CABIN.....NOTIFY FOR LANDING

AT 500 FT AGL
BRACE FOR IMPACT.....ORDER

AT TOUCHDOWN
ENG MASTERS..... OFF
BRAKES ON ACCU ONLY

- AFTER LANDING**
- **When the aircraft has stopped :**
PARKING BRK.....ON
ATC.....NOTIFY
 - **If Evacuation required :**
EVACUATION.....INITIATE
ELT  CHECK EMITTING
If not, switch on the transmitter
 - **If Evacuation not required :**
CABIN CREW and PASSENGERS (PA).....NOTIFY

Ident.: ABN-70-B-00012040.0004001 / 17 MAR 11
Applicable to: MSN 1276-1843, 2927

IF DITCHING ANTICIPATED

APPROACH
FOR LDG.....USE FLAP 3
Only slats extend, and slowly.
MIN APPR SPEED..... 160 KT
VAPP..... DETERMINE
Vapp is the maximum between VREF + 30 kt/160 kt:

Weight (1 000 kg)	52	56	60	64	68	72	76	80	84	88	92	94
Vapp	160	160	160	160	163	167	171	174	178	181	185	187

- **At a suitable altitude (not below 3 000 ft AGL), configure the aircraft for ditching (CONF 3 ; L/G UP)**
L/G lever.....CHECK UP

AT 2 000 FT AGL
CABIN.....NOTIFY FOR DITCHING
DITCHING pushbutton..... ON
*Prefer ditching parallel to the swell
If that causes a strong crosswind, ditch into the wind..
In all cases, touch down with a pitch attitude of approximately 11 °.
Minimize aircraft vertical speed.*

AT 500 FT AGL
BRACE FOR IMPACT.....ORDER



ENG DUAL FAILURE - NO FUEL REMAINING (Cont'd)



AT TOUCHDOWN

ENG MASTERS..... OFF

AFTER DITCHING

ATC (VHF 1).....NOTIFY

EVACUATION..... INITIATE

ELT  CHECK EMITTING

If not, switch on the transmitter

Ident.: ABN-70-B-00012040.0007001 / 17 MAR 11
Applicable to: MSN 2649

IF DITCHING ANTICIPATED

APPROACH

FOR LDG.....USE FLAP 3

Only slats extend, and slowly.

MIN APPR SPEED..... 150 KT

VAPP..... DETERMINE

Vapp is the maximum between VREF + 25 kt/150 kt:

Weight (1 000 kg)	40	44	48	52	56	60	64	68	72	76	78
Vapp	150	150	150	150	150	154	159	163	167	171	172

- At a suitable altitude (not below 3 000 ft AGL), configure the aircraft for ditching (CONF 3 ; L/G UP)

L/G lever..... CHECK UP

AT 2 000 FT AGL

CABIN..... NOTIFY FOR DITCHING

DITCHING pushbutton..... ON

Prefer ditching parallel to the swell

If that causes a strong crosswind, ditch into the wind..

In all cases, touch down with a pitch attitude of approximately 11 °.

Minimize aircraft vertical speed.

AT 500 FT AGL

BRACE FOR IMPACT..... ORDER

AT TOUCHDOWN

ENG MASTERS..... OFF

AFTER DITCHING

ATC (VHF 1).....NOTIFY

EVACUATION..... INITIATE

ELT  CHECK EMITTING

If not, switch on the transmitter



ENG DUAL FAILURE - NO FUEL REMAINING (Cont'd)



Ident.: ABN-70-B-00012040.0011001 / 17 MAR 11

Applicable to: MSN 1219-1233

IF DITCHING ANTICIPATED

APPROACH

FOR LDG.....USE FLAP 3

Only slats extend, and slowly.

MIN APPR SPEED..... 160 KT

VAPP..... DETERMINE

Vapp is the maximum between VREF + 30 kt/160 kt:

Weight (1 000 kg)	52	56	60	64	68	72	76	80	84	88	92	94
Vapp	160	160	160	160	163	167	170	174	178	181	185	186

- At a suitable altitude (not below 3 000 ft AGL), configure the aircraft for ditching (CONF 3 ; L/G UP)
 L/G lever..... CHECK UP

AT 2 000 FT AGL

CABIN..... NOTIFY FOR DITCHING

DITCHING pushbutton..... ON

Prefer ditching parallel to the swell

If that causes a strong crosswind, ditch into the wind..

In all cases, touch down with a pitch attitude of approximately11 °.

Minimize aircraft vertical speed.

AT 500 FT AGL

BRACE FOR IMPACT..... ORDER

AT TOUCHDOWN

ENG MASTERS..... OFF

AFTER DITCHING

ATC (VHF 1).....NOTIFY

EVACUATION..... INITIATE

ELT  CHECK EMITTING

If not, switch on the transmitter

Ident.: ABN-70-B-00012040.0015001 / 17 MAR 11

Applicable to: MSN 2933-3120

IF DITCHING ANTICIPATED

APPROACH

FOR LDG.....USE FLAP 3

Only slats extend, and slowly.

MIN APPR SPEED..... 160 KT

VAPP..... DETERMINE

Vapp is the maximum between VREF + 30 kt/160 kt:

Weight (1 000 kg)	52	56	60	64	68	72	76	80	84	86
Vapp	160	160	160	160	163	167	171	174	178	180



ENG DUAL FAILURE - NO FUEL REMAINING (Cont'd)



- **At a suitable altitude (not below 3 000 ft AGL), configure the aircraft for ditching (CONF 3 ; L/G UP)**
 L/G lever..... CHECK UP

AT 2 000 FT AGL

CABIN..... NOTIFY FOR DITCHING
 DITCHING pushbutton..... ON
Prefer ditching parallel to the swell
If that causes a strong crosswind, ditch into the wind..
In all cases, touch down with a pitch attitude of approximately 11 °.
Minimize aircraft vertical speed.

AT 500 FT AGL

BRACE FOR IMPACT..... ORDER

AT TOUCHDOWN

ENG MASTERS..... OFF

AFTER DITCHING

ATC (VHF 1).....NOTIFY
 EVACUATION..... INITIATE
 ELT  CHECK EMITTING
If not, switch on the transmitter

ENG RELIGHT
(IN FLIGHT)

Ident.: ABN-70-00010850.0002001 / 01 OCT 12
Applicable to: MSN 1219-1233

- MAX ALTITUDE.....See below
- ENG MASTER (affected).....OFF
- THR LEVER (affected)..... IDLE
- ENG MODE SEL.....IGN
- X BLEED OPEN
- WING A. ICE (for starter assist).....OFF
- ENG MASTER (affected)..... ON

Be aware that, contrary to an autostart on ground, the crew must take appropriate action in case of an abnormal start.
Engine light up should be achieved within 30 s after fuel flow increases.
ENG PARAMETERS (N2, EGT)..... CHECK
If the START FAULT ENG STALL warning is triggered, although engine parameters are normal, disregard the warning.

■ When idle is reached :

- ENG MODE SEL..... NORM
- TCAS MODE SEL  check TA/RA
Check that the selector is at TA/RA since, if the ENG SHUT DOWN procedure has been applied, the TCAS mode selector may have been set at the TA position.
- Affected SYS..... RESTORE
Restore affected systems, and set the X BLEED selector to AUTO.

■ If no relight :

- ENG MASTER (affected)..... OFF
Wait 30 s before attempting a new start (to drain the engine).

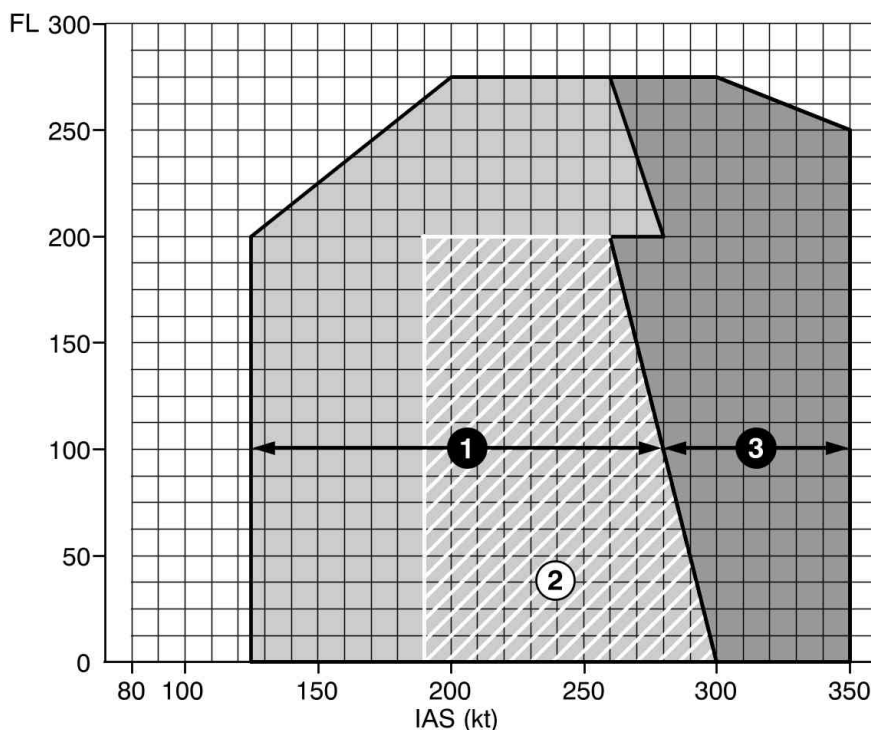




ENG RELIGHT (Cont'd) (IN FLIGHT)



IN FLIGHT ENGINE RELIGHT ENVELOPE



1

STARTER ASSISTED
RELIGHT
Above FL200 $N2 \leq 15\%$
Below FL200 $N2 \leq 12\%$

2

WINDMILL QUICK RELIGHT
 $t < 30s$

3

STABILIZED
WINDMILL
RELIGHT

ENG RELIGHT (IN FLIGHT)

Ident.: ABN-70-00010850.0007001 / 01 OCT 12
Applicable to: MSN 1276-3120

MAX ALTITUDE..... See below
ENG MASTER (affected)..... OFF
THR LEVER (affected)..... IDLE
ENG MODE SEL..... IGN
X BLEED OPEN
WING A. ICE (for starter assist)..... OFF
ENG MASTER (affected)..... ON

Be aware that, contrary to an autostart on ground, the crew must take appropriate action in case of an abnormal start.

Engine light up should be achieved within 30 s after fuel flow increases.

■ **When idle is reached:**

ENG MODE SEL..... NORM



ENG RELIGHT (Cont'd)
(IN FLIGHT)



TCAS MODE SEL  check TA/RA

*Check that the selector is at TA/RA since, if the **ENG SHUT DOWN** procedure has been applied, the TCAS mode selector may have been set at the TA position.*

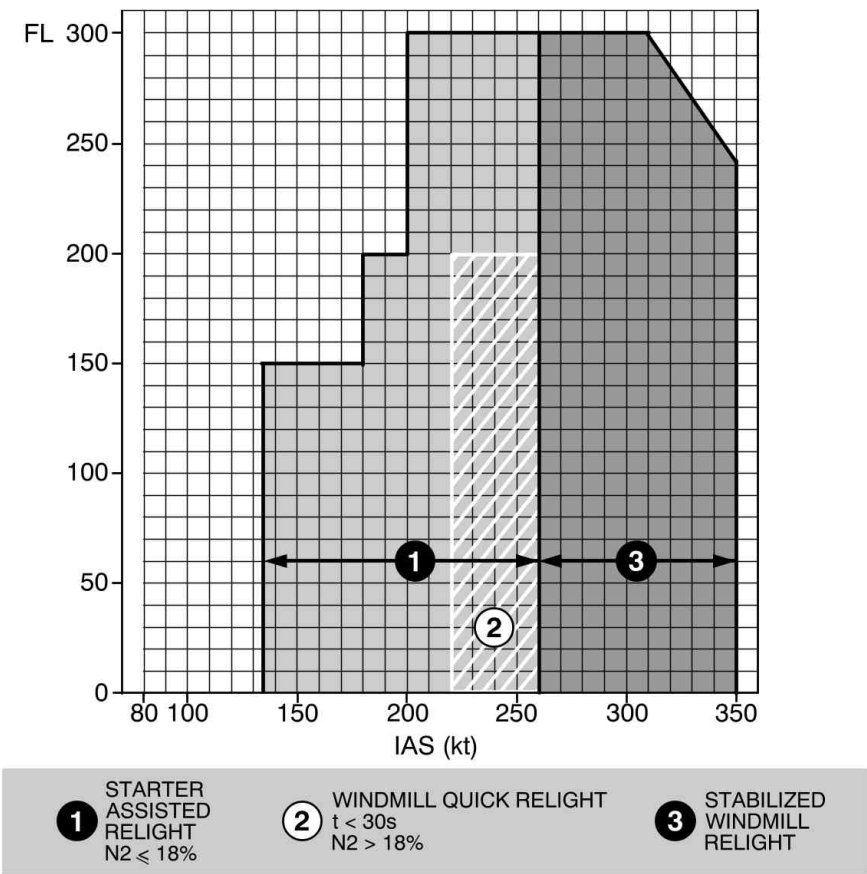
Affected SYS..... RESTORE

Restore affected systems, and set the X BLEED selector to AUTO.

- **If no relight:**

ENG MASTER (affected)..... OFF

Wait 30 s before attempting a new start (to drain the engine).





ENG 1(2) STALL

Ident.: ABN-70-00010851.0002001 / 18 NOV 11

Applicable to: MSN 1219-1233

■ **N2 between 50 % and IDLE:**

ENG MASTER (AFFECTED ENGINE)..... OFF

ENG 1(2) SHUT DOWN

■ **N2 above IDLE (title and procedure not displayed on ECAM):**

■ **On ground :**

ENG MASTER (AFFECTED ENGINE)..... OFF

■ **In flight :**

THR LEVER (AFFECTED ENGINE)..... IDLE

ENG PARAMETERS (AFFECTED ENGINE)..... CHECK

● **Abnormal :**

ENG MASTER (AFFECTED ENGINE)..... OFF

ENG 1(2) SHUT DOWN

● **Normal :**

ENG A.ICE (AFFECTED ENGINE)..... ON

WING A.ICE..... ON

THR LEVER (AFFECTED ENGINE)..... SLOWLY ADVANCE

● **If a stall recurs :**

THR LEVER (AFFECTED ENGINE)..... REDUCE

● **If a stall does not recur :**

Continue engine operation.

ENG 1(2) STALL

Ident.: ABN-70-00010851.0004001 / 21 MAR 11

Applicable to: MSN 1276-3120

■ **On the ground :**

THR LEVER (AFFECTED ENGINE)..... IDLE

ENG MASTER (AFFECTED ENGINE)..... OFF

■ **In flight :**

THR LEVER (AFFECTED ENGINE)..... IDLE

ENG PARAMETERS (AFFECTED ENGINE)..... CHECK

■ **IF ABNORMAL :**

ENG MASTER (AFFECTED ENGINE)..... OFF

ENG 1(2) SHUT DOWN

■ **Normal :**

ENG A.ICE (AFFECTED ENGINE)..... ON



ENG 1(2) STALL (Cont'd)



WING A.ICE..... ON
THR LEVER (AFFECTED ENGINE)..... SLOWLY ADVANCE

- **If a stall recurs :**
THR LEVER (AFFECTED ENGINE)..... REDUCE
- **If a stall does not recur :**
Continue engine operation.

ENG TAILPIPE FIRE

Ident.: ABN-70-00010852.0001001 / 08 FEB 13
Applicable to: ALL

CAUTION	External fire agents can cause severe corrosive damage and should, therefore, only be considered after having applied following procedure :

- ENG MASTER (affected).....OFF
MAN START.....OFF
AIR BLEED PRESS.....ESTABLISH
BEACON.....ON
ENG MODE SEL.....CRANK
MAN START.....ON
- **When burning has stopped :**
- MAN START.....OFF
ENG MODE SEL.....NORM

 A320/A321 QUICK REFERENCE HANDBOOK	ABNORMAL AND EMERGENCY PROCEDURES	70.06A 27 NOV 13
HIGH ENGINE VIBRATION		
Ident.: ABN-70-00010853.0001001 / 07 MAY 13 Applicable to: MSN 1219-1233		
The ECAM's VIB advisory (N1 ≥6 units, N2 ≥4.3 units) is mainly a guideline to induce the crew to monitor engine parameters more closely VIB detection alone does not require engine shutdown. <u>Note:</u> 1. High engine vibration may be accompanied by cockpit and cabin smoke, and/or the smell of burning. This may be due only to compressor blade tip contact with associated abradable seals. 2. High N1 vibration are generally accompanied by perceivable airframe vibrations. High N2 vibration can occur without perceivable airframe vibrations. ■ If no icing conditions: ENG PARAMETERS.....CHECK <i>Check engine parameters and especially EGT ; crosscheck with the other engine. Report in the maintenance log.</i> ● If rapid increase above the advisory: THRUST LEVER (affected engine)..... RETARD <i>Flight conditions permitting, reduce N1 to maintain the vibration level below the advisory threshold.</i> <u>Note:</u> If the VIB indication does not decrease following thrust reduction, this may indicate other engine problems. Apply the appropriate procedure. ■ If icing conditions: An increase in engine vibrations in icing conditions, with or without engine anti-ice, may be due to fan blades and/or spinner icing. A/THR..... OFF ENGINE ANTI-ICE..... CHECK <i>If ENG ANTI-ICE is off, switch it ON at idle fan speed, one engine after the other at an approximate 30 s interval.</i> THRUST LEVER (one engine at a time)..... INCREASE THRUST <i>Increase thrust to a setting compatible with the flight phase. The VIB level will return to normal after ice is shed, despite a slight increase during acceleration. Resume normal operation.</i> <u>Note:</u> When vibration above the advisory level have been experienced, and if possible, shut down the engine after landing, for taxiing.		
HIGH ENGINE VIBRATION		
Ident.: ABN-70-00010853.0002001 / 07 MAY 13 Applicable to: MSN 1276-3120		
■ High N2 vibrations during engine start on ground: Engine start should be aborted (if vibration indications are available), when the N2 vibration level exceeds the 6.5-units advisory threshold. The subsequent start is to be initiated after the engine has completely spooled down. This procedure may be repeated a maximum of three times. Report any N2 vibration advisory condition in the logbook. ■ High N1 or N2 vibrations in operation: The ECAM's VIB advisory (N1 ≥ 5 units, N2 ≥ 5 units) is mainly a guideline to induce the crew to monitor engine parameters more closely. VIB detection alone does not require engine shutdown.		



HIGH ENGINE VIBRATION (Cont'd)



- Note:
1. High engine vibration may be accompanied by cockpit and cabin smoke, and/or the smell of burning. This may be due only to compressor blade tip contact with associated abradable seals.
 2. High N1 vibration are generally accompanied by perceivable airframe vibrations. High N2 vibration can occur without perceivable airframe vibrations.

- **If no icing conditions:**
- ENG PARAMETERS.....CHECK
- Check engine parameters and especially EGT ; crosscheck with the other engine. Report in the maintenance log.*
- **If rapid increase above the advisory:**
- THRUST LEVER (affected engine)..... RETARD
- Flight conditions permitting, reduce N1 to maintain the vibration level below the advisory threshold.*
- Note: *If the VIB indication does not decrease following thrust reduction, this may indicate other engine problems. Apply the appropriate procedure.*

- **If icing conditions:**
- An increase in engine vibrations in icing conditions, with or without engine anti-ice, may be due to fan blades and/or spinner icing.
- A/THR..... OFF
- ENGINE ANTI-ICE..... CHECK
- If ENG ANTI-ICE is off, switch it ON at idle fan speed, one engine after the other at an approximate 30 s interval.*
- THRUST LEVER (one engine at a time)..... INCREASE THRUST
- Increase thrust to a setting compatible with the flight phase. The VIB level will return to normal after ice is shed, despite a slight increase during acceleration. Resume normal operation.*
- Note: *When vibration above the advisory level have been experienced, and if possible, shut down the engine after landing, for taxiing.*

CIRCLING APPROACH WITH ONE ENGINE INOPERATIVE

Ident.: ABN-80-00010929.0003001 / 18 DEC 12
Applicable to: MSN 1219-1233

LANDING WEIGHT..... CHECK

- if the aircraft weight is above the maximum weight for circling in CONF 3 (given in the table below):
The aircraft cannot maintain flight level with CONF 3 and the landing gear down.

FOR LDG..... USE FLAP 3
CONF 3 is preferred, to minimize a configuration change in short final.

GPWS LDG FLAP 3..... ON
Delay gear extension.

- Note:
- If the approach is flown at less than 750 ft RA, the “L/G NOT DOWN” warning will be triggered. The pilot can cancel the aural warning by pressing the EMER CANC pb, located on the ECAM control panel.
 - A “TOO LOW GEAR” warning is to be expected, if the landing gear is not downlocked at 500 ft RA.

MAXIMUM WEIGHT FOR CIRCLING IN CONF 3 (1000 KG)								
OAT (°C)	AIRPORT ELEVATION (feet)							
	0	2 000	4 000	6 000	8 000	10 000	12 000	14 000
0	86.0	82.0	78.0	75.0	71.0	67.0	63.0	59.0
5	86.0	82.0	78.0	75.0	71.0	67.0	62.0	
10	86.0	82.0	78.0	75.0	70.0	65.0	60.0	
15	86.0	82.0	78.0	74.0	68.0	63.0		
20	86.0	82.0	76.0	71.0	65.0	60.0		
25	86.0	79.0	73.0	68.0	62.0			
30	82.0	76.0	70.0	65.0	60.0			
35	79.0	72.0	67.0	62.0				
40	74.0	69.0	64.0	59.0				
45	72.0	66.0	61.0					
50	68.0	63.0						
55	65.0							

CIRCLING APPROACH WITH ONE ENGINE INOPERATIVE

Ident.: ABN-80-00010929.0008001 / 18 DEC 12
Applicable to: MSN 2649

LANDING WEIGHT..... CHECK

- if the aircraft weight is above the maximum weight for circling in CONF 3 (given in the table below):
The aircraft cannot maintain flight level with CONF 3 and the landing gear down.

FOR LDG..... USE FLAP 3
CONF 3 is preferred, to minimize a configuration change in short final.

GPWS LDG FLAP 3..... ON



CIRCLING APPROACH WITH ONE
ENGINE INOPERATIVE (Cont'd)



Delay gear extension.

- Note:
- If the approach is flown at less than 750 ft RA, the “L/G NOT DOWN” warning will be triggered. The pilot can cancel the aural warning by pressing the EMER CANC pb, located on the ECAM control panel.
 - A “TOO LOW GEAR” warning is to be expected, if the landing gear is not downlocked at 500 ft RA.

MAXIMUM WEIGHT FOR CIRCLING IN CONF 3 (1000 KG)								
OAT (°C)	AIRPORT ELEVATION (feet)							
	0	2 000	4 000	6 000	8 000	10 000	12 000	14 000
0	70.0	69.0	68.0	67.0	65.0	64.0	62.0	57.0
5	70.0	69.0	68.0	67.0	65.0	64.0	60.0	55.0
10	70.0	69.0	68.0	67.0	65.0	61.0	57.0	52.0
15	70.0	69.0	68.0	66.0	63.0	59.0	54.0	50.0
20	70.0	69.0	66.0	64.0	61.0	56.0	52.0	48.0
25	70.0	67.0	64.0	62.0	58.0	54.0	50.0	46.0
30	67.0	65.0	63.0	60.0	56.0	51.0	47.0	
35	65.0	62.0	60.0	57.0	53.0	49.0		
40	62.0	60.0	58.0	54.0				
45	59.0	57.0	55.0					
50	56.0	54.0						
55	53.0							

CIRCLING APPROACH WITH ONE ENGINE INOPERATIVE

Ident.: ABN-80-00010929.0015001 / 18 DEC 12
Applicable to: MSN 2933-3120

LANDING WEIGHT..... CHECK

- if the aircraft weight is above the maximum weight for circling in CONF 3 (given in the table below):

The aircraft cannot maintain flight level with CONF 3 and the landing gear down.

FOR LDG.....USE FLAP 3

CONF 3 is preferred, to minimize a configuration change in short final.

GPWS LDG FLAP 3..... ON

Delay gear extension.

- Note:
- If the approach is flown at less than 750 ft RA, the “L/G NOT DOWN” warning will be triggered. The pilot can cancel the aural warning by pressing the EMER CANC pb, located on the ECAM control panel.
 - A “TOO LOW GEAR” warning is to be expected, if the landing gear is not downlocked at 500 ft RA.



CIRCLING APPROACH WITH ONE
ENGINE INOPERATIVE (Cont'd)



MAXIMUM WEIGHT FOR CIRCLING IN CONF 3 (1000 KG)								
OAT (°C)	AIRPORT ELEVATION (feet)							
	0	2 000	4 000	6 000	8 000	10 000	12 000	14 000
0	76	74	71	68	64	61	58	54
5	76	74	71	68	64	61	56	52
10	76	74	71	68	64	59	54	
15	76	74	71	67	61	57	52	
20	76	74	69	64	59	54		
25	76	71	66	61	56			
30	73	68	63	58	53			
35	69	64	60	55				
40	65	61	57	52				
45	61	57	53					
50	57	54						
55	54							

CIRCLING APPROACH WITH ONE ENGINE INOPERATIVE

Ident.: ABN-80-00010929.0006001 / 18 DEC 12
Applicable to: MSN 1276-1843, 2927

LANDING WEIGHT..... CHECK

- if the aircraft weight is above the maximum weight for circling in CONF 3 (given in the table below):
The aircraft cannot maintain flight level with CONF 3 and the landing gear down.

FOR LDG.....USE FLAP 3
CONF 3 is preferred, to minimize a configuration change in short final.

GPWS LDG FLAP 3..... ON
Delay gear extension.

Note:

- If the approach is flown at less than 750 ft RA, the “L/G NOT DOWN” warning will be triggered. The pilot can cancel the aural warning by pressing the EMER CANC pb, located on the ECAM control panel.
- A “TOO LOW GEAR” warning is to be expected, if the landing gear is not downlocked at 500 ft RA.

MAXIMUM WEIGHT FOR CIRCLING IN CONF 3 (1000 KG)								
OAT (°C)	AIRPORT ELEVATION (feet)							
	0	2 000	4 000	6 000	8 000	10 000	12 000	14 000
0	76	74	71	68	64	61	58	54
5	76	74	71	68	64	61	56	52
10	76	74	71	68	64	59	54	

CIRCLING APPROACH WITH ONE
ENGINE INOPERATIVE (Cont'd)

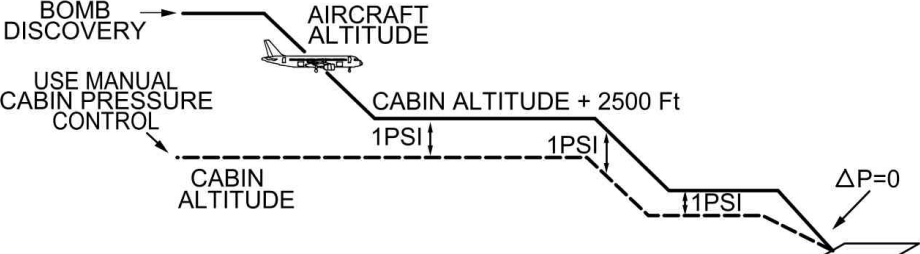


MAXIMUM WEIGHT FOR CIRCLING IN CONF 3 (1000 KG)								
OAT (°C)	AIRPORT ELEVATION (feet)							
	0	2 000	4 000	6 000	8 000	10 000	12 000	14 000
15	76	74	71	67	61	57	52	
20	76	74	69	64	59	54		
25	76	71	66	61	56			
30	73	68	64	59	54			
35	69	65	61	57	52			
40	66	62	59	55				
45	63	60	57					
50	60	57						
55	57							

STRAIGHT-IN-APPROACH WITH
ONE ENGINE INOPERATIVE

Ident.: ABN-80-00010930.0001001 / 08 FEB 13
Applicable to: ALL

For performance reasons, do not extend flaps full until established on a final descent to landing.
If a level off is expected during the final approach, perform the approach and landing in CONF 3.

 A320/A321 QUICK REFERENCE HANDBOOK	ABNORMAL AND EMERGENCY PROCEDURES	80.02A 06 MAR 14
BOMB ON BOARD		
Ident.: ABN-80-00010868.0002001 / 08 FEB 13 Applicable to: MSN 1843-3120		
IF POSSIBLE, LAND AND EVACUATE THE AIRCRAFT IMMEDIATELY. <i>If it is not possible to land and evacuate the aircraft within 30 min, apply the following procedures:</i>		
<u>COCKPIT PROCEDURES</u>		
BACKGROUND		
To avoid the activation of an altitude-sensitive bomb, the cabin altitude should not exceed the value at which the bomb has been discovered. To reduce the effects of the explosion, the aircraft should fly as long as possible with approximately 1 PSI differential pressure, to help the blast go outwards. 1 PSI differential pressure corresponds to a 2 500 ft difference between the aircraft and the cabin altitude. These conditions are achieved by using the manual pressure control.		
PROCEDURE		
The following procedure assumes that it is initiated during climb or cruise: - First, maintain the cabin altitude. - While maintaining the cabin altitude, descend the aircraft to the cabin altitude + 2 500 ft and maintain ΔP at 1 PSI . - During further steps of descent, maintain ΔP at 1 PSI . - For landing, reduce the differential pressure to zero, until the final approach.		
If flight conditions are different, the crew should adapt the procedure, bearing in mind the above-mentioned principles (background paragraph).		
		
AIRCRAFT (if climbing).....LEVEL OFF CABIN PRESS MODE SEL.....MAN CAB ALT.....MAINTAIN CABIN CREW.....NOTIFY ATC/COMPANY OPERATIONS.....NOTIFY FUEL RESERVES.....DETERMINE <i>Keep in mind that when flying at cabin altitude + 2 500 ft , the fuel consumption in CONF 1 , with landing gear down, will be about 2.1 times that consumed in clean configuration.</i> NEXT SUITABLE AIRPORT.....DETERMINE FCU SPEED SELECTION KNOB.....PULL AND TURN <i>Select the most appropriate speed, taking into account the time to destination, the fuel consumption and the fact that low speed could reduce the consequences of possible structural damage, if the bomb explodes.</i> DESCENT TO CAB ALT +2 500 FEET or MEA or minimum obstacle clearance altitude.....INITIATE AVOID SHARP MANEUVERS CAB ALT.....MAINTAIN		



BOMB ON BOARD (Cont'd)



- **When at CAB ALT+ 2 500 ft:**
 - 1 PSI ΔP.....MAINTAIN
 - GALLEY.....OFF
- **When the bomb is secured at the LRBL or cannot be moved:**
 - EMER EXIT LT.....ON
 - COMMERCIAL.....OFF
 - FLAPS (fuel permitting)..... AT LEAST CONF 1
 - For landing, use normal configuration.*
 - LANDING GEAR (fuel permitting, except for flight over water).....DOWN
- **For any other steps of descent:**
 - 1 PSI ΔP.....MAINTAIN
- **During approach:**
 - CABIN PRESS MODE SEL..... AUTO
- **When aircraft on ground and stopped in a remote area (if possible) :**
 - **If Evacuation required:**
 - EVACUATION.....INITIATE
 - Avoid exits, and exiting on the same side as the bomb or near the bomb.*
 - **If Evacuation not required:**
 - CABIN CREW and PASSENGERS (PA)..... NOTIFY

CABIN PROCEDURES

If a suspect device is found in the cabin:

WARNING	Do not cut or disconnect any wires and do not open or attempt to gain entry to internal components of a closed or concealed suspect device. Any attempt may result in an explosion. Booby-trapped closed devices have been used on aircraft in the past.
WARNING	Alternate locations must not be used without consulting with an aviation explosives security specialist. Never take a suspect device to the flight deck.
CAUTION	The least risk bomb location for aircraft structure and systems is center of the RH aft cabin door.

EOD PERSONNEL ON BOARD.....CHECK

Announce : "Is there any EOD personnel on board ?". By using the initials, only persons familiar with EOD (Explosive Ordnance Disposal) will be made aware of the problem.

DO NOT OPEN THE BOMB

DO NOT CUT BOMB'S WIRES

SECURE BOMB AGAINST SLIPPING

PROTECT BOMB AGAINST SHOCKS

Secure in the attitude found and do not lift before having checked for an anti-lift ignition device.



BOMB ON BOARD (Cont'd)



PASSENGERS.....LEAD AWAY FROM BOMB

Move passengers at least 4 seat rows away from the bomb location. On full flights, it may be necessary to double up passengers to achieve standoff from the suspect device.
Passengers near the bomb should protect their heads with pillows, blankets. All passengers must remain seated with seatbelts on and, if possible, head below the top of the head rest.
Seat backs and tray tables must be in their full upright position.
Service items may need to be collected in order to secure tray tables.

PORTABLE ELECTRONIC DEVICES..... SWITCH OFF

The cabin crews must command passengers to switch off all portable electronic devices.

BOMB.....CHECK NO ANTI-LIFT DEVICE

To check for an anti-lift switch or lever, slide a string or stiff card (such as the emergency information card) under the bomb, without disturbing the bomb.
If the string or card cannot be slipped under the bomb, it may indicate that an anti-lift switch or lever is present and that the bomb cannot be moved.
If a card is used and can be slid under the bomb, leave it under the bomb and move together with the bomb.
If it is not possible to move the bomb, then it should be surrounded with a single thin sheet of plastic (e.g. trash bag), then with wetted materials, and other blast attenuation materials such as seat cushions and soft carry-on baggage. Move personnel as far away from the bomb location as possible.

EMERGENCY EQUIPMENT..... REMOVE AND STOW

Emergency equipment (PBE, fire extinguisher, ...) located close to the LRBL must be removed and stowed in alternate location.

GALLEY/IFE POWER.....OFF

All galley and IFE equipment located close to the LRBL must be switched off.

● If the bomb can be moved:

RH AFT CABIN DOOR SLIDE.....DISARM

LEAST RISK BOMB LOCATION (LRBL)..... PREPARE

Build up a platform of solid baggage against the door up to about 25 cm (10 in) below the middle of the door.
On top of this, build up at least 25 cm (10 in) of wetted material such as blankets and pillows.
Place a single thin sheet of plastic (e.g. trash bag) on top of the wetted materials. This prevents any possible short circuit.

CAUTION	Do not omit the plastic sheets, as the suspect device could get wet and possibly short circuit electronic components causing inadvertent device activation.

BOMB INDICATION LINE..... POSITION

Note: *A bomb location indicator line is a 6 ft to 8 ft (1.8 m to 2.4 m) line (e.g. neckties, headset cord, or belts connected together) preferably of contrasting color, that helps the responding bomb squad find the precise location of the suspect device within the LRBL stack once constructed.*

Position the bomb indication line from the location on the platform where you will place the suspect device, EXTENDING outward into the aisle.





BOMB ON BOARD (Cont'd)



BOMB..... MOVE TO LRBL

Carefully carry in the attitude found and place on top of the wetted materials in the same attitude and as close to the door structure as possible.

CAUTION

Ensure that the suspect device, when placed on the stack against the door, is above the slide pack but not against the door handle, and if possible, avoid placement in the view port.

LEAST RISK BOMB LOCATION (LRBL).....COMPLETE

Place an additional single thin sheet of plastic over the bomb.

CAUTION

Do not omit the plastic sheets, as the suspect device could get wet and possibly short circuit electronic components causing inadvertent device activation.

Build up at 25 cm (10 in) of wetted material around the sides and on top of the bomb.

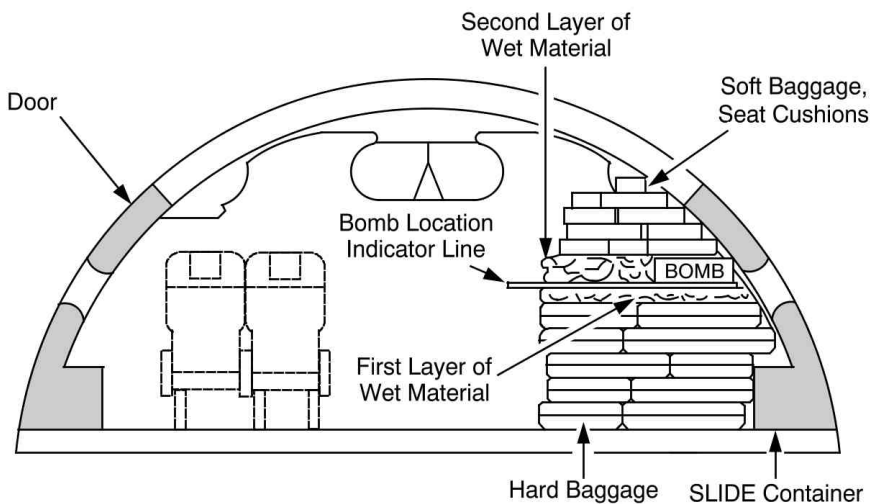
DO NOT PLACE ANYTHING BETWEEN THE BOMB AND THE DOOR, AND MINIMIZE AIRSPACE AROUND THE BOMB.

The idea is to build up a protective surrounding of the bomb so that the explosive force is directed in the only unprotected area into the door structure.

Fill the area around the bomb with seat cushions and other soft materials such as hand luggage (saturated with water on any other nonflammable liquid) up to the cabin ceiling, compressing as much as possible. Secure the LRBL stack in place using belt, ties or other appropriate materials. The more material stacked around the bomb, the less the damage will be.

USE ONLY SOFT MATERIAL. AVOID USING MATERIALS CONTAINING ANY INFLAMMABLE LIQUID AND ANY METAL OBJECTS WHICH COULD BECOME DANGEROUS PROJECTILES.

LRBL STACK



BOMB ON BOARD (Cont'd)



PASSENGERS.....**MOVE/ADVISE**

Move passengers at least 4 seat rows away from the least risk bomb location (RH aft cabin door). On full flights, it may be necessary to double up passengers to achieve standoff from the suspect device.

Passengers near the bomb should protect their heads with pillows, blankets. All passengers must remain seated with seatbelts on and, if possible, head below the top of the head rest. Seat backs and tray tables must be in their full upright position.

CABIN CREW.....**NOTIFY COCKPIT CREW**

Cabin crew notify the flight crew that the bomb is secured at the LRBL.

EVACUATION/DISEMBARKATION.....**EXECUTE**

Evacuate through normal and emergency exits on the opposite side of the "bomb" location. Do not use the door just opposite the "bomb".

Use all available airport facilities to disembark without delay.

BOMB ON BOARD

Ident.: ABN-80-00010868.0003001 / 08 FEB 13
 Applicable to: MSN 1219-1276

IF POSSIBLE, LAND AND EVACUATE THE AIRCRAFT IMMEDIATELY.
If it is not possible to land and evacuate the aircraft within 30 min, apply the following procedures:

COCKPIT PROCEDURES

BACKGROUND

To avoid the activation of an altitude-sensitive bomb, the cabin altitude should not exceed the value at which the bomb has been discovered.

To reduce the effects of the explosion, the aircraft should fly as long as possible with approximately 1 PSI differential pressure, to help the blast go outwards. 1 PSI differential pressure corresponds to a 2 500 ft difference between the aircraft and the cabin altitude.

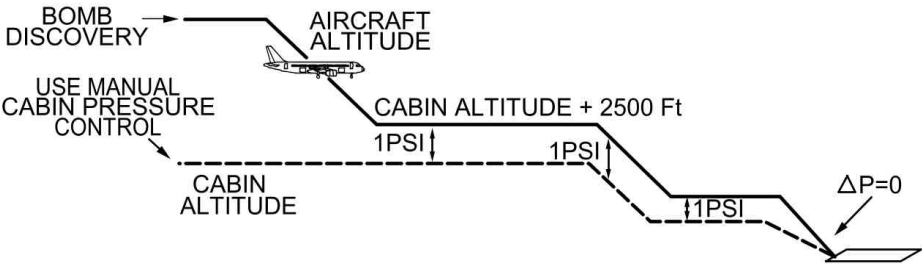
These conditions are achieved by using the manual pressure control.

PROCEDURE

The following procedure assumes that it is initiated during climb or cruise:

- First, maintain the cabin altitude.
- While maintaining the cabin altitude, descend the aircraft to the cabin altitude + 2 500 ft and maintain ΔP at 1 PSI .
- During further steps of descent, maintain ΔP at 1 PSI .
- For landing, reduce the differential pressure to zero, until the final approach.

If flight conditions are different, the crew should adapt the procedure, bearing in mind the above-mentioned principles (background paragraph).



AIRCRAFT (if climbing).....**LEVEL OFF**

BOMB ON BOARD (Cont'd)



- CABIN PRESS MODE SEL.....MAN
- CAB ALT.....MAINTAIN
- CABIN CREW.....NOTIFY
- ATC/COMPANY OPERATIONS.....NOTIFY
- FUEL RESERVES.....DETERMINE
- Keep in mind that when flying at cabin altitude + 2 500 ft , the fuel consumption in CONF 1, with landing gear down, will be about 2.1 times that consumed in clean configuration.*
- NEXT SUITABLE AIRPORT.....DETERMINE
- FCU SPEED SELECTION KNOB.....PULL AND TURN
- Select the most appropriate speed, taking into account the time to destination, the fuel consumption and the fact that low speed could reduce the consequences of possible structural damage, if the bomb explodes.*
- DESCENT TO CAB ALT +2 500 FEET or MEA or minimum obstacle clearance altitude.....INITIATE
- AVOID SHARP MANEUVERS
- CAB ALT.....MAINTAIN
- **When at CAB ALT + 2 500 ft:**

1 PSI ΔP.....MAINTAIN

GALY & CAB.....OFF

FLAPS (fuel permitting)..... AT LEAST CONF 1

For landing, use normal configuration.

LANDING GEAR (fuel permitting, except for flight over water).....DOWN
- **For any other steps of descent:**

1 PSI ΔP.....MAINTAIN
- **During approach:**

CABIN PRESS MODE SEL..... AUTO
- **When aircraft on ground and stopped in a remote area (if possible) :**

■ **If Evacuation required:**

EVACUATION.....INITIATE

Avoid exits, and exiting on the same side as the bomb or near the bomb.

■ **If Evacuation not required:**

CABIN CREW and PASSENGERS (PA).....NOTIFY

CABIN PROCEDURES

If a suspect device is found in the cabin:

WARNING	Do not cut or disconnect any wires and do not open or attempt to gain entry to internal components of a closed or concealed suspect device. Any attempt may result in an explosion. Booby-trapped closed devices have been used on aircraft in the past.




A320/A321
QUICK REFERENCE HANDBOOK

**ABNORMAL AND
EMERGENCY PROCEDURES**

80.02G
06 MAR 14

BOMB ON BOARD (Cont'd)



WARNING	Alternate locations must not be used without consulting with an aviation explosives security specialist. Never take a suspect device to the flight deck.
CAUTION	The least risk bomb location for aircraft structure and systems is center of the RH aft cabin door.

EOD PERSONNEL ON BOARD.....CHECK
Announce : "Is there any EOD personnel on board ?". By using the initials, only persons familiar with EOD (Explosive Ordnance Disposal) will be made aware of the problem.

DO NOT OPEN THE BOMB
DO NOT CUT BOMB'S WIRES
SECURE BOMB AGAINST SLIPPING
PROTECT BOMB AGAINST SHOCKS
Secure in the attitude found and do not lift before having checked for an anti-lift ignition device.

PASSENGERS.....LEAD AWAY FROM BOMB
*Move passengers at least 4 seat rows away the bomb location. On full flights, it may be necessary to double up passengers to achieve standoff from the suspect device.
Passengers near the bomb should protect their heads with pillows, blankets. All passengers must remain seated with seatbelts on and, if possible, head below the top of the head rest.
Seat backs and tray tables must be in their full upright position.
Service items may need to be collected in order to secure tray tables.*

PORTABLE ELECTRONIC DEVICES..... SWITCH OFF
The cabin crews must command passengers to switch off all portable electronic devices.

BOMB.....CHECK NO ANTI-LIFT DEVICE
*To check for an anti-lift switch or lever, slide a string or stiff card (such as the emergency information card) under the bomb, without disturbing the bomb.
If the string or card cannot be slipped under the bomb, it may indicate that an anti-lift switch or lever is present and that the bomb cannot be moved.
If a card is used and can be slid under the bomb, leave it under the bomb and move together with the bomb.
If it is not possible to move the bomb, then it should be surrounded with a single thin sheet of plastic (e.g. trash bag), then with wetted materials, and other blast attenuation materials such as seat cushions and soft carry-on baggage. Move personnel as far away from the bomb location as possible.*

EMERGENCY EQUIPMENT..... REMOVE AND STOW
Emergency equipment (PBE, fire extinguisher, ...) located close to the LRBL must be removed and stowed in alternate location.

GALLEY/IFE POWER.....OFF
All galley and IFE equipment located close to the LRBL must be switched off.

- **If the bomb can be moved:**
RH AFT CABIN DOOR SLIDE.....DISARM





BOMB ON BOARD (Cont'd)



LEAST RISK BOMB LOCATION (LRBL)..... PREPARE

Build up a platform of solid baggage against the door up to about 25 cm (10 in) below the middle of the door.

On top of this, build up at least 25 cm (10 in) of wetted material such as blankets and pillows.

Place a single thin sheet of plastic (e.g. trash bag) on top of the wetted materials. This prevents any possible short circuit.

CAUTION

Do not omit the plastic sheets, as the suspect device could get wet and possibly short circuit electronic components causing inadvertent device activation.

BOMB INDICATION LINE..... POSITION

Note: *A bomb location indicator line is a 6 ft to 8 ft (1.8 m to 2.4 m) line (e.g. neckties, headset cord, or belts connected together) preferably of contrasting color, that helps the responding bomb squad find the precise location of the suspect device within the LRBL stack once constructed.*

Position the bomb indication line from the location on the platform where you will place the suspect device, EXTENDING outward into the aisle.

BOMB..... MOVE TO LRBL

Carefully carry in the attitude found and place on top of the wetted materials in the same attitude and as close to the door structure as possible.

CAUTION

Ensure that the suspect device, when placed on the stack against the door, is above the slide pack but not against the door handle, and if possible, avoid placement in the view port.

LEAST RISK BOMB LOCATION (LRBL)..... COMPLETE

Place an additional single thin sheet of plastic over the bomb.

CAUTION

Do not omit the plastic sheets, as the suspect device could get wet and possibly short circuit electronic components causing inadvertent device activation.

Build up at 25 cm (10 in) of wetted material around the sides and on top of the bomb.

DO NOT PLACE ANYTHING BETWEEN THE BOMB AND THE DOOR, AND MINIMIZE AIRSPACE AROUND THE BOMB.

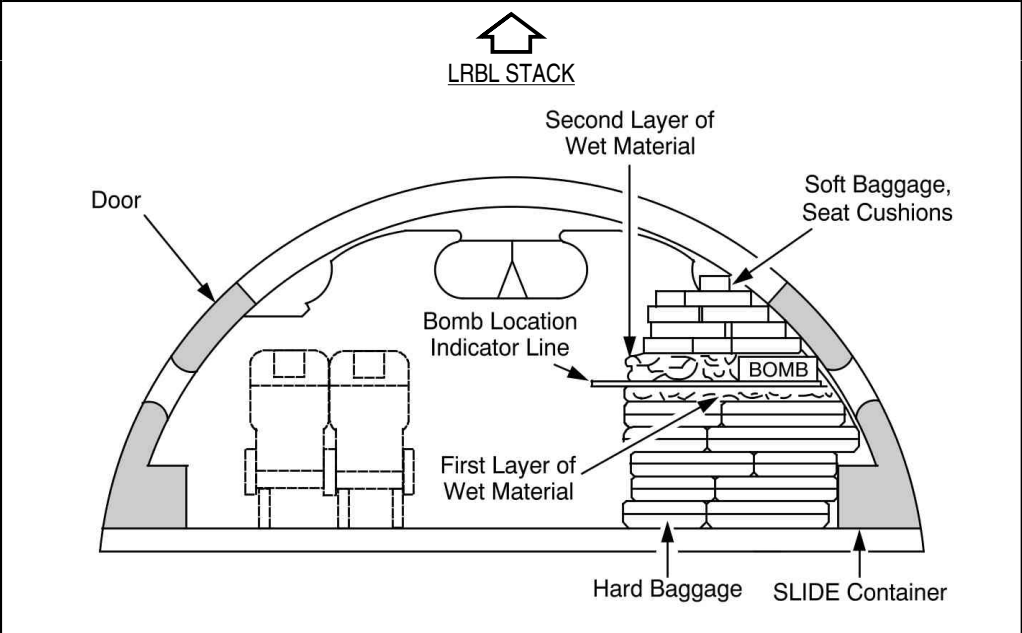
The idea is to build up a protective surrounding of the bomb so that the explosive force is directed in the only unprotected area into the door structure.

Fill the area around the bomb with seat cushions and other soft materials such as hand luggage (saturated with water or any other nonflammable liquid) up to the cabin ceiling, compressing as much as possible. Secure the LRBL stack in place using belt, ties or other appropriate materials. The more material stacked around the bomb, the less the damage will be.

USE ONLY SOFT MATERIAL. AVOID USING MATERIALS CONTAINING ANY INFLAMMABLE LIQUID AND ANY METAL OBJECTS WHICH COULD BECOME DANGEROUS PROJECTILES.



BOMB ON BOARD (Cont'd)



PASSENGERS.....MOVE/ADVISE

Move passengers at least 4 seat rows away from the least risk bomb location (RH aft cabin door). On full flights, it may be necessary to double up passengers to achieve standoff from the suspect device.

Passengers near the bomb should protect their heads with pillows, blankets. All passengers must remain seated with seatbelts on and, if possible, head below the top of the head rest. Seat backs and tray tables must be in their full upright position.

CABIN CREW.....NOTIFY COCKPIT CREW

Cabin crew notify the flight crew that the bomb is secured at the LRBL.

EVACUATION/DISEMBARKATION.....EXECUTE

Evacuate through normal and emergency exits on the opposite side of the "bomb" location. Do not use the door just opposite the "bomb".

Use all available airport facilities to disembark without delay.



DITCHING

Ident.: ABN-80-00010859.0029001 / 21 MAR 11

Applicable to: MSN 1843-3120

This procedure applies when engines are running. If engines are not running, *Refer to the QRH ABN 70 ENG DUAL FAILURE (with or without fuel remaining)* procedure, which has been amended to include the ditching procedure when the engines are not running.

PREPARATION

ATC/TRANSPONDER (if available)..... NOTIFY/SELECT A7700
Notify ATC of the nature of the emergency encountered, and state intentions. Select transponder code A7700, or transmit the distress message on: (VHF) 121.5 MHz or (HF) 2 182 kHz or 8 364 kHz.

CABIN and COCKPIT.....PREPARE
Loose equipment secured, survival equipment prepared, belts and shoulder harness locked.

GPWS SYS.....OFF

GPWS TERR.....OFF

SIGNS.....ON

EMER EXIT LT.....ON

COMMERCIAL.....OFF

LDG ELEV..... SELECT 00

BARO..... SET

Omit the normal approach and landing checklist.

CREW MASKS/OXY SUPPLY (below FL 100).....OFF

APPROACH

L/G lever..... UP

SLATS and FLAPS.....MAX AVAIL

AT 2 000 FT AGL

CAB PRESS MODE SEL.....CHECK AUTO

BLEED (ENGs and APU).....OFF

CABIN.....NOTIFY FOR DITCHING

DITCHING pushbutton..... ON

Prefer ditching parallel to the swell. If that causes a strong crosswind, ditch into the wind.

In all cases, touch down with a pitch attitude of approximately 11 °. Minimize aircraft vertical speed.

AT 500 FT AGL

BRACE FOR IMPACT..... ORDER

AT TOUCHDOWN

ENG MASTERS.....OFF

APU MASTERS SW.....OFF

AFTER DITCHING

ATC (VHF 1).....NOTIFY

FIRE pushbutton (ENG and APU).....PUSH

AGENTS (ENGs and APU)..... DISCH

EVACUATION..... INITIATE

ELT.....CHECK EMITTING

If not, switch ON the transmitter.

DITCHING

Ident.: ABN-80-00010859.0022001 / 21 MAR 11
Applicable to: MSN 1219-1276

This procedure applies when engines are running. If engines are not running, *Refer to the QRH ABN 70 ENG DUAL FAILURE (with or without fuel remaining) procedure, which has been amended to include the ditching procedure when the engines are not running.*

PREPARATION

- ATC/TRANSPONDER (if available)..... NOTIFY/SELECT A7700
Notify ATC of the nature of the emergency encountered, and state intentions. Select transponder code A7700, or transmit the distress message on: (VHF) 121.5 MHz or (HF) 2 182 kHz or 8 364 kHz.
- CABIN and COCKPIT.....PREPARE
Loose equipment secured, survival equipment prepared, belts and shoulder harness locked.
- GPWS SYS.....OFF
- GPWS TERR..... OFF
- SIGNS..... ON
- GALY & CAB..... OFF
- LDG ELEV..... SELECT 00
- BARO..... SET
Omit the normal approach and landing checklist.
- CREW MASKS/OXY SUPPLY (below FL 100)..... OFF

APPROACH

- L/G lever..... UP
- SLATS and FLAPS.....MAX AVAIL

AT 2 000 FT AGL

- CAB PRESS MODE SEL.....CHECK AUTO
- BLEED (ENGs and APU)..... OFF
- CABIN.....NOTIFY FOR DITCHING
- DITCHING pushbutton..... ON
*Prefer ditching parallel to the swell. If that causes a strong crosswind, ditch into the wind.
In all cases, touch down with a pitch attitude of approximately 11 °. Minimize aircraft vertical speed.*

AT 500 FT AGL

- BRACE FOR IMPACT..... ORDER

AT TOUCHDOWN

- ENG MASTERS.....OFF
- APU MASTERS SW..... OFF

AFTER DITCHING

- ATC (VHF 1).....NOTIFY
- FIRE pushbutton (ENG and APU).....PUSH
- AGENTS (ENGs and APU)..... DISCH
- EVACUATION..... INITIATE
- ELT.....CHECK EMITTING
If not, switch ON the transmitters.



FORCED LANDING

Ident.: ABN-80-00010860.0011001 / 22 MAY 12

Applicable to: MSN 1219-1276

This procedure applies when engines are running. If engines are not running, *Refer to the QRH ABN 70 ENG DUAL FAILURE (with or without fuel remaining) procedure*, which has been amended to include the forced landing procedure, when the engines are not running.

PREPARATION

ATC/TRANSPONDER (if available)..... NOTIFY/SELECT A7700

Notify ATC of the nature of the emergency encountered, and state intentions.

Select transponder code A7700, or transmit the distress message on: (VHF) 121.5 MHz or (HF)

2 182 kHz or 8 364 kHz .

CABIN and COCKPIT.....PREPARE

- Loose equipment secured

- Survival equipment prepared

- Belts and shoulder harness locked.

GPWS SYS.....OFF

GPWS TERR.....OFF

SIGNS.....ON

GALY & CAB.....OFF

LDG ELEV.....SET

BARO.....SET

Omit normal approach and landing checklist.

CREW MASKS/OXY SUPPLY (below FL 100).....OFF

APPROACH

RAM AIR.....ON

L/G lever.....DOWN

SLATS AND FLAPS..... MAX AVAIL

GND SPLR.....ARM

MAX BRK PR..... 1 000 PSI

AT 2 000 FT AGL

CABIN.....NOTIFY FOR LANDING

AT 500 FT AGL

BRACE FOR IMPACT..... ORDER

AT TOUCHDOWN

ENG MASTERS.....OFF

APU MASTER SW.....OFF

BRAKES ON ACCU ONLY

AFTER LANDING

● When aircraft has stopped:

PARKING BRK.....ON

ATC (VHF 1)..... NOTIFY

FIRE pushbutton (ENG and APU).....PUSH

AGENTS (ENG and APU).....DISCH



FORCED LANDING (Cont'd)



- **If Evacuation required:**
EVACUATION..... INITIATE
ELT..... CHECK EMITTING
If not, switch on the transmitter.
- **If Evacuation not required:**
CABIN CREW and PASSENGERS (PA)..... NOTIFY

FORCED LANDING

Ident.: ABN-80-00010860.0018001 / 22 MAY 12
Applicable to: MSN 1843-3120

This procedure applies when engines are running. If engines are not running, *Refer to the QRH ABN 70 ENG DUAL FAILURE (with or without fuel remaining) procedure, which has been amended to include the forced landing procedure, when the engines are not running.*

PREPARATION

- ATC /TRANSPONDER (if available)..... NOTIFY/SELECT A7700
*Notify ATC of the nature of the emergency encountered, and state intentions.
If not in contact with ATC, select transponder code A7700, or transmit the distress message on: (VHF) 121.5 MHz or (HF) 2 182 kHz or 8 364 kHz .*
- CABIN and COCKPIT..... PREPARE
 - Loose equipment secured
 - Survival equipment prepared
 - Belts and shoulder harness locked.
- GPWS SYS..... OFF
- GPWS TERR..... OFF
- SIGNS..... ON
- EMER EXIT LT..... ON
- COMMERCIAL..... OFF
- LDG ELEV..... SET
- BARO..... SET
Omit normal approach and landing checklist.
- CREW MASKS/OXY SUPPLY (below FL 100)..... OFF

APPROACH

- RAM AIR..... ON
- L/G lever..... DOWN
- SLATS AND FLAPS..... MAX AVAIL
- GND SPLR..... ARM
- MAX BRK PR..... 1 000 PSI

AT 2 000 FT AGL

- CABIN..... NOTIFY FOR LANDING

AT 500 FT AGL

- BRACE FOR IMPACT..... ORDER



FORCED LANDING (Cont'd)



AT TOUCHDOWN

ENG MASTERS.....OFF
APU MASTER SW..... OFF
BRAKES ON ACCU ONLY

AFTER LANDING

- **When aircraft has stopped:**
PARKING BRK.....ON
ATC (VHF 1)..... NOTIFY
FIRE pushbutton (ENG and APU).....PUSH
AGENTS (ENG and APU).....DISCH
- **If Evacuation required:**
EVACUATION.....INITIATE
ELT..... CHECK EMITTING
If not, switch on the transmitter.
- **If Evacuation not required:**
CABIN CREW and PASSENGERS (PA)..... NOTIFY

EMER DESCENT

Ident.: ABN-80-00010861.0001001 / 03 DEC 13
 Applicable to: ALL

IMMEDIATE ACTION

CREW OXY MASKS.....ON
 EMER DESCENT.....ANNOUNCE(PA)

The flight crew must inform the cabin of emergency descent on the PA system.

SIGNS.....ON
 EMER DESCENT.....INITIATE

The recommendation is to descend with the AP engaged:

- Turn the ALT selector knob and pull
- Turn the HDG selector knob and pull
- Adjust the target SPD/MACH.

THR LEVERS(if A/THR not engaged).....IDLE

- If autothrust is engaged, check that THR IDLE is displayed on the FMA.
- If not engaged, retard the thrust levers.

SPD BRK.....FULL

*Extension of the speedbrakes will significantly increase Vls.
 To avoid AP disconnection and automatic retraction of the speedbrakes, due to possible activation of Angle-of-Attack protection, allow the speed to increase before starting to use the speedbrakes.*

WHEN DESCENT ESTABLISHED

EMER DESCENT FL100, or minimum allowable altitude.

SPEED.....MAX/APPROPRIATE

CAUTION	Descend at the maximum appropriate speed. If structural damage is suspected, use the flight controls with care and reduce speed as appropriate.

Landing gear may be extended below 25 000 ft. In such a case, speed must be reduced to VLO/VLE.

Note: *The recommendation is to descend with the autopilot engaged.
 Use of the autopilot is also permitted in EXPEDITE mode .*

ENG MODE SEL.....IGN
 ATC.....NOTIFY

Notify ATC of the nature of the emergency, and state intention. If not in contact with ATC, transmit a distress message on one of the following frequencies: (VHF) 121.5 MHz, or (HF) 2 182 kHz, or 8 364 kHz.

ATC XPDR 7700.....CONSIDER

*Squawk 7700 unless otherwise specified by ATC.
 To save oxygen, set the oxygen diluter selector to the N position. If the oxygen diluter selector remains at 100 %, the quantity of oxygen may not be sufficient for the entire emergency descent profile.*

MAX FL.....100/MEA

● **IF CAB ALT > 14 000 ft:**

PAX OXY MASKS.....MAN ON

This action confirms that the passenger oxygen masks are released.

Note: *Notify the cabin crew when the aircraft reaches a safe flight level, and when cabin oxygen is no more necessary.*



OVERSPEED RECOVERY

Ident.: ABN-80-00014876.0001001 / 08 FEB 13

Applicable to: ALL

As soon as the speed exceeds VMO/MMO, apply the following actions:

AP : KEEP ON

SPEED BRAKES LEVER..... FULL

THRUST REDUCTION..... MONITOR

● **If the A/THR is OFF:**

ALL THR LEVERS..... IDLE

● **If the AP automatically disengages:**

HIGH SPEED PROTECTION : ACTIVE IN NORM LAW

The activation of the high speed protection results in an automatic pitch up in order to reduce the speed.

● **While the speed is above VMO/MMO:**

SPEED BRAKES LEVER : KEEP FULL

PITCH ATT..... ADJUST SMOOTHLY AS RQRD

● **When the speed is below VMO/MMO with a sufficient margin to VMO/MMO:**

SPEED BRAKES..... AS RQRD

● **If the A/THR is OFF:**

ALL THR LEVERS..... MAN ADJUST

● **If the AP is OFF:**

FLIGHT PATH..... RECOVER SMOOTHLY

● **In the case of severe turbulence:**

Refer to QRH OPS - Severe Turbulence

OVERWEIGHT LANDING

Ident.: ABN-80-00010864.0003001 / 08 FEB 13
Applicable to: MSN 2933-3120

LDG CONF..... AS REQUIRED

Use the ECAM flap setting, if required for abnormal operations. In all other cases :
- FULL is preferred for optimized landing performance
- If the aircraft weight is above the maximum weight for go-around (given in the table below), use FLAP 3 for landing.
In all cases, if landing configuration is different from FLAP FULL, use 1+F for go-around.

Note: At very high weights, VFE CONF1 is close to VLS clean. To select CONF1, deselect A/THR, decelerate to (or slightly below) VLS and select CONF1 when below VFE. When established at CONF1, the crew can re-engage the A/THR and use managed speed again.

LDG DIST..... CHECK
PACK 1 and 2.....OFF or supplied by APU

Selecting packs OFF (or supplied from APU) will increase the maximum thrust available from the engines in the event of a go-around.

- In the final approach stages:
TARGET SPEED..... VLS
Reduce the selected speed on the FCU to reach VLS at runway threshold.
Touch down as smoothly as possible (Maximum V/S at touchdown 360 ft/min).

- At main landing gear touchdown:
REVERSE THRUST..... USE MAX AVAILABLE

- After nosewheel touchdown:
BRAKES.....APPLY AS NECESSARY
Maximum braking may be used after nose wheel touchdown. But, if landing distance permits, delay or reduce braking to fully benefit from the available runway length.

- Landing complete:
BRAKE FANS  ON
Be prepared for tire deflation, if temperatures exceed 800 °C.

MAXIMUM WEIGHT FOR GO AROUND IN CONF 3 (1 000 kg)								
OAT °C	AIRPORT ELEVATION (FT)							
	0	2 000	4 000	6 000	8 000	10 000	12 000	14 000
<10	87	83	79	74	70	65	60	55
15	87	83	79	74	69	64	59	54
20	87	83	79	73	67	62	57	53
25	87	83	76	70	65	60	55	
30	87	80	74	68	63			
35	84	77	71	65	60			
40	80	74	68	63				
45	77	71	65					
50	74	68						
55								

OVERWEIGHT LANDING

Ident.: ABN-80-00010864.0007001 / 08 FEB 13
Applicable to: MSN 1276-1843, 2927

LDG CONF..... AS REQUIRED

Use the ECAM flap setting, if required for abnormal operations. In all other cases:

- FULL is preferred for optimized landing performance
 - If the aircraft weight is above the maximum weight for go-around (given in the table below), use FLAP 3 for landing.
- In all cases, if landing configuration is different from FLAP FULL, use 1+F for go-around.

Note: At very high weights, VFE CONF1 is close to VLS clean. To select CONF1, deselect A/THR, decelerate to (or slightly below) VLS and select CONF1 when below VFE. When established at CONF1, the crew can re-engage the A/THR and use managed speed again

LDG DIST..... CHECK
PACK 1 and 2..... OFF or supplied by APU

Selecting packs OFF (or supplied from APU) will increase the maximum thrust available from the engines in the event of a go-around.

● In the final approach stages:

TARGET SPEED..... VLS

Reduce the selected speed on the FCU to reach VLS at runway threshold.
Touch down as smoothly as possible (Maximum V/S at touchdown 360 ft/min).

● At main landing gear touchdown:

REVERSE THRUST..... USE MAX AVAILABLE

● After nosewheel touchdown:

BRAKES..... APPLY AS NECESSARY

Maximum braking may be used after nose wheel touchdown. But, if landing distance permits, delay or reduce braking to fully benefit from the available runway length.

● Landing complete:

BRAKE FANS  ON

Be prepared for tire deflation, if temperatures exceed 800 °C.

MAXIMUM WEIGHT FOR GO AROUND IN CONF 3 (1 000 kg)								
OAT °C	AIRPORT ELEVATION (FT)							
	0	2 000	4 000	6 000	8 000	10 000	12 000	14 000
<10	92	88	82	76	70	65	60	55
15	92	88	82	76	70	65	60	55
20	92	88	82	76	70	65	60	55
25	92	87	80	75	69	64	59	
30	92	85	79	73	68			
35	88	82	76	70	65			
40	85	79	73	68				
45	82	75	70					
50	78	72						
55								

OVERWEIGHT LANDING

Ident.: ABN-80-00010864.0010001 / 08 FEB 13
Applicable to: MSN 1219-1233

LDG CONF..... AS REQUIRED

Use the ECAM flap setting, if required for abnormal operations. In all other cases:

- FULL is preferred for optimized landing performance
- If the aircraft weight is above the maximum weight for go-around (given in the table below), use FLAP 3 for landing.

In all cases, if landing configuration is different from FLAP FULL, use 1+F for go-around.

Note: At very high weights, VFE CONF1 is close to VLS clean. To select CONF1, deselect A/THR, decelerate to (or slightly below) VLS and select CONF1 when below VFE. When established at CONF1, the crew can re-engage the A/THR and use managed speed again

LDG DIST..... CHECK
PACK 1 and 2..... OFF or supplied by APU

Selecting packs OFF (or supplied from APU) will increase the maximum thrust available from the engines in the event of a go-around.

- In the final approach stages:
TARGET SPEED..... VLS
Reduce the selected speed on the FCU to reach VLS at runway threshold.
Touch down as smoothly as possible (Maximum V/S at touchdown 360 ft/min).

- At main landing gear touchdown:
REVERSE THRUST..... USE MAX AVAILABLE

- After nosewheel touchdown:
BRAKES..... APPLY AS NECESSARY
Maximum braking may be used after nose wheel touchdown. But, if landing distance permits, delay or reduce braking to fully benefit from the available runway length.

- Landing complete:
BRAKE FANS  ON
Be prepared for tire deflation, if temperatures exceed 800 °C.

MAXIMUM WEIGHT FOR GO AROUND IN CONF 3 (1 000 kg)								
OAT °C	AIRPORT ELEVATION (FT)							
	0	2 000	4 000	6 000	8 000	10 000	12 000	14 000
<10	94	90	85	79	74	68	62	57
15	94	90	85	79	73	67	60	55
20	94	89	84	78	71	64	58	53
25	94	89	82	76	69	62	57	51
30	93	86	80	73	66	60	55	
35	89	83	77	69	63			
40	85	79	72	66				
45	80	74	68					
50	75	69						
55								

OVERWEIGHT LANDING

Ident.: ABN-80-00010864.0015001 / 08 FEB 13
Applicable to: MSN 2649

LDG CONF..... AS REQUIRED

Use the ECAM flap setting, if required for abnormal operations. In all other cases :

- FULL is preferred for optimized landing performance
 - If the aircraft weight is above the maximum weight for go-around (given in the table below), use FLAP 3 for landing.
- In all cases, if landing configuration is different from FLAP FULL, use 1+F for go-around.

Note: For weights greater than 70 000 kg (or 154 000 lb), S speed is greater than VFE CONF 2 (200 kt). Consequently, on the FCU, the crew must select a speed below 200 kt before setting FLAPS 2. When in FLAPS 2, the crew can use managed speed again.

LDG DIST..... CHECK
PACK 1 and 2..... OFF or supplied by APU

Selecting packs OFF (or supplied from APU) will increase the maximum thrust available from the engines in the event of a go-around.

● In the final approach stages:

TARGET SPEED..... VLS

Reduce the selected speed on the FCU to reach VLS at runway threshold.
Touch down as smoothly as possible (Maximum V/S at touchdown 360 ft/min).

● At main landing gear touchdown:

REVERSE THRUST..... USE MAX AVAILABLE

● After nosewheel touchdown:

BRAKES..... APPLY AS NECESSARY

Maximum braking may be used after nose wheel touchdown. But, if landing distance permits, delay or reduce braking to fully benefit from the available runway length.

● Landing complete:

BRAKE FANS  ON

Be prepared for tire deflation, if temperatures exceed 800 °C.

MAXIMUM WEIGHT FOR GO AROUND IN CONF 3 (1 000 kg)								
OAT °C	AIRPORT ELEVATION (FT)							
	0	2 000	4 000	6 000	8 000	10 000	12 000	14 000
<10	83	81	78	74	71	66	62	58
15	83	81	78	74	71	66	62	58
20	83	81	78	74	71	66	61	56
25	83	81	78	74	70	64	59	
30	83	81	78	73	67			
35	83	81	76	70	65			
40	83	80	73	67				
45	82	76	70					
50	79	73						
55								

STALL RECOVERY

Ident.: ABN-80-00013714.0001001 / 21 MAR 11
Applicable to: ALL

As soon as any stall indication (could be aural warning, buffet...) is recognized, apply the immediate actions:

NOSE DOWN PITCH CONTROL..... APPLY
This will reduce angle of attack

Note: *In case of lack of pitch down authority, reducing thrust may be necessary.*

BANK..... WINGS LEVEL

● **When out of stall (no longer stall indications) :**

THRUST..... INCREASE SMOOTHLY AS NEEDED

Note: *In case of one engine inoperative, progressively compensate the thrust asymmetry with rudder.*

SPEEDBRAKES..... CHECK RETRACTED
FLIGHT PATH..... RECOVER SMOOTHLY

● **If in clean configuration and below 20 000 ft:**

FLAP 1..... SELECT

Note: *If a risk of ground contact exists, once clearly out of stall (no longer stall indications), establish smoothly a positive climb gradient.*

STALL WARNING AT LIFTOFF

Ident.: ABN-80-00013715.0001001 / 08 FEB 13
Applicable to: ALL

Spurious stall warning may sound in NORMAL law, if an angle of attack probe is damaged. In this case, apply immediately the following actions:

THRUST..... TOGA

At the same time:

PITCH ATTITUDE..... 15 °
BANK..... WINGS LEVEL

Note: *When a safe flight path and speed are achieved and maintained, if stall warning continues, consider it as spurious.*

 A320/A321 QUICK REFERENCE HANDBOOK	ABNORMAL AND EMERGENCY PROCEDURES	80.09A
		06 MAR 14
TAILSTRIKE		
Ident.: ABN-80-00010928.0001001 / 08 FEB 13 Applicable to: ALL		
In the event of a tailstrike, apply the following procedure: LAND ASAP MAX FL..... 100 or MSA <i>500 ft/min should be targeted for the climb, to minimize pressure changes, and for passenger and crew comfort. Similarly, the rate of descent must be limited to about 1 000 ft/min , except for the final approach that must be performed normally.</i> <i>Notify the ATC of the aircraft's rate of climb.</i> RAM AIR.....ON PACK 1 and 2..... OFF		

VOLCANIC ASH ENCOUNTER

Ident.: ABN-80-00010867.0001001 / 08 FEB 13
Applicable to: MSN 2649

- **If the aircraft enters a volcanic ash cloud:**

180 ° TURN.....	INITIATE
ATC.....	NOTIFY
A/THR.....	OFF
THRUST (conditions permitting).....	REDUCE
CREW OXYGEN MASKS.....	ON/100 %/EMER
CABIN CREW.....	NOTIFY
PASSENGER OXYGEN.....	AS RQRD
ENG ANTI ICE.....	ON
WING ANTI ICE.....	ON
PACK FLOW.....	HI

Note: If CARGO VENTILATION system is installed, it is recommended to switch off the CARGO ISOL VALVES, to prevent a cargo smoke warning being triggered.

APU.....	START
ENGINE PARAMETERS.....	MONITOR
AIRSPEED INDICATIONS.....	MONITOR

If airspeed is unreliable or lost, Refer to QRH ABN 34 Unreliable Speed Indication/ADR Check Proc procedure.

Note: If all engines flame out and speed indications are lost, Refer to QRH ABN 70 DUAL ENGINE FAILURE procedure, to get the required pitch attitude for the optimum relight speed.
In case of engine failure, switch off the wing anti ice before engine restart.

Note: If visibility is insufficient for approach due to windshield/window damage, consider AUTOLAND. If AUTOLAND is not available, consider opening the sliding window on the PF's side (maximum speed 200 kt), after cabin depressurization.
To manually depressurize the cabin:

CAB PRESS MODE SEL.....	MAN
MAN V/S CTL.....	FULL UP

Due to the increased noise level, pay particular attention to visual warnings.

VOLCANIC ASH ENCOUNTER

Ident.: ABN-80-00010867.0002001 / 08 FEB 13
Applicable to: MSN 1219-1843, 2927-3120

- **If the aircraft enters a volcanic ash cloud:**

180 ° TURN.....	INITIATE
ATC.....	NOTIFY
A/THR.....	OFF
THRUST (conditions permitting).....	REDUCE
CREW OXYGEN MASKS.....	ON/100 %/EMER
CABIN CREW.....	NOTIFY
PASSENGER OXYGEN.....	AS RQRD



VOLCANIC ASH ENCOUNTER (Cont'd)



ENG ANTI ICE..... ON
 WING ANTI ICE..... ON
 ECON FLOW..... OFF

Note: If CARGO VENTILATION system is installed, it is recommended to switch off the CARGO ISOL VALVES, to prevent a cargo smoke warning being triggered.

APU..... START
 ENGINE PARAMETERS..... MONITOR
 AIRSPEED INDICATIONS.....MONITOR

If airspeed is unreliable or lost, Refer to QRH ABN 34 Unreliable Speed Indication/ADR Check Proc procedure.

Note: If all engines flame out and speed indications are lost, Refer to QRH ABN 70 DUAL ENGINE FAILURE procedure, to get the required pitch attitude for the optimum relight speed.
 In case of engine failure, switch off the wing anti ice before engine restart.

Note: If visibility is insufficient for approach due to windshield/window damage, consider AUTOLAND. If AUTOLAND is not available, consider opening the sliding window on the PF's side (maximum speed 200 kt), after cabin depressurization.
 To manually depressurize the cabin:

CAB PRESS MODE SEL..... MAN
 MAN V/S CTL..... FULL UP

Due to the increased noise level, pay particular attention to visual warnings.

WINDSHEAR

Ident.: ABN-80-00010862.0002001 / 28 FEB 14
Applicable to: ALL

A red flag “WINDSHEAR” is displayed on each PFD associated with an aural synthetic voice “WINDSHEAR” repeated three times.
If windshear is detected either by the system or by pilot observation, apply the following recovery technique:

■ **At takeoff:**

■ **If before V1:**

The takeoff should be rejected only if significant airspeed variations occur below indicated V1 and the pilot decides that there is sufficient runway remaining to stop the airplane.

■ **If after V1:**

THR LEVERS..... TOGA
REACHING VR..... ROTATE
SRS ORDERS..... FOLLOW

If necessary, the flight crew may pull the sidestick fully back.

Note: *If the FD bars are not displayed, move toward an initial pitch attitude of 17.5 °. Then, if necessary, to prevent a loss in altitude, increase the pitch attitude.*

■ **Airborne, initial climb or landing:**

THR LEVERS AT TOGA..... SET OR CONFIRM
AP (if engaged)..... KEEP ON
SRS ORDERS..... FOLLOW

If necessary, the flight crew may pull the sidestick fully back.

Note: 1. Autopilot disengages if the angle of attack value goes above α prot.
 2. If the FD bars are not displayed, move toward an initial pitch attitude of 17.5 °. Then, if necessary, to prevent a loss in altitude, increase the pitch attitude.

DO NOT CHANGE CONFIGURATION (SLATS/FLAPS, GEAR) UNTIL OUT OF WINDSHEAR.

CLOSELY MONITOR FLIGHT PATH AND SPEED.

RECOVER SMOOTHLY TO NORMAL CLIMB OUT OF WINDSHEAR.

WINDSHEAR AHEAD

Ident.: ABN-80-00010863.0009001 / 28 FEB 14
Applicable to: ALL

The “W/S AHEAD” message is displayed on each PFD. The color of the message depends on the severity and location of the windshear.

Note: When a predictive windshear alert (“WINDSHEAR AHEAD” or “GO AROUND WINDSHEAR AHEAD”) is triggered, if the flight crew makes a positive verification that no hazard exists, then the alert may be disregarded, as long as:

- There are no other signs of possible windshear conditions, and
- The reactive windshear system is operational.

Known cases of spurious predictive windshear alerts have been reported at some airports, during either takeoff or landing, due to the specific obstacle environment. However, always rely on any reactive windshear (“WINDSHEAR”).

W/S AHEAD RED

■ **Takeoff:**

Associated with an aural synthetic voice “WINDSHEAR AHEAD, WINDSHEAR AHEAD”.

● **Before takeoff:**

Delay takeoff, or select the most favorable runway.

● **During the takeoff run:**

Reject takeoff.

Note: Predictive windshear alerts are inhibited above 100 kts until 50 ft.

● **When airborne:**

THR LEVERS.....TOGA

As usual, the slat/flap configuration can be changed, provided the windshear is not entered.

AP (if engaged).....KEEP ON

SRS ORDERS.....FOLLOW

If necessary, the flight crew may pull the sidestick fully back.

- Note:
1. Autopilot disengages if the angle of attack value goes above α prot.
 2. If the FD are not displayed, move toward an initial pitch attitude of 17.5 °. Then, if necessary, to prevent a loss in altitude, increase the pitch attitude.

■ **Landing:**

Associated with an aural synthetic voice “GO AROUND, WINDSHEAR AHEAD”.

GO AROUND.....PERFORM

AP (if engaged).....KEEP ON

If necessary, the flight crew may pull the sidestick fully back.

- Note:
1. Autopilot disengages if the angle of attack value goes above α prot.
 2. If the FD are not displayed, move toward an initial pitch attitude of 17.5 °. Then, if necessary, to prevent a loss in altitude, increase the pitch attitude.

W/S AHEAD AMBER

Apply precautionary measures, as indicated below:

■ **Before takeoff:**

Delay takeoff until conditions improve.

Evaluate takeoff conditions:



WINDSHEAR AHEAD (Cont'd)



- Using observations and experience,
- Checking weather conditions.

Select the most favorable runway (considering location of the likely windshear).
Use the weather radar or the predictive windshear system before commencing takeoff to ensure that the flight path clears any potential problem areas.

Select TOGA thrust.

Monitor closely airspeed and airspeed trend during the takeoff run for early signs of windshear.

■ **During approach:**

Delay landing or divert to another airport until conditions are more favorable.
Evaluate condition for a safe landing by:

- Using observations and experience,
- Checking weather conditions.

Use the weather radar.

Select the most favorable runway, considering also which has the most appropriate approach aid.

Select FLAPS 3.

Use managed speed in the approach phase.

Check both FDs engaged in ILS, FPA or V/S.

Engage the autopilot, for a more accurate approach and earlier recognition of deviation from the beam, when ILS is available.

Note:

- When using the GS mini-function, associated with managed speed, the system will carry extra speed in strong wind conditions.
- In case of strong or gusty crosswind greater than 20 kt, Refer to QRH PER-C VAPP Determination without Failure.

 A320/A321 QUICK REFERENCE HANDBOOK	ABNORMAL AND EMERGENCY PROCEDURES	80.13A
		06 MAR 14
WINDSHIELD / WINDOW ARCING		
Ident.: ABN-80-00010866.0001001 / 08 FEB 13 Applicable to: ALL		
Affected WINDOW/WINDSHIELD ANTI ICE C/B..... PULL <i>Pull the circuit breaker of the affected window/windshield heating system, in case of :</i> - <i>Electrical arcing of the cockpit windshield/window, or</i> - <i>Burning smell or smoke identified as coming from the bottom right corner of CAPT windshield or bottom left corner of the F/O windshield.</i> <i>On the rear C/B panel :</i> • ANTI ICE L WSHLD C/B AF10 (123VU) • ANTI ICE R WSHLD C/B AF03 (123VU) • ANTI ICE/WINDOWS L C/B X14 (122VU) • ANTI ICE/WINDOWS R C/B W14 (122VU)		

WINDSHIELD / WINDOW CRACKED

Ident.: ABN-80-00010865.0001001 / 08 FEB 13
Applicable to: ALL

DIAGNOSIS OF INNER PLY.....PERFORM
Touch the cracks with a pen (or carefully with fingernail) to determine if there is a crack on the cockpit side.

■ **If no crack on cockpit side:**

No limitation

The inner ply is not affected. Therefore, the window/windshield is still able to sustain the differential pressure up to the maximum flight level.

■ **If cracks on cockpit side:**

MAX FL..... 230/MEA

The inner ply is affected. The flight crew is not able to easily determine if other plies are affected. Descend to FL 230/MEA and reduce differential pressure to 5 PSI .

Note: *The maximum flight level is restricted to FL 230/MEA to obtain ΔP 5 PSI , without resulting in an excessive cabin altitude and an EXCESS CAB ALT warning.*

The following procedure enables maintaining ΔP 5 PSI in manual cabin pressure mode.

CAB PRESS MODE SEL..... MAN

MAN V/S CTL..... AS RQRD

Disregard the CAB ALT TARGET table displayed on the ECAM and set the cabin altitude according to the table below:

$\Delta P = 5$ PSI	FL	100	150	200	230
	CABIN ALTITUDE	0	3 000	6 000	8 000

● **When starting the descent for approach:**

CAB PRESS MODE SEL..... AUTO

Note: *If visibility is insufficient for approach due to windshield/window damage, consider AUTOLAND. If AUTOLAND is not available, consider opening the sliding window (maximum speed 200 kt) on the PF's side, after cabin depressurization. To manually depressurize the cabin:*

CAB PRESS MODE SEL..... MAN

MAN V/S CTL..... FULL UP

Due to the increased noise level, pay particular attention to visual warnings.

ECAM ADVISORY CONDITIONS

SYSTEM	CONDITIONS	RECOMMENDED ACTION

Ident.: ABN-80-G-00010922.0001001 / 08 FEB 13
Applicable to: ALL

CAB PRESS	CAB VERTICAL SPEED V/S > 1 800 ft/min	CPC changeover is recommended: MODE SEL (MAN) Wait 10 s, then: MODE SEL (AUTO)
	CAB ALTITUDE altitude ≥ 8 800 ft	MODE SEL (MAN) Manual pressure control
	ΔP ≥ 1.5 PSI in phase 7	LDG ELEV (ADJUST) If unsuccessful: MODE SEL (MAN) Manual pressure control

Ident.: ABN-80-G-00010923.0001001 / 18 MAR 11
Applicable to: ALL

ELEC	IDG OIL TEMP ≥ 147 °C	Reduce IDG load, if possible (GALLEY or GEN OFF). If required, restore when the temperature has dropped. Restrict generator use to a short time, if the temperature rises again excessively.

Ident.: ABN-80-G-00010924.0001001 / 24 FEB 14
Applicable to: MSN 2649

FUEL	Difference between wing fuel quantities greater than 1 500 kg (3 307 lb)	FUEL MANAGEMENT (CHECK) If a fuel leak is suspected, <i>Refer to QRH ABN-28 FUEL LEAK.</i>
	Fuel temp greater than 45 °C in inner cell, or 55 °C in outer cell	GALLEY (OFF)
	Fuel temp lower than -40 °C in inner or outer cell	Consider descending to a lower altitude and/or increasing Mach to increase TAT.

Ident.: ABN-80-G-00010924.0002001 / 24 FEB 14
Applicable to: MSN 1219-1843, 2927-3120

FUEL	Difference between wing fuel quantities greater than 1 500 kg (3 307 lb)	FUEL MANAGEMENT (CHECK) If a fuel leak is suspected, <i>Refer to QRH ABN-28 FUEL LEAK.</i>
	Fuel temp greater than 45 °C in wing tank	GALLEY (OFF)
	Fuel temp lower than -40 °C in wing tank	Consider descending to a lower altitude, and/or increasing Mach to increase TAT.

Ident.: ABN-80-G-00010925.0009001 / 18 NOV 11
Applicable to: MSN 2649-3120

OXY	Cockpit oxygen bottle pressure < 600 PSI.	If mask is not being used, check if it is correctly stowed.

Ident.: ABN-80-G-00010926.0002001 / 18 MAR 11
Applicable to: ALL

APU	EGT > EGT MAX -33 °C (inhibited during APU start)	
	OIL QTY (message LOW OIL LEVEL pulsing)	If there is no oil leak, then the remaining oil quantity allows normal APU operation for about 10 h.



Continued from the previous page

SYSTEM	CONDITIONS	RECOMMENDED ACTION
Ident.: ABN-80-G-00010927.0005001 / 24 FEB 14 Applicable to: MSN 1219-1233		
ENG	OIL PRESS P < 16 PSI	- If oil pressure is between 16 PSI and 13 PSI (advisory), continue normal operation. - If oil pressure is below 13 PSI (red indication), without the <u>ENG</u> OIL LO PR warning, continue normal engine operation (it can be assumed that the oil pressure transducer is faulty). In both cases, monitor other engine parameters, especially oil temperature and quantity.
	OIL PRESS P > 90 PSI	Closely monitor other engine parameters for symptoms of engine malfunction. If high oil pressure is not accompanied by other abnormal indications, operate the engine normally for the remainder of the flight. Record high oil pressure, and corresponding N2 readings, for maintenance action.
	OIL TEMP T > 140 °C	An oil temperature increase during normal steady-state operations indicates a system malfunction, and should be closely monitored for other symptoms of engine malfunction. <u>Note:</u> If the OIL TEMP increase follows thrust reduction, increasing thrust may reduce oil temperature. In addition, an oil temperature increase could be related to the IDG oil cooling system. To reduce oil temperature increases before limits are reached, the following is recommended: 1. <u>Low Speed</u>- Increase engine speed to increase fuel flow, and thereby cool IDG oil. 2. <u>High Speed</u>- Reduce generator load, or turn off generator. If oil temperature continues to rise, mechanically disconnect IDG.
	OIL QTY < 3 qt	If oil quantity is low at a high power setting, expect level increase after power reduction.
	NAC TEMP ≥ 240 °C	Monitor engine parameters and crosscheck with other engine.
	VIBRATION N1 ≥ 6 units N2 ≥ 4.3 units	Refer to HIGH ENGINE VIBRATION procedure (<i>Refer to QRH ABN-70 High Engine Vibration</i>). <u>Note:</u> The advisory threshold may be decreased by a MCDU procedure at the level of vibration reached during the last flight. If this function has been activated, the N1 and N2 VIB indication will respectively pulse below 6 and 4.3.



 A320/A321 QUICK REFERENCE HANDBOOK	ABNORMAL AND EMERGENCY PROCEDURES	80.15C 06 MAR 14

Continued from the previous page

SYSTEM	CONDITIONS	RECOMMENDED ACTION
Ident.: ABN-80-G-00010927.0006001 / 24 FEB 14 Applicable to: MSN 1276-3120		
ENG	OIL PRESS P < 80 PSI	- If oil pressure is between 80 PSI and 60 PSI continue normal engine operation. - If oil pressure is below 60 PSI (red indication), without the ENG OIL LO PR warning, continue normal engine operation (it can be assumed that the oil pressure transducer is faulty). In both cases, monitor other engine parameters, especially oil temperature and oil quantity.
	OIL PRESS P > 390 PSI	Closely monitor other engine parameters for symptoms of engine malfunction. If a high oil pressure is not accompanied by other abnormal indications, operate the engine normally for the remainder of the flight. Record high oil pressure, and corresponding N2 readings, for maintenance action.
	OIL TEMP T > 155 °C	An oil temperature increase during normal steady-state operations indicates a system malfunction, and should be closely monitored for other symptoms of engine malfunction. <i>Note: If the OIL TEMP increase follows thrust reduction, increasing thrust may reduce oil temperature.</i> <i>In addition, an oil temperature increase could be related to the IDG oil cooling system. To reduce oil temperature increases before limits are reached, the following is recommended:</i> 1. <u>Low Speed</u>- Increase engine speed to increase fuel flow, and thereby cool IDG oil. 2. <u>High Speed</u>- Reduce generator load, or turn off generator. If oil temperature continues to rise, mechanically disconnect IDG.
	OIL QTY < 5 qt	If oil quantity is low at a high power setting, expect level increase after power reduction.
	NAC TEMP ≥ 320 °C	Monitor engine parameters and crosscheck with other engine.
	VIBRATION N1 ≥ 5 units N2 ≥ 5 units	Refer to HIGH ENGINE VIBRATION procedure (<i>Refer to QRH ABN-70 High Engine Vibration</i>).

 A320/A321 QUICK REFERENCE HANDBOOK	ABNORMAL AND EMERGENCY PROCEDURES	80.16A
		06 MAR 14

TRIPPED C/B RE-ENGAGEMENT

Ident.: ABN-80-00010904.0001001 / 18 MAR 11
Applicable to: ALL

In flight, do not reengage a circuit breaker (C/B) that has tripped by itself, unless the Captain judges it necessary to do so for the safe continuation of the flight. This procedure should be adopted only as a last resort, and only one reengagement should be attempted.

On ground, do not reengage the C/B of the fuel pump(s) of any tank. For all other C/Bs, if the flight crew coordinates the action with maintenance, the flight crew may reengage a tripped C/B, provided that the cause of the tripped C/B is identified.

COMPUTER RESET

Ident.: ABN-80-E-00010905.0001001 / 19 AUG 10 Applicable to: ALL

When a digital computer behaves abnormally, as a result of an electrical transient, for example, the Operator can stop the abnormal behavior by briefly interrupting the power supply to its processor.

The flight crew can reset most of the computers in this aircraft with a normal cockpit control (selector or pushbutton). However, for some systems, the only way to cut off electrical power is to pull the associated circuit breaker.

Ident.: ABN-80-E-00010906.0001001 / 18 MAR 11 Applicable to: ALL

- To perform a computer reset:
- Select the related normal cockpit control OFF, or pull the corresponding circuit breaker.
 - Wait 3 s if a normal cockpit control is used, or 5 s if a circuit breaker is used (unless a different time is indicated)
 - Select the related normal cockpit control ON, or push the corresponding circuit breaker
 - Wait 3 s for the end of the reset.

WARNING	Do not reset more than one computer at the same time, unless instructed to do so.

- Note: *In flight, before taking any action on the cockpit C/Bs, both the PF and PNF must :*
- *Consider and fully understand the consequences of taking action*
 - *Crosscheck and ensure that the C/B label corresponds to the affected system.*

Ident.: ABN-80-E-00010907.0001001 / 21 NOV 11 Applicable to: ALL

- The computers most prone to reset are listed in the table below, along with the associated reset procedure. Specific reset procedures included in OEB or TDUs are not referenced in this table and, when issued, supersede this table.
- On ground, almost all computers can be reset and are not limited to the ones indicated in the table.
- The following computers are not allowed to be reset in specific circumstances:
- ECU (Engine Control Unit on CFM engines), or EEC (Electronic Engine Control on IAE engines), and EIU (Engine Interface Unit) while the engine is running.
 - BSCU (Brake Steering Control Unit), if the aircraft is not stopped.
- In flight, as a general rule, the crew must restrict computer resets to those listed in the table, or to those in applicable TDUs or OEBs. Before taking any action on other computers, the flight crew must consider and fully understand the consequences.

CAUTION	Do not pull the following circuit breakers: - SFCC (could lead to SLATS/FLAPS locked). - ECU or EEC, EIU.

COMPUTER RESET TABLE

ATA	System malfunction or ECAM Warning/Caution	Affected System	Reset

Ident.: ABN-80-F-00010908.0001001 / 21 AUG 13
Applicable to: MSN 1219-1843

21	VENT AVNCS SYS FAULT	AEVC	On ground only: - Pull C/B Y 17 on 122VU - Wait 1 s before pushing the C/B.

Ident.: TDU / ABN-80-F-00013737.0001001 / 21 AUG 13
Applicable to: MSN 2649

21	VENT AVNCS SYS FAULT	AEVC	On ground only: - Pull C/B Y 17 on 122VU - Wait 1 s before pushing the C/B.
	COND TRIM AIR SYS FAULT or AIR PACK 1(2) REGUL FAULT	ACSC	On ground only: - Pull C/B W21 and W22 on 122VU - Pull C/B X21 and X22 on 122VU - Pull C/B Y18, Y20 and Y21 on 122VU - Pull C/B D8 on 49VU - Wait 5 s before pushing all the C/Bs.

Ident.: TDU / ABN-80-F-00013737.0002001 / 21 AUG 13
Applicable to: MSN 2927-3120

21	VENT AVNCS SYS FAULT	AEVC	On ground only: - Pull C/B Y 17 on 122VU - Wait 1 s before pushing the C/B.
	AIR PACK 1(2) REGUL FAULT	ACSC	On ground only: - Pull C/B W21 and W22 on 122VU - Pull C/B X21 and X22 on 122VU - Pull C/B Y18, Y20 and Y21 on 122VU - Pull C/B D8 on 49VU - Wait 5 s before pushing all the C/Bs.



Continued from the previous page

ATA	System malfunction or ECAM Warning/Caution	Affected System	Reset
Ident.: ABN-80-F-00010909.0004001 / 21 AUG 13 Applicable to: MSN 1219-1233			
22	AUTO FLT FCU 1(2) FAULT	FCU	In flight: - Pull the C/B B05 on 49VU for FCU1, or M21 on 121VU for FCU2. - Push it after 5 s. - CHECK the displayed targets and the barometer reference, and correct them if necessary. On ground: - Pull the C/B B05 on 49VU for FCU1, or M21 on 121VU for FCU2. - Push it after 5 s. - If AUTO FLT FCU 1(2) FAULT disappears, CHECK the displayed targets and barometer reference, and correct them if necessary (RESET successful) - If AUTO FLT FCU 1(2) FAULT remains, pull both C/B B05 on 49VU and M21 on 121VU - Push them after 7 min, with a delay of less than 5 s between side 1 and 2 - Wait at least 30 s for FCU1 and FCU2 safety tests completion - CHECK the displayed targets and barometer reference, and correct them if necessary (RESET successful)
22	AUTO FLT FCU 1+2 FAULT	FCU	In flight: - Pull the C/B B05 on 49VU for FCU1, and then M21 on 121VU for FCU2. - Push them after 5 s. - CHECK the displayed targets and the barometer reference, and correct them if necessary. On ground: - Pull the C/B B05 on 49VU for FCU1, and then M21 on 121VU for FCU2. - Push them after 5 s - If AUTO FLT FCU 1+2 FAULT disappears, CHECK the displayed targets and barometer reference, and correct them if necessary (RESET successful) - If AUTO FLT FCU 1+2 FAULT remains, pull again both C/B B05 on 49VU and M21 on 121VU - Push them after 7 min, with a delay of less than 5 s between side 1 and 2 - Wait for at least 30 s for FCU1 and FCU2 safety tests completion - CHECK the displayed targets and barometer reference, and correct them if necessary (RESET successful) FCU targets are synchronized on current aircraft values, and displayed as selected targets. - RE-ENTER the barometer altimeter setting value, if necessary.



Continued from the previous page

ATA	System malfunction or ECAM Warning/Caution	Affected System	Reset
22	AUTO FLT YAW DAMPER 1(2) FAULT	FAC 1(2)	On ground, or in flight: In order to perform a reset, use the associated FAC pushbutton: - Set FAC 1(2) pb to OFF - Wait 3 s - Set FAC 1(2) pb to ON
	WINDSHEAR DET FAULT or AUTO FLT REAC W/S DET FAULT 	FAC 1+2	On ground only: The Flight Crew could cancel these alerts by resetting both FACs, one after the other - Pull the C/Bs B03 and B04 on 49VU and push them after 5 s - Pull the C/Bs M18 and M19 on 121VU and push them after 5 s
	One MCDU locked, or blank	MCDU	On ground, or in flight: - Pull the CB for the locked or blank MCDU and push it back after 10 s. The circuit breakers for the MCDU's are: • AUTO FLT/MCDU 1 B1 ON 49 VU (Overhead Panel) • AUTO FLT/MCDU 2 N20 ON 121 VU (Right Rear Maintenance Panel) • AUTO FLT/MCDU 3 N21 ON 121 VU (Right Rear Maintenance Panel) 
	Both MCDU locked, or blank FMGC malfunction	FMGC FMGC	On ground: - Apply external power or APU generator power - Wait 2 min before resetting the FMGC circuit breakers - FD 1(or 2) (OFF) - Pull the CB of the affected FMGC and reset it after 5 s. The circuit breakers for the FMGC's are: • AUTO FLT/FMGC 1 B2 ON 49 VU (Overhead Panel) • AUTO FLT/FMGC 2 M17 ON 121 VU (Right Rear Maintenance Panel) CAUTION Always wait 1 min after the "PLEASE WAIT" message disappears from the MCDU, before engaging or reengaging the FDs and the AP of the reset FMGC. In flight: - FD 1(or 2) (OFF) - Pull the CB of the affected FMGC and reset it after 5 s. The circuit breakers for the FMGC's are: • AUTO FLT/FMGC 1 B2 ON 49 VU (Overhead Panel)



Continued from the previous page

ATA	System malfunction or ECAM Warning/Caution	Affected System	Reset
			AUTO FLT/FMGC 2 M17 ON 121 VU (Right Rear Maintenance Panel) CAUTION Always wait 1 min after the "PLEASE WAIT" message disappears from the MCDU, before engaging or reengaging the FDs and the AP of the reset FMGC.



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ATA	System malfunction or ECAM Warning/Caution	Affected System	Reset
Ident.: ABN-80-F-00010909.0001001 / 21 AUG 13 Applicable to: MSN 1276-3120			
22	AUTO FLT FCU 1(2) FAULT	FCU	In flight: - Pull the C/B B05 on 49VU for FCU1, or M21 on 121VU for FCU2. - Push it after 5 s. - CHECK the displayed targets and the barometer reference, and correct them if necessary. On ground: - Pull the C/B B05 on 49VU for FCU1, or M21 on 121VU for FCU2. - Push it after 5 s. - If AUTO FLT FCU 1(2) FAULT disappears, CHECK the displayed targets and barometer reference, and correct them if necessary (RESET successful) - If AUTO FLT FCU 1(2) FAULT remains, pull both C/B B05 on 49VU and M21 on 121VU - Push them after 7 min, with a delay of less than 5 s between side 1 and 2 - Wait at least 30 s for FCU1 and FCU2 safety tests completion - CHECK the displayed targets and barometer reference, and correct them if necessary (RESET successful)
22	AUTO FLT FCU 1+2 FAULT	FCU	In flight: - Pull the C/B B05 on 49VU for FCU1, and then M21 on 121VU for FCU2. - Push them after 5 s. - CHECK the displayed targets and the barometer reference, and correct them if necessary. On ground: - Pull the C/B B05 on 49VU for FCU1, and then M21 on 121VU for FCU2. - Push them after 5 s - If AUTO FLT FCU 1+2 FAULT disappears, CHECK the displayed targets and barometer reference, and correct them if necessary (RESET successful) - If AUTO FLT FCU 1+2 FAULT remains, pull again both C/B B05 on 49VU and M21 on 121VU - Push them after 7 min, with a delay of less than 5 s between side 1 and 2 - Wait for at least 30 s for FCU1 and FCU2 safety tests completion - CHECK the displayed targets and barometer reference, and correct them if necessary (RESET successful) FCU targets are synchronized on current aircraft values, and displayed as selected targets. - RE-ENTER the barometer altimeter setting value, if necessary.



Continued from the previous page

ATA	System malfunction or ECAM Warning/Caution	Affected System	Reset			
22	WINDSHEAR DET FAULT or AUTO FLT REAC W/S DET FAULT 	FAC 1+2	On ground only: The Flight Crew could cancel these alerts by resetting both FACs, one after the other - Pull the C/Bs B03 and B04 on 49VU and push them after 5 s - Pull the C/Bs M18 and M19 on 121VU and push them after 5 s			
	One MCDU locked, or blank	MCDU	On ground, or in flight: - Pull the CB for the locked or blank MCDU and push it back after 10 s. The circuit breakers for the MCDU's are: • AUTO FLT/MCDU 1 B1 ON 49 VU (Overhead Panel) • AUTO FLT/MCDU 2 N20 ON 121 VU (Right Rear Maintenance Panel) • AUTO FLT/MCDU 3 N21 ON 121 VU (Right Rear Maintenance Panel) 			
	Both MCDU locked, or blank FMGC malfunction	FMGC FMGC	On ground: - Apply external power or APU generator power - Wait 2 min before resetting the FMGC circuit breakers - FD 1(or 2) (OFF) - Pull the CB of the affected FMGC and reset it after 5 s. The circuit breakers for the FMGC's are: • AUTO FLT/FMGC 1 B2 ON 49 VU (Overhead Panel) • AUTO FLT/FMGC 2 M17 ON 121 VU (Right Rear Maintenance Panel) <table border="1"><tr><td>CAUTION</td><td>Always wait 1 min after the "PLEASE WAIT" message disappears from the MCDU, before engaging or reengaging the FDs and the AP of the reset FMGC.</td></tr></table> In flight: - FD 1(or 2) (OFF) - Pull the CB of the affected FMGC and reset it after 5 s. The circuit breakers for the FMGC's are: • AUTO FLT/FMGC 1 B2 ON 49 VU (Overhead Panel) • AUTO FLT/FMGC 2 M17 ON 121 VU (Right Rear Maintenance Panel) <table border="1"><tr><td>CAUTION</td><td>Always wait 1 min after the "PLEASE WAIT" message disappears from</td></tr></table>	CAUTION	Always wait 1 min after the "PLEASE WAIT" message disappears from the MCDU, before engaging or reengaging the FDs and the AP of the reset FMGC.	CAUTION
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CAUTION	Always wait 1 min after the "PLEASE WAIT" message disappears from					



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ATA	System malfunction or ECAM Warning/Caution	Affected System	Reset
			the MCDU, before engaging or reengaging the FDs and the AP of the reset FMGC.

Ident.: ABN-80-F-00010910.0002001 / 20 DEC 13
Applicable to: MSN 1219-1843

	COM CIDS 1+2 FAULT	CIDS	On ground, or in flight: - Pull the C/Bs in the following order: G01 on 49VU, M06 on 121VU. G02 on 49VU, M07 on 121VU. - Wait 10 s, then - Push the C/B in the following order: M06, M07, G01, G02. - After CIDS reset, wait approximately 4 min, before recovering normal operation.
23	Uncommanded EVAC horn activation	CIDS	On ground, or in flight: Press the EVAC HORN SHUT OFF pb. Set the EVAC CAPT & PURS CAPT sw to the CAPT only position. Wait for 3 s. • IF UNSUCCESSFUL: - Pull the C/Bs for DIR2 in the following order: G02 on 49VU, M07 on 121VU. • IF UNSUCCESSFUL: - Pull the C/Bs for DIR1 in the following order: G01 on 49VU, M06 on 121VU. - Wait for 1 min, then: - Push the C/Bs for DIR2 in the following order: M07, G02 - After CIDS reset, wait approximately 4 min, before recovering normal operation.
	Frozen RMP	RMP	On ground, or in flight: The flight crew must reset all the RMPs one after the other via the RMP control panel: - Set RMP ON/OFF sw to OFF position, - Wait 5 s, - Set RMP ON/OFF sw to ON position.
23	FAP freezing	FAP or Tape reproducer PRAM	On ground, or in flight: - Pull C/B M14 (or Q14 ) of the FAP* in the 121VU. - Wait 10 s before pushing the C/B. • IF UNSUCCESSFUL: - Pull the tape reproducer/PRAM C/B D01 or E01 or F07 on 2000VU (cabin) - Wait 10 s before pushing the C/B.



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ATA	System malfunction or ECAM Warning/Caution	Affected System	Reset
Ident.: ABN-80-F-00010910.0004001 / 21 AUG 13 Applicable to: MSN 2927-3120			
23	COM CIDS 1+2 FAULT and/or Loss of Passenger Address and/or Loss of Cabin Interphone	CIDS	On ground, or in flight: - Pull the C/Bs in the following order: P13  and P14  on 121VU, G01 and G02 on 49VU, M06 and M07 on 121VU. - Wait 10 s, then - Push the C/B in the following order: M06, M07, G01, G02, P13 , P14 . - After CIDS reset, wait approximately 4 min, before recovering normal operation.
	Uncommanded EVAC horn activation	CIDS	On ground, or in flight: Press the EVAC HORN SHUT OFF pb. Set the EVAC CAPT & PURS CAPT sw to the CAPT only position. Wait for 3 s. • IF UNSUCCESSFUL: - Pull the C/Bs for DIR2 in the following order: G02 on 49VU, M07 on 121VU. • IF UNSUCCESSFUL: - Pull the C/Bs for DIR1 in the following order: G01 on 49VU, M06 on 121VU. - Wait for 1 min, then: - Push the C/Bs for DIR2 in the following order: M07, G02 - After CIDS reset, wait approximately 4 min, before recovering normal operation.
23	Frozen RMP	RMP	On ground, or in flight: The flight crew must reset all the RMPs one after the other via the RMP control panel: - Set RMP ON/OFF sw to OFF position, - Wait 5 s, - Set RMP ON/OFF sw to ON position.
	FAP freezing	FAP or Tape reproducer PRAM	On ground, or in flight: - Pull FAP C/Bs in the following order: H01 on 49VU, Q14 on 121VU. - Wait 10 s, then: - Push the C/Bs in the following order: Q14, H01.



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ATA	System malfunction or ECAM Warning/Caution	Affected System	Reset

Ident.: ABN-80-F-00010910.0006001 / 21 AUG 13
Applicable to: MSN 2649

23	COM CIDS 1+2 FAULT and/or Loss of Passenger Address and/or Loss of Cabin Interphone	CIDS	On ground, or in flight: - Pull the C/Bs in the following order: P13  and P14  on 121VU, G01 and G02 on 49VU, M05 and M06 on 121VU. - Wait 10 s, then: - Push the C/B in the following order: M05, M06, G01, G02, P13 , P14 . - After CIDS reset, wait approximately 4 min, before recovering normal operation.
	Uncommanded EVAC horn activation	CIDS	On ground, or in flight: Press the EVAC HORN SHUT OFF pb. Set the EVAC CAPT & PURS CAPT sw to the CAPT only position. Wait for 3 s. • IF UNSUCCESSFUL: - Pull the C/Bs for DIR2 in the following order: G02 on 49VU, M06 on 121VU. • IF UNSUCCESSFUL: - Pull the C/Bs for DIR1 in the following order: G01 on 49VU, M05 on 121VU. - Wait for 1 min, then: - Push the C/Bs for DIR2 in the following order: M06, G02. - After CIDS reset, wait approximately 4 min, before recovering normal operation.
23	Frozen RMP	RMP	On ground, or in flight: The flight crew must reset all the RMPs one after the other via the RMP control panel: - Set RMP ON/OFF sw to OFF position, - Wait 5 s, - Set RMP ON/OFF sw to ON position.
	FAP freezing	FAP	On ground, or in flight: - Pull the C/Bs in the following order: H01 on 49VU, Q14 on 121VU. - Wait 10 s, then: - Push the C/Bs in the following order: Q14, H01.

Ident.: ABN-80-F-00010911.0001001 / 18 MAR 11
Applicable to: MSN 2649-3120

24	GPU cannot be connected to the aircraft	GAPCU	On ground only: The GPU cannot be connected to the electrical network of the aircraft (AVAIL light is OFF): • If at least one power source (IDG 1 or 2, APU GEN or batteries) is connected to the electrical network of the aircraft. - Reset the EXT PWR pb on 35VU (Press and release) • If no power source is connected to the electrical network of the aircraft. - Set the BAT 1 pb-sw and BAT 2 pb-sw to AUTO.



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ATA	System malfunction or ECAM Warning/Caution	Affected System	Reset

Ident.: ABN-80-F-00010912.0017001 / 21 AUG 13
Applicable to: MSN 1276-1843

26	SMOKE DET FAULT	SDCU	On ground only: - Pull C/B C06 on 49VU, and C/B T18 on 122VU. - Wait 60 s before pushing both C/Bs.

Ident.: ABN-80-F-00010912.0002001 / 21 AUG 13
Applicable to: MSN 1219-1233

26	SMOKE LAV +CRG DET FAULT	SDCU	On ground only: - Pull C/B C06 on 49VU, and C/B T18 on 122VU. - Wait 60 s before pushing both C/Bs.



Continued from the previous page

ATA	System malfunction or ECAM Warning/Caution	Affected System	Reset

Ident.: ABN-80-F-00010912.0008001 / 03 DEC 13
 Applicable to: MSN 2649-3120

26	SMOKE LAV +CRG DET FAULT	CIDS-SDF	On ground or in flight: Apply the following actions in the presented order: - Pull the C/Bs C05 and C06 on 49VU, T17 and T18 on 122VU. - Wait 10 s, then - Push simultaneously the C/Bs C05 and C06 on 49VU - Within 2 s push simultaneously the C/Bs T17 and T18 on 122VU. - After CIDS reset, wait approximately 4 min before recovering normal operation.
	SMOKE LAVATORY DET FAULT with all lavatories declared inoperative on the FAP	CIDS or CIDS-SDF	On ground or in flight: Apply the following actions in the presented order: - Pull the C/Bs P13 and P14  on 121VU, G01 and G02 on 49VU, M05 or M06 or M07 on 121VU. - Wait 10 s, then - Push the C/Bs in the following order: M05 or M06 and M06 or M07 on 121VU, G01 and G02 on 49VU, P13 and P14  ; on 121VU. - After CIDS reset, wait approximately 4 min before recovering normal operation. If unsuccessful, on ground only: Apply the following actions in the presented order: - Pull the C/Bs C06 and C05 on 49VU, T17 and T18 on 122VU. - Wait 10 s, then - Push simultaneously the C/Bs C05 and C06 on 49VU - Within 2 s push simultaneously the C/Bs T17 and T18 on 122VU. - After CIDS reset, wait approximately 4 min before recovering normal operation.
	SMOKE FWD (AFT) CARGO DET FAULT SMOKE FWD (AFT) CRG 1/2 BTL FAULT	CIDS-SDF	On ground: Apply the following actions in the presented order: - Pull the C/Bs C05 and C06 on 49VU, T17 and T18 on 122VU. - Wait 10 s, then - Push simultaneously the C/Bs C05 and C06 on 49VU - Within 2 s push simultaneously the C/Bs T17 and T18 on 122VU. - After CIDS reset, wait approximately 4 min before recovering normal operation.



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ATA	System malfunction or ECAM Warning/Caution	Affected System	Reset
Ident.: ABN-80-F-00010913.0001001 / 16 MAY 12 Applicable to: ALL			
27	F/CTL ELAC 1(2) FAULT (one or both computer failed)	ELAC	On ground, or in flight - Set ELAC 1(2) pb to OFF - Wait 3 s, - Set ELAC 1(2) pb to ON WARNING Do not reset ELAC, if uncommanded maneuvers occurred during flight. Do not reset more than one computer at a time. Note: - When an ELAC reset is performed on ground, the crew must check the pitch trim position. - If a reset is performed on ground, the flight crew must then perform a flight controls check.
	ELAC or SEC malfunction	ELAC or SEC	ELAC or SEC may be reset. WARNING Do not reset more than one computer at a time. - It is possible to reset the flight control computers in flight, even if not requested by the ECAM, provided only one reset is performed at a time: For the ELAC only, in case of uncommanded maneuvers during the flight, the reset is not recommended. Note: - When an ELAC reset is performed on ground, the crew must check the pitch trim position. - If a reset is performed on ground, the flight crew must then perform a flight controls check.



Continued from the previous page

ATA	System malfunction or ECAM Warning/Caution	Affected System	Reset

Ident.: ABN-80-F-00010914.0003001 / 18 MAR 11
Applicable to: MSN 1219-1843, 2927-3120

28	Loss of fuel quantity indication	FQIC	On ground, or in flight: - Pull the C/B of the affected channel: • Channel 1 (A13 on 49VU) • Channel 2 (M27 on 121VU) - Wait 5 s, before pushing the C/B. <i>Note:</i> The fuel quantity indication will be re-established within 1 min.

Ident.: ABN-80-F-00010914.0005001 / 21 AUG 13
Applicable to: MSN 2649

28	Loss of fuel quantity indication or Simultaneous triggering of FUEL L XFR VALVE CLOSED and FUEL R XFR VALVE CLOSED although FUEL SD indicates no anomaly.	FQIC	On ground, or in flight: - Pull the 3 C/B: • Channel 1 (A13 on 49VU) • Channel 2 (M27 on 121VU) • Channel 1 and 2 (L26 on 121VU) - Wait 5 s, before pushing the 3 C/B. <u>Note:</u> 1. The fuel quantity indication will be re-established within 1 min. 2. The fuel leak detection function will be lost for the remainder of the flight. The flight crew must monitor the fuel quantity.	
			<table border="1" style="width: 100%;"> <tr> <td style="width: 20%; text-align: center; vertical-align: top;">CAUTION</td> <td> The FUEL AUTO FEED FAULT caution will be lost for the remainder of the flight. In flight: - If center tank is not empty, while one inner tank contains less than 5 000 kg (11 000 lb) of fuel: • FUEL MODE SEL (MAN) - When center tank is empty: • CTR TK PUMP 1 and 2 (OFF) • FUEL MODE SEL (MAN) </td> </tr> </table>	CAUTION
CAUTION	The FUEL AUTO FEED FAULT caution will be lost for the remainder of the flight. In flight: - If center tank is not empty, while one inner tank contains less than 5 000 kg (11 000 lb) of fuel: • FUEL MODE SEL (MAN) - When center tank is empty: • CTR TK PUMP 1 and 2 (OFF) • FUEL MODE SEL (MAN)			



Continued from the previous page

ATA	System malfunction or ECAM Warning/Caution	Affected System	Reset

Ident.: ABN-80-F-00010916.0002001 / 21 AUG 13
Applicable to: ALL

31	FWS FWC 1(2) FAULT	FWC	On ground: Pull, then push, the C/B of the affected FWC: - FWC 1 (F01 on 49VU) - FWC 2.(Q7 on 121VU) Wait 50 s after pushing the C/Bs. In flight: Pull, then push, the C/B of the affected FWC: - FWC 1 (F01 on 49VU) - FWC 2 (Q7 on 121VU)



Continued from the previous page

ATA	System malfunction or ECAM Warning/Caution	Affected System	Reset
Ident.: TDU / ABN-80-F-00014916.0001001 / 23 AUG 13 Applicable to: ALL			
	BRAKES SYS 1(2) FAULT or BRAKES BSCU CH 1(2) FAULT	BSCU	On ground: - STOP aircraft, - Set PARK BRK handle to ON, - Confirm that towing bar is disconnected, - Set A/SKID & N/W STRG sw to OFF, - Set A/SKID & N/W STRG sw to ON, - If unsuccessful: - Pull C/Bs M33 and M34 on 121VU for BSCU channel 1, - Pull C/Bs M36 and M35 on 121VU for BSCU channel 2, - Push C/Bs. After a successful reset, resume to normal operation. <u>Note:</u> After any BSCU reset: 1. Check brake efficiency, 2. Record BSCU reset in the logbook. In Flight: When landing gear is up only: - Set A/SKID & N/W STRG sw to OFF, - Set A/SKID & N/W STRG sw to ON, - If required, rearm the autobrake. When landing gear is down: reset not authorized. <u>Note:</u> After any BSCU reset: - Record BSCU reset in the logbook.
32	WHEEL N.W STEER FAULT or WHEEL N/W STRG FAULT	BSCU	On ground only: Case A If the three conditions below are fulfilled: - the WHEEL N/W. STRG FAULT alert was triggered just after engine start - the NW STRG DISC memo was displayed before the start of the pushback (before the aircraft starts moving) - the NW STRG DISC memo remained displayed even after the pushback is finished (nosewheel steering selector bypass pin is in the steering position). Apply the below reset procedure. If the ECAM alert disappears after the reset, the flight crew may continue the flight without troubleshooting. Case B In all other cases, including in case of doubt on the above conditions, troubleshooting must be performed before continuing the flight, even if the ECAM alert disappears after the reset. For a return to the gate : - Apply the below reset procedure - The taxi speed must not exceed 10 kt. Reset Procedure: - STOP aircraft, - Set PARK BRK handle to ON, - Confirm that towing bar is disconnected, - Set A/SKID & N/W STRG sw to OFF,



Continued from the previous page

ATA	System malfunction or ECAM Warning/Caution	Affected System	Reset
			- Set A/SKID & N/W STRG sw to ON. <u>Note:</u> After any BSCU reset: 1. Check brake efficiency, 2. Check absence of aircraft veering, 3. Record the BSCU reset in the logbook.
	L/G LGCIU 1(2) FAULT	LGCIU 1(2)	On ground only: The flight crew must depressurize the green hydraulic system before resetting the LGCIU. - ENG 1 PUMP: OFF, - PTU: OFF. When there is no green hydraulic pressure: - To reset LGCIU 1: • Pull C/B Q34 on 121VU, then C09 on 49VU, • Wait for 15 s , then push the C/Bs; - To reset LGCIU 2: • Pull C/B Q35 on 121VU, • Wait for 15 s , then push the C/B. After the LGCIU reset, restore green hydraulic pressure (ENG 1 PUMP ON, PTU AUTO).

Ident.: ABN-80-F-00010918.0001001 / 21 AUG 13
 Applicable to: MSN 1219-1233

34	NAV TCAS FAULT	TCAS	On ground only: - Pull C/B K10 on 121VU. - Wait 5 s, then push the C/B.

Ident.: ABN-80-F-00010918.0005001 / 21 AUG 13
 Applicable to: MSN 1276-3120

34	NAV TCAS FAULT	TCAS	On ground only: - Pull C/B K10 on 121VU. - Wait 5 s, then push the C/B.
	ISIS malfunction	ISIS	On ground only: With aircraft not moving: - Pull C/B F12 on 49VU, - Wait 5 s, then push the C/B, - Normal operation is expected after approximately 2 min. <u>Note:</u> In the case of small aircraft motion during the C/B reset (refueling, cargo loading conditions, etc.), the ATT red flag may appear on the ISIS. In this case, press the RST P/B for 2 s, and wait 2 min to recover normal operation.



 A320/A321 QUICK REFERENCE HANDBOOK	ABNORMAL AND EMERGENCY PROCEDURES	80.18Q 06 MAR 14

Continued from the previous page

ATA	System malfunction or ECAM Warning/Caution	Affected System	Reset

Ident.: ABN-80-F-00015020.0001001 / 27 MAY 13
Applicable to: ALL

36	AIR ENG 1(2) BLEED FAULT or AIR ENG 1(2) BLEED ABNORM PR	Engine Bleed Supply System	<i>Note:</i> Do not attempt more than one reset. On ground or in flight • If the PACK (non-affected side) is operative, and If the Wing Anti-Ice is OFF: - ENG BLEED (affected side).....OFF ■ If the ENG BLEED (affected side) pb-sw FAULT light is on: - Delay application of the reset until FAULT light extinguishes. ■ If the ENG BLEED (affected side) pb-sw FAULT light is off: - X BLEED.....AUTO - PACK (affected side).....ON - ENG BLEED (affected side).....ON - Check that the affected Engine Bleed Valve is open on the BLEED SD page. • If AIR ENG (AFFECTED) BLEED BLEED ABNORM PR alert reoccurs, or If Engine Bleed Valve (affected side) not open on the BLEED SD page: - ENG BLEED (affected side).....OFF - X BLEED.....OPEN <i>Note:</i> Record the ENG BLEED reset in the logbook (successful or unsuccessful).

Ident.: ABN-80-F-00010919.0001001 / 18 MAR 11
Applicable to: MSN 1219-1843

38	Failure messages on the CIDS FAP in the cabin	Vacuum System Controller	On ground, or in flight: - Pull C/B 35 MG on 2001VU, aft cabin, - Wait 30 s, then push the C/B 35 MG.

Ident.: ABN-80-F-00010920.0001001 / 18 MAR 11
Applicable to: MSN 1219-1843, 2927-3120

46	ATSU Malfunction	ATSU	An ATSU reset should be attempted, if: key selection has no effect on any of the MCDU ATSU DATALINK submenus. On ground, or in flight: - Pull the C/Bs in the following order: L16, L15 on 121VU - Wait 5 s, then: - Push the C/Bs in the following order: L15, L16.



Continued from the previous page

ATA	System malfunction or ECAM Warning/Caution	Affected System	Reset

Ident.: ABN-80-F-00010920.0002001 / 18 MAR 11
Applicable to: MSN 2649

46	ATSU malfunction	ATSU	An ATSU reset should be attempted, if case of: - Permanent display of "INVALID DATA" on the DCDU. - No key selection effect on the DCDU or MCDU ATC pages. On ground, or in flight: - Pull the C/Bs in the following order: L16, L15 on 121VU - Wait 5 s, then: - Push the C/Bs in the following order: L15, L16.

Ident.: ABN-80-F-00010921.0001001 / 21 AUG 13
Applicable to: MSN 1219-1233

70	ENG 1(2) FADEC A(B) FAULT	FADEC	On ground only: If this alert triggers at engine start, apply the following procedure: - Set ENG MASTER (affected) pb-sw to OFF After N2 speed below 5 %: - Pull C/B A04 or A05 on 49VU for ENG 1(2) FADEC channel A - Pull C/B R41 or Q40 on 120VU for ENG 1(2) FADEC channel B - Wait 5 s before pushing the C/Bs After ECU power-up sequence the Flight Crew can restart the engine.

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SAFETY EXTERIOR INSPECTION

Ident.: NP-NP-00010933.0001001 / 04 MAR 14
Applicable to: ALL

PF	PNF
	* WHEEL CHOCKS..... CHECK * L/G DOORS.....CHECK POSITION * APU AREA..... CHECK

PRELIMINARY COCKPIT PREPARATION

Ident.: NP-NP-00015472.0012001 / 03 MAR 14
Applicable to: MSN 2649-3120

PF	PNF
	ENG MASTERS 1, 2..... OFF ENG MODE selector..... CHECK NORM * WEATHER RADAR..... OFF L/G lever..... DOWN Both WIPER selectors..... OFF BAT..... CHECK/AUTO EXT PWR pb-sw.....AS RQRD APU FIRE..... CHECK/TEST APU.....START When the APU is AVAIL: AIR COND panel..... SET * EXT PWR pb-sw.....AS RQRD * COCKPIT LIGHT.....AS RQRD * ECAM RCL pb..... PRESS * ECAM OXY PRESS/HYD QTY/ENG OIL QTY..... CHECK FLAPS..... CHECK POSITION * SPD BRK lever.....CHECK RET AND DISARMED * PARKING BRAKE handle..... ON * ACCU/BRAKES PRESS..... CHECK ALTN BRAKING..... CHECK * OEB IN QRH..... CHECK
	EMER EQPT.....CHECK RAIN REPELLENT..... CHECK C/B PANELS.....CHECK * GEAR PINS and COVERS.....CHECK ONBOARD/STOWED * EXTERIOR WALKAROUND.....PERFORM

PRELIMINARY COCKPIT PREPARATION

Ident.: NP-NP-00015472.0003001 / 03 MAR 14
Applicable to: MSN 1219-1843

PF	PNF
	ENG MASTERS 1, 2..... OFF
	ENG MODE selector..... CHECK NORM
	* WEATHER RADAR..... OFF
	L/G lever..... DOWN
	Both WIPER selectors..... OFF
	BAT..... CHECK/AUTO
	EXT PWR pb-sw..... AS RQRD
	APU FIRE..... CHECK/TEST
	APU..... START
	When the APU is AVAIL:
	AIR COND panel..... SET
	* EXT PWR pb-sw..... AS RQRD
	* COCKPIT LIGHT..... AS RQRD
	* ECAM RCL pb..... PRESS
	* ECAM OXY PRESS/HYD QTY/ENG OIL QTY..... CHECK
	FLAPS..... CHECK POSITION
	* SPD BRK lever..... CHECK RET AND DISARMED
	* PARKING BRAKE handle..... ON
	* ACCU/BRAKES PRESS..... CHECK
* OEB IN QRH.....	CHECK
	EMER EQPT..... CHECK
	RAIN REPELLENT..... CHECK
	C/B PANELS..... CHECK
	* GEAR PINS and COVERS..... CHECK ONBOARD/STOWED
	* EXTERIOR WALKAROUND..... PERFORM

Continued from the previous page

PF	PNF
LATERAL CONSOLE:	LATERAL CONSOLE:
OXY MASK.....TEST	OXY MASK.....TEST
INSTRUMENT PANEL:	INSTRUMENT PANEL:
PFD-ND brightness.....ADJUST	PFD-ND brightness.....ADJUST
LOUDSPEAKER knob.....SET	LOUDSPEAKER knob.....SET
* PFD-ND.....CHECK	* PFD-ND.....CHECK
* LDG ELEV (ECAM).....CHECK AUTO	* IRS ALIGN.....CHECK
* ECAM STATUS.....CHECK	
* TAKEOFF BRIEFING.....PERFORM	

COCKPIT PREPARATION

Ident.: NP-NP-00010936.0017001 / 03 MAR 14
Applicable to: MSN 1276-1843, 2927-3120

PF	PNF
<u>OVERHEAD PANEL:</u>	
* ALL WHITE LIGHTS..... EXTINGUISH	
* RCDR GND CTL pb-sw..... ON	
CVR TEST pb..... PRESS	
CAPT & PURS/CAPT sw..... AS RQRD	
* ALL IR MODE selector..... NAV	
EXTERIOR LIGHTS..... SET	
* SIGNS..... SET	
PROB/WINDOW HEAT..... AUTO	
LDG ELEV..... AUTO	
* PACK FLOW..... AS RQRD	
BAT..... CHECK	
ENG FIRE..... CHECK/TEST	
AUDIO SWITCH..... NORM	
VENT panel..... CHECK	
PA (3rd occupant)..... RECEPT	
MAINT panel..... CHECK	
<u>CTR INSTRUMENT PANEL:</u>	
* ISIS..... CHECK	
* CLOCK..... CHECK/SET	
* A/SKID & NW STRG sw..... ON	
<u>PEDESTAL:</u>	
ACP..... CHECK	
COCKPIT DOOR..... CHECK	
SWITCHING PANEL..... NORM	
* THRUST LEVERS..... CHECK IDLE	
* ENG MASTERS..... CHECK OFF	
* ENG MODE selector..... CHECK NORM	
PARKING BRK..... AS RQRD	
GRAVITY GEAR EXTN..... CHECK STOWED	
* ATC..... SET	
RMP..... SET	
* AIRFIELD DATA..... OBTAIN	
* ACARS  INITIALIZE	
* FMS..... PREPARE	
	* FMS PREPARATION..... CHECK
•When both flight crewmembers are seated:	
<u>GLARESHIELD:</u>	<u>GLARESHIELD:</u>
* BAROMETRIC REFERENCE..... SET	* BAROMETRIC REFERENCE..... SET
* FD..... CHECK ON	* FD..... CHECK ON
* LS..... AS RQRD	* LS..... AS RQRD
* ND mode and range..... SET	* ND mode and range..... SET
* VOR/ADF selector..... AS RQRD	* VOR/ADF selector..... AS RQRD
* FCU..... SET	



Continued from the previous page

PF	PNF
LATERAL CONSOLE:	LATERAL CONSOLE:
OXY MASK.....TEST	OXY MASK.....TEST
INSTRUMENT PANEL:	INSTRUMENT PANEL:
PFD-ND brightness.....ADJUST	PFD-ND brightness.....ADJUST
LOUDSPEAKER knob.....SET	LOUDSPEAKER knob.....SET
* PFD-ND.....CHECK	* PFD-ND.....CHECK
* LDG ELEV (ECAM).....CHECK AUTO	* IRS ALIGN.....CHECK
* ECAM STATUS.....CHECK	
* TAKEOFF BRIEFING.....PERFORM	

Continued from the previous page

PF	PNF
* FCU..... SET LATERAL CONSOLE: OXY MASK..... TEST INSTRUMENT PANEL: PFD-ND brightness..... ADJUST LOUDSPEAKER knob..... SET * PFD-ND..... CHECK * LDG ELEV (ECAM)..... CHECK AUTO * ECAM STATUS..... CHECK * TAKEOFF BRIEFING..... PERFORM	LATERAL CONSOLE: OXY MASK..... TEST INSTRUMENT PANEL: PFD-ND brightness..... ADJUST LOUDSPEAKER knob..... SET * PFD-ND..... CHECK * IRS ALIGN..... CHECK

BEFORE PUSHBACK OR START

Ident.: NP-NP-00010938.0001001 / 04 MAR 14
Applicable to: ALL

PF	PNF
LOADSHEET..... CHECK (CM1) FOB..... CHECK FMS TO DATA..... CHECK/REVISE AS RQRD SEATING POSITION..... ADJUST FMS PERF TO page..... SELECT BEFORE START C/L down to the line..... COMPLETE NW STRG DISC..... CHECK AS RQRD WINDOWS/DOORS..... CHECK CLOSED SLIDES..... CHECK ARMED EXTERIOR LIGHTS..... SET THRUST LEVERS..... IDLE PARK BRK ACCU PRESS..... CHECK PARKING BRK..... AS RQRD BEFORE START C/L below the line..... COMPLETE	FOB..... CHECK REVISED FMS TO DATA..... XCHECK SEATING POSITION..... ADJUST FMS F-PLN page SELECT EXT PWR..... CHECK AVAIL EXT PWR DISCONNECTION REQUEST BEFORE START C/L down to the line..... COMPLETE PUSHBACK/START CLEARANCE..... OBTAIN WINDOWS/DOORS..... CHECK CLOSED SLIDES..... CHECK ARMED BEFORE START C/L below the line..... COMPLETE

ENGINE START

Ident.: NP-NP-00010941.0001001 / 04 MAR 14
Applicable to: ALL

PF	PNF
ENG MODE selector..... IGN/START ENG 2 START..... ANNOUNCE ENG MASTER switch 2..... ON ENG IDLE PARAMETERS..... CHECK ENG 1 START..... ANNOUNCE REPEAT THE START SEQUENCE	

 A320/A321 QUICK REFERENCE HANDBOOK	NORMAL PROCEDURES	NP-NP 9/20 06 MAR 14

AFTER START

Ident.: NP-NP-00010945.0001001 / 04 MAR 14
Applicable to: ALL

PF	PNF
ENG MODE selector.....NORM	
APU BLEED pb-sw.....OFF	GND SPOILERS.....ARM
ENG ANTI ICE pb-sw.....AS RQRD	RUD TRIM.....ZERO
WING ANTI ICE pb-sw.....AS RQRD	FLAPS.....SET
APU MASTER SW.....AS RQRD	PITCH TRIM.....SET
ECAM STATUS.....CHECK	ECAM STATUS.....CHECK
CLEAR TO DISCONNECT.....ANNOUNCE	
N/W STEER DISC MEMO.....CHECK NOT DISPLAYED	
AFTER START C/L.....COMPLETE	AFTER START C/L.....COMPLETE

TAXI

Ident.: NP-NP-00010943.0001001 / 04 MAR 14
Applicable to: MSN 1219-1843

PF	PNF
EXTERIOR LIGHTS.....SET	TAXI CLEARANCE.....OBTAIN
•Taxi clearance obtained:	
PARKING BRAKE handle.....OFF	ELAPSED TIME.....AS RQRD
THRUST LEVERS.....AS RQRD	
BRAKES.....CHECK	BRAKES.....CHECK
FLT CTL.....CHECK	FLT CTL.....CHECK
•ATC clearance obtained:	
	ATC CLEARANCE.....CONFIRM
	T.O DATA.....CHECK
	FMS F-PLAN/SPD.....CHECK
	FCU ALT/HDG.....SET
	BOTH FD.....CHECK ON
PFD/ND.....CHECK	PFD/ND.....CHECK
TAKEOFF BRIEFING.....CONFIRM	
	RADAR and PREDICTIVE WINDSHEAR SYSTEM  AS RQRD
	ATC CODE.....CONFIRM/SET
TERR ON ND  AS RQRD	TERR ON ND  AS RQRD
	AUTO BRK.....MAX
	T.O CONFIG pb.....TEST
	T.O MEMO.....CHECK NO BLUE
CABIN REPORT.....RECEIVE	CABIN REPORT.....RECEIVE
BEFORE TAKEOFF C/L down to the line.....COMPLETE	BEFORE TAKEOFF C/L down to the line.....COMPLETE

TAXI

Ident.: NP-NP-00010943.0012001 / 04 MAR 14
Applicable to: MSN 2649-3120

PF	PNF
EXTERIOR LIGHTS..... SET	TAXI CLEARANCE..... OBTAIN
•Taxi clearance obtained:	
PARKING BRAKE handle..... OFF	ELAPSED TIME..... AS RQRD
THRUST LEVERS..... AS RQRD	
BRAKES..... CHECK	
FLT CTL..... CHECK	FLT CTL..... CHECK
•ATC clearance obtained:	
	ATC CLEARANCE..... CONFIRM
	T.O DATA..... CHECK
	FMS F-PLAN/SPD..... CHECK
	FCU ALT/HDG..... SET
	BOTH FD..... CHECK ON
PFD/ND..... CHECK	PFD/ND..... CHECK
TAKEOFF BRIEFING..... CONFIRM	
	RADAR and PREDICTIVE WINDSHEAR SYSTEM  AS RQRD
	ATC CODE..... CONFIRM/SET
TERR ON ND  AS RQRD	TERR ON ND  AS RQRD
	AUTO BRK..... MAX
	T.O CONFIG pb..... TEST
	T.O MEMO..... CHECK NO BLUE
CABIN REPORT..... RECEIVE	CABIN REPORT..... RECEIVE
BEFORE TAKEOFF C/L down to the line..... COMPLETE	BEFORE TAKEOFF C/L down to the line..... COMPLETE

BEFORE TAKEOFF

Ident.: NP-NP-00010946.0001001 / 04 MAR 14
Applicable to: ALL

PF	PNF
	BRAKE TEMP (if brake fan  running)..... CHECK
	BRAKE FAN pb-sw (if brake fan  running)..... OFF
	TAKEOFF/LINE UP CLEARANCE..... OBTAIN
EXTERIOR LIGHTS..... SET	
	TCAS Mode selector  TA or TA/RA
APPROACH PATH..... CLEARED OF TRAFFIC	APPROACH PATH..... CLEARED OF TRAFFIC
	CABIN CREW..... ADVISE
	ENG MODE selector..... AS RQRD
SLIDING TABLE  STOWED	SLIDING TABLE  STOWED
THRUST BUMP  AS RQRD	
TAKEOFF RUNWAY..... CONFIRM	TAKEOFF RUNWAY..... CONFIRM
	PACKS 1+2..... AS RQRD
BEFORE TAKEOFF C/L below the line..... COMPLETE	BEFORE TAKEOFF C/L below the line..... COMPLETE

TAKEOFF

Ident.: NP-NP-00010948.0001001 / 04 MAR 14
 Applicable to: ALL

PF	PNF
TAKEOFF.....ANNOUNCE	
BRAKES.....RELEASE	
THRUST LEVERS..... FLX or TOGA	CHRONO..... START
The Captain places hand on thrust levers until V1	
DIRECTIONAL CONTROL.....USE RUDDER	
FMA.....ANNOUNCE	PFD/ND..... MONITOR
•BELOW 80 kt:	N1 (EPR)..... CHECK
	THRUST SET..... ANNOUNCE
	PFD and ENG indications..... MONITOR
	ONE HUNDRED KNOTS.....ANNOUNCE
•AT 100 kt:	
100 kt..... CHECK	V1.....ANNOUNCE
•AT V1:	ROTATION..... ORDER
•AT VR:	
ROTATION..... PERFORM	
•WHEN POSITIVE CLIMB:	POSITIVE CLIMB..... ANNOUNCE
L/G UP.....ORDER	L/G.....SELECT UP
AP..... AS RQRD	
•AT THR RED ALT:	
THRUST LEVERS..... CL	PACK 1 (if applicable)..... ON
•AT F SPEED:	
FLAPS 1..... ORDER	FLAPS 1..... SELECT
•AT S SPEED:	
FLAPS 0..... ORDER	FLAPS 0..... SELECT
	GND SPLRS.....DISARM
	EXTERIOR LIGHTS..... SET
	PACKS 2 (if applicable)..... ON

AFTER TAKEOFF

Ident.: NP-NP-00010949.0001001 / 04 MAR 14
 Applicable to: ALL

PF	PNF
	APU BLEED pb-sw.....AS RQRD
	APU MASTER SW..... AS RQRD
	ENG MODE selector..... AS RQRD
	TCAS Mode selector  TA/RA
	ANTI ICE pb-sw..... AS RQRD
AFTER TAKEOFF/CLIMB C/L down to the line.....COMPLETE	AFTER TAKEOFF/CLIMB C/L down to the line..... COMPLETE

CLIMB

Ident.: NP-NP-00010950.0015001 / 04 MAR 14
Applicable to: MSN 2649

PF	PNF
MCDU..... PERF CLB	MCDU..... F-PLN
FCU/FMGS..... SET IF AP ON	FCU/FMGS..... SET IF AP OFF
•At transition altitude:	
BAROMETRIC REFERENCE..... SET STD/CROSSCHECK	BAROMETRIC REFERENCE..... SET STD/CROSSCHECK
AFTER TAKEOFF/CLIMB C/L below the line..... COMPLETE	AFTER TAKEOFF/CLIMB C/L below the line..... COMPLETE
RADAR..... ADJUST AS APPROPRIATE	ENG ANTI ICE..... AS RQRD
•At 10 000 ft:	
	LAND LIGHTS selector..... RETRACT
	SEAT BELTS sw..... AS RQRD
EFIS OPTION..... AS RQRD	EFIS OPTION..... AS RQRD
	ECAM MEMO..... REVIEW
	NAVAIDS..... CLEAR
	SEC F-PLN..... AS RQRD
	OPT/MAX ALT..... CHECK

CLIMB

Ident.: NP-NP-00010950.0001001 / 04 MAR 14
Applicable to: MSN 1219-1843, 2927-3120

PF	PNF
MCDU..... PERF CLB	MCDU..... F-PLN
FCU/FMGS..... SET IF AP ON	FCU/FMGS..... SET IF AP OFF
•At transition altitude:	
BAROMETRIC REFERENCE..... SET STD/CROSSCHECK	BAROMETRIC REFERENCE..... SET STD/CROSSCHECK
AFTER TAKEOFF/CLIMB C/L below the line..... COMPLETE	AFTER TAKEOFF/CLIMB C/L below the line..... COMPLETE
RADAR..... ADJUST AS APPROPRIATE	ENG ANTI ICE..... AS RQRD
•At 10 000 ft:	
	LAND LIGHTS selector..... RETRACT
	SEAT BELTS sw..... AS RQRD
EFIS OPTION..... AS RQRD	EFIS OPTION..... AS RQRD
	ECAM MEMO..... REVIEW
	NAVAIDS..... CLEAR
	SEC F-PLN..... AS RQRD
	OPT/MAX ALT..... CHECK

CRUISE

Ident.: NP-NP-00010951.0001001 / 04 MAR 14
Applicable to: MSN 1219-1843, 2927-3120

PF	PNF
ECAM MEMO/SD PAGES..... REVIEW	
FLIGHT PROGRESS..... CHECK	
FUEL..... MONITOR	
NAVIGATION ACCURACY..... MONITOR	
RADAR..... ADJUST AS APPROPRIATE	

CRUISE

Ident.: NP-NP-00010951.0014001 / 04 MAR 14
 Applicable to: MSN 2649

PF	PNF
ECAM MEMO/SD PAGES..... REVIEW	
FLIGHT PROGRESS..... CHECK	
FUEL..... MONITOR	
NAVIGATION ACCURACY..... MONITOR	
RADAR..... ADJUST AS APPROPRIATE	

DESCENT PREPARATION

Ident.: NP-NP-00010952.0001001 / 03 MAR 14
 Applicable to: ALL

PF	PNF
	WEATHER AND LANDING INFORMATION..... OBTAIN
LANDING PERFORMANCE..... CONFIRM	LANDING PERFORMANCE..... CHECK
FMS..... PREPARE	FMS PREPARATION..... CHECK
	GPWS LDG FLAP 3..... AS RQRD
APPR BRIEFING..... PERFORM	
LDG ELEV..... CHECK	
AUTO BRK..... AS RQRD	
TERR ON ND  AS RQRD	TERR ON ND  AS RQRD
RADAR..... ADJUST AS APPROPRIATE	
	ENG ANTI ICE pb-sw..... AS RQRD
	WING ANTI ICE pb-sw..... AS RQRD
	DESCENT CLEARANCE..... OBTAIN
CLEARED ALTITUDE ON FCU..... SET	

DESCENT

Ident.: NP-NP-00010954.0002001 / 03 MAR 14
 Applicable to: MSN 1219-1843, 2927-3120

PF	PNF
DESCENT..... INITIATE	
MCDU..... PROG/PERF DESCENT	MCDU..... F-PLN
DESCENT..... MONITOR/ADJUST	
•When the aircraft approaches the transition level, and when cleared for an altitude:	
BAROMETRIC REFERENCE..... SET/CROSSCHECK	BAROMETRIC REFERENCE..... SET/CROSSCHECK
	ECAM STATUS..... CHECK
•At 10 000 ft:	
	LAND LIGHTS selector..... SET
	SEAT BELTS sw..... ON
EFIS option pb..... CSTR	EFIS option pb..... CSTR
LS pb AS RQRD	LS pb..... AS RQRD
	RADIO NAV..... SELECT/IDENT
	ENG MODE selector..... AS RQRD



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PF	PNF
•If GPS PRIMARY not available: NAV ACCY..... CHECK APPROACH C/L..... COMPLETE	APPROACH C/L..... COMPLETE

DESCENT

Ident.: NP-NP-00010954.0021001 / 03 MAR 14
Applicable to: MSN 2649

PF	PNF
DESCENT.....INITIATE MCDU..... PROG/PERF DESCENT DESCENT.....MONITOR/ADJUST •When the aircraft approaches the transition level, and when cleared for an altitude: BAROMETRIC REFERENCE..... SET/CROSSCHECK •At 10 000 ft: EFIS option pb.....CSTR LS pb AS RQRD •If GPS PRIMARY not available: NAV ACCY..... CHECK APPROACH C/L..... COMPLETE	MCDU.....F-PLN BAROMETRIC REFERENCE..... SET/CROSSCHECK ECAM STATUS..... CHECK LAND LIGHTS sw..... SET SEAT BELTS sw..... ON EFIS option pb.....CSTR LS pb..... AS RQRD RADIO NAV..... SELECT/IDENT ENG MODE selector..... AS RQRD APPROACH C/L..... COMPLETE

AIRCRAFT CONFIGURATION FOR APPROACH

Ident.: NP-NP-00014939.0002001 / 03 MAR 14
Applicable to: MSN 1219-1843, 2927-3120

PF	PNF
INITIAL APPROACH: F-PLN SEQUENCING.....ADJUST •Approx 15 nm from touchdown: APPR PHASE ACTIVATE or set green dot ⁽¹⁾ MANAGED SPEED..... CHECK FLIGHT PATH.....MONITOR SPEED BRAKES lever.....AS RQRD RADAR..... ADJUST AS APPROPRIATE <u>INTERMEDIATE/FINAL APPROACH:</u> •At green dot: FLAPS 1.....ORDER S SPEED.....CHECK OR SET ⁽¹⁾ •At 2 000 ft AGL: FLAPS 2.....ORDER	NAV ACCURACY..... MONITOR FLAPS 1..... SELECT TCAS  TA or TA/RA FLAPS 2..... SELECT



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PF	PNF
F SPEED.....CHECK OR SET ⁽¹⁾	
•When FLAPS 2: L/G DOWN.....ORDER	L/G.....SELECT DOWN AUTO BRAKE.....CONFIRM GRND SPLRS.....ARM EXTERIOR LIGHTS.....SET
•When L/G down: FLAPS 3.....ORDER	FLAPS 3.....SELECT ECAM WHEEL PAGE.....CHECK
•When FLAPS 3: FLAPS FULL.....ORDER	FLAPS FULL.....SELECT VAPP.....CHECK OR SET ⁽¹⁾ A/THR.....CHECK SPD or OFF WING A. ICE (if not required).....OFF
SLIDING TABLE  STOW	SLIDING TABLE  STOW
CABIN REPORT.....RECEIVE	CABIN REPORT.....RECEIVE
LDG C/L.....COMPLETE	LDG C/L.....COMPLETE
ANNOUNCE ANY FMA MODIFICATION	FLT PARAMETERS.....MONITOR Announce any deviation in excess of: • V/S: 1 000 ft/min • IAS: speed target +10 kt; VAPP -5 kt • PITCH: 2.5 ° nose down; 7.5 ° nose up • BANK: 7 °

(1) PF if AP is ON, PNF if AP is OFF. The PF may request that this action is performed by the PNF depending on the situation.

AIRCRAFT CONFIGURATION FOR APPROACH

Ident.: NP-NP-00014939.0001001 / 03 MAR 14
 Applicable to: MSN 2649

PF	PNF
INITIAL APPROACH: F-PLN SEQUENCING.....ADJUST	
•Approx 15 nm from touchdown: APPR PHASE ACTIVATE or set green dot ⁽¹⁾	
MANAGED SPEED.....CHECK	
FLIGHT PATH.....MONITOR	NAV ACCURACY.....MONITOR
SPEED BRAKES lever.....AS RQRD	
RADAR.....ADJUST AS APPROPRIATE	
INTERMEDIATE/FINAL APPROACH:	
•At green dot: FLAPS 1.....ORDER	FLAPS 1.....SELECT
S SPEED.....CHECK OR SET ⁽¹⁾	
	TCAS  TA or TA/RA



Continued from the previous page

PF	PNF
•At 2 000 ft AGL: FLAPS 2.....ORDER	FLAPS 2.....SELECT
F SPEED.....	CHECK OR SET ⁽¹⁾
•When FLAPS 2: L/G DOWN.....ORDER	L/G.....SELECT DOWN AUTO BRAKE.....CONFIRM GRND SPLRS.....ARM EXTERIOR LIGHTS.....SET
•When L/G down: FLAPS 3.....ORDER	FLAPS 3.....SELECT ECAM WHEEL PAGE.....CHECK
•When FLAPS 3: FLAPS FULL.....ORDER	FLAPS FULL.....SELECT
VAPP.....	CHECK OR SET ⁽¹⁾
A/THR.....	CHECK SPD or OFF
WING A. ICE (if not required).....	OFF
SLIDING TABLE  STOW	SLIDING TABLE  STOW
LDG MEMO.....	CHECK NO BLUE
CABIN REPORT.....RECEIVE	CABIN REPORT.....RECEIVE
CABIN CREW.....	ADVISE
LDG C/L.....COMPLETE	LDG C/L.....COMPLETE
ANNOUNCE ANY FMA MODIFICATION	FLT PARAMETERS.....MONITOR
	Announce any deviation in excess of: • V/S: 1 000 ft/min • IAS: speed target +10 kt; VAPP -5 kt • PITCH: 2.5 ° nose down; 10 ° nose up • BANK: 7 °

(1) PF if AP is ON, PNF if AP is OFF. The PF may request that this action is performed by the PNF depending on the situation.

APPROACH USING LOC G/S GUIDANCE

Ident.: NP-NP-00014947.0001001 / 03 MAR 14

Applicable to: ALL

PF	PNF
INITIAL/INTERMEDIATE APPROACH: APPR pb on FCU.....PRESS BOTH AP.....ENGAGE LOC.....CHECK ARMED G/S.....CHECK ARMED LOC CAPTURE.....MONITOR G/S CAPTURE.....MONITOR	
GO AROUND.....	SET ⁽¹⁾
FINAL APPROACH:	



Continued from the previous page

PF	PNF
•At minimum +100 ft: •At minimum: CONTINUE OR GO-AROUND.....ANNOUNCE	FLT PARAMETERS..... MONITOR Announce any deviation in excess of: • LOC: ½ dot • GLIDE: ½ dot ONE HUNDRED ABOVE..... MONITOR OR ANNOUNCE MINIMUM..... MONITOR OR ANNOUNCE

(1) PF if AP is ON, PNF if AP is OFF. The PF may request that this action is performed by the PNF depending on the situation.

APPROACH USING FINAL APP GUIDANCE

Ident.: NP-NP-00014948.0002001 / 03 MAR 14
 Applicable to: ALL

PF	PNF
<u>DESCENT PREPARATION:</u> F-PLN A Page.....CHECK PROG Page..... COMPLETE GO AROUND STRATEGY..... REVIEW <u>DESCENT:</u> •At 10 000 ft: NAV ACCURACY.....CHECK •For RNAV(GNSS): GPS PRIMARY..... CHECK BARO REF..... SET <u>INITIAL/INTERMEDIATE/FINAL APPROACH:</u> POSITION..... MONITOR APPR pb on FCU..... PRESS APP NAV..... CHECK ARMED or ENGAGED FINAL..... CHECK ARMED •At Final Descent Point: FINAL APP.....CHECK ENGAGED GO AROUND ALT..... SET ⁽¹⁾ •At minimum +100 ft: •At minimum: CONTINUE OR GO-AROUND.....ANNOUNCE	WEATHER AND LANDING INFO..... OBTAIN F-PLN A Page.....CHECK PROG Page..... COMPLETE FLT PARAMETERS..... MONITOR Announce any deviation in excess of: • XTK > 0.1 nm • V/DEV > ½ dot ONE HUNDRED ABOVE..... MONITOR OR ANNOUNCE MINIMUM..... MONITOR OR ANNOUNCE

(1) PF if AP is ON, PNF if AP is OFF. The PF may request that this action is performed by the PNF depending on the situation.



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APPROACH USING FPA GUIDANCE

Applicable to: ALL

PF	PNF
DESCENT PREPARATION:	
F-PLN A Page..... CHECK	F-PLN A Page..... CHECK
PROG Page..... COMPLETE	PROG Page..... COMPLETE
GO AROUND STRATEGY..... REVIEW	
DESCENT:	
•At 10 000 ft:	
NAV ACCURACY..... CHECK	
•For RNAV(GNSS):	
GPS PRIMARY..... CHECK	
INITIAL/INTERMEDIATE/FINAL APPROACH:	
LATERAL GUIDANCE MODE..... SET FOR APPROACH	
•For LOC ONLY and ILS G/S OUT	
LOC pb-sw..... PRESS	
LOC..... CHECK ARMED	
•For back course localizer approaches:	
TRK FPA MODE..... USE FOR APPROACH	
LATERAL path..... INTERCEPT	
TRK FPA (Bird)..... SELECT	
FPA FOR FINAL APPROACH..... SET	
•At 0.3 nm from the Final Descent Point:	
FPA pb..... PULL	
FPA..... CHECK ENGAGED	
POSITION/FLT PATH..... MONITOR / ADJUST	
GO AROUND ALT..... SET ⁽¹⁾	
	FLT PARAMETERS..... MONITOR
	Announce any deviation in excess of:
	• Approach using NAV MODE : XTK > 0.1 nm
	• Approach using LOC MODE : LOC ½ dot
	• Approach using TRK MODE :
	■ VOR: ½ dot or 2.5 °
	■ NDB: 5 °
•At minimum +100 ft:	ONE HUNDRED ABOVE..... MONITOR OR ANNOUNCE
•At minimum:	
CONTINUE OR GO-AROUND..... ANNOUNCE	MINIMUM..... MONITOR OR ANNOUNCE

(1) PF if AP is ON, PNF if AP is OFF. The PF may request that this action is performed by the PNF depending on the situation.

LANDING

Applicable to: ALL

PF	PNF
•In stabilized approach conditions, at approx. 30 ft: FLARE.....PERFORM	ATTITUDE.....MONITOR



Continued from the previous page

PF	PNF
THRUST LEVERS.....IDLE	
•At touchdown:	
DEROTATION..... INITIATE	
BOTH THRUST LEVERS.....REV MAX or REV IDLE	GRND SPLRS.....CHECK/ANNOUNCE
	REVERSERS..... CHECK/ANNOUNCE
DIRECTIONAL CONTROL.....ENSURE	DIRECTIONAL CONTROL.....MONITOR
BRAKES..... AS RQRD	DECELERATION.....CHECK/ANNOUNCE
•At 70 kt:	
BOTH THRUST LEVERS.....REV IDLE	70 kt.....ANNOUNCE
•At taxi speed:	
BOTH THRUST LEVERS..... FWD IDLE	
•Before 20 kt:	
AUTOBRK..... DISENGAGE	

GO AROUND

Ident.: NP-NP-00011029.0001001 / 04 MAR 14
 Applicable to: ALL

PF	PNF
THRUST LEVERS..... TOGA	
ROTATION..... PERFORM	
GO-AROUND.....ANNOUNCE	FLAPS lever..... SELECT AS RQRD
FMA.....ANNOUNCE	
	POSITIVE CLIMB..... ANNOUNCE
L/G UP.....ORDER	L/G.....SELECT UP
AP AS RQRD	
NAV or HDG mode.....AS RQRD	
•AT GA THR RED ALT:	
THRUST LEVERS..... CL	
•AT GA ACCEL ALT:	
SPEED.....MONITOR	
•AT F SPEED:	
FLAPS 1.....ORDER	FLAPS 1.....SELECT
•AT S SPEED:	
FLAPS 0.....ORDER	FLAPS 0.....SELECT
	GND SPLRS.....DISARM
	EXTERIOR LIGHTS.....SET
AFTER TAKEOFF C/L down to the line..... COMPLETE	AFTER TAKEOFF C/L down to the line..... COMPLETE

AFTER LANDING

Ident.: NP-NP-00010968.0002001 / 04 MAR 14
 Applicable to: ALL

PF	PNF
GRND SPLRS.....DISARM	
EXTERIOR LIGHTS.....SET	



Continued from the previous page

PF	PNF
	RADAR.....OFF/STBY
	PREDICTIVE WINDSHEAR  OFF
	ENG MODE selector..... NORM
	FLAPS..... RETRACT
	TCAS  SET on standby
	ATC.....AS RQRD
	APU.....START
	ANTI ICE..... AS RQRD
	BRAKE TEMP.....CHECK
AFTER LDG C/L.....COMPLETE	AFTER LDG C/L.....COMPLETE

PARKING

Ident.: NP-NP-00010972.0001001 / 04 MAR 14
Applicable to: ALL

PF	PNF
ACCU PRESS..... CHECK	ANTI-ICE..... OFF
PARKING BRAKE handle.....ON	APU BLEED pb-sw..... ON
ENG MASTER 1, 2.....OFF	
SLIDES..... CHECK DISARMED	
SEAT BELTS sw.....OFF	FUEL PUMPS..... OFF
	ATC..... SET on standby
EXTERIOR LIGHTS..... SET	IRS PERFORMANCE..... CHECK
GROUND CONTACT..... ESTABLISH	FUEL QTY..... CHECK
	STATUS..... CHECK
PARKING BRK..... AS RQRD	BRAKE FAN  OFF
DUs..... DIM	DUs..... DIM
PARKING C/L.....COMPLETE	PARKING C/L.....COMPLETE

SECURING THE AIRCRAFT

Ident.: NP-NP-00010975.0001001 / 04 MAR 14
Applicable to: ALL

PF	PNF
PARKING BRK.....CHECK ON	
ADIRS (1+2+3).....OFF	OXY CREW SUPPLY pb..... OFF
	EXTERIOR LIGHTS..... OFF
	MAINT BUS SW..... AS RQRD
	APU BLEED pb-sw..... OFF
	APU MASTER SW..... OFF
	EMER EXIT LT sw.....OFF
	SIGNS sw.....OFF
	EXT PWR pb..... AS RQRD
	BAT 1+2..... OFF
SECURING THE A/C C/L.....COMPLETE	SECURING THE A/C C/L.....COMPLETE

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SPEEDS

Ident.: PER-A-00010999.0009001 / 04 FEB 13
Applicable to: MSN 2649

OPERATING SPEEDS (KT)					
CG ≥ 25 %					
Weight (1000 KG)	F	S	Green dot FL < 200 ⁽¹⁾	VLS CONF 3	VREF
40	117	152	160	109	106
44	122	159	168	114	111
48	128	166	176	119	116
52	133	173	184	124	121
56	138	179	192	128	125
60	143	185	200	133	129
64	148	192	208	137	134
68	152	197	216	142	138
72	157	203	224	146	142
76	161	209	232	150	146
78	163	211	236	152	147

(1) Above FL 200 add 1 kt per additional 1 000 ft.

For CG < 25 % add 2 kt to VLS and VREF

SPEEDS

Ident.: PER-A-00010999.0004001 / 04 FEB 13
Applicable to: MSN 2933-3120

OPERATING SPEEDS (KT)					
Weight (1000 KG)	F	S	Green dot FL < 200 ⁽¹⁾	VLS CONF 3	VREF
52	130	168	188	121	116
54	133	171	191	123	119
56	135	174	194	125	121
58	137	177	197	128	123
60	140	180	200	130	125
62	142	183	203	132	127
64	144	186	206	134	129
66	147	189	209	136	131
68	149	192	212	138	133
70	151	195	215	140	135
72	153	197	218	142	137
74	155	200	221	144	139
76	157	203	224	146	141
78	159	205	227	148	143
80	161	208	230	150	144
82	163	211	233	152	146
84	165	213	236	154	148
86	167	216	239	156	150

(1) Above FL 200 add 1 kt per additional 1 000 ft.

SPEEDS

Ident.: PER-A-00010999.0010001 / 04 FEB 13
Applicable to: MSN 1276-1843, 2927

OPERATING SPEEDS (KT)					
Weight (1000 KG)	F	S	Green dot FL < 200 ⁽¹⁾	VLS CONF 3	VREF
52	130	168	188	121	116
56	135	174	194	125	121
60	140	180	200	130	125
64	144	186	206	134	129
68	149	192	212	138	133
72	153	197	218	142	137
76	157	203	224	146	141
80	161	208	230	150	144
84	165	213	236	154	148
88	169	218	242	157	151
92	173	223	248	161	155
94	175	226	251	163	157

(1) Above FL 200 add 1 kt per additional 1 000 ft.

SPEEDS

Ident.: PER-A-00010999.0021001 / 04 FEB 13
Applicable to: MSN 1219-1233

OPERATING SPEEDS (KT)					
Weight (1000 KG)	F	S	Green dot FL < 200 ⁽¹⁾	VLS CONF 3	VREF
52	130	168	188	121	116
56	135	174	194	126	121
60	140	180	200	130	125
64	144	186	206	135	129
68	149	192	212	139	133
72	153	197	218	143	137
76	157	203	224	147	140
80	161	208	230	151	144
84	165	213	236	154	148
88	169	218	242	158	151
92	173	223	248	161	155
94	175	226	251	163	156

(1) Above FL 200 add 1 kt per additional 1 000 ft.

USE OF FUEL PENALTY FACTOR TABLES

Ident.: PER-B-00014206.0001001 / 06 APR 12
Applicable to: ALL

USE OF THE FUEL PENALTY FACTORS

The Fuel Penalty Factors provided in the following tables are conservative values, given as a guideline in order to increase the crew awareness and to help the decision making.

***Note:** In case of failure impacting the fuel consumption, the fuel predictions provided by the FMS are no longer reliable (except in One Engine Inoperative OEI condition). The flight crew must still compute and monitor the actual fuel consumption.*

Refer to the following tables in order to assess the impact of the failure on the fuel consumption after any ECAM alert that:

- Displays the line **INCREASED FUEL CONSUMP** in the STATUS SD page, or
- Displays Flight Control Surfaces in the INOP SYS, or
- Impacts the Landing Gears or Landing Gear Doors retraction (when extended).

The Fuel Penalty Factors given in these tables have been calculated taking into account:

- The FUEL CRITICAL INOP SYS, and
- The aircraft configuration, speed or altitude described in the CONDITIONS column.

Ensure that all these conditions are well met before applying the corresponding Fuel Penalty Factor.

METHODOLOGY

The methodology is the following:

- Check the **ECAM ALERT table** to determine if a Fuel Penalty Factor is applicable depending on the CONDITIONS column, then
- Check the **INOP SYS table** in order to determine if, according to the actual aircraft status, there is a Fuel Penalty Factor applicable depending on the CONDITIONS column
- If only one Fuel Penalty Factor (FPF) is applicable:

$$\text{TRIP FUEL PENALTY} = (\text{FOB} - \text{EFOD at DEST}) \times \text{FPF}$$

The FMS fuel predictions must be recomputed to take into account this trip fuel penalty.
- If two or more Fuel Penalty Factors (FPF) are applicable:

$$\text{TRIP FUEL PENALTY} = (\text{FOB} - \text{EFOD at DEST}) \times (\text{FPF1} + \text{FPF2} + \dots)$$

The FMS fuel predictions must be recomputed to take into account this trip fuel penalty.

***Note:** Due to previous failures in flight or dispatch under MEL, some failures could have an impact on the fuel consumption:*

- Without being mentioned in the ECAM ALERT table (only through INOP SYS table), or
- If mentioned in the ECAM ALERT table, with additional INOP SYS (other than the one(s) described in the FUEL CRITICAL INOP SYS column for this specific ECAM alert) impacting also the fuel consumption.

Example:

- Dispatch with the ELAC 1 inoperative under MEL
- HYD G SYS LO PR ECAM caution in flight
- These two failures lead to the loss of the left aileron
- INOP SYS will displayed “L AIL”

If the Fuel Penalty Factor of the HYD G SYS LO PR ECAM alert is applicable (spoiler extended), sum the corresponding factor with the Fuel Penalty Factor related to the INOP SYS “L(R) AIL” partially extended.

FPF (HYD G SYS LO PR) = 10 %

FPF (INOP SYS: L AIL) = 8 %

Therefore, $\text{TRIP FUEL PENALTY} = (\text{FOB} - \text{EFOD at DEST}) \times (10 \% + 8 \%)$

If the Fuel Penalty Factor of the HYD G SYS LO PR ECAM alert is not applicable (spoiler remains retracted), apply the Fuel Penalty Factor related to the INOP SYS “L(R) AIL” partially extended.

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Therefore, TRIP FUEL PENALTY = (FOB - EFOB at DEST) x 8 %

FUEL PENALTY FACTORS/ECAM ALERT TABLE

Ident.: PER-B-00014207.0001001 / 21 NOV 11
 Applicable to: ALL

SYS	ECAM ALERT	FUEL CRITICAL INOP SYS	CONDITIONS	FUEL PENALTY FACTOR
ELEC	AC BUS 1 FAULT (equivalent to B SYS LO PR)	SPLR 3	If L(R) spoiler 3 is indicated extended (at the time of the failure)	10 %
	DC ESS BUS FAULT (equivalent to B SYS LO PR)	SPLR 3	If L(R) spoiler 3 is indicated extended (at the time of the failure)	10 %
F/CTL	L(R) AIL FAULT	L(R) AIL	If one aileron is indicated fully extended (upwards or downwards)	27 %
		L(R) AIL or L+R AIL	If one or both aileron(s) is/are indicated partially extended	8 %
	SPLR FAULT	SPLR (affected)	If one spoiler is suspected fully extended ⁽²⁾ Cruise Conditions: OPT SPEED..... GDOT +10KT Whenever possible, target green dot speed +10 kt to minimize fuel consumption. However, if buffet is encountered at GDOT speed +10 kt increase speed to fly out of buffet condition. CRUISE ALT.....AS REQUIRED Current Flight Level (FL) may not be maintained due to increased drag. Maintain a cruise FL as high as possible.	55 %
			If one spoiler or one pair of spoilers is partially extended (zero hinge moment)	10 %
		SPLR 3 with BLUE HYD	If spoiler 3 is partially extended after the loss of the B hydraulic system ⁽¹⁾	Up to 4 %
		SPLR 1 or 5 with GREEN HYD	If spoiler 1 or 5 is partially extended after the loss of the G hydraulic system ⁽¹⁾	Up to 9 % (3)
		SPLR 2 or 4 with YELLOW HYD	If spoiler 2 or 4 is partially extended after the loss of the Y hydraulic system ⁽¹⁾	Up to 9 % (3)
		FLAPS FAULT/LOCKED	FLAPS	If Flaps are extended
	SLATS FAULT/LOCKED	SLATS	If Slats are extended	60 %
	SLATS + FLAPS FAULT/LOCKED	SLATS+FLAPS	If Slats and Flaps are extended	100 %
HYD	B SYS LO PR	SPLR 3	If L(R) spoiler 3 is indicated extended (at the time of the failure)	10 %
	G SYS LO PR	SPLR 1+5	If L(R) spoiler 5 is indicated extended (at the time of the failure)	10 %
	Y SYS LO PR	SPLR 2+4	If L(R) spoilers 2 and 4 are indicated extended (at the time of the failure)	20 %
	G+B SYS LO PR	L+R AIL SPLR 1+3+5 L ELEV	Both ailerons are failed Spoilers 1, 3 and 5 ⁽¹⁾ Left elevator is failed RAT is extended	10 % to 15 % (4)
	G+Y SYS LO PR	SPLR 1+2+4+5 STABILIZER	Stabilizer is jammed Spoilers 1, 2, 4 and 5 ⁽¹⁾	0 % to 10 % (4)
	B+Y SYS LO PR	SPLR 2+3+4 R ELEV	Spoilers 2, 3 and 4 ⁽¹⁾ Right elevator is failed RAT extended	3 % to 10 %



Continued from the previous page

SYS	ECAM ALERT	FUEL CRITICAL INOP SYS	CONDITIONS	FUEL PENALTY FACTOR
				(4)
L/G	SHOCK ABSORBER FAULT	L/G RETRACT	All landing gears are extended (Also refer to PRO-SPO-25-10)	180 %
	GEAR NOT UNLOCKED			
	BOGIE ALIGN FAULT (option)			
	GEAR UNLOCK FAULT			
	DOORS NOT CLOSED	L/G DOOR	All landing gears doors are extended	15 %

- (1) During the flight, the spoiler(s) may gradually extend and increase(s) the fuel consumption.
- (2) A spoiler can be suspected fully extended (runaway) if high roll rate has been experienced immediately after the failure, associated with a possible AP disconnection. A visual inspection, if time permits, can also confirm the full extension of the spoiler.
- (3) The maximum value of the Fuel Penalty Factor provided in the table considers that the two pairs of corresponding spoilers gradually extend during the flight.
- (4) The minimum value of the Fuel Penalty Factor provided in the table considers that all spoilers remain retracted. The maximum value has been calculated considering that all impacted spoilers gradually extend during the flight.

FUEL PENALTY FACTORS/INOP SYS TABLE

Ident.: PER-B-00014208.0001001 / 18 NOV 11

Applicable to: ALL

SYS	INOP SYS	CONDITIONS	FUEL PENALTY FACTOR
F/CTL	L(R) AIL or L+R AIL	If one or both aileron(s) is/are indicated partially extended	8 %
	FLAPS	If Flaps are extended	80 %
	SLATS	If Slats are extended	60 %
	SLATS+FLAPS	If Slats and Flaps are extended	100 %
L/G	L/G DOOR	All landing gears doors are extended	15 %

METHOD TO DETERMINE AIRCRAFT PERFORMANCE AT LANDING WITHOUT OR WITH FAILURE

Ident.: PER-C-00015468.0001001 / 28 FEB 14
 Applicable to: ALL

Use the following method to determine the runway landing performance level, the FLAPS lever position for landing, the VAPP, and the Factored Landing Distance (FLD):

RUNWAY LANDING PERFORMANCE LEVEL - CODE
Use the Runway Condition Assessment Matrix to determine the runway landing performance level and code.

FLAPS LEVER POSITION FOR LANDING
Select the FLAPS lever position requested by the ECAM*.

* If there are no ECAM instructions, the FLAPS lever position for landing is at the flight crew's discretion.

VAPP
Determine the VAPP.

FACTORED LANDING DISTANCE (FLD)										
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FACTORED LANDING DISTANCE (FLD)
FLD = LD x MEL LANDING PENALTY FACTOR x SAFETY MARGIN

METHOD TO DETERMINE AIRCRAFT PERFORMANCE AT LANDING WITH SEVERAL FAILURES

Ident.: PER-C-00015467.0001001 / 28 FEB 14
Applicable to: ALL

Use the following method to determine the runway landing performance level, the FLAPS lever position for landing, the VAPP, and the Factored Landing Distance (FLD):

RUNWAY LANDING PERFORMANCE LEVEL - CODE
Use the Runway Condition Assessment Matrix to determine the runway landing performance level and code.

FLAPS LEVER POSITION FOR LANDING
Select the FLAPS lever position requested by the ECAM*.

* If there are no ECAM instructions, the FLAPS lever position for landing is at the flight crew's discretion.

VAPP
Determine the VAPP using the highest $\Delta VREF$.

FACTORED LANDING DISTANCE (FLD)
DETERMINE THE LANDING DISTANCE (LDG DIST) OF THE FAILURE THAT HAS THE MOST EFFECT
1 - Identify the failure with the longest REF DIST 2 - Calculate the landing distance (LDG DIST) for this failure taking into account all corrections.
+
DETERMINE THE EFFECT OF THE OTHER FAILURE (ΔLD)
1 - Identify the [REF DIST with failure] of the other failure (no correction)** 2 - Calculate ΔLD = [REF DIST with failure] - [REF DIST without failure].
** Use the FLAPS lever position selected for landing. If not available, use FLAPS 3.
↓
DETERMINE THE LANDING DISTANCE WITH SEVERAL FAILURES (LD)
$LD = LDG\ DIST + \Delta LD$
X
MEL LANDING PENALTY FACTOR
Multiply LD by the landing penalty factor specified in the MEL, if any.
X
SAFETY MARGIN
Add a margin, as per airline policy. Airbus recommends a 15% margin. Under exceptional circumstances, the flight crew may disregard this margin.

FACTORED LANDING DISTANCE (FLD)
$FLD = LD \times MEL\ LANDING\ PENALTY\ FACTOR \times SAFETY\ MARGIN$

RUNWAY CONDITION ASSESSMENT MATRIX FOR LANDING

Ident.: PER-C-00014155.0001001 / 28 FEB 14
 Applicable to: ALL

Runway Surface Conditions		Observations on Deceleration and Directional Control	Related Landing Performance		Maximum Crosswind (Gust included)
Runway State or / and Runway Contaminant	ESF* or PIREP**		Code	Level	
Dry	–	–	6	DRY	38kt
Damp	Good	Braking deceleration is normal for the wheel braking effort applied. Directional control is normal.	5	GOOD	38kt
Wet (3 mm (1/8") or less of water)					29kt
3 mm (1/8") or less of: • Slush • Dry Snow • Wet Snow					
Frost					
Compacted Snow (OAT at or below –15°C)	Good to Medium	Braking deceleration and controllability is between Good and Medium.	4	GOOD TO MEDIUM	29kt
Dry Snow – between 3 mm (1/8") and 100 mm (4") Wet Snow – between 3 mm (1/8") and 30 mm (1 1/8") Compacted Snow (OAT above –15°C) Slippery when wet	Medium	Braking deceleration is noticeably reduced for the wheel braking effort applied. Directional control may be reduced.	3	MEDIUM	25kt
Water – between 3 mm (1/8") and 12.7 mm (1/2") Slush – between 3 mm (1/8") and 12.7 mm (1/2")	Medium to Poor	Braking deceleration and controllability is between Medium and Poor. Potential for Hydroplaning exists.	2	MEDIUM TO POOR	20kt
Ice (cold & dry)	Poor	Braking deceleration is significantly reduced for the wheel braking effort applied. Directional control may be significantly reduced.	1	POOR	15kt
Wet ice Water on top of Compacted Snow Dry Snow or Wet Snow over ice	Nil	Braking deceleration is minimal to non-existent for the wheel braking effort applied. Directional control may be uncertain.	–	–	–

*ESF: Estimated Surface Friction
 **PIREP: Pilot Report of Braking Action

Note: For Automatic Approach, Landing and Roll Out limitations, refer to FCOM LIM-22.

VAPP DETERMINATION WITHOUT FAILURE

Ident.: PER-C-00014156.0025001 / 28 FEB 14
Applicable to: MSN 2649

The FMGS performs the following VAPP computation for landing in normal configuration (CONF 3 or CONF FULL).

VAPP = VLS + APPR COR

VLS												
Weight (T)		40	42	46	50	54	58	62	66	70	74	78
VLS CONF FULL (kt) (=VREF)	CG < 25%	108	111	116	121	125	129	134	138	142	146	149
	CG ≥ 25%	106	109	114	119	123	127	132	136	140	144	147
VLS CONF 3 (kt)	CG < 25%	111	114	119	124	128	133	137	142	146	150	154
	CG ≥ 25%	109	112	117	122	126	131	135	140	144	148	152

+

APPROach CORrection	
APPR COR = Highest of	• 5kt in case of A/THR ON • 5kt in case of Ice Accretion in CONF FULL • 10kt in case of Ice Accretion in CONF 3 • 1/3 Headwind component (excluding gust - maximum 15 kt)



VAPP
VAPP = VLS + APPR COR



LANDING DISTANCE CORRECTION (SPD column in Landing Distance table)	
• If APPR COR is equal to 1/3 Headwind component: No SPD • If APPR COR is greater than 1/3 Headwind component: SPD = APPR COR	

CAUTION	Any extra pilot approach speed increment must be added to VAPP, and must be taken into account in SPD column for Landing Distance computation.

Note: In case of strong or gusty crosswind greater than 20kt, VAPP should be at least VLS + 5 kt. The 5kt increment above VLS may be increased up to 15kt at the flight crew's discretion.

VAPP DETERMINATION WITHOUT FAILURE

Ident.: PER-C-00014156.0021001 / 28 FEB 14
Applicable to: MSN 1219-1233

The FMGS performs the following VAPP computation for landing in normal configuration (CONF 3 or CONF FULL).

VAPP = VLS + APPR COR

VLS												
Weight (T)	52	54	58	62	66	70	74	78	82	86	90	94
VLS CONF FULL (kt) (=VREF)	116	119	123	127	131	135	139	142	146	150	153	156
VLS CONF 3 (kt)	121	124	128	133	137	141	145	149	153	156	160	163

+

APPR oach CORrection	
APPR COR = Highest of	• 5kt in case of A/THR ON • 5kt in case of Ice Accretion in CONF FULL • 10kt in case of Ice Accretion in CONF 3 • 1/3 Headwind component (excluding gust - maximum 15 kt)



VAPP
VAPP = VLS + APPR COR



LANDING DISTANCE CORRECTION (SPD column in Landing Distance table)	
• If APPR COR is equal to 1/3 Headwind component: No SPD • If APPR COR is greater than 1/3 Headwind component: SPD = APPR COR	

CAUTION	Any extra pilot approach speed increment must be added to VAPP, and must be taken into account in SPD column for Landing Distance computation.

Note: In case of strong or gusty crosswind greater than 20kt, VAPP should be at least VLS + 5 kt. The 5kt increment above VLS may be increased up to 15kt at the flight crew's discretion.

VAPP DETERMINATION WITHOUT FAILURE

Ident.: PER-C-00014156.0005001 / 28 FEB 14
Applicable to: MSN 1276-1843, 2927-3120

The FMGS performs the following VAPP computation for landing in normal configuration (CONF 3 or CONF FULL).

VAPP = VLS + APPR COR

VLS												
Weight (T)	52	54	58	62	66	70	74	78	82	86	90	94
VLS CONF FULL (kt) (=VREF)	116	119	123	127	131	135	139	143	146	150	153	157
VLS CONF 3 (kt)	121	123	128	132	136	140	144	148	152	156	159	163

+

APPR oach CORrection	
APPR COR = Highest of	• 5kt in case of A/THR ON • 5kt in case of Ice Accretion in CONF FULL • 10kt in case of Ice Accretion in CONF 3 • 1/3 Headwind component (excluding gust - maximum 15 kt)



VAPP
VAPP = VLS + APPR COR



LANDING DISTANCE CORRECTION (SPD column in Landing Distance table)
• If APPR COR is equal to 1/3 Headwind component: No SPD • If APPR COR is greater than 1/3 Headwind component: SPD = APPR COR

CAUTION	Any extra pilot approach speed increment must be added to VAPP, and must be taken into account in SPD column for Landing Distance computation.

Note: In case of strong or gusty crosswind greater than 20kt, VAPP should be at least VLS + 5 kt. The 5kt increment above VLS may be increased up to 15kt at the flight crew's discretion.

VAPP DETERMINATION WITH FAILURE

Ident.: PER-C-00014420.0015001 / 28 FEB 14
 Applicable to: MSN 1219-1233

VAPP = VREF + ΔVREF + APPR COR

VREF												
Weight (T)	52	54	58	62	66	70	74	78	82	86	90	94
VREF = VLS CONF FULL (kt)	116	119	123	127	131	135	139	142	146	150	153	156

+

ΔVREF
Refer to the applicable Landing Distance table

+

APPR each CORrection	
ΔVREF ≤ 10 kt	APPR COR= Highest of • 5kt in case of A/THR ON • 5kt in case of Ice Accretion in CONF FULL • 10kt in case of Ice Accretion in CONF 3 • 1/3 Headwind component (excluding gust - maximum 15 kt) <i>APPR COR + ΔVREF must be limited to 20kt</i>
10 kt < ΔVREF < 20 kt	APPR COR = 1/3 Headwind component (excluding gust - maximum 10 kt) <i>APPR COR + ΔVREF must be limited to 20kt</i>
ΔVREF ≥ 20 kt	APPR COR = 0kt <i>N/A displayed in the SPD column of the Landing Distance table</i>

↓

VAPP
VAPP = VREF + ΔVREF + APPR COR

↓

LANDING DISTANCE CORRECTION (SPD column in Landing Distance table)
• If APPR COR is equal to 1/3 Headwind component:No SPD • If APPR COR is greater than 1/3 Headwind component:SPD = APPR COR

CAUTION	Any extra pilot approach speed increment must be added to VAPP, and must be taken into account in SPD column for Landing Distance computation. If N/A is displayed in the SPD column of the Landing Distance table, do not add any extra pilot approach speed increment.

VAPP DETERMINATION WITH FAILURE

Ident.: PER-C-00014420.0006001 / 28 FEB 14
Applicable to: MSN 1276-1843, 2927-3120

VAPP = VREF + ΔVREF + APPR COR

VREF												
Weight (T)	52	54	58	62	66	70	74	78	82	86	90	94
VREF = VLS CONF FULL (kt)	116	119	123	127	131	135	139	143	146	150	153	157

+

ΔVREF
Refer to the applicable Landing Distance table

+

APPROach CORrection	
ΔVREF ≤ 10 kt	APPR COR= Highest of • 5kt in case of A/THR ON • 5kt in case of Ice Accretion in CONF FULL • 10kt in case of Ice Accretion in CONF 3 • 1/3 Headwind component (excluding gust - maximum 15 kt) APPR COR + ΔVREF must be limited to 20kt
10 kt < ΔVREF < 20 kt	APPR COR = 1/3 Headwind component (excluding gust - maximum 10 kt) APPR COR + ΔVREF must be limited to 20kt
ΔVREF ≥ 20 kt	APPR COR = 0kt N/A displayed in the SPD column of the Landing Distance table



VAPP
VAPP = VREF + ΔVREF + APPR COR



LANDING DISTANCE CORRECTION (SPD column in Landing Distance table)
• If APPR COR is equal to 1/3 Headwind component: No SPD • If APPR COR is greater than 1/3 Headwind component: SPD = APPR COR

CAUTION	Any extra pilot approach speed increment must be added to VAPP, and must be taken into account in SPD column for Landing Distance computation. If N/A is displayed in the SPD column of the Landing Distance table, do not add any extra pilot approach speed increment.

VAPP DETERMINATION WITH FAILURE

Ident.: PER-C-00014420.0001001 / 28 FEB 14
 Applicable to: MSN 2649

$$VAPP = VREF + \Delta VREF + APPR COR$$

VREF												
Weight (T)		40	42	46	50	54	58	62	66	70	74	78
VREF = VLS CONF FULL (kt)	CG < 25%	108	111	116	121	125	130	134	138	142	146	149
	CG ≥ 25%	106	109	114	119	123	128	132	136	140	144	147

+

$\Delta VREF$
Refer to the applicable Landing Distance table

+

APPR oach CORrection	
$\Delta VREF \leq 10 \text{ kt}$	APPR COR= Highest of • 5kt in case of A/THR ON • 5kt in case of Ice Accretion in CONF FULL • 10kt in case of Ice Accretion in CONF 3 • 1/3 Headwind component (excluding gust - maximum 15 kt) <i>APPR COR + $\Delta VREF$ must be limited to 20kt</i>
$10 \text{ kt} < \Delta VREF < 20 \text{ kt}$	APPR COR = 1/3 Headwind component (excluding gust - maximum 10 kt) <i>APPR COR + $\Delta VREF$ must be limited to 20kt</i>
$\Delta VREF \geq 20 \text{ kt}$	APPR COR = 0kt <i>N/A displayed in the SPD column of the Landing Distance table</i>



VAPP
$VAPP = VREF + \Delta VREF + APPR COR$



LANDING DISTANCE CORRECTION (SPD column in Landing Distance table)
• If APPR COR is equal to 1/3 Headwind component: No SPD • If APPR COR is greater than 1/3 Headwind component: SPD = APPR COR

CAUTION	Any extra pilot approach speed increment must be added to VAPP, and must be taken into account in SPD column for Landing Distance computation. If N/A is displayed in the SPD column of the Landing Distance table, do not add any extra pilot approach speed increment.

 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-C 10/10
		06 MAR 14

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LANDING DISTANCE WITHOUT FAILURE

Ident.: PER-D-00014077.0074001 / 28 FEB 14
 Applicable to: MSN 2933-3034

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, VAPP=VLS without APPR COR.

6 - DRY										
Corrections on Landing Distance (m)			WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
Braking Mode	LDG CONF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
Maximum MANUAL	FULL	1 210	+ 50	+ 80	+ 50	+ 140	+ 50	+ 30	- 20	+ 700
	3	1 290	+ 60	+ 80	+ 60	+ 160	+ 50	+ 30	- 20	+ 700
AUTOBRAKE MED	FULL	1 480	+ 50	+ 90	+ 50	+ 140	+ 50	+ 20	0	+ 240
	3	1 570	+ 50	+ 100	+ 60	+ 140	+ 50	+ 20	0	+ 260
AUTOBRAKE LOW	FULL	2 090	+ 40	+ 140	+ 80	+ 210	+ 70	+ 30	0	+ 270
	3	2 230	+ 50	+ 150	+ 80	+ 210	+ 80	+ 30	0	+ 280
(1) Automatic Landing correction: if CONF FULL, add 210m. If CONF 3, add 220m. (2) Weight correction: subtract 10m per 1T below 78T.										

5 - GOOD										
Corrections on Landing Distance (m)			WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
Braking Mode	LDG CONF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
Maximum MANUAL	FULL	1 520	+ 50	+ 110	+ 80	+ 210	+ 70	+ 50	- 50	+ 590
	3	1 650	+ 50	+ 120	+ 90	+ 220	+ 70	+ 60	- 60	+ 600
AUTOBRAKE MED	FULL	1 560	+ 50	+ 120	+ 80	+ 210	+ 70	+ 60	- 10	+ 240
	3	1 700	+ 50	+ 120	+ 90	+ 230	+ 70	+ 60	- 30	+ 250
AUTOBRAKE LOW	FULL	2 090	+ 40	+ 140	+ 80	+ 210	+ 70	+ 30	0	+ 270
	3	2 230	+ 50	+ 150	+ 80	+ 210	+ 80	+ 30	0	+ 280
(1) Automatic Landing correction: if CONF FULL, add 240m. If CONF 3, add 250m. (2) Weight correction: if CONF FULL, subtract 10m per 1T below 78T. If CONF 3, subtract 20m per 1T below 78T.										

4 - GOOD TO MEDIUM										
Corrections on Landing Distance (m)			WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
Braking Mode	LDG CONF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
Maximum MANUAL	FULL	1 730	+ 40	+ 90	+ 70	+ 190	+ 60	+ 70	- 90	+ 670
	3	1 860	+ 40	+ 90	+ 70	+ 200	+ 60	+ 80	- 110	+ 680
AUTOBRAKE MED	FULL	1 780	+ 30	+ 90	+ 70	+ 190	+ 60	+ 80	- 110	+ 230
	3	1 910	+ 40	+ 100	+ 70	+ 200	+ 70	+ 80	- 120	+ 230
AUTOBRAKE LOW	FULL	2 090	+ 40	+ 140	+ 80	+ 210	+ 80	+ 50	- 10	+ 270
	3	2 240	+ 50	+ 140	+ 90	+ 220	+ 70	+ 40	- 10	+ 280
(1) Automatic Landing correction: if CONF FULL, add 240m. If CONF 3, add 250m. (2) Weight correction: subtract 10m per 1T below 78T.										

 A320/A321 QUICK REFERENCE HANDBOOK			IN FLIGHT PERFORMANCE							PER-D 2/10	
									06 MAR 14		
3 - MEDIUM											
Corrections on Landing Distance (m)			WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW	
Braking Mode	LDG CONF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied	
Maximum MANUAL	FULL	1 930	+ 40	+ 100	+ 80	+ 220	+ 70	+ 100	- 130	+ 640	
	3	2 070	+ 40	+ 110	+ 90	+ 230	+ 70	+ 110	- 150	+ 650	
AUTOBRAKE MED	FULL	1 980	+ 40	+ 100	+ 80	+ 230	+ 70	+ 110	- 150	+ 230	
	3	2 120	+ 40	+ 110	+ 80	+ 230	+ 80	+ 120	- 160	+ 240	
AUTOBRAKE LOW	FULL	2 170	+ 40	+ 130	+ 90	+ 240	+ 70	+ 90	- 50	+ 260	
	3	2 320	+ 50	+ 140	+ 90	+ 240	+ 80	+ 90	- 50	+ 270	
(1) Automatic Landing correction: if CONF FULL, add 240m. If CONF 3, add 250m.											
(2) Weight correction: if CONF FULL, subtract 10m per 1T below 78T. If CONF 3, subtract 20m per 1T below 78T.											
2 - MEDIUM TO POOR											
Corrections on Landing Distance (m)			WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW	
Braking Mode	LDG CONF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied	
Maximum MANUAL	FULL	2 220	+ 70	+ 150	+ 130	+ 370	+ 110	+ 160	- 160	+ 450	
	3	2 430	+ 70	+ 170	+ 150	+ 390	+ 130	+ 190	- 190	+ 460	
AUTOBRAKE MED	FULL	2 240	+ 70	+ 160	+ 130	+ 370	+ 110	+ 170	- 170	+ 260	
	3	2 450	+ 70	+ 170	+ 150	+ 390	+ 120	+ 190	- 200	+ 280	
AUTOBRAKE LOW	FULL	2 260	+ 70	+ 160	+ 130	+ 370	+ 110	+ 170	- 60	+ 260	
	3	2 480	+ 70	+ 160	+ 150	+ 390	+ 120	+ 200	- 80	+ 280	
(1) Automatic Landing correction: if CONF FULL, add 280m. If CONF 3, add 300m.											
(2) Weight correction: if CONF FULL, subtract 20m per 1T below 78T. If CONF 3, subtract 30m per 1T below 78T.											
1 - POOR											
Corrections on Landing Distance (m)			WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW	
Braking Mode	LDG CONF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied	
Maximum MANUAL	FULL	3 430	+ 70	+ 150	+ 180	+ 570	+ 140	+ 780	- 440	+ 450	
	3	3 700	+ 70	+ 160	+ 200	+ 590	+ 150	+ 860	- 490	+ 460	
AUTOBRAKE MED	FULL	3 460	+ 70	+ 150	+ 180	+ 570	+ 140	+ 780	- 470	+ 260	
	3	3 730	+ 70	+ 160	+ 190	+ 590	+ 160	+ 850	- 530	+ 280	
AUTOBRAKE LOW	FULL	3 490	+ 70	+ 150	+ 180	+ 570	+ 140	+ 790	- 480	+ 270	
	3	3 760	+ 70	+ 160	+ 200	+ 590	+ 150	+ 860	- 530	+ 280	
(1) Automatic Landing correction: if CONF FULL, add 280m. If CONF 3, add 290m.											
(2) Weight correction: subtract 30m per 1T below 78T.											

LANDING DISTANCE WITHOUT FAILURE

Ident.: PER-D-00014077.0050001 / 28 FEB 14
Applicable to: MSN 1276-1843, 2927

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, VAPP=VLS without APPR COR.

6 - DRY										
Corrections on Landing Distance (m)			WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
Braking Mode	LDG CONF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
Maximum MANUAL	FULL	1 210	+ 50	+ 80	+ 50	+ 140	+ 50	+ 30	- 20	+ 700
	3	1 290	+ 60	+ 80	+ 60	+ 160	+ 50	+ 30	- 20	+ 700
AUTOBRAKE MED	FULL	1 480	+ 50	+ 90	+ 50	+ 140	+ 50	+ 20	0	+ 240
	3	1 570	+ 50	+ 100	+ 60	+ 140	+ 50	+ 20	0	+ 260
AUTOBRAKE LOW	FULL	2 090	+ 40	+ 140	+ 80	+ 210	+ 70	+ 30	0	+ 270
	3	2 230	+ 50	+ 150	+ 80	+ 210	+ 80	+ 30	0	+ 280

(1) Automatic Landing correction: if CONF FULL, add 210m. If CONF 3, add 220m.
(2) Weight correction: subtract 10m per 1T below 78T.

5 - GOOD										
Corrections on Landing Distance (m)			WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
Braking Mode	LDG CONF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
Maximum MANUAL	FULL	1 520	+ 50	+ 110	+ 80	+ 210	+ 70	+ 50	- 50	+ 590
	3	1 650	+ 50	+ 120	+ 90	+ 220	+ 70	+ 60	- 60	+ 600
AUTOBRAKE MED	FULL	1 560	+ 50	+ 120	+ 80	+ 210	+ 70	+ 60	- 10	+ 240
	3	1 700	+ 50	+ 120	+ 90	+ 230	+ 70	+ 60	- 30	+ 250
AUTOBRAKE LOW	FULL	2 090	+ 40	+ 140	+ 80	+ 210	+ 70	+ 30	0	+ 270
	3	2 230	+ 50	+ 150	+ 80	+ 210	+ 80	+ 30	0	+ 280

(1) Automatic Landing correction: if CONF FULL, add 240m. If CONF 3, add 250m.
(2) Weight correction: if CONF FULL, subtract 10m per 1T below 78T. If CONF 3, subtract 20m per 1T below 78T.

4 - GOOD TO MEDIUM										
Corrections on Landing Distance (m)			WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
Braking Mode	LDG CONF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
Maximum MANUAL	FULL	1 730	+ 40	+ 90	+ 70	+ 190	+ 60	+ 70	- 90	+ 670
	3	1 860	+ 40	+ 90	+ 70	+ 200	+ 60	+ 80	- 110	+ 680
AUTOBRAKE MED	FULL	1 780	+ 30	+ 90	+ 70	+ 190	+ 60	+ 80	- 110	+ 230
	3	1 910	+ 40	+ 100	+ 70	+ 200	+ 70	+ 80	- 120	+ 230
AUTOBRAKE LOW	FULL	2 090	+ 40	+ 140	+ 80	+ 210	+ 80	+ 50	- 10	+ 270
	3	2 240	+ 50	+ 140	+ 90	+ 220	+ 70	+ 40	- 10	+ 280

(1) Automatic Landing correction: if CONF FULL, add 240m. If CONF 3, add 250m.
(2) Weight correction: subtract 10m per 1T below 78T.

 A320/A321 QUICK REFERENCE HANDBOOK			IN FLIGHT PERFORMANCE							PER-D 4/10	
									06 MAR 14		
3 - MEDIUM											
Corrections on Landing Distance (m)			WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW	
Braking Mode	LDG CONF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied	
Maximum MANUAL	FULL	1 930	+ 40	+ 100	+ 80	+ 220	+ 70	+ 100	- 130	+ 640	
	3	2 070	+ 40	+ 110	+ 90	+ 230	+ 70	+ 110	- 150	+ 650	
AUTOBRAKE MED	FULL	1 980	+ 40	+ 100	+ 80	+ 230	+ 70	+ 110	- 150	+ 230	
	3	2 120	+ 40	+ 110	+ 80	+ 230	+ 80	+ 120	- 160	+ 240	
AUTOBRAKE LOW	FULL	2 170	+ 40	+ 130	+ 90	+ 240	+ 70	+ 90	- 50	+ 260	
	3	2 320	+ 50	+ 140	+ 90	+ 240	+ 80	+ 90	- 50	+ 270	
(1) Automatic Landing correction: if CONF FULL, add 240m. If CONF 3, add 250m.											
(2) Weight correction: if CONF FULL, subtract 10m per 1T below 78T. If CONF 3, subtract 20m per 1T below 78T.											
2 - MEDIUM TO POOR											
Corrections on Landing Distance (m)			WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW	
Braking Mode	LDG CONF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied	
Maximum MANUAL	FULL	2 220	+ 70	+ 150	+ 130	+ 370	+ 110	+ 160	- 160	+ 450	
	3	2 430	+ 70	+ 170	+ 150	+ 390	+ 130	+ 190	- 190	+ 460	
AUTOBRAKE MED	FULL	2 240	+ 70	+ 160	+ 130	+ 370	+ 110	+ 170	- 170	+ 260	
	3	2 450	+ 70	+ 170	+ 150	+ 390	+ 120	+ 190	- 200	+ 280	
AUTOBRAKE LOW	FULL	2 260	+ 70	+ 160	+ 130	+ 370	+ 110	+ 170	- 60	+ 260	
	3	2 480	+ 70	+ 160	+ 150	+ 390	+ 120	+ 200	- 80	+ 280	
(1) Automatic Landing correction: if CONF FULL, add 280m. If CONF 3, add 300m.											
(2) Weight correction: if CONF FULL, subtract 20m per 1T below 78T. If CONF 3, subtract 30m per 1T below 78T.											
1 - POOR											
Corrections on Landing Distance (m)			WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW	
Braking Mode	LDG CONF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied	
Maximum MANUAL	FULL	3 430	+ 70	+ 150	+ 180	+ 570	+ 140	+ 780	- 440	+ 450	
	3	3 700	+ 70	+ 160	+ 200	+ 590	+ 150	+ 860	- 490	+ 460	
AUTOBRAKE MED	FULL	3 460	+ 70	+ 150	+ 180	+ 570	+ 140	+ 780	- 470	+ 260	
	3	3 730	+ 70	+ 160	+ 190	+ 590	+ 160	+ 850	- 530	+ 280	
AUTOBRAKE LOW	FULL	3 490	+ 70	+ 150	+ 180	+ 570	+ 140	+ 790	- 480	+ 270	
	3	3 760	+ 70	+ 160	+ 200	+ 590	+ 150	+ 860	- 530	+ 280	
(1) Automatic Landing correction: if CONF FULL, add 280m. If CONF 3, add 290m.											
(2) Weight correction: subtract 30m per 1T below 78T.											

LANDING DISTANCE WITHOUT FAILURE

Ident.: PER-D-00014077.0048001 / 28 FEB 14
Applicable to: MSN 3120

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, VAPP=VLS without APPR COR.

6 - DRY										
Corrections on Landing Distance (m)			WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
Braking Mode	LDG CONF	REF DIST (m) for 76T	Per 1T above 76T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
Maximum MANUAL	FULL	1 190	+ 50	+ 80	+ 50	+ 140	+ 40	+ 30	- 20	+ 710
	3	1 260	+ 60	+ 80	+ 50	+ 150	+ 50	+ 30	- 20	+ 710
AUTOBRAKE MED	FULL	1 450	+ 40	+ 100	+ 50	+ 140	+ 50	+ 20	0	+ 240
	3	1 540	+ 50	+ 100	+ 50	+ 140	+ 50	+ 20	0	+ 250
AUTOBRAKE LOW	FULL	2 050	+ 40	+ 140	+ 80	+ 210	+ 70	+ 30	0	+ 260
	3	2 190	+ 50	+ 140	+ 80	+ 220	+ 70	+ 30	0	+ 270
(1) Automatic Landing correction: add 230m. (2) Weight correction: subtract 10m per 1T below 76T.										

5 - GOOD										
Corrections on Landing Distance (m)			WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
Braking Mode	LDG CONF	REF DIST (m) for 76T	Per 1T above 76T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
Maximum MANUAL	FULL	1 490	+ 40	+ 100	+ 80	+ 210	+ 60	+ 50	- 40	+ 590
	3	1 610	+ 50	+ 120	+ 80	+ 220	+ 70	+ 60	- 60	+ 590
AUTOBRAKE MED	FULL	1 530	+ 50	+ 110	+ 80	+ 210	+ 60	+ 50	- 10	+ 240
	3	1 660	+ 50	+ 110	+ 90	+ 220	+ 70	+ 60	- 20	+ 250
AUTOBRAKE LOW	FULL	2 050	+ 40	+ 140	+ 80	+ 210	+ 70	+ 30	0	+ 260
	3	2 190	+ 50	+ 140	+ 80	+ 220	+ 70	+ 30	0	+ 270
(1) Automatic Landing correction: if CONF FULL, add 260m. If CONF 3, add 270m. (2) Weight correction: subtract 10m per 1T below 76T.										

4 - GOOD TO MEDIUM										
Corrections on Landing Distance (m)			WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
Braking Mode	LDG CONF	REF DIST (m) for 76T	Per 1T above 76T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
Maximum MANUAL	FULL	1 700	+ 40	+ 90	+ 70	+ 190	+ 60	+ 70	- 90	+ 670
	3	1 820	+ 40	+ 90	+ 70	+ 190	+ 60	+ 80	- 100	+ 680
AUTOBRAKE MED	FULL	1 750	+ 40	+ 90	+ 70	+ 190	+ 60	+ 80	- 100	+ 220
	3	1 870	+ 40	+ 100	+ 70	+ 200	+ 70	+ 80	- 120	+ 230
AUTOBRAKE LOW	FULL	2 050	+ 40	+ 140	+ 80	+ 210	+ 70	+ 40	- 10	+ 260
	3	2 190	+ 50	+ 140	+ 80	+ 220	+ 80	+ 50	- 10	+ 280
(1) Automatic Landing correction: if CONF FULL, add 250m. If CONF 3, add 260m. (2) Weight correction: subtract 10m per 1T below 76T.										

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		06 MAR 14

3 - MEDIUM										
Corrections on Landing Distance (m)			WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
Braking Mode	LDG CONF	REF DIST (m) for 76T	Per 1T above 76T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
Maximum MANUAL	FULL	1 890	+ 40	+ 100	+ 80	+ 220	+ 70	+ 100	- 130	+ 630
	3	2 030	+ 40	+ 110	+ 80	+ 230	+ 70	+ 110	- 140	+ 640
AUTOBRAKE MED	FULL	1 940	+ 40	+ 100	+ 80	+ 220	+ 70	+ 100	- 140	+ 230
	3	2 080	+ 40	+ 110	+ 80	+ 230	+ 80	+ 120	- 160	+ 240
AUTOBRAKE LOW	FULL	2 120	+ 40	+ 140	+ 80	+ 230	+ 80	+ 90	- 50	+ 250
	3	2 270	+ 50	+ 140	+ 90	+ 240	+ 80	+ 90	- 50	+ 270
(1) Automatic Landing correction: if CONF FULL, add 260m. If CONF 3, add 270m. (2) Weight correction: if CONF FULL, subtract 10m per 1T below 76T. If CONF 3, subtract 20m per 1T below 76T.										

2 - MEDIUM TO POOR										
Corrections on Landing Distance (m)			WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
Braking Mode	LDG CONF	REF DIST (m) for 76T	Per 1T above 76T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
Maximum MANUAL	FULL	2 160	+ 70	+ 160	+ 130	+ 360	+ 110	+ 160	- 150	+ 450
	3	2 370	+ 80	+ 160	+ 140	+ 380	+ 120	+ 180	- 170	+ 460
AUTOBRAKE MED	FULL	2 180	+ 70	+ 160	+ 130	+ 360	+ 110	+ 160	- 160	+ 260
	3	2 390	+ 70	+ 160	+ 140	+ 390	+ 120	+ 190	- 190	+ 270
AUTOBRAKE LOW	FULL	2 210	+ 70	+ 160	+ 130	+ 370	+ 100	+ 160	- 60	+ 260
	3	2 420	+ 70	+ 160	+ 140	+ 390	+ 120	+ 190	- 70	+ 280
(1) Automatic Landing correction: if CONF FULL, add 300m. If CONF 3, add 310m. (2) Weight correction: if CONF FULL, subtract 20m per 1T below 76T. If CONF 3, subtract 30m per 1T below 76T.										

1 - POOR										
Corrections on Landing Distance (m)			WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
Braking Mode	LDG CONF	REF DIST (m) for 76T	Per 1T above 76T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
Maximum MANUAL	FULL	3 360	+ 70	+ 150	+ 180	+ 570	+ 140	+ 770	- 430	+ 450
	3	3 630	+ 70	+ 160	+ 190	+ 590	+ 150	+ 850	- 480	+ 460
AUTOBRAKE MED	FULL	3 400	+ 70	+ 140	+ 180	+ 570	+ 130	+ 780	- 460	+ 260
	3	3 660	+ 70	+ 160	+ 190	+ 590	+ 150	+ 850	- 520	+ 270
AUTOBRAKE LOW	FULL	3 420	+ 70	+ 150	+ 180	+ 570	+ 140	+ 780	- 470	+ 260
	3	3 690	+ 70	+ 150	+ 190	+ 590	+ 150	+ 860	- 530	+ 280
(1) Automatic Landing correction: if CONF FULL, add 290m. If CONF 3, add 300m. (2) Weight correction: subtract 30m per 1T below 76T.										

 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-D 7/10
		06 MAR 14

LANDING DISTANCE WITHOUT FAILURE

Ident.: PER-D-00014077.0030001 / 28 FEB 14

Applicable to: MSN 1219-1233

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, VAPP=VLS without APPR COR.

6 - DRY										
Corrections on Landing Distance (m)			WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
Braking Mode	LDG CONF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
Maximum MANUAL	FULL	1 220	+ 50	+ 80	+ 50	+ 150	+ 50	+ 30	- 20	+ 690
	3	1 310	+ 60	+ 90	+ 60	+ 160	+ 50	+ 30	- 20	+ 670
AUTOBRAKE MED	FULL	1 480	+ 50	+ 90	+ 50	+ 140	+ 50	+ 20	0	+ 240
	3	1 590	+ 50	+ 100	+ 60	+ 150	+ 50	+ 10	0	+ 260
AUTOBRAKE LOW	FULL	2 090	+ 40	+ 140	+ 80	+ 210	+ 80	+ 30	- 10	+ 280
	3	2 260	+ 50	+ 150	+ 80	+ 220	+ 80	+ 30	- 10	+ 290
(1) Automatic Landing correction: add 260m. (2) Weight correction: subtract 10m per 1T below 78T.										

5 - GOOD										
Corrections on Landing Distance (m)			WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
Braking Mode	LDG CONF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
Maximum MANUAL	FULL	1 550	+ 50	+ 110	+ 80	+ 220	+ 60	+ 50	- 40	+ 590
	3	1 700	+ 50	+ 120	+ 80	+ 230	+ 80	+ 60	- 50	+ 580
AUTOBRAKE MED	FULL	1 590	+ 50	+ 120	+ 80	+ 220	+ 70	+ 60	- 30	+ 250
	3	1 750	+ 50	+ 120	+ 80	+ 230	+ 80	+ 70	- 50	+ 260
AUTOBRAKE LOW	FULL	2 090	+ 40	+ 140	+ 80	+ 210	+ 80	+ 30	- 10	+ 280
	3	2 260	+ 50	+ 150	+ 80	+ 220	+ 80	+ 30	- 10	+ 290
(1) Automatic Landing correction: if CONF FULL, add 290m. If CONF 3, add 300m. (2) Weight correction: if CONF FULL, subtract 10m per 1T below 78T. If CONF 3, subtract 20m per 1T below 78T.										

4 - GOOD TO MEDIUM										
Corrections on Landing Distance (m)			WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
Braking Mode	LDG CONF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
Maximum MANUAL	FULL	1 760	+ 40	+ 100	+ 60	+ 190	+ 60	+ 80	- 70	+ 660
	3	1 910	+ 40	+ 100	+ 70	+ 200	+ 70	+ 80	- 80	+ 660
AUTOBRAKE MED	FULL	1 820	+ 30	+ 90	+ 70	+ 200	+ 60	+ 80	- 80	+ 230
	3	1 970	+ 40	+ 100	+ 70	+ 200	+ 70	+ 90	- 90	+ 240
AUTOBRAKE LOW	FULL	2 100	+ 40	+ 140	+ 80	+ 220	+ 70	+ 50	- 10	+ 280
	3	2 270	+ 50	+ 150	+ 80	+ 220	+ 80	+ 50	- 10	+ 290
(1) Automatic Landing correction: if CONF FULL, add 280m. If CONF 3, add 290m. (2) Weight correction: subtract 10m per 1T below 78T.										

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									06 MAR 14		
3 - MEDIUM											
Corrections on Landing Distance (m)			WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW	
Braking Mode	LDG CONF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied	
Maximum MANUAL	FULL	1 980	+ 40	+ 100	+ 80	+ 230	+ 60	+ 110	- 90	+ 620	
	3	2 150	+ 40	+ 100	+ 80	+ 240	+ 70	+ 120	- 100	+ 630	
AUTOBRAKE MED	FULL	2 030	+ 40	+ 100	+ 70	+ 230	+ 70	+ 110	- 110	+ 240	
	3	2 200	+ 40	+ 110	+ 80	+ 240	+ 80	+ 130	- 120	+ 240	
AUTOBRAKE LOW	FULL	2 190	+ 40	+ 130	+ 80	+ 240	+ 70	+ 100	- 50	+ 270	
	3	2 360	+ 50	+ 140	+ 90	+ 240	+ 90	+ 110	- 50	+ 280	
(1) Automatic Landing correction: if CONF FULL, add 290m. If CONF 3, add 300m. (2) Weight correction: subtract 20m per 1T below 78T.											
2 - MEDIUM TO POOR											
Corrections on Landing Distance (m)			WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW	
Braking Mode	LDG CONF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied	
Maximum MANUAL	FULL	2 290	+ 70	+ 170	+ 120	+ 380	+ 120	+ 180	- 110	+ 450	
	3	2 560	+ 80	+ 170	+ 140	+ 410	+ 130	+ 210	- 140	+ 460	
AUTOBRAKE MED	FULL	2 310	+ 70	+ 170	+ 120	+ 390	+ 120	+ 180	- 130	+ 270	
	3	2 580	+ 80	+ 180	+ 140	+ 410	+ 130	+ 220	- 160	+ 290	
AUTOBRAKE LOW	FULL	2 340	+ 70	+ 170	+ 130	+ 390	+ 110	+ 190	- 70	+ 280	
	3	2 610	+ 80	+ 170	+ 140	+ 410	+ 130	+ 220	- 110	+ 290	
(1) Automatic Landing correction: if CONF FULL, add 330m. If CONF 3, add 350m. (2) Weight correction: if CONF FULL, subtract 20m per 1T below 78T. If CONF 3, subtract 30m per 1T below 78T.											
1 - POOR											
Corrections on Landing Distance (m)			WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW	
Braking Mode	LDG CONF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied	
Maximum MANUAL	FULL	3 650	+ 70	+ 150	+ 150	+ 570	+ 140	+ 910	- 310	+ 450	
	3	4 000	+ 70	+ 160	+ 160	+ 590	+ 150	+ 1 020	- 360	+ 460	
AUTOBRAKE MED	FULL	3 680	+ 70	+ 150	+ 150	+ 570	+ 140	+ 910	- 350	+ 270	
	3	4 030	+ 70	+ 160	+ 160	+ 590	+ 160	+ 1 020	- 400	+ 290	
AUTOBRAKE LOW	FULL	3 710	+ 70	+ 150	+ 150	+ 580	+ 140	+ 920	- 350	+ 280	
	3	4 060	+ 70	+ 160	+ 160	+ 600	+ 160	+ 1 020	- 400	+ 290	
(1) Automatic Landing correction: if CONF FULL, add 330m. If CONF 3, add 340m. (2) Weight correction: subtract 30m per 1T below 78T.											

LANDING DISTANCE WITHOUT FAILURE

Ident.: PER-D-00014077.0005001 / 28 FEB 14
Applicable to: MSN 2649

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, VAPP=VLS without APPR COR.

6 - DRY										
Corrections on Landing Distance (m)			WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
Braking Mode	LDG CONF	REF DIST (m) for 66T	Per 1T above 66T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
Maximum MANUAL	FULL	1 080	+ 40	+ 60	+ 40	+ 130	+ 30	+ 20	- 20	+ 760
	3	1 130	+ 50	+ 80	+ 50	+ 120	+ 40	+ 20	- 20	+ 990
AUTOBRAKE MED	FULL	1 360	+ 30	+ 90	+ 50	+ 130	+ 40	+ 10	0	+ 230
	3	1 420	+ 40	+ 100	+ 50	+ 140	+ 50	+ 10	0	+ 250
AUTOBRAKE LOW	FULL	1 930	+ 50	+ 130	+ 80	+ 200	+ 60	+ 20	- 10	+ 260
	3	2 030	+ 50	+ 150	+ 80	+ 210	+ 70	+ 30	- 10	+ 290

(1) Automatic Landing correction: if CONF FULL, add 190m. If CONF 3, add 260m.
(2) Weight correction: subtract 10m per 1T below 66T.

5 - GOOD										
Corrections on Landing Distance (m)			WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
Braking Mode	LDG CONF	REF DIST (m) for 66T	Per 1T above 66T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
Maximum MANUAL	FULL	1 370	+ 50	+ 100	+ 70	+ 200	+ 60	+ 40	- 50	+ 600
	3	1 480	+ 50	+ 120	+ 80	+ 220	+ 70	+ 60	- 60	+ 790
AUTOBRAKE MED	FULL	1 420	+ 50	+ 110	+ 70	+ 200	+ 60	+ 40	- 10	+ 220
	3	1 540	+ 50	+ 120	+ 80	+ 220	+ 70	+ 60	- 30	+ 240
AUTOBRAKE LOW	FULL	1 930	+ 50	+ 130	+ 80	+ 200	+ 60	+ 20	- 10	+ 260
	3	2 030	+ 50	+ 150	+ 80	+ 210	+ 70	+ 30	- 10	+ 270

(1) Automatic Landing correction: if CONF FULL, add 230m. If CONF 3, add 310m.
(2) Weight correction: if CONF FULL, subtract 10m per 1T below 66T. If CONF 3, subtract 20m per 1T below 66T.

4 - GOOD TO MEDIUM										
Corrections on Landing Distance (m)			WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
Braking Mode	LDG CONF	REF DIST (m) for 66T	Per 1T above 66T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
Maximum MANUAL	FULL	1 600	+ 40	+ 80	+ 70	+ 180	+ 50	+ 60	- 90	+ 670
	3	1 720	+ 40	+ 100	+ 70	+ 190	+ 60	+ 70	- 110	+ 880
AUTOBRAKE MED	FULL	1 650	+ 40	+ 90	+ 60	+ 190	+ 60	+ 70	- 110	+ 200
	3	1 790	+ 40	+ 100	+ 70	+ 200	+ 60	+ 80	- 140	+ 210
AUTOBRAKE LOW	FULL	1 930	+ 50	+ 130	+ 80	+ 210	+ 60	+ 40	- 10	+ 260
	3	2 030	+ 50	+ 150	+ 80	+ 210	+ 70	+ 50	- 20	+ 280

(1) Automatic Landing correction: if CONF FULL, add 230m. If CONF 3, add 310m.
(2) Weight correction: if CONF FULL, subtract 10m per 1T below 66T. If CONF 3, subtract 20m per 1T below 66T.

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3 - MEDIUM										
Corrections on Landing Distance (m)			WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
Braking Mode	LDG CONF	REF DIST (m) for 66T	Per 1T above 66T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
Maximum MANUAL	FULL	1 770	+ 40	+ 90	+ 80	+ 210	+ 60	+ 90	- 110	+ 640
	3	1 920	+ 50	+ 110	+ 80	+ 220	+ 60	+ 110	- 140	+ 840
AUTOBRAKE MED	FULL	1 820	+ 40	+ 100	+ 80	+ 210	+ 70	+ 90	- 140	+ 210
	3	1 990	+ 40	+ 110	+ 80	+ 230	+ 70	+ 110	- 180	+ 220
AUTOBRAKE LOW	FULL	1 990	+ 50	+ 130	+ 80	+ 230	+ 70	+ 70	- 40	+ 240
	3	2 120	+ 50	+ 140	+ 90	+ 240	+ 70	+ 90	- 70	+ 270
(1) Automatic Landing correction: if CONF FULL, add 240m. If CONF 3, add 320m. (2) Weight correction: subtract 20m per 1T below 66T.										

2 - MEDIUM TO POOR										
Corrections on Landing Distance (m)			WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
Braking Mode	LDG CONF	REF DIST (m) for 66T	Per 1T above 66T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
Maximum MANUAL	FULL	1 950	+ 70	+ 140	+ 120	+ 330	+ 90	+ 130	- 120	+ 460
	3	2 200	+ 80	+ 180	+ 150	+ 380	+ 110	+ 170	- 160	+ 600
AUTOBRAKE MED	FULL	1 980	+ 70	+ 150	+ 120	+ 330	+ 100	+ 130	- 160	+ 230
	3	2 230	+ 80	+ 180	+ 150	+ 390	+ 110	+ 180	- 210	+ 280
AUTOBRAKE LOW	FULL	2 020	+ 70	+ 150	+ 120	+ 340	+ 90	+ 130	- 40	+ 230
	3	2 250	+ 80	+ 180	+ 150	+ 390	+ 110	+ 180	- 90	+ 280
(1) Automatic Landing correction: if CONF FULL, add 280m. If CONF 3, add 390m. (2) Weight correction: if CONF FULL, subtract 20m per 1T below 66T. If CONF 3, subtract 30m per 1T below 66T.										

1 - POOR										
Corrections on Landing Distance (m)			WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
Braking Mode	LDG CONF	REF DIST (m) for 66T	Per 1T above 66T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
Maximum MANUAL	FULL	2 950	+ 70	+ 140	+ 190	+ 490	+ 120	+ 530	- 230	+ 470
	3	3 380	+ 80	+ 170	+ 220	+ 530	+ 140	+ 690	- 330	+ 600
AUTOBRAKE MED	FULL	3 020	+ 70	+ 130	+ 190	+ 490	+ 120	+ 540	- 300	+ 230
	3	3 450	+ 80	+ 170	+ 220	+ 530	+ 140	+ 690	- 430	+ 280
AUTOBRAKE LOW	FULL	3 040	+ 70	+ 130	+ 190	+ 490	+ 120	+ 540	- 290	+ 230
	3	3 480	+ 80	+ 170	+ 220	+ 540	+ 140	+ 700	- 430	+ 280
(1) Automatic Landing correction: if CONF FULL, add 280m. If CONF 3, add 380m. (2) Weight correction: if CONF FULL, subtract 30m per 1T below 66T. If CONF 3, subtract 40m per 1T below 66T.										

Ident.: PER-24-00015356.0001001 / 28 FEB 14
Applicable to: ALL

LANDING DISTANCE WITH FAILURE

Ident.: PER-24-00014167.0080001 / 28 FEB 14
Applicable to: MSN 2933-3034

ELECTRICAL SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

6 - DRY											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
AC BUS 1 FAULT	FULL	0	1 290	+ 50	+ 80	+ 60	+ 150	+ 40	+ 30	- 20	+ 680
	3	6	1 370	+ 50	+ 90	+ 60	+ 160	+ 50	+ 30	- 30	+ 660
DC BUS 2 FAULT	FULL	0	1 370	+ 50	+ 100	+ 60	+ 140	+ 50	+ 40	- 30	+ 710
	3	6	1 460	+ 50	+ 110	+ 60	+ 150	+ 60	+ 40	- 40	+ 720
DC BUS 1+2 FAULT	FULL	0	2 100	+ 70	+ 120	+ 80	+ 210	+ 70	+ 100	INOP	+ 730
	3	6	2 270	+ 80	+ 120	+ 90	+ 220	+ 80	+ 110	INOP	+ 750
DC ESS BUS FAULT with no Ice Accretion	FULL	0	1 290	+ 50	+ 90	+ 60	+ 160	+ 40	+ 30	- 20	+ 680
	3	6	1 370	+ 50	+ 90	+ 70	+ 160	+ 50	+ 30	- 30	+ 660
DC ESS BUS FAULT with Ice Accretion	FULL	10	1 410	+ 50	+ 90	+ 70	+ 170	+ 50	+ 30	- 30	+ 520
	3	16	1 500	+ 50	+ 90	+ 70	+ 170	+ 50	+ 30	- 40	+ 570
DC ESS SHED BUS with Ice Accretion	FULL	10	1 370	+ 50	+ 90	+ 70	+ 160	+ 50	+ 30	- 20	+ 500
	3	16	1 470	+ 50	+ 90	+ 70	+ 160	+ 50	+ 30	- 30	+ 550
DC EMER CONFIG (Calculated with 140kt min)	FULL	0 / 140kt	2 110	+ 70	+ 110	+ 80	+ 210	+ 70	+ 100	INOP	+ 720
	3	6 / 140kt	2 280	+ 80	+ 120	+ 90	+ 220	+ 80	+ 110	INOP	+ 740
ELEC EMER CONFIG (Calculated with 140kt min)	3	10 / 140kt	2 330	+ 80	+ 120	+ 90	+ 220	+ 80	+ 110	INOP	+ 680
(1) Automatic Landing correction: add 100m - (2) Weight correction: subtract 10m per 1T below 78T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 210m											



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ELECTRICAL SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

5 - GOOD											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
AC BUS 1 FAULT	FULL	0	1 670	+ 50	+ 120	+ 90	+ 230	+ 70	+ 60	- 70	+ 550
	3	6	1 810	+ 60	+ 130	+ 100	+ 240	+ 90	+ 70	- 80	+ 540
DC BUS 2 FAULT	FULL	0	1 820	+ 60	+ 160	+ 100	+ 260	+ 90	+ 90	- 90	+ 540
	3	6	2 010	+ 60	+ 180	+ 120	+ 280	+ 100	+ 110	- 120	+ 550
DC BUS 1+2 FAULT	FULL	0	2 170	+ 70	+ 150	+ 110	+ 280	+ 90	+ 130	INOP	+ 590
	3	6	2 370	+ 80	+ 170	+ 120	+ 300	+ 110	+ 160	INOP	+ 600
DC ESS BUS FAULT with no Ice Accretion	FULL	0	1 670	+ 50	+ 130	+ 90	+ 240	+ 80	+ 70	- 70	+ 550
	3	6	1 820	+ 60	+ 130	+ 100	+ 250	+ 80	+ 70	- 80	+ 540
DC ESS BUS FAULT with Ice Accretion	FULL	10	1 870	+ 60	+ 130	+ 100	+ 250	+ 80	+ 70	- 90	+ 430
	3	16	2 020	+ 60	+ 140	+ 110	+ 250	+ 100	+ 80	- 100	+ 430
DC ESS SHED BUS with Ice Accretion	FULL	10	1 760	+ 50	+ 110	+ 90	+ 230	+ 70	+ 60	- 60	+ 430
	3	16	1 910	+ 50	+ 120	+ 100	+ 230	+ 80	+ 70	- 70	+ 440
DC EMER CONFIG (Calculated with 140kt min)	FULL	0 / 140kt	2 170	+ 70	+ 160	+ 110	+ 280	+ 90	+ 130	INOP	+ 590
	3	6 / 140kt	2 380	+ 80	+ 170	+ 120	+ 300	+ 100	+ 160	INOP	+ 600
ELEC EMER CONFIG (Calculated with 140kt min)	3	10 / 140kt	2 450	+ 80	+ 170	+ 130	+ 300	+ 110	+ 150	INOP	+ 550
(1) Automatic Landing correction: add 110m - (2) Weight correction: subtract 10m per 1T below 78T REF DIST without failure (valid for all FLAPS LEVER positions) = 1 520m											



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ELECTRICAL SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

4 - GOOD TO MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
AC BUS 1 FAULT	FULL	0	1 880	+ 40	+ 100	+ 80	+ 200	+ 60	+ 80	- 120	+ 640
	3	6	2 010	+ 40	+ 110	+ 80	+ 200	+ 70	+ 90	- 130	+ 640
DC BUS 2 FAULT	FULL	0	2 060	+ 40	+ 130	+ 90	+ 220	+ 70	+ 110	- 160	+ 640
	3	6	2 230	+ 40	+ 140	+ 90	+ 230	+ 80	+ 130	- 190	+ 660
DC BUS 1+2 FAULT	FULL	0	2 240	+ 50	+ 130	+ 90	+ 230	+ 70	+ 130	INOP	+ 680
	3	6	2 430	+ 60	+ 140	+ 100	+ 240	+ 80	+ 150	INOP	+ 700
DC ESS BUS FAULT with no Ice Accretion	FULL	0	1 890	+ 40	+ 110	+ 80	+ 200	+ 70	+ 90	- 130	+ 640
	3	6	2 030	+ 40	+ 110	+ 80	+ 210	+ 70	+ 100	- 150	+ 640
DC ESS BUS FAULT with Ice Accretion	FULL	10	2 070	+ 40	+ 110	+ 80	+ 210	+ 70	+ 100	- 150	+ 510
	3	16	2 220	+ 40	+ 110	+ 90	+ 210	+ 70	+ 100	- 170	+ 520
DC ESS SHED BUS with Ice Accretion	FULL	10	1 940	+ 40	+ 90	+ 80	+ 200	+ 70	+ 80	- 100	+ 510
	3	16	2 080	+ 40	+ 100	+ 80	+ 200	+ 70	+ 80	- 110	+ 520
DC EMER CONFIG (Calculated with 140kt min)	FULL	0 / 140kt	2 240	+ 60	+ 140	+ 90	+ 230	+ 80	+ 130	INOP	+ 680
	3	6 / 140kt	2 440	+ 60	+ 140	+ 100	+ 240	+ 80	+ 150	INOP	+ 700
ELEC EMER CONFIG (Calculated with 140kt min)	3	10 / 140kt	2 490	+ 60	+ 140	+ 100	+ 230	+ 90	+ 140	INOP	+ 640
(1) Automatic Landing correction: add 110m - (2) Weight correction: subtract 10m per 1T below 78T REF DIST without failure (valid for all FLAPS LEVER positions) = 1 730m											



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ELECTRICAL SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

3 - MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
AC BUS 1 FAULT	FULL	0	2 100	+ 40	+ 120	+ 90	+ 230	+ 80	+ 120	- 160	+ 600
	3	6	2 250	+ 40	+ 120	+ 100	+ 240	+ 80	+ 130	- 180	+ 600
DC BUS 2 FAULT	FULL	0	2 320	+ 40	+ 140	+ 100	+ 260	+ 80	+ 160	- 230	+ 600
	3	6	2 530	+ 50	+ 150	+ 110	+ 270	+ 90	+ 180	- 270	+ 620
DC BUS 1+2 FAULT	FULL	0	2 490	+ 50	+ 140	+ 100	+ 270	+ 90	+ 180	INOP	+ 640
	3	6	2 710	+ 50	+ 160	+ 110	+ 280	+ 100	+ 210	INOP	+ 660
DC ESS BUS FAULT with no Ice Accretion	FULL	0	2 140	+ 40	+ 120	+ 90	+ 250	+ 70	+ 130	- 190	+ 600
	3	6	2 290	+ 40	+ 130	+ 100	+ 250	+ 90	+ 140	- 220	+ 600
DC ESS BUS FAULT with Ice Accretion	FULL	10	2 330	+ 40	+ 120	+ 100	+ 250	+ 80	+ 140	- 220	+ 480
	3	16	2 490	+ 40	+ 120	+ 110	+ 250	+ 90	+ 150	- 240	+ 490
DC ESS SHED BUS with Ice Accretion	FULL	10	2 160	+ 40	+ 100	+ 90	+ 230	+ 70	+ 110	- 140	+ 480
	3	16	2 320	+ 40	+ 100	+ 100	+ 230	+ 80	+ 120	- 150	+ 490
DC EMER CONFIG (Calculated with 140kt min)	FULL	0 / 140kt	2 490	+ 50	+ 150	+ 100	+ 270	+ 90	+ 180	INOP	+ 640
	3	6 / 140kt	2 720	+ 50	+ 160	+ 110	+ 280	+ 100	+ 210	INOP	+ 660
ELEC EMER CONFIG (Calculated with 140kt min)	3	10 / 140kt	2 760	+ 50	+ 150	+ 120	+ 270	+ 100	+ 190	INOP	+ 600
(1) Automatic Landing correction: add 110m - (2) Weight correction: subtract 10m per 1T below 78T REF DIST without failure (valid for all FLAPS LEVER positions) = 1 930m											



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ELECTRICAL SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

2 - MEDIUM TO POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
AC BUS 1 FAULT	FULL	0	2 470	+ 80	+ 180	+ 150	+ 400	+ 130	+ 200	- 200	+ 390
	3	6	2 710	+ 80	+ 180	+ 170	+ 430	+ 130	+ 230	- 240	+ 400
DC BUS 2 FAULT	FULL	0	2 780	+ 90	+ 230	+ 190	+ 480	+ 160	+ 300	- 300	+ 380
	3	6	3 150	+ 100	+ 250	+ 220	+ 530	+ 180	+ 380	- 380	+ 400
DC BUS 1+2 FAULT	FULL	0	2 870	+ 90	+ 240	+ 200	+ 500	+ 160	+ 330	INOP	+ 400
	3	6	3 260	+ 100	+ 260	+ 230	+ 560	+ 190	+ 420	INOP	+ 420
DC ESS BUS FAULT with no Ice Accretion	FULL	0	2 520	+ 80	+ 190	+ 160	+ 440	+ 140	+ 230	- 240	+ 380
	3	6	2 770	+ 80	+ 190	+ 180	+ 460	+ 140	+ 260	- 290	+ 380
DC ESS BUS FAULT with Ice Accretion	FULL	10	2 800	+ 80	+ 180	+ 180	+ 450	+ 140	+ 250	- 290	+ 330
	3	16	3 060	+ 80	+ 180	+ 190	+ 470	+ 150	+ 280	- 350	+ 340
DC ESS SHED BUS with Ice Accretion	FULL	10	2 550	+ 70	+ 150	+ 150	+ 380	+ 120	+ 170	- 180	+ 340
	3	16	2 790	+ 80	+ 160	+ 160	+ 390	+ 140	+ 200	- 210	+ 350
DC EMER CONFIG (Calculated with 140kt min)	FULL	0 / 140kt	2 880	+ 90	+ 240	+ 200	+ 510	+ 160	+ 330	INOP	+ 400
	3	6 / 140kt	3 270	+ 100	+ 260	+ 230	+ 560	+ 180	+ 420	INOP	+ 420
ELEC EMER CONFIG (Calculated with 140kt min)	3	10 / 140kt	3 320	+ 100	+ 240	+ 220	+ 510	+ 170	+ 380	INOP	+ 400
(1) Automatic Landing correction: add 140m - (2) Weight correction: subtract 10m per 1T below 78T REF DIST without failure (valid for all FLAPS LEVER positions) = 2 220m											



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ELECTRICAL SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

1 - POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
AC BUS 1 FAULT	FULL	0	3 780	+ 70	+ 170	+ 200	+ 600	+ 150	+ 910	- 530	+ 390
	3	6	4 060	+ 70	+ 180	+ 220	+ 620	+ 170	+ 980	- 590	+ 390
DC BUS 2 FAULT	FULL	0	4 470	+ 70	+ 220	+ 240	+ 710	+ 180	+ 1 550	- 990	+ 380
	3	6	Landing Distance greater than 6 000 m for all conditions								
DC BUS 1+2 FAULT	FULL	0	Landing Distance greater than 6 000 m for all conditions								
	3	6	Landing Distance greater than 6 000 m for all conditions								
DC ESS BUS FAULT with no Ice Accretion	FULL	0	Landing Distance greater than 6 000 m for all conditions								
	3	6	Landing Distance greater than 6 000 m for all conditions								
DC ESS BUS FAULT with Ice Accretion	FULL	10	Landing Distance greater than 6 000 m for all conditions								
	3	16	Landing Distance greater than 6 000 m for all conditions								
DC ESS SHED BUS with Ice Accretion	FULL	10	3 740	+ 70	+ 150	+ 190	+ 580	+ 160	+ 790	- 470	+ 340
	3	16	4 050	+ 70	+ 150	+ 210	+ 590	+ 160	+ 860	- 530	+ 350
DC EMER CONFIG (Calculated with 140kt min)	FULL	0 / 140kt	Landing Distance greater than 6 000 m for all conditions								
	3	6 / 140kt	Landing Distance greater than 6 000 m for all conditions								
ELEC EMER CONFIG (Calculated with 140kt min)	3	10 / 140kt	Landing Distance greater than 6 000 m for all conditions								
(1) Automatic Landing correction: add 140m - (2) Weight correction: subtract 10m per 1T below 78T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 3 430m											

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Ident.: PER-24-00014167.0061001 / 28 FEB 14
Applicable to: MSN 3120

ELECTRICAL SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

6 - DRY											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 76T	Per 1T above 76T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
AC BUS 1 FAULT	FULL	0	1 270	+ 50	+ 80	+ 50	+ 150	+ 40	+ 30	- 20	+ 690
	3	6	1 350	+ 50	+ 90	+ 60	+ 160	+ 50	+ 30	- 30	+ 670
DC BUS 2 FAULT	FULL	0	1 350	+ 50	+ 90	+ 50	+ 140	+ 40	+ 30	- 30	+ 720
	3	6	1 440	+ 50	+ 100	+ 60	+ 150	+ 50	+ 40	- 40	+ 720
DC BUS 1+2 FAULT	FULL	0	2 040	+ 70	+ 110	+ 80	+ 210	+ 60	+ 90	INOP	+ 720
	3	6	2 200	+ 70	+ 120	+ 80	+ 210	+ 80	+ 110	INOP	+ 740
DC ESS BUS FAULT with no Ice Accretion	FULL	0	1 270	+ 50	+ 80	+ 50	+ 150	+ 40	+ 30	- 20	+ 690
	3	6	1 350	+ 50	+ 90	+ 60	+ 160	+ 50	+ 30	- 30	+ 670
DC ESS BUS FAULT with Ice Accretion	FULL	10	1 380	+ 50	+ 90	+ 60	+ 160	+ 50	+ 30	- 30	+ 520
	3	16	1 470	+ 50	+ 90	+ 70	+ 160	+ 50	+ 30	- 40	+ 550
DC ESS SHED BUS with Ice Accretion	FULL	10	1 340	+ 50	+ 80	+ 60	+ 160	+ 50	+ 30	- 20	+ 500
	3	16	1 430	+ 50	+ 90	+ 70	+ 160	+ 50	+ 30	- 30	+ 530
DC EMER CONFIG (Calculated with 140kt min)	FULL	0 / 140kt	2 040	+ 70	+ 120	+ 80	+ 210	+ 70	+ 100	INOP	+ 720
	3	6 / 140kt	2 210	+ 70	+ 120	+ 80	+ 220	+ 70	+ 110	INOP	+ 740
ELEC EMER CONFIG (Calculated with 140kt min)	3	10 / 140kt	2 260	+ 70	+ 120	+ 90	+ 210	+ 80	+ 100	INOP	+ 680
(1) Automatic Landing correction: add 120m - (2) Weight correction: subtract 10m per 1T below 76T REF DIST without failure (valid for all FLAPS LEVER positions) = 1 190m											



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ELECTRICAL SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, $VAPP = VREF + \Delta VREF$ without APPR COR.

5 - GOOD											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	$\Delta VREF$	REF DIST (m) for 76T	Per 1T above 76T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
AC BUS 1 FAULT	FULL	0	1 630	+ 50	+ 120	+ 90	+ 230	+ 70	+ 60	- 60	+ 550
	3	6	1 770	+ 50	+ 130	+ 100	+ 240	+ 80	+ 70	- 80	+ 540
DC BUS 2 FAULT	FULL	0	1 780	+ 60	+ 150	+ 100	+ 260	+ 80	+ 90	- 90	+ 540
	3	6	1 970	+ 60	+ 170	+ 120	+ 280	+ 90	+ 100	- 110	+ 550
DC BUS 1+2 FAULT	FULL	0	2 100	+ 70	+ 150	+ 100	+ 270	+ 90	+ 130	INOP	+ 590
	3	6	2 310	+ 70	+ 170	+ 120	+ 300	+ 100	+ 150	INOP	+ 590
DC ESS BUS FAULT with no Ice Accretion	FULL	0	1 630	+ 50	+ 130	+ 90	+ 230	+ 70	+ 70	- 60	+ 550
	3	6	1 780	+ 60	+ 130	+ 100	+ 250	+ 80	+ 70	- 80	+ 530
DC ESS BUS FAULT with Ice Accretion	FULL	10	1 820	+ 60	+ 130	+ 100	+ 240	+ 90	+ 70	- 80	+ 430
	3	16	1 980	+ 60	+ 130	+ 110	+ 250	+ 90	+ 80	- 100	+ 430
DC ESS SHED BUS with Ice Accretion	FULL	10	1 720	+ 50	+ 110	+ 90	+ 220	+ 70	+ 60	- 50	+ 430
	3	16	1 870	+ 50	+ 120	+ 100	+ 230	+ 80	+ 60	- 70	+ 430
DC EMER CONFIG (Calculated with 140kt min)	FULL	0 / 140kt	2 110	+ 70	+ 150	+ 100	+ 270	+ 90	+ 130	INOP	+ 580
	3	6 / 140kt	2 310	+ 70	+ 170	+ 120	+ 290	+ 100	+ 150	INOP	+ 590
ELEC EMER CONFIG (Calculated with 140kt min)	3	10 / 140kt	2 380	+ 70	+ 170	+ 120	+ 290	+ 110	+ 140	INOP	+ 540
(1) Automatic Landing correction: add 130m - (2) Weight correction: subtract 10m per 1T below 76T REF DIST without failure (valid for all FLAPS LEVER positions) = 1 490m											



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ELECTRICAL SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

4 - GOOD TO MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 76T	Per 1T above 76T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
AC BUS 1 FAULT	FULL	0	1 840	+ 40	+ 110	+ 70	+ 200	+ 70	+ 80	- 110	+ 640
	3	6	1 980	+ 40	+ 100	+ 80	+ 210	+ 70	+ 90	- 130	+ 640
DC BUS 2 FAULT	FULL	0	2 020	+ 40	+ 130	+ 80	+ 220	+ 70	+ 110	- 160	+ 630
	3	6	2 190	+ 40	+ 140	+ 90	+ 220	+ 80	+ 120	- 190	+ 650
DC BUS 1+2 FAULT	FULL	0	2 190	+ 50	+ 130	+ 90	+ 220	+ 80	+ 130	INOP	+ 680
	3	6	2 380	+ 50	+ 140	+ 100	+ 230	+ 90	+ 150	INOP	+ 690
DC ESS BUS FAULT with no Ice Accretion	FULL	0	1 860	+ 40	+ 110	+ 80	+ 200	+ 60	+ 90	- 130	+ 640
	3	6	2 000	+ 40	+ 110	+ 80	+ 210	+ 70	+ 100	- 150	+ 640
DC ESS BUS FAULT with Ice Accretion	FULL	10	2 030	+ 40	+ 110	+ 80	+ 210	+ 70	+ 100	- 150	+ 500
	3	16	2 180	+ 40	+ 110	+ 90	+ 210	+ 70	+ 100	- 170	+ 510
DC ESS SHED BUS with Ice Accretion	FULL	10	1 900	+ 40	+ 100	+ 70	+ 190	+ 70	+ 80	- 100	+ 500
	3	16	2 050	+ 40	+ 90	+ 80	+ 200	+ 70	+ 80	- 110	+ 520
DC EMER CONFIG (Calculated with 140kt min)	FULL	0 / 140kt	2 200	+ 50	+ 130	+ 90	+ 230	+ 80	+ 130	INOP	+ 670
	3	6 / 140kt	2 390	+ 50	+ 140	+ 100	+ 240	+ 90	+ 140	INOP	+ 690
ELEC EMER CONFIG (Calculated with 140kt min)	3	10 / 140kt	2 450	+ 50	+ 140	+ 100	+ 230	+ 80	+ 140	INOP	+ 630
(1) Automatic Landing correction: add 130m - (2) Weight correction: subtract 10m per 1T below 76T REF DIST without failure (valid for all FLAPS LEVER positions) = 1 700m											



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ELECTRICAL SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

3 - MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 76T	Per 1T above 76T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
AC BUS 1 FAULT	FULL	0	2 060	+ 40	+ 110	+ 90	+ 230	+ 70	+ 120	- 160	+ 600
	3	6	2 210	+ 40	+ 120	+ 90	+ 240	+ 80	+ 130	- 180	+ 600
DC BUS 2 FAULT	FULL	0	2 270	+ 50	+ 140	+ 100	+ 250	+ 90	+ 160	- 220	+ 590
	3	6	2 480	+ 50	+ 150	+ 110	+ 270	+ 90	+ 180	- 260	+ 610
DC BUS 1+2 FAULT	FULL	0	2 440	+ 50	+ 150	+ 100	+ 270	+ 90	+ 180	INOP	+ 630
	3	6	2 660	+ 50	+ 160	+ 110	+ 280	+ 100	+ 210	INOP	+ 650
DC ESS BUS FAULT with no Ice Accretion	FULL	0	2 090	+ 40	+ 120	+ 90	+ 240	+ 80	+ 130	- 190	+ 600
	3	6	2 250	+ 40	+ 120	+ 100	+ 250	+ 80	+ 140	- 210	+ 590
DC ESS BUS FAULT with Ice Accretion	FULL	10	2 290	+ 40	+ 120	+ 100	+ 250	+ 80	+ 140	- 210	+ 470
	3	16	2 450	+ 40	+ 120	+ 100	+ 250	+ 90	+ 150	- 240	+ 480
DC ESS SHED BUS with Ice Accretion	FULL	10	2 120	+ 40	+ 100	+ 90	+ 230	+ 70	+ 100	- 130	+ 470
	3	16	2 280	+ 40	+ 100	+ 90	+ 230	+ 80	+ 110	- 150	+ 480
DC EMER CONFIG (Calculated with 140kt min)	FULL	0 / 140kt	2 450	+ 50	+ 140	+ 100	+ 270	+ 80	+ 180	INOP	+ 630
	3	6 / 140kt	2 670	+ 50	+ 160	+ 110	+ 280	+ 100	+ 210	INOP	+ 650
ELEC EMER CONFIG (Calculated with 140kt min)	3	10 / 140kt	2 710	+ 50	+ 150	+ 120	+ 270	+ 90	+ 190	INOP	+ 590
(1) Automatic Landing correction: add 130m - (2) Weight correction: subtract 10m per 1T below 76T REF DIST without failure (valid for all FLAPS LEVER positions) = 1 890m											



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ELECTRICAL SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

2 - MEDIUM TO POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 76T	Per 1T above 76T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
AC BUS 1 FAULT	FULL	0	2 410	+ 80	+ 170	+ 150	+ 400	+ 120	+ 200	- 190	+ 390
	3	6	2 640	+ 80	+ 180	+ 170	+ 420	+ 130	+ 230	- 230	+ 390
DC BUS 2 FAULT	FULL	0	2 710	+ 90	+ 230	+ 180	+ 470	+ 150	+ 290	- 270	+ 380
	3	6	3 070	+ 100	+ 250	+ 220	+ 520	+ 170	+ 370	- 360	+ 390
DC BUS 1+2 FAULT	FULL	0	2 800	+ 90	+ 240	+ 190	+ 500	+ 150	+ 320	INOP	+ 400
	3	6	3 180	+ 100	+ 260	+ 220	+ 560	+ 180	+ 410	INOP	+ 410
DC ESS BUS FAULT with no Ice Accretion	FULL	0	2 460	+ 80	+ 190	+ 160	+ 430	+ 130	+ 220	- 230	+ 380
	3	6	2 700	+ 80	+ 190	+ 170	+ 460	+ 140	+ 260	- 270	+ 380
DC ESS BUS FAULT with Ice Accretion	FULL	10	2 730	+ 80	+ 180	+ 170	+ 440	+ 140	+ 240	- 280	+ 330
	3	16	2 980	+ 80	+ 190	+ 190	+ 460	+ 160	+ 270	- 330	+ 330
DC ESS SHED BUS with Ice Accretion	FULL	10	2 480	+ 70	+ 150	+ 140	+ 370	+ 120	+ 170	- 170	+ 330
	3	16	2 730	+ 80	+ 150	+ 160	+ 390	+ 130	+ 200	- 200	+ 340
DC EMER CONFIG (Calculated with 140kt min)	FULL	0 / 140kt	2 810	+ 90	+ 230	+ 190	+ 500	+ 150	+ 320	INOP	+ 390
	3	6 / 140kt	3 190	+ 100	+ 260	+ 220	+ 560	+ 180	+ 410	INOP	+ 410
ELEC EMER CONFIG (Calculated with 140kt min)	3	10 / 140kt	3 230	+ 100	+ 240	+ 220	+ 500	+ 170	+ 360	INOP	+ 400
(1) Automatic Landing correction: add 150m - (2) Weight correction: subtract 10m per 1T below 76T REF DIST without failure (valid for all FLAPS LEVER positions) = 2 160m											



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ELECTRICAL SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, $VAPP = VREF + \Delta VREF$ without APPR COR.

1 - POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 76T	Per 1T above 76T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
AC BUS 1 FAULT	FULL	0	3 710	+ 70	+ 170	+ 200	+ 600	+ 150	+ 910	- 520	+ 390
	3	6	3 980	+ 70	+ 180	+ 220	+ 610	+ 170	+ 970	- 580	+ 390
DC BUS 2 FAULT	FULL	0	4 390	+ 70	+ 220	+ 240	+ 710	+ 180	+ 1 570	- 990	+ 380
	3	6	Landing Distance greater than 6 000 m for all conditions								
DC BUS 1+2 FAULT	FULL	0	Landing Distance greater than 6 000 m for all conditions								
	3	6	Landing Distance greater than 6 000 m for all conditions								
DC ESS BUS FAULT with no Ice Accretion	FULL	0	Landing Distance greater than 6 000 m for all conditions								
	3	6	Landing Distance greater than 6 000 m for all conditions								
DC ESS BUS FAULT with Ice Accretion	FULL	10	Landing Distance greater than 6 000 m for all conditions								
	3	16	Landing Distance greater than 6 000 m for all conditions								
DC ESS SHED BUS with Ice Accretion	FULL	10	3 670	+ 70	+ 150	+ 190	+ 580	+ 150	+ 790	- 460	+ 330
	3	16	3 970	+ 70	+ 160	+ 210	+ 590	+ 170	+ 850	- 520	+ 340
DC EMER CONFIG (Calculated with 140kt min)	FULL	0 / 140kt	Landing Distance greater than 6 000 m for all conditions								
	3	6 / 140kt	Landing Distance greater than 6 000 m for all conditions								
ELEC EMER CONFIG (Calculated with 140kt min)	3	10 / 140kt	Landing Distance greater than 6 000 m for all conditions								
(1) Automatic Landing correction: add 150m - (2) Weight correction: subtract 10m per 1T below 76T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 3 360m											

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Ident.: PER-24-00014167.0058001 / 28 FEB 14
Applicable to: MSN 1276-1843, 2927

ELECTRICAL SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

6 - DRY											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
AC BUS 1 FAULT	FULL	0	1 290	+ 50	+ 80	+ 60	+ 150	+ 40	+ 30	- 20	+ 680
	3	6	1 370	+ 50	+ 90	+ 60	+ 160	+ 50	+ 30	- 30	+ 660
DC BUS 2 FAULT	FULL	0	1 370	+ 50	+ 100	+ 60	+ 140	+ 50	+ 40	- 30	+ 710
	3	6	1 460	+ 50	+ 110	+ 60	+ 150	+ 60	+ 40	- 40	+ 720
DC BUS 1+2 FAULT	FULL	0	2 100	+ 70	+ 120	+ 80	+ 210	+ 70	+ 100	INOP	+ 730
	3	6	2 270	+ 80	+ 120	+ 90	+ 220	+ 80	+ 110	INOP	+ 750
DC ESS BUS FAULT with no Ice Accretion	FULL	0	1 290	+ 50	+ 90	+ 60	+ 160	+ 40	+ 30	- 20	+ 680
	3	6	1 370	+ 50	+ 90	+ 70	+ 160	+ 50	+ 30	- 30	+ 660
DC ESS BUS FAULT with Ice Accretion	FULL	10	1 410	+ 50	+ 90	+ 70	+ 170	+ 50	+ 30	- 30	+ 520
	3	16	1 500	+ 50	+ 90	+ 70	+ 170	+ 50	+ 30	- 40	+ 570
DC ESS SHED BUS with Ice Accretion	FULL	10	1 370	+ 50	+ 90	+ 70	+ 160	+ 50	+ 30	- 20	+ 500
	3	16	1 470	+ 50	+ 90	+ 70	+ 160	+ 50	+ 30	- 30	+ 550
DC EMER CONFIG (Calculated with 140kt min)	FULL	0 / 140kt	2 110	+ 70	+ 110	+ 80	+ 210	+ 70	+ 100	INOP	+ 720
	3	6 / 140kt	2 280	+ 80	+ 120	+ 90	+ 220	+ 80	+ 110	INOP	+ 740
ELEC EMER CONFIG (Calculated with 140kt min)	3	10 / 140kt	2 330	+ 80	+ 120	+ 90	+ 220	+ 80	+ 110	INOP	+ 680
(1) Automatic Landing correction: add 100m - (2) Weight correction: subtract 10m per 1T below 78T REF DIST without failure (valid for all FLAPS LEVER positions) = 1 210m											



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ELECTRICAL SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

5 - GOOD											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
AC BUS 1 FAULT	FULL	0	1 670	+ 50	+ 120	+ 90	+ 230	+ 70	+ 60	- 70	+ 550
	3	6	1 810	+ 60	+ 130	+ 100	+ 240	+ 90	+ 70	- 80	+ 540
DC BUS 2 FAULT	FULL	0	1 820	+ 60	+ 160	+ 100	+ 260	+ 90	+ 90	- 90	+ 540
	3	6	2 010	+ 60	+ 180	+ 120	+ 280	+ 100	+ 110	- 120	+ 550
DC BUS 1+2 FAULT	FULL	0	2 170	+ 70	+ 150	+ 110	+ 280	+ 90	+ 130	INOP	+ 590
	3	6	2 370	+ 80	+ 170	+ 120	+ 300	+ 110	+ 160	INOP	+ 600
DC ESS BUS FAULT with no Ice Accretion	FULL	0	1 670	+ 50	+ 130	+ 90	+ 240	+ 80	+ 70	- 70	+ 550
	3	6	1 820	+ 60	+ 130	+ 100	+ 250	+ 80	+ 70	- 80	+ 540
DC ESS BUS FAULT with Ice Accretion	FULL	10	1 870	+ 60	+ 130	+ 100	+ 250	+ 80	+ 70	- 90	+ 430
	3	16	2 020	+ 60	+ 140	+ 110	+ 250	+ 100	+ 80	- 100	+ 430
DC ESS SHED BUS with Ice Accretion	FULL	10	1 760	+ 50	+ 110	+ 90	+ 230	+ 70	+ 60	- 60	+ 430
	3	16	1 910	+ 50	+ 120	+ 100	+ 230	+ 80	+ 70	- 70	+ 440
DC EMER CONFIG (Calculated with 140kt min)	FULL	0 / 140kt	2 170	+ 70	+ 160	+ 110	+ 280	+ 90	+ 130	INOP	+ 590
	3	6 / 140kt	2 380	+ 80	+ 170	+ 120	+ 300	+ 100	+ 160	INOP	+ 600
ELEC EMER CONFIG (Calculated with 140kt min)	3	10 / 140kt	2 450	+ 80	+ 170	+ 130	+ 300	+ 110	+ 150	INOP	+ 550
(1) Automatic Landing correction: add 110m - (2) Weight correction: subtract 10m per 1T below 78T REF DIST without failure (valid for all FLAPS LEVER positions) = 1 520m											



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ELECTRICAL SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

4 - GOOD TO MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
AC BUS 1 FAULT	FULL	0	1 880	+ 40	+ 100	+ 80	+ 200	+ 60	+ 80	- 120	+ 640
	3	6	2 010	+ 40	+ 110	+ 80	+ 200	+ 70	+ 90	- 130	+ 640
DC BUS 2 FAULT	FULL	0	2 060	+ 40	+ 130	+ 90	+ 220	+ 70	+ 110	- 160	+ 640
	3	6	2 230	+ 40	+ 140	+ 90	+ 230	+ 80	+ 130	- 190	+ 660
DC BUS 1+2 FAULT	FULL	0	2 240	+ 50	+ 130	+ 90	+ 230	+ 70	+ 130	INOP	+ 680
	3	6	2 430	+ 60	+ 140	+ 100	+ 240	+ 80	+ 150	INOP	+ 700
DC ESS BUS FAULT with no Ice Accretion	FULL	0	1 890	+ 40	+ 110	+ 80	+ 200	+ 70	+ 90	- 130	+ 640
	3	6	2 030	+ 40	+ 110	+ 80	+ 210	+ 70	+ 100	- 150	+ 640
DC ESS BUS FAULT with Ice Accretion	FULL	10	2 070	+ 40	+ 110	+ 80	+ 210	+ 70	+ 100	- 150	+ 510
	3	16	2 220	+ 40	+ 110	+ 90	+ 210	+ 70	+ 100	- 170	+ 520
DC ESS SHED BUS with Ice Accretion	FULL	10	1 940	+ 40	+ 90	+ 80	+ 200	+ 70	+ 80	- 100	+ 510
	3	16	2 080	+ 40	+ 100	+ 80	+ 200	+ 70	+ 80	- 110	+ 520
DC EMER CONFIG (Calculated with 140kt min)	FULL	0 / 140kt	2 240	+ 60	+ 140	+ 90	+ 230	+ 80	+ 130	INOP	+ 680
	3	6 / 140kt	2 440	+ 60	+ 140	+ 100	+ 240	+ 80	+ 150	INOP	+ 700
ELEC EMER CONFIG (Calculated with 140kt min)	3	10 / 140kt	2 490	+ 60	+ 140	+ 100	+ 230	+ 90	+ 140	INOP	+ 640

(1) Automatic Landing correction: add 110m - (2) Weight correction: subtract 10m per 1T below 78T

REF DIST without failure (valid for all FLAPS LEVER positions) = 1 730m



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ELECTRICAL SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

3 - MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
AC BUS 1 FAULT	FULL	0	2 100	+ 40	+ 120	+ 90	+ 230	+ 80	+ 120	- 160	+ 600
	3	6	2 250	+ 40	+ 120	+ 100	+ 240	+ 80	+ 130	- 180	+ 600
DC BUS 2 FAULT	FULL	0	2 320	+ 40	+ 140	+ 100	+ 260	+ 80	+ 160	- 230	+ 600
	3	6	2 530	+ 50	+ 150	+ 110	+ 270	+ 90	+ 180	- 270	+ 620
DC BUS 1+2 FAULT	FULL	0	2 490	+ 50	+ 140	+ 100	+ 270	+ 90	+ 180	INOP	+ 640
	3	6	2 710	+ 50	+ 160	+ 110	+ 280	+ 100	+ 210	INOP	+ 660
DC ESS BUS FAULT with no Ice Accretion	FULL	0	2 140	+ 40	+ 120	+ 90	+ 250	+ 70	+ 130	- 190	+ 600
	3	6	2 290	+ 40	+ 130	+ 100	+ 250	+ 90	+ 140	- 220	+ 600
DC ESS BUS FAULT with Ice Accretion	FULL	10	2 330	+ 40	+ 120	+ 100	+ 250	+ 80	+ 140	- 220	+ 480
	3	16	2 490	+ 40	+ 120	+ 110	+ 250	+ 90	+ 150	- 240	+ 490
DC ESS SHED BUS with Ice Accretion	FULL	10	2 160	+ 40	+ 100	+ 90	+ 230	+ 70	+ 110	- 140	+ 480
	3	16	2 320	+ 40	+ 100	+ 100	+ 230	+ 80	+ 120	- 150	+ 490
DC EMER CONFIG (Calculated with 140kt min)	FULL	0 / 140kt	2 490	+ 50	+ 150	+ 100	+ 270	+ 90	+ 180	INOP	+ 640
	3	6 / 140kt	2 720	+ 50	+ 160	+ 110	+ 280	+ 100	+ 210	INOP	+ 660
ELEC EMER CONFIG (Calculated with 140kt min)	3	10 / 140kt	2 760	+ 50	+ 150	+ 120	+ 270	+ 100	+ 190	INOP	+ 600
(1) Automatic Landing correction: add 110m - (2) Weight correction: subtract 10m per 1T below 78T REF DIST without failure (valid for all FLAPS LEVER positions) = 1 930m											



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ELECTRICAL SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

2 - MEDIUM TO POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
AC BUS 1 FAULT	FULL	0	2 470	+ 80	+ 180	+ 150	+ 400	+ 130	+ 200	- 200	+ 390
	3	6	2 710	+ 80	+ 180	+ 170	+ 430	+ 130	+ 230	- 240	+ 400
DC BUS 2 FAULT	FULL	0	2 780	+ 90	+ 230	+ 190	+ 480	+ 160	+ 300	- 300	+ 380
	3	6	3 150	+ 100	+ 250	+ 220	+ 530	+ 180	+ 380	- 380	+ 400
DC BUS 1+2 FAULT	FULL	0	2 870	+ 90	+ 240	+ 200	+ 500	+ 160	+ 330	INOP	+ 400
	3	6	3 260	+ 100	+ 260	+ 230	+ 560	+ 190	+ 420	INOP	+ 420
DC ESS BUS FAULT with no Ice Accretion	FULL	0	2 520	+ 80	+ 190	+ 160	+ 440	+ 140	+ 230	- 240	+ 380
	3	6	2 770	+ 80	+ 190	+ 180	+ 460	+ 140	+ 260	- 290	+ 380
DC ESS BUS FAULT with Ice Accretion	FULL	10	2 800	+ 80	+ 180	+ 180	+ 450	+ 140	+ 250	- 290	+ 330
	3	16	3 060	+ 80	+ 180	+ 190	+ 470	+ 150	+ 280	- 350	+ 340
DC ESS SHED BUS with Ice Accretion	FULL	10	2 550	+ 70	+ 150	+ 150	+ 380	+ 120	+ 170	- 180	+ 340
	3	16	2 790	+ 80	+ 160	+ 160	+ 390	+ 140	+ 200	- 210	+ 350
DC EMER CONFIG (Calculated with 140kt min)	FULL	0 / 140kt	2 880	+ 90	+ 240	+ 200	+ 510	+ 160	+ 330	INOP	+ 400
	3	6 / 140kt	3 270	+ 100	+ 260	+ 230	+ 560	+ 180	+ 420	INOP	+ 420
ELEC EMER CONFIG (Calculated with 140kt min)	3	10 / 140kt	3 320	+ 100	+ 240	+ 220	+ 510	+ 170	+ 380	INOP	+ 400

(1) Automatic Landing correction: add 140m - (2) Weight correction: subtract 10m per 1T below 78T

REF DIST without failure (valid for all FLAPS LEVER positions) = 2 220m



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ELECTRICAL SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

1 - POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
AC BUS 1 FAULT	FULL	0	3 780	+ 70	+ 170	+ 200	+ 600	+ 150	+ 910	- 530	+ 390
	3	6	4 060	+ 70	+ 180	+ 220	+ 620	+ 170	+ 980	- 590	+ 390
DC BUS 2 FAULT	FULL	0	4 470	+ 70	+ 220	+ 240	+ 710	+ 180	+ 1 550	- 990	+ 380
	3	6	Landing Distance greater than 6 000 m for all conditions								
DC BUS 1+2 FAULT	FULL	0	Landing Distance greater than 6 000 m for all conditions								
	3	6	Landing Distance greater than 6 000 m for all conditions								
DC ESS BUS FAULT with no Ice Accretion	FULL	0	Landing Distance greater than 6 000 m for all conditions								
	3	6	Landing Distance greater than 6 000 m for all conditions								
DC ESS BUS FAULT with Ice Accretion	FULL	10	Landing Distance greater than 6 000 m for all conditions								
	3	16	Landing Distance greater than 6 000 m for all conditions								
DC ESS SHED BUS with Ice Accretion	FULL	10	3 740	+ 70	+ 150	+ 190	+ 580	+ 160	+ 790	- 470	+ 340
	3	16	4 050	+ 70	+ 150	+ 210	+ 590	+ 160	+ 860	- 530	+ 350
DC EMER CONFIG (Calculated with 140kt min)	FULL	0 / 140kt	Landing Distance greater than 6 000 m for all conditions								
	3	6 / 140kt	Landing Distance greater than 6 000 m for all conditions								
ELEC EMER CONFIG (Calculated with 140kt min)	3	10 / 140kt	Landing Distance greater than 6 000 m for all conditions								
(1) Automatic Landing correction: add 140m - (2) Weight correction: subtract 10m per 1T below 78T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 3 430m											

 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-24 19/30
		06 MAR 14

Ident.: PER-24-00014167.0028001 / 28 FEB 14
Applicable to: MSN 1219-1233

ELECTRICAL SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

6 - DRY											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
AC BUS 1 FAULT	FULL	0	1 300	+ 50	+ 90	+ 60	+ 150	+ 50	+ 30	- 20	+ 660
	3	6	1 390	+ 50	+ 90	+ 60	+ 170	+ 50	+ 30	- 30	+ 650
DC BUS 2 FAULT	FULL	0	1 390	+ 50	+ 100	+ 50	+ 150	+ 50	+ 40	- 30	+ 700
	3	6	1 490	+ 50	+ 110	+ 60	+ 160	+ 50	+ 40	- 40	+ 710
DC BUS 1+2 FAULT	FULL	0	2 160	+ 70	+ 120	+ 80	+ 220	+ 70	+ 110	INOP	+ 720
	3	6	2 360	+ 80	+ 120	+ 80	+ 230	+ 70	+ 120	INOP	+ 740
DC ESS BUS FAULT with no Ice Accretion	FULL	0	1 300	+ 50	+ 90	+ 60	+ 150	+ 50	+ 30	- 20	+ 660
	3	6	1 390	+ 50	+ 90	+ 60	+ 170	+ 50	+ 30	- 30	+ 650
DC ESS BUS FAULT with Ice Accretion	FULL	10	1 420	+ 50	+ 90	+ 60	+ 170	+ 60	+ 40	- 30	+ 510
	3	16	1 520	+ 50	+ 90	+ 70	+ 170	+ 60	+ 40	- 30	+ 560
DC ESS SHED BUS with Ice Accretion	FULL	10	1 380	+ 50	+ 90	+ 60	+ 160	+ 50	+ 30	- 20	+ 490
	3	16	1 480	+ 50	+ 90	+ 70	+ 170	+ 60	+ 30	- 20	+ 530
DC EMER CONFIG (Calculated with 140kt min)	FULL	0 / 140kt	2 170	+ 70	+ 120	+ 80	+ 220	+ 70	+ 110	INOP	+ 710
	3	6 / 140kt	2 360	+ 80	+ 130	+ 80	+ 230	+ 80	+ 120	INOP	+ 740
ELEC EMER CONFIG (Calculated with 140kt min)	3	10 / 140kt	2 400	+ 80	+ 120	+ 80	+ 220	+ 80	+ 110	INOP	+ 670
(1) Automatic Landing correction: add 140m - (2) Weight correction: subtract 10m per 1T below 78T REF DIST without failure (valid for all FLAPS LEVER positions) = 1 220m											



 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-24 20/30
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ELECTRICAL SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

5 - GOOD											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
AC BUS 1 FAULT	FULL	0	1 700	+ 50	+ 130	+ 90	+ 240	+ 80	+ 70	- 50	+ 540
	3	6	1 860	+ 60	+ 140	+ 90	+ 250	+ 90	+ 80	- 70	+ 540
DC BUS 2 FAULT	FULL	0	1 880	+ 60	+ 160	+ 100	+ 270	+ 90	+ 100	- 80	+ 540
	3	6	2 090	+ 60	+ 190	+ 110	+ 300	+ 110	+ 120	- 100	+ 550
DC BUS 1+2 FAULT	FULL	0	2 240	+ 70	+ 170	+ 100	+ 290	+ 100	+ 150	INOP	+ 590
	3	6	2 480	+ 80	+ 190	+ 120	+ 320	+ 110	+ 180	INOP	+ 600
DC ESS BUS FAULT with no Ice Accretion	FULL	0	1 710	+ 50	+ 140	+ 90	+ 250	+ 80	+ 70	- 60	+ 540
	3	6	1 870	+ 60	+ 150	+ 100	+ 260	+ 90	+ 90	- 70	+ 530
DC ESS BUS FAULT with Ice Accretion	FULL	10	1 920	+ 60	+ 140	+ 100	+ 260	+ 90	+ 80	- 80	+ 420
	3	16	2 090	+ 60	+ 150	+ 110	+ 260	+ 100	+ 90	- 90	+ 430
DC ESS SHED BUS with Ice Accretion	FULL	10	1 790	+ 50	+ 120	+ 90	+ 230	+ 80	+ 60	- 50	+ 420
	3	16	1 960	+ 50	+ 120	+ 100	+ 240	+ 80	+ 70	- 60	+ 430
DC EMER CONFIG (Calculated with 140kt min)	FULL	0 / 140kt	2 250	+ 70	+ 170	+ 100	+ 290	+ 100	+ 150	INOP	+ 580
	3	6 / 140kt	2 490	+ 80	+ 190	+ 120	+ 320	+ 110	+ 180	INOP	+ 600
ELEC EMER CONFIG (Calculated with 140kt min)	3	10 / 140kt	2 540	+ 70	+ 180	+ 120	+ 300	+ 110	+ 170	INOP	+ 540
(1) Automatic Landing correction: add 150m - (2) Weight correction: subtract 10m per 1T below 78T REF DIST without failure (valid for all FLAPS LEVER positions) = 1 550m											



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ELECTRICAL SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

4 - GOOD TO MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
AC BUS 1 FAULT	FULL	0	1 920	+ 40	+ 110	+ 70	+ 200	+ 70	+ 90	- 80	+ 630
	3	6	2 070	+ 40	+ 110	+ 80	+ 210	+ 70	+ 100	- 90	+ 630
DC BUS 2 FAULT	FULL	0	2 120	+ 40	+ 140	+ 80	+ 220	+ 80	+ 120	- 130	+ 630
	3	6	2 320	+ 40	+ 150	+ 90	+ 230	+ 80	+ 140	- 150	+ 650
DC BUS 1+2 FAULT	FULL	0	2 320	+ 50	+ 140	+ 80	+ 240	+ 80	+ 150	INOP	+ 670
	3	6	2 540	+ 60	+ 150	+ 90	+ 250	+ 90	+ 160	INOP	+ 700
DC ESS BUS FAULT with no Ice Accretion	FULL	0	1 950	+ 40	+ 110	+ 70	+ 210	+ 70	+ 100	- 120	+ 630
	3	6	2 110	+ 40	+ 110	+ 80	+ 220	+ 70	+ 110	- 130	+ 630
DC ESS BUS FAULT with Ice Accretion	FULL	10	2 140	+ 40	+ 110	+ 80	+ 220	+ 70	+ 110	- 130	+ 490
	3	16	2 300	+ 40	+ 110	+ 90	+ 220	+ 80	+ 110	- 150	+ 510
DC ESS SHED BUS with Ice Accretion	FULL	10	1 980	+ 40	+ 90	+ 70	+ 200	+ 70	+ 80	- 80	+ 490
	3	16	2 130	+ 40	+ 100	+ 80	+ 200	+ 80	+ 90	- 90	+ 510
DC EMER CONFIG (Calculated with 140kt min)	FULL	0 / 140kt	2 330	+ 50	+ 140	+ 80	+ 240	+ 80	+ 140	INOP	+ 670
	3	6 / 140kt	2 550	+ 60	+ 150	+ 90	+ 250	+ 90	+ 170	INOP	+ 690
ELEC EMER CONFIG (Calculated with 140kt min)	3	10 / 140kt	2 580	+ 60	+ 150	+ 90	+ 240	+ 90	+ 150	INOP	+ 630

(1) Automatic Landing correction: add 140m - (2) Weight correction: subtract 10m per 1T below 78T

REF DIST without failure (valid for all FLAPS LEVER positions) = 1 760m



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ELECTRICAL SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

3 - MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
AC BUS 1 FAULT	FULL	0	2 160	+ 40	+ 120	+ 80	+ 240	+ 80	+ 130	- 110	+ 590
	3	6	2 330	+ 40	+ 120	+ 90	+ 250	+ 80	+ 140	- 120	+ 590
DC BUS 2 FAULT	FULL	0	2 410	+ 40	+ 150	+ 90	+ 260	+ 90	+ 180	- 180	+ 590
	3	6	2 650	+ 50	+ 160	+ 100	+ 280	+ 100	+ 210	- 220	+ 610
DC BUS 1+2 FAULT	FULL	0	2 600	+ 50	+ 160	+ 100	+ 280	+ 90	+ 210	INOP	+ 630
	3	6	2 870	+ 50	+ 170	+ 110	+ 300	+ 100	+ 240	INOP	+ 660
DC ESS BUS FAULT with no Ice Accretion	FULL	0	2 220	+ 40	+ 120	+ 80	+ 250	+ 80	+ 150	- 170	+ 590
	3	6	2 400	+ 40	+ 130	+ 90	+ 260	+ 80	+ 160	- 200	+ 590
DC ESS BUS FAULT with Ice Accretion	FULL	10	2 420	+ 40	+ 130	+ 90	+ 260	+ 90	+ 150	- 190	+ 470
	3	16	2 610	+ 40	+ 130	+ 100	+ 260	+ 90	+ 170	- 220	+ 480
DC ESS SHED BUS with Ice Accretion	FULL	10	2 210	+ 40	+ 100	+ 80	+ 230	+ 80	+ 110	- 110	+ 460
	3	16	2 390	+ 40	+ 110	+ 90	+ 240	+ 80	+ 130	- 120	+ 480
DC EMER CONFIG (Calculated with 140kt min)	FULL	0 / 140kt	2 610	+ 50	+ 160	+ 100	+ 280	+ 90	+ 210	INOP	+ 630
	3	6 / 140kt	2 870	+ 50	+ 170	+ 100	+ 290	+ 110	+ 240	INOP	+ 660
ELEC EMER CONFIG (Calculated with 140kt min)	3	10 / 140kt	2 880	+ 50	+ 160	+ 110	+ 280	+ 100	+ 210	INOP	+ 600
(1) Automatic Landing correction: add 150m - (2) Weight correction: subtract 10m per 1T below 78T REF DIST without failure (valid for all FLAPS LEVER positions) = 1 980m											



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ELECTRICAL SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

2 - MEDIUM TO POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
AC BUS 1 FAULT	FULL	0	2 570	+ 70	+ 190	+ 140	+ 420	+ 130	+ 230	- 150	+ 400
	3	6	2 840	+ 80	+ 190	+ 160	+ 440	+ 150	+ 260	- 180	+ 400
DC BUS 2 FAULT	FULL	0	2 950	+ 90	+ 240	+ 170	+ 520	+ 160	+ 350	- 250	+ 390
	3	6	3 400	+ 100	+ 270	+ 200	+ 580	+ 190	+ 460	- 340	+ 410
DC BUS 1+2 FAULT	FULL	0	3 070	+ 90	+ 260	+ 180	+ 550	+ 170	+ 390	INOP	+ 410
	3	6	3 560	+ 100	+ 290	+ 210	+ 630	+ 200	+ 530	INOP	+ 430
DC ESS BUS FAULT with no Ice Accretion	FULL	0	2 660	+ 80	+ 200	+ 150	+ 470	+ 140	+ 260	- 220	+ 380
	3	6	2 950	+ 80	+ 210	+ 170	+ 500	+ 160	+ 310	- 270	+ 380
DC ESS BUS FAULT with Ice Accretion	FULL	10	2 960	+ 80	+ 190	+ 160	+ 480	+ 150	+ 280	- 270	+ 330
	3	16	3 260	+ 80	+ 200	+ 180	+ 510	+ 170	+ 330	- 320	+ 340
DC ESS SHED BUS with Ice Accretion	FULL	10	2 640	+ 70	+ 150	+ 140	+ 390	+ 120	+ 190	- 150	+ 340
	3	16	2 920	+ 80	+ 160	+ 150	+ 420	+ 140	+ 220	- 180	+ 350
DC EMER CONFIG (Calculated with 140kt min)	FULL	0 / 140kt	3 080	+ 90	+ 260	+ 180	+ 560	+ 170	+ 390	INOP	+ 410
	3	6 / 140kt	3 570	+ 100	+ 280	+ 210	+ 630	+ 200	+ 530	INOP	+ 430
ELEC EMER CONFIG (Calculated with 140kt min)	3	10 / 140kt	3 530	+ 100	+ 250	+ 200	+ 540	+ 190	+ 440	INOP	+ 410
(1) Automatic Landing correction: add 170m - (2) Weight correction: subtract 10m per 1T below 78T REF DIST without failure (valid for all FLAPS LEVER positions) = 2 290m											



 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-24 24/30
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ELECTRICAL SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, $VAPP = VREF + \Delta VREF$ without APPR COR.

1 - POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
AC BUS 1 FAULT	FULL	0	4 050	+ 70	+ 170	+ 160	+ 600	+ 160	+ 1 080	- 380	+ 400
	3	6	4 390	+ 80	+ 180	+ 180	+ 620	+ 180	+ 1 170	- 430	+ 400
DC BUS 2 FAULT	FULL	0	Landing Distance greater than 6 000 m for all conditions								
	3	6	Landing Distance greater than 6 000 m for all conditions								
DC BUS 1+2 FAULT	FULL	0	Landing Distance greater than 6 000 m for all conditions								
	3	6	Landing Distance greater than 6 000 m for all conditions								
DC ESS BUS FAULT with no Ice Accretion	FULL	0	Landing Distance greater than 6 000 m for all conditions								
	3	6	Landing Distance greater than 6 000 m for all conditions								
DC ESS BUS FAULT with Ice Accretion	FULL	10	Landing Distance greater than 6 000 m for all conditions								
	3	16	Landing Distance greater than 6 000 m for all conditions								
DC ESS SHED BUS with Ice Accretion	FULL	10	3 980	+ 70	+ 150	+ 160	+ 580	+ 150	+ 920	- 440	+ 340
	3	16	4 350	+ 70	+ 150	+ 180	+ 600	+ 170	+ 1 020	- 500	+ 350
DC EMER CONFIG (Calculated with 140kt min)	FULL	0 / 140kt	Landing Distance greater than 6 000 m for all conditions								
	3	6 / 140kt	Landing Distance greater than 6 000 m for all conditions								
ELEC EMER CONFIG (Calculated with 140kt min)	3	10 / 140kt	Landing Distance greater than 6 000 m for all conditions								
(1) Automatic Landing correction: add 170m - (2) Weight correction: subtract 10m per 1T below 78T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 3 650m											

Ident.: PER-24-00014167.0018001 / 28 FEB 14
Applicable to: MSN 2649

ELECTRICAL SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

6 - DRY											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 66T	Per 1T above 66T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
AC BUS 1 FAULT	FULL	0	1 120	+ 40	+ 70	+ 40	+ 120	+ 40	+ 20	- 20	+ 760
	3	6	1 210	+ 50	+ 80	+ 50	+ 120	+ 40	+ 20	- 30	+ 950
DC BUS 2 FAULT	FULL	0	1 220	+ 40	+ 90	+ 40	+ 120	+ 40	+ 30	- 40	+ 790
	3	6	1 290	+ 40	+ 90	+ 50	+ 130	+ 40	+ 30	- 40	+ 1 000
DC BUS 1+2 FAULT	FULL	0	1 940	+ 80	+ 110	+ 80	+ 210	+ 60	+ 90	INOP	+ 710
	3	6	2 150	+ 90	+ 120	+ 90	+ 220	+ 70	+ 110	INOP	+ 900
DC ESS BUS FAULT with no Ice Accretion	FULL	0	1 120	+ 40	+ 70	+ 40	+ 120	+ 40	+ 20	- 20	+ 750
	3	6	1 210	+ 50	+ 80	+ 50	+ 120	+ 50	+ 30	- 30	+ 950
DC ESS BUS FAULT with Ice Accretion	FULL	10	1 240	+ 50	+ 70	+ 50	+ 130	+ 40	+ 20	- 30	+ 590
	3	16	1 350	+ 50	+ 80	+ 50	+ 120	+ 50	+ 30	- 30	+ 800
DC ESS SHED BUS with Ice Accretion	FULL	10	1 230	+ 40	+ 70	+ 50	+ 120	+ 40	+ 20	- 20	+ 580
	3	16	1 350	+ 50	+ 80	+ 50	+ 130	+ 40	+ 20	- 30	+ 790
DC EMER CONFIG (Calculated with 140kt min)	FULL	0 / 140kt	2 020	+ 60	+ 100	+ 80	+ 210	+ 70	+ 100	INOP	+ 640
	3	6 / 140kt	2 160	+ 90	+ 120	+ 90	+ 220	+ 70	+ 110	INOP	+ 900
ELEC EMER CONFIG (Calculated with 140kt min)	3	10 / 140kt	2 190	+ 80	+ 120	+ 90	+ 210	+ 70	+ 100	INOP	+ 840
(1) Automatic Landing correction: add 160m - (2) Weight correction: subtract 10m per 1T below 66T REF DIST without failure (valid for all FLAPS LEVER positions) = 1 080m											



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ELECTRICAL SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

5 - GOOD											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 66T	Per 1T above 66T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
AC BUS 1 FAULT	FULL	0	1 460	+ 50	+ 110	+ 80	+ 210	+ 60	+ 50	- 60	+ 560
	3	6	1 630	+ 60	+ 120	+ 90	+ 240	+ 70	+ 60	- 80	+ 710
DC BUS 2 FAULT	FULL	0	1 660	+ 60	+ 150	+ 100	+ 250	+ 80	+ 80	- 100	+ 560
	3	6	1 840	+ 60	+ 170	+ 120	+ 280	+ 90	+ 100	- 120	+ 720
DC BUS 1+2 FAULT	FULL	0	2 000	+ 70	+ 150	+ 100	+ 270	+ 80	+ 130	INOP	+ 570
	3	6	2 230	+ 80	+ 170	+ 120	+ 300	+ 90	+ 150	INOP	+ 740
DC ESS BUS FAULT with no Ice Accretion	FULL	0	1 460	+ 50	+ 120	+ 80	+ 210	+ 70	+ 60	- 60	+ 560
	3	6	1 630	+ 60	+ 140	+ 90	+ 240	+ 80	+ 70	- 80	+ 700
DC ESS BUS FAULT with Ice Accretion	FULL	10	1 640	+ 50	+ 110	+ 90	+ 230	+ 70	+ 60	- 80	+ 430
	3	16	1 830	+ 60	+ 130	+ 110	+ 250	+ 80	+ 70	- 100	+ 580
DC ESS SHED BUS with Ice Accretion	FULL	10	1 580	+ 50	+ 110	+ 80	+ 210	+ 70	+ 50	- 60	+ 430
	3	16	1 760	+ 60	+ 120	+ 100	+ 230	+ 80	+ 70	- 80	+ 580
DC EMER CONFIG (Calculated with 140kt min)	FULL	0 / 140kt	2 100	+ 60	+ 140	+ 110	+ 280	+ 90	+ 130	INOP	+ 500
	3	6 / 140kt	2 230	+ 80	+ 170	+ 120	+ 300	+ 100	+ 150	INOP	+ 740
ELEC EMER CONFIG (Calculated with 140kt min)	3	10 / 140kt	2 280	+ 80	+ 160	+ 120	+ 290	+ 90	+ 140	INOP	+ 690
(1) Automatic Landing correction: add 180m - (2) Weight correction: subtract 10m per 1T below 66T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 370m											



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ELECTRICAL SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

4 - GOOD TO MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 66T	Per 1T above 66T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
AC BUS 1 FAULT	FULL	0	1 690	+ 40	+ 90	+ 70	+ 190	+ 50	+ 70	- 100	+ 650
	3	6	1 860	+ 40	+ 100	+ 80	+ 200	+ 60	+ 80	- 120	+ 820
DC BUS 2 FAULT	FULL	0	1 930	+ 40	+ 130	+ 80	+ 220	+ 70	+ 110	- 170	+ 650
	3	6	2 100	+ 40	+ 140	+ 90	+ 220	+ 70	+ 130	- 200	+ 840
DC BUS 1+2 FAULT	FULL	0	2 110	+ 50	+ 130	+ 90	+ 230	+ 70	+ 130	INOP	+ 650
	3	6	2 310	+ 60	+ 150	+ 100	+ 240	+ 80	+ 150	INOP	+ 850
DC ESS BUS FAULT with no Ice Accretion	FULL	0	1 720	+ 40	+ 100	+ 70	+ 200	+ 60	+ 80	- 130	+ 640
	3	6	1 890	+ 40	+ 110	+ 80	+ 210	+ 70	+ 100	- 160	+ 820
DC ESS BUS FAULT with Ice Accretion	FULL	10	1 880	+ 40	+ 100	+ 80	+ 200	+ 60	+ 90	- 140	+ 500
	3	16	2 070	+ 40	+ 110	+ 90	+ 210	+ 70	+ 100	- 180	+ 690
DC ESS SHED BUS with Ice Accretion	FULL	10	1 790	+ 40	+ 90	+ 70	+ 190	+ 60	+ 70	- 100	+ 500
	3	16	1 970	+ 40	+ 100	+ 80	+ 190	+ 60	+ 80	- 120	+ 690
DC EMER CONFIG (Calculated with 140kt min)	FULL	0 / 140kt	2 210	+ 40	+ 120	+ 90	+ 230	+ 80	+ 140	INOP	+ 580
	3	6 / 140kt	2 320	+ 60	+ 150	+ 100	+ 240	+ 80	+ 150	INOP	+ 850
ELEC EMER CONFIG (Calculated with 140kt min)	3	10 / 140kt	2 350	+ 60	+ 140	+ 100	+ 230	+ 80	+ 130	INOP	+ 790
(1) Automatic Landing correction: add 180m - (2) Weight correction: subtract 10m per 1T below 66T REF DIST without failure (valid for all FLAPS LEVER positions) = 1 600m											



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ELECTRICAL SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

3 - MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 66T	Per 1T above 66T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
AC BUS 1 FAULT	FULL	0	1 870	+ 40	+ 100	+ 80	+ 220	+ 60	+ 100	- 130	+ 610
	3	6	2 070	+ 40	+ 120	+ 90	+ 230	+ 80	+ 120	- 160	+ 770
DC BUS 2 FAULT	FULL	0	2 160	+ 50	+ 140	+ 100	+ 250	+ 80	+ 160	- 220	+ 610
	3	6	2 380	+ 50	+ 150	+ 110	+ 270	+ 90	+ 180	- 270	+ 790
DC BUS 1+2 FAULT	FULL	0	2 340	+ 50	+ 140	+ 100	+ 270	+ 80	+ 180	INOP	+ 610
	3	6	2 590	+ 50	+ 160	+ 120	+ 280	+ 90	+ 210	INOP	+ 800
DC ESS BUS FAULT with no Ice Accretion	FULL	0	1 920	+ 40	+ 110	+ 80	+ 230	+ 70	+ 120	- 180	+ 600
	3	6	2 140	+ 40	+ 120	+ 90	+ 250	+ 80	+ 140	- 220	+ 770
DC ESS BUS FAULT with Ice Accretion	FULL	10	2 100	+ 40	+ 110	+ 90	+ 240	+ 70	+ 120	- 200	+ 470
	3	16	2 330	+ 50	+ 120	+ 100	+ 250	+ 90	+ 140	- 250	+ 650
DC ESS SHED BUS with Ice Accretion	FULL	10	1 980	+ 40	+ 90	+ 80	+ 220	+ 70	+ 100	- 130	+ 480
	3	16	2 190	+ 50	+ 110	+ 100	+ 220	+ 80	+ 110	- 150	+ 650
DC EMER CONFIG (Calculated with 140kt min)	FULL	0 / 140kt	2 450	+ 30	+ 130	+ 110	+ 280	+ 90	+ 190	INOP	+ 540
	3	6 / 140kt	2 600	+ 50	+ 160	+ 120	+ 280	+ 90	+ 210	INOP	+ 800
ELEC EMER CONFIG (Calculated with 140kt min)	3	10 / 140kt	2 590	+ 50	+ 150	+ 120	+ 260	+ 90	+ 180	INOP	+ 750
(1) Automatic Landing correction: add 190m - (2) Weight correction: subtract 10m per 1T below 66T REF DIST without failure (valid for all FLAPS LEVER positions) = 1 770m											



Continued from the previous page

ELECTRICAL SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

2 - MEDIUM TO POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 66T	Per 1T above 66T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
AC BUS 1 FAULT	FULL	0	2 090	+ 70	+ 150	+ 130	+ 350	+ 100	+ 150	- 140	+ 420
	3	6	2 440	+ 90	+ 180	+ 170	+ 410	+ 120	+ 200	- 190	+ 520
DC BUS 2 FAULT	FULL	0	2 470	+ 90	+ 220	+ 180	+ 440	+ 140	+ 260	- 260	+ 400
	3	6	2 890	+ 110	+ 260	+ 230	+ 520	+ 170	+ 360	- 330	+ 520
DC BUS 1+2 FAULT	FULL	0	2 580	+ 90	+ 230	+ 190	+ 480	+ 140	+ 300	INOP	+ 390
	3	6	3 030	+ 110	+ 280	+ 250	+ 580	+ 190	+ 420	INOP	+ 510
DC ESS BUS FAULT with no Ice Accretion	FULL	0	2 160	+ 70	+ 170	+ 140	+ 390	+ 110	+ 180	- 200	+ 380
	3	6	2 530	+ 90	+ 210	+ 180	+ 460	+ 140	+ 250	- 270	+ 480
DC ESS BUS FAULT with Ice Accretion	FULL	10	2 400	+ 80	+ 160	+ 150	+ 390	+ 120	+ 190	- 240	+ 330
	3	16	2 820	+ 90	+ 190	+ 190	+ 470	+ 150	+ 270	- 330	+ 420
DC ESS SHED BUS with Ice Accretion	FULL	10	2 240	+ 70	+ 140	+ 130	+ 340	+ 110	+ 140	- 150	+ 350
	3	16	2 610	+ 90	+ 170	+ 170	+ 390	+ 130	+ 200	- 200	+ 450
DC EMER CONFIG (Calculated with 140kt min)	FULL	0 / 140kt	2 730	+ 70	+ 200	+ 190	+ 490	+ 150	+ 310	INOP	+ 360
	3	6 / 140kt	3 040	+ 110	+ 280	+ 250	+ 580	+ 180	+ 420	INOP	+ 500
ELEC EMER CONFIG (Calculated with 140kt min)	3	10 / 140kt	3 030	+ 110	+ 230	+ 230	+ 490	+ 160	+ 350	INOP	+ 520
(1) Automatic Landing correction: add 260m - (2) Weight correction: subtract 10m per 1T below 66T REF DIST without failure (valid for all FLAPS LEVER positions) = 1 950m											



 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-24 30/30 06 MAR 14

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ELECTRICAL SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, $VAPP = VREF + \Delta VREF$ without APPR COR.

1 - POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	$\Delta VREF$	REF DIST (m) for 66T	Per 1T above 66T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
AC BUS 1 FAULT	FULL	0	3 130	+ 70	+ 150	+ 200	+ 500	+ 130	+ 580	- 260	+ 420
	3	6	3 650	+ 80	+ 190	+ 240	+ 540	+ 160	+ 750	- 380	+ 520
DC BUS 2 FAULT	FULL	0	3 960	+ 70	+ 210	+ 270	+ 650	+ 170	+ 1 210	- 750	+ 400
	3	6	Landing Distance greater than 6 000 m for all conditions								
DC BUS 1+2 FAULT	FULL	0	Landing Distance greater than 6 000 m for all conditions								
	3	6	Landing Distance greater than 6 000 m for all conditions								
DC ESS BUS FAULT with no Ice Accretion	FULL	0	Landing Distance greater than 6 000 m for all conditions								
	3	6	Landing Distance greater than 6 000 m for all conditions								
DC ESS BUS FAULT with Ice Accretion	FULL	10	Landing Distance greater than 6 000 m for all conditions								
	3	16	Landing Distance greater than 6 000 m for all conditions								
DC ESS SHED BUS with Ice Accretion	FULL	10	3 230	+ 70	+ 140	+ 200	+ 500	+ 130	+ 540	- 340	+ 350
	3	16	3 780	+ 80	+ 160	+ 240	+ 530	+ 150	+ 700	- 450	+ 450
DC EMER CONFIG (Calculated with 140kt min)	FULL	0 / 140kt	Landing Distance greater than 6 000 m for all conditions								
	3	6 / 140kt	Landing Distance greater than 6 000 m for all conditions								
ELEC EMER CONFIG (Calculated with 140kt min)	3	10 / 140kt	4 440	+ 100	+ 240	+ 310	+ 610	+ 190	+ 1 070	INOP	+ 520
(1) Automatic Landing correction: add 260m - (2) Weight correction: subtract 10m per 1T below 66T REF DIST without failure (valid for all FLAPS LEVER positions) = 2 950m											

 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-27 1/30 06 MAR 14

Ident.: PER-27-00014168.0068001 / 28 FEB 14
Applicable to: MSN 2933-3034

FLIGHT CONTROLS SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

6 - DRY											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
ONE SPLR FAULT with no SPOILER runaway suspected	FULL	0	1 290	+ 50	+ 80	+ 60	+ 150	+ 40	+ 30	- 20	+ 670
	3	6	1 380	+ 50	+ 90	+ 60	+ 170	+ 50	+ 30	- 30	+ 670
ONE SPLR FAULT with SPOILER runaway suspected	3	10	1 430	+ 50	+ 90	+ 70	+ 170	+ 50	+ 30	- 30	+ 630
TWO SPLR FAULT/ GND SPLR 1+2(3+4) FAULT	FULL	0	1 360	+ 50	+ 100	+ 60	+ 140	+ 50	+ 40	- 30	+ 700
	3	6	1 460	+ 50	+ 100	+ 60	+ 160	+ 50	+ 40	- 40	+ 710
THREE SPLR FAULT	FULL	0	1 410	+ 50	+ 100	+ 60	+ 150	+ 50	+ 40	- 40	+ 720
	3	6	1 500	+ 50	+ 110	+ 60	+ 150	+ 60	+ 40	- 40	+ 740
ALL SPLR FAULT	FULL	0	1 530	+ 50	+ 130	+ 60	+ 150	+ 60	+ 50	- 50	+ 750
	3	6	1 630	+ 50	+ 130	+ 70	+ 160	+ 60	+ 50	- 60	+ 780
GND SPLR FAULT	FULL	0	1 530	+ 50	+ 130	+ 60	+ 150	+ 60	+ 50	- 50	+ 750
	3	6	1 630	+ 50	+ 130	+ 70	+ 160	+ 60	+ 50	- 60	+ 780
SEC 1 or SEC 3 FAULT	FULL	0	1 320	+ 50	+ 90	+ 60	+ 150	+ 50	+ 30	- 30	+ 680
	3	6	1 400	+ 50	+ 100	+ 60	+ 160	+ 60	+ 40	- 30	+ 670
SEC 2 FAULT	FULL	0	1 270	+ 50	+ 80	+ 60	+ 160	+ 40	+ 30	- 20	+ 670
	3	6	1 350	+ 50	+ 90	+ 60	+ 170	+ 50	+ 30	- 20	+ 650
SEC 2+3 FAULT	FULL	0	1 370	+ 50	+ 100	+ 60	+ 140	+ 50	+ 40	- 30	+ 710
	3	6	1 460	+ 50	+ 110	+ 60	+ 150	+ 60	+ 40	- 40	+ 720
SEC 1+3 FAULT	FULL	0	1 460	+ 50	+ 110	+ 60	+ 150	+ 50	+ 40	- 50	+ 730
	3	6	1 560	+ 50	+ 120	+ 70	+ 160	+ 50	+ 40	- 60	+ 750
SEC 1+2 FAULT	FULL	0	1 360	+ 50	+ 100	+ 60	+ 140	+ 50	+ 40	- 30	+ 710
	3	6	1 450	+ 50	+ 100	+ 60	+ 160	+ 50	+ 40	- 40	+ 700
RUDDER JAM	FULL	0	1 440	+ 60	+ 120	+ 90	+ 190	+ 60	+ 50	- 30	+ 570
	3	6	1 580	+ 70	+ 120	+ 90	+ 200	+ 70	+ 50	- 40	+ 590
SEC 1+2+3 FAULT	3	10	1 700	+ 50	+ 140	+ 70	+ 160	+ 70	+ 60	INOP	+ 730
ALTN LAW/ DIRECT LAW/ ELAC 1+2 FAULT/ L+R ELEV FAULT/ L(R) ELEV FAULT/ STAB JAM	3	10	1 390	+ 50	+ 90	+ 70	+ 170	+ 50	+ 30	- 20	+ 590

(1) Automatic Landing correction: add 110m - (2) Weight correction: subtract 10m per 1T below 78T

REF DIST without failure (valid for all FLAPS LEVER positions) = 1 210m



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FLIGHT CONTROLS SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

5 - GOOD											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
ONE SPLR FAULT with no SPOILER runaway suspected	FULL	0	1 660	+ 50	+ 120	+ 90	+ 230	+ 70	+ 60	- 60	+ 540
	3	6	1 830	+ 60	+ 140	+ 100	+ 250	+ 90	+ 80	- 70	+ 550
ONE SPLR FAULT with SPOILER runaway suspected	3	10	1 920	+ 60	+ 130	+ 110	+ 260	+ 80	+ 80	- 80	+ 500
TWO SPLR FAULT/ GND SPLR 1+2(3+4) FAULT	FULL	0	1 800	+ 60	+ 150	+ 100	+ 250	+ 90	+ 90	- 80	+ 530
	3	6	1 990	+ 60	+ 160	+ 120	+ 270	+ 100	+ 100	- 100	+ 540
THREE SPLR FAULT	FULL	0	1 890	+ 60	+ 170	+ 110	+ 270	+ 100	+ 100	- 90	+ 540
	3	6	2 090	+ 70	+ 180	+ 130	+ 290	+ 100	+ 120	- 110	+ 560
ALL SPLR FAULT	FULL	0	2 150	+ 70	+ 240	+ 140	+ 320	+ 120	+ 160	- 140	+ 550
	3	6	2 360	+ 80	+ 250	+ 150	+ 340	+ 130	+ 190	- 160	+ 560
GND SPLR FAULT	FULL	0	2 150	+ 70	+ 240	+ 140	+ 320	+ 120	+ 160	- 140	+ 550
	3	6	2 360	+ 80	+ 250	+ 150	+ 340	+ 130	+ 190	- 160	+ 560
SEC 1 or SEC 3 FAULT	FULL	0	1 720	+ 50	+ 140	+ 100	+ 240	+ 80	+ 70	- 70	+ 550
	3	6	1 870	+ 60	+ 150	+ 100	+ 250	+ 90	+ 80	- 80	+ 540
SEC 2 FAULT	FULL	0	1 620	+ 50	+ 120	+ 90	+ 220	+ 70	+ 60	- 50	+ 550
	3	6	1 770	+ 50	+ 120	+ 90	+ 240	+ 80	+ 70	- 60	+ 540
SEC 2+3 FAULT	FULL	0	1 820	+ 60	+ 160	+ 100	+ 250	+ 90	+ 90	- 80	+ 540
	3	6	2 010	+ 60	+ 170	+ 120	+ 280	+ 100	+ 110	- 100	+ 560
SEC 1+3 FAULT	FULL	0	1 990	+ 70	+ 190	+ 120	+ 280	+ 100	+ 120	- 130	+ 540
	3	6	2 200	+ 70	+ 210	+ 140	+ 310	+ 110	+ 150	- 160	+ 550
SEC 1+2 FAULT	FULL	0	1 810	+ 60	+ 160	+ 100	+ 250	+ 90	+ 90	- 90	+ 560
	3	6	1 960	+ 60	+ 160	+ 110	+ 270	+ 100	+ 100	- 110	+ 540
RUDDER JAM	FULL	0	1 820	+ 60	+ 140	+ 110	+ 270	+ 90	+ 90	- 80	+ 420
	3	6	2 010	+ 60	+ 150	+ 130	+ 290	+ 100	+ 110	- 100	+ 430
SEC 1+2+3 FAULT	3	10	2 500	+ 80	+ 270	+ 160	+ 350	+ 140	+ 210	INOP	+ 510
ALTN LAW/ DIRECT LAW/ ELAC 1+2 FAULT/ L+R ELEV FAULT/ L(R) ELEV FAULT/ STAB JAM	3	10	1 800	+ 50	+ 120	+ 100	+ 230	+ 80	+ 60	- 60	+ 500

(1) Automatic Landing correction: add 140m - (2) Weight correction: subtract 10m per 1T below 78T
 REF DIST without failure (valid for all FLAPS LEVER positions) = 1 520m



 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-27 3/30 06 MAR 14

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FLIGHT CONTROLS SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

4 - GOOD TO MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
ONE SPLR FAULT with no SPOILER runaway suspected	FULL	0	1 870	+ 40	+ 100	+ 80	+ 200	+ 60	+ 80	- 100	+ 630
	3	6	2 030	+ 40	+ 110	+ 80	+ 200	+ 70	+ 90	- 120	+ 650
ONE SPLR FAULT with SPOILER runaway suspected	3	10	2 110	+ 40	+ 110	+ 90	+ 210	+ 70	+ 100	- 130	+ 600
TWO SPLR FAULT/ GND SPLR 1+2(3+4) FAULT	FULL	0	2 020	+ 40	+ 130	+ 80	+ 210	+ 80	+ 100	- 130	+ 630
	3	6	2 200	+ 40	+ 130	+ 90	+ 220	+ 80	+ 120	- 150	+ 650
THREE SPLR FAULT	FULL	0	2 120	+ 40	+ 140	+ 90	+ 220	+ 80	+ 120	- 150	+ 640
	3	6	2 300	+ 40	+ 140	+ 100	+ 230	+ 80	+ 140	- 170	+ 660
ALL SPLR FAULT	FULL	0	2 390	+ 50	+ 190	+ 110	+ 250	+ 90	+ 180	- 200	+ 650
	3	6	2 570	+ 50	+ 200	+ 120	+ 260	+ 100	+ 190	- 230	+ 670
GND SPLR FAULT	FULL	0	2 390	+ 50	+ 190	+ 110	+ 250	+ 90	+ 180	- 200	+ 650
	3	6	2 570	+ 50	+ 200	+ 120	+ 260	+ 100	+ 190	- 230	+ 670
SEC 1 or SEC 3 FAULT	FULL	0	1 940	+ 40	+ 110	+ 80	+ 200	+ 70	+ 90	- 120	+ 640
	3	6	2 080	+ 40	+ 110	+ 90	+ 210	+ 70	+ 100	- 130	+ 640
SEC 2 FAULT	FULL	0	1 830	+ 30	+ 100	+ 70	+ 200	+ 60	+ 80	- 100	+ 640
	3	6	1 970	+ 40	+ 100	+ 80	+ 200	+ 60	+ 80	- 110	+ 640
SEC 2+3 FAULT	FULL	0	2 040	+ 40	+ 130	+ 80	+ 210	+ 80	+ 110	- 130	+ 640
	3	6	2 220	+ 40	+ 130	+ 90	+ 220	+ 80	+ 120	- 160	+ 660
SEC 1+3 FAULT	FULL	0	2 220	+ 40	+ 160	+ 100	+ 230	+ 80	+ 140	- 200	+ 640
	3	6	2 410	+ 40	+ 160	+ 110	+ 240	+ 90	+ 160	- 230	+ 660
SEC 1+2 FAULT	FULL	0	2 040	+ 40	+ 120	+ 80	+ 220	+ 70	+ 110	- 150	+ 650
	3	6	2 170	+ 40	+ 130	+ 90	+ 220	+ 80	+ 110	- 170	+ 640
RUDDER JAM	FULL	0	2 040	+ 50	+ 120	+ 100	+ 240	+ 70	+ 110	- 120	+ 520
	3	6	2 220	+ 50	+ 130	+ 110	+ 250	+ 90	+ 130	- 150	+ 520
SEC 1+2+3 FAULT	3	10	2 690	+ 50	+ 210	+ 120	+ 260	+ 100	+ 210	INOP	+ 610
ALTN LAW/ DIRECT LAW/ ELAC 1+2 FAULT/ L+R ELEV FAULT/ L(R) ELEV FAULT/ STAB JAM	3	10	1 990	+ 40	+ 100	+ 80	+ 200	+ 70	+ 80	- 110	+ 590

(1) Automatic Landing correction: add 140m - (2) Weight correction: subtract 10m per 1T below 78T

REF DIST without failure (valid for all FLAPS LEVER positions) = 1 730m



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FLIGHT CONTROLS SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

3 - MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
ONE SPLR FAULT with no SPOILER runaway suspected	FULL	0	2 090	+ 40	+ 110	+ 90	+ 230	+ 70	+ 120	- 140	+ 590
	3	6	2 280	+ 40	+ 120	+ 100	+ 240	+ 80	+ 130	- 170	+ 610
ONE SPLR FAULT with SPOILER runaway suspected	3	10	2 360	+ 40	+ 120	+ 100	+ 250	+ 80	+ 140	- 170	+ 560
TWO SPLR FAULT/ GND SPLR 1+2(3+4) FAULT	FULL	0	2 270	+ 40	+ 130	+ 100	+ 250	+ 80	+ 150	- 180	+ 590
	3	6	2 470	+ 50	+ 150	+ 110	+ 260	+ 90	+ 170	- 210	+ 610
THREE SPLR FAULT	FULL	0	2 390	+ 50	+ 150	+ 110	+ 260	+ 90	+ 170	- 200	+ 600
	3	6	2 590	+ 50	+ 170	+ 120	+ 270	+ 100	+ 190	- 230	+ 620
ALL SPLR FAULT	FULL	0	2 710	+ 50	+ 210	+ 130	+ 290	+ 110	+ 250	- 280	+ 610
	3	6	2 920	+ 60	+ 220	+ 140	+ 300	+ 120	+ 280	- 310	+ 630
GND SPLR FAULT	FULL	0	2 710	+ 50	+ 210	+ 130	+ 290	+ 110	+ 250	- 280	+ 610
	3	6	2 920	+ 60	+ 220	+ 140	+ 300	+ 120	+ 280	- 310	+ 630
SEC 1 or SEC 3 FAULT	FULL	0	2 180	+ 40	+ 120	+ 90	+ 240	+ 70	+ 130	- 160	+ 600
	3	6	2 330	+ 40	+ 130	+ 100	+ 250	+ 80	+ 140	- 180	+ 600
SEC 2 FAULT	FULL	0	2 040	+ 40	+ 110	+ 80	+ 230	+ 70	+ 110	- 130	+ 600
	3	6	2 200	+ 40	+ 110	+ 90	+ 240	+ 80	+ 120	- 150	+ 600
SEC 2+3 FAULT	FULL	0	2 300	+ 40	+ 140	+ 100	+ 250	+ 80	+ 150	- 180	+ 600
	3	6	2 500	+ 50	+ 150	+ 110	+ 260	+ 90	+ 170	- 210	+ 620
SEC 1+3 FAULT	FULL	0	2 510	+ 50	+ 170	+ 110	+ 270	+ 90	+ 200	- 260	+ 600
	3	6	2 730	+ 50	+ 180	+ 130	+ 280	+ 100	+ 220	- 300	+ 610
SEC 1+2 FAULT	FULL	0	2 290	+ 40	+ 140	+ 100	+ 250	+ 80	+ 150	- 200	+ 610
	3	6	2 440	+ 50	+ 140	+ 110	+ 260	+ 90	+ 160	- 220	+ 600
RUDDER JAM	FULL	0	2 260	+ 50	+ 130	+ 120	+ 280	+ 90	+ 150	- 160	+ 480
	3	6	2 460	+ 60	+ 140	+ 130	+ 290	+ 100	+ 170	- 190	+ 480
SEC 1+2+3 FAULT	3	10	3 060	+ 60	+ 230	+ 140	+ 310	+ 120	+ 290	INOP	+ 570
ALTN LAW/ DIRECT LAW/ ELAC 1+2 FAULT/ L+R ELEV FAULT/ L(R) ELEV FAULT/ STAB JAM	3	10	2 220	+ 40	+ 100	+ 90	+ 240	+ 70	+ 110	- 150	+ 550

(1) Automatic Landing correction: add 140m - (2) Weight correction: subtract 20m per 1T below 78T
 REF DIST without failure (valid for all FLAPS LEVER positions) = 1 930m



 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-27 5/30 06 MAR 14

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FLIGHT CONTROLS SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

2 - MEDIUM TO POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
ONE SPLR FAULT with no SPOILER runaway suspected	FULL	0	2 440	+ 70	+ 170	+ 150	+ 400	+ 120	+ 200	- 170	+ 390
	3	6	2 760	+ 80	+ 190	+ 180	+ 430	+ 140	+ 250	- 220	+ 400
ONE SPLR FAULT with SPOILER runaway suspected	3	10	2 870	+ 80	+ 190	+ 180	+ 430	+ 150	+ 260	- 240	+ 380
TWO SPLR FAULT/ GND SPLR 1+2(3+4) FAULT	FULL	0	2 690	+ 80	+ 210	+ 180	+ 440	+ 150	+ 260	- 220	+ 380
	3	6	3 050	+ 90	+ 230	+ 200	+ 490	+ 160	+ 340	- 280	+ 400
THREE SPLR FAULT	FULL	0	2 890	+ 90	+ 240	+ 200	+ 480	+ 160	+ 330	- 260	+ 390
	3	6	3 250	+ 100	+ 270	+ 230	+ 520	+ 190	+ 410	- 320	+ 410
ALL SPLR FAULT	FULL	0	3 400	+ 120	+ 340	+ 260	+ 590	+ 210	+ 560	- 370	+ 400
	3	6	3 800	+ 120	+ 360	+ 300	+ 630	+ 220	+ 680	- 450	+ 400
GND SPLR FAULT	FULL	0	3 400	+ 120	+ 340	+ 260	+ 590	+ 210	+ 560	- 370	+ 400
	3	6	3 800	+ 120	+ 360	+ 300	+ 630	+ 220	+ 680	- 450	+ 400
SEC 1 or SEC 3 FAULT	FULL	0	2 570	+ 80	+ 200	+ 160	+ 420	+ 140	+ 230	- 200	+ 390
	3	6	2 810	+ 80	+ 200	+ 180	+ 440	+ 150	+ 260	- 230	+ 390
SEC 2 FAULT	FULL	0	2 380	+ 70	+ 170	+ 150	+ 380	+ 120	+ 180	- 160	+ 390
	3	6	2 620	+ 80	+ 170	+ 160	+ 410	+ 130	+ 210	- 200	+ 390
SEC 2+3 FAULT	FULL	0	2 750	+ 90	+ 220	+ 180	+ 460	+ 150	+ 280	- 230	+ 390
	3	6	3 110	+ 100	+ 240	+ 210	+ 500	+ 170	+ 360	- 290	+ 410
SEC 1+3 FAULT	FULL	0	3 070	+ 100	+ 270	+ 220	+ 520	+ 170	+ 400	- 360	+ 390
	3	6	3 460	+ 110	+ 300	+ 250	+ 570	+ 200	+ 500	- 460	+ 400
SEC 1+2 FAULT	FULL	0	2 760	+ 90	+ 220	+ 180	+ 460	+ 150	+ 290	- 270	+ 400
	3	6	2 990	+ 90	+ 220	+ 200	+ 480	+ 160	+ 320	- 310	+ 390
RUDDER JAM	FULL	0	2 540	+ 90	+ 180	+ 170	+ 420	+ 130	+ 220	- 190	+ 320
	3	6	2 820	+ 90	+ 180	+ 200	+ 460	+ 140	+ 270	- 240	+ 320
SEC 1+2+3 FAULT	3	10	4 000	+ 120	+ 360	+ 310	+ 640	+ 240	+ 720	INOP	+ 380
ALTN LAW/ DIRECT LAW/ ELAC 1+2 FAULT/ L+R ELEV FAULT/ L(R) ELEV FAULT/ STAB JAM	3	10	2 640	+ 70	+ 160	+ 160	+ 390	+ 130	+ 200	- 190	+ 370

(1) Automatic Landing correction: add 180m - (2) Weight correction: subtract 30m per 1T below 78T

REF DIST without failure (valid for all FLAPS LEVER positions) = 2 220m



 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-27 6/30
		06 MAR 14

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FLIGHT CONTROLS SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

1 - POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
ONE SPLR FAULT with no SPOILER runway suspected	FULL	0	3 710	+ 70	+ 170	+ 200	+ 590	+ 160	+ 870	- 500	+ 390
	3	6	4 150	+ 80	+ 190	+ 230	+ 630	+ 170	+ 1 030	- 600	+ 400
ONE SPLR FAULT with SPOILER runway suspected	3	10	4 260	+ 80	+ 190	+ 230	+ 630	+ 180	+ 1 030	- 610	+ 380
TWO SPLR FAULT/ GND SPLR 1+2(3+4) FAULT	FULL	0	4 120	+ 80	+ 200	+ 230	+ 630	+ 170	+ 1 090	- 610	+ 380
	3	6	4 580	+ 80	+ 220	+ 260	+ 660	+ 190	+ 1 260	- 720	+ 400
THREE SPLR FAULT	FULL	0	4 440	+ 80	+ 230	+ 250	+ 660	+ 190	+ 1 280	- 700	+ 390
	3	6	4 900	+ 90	+ 260	+ 280	+ 690	+ 210	+ 1 450	- 810	+ 410
ALL SPLR FAULT	FULL	0	Landing Distance greater than 6 000 m for all conditions								
	3	6	Landing Distance greater than 6 000 m for all conditions								
GND SPLR FAULT	FULL	0	Landing Distance greater than 6 000 m for all conditions								
	3	6	Landing Distance greater than 6 000 m for all conditions								
SEC 1 or SEC 3 FAULT	FULL	0	3 940	+ 70	+ 190	+ 210	+ 610	+ 170	+ 990	- 560	+ 390
	3	6	4 210	+ 80	+ 190	+ 230	+ 630	+ 180	+ 1 060	- 610	+ 390
SEC 2 FAULT	FULL	0	3 630	+ 70	+ 170	+ 190	+ 580	+ 150	+ 840	- 480	+ 390
	3	6	3 920	+ 70	+ 170	+ 210	+ 600	+ 170	+ 910	- 540	+ 390
SEC 2+3 FAULT	FULL	0	4 210	+ 80	+ 210	+ 240	+ 640	+ 180	+ 1 140	- 640	+ 390
	3	6	4 680	+ 90	+ 240	+ 270	+ 670	+ 200	+ 1 320	- 750	+ 410
SEC 1+3 FAULT	FULL	0	4 710	+ 90	+ 260	+ 270	+ 690	+ 200	+ 1 450	- 870	+ 390
	3	6	5 200	+ 90	+ 280	+ 310	+ 720	+ 220	+ 1 660	- 1 030	+ 400
SEC 1+2 FAULT	FULL	0	4 240	+ 80	+ 210	+ 240	+ 640	+ 180	+ 1 160	- 690	+ 400
	3	6	4 490	+ 80	+ 210	+ 250	+ 660	+ 180	+ 1 210	- 740	+ 400
RUDDER JAM	FULL	0	3 730	+ 90	+ 180	+ 230	+ 630	+ 170	+ 870	- 500	+ 320
	3	6	4 070	+ 90	+ 180	+ 250	+ 670	+ 180	+ 980	- 560	+ 320
SEC 1+2+3 FAULT	3	10	Landing Distance greater than 6 000 m for all conditions								
ALTN LAW/ DIRECT LAW/ ELAC 1+2 FAULT/ L+R ELEV FAULT/ L(R) ELEV FAULT/ STAB JAM	3	10	3 900	+ 70	+ 160	+ 210	+ 590	+ 160	+ 860	- 510	+ 370

(1) Automatic Landing correction: add 170m - (2) Weight correction: subtract 30m per 1T below 78T

REF DIST without failure (valid for all FLAPS LEVER positions) = 3 430m

 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-27 7/30 06 MAR 14

Ident.: PER-27-00014168.0052001 / 28 FEB 14
Applicable to: MSN 3120

FLIGHT CONTROLS SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

6 - DRY											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 76T	Per 1T above 76T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
ONE SPLR FAULT with no SPOILER runaway suspected	FULL	0	1 260	+ 50	+ 90	+ 50	+ 140	+ 50	+ 30	- 20	+ 680
	3	6	1 350	+ 50	+ 90	+ 60	+ 150	+ 50	+ 30	- 30	+ 680
ONE SPLR FAULT with SPOILER runaway suspected	3	10	1 400	+ 50	+ 90	+ 60	+ 160	+ 50	+ 30	- 30	+ 620
TWO SPLR FAULT/ GND SPLR 1+2(3+4) FAULT	FULL	0	1 340	+ 50	+ 90	+ 50	+ 130	+ 50	+ 30	- 30	+ 720
	3	6	1 430	+ 50	+ 100	+ 60	+ 140	+ 60	+ 40	- 30	+ 710
THREE SPLR FAULT	FULL	0	1 380	+ 50	+ 100	+ 50	+ 140	+ 50	+ 40	- 30	+ 740
	3	6	1 480	+ 50	+ 100	+ 60	+ 150	+ 50	+ 40	- 40	+ 730
ALL SPLR FAULT	FULL	0	1 500	+ 50	+ 120	+ 60	+ 140	+ 60	+ 50	- 50	+ 760
	3	6	1 600	+ 50	+ 130	+ 70	+ 150	+ 60	+ 50	- 60	+ 770
GND SPLR FAULT	FULL	0	1 500	+ 50	+ 120	+ 60	+ 140	+ 60	+ 50	- 50	+ 760
	3	6	1 600	+ 50	+ 130	+ 70	+ 150	+ 60	+ 50	- 60	+ 770
SEC 1 or SEC 3 FAULT	FULL	0	1 300	+ 50	+ 90	+ 50	+ 140	+ 40	+ 30	- 20	+ 700
	3	6	1 380	+ 50	+ 90	+ 60	+ 150	+ 50	+ 30	- 30	+ 670
SEC 2 FAULT	FULL	0	1 240	+ 50	+ 80	+ 50	+ 140	+ 50	+ 30	- 20	+ 680
	3	6	1 330	+ 50	+ 80	+ 60	+ 160	+ 40	+ 30	- 20	+ 660
SEC 2+3 FAULT	FULL	0	1 350	+ 50	+ 90	+ 50	+ 140	+ 40	+ 30	- 30	+ 720
	3	6	1 440	+ 50	+ 100	+ 60	+ 150	+ 50	+ 40	- 40	+ 720
SEC 1+3 FAULT	FULL	0	1 430	+ 50	+ 110	+ 60	+ 140	+ 50	+ 40	- 50	+ 740
	3	6	1 530	+ 50	+ 110	+ 60	+ 150	+ 60	+ 40	- 50	+ 740
SEC 1+2 FAULT	FULL	0	1 340	+ 50	+ 90	+ 60	+ 140	+ 40	+ 30	- 30	+ 730
	3	6	1 420	+ 50	+ 100	+ 60	+ 140	+ 50	+ 40	- 40	+ 700
RUDDER JAM	FULL	0	1 390	+ 60	+ 120	+ 80	+ 190	+ 60	+ 40	- 30	+ 560
	3	6	1 520	+ 60	+ 120	+ 90	+ 190	+ 70	+ 50	- 30	+ 580
SEC 1+2+3 FAULT	3	10	1 670	+ 50	+ 140	+ 70	+ 150	+ 70	+ 60	INOP	+ 720
ALTN LAW/ DIRECT LAW/ ELAC 1+2 FAULT/ L+R ELEV FAULT/ L(R) ELEV FAULT/ STAB JAM	3	10	1 350	+ 50	+ 90	+ 60	+ 160	+ 50	+ 30	- 20	+ 590

(1) Automatic Landing correction: add 120m - (2) Weight correction: subtract 10m per 1T below 76T

REF DIST without failure (valid for all FLAPS LEVER positions) = 1 190m



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FLIGHT CONTROLS SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

5 - GOOD											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 76T	Per 1T above 76T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
ONE SPLR FAULT with no SPOILER runaway suspected	FULL	0	1 620	+ 50	+ 120	+ 90	+ 230	+ 70	+ 60	- 50	+ 540
	3	6	1 790	+ 60	+ 130	+ 100	+ 240	+ 80	+ 70	- 70	+ 550
ONE SPLR FAULT with SPOILER runaway suspected	3	10	1 870	+ 60	+ 140	+ 100	+ 250	+ 90	+ 80	- 80	+ 500
TWO SPLR FAULT/ GND SPLR 1+2(3+4) FAULT	FULL	0	1 760	+ 60	+ 150	+ 100	+ 250	+ 80	+ 80	- 70	+ 530
	3	6	1 940	+ 60	+ 160	+ 110	+ 270	+ 100	+ 100	- 90	+ 540
THREE SPLR FAULT	FULL	0	1 850	+ 60	+ 170	+ 110	+ 270	+ 90	+ 100	- 80	+ 540
	3	6	2 040	+ 70	+ 180	+ 120	+ 290	+ 100	+ 120	- 110	+ 550
ALL SPLR FAULT	FULL	0	2 100	+ 70	+ 230	+ 130	+ 320	+ 110	+ 160	- 130	+ 550
	3	6	2 300	+ 80	+ 250	+ 150	+ 330	+ 130	+ 180	- 150	+ 560
GND SPLR FAULT	FULL	0	2 100	+ 70	+ 230	+ 130	+ 320	+ 110	+ 160	- 130	+ 550
	3	6	2 300	+ 80	+ 250	+ 150	+ 330	+ 130	+ 180	- 150	+ 560
SEC 1 or SEC 3 FAULT	FULL	0	1 680	+ 50	+ 140	+ 90	+ 230	+ 80	+ 70	- 60	+ 540
	3	6	1 830	+ 60	+ 140	+ 100	+ 250	+ 90	+ 80	- 70	+ 530
SEC 2 FAULT	FULL	0	1 580	+ 50	+ 120	+ 80	+ 220	+ 70	+ 60	- 50	+ 540
	3	6	1 730	+ 50	+ 120	+ 90	+ 230	+ 80	+ 60	- 60	+ 540
SEC 2+3 FAULT	FULL	0	1 780	+ 60	+ 150	+ 100	+ 260	+ 80	+ 90	- 70	+ 540
	3	6	1 960	+ 60	+ 170	+ 110	+ 270	+ 100	+ 100	- 90	+ 550
SEC 1+3 FAULT	FULL	0	1 940	+ 60	+ 190	+ 120	+ 280	+ 100	+ 120	- 120	+ 540
	3	6	2 140	+ 70	+ 210	+ 130	+ 300	+ 110	+ 140	- 150	+ 550
SEC 1+2 FAULT	FULL	0	1 770	+ 60	+ 150	+ 100	+ 250	+ 80	+ 80	- 90	+ 550
	3	6	1 920	+ 60	+ 160	+ 110	+ 270	+ 90	+ 90	- 100	+ 540
RUDDER JAM	FULL	0	1 770	+ 60	+ 140	+ 110	+ 260	+ 90	+ 90	- 70	+ 430
	3	6	1 960	+ 60	+ 150	+ 120	+ 280	+ 100	+ 100	- 90	+ 420
SEC 1+2+3 FAULT	3	10	2 440	+ 80	+ 260	+ 160	+ 340	+ 130	+ 200	INOP	+ 510
ALTN LAW/ DIRECT LAW/ ELAC 1+2 FAULT/ L+R ELEV FAULT/ L(R) ELEV FAULT/ STAB JAM	3	10	1 760	+ 50	+ 120	+ 90	+ 230	+ 80	+ 60	- 60	+ 490

(1) Automatic Landing correction: add 160m - (2) Weight correction: subtract 10m per 1T below 76T
 REF DIST without failure (valid for all FLAPS LEVER positions) = 1 490m



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FLIGHT CONTROLS SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

4 - GOOD TO MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 76T	Per 1T above 76T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
ONE SPLR FAULT with no SPOILER runaway suspected	FULL	0	1 830	+ 40	+ 100	+ 70	+ 200	+ 70	+ 80	- 100	+ 630
	3	6	2 000	+ 40	+ 110	+ 80	+ 210	+ 70	+ 90	- 120	+ 650
ONE SPLR FAULT with SPOILER runaway suspected	3	10	2 070	+ 40	+ 110	+ 90	+ 210	+ 70	+ 90	- 130	+ 590
TWO SPLR FAULT/ GND SPLR 1+2(3+4) FAULT	FULL	0	1 980	+ 40	+ 120	+ 80	+ 210	+ 70	+ 100	- 130	+ 620
	3	6	2 160	+ 40	+ 130	+ 90	+ 220	+ 70	+ 120	- 150	+ 640
THREE SPLR FAULT	FULL	0	2 080	+ 40	+ 140	+ 90	+ 220	+ 70	+ 120	- 150	+ 640
	3	6	2 250	+ 40	+ 150	+ 100	+ 230	+ 80	+ 130	- 170	+ 650
ALL SPLR FAULT	FULL	0	2 340	+ 50	+ 190	+ 110	+ 240	+ 90	+ 170	- 200	+ 650
	3	6	2 520	+ 50	+ 200	+ 110	+ 250	+ 100	+ 190	- 230	+ 660
GND SPLR FAULT	FULL	0	2 340	+ 50	+ 190	+ 110	+ 240	+ 90	+ 170	- 200	+ 650
	3	6	2 520	+ 50	+ 200	+ 110	+ 250	+ 100	+ 190	- 230	+ 660
SEC 1 or SEC 3 FAULT	FULL	0	1 900	+ 40	+ 110	+ 80	+ 200	+ 70	+ 90	- 110	+ 640
	3	6	2 040	+ 40	+ 110	+ 80	+ 210	+ 70	+ 100	- 130	+ 630
SEC 2 FAULT	FULL	0	1 790	+ 40	+ 100	+ 70	+ 190	+ 60	+ 80	- 90	+ 640
	3	6	1 930	+ 40	+ 100	+ 80	+ 200	+ 70	+ 80	- 110	+ 630
SEC 2+3 FAULT	FULL	0	2 010	+ 40	+ 120	+ 80	+ 220	+ 70	+ 110	- 130	+ 630
	3	6	2 180	+ 40	+ 130	+ 90	+ 220	+ 80	+ 120	- 150	+ 650
SEC 1+3 FAULT	FULL	0	2 180	+ 40	+ 150	+ 90	+ 230	+ 80	+ 140	- 190	+ 630
	3	6	2 360	+ 50	+ 160	+ 100	+ 240	+ 90	+ 150	- 220	+ 650
SEC 1+2 FAULT	FULL	0	2 000	+ 40	+ 120	+ 80	+ 210	+ 70	+ 110	- 150	+ 650
	3	6	2 130	+ 40	+ 130	+ 90	+ 220	+ 80	+ 110	- 160	+ 640
RUDDER JAM	FULL	0	1 990	+ 50	+ 120	+ 100	+ 240	+ 80	+ 110	- 120	+ 510
	3	6	2 180	+ 50	+ 120	+ 110	+ 250	+ 80	+ 120	- 140	+ 510
SEC 1+2+3 FAULT	3	10	2 640	+ 50	+ 210	+ 120	+ 260	+ 100	+ 200	INOP	+ 600
ALTN LAW/ DIRECT LAW/ ELAC 1+2 FAULT/ L+R ELEV FAULT/ L(R) ELEV FAULT/ STAB JAM	3	10	1 950	+ 40	+ 100	+ 80	+ 200	+ 70	+ 80	- 100	+ 580

(1) Automatic Landing correction: add 150m - (2) Weight correction: subtract 10m per 1T below 76T

REF DIST without failure (valid for all FLAPS LEVER positions) = 1 700m



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FLIGHT CONTROLS SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

3 - MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 76T	Per 1T above 76T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
ONE SPLR FAULT with no SPOILER runaway suspected	FULL	0	2 050	+ 40	+ 110	+ 90	+ 230	+ 70	+ 120	- 140	+ 590
	3	6	2 240	+ 40	+ 120	+ 100	+ 240	+ 80	+ 130	- 160	+ 610
ONE SPLR FAULT with SPOILER runaway suspected	3	10	2 320	+ 40	+ 120	+ 100	+ 250	+ 80	+ 130	- 170	+ 560
TWO SPLR FAULT/ GND SPLR 1+2(3+4) FAULT	FULL	0	2 230	+ 50	+ 130	+ 100	+ 250	+ 80	+ 150	- 170	+ 580
	3	6	2 430	+ 50	+ 140	+ 110	+ 260	+ 90	+ 170	- 200	+ 600
THREE SPLR FAULT	FULL	0	2 340	+ 50	+ 150	+ 100	+ 260	+ 90	+ 170	- 200	+ 600
	3	6	2 550	+ 50	+ 160	+ 110	+ 270	+ 90	+ 190	- 230	+ 610
ALL SPLR FAULT	FULL	0	2 660	+ 60	+ 210	+ 120	+ 290	+ 100	+ 250	- 270	+ 610
	3	6	2 870	+ 60	+ 220	+ 140	+ 300	+ 110	+ 270	- 300	+ 620
GND SPLR FAULT	FULL	0	2 660	+ 60	+ 210	+ 120	+ 290	+ 100	+ 250	- 270	+ 610
	3	6	2 870	+ 60	+ 220	+ 140	+ 300	+ 110	+ 270	- 300	+ 620
SEC 1 or SEC 3 FAULT	FULL	0	2 130	+ 40	+ 120	+ 90	+ 240	+ 80	+ 130	- 150	+ 600
	3	6	2 290	+ 40	+ 120	+ 100	+ 250	+ 80	+ 140	- 170	+ 590
SEC 2 FAULT	FULL	0	2 000	+ 40	+ 110	+ 80	+ 230	+ 70	+ 110	- 130	+ 600
	3	6	2 160	+ 40	+ 110	+ 90	+ 240	+ 70	+ 120	- 150	+ 590
SEC 2+3 FAULT	FULL	0	2 250	+ 50	+ 140	+ 100	+ 250	+ 80	+ 150	- 180	+ 590
	3	6	2 460	+ 50	+ 140	+ 110	+ 260	+ 90	+ 170	- 210	+ 610
SEC 1+3 FAULT	FULL	0	2 460	+ 50	+ 170	+ 110	+ 270	+ 90	+ 200	- 260	+ 590
	3	6	2 680	+ 50	+ 180	+ 120	+ 280	+ 100	+ 220	- 300	+ 610
SEC 1+2 FAULT	FULL	0	2 250	+ 50	+ 130	+ 100	+ 250	+ 80	+ 150	- 200	+ 610
	3	6	2 390	+ 50	+ 140	+ 100	+ 250	+ 90	+ 160	- 220	+ 600
RUDDER JAM	FULL	0	2 210	+ 50	+ 130	+ 120	+ 280	+ 80	+ 140	- 160	+ 470
	3	6	2 410	+ 60	+ 140	+ 120	+ 290	+ 100	+ 170	- 190	+ 470
SEC 1+2+3 FAULT	3	10	3 000	+ 60	+ 230	+ 140	+ 300	+ 120	+ 290	INOP	+ 570
ALTN LAW/ DIRECT LAW/ ELAC 1+2 FAULT/ L+R ELEV FAULT/ L(R) ELEV FAULT/ STAB JAM	3	10	2 180	+ 40	+ 100	+ 90	+ 240	+ 70	+ 110	- 140	+ 550

(1) Automatic Landing correction: add 160m - (2) Weight correction: subtract 20m per 1T below 76T
 REF DIST without failure (valid for all FLAPS LEVER positions) = 1 890m



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FLIGHT CONTROLS SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

2 - MEDIUM TO POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 76T	Per 1T above 76T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
ONE SPLR FAULT with no SPOILER runaway suspected	FULL	0	2 370	+ 70	+ 170	+ 150	+ 390	+ 120	+ 190	- 160	+ 380
	3	6	2 690	+ 80	+ 190	+ 170	+ 430	+ 140	+ 240	- 210	+ 400
ONE SPLR FAULT with SPOILER runaway suspected	3	10	2 800	+ 80	+ 190	+ 170	+ 430	+ 150	+ 250	- 220	+ 380
TWO SPLR FAULT/ GND SPLR 1+2(3+4) FAULT	FULL	0	2 620	+ 80	+ 210	+ 170	+ 440	+ 140	+ 260	- 210	+ 380
	3	6	2 970	+ 90	+ 230	+ 200	+ 480	+ 160	+ 320	- 260	+ 390
THREE SPLR FAULT	FULL	0	2 810	+ 90	+ 240	+ 190	+ 480	+ 160	+ 320	- 240	+ 390
	3	6	3 170	+ 100	+ 260	+ 220	+ 520	+ 180	+ 400	- 300	+ 400
ALL SPLR FAULT	FULL	0	3 310	+ 120	+ 340	+ 260	+ 590	+ 200	+ 540	- 340	+ 390
	3	6	3 700	+ 120	+ 360	+ 290	+ 630	+ 220	+ 660	- 420	+ 400
GND SPLR FAULT	FULL	0	3 310	+ 120	+ 340	+ 260	+ 590	+ 200	+ 540	- 340	+ 390
	3	6	3 700	+ 120	+ 360	+ 290	+ 630	+ 220	+ 660	- 420	+ 400
SEC 1 or SEC 3 FAULT	FULL	0	2 510	+ 80	+ 190	+ 160	+ 420	+ 130	+ 220	- 180	+ 390
	3	6	2 740	+ 80	+ 190	+ 180	+ 440	+ 140	+ 250	- 220	+ 390
SEC 2 FAULT	FULL	0	2 320	+ 70	+ 160	+ 140	+ 380	+ 120	+ 180	- 150	+ 390
	3	6	2 550	+ 80	+ 170	+ 160	+ 400	+ 130	+ 200	- 180	+ 390
SEC 2+3 FAULT	FULL	0	2 670	+ 90	+ 220	+ 180	+ 440	+ 150	+ 270	- 210	+ 390
	3	6	3 030	+ 100	+ 240	+ 210	+ 500	+ 160	+ 340	- 270	+ 400
SEC 1+3 FAULT	FULL	0	2 980	+ 100	+ 270	+ 210	+ 510	+ 170	+ 380	- 330	+ 380
	3	6	3 370	+ 110	+ 290	+ 250	+ 560	+ 190	+ 480	- 420	+ 400
SEC 1+2 FAULT	FULL	0	2 680	+ 90	+ 220	+ 180	+ 450	+ 150	+ 270	- 250	+ 400
	3	6	2 910	+ 90	+ 220	+ 190	+ 470	+ 150	+ 310	- 290	+ 390
RUDDER JAM	FULL	0	2 470	+ 90	+ 180	+ 170	+ 420	+ 130	+ 220	- 180	+ 310
	3	6	2 740	+ 90	+ 190	+ 190	+ 450	+ 150	+ 260	- 220	+ 320
SEC 1+2+3 FAULT	3	10	3 900	+ 130	+ 360	+ 300	+ 640	+ 230	+ 690	INOP	+ 370
ALTN LAW/ DIRECT LAW/ ELAC 1+2 FAULT/ L+R ELEV FAULT/ L(R) ELEV FAULT/ STAB JAM	3	10	2 580	+ 70	+ 160	+ 150	+ 390	+ 130	+ 190	- 180	+ 370

(1) Automatic Landing correction: add 190m - (2) Weight correction: subtract 30m per 1T below 76T

REF DIST without failure (valid for all FLAPS LEVER positions) = 2 160m



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FLIGHT CONTROLS SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

1 - POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 76T	Per 1T above 76T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
ONE SPLR FAULT with no SPOILER runaway suspected	FULL	0	3 640	+ 70	+ 170	+ 200	+ 590	+ 150	+ 870	- 490	+ 380
	3	6	4 070	+ 80	+ 190	+ 220	+ 620	+ 170	+ 1 020	- 580	+ 400
ONE SPLR FAULT with SPOILER runaway suspected	3	10	4 180	+ 80	+ 190	+ 230	+ 630	+ 180	+ 1 020	- 600	+ 380
TWO SPLR FAULT/ GND SPLR 1+2(3+4) FAULT	FULL	0	4 040	+ 80	+ 200	+ 230	+ 630	+ 170	+ 1 080	- 600	+ 380
	3	6	4 490	+ 80	+ 230	+ 260	+ 660	+ 190	+ 1 250	- 700	+ 390
THREE SPLR FAULT	FULL	0	4 350	+ 80	+ 230	+ 250	+ 660	+ 190	+ 1 260	- 690	+ 390
	3	6	4 810	+ 90	+ 250	+ 280	+ 690	+ 200	+ 1 450	- 800	+ 400
ALL SPLR FAULT	FULL	0	Landing Distance greater than 6 000 m for all conditions								
	3	6	Landing Distance greater than 6 000 m for all conditions								
GND SPLR FAULT	FULL	0	Landing Distance greater than 6 000 m for all conditions								
	3	6	Landing Distance greater than 6 000 m for all conditions								
SEC 1 or SEC 3 FAULT	FULL	0	3 870	+ 70	+ 180	+ 210	+ 620	+ 160	+ 990	- 550	+ 390
	3	6	4 130	+ 80	+ 190	+ 230	+ 630	+ 180	+ 1 050	- 600	+ 390
SEC 2 FAULT	FULL	0	3 560	+ 70	+ 160	+ 190	+ 580	+ 150	+ 830	- 470	+ 390
	3	6	3 850	+ 70	+ 170	+ 210	+ 600	+ 160	+ 910	- 530	+ 390
SEC 2+3 FAULT	FULL	0	4 130	+ 80	+ 210	+ 230	+ 640	+ 180	+ 1 130	- 630	+ 390
	3	6	4 590	+ 90	+ 230	+ 260	+ 670	+ 200	+ 1 310	- 730	+ 400
SEC 1+3 FAULT	FULL	0	4 610	+ 90	+ 260	+ 270	+ 690	+ 200	+ 1 430	- 850	+ 380
	3	6	5 100	+ 100	+ 280	+ 300	+ 720	+ 220	+ 1 650	- 1 000	+ 400
SEC 1+2 FAULT	FULL	0	4 160	+ 80	+ 210	+ 230	+ 650	+ 170	+ 1 150	- 670	+ 400
	3	6	4 400	+ 80	+ 210	+ 250	+ 650	+ 190	+ 1 200	- 720	+ 390
RUDDER JAM	FULL	0	3 660	+ 90	+ 170	+ 220	+ 640	+ 160	+ 870	- 480	+ 310
	3	6	3 990	+ 90	+ 180	+ 250	+ 670	+ 170	+ 970	- 550	+ 320
SEC 1+2+3 FAULT	3	10	Landing Distance greater than 6 000 m for all conditions								
ALTN LAW/ DIRECT LAW/ ELAC 1+2 FAULT/ L+R ELEV FAULT/ L(R) ELEV FAULT/ STAB JAM	3	10	3 830	+ 70	+ 160	+ 200	+ 590	+ 160	+ 860	- 510	+ 370

(1) Automatic Landing correction: add 180m - (2) Weight correction: subtract 30m per 1T below 76T
REF DIST without failure (valid for all FLAPS LEVER positions) = 3 360m

 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-27 13/30 06 MAR 14

Ident.: PER-27-00014168.0047001 / 28 FEB 14
Applicable to: MSN 1276-1843, 2927

FLIGHT CONTROLS SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

6 - DRY											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
ONE SPLR FAULT with no SPOILER runway suspected	FULL	0	1 290	+ 50	+ 80	+ 60	+ 150	+ 40	+ 30	- 20	+ 670
	3	6	1 380	+ 50	+ 90	+ 60	+ 170	+ 50	+ 30	- 30	+ 670
ONE SPLR FAULT with SPOILER runway suspected	3	10	1 430	+ 50	+ 90	+ 70	+ 170	+ 50	+ 30	- 30	+ 630
TWO SPLR FAULT/ GND SPLR 1+2(3+4) FAULT	FULL	0	1 360	+ 50	+ 100	+ 60	+ 140	+ 50	+ 40	- 30	+ 700
	3	6	1 460	+ 50	+ 100	+ 60	+ 160	+ 50	+ 40	- 40	+ 710
THREE SPLR FAULT	FULL	0	1 410	+ 50	+ 100	+ 60	+ 150	+ 50	+ 40	- 40	+ 720
	3	6	1 500	+ 50	+ 110	+ 60	+ 150	+ 60	+ 40	- 40	+ 740
ALL SPLR FAULT	FULL	0	1 530	+ 50	+ 130	+ 60	+ 150	+ 60	+ 50	- 50	+ 750
	3	6	1 630	+ 50	+ 130	+ 70	+ 160	+ 60	+ 50	- 60	+ 780
GND SPLR FAULT	FULL	0	1 530	+ 50	+ 130	+ 60	+ 150	+ 60	+ 50	- 50	+ 750
	3	6	1 630	+ 50	+ 130	+ 70	+ 160	+ 60	+ 50	- 60	+ 780
SEC 1 or SEC 3 FAULT	FULL	0	1 320	+ 50	+ 90	+ 60	+ 150	+ 50	+ 30	- 30	+ 680
	3	6	1 400	+ 50	+ 100	+ 60	+ 160	+ 60	+ 40	- 30	+ 670
SEC 2 FAULT	FULL	0	1 270	+ 50	+ 80	+ 60	+ 160	+ 40	+ 30	- 20	+ 670
	3	6	1 350	+ 50	+ 90	+ 60	+ 170	+ 50	+ 30	- 20	+ 650
SEC 2+3 FAULT	FULL	0	1 370	+ 50	+ 100	+ 60	+ 140	+ 50	+ 40	- 30	+ 710
	3	6	1 460	+ 50	+ 110	+ 60	+ 150	+ 60	+ 40	- 40	+ 720
SEC 1+3 FAULT	FULL	0	1 460	+ 50	+ 110	+ 60	+ 150	+ 50	+ 40	- 50	+ 730
	3	6	1 560	+ 50	+ 120	+ 70	+ 160	+ 50	+ 40	- 60	+ 750
SEC 1+2 FAULT	FULL	0	1 360	+ 50	+ 100	+ 60	+ 140	+ 50	+ 40	- 30	+ 710
	3	6	1 450	+ 50	+ 100	+ 60	+ 160	+ 50	+ 40	- 40	+ 700
RUDDER JAM	FULL	0	1 440	+ 60	+ 120	+ 90	+ 190	+ 60	+ 50	- 30	+ 570
	3	6	1 580	+ 70	+ 120	+ 90	+ 200	+ 70	+ 50	- 40	+ 590
SEC 1+2+3 FAULT	3	10	1 700	+ 50	+ 140	+ 70	+ 160	+ 70	+ 60	INOP	+ 730
ALTN LAW/ DIRECT LAW/ ELAC 1+2 FAULT/ L+R ELEV FAULT/ L(R) ELEV FAULT/ STAB JAM	3	10	1 390	+ 50	+ 90	+ 70	+ 170	+ 50	+ 30	- 20	+ 590

(1) Automatic Landing correction: add 110m - (2) Weight correction: subtract 10m per 1T below 78T

REF DIST without failure (valid for all FLAPS LEVER positions) = 1 210m



Continued from the previous page

FLIGHT CONTROLS SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

5 - GOOD											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
ONE SPLR FAULT with no SPOILER runaway suspected	FULL	0	1 660	+ 50	+ 120	+ 90	+ 230	+ 70	+ 60	- 60	+ 540
	3	6	1 830	+ 60	+ 140	+ 100	+ 250	+ 90	+ 80	- 70	+ 550
ONE SPLR FAULT with SPOILER runaway suspected	3	10	1 920	+ 60	+ 130	+ 110	+ 260	+ 80	+ 80	- 80	+ 500
TWO SPLR FAULT/ GND SPLR 1+2(3+4) FAULT	FULL	0	1 800	+ 60	+ 150	+ 100	+ 250	+ 90	+ 90	- 80	+ 530
	3	6	1 990	+ 60	+ 160	+ 120	+ 270	+ 100	+ 100	- 100	+ 540
THREE SPLR FAULT	FULL	0	1 890	+ 60	+ 170	+ 110	+ 270	+ 100	+ 100	- 90	+ 540
	3	6	2 090	+ 70	+ 180	+ 130	+ 290	+ 100	+ 120	- 110	+ 560
ALL SPLR FAULT	FULL	0	2 150	+ 70	+ 240	+ 140	+ 320	+ 120	+ 160	- 140	+ 550
	3	6	2 360	+ 80	+ 250	+ 150	+ 340	+ 130	+ 190	- 160	+ 560
GND SPLR FAULT	FULL	0	2 150	+ 70	+ 240	+ 140	+ 320	+ 120	+ 160	- 140	+ 550
	3	6	2 360	+ 80	+ 250	+ 150	+ 340	+ 130	+ 190	- 160	+ 560
SEC 1 or SEC 3 FAULT	FULL	0	1 720	+ 50	+ 140	+ 100	+ 240	+ 80	+ 70	- 70	+ 550
	3	6	1 870	+ 60	+ 150	+ 100	+ 250	+ 90	+ 80	- 80	+ 540
SEC 2 FAULT	FULL	0	1 620	+ 50	+ 120	+ 90	+ 220	+ 70	+ 60	- 50	+ 550
	3	6	1 770	+ 50	+ 120	+ 90	+ 240	+ 80	+ 70	- 60	+ 540
SEC 2+3 FAULT	FULL	0	1 820	+ 60	+ 160	+ 100	+ 250	+ 90	+ 90	- 80	+ 540
	3	6	2 010	+ 60	+ 170	+ 120	+ 280	+ 100	+ 110	- 100	+ 560
SEC 1+3 FAULT	FULL	0	1 990	+ 70	+ 190	+ 120	+ 280	+ 100	+ 120	- 130	+ 540
	3	6	2 200	+ 70	+ 210	+ 140	+ 310	+ 110	+ 150	- 160	+ 550
SEC 1+2 FAULT	FULL	0	1 810	+ 60	+ 160	+ 100	+ 250	+ 90	+ 90	- 90	+ 560
	3	6	1 960	+ 60	+ 160	+ 110	+ 270	+ 100	+ 100	- 110	+ 540
RUDDER JAM	FULL	0	1 820	+ 60	+ 140	+ 110	+ 270	+ 90	+ 90	- 80	+ 420
	3	6	2 010	+ 60	+ 150	+ 130	+ 290	+ 100	+ 110	- 100	+ 430
SEC 1+2+3 FAULT	3	10	2 500	+ 80	+ 270	+ 160	+ 350	+ 140	+ 210	INOP	+ 510
ALTN LAW/ DIRECT LAW/ ELAC 1+2 FAULT/ L+R ELEV FAULT/ L(R) ELEV FAULT/ STAB JAM	3	10	1 800	+ 50	+ 120	+ 100	+ 230	+ 80	+ 60	- 60	+ 500

(1) Automatic Landing correction: add 140m - (2) Weight correction: subtract 10m per 1T below 78T

REF DIST without failure (valid for all FLAPS LEVER positions) = 1 520m



Continued from the previous page

FLIGHT CONTROLS SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

4 - GOOD TO MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
ONE SPLR FAULT with no SPOILER runaway suspected	FULL	0	1 870	+ 40	+ 100	+ 80	+ 200	+ 60	+ 80	- 100	+ 630
	3	6	2 030	+ 40	+ 110	+ 80	+ 200	+ 70	+ 90	- 120	+ 650
ONE SPLR FAULT with SPOILER runaway suspected	3	10	2 110	+ 40	+ 110	+ 90	+ 210	+ 70	+ 100	- 130	+ 600
TWO SPLR FAULT/ GND SPLR 1+2(3+4) FAULT	FULL	0	2 020	+ 40	+ 130	+ 80	+ 210	+ 80	+ 100	- 130	+ 630
	3	6	2 200	+ 40	+ 130	+ 90	+ 220	+ 80	+ 120	- 150	+ 650
THREE SPLR FAULT	FULL	0	2 120	+ 40	+ 140	+ 90	+ 220	+ 80	+ 120	- 150	+ 640
	3	6	2 300	+ 40	+ 140	+ 100	+ 230	+ 80	+ 140	- 170	+ 660
ALL SPLR FAULT	FULL	0	2 390	+ 50	+ 190	+ 110	+ 250	+ 90	+ 180	- 200	+ 650
	3	6	2 570	+ 50	+ 200	+ 120	+ 260	+ 100	+ 190	- 230	+ 670
GND SPLR FAULT	FULL	0	2 390	+ 50	+ 190	+ 110	+ 250	+ 90	+ 180	- 200	+ 650
	3	6	2 570	+ 50	+ 200	+ 120	+ 260	+ 100	+ 190	- 230	+ 670
SEC 1 or SEC 3 FAULT	FULL	0	1 940	+ 40	+ 110	+ 80	+ 200	+ 70	+ 90	- 120	+ 640
	3	6	2 080	+ 40	+ 110	+ 90	+ 210	+ 70	+ 100	- 130	+ 640
SEC 2 FAULT	FULL	0	1 830	+ 30	+ 100	+ 70	+ 200	+ 60	+ 80	- 100	+ 640
	3	6	1 970	+ 40	+ 100	+ 80	+ 200	+ 60	+ 80	- 110	+ 640
SEC 2+3 FAULT	FULL	0	2 040	+ 40	+ 130	+ 80	+ 210	+ 80	+ 110	- 130	+ 640
	3	6	2 220	+ 40	+ 130	+ 90	+ 220	+ 80	+ 120	- 160	+ 660
SEC 1+3 FAULT	FULL	0	2 220	+ 40	+ 160	+ 100	+ 230	+ 80	+ 140	- 200	+ 640
	3	6	2 410	+ 40	+ 160	+ 110	+ 240	+ 90	+ 160	- 230	+ 660
SEC 1+2 FAULT	FULL	0	2 040	+ 40	+ 120	+ 80	+ 220	+ 70	+ 110	- 150	+ 650
	3	6	2 170	+ 40	+ 130	+ 90	+ 220	+ 80	+ 110	- 170	+ 640
RUDDER JAM	FULL	0	2 040	+ 50	+ 120	+ 100	+ 240	+ 70	+ 110	- 120	+ 520
	3	6	2 220	+ 50	+ 130	+ 110	+ 250	+ 90	+ 130	- 150	+ 520
SEC 1+2+3 FAULT	3	10	2 690	+ 50	+ 210	+ 120	+ 260	+ 100	+ 210	INOP	+ 610
ALTN LAW/ DIRECT LAW/ ELAC 1+2 FAULT/ L+R ELEV FAULT/ L(R) ELEV FAULT/ STAB JAM	3	10	1 990	+ 40	+ 100	+ 80	+ 200	+ 70	+ 80	- 110	+ 590

(1) Automatic Landing correction: add 140m - (2) Weight correction: subtract 10m per 1T below 78T

REF DIST without failure (valid for all FLAPS LEVER positions) = 1 730m



Continued from the previous page

FLIGHT CONTROLS SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

3 - MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
ONE SPLR FAULT with no SPOILER runaway suspected	FULL	0	2 090	+ 40	+ 110	+ 90	+ 230	+ 70	+ 120	- 140	+ 590
	3	6	2 280	+ 40	+ 120	+ 100	+ 240	+ 80	+ 130	- 170	+ 610
ONE SPLR FAULT with SPOILER runaway suspected	3	10	2 360	+ 40	+ 120	+ 100	+ 250	+ 80	+ 140	- 170	+ 560
TWO SPLR FAULT/ GND SPLR 1+2(3+4) FAULT	FULL	0	2 270	+ 40	+ 130	+ 100	+ 250	+ 80	+ 150	- 180	+ 590
	3	6	2 470	+ 50	+ 150	+ 110	+ 260	+ 90	+ 170	- 210	+ 610
THREE SPLR FAULT	FULL	0	2 390	+ 50	+ 150	+ 110	+ 260	+ 90	+ 170	- 200	+ 600
	3	6	2 590	+ 50	+ 170	+ 120	+ 270	+ 100	+ 190	- 230	+ 620
ALL SPLR FAULT	FULL	0	2 710	+ 50	+ 210	+ 130	+ 290	+ 110	+ 250	- 280	+ 610
	3	6	2 920	+ 60	+ 220	+ 140	+ 300	+ 120	+ 280	- 310	+ 630
GND SPLR FAULT	FULL	0	2 710	+ 50	+ 210	+ 130	+ 290	+ 110	+ 250	- 280	+ 610
	3	6	2 920	+ 60	+ 220	+ 140	+ 300	+ 120	+ 280	- 310	+ 630
SEC 1 or SEC 3 FAULT	FULL	0	2 180	+ 40	+ 120	+ 90	+ 240	+ 70	+ 130	- 160	+ 600
	3	6	2 330	+ 40	+ 130	+ 100	+ 250	+ 80	+ 140	- 180	+ 600
SEC 2 FAULT	FULL	0	2 040	+ 40	+ 110	+ 80	+ 230	+ 70	+ 110	- 130	+ 600
	3	6	2 200	+ 40	+ 110	+ 90	+ 240	+ 80	+ 120	- 150	+ 600
SEC 2+3 FAULT	FULL	0	2 300	+ 40	+ 140	+ 100	+ 250	+ 80	+ 150	- 180	+ 600
	3	6	2 500	+ 50	+ 150	+ 110	+ 260	+ 90	+ 170	- 210	+ 620
SEC 1+3 FAULT	FULL	0	2 510	+ 50	+ 170	+ 110	+ 270	+ 90	+ 200	- 260	+ 600
	3	6	2 730	+ 50	+ 180	+ 130	+ 280	+ 100	+ 220	- 300	+ 610
SEC 1+2 FAULT	FULL	0	2 290	+ 40	+ 140	+ 100	+ 250	+ 80	+ 150	- 200	+ 610
	3	6	2 440	+ 50	+ 140	+ 110	+ 260	+ 90	+ 160	- 220	+ 600
RUDDER JAM	FULL	0	2 260	+ 50	+ 130	+ 120	+ 280	+ 90	+ 150	- 160	+ 480
	3	6	2 460	+ 60	+ 140	+ 130	+ 290	+ 100	+ 170	- 190	+ 480
SEC 1+2+3 FAULT	3	10	3 060	+ 60	+ 230	+ 140	+ 310	+ 120	+ 290	INOP	+ 570
ALTN LAW/ DIRECT LAW/ ELAC 1+2 FAULT/ L+R ELEV FAULT/ L(R) ELEV FAULT/ STAB JAM	3	10	2 220	+ 40	+ 100	+ 90	+ 240	+ 70	+ 110	- 150	+ 550

(1) Automatic Landing correction: add 140m - (2) Weight correction: subtract 20m per 1T below 78T
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 930m



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FLIGHT CONTROLS SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

2 - MEDIUM TO POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
ONE SPLR FAULT with no SPOILER runaway suspected	FULL	0	2 440	+ 70	+ 170	+ 150	+ 400	+ 120	+ 200	- 170	+ 390
	3	6	2 760	+ 80	+ 190	+ 180	+ 430	+ 140	+ 250	- 220	+ 400
ONE SPLR FAULT with SPOILER runaway suspected	3	10	2 870	+ 80	+ 190	+ 180	+ 430	+ 150	+ 260	- 240	+ 380
TWO SPLR FAULT/ GND SPLR 1+2(3+4) FAULT	FULL	0	2 690	+ 80	+ 210	+ 180	+ 440	+ 150	+ 260	- 220	+ 380
	3	6	3 050	+ 90	+ 230	+ 200	+ 490	+ 160	+ 340	- 280	+ 400
THREE SPLR FAULT	FULL	0	2 890	+ 90	+ 240	+ 200	+ 480	+ 160	+ 330	- 260	+ 390
	3	6	3 250	+ 100	+ 270	+ 230	+ 520	+ 190	+ 410	- 320	+ 410
ALL SPLR FAULT	FULL	0	3 400	+ 120	+ 340	+ 260	+ 590	+ 210	+ 560	- 370	+ 400
	3	6	3 800	+ 120	+ 360	+ 300	+ 630	+ 220	+ 680	- 450	+ 400
GND SPLR FAULT	FULL	0	3 400	+ 120	+ 340	+ 260	+ 590	+ 210	+ 560	- 370	+ 400
	3	6	3 800	+ 120	+ 360	+ 300	+ 630	+ 220	+ 680	- 450	+ 400
SEC 1 or SEC 3 FAULT	FULL	0	2 570	+ 80	+ 200	+ 160	+ 420	+ 140	+ 230	- 200	+ 390
	3	6	2 810	+ 80	+ 200	+ 180	+ 440	+ 150	+ 260	- 230	+ 390
SEC 2 FAULT	FULL	0	2 380	+ 70	+ 170	+ 150	+ 380	+ 120	+ 180	- 160	+ 390
	3	6	2 620	+ 80	+ 170	+ 160	+ 410	+ 130	+ 210	- 200	+ 390
SEC 2+3 FAULT	FULL	0	2 750	+ 90	+ 220	+ 180	+ 460	+ 150	+ 280	- 230	+ 390
	3	6	3 110	+ 100	+ 240	+ 210	+ 500	+ 170	+ 360	- 290	+ 410
SEC 1+3 FAULT	FULL	0	3 070	+ 100	+ 270	+ 220	+ 520	+ 170	+ 400	- 360	+ 390
	3	6	3 460	+ 110	+ 300	+ 250	+ 570	+ 200	+ 500	- 460	+ 400
SEC 1+2 FAULT	FULL	0	2 760	+ 90	+ 220	+ 180	+ 460	+ 150	+ 290	- 270	+ 400
	3	6	2 990	+ 90	+ 220	+ 200	+ 480	+ 160	+ 320	- 310	+ 390
RUDDER JAM	FULL	0	2 540	+ 90	+ 180	+ 170	+ 420	+ 130	+ 220	- 190	+ 320
	3	6	2 820	+ 90	+ 180	+ 200	+ 460	+ 140	+ 270	- 240	+ 320
SEC 1+2+3 FAULT	3	10	4 000	+ 120	+ 360	+ 310	+ 640	+ 240	+ 720	INOP	+ 380
ALTN LAW/ DIRECT LAW/ ELAC 1+2 FAULT/ L+R ELEV FAULT/ L(R) ELEV FAULT/ STAB JAM	3	10	2 640	+ 70	+ 160	+ 160	+ 390	+ 130	+ 200	- 190	+ 370

(1) Automatic Landing correction: add 180m - (2) Weight correction: subtract 30m per 1T below 78T

REF DIST without failure (valid for all FLAPS LEVER positions) = 2 220m



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FLIGHT CONTROLS SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

1 - POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
ONE SPLR FAULT with no SPOILER runway suspected	FULL	0	3 710	+ 70	+ 170	+ 200	+ 590	+ 160	+ 870	- 500	+ 390
	3	6	4 150	+ 80	+ 190	+ 230	+ 630	+ 170	+ 1 030	- 600	+ 400
ONE SPLR FAULT with SPOILER runway suspected	3	10	4 260	+ 80	+ 190	+ 230	+ 630	+ 180	+ 1 030	- 610	+ 380
TWO SPLR FAULT/ GND SPLR 1+2(3+4) FAULT	FULL	0	4 120	+ 80	+ 200	+ 230	+ 630	+ 170	+ 1 090	- 610	+ 380
	3	6	4 580	+ 80	+ 220	+ 260	+ 660	+ 190	+ 1 260	- 720	+ 400
THREE SPLR FAULT	FULL	0	4 440	+ 80	+ 230	+ 250	+ 660	+ 190	+ 1 280	- 700	+ 390
	3	6	4 900	+ 90	+ 260	+ 280	+ 690	+ 210	+ 1 450	- 810	+ 410
ALL SPLR FAULT	FULL	0	Landing Distance greater than 6 000 m for all conditions								
	3	6	Landing Distance greater than 6 000 m for all conditions								
GND SPLR FAULT	FULL	0	Landing Distance greater than 6 000 m for all conditions								
	3	6	Landing Distance greater than 6 000 m for all conditions								
SEC 1 or SEC 3 FAULT	FULL	0	3 940	+ 70	+ 190	+ 210	+ 610	+ 170	+ 990	- 560	+ 390
	3	6	4 210	+ 80	+ 190	+ 230	+ 630	+ 180	+ 1 060	- 610	+ 390
SEC 2 FAULT	FULL	0	3 630	+ 70	+ 170	+ 190	+ 580	+ 150	+ 840	- 480	+ 390
	3	6	3 920	+ 70	+ 170	+ 210	+ 600	+ 170	+ 910	- 540	+ 390
SEC 2+3 FAULT	FULL	0	4 210	+ 80	+ 210	+ 240	+ 640	+ 180	+ 1 140	- 640	+ 390
	3	6	4 680	+ 90	+ 240	+ 270	+ 670	+ 200	+ 1 320	- 750	+ 410
SEC 1+3 FAULT	FULL	0	4 710	+ 90	+ 260	+ 270	+ 690	+ 200	+ 1 450	- 870	+ 390
	3	6	5 200	+ 90	+ 280	+ 310	+ 720	+ 220	+ 1 660	- 1 030	+ 400
SEC 1+2 FAULT	FULL	0	4 240	+ 80	+ 210	+ 240	+ 640	+ 180	+ 1 160	- 690	+ 400
	3	6	4 490	+ 80	+ 210	+ 250	+ 660	+ 180	+ 1 210	- 740	+ 400
RUDDER JAM	FULL	0	3 730	+ 90	+ 180	+ 230	+ 630	+ 170	+ 870	- 500	+ 320
	3	6	4 070	+ 90	+ 180	+ 250	+ 670	+ 180	+ 980	- 560	+ 320
SEC 1+2+3 FAULT	3	10	Landing Distance greater than 6 000 m for all conditions								
ALTN LAW/ DIRECT LAW/ ELAC 1+2 FAULT/ L+R ELEV FAULT/ L(R) ELEV FAULT/ STAB JAM	3	10	3 900	+ 70	+ 160	+ 210	+ 590	+ 160	+ 860	- 510	+ 370

(1) Automatic Landing correction: add 170m - (2) Weight correction: subtract 30m per 1T below 78T

REF DIST without failure (valid for all FLAPS LEVER positions) = 3 430m

 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-27 19/30 06 MAR 14

Ident.: PER-27-00014168.0028001 / 28 FEB 14
Applicable to: MSN 1219-1233

FLIGHT CONTROLS SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

6 - DRY											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
ONE SPLR FAULT with no SPOILER runaway suspected	FULL	0	1 300	+ 50	+ 90	+ 50	+ 150	+ 50	+ 30	- 20	+ 660
	3	6	1 390	+ 50	+ 90	+ 60	+ 160	+ 60	+ 40	- 30	+ 660
ONE SPLR FAULT with SPOILER runaway suspected	3	10	1 440	+ 50	+ 100	+ 60	+ 170	+ 60	+ 40	- 30	+ 620
TWO SPLR FAULT/ GND SPLR 1+2(3+4) FAULT	FULL	0	1 380	+ 50	+ 100	+ 50	+ 140	+ 50	+ 40	- 30	+ 690
	3	6	1 480	+ 50	+ 100	+ 60	+ 160	+ 60	+ 40	- 30	+ 700
THREE SPLR FAULT	FULL	0	1 430	+ 50	+ 100	+ 60	+ 150	+ 50	+ 40	- 30	+ 710
	3	6	1 530	+ 50	+ 110	+ 60	+ 160	+ 50	+ 40	- 40	+ 730
ALL SPLR FAULT	FULL	0	1 560	+ 50	+ 130	+ 60	+ 150	+ 60	+ 50	- 50	+ 740
	3	6	1 670	+ 50	+ 140	+ 70	+ 160	+ 60	+ 60	- 50	+ 770
GND SPLR FAULT	FULL	0	1 560	+ 50	+ 130	+ 60	+ 150	+ 60	+ 50	- 50	+ 740
	3	6	1 670	+ 50	+ 140	+ 70	+ 160	+ 60	+ 60	- 50	+ 770
SEC 1 or SEC 3 FAULT	FULL	0	1 330	+ 50	+ 100	+ 50	+ 150	+ 50	+ 40	- 20	+ 670
	3	6	1 420	+ 50	+ 100	+ 60	+ 160	+ 60	+ 40	- 30	+ 660
SEC 2 FAULT	FULL	0	1 280	+ 50	+ 80	+ 60	+ 160	+ 40	+ 30	- 20	+ 660
	3	6	1 370	+ 50	+ 90	+ 60	+ 170	+ 40	+ 30	- 20	+ 640
SEC 2+3 FAULT	FULL	0	1 390	+ 50	+ 100	+ 50	+ 150	+ 50	+ 40	- 30	+ 700
	3	6	1 490	+ 50	+ 100	+ 60	+ 160	+ 50	+ 40	- 30	+ 710
SEC 1+3 FAULT	FULL	0	1 480	+ 50	+ 120	+ 60	+ 150	+ 60	+ 50	- 40	+ 720
	3	6	1 590	+ 50	+ 120	+ 60	+ 160	+ 60	+ 50	- 40	+ 740
SEC 1+2 FAULT	FULL	0	1 380	+ 50	+ 100	+ 50	+ 150	+ 50	+ 40	- 30	+ 700
	3	6	1 470	+ 50	+ 100	+ 60	+ 160	+ 50	+ 40	- 30	+ 690
RUDDER JAM	FULL	0	1 460	+ 60	+ 120	+ 80	+ 200	+ 60	+ 50	- 30	+ 560
	3	6	1 610	+ 70	+ 130	+ 90	+ 210	+ 70	+ 60	- 30	+ 580
SEC 1+2+3 FAULT	3	10	1 750	+ 50	+ 140	+ 70	+ 170	+ 60	+ 60	INOP	+ 720
ALTN LAW/ DIRECT LAW/ ELAC 1+2 FAULT/ L+R ELEV FAULT/ L(R) ELEV FAULT/ STAB JAM	3	10	1 400	+ 50	+ 90	+ 70	+ 170	+ 50	+ 30	- 20	+ 580

(1) Automatic Landing correction: add 140m - (2) Weight correction: subtract 10m per 1T below 78T

REF DIST without failure (valid for all FLAPS LEVER positions) = 1 220m



 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-27 20/30
		06 MAR 14

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FLIGHT CONTROLS SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

5 - GOOD											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
ONE SPLR FAULT with no SPOILER runaway suspected	FULL	0	1 690	+ 50	+ 130	+ 80	+ 240	+ 80	+ 70	- 50	+ 530
	3	6	1 880	+ 60	+ 140	+ 100	+ 250	+ 90	+ 80	- 60	+ 550
ONE SPLR FAULT with SPOILER runaway suspected	3	10	1 970	+ 60	+ 140	+ 100	+ 260	+ 90	+ 90	- 70	+ 500
TWO SPLR FAULT/ GND SPLR 1+2(3+4) FAULT	FULL	0	1 850	+ 60	+ 160	+ 100	+ 260	+ 90	+ 90	- 70	+ 530
	3	6	2 060	+ 60	+ 170	+ 110	+ 290	+ 100	+ 110	- 90	+ 540
THREE SPLR FAULT	FULL	0	1 950	+ 60	+ 180	+ 100	+ 280	+ 100	+ 110	- 80	+ 540
	3	6	2 170	+ 70	+ 200	+ 120	+ 310	+ 110	+ 140	- 100	+ 560
ALL SPLR FAULT	FULL	0	2 240	+ 70	+ 260	+ 130	+ 330	+ 120	+ 190	- 130	+ 560
	3	6	2 490	+ 80	+ 270	+ 150	+ 360	+ 130	+ 220	- 160	+ 570
GND SPLR FAULT	FULL	0	2 240	+ 70	+ 260	+ 130	+ 330	+ 120	+ 190	- 130	+ 560
	3	6	2 490	+ 80	+ 270	+ 150	+ 360	+ 130	+ 220	- 160	+ 570
SEC 1 or SEC 3 FAULT	FULL	0	1 760	+ 50	+ 140	+ 90	+ 250	+ 90	+ 80	- 60	+ 540
	3	6	1 930	+ 60	+ 150	+ 100	+ 260	+ 90	+ 90	- 70	+ 530
SEC 2 FAULT	FULL	0	1 650	+ 50	+ 120	+ 80	+ 230	+ 70	+ 60	- 50	+ 540
	3	6	1 810	+ 50	+ 130	+ 90	+ 240	+ 80	+ 70	- 60	+ 530
SEC 2+3 FAULT	FULL	0	1 870	+ 60	+ 160	+ 100	+ 270	+ 90	+ 100	- 70	+ 540
	3	6	2 080	+ 60	+ 180	+ 110	+ 290	+ 100	+ 120	- 90	+ 550
SEC 1+3 FAULT	FULL	0	2 060	+ 60	+ 200	+ 110	+ 300	+ 100	+ 140	- 110	+ 540
	3	6	2 300	+ 70	+ 220	+ 130	+ 330	+ 110	+ 170	- 130	+ 550
SEC 1+2 FAULT	FULL	0	1 860	+ 60	+ 160	+ 100	+ 270	+ 90	+ 100	- 80	+ 550
	3	6	2 030	+ 60	+ 160	+ 110	+ 280	+ 90	+ 110	- 90	+ 540
RUDDER JAM	FULL	0	1 870	+ 60	+ 150	+ 110	+ 280	+ 90	+ 100	- 70	+ 420
	3	6	2 080	+ 60	+ 160	+ 120	+ 300	+ 110	+ 120	- 90	+ 430
SEC 1+2+3 FAULT	3	10	2 650	+ 80	+ 280	+ 160	+ 370	+ 140	+ 240	INOP	+ 510
ALTN LAW/ DIRECT LAW/ ELAC 1+2 FAULT/ L+R ELEV FAULT/ L(R) ELEV FAULT/ STAB JAM	3	10	1 840	+ 50	+ 130	+ 90	+ 240	+ 80	+ 70	- 60	+ 490

(1) Automatic Landing correction: add 180m - (2) Weight correction: subtract 20m per 1T below 78T
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 550m



 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-27 21/30 06 MAR 14

Continued from the previous page

FLIGHT CONTROLS SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

4 - GOOD TO MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
ONE SPLR FAULT with no SPOILER runaway suspected	FULL	0	1 910	+ 40	+ 110	+ 70	+ 200	+ 60	+ 90	- 80	+ 620
	3	6	2 090	+ 40	+ 110	+ 80	+ 210	+ 70	+ 100	- 100	+ 640
ONE SPLR FAULT with SPOILER runaway suspected	3	10	2 170	+ 40	+ 110	+ 80	+ 220	+ 70	+ 100	- 100	+ 590
TWO SPLR FAULT/ GND SPLR 1+2(3+4) FAULT	FULL	0	2 080	+ 40	+ 130	+ 80	+ 220	+ 70	+ 110	- 110	+ 620
	3	6	2 270	+ 40	+ 140	+ 90	+ 230	+ 80	+ 130	- 130	+ 640
THREE SPLR FAULT	FULL	0	2 190	+ 40	+ 140	+ 80	+ 230	+ 80	+ 130	- 120	+ 630
	3	6	2 380	+ 40	+ 160	+ 90	+ 230	+ 90	+ 150	- 140	+ 650
ALL SPLR FAULT	FULL	0	2 490	+ 50	+ 200	+ 100	+ 250	+ 90	+ 200	- 180	+ 650
	3	6	2 700	+ 50	+ 210	+ 110	+ 260	+ 100	+ 220	- 210	+ 660
GND SPLR FAULT	FULL	0	2 490	+ 50	+ 200	+ 100	+ 250	+ 90	+ 200	- 180	+ 650
	3	6	2 700	+ 50	+ 210	+ 110	+ 260	+ 100	+ 220	- 210	+ 660
SEC 1 or SEC 3 FAULT	FULL	0	1 990	+ 40	+ 110	+ 80	+ 210	+ 70	+ 100	- 90	+ 630
	3	6	2 140	+ 40	+ 120	+ 80	+ 220	+ 70	+ 110	- 110	+ 630
SEC 2 FAULT	FULL	0	1 870	+ 30	+ 100	+ 70	+ 200	+ 60	+ 80	- 80	+ 630
	3	6	2 020	+ 40	+ 100	+ 80	+ 210	+ 70	+ 90	- 90	+ 630
SEC 2+3 FAULT	FULL	0	2 100	+ 40	+ 130	+ 80	+ 220	+ 80	+ 120	- 110	+ 630
	3	6	2 300	+ 40	+ 140	+ 90	+ 230	+ 80	+ 130	- 130	+ 650
SEC 1+3 FAULT	FULL	0	2 300	+ 40	+ 160	+ 90	+ 240	+ 90	+ 150	- 140	+ 630
	3	6	2 510	+ 40	+ 180	+ 100	+ 250	+ 90	+ 180	- 170	+ 650
SEC 1+2 FAULT	FULL	0	2 090	+ 40	+ 130	+ 80	+ 220	+ 80	+ 120	- 110	+ 640
	3	6	2 240	+ 40	+ 130	+ 90	+ 220	+ 80	+ 120	- 120	+ 630
RUDDER JAM	FULL	0	2 090	+ 50	+ 130	+ 100	+ 250	+ 80	+ 120	- 100	+ 510
	3	6	2 300	+ 50	+ 130	+ 110	+ 260	+ 90	+ 140	- 130	+ 510
SEC 1+2+3 FAULT	3	10	2 840	+ 50	+ 220	+ 110	+ 270	+ 100	+ 230	INOP	+ 600
ALTN LAW/ DIRECT LAW/ ELAC 1+2 FAULT/ L+R ELEV FAULT/ L(R) ELEV FAULT/ STAB JAM	3	10	2 030	+ 40	+ 100	+ 80	+ 200	+ 70	+ 90	- 90	+ 580

(1) Automatic Landing correction: add 170m - (2) Weight correction: subtract 10m per 1T below 78T

REF DIST without failure (valid for all FLAPS LEVER positions) = 1 760m



Continued from the previous page

FLIGHT CONTROLS SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

3 - MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
ONE SPLR FAULT with no SPOILER runaway suspected	FULL	0	2 140	+ 40	+ 120	+ 80	+ 240	+ 80	+ 130	- 120	+ 580
	3	6	2 360	+ 40	+ 130	+ 90	+ 250	+ 80	+ 150	- 140	+ 600
ONE SPLR FAULT with SPOILER runaway suspected	3	10	2 440	+ 40	+ 130	+ 90	+ 250	+ 90	+ 150	- 140	+ 550
TWO SPLR FAULT/ GND SPLR 1+2(3+4) FAULT	FULL	0	2 340	+ 40	+ 140	+ 90	+ 250	+ 90	+ 160	- 150	+ 580
	3	6	2 580	+ 50	+ 150	+ 100	+ 270	+ 90	+ 190	- 170	+ 600
THREE SPLR FAULT	FULL	0	2 480	+ 50	+ 160	+ 100	+ 270	+ 90	+ 190	- 170	+ 590
	3	6	2 710	+ 50	+ 180	+ 110	+ 280	+ 100	+ 220	- 200	+ 610
ALL SPLR FAULT	FULL	0	2 850	+ 50	+ 220	+ 110	+ 300	+ 110	+ 290	- 250	+ 610
	3	6	3 100	+ 50	+ 240	+ 120	+ 310	+ 120	+ 320	- 280	+ 630
GND SPLR FAULT	FULL	0	2 850	+ 50	+ 220	+ 110	+ 300	+ 110	+ 290	- 250	+ 610
	3	6	3 100	+ 50	+ 240	+ 120	+ 310	+ 120	+ 320	- 280	+ 630
SEC 1 or SEC 3 FAULT	FULL	0	2 240	+ 40	+ 130	+ 90	+ 250	+ 80	+ 140	- 130	+ 590
	3	6	2 410	+ 40	+ 130	+ 90	+ 250	+ 90	+ 160	- 150	+ 590
SEC 2 FAULT	FULL	0	2 090	+ 40	+ 110	+ 80	+ 230	+ 80	+ 120	- 110	+ 590
	3	6	2 270	+ 40	+ 110	+ 90	+ 240	+ 80	+ 130	- 120	+ 590
SEC 2+3 FAULT	FULL	0	2 380	+ 40	+ 140	+ 90	+ 260	+ 80	+ 170	- 150	+ 590
	3	6	2 610	+ 50	+ 160	+ 100	+ 270	+ 90	+ 190	- 180	+ 610
SEC 1+3 FAULT	FULL	0	2 620	+ 50	+ 180	+ 100	+ 280	+ 90	+ 220	- 190	+ 590
	3	6	2 870	+ 50	+ 200	+ 110	+ 290	+ 110	+ 250	- 230	+ 610
SEC 1+2 FAULT	FULL	0	2 370	+ 40	+ 140	+ 90	+ 260	+ 80	+ 170	- 140	+ 600
	3	6	2 540	+ 50	+ 150	+ 100	+ 270	+ 90	+ 180	- 160	+ 600
RUDDER JAM	FULL	0	2 330	+ 50	+ 130	+ 110	+ 290	+ 90	+ 160	- 140	+ 470
	3	6	2 560	+ 60	+ 140	+ 120	+ 300	+ 100	+ 190	- 160	+ 480
SEC 1+2+3 FAULT	3	10	3 250	+ 50	+ 250	+ 130	+ 320	+ 130	+ 340	INOP	+ 570
ALTN LAW/ DIRECT LAW/ ELAC 1+2 FAULT/ L+R ELEV FAULT/ L(R) ELEV FAULT/ STAB JAM	3	10	2 280	+ 40	+ 110	+ 90	+ 240	+ 80	+ 130	- 120	+ 540

(1) Automatic Landing correction: add 180m - (2) Weight correction: subtract 20m per 1T below 78T
 REF DIST without failure (valid for all FLAPS LEVER positions) = 1 980m



Continued from the previous page

FLIGHT CONTROLS SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

2 - MEDIUM TO POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
ONE SPLR FAULT with no SPOILER runaway suspected	FULL	0	2 530	+ 70	+ 180	+ 140	+ 410	+ 130	+ 220	- 150	+ 390
	3	6	2 910	+ 80	+ 200	+ 160	+ 460	+ 150	+ 280	- 190	+ 410
ONE SPLR FAULT with SPOILER runaway suspected	3	10	3 030	+ 80	+ 190	+ 170	+ 470	+ 150	+ 290	- 210	+ 380
TWO SPLR FAULT/ GND SPLR 1+2(3+4) FAULT	FULL	0	2 820	+ 80	+ 220	+ 160	+ 460	+ 160	+ 300	- 190	+ 390
	3	6	3 240	+ 90	+ 240	+ 190	+ 520	+ 180	+ 390	- 250	+ 410
THREE SPLR FAULT	FULL	0	3 050	+ 90	+ 260	+ 180	+ 510	+ 170	+ 370	- 230	+ 400
	3	6	3 490	+ 100	+ 280	+ 210	+ 570	+ 200	+ 490	- 300	+ 420
ALL SPLR FAULT	FULL	0	3 660	+ 110	+ 360	+ 230	+ 640	+ 220	+ 670	- 350	+ 420
	3	6	4 160	+ 120	+ 390	+ 260	+ 700	+ 260	+ 850	- 460	+ 430
GND SPLR FAULT	FULL	0	3 660	+ 110	+ 360	+ 230	+ 640	+ 220	+ 670	- 350	+ 420
	3	6	4 160	+ 120	+ 390	+ 260	+ 700	+ 260	+ 850	- 460	+ 430
SEC 1 or SEC 3 FAULT	FULL	0	2 690	+ 80	+ 200	+ 150	+ 440	+ 140	+ 260	- 170	+ 400
	3	6	2 960	+ 80	+ 210	+ 170	+ 460	+ 160	+ 300	- 200	+ 400
SEC 2 FAULT	FULL	0	2 470	+ 70	+ 170	+ 140	+ 400	+ 120	+ 200	- 140	+ 390
	3	6	2 740	+ 80	+ 180	+ 150	+ 430	+ 140	+ 240	- 170	+ 400
SEC 2+3 FAULT	FULL	0	2 890	+ 90	+ 230	+ 170	+ 480	+ 150	+ 320	- 200	+ 400
	3	6	3 310	+ 90	+ 260	+ 190	+ 540	+ 190	+ 420	- 270	+ 420
SEC 1+3 FAULT	FULL	0	3 260	+ 100	+ 280	+ 200	+ 560	+ 180	+ 460	- 280	+ 400
	3	6	3 740	+ 110	+ 310	+ 230	+ 620	+ 210	+ 600	- 380	+ 420
SEC 1+2 FAULT	FULL	0	2 900	+ 90	+ 230	+ 170	+ 490	+ 160	+ 320	- 200	+ 410
	3	6	3 170	+ 90	+ 230	+ 180	+ 510	+ 170	+ 360	- 240	+ 400
RUDDER JAM	FULL	0	2 640	+ 80	+ 190	+ 160	+ 440	+ 140	+ 250	- 170	+ 320
	3	6	2 970	+ 90	+ 190	+ 180	+ 490	+ 150	+ 310	- 210	+ 330
SEC 1+2+3 FAULT	3	10	4 390	+ 120	+ 380	+ 280	+ 710	+ 260	+ 890	INOP	+ 410
ALTN LAW/ DIRECT LAW/ ELAC 1+2 FAULT/ L+R ELEV FAULT/ L(R) ELEV FAULT/ STAB JAM	3	10	2 760	+ 70	+ 170	+ 150	+ 410	+ 140	+ 220	- 160	+ 370

(1) Automatic Landing correction: add 210m - (2) Weight correction: subtract 30m per 1T below 78T

REF DIST without failure (valid for all FLAPS LEVER positions) = 2 290m



 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-27 24/30
		06 MAR 14

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FLIGHT CONTROLS SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

1 - POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
ONE SPLR FAULT with no SPOILER runaway suspected	FULL	0	3 970	+ 70	+ 170	+ 160	+ 600	+ 160	+ 1 030	- 480	+ 390
	3	6	4 500	+ 80	+ 190	+ 180	+ 630	+ 180	+ 1 230	- 580	+ 410
ONE SPLR FAULT with SPOILER runaway suspected	3	10	4 620	+ 80	+ 190	+ 190	+ 630	+ 190	+ 1 240	- 590	+ 380
TWO SPLR FAULT/ GND SPLR 1+2(3+4) FAULT	FULL	0	4 450	+ 80	+ 200	+ 180	+ 640	+ 180	+ 1 300	- 600	+ 390
	3	6	5 030	+ 90	+ 230	+ 200	+ 670	+ 200	+ 1 550	- 720	+ 410
THREE SPLR FAULT	FULL	0	4 840	+ 80	+ 230	+ 200	+ 670	+ 190	+ 1 550	- 710	+ 400
	3	6	5 440	+ 90	+ 250	+ 220	+ 710	+ 210	+ 1 840	- 840	+ 420
ALL SPLR FAULT	FULL	0	5 830	+ 100	+ 350	+ 260	+ 820	+ 250	+ 1 820	- 1 010	+ 420
	3	6	Landing Distance greater than 6 000 m for all conditions								
GND SPLR FAULT	FULL	0	5 830	+ 100	+ 350	+ 260	+ 820	+ 250	+ 1 820	- 1 010	+ 420
	3	6	Landing Distance greater than 6 000 m for all conditions								
SEC 1 or SEC 3 FAULT	FULL	0	4 240	+ 80	+ 190	+ 170	+ 620	+ 170	+ 1 180	- 550	+ 400
	3	6	4 580	+ 80	+ 190	+ 190	+ 640	+ 180	+ 1 280	- 600	+ 400
SEC 2 FAULT	FULL	0	3 880	+ 70	+ 160	+ 160	+ 590	+ 150	+ 990	- 460	+ 390
	3	6	4 230	+ 70	+ 170	+ 170	+ 610	+ 170	+ 1 090	- 520	+ 400
SEC 2+3 FAULT	FULL	0	4 570	+ 80	+ 210	+ 180	+ 650	+ 180	+ 1 380	- 630	+ 400
	3	6	5 160	+ 90	+ 230	+ 210	+ 690	+ 200	+ 1 640	- 760	+ 420
SEC 1+3 FAULT	FULL	0	Landing Distance greater than 6 000 m for all conditions								
	3	6	Landing Distance greater than 6 000 m for all conditions								
SEC 1+2 FAULT	FULL	0	4 600	+ 80	+ 210	+ 190	+ 650	+ 180	+ 1 400	- 520	+ 410
	3	6	4 920	+ 80	+ 210	+ 200	+ 670	+ 190	+ 1 490	- 570	+ 400
RUDDER JAM	FULL	0	3 990	+ 90	+ 170	+ 190	+ 650	+ 170	+ 1 030	- 470	+ 320
	3	6	4 400	+ 90	+ 190	+ 210	+ 690	+ 190	+ 1 170	- 540	+ 330
SEC 1+2+3 FAULT	3	10	Landing Distance greater than 6 000 m for all conditions								
ALTN LAW/ DIRECT LAW/ ELAC 1+2 FAULT/ L+R ELEV FAULT/ L(R) ELEV FAULT/ STAB JAM	3	10	4 190	+ 70	+ 160	+ 170	+ 600	+ 170	+ 1 020	- 490	+ 380

(1) Automatic Landing correction: add 210m - (2) Weight correction: subtract 30m per 1T below 78T
REF DIST without failure (valid for all FLAPS LEVER positions) = 3 650m

 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-27 25/30 06 MAR 14

Ident.: PER-27-00014168.0017001 / 28 FEB 14
Applicable to: MSN 2649

FLIGHT CONTROLS SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

6 - DRY											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 66T	Per 1T above 66T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
ONE SPLR FAULT with no SPOILER runaway suspected	FULL	0	1 150	+ 40	+ 70	+ 40	+ 120	+ 30	+ 20	- 20	+ 760
	3	6	1 220	+ 50	+ 80	+ 50	+ 130	+ 40	+ 20	- 30	+ 960
ONE SPLR FAULT with SPOILER runaway suspected	3	10	1 270	+ 50	+ 80	+ 50	+ 120	+ 50	+ 30	- 30	+ 900
TWO SPLR FAULT/ GND SPLR 1+2(3+4) FAULT	FULL	0	1 190	+ 40	+ 80	+ 40	+ 120	+ 40	+ 20	- 30	+ 800
	3	6	1 260	+ 50	+ 80	+ 50	+ 130	+ 40	+ 20	- 30	+ 1 000
THREE SPLR FAULT	FULL	0	1 230	+ 40	+ 90	+ 50	+ 120	+ 40	+ 30	- 30	+ 800
	3	6	1 300	+ 40	+ 90	+ 50	+ 120	+ 40	+ 30	- 40	+ 1 010
ALL SPLR FAULT	FULL	0	1 340	+ 40	+ 120	+ 50	+ 130	+ 50	+ 40	- 50	+ 840
	3	6	1 410	+ 40	+ 110	+ 60	+ 130	+ 40	+ 40	- 50	+ 1 050
GND SPLR FAULT	FULL	0	1 340	+ 40	+ 120	+ 50	+ 130	+ 50	+ 40	- 50	+ 840
	3	6	1 410	+ 40	+ 110	+ 60	+ 130	+ 40	+ 40	- 50	+ 1 050
SEC 1 or SEC 3 FAULT	FULL	0	1 150	+ 40	+ 80	+ 40	+ 120	+ 40	+ 20	- 20	+ 780
	3	6	1 230	+ 50	+ 80	+ 50	+ 130	+ 40	+ 20	- 30	+ 970
SEC 2 FAULT	FULL	0	1 120	+ 40	+ 70	+ 40	+ 120	+ 40	+ 20	- 20	+ 760
	3	6	1 210	+ 50	+ 80	+ 50	+ 120	+ 40	+ 20	- 20	+ 950
SEC 2+3 FAULT	FULL	0	1 220	+ 40	+ 90	+ 40	+ 120	+ 40	+ 30	- 30	+ 790
	3	6	1 290	+ 40	+ 90	+ 50	+ 120	+ 40	+ 30	- 30	+ 1 000
SEC 1+3 FAULT	FULL	0	1 280	+ 40	+ 100	+ 50	+ 120	+ 40	+ 30	- 40	+ 800
	3	6	1 350	+ 40	+ 100	+ 50	+ 130	+ 40	+ 30	- 50	+ 1 020
SEC 1+2 FAULT	FULL	0	1 180	+ 40	+ 80	+ 40	+ 120	+ 40	+ 20	- 30	+ 790
	3	6	1 260	+ 50	+ 80	+ 50	+ 130	+ 40	+ 20	- 30	+ 1 000
RUDDER JAM	FULL	0	1 240	+ 60	+ 100	+ 60	+ 140	+ 50	+ 30	- 20	+ 650
	3	6	1 390	+ 60	+ 110	+ 70	+ 150	+ 50	+ 40	- 30	+ 830
SEC 1+2+3 FAULT	3	10	1 470	+ 40	+ 110	+ 60	+ 130	+ 50	+ 40	INOP	+ 990
ALTN LAW/ DIRECT LAW/ ELAC 1+2 FAULT/ L+R ELEV FAULT/ L(R) ELEV FAULT/ STAB JAM	3	10	1 260	+ 50	+ 80	+ 50	+ 120	+ 50	+ 30	- 20	+ 880

(1) Automatic Landing correction: add 160m - (2) Weight correction: subtract 10m per 1T below 66T

REF DIST without failure (valid for all FLAPS LEVER positions) = 1 080m



Continued from the previous page

FLIGHT CONTROLS SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

5 - GOOD											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 66T	Per 1T above 66T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
ONE SPLR FAULT with no SPOILER runaway suspected	FULL	0	1 510	+ 50	+ 120	+ 80	+ 220	+ 60	+ 60	- 60	+ 550
	3	6	1 670	+ 60	+ 130	+ 100	+ 240	+ 80	+ 70	- 80	+ 700
ONE SPLR FAULT with SPOILER runaway suspected	3	10	1 750	+ 60	+ 130	+ 100	+ 250	+ 80	+ 70	- 80	+ 650
TWO SPLR FAULT/ GND SPLR 1+2(3+4) FAULT	FULL	0	1 600	+ 60	+ 140	+ 90	+ 230	+ 80	+ 70	- 70	+ 580
	3	6	1 770	+ 60	+ 150	+ 110	+ 260	+ 80	+ 90	- 90	+ 740
THREE SPLR FAULT	FULL	0	1 680	+ 60	+ 160	+ 100	+ 250	+ 80	+ 90	- 90	+ 570
	3	6	1 860	+ 70	+ 180	+ 120	+ 280	+ 90	+ 110	- 110	+ 740
ALL SPLR FAULT	FULL	0	1 920	+ 70	+ 220	+ 130	+ 300	+ 100	+ 140	- 130	+ 610
	3	6	2 110	+ 80	+ 250	+ 150	+ 330	+ 120	+ 170	- 160	+ 800
GND SPLR FAULT	FULL	0	1 920	+ 70	+ 220	+ 130	+ 300	+ 100	+ 140	- 130	+ 610
	3	6	2 110	+ 80	+ 250	+ 150	+ 330	+ 120	+ 170	- 160	+ 800
SEC 1 or SEC 3 FAULT	FULL	0	1 520	+ 50	+ 120	+ 80	+ 220	+ 70	+ 60	- 60	+ 570
	3	6	1 700	+ 60	+ 140	+ 100	+ 250	+ 80	+ 70	- 80	+ 730
SEC 2 FAULT	FULL	0	1 460	+ 50	+ 110	+ 80	+ 210	+ 60	+ 50	- 50	+ 560
	3	6	1 630	+ 60	+ 120	+ 90	+ 240	+ 70	+ 60	- 70	+ 710
SEC 2+3 FAULT	FULL	0	1 660	+ 60	+ 150	+ 100	+ 250	+ 70	+ 80	- 80	+ 560
	3	6	1 830	+ 60	+ 170	+ 110	+ 270	+ 90	+ 100	- 100	+ 730
SEC 1+3 FAULT	FULL	0	1 780	+ 60	+ 180	+ 110	+ 270	+ 80	+ 100	- 120	+ 570
	3	6	1 960	+ 70	+ 200	+ 130	+ 290	+ 100	+ 130	- 150	+ 750
SEC 1+2 FAULT	FULL	0	1 580	+ 60	+ 130	+ 90	+ 230	+ 70	+ 70	- 80	+ 580
	3	6	1 760	+ 60	+ 160	+ 110	+ 260	+ 90	+ 90	- 110	+ 740
RUDDER JAM	FULL	0	1 600	+ 60	+ 130	+ 100	+ 250	+ 70	+ 70	- 70	+ 450
	3	6	1 840	+ 70	+ 160	+ 130	+ 290	+ 90	+ 100	- 100	+ 560
SEC 1+2+3 FAULT	3	10	2 250	+ 80	+ 250	+ 160	+ 340	+ 120	+ 180	INOP	+ 740
ALTN LAW/ DIRECT LAW/ ELAC 1+2 FAULT/ L+R ELEV FAULT/ L(R) ELEV FAULT/ STAB JAM	3	10	1 660	+ 50	+ 120	+ 90	+ 230	+ 70	+ 60	- 70	+ 660

(1) Automatic Landing correction: add 240m - (2) Weight correction: subtract 20m per 1T below 66T

REF DIST without failure (valid for all FLAPS LEVER positions) = 1 370m



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FLIGHT CONTROLS SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

4 - GOOD TO MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 66T	Per 1T above 66T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
ONE SPLR FAULT with no SPOILER runaway suspected	FULL	0	1 740	+ 40	+ 100	+ 70	+ 190	+ 60	+ 80	- 100	+ 630
	3	6	1 900	+ 40	+ 110	+ 80	+ 200	+ 70	+ 90	- 120	+ 820
ONE SPLR FAULT with SPOILER runaway suspected	3	10	1 970	+ 40	+ 110	+ 80	+ 200	+ 70	+ 90	- 130	+ 760
TWO SPLR FAULT/ GND SPLR 1+2(3+4) FAULT	FULL	0	1 850	+ 40	+ 110	+ 80	+ 210	+ 60	+ 90	- 120	+ 660
	3	6	2 010	+ 40	+ 120	+ 90	+ 210	+ 70	+ 110	- 140	+ 850
THREE SPLR FAULT	FULL	0	1 940	+ 40	+ 130	+ 90	+ 210	+ 70	+ 110	- 140	+ 660
	3	6	2 110	+ 40	+ 140	+ 100	+ 220	+ 70	+ 120	- 160	+ 850
ALL SPLR FAULT	FULL	0	2 200	+ 50	+ 180	+ 100	+ 240	+ 80	+ 170	- 200	+ 700
	3	6	2 370	+ 50	+ 190	+ 110	+ 250	+ 90	+ 180	- 220	+ 910
GND SPLR FAULT	FULL	0	2 200	+ 50	+ 180	+ 100	+ 240	+ 80	+ 170	- 200	+ 700
	3	6	2 370	+ 50	+ 190	+ 110	+ 250	+ 90	+ 180	- 220	+ 910
SEC 1 or SEC 3 FAULT	FULL	0	1 760	+ 40	+ 100	+ 70	+ 200	+ 60	+ 80	- 110	+ 650
	3	6	1 930	+ 40	+ 120	+ 80	+ 200	+ 70	+ 100	- 130	+ 840
SEC 2 FAULT	FULL	0	1 690	+ 40	+ 90	+ 70	+ 190	+ 50	+ 70	- 90	+ 650
	3	6	1 860	+ 40	+ 100	+ 80	+ 200	+ 60	+ 80	- 120	+ 820
SEC 2+3 FAULT	FULL	0	1 910	+ 40	+ 120	+ 90	+ 210	+ 60	+ 110	- 130	+ 650
	3	6	2 070	+ 40	+ 140	+ 90	+ 220	+ 80	+ 120	- 160	+ 840
SEC 1+3 FAULT	FULL	0	2 040	+ 50	+ 150	+ 90	+ 220	+ 70	+ 130	- 180	+ 660
	3	6	2 210	+ 50	+ 160	+ 100	+ 230	+ 80	+ 150	- 210	+ 860
SEC 1+2 FAULT	FULL	0	1 820	+ 40	+ 120	+ 80	+ 200	+ 70	+ 90	- 130	+ 670
	3	6	2 000	+ 40	+ 130	+ 90	+ 210	+ 70	+ 110	- 160	+ 850
RUDDER JAM	FULL	0	1 830	+ 50	+ 120	+ 100	+ 230	+ 70	+ 90	- 110	+ 530
	3	6	2 080	+ 50	+ 130	+ 110	+ 250	+ 80	+ 120	- 150	+ 670
SEC 1+2+3 FAULT	3	10	2 490	+ 50	+ 190	+ 120	+ 250	+ 90	+ 190	INOP	+ 850
ALTN LAW/ DIRECT LAW/ ELAC 1+2 FAULT/ L+R ELEV FAULT/ L(R) ELEV FAULT/ STAB JAM	3	10	1 870	+ 40	+ 100	+ 80	+ 190	+ 70	+ 80	- 110	+ 760

(1) Automatic Landing correction: add 220m - (2) Weight correction: subtract 20m per 1T below 66T

REF DIST without failure (valid for all FLAPS LEVER positions) = 1 600m



Continued from the previous page

FLIGHT CONTROLS SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

3 - MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 66T	Per 1T above 66T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
ONE SPLR FAULT with no SPOILER runaway suspected	FULL	0	1 930	+ 40	+ 110	+ 90	+ 220	+ 60	+ 110	- 130	+ 600
	3	6	2 130	+ 50	+ 120	+ 100	+ 240	+ 70	+ 130	- 160	+ 770
ONE SPLR FAULT with SPOILER runaway suspected	3	10	2 200	+ 50	+ 120	+ 100	+ 240	+ 80	+ 130	- 170	+ 720
TWO SPLR FAULT/ GND SPLR 1+2(3+4) FAULT	FULL	0	2 060	+ 50	+ 130	+ 90	+ 240	+ 70	+ 130	- 160	+ 620
	3	6	2 260	+ 50	+ 140	+ 100	+ 250	+ 80	+ 150	- 190	+ 810
THREE SPLR FAULT	FULL	0	2 160	+ 50	+ 150	+ 100	+ 240	+ 80	+ 150	- 180	+ 620
	3	6	2 380	+ 50	+ 150	+ 110	+ 260	+ 80	+ 180	- 220	+ 810
ALL SPLR FAULT	FULL	0	2 470	+ 60	+ 200	+ 120	+ 280	+ 100	+ 230	- 250	+ 660
	3	6	2 690	+ 60	+ 220	+ 130	+ 290	+ 110	+ 260	- 290	+ 870
GND SPLR FAULT	FULL	0	2 470	+ 60	+ 200	+ 120	+ 280	+ 100	+ 230	- 250	+ 660
	3	6	2 690	+ 60	+ 220	+ 130	+ 290	+ 110	+ 260	- 290	+ 870
SEC 1 or SEC 3 FAULT	FULL	0	1 950	+ 40	+ 120	+ 90	+ 220	+ 70	+ 110	- 140	+ 620
	3	6	2 170	+ 50	+ 130	+ 100	+ 240	+ 80	+ 140	- 170	+ 790
SEC 2 FAULT	FULL	0	1 870	+ 40	+ 100	+ 80	+ 220	+ 60	+ 100	- 120	+ 610
	3	6	2 070	+ 40	+ 120	+ 90	+ 230	+ 80	+ 120	- 150	+ 770
SEC 2+3 FAULT	FULL	0	2 120	+ 50	+ 140	+ 100	+ 240	+ 80	+ 150	- 170	+ 610
	3	6	2 330	+ 50	+ 150	+ 110	+ 250	+ 90	+ 170	- 210	+ 800
SEC 1+3 FAULT	FULL	0	2 280	+ 50	+ 160	+ 110	+ 260	+ 80	+ 180	- 230	+ 620
	3	6	2 500	+ 50	+ 180	+ 120	+ 270	+ 100	+ 210	- 270	+ 820
SEC 1+2 FAULT	FULL	0	2 030	+ 50	+ 130	+ 90	+ 230	+ 70	+ 130	- 160	+ 630
	3	6	2 250	+ 50	+ 140	+ 100	+ 240	+ 90	+ 150	- 200	+ 810
RUDDER JAM	FULL	0	2 020	+ 50	+ 120	+ 110	+ 260	+ 80	+ 130	- 140	+ 490
	3	6	2 310	+ 60	+ 140	+ 130	+ 290	+ 100	+ 170	- 190	+ 630
SEC 1+2+3 FAULT	3	10	2 830	+ 60	+ 210	+ 140	+ 300	+ 110	+ 270	INOP	+ 800
ALTN LAW/ DIRECT LAW/ ELAC 1+2 FAULT/ L+R ELEV FAULT/ L(R) ELEV FAULT/ STAB JAM	3	10	2 090	+ 40	+ 110	+ 90	+ 230	+ 70	+ 110	- 150	+ 720

(1) Automatic Landing correction: add 240m - (2) Weight correction: subtract 20m per 1T below 66T
 REF DIST without failure (valid for all FLAPS LEVER positions) = 1 770m



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		06 MAR 14

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FLIGHT CONTROLS SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

2 - MEDIUM TO POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 66T	Per 1T above 66T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
ONE SPLR FAULT with no SPOILER runaway suspected	FULL	0	2 160	+ 80	+ 160	+ 140	+ 360	+ 100	+ 160	- 150	+ 410
	3	6	2 500	+ 90	+ 200	+ 170	+ 410	+ 140	+ 220	- 190	+ 520
ONE SPLR FAULT with SPOILER runaway suspected	3	10	2 620	+ 90	+ 190	+ 180	+ 420	+ 140	+ 230	- 210	+ 490
TWO SPLR FAULT/ GND SPLR 1+2(3+4) FAULT	FULL	0	2 350	+ 90	+ 190	+ 160	+ 400	+ 120	+ 210	- 180	+ 430
	3	6	2 730	+ 100	+ 230	+ 210	+ 470	+ 150	+ 290	- 230	+ 550
THREE SPLR FAULT	FULL	0	2 480	+ 90	+ 210	+ 180	+ 430	+ 130	+ 250	- 210	+ 430
	3	6	2 890	+ 110	+ 260	+ 230	+ 500	+ 170	+ 350	- 260	+ 550
ALL SPLR FAULT	FULL	0	2 920	+ 110	+ 300	+ 250	+ 530	+ 170	+ 430	- 300	+ 470
	3	6	3 420	+ 130	+ 360	+ 320	+ 620	+ 210	+ 620	- 370	+ 620
GND SPLR FAULT	FULL	0	2 920	+ 110	+ 300	+ 250	+ 530	+ 170	+ 430	- 300	+ 470
	3	6	3 420	+ 130	+ 360	+ 320	+ 620	+ 210	+ 620	- 370	+ 620
SEC 1 or SEC 3 FAULT	FULL	0	2 210	+ 80	+ 170	+ 150	+ 370	+ 110	+ 170	- 160	+ 420
	3	6	2 580	+ 90	+ 210	+ 180	+ 430	+ 140	+ 250	- 200	+ 530
SEC 2 FAULT	FULL	0	2 090	+ 70	+ 150	+ 130	+ 350	+ 100	+ 150	- 140	+ 420
	3	6	2 440	+ 90	+ 180	+ 170	+ 410	+ 120	+ 200	- 180	+ 520
SEC 2+3 FAULT	FULL	0	2 420	+ 90	+ 200	+ 170	+ 410	+ 130	+ 230	- 200	+ 420
	3	6	2 820	+ 100	+ 240	+ 220	+ 480	+ 160	+ 320	- 250	+ 540
SEC 1+3 FAULT	FULL	0	2 630	+ 100	+ 240	+ 200	+ 460	+ 140	+ 300	- 270	+ 430
	3	6	3 080	+ 120	+ 290	+ 260	+ 540	+ 180	+ 430	- 350	+ 560
SEC 1+2 FAULT	FULL	0	2 320	+ 80	+ 190	+ 160	+ 400	+ 120	+ 200	- 190	+ 430
	3	6	2 720	+ 100	+ 230	+ 200	+ 460	+ 150	+ 290	- 250	+ 550
RUDDER JAM	FULL	0	2 210	+ 80	+ 160	+ 160	+ 370	+ 110	+ 170	- 160	+ 340
	3	6	2 630	+ 110	+ 200	+ 210	+ 450	+ 140	+ 260	- 220	+ 410
SEC 1+2+3 FAULT	3	10	3 610	+ 130	+ 370	+ 330	+ 630	+ 220	+ 660	INOP	+ 570
ALTN LAW/ DIRECT LAW/ ELAC 1+2 FAULT/ L+R ELEV FAULT/ L(R) ELEV FAULT/ STAB JAM	3	10	2 460	+ 80	+ 170	+ 160	+ 390	+ 120	+ 190	- 180	+ 490

(1) Automatic Landing correction: add 340m - (2) Weight correction: subtract 30m per 1T below 66T

REF DIST without failure (valid for all FLAPS LEVER positions) = 1 950m



 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-27 30/30
		06 MAR 14

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FLIGHT CONTROLS SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

1 - POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 66T	Per 1T above 66T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
ONE SPLR FAULT with no SPOILER runaway suspected	FULL	0	3 220	+ 80	+ 160	+ 210	+ 510	+ 130	+ 620	- 360	+ 410
	3	6	3 760	+ 90	+ 190	+ 250	+ 560	+ 150	+ 800	- 480	+ 520
ONE SPLR FAULT with SPOILER runaway suspected	3	10	3 870	+ 90	+ 180	+ 260	+ 560	+ 160	+ 810	- 490	+ 490
TWO SPLR FAULT/ GND SPLR 1+2(3+4) FAULT	FULL	0	3 540	+ 80	+ 190	+ 240	+ 540	+ 150	+ 770	- 440	+ 430
	3	6	4 120	+ 90	+ 220	+ 290	+ 590	+ 180	+ 990	- 580	+ 550
THREE SPLR FAULT	FULL	0	3 740	+ 90	+ 210	+ 260	+ 560	+ 160	+ 870	- 490	+ 430
	3	6	4 360	+ 100	+ 250	+ 320	+ 620	+ 190	+ 1 130	- 640	+ 550
ALL SPLR FAULT	FULL	0	4 440	+ 100	+ 280	+ 340	+ 640	+ 190	+ 1 320	- 690	+ 470
	3	6	Landing Distance greater than 6 000 m for all conditions								
GND SPLR FAULT	FULL	0	4 440	+ 100	+ 280	+ 340	+ 640	+ 190	+ 1 320	- 690	+ 470
	3	6	Landing Distance greater than 6 000 m for all conditions								
SEC 1 or SEC 3 FAULT	FULL	0	3 320	+ 80	+ 170	+ 220	+ 520	+ 140	+ 660	- 390	+ 420
	3	6	3 890	+ 90	+ 200	+ 270	+ 570	+ 160	+ 870	- 510	+ 530
SEC 2 FAULT	FULL	0	3 130	+ 70	+ 150	+ 200	+ 500	+ 130	+ 580	- 340	+ 420
	3	6	3 650	+ 80	+ 190	+ 240	+ 540	+ 160	+ 750	- 460	+ 520
SEC 2+3 FAULT	FULL	0	3 640	+ 90	+ 200	+ 250	+ 550	+ 160	+ 820	- 470	+ 420
	3	6	4 240	+ 100	+ 240	+ 300	+ 600	+ 190	+ 1 060	- 610	+ 540
SEC 1+3 FAULT	FULL	0	3 960	+ 90	+ 230	+ 280	+ 590	+ 180	+ 1 000	- 490	+ 430
	3	6	4 640	+ 100	+ 270	+ 350	+ 650	+ 200	+ 1 320	- 710	+ 560
SEC 1+2 FAULT	FULL	0	3 500	+ 80	+ 190	+ 230	+ 540	+ 150	+ 750	- 360	+ 430
	3	6	4 100	+ 90	+ 220	+ 290	+ 590	+ 170	+ 980	- 510	+ 550
RUDDER JAM	FULL	0	3 190	+ 90	+ 150	+ 230	+ 540	+ 140	+ 600	- 350	+ 340
	3	6	3 800	+ 110	+ 200	+ 290	+ 610	+ 170	+ 820	- 480	+ 410
SEC 1+2+3 FAULT	3	10	Landing Distance greater than 6 000 m for all conditions								
ALTN LAW/ DIRECT LAW/ ELAC 1+2 FAULT/ L+R ELEV FAULT/ L(R) ELEV FAULT/ STAB JAM	3	10	3 630	+ 80	+ 170	+ 230	+ 540	+ 150	+ 700	- 440	+ 490

(1) Automatic Landing correction: add 310m - (2) Weight correction: subtract 40m per 1T below 66T

REF DIST without failure (valid for all FLAPS LEVER positions) = 2 950m

Ident.: PER-27A-00014169.0068001 / 28 FEB 14
Applicable to: MSN 2933-3034

SLATS AND FLAPS SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, $VAPP = VREF + \Delta VREF$ without APPR COR.

6 - DRY												
Corrections on Landing Distance (m)					WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE		FLAPS LEVER for LDG	$\Delta VREF$	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
FLAPS FAULT	FLAPS<1	3	30	1 770	+ 60	N/A	+ 80	+ 180	+ 70	+ 40	- 30	+ 1 310
	1≤FLAPS<2	3	15	1 490	+ 60	+ 100	+ 70	+ 170	+ 60	+ 40	- 30	+ 960
	2≤FLAPS<3	3	10	1 410	+ 50	+ 100	+ 70	+ 170	+ 60	+ 30	- 20	+ 840
	FLAPS=3	3	10	1 390	+ 50	+ 90	+ 70	+ 170	+ 50	+ 30	- 20	+ 590
	FLAPS>3	FULL	5	1 310	+ 50	+ 90	+ 60	+ 160	+ 50	+ 30	- 20	+ 570
SLATS FAULT	SLATS<1	3	25	1 600	+ 50	N/A	+ 70	+ 160	+ 60	+ 40	- 30	+ 470
	1≤SLATS≤3	3	10	1 390	+ 50	+ 90	+ 70	+ 170	+ 50	+ 30	- 20	+ 590
	SLATS>3	3	5	1 330	+ 50	+ 90	+ 60	+ 160	+ 50	+ 30	- 20	+ 660
FLAPS AND SLATS AT 0		1	50	2 170	+ 70	N/A	+ 90	+ 180	+ 90	+ 60	- 40	+ 1 100
FLAPS<1	SLATS<1	3	45	2 070	+ 70	N/A	+ 90	+ 180	+ 80	+ 50	- 40	+ 1 160
	SLATS≥1	3	30	1 770	+ 60	N/A	+ 80	+ 180	+ 70	+ 40	- 30	+ 1 310
1≤FLAPS<2	SLATS<1	3	30	1 740	+ 60	N/A	+ 80	+ 170	+ 60	+ 40	- 30	+ 830
	SLATS≥1	3	15	1 490	+ 60	+ 100	+ 70	+ 170	+ 60	+ 40	- 30	+ 960
2≤FLAPS<3	SLATS<1	3	25	1 640	+ 60	N/A	+ 80	+ 170	+ 60	+ 40	- 30	+ 730
	SLATS≥1	3	10	1 410	+ 50	+ 100	+ 70	+ 170	+ 60	+ 30	- 20	+ 840
FLAPS=3	SLATS<1	3	25	1 600	+ 60	N/A	+ 70	+ 170	+ 70	+ 40	- 30	+ 470
	1≤SLATS≤3	3	10	1 390	+ 50	+ 100	+ 70	+ 160	+ 60	+ 30	- 20	+ 590
	SLATS>3	3	5	1 320	+ 50	+ 90	+ 60	+ 160	+ 50	+ 30	- 20	+ 660
FLAPS>3	1≤SLATS≤3	FULL	10	1 380	+ 50	+ 90	+ 70	+ 170	+ 50	+ 30	- 20	+ 500
	SLATS>3	FULL	5	1 310	+ 50	+ 90	+ 60	+ 160	+ 50	+ 30	- 20	+ 570

(1) Automatic Landing correction: add 80m - (2) Weight correction: subtract 10m per 1T below 78T

REF DIST without failure (valid for all FLAPS LEVER positions) = 1 210m



Continued from the previous page

SLATS AND FLAPS SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

5 - GOOD												
Corrections on Landing Distance (m)					WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE		FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
FLAPS FAULT	FLAPS<1	3	30	2 240	+ 60	N/A	+ 130	+ 270	+ 100	+ 90	- 100	+ 1 030
	1≤FLAPS<2	3	15	1 970	+ 60	+ 130	+ 110	+ 260	+ 90	+ 80	- 80	+ 750
	2≤FLAPS<3	3	10	1 850	+ 60	+ 130	+ 100	+ 250	+ 90	+ 70	- 70	+ 690
	FLAPS=3	3	10	1 800	+ 50	+ 120	+ 100	+ 240	+ 90	+ 70	- 60	+ 490
	FLAPS>3	FULL	5	1 670	+ 50	+ 120	+ 90	+ 220	+ 70	+ 60	- 50	+ 480
SLATS FAULT	SLATS<1	3	25	2 090	+ 60	N/A	+ 110	+ 240	+ 90	+ 70	- 80	+ 360
	1≤SLATS≤3	3	10	1 800	+ 50	+ 120	+ 100	+ 230	+ 80	+ 60	- 60	+ 500
	SLATS>3	3	5	1 720	+ 50	+ 120	+ 90	+ 230	+ 70	+ 60	- 60	+ 550
FLAPS AND SLATS AT 0		1	50	2 770	+ 70	N/A	+ 160	+ 300	+ 130	+ 110	- 140	+ 810
FLAPS<1	SLATS<1	3	45	2 650	+ 70	N/A	+ 150	+ 290	+ 130	+ 110	- 130	+ 850
	SLATS≥1	3	30	2 240	+ 60	N/A	+ 130	+ 270	+ 100	+ 90	- 100	+ 1 030
1≤FLAPS<2	SLATS<1	3	30	2 280	+ 60	N/A	+ 130	+ 260	+ 100	+ 90	- 100	+ 600
	SLATS≥1	3	15	1 970	+ 60	+ 130	+ 110	+ 260	+ 90	+ 80	- 80	+ 750
2≤FLAPS<3	SLATS<1	3	25	2 150	+ 60	N/A	+ 120	+ 250	+ 100	+ 80	- 90	+ 520
	SLATS≥1	3	10	1 850	+ 60	+ 130	+ 100	+ 250	+ 90	+ 70	- 70	+ 690
FLAPS=3	SLATS<1	3	25	2 100	+ 60	N/A	+ 110	+ 240	+ 90	+ 70	- 90	+ 360
	1≤SLATS≤3	3	10	1 810	+ 50	+ 120	+ 100	+ 240	+ 80	+ 70	- 70	+ 490
	SLATS>3	3	5	1 710	+ 50	+ 120	+ 90	+ 230	+ 80	+ 60	- 60	+ 550
FLAPS>3	1≤SLATS≤3	FULL	10	1 770	+ 50	+ 110	+ 90	+ 230	+ 80	+ 60	- 60	+ 430
	SLATS>3	FULL	5	1 670	+ 50	+ 120	+ 90	+ 220	+ 70	+ 60	- 50	+ 480

(1) Automatic Landing correction: add 90m - (2) Weight correction: subtract 10m per 1T below 78T
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 520m



Continued from the previous page

SLATS AND FLAPS SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

4 - GOOD TO MEDIUM												
Corrections on Landing Distance (m)					WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE		FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
FLAPS FAULT	FLAPS<1	3	30	2 370	+ 40	N/A	+ 90	+ 210	+ 80	+ 100	- 140	+ 1 280
	1≤FLAPS<2	3	15	2 150	+ 40	+ 110	+ 90	+ 210	+ 80	+ 100	- 130	+ 930
	2≤FLAPS<3	3	10	2 050	+ 40	+ 100	+ 80	+ 210	+ 70	+ 90	- 120	+ 840
	FLAPS=3	3	10	2 000	+ 40	+ 100	+ 80	+ 200	+ 70	+ 90	- 120	+ 590
	FLAPS>3	FULL	5	1 880	+ 30	+ 90	+ 80	+ 200	+ 60	+ 80	- 100	+ 570
SLATS FAULT	SLATS<1	3	25	2 240	+ 40	N/A	+ 90	+ 200	+ 70	+ 80	- 120	+ 430
	1≤SLATS≤3	3	10	1 990	+ 40	+ 100	+ 80	+ 200	+ 70	+ 80	- 110	+ 590
	SLATS>3	3	5	1 910	+ 40	+ 100	+ 80	+ 200	+ 70	+ 80	- 100	+ 650
FLAPS AND SLATS AT 0		1	50	2 800	+ 40	N/A	+ 110	+ 220	+ 90	+ 110	- 180	+ 1 070
FLAPS<1	SLATS<1	3	45	2 710	+ 40	N/A	+ 110	+ 220	+ 90	+ 110	- 180	+ 1 120
	SLATS≥1	3	30	2 370	+ 40	N/A	+ 90	+ 210	+ 80	+ 100	- 140	+ 1 280
1≤FLAPS<2	SLATS<1	3	30	2 420	+ 40	N/A	+ 100	+ 210	+ 80	+ 100	- 150	+ 770
	SLATS≥1	3	15	2 150	+ 40	+ 110	+ 90	+ 210	+ 80	+ 100	- 130	+ 930
2≤FLAPS<3	SLATS<1	3	25	2 310	+ 40	N/A	+ 90	+ 210	+ 80	+ 100	- 140	+ 670
	SLATS≥1	3	10	2 050	+ 40	+ 100	+ 80	+ 210	+ 70	+ 90	- 120	+ 840
FLAPS=3	SLATS<1	3	25	2 260	+ 40	N/A	+ 90	+ 200	+ 80	+ 90	- 140	+ 430
	1≤SLATS≤3	3	10	2 010	+ 40	+ 100	+ 80	+ 200	+ 70	+ 90	- 120	+ 590
	SLATS>3	3	5	1 920	+ 40	+ 100	+ 80	+ 200	+ 70	+ 90	- 110	+ 650
FLAPS>3	1≤SLATS≤3	FULL	10	1 970	+ 40	+ 90	+ 80	+ 210	+ 60	+ 80	- 110	+ 510
	SLATS>3	FULL	5	1 880	+ 30	+ 90	+ 80	+ 200	+ 60	+ 80	- 100	+ 570

(1) Automatic Landing correction: add 90m - (2) Weight correction: subtract 10m per 1T below 78T

REF DIST without failure (valid for all FLAPS LEVER positions) = 1 730m



Continued from the previous page

SLATS AND FLAPS SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

3 - MEDIUM												
Corrections on Landing Distance (m)					WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE		FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
FLAPS FAULT	FLAPS<1	3	30	2 690	+ 40	N/A	+ 110	+ 250	+ 90	+ 140	- 210	+ 1 200
	1≤FLAPS<2	3	15	2 440	+ 40	+ 110	+ 100	+ 250	+ 80	+ 140	- 190	+ 870
	2≤FLAPS<3	3	10	2 320	+ 40	+ 110	+ 100	+ 250	+ 80	+ 140	- 170	+ 780
	FLAPS=3	3	10	2 250	+ 40	+ 110	+ 90	+ 240	+ 80	+ 130	- 160	+ 550
	FLAPS>3	FULL	5	2 110	+ 40	+ 100	+ 90	+ 240	+ 70	+ 120	- 150	+ 530
SLATS FAULT	SLATS<1	3	25	2 490	+ 40	N/A	+ 100	+ 230	+ 80	+ 120	- 160	+ 400
	1≤SLATS≤3	3	10	2 220	+ 40	+ 100	+ 90	+ 240	+ 70	+ 110	- 150	+ 550
	SLATS>3	3	5	2 140	+ 40	+ 100	+ 90	+ 230	+ 70	+ 110	- 140	+ 610
FLAPS AND SLATS AT 0		1	50	3 180	+ 50	N/A	+ 130	+ 270	+ 110	+ 170	- 260	+ 1 000
FLAPS<1	SLATS<1	3	45	3 080	+ 50	N/A	+ 130	+ 270	+ 100	+ 160	- 250	+ 1 050
	SLATS≥1	3	30	2 690	+ 40	N/A	+ 110	+ 250	+ 90	+ 140	- 210	+ 1 200
1≤FLAPS<2	SLATS<1	3	30	2 730	+ 40	N/A	+ 110	+ 250	+ 90	+ 150	- 220	+ 720
	SLATS≥1	3	15	2 440	+ 40	+ 110	+ 100	+ 250	+ 80	+ 140	- 190	+ 870
2≤FLAPS<3	SLATS<1	3	25	2 600	+ 40	N/A	+ 110	+ 250	+ 90	+ 140	- 200	+ 620
	SLATS≥1	3	10	2 320	+ 40	+ 110	+ 100	+ 250	+ 80	+ 140	- 170	+ 780
FLAPS=3	SLATS<1	3	25	2 530	+ 40	N/A	+ 100	+ 240	+ 90	+ 130	- 190	+ 400
	1≤SLATS≤3	3	10	2 260	+ 40	+ 110	+ 90	+ 240	+ 80	+ 130	- 160	+ 550
	SLATS>3	3	5	2 160	+ 40	+ 110	+ 90	+ 240	+ 80	+ 120	- 160	+ 610
FLAPS>3	1≤SLATS≤3	FULL	10	2 200	+ 40	+ 110	+ 90	+ 240	+ 80	+ 120	- 150	+ 480
	SLATS>3	FULL	5	2 110	+ 40	+ 100	+ 90	+ 240	+ 70	+ 120	- 150	+ 530

(1) Automatic Landing correction: add 100m - (2) Weight correction: subtract 20m per 1T below 78T
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 930m



Continued from the previous page

SLATS AND FLAPS SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

2 - MEDIUM TO POOR												
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW	
FAILURE		FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
FLAPS FAULT	FLAPS<1	3	30	3 600	+ 90	N/A	+ 230	+ 520	+ 190	+ 340	- 350	+ 760
	1≤FLAPS<2	3	15	3 080	+ 90	+ 200	+ 200	+ 480	+ 170	+ 290	- 280	+ 510
	2≤FLAPS<3	3	10	2 850	+ 80	+ 190	+ 180	+ 460	+ 150	+ 260	- 240	+ 460
	FLAPS=3	3	10	2 700	+ 80	+ 170	+ 160	+ 430	+ 140	+ 220	- 220	+ 360
	FLAPS>3	FULL	5	2 470	+ 70	+ 170	+ 150	+ 400	+ 130	+ 190	- 180	+ 350
SLATS FAULT	SLATS<1	3	25	3 020	+ 80	N/A	+ 170	+ 400	+ 140	+ 210	- 230	+ 310
	1≤SLATS≤3	3	10	2 640	+ 70	+ 160	+ 160	+ 390	+ 130	+ 200	- 190	+ 370
	SLATS>3	3	5	2 530	+ 70	+ 160	+ 150	+ 400	+ 120	+ 190	- 180	+ 400
FLAPS AND SLATS AT 0		1	50	4 390	+ 100	N/A	+ 270	+ 560	+ 220	+ 420	- 480	+ 630
FLAPS<1	SLATS<1	3	45	4 240	+ 100	N/A	+ 270	+ 560	+ 210	+ 420	- 460	+ 650
	SLATS≥1	3	30	3 600	+ 90	N/A	+ 230	+ 520	+ 190	+ 340	- 350	+ 760
1≤FLAPS<2	SLATS<1	3	30	3 520	+ 90	N/A	+ 220	+ 490	+ 170	+ 310	- 340	+ 450
	SLATS≥1	3	15	3 080	+ 90	+ 200	+ 200	+ 480	+ 170	+ 290	- 280	+ 510
2≤FLAPS<3	SLATS<1	3	25	3 270	+ 90	N/A	+ 200	+ 470	+ 160	+ 280	- 300	+ 400
	SLATS≥1	3	10	2 850	+ 80	+ 190	+ 180	+ 460	+ 150	+ 260	- 240	+ 460
FLAPS=3	SLATS<1	3	25	3 090	+ 80	N/A	+ 180	+ 430	+ 140	+ 230	- 260	+ 300
	1≤SLATS≤3	3	10	2 710	+ 80	+ 170	+ 170	+ 430	+ 130	+ 220	- 220	+ 360
	SLATS>3	3	5	2 570	+ 70	+ 170	+ 160	+ 430	+ 130	+ 220	- 200	+ 390
FLAPS>3	1≤SLATS≤3	FULL	10	2 600	+ 70	+ 160	+ 150	+ 400	+ 130	+ 200	- 200	+ 330
	SLATS>3	FULL	5	2 470	+ 70	+ 170	+ 150	+ 400	+ 130	+ 190	- 180	+ 350

(1) Automatic Landing correction: add 110m - (2) Weight correction: subtract 30m per 1T below 78T

REF DIST without failure (valid for all FLAPS LEVER positions) = 2 220m



Continued from the previous page

SLATS AND FLAPS SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

1 - POOR												
Corrections on Landing Distance (m)					WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE		FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
FLAPS FAULT	FLAPS<1	3	30	Landing Distance greater than 6 000 m for all conditions								
	1≤FLAPS<2	3	15	Landing Distance greater than 6 000 m for all conditions								
	2≤FLAPS<3	3	10	Landing Distance greater than 6 000 m for all conditions								
	FLAPS=3	3	10	Landing Distance greater than 6 000 m for all conditions								
	FLAPS>3	FULL	5	Landing Distance greater than 6 000 m for all conditions								
SLATS FAULT	SLATS<1	3	25	4 270	+ 70	N/A	+ 220	+ 600	+ 170	+ 860	- 550	+ 310
	1≤SLATS≤3	3	10	3 900	+ 70	+ 160	+ 210	+ 590	+ 160	+ 860	- 510	+ 370
	SLATS>3	3	5	3 790	+ 70	+ 160	+ 200	+ 590	+ 160	+ 860	- 500	+ 400
FLAPS AND SLATS AT 0		1	50	Landing Distance greater than 6 000 m for all conditions								
FLAPS<1	SLATS<1	3	45	Landing Distance greater than 6 000 m for all conditions								
	SLATS≥1	3	30	Landing Distance greater than 6 000 m for all conditions								
1≤FLAPS<2	SLATS<1	3	30	Landing Distance greater than 6 000 m for all conditions								
	SLATS≥1	3	15	Landing Distance greater than 6 000 m for all conditions								
2≤FLAPS<3	SLATS<1	3	25	Landing Distance greater than 6 000 m for all conditions								
	SLATS≥1	3	10	Landing Distance greater than 6 000 m for all conditions								
FLAPS=3	SLATS<1	3	25	Landing Distance greater than 6 000 m for all conditions								
	1≤SLATS≤3	3	10	Landing Distance greater than 6 000 m for all conditions								
	SLATS>3	3	5	Landing Distance greater than 6 000 m for all conditions								
FLAPS>3	1≤SLATS≤3	FULL	10	Landing Distance greater than 6 000 m for all conditions								
	SLATS>3	FULL	5	Landing Distance greater than 6 000 m for all conditions								
(1) Automatic Landing correction: add 110m - (2) Weight correction: subtract 20m per 1T below 78T												
REF DIST without failure (valid for all FLAPS LEVER positions) = 3 430m												

	IN FLIGHT PERFORMANCE	PER-27A 7/30 06 MAR 14

Ident.: PER-27A-00014169.0052001 / 28 FEB 14
Applicable to: MSN 3120

SLATS AND FLAPS SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, $VAPP = VREF + \Delta VREF$ without APPR COR.

6 - DRY												
Corrections on Landing Distance (m)					WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE		FLAPS LEVER for LDG	$\Delta VREF$	REF DIST (m) for 76T	Per 1T above 76T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
FLAPS FAULT	FLAPS<1	3	30	1 710	+ 60	N/A	+ 80	+ 170	+ 70	+ 40	- 30	+ 1 300
	1≤FLAPS<2	3	15	1 450	+ 60	+ 100	+ 70	+ 170	+ 60	+ 40	- 30	+ 930
	2≤FLAPS<3	3	10	1 370	+ 50	+ 100	+ 60	+ 160	+ 60	+ 30	- 20	+ 830
	FLAPS=3	3	10	1 350	+ 50	+ 90	+ 60	+ 160	+ 50	+ 30	- 20	+ 590
	FLAPS>3	FULL	5	1 280	+ 50	+ 80	+ 60	+ 150	+ 40	+ 30	- 20	+ 580
SLATS FAULT	SLATS<1	3	25	1 560	+ 50	N/A	+ 70	+ 160	+ 60	+ 30	- 30	+ 460
	1≤SLATS≤3	3	10	1 350	+ 50	+ 90	+ 60	+ 160	+ 50	+ 30	- 20	+ 590
	SLATS>3	3	5	1 300	+ 50	+ 80	+ 60	+ 150	+ 50	+ 30	- 20	+ 670
FLAPS AND SLATS AT 0		1	50	2 100	+ 70	N/A	+ 90	+ 180	+ 80	+ 50	- 50	+ 1 080
FLAPS<1	SLATS<1	3	45	2 000	+ 70	N/A	+ 90	+ 180	+ 70	+ 50	- 40	+ 1 140
	SLATS≥1	3	30	1 710	+ 60	N/A	+ 80	+ 170	+ 70	+ 40	- 30	+ 1 300
1≤FLAPS<2	SLATS<1	3	30	1 680	+ 60	N/A	+ 80	+ 170	+ 70	+ 40	- 30	+ 820
	SLATS≥1	3	15	1 450	+ 60	+ 100	+ 70	+ 170	+ 60	+ 40	- 30	+ 930
2≤FLAPS<3	SLATS<1	3	25	1 590	+ 60	N/A	+ 70	+ 170	+ 60	+ 40	- 30	+ 720
	SLATS≥1	3	10	1 370	+ 50	+ 100	+ 60	+ 160	+ 60	+ 30	- 20	+ 830
FLAPS=3	SLATS<1	3	25	1 560	+ 50	N/A	+ 70	+ 160	+ 60	+ 40	- 30	+ 460
	1≤SLATS≤3	3	10	1 360	+ 50	+ 90	+ 60	+ 160	+ 50	+ 30	- 20	+ 590
	SLATS>3	3	5	1 300	+ 50	+ 80	+ 60	+ 160	+ 40	+ 30	- 20	+ 670
FLAPS>3	1≤SLATS≤3	FULL	10	1 340	+ 50	+ 90	+ 60	+ 160	+ 50	+ 30	- 20	+ 500
	SLATS>3	FULL	5	1 280	+ 50	+ 80	+ 60	+ 150	+ 40	+ 30	- 20	+ 580
(1) Automatic Landing correction: add 100m - (2) Weight correction: subtract 10m per 1T below 76T REF DIST without failure (valid for all FLAPS LEVER positions) = 1 190m												



Continued from the previous page

SLATS AND FLAPS SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

5 - GOOD												
Corrections on Landing Distance (m)					WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE		FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 76T	Per 1T above 76T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
FLAPS FAULT	FLAPS<1	3	30	2 190	+ 60	N/A	+ 120	+ 260	+ 100	+ 80	- 90	+ 1 020
	1≤FLAPS<2	3	15	1 920	+ 60	+ 130	+ 110	+ 250	+ 90	+ 80	- 70	+ 750
	2≤FLAPS<3	3	10	1 810	+ 60	+ 130	+ 100	+ 250	+ 80	+ 70	- 60	+ 680
	FLAPS=3	3	10	1 760	+ 50	+ 120	+ 90	+ 230	+ 80	+ 70	- 60	+ 490
	FLAPS>3	FULL	5	1 630	+ 50	+ 120	+ 90	+ 220	+ 70	+ 60	- 50	+ 480
SLATS FAULT	SLATS<1	3	25	2 040	+ 60	N/A	+ 100	+ 230	+ 90	+ 70	- 80	+ 360
	1≤SLATS≤3	3	10	1 760	+ 50	+ 120	+ 90	+ 230	+ 80	+ 60	- 60	+ 490
	SLATS>3	3	5	1 680	+ 50	+ 120	+ 90	+ 230	+ 70	+ 60	- 50	+ 550
FLAPS AND SLATS AT 0		1	50	2 710	+ 70	N/A	+ 150	+ 290	+ 130	+ 110	- 160	+ 800
FLAPS<1	SLATS<1	3	45	2 600	+ 70	N/A	+ 150	+ 290	+ 120	+ 100	- 130	+ 840
	SLATS≥1	3	30	2 190	+ 60	N/A	+ 120	+ 260	+ 100	+ 80	- 90	+ 1 020
1≤FLAPS<2	SLATS<1	3	30	2 230	+ 60	N/A	+ 120	+ 260	+ 100	+ 90	- 100	+ 590
	SLATS≥1	3	15	1 920	+ 60	+ 130	+ 110	+ 250	+ 90	+ 80	- 70	+ 750
2≤FLAPS<3	SLATS<1	3	25	2 100	+ 60	N/A	+ 110	+ 250	+ 100	+ 80	- 90	+ 530
	SLATS≥1	3	10	1 810	+ 60	+ 130	+ 100	+ 250	+ 80	+ 70	- 60	+ 680
FLAPS=3	SLATS<1	3	25	2 050	+ 60	N/A	+ 110	+ 240	+ 90	+ 70	- 80	+ 360
	1≤SLATS≤3	3	10	1 770	+ 50	+ 120	+ 100	+ 230	+ 80	+ 60	- 60	+ 490
	SLATS>3	3	5	1 670	+ 50	+ 120	+ 90	+ 230	+ 80	+ 60	- 50	+ 550
FLAPS>3	1≤SLATS≤3	FULL	10	1 730	+ 50	+ 110	+ 90	+ 230	+ 70	+ 60	- 60	+ 430
	SLATS>3	FULL	5	1 630	+ 50	+ 120	+ 90	+ 220	+ 70	+ 60	- 50	+ 480

(1) Automatic Landing correction: add 110m - (2) Weight correction: subtract 10m per 1T below 76T
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 490m



Continued from the previous page

SLATS AND FLAPS SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

4 - GOOD TO MEDIUM												
Corrections on Landing Distance (m)					WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE		FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 76T	Per 1T above 76T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
FLAPS FAULT	FLAPS<1	3	30	2 330	+ 40	N/A	+ 90	+ 210	+ 80	+ 90	- 140	+ 1 260
	1≤FLAPS<2	3	15	2 120	+ 40	+ 100	+ 90	+ 210	+ 70	+ 90	- 130	+ 920
	2≤FLAPS<3	3	10	2 010	+ 40	+ 110	+ 80	+ 200	+ 70	+ 90	- 120	+ 830
	FLAPS=3	3	10	1 970	+ 40	+ 100	+ 80	+ 210	+ 70	+ 90	- 110	+ 580
	FLAPS>3	FULL	5	1 840	+ 40	+ 100	+ 70	+ 200	+ 70	+ 80	- 100	+ 570
SLATS FAULT	SLATS<1	3	25	2 200	+ 40	N/A	+ 90	+ 200	+ 70	+ 80	- 120	+ 420
	1≤SLATS≤3	3	10	1 950	+ 40	+ 100	+ 80	+ 200	+ 70	+ 80	- 100	+ 580
	SLATS>3	3	5	1 880	+ 40	+ 100	+ 70	+ 200	+ 60	+ 80	- 100	+ 650
FLAPS AND SLATS AT 0		1	50	2 760	+ 40	N/A	+ 110	+ 220	+ 90	+ 110	- 190	+ 1 050
FLAPS<1	SLATS<1	3	45	2 670	+ 40	N/A	+ 100	+ 220	+ 90	+ 110	- 170	+ 1 090
	SLATS≥1	3	30	2 330	+ 40	N/A	+ 90	+ 210	+ 80	+ 90	- 140	+ 1 260
1≤FLAPS<2	SLATS<1	3	30	2 380	+ 40	N/A	+ 90	+ 210	+ 80	+ 100	- 150	+ 760
	SLATS≥1	3	15	2 120	+ 40	+ 100	+ 90	+ 210	+ 70	+ 90	- 130	+ 920
2≤FLAPS<3	SLATS<1	3	25	2 270	+ 40	N/A	+ 90	+ 210	+ 80	+ 90	- 140	+ 660
	SLATS≥1	3	10	2 010	+ 40	+ 110	+ 80	+ 200	+ 70	+ 90	- 120	+ 830
FLAPS=3	SLATS<1	3	25	2 220	+ 40	N/A	+ 90	+ 200	+ 80	+ 90	- 130	+ 420
	1≤SLATS≤3	3	10	1 980	+ 40	+ 100	+ 80	+ 210	+ 70	+ 90	- 110	+ 580
	SLATS>3	3	5	1 890	+ 40	+ 100	+ 80	+ 200	+ 60	+ 80	- 110	+ 650
FLAPS>3	1≤SLATS≤3	FULL	10	1 930	+ 40	+ 90	+ 80	+ 200	+ 70	+ 80	- 100	+ 500
	SLATS>3	FULL	5	1 840	+ 40	+ 100	+ 70	+ 200	+ 70	+ 80	- 100	+ 570

(1) Automatic Landing correction: add 110m - (2) Weight correction: subtract 10m per 1T below 76T

REF DIST without failure (valid for all FLAPS LEVER positions) = 1 700m



Continued from the previous page

SLATS AND FLAPS SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

3 - MEDIUM												
Corrections on Landing Distance (m)					WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE		FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 76T	Per 1T above 76T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
FLAPS FAULT	FLAPS<1	3	30	2 640	+ 40	N/A	+ 110	+ 250	+ 100	+ 140	- 200	+ 1 190
	1≤FLAPS<2	3	15	2 400	+ 40	+ 110	+ 100	+ 250	+ 80	+ 140	- 190	+ 860
	2≤FLAPS<3	3	10	2 270	+ 40	+ 120	+ 90	+ 240	+ 90	+ 130	- 170	+ 770
	FLAPS=3	3	10	2 210	+ 40	+ 110	+ 90	+ 240	+ 80	+ 130	- 160	+ 550
	FLAPS>3	FULL	5	2 070	+ 40	+ 100	+ 90	+ 240	+ 70	+ 110	- 140	+ 530
SLATS FAULT	SLATS<1	3	25	2 440	+ 40	N/A	+ 100	+ 230	+ 90	+ 120	- 160	+ 400
	1≤SLATS≤3	3	10	2 180	+ 40	+ 100	+ 90	+ 240	+ 70	+ 110	- 140	+ 550
	SLATS>3	3	5	2 100	+ 40	+ 100	+ 90	+ 230	+ 70	+ 110	- 140	+ 600
FLAPS AND SLATS AT 0		1	50	3 130	+ 50	N/A	+ 130	+ 270	+ 110	+ 160	- 260	+ 980
FLAPS<1	SLATS<1	3	45	3 030	+ 50	N/A	+ 130	+ 260	+ 100	+ 160	- 250	+ 1 030
	SLATS≥1	3	30	2 640	+ 40	N/A	+ 110	+ 250	+ 100	+ 140	- 200	+ 1 190
1≤FLAPS<2	SLATS<1	3	30	2 680	+ 50	N/A	+ 110	+ 250	+ 100	+ 150	- 210	+ 710
	SLATS≥1	3	15	2 400	+ 40	+ 110	+ 100	+ 250	+ 80	+ 140	- 190	+ 860
2≤FLAPS<3	SLATS<1	3	25	2 560	+ 40	N/A	+ 110	+ 250	+ 80	+ 140	- 200	+ 620
	SLATS≥1	3	10	2 270	+ 40	+ 120	+ 90	+ 240	+ 90	+ 130	- 170	+ 770
FLAPS=3	SLATS<1	3	25	2 490	+ 40	N/A	+ 100	+ 240	+ 80	+ 130	- 190	+ 400
	1≤SLATS≤3	3	10	2 220	+ 40	+ 110	+ 90	+ 240	+ 80	+ 130	- 160	+ 540
	SLATS>3	3	5	2 120	+ 40	+ 110	+ 90	+ 240	+ 80	+ 120	- 150	+ 600
FLAPS>3	1≤SLATS≤3	FULL	10	2 160	+ 40	+ 100	+ 90	+ 240	+ 80	+ 120	- 150	+ 470
	SLATS>3	FULL	5	2 070	+ 40	+ 100	+ 90	+ 240	+ 70	+ 110	- 140	+ 530

(1) Automatic Landing correction: add 110m - (2) Weight correction: subtract 10m per 1T below 76T
 REF DIST without failure (valid for all FLAPS LEVER positions) = 1 890m



Continued from the previous page

SLATS AND FLAPS SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

2 - MEDIUM TO POOR												
Corrections on Landing Distance (m)					WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE		FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 76T	Per 1T above 76T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
FLAPS FAULT	FLAPS<1	3	30	3 520	+ 100	N/A	+ 220	+ 510	+ 180	+ 330	- 330	+ 740
	1≤FLAPS<2	3	15	3 010	+ 90	+ 190	+ 200	+ 480	+ 160	+ 280	- 260	+ 500
	2≤FLAPS<3	3	10	2 780	+ 80	+ 190	+ 180	+ 460	+ 150	+ 250	- 230	+ 460
	FLAPS=3	3	10	2 630	+ 80	+ 170	+ 160	+ 420	+ 140	+ 220	- 200	+ 360
	FLAPS>3	FULL	5	2 410	+ 70	+ 160	+ 150	+ 400	+ 120	+ 190	- 170	+ 350
SLATS FAULT	SLATS<1	3	25	2 950	+ 80	N/A	+ 170	+ 390	+ 140	+ 200	- 220	+ 300
	1≤SLATS≤3	3	10	2 580	+ 70	+ 160	+ 150	+ 390	+ 130	+ 190	- 180	+ 370
	SLATS>3	3	5	2 460	+ 70	+ 170	+ 150	+ 390	+ 130	+ 190	- 170	+ 390
FLAPS AND SLATS AT 0		1	50	4 300	+ 110	N/A	+ 270	+ 560	+ 210	+ 410	- 520	+ 620
FLAPS<1	SLATS<1	3	45	4 150	+ 100	N/A	+ 260	+ 550	+ 210	+ 400	- 430	+ 640
	SLATS≥1	3	30	3 520	+ 100	N/A	+ 220	+ 510	+ 180	+ 330	- 330	+ 740
1≤FLAPS<2	SLATS<1	3	30	3 440	+ 90	N/A	+ 210	+ 490	+ 170	+ 300	- 320	+ 440
	SLATS≥1	3	15	3 010	+ 90	+ 190	+ 200	+ 480	+ 160	+ 280	- 260	+ 500
2≤FLAPS<3	SLATS<1	3	25	3 190	+ 90	N/A	+ 190	+ 460	+ 160	+ 270	- 280	+ 390
	SLATS≥1	3	10	2 780	+ 80	+ 190	+ 180	+ 460	+ 150	+ 250	- 230	+ 460
FLAPS=3	SLATS<1	3	25	3 020	+ 80	N/A	+ 180	+ 430	+ 140	+ 230	- 250	+ 300
	1≤SLATS≤3	3	10	2 640	+ 80	+ 170	+ 160	+ 420	+ 140	+ 220	- 200	+ 360
	SLATS>3	3	5	2 500	+ 70	+ 180	+ 160	+ 420	+ 130	+ 210	- 190	+ 380
FLAPS>3	1≤SLATS≤3	FULL	10	2 540	+ 70	+ 160	+ 150	+ 400	+ 130	+ 190	- 190	+ 320
	SLATS>3	FULL	5	2 410	+ 70	+ 160	+ 150	+ 400	+ 120	+ 190	- 170	+ 350

(1) Automatic Landing correction: add 130m - (2) Weight correction: subtract 10m per 1T below 76T

REF DIST without failure (valid for all FLAPS LEVER positions) = 2 160m



Continued from the previous page

SLATS AND FLAPS SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

1 - POOR												
Corrections on Landing Distance (m)					WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE		FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 76T	Per 1T above 76T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
FLAPS FAULT	FLAPS<1	3	30	Landing Distance greater than 6 000 m for all conditions								
	1≤FLAPS<2	3	15	Landing Distance greater than 6 000 m for all conditions								
	2≤FLAPS<3	3	10	Landing Distance greater than 6 000 m for all conditions								
	FLAPS=3	3	10	Landing Distance greater than 6 000 m for all conditions								
	FLAPS>3	FULL	5	Landing Distance greater than 6 000 m for all conditions								
SLATS FAULT	SLATS<1	3	25	4 190	+ 80	N/A	+ 220	+ 590	+ 170	+ 860	- 540	+ 300
	1≤SLATS≤3	3	10	3 830	+ 70	+ 160	+ 200	+ 590	+ 160	+ 860	- 510	+ 370
	SLATS>3	3	5	3 720	+ 70	+ 160	+ 200	+ 590	+ 150	+ 860	- 490	+ 390
FLAPS AND SLATS AT 0		1	50	Landing Distance greater than 6 000 m for all conditions								
FLAPS<1	SLATS<1	3	45	Landing Distance greater than 6 000 m for all conditions								
	SLATS≥1	3	30	Landing Distance greater than 6 000 m for all conditions								
1≤FLAPS<2	SLATS<1	3	30	Landing Distance greater than 6 000 m for all conditions								
	SLATS≥1	3	15	Landing Distance greater than 6 000 m for all conditions								
2≤FLAPS<3	SLATS<1	3	25	Landing Distance greater than 6 000 m for all conditions								
	SLATS≥1	3	10	Landing Distance greater than 6 000 m for all conditions								
FLAPS=3	SLATS<1	3	25	Landing Distance greater than 6 000 m for all conditions								
	1≤SLATS≤3	3	10	Landing Distance greater than 6 000 m for all conditions								
	SLATS>3	3	5	Landing Distance greater than 6 000 m for all conditions								
FLAPS>3	1≤SLATS≤3	FULL	10	Landing Distance greater than 6 000 m for all conditions								
	SLATS>3	FULL	5	Landing Distance greater than 6 000 m for all conditions								
(1) Automatic Landing correction: add 130m - (2) Weight correction: subtract 10m per 1T below 76T												
REF DIST without failure (valid for all FLAPS LEVER positions) = 3 360m												

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Applicable to: MSN 1276-1843, 2927

SLATS AND FLAPS SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

6 - DRY												
Corrections on Landing Distance (m)					WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE		FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
FLAPS FAULT	FLAPS<1	3	30	1 770	+ 60	N/A	+ 80	+ 180	+ 70	+ 40	- 30	+ 1 310
	1≤FLAPS<2	3	15	1 490	+ 60	+ 100	+ 70	+ 170	+ 60	+ 40	- 30	+ 960
	2≤FLAPS<3	3	10	1 410	+ 50	+ 100	+ 70	+ 170	+ 60	+ 30	- 20	+ 840
	FLAPS=3	3	10	1 390	+ 50	+ 90	+ 70	+ 170	+ 50	+ 30	- 20	+ 590
	FLAPS>3	FULL	5	1 310	+ 50	+ 90	+ 60	+ 160	+ 50	+ 30	- 20	+ 570
SLATS FAULT	SLATS<1	3	25	1 600	+ 50	N/A	+ 70	+ 160	+ 60	+ 40	- 30	+ 470
	1≤SLATS≤3	3	10	1 390	+ 50	+ 90	+ 70	+ 170	+ 50	+ 30	- 20	+ 590
	SLATS>3	3	5	1 330	+ 50	+ 90	+ 60	+ 160	+ 50	+ 30	- 20	+ 660
FLAPS AND SLATS AT 0		1	50	2 170	+ 70	N/A	+ 90	+ 180	+ 90	+ 60	- 40	+ 1 100
FLAPS<1	SLATS<1	3	45	2 070	+ 70	N/A	+ 90	+ 180	+ 80	+ 50	- 40	+ 1 160
	SLATS≥1	3	30	1 770	+ 60	N/A	+ 80	+ 180	+ 70	+ 40	- 30	+ 1 310
1≤FLAPS<2	SLATS<1	3	30	1 740	+ 60	N/A	+ 80	+ 170	+ 60	+ 40	- 30	+ 830
	SLATS≥1	3	15	1 490	+ 60	+ 100	+ 70	+ 170	+ 60	+ 40	- 30	+ 960
2≤FLAPS<3	SLATS<1	3	25	1 640	+ 60	N/A	+ 80	+ 170	+ 60	+ 40	- 30	+ 730
	SLATS≥1	3	10	1 410	+ 50	+ 100	+ 70	+ 170	+ 60	+ 30	- 20	+ 840
FLAPS=3	SLATS<1	3	25	1 600	+ 60	N/A	+ 70	+ 170	+ 70	+ 40	- 30	+ 470
	1≤SLATS≤3	3	10	1 390	+ 50	+ 100	+ 70	+ 160	+ 60	+ 30	- 20	+ 590
	SLATS>3	3	5	1 320	+ 50	+ 90	+ 60	+ 160	+ 50	+ 30	- 20	+ 660
FLAPS>3	1≤SLATS≤3	FULL	10	1 380	+ 50	+ 90	+ 70	+ 170	+ 50	+ 30	- 20	+ 500
	SLATS>3	FULL	5	1 310	+ 50	+ 90	+ 60	+ 160	+ 50	+ 30	- 20	+ 570

(1) Automatic Landing correction: add 80m - (2) Weight correction: subtract 10m per 1T below 78T
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 210m



Continued from the previous page

SLATS AND FLAPS SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

5 - GOOD												
Corrections on Landing Distance (m)					WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE		FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
FLAPS FAULT	FLAPS<1	3	30	2 240	+ 60	N/A	+ 130	+ 270	+ 100	+ 90	- 100	+ 1 030
	1≤FLAPS<2	3	15	1 970	+ 60	+ 130	+ 110	+ 260	+ 90	+ 80	- 80	+ 750
	2≤FLAPS<3	3	10	1 850	+ 60	+ 130	+ 100	+ 250	+ 90	+ 70	- 70	+ 690
	FLAPS=3	3	10	1 800	+ 50	+ 120	+ 100	+ 240	+ 90	+ 70	- 60	+ 490
	FLAPS>3	FULL	5	1 670	+ 50	+ 120	+ 90	+ 220	+ 70	+ 60	- 50	+ 480
SLATS FAULT	SLATS<1	3	25	2 090	+ 60	N/A	+ 110	+ 240	+ 90	+ 70	- 80	+ 360
	1≤SLATS≤3	3	10	1 800	+ 50	+ 120	+ 100	+ 230	+ 80	+ 60	- 60	+ 500
	SLATS>3	3	5	1 720	+ 50	+ 120	+ 90	+ 230	+ 70	+ 60	- 60	+ 550
FLAPS AND SLATS AT 0		1	50	2 770	+ 70	N/A	+ 160	+ 300	+ 130	+ 110	- 140	+ 810
FLAPS<1	SLATS<1	3	45	2 650	+ 70	N/A	+ 150	+ 290	+ 130	+ 110	- 130	+ 850
	SLATS≥1	3	30	2 240	+ 60	N/A	+ 130	+ 270	+ 100	+ 90	- 100	+ 1 030
1≤FLAPS<2	SLATS<1	3	30	2 280	+ 60	N/A	+ 130	+ 260	+ 100	+ 90	- 100	+ 600
	SLATS≥1	3	15	1 970	+ 60	+ 130	+ 110	+ 260	+ 90	+ 80	- 80	+ 750
2≤FLAPS<3	SLATS<1	3	25	2 150	+ 60	N/A	+ 120	+ 250	+ 100	+ 80	- 90	+ 520
	SLATS≥1	3	10	1 850	+ 60	+ 130	+ 100	+ 250	+ 90	+ 70	- 70	+ 690
FLAPS=3	SLATS<1	3	25	2 100	+ 60	N/A	+ 110	+ 240	+ 90	+ 70	- 90	+ 360
	1≤SLATS≤3	3	10	1 810	+ 50	+ 120	+ 100	+ 240	+ 80	+ 70	- 70	+ 490
	SLATS>3	3	5	1 710	+ 50	+ 120	+ 90	+ 230	+ 80	+ 60	- 60	+ 550
FLAPS>3	1≤SLATS≤3	FULL	10	1 770	+ 50	+ 110	+ 90	+ 230	+ 80	+ 60	- 60	+ 430
	SLATS>3	FULL	5	1 670	+ 50	+ 120	+ 90	+ 220	+ 70	+ 60	- 50	+ 480

(1) Automatic Landing correction: add 90m - (2) Weight correction: subtract 10m per 1T below 78T
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 520m



Continued from the previous page

SLATS AND FLAPS SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

4 - GOOD TO MEDIUM												
Corrections on Landing Distance (m)					WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE		FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
FLAPS FAULT	FLAPS<1	3	30	2 370	+ 40	N/A	+ 90	+ 210	+ 80	+ 100	- 140	+ 1 280
	1≤FLAPS<2	3	15	2 150	+ 40	+ 110	+ 90	+ 210	+ 80	+ 100	- 130	+ 930
	2≤FLAPS<3	3	10	2 050	+ 40	+ 100	+ 80	+ 210	+ 70	+ 90	- 120	+ 840
	FLAPS=3	3	10	2 000	+ 40	+ 100	+ 80	+ 200	+ 70	+ 90	- 120	+ 590
	FLAPS>3	FULL	5	1 880	+ 30	+ 90	+ 80	+ 200	+ 60	+ 80	- 100	+ 570
SLATS FAULT	SLATS<1	3	25	2 240	+ 40	N/A	+ 90	+ 200	+ 70	+ 80	- 120	+ 430
	1≤SLATS≤3	3	10	1 990	+ 40	+ 100	+ 80	+ 200	+ 70	+ 80	- 110	+ 590
	SLATS>3	3	5	1 910	+ 40	+ 100	+ 80	+ 200	+ 70	+ 80	- 100	+ 650
FLAPS AND SLATS AT 0		1	50	2 800	+ 40	N/A	+ 110	+ 220	+ 90	+ 110	- 180	+ 1 070
FLAPS<1	SLATS<1	3	45	2 710	+ 40	N/A	+ 110	+ 220	+ 90	+ 110	- 180	+ 1 120
	SLATS≥1	3	30	2 370	+ 40	N/A	+ 90	+ 210	+ 80	+ 100	- 140	+ 1 280
1≤FLAPS<2	SLATS<1	3	30	2 420	+ 40	N/A	+ 100	+ 210	+ 80	+ 100	- 150	+ 770
	SLATS≥1	3	15	2 150	+ 40	+ 110	+ 90	+ 210	+ 80	+ 100	- 130	+ 930
2≤FLAPS<3	SLATS<1	3	25	2 310	+ 40	N/A	+ 90	+ 210	+ 80	+ 100	- 140	+ 670
	SLATS≥1	3	10	2 050	+ 40	+ 100	+ 80	+ 210	+ 70	+ 90	- 120	+ 840
FLAPS=3	SLATS<1	3	25	2 260	+ 40	N/A	+ 90	+ 200	+ 80	+ 90	- 140	+ 430
	1≤SLATS≤3	3	10	2 010	+ 40	+ 100	+ 80	+ 200	+ 70	+ 90	- 120	+ 590
	SLATS>3	3	5	1 920	+ 40	+ 100	+ 80	+ 200	+ 70	+ 90	- 110	+ 650
FLAPS>3	1≤SLATS≤3	FULL	10	1 970	+ 40	+ 90	+ 80	+ 210	+ 60	+ 80	- 110	+ 510
	SLATS>3	FULL	5	1 880	+ 30	+ 90	+ 80	+ 200	+ 60	+ 80	- 100	+ 570

(1) Automatic Landing correction: add 90m - (2) Weight correction: subtract 10m per 1T below 78T

REF DIST without failure (valid for all FLAPS LEVER positions) = 1 730m



Continued from the previous page

SLATS AND FLAPS SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

3 - MEDIUM												
Corrections on Landing Distance (m)					WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE		FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
FLAPS FAULT	FLAPS<1	3	30	2 690	+ 40	N/A	+ 110	+ 250	+ 90	+ 140	- 210	+ 1 200
	1≤FLAPS<2	3	15	2 440	+ 40	+ 110	+ 100	+ 250	+ 80	+ 140	- 190	+ 870
	2≤FLAPS<3	3	10	2 320	+ 40	+ 110	+ 100	+ 250	+ 80	+ 140	- 170	+ 780
	FLAPS=3	3	10	2 250	+ 40	+ 110	+ 90	+ 240	+ 80	+ 130	- 160	+ 550
	FLAPS>3	FULL	5	2 110	+ 40	+ 100	+ 90	+ 240	+ 70	+ 120	- 150	+ 530
SLATS FAULT	SLATS<1	3	25	2 490	+ 40	N/A	+ 100	+ 230	+ 80	+ 120	- 160	+ 400
	1≤SLATS≤3	3	10	2 220	+ 40	+ 100	+ 90	+ 240	+ 70	+ 110	- 150	+ 550
	SLATS>3	3	5	2 140	+ 40	+ 100	+ 90	+ 230	+ 70	+ 110	- 140	+ 610
FLAPS AND SLATS AT 0		1	50	3 180	+ 50	N/A	+ 130	+ 270	+ 110	+ 170	- 260	+ 1 000
FLAPS<1	SLATS<1	3	45	3 080	+ 50	N/A	+ 130	+ 270	+ 100	+ 160	- 250	+ 1 050
	SLATS≥1	3	30	2 690	+ 40	N/A	+ 110	+ 250	+ 90	+ 140	- 210	+ 1 200
1≤FLAPS<2	SLATS<1	3	30	2 730	+ 40	N/A	+ 110	+ 250	+ 90	+ 150	- 220	+ 720
	SLATS≥1	3	15	2 440	+ 40	+ 110	+ 100	+ 250	+ 80	+ 140	- 190	+ 870
2≤FLAPS<3	SLATS<1	3	25	2 600	+ 40	N/A	+ 110	+ 250	+ 90	+ 140	- 200	+ 620
	SLATS≥1	3	10	2 320	+ 40	+ 110	+ 100	+ 250	+ 80	+ 140	- 170	+ 780
FLAPS=3	SLATS<1	3	25	2 530	+ 40	N/A	+ 100	+ 240	+ 90	+ 130	- 190	+ 400
	1≤SLATS≤3	3	10	2 260	+ 40	+ 110	+ 90	+ 240	+ 80	+ 130	- 160	+ 550
	SLATS>3	3	5	2 160	+ 40	+ 110	+ 90	+ 240	+ 80	+ 120	- 160	+ 610
FLAPS>3	1≤SLATS≤3	FULL	10	2 200	+ 40	+ 110	+ 90	+ 240	+ 80	+ 120	- 150	+ 480
	SLATS>3	FULL	5	2 110	+ 40	+ 100	+ 90	+ 240	+ 70	+ 120	- 150	+ 530

(1) Automatic Landing correction: add 100m - (2) Weight correction: subtract 20m per 1T below 78T
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 930m



Continued from the previous page

SLATS AND FLAPS SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

2 - MEDIUM TO POOR												
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW	
FAILURE		FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
FLAPS FAULT	FLAPS<1	3	30	3 600	+ 90	N/A	+ 230	+ 520	+ 190	+ 340	- 350	+ 760
	1≤FLAPS<2	3	15	3 080	+ 90	+ 200	+ 200	+ 480	+ 170	+ 290	- 280	+ 510
	2≤FLAPS<3	3	10	2 850	+ 80	+ 190	+ 180	+ 460	+ 150	+ 260	- 240	+ 460
	FLAPS=3	3	10	2 700	+ 80	+ 170	+ 160	+ 430	+ 140	+ 220	- 220	+ 360
	FLAPS>3	FULL	5	2 470	+ 70	+ 170	+ 150	+ 400	+ 130	+ 190	- 180	+ 350
SLATS FAULT	SLATS<1	3	25	3 020	+ 80	N/A	+ 170	+ 400	+ 140	+ 210	- 230	+ 310
	1≤SLATS≤3	3	10	2 640	+ 70	+ 160	+ 160	+ 390	+ 130	+ 200	- 190	+ 370
	SLATS>3	3	5	2 530	+ 70	+ 160	+ 150	+ 400	+ 120	+ 190	- 180	+ 400
FLAPS AND SLATS AT 0		1	50	4 390	+ 100	N/A	+ 270	+ 560	+ 220	+ 420	- 480	+ 630
FLAPS<1	SLATS<1	3	45	4 240	+ 100	N/A	+ 270	+ 560	+ 210	+ 420	- 460	+ 650
	SLATS≥1	3	30	3 600	+ 90	N/A	+ 230	+ 520	+ 190	+ 340	- 350	+ 760
1≤FLAPS<2	SLATS<1	3	30	3 520	+ 90	N/A	+ 220	+ 490	+ 170	+ 310	- 340	+ 450
	SLATS≥1	3	15	3 080	+ 90	+ 200	+ 200	+ 480	+ 170	+ 290	- 280	+ 510
2≤FLAPS<3	SLATS<1	3	25	3 270	+ 90	N/A	+ 200	+ 470	+ 160	+ 280	- 300	+ 400
	SLATS≥1	3	10	2 850	+ 80	+ 190	+ 180	+ 460	+ 150	+ 260	- 240	+ 460
FLAPS=3	SLATS<1	3	25	3 090	+ 80	N/A	+ 180	+ 430	+ 140	+ 230	- 260	+ 300
	1≤SLATS≤3	3	10	2 710	+ 80	+ 170	+ 170	+ 430	+ 130	+ 220	- 220	+ 360
	SLATS>3	3	5	2 570	+ 70	+ 170	+ 160	+ 430	+ 130	+ 220	- 200	+ 390
FLAPS>3	1≤SLATS≤3	FULL	10	2 600	+ 70	+ 160	+ 150	+ 400	+ 130	+ 200	- 200	+ 330
	SLATS>3	FULL	5	2 470	+ 70	+ 170	+ 150	+ 400	+ 130	+ 190	- 180	+ 350

(1) Automatic Landing correction: add 110m - (2) Weight correction: subtract 30m per 1T below 78T

REF DIST without failure (valid for all FLAPS LEVER positions) = 2 220m



Continued from the previous page

SLATS AND FLAPS SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

1 - POOR												
Corrections on Landing Distance (m)					WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE		FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
FLAPS FAULT	FLAPS<1	3	30	Landing Distance greater than 6 000 m for all conditions								
	1≤FLAPS<2	3	15	Landing Distance greater than 6 000 m for all conditions								
	2≤FLAPS<3	3	10	Landing Distance greater than 6 000 m for all conditions								
	FLAPS=3	3	10	Landing Distance greater than 6 000 m for all conditions								
	FLAPS>3	FULL	5	Landing Distance greater than 6 000 m for all conditions								
SLATS FAULT	SLATS<1	3	25	4 270	+ 70	N/A	+ 220	+ 600	+ 170	+ 860	- 550	+ 310
	1≤SLATS≤3	3	10	3 900	+ 70	+ 160	+ 210	+ 590	+ 160	+ 860	- 510	+ 370
	SLATS>3	3	5	3 790	+ 70	+ 160	+ 200	+ 590	+ 160	+ 860	- 500	+ 400
FLAPS AND SLATS AT 0		1	50	Landing Distance greater than 6 000 m for all conditions								
FLAPS<1	SLATS<1	3	45	Landing Distance greater than 6 000 m for all conditions								
	SLATS≥1	3	30	Landing Distance greater than 6 000 m for all conditions								
1≤FLAPS<2	SLATS<1	3	30	Landing Distance greater than 6 000 m for all conditions								
	SLATS≥1	3	15	Landing Distance greater than 6 000 m for all conditions								
2≤FLAPS<3	SLATS<1	3	25	Landing Distance greater than 6 000 m for all conditions								
	SLATS≥1	3	10	Landing Distance greater than 6 000 m for all conditions								
FLAPS=3	SLATS<1	3	25	Landing Distance greater than 6 000 m for all conditions								
	1≤SLATS≤3	3	10	Landing Distance greater than 6 000 m for all conditions								
	SLATS>3	3	5	Landing Distance greater than 6 000 m for all conditions								
FLAPS>3	1≤SLATS≤3	FULL	10	Landing Distance greater than 6 000 m for all conditions								
	SLATS>3	FULL	5	Landing Distance greater than 6 000 m for all conditions								
(1) Automatic Landing correction: add 110m - (2) Weight correction: subtract 20m per 1T below 78T												
REF DIST without failure (valid for all FLAPS LEVER positions) = 3 430m												

Ident.: PER-27A-00014169.0028001 / 28 FEB 14
Applicable to: MSN 1219-1233

SLATS AND FLAPS SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

6 - DRY												
Corrections on Landing Distance (m)					WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE		FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
FLAPS FAULT	FLAPS<1	3	30	1 790	+ 60	N/A	+ 80	+ 180	+ 70	+ 50	- 30	+ 1 260
	1≤FLAPS<2	3	15	1 510	+ 60	+ 100	+ 70	+ 170	+ 70	+ 40	- 30	+ 930
	2≤FLAPS<3	3	10	1 430	+ 50	+ 100	+ 70	+ 170	+ 60	+ 40	- 20	+ 810
	FLAPS=3	3	10	1 400	+ 50	+ 100	+ 60	+ 170	+ 60	+ 30	- 20	+ 580
	FLAPS>3	FULL	5	1 320	+ 50	+ 90	+ 60	+ 160	+ 50	+ 30	- 20	+ 560
SLATS FAULT	SLATS<1	3	25	1 620	+ 50	N/A	+ 70	+ 170	+ 60	+ 40	- 30	+ 450
	1≤SLATS≤3	3	10	1 400	+ 50	+ 90	+ 70	+ 170	+ 50	+ 30	- 20	+ 580
	SLATS>3	3	5	1 340	+ 50	+ 90	+ 60	+ 160	+ 50	+ 30	- 20	+ 650
FLAPS AND SLATS AT 0		1	50	2 210	+ 70	N/A	+ 90	+ 180	+ 90	+ 70	- 40	+ 1 080
FLAPS<1	SLATS<1	3	45	2 110	+ 70	N/A	+ 90	+ 190	+ 80	+ 60	- 30	+ 1 130
	SLATS≥1	3	30	1 790	+ 60	N/A	+ 80	+ 180	+ 70	+ 50	- 30	+ 1 260
1≤FLAPS<2	SLATS<1	3	30	1 760	+ 60	N/A	+ 80	+ 180	+ 70	+ 40	- 30	+ 800
	SLATS≥1	3	15	1 510	+ 60	+ 100	+ 70	+ 170	+ 70	+ 40	- 30	+ 930
2≤FLAPS<3	SLATS<1	3	25	1 660	+ 60	N/A	+ 70	+ 180	+ 60	+ 40	- 30	+ 690
	SLATS≥1	3	10	1 430	+ 50	+ 100	+ 70	+ 170	+ 60	+ 40	- 20	+ 810
FLAPS=3	SLATS<1	3	25	1 630	+ 60	N/A	+ 70	+ 170	+ 60	+ 40	- 30	+ 450
	1≤SLATS≤3	3	10	1 410	+ 50	+ 100	+ 60	+ 170	+ 60	+ 30	- 20	+ 580
	SLATS>3	3	5	1 340	+ 50	+ 90	+ 60	+ 170	+ 50	+ 30	- 20	+ 650
FLAPS>3	1≤SLATS≤3	FULL	10	1 390	+ 50	+ 90	+ 60	+ 170	+ 60	+ 30	- 20	+ 480
	SLATS>3	FULL	5	1 320	+ 50	+ 90	+ 60	+ 160	+ 50	+ 30	- 20	+ 560

(1) Automatic Landing correction: add 110m - (2) Weight correction: subtract 10m per 1T below 78T

REF DIST without failure (valid for all FLAPS LEVER positions) = 1 220m



Continued from the previous page

SLATS AND FLAPS SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

5 - GOOD												
Corrections on Landing Distance (m)					WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE		FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
FLAPS FAULT	FLAPS<1	3	30	2 310	+ 60	N/A	+ 120	+ 280	+ 100	+ 90	- 90	+ 1 000
	1≤FLAPS<2	3	15	2 030	+ 60	+ 130	+ 110	+ 270	+ 90	+ 80	- 70	+ 720
	2≤FLAPS<3	3	10	1 910	+ 60	+ 130	+ 100	+ 260	+ 90	+ 80	- 60	+ 660
	FLAPS=3	3	10	1 850	+ 50	+ 130	+ 90	+ 250	+ 90	+ 70	- 60	+ 490
	FLAPS>3	FULL	5	1 710	+ 50	+ 120	+ 90	+ 240	+ 70	+ 60	- 50	+ 470
SLATS FAULT	SLATS<1	3	25	2 140	+ 60	N/A	+ 100	+ 240	+ 90	+ 80	- 70	+ 350
	1≤SLATS≤3	3	10	1 840	+ 50	+ 130	+ 90	+ 240	+ 80	+ 70	- 60	+ 490
	SLATS>3	3	5	1 750	+ 50	+ 130	+ 90	+ 230	+ 80	+ 70	- 50	+ 540
FLAPS AND SLATS AT 0		1	50	2 840	+ 70	N/A	+ 150	+ 310	+ 130	+ 120	- 130	+ 790
FLAPS<1	SLATS<1	3	45	2 730	+ 70	N/A	+ 150	+ 310	+ 120	+ 110	- 120	+ 840
	SLATS≥1	3	30	2 310	+ 60	N/A	+ 120	+ 280	+ 100	+ 90	- 90	+ 1 000
1≤FLAPS<2	SLATS<1	3	30	2 350	+ 60	N/A	+ 120	+ 280	+ 110	+ 100	- 90	+ 580
	SLATS≥1	3	15	2 030	+ 60	+ 130	+ 110	+ 270	+ 90	+ 80	- 70	+ 720
2≤FLAPS<3	SLATS<1	3	25	2 220	+ 60	N/A	+ 110	+ 270	+ 100	+ 90	- 80	+ 500
	SLATS≥1	3	10	1 910	+ 60	+ 130	+ 100	+ 260	+ 90	+ 80	- 60	+ 660
FLAPS=3	SLATS<1	3	25	2 160	+ 60	N/A	+ 110	+ 250	+ 100	+ 80	- 80	+ 350
	1≤SLATS≤3	3	10	1 860	+ 50	+ 130	+ 90	+ 250	+ 90	+ 70	- 60	+ 490
	SLATS>3	3	5	1 760	+ 50	+ 120	+ 90	+ 250	+ 80	+ 70	- 50	+ 540
FLAPS>3	1≤SLATS≤3	FULL	10	1 810	+ 50	+ 120	+ 90	+ 240	+ 80	+ 60	- 50	+ 420
	SLATS>3	FULL	5	1 710	+ 50	+ 120	+ 90	+ 240	+ 70	+ 60	- 50	+ 470

(1) Automatic Landing correction: add 130m - (2) Weight correction: subtract 20m per 1T below 78T
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 550m



Continued from the previous page

SLATS AND FLAPS SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

4 - GOOD TO MEDIUM												
Corrections on Landing Distance (m)					WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE		FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
FLAPS FAULT	FLAPS<1	3	30	2 440	+ 40	N/A	+ 90	+ 210	+ 80	+ 110	- 130	+ 1 230
	1≤FLAPS<2	3	15	2 220	+ 40	+ 110	+ 80	+ 210	+ 80	+ 100	- 120	+ 900
	2≤FLAPS<3	3	10	2 120	+ 40	+ 110	+ 80	+ 210	+ 70	+ 100	- 110	+ 800
	FLAPS=3	3	10	2 070	+ 40	+ 100	+ 80	+ 210	+ 70	+ 100	- 100	+ 580
	FLAPS>3	FULL	5	1 930	+ 30	+ 100	+ 70	+ 200	+ 70	+ 90	- 90	+ 560
SLATS FAULT	SLATS<1	3	25	2 290	+ 40	N/A	+ 80	+ 200	+ 80	+ 90	- 100	+ 410
	1≤SLATS≤3	3	10	2 030	+ 40	+ 100	+ 80	+ 200	+ 70	+ 90	- 90	+ 580
	SLATS>3	3	5	1 960	+ 40	+ 100	+ 70	+ 200	+ 70	+ 90	- 80	+ 640
FLAPS AND SLATS AT 0		1	50	2 880	+ 40	N/A	+ 110	+ 230	+ 90	+ 120	- 160	+ 1 050
FLAPS<1	SLATS<1	3	45	2 790	+ 40	N/A	+ 100	+ 230	+ 90	+ 120	- 150	+ 1 100
	SLATS≥1	3	30	2 440	+ 40	N/A	+ 90	+ 210	+ 80	+ 110	- 130	+ 1 230
1≤FLAPS<2	SLATS<1	3	30	2 500	+ 40	N/A	+ 90	+ 220	+ 80	+ 110	- 140	+ 740
	SLATS≥1	3	15	2 220	+ 40	+ 110	+ 80	+ 210	+ 80	+ 100	- 120	+ 900
2≤FLAPS<3	SLATS<1	3	25	2 390	+ 40	N/A	+ 90	+ 220	+ 80	+ 110	- 130	+ 640
	SLATS≥1	3	10	2 120	+ 40	+ 110	+ 80	+ 210	+ 70	+ 100	- 110	+ 800
FLAPS=3	SLATS<1	3	25	2 340	+ 40	N/A	+ 80	+ 210	+ 80	+ 100	- 120	+ 410
	1≤SLATS≤3	3	10	2 080	+ 40	+ 100	+ 80	+ 210	+ 70	+ 100	- 100	+ 580
	SLATS>3	3	5	1 980	+ 30	+ 110	+ 70	+ 210	+ 70	+ 90	- 100	+ 640
FLAPS>3	1≤SLATS≤3	FULL	10	2 020	+ 30	+ 100	+ 70	+ 210	+ 70	+ 90	- 100	+ 490
	SLATS>3	FULL	5	1 930	+ 30	+ 100	+ 70	+ 200	+ 70	+ 90	- 90	+ 560

(1) Automatic Landing correction: add 120m - (2) Weight correction: subtract 10m per 1T below 78T

REF DIST without failure (valid for all FLAPS LEVER positions) = 1 760m



Continued from the previous page

SLATS AND FLAPS SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

3 - MEDIUM												
Corrections on Landing Distance (m)					WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE		FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
FLAPS FAULT	FLAPS<1	3	30	2 800	+ 40	N/A	+ 100	+ 260	+ 90	+ 160	- 190	+ 1 160
	1≤FLAPS<2	3	15	2 540	+ 40	+ 120	+ 100	+ 260	+ 90	+ 160	- 170	+ 840
	2≤FLAPS<3	3	10	2 410	+ 40	+ 120	+ 90	+ 260	+ 90	+ 150	- 160	+ 750
	FLAPS=3	3	10	2 340	+ 40	+ 120	+ 90	+ 250	+ 80	+ 140	- 150	+ 540
	FLAPS>3	FULL	5	2 180	+ 40	+ 110	+ 80	+ 250	+ 70	+ 130	- 130	+ 520
SLATS FAULT	SLATS<1	3	25	2 560	+ 40	N/A	+ 90	+ 240	+ 90	+ 130	- 130	+ 390
	1≤SLATS≤3	3	10	2 280	+ 40	+ 110	+ 90	+ 240	+ 80	+ 130	- 120	+ 540
	SLATS>3	3	5	2 200	+ 40	+ 110	+ 80	+ 240	+ 70	+ 120	- 110	+ 600
FLAPS AND SLATS AT 0		1	50	3 290	+ 50	N/A	+ 120	+ 280	+ 110	+ 180	- 230	+ 980
FLAPS<1	SLATS<1	3	45	3 190	+ 50	N/A	+ 120	+ 270	+ 110	+ 180	- 220	+ 1 030
	SLATS≥1	3	30	2 800	+ 40	N/A	+ 100	+ 260	+ 90	+ 160	- 190	+ 1 160
1≤FLAPS<2	SLATS<1	3	30	2 840	+ 40	N/A	+ 100	+ 260	+ 100	+ 160	- 200	+ 690
	SLATS≥1	3	15	2 540	+ 40	+ 120	+ 100	+ 260	+ 90	+ 160	- 170	+ 840
2≤FLAPS<3	SLATS<1	3	25	2 710	+ 40	N/A	+ 100	+ 260	+ 90	+ 160	- 180	+ 590
	SLATS≥1	3	10	2 410	+ 40	+ 120	+ 90	+ 260	+ 90	+ 150	- 160	+ 750
FLAPS=3	SLATS<1	3	25	2 640	+ 40	N/A	+ 100	+ 250	+ 90	+ 150	- 170	+ 390
	1≤SLATS≤3	3	10	2 350	+ 40	+ 110	+ 90	+ 250	+ 80	+ 140	- 150	+ 540
	SLATS>3	3	5	2 250	+ 40	+ 110	+ 80	+ 250	+ 80	+ 140	- 140	+ 600
FLAPS>3	1≤SLATS≤3	FULL	10	2 280	+ 40	+ 110	+ 80	+ 250	+ 80	+ 130	- 140	+ 460
	SLATS>3	FULL	5	2 180	+ 40	+ 110	+ 80	+ 250	+ 70	+ 130	- 130	+ 520

(1) Automatic Landing correction: add 130m - (2) Weight correction: subtract 20m per 1T below 78T
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 980m



Continued from the previous page

SLATS AND FLAPS SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

2 - MEDIUM TO POOR												
Corrections on Landing Distance (m)					WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE		FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
FLAPS FAULT	FLAPS<1	3	30	3 840	+ 90	N/A	+ 210	+ 560	+ 200	+ 400	- 340	+ 740
	1≤FLAPS<2	3	15	3 280	+ 90	+ 200	+ 190	+ 520	+ 170	+ 340	- 270	+ 500
	2≤FLAPS<3	3	10	3 030	+ 80	+ 200	+ 170	+ 500	+ 170	+ 300	- 230	+ 450
	FLAPS=3	3	10	2 860	+ 80	+ 180	+ 160	+ 460	+ 140	+ 260	- 210	+ 360
	FLAPS>3	FULL	5	2 590	+ 70	+ 170	+ 140	+ 430	+ 130	+ 210	- 170	+ 350
SLATS FAULT	SLATS<1	3	25	3 150	+ 80	N/A	+ 160	+ 420	+ 150	+ 230	- 200	+ 310
	1≤SLATS≤3	3	10	2 760	+ 70	+ 170	+ 150	+ 410	+ 140	+ 220	- 160	+ 370
	SLATS>3	3	5	2 640	+ 70	+ 170	+ 140	+ 410	+ 130	+ 210	- 150	+ 400
FLAPS AND SLATS AT 0		1	50	4 670	+ 100	N/A	+ 250	+ 610	+ 240	+ 500	- 460	+ 620
FLAPS<1	SLATS<1	3	45	4 520	+ 100	N/A	+ 240	+ 610	+ 230	+ 490	- 440	+ 640
	SLATS≥1	3	30	3 840	+ 90	N/A	+ 210	+ 560	+ 200	+ 400	- 340	+ 740
1≤FLAPS<2	SLATS<1	3	30	3 730	+ 90	N/A	+ 200	+ 530	+ 190	+ 360	- 320	+ 440
	SLATS≥1	3	15	3 280	+ 90	+ 200	+ 190	+ 520	+ 170	+ 340	- 270	+ 500
2≤FLAPS<3	SLATS<1	3	25	3 480	+ 80	N/A	+ 190	+ 510	+ 170	+ 320	- 290	+ 390
	SLATS≥1	3	10	3 030	+ 80	+ 200	+ 170	+ 500	+ 170	+ 300	- 230	+ 450
FLAPS=3	SLATS<1	3	25	3 270	+ 80	N/A	+ 170	+ 470	+ 160	+ 270	- 250	+ 300
	1≤SLATS≤3	3	10	2 860	+ 80	+ 180	+ 160	+ 460	+ 150	+ 260	- 210	+ 360
	SLATS>3	3	5	2 710	+ 70	+ 190	+ 150	+ 450	+ 150	+ 250	- 190	+ 390
FLAPS>3	1≤SLATS≤3	FULL	10	2 730	+ 70	+ 160	+ 150	+ 430	+ 130	+ 220	- 180	+ 330
	SLATS>3	FULL	5	2 590	+ 70	+ 170	+ 140	+ 430	+ 130	+ 210	- 170	+ 350

(1) Automatic Landing correction: add 150m - (2) Weight correction: subtract 30m per 1T below 78T

REF DIST without failure (valid for all FLAPS LEVER positions) = 2 290m



Continued from the previous page

SLATS AND FLAPS SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

1 - POOR												
Corrections on Landing Distance (m)					WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE		FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
FLAPS FAULT	FLAPS<1	3	30	Landing Distance greater than 6 000 m for all conditions								
	1≤FLAPS<2	3	15	Landing Distance greater than 6 000 m for all conditions								
	2≤FLAPS<3	3	10	Landing Distance greater than 6 000 m for all conditions								
	FLAPS=3	3	10	Landing Distance greater than 6 000 m for all conditions								
	FLAPS>3	FULL	5	Landing Distance greater than 6 000 m for all conditions								
SLATS FAULT	SLATS<1	3	25	4 580	+ 80	N/A	+ 180	+ 600	+ 170	+ 1 020	- 510	+ 310
	1≤SLATS≤3	3	10	4 190	+ 70	+ 160	+ 170	+ 600	+ 170	+ 1 020	- 490	+ 380
	SLATS>3	3	5	4 070	+ 70	+ 160	+ 160	+ 600	+ 160	+ 1 020	- 480	+ 400
FLAPS AND SLATS AT 0		1	50	Landing Distance greater than 6 000 m for all conditions								
FLAPS<1	SLATS<1	3	45	Landing Distance greater than 6 000 m for all conditions								
	SLATS≥1	3	30	Landing Distance greater than 6 000 m for all conditions								
1≤FLAPS<2	SLATS<1	3	30	Landing Distance greater than 6 000 m for all conditions								
	SLATS≥1	3	15	Landing Distance greater than 6 000 m for all conditions								
2≤FLAPS<3	SLATS<1	3	25	Landing Distance greater than 6 000 m for all conditions								
	SLATS≥1	3	10	Landing Distance greater than 6 000 m for all conditions								
FLAPS=3	SLATS<1	3	25	Landing Distance greater than 6 000 m for all conditions								
	1≤SLATS≤3	3	10	Landing Distance greater than 6 000 m for all conditions								
	SLATS>3	3	5	Landing Distance greater than 6 000 m for all conditions								
FLAPS>3	1≤SLATS≤3	FULL	10	Landing Distance greater than 6 000 m for all conditions								
	SLATS>3	FULL	5	Landing Distance greater than 6 000 m for all conditions								
(1) Automatic Landing correction: add 150m - (2) Weight correction: subtract 10m per 1T below 78T												
REF DIST without failure (valid for all FLAPS LEVER positions) = 3 650m												

Ident.: PER-27A-00014169.0017001 / 28 FEB 14
 Applicable to: MSN 2649

SLATS AND FLAPS SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

6 - DRY												
Corrections on Landing Distance (m)					WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 66T	Per 1T above 66T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied	
FLAPS FAULT	FLAPS<1	3	25	1 540	+ 50	N/A	+ 60	+ 130	+ 50	+ 30	- 30	+ 1 390
	1≤FLAPS<2	3	15	1 370	+ 50	+ 80	+ 50	+ 130	+ 40	+ 30	- 30	+ 1 090
	2≤FLAPS<3	3	10	1 280	+ 50	+ 80	+ 50	+ 130	+ 50	+ 30	- 20	+ 1 030
	FLAPS=3	3	10	1 260	+ 50	+ 80	+ 50	+ 120	+ 50	+ 30	- 20	+ 880
	FLAPS>3	FULL	5	1 170	+ 40	+ 70	+ 50	+ 130	+ 40	+ 20	- 20	+ 660
SLATS FAULT	SLATS<1	3	25	1 480	+ 50	N/A	+ 50	+ 120	+ 40	+ 30	- 30	+ 680
	1≤SLATS≤3	3	10	1 260	+ 50	+ 80	+ 50	+ 120	+ 50	+ 30	- 20	+ 880
	SLATS>3	3	5	1 200	+ 50	+ 80	+ 50	+ 120	+ 40	+ 20	- 20	+ 950
FLAPS AND SLATS AT 0		1	50	1 920	+ 60	N/A	+ 70	+ 130	+ 50	+ 40	- 40	+ 1 050
FLAPS<1	SLATS<1	3	45	1 840	+ 60	N/A	+ 60	+ 130	+ 60	+ 40	- 40	+ 1 110
	SLATS≥1	3	25	1 540	+ 50	N/A	+ 60	+ 130	+ 50	+ 30	- 30	+ 1 390
1≤FLAPS<2	SLATS<1	3	30	1 580	+ 50	N/A	+ 60	+ 130	+ 50	+ 30	- 30	+ 910
	SLATS≥1	3	15	1 370	+ 50	+ 80	+ 50	+ 130	+ 40	+ 30	- 30	+ 1 090
2≤FLAPS<3	SLATS<1	3	25	1 490	+ 50	N/A	+ 50	+ 120	+ 50	+ 30	- 30	+ 830
	SLATS≥1	3	10	1 280	+ 50	+ 80	+ 50	+ 130	+ 50	+ 30	- 20	+ 1 030
FLAPS=3	SLATS<1	3	25	1 480	+ 50	N/A	+ 50	+ 120	+ 50	+ 30	- 30	+ 680
	1≤SLATS≤3	3	10	1 270	+ 50	+ 80	+ 50	+ 130	+ 40	+ 30	- 20	+ 870
	SLATS>3	3	5	1 190	+ 50	+ 80	+ 50	+ 120	+ 40	+ 30	- 20	+ 950
FLAPS>3	1≤SLATS≤3	FULL	10	1 240	+ 50	+ 70	+ 50	+ 120	+ 40	+ 20	- 20	+ 580
	SLATS>3	FULL	5	1 170	+ 40	+ 70	+ 50	+ 130	+ 40	+ 20	- 20	+ 660

(1) Automatic Landing correction: add 120m - (2) Weight correction: subtract 10m per 1T below 66T

REF DIST without failure (valid for all FLAPS LEVER positions) = 1 080m



Continued from the previous page

SLATS AND FLAPS SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

5 - GOOD												
Corrections on Landing Distance (m)					WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE		FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 66T	Per 1T above 66T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
FLAPS FAULT	FLAPS<1	3	25	2 020	+ 60	N/A	+ 120	+ 260	+ 90	+ 80	- 100	+ 1 070
	1≤FLAPS<2	3	15	1 790	+ 60	+ 130	+ 100	+ 250	+ 90	+ 70	- 80	+ 820
	2≤FLAPS<3	3	10	1 680	+ 60	+ 130	+ 100	+ 240	+ 80	+ 60	- 70	+ 770
	FLAPS=3	3	10	1 660	+ 60	+ 130	+ 90	+ 240	+ 80	+ 70	- 70	+ 650
	FLAPS>3	FULL	5	1 510	+ 50	+ 110	+ 80	+ 220	+ 60	+ 50	- 50	+ 490
SLATS FAULT	SLATS<1	3	25	1 940	+ 60	N/A	+ 110	+ 230	+ 80	+ 70	- 90	+ 500
	1≤SLATS≤3	3	10	1 660	+ 50	+ 120	+ 90	+ 230	+ 70	+ 60	- 70	+ 660
	SLATS>3	3	5	1 570	+ 50	+ 120	+ 90	+ 220	+ 70	+ 60	- 60	+ 720
FLAPS AND SLATS AT 0		1	50	2 610	+ 80	N/A	+ 160	+ 300	+ 120	+ 110	- 150	+ 770
FLAPS<1	SLATS<1	3	45	2 500	+ 70	N/A	+ 150	+ 290	+ 110	+ 100	- 140	+ 820
	SLATS≥1	3	25	2 020	+ 60	N/A	+ 120	+ 260	+ 90	+ 80	- 100	+ 1 070
1≤FLAPS<2	SLATS<1	3	30	2 090	+ 60	N/A	+ 120	+ 260	+ 100	+ 80	- 110	+ 660
	SLATS≥1	3	15	1 790	+ 60	+ 130	+ 100	+ 250	+ 90	+ 70	- 80	+ 820
2≤FLAPS<3	SLATS<1	3	25	1 970	+ 60	N/A	+ 110	+ 250	+ 90	+ 70	- 90	+ 600
	SLATS≥1	3	10	1 680	+ 60	+ 130	+ 100	+ 240	+ 80	+ 60	- 70	+ 770
FLAPS=3	SLATS<1	3	25	1 950	+ 60	N/A	+ 110	+ 240	+ 90	+ 70	- 90	+ 490
	1≤SLATS≤3	3	10	1 670	+ 60	+ 130	+ 90	+ 240	+ 80	+ 60	- 70	+ 640
	SLATS>3	3	5	1 570	+ 50	+ 120	+ 90	+ 230	+ 70	+ 60	- 60	+ 710
FLAPS>3	1≤SLATS≤3	FULL	10	1 600	+ 50	+ 110	+ 90	+ 220	+ 70	+ 50	- 60	+ 430
	SLATS>3	FULL	5	1 510	+ 50	+ 110	+ 80	+ 220	+ 60	+ 50	- 50	+ 490

(1) Automatic Landing correction: add 150m - (2) Weight correction: subtract 20m per 1T below 66T
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 370m



Continued from the previous page

SLATS AND FLAPS SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

4 - GOOD TO MEDIUM												
Corrections on Landing Distance (m)					WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE		FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 66T	Per 1T above 66T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
FLAPS FAULT	FLAPS<1	3	25	2 220	+ 40	N/A	+ 90	+ 210	+ 70	+ 100	- 160	+ 1 260
	1≤FLAPS<2	3	15	2 030	+ 40	+ 100	+ 80	+ 210	+ 70	+ 90	- 140	+ 970
	2≤FLAPS<3	3	10	1 930	+ 40	+ 100	+ 80	+ 210	+ 60	+ 90	- 130	+ 900
	FLAPS=3	3	10	1 910	+ 40	+ 100	+ 80	+ 210	+ 70	+ 90	- 130	+ 760
	FLAPS>3	FULL	5	1 750	+ 40	+ 90	+ 70	+ 200	+ 60	+ 80	- 110	+ 570
SLATS FAULT	SLATS<1	3	25	2 120	+ 40	N/A	+ 90	+ 190	+ 70	+ 80	- 130	+ 590
	1≤SLATS≤3	3	10	1 870	+ 40	+ 100	+ 80	+ 190	+ 70	+ 80	- 110	+ 760
	SLATS>3	3	5	1 800	+ 40	+ 100	+ 70	+ 190	+ 60	+ 80	- 110	+ 830
FLAPS AND SLATS AT 0		1	50	2 710	+ 50	N/A	+ 110	+ 230	+ 90	+ 110	- 210	+ 960
FLAPS<1	SLATS<1	3	45	2 620	+ 50	N/A	+ 110	+ 220	+ 90	+ 110	- 200	+ 1 010
	SLATS≥1	3	25	2 220	+ 40	N/A	+ 90	+ 210	+ 70	+ 100	- 160	+ 1 260
1≤FLAPS<2	SLATS<1	3	30	2 290	+ 40	N/A	+ 90	+ 210	+ 70	+ 100	- 160	+ 800
	SLATS≥1	3	15	2 030	+ 40	+ 100	+ 80	+ 210	+ 70	+ 90	- 140	+ 970
2≤FLAPS<3	SLATS<1	3	25	2 180	+ 40	N/A	+ 90	+ 210	+ 70	+ 90	- 150	+ 730
	SLATS≥1	3	10	1 930	+ 40	+ 100	+ 80	+ 210	+ 60	+ 90	- 130	+ 900
FLAPS=3	SLATS<1	3	25	2 170	+ 40	N/A	+ 90	+ 210	+ 70	+ 90	- 150	+ 590
	1≤SLATS≤3	3	10	1 920	+ 40	+ 100	+ 80	+ 210	+ 60	+ 90	- 130	+ 760
	SLATS>3	3	5	1 830	+ 40	+ 100	+ 80	+ 210	+ 60	+ 90	- 120	+ 830
FLAPS>3	1≤SLATS≤3	FULL	10	1 830	+ 40	+ 100	+ 70	+ 200	+ 60	+ 80	- 110	+ 500
	SLATS>3	FULL	5	1 750	+ 40	+ 90	+ 70	+ 200	+ 60	+ 80	- 110	+ 570

(1) Automatic Landing correction: add 150m - (2) Weight correction: subtract 20m per 1T below 66T

REF DIST without failure (valid for all FLAPS LEVER positions) = 1 600m



Continued from the previous page

SLATS AND FLAPS SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

3 - MEDIUM												
Corrections on Landing Distance (m)					WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE		FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 66T	Per 1T above 66T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
FLAPS FAULT	FLAPS<1	3	25	2 530	+ 50	N/A	+ 110	+ 250	+ 90	+ 150	- 230	+ 1 200
	1≤FLAPS<2	3	15	2 300	+ 40	+ 120	+ 100	+ 250	+ 80	+ 140	- 200	+ 920
	2≤FLAPS<3	3	10	2 180	+ 40	+ 110	+ 100	+ 250	+ 70	+ 130	- 180	+ 850
	FLAPS=3	3	10	2 150	+ 40	+ 120	+ 90	+ 240	+ 80	+ 130	- 180	+ 710
	FLAPS>3	FULL	5	1 950	+ 40	+ 100	+ 80	+ 230	+ 70	+ 110	- 150	+ 530
SLATS FAULT	SLATS<1	3	25	2 360	+ 50	N/A	+ 100	+ 230	+ 80	+ 120	- 170	+ 560
	1≤SLATS≤3	3	10	2 090	+ 40	+ 110	+ 90	+ 230	+ 70	+ 110	- 150	+ 720
	SLATS>3	3	5	2 010	+ 40	+ 110	+ 90	+ 230	+ 70	+ 110	- 140	+ 780
FLAPS AND SLATS AT 0		1	50	3 080	+ 50	N/A	+ 130	+ 270	+ 110	+ 170	- 290	+ 910
FLAPS<1	SLATS<1	3	45	2 980	+ 50	N/A	+ 130	+ 270	+ 100	+ 170	- 280	+ 960
	SLATS≥1	3	25	2 530	+ 50	N/A	+ 110	+ 250	+ 90	+ 150	- 230	+ 1 200
1≤FLAPS<2	SLATS<1	3	30	2 590	+ 50	N/A	+ 110	+ 250	+ 90	+ 150	- 230	+ 760
	SLATS≥1	3	15	2 300	+ 40	+ 120	+ 100	+ 250	+ 80	+ 140	- 200	+ 920
2≤FLAPS<3	SLATS<1	3	25	2 460	+ 50	N/A	+ 100	+ 250	+ 80	+ 140	- 210	+ 680
	SLATS≥1	3	10	2 180	+ 40	+ 110	+ 100	+ 250	+ 70	+ 130	- 180	+ 850
FLAPS=3	SLATS<1	3	25	2 440	+ 50	N/A	+ 100	+ 250	+ 80	+ 130	- 210	+ 550
	1≤SLATS≤3	3	10	2 160	+ 40	+ 110	+ 90	+ 250	+ 80	+ 130	- 180	+ 710
	SLATS>3	3	5	2 060	+ 40	+ 110	+ 90	+ 240	+ 70	+ 130	- 170	+ 780
FLAPS>3	1≤SLATS≤3	FULL	10	2 040	+ 40	+ 100	+ 90	+ 230	+ 70	+ 110	- 150	+ 470
	SLATS>3	FULL	5	1 950	+ 40	+ 100	+ 80	+ 230	+ 70	+ 110	- 150	+ 530

(1) Automatic Landing correction: add 160m - (2) Weight correction: subtract 20m per 1T below 66T
 REF DIST without failure (valid for all FLAPS LEVER positions) = 1 770m



Continued from the previous page

SLATS AND FLAPS SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

2 - MEDIUM TO POOR												
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW	
FAILURE		FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 66T	Per 1T above 66T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
FLAPS FAULT	FLAPS<1	3	25	3 340	+ 110	N/A	+ 240	+ 540	+ 190	+ 360	- 350	+ 760
	1≤FLAPS<2	3	15	2 850	+ 90	+ 200	+ 210	+ 490	+ 150	+ 280	- 260	+ 570
	2≤FLAPS<3	3	10	2 620	+ 90	+ 190	+ 180	+ 470	+ 140	+ 240	- 220	+ 530
	FLAPS=3	3	10	2 550	+ 90	+ 190	+ 170	+ 440	+ 140	+ 230	- 220	+ 450
	FLAPS>3	FULL	5	2 210	+ 70	+ 150	+ 140	+ 380	+ 100	+ 160	- 160	+ 350
SLATS FAULT	SLATS<1	3	25	2 840	+ 90	N/A	+ 180	+ 390	+ 140	+ 210	- 220	+ 400
	1≤SLATS≤3	3	10	2 460	+ 80	+ 170	+ 160	+ 390	+ 120	+ 190	- 180	+ 490
	SLATS>3	3	5	2 340	+ 80	+ 170	+ 160	+ 390	+ 120	+ 180	- 160	+ 520
FLAPS AND SLATS AT 0		1	50	4 260	+ 120	N/A	+ 290	+ 590	+ 230	+ 450	- 500	+ 590
FLAPS<1	SLATS<1	3	45	4 100	+ 120	N/A	+ 290	+ 580	+ 220	+ 440	- 480	+ 620
	SLATS≥1	3	25	3 340	+ 110	N/A	+ 240	+ 540	+ 190	+ 360	- 350	+ 760
1≤FLAPS<2	SLATS<1	3	30	3 280	+ 100	N/A	+ 220	+ 500	+ 180	+ 310	- 330	+ 490
	SLATS≥1	3	15	2 850	+ 90	+ 200	+ 210	+ 490	+ 150	+ 280	- 260	+ 570
2≤FLAPS<3	SLATS<1	3	25	3 030	+ 90	N/A	+ 200	+ 460	+ 160	+ 270	- 290	+ 440
	SLATS≥1	3	10	2 620	+ 90	+ 190	+ 180	+ 470	+ 140	+ 240	- 220	+ 530
FLAPS=3	SLATS<1	3	25	2 960	+ 90	N/A	+ 190	+ 450	+ 150	+ 250	- 270	+ 380
	1≤SLATS≤3	3	10	2 560	+ 90	+ 190	+ 170	+ 440	+ 140	+ 230	- 220	+ 450
	SLATS>3	3	5	2 410	+ 80	+ 190	+ 170	+ 440	+ 130	+ 220	- 200	+ 480
FLAPS>3	1≤SLATS≤3	FULL	10	2 330	+ 70	+ 140	+ 140	+ 380	+ 110	+ 170	- 180	+ 320
	SLATS>3	FULL	5	2 210	+ 70	+ 150	+ 140	+ 380	+ 100	+ 160	- 160	+ 350

(1) Automatic Landing correction: add 200m - (2) Weight correction: subtract 30m per 1T below 66T

REF DIST without failure (valid for all FLAPS LEVER positions) = 1 950m



Continued from the previous page

SLATS AND FLAPS SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

1 - POOR												
Corrections on Landing Distance (m)					WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE		FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 66T	Per 1T above 66T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
FLAPS FAULT	FLAPS<1	3	25	Landing Distance greater than 6 000 m for all conditions								
	1≤FLAPS<2	3	15	Landing Distance greater than 6 000 m for all conditions								
	2≤FLAPS<3	3	10	Landing Distance greater than 6 000 m for all conditions								
	FLAPS=3	3	10	Landing Distance greater than 6 000 m for all conditions								
	FLAPS>3	FULL	5	Landing Distance greater than 6 000 m for all conditions								
SLATS FAULT	SLATS<1	3	25	4 000	+ 90	N/A	+ 250	+ 540	+ 170	+ 700	- 470	+ 400
	1≤SLATS≤3	3	10	3 630	+ 80	+ 170	+ 230	+ 540	+ 150	+ 700	- 440	+ 490
	SLATS>3	3	5	3 510	+ 80	+ 170	+ 230	+ 530	+ 150	+ 690	- 420	+ 520
FLAPS AND SLATS AT 0		1	50	Landing Distance greater than 6 000 m for all conditions								
FLAPS<1	SLATS<1	3	45	Landing Distance greater than 6 000 m for all conditions								
	SLATS≥1	3	25	Landing Distance greater than 6 000 m for all conditions								
1≤FLAPS<2	SLATS<1	3	30	Landing Distance greater than 6 000 m for all conditions								
	SLATS≥1	3	15	Landing Distance greater than 6 000 m for all conditions								
2≤FLAPS<3	SLATS<1	3	25	Landing Distance greater than 6 000 m for all conditions								
	SLATS≥1	3	10	Landing Distance greater than 6 000 m for all conditions								
FLAPS=3	SLATS<1	3	25	Landing Distance greater than 6 000 m for all conditions								
	1≤SLATS≤3	3	10	Landing Distance greater than 6 000 m for all conditions								
	SLATS>3	3	5	Landing Distance greater than 6 000 m for all conditions								
FLAPS>3	1≤SLATS≤3	FULL	10	Landing Distance greater than 6 000 m for all conditions								
	SLATS>3	FULL	5	Landing Distance greater than 6 000 m for all conditions								
(1) Automatic Landing correction: add 200m - (2) Weight correction: subtract 30m per 1T below 66T												
REF DIST without failure (valid for all FLAPS LEVER positions) = 2 950m												

 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-29 1/30
		06 MAR 14

Ident.: PER-29-00014170.0068001 / 28 FEB 14
Applicable to: MSN 2927-3034

HYDRAULIC SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, $VAPP = VREF + \Delta VREF$ without APPR COR.

6 - DRY											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	$\Delta VREF$	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
G SYS LO PR	FULL	0	1 390	+ 50	+ 90	+ 50	+ 140	+ 50	+ 40	- 40	+ 700
	3	6	1 490	+ 50	+ 100	+ 60	+ 150	+ 60	+ 40	- 50	+ 700
B SYS LO PR	FULL	0	1 290	+ 50	+ 80	+ 60	+ 150	+ 40	+ 30	- 20	+ 680
	3	6	1 370	+ 50	+ 90	+ 60	+ 160	+ 50	+ 30	- 30	+ 660
Y SYS LO PR	FULL	0	1 320	+ 50	+ 100	+ 60	+ 140	+ 50	+ 30	- 30	+ 680
	3	6	1 410	+ 50	+ 100	+ 60	+ 160	+ 50	+ 30	- 30	+ 670
G SYS LO PR with B SYS supplied by the RAT (Calculated with 140kt min)	FULL	0 / 140kt	1 480	+ 50	+ 100	+ 60	+ 140	+ 50	+ 40	- 70	+ 730
	3	6 / 140kt	1 580	+ 50	+ 110	+ 60	+ 150	+ 60	+ 50	- 70	+ 730
Y SYS LO PR with B SYS supplied by the RAT (Calculated with 140kt min)	FULL	0 / 140kt	1 390	+ 50	+ 100	+ 60	+ 150	+ 50	+ 30	- 50	+ 720
	3	6 / 140kt	1 470	+ 50	+ 110	+ 60	+ 150	+ 60	+ 40	- 50	+ 700
G + B	3	25	1 880	+ 50	N/A	+ 70	+ 150	+ 70	+ 60	- 80	+ 500
G + Y	3	30	2 890	+ 70	N/A	+ 120	+ 220	+ 90	+ 140	INOP	+ 410
B + Y	3	10	1 520	+ 50	+ 110	+ 60	+ 160	+ 60	+ 40	- 40	+ 660
(1) Automatic Landing correction: add 90m - (2) Weight correction: subtract 10m per 1T below 78T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 210m											



Continued from the previous page

HYDRAULIC SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

5 - GOOD											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
G SYS LO PR	FULL	0	1 820	+ 50	+ 140	+ 100	+ 260	+ 80	+ 80	- 90	+ 510
	3	6	2 010	+ 60	+ 160	+ 110	+ 280	+ 100	+ 100	- 120	+ 530
B SYS LO PR	FULL	0	1 670	+ 50	+ 120	+ 90	+ 230	+ 70	+ 60	- 60	+ 550
	3	6	1 810	+ 60	+ 130	+ 100	+ 240	+ 90	+ 70	- 70	+ 540
Y SYS LO PR	FULL	0	1 730	+ 50	+ 140	+ 100	+ 240	+ 80	+ 80	- 70	+ 540
	3	6	1 880	+ 60	+ 150	+ 100	+ 250	+ 90	+ 90	- 90	+ 530
G SYS LO PR with B SYS supplied by the RAT (Calculated with 140kt min)	FULL	0 / 140kt	1 980	+ 60	+ 170	+ 120	+ 280	+ 90	+ 110	- 170	+ 510
	3	6 / 140kt	2 190	+ 70	+ 180	+ 130	+ 310	+ 100	+ 130	- 190	+ 530
Y SYS LO PR with B SYS supplied by the RAT (Calculated with 140kt min)	FULL	0 / 140kt	1 850	+ 60	+ 160	+ 110	+ 260	+ 90	+ 90	- 140	+ 550
	3	6 / 140kt	2 000	+ 60	+ 170	+ 120	+ 270	+ 100	+ 100	- 150	+ 530
G + B	3	25	2 720	+ 70	N/A	+ 160	+ 320	+ 120	+ 160	- 220	+ 350
G + Y	3	30	3 210	+ 90	N/A	+ 180	+ 340	+ 140	+ 220	INOP	+ 340
B + Y	3	10	2 100	+ 60	+ 160	+ 120	+ 280	+ 100	+ 110	- 120	+ 490
(1) Automatic Landing correction: add 100m - (2) Weight correction: subtract 10m per 1T below 78T REF DIST without failure (valid for all FLAPS LEVER positions) = 1 520m											



Continued from the previous page

HYDRAULIC SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

4 - GOOD TO MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
G SYS LO PR	FULL	0	1 920	+ 40	+ 110	+ 80	+ 200	+ 70	+ 90	- 130	+ 630
	3	6	2 090	+ 40	+ 120	+ 90	+ 210	+ 70	+ 100	- 150	+ 660
B SYS LO PR	FULL	0	1 880	+ 40	+ 100	+ 80	+ 200	+ 60	+ 80	- 100	+ 640
	3	6	2 010	+ 40	+ 110	+ 80	+ 200	+ 70	+ 90	- 120	+ 640
Y SYS LO PR	FULL	0	1 950	+ 40	+ 110	+ 80	+ 210	+ 70	+ 90	- 130	+ 640
	3	6	2 090	+ 40	+ 120	+ 90	+ 210	+ 70	+ 100	- 140	+ 630
G SYS LO PR with B SYS supplied by the RAT (Calculated with 140kt min)	FULL	0 / 140kt	2 070	+ 40	+ 130	+ 90	+ 210	+ 80	+ 110	- 190	+ 640
	3	6 / 140kt	2 250	+ 40	+ 140	+ 90	+ 230	+ 80	+ 130	- 210	+ 660
Y SYS LO PR with B SYS supplied by the RAT (Calculated with 140kt min)	FULL	0 / 140kt	2 080	+ 40	+ 130	+ 90	+ 220	+ 70	+ 110	- 190	+ 650
	3	6 / 140kt	2 210	+ 40	+ 140	+ 90	+ 220	+ 80	+ 120	- 190	+ 640
G + B	3	25	2 680	+ 50	N/A	+ 110	+ 230	+ 90	+ 140	- 230	+ 430
G + Y	3	30	3 190	+ 60	N/A	+ 140	+ 250	+ 110	+ 190	INOP	+ 390
B + Y	3	10	2 290	+ 40	+ 130	+ 100	+ 230	+ 80	+ 120	- 180	+ 590
(1) Automatic Landing correction: add 100m - (2) Weight correction: subtract 10m per 1T below 78T REF DIST without failure (valid for all FLAPS LEVER positions) = 1 730m											



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HYDRAULIC SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

3 - MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
G SYS LO PR	FULL	0	2 150	+ 40	+ 120	+ 90	+ 240	+ 70	+ 130	- 170	+ 590
	3	6	2 350	+ 40	+ 130	+ 100	+ 250	+ 80	+ 150	- 200	+ 610
B SYS LO PR	FULL	0	2 100	+ 40	+ 120	+ 90	+ 230	+ 80	+ 120	- 140	+ 600
	3	6	2 250	+ 40	+ 120	+ 100	+ 240	+ 80	+ 130	- 160	+ 600
Y SYS LO PR	FULL	0	2 180	+ 40	+ 130	+ 90	+ 240	+ 80	+ 130	- 170	+ 600
	3	6	2 340	+ 40	+ 130	+ 100	+ 250	+ 90	+ 140	- 190	+ 590
G SYS LO PR with B SYS supplied by the RAT (Calculated with 140kt min)	FULL	0 / 140kt	2 330	+ 50	+ 140	+ 100	+ 250	+ 90	+ 160	- 250	+ 600
	3	6 / 140kt	2 540	+ 50	+ 150	+ 110	+ 270	+ 90	+ 180	- 270	+ 620
Y SYS LO PR with B SYS supplied by the RAT (Calculated with 140kt min)	FULL	0 / 140kt	2 340	+ 50	+ 140	+ 100	+ 250	+ 80	+ 160	- 250	+ 610
	3	6 / 140kt	2 490	+ 50	+ 150	+ 110	+ 260	+ 90	+ 170	- 260	+ 590
G + B	3	25	3 010	+ 50	N/A	+ 130	+ 270	+ 110	+ 200	- 300	+ 410
G + Y	3	30	3 540	+ 60	N/A	+ 160	+ 290	+ 120	+ 260	INOP	+ 380
B + Y	3	10	2 570	+ 50	+ 150	+ 110	+ 260	+ 100	+ 180	- 240	+ 550
(1) Automatic Landing correction: add 110m - (2) Weight correction: subtract 10m per 1T below 78T REF DIST without failure (valid for all FLAPS LEVER positions) = 1 930m											



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HYDRAULIC SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

2 - MEDIUM TO POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
G SYS LO PR	FULL	0	2 520	+ 80	+ 190	+ 160	+ 410	+ 130	+ 220	- 220	+ 390
	3	6	2 860	+ 90	+ 210	+ 190	+ 450	+ 150	+ 280	- 280	+ 400
B SYS LO PR	FULL	0	2 470	+ 80	+ 180	+ 150	+ 400	+ 130	+ 200	- 180	+ 390
	3	6	2 710	+ 80	+ 180	+ 170	+ 430	+ 130	+ 230	- 210	+ 400
Y SYS LO PR	FULL	0	2 580	+ 80	+ 200	+ 160	+ 420	+ 140	+ 230	- 220	+ 390
	3	6	2 820	+ 80	+ 200	+ 180	+ 440	+ 150	+ 260	- 260	+ 390
G SYS LO PR with B SYS supplied by the RAT (Calculated with 140kt min)	FULL	0 / 140kt	2 800	+ 90	+ 220	+ 190	+ 470	+ 150	+ 290	- 370	+ 390
	3	6 / 140kt	3 160	+ 100	+ 250	+ 220	+ 510	+ 170	+ 370	- 430	+ 400
Y SYS LO PR with B SYS supplied by the RAT (Calculated with 140kt min)	FULL	0 / 140kt	2 820	+ 90	+ 230	+ 190	+ 470	+ 150	+ 300	- 380	+ 390
	3	6 / 140kt	3 050	+ 90	+ 230	+ 200	+ 490	+ 160	+ 330	- 390	+ 390
G + B	3	25	3 830	+ 100	N/A	+ 250	+ 510	+ 200	+ 420	- 490	+ 310
G + Y	3	30	4 420	+ 120	N/A	+ 290	+ 570	+ 220	+ 560	INOP	+ 300
B + Y	3	10	3 170	+ 90	+ 230	+ 210	+ 480	+ 170	+ 340	- 350	+ 370
(1) Automatic Landing correction: add 130m - (2) Weight correction: subtract 10m per 1T below 78T REF DIST without failure (valid for all FLAPS LEVER positions) = 2 220m											



 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-29 6/30
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HYDRAULIC SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

1 - POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
G SYS LO PR	FULL	0	3 860	+ 70	+ 180	+ 210	+ 610	+ 160	+ 950	- 550	+ 390
	3	6	4 310	+ 80	+ 200	+ 240	+ 640	+ 180	+ 1 110	- 670	+ 400
B SYS LO PR	FULL	0	3 780	+ 70	+ 170	+ 200	+ 600	+ 150	+ 910	- 520	+ 390
	3	6	4 060	+ 70	+ 180	+ 220	+ 620	+ 170	+ 980	- 570	+ 390
Y SYS LO PR	FULL	0	3 950	+ 70	+ 190	+ 210	+ 610	+ 170	+ 1 000	- 430	+ 390
	3	6	4 230	+ 80	+ 190	+ 230	+ 630	+ 170	+ 1 070	- 490	+ 390
G SYS LO PR with B SYS supplied by the RAT (Calculated with 140kt min)	FULL	0 / 140kt	4 280	+ 80	+ 220	+ 240	+ 650	+ 180	+ 1 170	- 630	+ 390
	3	6 / 140kt	4 750	+ 90	+ 240	+ 270	+ 680	+ 200	+ 1 350	- 750	+ 400
Y SYS LO PR with B SYS supplied by the RAT (Calculated with 140kt min)	FULL	0 / 140kt	4 330	+ 80	+ 220	+ 240	+ 650	+ 180	+ 1 210	- 650	+ 390
	3	6 / 140kt	4 570	+ 80	+ 220	+ 260	+ 660	+ 190	+ 1 250	- 670	+ 390
G + B	3	25	Landing Distance greater than 6 000 m for all conditions								
G + Y	3	30	Landing Distance greater than 6 000 m for all conditions								
B + Y	3	10	4 690	+ 80	+ 220	+ 260	+ 670	+ 200	+ 1 250	- 630	+ 370
(1) Automatic Landing correction: add 120m - (2) Weight correction: subtract 10m per 1T below 78T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 3 430m											

	IN FLIGHT PERFORMANCE	PER-29 7/30
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Ident.: PER-29-00014170.0052001 / 28 FEB 14
Applicable to: MSN 3120

HYDRAULIC SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

6 - DRY											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 76T	Per 1T above 76T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
G SYS LO PR	FULL	0	1 370	+ 50	+ 80	+ 50	+ 130	+ 40	+ 30	- 40	+ 730
	3	6	1 470	+ 50	+ 90	+ 60	+ 140	+ 50	+ 40	- 40	+ 710
B SYS LO PR	FULL	0	1 270	+ 50	+ 80	+ 50	+ 150	+ 40	+ 30	- 20	+ 690
	3	6	1 350	+ 50	+ 90	+ 60	+ 160	+ 50	+ 30	- 30	+ 670
Y SYS LO PR	FULL	0	1 300	+ 50	+ 90	+ 50	+ 140	+ 50	+ 30	- 20	+ 700
	3	6	1 390	+ 50	+ 90	+ 60	+ 150	+ 50	+ 30	- 30	+ 670
G SYS LO PR with B SYS supplied by the RAT (Calculated with 140kt min)	FULL	0 / 140kt	1 450	+ 50	+ 100	+ 50	+ 130	+ 50	+ 40	- 70	+ 750
	3	6 / 140kt	1 560	+ 50	+ 100	+ 60	+ 150	+ 50	+ 40	- 70	+ 730
Y SYS LO PR with B SYS supplied by the RAT (Calculated with 140kt min)	FULL	0 / 140kt	1 360	+ 50	+ 100	+ 50	+ 140	+ 50	+ 40	- 50	+ 730
	3	6 / 140kt	1 450	+ 50	+ 100	+ 60	+ 150	+ 50	+ 40	- 50	+ 700
G + B	3	25	1 860	+ 50	N/A	+ 70	+ 150	+ 60	+ 50	- 80	+ 490
G + Y	3	30	2 840	+ 60	N/A	+ 120	+ 220	+ 90	+ 140	INOP	+ 400
B + Y	3	10	1 500	+ 50	+ 100	+ 60	+ 150	+ 50	+ 40	- 40	+ 650
(1) Automatic Landing correction: add 110m - (2) Weight correction: subtract 10m per 1T below 76T REF DIST without failure (valid for all FLAPS LEVER positions) = 1 190m											



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HYDRAULIC SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

5 - GOOD											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 76T	Per 1T above 76T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
G SYS LO PR	FULL	0	1 770	+ 50	+ 140	+ 100	+ 250	+ 80	+ 80	- 90	+ 510
	3	6	1 970	+ 60	+ 150	+ 110	+ 280	+ 90	+ 100	- 110	+ 520
B SYS LO PR	FULL	0	1 630	+ 50	+ 120	+ 90	+ 230	+ 70	+ 60	- 50	+ 550
	3	6	1 770	+ 50	+ 130	+ 100	+ 240	+ 80	+ 70	- 70	+ 540
Y SYS LO PR	FULL	0	1 690	+ 50	+ 140	+ 90	+ 240	+ 80	+ 70	- 70	+ 540
	3	6	1 840	+ 60	+ 140	+ 100	+ 250	+ 90	+ 80	- 90	+ 530
G SYS LO PR with B SYS supplied by the RAT (Calculated with 140kt min)	FULL	0 / 140kt	1 930	+ 60	+ 160	+ 110	+ 280	+ 90	+ 110	- 180	+ 510
	3	6 / 140kt	2 130	+ 70	+ 190	+ 130	+ 300	+ 110	+ 130	- 200	+ 520
Y SYS LO PR with B SYS supplied by the RAT (Calculated with 140kt min)	FULL	0 / 140kt	1 810	+ 60	+ 160	+ 100	+ 260	+ 80	+ 90	- 150	+ 550
	3	6 / 140kt	1 960	+ 60	+ 160	+ 110	+ 270	+ 90	+ 100	- 150	+ 530
G + B	3	25	2 660	+ 70	N/A	+ 160	+ 310	+ 120	+ 160	- 210	+ 350
G + Y	3	30	3 130	+ 90	N/A	+ 170	+ 330	+ 140	+ 210	INOP	+ 340
B + Y	3	10	2 050	+ 60	+ 160	+ 120	+ 280	+ 100	+ 110	- 120	+ 490
(1) Automatic Landing correction: add 120m - (2) Weight correction: subtract 10m per 1T below 76T REF DIST without failure (valid for all FLAPS LEVER positions) = 1 490m											



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HYDRAULIC SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

4 - GOOD TO MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 76T	Per 1T above 76T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
G SYS LO PR	FULL	0	1 880	+ 40	+ 110	+ 80	+ 200	+ 70	+ 90	- 120	+ 630
	3	6	2 050	+ 40	+ 120	+ 80	+ 210	+ 70	+ 100	- 150	+ 650
B SYS LO PR	FULL	0	1 840	+ 40	+ 110	+ 70	+ 200	+ 70	+ 80	- 100	+ 640
	3	6	1 980	+ 40	+ 100	+ 80	+ 210	+ 70	+ 90	- 120	+ 640
Y SYS LO PR	FULL	0	1 910	+ 40	+ 110	+ 80	+ 200	+ 70	+ 90	- 120	+ 630
	3	6	2 050	+ 40	+ 120	+ 80	+ 210	+ 70	+ 100	- 140	+ 630
G SYS LO PR with B SYS supplied by the RAT (Calculated with 140kt min)	FULL	0 / 140kt	2 030	+ 40	+ 130	+ 80	+ 210	+ 80	+ 110	- 200	+ 630
	3	6 / 140kt	2 210	+ 40	+ 140	+ 90	+ 220	+ 80	+ 120	- 210	+ 650
Y SYS LO PR with B SYS supplied by the RAT (Calculated with 140kt min)	FULL	0 / 140kt	2 040	+ 40	+ 130	+ 90	+ 220	+ 70	+ 110	- 200	+ 640
	3	6 / 140kt	2 170	+ 40	+ 130	+ 90	+ 220	+ 80	+ 120	- 200	+ 630
G + B	3	25	2 640	+ 50	N/A	+ 110	+ 230	+ 90	+ 140	- 220	+ 420
G + Y	3	30	3 140	+ 60	N/A	+ 130	+ 250	+ 110	+ 190	INOP	+ 390
B + Y	3	10	2 250	+ 40	+ 130	+ 100	+ 230	+ 80	+ 120	- 170	+ 580
(1) Automatic Landing correction: add 120m - (2) Weight correction: subtract 10m per 1T below 76T REF DIST without failure (valid for all FLAPS LEVER positions) = 1 700m											



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HYDRAULIC SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

3 - MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 76T	Per 1T above 76T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
G SYS LO PR	FULL	0	2 110	+ 40	+ 110	+ 90	+ 240	+ 70	+ 120	- 170	+ 590
	3	6	2 300	+ 40	+ 130	+ 100	+ 250	+ 90	+ 140	- 200	+ 610
B SYS LO PR	FULL	0	2 060	+ 40	+ 110	+ 90	+ 230	+ 70	+ 120	- 140	+ 600
	3	6	2 210	+ 40	+ 120	+ 90	+ 240	+ 80	+ 130	- 160	+ 600
Y SYS LO PR	FULL	0	2 140	+ 40	+ 120	+ 90	+ 240	+ 80	+ 130	- 170	+ 590
	3	6	2 300	+ 40	+ 120	+ 100	+ 250	+ 80	+ 140	- 190	+ 590
G SYS LO PR with B SYS supplied by the RAT (Calculated with 140kt min)	FULL	0 / 140kt	2 290	+ 50	+ 140	+ 100	+ 250	+ 80	+ 150	- 260	+ 590
	3	6 / 140kt	2 490	+ 50	+ 150	+ 110	+ 260	+ 90	+ 180	- 280	+ 610
Y SYS LO PR with B SYS supplied by the RAT (Calculated with 140kt min)	FULL	0 / 140kt	2 290	+ 50	+ 150	+ 100	+ 250	+ 90	+ 160	- 260	+ 600
	3	6 / 140kt	2 440	+ 50	+ 150	+ 110	+ 260	+ 90	+ 170	- 260	+ 590
G + B	3	25	2 960	+ 50	N/A	+ 130	+ 270	+ 110	+ 200	- 290	+ 400
G + Y	3	30	3 480	+ 60	N/A	+ 150	+ 290	+ 120	+ 260	INOP	+ 370
B + Y	3	10	2 530	+ 50	+ 140	+ 110	+ 260	+ 90	+ 170	- 230	+ 540
(1) Automatic Landing correction: add 120m - (2) Weight correction: subtract 10m per 1T below 76T REF DIST without failure (valid for all FLAPS LEVER positions) = 1 890m											



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HYDRAULIC SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

2 - MEDIUM TO POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 76T	Per 1T above 76T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
G SYS LO PR	FULL	0	2 460	+ 80	+ 180	+ 160	+ 410	+ 120	+ 210	- 200	+ 380
	3	6	2 790	+ 90	+ 200	+ 180	+ 450	+ 150	+ 270	- 260	+ 400
B SYS LO PR	FULL	0	2 410	+ 80	+ 170	+ 150	+ 400	+ 120	+ 200	- 170	+ 390
	3	6	2 640	+ 80	+ 180	+ 170	+ 420	+ 130	+ 230	- 200	+ 390
Y SYS LO PR	FULL	0	2 520	+ 80	+ 190	+ 160	+ 420	+ 130	+ 220	- 200	+ 390
	3	6	2 750	+ 80	+ 200	+ 180	+ 440	+ 140	+ 250	- 240	+ 380
G SYS LO PR with B SYS supplied by the RAT (Calculated with 140kt min)	FULL	0 / 140kt	2 720	+ 90	+ 220	+ 180	+ 460	+ 150	+ 280	- 370	+ 380
	3	6 / 140kt	3 080	+ 100	+ 240	+ 210	+ 500	+ 170	+ 360	- 430	+ 400
Y SYS LO PR with B SYS supplied by the RAT (Calculated with 140kt min)	FULL	0 / 140kt	2 740	+ 90	+ 230	+ 190	+ 460	+ 150	+ 290	- 380	+ 390
	3	6 / 140kt	2 970	+ 90	+ 230	+ 200	+ 480	+ 160	+ 320	- 390	+ 380
G + B	3	25	3 740	+ 110	N/A	+ 240	+ 510	+ 190	+ 410	- 460	+ 310
G + Y	3	30	4 310	+ 120	N/A	+ 290	+ 560	+ 230	+ 540	INOP	+ 300
B + Y	3	10	3 100	+ 100	+ 220	+ 210	+ 480	+ 160	+ 330	- 320	+ 360
(1) Automatic Landing correction: add 140m - (2) Weight correction: subtract 10m per 1T below 76T REF DIST without failure (valid for all FLAPS LEVER positions) = 2 160m											



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HYDRAULIC SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

1 - POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 76T	Per 1T above 76T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
G SYS LO PR	FULL	0	3 780	+ 70	+ 180	+ 210	+ 610	+ 160	+ 940	- 540	+ 380
	3	6	4 230	+ 80	+ 200	+ 230	+ 640	+ 180	+ 1 100	- 660	+ 400
B SYS LO PR	FULL	0	3 710	+ 70	+ 170	+ 200	+ 600	+ 150	+ 910	- 510	+ 390
	3	6	3 980	+ 70	+ 180	+ 220	+ 610	+ 170	+ 970	- 560	+ 390
Y SYS LO PR	FULL	0	3 880	+ 70	+ 180	+ 210	+ 620	+ 160	+ 1 000	- 400	+ 390
	3	6	4 150	+ 80	+ 190	+ 230	+ 630	+ 170	+ 1 060	- 460	+ 380
G SYS LO PR with B SYS supplied by the RAT (Calculated with 140kt min)	FULL	0 / 140kt	4 200	+ 80	+ 220	+ 240	+ 650	+ 180	+ 1 170	- 610	+ 380
	3	6 / 140kt	4 660	+ 90	+ 240	+ 270	+ 680	+ 200	+ 1 340	- 730	+ 400
Y SYS LO PR with B SYS supplied by the RAT (Calculated with 140kt min)	FULL	0 / 140kt	4 250	+ 80	+ 210	+ 240	+ 660	+ 170	+ 1 200	- 630	+ 390
	3	6 / 140kt	4 480	+ 80	+ 220	+ 250	+ 660	+ 190	+ 1 240	- 650	+ 380
G + B	3	25	5 330	+ 100	N/A	+ 300	+ 690	+ 220	+ 1 370	- 750	+ 310
G + Y	3	30	Landing Distance greater than 6 000 m for all conditions								
B + Y	3	10	4 610	+ 90	+ 210	+ 260	+ 670	+ 190	+ 1 250	- 590	+ 360
(1) Automatic Landing correction: add 140m - (2) Weight correction: subtract 10m per 1T below 76T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 3 360m											

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Ident.: PER-29-00014170.0047001 / 28 FEB 14
Applicable to: MSN 1276-1843

HYDRAULIC SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

6 - DRY											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
G SYS LO PR	FULL	0	1 390	+ 50	+ 90	+ 50	+ 140	+ 50	+ 40	- 40	+ 700
	3	6	1 490	+ 50	+ 100	+ 60	+ 150	+ 60	+ 40	- 50	+ 700
B SYS LO PR	FULL	0	1 290	+ 50	+ 80	+ 60	+ 150	+ 40	+ 30	- 20	+ 680
	3	6	1 370	+ 50	+ 90	+ 60	+ 160	+ 50	+ 30	- 30	+ 660
Y SYS LO PR	FULL	0	1 320	+ 50	+ 100	+ 60	+ 140	+ 50	+ 30	- 30	+ 680
	3	6	1 410	+ 50	+ 100	+ 60	+ 160	+ 50	+ 30	- 30	+ 670
G SYS LO PR with B SYS supplied by the RAT (Calculated with 140kt min)	FULL	0 / 140kt	1 480	+ 50	+ 100	+ 60	+ 140	+ 50	+ 40	- 70	+ 730
	3	6 / 140kt	1 580	+ 50	+ 110	+ 60	+ 150	+ 60	+ 50	- 70	+ 730
Y SYS LO PR with B SYS supplied by the RAT (Calculated with 140kt min)	FULL	0 / 140kt	1 390	+ 50	+ 100	+ 60	+ 150	+ 50	+ 30	- 50	+ 720
	3	6 / 140kt	1 470	+ 50	+ 110	+ 60	+ 150	+ 60	+ 40	- 50	+ 700
G + B	3	25	1 880	+ 50	N/A	+ 70	+ 150	+ 70	+ 60	- 80	+ 500
G + Y	3	30	2 890	+ 70	N/A	+ 120	+ 220	+ 90	+ 140	INOP	+ 410
B + Y	3	10	1 520	+ 50	+ 110	+ 60	+ 160	+ 60	+ 40	- 40	+ 660
(1) Automatic Landing correction: add 90m - (2) Weight correction: subtract 10m per 1T below 78T REF DIST without failure (valid for all FLAPS LEVER positions) = 1 210m											



Continued from the previous page

HYDRAULIC SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

5 - GOOD											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
G SYS LO PR	FULL	0	1 820	+ 50	+ 140	+ 100	+ 260	+ 80	+ 80	- 90	+ 510
	3	6	2 010	+ 60	+ 160	+ 110	+ 280	+ 100	+ 100	- 120	+ 530
B SYS LO PR	FULL	0	1 670	+ 50	+ 120	+ 90	+ 230	+ 70	+ 60	- 60	+ 550
	3	6	1 810	+ 60	+ 130	+ 100	+ 240	+ 90	+ 70	- 70	+ 540
Y SYS LO PR	FULL	0	1 730	+ 50	+ 140	+ 100	+ 240	+ 80	+ 80	- 70	+ 540
	3	6	1 880	+ 60	+ 150	+ 100	+ 250	+ 90	+ 90	- 90	+ 530
G SYS LO PR with B SYS supplied by the RAT (Calculated with 140kt min)	FULL	0 / 140kt	1 980	+ 60	+ 170	+ 120	+ 280	+ 90	+ 110	- 170	+ 510
	3	6 / 140kt	2 190	+ 70	+ 180	+ 130	+ 310	+ 100	+ 130	- 190	+ 530
Y SYS LO PR with B SYS supplied by the RAT (Calculated with 140kt min)	FULL	0 / 140kt	1 850	+ 60	+ 160	+ 110	+ 260	+ 90	+ 90	- 140	+ 550
	3	6 / 140kt	2 000	+ 60	+ 170	+ 120	+ 270	+ 100	+ 100	- 150	+ 530
G + B	3	25	2 720	+ 70	N/A	+ 160	+ 320	+ 120	+ 160	- 220	+ 350
G + Y	3	30	3 210	+ 90	N/A	+ 180	+ 340	+ 140	+ 220	INOP	+ 340
B + Y	3	10	2 100	+ 60	+ 160	+ 120	+ 280	+ 100	+ 110	- 120	+ 490
(1) Automatic Landing correction: add 100m - (2) Weight correction: subtract 10m per 1T below 78T REF DIST without failure (valid for all FLAPS LEVER positions) = 1 520m											



Continued from the previous page

HYDRAULIC SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

4 - GOOD TO MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
G SYS LO PR	FULL	0	1 920	+ 40	+ 110	+ 80	+ 200	+ 70	+ 90	- 130	+ 630
	3	6	2 090	+ 40	+ 120	+ 90	+ 210	+ 70	+ 100	- 150	+ 660
B SYS LO PR	FULL	0	1 880	+ 40	+ 100	+ 80	+ 200	+ 60	+ 80	- 100	+ 640
	3	6	2 010	+ 40	+ 110	+ 80	+ 200	+ 70	+ 90	- 120	+ 640
Y SYS LO PR	FULL	0	1 950	+ 40	+ 110	+ 80	+ 210	+ 70	+ 90	- 130	+ 640
	3	6	2 090	+ 40	+ 120	+ 90	+ 210	+ 70	+ 100	- 140	+ 630
G SYS LO PR with B SYS supplied by the RAT (Calculated with 140kt min)	FULL	0 / 140kt	2 070	+ 40	+ 130	+ 90	+ 210	+ 80	+ 110	- 190	+ 640
	3	6 / 140kt	2 250	+ 40	+ 140	+ 90	+ 230	+ 80	+ 130	- 210	+ 660
Y SYS LO PR with B SYS supplied by the RAT (Calculated with 140kt min)	FULL	0 / 140kt	2 080	+ 40	+ 130	+ 90	+ 220	+ 70	+ 110	- 190	+ 650
	3	6 / 140kt	2 210	+ 40	+ 140	+ 90	+ 220	+ 80	+ 120	- 190	+ 640
G + B	3	25	2 680	+ 50	N/A	+ 110	+ 230	+ 90	+ 140	- 230	+ 430
G + Y	3	30	3 190	+ 60	N/A	+ 140	+ 250	+ 110	+ 190	INOP	+ 390
B + Y	3	10	2 290	+ 40	+ 130	+ 100	+ 230	+ 80	+ 120	- 180	+ 590
(1) Automatic Landing correction: add 100m - (2) Weight correction: subtract 10m per 1T below 78T REF DIST without failure (valid for all FLAPS LEVER positions) = 1 730m											



Continued from the previous page

HYDRAULIC SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

3 - MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
G SYS LO PR	FULL	0	2 150	+ 40	+ 120	+ 90	+ 240	+ 70	+ 130	- 170	+ 590
	3	6	2 350	+ 40	+ 130	+ 100	+ 250	+ 80	+ 150	- 200	+ 610
B SYS LO PR	FULL	0	2 100	+ 40	+ 120	+ 90	+ 230	+ 80	+ 120	- 140	+ 600
	3	6	2 250	+ 40	+ 120	+ 100	+ 240	+ 80	+ 130	- 160	+ 600
Y SYS LO PR	FULL	0	2 180	+ 40	+ 130	+ 90	+ 240	+ 80	+ 130	- 170	+ 600
	3	6	2 340	+ 40	+ 130	+ 100	+ 250	+ 90	+ 140	- 190	+ 590
G SYS LO PR with B SYS supplied by the RAT (Calculated with 140kt min)	FULL	0 / 140kt	2 330	+ 50	+ 140	+ 100	+ 250	+ 90	+ 160	- 250	+ 600
	3	6 / 140kt	2 540	+ 50	+ 150	+ 110	+ 270	+ 90	+ 180	- 270	+ 620
Y SYS LO PR with B SYS supplied by the RAT (Calculated with 140kt min)	FULL	0 / 140kt	2 340	+ 50	+ 140	+ 100	+ 250	+ 80	+ 160	- 250	+ 610
	3	6 / 140kt	2 490	+ 50	+ 150	+ 110	+ 260	+ 90	+ 170	- 260	+ 590
G + B	3	25	3 010	+ 50	N/A	+ 130	+ 270	+ 110	+ 200	- 300	+ 410
G + Y	3	30	3 540	+ 60	N/A	+ 160	+ 290	+ 120	+ 260	INOP	+ 380
B + Y	3	10	2 570	+ 50	+ 150	+ 110	+ 260	+ 100	+ 180	- 240	+ 550
(1) Automatic Landing correction: add 110m - (2) Weight correction: subtract 10m per 1T below 78T REF DIST without failure (valid for all FLAPS LEVER positions) = 1 930m											



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HYDRAULIC SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

2 - MEDIUM TO POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
G SYS LO PR	FULL	0	2 520	+ 80	+ 190	+ 160	+ 410	+ 130	+ 220	- 220	+ 390
	3	6	2 860	+ 90	+ 210	+ 190	+ 450	+ 150	+ 280	- 280	+ 400
B SYS LO PR	FULL	0	2 470	+ 80	+ 180	+ 150	+ 400	+ 130	+ 200	- 180	+ 390
	3	6	2 710	+ 80	+ 180	+ 170	+ 430	+ 130	+ 230	- 210	+ 400
Y SYS LO PR	FULL	0	2 580	+ 80	+ 200	+ 160	+ 420	+ 140	+ 230	- 220	+ 390
	3	6	2 820	+ 80	+ 200	+ 180	+ 440	+ 150	+ 260	- 260	+ 390
G SYS LO PR with B SYS supplied by the RAT (Calculated with 140kt min)	FULL	0 / 140kt	2 800	+ 90	+ 220	+ 190	+ 470	+ 150	+ 290	- 370	+ 390
	3	6 / 140kt	3 160	+ 100	+ 250	+ 220	+ 510	+ 170	+ 370	- 430	+ 400
Y SYS LO PR with B SYS supplied by the RAT (Calculated with 140kt min)	FULL	0 / 140kt	2 820	+ 90	+ 230	+ 190	+ 470	+ 150	+ 300	- 380	+ 390
	3	6 / 140kt	3 050	+ 90	+ 230	+ 200	+ 490	+ 160	+ 330	- 390	+ 390
G + B	3	25	3 830	+ 100	N/A	+ 250	+ 510	+ 200	+ 420	- 490	+ 310
G + Y	3	30	4 420	+ 120	N/A	+ 290	+ 570	+ 220	+ 560	INOP	+ 300
B + Y	3	10	3 170	+ 90	+ 230	+ 210	+ 480	+ 170	+ 340	- 350	+ 370
(1) Automatic Landing correction: add 130m - (2) Weight correction: subtract 10m per 1T below 78T REF DIST without failure (valid for all FLAPS LEVER positions) = 2 220m											



 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-29 18/30
		06 MAR 14

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HYDRAULIC SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

1 - POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
G SYS LO PR	FULL	0	3 860	+ 70	+ 180	+ 210	+ 610	+ 160	+ 950	- 550	+ 390
	3	6	4 310	+ 80	+ 200	+ 240	+ 640	+ 180	+ 1 110	- 670	+ 400
B SYS LO PR	FULL	0	3 780	+ 70	+ 170	+ 200	+ 600	+ 150	+ 910	- 520	+ 390
	3	6	4 060	+ 70	+ 180	+ 220	+ 620	+ 170	+ 980	- 570	+ 390
Y SYS LO PR	FULL	0	3 950	+ 70	+ 190	+ 210	+ 610	+ 170	+ 1 000	- 430	+ 390
	3	6	4 230	+ 80	+ 190	+ 230	+ 630	+ 170	+ 1 070	- 490	+ 390
G SYS LO PR with B SYS supplied by the RAT (Calculated with 140kt min)	FULL	0 / 140kt	4 280	+ 80	+ 220	+ 240	+ 650	+ 180	+ 1 170	- 630	+ 390
	3	6 / 140kt	4 750	+ 90	+ 240	+ 270	+ 680	+ 200	+ 1 350	- 750	+ 400
Y SYS LO PR with B SYS supplied by the RAT (Calculated with 140kt min)	FULL	0 / 140kt	4 330	+ 80	+ 220	+ 240	+ 650	+ 180	+ 1 210	- 650	+ 390
	3	6 / 140kt	4 570	+ 80	+ 220	+ 260	+ 660	+ 190	+ 1 250	- 670	+ 390
G + B	3	25	Landing Distance greater than 6 000 m for all conditions								
G + Y	3	30	Landing Distance greater than 6 000 m for all conditions								
B + Y	3	10	4 690	+ 80	+ 220	+ 260	+ 670	+ 200	+ 1 250	- 630	+ 370
(1) Automatic Landing correction: add 120m - (2) Weight correction: subtract 10m per 1T below 78T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 3 430m											

 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-29 19/30
		06 MAR 14

Ident.: PER-29-00014170.0028001 / 28 FEB 14
Applicable to: MSN 1219-1233

HYDRAULIC SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

6 - DRY											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
G SYS LO PR	FULL	0	1 410	+ 50	+ 90	+ 50	+ 140	+ 50	+ 40	- 30	+ 690
	3	6	1 520	+ 50	+ 90	+ 60	+ 150	+ 50	+ 40	- 40	+ 690
B SYS LO PR	FULL	0	1 300	+ 50	+ 90	+ 60	+ 150	+ 50	+ 30	- 20	+ 660
	3	6	1 390	+ 50	+ 90	+ 60	+ 170	+ 50	+ 30	- 30	+ 650
Y SYS LO PR	FULL	0	1 340	+ 50	+ 90	+ 50	+ 150	+ 50	+ 40	- 20	+ 670
	3	6	1 430	+ 50	+ 100	+ 60	+ 160	+ 50	+ 40	- 30	+ 660
G SYS LO PR with B SYS supplied by the RAT (Calculated with 140kt min)	FULL	0 / 140kt	1 500	+ 50	+ 100	+ 50	+ 140	+ 50	+ 40	- 50	+ 710
	3	6 / 140kt	1 610	+ 50	+ 110	+ 60	+ 150	+ 60	+ 50	- 50	+ 720
Y SYS LO PR with B SYS supplied by the RAT (Calculated with 140kt min)	FULL	0 / 140kt	1 410	+ 50	+ 100	+ 60	+ 150	+ 50	+ 40	- 40	+ 700
	3	6 / 140kt	1 500	+ 50	+ 100	+ 60	+ 160	+ 50	+ 40	- 40	+ 690
G + B	3	25	1 920	+ 50	N/A	+ 70	+ 160	+ 70	+ 60	- 60	+ 470
G + Y	3	30	3 000	+ 70	N/A	+ 110	+ 220	+ 100	+ 160	INOP	+ 390
B + Y	3	10	1 550	+ 50	+ 110	+ 60	+ 160	+ 50	+ 40	- 30	+ 650
(1) Automatic Landing correction: add 130m - (2) Weight correction: subtract 10m per 1T below 78T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 220m											



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HYDRAULIC SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

5 - GOOD											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
G SYS LO PR	FULL	0	1 860	+ 50	+ 150	+ 90	+ 260	+ 90	+ 90	- 70	+ 510
	3	6	2 080	+ 60	+ 160	+ 110	+ 290	+ 100	+ 110	- 90	+ 520
B SYS LO PR	FULL	0	1 700	+ 50	+ 130	+ 90	+ 240	+ 80	+ 70	- 50	+ 540
	3	6	1 860	+ 60	+ 140	+ 90	+ 250	+ 90	+ 80	- 60	+ 540
Y SYS LO PR	FULL	0	1 770	+ 50	+ 140	+ 90	+ 250	+ 80	+ 80	- 60	+ 540
	3	6	1 940	+ 60	+ 150	+ 100	+ 260	+ 90	+ 90	- 70	+ 530
G SYS LO PR with B SYS supplied by the RAT (Calculated with 140kt min)	FULL	0 / 140kt	2 040	+ 60	+ 180	+ 110	+ 300	+ 90	+ 120	- 130	+ 510
	3	6 / 140kt	2 270	+ 70	+ 200	+ 120	+ 320	+ 120	+ 150	- 150	+ 530
Y SYS LO PR with B SYS supplied by the RAT (Calculated with 140kt min)	FULL	0 / 140kt	1 900	+ 60	+ 170	+ 100	+ 270	+ 100	+ 100	- 110	+ 550
	3	6 / 140kt	2 070	+ 60	+ 180	+ 110	+ 280	+ 100	+ 120	- 120	+ 530
G + B	3	25	2 840	+ 70	N/A	+ 150	+ 330	+ 130	+ 180	- 170	+ 350
G + Y	3	30	3 370	+ 90	N/A	+ 160	+ 350	+ 150	+ 250	INOP	+ 340
B + Y	3	10	2 170	+ 60	+ 180	+ 120	+ 290	+ 110	+ 120	- 100	+ 490
(1) Automatic Landing correction: add 140m - (2) Weight correction: subtract 10m per 1T below 78T REF DIST without failure (valid for all FLAPS LEVER positions) = 1 550m											



Continued from the previous page

HYDRAULIC SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

4 - GOOD TO MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
G SYS LO PR	FULL	0	1 960	+ 40	+ 110	+ 70	+ 200	+ 70	+ 100	- 90	+ 620
	3	6	2 150	+ 40	+ 120	+ 80	+ 220	+ 80	+ 110	- 100	+ 650
B SYS LO PR	FULL	0	1 920	+ 40	+ 110	+ 70	+ 200	+ 70	+ 90	- 90	+ 630
	3	6	2 070	+ 40	+ 110	+ 80	+ 210	+ 70	+ 100	- 100	+ 630
Y SYS LO PR	FULL	0	2 000	+ 40	+ 120	+ 70	+ 210	+ 70	+ 100	- 90	+ 630
	3	6	2 150	+ 40	+ 120	+ 80	+ 220	+ 80	+ 110	- 100	+ 620
G SYS LO PR with B SYS supplied by the RAT (Calculated with 140kt min)	FULL	0 / 140kt	2 130	+ 40	+ 140	+ 80	+ 220	+ 80	+ 120	- 130	+ 630
	3	6 / 140kt	2 330	+ 40	+ 150	+ 90	+ 230	+ 80	+ 140	- 140	+ 650
Y SYS LO PR with B SYS supplied by the RAT (Calculated with 140kt min)	FULL	0 / 140kt	2 140	+ 40	+ 130	+ 80	+ 220	+ 70	+ 120	- 130	+ 640
	3	6 / 140kt	2 290	+ 40	+ 140	+ 90	+ 230	+ 80	+ 130	- 130	+ 630
G + B	3	25	2 790	+ 40	N/A	+ 100	+ 240	+ 100	+ 160	- 160	+ 410
G + Y	3	30	3 340	+ 60	N/A	+ 120	+ 260	+ 110	+ 220	INOP	+ 380
B + Y	3	10	2 370	+ 40	+ 140	+ 90	+ 230	+ 90	+ 140	- 120	+ 570
(1) Automatic Landing correction: add 140m - (2) Weight correction: subtract 10m per 1T below 78T REF DIST without failure (valid for all FLAPS LEVER positions) = 1 760m											



Continued from the previous page

HYDRAULIC SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

3 - MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
G SYS LO PR	FULL	0	2 210	+ 40	+ 120	+ 80	+ 240	+ 80	+ 140	- 120	+ 580
	3	6	2 430	+ 40	+ 140	+ 90	+ 250	+ 90	+ 160	- 140	+ 610
B SYS LO PR	FULL	0	2 160	+ 40	+ 120	+ 80	+ 240	+ 80	+ 130	- 120	+ 590
	3	6	2 330	+ 40	+ 120	+ 90	+ 250	+ 80	+ 140	- 130	+ 590
Y SYS LO PR	FULL	0	2 250	+ 40	+ 130	+ 90	+ 250	+ 80	+ 140	- 110	+ 590
	3	6	2 430	+ 40	+ 130	+ 90	+ 260	+ 80	+ 160	- 130	+ 580
G SYS LO PR with B SYS supplied by the RAT (Calculated with 140kt min)	FULL	0 / 140kt	2 410	+ 50	+ 150	+ 90	+ 260	+ 90	+ 170	- 160	+ 590
	3	6 / 140kt	2 650	+ 50	+ 160	+ 100	+ 270	+ 100	+ 200	- 190	+ 610
Y SYS LO PR with B SYS supplied by the RAT (Calculated with 140kt min)	FULL	0 / 140kt	2 420	+ 50	+ 150	+ 90	+ 260	+ 90	+ 180	- 170	+ 600
	3	6 / 140kt	2 590	+ 50	+ 160	+ 100	+ 270	+ 100	+ 190	- 170	+ 590
G + B	3	25	3 150	+ 50	N/A	+ 120	+ 280	+ 120	+ 220	- 200	+ 400
G + Y	3	30	3 720	+ 60	N/A	+ 140	+ 300	+ 140	+ 290	INOP	+ 370
B + Y	3	10	2 680	+ 50	+ 160	+ 100	+ 270	+ 100	+ 190	- 160	+ 540
(1) Automatic Landing correction: add 140m - (2) Weight correction: subtract 10m per 1T below 78T REF DIST without failure (valid for all FLAPS LEVER positions) = 1 980m											



Continued from the previous page

HYDRAULIC SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

2 - MEDIUM TO POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
G SYS LO PR	FULL	0	2 630	+ 80	+ 200	+ 150	+ 430	+ 140	+ 240	- 160	+ 390
	3	6	3 030	+ 90	+ 210	+ 170	+ 490	+ 160	+ 320	- 210	+ 410
B SYS LO PR	FULL	0	2 570	+ 70	+ 190	+ 140	+ 420	+ 130	+ 230	- 150	+ 400
	3	6	2 840	+ 80	+ 190	+ 160	+ 440	+ 150	+ 260	- 180	+ 400
Y SYS LO PR	FULL	0	2 700	+ 80	+ 200	+ 150	+ 440	+ 140	+ 260	- 160	+ 390
	3	6	2 980	+ 80	+ 200	+ 170	+ 470	+ 150	+ 300	- 190	+ 390
G SYS LO PR with B SYS supplied by the RAT (Calculated with 140kt min)	FULL	0 / 140kt	2 940	+ 90	+ 240	+ 170	+ 490	+ 160	+ 330	- 270	+ 400
	3	6 / 140kt	3 370	+ 100	+ 260	+ 200	+ 550	+ 190	+ 430	- 330	+ 420
Y SYS LO PR with B SYS supplied by the RAT (Calculated with 140kt min)	FULL	0 / 140kt	2 970	+ 90	+ 240	+ 180	+ 500	+ 160	+ 340	- 280	+ 400
	3	6 / 140kt	3 240	+ 90	+ 240	+ 190	+ 520	+ 170	+ 380	- 300	+ 400
G + B	3	25	4 090	+ 100	N/A	+ 230	+ 560	+ 210	+ 490	- 360	+ 320
G + Y	3	30	4 740	+ 110	N/A	+ 260	+ 620	+ 250	+ 660	INOP	+ 310
B + Y	3	10	3 380	+ 90	+ 230	+ 190	+ 530	+ 180	+ 400	- 270	+ 380
(1) Automatic Landing correction: add 160m - (2) Weight correction: subtract 10m per 1T below 78T REF DIST without failure (valid for all FLAPS LEVER positions) = 2 290m											



Continued from the previous page

HYDRAULIC SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

1 - POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
G SYS LO PR	FULL	0	4 140	+ 70	+ 180	+ 170	+ 610	+ 160	+ 1 120	- 400	+ 390
	3	6	4 700	+ 80	+ 200	+ 190	+ 650	+ 180	+ 1 350	- 510	+ 410
B SYS LO PR	FULL	0	4 050	+ 70	+ 170	+ 160	+ 600	+ 160	+ 1 080	- 500	+ 400
	3	6	4 390	+ 80	+ 180	+ 180	+ 620	+ 180	+ 1 170	- 550	+ 400
Y SYS LO PR	FULL	0	4 260	+ 80	+ 180	+ 170	+ 620	+ 160	+ 1 190	- 140	+ 400
	3	6	4 600	+ 80	+ 190	+ 190	+ 640	+ 180	+ 1 300	- 190	+ 390
G SYS LO PR with B SYS supplied by the RAT (Calculated with 140kt min)	FULL	0 / 140kt	4 650	+ 80	+ 220	+ 190	+ 650	+ 190	+ 1 420	- 280	+ 400
	3	6 / 140kt	Landing Distance greater than 6 000 m for all conditions								
Y SYS LO PR with B SYS supplied by the RAT (Calculated with 140kt min)	FULL	0 / 140kt	4 710	+ 80	+ 220	+ 190	+ 660	+ 180	+ 1 460	- 290	+ 400
	3	6 / 140kt	Landing Distance greater than 6 000 m for all conditions								
G + B	3	25	Landing Distance greater than 6 000 m for all conditions								
G + Y	3	30	Landing Distance greater than 6 000 m for all conditions								
B + Y	3	10	Landing Distance greater than 6 000 m for all conditions								
(1) Automatic Landing correction: add 160m - (2) Weight correction: subtract 10m per 1T below 78T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 3 650m											

 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-29 25/30
		06 MAR 14

Ident.: PER-29-00014170.0017001 / 28 FEB 14
Applicable to: MSN 2649

HYDRAULIC SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

6 - DRY											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 66T	Per 1T above 66T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
G SYS LO PR	FULL	0	1 240	+ 40	+ 80	+ 40	+ 120	+ 40	+ 30	- 40	+ 770
	3	6	1 320	+ 40	+ 80	+ 50	+ 120	+ 40	+ 30	- 40	+ 970
B SYS LO PR	FULL	0	1 120	+ 40	+ 70	+ 40	+ 120	+ 40	+ 20	- 20	+ 760
	3	6	1 210	+ 50	+ 80	+ 50	+ 120	+ 40	+ 20	- 20	+ 950
Y SYS LO PR	FULL	0	1 160	+ 40	+ 70	+ 40	+ 120	+ 30	+ 20	- 20	+ 780
	3	6	1 240	+ 50	+ 80	+ 50	+ 130	+ 40	+ 20	- 30	+ 980
G SYS LO PR with B SYS supplied by the RAT (Calculated with 140kt min)	FULL	0 / 140kt	1 340	+ 30	+ 80	+ 50	+ 120	+ 50	+ 30	- 50	+ 700
	3	6 / 140kt	1 360	+ 40	+ 80	+ 50	+ 120	+ 40	+ 30	- 60	+ 980
Y SYS LO PR with B SYS supplied by the RAT (Calculated with 140kt min)	FULL	0 / 140kt	1 270	+ 30	+ 80	+ 50	+ 120	+ 40	+ 30	- 50	+ 710
	3	6 / 140kt	1 290	+ 50	+ 80	+ 50	+ 130	+ 40	+ 30	- 50	+ 1 000
G + B	3	25	1 630	+ 40	N/A	+ 60	+ 130	+ 50	+ 40	- 60	+ 700
G + Y	3	25	2 510	+ 80	N/A	+ 100	+ 200	+ 80	+ 120	INOP	+ 610
B + Y	FULL	0	1 200	+ 40	+ 80	+ 40	+ 120	+ 40	+ 30	- 30	+ 800
	3	6	1 280	+ 50	+ 80	+ 50	+ 130	+ 40	+ 30	- 30	+ 1 000
(1) Automatic Landing correction: add 130m - (2) Weight correction: subtract 10m per 1T below 66T REF DIST without failure (valid for all FLAPS LEVER positions) = 1 080m											



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HYDRAULIC SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

5 - GOOD											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 66T	Per 1T above 66T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
G SYS LO PR	FULL	0	1 650	+ 60	+ 130	+ 90	+ 240	+ 70	+ 80	- 90	+ 530
	3	6	1 840	+ 60	+ 150	+ 110	+ 270	+ 80	+ 90	- 120	+ 680
B SYS LO PR	FULL	0	1 460	+ 50	+ 110	+ 80	+ 210	+ 60	+ 50	- 50	+ 560
	3	6	1 630	+ 60	+ 120	+ 90	+ 240	+ 70	+ 60	- 70	+ 710
Y SYS LO PR	FULL	0	1 530	+ 50	+ 130	+ 90	+ 220	+ 70	+ 60	- 70	+ 570
	3	6	1 710	+ 60	+ 150	+ 100	+ 250	+ 90	+ 80	- 90	+ 730
G SYS LO PR with B SYS supplied by the RAT (Calculated with 140kt min)	FULL	0 / 140kt	1 830	+ 40	+ 130	+ 110	+ 260	+ 80	+ 90	- 180	+ 480
	3	6 / 140kt	1 920	+ 70	+ 170	+ 120	+ 290	+ 100	+ 110	- 200	+ 690
Y SYS LO PR with B SYS supplied by the RAT (Calculated with 140kt min)	FULL	0 / 140kt	1 720	+ 40	+ 140	+ 100	+ 240	+ 80	+ 80	- 150	+ 510
	3	6 / 140kt	1 820	+ 60	+ 170	+ 110	+ 270	+ 90	+ 100	- 180	+ 740
G + B	3	25	2 400	+ 70	N/A	+ 140	+ 300	+ 110	+ 130	- 200	+ 480
G + Y	3	25	2 710	+ 90	N/A	+ 150	+ 300	+ 110	+ 170	INOP	+ 500
B + Y	FULL	0	1 620	+ 60	+ 150	+ 90	+ 240	+ 80	+ 80	- 90	+ 580
	3	6	1 810	+ 60	+ 170	+ 110	+ 270	+ 90	+ 90	- 110	+ 740
(1) Automatic Landing correction: add 180m - (2) Weight correction: subtract 10m per 1T below 66T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 370m											



Continued from the previous page

HYDRAULIC SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

4 - GOOD TO MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 66T	Per 1T above 66T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
G SYS LO PR	FULL	0	1 790	+ 40	+ 110	+ 80	+ 200	+ 60	+ 90	- 120	+ 640
	3	6	1 960	+ 40	+ 120	+ 80	+ 210	+ 70	+ 100	- 150	+ 820
B SYS LO PR	FULL	0	1 690	+ 40	+ 90	+ 70	+ 190	+ 50	+ 70	- 90	+ 650
	3	6	1 860	+ 40	+ 100	+ 80	+ 200	+ 60	+ 80	- 120	+ 820
Y SYS LO PR	FULL	0	1 770	+ 40	+ 110	+ 80	+ 190	+ 60	+ 80	- 110	+ 660
	3	6	1 950	+ 40	+ 120	+ 80	+ 210	+ 70	+ 100	- 130	+ 840
G SYS LO PR with B SYS supplied by the RAT (Calculated with 140kt min)	FULL	0 / 140kt	1 960	+ 30	+ 110	+ 80	+ 210	+ 70	+ 100	- 180	+ 580
	3	6 / 140kt	2 040	+ 40	+ 130	+ 90	+ 210	+ 70	+ 110	- 200	+ 830
Y SYS LO PR with B SYS supplied by the RAT (Calculated with 140kt min)	FULL	0 / 140kt	1 960	+ 30	+ 120	+ 80	+ 210	+ 70	+ 100	- 180	+ 600
	3	6 / 140kt	2 060	+ 40	+ 140	+ 90	+ 210	+ 80	+ 120	- 210	+ 850
G + B	3	25	2 430	+ 50	N/A	+ 100	+ 220	+ 90	+ 120	- 200	+ 590
G + Y	3	25	2 750	+ 60	N/A	+ 120	+ 230	+ 100	+ 160	INOP	+ 580
B + Y	FULL	0	1 870	+ 40	+ 120	+ 80	+ 210	+ 70	+ 100	- 130	+ 670
	3	6	2 060	+ 40	+ 130	+ 90	+ 220	+ 70	+ 110	- 160	+ 850

(1) Automatic Landing correction: add 170m - (2) Weight correction: subtract 10m per 1T below 66T

REF DIST without failure (valid for all FLAPS LEVER positions) = 1 600m



Continued from the previous page

HYDRAULIC SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

3 - MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 66T	Per 1T above 66T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
G SYS LO PR	FULL	0	1 990	+ 50	+ 120	+ 90	+ 230	+ 70	+ 120	- 150	+ 600
	3	6	2 190	+ 50	+ 130	+ 100	+ 240	+ 80	+ 140	- 190	+ 780
B SYS LO PR	FULL	0	1 870	+ 40	+ 100	+ 80	+ 220	+ 60	+ 100	- 120	+ 610
	3	6	2 070	+ 40	+ 120	+ 90	+ 230	+ 80	+ 120	- 150	+ 770
Y SYS LO PR	FULL	0	1 970	+ 40	+ 120	+ 90	+ 230	+ 70	+ 120	- 130	+ 620
	3	6	2 190	+ 50	+ 130	+ 100	+ 240	+ 80	+ 140	- 170	+ 790
G SYS LO PR with B SYS supplied by the RAT (Calculated with 140kt min)	FULL	0 / 140kt	2 180	+ 30	+ 120	+ 100	+ 240	+ 70	+ 140	- 220	+ 540
	3	6 / 140kt	2 290	+ 50	+ 140	+ 110	+ 250	+ 80	+ 160	- 250	+ 790
Y SYS LO PR with B SYS supplied by the RAT (Calculated with 140kt min)	FULL	0 / 140kt	2 190	+ 30	+ 120	+ 100	+ 250	+ 80	+ 140	- 220	+ 560
	3	6 / 140kt	2 320	+ 50	+ 150	+ 110	+ 250	+ 90	+ 160	- 260	+ 810
G + B	3	25	2 720	+ 50	N/A	+ 120	+ 250	+ 100	+ 170	- 250	+ 560
G + Y	3	25	3 040	+ 60	N/A	+ 140	+ 270	+ 100	+ 210	INOP	+ 550
B + Y	FULL	0	2 090	+ 50	+ 130	+ 100	+ 240	+ 70	+ 140	- 160	+ 630
	3	6	2 320	+ 50	+ 140	+ 110	+ 260	+ 80	+ 160	- 200	+ 810
(1) Automatic Landing correction: add 180m - (2) Weight correction: subtract 10m per 1T below 66T REF DIST without failure (valid for all FLAPS LEVER positions) = 1 770m											



 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-29 29/30
		06 MAR 14

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HYDRAULIC SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

2 - MEDIUM TO POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 66T	Per 1T above 66T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
G SYS LO PR	FULL	0	2 240	+ 80	+ 170	+ 150	+ 370	+ 110	+ 180	- 180	+ 410
	3	6	2 600	+ 90	+ 210	+ 190	+ 430	+ 140	+ 250	- 230	+ 520
B SYS LO PR	FULL	0	2 090	+ 70	+ 150	+ 130	+ 350	+ 100	+ 150	- 140	+ 420
	3	6	2 440	+ 90	+ 180	+ 170	+ 410	+ 120	+ 200	- 180	+ 520
Y SYS LO PR	FULL	0	2 230	+ 80	+ 180	+ 150	+ 380	+ 120	+ 180	- 160	+ 430
	3	6	2 610	+ 90	+ 220	+ 190	+ 440	+ 150	+ 260	- 220	+ 540
G SYS LO PR with B SYS supplied by the RAT (Calculated with 140kt min)	FULL	0 / 140kt	2 490	+ 70	+ 170	+ 170	+ 400	+ 120	+ 220	- 290	+ 380
	3	6 / 140kt	2 750	+ 100	+ 230	+ 210	+ 470	+ 150	+ 300	- 380	+ 530
Y SYS LO PR with B SYS supplied by the RAT (Calculated with 140kt min)	FULL	0 / 140kt	2 520	+ 70	+ 190	+ 170	+ 410	+ 140	+ 240	- 300	+ 400
	3	6 / 140kt	2 810	+ 100	+ 250	+ 220	+ 480	+ 160	+ 320	- 410	+ 550
G + B	3	25	3 360	+ 110	N/A	+ 230	+ 470	+ 170	+ 340	- 370	+ 400
G + Y	3	25	3 640	+ 120	N/A	+ 260	+ 500	+ 190	+ 420	INOP	+ 400
B + Y	FULL	0	2 390	+ 90	+ 200	+ 170	+ 410	+ 120	+ 220	- 190	+ 430
	3	6	2 810	+ 100	+ 240	+ 220	+ 480	+ 150	+ 320	- 260	+ 550
(1) Automatic Landing correction: add 240m - (2) Weight correction: subtract 10m per 1T below 66T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 950m											



 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-29 30/30
		06 MAR 14

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HYDRAULIC SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

1 - POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 66T	Per 1T above 66T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
G SYS LO PR	FULL	0	3 340	+ 80	+ 170	+ 220	+ 520	+ 150	+ 670	- 310	+ 410
	3	6	3 910	+ 90	+ 200	+ 270	+ 570	+ 160	+ 880	- 450	+ 520
B SYS LO PR	FULL	0	3 130	+ 70	+ 150	+ 200	+ 500	+ 130	+ 580	- 340	+ 420
	3	6	3 650	+ 80	+ 190	+ 240	+ 540	+ 160	+ 750	- 460	+ 520
Y SYS LO PR	FULL	0	3 360	+ 80	+ 180	+ 220	+ 520	+ 150	+ 680	- 140	+ 430
	3	6	3 940	+ 90	+ 210	+ 270	+ 570	+ 170	+ 890	- 270	+ 540
G SYS LO PR with B SYS supplied by the RAT (Calculated with 140kt min)	FULL	0 / 140kt	3 660	+ 60	+ 170	+ 240	+ 550	+ 160	+ 770	- 260	+ 380
	3	6 / 140kt	4 130	+ 90	+ 220	+ 290	+ 590	+ 180	+ 990	- 430	+ 530
Y SYS LO PR with B SYS supplied by the RAT (Calculated with 140kt min)	FULL	0 / 140kt	3 750	+ 60	+ 170	+ 250	+ 560	+ 160	+ 820	- 290	+ 400
	3	6 / 140kt	4 240	+ 100	+ 240	+ 300	+ 600	+ 190	+ 1 050	- 480	+ 550
G + B	3	25	4 730	+ 100	N/A	+ 320	+ 600	+ 200	+ 1 010	- 420	+ 400
G + Y	3	25	Landing Distance greater than 6 000 m for all conditions								
B + Y	FULL	0	3 610	+ 90	+ 200	+ 250	+ 550	+ 160	+ 800	- 200	+ 440
	3	6	4 240	+ 100	+ 230	+ 300	+ 610	+ 180	+ 1 060	- 370	+ 550
(1) Automatic Landing correction: add 230m - (2) Weight correction: subtract 20m per 1T below 66T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 2 950m											

 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-30 1/10 06 MAR 14

Ident.: PER-30-00014171.0068001 / 28 FEB 14
Applicable to: MSN 2927-3034

ANTI ICE SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

6 - DRY											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
WING ANTI ICE SYS FAULT with Ice Accretion	FULL	10	1 370	+ 50	+ 90	+ 70	+ 160	+ 50	+ 30	- 20	+ 500
	3	16	1 470	+ 50	+ 90	+ 70	+ 160	+ 50	+ 30	- 30	+ 550
(1) Automatic Landing correction: add 60m - (2) Weight correction: subtract 10m per 1T below 78T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 210m											

5 - GOOD											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
WING ANTI ICE SYS FAULT with Ice Accretion	FULL	10	1 760	+ 50	+ 110	+ 90	+ 230	+ 70	+ 60	- 60	+ 430
	3	16	1 910	+ 50	+ 120	+ 100	+ 230	+ 80	+ 70	- 70	+ 440
(1) Automatic Landing correction: add 80m - (2) Weight correction: subtract 20m per 1T below 78T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 520m											

4 - GOOD TO MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
WING ANTI ICE SYS FAULT with Ice Accretion	FULL	10	1 940	+ 40	+ 90	+ 80	+ 200	+ 70	+ 80	- 100	+ 510
	3	16	2 080	+ 40	+ 100	+ 80	+ 200	+ 70	+ 80	- 110	+ 520
(1) Automatic Landing correction: add 70m - (2) Weight correction: subtract 10m per 1T below 78T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 730m											

3 - MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
WING ANTI ICE SYS FAULT with Ice Accretion	FULL	10	2 160	+ 40	+ 100	+ 90	+ 230	+ 70	+ 110	- 140	+ 480
	3	16	2 320	+ 40	+ 100	+ 100	+ 230	+ 80	+ 120	- 150	+ 490
(1) Automatic Landing correction: add 70m - (2) Weight correction: subtract 20m per 1T below 78T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 930m											



 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-30 2/10
		06 MAR 14

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ANTI ICE SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

2 - MEDIUM TO POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
WING ANTI ICE SYS FAULT with Ice Accretion	FULL	10	2 550	+ 70	+ 150	+ 150	+ 380	+ 120	+ 170	- 180	+ 340
	3	16	2 790	+ 80	+ 160	+ 160	+ 390	+ 140	+ 200	- 210	+ 350
(1) Automatic Landing correction: add 90m - (2) Weight correction: subtract 30m per 1T below 78T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 2 220m											

1 - POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
WING ANTI ICE SYS FAULT with Ice Accretion	FULL	10	3 740	+ 70	+ 150	+ 190	+ 580	+ 160	+ 790	- 470	+ 340
	3	16	4 050	+ 70	+ 150	+ 210	+ 590	+ 160	+ 860	- 530	+ 350
(1) Automatic Landing correction: add 90m - (2) Weight correction: subtract 30m per 1T below 78T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 3 430m											

Ident.: PER-30-00014171.0052001 / 28 FEB 14
Applicable to: MSN 3120

ANTI ICE SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

6 - DRY											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 76T	Per 1T above 76T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
WING ANTI ICE SYS FAULT with Ice Accretion	FULL	10	1 340	+ 50	+ 80	+ 60	+ 160	+ 50	+ 30	- 20	+ 500
	3	16	1 430	+ 50	+ 90	+ 70	+ 160	+ 50	+ 30	- 30	+ 530
(1) Automatic Landing correction: add 80m - (2) Weight correction: subtract 10m per 1T below 76T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 190m											



 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-30 3/10
		06 MAR 14

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ANTI ICE SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

5 - GOOD											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 76T	Per 1T above 76T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
WING ANTI ICE SYS FAULT with Ice Accretion	FULL	10	1 720	+ 50	+ 110	+ 90	+ 220	+ 70	+ 60	- 50	+ 430
	3	16	1 870	+ 50	+ 120	+ 100	+ 230	+ 80	+ 60	- 70	+ 430

(1) Automatic Landing correction: add 90m - (2) Weight correction: subtract 20m per 1T below 76T
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 490m

4 - GOOD TO MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 76T	Per 1T above 76T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
WING ANTI ICE SYS FAULT with Ice Accretion	FULL	10	1 900	+ 40	+ 100	+ 70	+ 190	+ 70	+ 80	- 100	+ 500
	3	16	2 050	+ 40	+ 90	+ 80	+ 200	+ 70	+ 80	- 110	+ 520

(1) Automatic Landing correction: add 90m - (2) Weight correction: subtract 10m per 1T below 76T
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 700m

3 - MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 76T	Per 1T above 76T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
WING ANTI ICE SYS FAULT with Ice Accretion	FULL	10	2 120	+ 40	+ 100	+ 90	+ 230	+ 70	+ 100	- 130	+ 470
	3	16	2 280	+ 40	+ 100	+ 90	+ 230	+ 80	+ 110	- 150	+ 480

(1) Automatic Landing correction: add 90m - (2) Weight correction: subtract 20m per 1T below 76T
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 890m

2 - MEDIUM TO POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 76T	Per 1T above 76T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
WING ANTI ICE SYS FAULT with Ice Accretion	FULL	10	2 480	+ 70	+ 150	+ 140	+ 370	+ 120	+ 170	- 170	+ 330
	3	16	2 730	+ 80	+ 150	+ 160	+ 390	+ 130	+ 200	- 200	+ 340

(1) Automatic Landing correction: add 110m - (2) Weight correction: subtract 30m per 1T below 76T
REF DIST without failure (valid for all FLAPS LEVER positions) = 2 160m



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ANTI ICE SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

1 - POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 76T	Per 1T above 76T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
WING ANTI ICE SYS FAULT with Ice Accretion	FULL	10	3 670	+ 70	+ 150	+ 190	+ 580	+ 150	+ 790	- 460	+ 330
	3	16	3 970	+ 70	+ 160	+ 210	+ 590	+ 170	+ 850	- 520	+ 340
(1) Automatic Landing correction: add 100m - (2) Weight correction: subtract 30m per 1T below 76T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 3 360m											

Ident.: PER-30-00014171.0047001 / 28 FEB 14
Applicable to: MSN 1276-1843

ANTI ICE SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

6 - DRY											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
WING ANTI ICE SYS FAULT with Ice Accretion	FULL	10	1 370	+ 50	+ 90	+ 70	+ 160	+ 50	+ 30	- 20	+ 500
	3	16	1 470	+ 50	+ 90	+ 70	+ 160	+ 50	+ 30	- 30	+ 550
(1) Automatic Landing correction: add 60m - (2) Weight correction: subtract 10m per 1T below 78T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 210m											

5 - GOOD											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
WING ANTI ICE SYS FAULT with Ice Accretion	FULL	10	1 760	+ 50	+ 110	+ 90	+ 230	+ 70	+ 60	- 60	+ 430
	3	16	1 910	+ 50	+ 120	+ 100	+ 230	+ 80	+ 70	- 70	+ 440
(1) Automatic Landing correction: add 80m - (2) Weight correction: subtract 20m per 1T below 78T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 520m											



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ANTI ICE SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

4 - GOOD TO MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
WING ANTI ICE SYS FAULT with Ice Accretion	FULL	10	1 940	+ 40	+ 90	+ 80	+ 200	+ 70	+ 80	- 100	+ 510
	3	16	2 080	+ 40	+ 100	+ 80	+ 200	+ 70	+ 80	- 110	+ 520

(1) Automatic Landing correction: add 70m - (2) Weight correction: subtract 10m per 1T below 78T
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 730m

3 - MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
WING ANTI ICE SYS FAULT with Ice Accretion	FULL	10	2 160	+ 40	+ 100	+ 90	+ 230	+ 70	+ 110	- 140	+ 480
	3	16	2 320	+ 40	+ 100	+ 100	+ 230	+ 80	+ 120	- 150	+ 490

(1) Automatic Landing correction: add 70m - (2) Weight correction: subtract 20m per 1T below 78T
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 930m

2 - MEDIUM TO POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
WING ANTI ICE SYS FAULT with Ice Accretion	FULL	10	2 550	+ 70	+ 150	+ 150	+ 380	+ 120	+ 170	- 180	+ 340
	3	16	2 790	+ 80	+ 160	+ 160	+ 390	+ 140	+ 200	- 210	+ 350

(1) Automatic Landing correction: add 90m - (2) Weight correction: subtract 30m per 1T below 78T
REF DIST without failure (valid for all FLAPS LEVER positions) = 2 220m

1 - POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
WING ANTI ICE SYS FAULT with Ice Accretion	FULL	10	3 740	+ 70	+ 150	+ 190	+ 580	+ 160	+ 790	- 470	+ 340
	3	16	4 050	+ 70	+ 150	+ 210	+ 590	+ 160	+ 860	- 530	+ 350

(1) Automatic Landing correction: add 90m - (2) Weight correction: subtract 30m per 1T below 78T
REF DIST without failure (valid for all FLAPS LEVER positions) = 3 430m

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Ident.: PER-30-00014171.0028001 / 28 FEB 14
Applicable to: MSN 1219-1233

ANTI ICE SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

6 - DRY											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
WING ANTI ICE SYS FAULT with Ice Accretion	FULL	10	1 380	+ 50	+ 90	+ 60	+ 160	+ 50	+ 30	- 20	+ 490
	3	16	1 480	+ 50	+ 90	+ 70	+ 170	+ 60	+ 30	- 20	+ 530
(1) Automatic Landing correction: add 90m - (2) Weight correction: subtract 10m per 1T below 78T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 220m											

5 - GOOD											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
WING ANTI ICE SYS FAULT with Ice Accretion	FULL	10	1 790	+ 50	+ 120	+ 90	+ 230	+ 80	+ 60	- 50	+ 420
	3	16	1 960	+ 50	+ 120	+ 100	+ 240	+ 80	+ 70	- 60	+ 430
(1) Automatic Landing correction: add 110m - (2) Weight correction: subtract 20m per 1T below 78T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 550m											

4 - GOOD TO MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
WING ANTI ICE SYS FAULT with Ice Accretion	FULL	10	1 980	+ 40	+ 90	+ 70	+ 200	+ 70	+ 80	- 80	+ 490
	3	16	2 130	+ 40	+ 100	+ 80	+ 200	+ 80	+ 90	- 90	+ 510
(1) Automatic Landing correction: add 100m - (2) Weight correction: subtract 10m per 1T below 78T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 760m											

3 - MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
WING ANTI ICE SYS FAULT with Ice Accretion	FULL	10	2 210	+ 40	+ 100	+ 80	+ 230	+ 80	+ 110	- 110	+ 460
	3	16	2 390	+ 40	+ 110	+ 90	+ 240	+ 80	+ 130	- 120	+ 480
(1) Automatic Landing correction: add 100m - (2) Weight correction: subtract 20m per 1T below 78T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 980m											



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ANTI ICE SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

2 - MEDIUM TO POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
WING ANTI ICE SYS	FULL	10	2 640	+ 70	+ 150	+ 140	+ 390	+ 120	+ 190	- 150	+ 340
FAULT with Ice Accretion	3	16	2 920	+ 80	+ 160	+ 150	+ 420	+ 140	+ 220	- 180	+ 350
(1) Automatic Landing correction: add 120m - (2) Weight correction: subtract 30m per 1T below 78T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 2 290m											

1 - POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
WING ANTI ICE SYS	FULL	10	3 980	+ 70	+ 150	+ 160	+ 580	+ 150	+ 920	- 440	+ 340
FAULT with Ice Accretion	3	16	4 350	+ 70	+ 150	+ 180	+ 600	+ 170	+ 1 020	- 500	+ 350
(1) Automatic Landing correction: add 120m - (2) Weight correction: subtract 30m per 1T below 78T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 3 650m											

Ident.: PER-30-00014171.0017001 / 28 FEB 14
Applicable to: MSN 2649

ANTI ICE SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

6 - DRY											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 66T	Per 1T above 66T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
WING ANTI ICE SYS	FULL	10	1 230	+ 40	+ 70	+ 50	+ 120	+ 40	+ 20	- 20	+ 580
FAULT with Ice Accretion	3	16	1 350	+ 50	+ 80	+ 50	+ 130	+ 40	+ 20	- 30	+ 790
(1) Automatic Landing correction: add 90m - (2) Weight correction: subtract 10m per 1T below 66T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 080m											



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ANTI ICE SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

5 - GOOD											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 66T	Per 1T above 66T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
WING ANTI ICE SYS FAULT with Ice Accretion	FULL	10	1 580	+ 50	+ 110	+ 80	+ 210	+ 70	+ 50	- 60	+ 430
	3	16	1 760	+ 60	+ 120	+ 100	+ 230	+ 80	+ 70	- 80	+ 580

(1) Automatic Landing correction: add 130m - (2) Weight correction: subtract 20m per 1T below 66T
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 370m

4 - GOOD TO MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 66T	Per 1T above 66T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
WING ANTI ICE SYS FAULT with Ice Accretion	FULL	10	1 790	+ 40	+ 90	+ 70	+ 190	+ 60	+ 70	- 100	+ 500
	3	16	1 970	+ 40	+ 100	+ 80	+ 190	+ 60	+ 80	- 120	+ 690

(1) Automatic Landing correction: add 120m - (2) Weight correction: subtract 20m per 1T below 66T
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 600m

3 - MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 66T	Per 1T above 66T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
WING ANTI ICE SYS FAULT with Ice Accretion	FULL	10	1 980	+ 40	+ 90	+ 80	+ 220	+ 70	+ 100	- 130	+ 480
	3	16	2 190	+ 50	+ 110	+ 100	+ 220	+ 80	+ 110	- 150	+ 650

(1) Automatic Landing correction: add 130m - (2) Weight correction: subtract 20m per 1T below 66T
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 770m

2 - MEDIUM TO POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 66T	Per 1T above 66T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
WING ANTI ICE SYS FAULT with Ice Accretion	FULL	10	2 240	+ 70	+ 140	+ 130	+ 340	+ 110	+ 140	- 150	+ 350
	3	16	2 610	+ 90	+ 170	+ 170	+ 390	+ 130	+ 200	- 200	+ 450

(1) Automatic Landing correction: add 170m - (2) Weight correction: subtract 30m per 1T below 66T
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 950m



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ANTI ICE SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

1 - POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 66T	Per 1T above 66T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
WING ANTI ICE SYS	FULL	10	3 230	+ 70	+ 140	+ 200	+ 500	+ 130	+ 540	- 340	+ 350
FAULT with Ice Accretion	3	16	3 780	+ 80	+ 160	+ 240	+ 530	+ 150	+ 700	- 450	+ 450

(1) Automatic Landing correction: add 160m - (2) Weight correction: subtract 40m per 1T below 66T

REF DIST without failure (valid for all FLAPS LEVER positions) = 2 950m

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Ident.: PER-32-00014172.0111001 / 28 FEB 14
Applicable to: MSN 2927-3034

BRAKE SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

6 - DRY											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
ANTISKID FAULT	FULL	0	1 960	+ 60	+ 100	+ 70	+ 190	+ 70	+ 80	- 80	+ 650
	3	6	2 100	+ 70	+ 100	+ 80	+ 200	+ 70	+ 90	- 90	+ 660
ONE BRK RELEASED	FULL	0	1 420	+ 60	+ 100	+ 70	+ 190	+ 60	+ 50	- 40	+ 580
	3	6	1 530	+ 60	+ 110	+ 70	+ 200	+ 70	+ 50	- 40	+ 640
TWO BRK RELEASED	FULL	0	1 760	+ 70	+ 120	+ 90	+ 250	+ 70	+ 90	- 80	+ 570
	3	6	1 920	+ 80	+ 120	+ 100	+ 260	+ 80	+ 100	- 90	+ 590
ALTN L(R) RELEASED (if NORM BRK FAULT)	FULL	0	1 810	+ 70	+ 110	+ 90	+ 250	+ 70	+ 90	- 100	+ 560
	3	6	1 960	+ 70	+ 120	+ 100	+ 260	+ 80	+ 100	- 110	+ 580
ALTN L(R) RELEASED (if G SYS LO PR)	FULL	0	1 940	+ 70	+ 110	+ 90	+ 250	+ 70	+ 100	- 130	+ 600
	3	6	2 100	+ 80	+ 120	+ 100	+ 260	+ 80	+ 120	- 150	+ 630
NORM BRK FAULT	FULL	0	1 320	+ 50	+ 80	+ 60	+ 140	+ 40	+ 30	- 30	+ 660
	3	6	1 410	+ 50	+ 80	+ 60	+ 160	+ 50	+ 30	- 30	+ 650
NORM + ALTN FAULT	FULL	0	1 960	+ 60	+ 100	+ 70	+ 190	+ 70	+ 80	- 80	+ 650
	3	6	2 100	+ 70	+ 100	+ 80	+ 200	+ 70	+ 90	- 90	+ 660
(1) Automatic Landing correction: add 100m - (2) Weight correction: subtract 10m per 1T below 78T REF DIST without failure (valid for all FLAPS LEVER positions) = 1 210m											



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BRAKE SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

5 - GOOD											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
ANTISKID FAULT	FULL	0	1 970	+ 60	+ 100	+ 80	+ 230	+ 70	+ 90	- 80	+ 580
	3	6	2 110	+ 60	+ 110	+ 90	+ 240	+ 70	+ 100	- 100	+ 580
ONE BRK RELEASED	FULL	0	1 790	+ 60	+ 120	+ 100	+ 250	+ 80	+ 80	- 80	+ 490
	3	6	1 960	+ 60	+ 130	+ 110	+ 270	+ 90	+ 90	- 90	+ 480
TWO BRK RELEASED	FULL	0	2 130	+ 70	+ 140	+ 120	+ 320	+ 100	+ 130	- 130	+ 430
	3	6	2 330	+ 70	+ 150	+ 130	+ 340	+ 110	+ 150	- 160	+ 430
ALTN L(R) RELEASED (if NORM BRK FAULT)	FULL	0	2 270	+ 70	+ 140	+ 130	+ 340	+ 100	+ 160	- 160	+ 410
	3	6	2 480	+ 70	+ 150	+ 140	+ 360	+ 110	+ 180	- 190	+ 410
ALTN L(R) RELEASED (if G SYS LO PR)	FULL	0	2 470	+ 80	+ 170	+ 140	+ 370	+ 120	+ 200	- 230	+ 400
	3	6	2 770	+ 80	+ 190	+ 170	+ 410	+ 130	+ 250	- 290	+ 410
NORM BRK FAULT	FULL	0	1 680	+ 50	+ 120	+ 90	+ 230	+ 80	+ 70	- 60	+ 520
	3	6	1 840	+ 50	+ 120	+ 100	+ 250	+ 80	+ 70	- 80	+ 510
NORM + ALTN FAULT	FULL	0	1 970	+ 60	+ 100	+ 80	+ 230	+ 70	+ 90	- 80	+ 580
	3	6	2 110	+ 60	+ 110	+ 90	+ 240	+ 70	+ 100	- 100	+ 580
(1) Automatic Landing correction: add 120m - (2) Weight correction: subtract 20m per 1T below 78T REF DIST without failure (valid for all FLAPS LEVER positions) = 1 520m											



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BRAKE SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

4 - GOOD TO MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
ANTISKID FAULT	FULL	0	1 970	+ 60	+ 100	+ 70	+ 200	+ 60	+ 80	- 110	+ 660
	3	6	2 110	+ 60	+ 100	+ 80	+ 210	+ 70	+ 90	- 120	+ 660
ONE BRK RELEASED	FULL	0	2 050	+ 40	+ 100	+ 80	+ 240	+ 70	+ 110	- 130	+ 590
	3	6	2 210	+ 40	+ 110	+ 90	+ 240	+ 70	+ 120	- 150	+ 590
TWO BRK RELEASED	FULL	0	2 470	+ 50	+ 120	+ 110	+ 310	+ 90	+ 210	- 210	+ 520
	3	6	2 670	+ 50	+ 130	+ 120	+ 320	+ 100	+ 230	- 240	+ 520
ALTN L(R) RELEASED (if NORM BRK FAULT)	FULL	0	2 470	+ 50	+ 120	+ 110	+ 310	+ 90	+ 210	- 210	+ 520
	3	6	2 670	+ 50	+ 130	+ 120	+ 320	+ 100	+ 230	- 240	+ 520
ALTN L(R) RELEASED (if G SYS LO PR)	FULL	0	2 690	+ 50	+ 140	+ 120	+ 330	+ 100	+ 260	- 280	+ 510
	3	6	2 960	+ 60	+ 160	+ 140	+ 350	+ 110	+ 300	- 340	+ 530
NORM BRK FAULT	FULL	0	1 790	+ 30	+ 90	+ 70	+ 190	+ 60	+ 70	- 90	+ 640
	3	6	1 920	+ 40	+ 100	+ 80	+ 200	+ 70	+ 80	- 100	+ 640
NORM + ALTN FAULT	FULL	0	1 970	+ 60	+ 100	+ 70	+ 200	+ 60	+ 80	- 110	+ 660
	3	6	2 110	+ 60	+ 100	+ 80	+ 210	+ 70	+ 90	- 120	+ 660
(1) Automatic Landing correction: add 110m - (2) Weight correction: subtract 10m per 1T below 78T REF DIST without failure (valid for all FLAPS LEVER positions) = 1 730m											



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BRAKE SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

3 - MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
ANTISKID FAULT	FULL	0	2 140	+ 40	+ 110	+ 80	+ 230	+ 80	+ 110	- 140	+ 620
	3	6	2 300	+ 40	+ 110	+ 90	+ 240	+ 80	+ 120	- 160	+ 620
ONE BRK RELEASED	FULL	0	2 280	+ 40	+ 110	+ 100	+ 270	+ 80	+ 160	- 180	+ 550
	3	6	2 460	+ 50	+ 120	+ 110	+ 280	+ 90	+ 180	- 200	+ 550
TWO BRK RELEASED	FULL	0	2 750	+ 50	+ 130	+ 130	+ 370	+ 100	+ 300	- 270	+ 480
	3	6	2 970	+ 60	+ 140	+ 140	+ 380	+ 120	+ 330	- 310	+ 480
ALTN L(R) RELEASED (if NORM BRK FAULT)	FULL	0	2 750	+ 50	+ 130	+ 130	+ 370	+ 100	+ 300	- 270	+ 480
	3	6	2 970	+ 60	+ 140	+ 140	+ 380	+ 120	+ 330	- 310	+ 480
ALTN L(R) RELEASED (if G SYS LO PR)	FULL	0	3 000	+ 60	+ 150	+ 140	+ 390	+ 110	+ 370	- 350	+ 470
	3	6	3 320	+ 60	+ 160	+ 160	+ 410	+ 130	+ 420	- 420	+ 490
NORM BRK FAULT	FULL	0	1 990	+ 40	+ 100	+ 80	+ 220	+ 70	+ 100	- 120	+ 600
	3	6	2 150	+ 40	+ 100	+ 90	+ 230	+ 70	+ 110	- 140	+ 600
NORM + ALTN FAULT	FULL	0	2 140	+ 40	+ 110	+ 80	+ 230	+ 80	+ 110	- 140	+ 620
	3	6	2 300	+ 40	+ 110	+ 90	+ 240	+ 80	+ 120	- 160	+ 620
(1) Automatic Landing correction: add 110m - (2) Weight correction: subtract 20m per 1T below 78T REF DIST without failure (valid for all FLAPS LEVER positions) = 1 930m											



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BRAKE SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

2 - MEDIUM TO POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
ANTISKID FAULT	FULL	0	2 370	+ 70	+ 150	+ 140	+ 380	+ 110	+ 170	- 160	+ 410
	3	6	2 600	+ 70	+ 170	+ 150	+ 390	+ 130	+ 200	- 190	+ 420
ONE BRK RELEASED	FULL	0	2 590	+ 80	+ 160	+ 160	+ 430	+ 120	+ 230	- 210	+ 360
	3	6	2 850	+ 80	+ 170	+ 170	+ 460	+ 140	+ 270	- 240	+ 360
TWO BRK RELEASED	FULL	0	3 030	+ 90	+ 170	+ 190	+ 520	+ 140	+ 380	- 300	+ 320
	3	6	3 320	+ 90	+ 180	+ 210	+ 550	+ 160	+ 440	- 350	+ 320
ALTN L(R) RELEASED (if NORM BRK FAULT)	FULL	0	3 030	+ 90	+ 170	+ 190	+ 520	+ 140	+ 380	- 300	+ 320
	3	6	3 320	+ 90	+ 180	+ 210	+ 550	+ 160	+ 440	- 350	+ 320
ALTN L(R) RELEASED (if G SYS LO PR)	FULL	0	3 330	+ 100	+ 200	+ 210	+ 580	+ 170	+ 490	- 410	+ 310
	3	6	3 780	+ 110	+ 240	+ 250	+ 640	+ 200	+ 620	- 510	+ 330
NORM BRK FAULT	FULL	0	2 310	+ 70	+ 150	+ 140	+ 370	+ 110	+ 170	- 150	+ 390
	3	6	2 540	+ 70	+ 170	+ 150	+ 390	+ 130	+ 190	- 180	+ 390
NORM + ALTN FAULT	FULL	0	2 370	+ 70	+ 150	+ 140	+ 380	+ 110	+ 170	- 160	+ 410
	3	6	2 600	+ 70	+ 170	+ 150	+ 390	+ 130	+ 200	- 190	+ 420
(1) Automatic Landing correction: add 130m - (2) Weight correction: subtract 30m per 1T below 78T REF DIST without failure (valid for all FLAPS LEVER positions) = 2 220m											



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BRAKE SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, $VAPP = VREF + \Delta VREF$ without APPR COR.

1 - POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	$\Delta VREF$	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
ANTISKID FAULT	FULL	0	3 570	+ 70	+ 150	+ 190	+ 580	+ 140	+ 790	- 460	+ 410
	3	6	3 860	+ 70	+ 160	+ 200	+ 590	+ 160	+ 860	- 510	+ 420
ONE BRK RELEASED	FULL	0	Landing Distance greater than 6 000 m for all conditions								
	3	6	Landing Distance greater than 6 000 m for all conditions								
TWO BRK RELEASED	FULL	0	Landing Distance greater than 6 000 m for all conditions								
	3	6	Landing Distance greater than 6 000 m for all conditions								
ALTN L(R) RELEASED (if NORM BRK FAULT)	FULL	0	Landing Distance greater than 6 000 m for all conditions								
	3	6	Landing Distance greater than 6 000 m for all conditions								
ALTN L(R) RELEASED (if G SYS LO PR)	FULL	0	Landing Distance greater than 6 000 m for all conditions								
	3	6	Landing Distance greater than 6 000 m for all conditions								
NORM BRK FAULT	FULL	0	3 510	+ 70	+ 160	+ 180	+ 570	+ 150	+ 780	- 450	+ 390
	3	6	3 810	+ 70	+ 160	+ 200	+ 590	+ 150	+ 870	- 510	+ 390
NORM + ALTN FAULT	FULL	0	3 570	+ 70	+ 150	+ 190	+ 580	+ 140	+ 790	- 460	+ 410
	3	6	3 860	+ 70	+ 160	+ 200	+ 590	+ 160	+ 860	- 510	+ 420
(1) Automatic Landing correction: add 120m - (2) Weight correction: subtract 30m per 1T below 78T REF DIST without failure (valid for all FLAPS LEVER positions) = 3 430m											

Ident.: PER-32-00014172.0071001 / 28 FEB 14
 Applicable to: MSN 3120

BRAKE SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, $VAPP = VREF + \Delta VREF$ without APPR COR.

6 - DRY											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	$\Delta VREF$	REF DIST (m) for 76T	Per 1T above 76T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
ANTISKID FAULT	FULL	0	1 910	+ 60	+ 90	+ 70	+ 200	+ 60	+ 80	- 80	+ 650
	3	6	2 040	+ 60	+ 100	+ 80	+ 200	+ 70	+ 80	- 90	+ 660
ONE BRK RELEASED	FULL	0	1 380	+ 60	+ 100	+ 70	+ 180	+ 60	+ 50	- 30	+ 570
	3	6	1 490	+ 60	+ 100	+ 70	+ 190	+ 60	+ 50	- 40	+ 620
TWO BRK RELEASED	FULL	0	1 700	+ 70	+ 120	+ 90	+ 240	+ 70	+ 80	- 70	+ 560
	3	6	1 850	+ 70	+ 120	+ 90	+ 250	+ 80	+ 90	- 90	+ 580
ALTN L(R) RELEASED (if NORM BRK FAULT)	FULL	0	1 780	+ 70	+ 100	+ 90	+ 250	+ 60	+ 90	- 90	+ 560
	3	6	1 910	+ 70	+ 110	+ 100	+ 250	+ 70	+ 90	- 110	+ 570
ALTN L(R) RELEASED (if G SYS LO PR)	FULL	0	1 900	+ 70	+ 120	+ 90	+ 230	+ 70	+ 110	- 130	+ 600
	3	6	2 070	+ 80	+ 110	+ 100	+ 260	+ 70	+ 110	- 150	+ 630
NORM BRK FAULT	FULL	0	1 300	+ 50	+ 70	+ 50	+ 140	+ 40	+ 30	- 20	+ 680
	3	6	1 380	+ 50	+ 90	+ 60	+ 140	+ 50	+ 40	- 30	+ 660
NORM + ALTN FAULT	FULL	0	1 910	+ 60	+ 90	+ 70	+ 200	+ 60	+ 80	- 80	+ 650
	3	6	2 040	+ 60	+ 100	+ 80	+ 200	+ 70	+ 80	- 90	+ 660

(1) Automatic Landing correction: add 120m - (2) Weight correction: subtract 10m per 1T below 76T
 REF DIST without failure (valid for all FLAPS LEVER positions) = 1 190m



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BRAKE SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

5 - GOOD											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 76T	Per 1T above 76T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
ANTISKID FAULT	FULL	0	1 910	+ 60	+ 100	+ 80	+ 220	+ 70	+ 80	- 80	+ 580
	3	6	2 050	+ 60	+ 110	+ 90	+ 240	+ 70	+ 90	- 90	+ 580
ONE BRK RELEASED	FULL	0	1 750	+ 60	+ 120	+ 90	+ 250	+ 80	+ 80	- 70	+ 490
	3	6	1 910	+ 60	+ 130	+ 100	+ 260	+ 90	+ 90	- 90	+ 480
TWO BRK RELEASED	FULL	0	2 080	+ 70	+ 140	+ 110	+ 310	+ 100	+ 130	- 130	+ 430
	3	6	2 280	+ 70	+ 140	+ 130	+ 330	+ 100	+ 150	- 150	+ 420
ALTN L(R) RELEASED (if NORM BRK FAULT)	FULL	0	2 210	+ 70	+ 140	+ 120	+ 330	+ 100	+ 150	- 150	+ 410
	3	6	2 420	+ 70	+ 150	+ 140	+ 350	+ 110	+ 170	- 180	+ 400
ALTN L(R) RELEASED (if G SYS LO PR)	FULL	0	2 410	+ 70	+ 170	+ 140	+ 370	+ 120	+ 200	- 220	+ 400
	3	6	2 700	+ 80	+ 190	+ 160	+ 400	+ 130	+ 240	- 270	+ 410
NORM BRK FAULT	FULL	0	1 640	+ 50	+ 120	+ 90	+ 230	+ 70	+ 60	- 60	+ 520
	3	6	1 790	+ 50	+ 130	+ 100	+ 240	+ 80	+ 70	- 70	+ 510
NORM + ALTN FAULT	FULL	0	1 910	+ 60	+ 100	+ 80	+ 220	+ 70	+ 80	- 80	+ 580
	3	6	2 050	+ 60	+ 110	+ 90	+ 240	+ 70	+ 90	- 90	+ 580
(1) Automatic Landing correction: add 130m - (2) Weight correction: subtract 20m per 1T below 76T REF DIST without failure (valid for all FLAPS LEVER positions) = 1 490m											



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BRAKE SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

4 - GOOD TO MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 76T	Per 1T above 76T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
ANTISKID FAULT	FULL	0	1 930	+ 60	+ 100	+ 70	+ 200	+ 60	+ 80	- 110	+ 650
	3	6	2 070	+ 60	+ 100	+ 80	+ 200	+ 70	+ 90	- 120	+ 650
ONE BRK RELEASED	FULL	0	2 010	+ 40	+ 100	+ 80	+ 230	+ 70	+ 110	- 130	+ 580
	3	6	2 160	+ 40	+ 110	+ 90	+ 240	+ 80	+ 120	- 150	+ 580
TWO BRK RELEASED	FULL	0	2 430	+ 50	+ 120	+ 110	+ 310	+ 80	+ 200	- 210	+ 510
	3	6	2 620	+ 50	+ 130	+ 120	+ 320	+ 100	+ 230	- 240	+ 510
ALTN L(R) RELEASED (if NORM BRK FAULT)	FULL	0	2 430	+ 50	+ 120	+ 110	+ 310	+ 80	+ 200	- 210	+ 510
	3	6	2 620	+ 50	+ 130	+ 120	+ 320	+ 100	+ 230	- 240	+ 510
ALTN L(R) RELEASED (if G SYS LO PR)	FULL	0	2 630	+ 50	+ 140	+ 120	+ 330	+ 100	+ 250	- 280	+ 510
	3	6	2 910	+ 60	+ 150	+ 130	+ 350	+ 110	+ 290	- 330	+ 530
NORM BRK FAULT	FULL	0	1 750	+ 30	+ 90	+ 70	+ 190	+ 60	+ 70	- 90	+ 630
	3	6	1 890	+ 40	+ 90	+ 80	+ 200	+ 60	+ 80	- 100	+ 630
NORM + ALTN FAULT	FULL	0	1 930	+ 60	+ 100	+ 70	+ 200	+ 60	+ 80	- 110	+ 650
	3	6	2 070	+ 60	+ 100	+ 80	+ 200	+ 70	+ 90	- 120	+ 650

(1) Automatic Landing correction: add 130m - (2) Weight correction: subtract 10m per 1T below 76T

REF DIST without failure (valid for all FLAPS LEVER positions) = 1 700m



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BRAKE SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

3 - MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 76T	Per 1T above 76T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
ANTISKID FAULT	FULL	0	2 100	+ 40	+ 110	+ 80	+ 230	+ 70	+ 110	- 140	+ 620
	3	6	2 260	+ 40	+ 110	+ 90	+ 240	+ 80	+ 120	- 160	+ 620
ONE BRK RELEASED	FULL	0	2 240	+ 50	+ 110	+ 100	+ 270	+ 80	+ 160	- 170	+ 540
	3	6	2 410	+ 50	+ 120	+ 100	+ 280	+ 90	+ 170	- 200	+ 540
TWO BRK RELEASED	FULL	0	2 700	+ 50	+ 120	+ 130	+ 370	+ 100	+ 290	- 260	+ 470
	3	6	2 920	+ 60	+ 130	+ 140	+ 380	+ 110	+ 320	- 300	+ 470
ALTN L(R) RELEASED (if NORM BRK FAULT)	FULL	0	2 700	+ 50	+ 120	+ 130	+ 370	+ 100	+ 290	- 260	+ 470
	3	6	2 920	+ 60	+ 130	+ 140	+ 380	+ 110	+ 320	- 300	+ 470
ALTN L(R) RELEASED (if G SYS LO PR)	FULL	0	2 940	+ 60	+ 150	+ 140	+ 390	+ 110	+ 360	- 340	+ 470
	3	6	3 250	+ 60	+ 170	+ 160	+ 410	+ 130	+ 420	- 410	+ 490
NORM BRK FAULT	FULL	0	1 950	+ 40	+ 100	+ 80	+ 220	+ 70	+ 100	- 120	+ 590
	3	6	2 110	+ 40	+ 100	+ 90	+ 230	+ 70	+ 110	- 140	+ 590
NORM + ALTN FAULT	FULL	0	2 100	+ 40	+ 110	+ 80	+ 230	+ 70	+ 110	- 140	+ 620
	3	6	2 260	+ 40	+ 110	+ 90	+ 240	+ 80	+ 120	- 160	+ 620
(1) Automatic Landing correction: add 130m - (2) Weight correction: subtract 20m per 1T below 76T REF DIST without failure (valid for all FLAPS LEVER positions) = 1 890m											



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BRAKE SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

2 - MEDIUM TO POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 76T	Per 1T above 76T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
ANTISKID FAULT	FULL	0	2 310	+ 70	+ 150	+ 140	+ 370	+ 110	+ 160	- 150	+ 410
	3	6	2 540	+ 70	+ 160	+ 150	+ 390	+ 120	+ 190	- 180	+ 410
ONE BRK RELEASED	FULL	0	2 520	+ 80	+ 160	+ 150	+ 420	+ 130	+ 220	- 190	+ 350
	3	6	2 780	+ 80	+ 170	+ 170	+ 450	+ 130	+ 260	- 230	+ 360
TWO BRK RELEASED	FULL	0	2 960	+ 90	+ 170	+ 180	+ 520	+ 140	+ 380	- 290	+ 310
	3	6	3 240	+ 90	+ 190	+ 200	+ 540	+ 160	+ 430	- 330	+ 320
ALTN L(R) RELEASED (if NORM BRK FAULT)	FULL	0	2 960	+ 90	+ 170	+ 180	+ 520	+ 140	+ 380	- 290	+ 310
	3	6	3 240	+ 90	+ 190	+ 200	+ 540	+ 160	+ 430	- 330	+ 320
ALTN L(R) RELEASED (if G SYS LO PR)	FULL	0	3 250	+ 100	+ 200	+ 210	+ 570	+ 160	+ 480	- 390	+ 310
	3	6	3 690	+ 110	+ 230	+ 250	+ 630	+ 190	+ 600	- 490	+ 320
NORM BRK FAULT	FULL	0	2 250	+ 70	+ 150	+ 140	+ 360	+ 110	+ 160	- 140	+ 390
	3	6	2 480	+ 70	+ 160	+ 150	+ 390	+ 120	+ 190	- 170	+ 390
NORM + ALTN FAULT	FULL	0	2 310	+ 70	+ 150	+ 140	+ 370	+ 110	+ 160	- 150	+ 410
	3	6	2 540	+ 70	+ 160	+ 150	+ 390	+ 120	+ 190	- 180	+ 410
(1) Automatic Landing correction: add 140m - (2) Weight correction: subtract 20m per 1T below 76T REF DIST without failure (valid for all FLAPS LEVER positions) = 2 160m											



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BRAKE SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, $VAPP = VREF + \Delta VREF$ without APPR COR.

1 - POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	$\Delta VREF$	REF DIST (m) for 76T	Per 1T above 76T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
ANTISKID FAULT	FULL	0	3 500	+ 70	+ 150	+ 180	+ 580	+ 140	+ 790	- 450	+ 410
	3	6	3 790	+ 70	+ 160	+ 200	+ 590	+ 150	+ 860	- 500	+ 410
ONE BRK RELEASED	FULL	0	Landing Distance greater than 6 000 m for all conditions								
	3	6	Landing Distance greater than 6 000 m for all conditions								
TWO BRK RELEASED	FULL	0	Landing Distance greater than 6 000 m for all conditions								
	3	6	Landing Distance greater than 6 000 m for all conditions								
ALTN L(R) RELEASED (if NORM BRK FAULT)	FULL	0	Landing Distance greater than 6 000 m for all conditions								
	3	6	Landing Distance greater than 6 000 m for all conditions								
ALTN L(R) RELEASED (if G SYS LO PR)	FULL	0	Landing Distance greater than 6 000 m for all conditions								
	3	6	Landing Distance greater than 6 000 m for all conditions								
NORM BRK FAULT	FULL	0	3 450	+ 70	+ 150	+ 180	+ 570	+ 140	+ 780	- 440	+ 390
	3	6	3 730	+ 70	+ 160	+ 200	+ 590	+ 160	+ 850	- 500	+ 390
NORM + ALTN FAULT	FULL	0	3 500	+ 70	+ 150	+ 180	+ 580	+ 140	+ 790	- 450	+ 410
	3	6	3 790	+ 70	+ 160	+ 200	+ 590	+ 150	+ 860	- 500	+ 410
(1) Automatic Landing correction: add 140m - (2) Weight correction: subtract 30m per 1T below 76T REF DIST without failure (valid for all FLAPS LEVER positions) = 3 360m											

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Ident.: PER-32-00014172.0046001 / 28 FEB 14
Applicable to: MSN 1276-1843

BRAKE SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

6 - DRY											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
ANTISKID FAULT	FULL	0	1 960	+ 60	+ 100	+ 70	+ 190	+ 70	+ 80	- 80	+ 650
	3	6	2 100	+ 70	+ 100	+ 80	+ 200	+ 70	+ 90	- 90	+ 660
AUTO BRK FAULT	FULL	0	1 320	+ 50	+ 80	+ 60	+ 140	+ 40	+ 30	- 30	+ 660
	3	6	1 410	+ 50	+ 80	+ 60	+ 160	+ 50	+ 30	- 30	+ 650

(1) Automatic Landing correction: add 90m - (2) Weight correction: subtract 10m per 1T below 78T
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 210m

5 - GOOD											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
ANTISKID FAULT	FULL	0	1 970	+ 60	+ 100	+ 80	+ 230	+ 70	+ 90	- 80	+ 580
	3	6	2 110	+ 60	+ 110	+ 90	+ 240	+ 70	+ 100	- 100	+ 580
AUTO BRK FAULT	FULL	0	1 680	+ 50	+ 120	+ 90	+ 230	+ 80	+ 70	- 60	+ 520
	3	6	1 840	+ 50	+ 120	+ 100	+ 250	+ 80	+ 70	- 80	+ 510

(1) Automatic Landing correction: add 100m - (2) Weight correction: subtract 20m per 1T below 78T
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 520m

4 - GOOD TO MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
ANTISKID FAULT	FULL	0	1 970	+ 60	+ 100	+ 70	+ 200	+ 60	+ 80	- 110	+ 660
	3	6	2 110	+ 60	+ 100	+ 80	+ 210	+ 70	+ 90	- 120	+ 660
AUTO BRK FAULT	FULL	0	1 790	+ 30	+ 90	+ 70	+ 190	+ 60	+ 70	- 90	+ 640
	3	6	1 920	+ 40	+ 100	+ 80	+ 200	+ 70	+ 80	- 100	+ 640

(1) Automatic Landing correction: add 90m - (2) Weight correction: subtract 10m per 1T below 78T
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 730m



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BRAKE SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

3 - MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
ANTISKID FAULT	FULL	0	2 140	+ 40	+ 110	+ 80	+ 230	+ 80	+ 110	- 140	+ 620
	3	6	2 300	+ 40	+ 110	+ 90	+ 240	+ 80	+ 120	- 160	+ 620
AUTO BRK FAULT	FULL	0	1 990	+ 40	+ 100	+ 80	+ 220	+ 70	+ 100	- 120	+ 600
	3	6	2 150	+ 40	+ 100	+ 90	+ 230	+ 70	+ 110	- 140	+ 600
(1) Automatic Landing correction: add 100m - (2) Weight correction: subtract 20m per 1T below 78T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 930m											

2 - MEDIUM TO POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
ANTISKID FAULT	FULL	0	2 370	+ 70	+ 150	+ 140	+ 380	+ 110	+ 170	- 160	+ 410
	3	6	2 600	+ 70	+ 170	+ 150	+ 390	+ 130	+ 200	- 190	+ 420
AUTO BRK FAULT	FULL	0	2 310	+ 70	+ 150	+ 140	+ 370	+ 110	+ 170	- 150	+ 390
	3	6	2 540	+ 70	+ 170	+ 150	+ 390	+ 130	+ 190	- 180	+ 390
(1) Automatic Landing correction: add 110m - (2) Weight correction: subtract 30m per 1T below 78T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 2 220m											

1 - POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
ANTISKID FAULT	FULL	0	3 570	+ 70	+ 150	+ 190	+ 580	+ 140	+ 790	- 460	+ 410
	3	6	3 860	+ 70	+ 160	+ 200	+ 590	+ 160	+ 860	- 510	+ 420
AUTO BRK FAULT	FULL	0	3 510	+ 70	+ 160	+ 180	+ 570	+ 150	+ 780	- 450	+ 390
	3	6	3 810	+ 70	+ 160	+ 200	+ 590	+ 150	+ 870	- 510	+ 390
(1) Automatic Landing correction: add 110m - (2) Weight correction: subtract 30m per 1T below 78T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 3 430m											

 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-32 15/22
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Ident.: PER-32-00014172.0022001 / 28 FEB 14
Applicable to: MSN 1219-1233

BRAKE SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

6 - DRY											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
ANTISKID FAULT	FULL	0	2 000	+ 60	+ 100	+ 70	+ 200	+ 60	+ 80	- 70	+ 640
	3	6	2 150	+ 70	+ 100	+ 80	+ 210	+ 70	+ 90	- 70	+ 650
AUTO BRK FAULT	FULL	0	1 330	+ 50	+ 80	+ 50	+ 140	+ 50	+ 30	- 20	+ 650
	3	6	1 420	+ 50	+ 90	+ 60	+ 150	+ 60	+ 40	- 30	+ 640

(1) Automatic Landing correction: add 130m - (2) Weight correction: subtract 10m per 1T below 78T
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 220m

5 - GOOD											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
ANTISKID FAULT	FULL	0	2 000	+ 60	+ 110	+ 80	+ 230	+ 70	+ 90	- 70	+ 580
	3	6	2 160	+ 60	+ 120	+ 90	+ 250	+ 80	+ 100	- 80	+ 570
AUTO BRK FAULT	FULL	0	1 710	+ 50	+ 120	+ 80	+ 240	+ 80	+ 70	- 50	+ 510
	3	6	1 880	+ 50	+ 130	+ 100	+ 250	+ 90	+ 80	- 60	+ 510

(1) Automatic Landing correction: add 130m - (2) Weight correction: subtract 20m per 1T below 78T
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 550m

4 - GOOD TO MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
ANTISKID FAULT	FULL	0	2 010	+ 60	+ 100	+ 70	+ 210	+ 60	+ 90	- 90	+ 650
	3	6	2 160	+ 60	+ 110	+ 80	+ 210	+ 70	+ 100	- 100	+ 650
AUTO BRK FAULT	FULL	0	1 820	+ 30	+ 100	+ 70	+ 190	+ 60	+ 80	- 70	+ 620
	3	6	1 970	+ 40	+ 100	+ 70	+ 200	+ 70	+ 90	- 80	+ 630

(1) Automatic Landing correction: add 130m - (2) Weight correction: subtract 10m per 1T below 78T
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 760m



 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE							PER-32
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BRAKE SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

3 - MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
ANTISKID FAULT	FULL	0	2 190	+ 40	+ 110	+ 80	+ 230	+ 80	+ 120	- 110	+ 610
	3	6	2 370	+ 40	+ 120	+ 90	+ 240	+ 80	+ 130	- 130	+ 620
AUTO BRK FAULT	FULL	0	2 040	+ 40	+ 100	+ 80	+ 230	+ 70	+ 110	- 100	+ 590
	3	6	2 210	+ 40	+ 110	+ 80	+ 240	+ 80	+ 120	- 110	+ 590
(1) Automatic Landing correction: add 130m - (2) Weight correction: subtract 20m per 1T below 78T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 980m											

2 - MEDIUM TO POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
ANTISKID FAULT	FULL	0	2 450	+ 70	+ 160	+ 130	+ 390	+ 120	+ 190	- 130	+ 410
	3	6	2 720	+ 70	+ 170	+ 150	+ 420	+ 130	+ 220	- 160	+ 420
AUTO BRK FAULT	FULL	0	2 390	+ 70	+ 160	+ 130	+ 390	+ 120	+ 180	- 130	+ 390
	3	6	2 660	+ 70	+ 170	+ 140	+ 410	+ 130	+ 220	- 150	+ 400
(1) Automatic Landing correction: add 150m - (2) Weight correction: subtract 30m per 1T below 78T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 2 290m											

1 - POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
ANTISKID FAULT	FULL	0	3 790	+ 70	+ 160	+ 150	+ 570	+ 150	+ 910	- 430	+ 410
	3	6	4 150	+ 70	+ 160	+ 170	+ 600	+ 160	+ 1 030	- 490	+ 420
AUTO BRK FAULT	FULL	0	3 740	+ 70	+ 150	+ 150	+ 580	+ 140	+ 920	- 420	+ 390
	3	6	4 090	+ 70	+ 160	+ 160	+ 600	+ 160	+ 1 020	- 480	+ 400
(1) Automatic Landing correction: add 150m - (2) Weight correction: subtract 30m per 1T below 78T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 3 650m											

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		06 MAR 14

Ident.: PER-32-00014172.0021001 / 28 FEB 14
Applicable to: MSN 2649

BRAKE SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, $VAPP = VREF + \Delta VREF$ without APPR COR.

6 - DRY											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	$\Delta VREF$	REF DIST (m) for 66T	Per 1T above 66T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
ANTISKID FAULT	FULL	0	1 790	+ 70	+ 90	+ 70	+ 190	+ 60	+ 70	- 90	+ 640
	3	6	1 990	+ 70	+ 110	+ 80	+ 200	+ 70	+ 90	- 100	+ 810
ONE BRK RELEASED	FULL	0	1 260	+ 50	+ 90	+ 50	+ 140	+ 50	+ 30	- 30	+ 700
	3	6	1 400	+ 50	+ 90	+ 60	+ 150	+ 40	+ 40	- 40	+ 900
TWO BRK RELEASED	FULL	0	1 540	+ 60	+ 100	+ 70	+ 180	+ 60	+ 60	- 60	+ 650
	3	6	1 730	+ 70	+ 100	+ 80	+ 190	+ 60	+ 70	- 70	+ 830
ALTN L(R) RELEASED (if NORM BRK FAULT)	FULL	0	1 550	+ 60	+ 90	+ 70	+ 190	+ 50	+ 60	- 70	+ 650
	3	6	1 730	+ 70	+ 100	+ 80	+ 190	+ 60	+ 70	- 90	+ 830
ALTN L(R) RELEASED (if G SYS LO PR)	FULL	0	1 670	+ 60	+ 100	+ 70	+ 190	+ 60	+ 70	- 100	+ 670
	3	6	1 810	+ 70	+ 110	+ 80	+ 190	+ 70	+ 80	- 120	+ 860
NORM BRK FAULT	FULL	0	1 160	+ 40	+ 70	+ 40	+ 110	+ 30	+ 20	- 20	+ 750
	3	6	1 240	+ 50	+ 70	+ 50	+ 120	+ 40	+ 20	- 30	+ 940
NORM + ALTN FAULT	FULL	0	1 790	+ 70	+ 90	+ 70	+ 190	+ 60	+ 70	- 90	+ 640
	3	6	1 990	+ 70	+ 110	+ 80	+ 200	+ 70	+ 90	- 100	+ 810

(1) Automatic Landing correction: add 150m - (2) Weight correction: subtract 10m per 1T below 66T

REF DIST without failure (valid for all FLAPS LEVER positions) = 1 080m



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BRAKE SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

5 - GOOD											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 66T	Per 1T above 66T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
ANTISKID FAULT	FULL	0	1 790	+ 60	+ 100	+ 80	+ 210	+ 60	+ 80	- 90	+ 580
	3	6	1 990	+ 70	+ 120	+ 90	+ 230	+ 80	+ 100	- 100	+ 730
ONE BRK RELEASED	FULL	0	1 590	+ 50	+ 120	+ 90	+ 230	+ 70	+ 70	- 70	+ 510
	3	6	1 790	+ 60	+ 140	+ 100	+ 260	+ 90	+ 90	- 90	+ 640
TWO BRK RELEASED	FULL	0	1 880	+ 70	+ 130	+ 110	+ 290	+ 80	+ 110	- 120	+ 450
	3	6	2 150	+ 80	+ 150	+ 130	+ 330	+ 100	+ 140	- 150	+ 560
ALTN L(R) RELEASED (if NORM BRK FAULT)	FULL	0	1 980	+ 70	+ 130	+ 110	+ 310	+ 90	+ 130	- 130	+ 430
	3	6	2 280	+ 80	+ 160	+ 140	+ 360	+ 110	+ 170	- 180	+ 540
ALTN L(R) RELEASED (if G SYS LO PR)	FULL	0	2 190	+ 80	+ 160	+ 140	+ 340	+ 100	+ 170	- 190	+ 430
	3	6	2 510	+ 90	+ 190	+ 170	+ 390	+ 120	+ 230	- 260	+ 540
NORM BRK FAULT	FULL	0	1 500	+ 50	+ 110	+ 80	+ 220	+ 70	+ 60	- 60	+ 540
	3	6	1 680	+ 60	+ 130	+ 100	+ 240	+ 80	+ 70	- 80	+ 680
NORM + ALTN FAULT	FULL	0	1 790	+ 60	+ 100	+ 80	+ 210	+ 60	+ 80	- 90	+ 580
	3	6	1 990	+ 70	+ 120	+ 90	+ 230	+ 80	+ 100	- 100	+ 730
(1) Automatic Landing correction: add 190m - (2) Weight correction: subtract 20m per 1T below 66T REF DIST without failure (valid for all FLAPS LEVER positions) = 1 370m											



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BRAKE SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

4 - GOOD TO MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 66T	Per 1T above 66T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
ANTISKID FAULT	FULL	0	1 810	+ 60	+ 90	+ 70	+ 190	+ 60	+ 70	- 110	+ 640
	3	6	2 010	+ 70	+ 100	+ 80	+ 210	+ 60	+ 90	- 130	+ 810
ONE BRK RELEASED	FULL	0	1 860	+ 40	+ 100	+ 80	+ 220	+ 70	+ 100	- 120	+ 600
	3	6	2 070	+ 50	+ 110	+ 90	+ 230	+ 80	+ 120	- 150	+ 760
TWO BRK RELEASED	FULL	0	2 220	+ 50	+ 110	+ 110	+ 290	+ 80	+ 180	- 180	+ 530
	3	6	2 510	+ 60	+ 130	+ 120	+ 310	+ 90	+ 220	- 230	+ 670
ALTN L(R) RELEASED (if NORM BRK FAULT)	FULL	0	2 220	+ 50	+ 110	+ 110	+ 290	+ 80	+ 180	- 180	+ 530
	3	6	2 510	+ 60	+ 130	+ 120	+ 310	+ 90	+ 220	- 230	+ 670
ALTN L(R) RELEASED (if G SYS LO PR)	FULL	0	2 440	+ 60	+ 140	+ 120	+ 310	+ 90	+ 230	- 220	+ 520
	3	6	2 750	+ 60	+ 160	+ 140	+ 330	+ 100	+ 280	- 280	+ 680
NORM BRK FAULT	FULL	0	1 640	+ 40	+ 90	+ 70	+ 180	+ 60	+ 70	- 90	+ 640
	3	6	1 810	+ 40	+ 100	+ 80	+ 190	+ 60	+ 80	- 110	+ 820
NORM + ALTN FAULT	FULL	0	1 810	+ 60	+ 90	+ 70	+ 190	+ 60	+ 70	- 110	+ 640
	3	6	2 010	+ 70	+ 100	+ 80	+ 210	+ 60	+ 90	- 130	+ 810
(1) Automatic Landing correction: add 180m - (2) Weight correction: subtract 20m per 1T below 66T REF DIST without failure (valid for all FLAPS LEVER positions) = 1 600m											



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BRAKE SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

3 - MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 66T	Per 1T above 66T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
ANTISKID FAULT	FULL	0	1 960	+ 40	+ 100	+ 80	+ 220	+ 60	+ 100	- 130	+ 610
	3	6	2 180	+ 50	+ 110	+ 90	+ 230	+ 80	+ 120	- 160	+ 780
ONE BRK RELEASED	FULL	0	2 060	+ 50	+ 110	+ 90	+ 260	+ 70	+ 140	- 150	+ 560
	3	6	2 310	+ 50	+ 120	+ 110	+ 270	+ 90	+ 170	- 190	+ 710
TWO BRK RELEASED	FULL	0	2 440	+ 60	+ 120	+ 130	+ 330	+ 90	+ 240	- 220	+ 490
	3	6	2 790	+ 60	+ 140	+ 150	+ 360	+ 100	+ 300	- 280	+ 630
ALTN L(R) RELEASED (if NORM BRK FAULT)	FULL	0	2 440	+ 60	+ 120	+ 130	+ 330	+ 90	+ 240	- 220	+ 490
	3	6	2 790	+ 60	+ 140	+ 150	+ 360	+ 100	+ 300	- 280	+ 630
ALTN L(R) RELEASED (if G SYS LO PR)	FULL	0	2 690	+ 60	+ 150	+ 140	+ 360	+ 110	+ 310	- 250	+ 480
	3	6	3 070	+ 70	+ 170	+ 170	+ 390	+ 120	+ 390	- 340	+ 630
NORM BRK FAULT	FULL	0	1 820	+ 40	+ 100	+ 80	+ 210	+ 60	+ 90	- 110	+ 600
	3	6	2 020	+ 40	+ 110	+ 90	+ 230	+ 70	+ 110	- 140	+ 770
NORM + ALTN FAULT	FULL	0	1 960	+ 40	+ 100	+ 80	+ 220	+ 60	+ 100	- 130	+ 610
	3	6	2 180	+ 50	+ 110	+ 90	+ 230	+ 80	+ 120	- 160	+ 780
(1) Automatic Landing correction: add 190m - (2) Weight correction: subtract 20m per 1T below 66T REF DIST without failure (valid for all FLAPS LEVER positions) = 1 770m											



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BRAKE SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

2 - MEDIUM TO POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 66T	Per 1T above 66T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
ANTISKID FAULT	FULL	0	2 080	+ 70	+ 140	+ 130	+ 340	+ 100	+ 140	- 140	+ 420
	3	6	2 420	+ 80	+ 170	+ 160	+ 390	+ 120	+ 190	- 180	+ 530
ONE BRK RELEASED	FULL	0	2 260	+ 80	+ 150	+ 140	+ 380	+ 110	+ 190	- 170	+ 380
	3	6	2 650	+ 90	+ 180	+ 180	+ 450	+ 130	+ 260	- 220	+ 470
TWO BRK RELEASED	FULL	0	2 620	+ 90	+ 160	+ 170	+ 450	+ 120	+ 300	- 230	+ 340
	3	6	3 100	+ 110	+ 200	+ 220	+ 530	+ 150	+ 410	- 310	+ 410
ALTN L(R) RELEASED (if NORM BRK FAULT)	FULL	0	2 620	+ 90	+ 160	+ 170	+ 450	+ 120	+ 300	- 230	+ 340
	3	6	3 100	+ 110	+ 200	+ 220	+ 530	+ 150	+ 410	- 310	+ 410
ALTN L(R) RELEASED (if G SYS LO PR)	FULL	0	2 900	+ 100	+ 190	+ 200	+ 500	+ 140	+ 390	- 280	+ 340
	3	6	3 440	+ 120	+ 230	+ 270	+ 600	+ 180	+ 550	- 390	+ 420
NORM BRK FAULT	FULL	0	2 030	+ 70	+ 140	+ 130	+ 340	+ 90	+ 130	- 130	+ 410
	3	6	2 360	+ 80	+ 170	+ 160	+ 390	+ 120	+ 180	- 160	+ 510
NORM + ALTN FAULT	FULL	0	2 080	+ 70	+ 140	+ 130	+ 340	+ 100	+ 140	- 140	+ 420
	3	6	2 420	+ 80	+ 170	+ 160	+ 390	+ 120	+ 190	- 180	+ 530
(1) Automatic Landing correction: add 230m - (2) Weight correction: subtract 20m per 1T below 66T REF DIST without failure (valid for all FLAPS LEVER positions) = 1 950m											



 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-32 22/22
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BRAKE SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, $VAPP = VREF + \Delta VREF$ without APPR COR.

1 - POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	$\Delta VREF$	REF DIST (m) for 66T	Per 1T above 66T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
ANTISKID FAULT	FULL	0	3 070	+ 70	+ 140	+ 190	+ 490	+ 130	+ 540	- 330	+ 420
	3	6	3 590	+ 80	+ 170	+ 230	+ 530	+ 150	+ 700	- 430	+ 530
ONE BRK RELEASED	FULL	0	3 330	+ 80	+ 150	+ 240	+ 600	+ 140	+ 830	- 380	+ 380
	3	6	Landing Distance greater than 6 000 m for all conditions								
TWO BRK RELEASED	FULL	0	Landing Distance greater than 6 000 m for all conditions								
	3	6	Landing Distance greater than 6 000 m for all conditions								
ALTN L(R) RELEASED (if NORM BRK FAULT)	FULL	0	Landing Distance greater than 6 000 m for all conditions								
	3	6	Landing Distance greater than 6 000 m for all conditions								
ALTN L(R) RELEASED (if G SYS LO PR)	FULL	0	Landing Distance greater than 6 000 m for all conditions								
	3	6	Landing Distance greater than 6 000 m for all conditions								
NORM BRK FAULT	FULL	0	3 020	+ 70	+ 140	+ 190	+ 490	+ 130	+ 540	- 320	+ 410
	3	6	3 530	+ 80	+ 170	+ 230	+ 530	+ 150	+ 700	- 420	+ 520
NORM + ALTN FAULT	FULL	0	3 070	+ 70	+ 140	+ 190	+ 490	+ 130	+ 540	- 330	+ 420
	3	6	3 590	+ 80	+ 170	+ 230	+ 530	+ 150	+ 700	- 430	+ 530
(1) Automatic Landing correction: add 220m - (2) Weight correction: subtract 30m per 1T below 66T REF DIST without failure (valid for all FLAPS LEVER positions) = 2 950m											

 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-34 1/16 06 MAR 14

Ident.: PER-34-00014173.0096001 / 28 FEB 14
Applicable to: MSN 2927-3034

NAVIGATION SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

6 - DRY											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
IR 1+2+3 FAULT	3	10	2 380	+ 50	+ 160	+ 90	+ 220	+ 90	+ 10	- 10	+ 440
UNRELIABLE SPEED INDICATION/ ADR CHECK PROC	3	16	1 470	+ 50	+ 90	+ 70	+ 160	+ 50	+ 30	- 30	+ 550
DUAL IR FAULT/ DUAL ADR FAULT/ ADR 1+2+3 FAULT	3	10	1 390	+ 50	+ 90	+ 70	+ 170	+ 50	+ 30	- 20	+ 590

(1) Automatic Landing correction: add 90m - (2) Weight correction: subtract 10m per 1T below 78T

REF DIST without failure (valid for all FLAPS LEVER positions) = 1 210m

5 - GOOD											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
IR 1+2+3 FAULT	3	10	2 380	+ 50	+ 160	+ 90	+ 220	+ 90	+ 10	- 10	+ 430
UNRELIABLE SPEED INDICATION/ ADR CHECK PROC	3	16	1 910	+ 50	+ 120	+ 100	+ 230	+ 80	+ 70	- 70	+ 440
DUAL IR FAULT/ DUAL ADR FAULT/ ADR 1+2+3 FAULT	3	10	1 800	+ 50	+ 120	+ 100	+ 230	+ 80	+ 60	- 60	+ 500

(1) Automatic Landing correction: add 90m - (2) Weight correction: subtract 20m per 1T below 78T

REF DIST without failure (valid for all FLAPS LEVER positions) = 1 520m



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NAVIGATION SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

4 - GOOD TO MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
IR 1+2+3 FAULT	3	10	2 380	+ 50	+ 170	+ 90	+ 220	+ 90	+ 30	- 10	+ 440
UNRELIABLE SPEED INDICATION/ ADR CHECK PROC	3	16	2 080	+ 40	+ 100	+ 80	+ 200	+ 70	+ 80	- 110	+ 520
DUAL IR FAULT/ DUAL ADR FAULT/ ADR 1+2+3 FAULT	3	10	1 990	+ 40	+ 100	+ 80	+ 200	+ 70	+ 80	- 110	+ 590

(1) Automatic Landing correction: add 90m - (2) Weight correction: subtract 10m per 1T below 78T

REF DIST without failure (valid for all FLAPS LEVER positions) = 1 730m

3 - MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
IR 1+2+3 FAULT	3	10	2 450	+ 50	+ 160	+ 100	+ 250	+ 90	+ 70	- 30	+ 440
UNRELIABLE SPEED INDICATION/ ADR CHECK PROC	3	16	2 320	+ 40	+ 100	+ 100	+ 230	+ 80	+ 120	- 150	+ 490
DUAL IR FAULT/ DUAL ADR FAULT/ ADR 1+2+3 FAULT	3	10	2 220	+ 40	+ 100	+ 90	+ 240	+ 70	+ 110	- 150	+ 550

(1) Automatic Landing correction: add 90m - (2) Weight correction: subtract 20m per 1T below 78T

REF DIST without failure (valid for all FLAPS LEVER positions) = 1 930m



 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-34 3/16 06 MAR 14

Continued from the previous page

NAVIGATION SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

2 - MEDIUM TO POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
IR 1+2+3 FAULT	3	10	2 640	+ 70	+ 170	+ 160	+ 390	+ 130	+ 200	- 50	+ 370
UNRELIABLE SPEED INDICATION/ ADR CHECK PROC	3	16	2 790	+ 80	+ 160	+ 160	+ 390	+ 140	+ 200	- 210	+ 350
DUAL IR FAULT/ DUAL ADR FAULT/ ADR 1+2+3 FAULT	3	10	2 640	+ 70	+ 160	+ 160	+ 390	+ 130	+ 200	- 190	+ 370
(1) Automatic Landing correction: add 90m - (2) Weight correction: subtract 30m per 1T below 78T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 2 220m											

1 - POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
IR 1+2+3 FAULT	3	10	3 900	+ 70	+ 170	+ 210	+ 590	+ 160	+ 860	- 460	+ 370
UNRELIABLE SPEED INDICATION/ ADR CHECK PROC	3	16	4 050	+ 70	+ 150	+ 210	+ 590	+ 160	+ 860	- 530	+ 350
DUAL IR FAULT/ DUAL ADR FAULT/ ADR 1+2+3 FAULT	3	10	3 900	+ 70	+ 160	+ 210	+ 590	+ 160	+ 860	- 510	+ 370
(1) Automatic Landing correction: add 90m - (2) Weight correction: subtract 30m per 1T below 78T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 3 430m											

Ident.: PER-34-00014173.0039001 / 28 FEB 14

Applicable to: MSN 3120

NAVIGATION SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

6 - DRY											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 76T	Per 1T above 76T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
IR 1+2+3 FAULT	3	10	2 330	+ 50	+ 160	+ 90	+ 220	+ 80	+ 10	- 10	+ 430
UNRELIABLE SPEED INDICATION/ ADR CHECK PROC	3	16	1 430	+ 50	+ 90	+ 70	+ 160	+ 50	+ 30	- 30	+ 530
DUAL IR FAULT/ DUAL ADR FAULT/ ADR 1+2+3 FAULT	3	10	1 350	+ 50	+ 90	+ 60	+ 160	+ 50	+ 30	- 20	+ 590
(1) Automatic Landing correction: add 110m - (2) Weight correction: subtract 10m per 1T below 76T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 190m											

5 - GOOD											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 76T	Per 1T above 76T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
IR 1+2+3 FAULT	3	10	2 330	+ 50	+ 160	+ 90	+ 220	+ 90	+ 10	- 10	+ 420
UNRELIABLE SPEED INDICATION/ ADR CHECK PROC	3	16	1 870	+ 50	+ 120	+ 100	+ 230	+ 80	+ 60	- 70	+ 430
DUAL IR FAULT/ DUAL ADR FAULT/ ADR 1+2+3 FAULT	3	10	1 760	+ 50	+ 120	+ 90	+ 230	+ 80	+ 60	- 60	+ 490
(1) Automatic Landing correction: add 110m - (2) Weight correction: subtract 20m per 1T below 76T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 490m											



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NAVIGATION SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

4 - GOOD TO MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 76T	Per 1T above 76T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
IR 1+2+3 FAULT	3	10	2 330	+ 50	+ 170	+ 90	+ 220	+ 90	+ 30	- 10	+ 430
UNRELIABLE SPEED INDICATION/ ADR CHECK PROC	3	16	2 050	+ 40	+ 90	+ 80	+ 200	+ 70	+ 80	- 110	+ 520
DUAL IR FAULT/ DUAL ADR FAULT/ ADR 1+2+3 FAULT	3	10	1 950	+ 40	+ 100	+ 80	+ 200	+ 70	+ 80	- 100	+ 580

(1) Automatic Landing correction: add 110m - (2) Weight correction: subtract 10m per 1T below 76T

REF DIST without failure (valid for all FLAPS LEVER positions) = 1 700m

3 - MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 76T	Per 1T above 76T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
IR 1+2+3 FAULT	3	10	2 400	+ 50	+ 160	+ 100	+ 250	+ 90	+ 70	- 30	+ 430
UNRELIABLE SPEED INDICATION/ ADR CHECK PROC	3	16	2 280	+ 40	+ 100	+ 90	+ 230	+ 80	+ 110	- 150	+ 480
DUAL IR FAULT/ DUAL ADR FAULT/ ADR 1+2+3 FAULT	3	10	2 180	+ 40	+ 100	+ 90	+ 240	+ 70	+ 110	- 140	+ 550

(1) Automatic Landing correction: add 110m - (2) Weight correction: subtract 20m per 1T below 76T

REF DIST without failure (valid for all FLAPS LEVER positions) = 1 890m



Continued from the previous page

NAVIGATION SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

2 - MEDIUM TO POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 76T	Per 1T above 76T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
IR 1+2+3 FAULT	3	10	2 580	+ 70	+ 170	+ 150	+ 390	+ 130	+ 190	- 50	+ 370
UNRELIABLE SPEED INDICATION/ ADR CHECK PROC	3	16	2 730	+ 80	+ 150	+ 160	+ 390	+ 130	+ 200	- 200	+ 340
DUAL IR FAULT/ DUAL ADR FAULT/ ADR 1+2+3 FAULT	3	10	2 580	+ 70	+ 160	+ 150	+ 390	+ 130	+ 190	- 180	+ 370
(1) Automatic Landing correction: add 110m - (2) Weight correction: subtract 30m per 1T below 76T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 2 160m											

1 - POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 76T	Per 1T above 76T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
IR 1+2+3 FAULT	3	10	3 830	+ 70	+ 160	+ 200	+ 590	+ 160	+ 860	- 450	+ 370
UNRELIABLE SPEED INDICATION/ ADR CHECK PROC	3	16	3 970	+ 70	+ 160	+ 210	+ 590	+ 170	+ 850	- 520	+ 340
DUAL IR FAULT/ DUAL ADR FAULT/ ADR 1+2+3 FAULT	3	10	3 830	+ 70	+ 160	+ 200	+ 590	+ 160	+ 860	- 510	+ 370
(1) Automatic Landing correction: add 110m - (2) Weight correction: subtract 30m per 1T below 76T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 3 360m											

 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-34 7/16 06 MAR 14

Ident.: PER-34-00014173.0031001 / 28 FEB 14
Applicable to: MSN 1219-1233

NAVIGATION SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

6 - DRY											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
IR 1+2+3 FAULT	3	10	2 380	+ 50	+ 160	+ 90	+ 220	+ 80	+ 10	- 10	+ 440
UNRELIABLE SPEED INDICATION/ ADR CHECK PROC	3	16	1 480	+ 50	+ 90	+ 70	+ 170	+ 60	+ 30	- 20	+ 530
DUAL IR FAULT/ DUAL ADR FAULT/ ADR 1+2+3 FAULT	3	10	1 400	+ 50	+ 90	+ 70	+ 170	+ 50	+ 30	- 20	+ 580

(1) Automatic Landing correction: add 130m - (2) Weight correction: subtract 10m per 1T below 78T
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 220m

5 - GOOD											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
IR 1+2+3 FAULT	3	10	2 380	+ 50	+ 160	+ 90	+ 220	+ 80	+ 10	- 10	+ 430
UNRELIABLE SPEED INDICATION/ ADR CHECK PROC	3	16	1 960	+ 50	+ 120	+ 100	+ 240	+ 80	+ 70	- 60	+ 430
DUAL IR FAULT/ DUAL ADR FAULT/ ADR 1+2+3 FAULT	3	10	1 840	+ 50	+ 130	+ 90	+ 240	+ 80	+ 70	- 60	+ 490

(1) Automatic Landing correction: add 130m - (2) Weight correction: subtract 20m per 1T below 78T
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 550m



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NAVIGATION SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

4 - GOOD TO MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
IR 1+2+3 FAULT	3	10	2 380	+ 40	+ 160	+ 90	+ 220	+ 90	+ 30	- 10	+ 440
UNRELIABLE SPEED INDICATION/ ADR CHECK PROC	3	16	2 130	+ 40	+ 100	+ 80	+ 200	+ 80	+ 90	- 90	+ 510
DUAL IR FAULT/ DUAL ADR FAULT/ ADR 1+2+3 FAULT	3	10	2 030	+ 40	+ 100	+ 80	+ 200	+ 70	+ 90	- 90	+ 580

(1) Automatic Landing correction: add 130m - (2) Weight correction: subtract 10m per 1T below 78T

REF DIST without failure (valid for all FLAPS LEVER positions) = 1 760m

3 - MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
IR 1+2+3 FAULT	3	10	2 470	+ 50	+ 160	+ 100	+ 250	+ 90	+ 80	- 30	+ 440
UNRELIABLE SPEED INDICATION/ ADR CHECK PROC	3	16	2 390	+ 40	+ 110	+ 90	+ 240	+ 80	+ 130	- 120	+ 480
DUAL IR FAULT/ DUAL ADR FAULT/ ADR 1+2+3 FAULT	3	10	2 280	+ 40	+ 110	+ 90	+ 240	+ 80	+ 130	- 120	+ 540

(1) Automatic Landing correction: add 130m - (2) Weight correction: subtract 20m per 1T below 78T

REF DIST without failure (valid for all FLAPS LEVER positions) = 1 980m



 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-34 9/16
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NAVIGATION SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

2 - MEDIUM TO POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
IR 1+2+3 FAULT	3	10	2 760	+ 70	+ 170	+ 150	+ 410	+ 140	+ 220	- 80	+ 370
UNRELIABLE SPEED INDICATION/ ADR CHECK PROC	3	16	2 920	+ 80	+ 160	+ 150	+ 420	+ 140	+ 220	- 180	+ 350
DUAL IR FAULT/ DUAL ADR FAULT/ ADR 1+2+3 FAULT	3	10	2 760	+ 70	+ 170	+ 150	+ 410	+ 140	+ 220	- 160	+ 370
(1) Automatic Landing correction: add 120m - (2) Weight correction: subtract 30m per 1T below 78T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 2 290m											

1 - POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
IR 1+2+3 FAULT	3	10	4 190	+ 70	+ 160	+ 170	+ 600	+ 170	+ 1 020	- 470	+ 380
UNRELIABLE SPEED INDICATION/ ADR CHECK PROC	3	16	4 350	+ 70	+ 150	+ 180	+ 600	+ 170	+ 1 020	- 500	+ 350
DUAL IR FAULT/ DUAL ADR FAULT/ ADR 1+2+3 FAULT	3	10	4 190	+ 70	+ 160	+ 170	+ 600	+ 170	+ 1 020	- 490	+ 380
(1) Automatic Landing correction: add 120m - (2) Weight correction: subtract 30m per 1T below 78T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 3 650m											

Ident.: PER-34-00014173.0024001 / 28 FEB 14
 Applicable to: MSN 1276-1843

NAVIGATION SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

6 - DRY											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
IR 1+2+3 FAULT	3	10	2 380	+ 50	+ 160	+ 90	+ 220	+ 90	+ 10	- 10	+ 440
UNRELIABLE SPEED INDICATION/ ADR CHECK PROC	3	16	1 470	+ 50	+ 90	+ 70	+ 160	+ 50	+ 30	- 30	+ 550
DUAL IR FAULT/ DUAL ADR FAULT/ ADR 1+2+3 FAULT	3	10	1 390	+ 50	+ 90	+ 70	+ 170	+ 50	+ 30	- 20	+ 590
(1) Automatic Landing correction: add 90m - (2) Weight correction: subtract 10m per 1T below 78T REF DIST without failure (valid for all FLAPS LEVER positions) = 1 210m											

5 - GOOD											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
IR 1+2+3 FAULT	3	10	2 380	+ 50	+ 160	+ 90	+ 220	+ 90	+ 10	- 10	+ 430
UNRELIABLE SPEED INDICATION/ ADR CHECK PROC	3	16	1 910	+ 50	+ 120	+ 100	+ 230	+ 80	+ 70	- 70	+ 440
DUAL IR FAULT/ DUAL ADR FAULT/ ADR 1+2+3 FAULT	3	10	1 800	+ 50	+ 120	+ 100	+ 230	+ 80	+ 60	- 60	+ 500
(1) Automatic Landing correction: add 90m - (2) Weight correction: subtract 20m per 1T below 78T REF DIST without failure (valid for all FLAPS LEVER positions) = 1 520m											



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NAVIGATION SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

4 - GOOD TO MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
IR 1+2+3 FAULT	3	10	2 380	+ 50	+ 170	+ 90	+ 220	+ 90	+ 30	- 10	+ 440
UNRELIABLE SPEED INDICATION/ ADR CHECK PROC	3	16	2 080	+ 40	+ 100	+ 80	+ 200	+ 70	+ 80	- 110	+ 520
DUAL IR FAULT/ DUAL ADR FAULT/ ADR 1+2+3 FAULT	3	10	1 990	+ 40	+ 100	+ 80	+ 200	+ 70	+ 80	- 110	+ 590

(1) Automatic Landing correction: add 90m - (2) Weight correction: subtract 10m per 1T below 78T

REF DIST without failure (valid for all FLAPS LEVER positions) = 1 730m

3 - MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
IR 1+2+3 FAULT	3	10	2 450	+ 50	+ 160	+ 100	+ 250	+ 90	+ 70	- 30	+ 440
UNRELIABLE SPEED INDICATION/ ADR CHECK PROC	3	16	2 320	+ 40	+ 100	+ 100	+ 230	+ 80	+ 120	- 150	+ 490
DUAL IR FAULT/ DUAL ADR FAULT/ ADR 1+2+3 FAULT	3	10	2 220	+ 40	+ 100	+ 90	+ 240	+ 70	+ 110	- 150	+ 550

(1) Automatic Landing correction: add 90m - (2) Weight correction: subtract 20m per 1T below 78T

REF DIST without failure (valid for all FLAPS LEVER positions) = 1 930m



Continued from the previous page

NAVIGATION SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

2 - MEDIUM TO POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
IR 1+2+3 FAULT	3	10	2 640	+ 70	+ 170	+ 160	+ 390	+ 130	+ 200	- 50	+ 370
UNRELIABLE SPEED INDICATION/ ADR CHECK PROC	3	16	2 790	+ 80	+ 160	+ 160	+ 390	+ 140	+ 200	- 210	+ 350
DUAL IR FAULT/ DUAL ADR FAULT/ ADR 1+2+3 FAULT	3	10	2 640	+ 70	+ 160	+ 160	+ 390	+ 130	+ 200	- 190	+ 370
(1) Automatic Landing correction: add 90m - (2) Weight correction: subtract 30m per 1T below 78T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 2 220m											

1 - POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
IR 1+2+3 FAULT	3	10	3 900	+ 70	+ 170	+ 210	+ 590	+ 160	+ 860	- 460	+ 370
UNRELIABLE SPEED INDICATION/ ADR CHECK PROC	3	16	4 050	+ 70	+ 150	+ 210	+ 590	+ 160	+ 860	- 530	+ 350
DUAL IR FAULT/ DUAL ADR FAULT/ ADR 1+2+3 FAULT	3	10	3 900	+ 70	+ 160	+ 210	+ 590	+ 160	+ 860	- 510	+ 370
(1) Automatic Landing correction: add 90m - (2) Weight correction: subtract 30m per 1T below 78T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 3 430m											

Ident.: PER-34-00014173.0009001 / 28 FEB 14
Applicable to: MSN 2649

NAVIGATION SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

6 - DRY											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 66T	Per 1T above 66T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
IR 1+2+3 FAULT	3	10	2 210	+ 50	+ 160	+ 90	+ 210	+ 80	+ 10	- 10	+ 610
UNRELIABLE SPEED INDICATION/ ADR CHECK PROC	3	16	1 350	+ 50	+ 80	+ 50	+ 130	+ 40	+ 20	- 30	+ 790
DUAL IR FAULT/ DUAL ADR FAULT/ ADR 1+2+3 FAULT	3	10	1 260	+ 50	+ 80	+ 50	+ 120	+ 50	+ 30	- 20	+ 880

(1) Automatic Landing correction: add 180m - (2) Weight correction: subtract 10m per 1T below 66T

REF DIST without failure (valid for all FLAPS LEVER positions) = 1 080m

5 - GOOD											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 66T	Per 1T above 66T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
IR 1+2+3 FAULT	3	10	2 210	+ 50	+ 160	+ 90	+ 210	+ 80	+ 20	- 10	+ 600
UNRELIABLE SPEED INDICATION/ ADR CHECK PROC	3	16	1 760	+ 60	+ 120	+ 100	+ 230	+ 80	+ 70	- 80	+ 580
DUAL IR FAULT/ DUAL ADR FAULT/ ADR 1+2+3 FAULT	3	10	1 660	+ 50	+ 120	+ 90	+ 230	+ 70	+ 60	- 70	+ 660

(1) Automatic Landing correction: add 180m - (2) Weight correction: subtract 20m per 1T below 66T

REF DIST without failure (valid for all FLAPS LEVER positions) = 1 370m



Continued from the previous page

NAVIGATION SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

4 - GOOD TO MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 66T	Per 1T above 66T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
IR 1+2+3 FAULT	3	10	2 210	+ 50	+ 160	+ 90	+ 220	+ 80	+ 20	- 10	+ 610
UNRELIABLE SPEED INDICATION/ ADR CHECK PROC	3	16	1 970	+ 40	+ 100	+ 80	+ 190	+ 60	+ 80	- 120	+ 690
DUAL IR FAULT/ DUAL ADR FAULT/ ADR 1+2+3 FAULT	3	10	1 870	+ 40	+ 100	+ 80	+ 190	+ 70	+ 80	- 110	+ 760

(1) Automatic Landing correction: add 180m - (2) Weight correction: subtract 20m per 1T below 66T

REF DIST without failure (valid for all FLAPS LEVER positions) = 1 600m

3 - MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 66T	Per 1T above 66T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
IR 1+2+3 FAULT	3	10	2 270	+ 50	+ 160	+ 100	+ 240	+ 80	+ 70	- 30	+ 610
UNRELIABLE SPEED INDICATION/ ADR CHECK PROC	3	16	2 190	+ 50	+ 110	+ 100	+ 220	+ 80	+ 110	- 150	+ 650
DUAL IR FAULT/ DUAL ADR FAULT/ ADR 1+2+3 FAULT	3	10	2 090	+ 40	+ 110	+ 90	+ 230	+ 70	+ 110	- 150	+ 720

(1) Automatic Landing correction: add 180m - (2) Weight correction: subtract 20m per 1T below 66T

REF DIST without failure (valid for all FLAPS LEVER positions) = 1 770m



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		06 MAR 14

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NAVIGATION SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

2 - MEDIUM TO POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 66T	Per 1T above 66T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
IR 1+2+3 FAULT	3	10	2 460	+ 80	+ 170	+ 160	+ 390	+ 120	+ 190	- 40	+ 490
UNRELIABLE SPEED INDICATION/ ADR CHECK PROC	3	16	2 610	+ 90	+ 170	+ 170	+ 390	+ 130	+ 200	- 200	+ 450
DUAL IR FAULT/ DUAL ADR FAULT/ ADR 1+2+3 FAULT	3	10	2 460	+ 80	+ 170	+ 160	+ 390	+ 120	+ 190	- 180	+ 490
(1) Automatic Landing correction: add 170m - (2) Weight correction: subtract 30m per 1T below 66T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 950m											

1 - POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 66T	Per 1T above 66T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
IR 1+2+3 FAULT	3	10	3 630	+ 80	+ 170	+ 230	+ 540	+ 150	+ 700	- 380	+ 490
UNRELIABLE SPEED INDICATION/ ADR CHECK PROC	3	16	3 780	+ 80	+ 160	+ 240	+ 530	+ 150	+ 700	- 450	+ 450
DUAL IR FAULT/ DUAL ADR FAULT/ ADR 1+2+3 FAULT	3	10	3 630	+ 80	+ 170	+ 230	+ 540	+ 150	+ 700	- 440	+ 490
(1) Automatic Landing correction: add 170m - (2) Weight correction: subtract 40m per 1T below 66T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 2 950m											

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		06 MAR 14

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 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-36 1/10 06 MAR 14

Ident.: PER-36-00014175.0068001 / 28 FEB 14
Applicable to: MSN 2927-3034

BLEED SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

6 - DRY											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
The following ECAM alerts with Ice Accretion: -DUAL BLEED FAULT -WING or ENG BLEED LEAK -X BLEED FAULT -ENG BLEED LO TEMP	FULL	10	1 370	+ 50	+ 90	+ 70	+ 160	+ 50	+ 30	- 20	+ 500
	3	16	1 470	+ 50	+ 90	+ 70	+ 160	+ 50	+ 30	- 30	+ 550
(1) Automatic Landing correction: add 60m - (2) Weight correction: subtract 10m per 1T below 78T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 210m											

5 - GOOD											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
The following ECAM alerts with Ice Accretion: -DUAL BLEED FAULT -WING or ENG BLEED LEAK -X BLEED FAULT -ENG BLEED LO TEMP	FULL	10	1 760	+ 50	+ 110	+ 90	+ 230	+ 70	+ 60	- 60	+ 430
	3	16	1 910	+ 50	+ 120	+ 100	+ 230	+ 80	+ 70	- 70	+ 440
(1) Automatic Landing correction: add 80m - (2) Weight correction: subtract 20m per 1T below 78T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 520m											

4 - GOOD TO MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
The following ECAM alerts with Ice Accretion: -DUAL BLEED FAULT -WING or ENG BLEED LEAK -X BLEED FAULT -ENG BLEED LO TEMP	FULL	10	1 940	+ 40	+ 90	+ 80	+ 200	+ 70	+ 80	- 100	+ 510
	3	16	2 080	+ 40	+ 100	+ 80	+ 200	+ 70	+ 80	- 110	+ 520
(1) Automatic Landing correction: add 70m - (2) Weight correction: subtract 10m per 1T below 78T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 730m											



 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-36 2/10
		06 MAR 14

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BLEED SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

3 - MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
The following ECAM alerts with Ice Accretion: -DUAL BLEED FAULT -WING or ENG BLEED LEAK -X BLEED FAULT -ENG BLEED LO TEMP	FULL	10	2 160	+ 40	+ 100	+ 90	+ 230	+ 70	+ 110	- 140	+ 480
	3	16	2 320	+ 40	+ 100	+ 100	+ 230	+ 80	+ 120	- 150	+ 490
(1) Automatic Landing correction: add 70m - (2) Weight correction: subtract 20m per 1T below 78T REF DIST without failure (valid for all FLAPS LEVER positions) = 1 930m											

2 - MEDIUM TO POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
The following ECAM alerts with Ice Accretion: -DUAL BLEED FAULT -WING or ENG BLEED LEAK -X BLEED FAULT -ENG BLEED LO TEMP	FULL	10	2 550	+ 70	+ 150	+ 150	+ 380	+ 120	+ 170	- 180	+ 340
	3	16	2 790	+ 80	+ 160	+ 160	+ 390	+ 140	+ 200	- 210	+ 350
(1) Automatic Landing correction: add 90m - (2) Weight correction: subtract 30m per 1T below 78T REF DIST without failure (valid for all FLAPS LEVER positions) = 2 220m											

1 - POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
The following ECAM alerts with Ice Accretion: -DUAL BLEED FAULT -WING or ENG BLEED LEAK -X BLEED FAULT -ENG BLEED LO TEMP	FULL	10	3 740	+ 70	+ 150	+ 190	+ 580	+ 160	+ 790	- 470	+ 340
	3	16	4 050	+ 70	+ 150	+ 210	+ 590	+ 160	+ 860	- 530	+ 350
(1) Automatic Landing correction: add 90m - (2) Weight correction: subtract 30m per 1T below 78T REF DIST without failure (valid for all FLAPS LEVER positions) = 3 430m											

 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-36 3/10 06 MAR 14

Ident.: PER-36-00014175.0052001 / 28 FEB 14
Applicable to: MSN 3120

BLEED SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

6 - DRY											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 76T	Per 1T above 76T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
The following ECAM alerts with Ice Accretion: -DUAL BLEED FAULT -WING or ENG BLEED LEAK -X BLEED FAULT -ENG BLEED LO TEMP	FULL	10	1 340	+ 50	+ 80	+ 60	+ 160	+ 50	+ 30	- 20	+ 500
	3	16	1 430	+ 50	+ 90	+ 70	+ 160	+ 50	+ 30	- 30	+ 530
(1) Automatic Landing correction: add 80m - (2) Weight correction: subtract 10m per 1T below 76T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 190m											

5 - GOOD											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 76T	Per 1T above 76T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
The following ECAM alerts with Ice Accretion: -DUAL BLEED FAULT -WING or ENG BLEED LEAK -X BLEED FAULT -ENG BLEED LO TEMP	FULL	10	1 720	+ 50	+ 110	+ 90	+ 220	+ 70	+ 60	- 50	+ 430
	3	16	1 870	+ 50	+ 120	+ 100	+ 230	+ 80	+ 60	- 70	+ 430
(1) Automatic Landing correction: add 90m - (2) Weight correction: subtract 20m per 1T below 76T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 490m											

4 - GOOD TO MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 76T	Per 1T above 76T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
The following ECAM alerts with Ice Accretion: -DUAL BLEED FAULT -WING or ENG BLEED LEAK -X BLEED FAULT -ENG BLEED LO TEMP	FULL	10	1 900	+ 40	+ 100	+ 70	+ 190	+ 70	+ 80	- 100	+ 500
	3	16	2 050	+ 40	+ 90	+ 80	+ 200	+ 70	+ 80	- 110	+ 520
(1) Automatic Landing correction: add 90m - (2) Weight correction: subtract 10m per 1T below 76T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 700m											



 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-36 4/10
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BLEED SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

3 - MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 76T	Per 1T above 76T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
The following ECAM alerts with Ice Accretion: -DUAL BLEED FAULT -WING or ENG BLEED LEAK -X BLEED FAULT -ENG BLEED LO TEMP	FULL	10	2 120	+ 40	+ 100	+ 90	+ 230	+ 70	+ 100	- 130	+ 470
	3	16	2 280	+ 40	+ 100	+ 90	+ 230	+ 80	+ 110	- 150	+ 480
(1) Automatic Landing correction: add 90m - (2) Weight correction: subtract 20m per 1T below 76T REF DIST without failure (valid for all FLAPS LEVER positions) = 1 890m											

2 - MEDIUM TO POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 76T	Per 1T above 76T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
The following ECAM alerts with Ice Accretion: -DUAL BLEED FAULT -WING or ENG BLEED LEAK -X BLEED FAULT -ENG BLEED LO TEMP	FULL	10	2 480	+ 70	+ 150	+ 140	+ 370	+ 120	+ 170	- 170	+ 330
	3	16	2 730	+ 80	+ 150	+ 160	+ 390	+ 130	+ 200	- 200	+ 340
(1) Automatic Landing correction: add 110m - (2) Weight correction: subtract 30m per 1T below 76T REF DIST without failure (valid for all FLAPS LEVER positions) = 2 160m											

1 - POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 76T	Per 1T above 76T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
The following ECAM alerts with Ice Accretion: -DUAL BLEED FAULT -WING or ENG BLEED LEAK -X BLEED FAULT -ENG BLEED LO TEMP	FULL	10	3 670	+ 70	+ 150	+ 190	+ 580	+ 150	+ 790	- 460	+ 330
	3	16	3 970	+ 70	+ 160	+ 210	+ 590	+ 170	+ 850	- 520	+ 340
(1) Automatic Landing correction: add 100m - (2) Weight correction: subtract 30m per 1T below 76T REF DIST without failure (valid for all FLAPS LEVER positions) = 3 360m											

 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-36 5/10 06 MAR 14

Ident.: PER-36-00014175.0047001 / 28 FEB 14
Applicable to: MSN 1276-1843

BLEED SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

6 - DRY											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
The following ECAM alerts with Ice Accretion: -DUAL BLEED FAULT -WING or ENG BLEED LEAK -X BLEED FAULT -ENG BLEED LO TEMP	FULL	10	1 370	+ 50	+ 90	+ 70	+ 160	+ 50	+ 30	- 20	+ 500
	3	16	1 470	+ 50	+ 90	+ 70	+ 160	+ 50	+ 30	- 30	+ 550
(1) Automatic Landing correction: add 60m - (2) Weight correction: subtract 10m per 1T below 78T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 210m											

5 - GOOD											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
The following ECAM alerts with Ice Accretion: -DUAL BLEED FAULT -WING or ENG BLEED LEAK -X BLEED FAULT -ENG BLEED LO TEMP	FULL	10	1 760	+ 50	+ 110	+ 90	+ 230	+ 70	+ 60	- 60	+ 430
	3	16	1 910	+ 50	+ 120	+ 100	+ 230	+ 80	+ 70	- 70	+ 440
(1) Automatic Landing correction: add 80m - (2) Weight correction: subtract 20m per 1T below 78T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 520m											

4 - GOOD TO MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
The following ECAM alerts with Ice Accretion: -DUAL BLEED FAULT -WING or ENG BLEED LEAK -X BLEED FAULT -ENG BLEED LO TEMP	FULL	10	1 940	+ 40	+ 90	+ 80	+ 200	+ 70	+ 80	- 100	+ 510
	3	16	2 080	+ 40	+ 100	+ 80	+ 200	+ 70	+ 80	- 110	+ 520
(1) Automatic Landing correction: add 70m - (2) Weight correction: subtract 10m per 1T below 78T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 730m											



 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-36 6/10
		06 MAR 14

Continued from the previous page

BLEED SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

3 - MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
The following ECAM alerts with Ice Accretion: -DUAL BLEED FAULT -WING or ENG BLEED LEAK -X BLEED FAULT -ENG BLEED LO TEMP	FULL	10	2 160	+ 40	+ 100	+ 90	+ 230	+ 70	+ 110	- 140	+ 480
	3	16	2 320	+ 40	+ 100	+ 100	+ 230	+ 80	+ 120	- 150	+ 490
(1) Automatic Landing correction: add 70m - (2) Weight correction: subtract 20m per 1T below 78T REF DIST without failure (valid for all FLAPS LEVER positions) = 1 930m											

2 - MEDIUM TO POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
The following ECAM alerts with Ice Accretion: -DUAL BLEED FAULT -WING or ENG BLEED LEAK -X BLEED FAULT -ENG BLEED LO TEMP	FULL	10	2 550	+ 70	+ 150	+ 150	+ 380	+ 120	+ 170	- 180	+ 340
	3	16	2 790	+ 80	+ 160	+ 160	+ 390	+ 140	+ 200	- 210	+ 350
(1) Automatic Landing correction: add 90m - (2) Weight correction: subtract 30m per 1T below 78T REF DIST without failure (valid for all FLAPS LEVER positions) = 2 220m											

1 - POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
The following ECAM alerts with Ice Accretion: -DUAL BLEED FAULT -WING or ENG BLEED LEAK -X BLEED FAULT -ENG BLEED LO TEMP	FULL	10	3 740	+ 70	+ 150	+ 190	+ 580	+ 160	+ 790	- 470	+ 340
	3	16	4 050	+ 70	+ 150	+ 210	+ 590	+ 160	+ 860	- 530	+ 350
(1) Automatic Landing correction: add 90m - (2) Weight correction: subtract 30m per 1T below 78T REF DIST without failure (valid for all FLAPS LEVER positions) = 3 430m											

 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-36 7/10 06 MAR 14

Ident.: PER-36-00014175.0028001 / 28 FEB 14
Applicable to: MSN 1219-1233

BLEED SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

6 - DRY											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
The following ECAM alerts with Ice Accretion: -DUAL BLEED FAULT -WING or ENG BLEED LEAK -X BLEED FAULT -ENG BLEED LO TEMP	FULL	10	1 380	+ 50	+ 90	+ 60	+ 160	+ 50	+ 30	- 20	+ 490
	3	16	1 480	+ 50	+ 90	+ 70	+ 170	+ 60	+ 30	- 20	+ 530
(1) Automatic Landing correction: add 90m - (2) Weight correction: subtract 10m per 1T below 78T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 220m											

5 - GOOD											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
The following ECAM alerts with Ice Accretion: -DUAL BLEED FAULT -WING or ENG BLEED LEAK -X BLEED FAULT -ENG BLEED LO TEMP	FULL	10	1 790	+ 50	+ 120	+ 90	+ 230	+ 80	+ 60	- 50	+ 420
	3	16	1 960	+ 50	+ 120	+ 100	+ 240	+ 80	+ 70	- 60	+ 430
(1) Automatic Landing correction: add 110m - (2) Weight correction: subtract 20m per 1T below 78T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 550m											

4 - GOOD TO MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
The following ECAM alerts with Ice Accretion: -DUAL BLEED FAULT -WING or ENG BLEED LEAK -X BLEED FAULT -ENG BLEED LO TEMP	FULL	10	1 980	+ 40	+ 90	+ 70	+ 200	+ 70	+ 80	- 80	+ 490
	3	16	2 130	+ 40	+ 100	+ 80	+ 200	+ 80	+ 90	- 90	+ 510
(1) Automatic Landing correction: add 100m - (2) Weight correction: subtract 10m per 1T below 78T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 760m											



 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-36 8/10 06 MAR 14

Continued from the previous page

BLEED SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

3 - MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
The following ECAM alerts with Ice Accretion: -DUAL BLEED FAULT -WING or ENG BLEED LEAK -X BLEED FAULT -ENG BLEED LO TEMP	FULL	10	2 210	+ 40	+ 100	+ 80	+ 230	+ 80	+ 110	- 110	+ 460
	3	16	2 390	+ 40	+ 110	+ 90	+ 240	+ 80	+ 130	- 120	+ 480
(1) Automatic Landing correction: add 100m - (2) Weight correction: subtract 20m per 1T below 78T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 980m											

2 - MEDIUM TO POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
The following ECAM alerts with Ice Accretion: -DUAL BLEED FAULT -WING or ENG BLEED LEAK -X BLEED FAULT -ENG BLEED LO TEMP	FULL	10	2 640	+ 70	+ 150	+ 140	+ 390	+ 120	+ 190	- 150	+ 340
	3	16	2 920	+ 80	+ 160	+ 150	+ 420	+ 140	+ 220	- 180	+ 350
(1) Automatic Landing correction: add 120m - (2) Weight correction: subtract 30m per 1T below 78T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 2 290m											

1 - POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
The following ECAM alerts with Ice Accretion: -DUAL BLEED FAULT -WING or ENG BLEED LEAK -X BLEED FAULT -ENG BLEED LO TEMP	FULL	10	3 980	+ 70	+ 150	+ 160	+ 580	+ 150	+ 920	- 440	+ 340
	3	16	4 350	+ 70	+ 150	+ 180	+ 600	+ 170	+ 1 020	- 500	+ 350
(1) Automatic Landing correction: add 120m - (2) Weight correction: subtract 30m per 1T below 78T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 3 650m											

 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-36 9/10 06 MAR 14

Ident.: PER-36-00014175.0017001 / 28 FEB 14
Applicable to: MSN 2649

BLEED SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

6 - DRY											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 66T	Per 1T above 66T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
The following ECAM alerts with Ice Accretion: -DUAL BLEED FAULT -WING or ENG BLEED LEAK -X BLEED FAULT -ENG BLEED LO TEMP	FULL	10	1 230	+ 40	+ 70	+ 50	+ 120	+ 40	+ 20	- 20	+ 580
	3	16	1 350	+ 50	+ 80	+ 50	+ 130	+ 40	+ 20	- 30	+ 790
(1) Automatic Landing correction: add 90m - (2) Weight correction: subtract 10m per 1T below 66T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 080m											

5 - GOOD											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 66T	Per 1T above 66T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
The following ECAM alerts with Ice Accretion: -DUAL BLEED FAULT -WING or ENG BLEED LEAK -X BLEED FAULT -ENG BLEED LO TEMP	FULL	10	1 580	+ 50	+ 110	+ 80	+ 210	+ 70	+ 50	- 60	+ 430
	3	16	1 760	+ 60	+ 120	+ 100	+ 230	+ 80	+ 70	- 80	+ 580
(1) Automatic Landing correction: add 130m - (2) Weight correction: subtract 20m per 1T below 66T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 370m											

4 - GOOD TO MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 66T	Per 1T above 66T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
The following ECAM alerts with Ice Accretion: -DUAL BLEED FAULT -WING or ENG BLEED LEAK -X BLEED FAULT -ENG BLEED LO TEMP	FULL	10	1 790	+ 40	+ 90	+ 70	+ 190	+ 60	+ 70	- 100	+ 500
	3	16	1 970	+ 40	+ 100	+ 80	+ 190	+ 60	+ 80	- 120	+ 690
(1) Automatic Landing correction: add 120m - (2) Weight correction: subtract 20m per 1T below 66T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 600m											



 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-36 10/10
		06 MAR 14

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BLEED SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

3 - MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 66T	Per 1T above 66T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
The following ECAM alerts with Ice Accretion: -DUAL BLEED FAULT -WING or ENG BLEED LEAK -X BLEED FAULT -ENG BLEED LO TEMP	FULL	10	1 980	+ 40	+ 90	+ 80	+ 220	+ 70	+ 100	- 130	+ 480
	3	16	2 190	+ 50	+ 110	+ 100	+ 220	+ 80	+ 110	- 150	+ 650
(1) Automatic Landing correction: add 130m - (2) Weight correction: subtract 20m per 1T below 66T REF DIST without failure (valid for all FLAPS LEVER positions) = 1 770m											

2 - MEDIUM TO POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 66T	Per 1T above 66T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
The following ECAM alerts with Ice Accretion: -DUAL BLEED FAULT -WING or ENG BLEED LEAK -X BLEED FAULT -ENG BLEED LO TEMP	FULL	10	2 240	+ 70	+ 140	+ 130	+ 340	+ 110	+ 140	- 150	+ 350
	3	16	2 610	+ 90	+ 170	+ 170	+ 390	+ 130	+ 200	- 200	+ 450
(1) Automatic Landing correction: add 170m - (2) Weight correction: subtract 30m per 1T below 66T REF DIST without failure (valid for all FLAPS LEVER positions) = 1 950m											

1 - POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 66T	Per 1T above 66T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
The following ECAM alerts with Ice Accretion: -DUAL BLEED FAULT -WING or ENG BLEED LEAK -X BLEED FAULT -ENG BLEED LO TEMP	FULL	10	3 230	+ 70	+ 140	+ 200	+ 500	+ 130	+ 540	- 340	+ 350
	3	16	3 780	+ 80	+ 160	+ 240	+ 530	+ 150	+ 700	- 450	+ 450
(1) Automatic Landing correction: add 160m - (2) Weight correction: subtract 40m per 1T below 66T REF DIST without failure (valid for all FLAPS LEVER positions) = 2 950m											

 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-70 1/10
		06 MAR 14

Ident.: PER-70-00014174.0068001 / 28 FEB 14
Applicable to: MSN 2927-3034

ENGINE SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

6 - DRY											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
REV UNLOCK with buffet	3	10	1 380	+ 50	+ 90	+ 60	+ 160	+ 50	+ 30	- 30	+ 590
	1	40	1 900	+ 60	N/A	+ 80	+ 170	+ 70	+ 40	- 40	+ 730
SHUTDOWN with ENG FIRE pushbutton pushed and Ice Accretion	FULL	10	1 360	+ 50	+ 90	+ 60	+ 160	+ 50	+ 30	- 20	+ 500
	3	16	1 460	+ 50	+ 90	+ 70	+ 160	+ 50	+ 30	- 30	+ 540
(1) Automatic Landing correction: add 60m - (2) Weight correction: subtract 10m per 1T below 78T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 210m											

5 - GOOD											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
REV UNLOCK with buffet	3	10	1 780	+ 50	+ 120	+ 90	+ 230	+ 80	+ 70	- 70	+ 490
	1	40	2 480	+ 70	N/A	+ 130	+ 260	+ 110	+ 90	- 130	+ 530
SHUTDOWN with ENG FIRE pushbutton pushed and Ice Accretion	FULL	10	1 740	+ 50	+ 110	+ 90	+ 220	+ 80	+ 60	- 60	+ 430
	3	16	1 900	+ 50	+ 120	+ 100	+ 230	+ 80	+ 60	- 80	+ 440
(1) Automatic Landing correction: add 80m - (2) Weight correction: subtract 20m per 1T below 78T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 520m											

4 - GOOD TO MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
REV UNLOCK with buffet	3	10	1 960	+ 40	+ 100	+ 80	+ 190	+ 70	+ 80	- 120	+ 590
	1	40	2 550	+ 40	N/A	+ 100	+ 210	+ 90	+ 100	- 170	+ 680
SHUTDOWN with ENG FIRE pushbutton pushed and Ice Accretion	FULL	10	1 920	+ 40	+ 90	+ 80	+ 190	+ 60	+ 70	- 110	+ 510
	3	16	2 060	+ 40	+ 100	+ 80	+ 190	+ 70	+ 80	- 130	+ 520
(1) Automatic Landing correction: add 80m - (2) Weight correction: subtract 10m per 1T below 78T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 730m											



 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-70 2/10
		06 MAR 14

Continued from the previous page

ENGINE SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

3 - MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
REV UNLOCK with buffet	3	10	2 190	+ 40	+ 110	+ 90	+ 230	+ 70	+ 110	- 160	+ 550
	1	40	2 860	+ 50	N/A	+ 110	+ 240	+ 100	+ 140	- 230	+ 640
SHUTDOWN with ENG FIRE pushbutton pushed and Ice Accretion	FULL	10	2 130	+ 40	+ 100	+ 80	+ 220	+ 80	+ 100	- 150	+ 480
	3	16	2 290	+ 40	+ 110	+ 90	+ 220	+ 80	+ 110	- 170	+ 490
(1) Automatic Landing correction: add 80m - (2) Weight correction: subtract 20m per 1T below 78T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 930m											

2 - MEDIUM TO POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
REV UNLOCK with buffet	3	10	2 610	+ 70	+ 160	+ 150	+ 380	+ 130	+ 190	- 220	+ 370
	1	40	3 690	+ 90	N/A	+ 200	+ 440	+ 180	+ 290	- 410	+ 420
SHUTDOWN with ENG FIRE pushbutton pushed and Ice Accretion	FULL	10	2 510	+ 70	+ 150	+ 140	+ 360	+ 130	+ 170	- 200	+ 330
	3	16	2 760	+ 80	+ 160	+ 160	+ 380	+ 130	+ 200	- 240	+ 340
(1) Automatic Landing correction: add 100m - (2) Weight correction: subtract 30m per 1T below 78T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 2 220m											

1 - POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
REV UNLOCK with buffet	3	10	3 790	+ 80	+ 160	+ 180	+ 540	+ 150	+ 720	- 590	+ 370
	1	40	5 030	+ 90	N/A	+ 230	+ 590	+ 190	+ 910	- 860	+ 420
SHUTDOWN with ENG FIRE pushbutton pushed and Ice Accretion	FULL	10	3 630	+ 80	+ 150	+ 170	+ 520	+ 150	+ 650	- 540	+ 330
	3	16	3 940	+ 80	+ 150	+ 180	+ 540	+ 150	+ 720	- 610	+ 340
(1) Automatic Landing correction: add 90m - (2) Weight correction: subtract 30m per 1T below 78T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 3 430m											

 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-70 3/10 06 MAR 14

Ident.: PER-70-00014174.0052001 / 28 FEB 14
Applicable to: MSN 3120

ENGINE SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

6 - DRY											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 76T	Per 1T above 76T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
REV UNLOCK with buffet	3	10	1 340	+ 50	+ 90	+ 60	+ 150	+ 50	+ 30	- 20	+ 600
	1	40	1 840	+ 60	N/A	+ 80	+ 170	+ 70	+ 40	- 40	+ 720
SHUTDOWN with ENG FIRE pushbutton pushed and Ice Accretion	FULL	10	1 330	+ 50	+ 80	+ 60	+ 150	+ 50	+ 20	- 20	+ 510
	3	16	1 420	+ 50	+ 90	+ 70	+ 160	+ 50	+ 30	- 30	+ 520
(1) Automatic Landing correction: add 80m - (2) Weight correction: subtract 10m per 1T below 76T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 190m											

5 - GOOD											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 76T	Per 1T above 76T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
REV UNLOCK with buffet	3	10	1 740	+ 50	+ 120	+ 90	+ 220	+ 80	+ 60	- 70	+ 490
	1	40	2 430	+ 70	N/A	+ 130	+ 260	+ 110	+ 90	- 130	+ 520
SHUTDOWN with ENG FIRE pushbutton pushed and Ice Accretion	FULL	10	1 700	+ 50	+ 110	+ 80	+ 220	+ 80	+ 60	- 60	+ 430
	3	16	1 850	+ 50	+ 120	+ 100	+ 220	+ 80	+ 70	- 80	+ 430
(1) Automatic Landing correction: add 90m - (2) Weight correction: subtract 20m per 1T below 76T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 490m											

4 - GOOD TO MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 76T	Per 1T above 76T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
REV UNLOCK with buffet	3	10	1 930	+ 40	+ 100	+ 80	+ 200	+ 60	+ 80	- 120	+ 580
	1	40	2 510	+ 40	N/A	+ 90	+ 210	+ 90	+ 100	- 170	+ 670
SHUTDOWN with ENG FIRE pushbutton pushed and Ice Accretion	FULL	10	1 880	+ 40	+ 100	+ 70	+ 190	+ 70	+ 70	- 110	+ 500
	3	16	2 020	+ 40	+ 100	+ 80	+ 190	+ 70	+ 80	- 120	+ 510
(1) Automatic Landing correction: add 90m - (2) Weight correction: subtract 10m per 1T below 76T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 700m											



 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-70 4/10
		06 MAR 14

Continued from the previous page

ENGINE SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

3 - MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 76T	Per 1T above 76T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
REV UNLOCK with buffet	3	10	2 150	+ 40	+ 100	+ 90	+ 230	+ 70	+ 110	- 160	+ 550
	1	40	2 810	+ 50	N/A	+ 110	+ 240	+ 100	+ 140	- 230	+ 630
SHUTDOWN with ENG FIRE pushbutton pushed and Ice Accretion	FULL	10	2 090	+ 40	+ 100	+ 80	+ 220	+ 70	+ 100	- 150	+ 470
	3	16	2 250	+ 40	+ 110	+ 90	+ 220	+ 80	+ 110	- 170	+ 480
(1) Automatic Landing correction: add 100m - (2) Weight correction: subtract 20m per 1T below 76T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 890m											

2 - MEDIUM TO POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 76T	Per 1T above 76T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
REV UNLOCK with buffet	3	10	2 550	+ 70	+ 160	+ 150	+ 380	+ 120	+ 190	- 210	+ 360
	1	40	3 610	+ 90	N/A	+ 200	+ 440	+ 170	+ 280	- 380	+ 410
SHUTDOWN with ENG FIRE pushbutton pushed and Ice Accretion	FULL	10	2 450	+ 70	+ 150	+ 140	+ 360	+ 120	+ 170	- 190	+ 330
	3	16	2 690	+ 80	+ 160	+ 150	+ 380	+ 130	+ 190	- 230	+ 340
(1) Automatic Landing correction: add 110m - (2) Weight correction: subtract 30m per 1T below 76T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 2 160m											

1 - POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 76T	Per 1T above 76T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
REV UNLOCK with buffet	3	10	3 710	+ 80	+ 160	+ 170	+ 530	+ 150	+ 710	- 580	+ 360
	1	40	4 930	+ 100	N/A	+ 230	+ 580	+ 190	+ 890	- 830	+ 420
SHUTDOWN with ENG FIRE pushbutton pushed and Ice Accretion	FULL	10	3 560	+ 80	+ 140	+ 160	+ 520	+ 140	+ 650	- 530	+ 330
	3	16	3 860	+ 80	+ 150	+ 180	+ 530	+ 150	+ 710	- 600	+ 340
(1) Automatic Landing correction: add 110m - (2) Weight correction: subtract 30m per 1T below 76T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 3 360m											

 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-70 5/10
		06 MAR 14

Ident.: PER-70-00014174.0047001 / 28 FEB 14
 Applicable to: MSN 1276-1843

ENGINE SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

6 - DRY											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
REV UNLOCK with buffet	3	10	1 380	+ 50	+ 90	+ 60	+ 160	+ 50	+ 30	- 30	+ 590
	1	40	1 900	+ 60	N/A	+ 80	+ 170	+ 70	+ 40	- 40	+ 730
SHUTDOWN with ENG FIRE pushbutton pushed and Ice Accretion	FULL	10	1 360	+ 50	+ 90	+ 60	+ 160	+ 50	+ 30	- 20	+ 500
	3	16	1 460	+ 50	+ 90	+ 70	+ 160	+ 50	+ 30	- 30	+ 540
(1) Automatic Landing correction: add 60m - (2) Weight correction: subtract 10m per 1T below 78T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 210m											

5 - GOOD											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
REV UNLOCK with buffet	3	10	1 780	+ 50	+ 120	+ 90	+ 230	+ 80	+ 70	- 70	+ 490
	1	40	2 480	+ 70	N/A	+ 130	+ 260	+ 110	+ 90	- 130	+ 530
SHUTDOWN with ENG FIRE pushbutton pushed and Ice Accretion	FULL	10	1 740	+ 50	+ 110	+ 90	+ 220	+ 80	+ 60	- 60	+ 430
	3	16	1 900	+ 50	+ 120	+ 100	+ 230	+ 80	+ 60	- 80	+ 440
(1) Automatic Landing correction: add 80m - (2) Weight correction: subtract 20m per 1T below 78T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 520m											

4 - GOOD TO MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
REV UNLOCK with buffet	3	10	1 960	+ 40	+ 100	+ 80	+ 190	+ 70	+ 80	- 120	+ 590
	1	40	2 550	+ 40	N/A	+ 100	+ 210	+ 90	+ 100	- 170	+ 680
SHUTDOWN with ENG FIRE pushbutton pushed and Ice Accretion	FULL	10	1 920	+ 40	+ 90	+ 80	+ 190	+ 60	+ 70	- 110	+ 510
	3	16	2 060	+ 40	+ 100	+ 80	+ 190	+ 70	+ 80	- 130	+ 520
(1) Automatic Landing correction: add 80m - (2) Weight correction: subtract 10m per 1T below 78T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 730m											



 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-70 6/10
		06 MAR 14

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ENGINE SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

3 - MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
REV UNLOCK with buffet	3	10	2 190	+ 40	+ 110	+ 90	+ 230	+ 70	+ 110	- 160	+ 550
	1	40	2 860	+ 50	N/A	+ 110	+ 240	+ 100	+ 140	- 230	+ 640
SHUTDOWN with ENG FIRE pushbutton pushed and Ice Accretion	FULL	10	2 130	+ 40	+ 100	+ 80	+ 220	+ 80	+ 100	- 150	+ 480
	3	16	2 290	+ 40	+ 110	+ 90	+ 220	+ 80	+ 110	- 170	+ 490
(1) Automatic Landing correction: add 80m - (2) Weight correction: subtract 20m per 1T below 78T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 930m											

2 - MEDIUM TO POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
REV UNLOCK with buffet	3	10	2 610	+ 70	+ 160	+ 150	+ 380	+ 130	+ 190	- 220	+ 370
	1	40	3 690	+ 90	N/A	+ 200	+ 440	+ 180	+ 290	- 410	+ 420
SHUTDOWN with ENG FIRE pushbutton pushed and Ice Accretion	FULL	10	2 510	+ 70	+ 150	+ 140	+ 360	+ 130	+ 170	- 200	+ 330
	3	16	2 760	+ 80	+ 160	+ 160	+ 380	+ 130	+ 200	- 240	+ 340
(1) Automatic Landing correction: add 100m - (2) Weight correction: subtract 30m per 1T below 78T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 2 220m											

1 - POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
REV UNLOCK with buffet	3	10	3 790	+ 80	+ 160	+ 180	+ 540	+ 150	+ 720	- 590	+ 370
	1	40	5 030	+ 90	N/A	+ 230	+ 590	+ 190	+ 910	- 860	+ 420
SHUTDOWN with ENG FIRE pushbutton pushed and Ice Accretion	FULL	10	3 630	+ 80	+ 150	+ 170	+ 520	+ 150	+ 650	- 540	+ 330
	3	16	3 940	+ 80	+ 150	+ 180	+ 540	+ 150	+ 720	- 610	+ 340
(1) Automatic Landing correction: add 90m - (2) Weight correction: subtract 30m per 1T below 78T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 3 430m											

 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-70 7/10
		06 MAR 14

Ident.: PER-70-00014174.0028001 / 28 FEB 14

Applicable to: MSN 1219-1233

ENGINE SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

6 - DRY											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
REV UNLOCK with buffet	3	10	1 380	+ 50	+ 100	+ 60	+ 160	+ 60	+ 30	- 20	+ 590
	1	40	1 900	+ 60	N/A	+ 80	+ 170	+ 80	+ 50	- 30	+ 710
SHUTDOWN with ENG FIRE pushbutton pushed and Ice Accretion	FULL	10	1 360	+ 50	+ 90	+ 60	+ 160	+ 60	+ 30	- 20	+ 500
	3	16	1 470	+ 50	+ 90	+ 70	+ 170	+ 50	+ 30	- 20	+ 540
(1) Automatic Landing correction: add 90m - (2) Weight correction: subtract 10m per 1T below 78T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 220m											

5 - GOOD											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
REV UNLOCK with buffet	3	10	1 810	+ 50	+ 120	+ 90	+ 240	+ 80	+ 70	- 60	+ 500
	1	40	2 500	+ 60	N/A	+ 130	+ 270	+ 110	+ 90	- 100	+ 520
SHUTDOWN with ENG FIRE pushbutton pushed and Ice Accretion	FULL	10	1 760	+ 50	+ 120	+ 90	+ 230	+ 80	+ 60	- 50	+ 430
	3	16	1 920	+ 50	+ 130	+ 100	+ 230	+ 90	+ 70	- 60	+ 440
(1) Automatic Landing correction: add 110m - (2) Weight correction: subtract 20m per 1T below 78T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 550m											

4 - GOOD TO MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
REV UNLOCK with buffet	3	10	1 990	+ 40	+ 100	+ 70	+ 200	+ 70	+ 80	- 90	+ 590
	1	40	2 580	+ 40	N/A	+ 100	+ 210	+ 80	+ 100	- 120	+ 660
SHUTDOWN with ENG FIRE pushbutton pushed and Ice Accretion	FULL	10	1 940	+ 40	+ 90	+ 70	+ 200	+ 70	+ 80	- 80	+ 500
	3	16	2 090	+ 40	+ 100	+ 80	+ 200	+ 70	+ 90	- 90	+ 520
(1) Automatic Landing correction: add 110m - (2) Weight correction: subtract 10m per 1T below 78T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 760m											



 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-70 8/10
		06 MAR 14

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ENGINE SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

3 - MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
REV UNLOCK with buffet	3	10	2 230	+ 40	+ 110	+ 90	+ 230	+ 70	+ 120	- 120	+ 550
	1	40	2 890	+ 50	N/A	+ 110	+ 250	+ 100	+ 140	- 160	+ 620
SHUTDOWN with ENG FIRE pushbutton pushed and Ice Accretion	FULL	10	2 160	+ 40	+ 100	+ 80	+ 230	+ 70	+ 110	- 110	+ 470
	3	16	2 340	+ 40	+ 110	+ 90	+ 230	+ 80	+ 120	- 130	+ 490
(1) Automatic Landing correction: add 110m - (2) Weight correction: subtract 20m per 1T below 78T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 980m											

2 - MEDIUM TO POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
REV UNLOCK with buffet	3	10	2 690	+ 80	+ 170	+ 150	+ 400	+ 130	+ 210	- 170	+ 370
	1	40	3 750	+ 90	N/A	+ 200	+ 460	+ 180	+ 300	- 290	+ 430
SHUTDOWN with ENG FIRE pushbutton pushed and Ice Accretion	FULL	10	2 570	+ 70	+ 150	+ 140	+ 380	+ 120	+ 180	- 150	+ 340
	3	16	2 840	+ 80	+ 170	+ 150	+ 400	+ 140	+ 210	- 190	+ 350
(1) Automatic Landing correction: add 120m - (2) Weight correction: subtract 30m per 1T below 78T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 2 290m											

1 - POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 78T	Per 1T above 78T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
REV UNLOCK with buffet	3	10	3 960	+ 80	+ 160	+ 160	+ 550	+ 150	+ 800	- 490	+ 370
	1	40	5 170	+ 90	N/A	+ 210	+ 590	+ 200	+ 970	- 670	+ 430
SHUTDOWN with ENG FIRE pushbutton pushed and Ice Accretion	FULL	10	3 760	+ 80	+ 150	+ 150	+ 530	+ 150	+ 720	- 440	+ 340
	3	16	4 110	+ 80	+ 160	+ 170	+ 540	+ 160	+ 790	- 510	+ 350
(1) Automatic Landing correction: add 120m - (2) Weight correction: subtract 30m per 1T below 78T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 3 650m											

	IN FLIGHT PERFORMANCE	PER-70 9/10
		06 MAR 14

Ident.: PER-70-00014174.0017001 / 28 FEB 14

Applicable to: MSN 2649

ENGINE SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

6 - DRY											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 66T	Per 1T above 66T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
REV UNLOCK with buffet	3	10	1 250	+ 50	+ 80	+ 50	+ 120	+ 40	+ 20	- 20	+ 860
	1	40	1 700	+ 50	N/A	+ 60	+ 130	+ 50	+ 30	- 40	+ 790
SHUTDOWN with ENG FIRE pushbutton pushed and Ice Accretion	FULL	10	1 220	+ 40	+ 70	+ 50	+ 120	+ 40	+ 20	- 20	+ 570
	3	16	1 330	+ 50	+ 80	+ 50	+ 120	+ 50	+ 30	- 30	+ 780
(1) Automatic Landing correction: add 100m - (2) Weight correction: subtract 10m per 1T below 66T REF DIST without failure (valid for all FLAPS LEVER positions) = 1 080m											

5 - GOOD											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 66T	Per 1T above 66T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
REV UNLOCK with buffet	3	10	1 630	+ 50	+ 120	+ 90	+ 220	+ 70	+ 60	- 70	+ 630
	1	40	2 250	+ 70	N/A	+ 120	+ 250	+ 100	+ 80	- 130	+ 570
SHUTDOWN with ENG FIRE pushbutton pushed and Ice Accretion	FULL	10	1 560	+ 50	+ 110	+ 80	+ 210	+ 70	+ 50	- 60	+ 420
	3	16	1 740	+ 60	+ 120	+ 90	+ 220	+ 80	+ 60	- 80	+ 570
(1) Automatic Landing correction: add 130m - (2) Weight correction: subtract 20m per 1T below 66T REF DIST without failure (valid for all FLAPS LEVER positions) = 1 370m											

4 - GOOD TO MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 66T	Per 1T above 66T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
REV UNLOCK with buffet	3	10	1 840	+ 40	+ 100	+ 70	+ 190	+ 70	+ 80	- 120	+ 740
	1	40	2 380	+ 40	N/A	+ 90	+ 200	+ 80	+ 90	- 170	+ 700
SHUTDOWN with ENG FIRE pushbutton pushed and Ice Accretion	FULL	10	1 770	+ 40	+ 90	+ 70	+ 190	+ 60	+ 70	- 110	+ 490
	3	16	1 940	+ 40	+ 100	+ 80	+ 190	+ 70	+ 80	- 130	+ 670
(1) Automatic Landing correction: add 130m - (2) Weight correction: subtract 20m per 1T below 66T REF DIST without failure (valid for all FLAPS LEVER positions) = 1 600m											



 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-70 10/10 06 MAR 14

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ENGINE SYSTEM

The Reference Distance (REF DIST) considers : Sea Level (SL), ISA, no wind, no slope, no engine reverse thrust, manual landing⁽¹⁾, maximum manual braking, VAPP = VREF+ΔVREF without APPR COR.

3 - MEDIUM											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 66T	Per 1T above 66T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
REV UNLOCK with buffet	3	10	2 050	+ 50	+ 110	+ 80	+ 220	+ 80	+ 110	- 170	+ 700
	1	40	2 650	+ 50	N/A	+ 110	+ 230	+ 90	+ 130	- 230	+ 660
SHUTDOWN with ENG FIRE pushbutton pushed and Ice Accretion	FULL	10	1 950	+ 40	+ 100	+ 80	+ 220	+ 70	+ 90	- 140	+ 460
	3	16	2 160	+ 50	+ 110	+ 90	+ 220	+ 80	+ 110	- 180	+ 630
(1) Automatic Landing correction: add 140m - (2) Weight correction: subtract 20m per 1T below 66T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 770m											

2 - MEDIUM TO POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 66T	Per 1T above 66T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
REV UNLOCK with buffet	3	10	2 410	+ 80	+ 170	+ 150	+ 380	+ 120	+ 180	- 200	+ 450
	1	40	3 350	+ 100	N/A	+ 190	+ 420	+ 160	+ 250	- 360	+ 450
SHUTDOWN with ENG FIRE pushbutton pushed and Ice Accretion	FULL	10	2 200	+ 70	+ 140	+ 120	+ 330	+ 110	+ 140	- 160	+ 330
	3	16	2 560	+ 80	+ 170	+ 150	+ 370	+ 130	+ 190	- 230	+ 420
(1) Automatic Landing correction: add 170m - (2) Weight correction: subtract 30m per 1T below 66T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 1 950m											

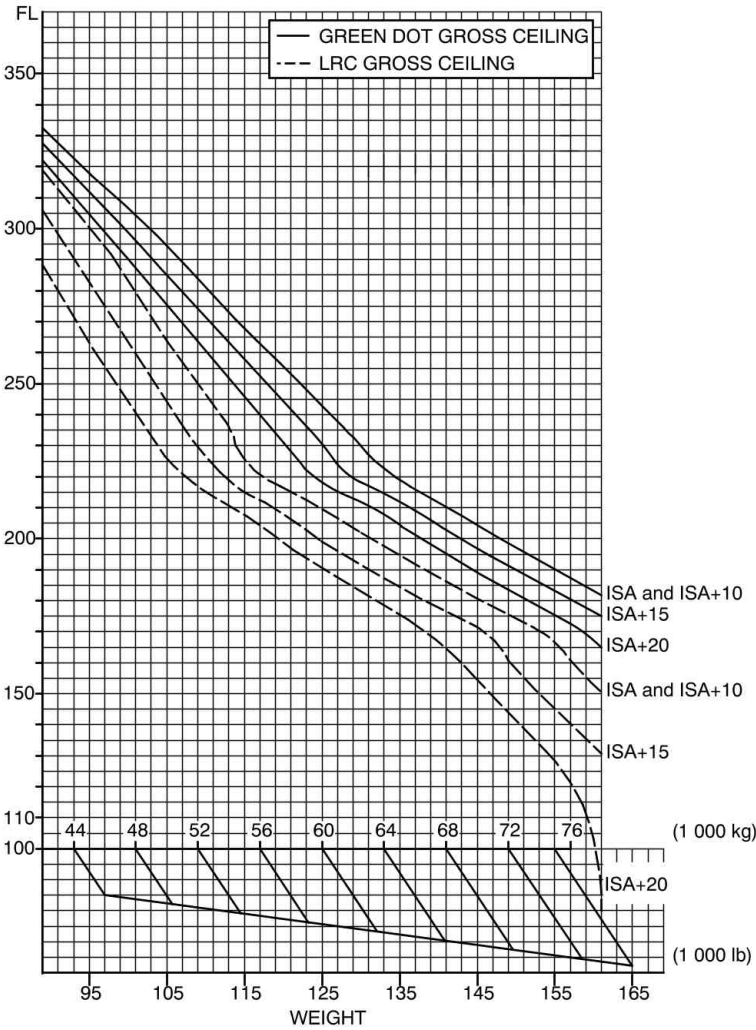
1 - POOR											
Corrections on Landing Distance (m)				WGT ⁽²⁾	SPD	ALT	WIND	TEMP	SLOPE	REV	OVW
FAILURE	FLAPS LEVER for LDG	ΔVREF	REF DIST (m) for 66T	Per 1T above 66T	Per 5kt	Per 1000ft above SL	Per 5kt TW	Per 10°C above ISA	Per 1% Down Slope	Per Thrust Reverser Operative	If OVW PROC applied
REV UNLOCK with buffet	3	10	3 570	+ 90	+ 160	+ 190	+ 510	+ 140	+ 670	- 530	+ 450
	1	40	4 610	+ 100	N/A	+ 230	+ 550	+ 190	+ 780	- 730	+ 450
SHUTDOWN with ENG FIRE pushbutton pushed and Ice Accretion	FULL	10	3 180	+ 80	+ 140	+ 160	+ 470	+ 130	+ 520	- 410	+ 330
	3	16	3 720	+ 90	+ 160	+ 190	+ 510	+ 150	+ 660	- 550	+ 420
(1) Automatic Landing correction: add 170m - (2) Weight correction: subtract 40m per 1T below 66T											
REF DIST without failure (valid for all FLAPS LEVER positions) = 2 950m											

CEILINGS

Ident.: PER-E-00011005.0008001 / 01 OCT 12
Applicable to: MSN 2649

ONE ENGINE OUT

GROSS CEILING at LONG RANGE and GREEN DOT SPEEDS Pack Flow Hi - Anti ice OFF



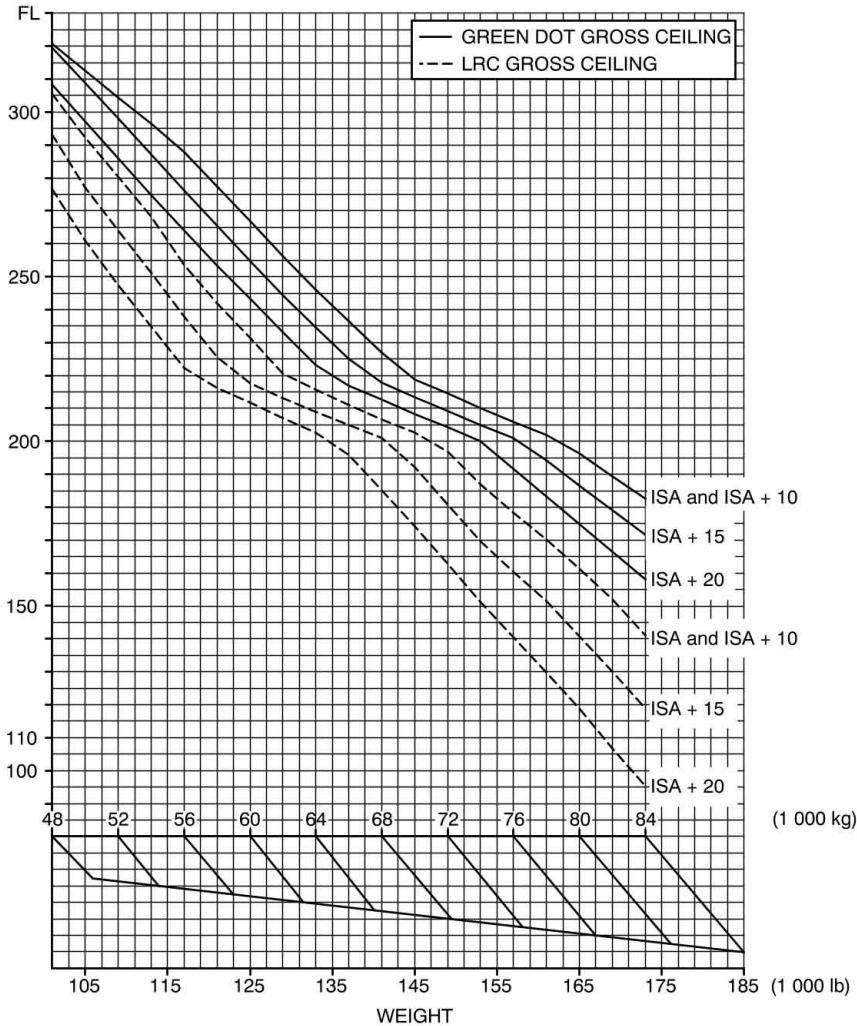
CORRECTIONS		ISA AND ISA + 10	ISA + 15 AND ISA + 20
LONG RANGE	ENGINE ANTI ICE ON	-1 300 ft	-4 000 ft
	TOTAL ANTI ICE ON	-2 700 ft	-7 400 ft
GREEN DOT	ENGINE ANTI ICE ON	-700 ft	-900 ft
	TOTAL ANTI ICE ON	-1 700 ft	-2 100 ft

CEILINGS

Ident.: PER-E-00011005.0010001 / 01 OCT 12
Applicable to: MSN 2933-3120

ONE ENGINE OUT

GROSS CEILING at LONG RANGE and GREEN DOT SPEEDS Pack Flow Hi - Anti ice OFF



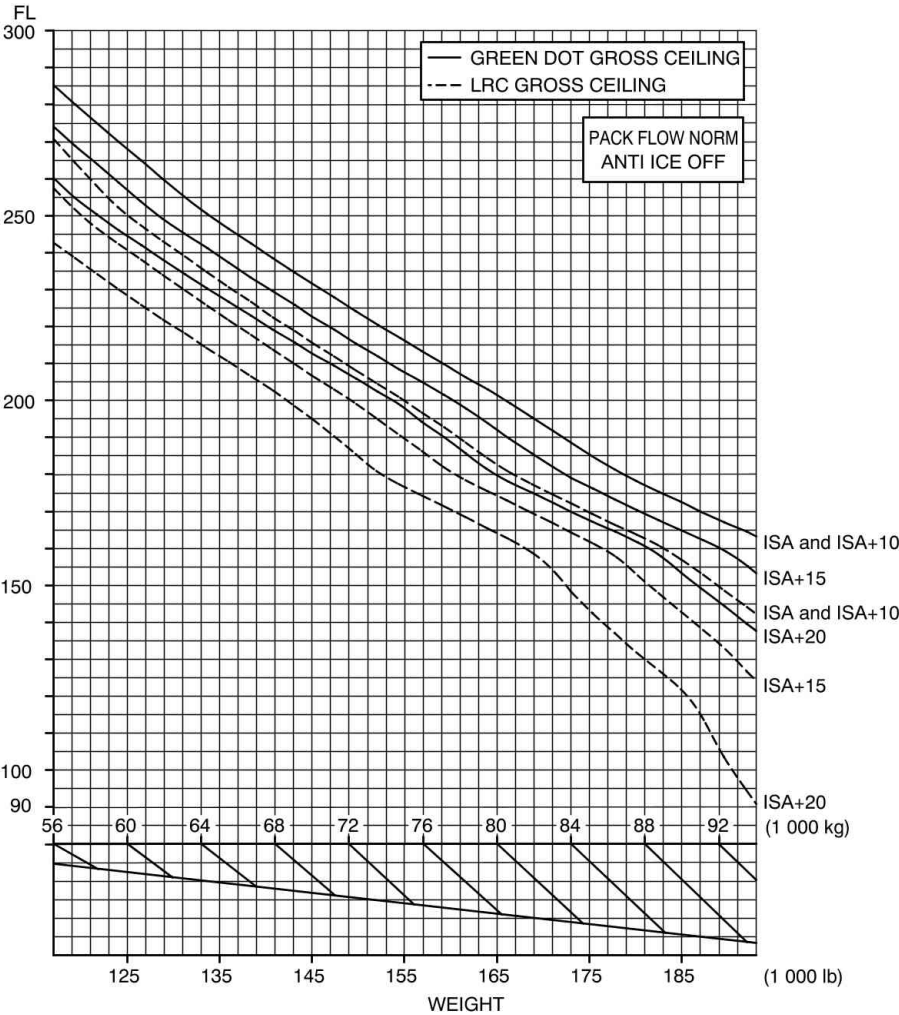
CORRECTIONS		ISA	ISA + 10	ISA + 15	ISA + 20
LONG RANGE	ENGINE ANTI ICE ON	-1 300 ft	-1 300 ft	-1 400 ft	-1 400 ft
	TOTAL ANTI ICE ON	-2 800 ft	-2 800 ft	-2 800 ft	-3 000 ft
GREEN DOT	ENGINE ANTI ICE ON	-1 000 ft	-900 ft	-900 ft	-1 100 ft
	TOTAL ANTI ICE ON	-2 100 ft	-2 100 ft	-2 100 ft	-2 300 ft

CEILING

Ident.: PER-E-00011005.0033001 / 01 OCT 12
Applicable to: MSN 1219-1233

ONE ENGINE OUT

GROSS CEILING at LONG RANGE and GREEN DOT SPEEDS Pack Flow Hi - Anti ice OFF



CORRECTIONS		ISA	ISA + 10	ISA + 15	ISA + 20
LONG RANGE	ENGINE ANTI ICE ON	-200 ft	-1 500 ft	-2 800 ft	-3 800 ft
	TOTAL ANTI ICE ON	-800 ft	-3 500 ft	-5 500 ft	-7 000 ft
GREEN DOT	ENGINE ANTI ICE ON	-200 ft	-1 400 ft	-1 700 ft	-1 800 ft
	TOTAL ANTI ICE ON	-900 ft	-3 200 ft	-3 300 ft	-3 900 ft

Note: For weights 85 000 kg or 187 400 lb, one engine ceilings at Long Range speed may be overestimated by FMS Legacy. In this case, ceiling values provided in the above graph should be retained.

 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-E 5/16 06 MAR 14

GROSS FLIGHT PATH DESCENT AT GREEN DOT SPEED

Ident.: PER-E-00011006.0007001 / 10 FEB 11
Applicable to: MSN 2649

ONE ENGINE OUT

GROSS FLIGHT PATH DESCENT AT GREEN DOT SPEED - 1 ENGINE OUT										
MAX. CONTINUOUS THRUST LIMITS				ISA		DISTANCE (NM)		TIME (MIN)		
HIGH AIR CONDITIONING				CG=33.0%		INITIAL SPEED (KT)		FUEL (1000KG)		
ANTI ICE OFF								LEVEL OFF (FT)		
INIT. GW	INITIAL FLIGHT LEVEL									
(1000KG)	250	290	310	330	350	370	390			
50			154 30 191 0.8 30000	215 42 193 1.0 30100	251 48 195 1.2 30100	278 53 197 1.3 30200	300 57 199 1.3 30200			
52		97 19 193 0.5 28700	208 41 195 1.1 29000	252 49 197 1.2 29100	282 54 199 1.4 29200	305 58 201 1.4 29200	325 61 203 1.5 29300			
54		172 34 197 0.9 27900	238 47 199 1.2 28000	274 53 201 1.4 28100	301 58 203 1.5 28200	321 61 205 1.6 28200	341 64 207 1.6 28200			
56		203 40 201 1.1 26900	258 51 203 1.4 27000	289 56 205 1.5 27100	315 60 207 1.6 27200	336 64 209 1.7 27200	352 66 211 1.7 27200			
58		171 33 205 1.0 26500	214 41 207 1.2 26500	244 47 209 1.3 26500	268 51 211 1.4 26500	287 54 213 1.4 26600	306 57 215 1.5 26600			
60		166 32 209 0.9 26000	201 38 211 1.1 26100	227 43 213 1.2 26100	249 47 215 1.3 26100	268 50 217 1.4 26100	284 52 219 1.4 26100			
62		165 31 213 1.0 25700	195 37 215 1.1 25700	218 41 217 1.2 25700	239 44 219 1.3 25700	256 47 221 1.3 25700	272 49 223 1.4 25800			
64		165 31 217 1.0 25300	192 36 219 1.1 25400	214 39 221 1.2 25400	232 42 223 1.3 25400	249 45 225 1.3 25400	264 47 227 1.4 25400			
66	51 10 217 0.3 24900	165 31 221 1.0 25000	188 35 223 1.1 25000	210 38 225 1.2 25000	226 41 227 1.2 25100	242 43 229 1.3 25100	257 45 231 1.3 25100			
68	129 24 221 0.9 24400	207 38 225 1.3 24500	228 42 227 1.4 24600	246 45 229 1.5 24600	261 47 231 1.5 24600	277 49 233 1.5 24600	290 51 235 1.6 24600			
70	162 30 225 1.1 23800	230 42 229 1.5 23900	250 46 231 1.6 24000	268 48 233 1.6 24000	282 50 235 1.7 24000	298 53 237 1.7 24000				
72	185 34 229 1.3 23200	245 45 233 1.6 23300	265 48 235 1.7 23400	282 51 237 1.7 23400	296 53 239 1.8 23400	310 55 241 1.8 23400				
74	205 38 233 1.4 22700	257 47 237 1.7 22700	275 49 239 1.8 22800	293 52 241 1.9 22800	307 54 243 1.9 22800	321 56 245 1.9 22800				
76	220 40 237 1.6 22100	268 48 241 1.8 22200	286 51 243 1.9 22200	300 53 245 1.9 22200	316 56 247 2.0 22200	331 58 249 2.0 22200				
78	252 46 241 1.8 21400	295 53 245 2.0 21500	312 55 247 2.1 21500	326 58 249 2.2 21600	339 59 251 2.2 21600					
CORRECTIONS		ENGINE ANTI ICE ON				TOTAL ANTI ICE ON				
FUEL		+ 14 %				+ 28 %				
TIME		+ 13 %				+ 26 %				
DISTANCE		+ 12 %				+ 23 %				
LEVEL OFF		- 700 ft				- 1800 ft				

 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-E 6/16 06 MAR 14

GROSS FLIGHT PATH DESCENT AT GREEN DOT SPEED

Ident.: PER-E-00011006.0008001 / 10 FEB 11
 Applicable to: MSN 1276-1843, 2927

ONE ENGINE OUT

GROSS FLIGHT PATH DESCENT AT GREEN DOT SPEED - 1 ENGINE OUT							
MAX. CONTINUOUS THRUST NORMAL AIR CONDITIONING ANTI-ICING OFF		ISA CG=33.0%		DISTANCE (NM) INITIAL SPEED (KT)		TIME (MIN) FUEL(1000KG) LEVEL OFF (FT)	
INIT. GW (1000KG)	INITIAL FLIGHT LEVEL						
	250	290	310	330	350	370	390
50				174 32 198 .9 31700	228 42 200 1.1 31800	262 47 202 1.3 31900	288 52 204 1.3 31900
54			156 29 202 .9 30100	222 41 204 1.2 30200	258 47 206 1.4 30300	285 52 208 1.5 30300	308 55 210 1.5 30400
58		152 29 206 .9 28200	231 43 208 1.3 28500	269 50 210 1.5 28600	298 54 212 1.7 28600	320 58 214 1.7 28700	339 61 216 1.8 28700
62		236 45 212 1.5 26400	279 52 214 1.7 26600	309 57 216 1.8 26600	333 61 218 1.9 26700	352 64 220 2.0 26700	369 67 222 2.1 26800
66	155 30 214 1.1 24200	281 53 218 1.8 24600	314 59 220 2.0 24600	339 63 222 2.1 24700	360 67 224 2.2 24700	378 69 226 2.3 24800	393 71 228 2.3 24800
70	231 45 220 1.7 22600	311 59 224 2.1 22800	335 63 226 2.2 22800	357 67 228 2.3 22900	376 70 230 2.4 22900	392 72 232 2.5 22900	406 74 234 2.5 23000
74	214 41 226 1.6 21300	278 53 230 2.0 21400	301 56 232 2.1 21400	321 60 234 2.2 21500	339 62 236 2.2 21500	354 65 238 2.3 21500	
78	212 40 232 1.6 20500	264 49 236 1.9 20600	283 52 238 2.0 20600	301 55 240 2.1 20600	316 57 242 2.2 20600	330 60 244 2.2 20600	
82	242 46 238 1.9 19600	282 52 242 2.1 19700	298 55 244 2.2 19700	313 57 246 2.3 19700	326 59 248 2.3 19800		
86	278 52 244 2.3 18400	317 58 248 2.5 18400	332 61 250 2.6 18500	346 63 252 2.6 18500	359 65 254 2.7 18500		
90	300 56 250 2.6 17100	335 61 254 2.7 17200	349 64 256 2.8 17200	363 66 258 2.9 17200			
94	317 59 256 2.8 15900	350 64 260 3.0 15900	363 66 262 3.0 16000	375 67 264 3.1 16000			
CORRECTIONS		DISTANCE		TIME	FUEL	LEVEL OFF	
ENGINE ANTI ICE ON		+ 15 %		+ 12 %	+ 18 %	- 200 FT	
TOTAL ANTI ICE ON		+ 20 %		+ 24 %	+ 33 %	- 700 FT	

 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-E 7/16 06 MAR 14

GROSS FLIGHT PATH DESCENT AT GREEN DOT SPEED

Ident.: PER-E-00011006.0009001 / 10 FEB 11

Applicable to: MSN 2933-3120

ONE ENGINE OUT

GROSS FLIGHT PATH DESCENT AT GREEN DOT SPEED - 1 ENGINE OUT										
MAX. CONTINUOUS THRUST NORMAL AIR CONDITIONING ANTI-ICING OFF				ISA CG=33.0%		DISTANCE(NM) INITIAL SPEED(KT)		TIME(MIN) FUEL(1000KG) LEVEL OFF(FT)		
INIT. GW (1000KG)	INITIAL FLIGHT LEVEL									
	250	290	310	330	350	370	390			
56		39 7 203 .2 28900	193 36 205 1.1 29300	241 45 207 1.3 29400	272 50 209 1.5 29400	296 54 211 1.6 29500	316 57 213 1.6 29500			
	58		152 29 206 .9 28200	229 43 208 1.3 28400	267 49 210 1.5 28500	293 54 212 1.6 28600	316 57 214 1.7 28600	334 60 216 1.8 28700		
		60		202 38 209 1.2 27400	257 48 211 1.5 27500	291 54 213 1.7 27600	314 58 215 1.8 27600	335 61 217 1.9 27700	353 64 219 1.9 27700	
62				236 45 212 1.5 26400	280 52 214 1.7 26600	310 58 216 1.9 26600	332 61 218 1.9 26700	351 64 220 2.0 26700	368 66 222 2.1 26700	
	64		64 12 211 .4 24800	263 50 215 1.7 25500	300 56 217 1.9 25600	327 61 219 2.0 25700	348 64 221 2.1 25700	365 67 223 2.1 25700	382 69 225 2.2 25800	
		66	155 30 214 1.1 24200	282 54 218 1.8 24600	314 59 220 2.0 24600	338 63 222 2.1 24700	360 66 224 2.2 24700	377 69 226 2.3 24800	393 71 228 2.3 24800	
68			200 39 217 1.4 23400	297 57 221 2.0 23700	324 61 223 2.1 23700	348 65 225 2.2 23800	367 68 227 2.3 23800	384 70 229 2.4 23800	398 72 231 2.4 23900	
	70		231 45 220 1.7 22600	311 59 224 2.1 22800	335 63 226 2.2 22800	358 67 228 2.3 22900	376 70 230 2.4 22900	391 72 232 2.5 22900	405 74 234 2.5 23000	
		72	228 44 223 1.7 21800	313 60 227 2.2 21900	346 65 229 2.4 21900	366 69 231 2.5 22000	383 71 233 2.5 22000	398 73 235 2.6 22000	411 75 237 2.6 22100	
74			214 41 226 1.6 21300	278 53 230 2.0 21400	301 56 232 2.1 21400	321 60 234 2.2 21500	339 62 236 2.2 21500	354 65 238 2.3 21500		
	76		210 40 229 1.6 20900	268 50 233 1.9 21000	289 54 235 2.0 21000	308 57 237 2.1 21000	324 59 239 2.2 21000	338 61 241 2.2 21000		
		78	212 40 232 1.6 20500	263 49 236 1.9 20600	283 52 238 2.0 20600	301 55 240 2.1 20600	316 57 242 2.2 20600	329 59 244 2.2 20600		
80			214 41 235 1.7 20100	262 49 239 1.9 20200	281 52 241 2.0 20200	296 54 243 2.1 20200	312 56 245 2.2 20200	325 58 247 2.2 20200		
	82		242 46 238 1.9 19600	282 52 242 2.1 19700	298 55 244 2.2 19700	313 57 246 2.3 19700	325 59 248 2.3 19800			
		84	265 50 241 2.2 19000	303 56 245 2.4 19100	319 59 247 2.4 19100	333 61 249 2.5 19100	347 63 251 2.5 19100			
CORRECTIONS			DISTANCE		TIME		FUEL		LEVEL OFF	
ENGINE ANTI ICE			+ 10 %		+ 10 %		+ 15 %		- 900 FT	
TOTAL ANTI ICE		+ 20 %		+ 20 %		+ 25 %		- 2000 FT		

10B -08F0A321-131 IAE V2530-A5 23500010C6KG330 0 018590 0 0 3 .0 .0 .00 0 02 1.000 1.000 .000 0 CL-NO-0-00-04-06-150

 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-E 8/16
		06 MAR 14

GROSS FLIGHT PATH DESCENT AT GREEN DOT SPEED

Ident.: PER-E-00011006.0037001 / 01 MAR 11

Applicable to: MSN 1219-1233

ONE ENGINE OUT

GROSS FLIGHT PATH DESCENT AT GREEN DOT SPEED - 1 ENGINE OUT									
MAX. CONTINUOUS THRUST NORMAL AIR CONDITIONING ANTI-ICING OFF			ISA CG=33.0%		DISTANCE (NM)		TIME (MIN)		
INIT. GW (1000KG)			INITIAL FLIGHT LEVEL		INITIAL SPEED (KT)		FUEL (1000KG) LEVEL OFF (FT)		
			250	290	310	330	350	370	390
64			230 43 215 1.5 25800	266 50 217 1.7 25800	292 54 219 1.8 25900	313 57 221 1.9 25900	331 60 223 2.0 26000	348 63 225 2.0 26000	
	93 18 214 .7 24700	244 46 218 1.6 25000	274 51 220 1.8 25100	299 55 222 1.9 25100	319 58 224 2.0 25200	336 61 226 2.1 25200	352 63 228 2.1 25200		
	139 27 217 1.0 24100	244 46 221 1.7 24400	272 51 223 1.8 24400	295 54 225 1.9 24400	314 57 227 2.0 24500	331 60 229 2.1 24500	346 62 231 2.1 24500		
70	166 32 220 1.2 23600	249 47 224 1.7 23700	275 51 226 1.9 23800	294 54 228 2.0 23800	312 57 230 2.0 23800	330 60 232 2.1 23800	345 62 234 2.2 23900		
	183 35 223 1.4 23000	255 48 227 1.8 23100	278 52 229 1.9 23100	296 54 231 2.0 23200	314 57 233 2.1 23200	331 60 235 2.2 23200	344 61 237 2.2 23200		
	199 38 226 1.5 22400	260 49 230 1.9 22500	282 52 232 2.0 22500	302 55 234 2.1 22600	317 58 236 2.2 22600	332 60 238 2.2 22600			
76	211 40 229 1.6 21800	266 50 233 2.0 21900	287 53 235 2.1 22000	303 55 237 2.1 22000	319 58 239 2.2 22000	335 60 241 2.3 22000			
	221 42 232 1.8 21300	272 50 236 2.0 21300	291 53 238 2.1 21400	307 56 240 2.2 21400	322 58 242 2.3 21400	336 60 244 2.3 21400			
	231 43 235 1.9 20700	277 51 239 2.1 20800	295 54 241 2.2 20800	311 57 243 2.3 20800	326 59 245 2.4 20800	339 60 247 2.4 20900			
82	239 45 238 2.0 20200	281 52 242 2.2 20200	299 55 244 2.3 20200	314 57 246 2.4 20300	329 59 248 2.4 20300				
	251 47 241 2.1 19600	291 54 245 2.3 19600	308 56 247 2.4 19700	322 58 249 2.5 19700	335 60 251 2.5 19700				
	263 49 244 2.2 19000	301 55 248 2.4 19000	316 57 250 2.5 19100	331 60 252 2.6 19100	344 62 254 2.6 19100				
88	272 50 247 2.3 18400	309 56 251 2.5 18400	323 59 253 2.6 18500	338 61 255 2.7 18500	351 62 257 2.7 18500				
	273 50 250 2.4 17800	310 56 254 2.6 17900	326 59 256 2.7 17900	340 61 258 2.7 17900					
	269 49 253 2.4 17300	303 55 257 2.6 17400	318 57 259 2.6 17400	332 59 261 2.7 17400					
CORRECTIONS			DISTANCE		TIME		FUEL		
ENGINE ANTI ICE ON			+ 2 %		—		+ 6 %		
TOTAL ANTI ICE ON			+ 2 %		+ 2 %		+ 6 %		
							— 100 FT		
							— 700 FT		

 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-E 9/16 06 MAR 14

CRUISE AT LONG RANGE CRUISE SPEED

Ident.: PER-E-00011007.0009001 / 10 FEB 11

Applicable to: MSN 1276-1843, 2927

ONE ENGINE OUT

LONG RANGE CRUISE - 1 ENGINE OUT							
MAX. CONTINUOUS THRUST LIMITS NORMAL AIR CONDITIONING ANTI-ICING OFF			ISA CG=33.0%	EPR FUEL FLOW (KG/H)		MACH IAS (KT)	
WEIGHT (1000KG)	FL100	FL150	FL190	FL210	FL230	FL250	
50	1.181 .442	1.250 .480	1.319 .507	1.369 .530	1.417 .549	1.472 .571	
	1972 244	1915 241	1856 236	1874 237	1870 236	1875 236	
54	1.199 .454	1.281 .494	1.363 .529	1.411 .548	1.464 .569	1.520 .588	
	2093 251	2047 249	2029 246	2028 246	2032 245	2034 243	
58	1.223 .466	1.310 .506	1.402 .546	1.454 .567	1.510 .587	1.554 .591	
	2224 258	2174 255	2185 255	2190 254	2196 253	2138 244	
62	1.253 .484	1.344 .521	1.441 .562	1.497 .583	1.536 .585	1.568 .551	
	2387 268	2330 263	2343 262	2354 262	2277 252	2121 227	
66	1.278 .495	1.380 .538	1.480 .578	1.534 .595	1.548 .548		
	2519 274	2499 272	2504 270	2503 267	2252 235		
70	1.303 .506	1.412 .552	1.517 .591	1.547 .578			
	2651 280	2651 278	2667 277	2519 260			
74	1.327 .515	1.446 .567	1.549 .600	1.562 .528			
	2785 286	2818 286	2811 281	2482 236			
78	1.359 .531	1.478 .579	1.557 .577				
	2968 295	2979 293	2795 270				
82	1.385 .543	1.510 .592	1.574 .523				
	3124 301	3146 299	2758 243				
86	1.412 .554	1.519 .580					
	3282 308	3163 293					
90	1.440 .567	1.529 .559					
	3449 315	3158 282					
94	1.456 .569	1.549 .512					
	3540 316	3139 258					
ENGINE ANTI ICE ON △FUEL = + 2 %				TOTAL ANTI ICE ON △FUEL = + 4 %			

 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-E 10/16 06 MAR 14

CRUISE AT LONG RANGE CRUISE SPEED

Ident.: PER-E-00011007.0010001 / 10 FEB 11
 Applicable to: MSN 2933-3120

ONE ENGINE OUT

LONG RANGE CRUISE – 1 ENGINE OUT						
MAX. CONTINUOUS THRUST LIMITS NORMAL AIR CONDITIONING ANTI-ICING OFF			ISA CG=33.0%	EPR FUEL FLOW (KG/H)	MACH IAS (KT)	
WEIGHT (1000KG)	FL100	FL150	FL190	FL210	FL230	FL250
56	1.210 .459 2153 254	1.295 .500 2108 252	1.383 .538 2109 251	1.432 .557 2106 250	1.487 .578 2113 249	1.545 .597 2118 247
58	1.223 .466 2223 258	1.310 .506 2173 255	1.402 .546 2185 255	1.454 .567 2189 254	1.510 .587 2196 253	
60	1.238 .475 2307 263	1.324 .511 2238 258	1.421 .553 2258 258	1.475 .574 2267 258	1.529 .592 2267 255	
62	1.253 .484 2385 268	1.344 .522 2330 263	1.441 .562 2342 262	1.497 .584 2354 262		
64	1.266 .490 2454 271	1.363 .531 2420 268	1.461 .570 2424 266	1.515 .589 2429 265		
66	1.278 .495 2518 274	1.380 .538 2498 272	1.480 .578 2504 270	1.534 .595 2504 267		
68	1.290 .500 2581 277	1.396 .545 2576 275	1.500 .586 2594 274			
70	1.303 .506 2650 280	1.412 .551 2650 278	1.517 .591 2666 277			
72	1.315 .510 2715 283	1.428 .559 2730 282	1.534 .597 2744 279			
74	1.327 .516 2784 286	1.446 .567 2817 286				
76	1.343 .524 2876 290	1.462 .573 2897 290				
78	1.359 .531 2967 295	1.478 .579 2978 293				
80	1.372 .537 3045 298	1.495 .587 3067 297				
82	1.385 .543 3123 301	1.510 .592 3145 299				
84	1.399 .549 3202 304					
ENGINE ANTI ICE ON △FUEL = + 2 %				TOTAL ANTI ICE ON △FUEL = + 4 %		

H09C -08B1A321-131 IAE V2530-A5 12200010C6KG330 0 018590 0 0 3 1.0 .0 .00 0 01 .990 .000 .000 0

CL-N0-CL-004-006-150

CRUISE AT LONG RANGE CRUISE SPEED

Ident.: PER-E-00011007.0008001 / 10 FEB 11

Applicable to: MSN 2649

ONE ENGINE OUT

LONG RANGE CRUISE - 1 ENGINE OUT							
MAX. CONTINUOUS THRUST LIMITS PACK FLOW HI ANTI-ICING OFF			ISA CG=33.0%	EPR FUEL FLOW (KG/H)		MACH IAS (KT)	
WEIGHT (1000KG)	FL100	FL150	FL190	FL210	FL230	FL250	
50	1.151 .430 1811 237	1.236 .511 1968 258	1.267 .515 1792 240	1.316 .550 1841 247	1.344 .556 1777 239	1.393 .584 1801 241	
52	1.158 .435 1879 240	1.240 .511 1987 257	1.292 .535 1907 250	1.327 .553 1881 248	1.363 .567 1855 244	1.412 .594 1874 246	
54	1.170 .447 1983 247	1.245 .510 2011 257	1.312 .550 1999 256	1.338 .555 1925 249	1.385 .581 1947 251	1.431 .602 1942 249	
56	1.183 .461 2098 255	1.250 .510 2040 257	1.323 .553 2044 258	1.355 .565 2001 253	1.404 .592 2024 255	1.440 .600 1963 248	
58	1.226 .510 2373 283	1.260 .514 2095 259	1.333 .555 2086 259	1.374 .576 2086 259	1.417 .595 2071 257	1.444 .585 1952 242	
60	1.233 .514 2415 285	1.270 .519 2156 261	1.346 .561 2145 262	1.394 .588 2174 264	1.420 .585 2065 252	1.452 .562 1935 232	
62	1.236 .514 2434 285	1.294 .540 2287 272	1.362 .570 2225 266	1.410 .596 2248 268	1.426 .570 2055 246		
64	1.239 .513 2454 284	1.311 .552 2382 279	1.381 .582 2317 272	1.418 .595 2272 267	1.435 .544 2037 234		
66	1.243 .513 2476 284	1.322 .556 2432 281	1.397 .591 2399 277	1.421 .585 2264 263			
68	1.247 .512 2499 283	1.330 .558 2472 282	1.412 .599 2473 280	1.426 .570 2253 256			
70	1.254 .514 2550 285	1.338 .560 2516 283	1.426 .604 2537 283	1.436 .543 2232 243			
72	1.262 .517 2604 287	1.351 .567 2592 286	1.428 .598 2533 280				
74	1.270 .521 2666 289	1.365 .575 2673 290	1.432 .587 2523 274				
76	1.290 .539 2805 299	1.381 .585 2767 296	1.438 .571 2509 267				
78	1.308 .554 2927 307	1.395 .593 2850 300	1.450 .537 2478 250				
ENGINE ANTI ICE ON △FUEL = + 2.5 %				TOTAL ANTI ICE ON △FUEL = + 6 %			

 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-E 12/16 06 MAR 14

CRUISE AT LONG RANGE CRUISE SPEED

Ident.: PER-E-00011007.0030001 / 10 FEB 11

Applicable to: MSN 1219-1233

ONE ENGINE OUT

LONG RANGE CRUISE - 1 ENGINE OUT						
MAX. CONTINUOUS THRUST LIMITS NORMAL AIR CONDITIONING ANTI-ICING OFF			ISA CG=33.0%	N1 (%) FUEL FLOW (KG/H)	MACH IAS (KT)	
WEIGHT (1000KG)	FL100	FL150	FL190	FL210	FL230	FL250
64	83.5 .492 2427 272	86.4 .523 2351 264	88.6 .547 2307 255	89.8 .557 2297 249	91.7 .575 2355 248	92.3 .545 2211 225
66	84.3 .497 2490 275	87.1 .528 2418 266	89.1 .548 2360 256	90.6 .561 2383 252	92.9 .582 2454 251	
68	84.8 .501 2547 277	87.6 .532 2479 268	89.6 .549 2417 256	91.4 .568 2479 255	92.9 .568 2446 245	
70	85.3 .504 2604 279	88.2 .536 2541 270	90.5 .558 2520 260	92.5 .576 2587 259	93.1 .548 2435 235	
72	85.8 .507 2658 281	88.8 .540 2613 273	91.2 .562 2604 262	93.6 .583 2690 262		
74	86.5 .512 2730 284	89.4 .545 2686 275	92.0 .568 2704 265	93.6 .571 2684 256		
76	87.2 .518 2804 287	90.0 .549 2755 277	93.0 .576 2814 269	93.8 .555 2676 249		
78	87.8 .523 2879 290	90.4 .549 2807 277	94.0 .582 2918 272			
80	88.4 .528 2951 293	90.8 .550 2859 277	94.1 .572 2913 267			
82	88.9 .531 3014 295	91.5 .556 2958 281	94.2 .558 2906 260			
84	89.3 .534 3076 296	92.2 .561 3053 284				
86	89.8 .537 3142 298	92.8 .565 3138 285				
88	90.3 .541 3215 300	93.6 .571 3247 289				
90	90.8 .545 3289 302	94.4 .578 3358 292				
92	91.3 .549 3363 305	95.3 .584 3469 295				
ENGINE ANTI ICE ON △FUEL = + 3 %				TOTAL ANTI ICE △FUEL = + 6 %		

 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-E 13/16 06 MAR 14

IN CRUISE QUICK CHECK LONG RANGE

Ident.: PER-E-00011008.0009001 / 10 FEB 11
Applicable to: MSN 1276-1843, 2927

ONE ENGINE OUT

IN CRUISE QUICK CHECK FROM ANY MOMENT IN CRUISE TO LANDING - 1 ENGINE OUT									
CRUISE : LONG RANGE - DESCENT : M.78/300KT/250KT - IMC PROCEDURE : 140 KG (6MIN)									
REF. INITIAL WEIGHT = 60000 KG NORMAL AIR CONDITIONING ANTI-ICING OFF				ISA CG = 33.0 %			FUEL CONSUMED (KG)		
							TIME (H.MIN)		
AIR							CORRECTION ON		
DIST.	FLIGHT LEVEL						FUEL CONSUMPTION		
(NM)	100	150	200	220	240	250	(KG/1000KG)		
	FL100	FL150	FL200	FL220	FL240	FL250			
200	1510 0.46	1317 0.44	1180 0.42	1131 0.41	1083 0.41	1061 0.41	9	7	6
300	2259 1.06	2008 1.03	1826 0.59	1762 0.58	1699 0.57	1670 0.58	15	14	13
400	3004 1.27	2694 1.22	2468 1.17	2388 1.15	2312 1.14	2276 1.15	21	20	20
500	3745 1.47	3377 1.41	3106 1.34	3010 1.32	2921 1.31	2877 1.32	27	27	27
600	4481 2.08	4055 2.00	3739 1.52	3628 1.49	3527 1.48	3475 1.49	34	34	34
700	5212 2.28	4729 2.19	4369 2.10	4241 2.07	4129 2.04	4069 2.05	40	40	41
800	5938 2.49	5400 2.39	4994 2.28	4851 2.24	4727 2.21	4659 2.22	46	47	48
900	6659 3.10	6066 2.58	5615 2.46	5456 2.41	5320 2.38	5247 2.38	52	53	54
1000	7376 3.31	6728 3.17	6232 3.04	6058 2.59	5907 2.55	5831 2.55	58	60	61
1100	8088 3.52	7387 3.37	6845 3.22	6656 3.16	6490 3.12	6413 3.11	63	66	68
1200	8798 4.13	8042 3.56	7454 3.41	7250 3.34	7070 3.29	6991 3.28	69	73	74
1300	9506 4.34	8693 4.16	8059 3.59	7840 3.52	7645 3.46	7566 3.44	75	79	81
1400	10209 4.55	9340 4.36	8661 4.17	8427 4.10	8217 4.03	8137 4.00	81	86	87
ENGINE ANTI ICE ON △FUEL = + 2 %					TOTAL ANTI ICE ON △FUEL = + 4 %				

FLIP23 A321-131 IAE V2530-A5 3610 03301.001011 0250300 .7801 .000100 140 0300350 60 0 100100 40100 18590 CL-N0-04-07-150

 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-E 14/16
		06 MAR 14

IN CRUISE QUICK CHECK LONG RANGE

Ident.: PER-E-00011008.0010001 / 10 FEB 11

Applicable to: MSN 2933-3120

ONE ENGINE OUT

IN CRUISE QUICK CHECK FROM ANY MOMENT IN CRUISE TO LANDING - 1 ENGINE OUT									
CRUISE : LONG RANGE - DESCENT : M.78/300KT/250KT - IMC PROCEDURE :140 KG (6MIN)									
REF. INITIAL WEIGHT = 60000 KG NORMAL AIR CONDITIONING ANTI-ICING OFF				ISA CG = 33.0 %		FUEL CONSUMED (KG)			
							TIME (H.MIN)		
AIR DIST. (NM)	FLIGHT LEVEL						CORRECTION ON FUEL CONSUMPTION (KG/1000KG)		
	100	150	200	220	240	250	FL100 FL150	FL200 FL220	FL240 FL250
200	1510 0.46	1317 0.44	1180 0.42	1131 0.41	1083 0.41	1061 0.41	9	7	6
300	2259 1.06	2008 1.03	1826 0.59	1762 0.58	1699 0.57	1670 0.58	15	14	13
400	3004 1.27	2694 1.22	2468 1.17	2388 1.15	2312 1.14	2276 1.15	21	20	20
500	3745 1.47	3377 1.41	3106 1.34	3010 1.32	2921 1.31	2877 1.32	27	27	27
600	4481 2.08	4055 2.00	3739 1.52	3628 1.49	3527 1.48	3475 1.49	34	34	34
700	5212 2.28	4729 2.19	4369 2.10	4241 2.07	4129 2.04	4069 2.05	40	40	41
800	5938 2.49	5400 2.39	4994 2.28	4851 2.24	4727 2.21	4659 2.22	46	47	48
900	6659 3.10	6066 2.58	5615 2.46	5456 2.41	5320 2.38	5247 2.38	52	53	54
1000	7376 3.31	6728 3.17	6232 3.04	6058 2.59	5907 2.55	5831 2.55	58	60	61
1100	8088 3.52	7387 3.37	6845 3.22	6656 3.16	6490 3.12	6413 3.11	63	66	68
1200	8798 4.13	8042 3.56	7454 3.41	7250 3.34	7070 3.29	6991 3.28	69	73	74
1300	9506 4.34	8693 4.16	8059 3.59	7840 3.52	7645 3.46	7566 3.44	75	79	81
1400	10209 4.55	9340 4.36	8661 4.17	8427 4.10	8217 4.03	8137 4.00	81	86	87
ENGINE ANTI ICE ON △FUEL = + 2 %					TOTAL ANTI ICE ON △FUEL = + 4 %				

FLIP23 A321-131 IAE V2530-A5 3610 03301.001011 0250300 .7801 .000100 140 0300350 60 0 100100 40100 18590 CL-N0-04-07-150

 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-E 15/16
		06 MAR 14

IN CRUISE QUICK CHECK LONG RANGE

Ident.: PER-E-00011008.0008001 / 10 FEB 11

Applicable to: MSN 2649

ONE ENGINE OUT

IN CRUISE QUICK CHECK FROM ANY MOMENT IN CRUISE TO LANDING - 1 ENGINE OUT									
CRUISE : LONG RANGE - DESCENT : M.78/300KT/250KT - IMC PROCEDURE : 120 KG (6 MIN)									
REF. INITIAL WEIGHT = 55000 KG				ISA		FUEL CONSUMED (KG)			
PACK FLOW HI				CG = 33.0 %		TIME (H.MIN)			
ANTI-ICING OFF									
AIR	FLIGHT LEVEL						CORRECTION ON		
DIST.							FUEL CONSUMPTION		
(NM)	100	150	200	220	240	250	FL100 FL150	FL200 FL220	FL240 FL250
200	1410 0.47	1187 0.44	1049 0.42	999 0.41	954 0.40	931 0.40	9	5	4
300	2101 1.09	1816 1.03	1627 1.00	1559 0.59	1499 0.57	1469 0.57	15	11	10
400	2785 1.30	2442 1.22	2203 1.17	2116 1.16	2042 1.14	2004 1.13	20	16	15
500	3463 1.52	3066 1.40	2776 1.35	2669 1.34	2581 1.31	2535 1.30	26	22	20
600	4136 2.14	3688 1.59	3346 1.53	3219 1.52	3118 1.48	3063 1.47	31	28	26
700	4801 2.36	4307 2.18	3913 2.11	3766 2.09	3652 2.05	3588 2.04	37	33	31
800	5460 2.58	4924 2.37	4477 2.28	4309 2.27	4183 2.22	4110 2.20	42	39	37
900	6114 3.20	5540 2.55	5040 2.46	4849 2.45	4710 2.39	4629 2.37	47	44	43
1000	6761 3.43	6153 3.14	5600 3.04	5386 3.03	5233 2.56	5146 2.54	51	49	48
1100	7403 4.05	6764 3.33	6157 3.22	5920 3.21	5753 3.14	5660 3.11	56	55	54
1200	8046 4.28	7373 3.52	6712 3.40	6451 3.39	6269 3.31	6173 3.28	61	60	60
1300	8686 4.49	7980 4.10	7265 3.58	6979 3.57	6783 3.49	6682 3.45	65	65	66
1400	9323 5.11	8586 4.29	7812 4.17	7504 4.15	7293 4.07	7189 4.02	70	70	72
ENGINE ANTI ICE ON △FUEL = + 3 %				TOTAL ANTI ICE ON △FUEL = + 6 %					

PROGRAM : FLIP23C 17.07.97 ; AERO : A320-232 01/06/97 ; MOTO : A320-233 15/10/97 ; GENE : A320-232 01/10/97 END OF FLIP

CL-NO-04-08-140

IN CRUISE QUICK CHECK LONG RANGE

Ident.: PER-E-00011008.0030001 / 02 MAR 11
 Applicable to: MSN 1219-1233

ONE ENGINE OUT

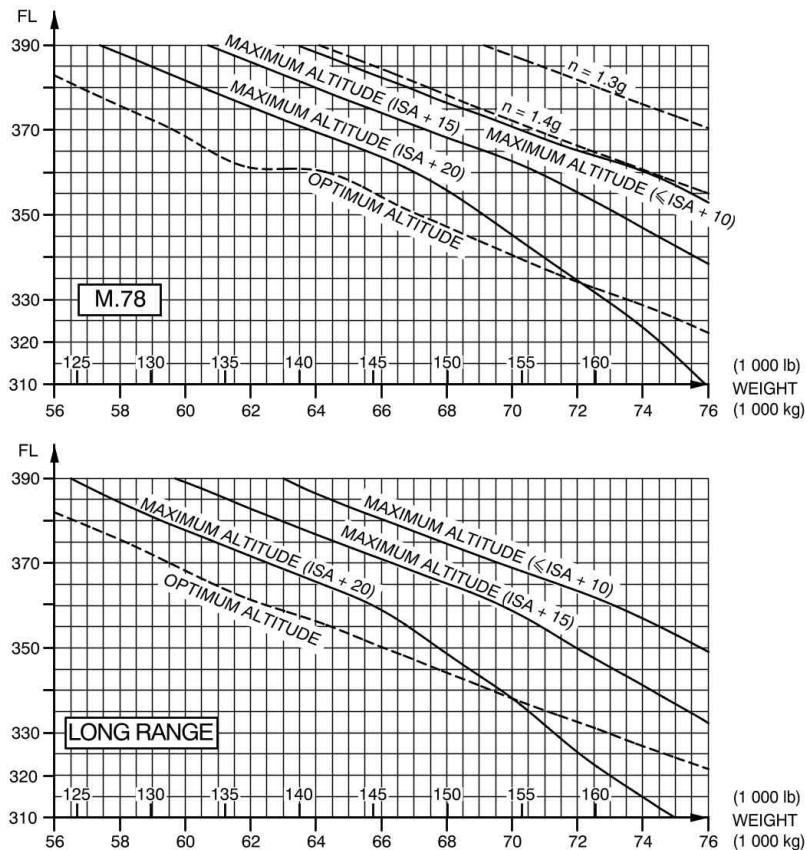
IN CRUISE QUICK CHECK FROM ANY MOMENT IN CRUISE TO LANDING - 1 ENGINE OUT									
CRUISE : LONG RANGE - DESCENT : M.78/300KT/250KT - IMC PROCEDURE : 140 KG (6 MIN)									
REF. INITIAL WEIGHT = 60000 KG NORMAL AIR CONDITIONING ANTI-ICING OFF				ISA CG = 33.0 %		FUEL CONSUMED (KG)			
						TIME (H.MIN)			
AIR							CORRECTION ON FUEL CONSUMPTION		
DIST.	FLIGHT LEVEL						(KG/1000KG)		
(NM)	100	150	200	220	240	250	FL100 FL150	FL200 FL220	FL240 FL250
200	1513 0.46	1305 0.44	1172 0.43	1128 0.42	1100 0.41	1088 0.41	9	9	9
300	2250 1.06	1987 1.03	1811 1.01	1755 1.00	1725 0.59	1715 0.58	16	17	18
400	2982 1.26	2664 1.22	2446 1.19	2377 1.18	2344 1.17	2335 1.16	22	25	27
500	3710 1.46	3337 1.41	3077 1.37	2995 1.36	2957 1.35	2949 1.33	28	32	35
600	4434 2.06	4006 2.00	3703 1.55	3608 1.54	3564 1.52	3556 1.51	35	40	43
700	5152 2.27	4671 2.20	4325 2.14	4217 2.13	4165 2.10	4157 2.09	41	47	51
800	5866 2.48	5332 2.39	4943 2.32	4821 2.31	4761 2.28	4753 2.26	47	54	58
900	6576 3.08	5989 2.58	5556 2.50	5421 2.49	5351 2.46	5342 2.44	53	61	66
1000	7281 3.29	6643 3.17	6165 3.09	6016 3.07	5936 3.04	5925 3.02	59	68	73
1100	7982 3.50	7292 3.37	6770 3.27	6607 3.25	6515 3.23	6503 3.20	65	75	80
1200	8678 4.12	7938 3.56	7370 3.46	7195 3.43	7090 3.41	7076 3.38	72	81	86
1300	9370 4.33	8580 4.16	7967 4.05	7778 4.01	7659 3.59	7643 3.57	78	88	93
1400	10058 4.55	9218 4.35	8560 4.23	8357 4.19	8224 4.17	8206 4.15	84	94	99
ENGINE ANTI ICE ON △FUEL = + 3 %					TOTAL ANTI ICE ON △FUEL = + 6 %				

OPTIMUM & MAXIMUM ALTITUDES

Ident.: PER-G-00011009.0007001 / 01 OCT 12

Applicable to: MSN 2649

ALL ENGINES

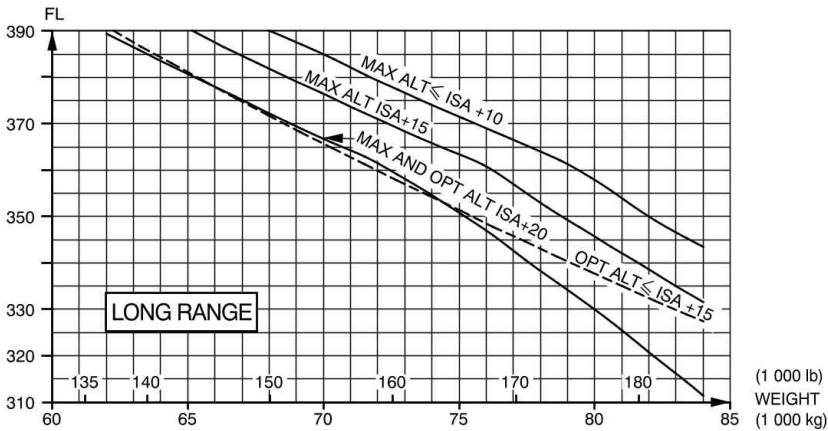
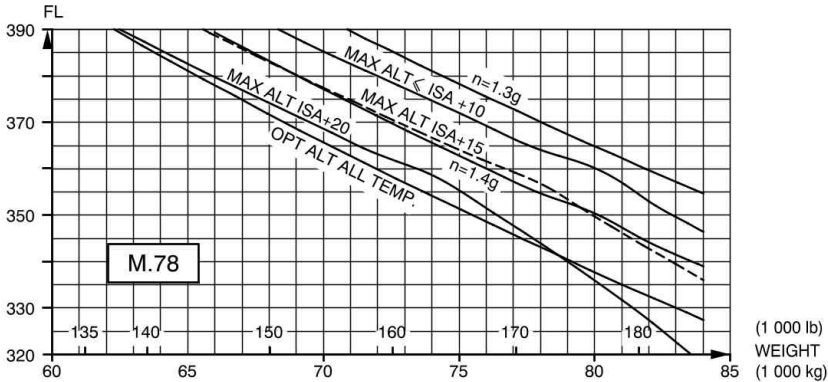


CORRECTIONS	ENGINE ANTI ICE	TOTAL ANTI ICE
≤ISA +10	Max ALT : -900 ft Opt ALT : No corr.	Max ALT : -1 700 ft Opt ALT : No corr.
ISA +15	Max ALT : -1 400 ft Opt ALT : No corr.	Max ALT : -2 800 ft Opt ALT : -1 400 ft
ISA +20	Max ALT : -1 700 ft Opt ALT : -1 500 ft	Max ALT : -2 800 ft Opt ALT : -2 000 ft

OPTIMUM & MAXIMUM ALTITUDES

Ident.: PER-G-00011009.0009001 / 01 OCT 12
Applicable to: MSN 2933-3120

ALL ENGINES

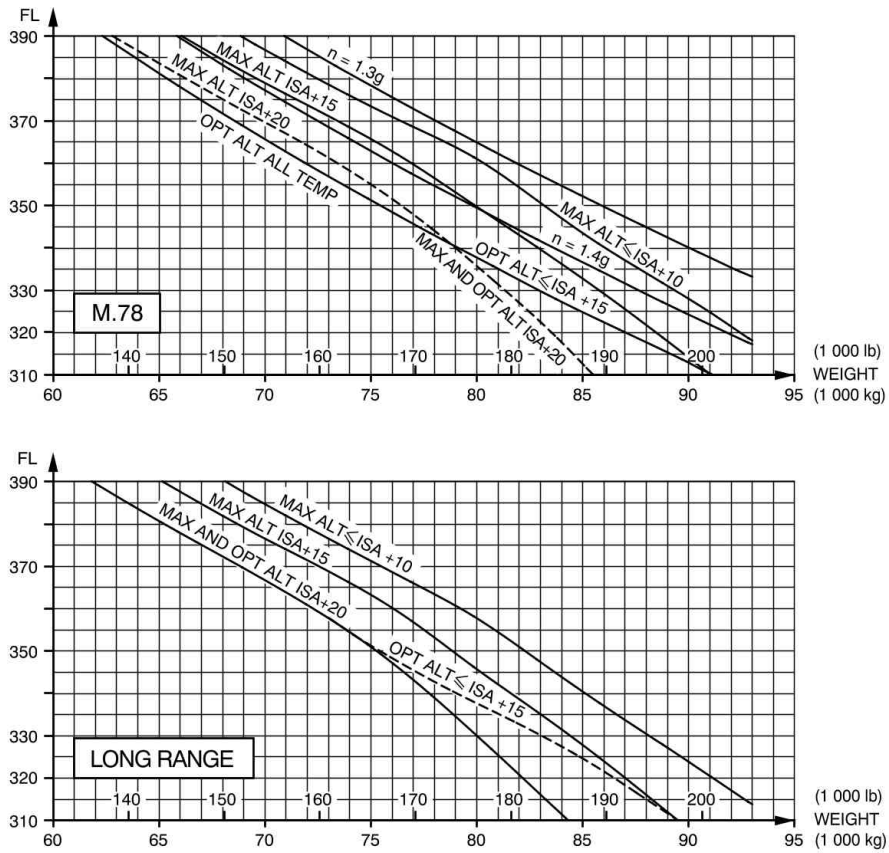


CORRECTIONS	ENGINE ANTI ICE	TOTAL ANTI ICE
≤ISA +10	Max ALT : -500 ft Opt ALT : -300 ft	Max ALT : -1 100 ft Opt ALT : -300 ft
ISA +15	Max ALT : -700 ft Opt ALT : -300 ft	Max ALT : -1 500 ft Opt ALT : -600 ft
ISA +20	Max ALT : -1 000 ft Opt ALT : -1 000 ft	Max ALT : -2 300 ft Opt ALT : -2 300 ft

OPTIMUM & MAXIMUM ALTITUDES

Ident.: PER-G-00011009.0008001 / 01 OCT 12
 Applicable to: MSN 1276-1843, 2927

ALL ENGINES



CORRECTIONS	ENGINE ANTI ICE	TOTAL ANTI ICE
$\leq$ ISA +10	Max ALT : -500 ft Opt ALT : -300 ft	Max ALT : -1 100 ft Opt ALT : -300 ft
ISA +15	Max ALT : -700 ft Opt ALT : -300 ft	Max ALT : -1 500 ft Opt ALT : -600 ft
ISA +20	Max ALT : -1 000 ft Opt ALT : -1 000 ft	Max ALT : -2 300 ft Opt ALT : -2 300 ft

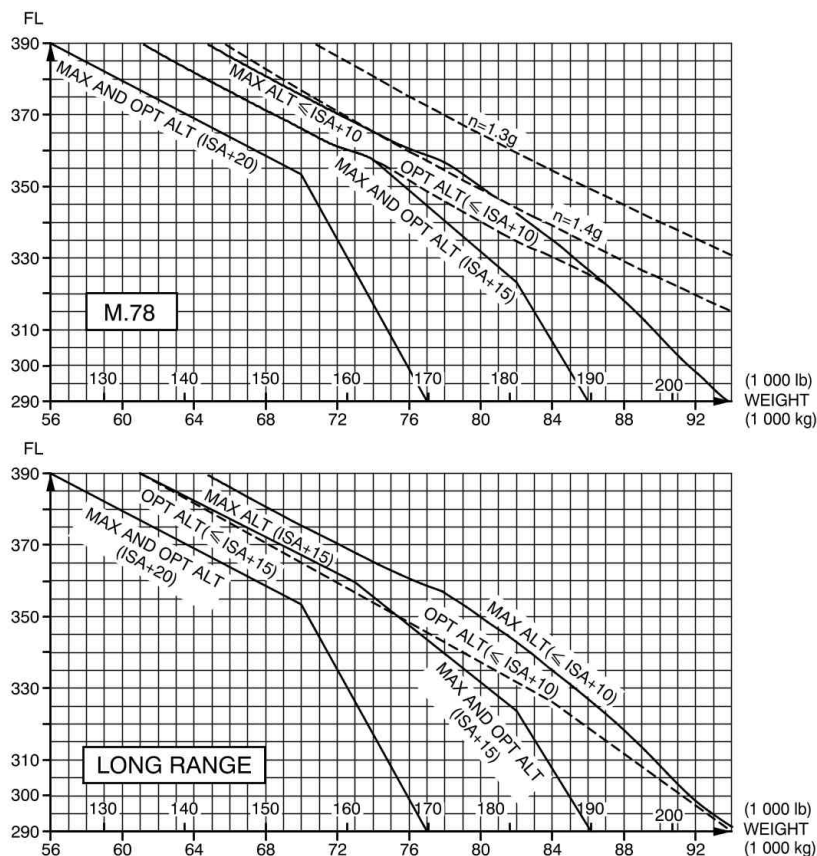


OPTIMUM & MAXIMUM ALTITUDES

Ident.: PER-G-00011009.0067001 / 01 OCT 12

Applicable to: MSN 1219-1233

ALL ENGINES



CORRECTIONS	ENGINE ANTI ICE	TOTAL ANTI ICE
ISA	Max ALT : -400 ft Opt ALT : -400 ft	Max ALT : -900 ft Opt ALT : -400 ft
ISA +10	Max ALT : -3 200 ft Opt ALT : -1 200 ft	Max ALT : -5 000 ft Opt ALT : -2 800 ft
ISA +15	Max ALT : -5 900 ft Opt ALT : -5 900 ft	Max ALT : -9 900 ft Opt ALT : -9 400 ft
ISA +20	Max ALT : -8 200 ft Opt ALT : -8 200 ft	Max ALT : -11 000 ft Opt ALT : -11 000 ft

 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-G 5/18 06 MAR 14

IN CRUISE QUICK CHECK AT A GIVEN MACH NUMBER

Ident.: PER-G-00011010.0008001 / 11 FEB 11

Applicable to: MSN 1276-1843, 2927

ALL ENGINES

IN CRUISE QUICK CHECK FROM ANY MOMENT IN CRUISE TO LANDING									
CRUISE : M.78 – DESCENT : M.78/300KT/250KT - IMC PROCEDURE : 140 KG (6MIN)									
REF. INITIAL WEIGHT = 65000 KG				ISA		FUEL CONSUMED (KG)			
NORMAL AIR CONDITIONING				CG = 33.0 %					
ANTI-ICING OFF				TIME (H.MIN)					
AIR	FLIGHT LEVEL						CORRECTION ON		
DIST.							FUEL CONSUMPTION		
(NM)	290	310	330	350	370	390	FL290 FL310	FL330 FL350	FL370 FL390
200	1037 0.36	978 0.36	926 0.36	880 0.36	842 0.36	816 0.36	1	2	4
400	2281 1.02	2158 1.02	2049 1.02	1956 1.03	1885 1.03	1854 1.03	7	10	20
600	3518 1.27	3329 1.28	3164 1.29	3023 1.29	2918 1.30	2875 1.30	13	18	33
800	4747 1.53	4494 1.54	4271 1.55	4081 1.56	3939 1.56	3882 1.56	19	25	45
1000	5970 2.19	5650 2.20	5370 2.22	5131 2.23	4951 2.23	4874 2.23	25	33	57
1200	7185 2.45	6799 2.47	6461 2.48	6171 2.49	5952 2.50	5852 2.50	31	40	67
1400	8393 3.11	7941 3.13	7544 3.14	7204 3.16	6944 3.17	6816 3.17	36	47	77
1600	9596 3.37	9076 3.39	8620 3.41	8228 3.43	7925 3.44	7768 3.44	41	54	86
1800	10792 4.03	10205 4.05	9689 4.07	9244 4.09	8898 4.10	8707 4.10	46	60	94
2000	11983 4.29	11327 4.31	10751 4.34	10254 4.36	9865 4.37	9640 4.37	51	66	102
2200	13167 4.55	12442 4.58	11806 5.00	11256 5.03	10825 5.04	10566 5.04	56	73	110
2400	14345 5.21	13551 5.24	12855 5.26	12251 5.29	11776 5.31	11482 5.31	61	79	117
2600	15518 5.47	14654 5.50	13897 5.53	13239 5.56	12720 5.58	12388 5.58	65	85	125
2800	16685 6.13	15750 6.16	14932 6.19	14220 6.23	13657 6.24	13286 6.24	68	90	131
3000	17851 6.39	16841 6.42	15961 6.46	15195 6.49	14586 6.51	14175 6.51	72	96	138
ECON AIR CONDITIONING ΔFUEL = - 0.6 %			ENGINE ANTI ICE ON ΔFUEL = + 2 %			TOTAL ANTI ICE ON ΔFUEL = + 5 %			

FLIP22B A321-131 IAE V2530-A53610 03301.300211 0250300 .7800 .000200 140 0300350 65 0 100100 40100 18590

CL-NO-CL-004-009-150

 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-G 6/18 06 MAR 14

IN CRUISE QUICK CHECK AT A GIVEN MACH NUMBER

Ident.: PER-G-00011010.0009001 / 11 FEB 11
 Applicable to: MSN 2933-3120

ALL ENGINES

IN CRUISE QUICK CHECK FROM ANY MOMENT IN CRUISE TO LANDING									
CRUISE : M.78 – DESCENT : M.78/300KT/250KT – IMC PROCEDURE : 140 KG (6MIN)									
REF. INITIAL WEIGHT = 65000 KG NORMAL AIR CONDITIONING ANTI-ICING OFF				ISA CG = 33.0 %		FUEL CONSUMED (KG)			
						TIME (H.MIN)			
AIR	FLIGHT LEVEL						CORRECTION ON FUEL CONSUMPTION (KG/1000KG)		
DIST.							FL290	FL330	FL370
(NM)	290	310	330	350	370	390	FL310	FL350	FL390
200	1037 0.36	978 0.36	926 0.36	880 0.36	842 0.36	816 0.36	1	2	4
400	2281 1.02	2158 1.02	2049 1.02	1956 1.03	1885 1.03	1854 1.03	7	10	20
600	3518 1.27	3329 1.28	3164 1.29	3023 1.29	2918 1.30	2875 1.30	13	18	33
800	4747 1.53	4494 1.54	4271 1.55	4081 1.56	3939 1.56	3882 1.56	19	25	45
1000	5970 2.19	5650 2.20	5370 2.22	5131 2.23	4951 2.23	4874 2.23	25	33	57
1200	7185 2.45	6799 2.47	6461 2.48	6171 2.49	5952 2.50	5852 2.50	31	40	67
1400	8393 3.11	7941 3.13	7544 3.14	7204 3.16	6944 3.17	6816 3.17	36	47	77
1600	9596 3.37	9076 3.39	8620 3.41	8228 3.43	7925 3.44	7768 3.44	41	54	86
1800	10792 4.03	10205 4.05	9689 4.07	9244 4.09	8898 4.10	8707 4.10	46	60	94
2000	11983 4.29	11327 4.31	10751 4.34	10254 4.36	9865 4.37	9640 4.37	51	66	102
2200	13167 4.55	12442 4.58	11806 5.00	11256 5.03	10825 5.04	10566 5.04	56	73	110
2400	14345 5.21	13551 5.24	12855 5.26	12251 5.29	11776 5.31	11482 5.31	61	79	117
2600	15518 5.47	14654 5.50	13897 5.53	13239 5.56	12720 5.58	12388 5.58	65	85	125
2800	16685 6.13	15750 6.16	14932 6.19	14220 6.23	13657 6.24	13286 6.24	68	90	131
3000	17851 6.39	16841 6.42	15961 6.46	15195 6.49	14586 6.51	14175 6.51	72	96	138
ECON AIR CONDITIONING △FUEL = - 0.6 %				ENGINE ANTI ICE ON △FUEL = + 2 %			TOTAL ANTI ICE ON △FUEL = + 5 %		

FLIP22B A321-131 | AE V2530-A53810 03301.300211 0250300 .7800 .000200 140 0300350 65 0 100100 40100 18590

CL-NO-CL-004-009-150

 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-G 7/18 06 MAR 14

IN CRUISE QUICK CHECK AT A GIVEN MACH NUMBER

Ident.: PER-G-00011010.0007001 / 11 FEB 11

Applicable to: MSN 2649

ALL ENGINES

IN CRUISE QUICK CHECK FROM ANY MOMENT IN CRUISE TO LANDING									
CRUISE : M.78 - DESCENT : M.78/300KT/250KT - IMC PROCEDURE : 120 KG (6MIN)									
REF. INITIAL WEIGHT = 60000 KG				ISA		FUEL CONSUMED (KG)			
NORMAL AIR CONDITIONING				CG = 33.0 %					
ANTI-ICING OFF				TIME (H.MIN)					
AIR							CORRECTION ON		
DIST.	FLIGHT LEVEL						FUEL CONSUMPTION		
(NM)	290	310	330	350	370	390	FL290 FL310	FL330 FL350	FL370 FL390
200	933 0.36	879 0.36	834 0.36	792 0.36	757 0.36	739 0.36	0	1	3
400	2069 1.02	1951 1.02	1858 1.03	1774 1.03	1704 1.03	1692 1.03	5	9	20
600	3202 1.28	3016 1.28	2873 1.29	2748 1.30	2642 1.30	2628 1.30	9	17	33
800	4331 1.54	4074 1.55	3881 1.55	3714 1.56	3572 1.57	3550 1.57	13	24	45
1000	5456 2.20	5124 2.21	4881 2.22	4673 2.23	4492 2.23	4458 2.23	17	32	57
1200	6579 2.46	6168 2.47	5874 2.48	5624 2.50	5403 2.50	5352 2.50	20	39	67
1400	7699 3.12	7206 3.13	6859 3.15	6569 3.16	6306 3.17	6232 3.17	23	46	77
1600	8817 3.37	8245 3.39	7838 3.41	7505 3.43	7202 3.44	7101 3.44	26	53	87
1800	9932 4.03	9279 4.05	8812 4.07	8432 4.09	8093 4.11	7957 4.11	28	59	95
2000	11044 4.29	10308 4.32	9778 4.34	9353 4.36	8978 4.37	8803 4.37	30	65	103
2200	12154 4.55	11332 4.58	10738 5.00	10266 5.03	9855 5.04	9637 5.04	31	71	110
2400	13262 5.21	12355 5.24	11692 5.27	11173 5.29	10726 5.31	10460 5.31	33	77	117
2600	14367 5.47	13380 5.50	12640 5.53	12072 5.56	11590 5.58	11274 5.58	34	83	123
2800	15469 6.13	14403 6.16	13582 6.19	12966 6.23	12448 6.25	12078 6.25	35	87	130
3000	16570 6.39	15422 6.42	14519 6.46	13853 6.49	13300 6.51	12888 6.51	36	92	136
LOW AIR CONDITIONING △FUEL = - 0.4 %			ENGINE ANTI ICE ON △FUEL = + 3 %			TOTAL ANTI ICE ON △FUEL = + 5.5 %			

PROGRAM : FLIP23C 17.07.97 ; AERO : A320-232 01/06/97 ; MOTO : A320-233 15/10/97 ; GENE : A320-232 01/10/97 END OF FLIP

CL-NO-04-10-140

IN CRUISE QUICK CHECK AT A GIVEN MACH NUMBER

Ident.: PER-G-00011010.0027001 / 02 MAR 11
 Applicable to: MSN 1219-1233

ALL ENGINES

IN CRUISE QUICK CHECK FROM ANY MOMENT IN CRUISE TO LANDING									
CRUISE : M.78 - DESCENT : M.78/300KT/250KT - IMC PROCEDURE : 140 KG (6MIN)									
REF. INITIAL WEIGHT = 65000 KG NORMAL AIR CONDITIONING ANTI-ICING OFF				ISA CG = 33.0 %		FUEL CONSUMED (KG)			
				TIME (H.MIN)					
AIR							CORRECTION ON FUEL CONSUMPTION		
DIST.	FLIGHT LEVEL						(KG/1000KG)		
(NM)	290	310	330	350	370	390	FL290 FL310	FL330 FL350	FL370 FL390
200	1059 0.35	996 0.35	940 0.35	894 0.36	855 0.36	828 0.36	0	2	4
400	2332 1.01	2201 1.02	2087 1.02	1997 1.02	1928 1.02	1892 1.02	6	11	16
600	3598 1.27	3397 1.28	3224 1.28	3090 1.29	2988 1.29	2938 1.29	12	19	35
800	4857 1.53	4587 1.54	4353 1.55	4172 1.56	4037 1.56	3969 1.56	18	27	47
1000	6109 2.19	5769 2.20	5474 2.21	5244 2.22	5075 2.23	4986 2.23	23	35	58
1200	7354 2.45	6943 2.46	6588 2.48	6306 2.49	6103 2.50	5989 2.50	28	42	69
1400	8593 3.11	8111 3.12	7693 3.14	7359 3.16	7120 3.16	6979 3.16	34	49	79
1600	9826 3.37	9272 3.39	8791 3.40	8402 3.42	8127 3.43	7957 3.43	39	56	89
1800	11054 4.03	10427 4.05	9884 4.07	9437 4.09	9125 4.10	8921 4.10	43	62	98
2000	12275 4.29	11576 4.31	10969 4.33	10466 4.36	10113 4.37	9879 4.37	48	68	107
2200	13490 4.55	12719 4.57	12047 5.00	11486 5.02	11092 5.04	10827 5.04	52	74	115
2400	14700 5.21	13855 5.23	13119 5.26	12498 5.29	12062 5.30	11765 5.30	56	79	123
2600	15905 5.47	14986 5.50	14184 5.52	13503 5.56	13024 5.57	12693 5.57	60	85	131
2800	17106 6.13	16111 6.16	15244 6.19	14500 6.22	13977 6.24	13611 6.24	64	90	138
3000	18301 6.39	17232 6.42	16298 6.45	15494 6.49	14922 6.51	14520 6.51	68	95	145
ECON AIR CONDITIONING △FUEL = - 0.4 %			ENGINE ANTI ICE ON △FUEL = + 3 %			TOTAL ANTI ICE ON △FUEL = + 5.5 %			

 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-G 9/18 06 MAR 14

COST INDEX FOR LONG RANGE CRUISE SPEED

Ident.: PER-G-00011011.0001001 / 08 FEB 13 Applicable to: MSN 1276-1843, 2927-3120

ALL ENGINES

- For a quick determination of the CI_{LRC} , use:
- CI_{LRC} = 50 kg/min in the FMGC, for aircraft in metric units.
or
 - CI_{LRC} = 70 (100 lb/h) in the FMGC, for aircraft in US units.

COST INDEX FOR LONG RANGE CRUISE SPEED

Ident.: PER-G-00011011.0003001 / 08 FEB 13 Applicable to: MSN 2649

ALL ENGINES

- For a quick determination of the CI_{LRC} , use:
- CI_{LRC} = 40 kg/min in the FMGC, for aircraft in metric units.
or
 - CI_{LRC} = 55 (100 lb/h) in the FMGC, for aircraft in US units.

COST INDEX FOR LONG RANGE CRUISE SPEED

Ident.: PER-G-00011011.0011001 / 08 FEB 13 Applicable to: MSN 1219-1233

ALL ENGINES

- For a quick determination of the CI_{LRC} , use:
- CI_{LRC} = 65 kg/min in the FMGC, for aircraft in metric units.
or
 - CI_{LRC} = 85 (100 lb/h) in the FMGC, for aircraft in US units.

 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-G 10/18
		06 MAR 14

STANDARD DESCENT

Ident.: PER-G-00011012.0003001 / 11 FEB 11
Applicable to: MSN 2933-3120

ALL ENGINES

DESCENT - M.78/300KT/250KT									
IDLE THRUST NORMAL AIR CONDITIONING ANTI-ICING OFF			ISA CG=33.0%		MAXIMUM CABIN RATE OF DESCENT 350FT/MIN				
WEIGHT (1000KG)	60				80				IAS (KT)
FL	TIME (MIN)	FUEL (KG)	DIST. (NM)	EPR	TIME (MIN)	FUEL (KG)	DIST. (NM)	EPR	
390	16.7	173	100	IDLE					241
370	15.9	166	95	IDLE	18.0	186	108	IDLE	252
350	15.2	159	90	IDLE	17.3	179	103	IDLE	264
330	14.6	153	85	IDLE	16.6	173	98	IDLE	277
310	14.0	148	81	IDLE	16.0	167	93	IDLE	289
290	13.5	143	76	IDLE	15.3	161	88	IDLE	300
270	12.8	137	71	IDLE	14.5	154	81	IDLE	300
250	12.1	131	66	IDLE	13.6	146	75	IDLE	300
240	11.7	127	63	IDLE	13.2	143	72	IDLE	300
220	11.0	121	58	IDLE	12.3	135	66	IDLE	300
200	10.2	114	53	IDLE	11.5	127	60	IDLE	300
180	9.5	108	48	IDLE	10.5	119	54	IDLE	300
160	8.7	100	43	IDLE	9.6	110	48	IDLE	300
140	7.9	93	39	IDLE	8.7	101	42	IDLE	300
120	7.1	85	34	IDLE	7.7	92	37	IDLE	300
100	6.3	76	29	IDLE	6.7	81	31	IDLE	300
50	2.4	30	10	IDLE	2.5	32	11	IDLE	250
15	.0	0	0	IDLE	.0	0	0	IDLE	250
CORRECTIONS		ECON AIR CONDITIONING		ENGINE ANTI ICE ON		TOTAL ANTI ICE ON		PER 1° ABOVE ISA	
TIME		—		+ 1 min		+ 3 min		+ 0.2 %	
FUEL		— 2 %		+ 17 %		+ 90 %		+ 0.7 %	
DISTANCE		—		+ 4 %		+ 20 %		+ 0.4 %	

10B-08FA321-131IAEV2530-A523100000C5KG330001859000-1-350.015.0.00003.780300.000250.0000 FCOM-N0-03-05-30-002-150

 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-G 11/18 06 MAR 14

STANDARD DESCENT

Ident.: PER-G-00011012.0002001 / 11 FEB 11
 Applicable to: MSN 1276-1843, 2927

ALL ENGINES

DESCENT - M.78/300KT/250KT									
IDLE THRUST NORMAL AIR CONDITIONING ANTI-ICING OFF			ISA CG=33.0%		MAXIMUM CABIN RATE OF DESCENT 350FT/MIN				
WEIGHT (1000KG)	60				80				IAS (KT)
FL	TIME (MIN)	FUEL (KG)	DIST. (NM)	EPR	TIME (MIN)	FUEL (KG)	DIST. (NM)	EPR	
390	16.7	173	100	IDLE					241
370	15.9	166	95	IDLE	18.0	186	108	IDLE	252
350	15.2	159	90	IDLE	17.3	179	103	IDLE	264
330	14.6	153	85	IDLE	16.6	173	98	IDLE	277
310	14.0	148	81	IDLE	16.0	167	93	IDLE	289
290	13.5	143	76	IDLE	15.3	161	88	IDLE	300
270	12.8	137	71	IDLE	14.5	154	81	IDLE	300
250	12.1	131	66	IDLE	13.6	146	75	IDLE	300
240	11.7	127	63	IDLE	13.2	143	72	IDLE	300
220	11.0	121	58	IDLE	12.3	135	66	IDLE	300
200	10.2	114	53	IDLE	11.5	127	60	IDLE	300
180	9.5	108	48	IDLE	10.5	119	54	IDLE	300
160	8.7	100	43	IDLE	9.6	110	48	IDLE	300
140	7.9	93	39	IDLE	8.7	101	42	IDLE	300
120	7.1	85	34	IDLE	7.7	92	37	IDLE	300
100	6.3	76	29	IDLE	6.7	81	31	IDLE	300
50	2.4	30	10	IDLE	2.5	32	11	IDLE	250
15	.0	0	0	IDLE	.0	0	0	IDLE	250
CORRECTIONS		ECON AIR CONDITIONING		ENGINE ANTI ICE ON		TOTAL ANTI ICE ON		PER 1° ABOVE ISA	
TIME		—		+ 1 min		+ 3 min		+ 0.2 %	
FUEL		— 2 %		+ 17 %		+ 90 %		+ 0.7 %	
DISTANCE		—		+ 4 %		+ 20 %		+ 0.4 %	

10B-08FA321-131IAEV2530-A523100000C5KG330001859000-1-350.015.0.00003.780300.000250.0000 FCOM-N0-03-05-30-002-150

STANDARD DESCENT

Ident.: PER-G-00011012.0005001 / 11 FEB 11
 Applicable to: MSN 2649

ALL ENGINES

DESCENT - M.78/300KT/250KT										
IDLE THRUST			ISA		MAXIMUM CABIN RATE OF DESCENT 350FT/MIN					
NORMAL AIR CONDITIONING			CG=33.0%							
ANTI-ICING OFF										
WEIGHT (1000KG)										
	45				65					
	TIME	FUEL	DIST.	EPR	TIME	FUEL	DIST.	EPR	IAS (KT)	
FL	(MIN)	(KG)	(NM)		(MIN)	(KG)	(NM)			
390	16.1	188	98	1.047	19.0	192	114	IDLE	241	
370	14.6	158	87	1.066	18.2	185	108	IDLE	252	
350	13.5	139	78	IDLE	17.5	178	102	IDLE	264	
330	12.9	134	74	IDLE	16.8	171	97	IDLE	277	
310	12.4	129	71	IDLE	16.1	166	93	IDLE	289	
290	12.0	125	67	IDLE	15.5	160	88	IDLE	300	
270	11.4	120	63	IDLE	14.7	153	82	IDLE	300	
250	10.8	115	58	IDLE	13.9	146	76	IDLE	300	
240	10.5	112	56	IDLE	13.5	143	73	IDLE	300	
220	9.9	107	52	IDLE	12.7	136	67	IDLE	300	
200	9.3	102	48	IDLE	11.8	129	62	IDLE	300	
180	8.7	97	44	IDLE	11.0	122	56	IDLE	300	
160	8.0	91	40	IDLE	10.1	114	50	IDLE	300	
140	7.4	85	36	IDLE	9.2	106	45	IDLE	300	
120	6.7	79	32	IDLE	8.3	97	39	IDLE	300	
100	6.0	72	28	IDLE	7.4	88	34	IDLE	300	
50	2.2	28	10	IDLE	2.7	34	12	IDLE	250	
15	.0	0	0	IDLE	.0	0	0	IDLE	250	
CORRECTIONS		LOW AIR CONDITIONING		ENGINE ANTI ICE ON		TOTAL ANTI ICE ON		PER 1° ABOVE ISA		
TIME		-		+ 4 %		+ 18 %		+ 0.3 %		
FUEL		- 1 %		+ 17 %		+ 85 %		+ 0.4 %		
DISTANCE		-		+ 4 %		+ 18 %		+ 0.4 %		

10F - 08F0A320 - 233 IAE V2527-EA5 23100000C5KG330 0 018590 0 0 - 1 - 350.0 15.0 .00 0 03 .780300.000250.000 0 CL-NO - 04 - 12 - 140

STANDARD DESCENT

Ident.: PER-G-00011012.0038001 / 11 FEB 11
 Applicable to: MSN 1219-1233

ALL ENGINES

DESCENT - M.78/300KT/250KT									
IDLE THRUST NORMAL AIR CONDITIONING ANTI-ICING OFF				ISA CG=33.0%		MAXIMUM CABIN RATE OF DESCENT 350FT/MIN			
WEIGHT (1000KG)	60				80				IAS (KT)
FL	TIME (MIN)	FUEL (KG)	DIST. (NM)	N1	TIME (MIN)	FUEL (KG)	DIST. (NM)	N1	
390	16.1	163	99	72.3					241
370	14.6	131	88	IDLE	17.0	152	103	IDLE	252
350	14.0	127	83	IDLE	16.3	147	98	IDLE	264
330	13.4	123	79	IDLE	15.6	143	93	IDLE	277
310	12.9	119	75	IDLE	15.0	139	88	IDLE	289
290	12.3	115	71	IDLE	14.4	134	83	IDLE	300
270	11.6	111	66	IDLE	13.6	129	77	IDLE	300
250	11.0	106	61	IDLE	12.7	123	71	IDLE	300
240	10.6	103	58	IDLE	12.3	120	68	IDLE	300
220	9.9	98	53	IDLE	11.5	113	62	IDLE	300
200	9.2	93	48	IDLE	10.6	107	56	IDLE	300
180	8.5	87	44	IDLE	9.7	100	50	IDLE	300
160	7.7	79	39	IDLE	8.8	91	45	IDLE	300
140	7.0	70	34	IDLE	7.9	80	39	IDLE	300
120	6.2	61	29	IDLE	6.9	69	33	IDLE	300
100	5.4	51	25	IDLE	6.0	57	28	IDLE	300
50	1.9	16	8	IDLE	2.1	18	9	IDLE	250
15	.0	0	0	IDLE	.0	0	0	IDLE	250
CORRECTIONS		ECON AIR CONDITIONING		ENGINE ANTI ICE ON		TOTAL ANTI ICE ON		PER 1° ABOVE ISA	
TIME		—		+ 1 min		+ 1 min		—	
FUEL		— 1 %		+ 45 %		+ 60 %		+ 0.4 %	
DISTANCE		—		+ 5.5 %		+ 7 %		+ 0.4 %	

11.0-08FOA321-211 CFM56-5B3/P SA23100000C5KG330 0 018590 0 0-1-350.0 15.0 00 0 03 .7903000.000250.000 0 FCOM-N0-03-05-30-002-185

QUICK DETERMINATION TABLE OF ALTERNATE FLIGHT PLANNING

Ident.: PER-G-00011013.0004001 / 11 FEB 11

Applicable to: MSN 2933-3120

ALL ENGINES

ALTERNATE PLANNING FROM DESTINATION TO ALTERNATE AIRPORT									
GO-AROUND : 120 KG - CLIMB : 250KT/300KT/M.78 - CRUISE : LONG RANGE									
DESCENT : M.78/300KT/250KT - VMC PROCEDURE : 100 KG (4MIN)									
REF. LDG WT AT DEST. = 60000 KG NORMAL AIR CONDITIONING ANTI-ICING OFF				ISA CG = 33.0 %		FUEL CONSUMED (KG)			
AIR DIST.		FLIGHT LEVEL					CORRECTION ON FUEL CONSUMPTION (KG/1000KG)		
(NM)	100	150	200	250	290	330	FL100 FL150	FL200 FL250	FL290 FL330
40	601 0.12						2		
60	775 0.16						4		
80	950 0.20	898 0.19					5		
100	1124 0.23	1056 0.23	1035 0.22				6	6	
120	1299 0.27	1213 0.26	1172 0.26	1172 0.25			7	7	
140	1474 0.31	1371 0.30	1310 0.29	1294 0.28			8	8	
160	1649 0.35	1529 0.33	1447 0.32	1416 0.31	1423 0.31		9	8	10
180	1825 0.39	1687 0.37	1585 0.35	1539 0.35	1536 0.34	1547 0.33	10	9	12
200	2000 0.43	1845 0.40	1723 0.38	1662 0.38	1650 0.36	1654 0.36	11	10	13
220	2176 0.46	2003 0.44	1860 0.42	1784 0.41	1763 0.39	1761 0.39	12	10	14
240	2352 0.50	2161 0.47	1998 0.45	1907 0.44	1877 0.42	1869 0.41	13	11	15
260	2529 0.54	2320 0.50	2136 0.48	2030 0.47	1991 0.45	1976 0.44	15	12	16
280	2705 0.58	2479 0.54	2274 0.51	2153 0.50	2105 0.48	2084 0.47	16	13	17
300	2882 1.02	2638 0.57	2413 0.54	2277 0.53	2220 0.51	2192 0.50	17	13	18
320	3059 1.05	2797 1.01	2551 0.58	2400 0.57	2334 0.54	2300 0.53	18	14	20
340	3236 1.09	2956 1.04	2689 1.01	2524 1.00	2449 0.57	2408 0.55	19	15	21
360	3414 1.13	3115 1.07	2828 1.04	2647 1.03	2563 1.00	2516 0.58	20	16	22
380	3591 1.17	3275 1.11	2966 1.07	2771 1.06	2678 1.03	2625 1.01	21	16	23
400	3769 1.21	3435 1.14	3105 1.10	2895 1.09	2793 1.06	2733 1.04	22	17	24
420	3947 1.24	3594 1.18	3243 1.14	3019 1.12	2908 1.09	2842 1.06	23	18	25
440	4125 1.28	3754 1.21	3382 1.17	3143 1.15	3023 1.12	2951 1.09	25	19	26
460	4304 1.32	3915 1.24	3521 1.20	3267 1.18	3138 1.15	3060 1.12	26	20	27
480	4482 1.35	4075 1.28	3660 1.23	3392 1.21	3253 1.18	3169 1.15	27	20	28
500	4661 1.39	4235 1.31	3799 1.26	3516 1.25	3369 1.21	3278 1.18	28	21	30

LOW AIR CONDITIONING

△FUEL = - 1 %

ENGINE ANTI ICE ON

△FUEL = + 4 %

TOTAL ANTI ICE ON

△FUEL = + 6 %

CL-N0-04-13-150

 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-G 15/18 06 MAR 14

QUICK DETERMINATION TABLE OF ALTERNATE FLIGHT PLANNING

Ident.: PER-G-00011013.0005001 / 11 FEB 11
Applicable to: MSN 1276-1843, 2927

ALL ENGINES

ALTERNATE PLANNING FROM DESTINATION TO ALTERNATE AIRPORT									
GO-AROUND : 120 KG - CLIMB : 250KT/300KT/M.78 - CRUISE : LONG RANGE									
DESCENT : M.78/300KT/250KT - VMC PROCEDURE : 100 KG (4MIN)									
REF. LDG WT AT DEST. = 60000 KG				ISA		FUEL CONSUMED (KG)			
NORMAL AIR CONDITIONING				CG = 33.0 %		TIME (H.MIN)			
ANTI-ICING OFF									
AIR DIST. (NM)	FLIGHT LEVEL						CORRECTION ON FUEL CONSUMPTION (KG/1000KG)		
	100	150	200	250	290	330	FL100 FL150	FL200 FL250	FL290 FL330
40	601 0.12						2		
60	775 0.16						4		
80	950 0.20	898 0.19					5		
100	1124 0.23	1056 0.23	1035 0.22				6	6	
120	1299 0.27	1213 0.26	1172 0.26	1172 0.25			7	7	
140	1474 0.31	1371 0.30	1310 0.29	1294 0.28			8	8	
160	1649 0.35	1529 0.33	1447 0.32	1416 0.31	1423 0.31		9	8	10
180	1825 0.39	1687 0.37	1585 0.35	1539 0.35	1536 0.34	1547 0.33	10	9	12
200	2000 0.43	1845 0.40	1723 0.38	1662 0.38	1650 0.36	1654 0.36	11	10	13
220	2176 0.46	2003 0.44	1860 0.42	1784 0.41	1763 0.39	1761 0.39	12	10	14
240	2352 0.50	2161 0.47	1998 0.45	1907 0.44	1877 0.42	1869 0.41	13	11	15
260	2529 0.54	2320 0.50	2136 0.48	2030 0.47	1991 0.45	1976 0.44	15	12	16
280	2705 0.58	2479 0.54	2274 0.51	2153 0.50	2105 0.48	2084 0.47	16	13	17
300	2882 1.02	2638 0.57	2413 0.54	2277 0.53	2220 0.51	2192 0.50	17	13	18
320	3059 1.05	2797 1.01	2551 0.58	2400 0.57	2334 0.54	2300 0.53	18	14	20
340	3236 1.09	2956 1.04	2689 1.01	2524 1.00	2449 0.57	2408 0.55	19	15	21
360	3414 1.13	3115 1.07	2828 1.04	2647 1.03	2563 1.00	2516 0.58	20	16	22
380	3591 1.17	3275 1.11	2966 1.07	2771 1.06	2678 1.03	2625 1.01	21	16	23
400	3769 1.21	3435 1.14	3105 1.10	2895 1.09	2793 1.06	2733 1.04	22	17	24
420	3947 1.24	3594 1.18	3243 1.14	3019 1.12	2908 1.09	2842 1.06	23	18	25
440	4125 1.28	3754 1.21	3382 1.17	3143 1.15	3023 1.12	2951 1.09	25	19	26
460	4304 1.32	3915 1.24	3521 1.20	3267 1.18	3138 1.15	3060 1.12	26	20	27
480	4482 1.35	4075 1.28	3660 1.23	3392 1.21	3253 1.18	3169 1.15	27	20	28
500	4661 1.39	4235 1.31	3799 1.26	3516 1.25	3369 1.21	3278 1.18	28	21	30
LOW AIR CONDITIONING			ENGINE ANTI ICE ON			TOTAL ANTI ICE ON			
△FUEL = - 1 %			△FUEL = + 4 %			△FUEL = + 6 %			

CL-ND-04-13-155

QUICK DETERMINATION TABLE
OF ALTERNATE FLIGHT PLANNING

Ident.: PER-G-00011013.0003001 / 11 FEB 11
Applicable to: MSN 2649

ALL ENGINES

ALTERNATE PLANNING FROM DESTINATION TO ALTERNATE AIRPORT									
GO-AROUND : 100 KG - CLIMB : 250KT/300KT/M.78 - CRUISE : LONG RANGE									
DESCENT : M.78/300KT/250KT - VMC PROCEDURE : 80 KG (4MIN)									
REF. LDG WT AT DEST. = 55000 KG NORMAL AIR CONDITIONING ANTI-ICING OFF				ISA CG = 33.0 %		FUEL CONSUMED (KG)			
							TIME (H.MIN)		
AIR DIST. (NM)	FLIGHT LEVEL						CORRECTION ON FUEL CONSUMPTION (KG/1000KG)		
	100	150	200	250	290	330	FL100 FL150	FL200 FL250	FL290 FL330
40	529 0.12						2		
60	681 0.16						4		
80	832 0.20	803 0.20					5		
100	984 0.24	943 0.24	939 0.22				6	5	
120	1136 0.28	1084 0.27	1066 0.26	1072 0.25			7	6	
140	1289 0.32	1224 0.31	1192 0.29	1182 0.28			9	7	
160	1441 0.37	1365 0.35	1319 0.32	1291 0.32	1307 0.31		10	7	9
180	1594 0.41	1506 0.39	1446 0.35	1401 0.35	1409 0.34	1422 0.33	11	8	11
200	1747 0.45	1647 0.42	1573 0.38	1511 0.38	1511 0.37	1518 0.36	13	9	12
220	1900 0.49	1788 0.46	1700 0.42	1621 0.41	1613 0.40	1613 0.39	14	9	13
240	2054 0.53	1930 0.50	1828 0.45	1731 0.45	1715 0.43	1709 0.42	15	10	14
260	2207 0.57	2072 0.54	1955 0.48	1841 0.48	1817 0.46	1805 0.45	17	11	15
280	2361 1.01	2213 0.57	2082 0.51	1951 0.51	1920 0.49	1901 0.48	18	11	16
300	2515 1.05	2356 1.01	2210 0.54	2061 0.54	2022 0.52	1997 0.51	19	12	17
320	2669 1.09	2498 1.05	2337 0.58	2172 0.57	2125 0.56	2094 0.53	21	13	18
340	2823 1.13	2640 1.09	2465 1.01	2282 1.01	2228 0.59	2190 0.56	22	13	19
360	2978 1.17	2783 1.12	2592 1.04	2393 1.04	2330 1.02	2286 0.59	23	14	20
380	3133 1.21	2926 1.16	2720 1.07	2503 1.07	2433 1.05	2383 1.02	25	15	21
400	3288 1.25	3069 1.20	2848 1.10	2614 1.10	2537 1.08	2480 1.05	26	16	22
420	3443 1.29	3212 1.23	2975 1.14	2725 1.14	2640 1.11	2576 1.08	27	16	23
440	3598 1.33	3356 1.27	3103 1.17	2835 1.17	2743 1.14	2673 1.11	29	17	25
460	3754 1.37	3499 1.30	3231 1.20	2946 1.20	2846 1.17	2770 1.13	30	18	26
480	3909 1.41	3643 1.34	3359 1.23	3057 1.23	2950 1.20	2868 1.16	31	18	27
500	4065 1.45	3787 1.38	3487 1.26	3169 1.27	3054 1.23	2965 1.19	33	19	28
LOW AIR CONDITIONING			ENGINE ANTI ICE ON			TOTAL ANTI ICE ON			
ΔFUEL = - 1 %			ΔFUEL = + 3 %			ΔFUEL = + 7 %			

CL-N0-04-13-140

QUICK DETERMINATION TABLE OF ALTERNATE FLIGHT PLANNING

Ident.: PER-G-00011013.0030001 / 11 FEB 11
 Applicable to: MSN 1219-1233

ALL ENGINES

ALTERNATE PLANNING FROM DESTINATION TO ALTERNATE AIRPORT									
GO-AROUND : 120 KG - CLIMB : 250KT/300KT/M.78 - CRUISE : LONG RANGE									
DESCENT : M.78/300KT/250KT - VMC PROCEDURE : 100 KG (4MIN)									
REF. LDG WT AT DEST. = 60000 KG				ISA		FUEL CONSUMED (KG)			
NORMAL AIR CONDITIONING				CG = 33.0 %		TIME (H.MIN)			
ANTI-ICING OFF									
AIR							CORRECTION ON		
DIST.	FLIGHT LEVEL						FUEL CONSUMPTION		
(NM)	100	150	200	250	290	330	FL100 FL150	FL200 FL250	FL290 FL330
40	601 0.12						2		
60	771 0.15	753 0.16					3		
80	942 0.19	905 0.19					4		
100	1113 0.22	1056 0.23	1053 0.22				5	6	
120	1285 0.26	1208 0.27	1190 0.26	1200 0.25			6	7	
140	1456 0.30	1360 0.30	1328 0.29	1325 0.28			7	8	
160	1628 0.33	1512 0.34	1465 0.32	1450 0.31	1460 0.30		8	9	11
180	1799 0.37	1664 0.37	1603 0.35	1575 0.34	1576 0.33	1590 0.33	9	10	12
200	1971 0.40	1816 0.41	1740 0.39	1700 0.37	1693 0.36	1699 0.35	9	11	13
220	2143 0.44	1968 0.44	1878 0.42	1825 0.40	1809 0.39	1808 0.38	10	12	14
240	2315 0.48	2121 0.48	2016 0.45	1950 0.43	1925 0.42	1918 0.41	11	13	15
260	2487 0.51	2274 0.51	2154 0.49	2076 0.46	2042 0.45	2027 0.44	12	14	16
280	2659 0.55	2426 0.55	2293 0.52	2202 0.49	2158 0.48	2137 0.47	13	15	17
300	2832 0.58	2579 0.59	2431 0.55	2327 0.52	2275 0.51	2246 0.49	14	16	18
320	3004 1.02	2732 1.02	2570 0.59	2453 0.55	2392 0.54	2356 0.52	15	17	19
340	3177 1.05	2885 1.06	2708 1.02	2579 0.58	2509 0.57	2466 0.55	15	18	20
360	3350 1.09	3038 1.09	2847 1.05	2705 1.02	2626 1.00	2576 0.58	16	19	22
380	3523 1.12	3192 1.13	2986 1.09	2832 1.05	2744 1.03	2686 1.00	17	20	23
400	3696 1.16	3345 1.16	3125 1.12	2958 1.08	2861 1.05	2797 1.03	18	21	24
420	3869 1.20	3499 1.20	3264 1.15	3085 1.11	2978 1.08	2907 1.06	19	22	25
440	4043 1.23	3653 1.23	3404 1.18	3211 1.14	3096 1.11	3018 1.09	20	23	26
460	4216 1.27	3807 1.27	3543 1.22	3338 1.17	3214 1.14	3128 1.11	21	24	27
480	4389 1.30	3961 1.31	3683 1.25	3465 1.20	3332 1.17	3239 1.14	22	25	28
500	4563 1.34	4115 1.34	3822 1.28	3592 1.23	3450 1.20	3350 1.17	23	26	29
ECON AIR CONDITIONING △FUEL = - 2 %			ENGINE ANTI ICE ON △FUEL = + 4 %			TOTAL ANTI ICE ON △FUEL = + 8 %			

CL-N0-04-13-165

 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-G 18/18
		06 MAR 14

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 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-H 1/4 06 MAR 14

IN CRUISE QUICK CHECK FL 100 LONG RANGE

Ident.: PER-H-00011014.0006001 / 11 FEB 11

Applicable to: MSN 1276-1843, 2927

FLIGHT WITHOUT CAB PRESS

IN CRUISE QUICK CHECK FROM ANY MOMENT IN CRUISE TO LANDING							
CRUISE : LONG RANGE - DESCENT : 250KT							
IMC PROCEDURE : 140 KG (6MIN)							
FL100							
NORMAL AIR CONDITIONING			ISA		FUEL CONSUMED (KG)		
ANTI-ICING OFF			CG = 25.0%		TIME (H.MIN)		
AIR DIST. (NM)	INITIAL WEIGHT (1000KG)						
	65	70	75	80	85	90	95
40	337 0.15	339 0.15	342 0.15	347 0.15	353 0.15	361 0.15	370 0.15
60	515 0.18	523 0.18	531 0.18	540 0.18	551 0.18	561 0.18	571 0.18
80	693 0.22	706 0.22	719 0.21	733 0.21	748 0.21	761 0.21	773 0.21
100	871 0.26	890 0.25	908 0.25	926 0.24	945 0.24	960 0.24	975 0.24
120	1048 0.30	1073 0.29	1096 0.28	1119 0.28	1141 0.27	1160 0.27	1176 0.27
140	1226 0.33	1256 0.32	1284 0.31	1312 0.31	1338 0.30	1359 0.30	1378 0.30
160	1403 0.37	1438 0.36	1472 0.35	1504 0.34	1534 0.33	1559 0.33	1580 0.33
180	1580 0.41	1621 0.39	1659 0.38	1696 0.37	1731 0.36	1758 0.36	1782 0.36
200	1757 0.45	1803 0.43	1846 0.42	1888 0.41	1927 0.39	1957 0.39	1984 0.39
220	1933 0.48	1985 0.46	2034 0.45	2080 0.44	2123 0.43	2156 0.42	2185 0.42
240	2110 0.52	2167 0.50	2221 0.48	2271 0.47	2319 0.46	2355 0.45	2387 0.45
260	2286 0.56	2349 0.53	2407 0.52	2463 0.51	2515 0.49	2554 0.48	2589 0.48
280	2462 1.00	2530 0.57	2594 0.55	2654 0.54	2710 0.52	2753 0.51	2791 0.51
300	2637 1.04	2711 1.00	2780 0.58	2845 0.57	2906 0.55	2952 0.54	2993 0.54
320	2813 1.07	2892 1.04	2967 1.02	3036 1.00	3101 0.59	3150 0.57	3195 0.57
340	2988 1.11	3073 1.07	3153 1.05	3227 1.04	3296 1.02	3349 1.00	3397 1.00
360	3164 1.15	3254 1.11	3339 1.09	3417 1.07	3491 1.05	3547 1.03	3599 1.03
380	3339 1.19	3434 1.15	3524 1.12	3608 1.10	3686 1.08	3745 1.05	3800 1.05
400	3513 1.23	3615 1.18	3710 1.15	3798 1.14	3881 1.12	3943 1.08	4001 1.08
420	3688 1.26	3795 1.22	3895 1.19	3988 1.17	4076 1.15	4141 1.11	4202 1.11
440	3862 1.30	3975 1.25	4080 1.22	4177 1.20	4270 1.18	4339 1.14	4402 1.14
460	4037 1.34	4154 1.29	4265 1.26	4367 1.24	4465 1.22	4537 1.17	4603 1.17
480	4211 1.38	4334 1.33	4450 1.29	4557 1.27	4659 1.25	4735 1.20	4803 1.20
500	4384 1.42	4513 1.36	4635 1.33	4746 1.30	4853 1.28	4932 1.23	5003 1.23
520	4558 1.46	4692 1.40	4819 1.36	4935 1.34	5047 1.32	5130 1.26	5203 1.26
540	4732 1.49	4871 1.43	5003 1.40	5124 1.37	5241 1.35	5327 1.29	5403 1.29
AIR CONDITIONING OFF △FUEL = - 2 %			ENGINE ANTI ICE ON △FUEL = + 3 %		TOTAL ANTI ICE ON △FUEL = + 5 %		



A320/A321
QUICK REFERENCE HANDBOOK

IN FLIGHT PERFORMANCE

PER-H

2/4

06 MAR 14

IN CRUISE QUICK CHECK FL 100 LONG RANGE

Ident.: PER-H-00011014.0005001 / 11 FEB 11

Applicable to: MSN 2933-3120

FLIGHT WITHOUT CAB PRESS

IN CRUISE QUICK CHECK FROM ANY MOMENT IN CRUISE TO LANDING							
CRUISE : LONG RANGE - DESCENT : 250KT							
IMC PROCEDURE : 140 KG (6MIN)							
FL100							
NORMAL AIR CONDITIONING ANTI-ICING OFF		ISA CG = 25.0%		FUEL CONSUMED (KG) TIME (H.MIN)			
AIR DIST. (NM)	INITIAL WEIGHT (1000KG)						
	55	60	65	70	75	80	85
40	338	336	337	339	342	347	353
	0.15	0.15	0.15	0.15	0.15	0.15	0.15
60	504	509	515	523	531	540	550
	0.19	0.19	0.18	0.18	0.18	0.18	0.18
80	670	681	693	706	719	733	748
	0.23	0.23	0.22	0.22	0.21	0.21	0.21
100	836	853	871	890	907	925	945
	0.27	0.26	0.26	0.25	0.25	0.24	0.24
120	1002	1025	1048	1073	1095	1118	1141
	0.31	0.30	0.30	0.29	0.28	0.28	0.27
140	1168	1197	1226	1256	1283	1310	1338
	0.35	0.34	0.33	0.32	0.32	0.31	0.30
160	1333	1368	1403	1438	1470	1502	1535
	0.39	0.38	0.37	0.36	0.35	0.34	0.33
180	1499	1539	1580	1621	1658	1694	1731
	0.43	0.42	0.41	0.39	0.38	0.38	0.36
200	1664	1711	1756	1803	1845	1886	1927
	0.47	0.46	0.45	0.43	0.42	0.41	0.39
220	1829	1881	1933	1985	2032	2078	2124
	0.51	0.50	0.48	0.46	0.45	0.44	0.42
240	1993	2052	2109	2167	2219	2269	2319
	0.56	0.54	0.52	0.50	0.48	0.47	0.46
260	2158	2222	2285	2349	2406	2460	2515
	1.00	0.58	0.56	0.53	0.52	0.51	0.49
280	2322	2393	2461	2530	2592	2651	2711
	1.04	1.02	1.00	0.57	0.55	0.54	0.52
300	2486	2563	2637	2712	2779	2842	2907
	1.08	1.06	1.04	1.00	0.59	0.57	0.55
320	2650	2733	2812	2893	2965	3033	3102
	1.12	1.10	1.07	1.04	1.02	1.01	0.59
340	2813	2902	2987	3074	3151	3223	3297
	1.16	1.13	1.11	1.07	1.05	1.04	1.02
360	2977	3072	3163	3254	3337	3414	3492
	1.20	1.17	1.15	1.11	1.09	1.07	1.05
380	3140	3241	3337	3435	3522	3604	3687
	1.25	1.21	1.19	1.14	1.12	1.11	1.08
400	3303	3410	3512	3615	3708	3794	3882
	1.29	1.25	1.23	1.18	1.16	1.14	1.12
420	3466	3579	3687	3795	3893	3984	4077
	1.33	1.29	1.26	1.22	1.19	1.17	1.15
440	3628	3747	3861	3975	4078	4174	4271
	1.37	1.33	1.30	1.25	1.23	1.21	1.19
460	3791	3916	4035	4155	4263	4364	4466
	1.41	1.37	1.34	1.29	1.26	1.24	1.22
480	3953	4084	4209	4334	4448	4554	4660
	1.45	1.41	1.38	1.33	1.29	1.27	1.25
500	4115	4252	4382	4514	4633	4743	4853
	1.50	1.45	1.42	1.36	1.33	1.30	1.28
520	4277	4420	4556	4693	4817	4932	5047
	1.54	1.49	1.46	1.40	1.36	1.34	1.32
540	4438	4588	4729	4872	5002	5122	5240
	1.58	1.53	1.50	1.43	1.40	1.37	1.35
AIR CONDITIONING OFF △FUEL = - 2 %		ENGINE ANTI ICE ON △FUEL = + 3 %		TOTAL ANTI ICE ON △FUEL = + 5 %			

 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-H 3/4 06 MAR 14

IN CRUISE QUICK CHECK FL 100 LONG RANGE

Ident.: PER-H-00011014.0004001 / 11 FEB 11

Applicable to: MSN 2649

FLIGHT WITHOUT CAB PRESS

IN CRUISE QUICK CHECK FROM ANY MOMENT IN CRUISE TO LANDING							
CRUISE : LONG RANGE - DESCENT : 250KT							
IMC PROCEDURE : 120 KG (6MIN)							
FL100							
NORMAL AIR CONDITIONING			ISA		FUEL CONSUMED (KG)		
ANTI-ICING OFF			CG = 25.0%		TIME (H.MIN)		
AIR DIST. (NM)	INITIAL WEIGHT (1000KG)						
	50	55	60	65	70	75	80
40	301 0.15	296 0.15	293 0.15	293 0.15	294 0.15	296 0.15	300 0.15
60	445 0.19	446 0.19	450 0.19	456 0.19	463 0.18	472 0.18	480 0.18
80	588 0.23	596 0.23	606 0.23	619 0.22	633 0.22	648 0.21	661 0.21
100	731 0.28	746 0.27	762 0.27	781 0.26	802 0.25	824 0.25	841 0.24
120	874 0.32	895 0.31	918 0.31	944 0.30	971 0.29	999 0.28	1021 0.27
140	1017 0.36	1045 0.35	1074 0.35	1106 0.34	1140 0.33	1174 0.31	1201 0.30
160	1160 0.41	1194 0.40	1229 0.39	1268 0.38	1309 0.36	1349 0.35	1381 0.34
180	1302 0.45	1343 0.44	1385 0.43	1430 0.42	1477 0.40	1524 0.38	1560 0.37
200	1444 0.50	1491 0.48	1540 0.47	1591 0.45	1645 0.44	1699 0.41	1740 0.40
220	1587 0.54	1640 0.52	1695 0.51	1752 0.49	1813 0.47	1873 0.45	1919 0.43
240	1728 0.58	1788 0.56	1849 0.55	1914 0.53	1981 0.51	2048 0.48	2098 0.46
260	1870 1.03	1936 1.00	2004 0.99	2074 0.97	2148 0.95	2222 0.92	2277 0.90
280	2012 1.07	2084 1.05	2158 1.03	2235 1.01	2316 0.98	2396 0.95	2456 0.93
300	2153 1.11	2232 1.09	2312 1.07	2396 1.05	2483 1.02	2570 0.98	2634 0.96
320	2294 1.16	2380 1.13	2466 1.11	2556 1.09	2650 1.06	2743 1.02	2813 0.99
340	2435 1.20	2527 1.17	2620 1.15	2716 1.12	2816 1.10	2917 1.05	2991 1.02
360	2576 1.25	2674 1.21	2773 1.19	2876 1.16	2983 1.13	3090 1.09	3169 1.06
380	2716 1.29	2821 1.26	2927 1.23	3035 1.20	3149 1.17	3263 1.12	3347 1.09
400	2856 1.33	2968 1.30	3080 1.27	3195 1.24	3315 1.21	3436 1.16	3525 1.12
420	2997 1.38	3114 1.34	3233 1.31	3354 1.28	3480 1.25	3609 1.19	3702 1.15
440	3137 1.42	3261 1.38	3385 1.35	3513 1.32	3646 1.28	3781 1.22	3880 1.19
460	3276 1.47	3407 1.43	3538 1.39	3672 1.36	3811 1.32	3954 1.26	4057 1.22
480	3416 1.51	3553 1.47	3690 1.43	3830 1.40	3977 1.36	4126 1.29	4235 1.25
500	3555 1.56	3699 1.51	3842 1.47	3989 1.44	4142 1.40	4298 1.33	4412 1.29
520	3695 2.00	3844 1.55	3994 1.51	4147 1.48	4306 1.43	4470 1.36	4588 1.32
540	3834 2.05	3990 2.00	4146 1.55	4305 1.51	4471 1.47	4642 1.40	4765 1.35
AIR CONDITIONING OFF △FUEL = - 1.5 %			ENGINE ANTI ICE ON △FUEL = + 3 %		TOTAL ANTI ICE ON △FUEL = + 6 %		



A320/A321
QUICK REFERENCE HANDBOOK

IN FLIGHT PERFORMANCE

PER-H
4/4

06 MAR 14

IN CRUISE QUICK CHECK FL 100 LONG RANGE

Ident.: PER-H-00011014.0030001 / 11 FEB 11

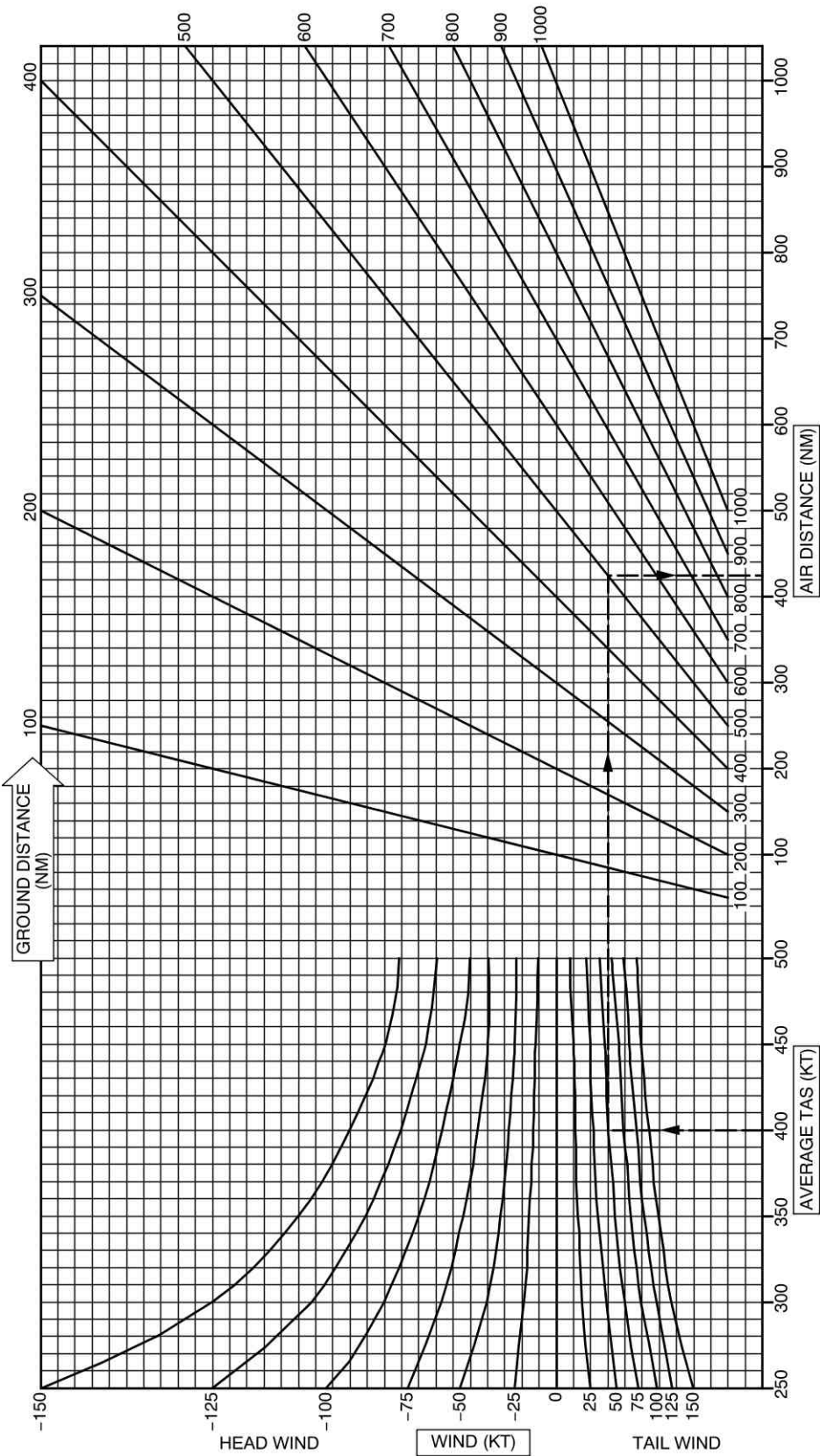
Applicable to: MSN 1219-1233

FLIGHT WITHOUT CAB PRESS

IN CRUISE QUICK CHECK FROM ANY MOMENT IN CRUISE TO LANDING							
CRUISE : LONG RANGE - DESCENT : 250KT							
IMC PROCEDURE : 140 KG (6MIN)							
FL100							
NORMAL AIR CONDITIONING ANTI-ICING OFF		ISA CG = 25.0%		FUEL CONSUMED (KG) TIME (H.MIN)			
AIR DIST. (NM)	INITIAL WEIGHT (1000KG)						
	65	70	75	80	85	90	95
40	354 0.15	354 0.15	356 0.15	361 0.15	368 0.15	375 0.15	384 0.15
60	527 0.18	531 0.18	537 0.18	547 0.18	559 0.18	571 0.18	584 0.18
80	700 0.22	708 0.22	718 0.22	732 0.22	749 0.21	766 0.21	784 0.21
100	873 0.25	885 0.25	899 0.25	917 0.25	940 0.25	961 0.24	984 0.24
120	1046 0.29	1062 0.29	1079 0.29	1103 0.28	1130 0.28	1157 0.28	1184 0.27
140	1219 0.32	1238 0.32	1260 0.32	1287 0.32	1320 0.31	1352 0.31	1384 0.30
160	1391 0.36	1414 0.36	1440 0.36	1472 0.35	1510 0.35	1546 0.34	1584 0.34
180	1564 0.40	1591 0.39	1620 0.39	1656 0.39	1700 0.38	1741 0.37	1783 0.37
200	1736 0.43	1767 0.43	1800 0.43	1841 0.42	1889 0.41	1935 0.40	1982 0.40
220	1908 0.47	1942 0.46	1980 0.46	2025 0.46	2079 0.45	2130 0.44	2181 0.43
240	2080 0.50	2118 0.50	2160 0.50	2209 0.49	2268 0.48	2324 0.47	2380 0.46
260	2252 0.54	2294 0.53	2340 0.53	2392 0.53	2457 0.51	2517 0.50	2578 0.49
280	2424 0.57	2469 0.57	2519 0.57	2576 0.56	2645 0.55	2711 0.53	2777 0.53
300	2596 1.01	2645 1.00	2698 1.00	2759 1.00	2834 0.58	2905 0.56	2975 0.56
320	2768 1.05	2820 1.04	2878 1.04	2942 1.03	3022 1.01	3098 1.00	3173 0.59
340	2939 1.08	2995 1.07	3057 1.07	3125 1.06	3211 1.05	3291 1.03	3371 1.02
360	3110 1.12	3170 1.11	3236 1.11	3308 1.10	3399 1.08	3484 1.06	3568 1.05
380	3282 1.15	3345 1.15	3414 1.14	3491 1.13	3586 1.11	3677 1.09	3766 1.08
400	3453 1.19	3519 1.18	3593 1.18	3673 1.17	3774 1.15	3869 1.13	3963 1.12
420	3624 1.22	3694 1.22	3771 1.21	3855 1.20	3961 1.18	4062 1.16	4160 1.15
440	3794 1.26	3869 1.25	3950 1.25	4037 1.24	4148 1.22	4254 1.19	4357 1.18
460	3965 1.30	4043 1.29	4128 1.28	4219 1.27	4335 1.25	4446 1.23	4554 1.21
480	4136 1.33	4217 1.32	4306 1.32	4401 1.31	4522 1.28	4638 1.26	4750 1.24
500	4306 1.37	4391 1.36	4484 1.35	4582 1.34	4709 1.32	4830 1.29	4947 1.28
520	4477 1.40	4565 1.39	4661 1.39	4764 1.38	4895 1.35	5021 1.32	5143 1.31
540	4647 1.44	4739 1.43	4839 1.42	4946 1.41	5081 1.39	5213 1.36	5339 1.34
AIR CONDITIONING OFF △FUEL = - 3 %			ENGINE ANTI ICE ON △FUEL = + 4 %		TOTAL ANTI ICE ON △FUEL = + 8.5 %		

GROUND DISTANCE / AIR DISTANCE CONVERSION

Ident.: PER-I-00011015.0001001 / 01 OCT 12
Applicable to: ALL

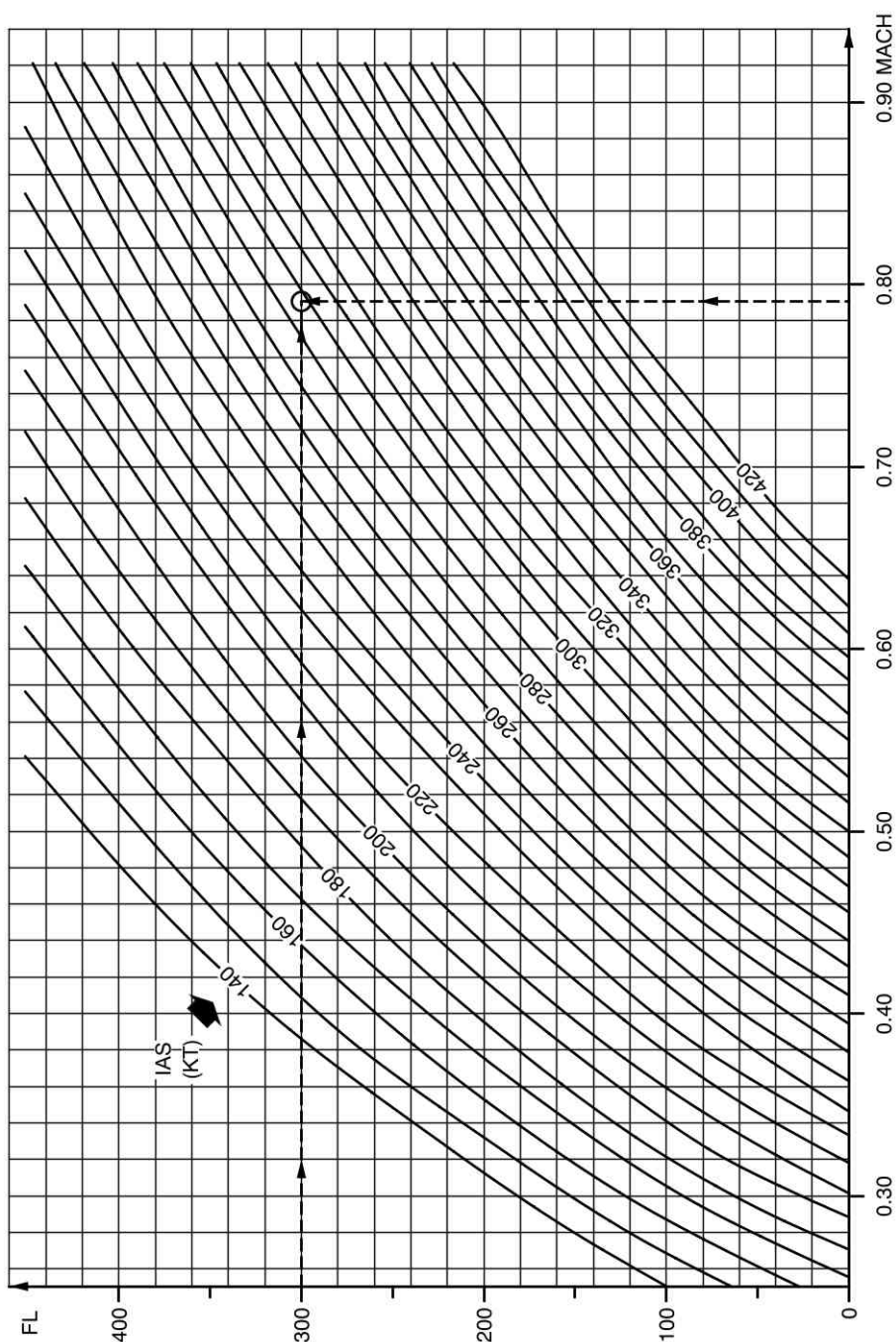




IAS / MACH CONVERSION

Ident.: PER-I-00011016.0001001 / 01 OCT 12

Applicable to: ALL





Applicable to: ALL

ISA Temperature

Airport Elevation (ft)	ISA Temp. (°C)
15 000	-14.7
14 000	-12.7
13 000	-10.8
12 000	-8.8
11 000	-6.8
10 000	-4.8
9 000	-2.8
8 000	-0.8
7 000	+1.1
6 000	+3.1
5 000	+5.1
4 000	+7.1
3 000	+9.1
2 000	+11.0
1 000	+13.0
0	+15.0
-1 000	+17.0
-2 000	+19.0

Example:

Airport Elevation = 1000 ft
OAT = 23°C

– With the table above, determine the ISA Temperature corresponding to the **Airport Elevation:**
→ **ISA Temp = +13°C**

– To obtain the Delta ISA Temperature, subtract the **ISA Temp** above from the **Outside Air Temperature (OAT)**
→ **Delta ISA Temp = +10°C**

Pressure Altitude Correction

QNH (hPa)	CORRECTION (ft)	QNH (in Hg)
949 – 951	+1 900	28.01 – 28.10
952 – 955	+1 800	28.11 – 28.20
956 – 958	+1 700	28.21 – 28.30
959 – 961	+1 600	28.31 – 28.40
962 – 964	+1 500	28.41 – 28.45
965 – 968	+1 400	28.46 – 28.56
969 – 971	+1 300	28.57 – 28.67
972 – 974	+1 200	28.68 – 28.77
975 – 978	+1 100	28.78 – 28.86
979 – 981	+1 000	28.87 – 28.95
982 – 984	+900	28.96 – 29.05
985 – 988	+800	29.06 – 29.15
989 – 991	+700	29.16 – 29.25
992 – 994	+600	29.26 – 29.35
995 – 997	+500	29.36 – 29.45
998 – 1 001	+400	29.46 – 29.54
1 002 – 1 004	+300	29.55 – 29.64
1 005 – 1 007	+200	29.65 – 29.74
1 008 – 1 011	+100	29.75 – 29.84
1 012 – 1 014	0	29.85 – 29.94
1 015 – 1 018	-100	29.95 – 30.04
1 019 – 1 021	-200	30.05 – 30.14
1 022 – 1 025	-300	30.15 – 30.24
1 026 – 1 028	-400	30.25 – 30.34
1 029 – 1 031	-500	30.35 – 30.44
1 032 – 1 035	-600	30.45 – 30.54
1 036 – 1 038	-700	30.55 – 30.65
1 039 – 1 042	-800	30.66 – 30.75
1 043 – 1 045	-900	30.76 – 30.85
1 046 – 1 050	-1 000	30.86 – 30.95

Example:

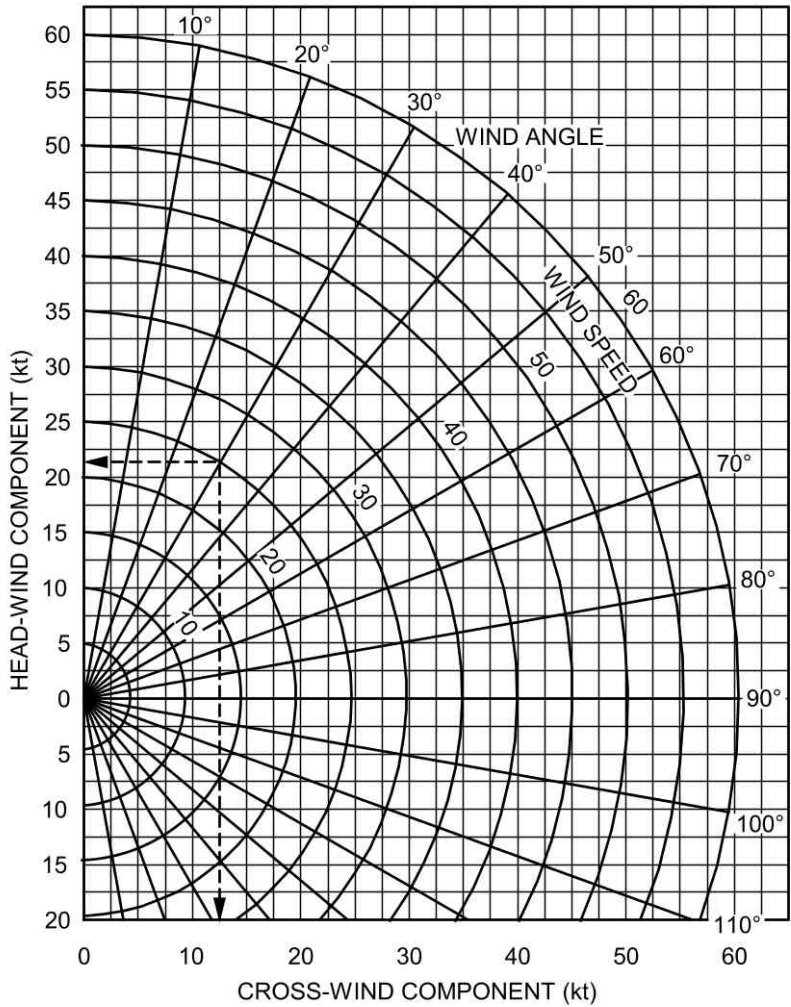
Airport Elevation = 1000 ft
QNH = 996 hPa (29.41 in Hg)

– With the table above, determine the Pressure Altitude Correction for the current **QNH:**
→ **Pressure Altitude Correction = +500 ft**

– To obtain the Airport Pressure Altitude, add the **Pressure Altitude Correction** above to the **Airport Elevation:**
→ **Airport Pressure Altitude = 1500 ft**

WIND COMPONENT

Ident.: PER-I-00014446.0001001 / 18 MAY 12
Applicable to: ALL



 A320/A321 QUICK REFERENCE HANDBOOK	IN FLIGHT PERFORMANCE	PER-I 6/6
		06 MAR 14

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SEVERE TURBULENCE.....OPS.01A

Hydraulic Architecture.....OPS.02A

Flight Controls Architecture.....OPS.03A

Required Equipment for CAT2 and CAT3.....OPS.04A

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SEVERE TURBULENCE

Ident.: OPS-00010995.0007001 / 21 NOV 11
 Applicable to: MSN 2649

SPEED AND THRUST SETTING FOR RECOMMENDED TURBULENCE SPEED										
FL	SPD or Mach	GROSS WEIGHT (1000 kg)								
		44	48	52	56	60	64	68	72	76
		N1 %								
390	0.76	75.7	76.6	77.7	79.0	-	-	-	-	-
370	0.76	74.7	75.5	76.3	77.2	78.4	79.7	-	-	-
350	0.76	74.3	74.8	75.6	76.3	77.1	78.1	79.3	80.5	-
330	0.76	74.5	74.8	75.3	76.0	76.6	77.4	78.2	79.2	80.2
310	275	74.1	74.3	74.7	75.2	75.8	76.4	77.1	77.9	78.8
290	275	72.9	73.2	73.5	73.9	74.5	75.1	75.8	76.5	77.3
270	275	71.7	71.9	72.3	72.7	73.3	73.9	74.5	75.2	76.0
250	275	70.4	70.7	71.0	71.4	71.9	72.6	73.2	73.9	74.7
200	275	66.8	67.1	67.4	67.9	68.4	69.0	69.8	70.4	71.1
150	250	59.9	60.4	61.0	61.7	62.5	63.5	64.5	65.5	66.5
100	250	56.3	56.7	57.2	57.8	58.5	59.3	60.3	61.4	62.5
50	250	52.7	53.4	53.8	54.4	54.9	55.7	56.5	57.4	58.4

SIGNS..... ON
 AUTO PILOT..... KEEP ON
 A/THR (when thrust changes become excessive)..... DISCONNECT
 DESCENT..... CONSIDER

Consider descending to or below OPT FL in order to increase the margin to buffet

● **FOR APPROACH:**

A/THR in managed speed.....USE

SEVERE TURBULENCE

Ident.: OPS-00010995.0025001 / 21 NOV 11
 Applicable to: MSN 1219-1233

SPEED AND THRUST SETTING FOR RECOMMENDED TURBULENCE SPEED												
FL	SPD or Mach	GROSS WEIGHT (1000 kg)										
		54	58	62	66	70	74	78	82	86	90	94
		N1 %										
390	0.76	83.7	84.7	-	-	-	-	-	-	-	-	-
370	0.76	82.6	83.4	84.2	85.2	-	-	-	-	-	-	-
350	0.76	82.0	82.7	83.3	84.1	84.8	-	-	-	-	-	-
330	0.76	81.8	82.4	83.1	83.7	84.3	85.0	85.7	-	-	-	-
310	0.76	81.8	82.3	82.8	83.4	83.9	84.5	85.1	85.7	86.4	-	-
290	0.76	82.0	82.3	82.7	83.2	83.7	84.2	84.7	85.3	85.8	86.4	87.0
270	300	81.5	81.8	82.1	82.5	82.9	83.4	83.9	84.4	85.0	85.6	86.1
250	300	80.1	80.5	80.9	81.4	81.8	82.2	82.7	83.2	83.7	84.4	85.1



SEVERE TURBULENCE (Cont'd)



SPEED AND THRUST SETTING FOR RECOMMENDED TURBULENCE SPEED												
FL	SPD or Mach	GROSS WEIGHT (1000 kg)										
		54	58	62	66	70	74	78	82	86	90	94
		N1 %										
200	300	76.3	76.7	77.2	77.7	78.1	78.6	79.2	79.8	80.4	81.1	81.9
150	270	68.2	68.7	69.2	69.8	70.5	71.2	71.9	72.7	73.5	74.4	75.4
100	270	64.2	64.7	65.3	65.9	66.6	67.3	68.1	69.0	69.7	70.5	71.3
50	270	60.9	61.3	61.8	62.3	62.8	63.4	64.1	64.8	65.5	66.3	67.2

SIGNS.....ON
AUTO PILOT..... KEEP ON
A/THR (when thrust changes become excessive)..... DISCONNECT
DESCENT..... CONSIDER
Consider descending to or below OPT FL in order to increase the margin to buffet

● **FOR APPROACH:**
A/THR in managed speed.....USE

SEVERE TURBULENCE

Ident.: OPS-00010995.0009001 / 21 NOV 11
Applicable to: MSN 2927-3120

SPEED AND THRUST SETTING FOR RECOMMENDED TURBULENCE SPEED												
FL	SPD or Mach	GROSS WEIGHT (1000 kg)										
		54	58	62	66	70	74	78	82	86	90	94
		N1 %										
390	0.76	79.4	80.6	-	-	-	-	-	-	-	-	-
370	0.76	77.9	78.9	80.0	81.2	-	-	-	-	-	-	-
350	0.76	77.2	77.9	78.8	79.7	80.7	-	-	-	-	-	-
330	0.76	76.9	77.6	78.2	79.0	79.8	80.7	81.6	-	-	-	-
310	0.76	76.7	77.3	77.9	78.5	79.2	79.9	80.6	81.5	82.4	-	-
290	0.76	76.7	77.2	77.7	78.2	78.8	79.4	80.0	80.6	81.4	82.1	83.0
270	300	76.2	76.6	77.0	77.5	78.0	78.5	79.1	79.6	80.3	80.9	81.6
250	300	75.0	75.4	75.8	76.2	76.7	77.1	77.7	78.2	78.9	79.5	80.2
200	300	72.2	72.5	72.9	73.3	73.7	74.2	74.7	75.2	75.8	76.4	77.0
150	270	65.5	65.9	66.5	67.0	67.7	68.4	69.2	70.3	71.0	71.8	72.6
100	270	62.5	62.9	63.5	64.0	64.6	65.3	66.0	66.8	67.6	68.4	69.2
50	270	59.1	59.5	60.0	60.5	61.1	61.8	62.6	63.4	64.2	65.0	65.7

SIGNS.....ON
AUTO PILOT..... KEEP ON
A/THR (when thrust changes become excessive)..... DISCONNECT
DESCENT..... CONSIDER
Consider descending to or below OPT FL in order to increase the margin to buffet



SEVERE TURBULENCE (Cont'd)



● **FOR APPROACH:**
 A/THR in managed speed.....USE

SEVERE TURBULENCE

Ident.: OPS-00010995.0083001 / 21 NOV 11
 Applicable to: MSN 1276-1843

SPEED AND THRUST SETTING FOR RECOMMENDED TURBULENCE SPEED												
FL	SPD or Mach	GROSS WEIGHT (1000 kg)										
		54	58	62	66	70	74	78	82	86	90	94
		N1 %										
390	0.76	79.4	80.6	-	-	-	-	-	-	-	-	-
370	0.76	77.9	78.9	80.0	81.2	-	-	-	-	-	-	-
350	0.76	77.2	77.9	78.8	79.7	80.7	-	-	-	-	-	-
330	0.76	76.9	77.6	78.2	79.0	79.8	80.7	81.6	-	-	-	-
310	0.76	76.8	77.3	77.9	78.5	79.2	79.9	80.6	81.5	82.4	-	-
290	0.76	76.7	77.2	77.7	78.2	78.8	79.4	80.0	80.7	81.4	82.1	83.0
270	305	76.7	77.1	77.5	77.9	78.4	78.9	79.5	80.0	80.6	81.2	81.9
250	305	75.5	75.9	76.2	76.7	77.1	77.6	78.1	78.6	79.2	79.8	80.5
200	305	72.7	73.0	73.4	73.8	74.2	74.6	75.1	75.6	76.1	76.7	77.2
150	275	66.0	66.4	66.9	67.4	68.0	68.7	69.5	70.5	71.2	72.0	72.7
100	275	63.2	63.6	64.1	64.6	65.1	65.7	66.4	67.1	67.8	68.6	69.4
50	275	59.8	60.2	60.6	61.1	61.6	62.2	63.0	63.7	64.5	65.2	66.0

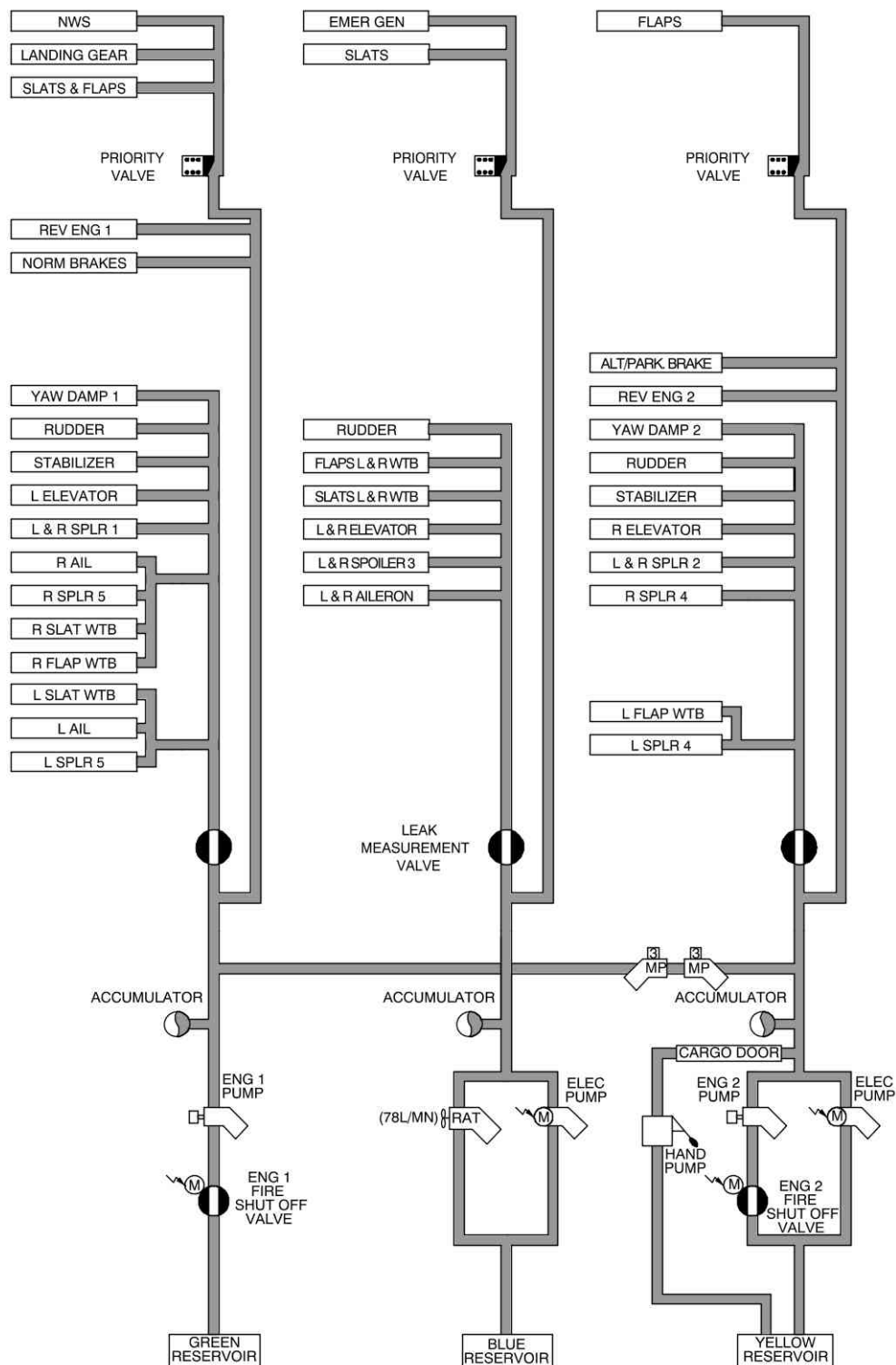
SIGNS..... ON
 AUTO PILOT..... KEEP ON
 A/THR (when thrust changes become excessive)..... DISCONNECT
 DESCENT..... CONSIDER
Consider descending to or below OPT FL in order to increase the margin to buffet

● **FOR APPROACH:**
 A/THR in managed speed.....USE



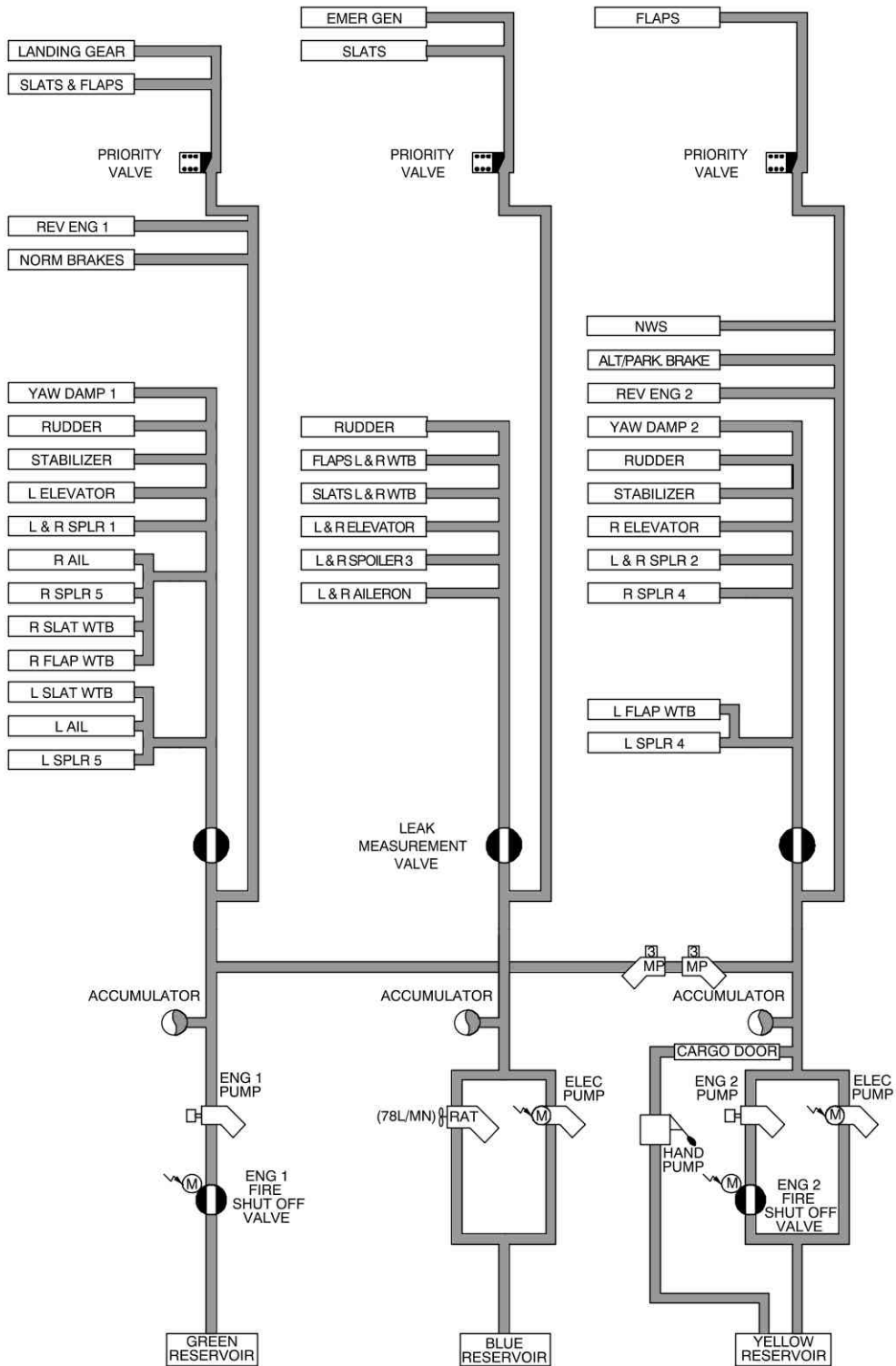
HYDRAULIC ARCHITECTURE

Ident.: OPS-00010996.0002001 / 01 OCT 12
Applicable to: MSN 1219-1843



HYDRAULIC ARCHITECTURE

Ident.: OPS-00010996.0006001 / 01 OCT 12
 Applicable to: MSN 2649-3120

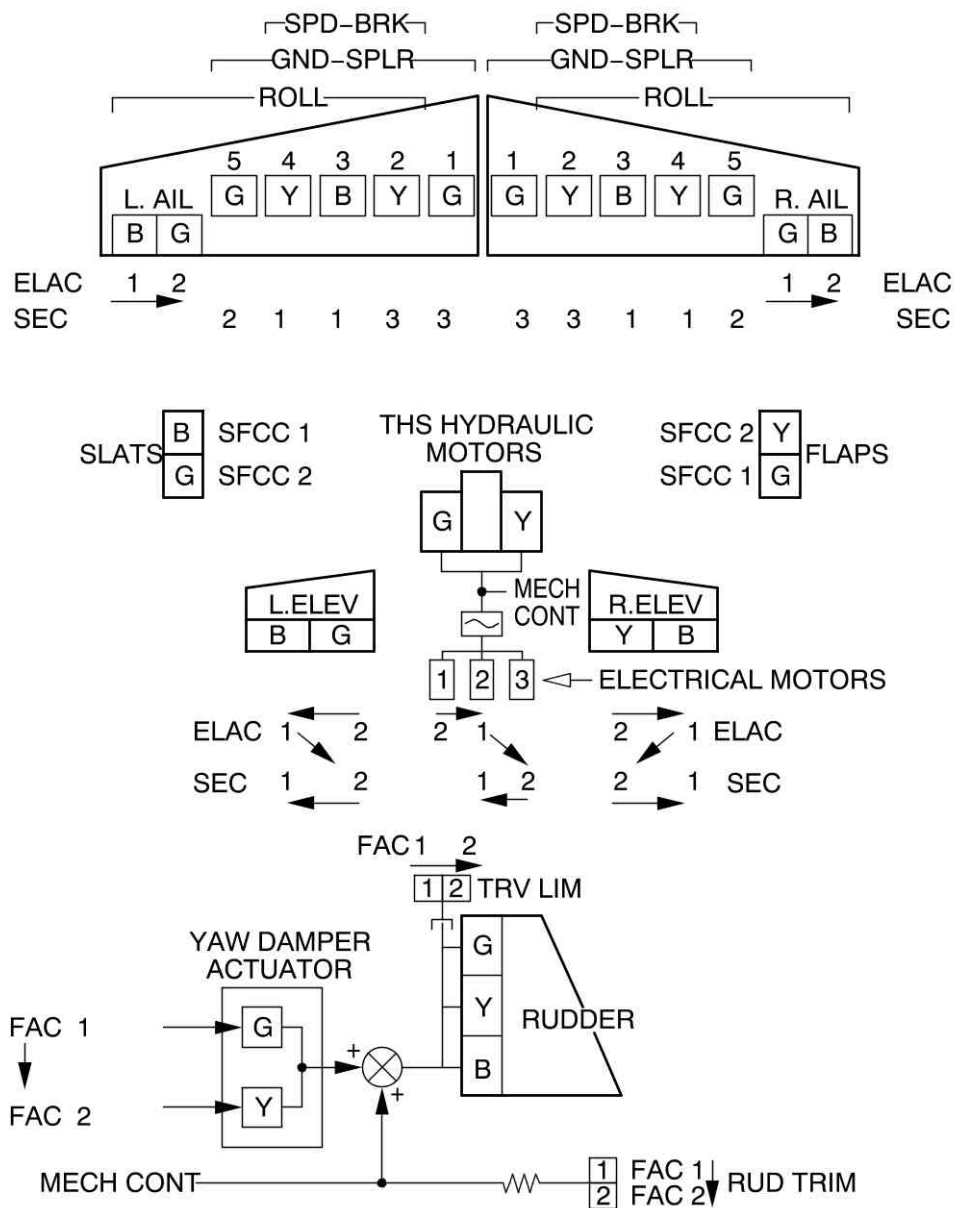




FLIGHT CONTROLS ARCHITECTURE

Ident.: OPS-00010997.0002001 / 01 OCT 12

Applicable to: ALL



→ Arrows indicate the control reconfiguration priorities

G B Y indicates the hydraulic power source for each servo control

REQUIRED EQUIPMENT FOR CAT2 AND CAT3

Ident.: OPS-00010998.0001001 / 19 AUG 10
 Applicable to: ALL

	FMA CAPABILITY →	CAT 2	CAT 3 SINGLE	CAT 3 DUAL
	EQUIPMENT ↓			
FMGS MONITORED FOR FMA LDG CAPABILITY	AP	1 AP ENGAGED	1 AP ENGAGED	2 AP ENGAGED
	AUTOTHRUST	0	1	1
	FMA	1	2	2
	A/THR CAUTION	0	1	1
	ELECTRICAL SUPPLY SPLIT	0	0	1
	FAC	1	1	2
	ELAC	1	1	2
	YAW DAMPER/RUDDER TRIM	1/1	1/1	2/2
	HYDRAULIC CIRCUIT	2	2	3
	PFD	2	2	2
	FLIGHT WARNING COMPUTER	1	1	2
	BSCU CHANNEL	1 ⁽¹⁾	1 ⁽¹⁾	1
	ANTISKID	1 ⁽¹⁾	1 ⁽¹⁾	1
	NOSEWHEEL STEERING	1 ⁽¹⁾	1 ⁽¹⁾	1
	RADIO ALTIMETER	1 (displayed on both sides)	2	2
	ILS RECEIVER	2	2	2
	BEAM EXCESSIVE DEVIATION WARNING	1 for PNF	2	2
	ATTITUDE INDICATION (PFD1/PFD2)	N° 1 + N° 2	N° 1 + N° 2	N° 1 + N° 2
	ADR/IR	2/2	2/2	3/3
NOT FMGS MONITORED FOR FMA LDG CAPABILITY	AP DISCONNECT PB	2	2	2
	"AP OFF" ECAM WARNING	1	1	2
	"AUTOLAND" LIGHT	1	1	1
	RUDDER TRAVEL LIMIT SYSTEM	1 required for autoland with crosswind higher than 12 kt		
	WINDSHIELD HEAT (L or R windshield)	1 for PF		
	WINDSHIELD WIPERS OR RAIN REPELLENT (if activated)	1 for PF		
	ND	1	2	2
	AUTO CALLOUT FUNCTION	one is required for autoland	1	1
	ATTITUDE INDICATION (STBY)	1	1	1
	DH INDICATION	1 for PNF		

(1) For automatic rollout, one is required. For autoland without automatic rollout, none is required.

 A320/A321 QUICK REFERENCE HANDBOOK	OPERATIONAL DATA	OPS.04B 12 MAR 13

- Note:
- Flight crews are not expected to check the equipment list before approach. When an ECAM or local caution occurs, the crew should use the list to confirm the landing capability.
 - On ground, the equipment list determines which approach category the aircraft will be able to perform at the next landing.
 - Electrical power supply split : This ensures that each FMGC is powered by an independent electrical source (AC and DC).
 - Failure of antiskid and/or nosewheel steering mechanical parts are not monitored for landing capability.
 - The DH will be displayed on the FMA, and the "Hundred Above" and "Minimum" auto callouts will be announced, provided that the DH value has been entered on the MCDU.

 A320/A321 QUICK REFERENCE HANDBOOK	OPERATIONS ENGINEERING BULLETINS LIST OF EFFECTIVE OPERATIONS ENGINEERING BULLETIN	OEBPROC 1/2 20 MAY 14

Identification	Title
OEB28 Issue 2	No Localizer or Glide Slope Capture in Approach <u>ECAM Entry</u> None
OEB34 Issue 2	FUEL L(R) XFR VALVE FAULT or FUEL CTR L(R) XFR FAULT or FUEL L(R) WING TK OVERFLOW <u>ECAM Entry</u> - <u>FUEL</u> L(R) XFR VALVE FAULT, or - <u>FUEL</u> CTR L(R) XFR FAULT, or - <u>FUEL</u> L(R) WING TK OVERFLOW
OEB36 Issue 1	No SRS Engagement During Go Around in the Case of EPR Mode Fault <u>ECAM Entry</u> <u>ENG 1(2)</u> EPR MODE FAULT
OEB38 Issue 2	Erroneous Radio Altimeter Height Indication <u>ECAM Entry</u> None
OEB40 Issue 1	AIR ENG 1(2) BLEED ABNORMAL PR or AIR ENG 1(2) BLEED FAULT <u>ECAM Entry</u> - <u>AIR</u> ENG 1(2) BLEED ABNORMAL PR - <u>AIR</u> ENG 1(2) BLEED FAULT
OEB41 Issue 1	Erroneous Alternate Fuel Predictions Upon Modification of a Company Route in the Alternate Flight Plan <u>ECAM Entry</u> None
OEB43 Issue 4	F/CTL SPOILER FAULT <u>ECAM Entry</u> <u>F/CTL</u> SPLR FAULT
OEB44 Issue 4	L/G GEAR NOT DOWNLOCKED <u>ECAM Entry</u> <u>L/G</u> GEAR NOT DOWNLOCKED
OEB47 Issue 2	HYD ENG PUMP LO PR followed by a HYD RSVR OVHT <u>ECAM Entry</u> <u>HYD</u> G ENG 1 PUMP LO PR followed by a <u>HYD</u> Y RSVR OVHT <u>HYD</u> Y ENG 2 PUMP LO PR followed by a <u>HYD</u> G RSVR OVHT

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Localization Title	Page	ID	Reason
OEBPROC-47 HYD ENG PUMP LO PR followed by a HYD RSVR OVHT	47.01	1	Improvement of typo error.

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NO LOCALIZER OR GLIDE SLOPE CAPTURE IN APPROACH

Ident.: OEBPROC-28-00013499.0001001 / 27 MAY 13

Applicable to: MSN 2649

ECAM ENTRY

None

PROCEDURE

In accordance with the FCOM Standard Operating Procedures, the flight crew should closely monitor the localizer and glide slope capture, for every ILS approach.

- **If LOC* mode does not engage when expected, the flight crew should:**

Perform the ILS interception using the LOC raw data deviations. The FD and AP can be used in selected modes (HDG-V/S modes, or preferably TRK-FPA modes) for this purpose.

Consider changing the Master FMGC:

- **If the AP is engaged:**

Change the AP in command

(If AP1+2 are engaged, change to AP2, by pressing the AP1 pb on the FCU to disengage AP1)

- **If the AP is disengaged, and the FDs are engaged:**

Turn off FD1

Then, attempt to reengage the LOC and G/S modes, by pressing the APPR pb.

LOC* (G/S*) mode should engage as expected, and the ILS can then be flown in LOC and G/S modes. However, the flight crew should disregard the approach capability on the FMA, and perform only a CAT I approach with a manual landing.

Note: *If it is still not possible to intercept the ILS after changing the Master FMGC, the flight crew must perform an ILS approach using raw data. The AP/FD can be used in selected modes (HDG/VS, or preferably TRK/FPA). The flight crew should disarm the APPR (LOC) mode(s) by setting the APPR (LOC) pb to OFF on the FCU, and then perform a CAT I approach with a manual landing.*

END OF OEB28

 A320/A321 QUICK REFERENCE HANDBOOK	OPERATIONS ENGINEERING BULLETINS	BLANK
		30 MAY 13

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FUEL L(R) XFR VALVE FAULT OR FUEL CTR L(R) XFR FAULT OR FUEL L(R) WING TK OVERFLOW

Ident.: OEBPROC-34-00013550.0001001 / 28 FEB 14
 Applicable to: MSN 1843, 2927-2933, 3120

ECAM ENTRY

- FUEL L(R) XFR VALVE FAULT, or
- FUEL CTR L(R) XFR FAULT, or
- FUEL L(R) WING TK OVERFLOW

PROCEDURE

FUEL L(R) XFR VALVE FAULT or FUEL CTR L(R) XFR FAULT

To apply the appropriate procedure, check the transfer valve position on the ECAM FUEL SD page.

- **Transfer valve displayed in line amber on the FUEL SD page**
 CTR TK L (R) XFR..... OFF

- **IF UNSUCCESSFUL and if the center tank fuel quantity is above 100 kg:**

Center tank transfer will be done by means of jet pump activated by the opposite R(L) wing tank pumps fuel flow. The procedure stops fuel transfer from the center tank to the affected L(R) wing tank by switching off both L(R) wing tank pumps. Then, as the crossfeed valve is open, both engines are fed by fuel from the R(L) wing tank, until the center tank is empty.

FUEL X FEED.....ON
 L (R) TK PUMP 1..... OFF
 L (R) TK PUMP 2..... OFF

Note: FUEL L (R) TK PUMP 1+2 LO PR will be triggered.

- **When the center tank fuel quantity is below 100 kg:**
 L (R) TK PUMP 1..... ON
 L (R) TK PUMP 2..... ON
 FUEL X FEED.....OFF

- **Transfer valve displayed crossline amber on the FUEL SD page**
 FUEL MODE SEL.....MAN

- **IF UNSUCCESSFUL and if the center tank fuel quantity is above 100 kg:**

Center tank transfer will be done by means of jet pump activated by the opposite R(L) wing tank pumps fuel flow. The procedure stops fuel transfer from the center tank to the affected L(R) wing tank by switching off both L(R) wing tank pumps. Then, as the crossfeed valve is open, both engines are fed by fuel from the R(L) wing tank, until the center tank is empty.

FUEL X FEED.....ON
 L (R) TK PUMP 1..... OFF
 L (R) TK PUMP 2..... OFF

Note: FUEL L (R) TK PUMP 1+2 LO PR will be triggered.

- **When the center tank fuel quantity is below 100 kg:**
 L (R) TK PUMP 1..... ON
 L (R) TK PUMP 2..... ON





FUEL L(R) XFR VALVE FAULT OR FUEL CTR L(R) XFR FAULT OR FUEL L(R) WING TK OVERFLOW (Cont'd)



FUEL X FEED.....OFF

■ Transfer valve displayed amber XX on the FUEL SD page

● If the center tank fuel quantity is above 100 kg:

Center tank transfer will be done by means of jet pump activated by the opposite R(L) wing tank pumps fuel flow. The procedure stops fuel transfer from the center tank to the affected L(R) wing tank by switching off both L(R) wing tank pumps. Then, as the crossfeed valve is open, both engines are fed by fuel from the R(L) wing tank, until the center tank is empty.

FUEL X FEED.....ON

L (R) TK PUMP 1..... OFF

L (R) TK PUMP 2..... OFF

Note: FUEL L (R) TK PUMP 1+2 LO PR will be triggered.

● When the center tank fuel quantity is below 100 kg:

L (R) TK PUMP 1..... ON

L (R) TK PUMP 2..... ON

FUEL X FEED.....OFF

FUEL L(R) WING TK OVERFLOW

CTR TK L (R) XFR.....OFF

● IF UNSUCCESSFUL or if the transfer valve is displayed amber XX on the FUEL SD page, and if the center tank fuel quantity is above 100 kg:

Center tank transfer will be done by means of jet pump activated by the opposite R(L) wing tank pumps fuel flow. The procedure stops fuel transfer from the center tank to the affected L(R) wing tank by switching off both L(R) wing tank pumps. Then, as the crossfeed valve is open, both engines are fed by fuel from the R(L) wing tank, until the center tank is empty.

FUEL X FEED.....ON

L (R) TK PUMP 1.....OFF

L (R) TK PUMP 2.....OFF

● When the center tank fuel quantity is below 100 kg:

L (R) TK PUMP 1..... ON

L (R) TK PUMP 2..... ON

FUEL X FEED.....OFF

END OF OEB34

NO SRS ENGAGEMENT DURING GO AROUND IN THE CASE OF EPR MODE FAULT

Ident.: OEBPROC-36-00013570.0003001 / 18 MAR 11
Applicable to: MSN 1276-3120

ECAM ENTRY

ENG 1(2) EPR MODE FAULT

PROCEDURE

In the case of go-around with EPR control mode inoperative, perform a manual go-around with no FD:

Maximum landing capability is CAT 1.

Note: To perform a manual go-around with no FD, the PF simultaneously announces her/his intention, disengages the AP, applies TOGA and initiates the rotation.

GO-AROUND..... ANNOUNCE
AP (if engaged)..... OFF
BOTH FDs (if engaged)..... OFF
Action performed by the PNF on PF request.
THRUST LEVERS..... TOGA
ROTATION..... 15 ° OF PITCH
Rotate to 12.5 ° in case of engine failure.
FLAPS..... RETRACT ONE STEP
POSITIVE CLIMB..... ANNOUNCE
LDG GEAR UP..... ORDER
LDG GEAR..... SELECT UP
Adjust pitch to maintain VAPP

- **When appropriate:**

Set both FDs to ON (basic guidance modes engage)
Engage OP CLB and select appropriate speed and lateral mode
AP use as required

- **When reaching thrust reduction altitude:**

Set both thrust levers to CL detent

- **When reaching acceleration altitude:**

Resume normal acceleration and climb procedures.

Note: CLB or LVR CLB will not flash on the FMA as the A/THR is not available. The FMS does not engage the GO AROUND phase.

END OF OEB36

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ERRONEOUS RADIO ALTIMETER HEIGHT INDICATION

Ident.: OEBPROC-38-00013579.0001001 / 08 APR 14
Applicable to: ALL

ECAM ENTRY

None

PROCEDURE

This bulletin is issued to remind operators of the possible consequences of an erroneous Radio Altimeter (RA) height indication. Erroneous RA height indication may have on aircraft systems, any of the effects listed in the OEB N°38.

This OEB PROC is issued to provide flight crews with the following recommendations:

During all phases of flight, the flight crew must monitor and crosscheck all primary flight parameters and FMA indications.

■ During an ILS (or MLS, or GLS) approach with AP engaged:

- In the event of an early/untimely FLARE and THR IDLE mode engagement (possibly associated with AUTOLAND warning and/or RETARD callout), the flight crew must:

- Immediately perform an automatic go-around (thrust levers set to TOGA),

OR

- Immediately disconnect AP and set both FDs to OFF. If external visual references are sufficient, the approach may be continued manually.

Note:

- If the flight crew does not immediately react, the angle-of-attack will increase and may reach the stall value,
- In CONF FULL, the auto-trim function is inhibited. In manual flight, a significant longitudinal sidestick input may be required.

■ During go-around

- If SRS and GA TRK modes remain engaged and other guidance modes cannot be selected or engaged as expected:

Note:

- At the thrust reduction altitude, LVR CLB will not be displayed on the FMA,
- ALT* and ALT will not engage at the FCU altitude.

Disconnect APs.

Set both FDs to OFF then ON. FDs revert to basic modes (HDG - V/S).

Re-engage guidance modes as appropriate.

■ For the approach that follows the go-around: Do not arm the G/S mode.

Flight crews must report, in the technical logbook, any of the consequences of an erroneous RA height listed in the OEB N°38.

END OF OEB38

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AIR ENG 1(2) BLEED ABNORMAL PR OR AIR ENG 1(2) BLEED FAULT

Ident.: OEBPROC-40-00013606.0001001 / 18 MAR 11
 Applicable to: ALL

ECAM ENTRY

- AIR ENG 1(2) BLEED ABNORMAL PR
- AIR ENG 1(2) BLEED FAULT

PROCEDURE

Apply the corresponding procedures if one of the following ECAM caution is triggered:

- AIR ENG 1(2) BLEED ABNORMAL PR
- AIR ENG 1(2) BLEED FAULT

AIR ENG 1(2) BLEED ABNORMAL PR

- **If Wing Anti-Ice is OFF**
 - PACK FLOW..... LO (A319/A320)
 - ECON FLOW.....ON (A321)
 - AFT CARGO HOT AIR (if installed).....OFF
 - X BLEED..... OPEN
 - BLEED page.....SELECT and MONITOR
 - **If the precooler outlet temperature of the remaining bleed exceeds 240 °C within 2 min after X BLEED valve opening:**
 - PACK (on the first affected bleed side)..... OFF
- Note: If Wing Anti-Ice is required (icing conditions) while operating with one PACK, consider switching OFF the remaining pack, if aircraft's altitude permits.*

- **If Wing Anti-Ice is ON**
 - **If both PACKS are ON**
 - PACK (affected bleed side).....OFF
 - X BLEED..... OPEN
 - BLEED Page..... SELECT and MONITOR
 - **If the precooler outlet temperature of the remaining bleed exceeds 240 °C within 2 min after X BLEED valve opening:**
 - BLEED AIR DEMAND.....REDUCE
- Consider reducing the bleed air demand, by, depending on the flight conditions:*
- Switching OFF the remaining pack (if aircraft's altitude permits), or
 - Switching OFF the Wing Anti-Ice system (if no longer icing conditions).

AIR ENG 1(2) BLEED FAULT

ENG BLEED affected..... OFF





AIR ENG 1(2) BLEED ABNORMAL PR OR AIR ENG 1(2) BLEED FAULT (Cont'd)



■ If Wing Anti-Ice is OFF

PACK FLOW..... LO (A319/A320)
ECON FLOW.....ON (A321)
AFT CARGO HOT AIR (if installed).....OFF
X BLEED..... OPEN
BLEED Page..... SELECT and MONITOR

● If the precooler outlet temperature of the remaining bleed exceeds 240 °C within 2 min after X BLEED valve opening:

PACK (on the first affected bleed side)..... OFF

*Note: If Wing Anti-Ice is required (icing conditions) while operating with one PACK,
consider switching OFF the remaining pack, if aircraft's altitude permits.*

■ If Wing Anti-Ice is ON

● If both PACKS are ON

PACK (affected bleed side).....OFF
X BLEED..... OPEN
BLEED Page..... SELECT and MONITOR

● If the precooler outlet temperature of the remaining bleed exceeds 240 °C within 2 min after X BLEED valve opening:

BLEED AIR DEMAND.....REDUCE

Consider reducing the bleed air demand, by, depending on the flight conditions:

- Switching OFF the remaining pack (if aircraft's altitude permits), or
- Switching OFF the Wing Anti-Ice system (if no longer icing conditions).

END OF OEB40

ERRONEOUS ALTERNATE FUEL PREDICTIONS UPON MODIFICATION OF A COMPANY ROUTE IN THE ALTERNATE FLIGHT PLAN

Ident.: OEBPROC-41-00013617.0001001 / 18 MAR 11 Applicable to: ALL

ECAM ENTRY

None

PROCEDURE

This OEB PROC N°41 is issued to provide flight crews with the following recommendations:
This procedure only applies when a CO RTE is used for ALTN F-PLN. In the case of ALTN fuel predictions erroneously set to zero further to a modification of this ALTN F-PLN:

ENTER manually a waypoint in the en-route F-PLN (neither in the departure, nor in the arrival), to start a new computation of ALTN fuel predictions
Maintain or delete the entered waypoint at convenience
Check the ALTN fuel predictions are correct

END OF OEB41

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F/CTL SPOILER FAULT

Ident.: OEBPROC-43-00013702.0001001 / 21 MAY 12
 Applicable to: ALL

ECAM ENTRY

F/CTL SPLR FAULT

PROCEDURE

- If **F/CTL SPLR FAULT** is triggered
 F/CTL S/D page.....CHECK
The flight crew should check the spoiler position on the F/CTL System Display page.
- If all amber spoilers are indicated retracted:
*Loss of one or more spoilers in the retracted position. In such a case, the flight crew must apply the following operational procedure that reflects the **F/CTL SPLR FAULT** ECAM caution.*

F/CTL SPLR FAULT

Note: If heavy vibrations are felt, CONF3 may be used for landing in order to reduce the buffeting.

– SPD BRK (if spoilers 3 + 4 affected).....DO NOT USE

Do not use speedbrakes, since using only surfaces N°2 is not efficient and would activate the SPD BRK DISAGREE caution.

STATUS

● if spoilers 3+4 affected

– SPD BRK DO NOT USE
 LDG DIST PROC.....APPLY

INOP SYS
 SPLR(affected)
 SPD BRK (if
 spoilers 2+3+4
 affected)

- If at least one spoiler is indicated deflected in amber, apply the following procedure:

F/CTL SPLR FAULT

AP..... OFF

Depending on the failed spoiler position, the AP may not have enough authority to counteract the roll induced by spoiler runaway.

SPEED..... GDOT+10

Whenever possible, target green dot speed +10 kt to minimize fuel consumption. However, if buffet is encountered at GDOT speed +10 kt, increase speed to fly out of buffet condition.

CRUISE ALTITUDE.....AS REQUIRED

Current Flight Level (FL) may not be maintained due to increased drag. Maintain a cruise FL as high as possible.

FUEL CONSUMPTION INCREASED

FMS FUEL PRED..... DISREGARD

FUEL CONSUMPTION..... DETERMINE

DIVERSION..... CONSIDER

APPR PROC

In clean configuration, if VLS is above VFE_{NEXT}, the flight crew should deselect A/THR, decelerate to VFE_{NEXT}, and select CONF 1 when below VFE_{NEXT}. When established at CONF 1, the flight crew can reengage the A/THR and use managed speed again.



F/CTL SPOILER FAULT (Cont'd)



FOR LDG.....USE FLAP 3
GPWS LDG FLAP 3.....ON
LANDING PERFORMANCE ASSESSMENT.....PERFORM
For Landing Performance assessment refer to QRH FPE-IFL

END OF OEB43

L/G GEAR NOT DOWNLOCKED

Ident.: OEBPROC-44-00013700.0001001 / 21 MAY 12
 Applicable to: ALL

ECAM ENTRY

L/G GEAR NOT DOWNLOCKED

PROCEDURE

Apply the following procedure if the ECAM triggers the L/G GEAR NOT DOWNLOCKED warning:

<u>L/G</u> GEAR NOT DOWNLOCKED
<i>This warning appears, if the landing gear sequence is not completed after 30 seconds.</i> L/G lever.....RECYCLE ● IF GEAR NOT DOWNLOCKED AFTER 2 MINUTES: L/G GRAVITY EXTENSION PROC.....APPLY STATUS The status displayed on the ECAM is correct.

END OF OEB44

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HYD ENG PUMP LO PR FOLLOWED BY A HYD RSVR OVHT

Ident.: OEBPROC-47-00015355.0001001 / 13 MAY 14
 Applicable to: ALL

ECAM ENTRY

HYD G ENG 1 PUMP LO PR followed by a HYD Y RSVR OVHT
HYD Y ENG 2 PUMP LO PR followed by a HYD G RSVR OVHT

PROCEDURE

- If a HYD G ENG 1 PUMP LO PR ECAM caution is followed by a HYD Y RSVR OVHT ECAM caution, disregard the HYD Y RSVR OVHT ECAM procedure, and apply the following procedure to stop the overheat situation:

HYD Y RSVR OVHT

PTU.....OFF
 YELLOW ENG 2 PUMP.....KEEP ON

- If a HYD Y ENG 2 PUMP LO PR ECAM caution is followed by a HYD G RSVR OVHT ECAM caution, disregard the HYD G RSVR OVHT ECAM procedure, and apply the following procedure to stop the overheat situation:

HYD G RSVR OVHT

PTU.....OFF
 GREEN ENG 1 PUMP.....KEEP ON

END OF OEB47

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		20 MAY 14

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EMERGENCY EVACUATION

Ident.: 00010931.0001001 / 08 FEB 13

Applicable to: ALL

- AIRCRAFT/PARKING BRK.....

STOP/ON
- ATC (VHF 1).....

NOTIFY
- CABIN CREW (PA).....

ALERT
- ΔP (only if MAN CAB PR has been used).....

CHECK ZERO
- If not zero, MODE selector on MAN, V/S CTL FULL UP.*
- ENG MASTERS (ALL).....

OFF
- FIRE Pushbuttons (ALL : ENG and APU).....

PUSH
- AGENTS (ENG and APU).....

AS RQRD
- If evacuation required:
- EVACUATION.....

INITIATE
- If evacuation not required:
- CABIN CREW and PASSENGERS (PA).....

NOTIFY

 A320/A321 QUICK REFERENCE HANDBOOK	ABNORMAL AND EMERGENCY PROCEDURES	BLANK
		15 FEB 13

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BEFORE START
Ident.: 00010978.0001001 / 17 AUG 10 Applicable to: ALL
COCKPIT PREP..... COMPLETED (BOTH) GEAR PINS and COVERS..... REMOVED SIGNS..... ON/AUTO ADIRS..... NAV FUEL QUANTITY..... ____ KG.LB TO DATA..... SET BARO REF..... SET (BOTH)
WINDOWS/DOORS..... CLOSED (BOTH) BEACON..... ON THR LEVERS..... IDLE PARKING BRAKE..... AS RQRD

AFTER START
Ident.: 00010980.0001001 / 30 AUG 12 Applicable to: ALL
ANTI ICE..... AS RQRD ECAM STATUS..... CHECKED PITCH TRIM..... % SET RUDDER TRIM..... ZERO

BEFORE TAKEOFF
Ident.: 00010982.0007001 / 12 FEB 13 Applicable to: ALL
FLIGHT CONTROLS..... CHECKED (BOTH) FLT INST..... CHECKED (BOTH) BRIEFING..... CONFIRMED FLAP SETTING..... CONF ____ (BOTH) V1. VR. V2/FLX TEMP..... (BOTH) ATC..... SET ECAM MEMO..... TO NO BLUE - AUTO BRK MAX - SIGNS ON - CABIN READY () - SPLRS ARM - FLAPS TO - TO CONFIG NORM
TAKEOFF RWY..... CONFIRM (BOTH) CABIN CREW..... ADVISED TCAS..... TA OR TA/RA ENG MODE SEL..... AS RQRD PACKS..... AS RQRD

AFTER TAKEOFF / CLIMB
Ident.: 00010984.0001001 / 17 AUG 10 Applicable to: ALL
LDG GEAR..... UP FLAPS..... RETRACTED PACKS..... ON BARO REF..... SET (BOTH)

APPROACH
Ident.: 00010987.0001001 / 07 JUL 11 Applicable to: ALL
BRIEFING..... CONFIRMED ECAM STATUS..... CHECKED SEAT BELTS..... ON BARO REF..... SET (BOTH) MINIMUM..... SET (BOTH) ENG MODE SEL..... AS RQRD

LANDING
Ident.: 00010989.0001001 / 01 JUL 11 Applicable to: ALL
CABIN CREW..... ADVISED A/THR..... SPEED/OFF AUTOBRAKE..... AS RQRD ECAM MEMO..... LDG NO BLUE - LDG GEAR DN - SIGNS ON - CABIN READY () - SPLRS ARM - FLAPS SET

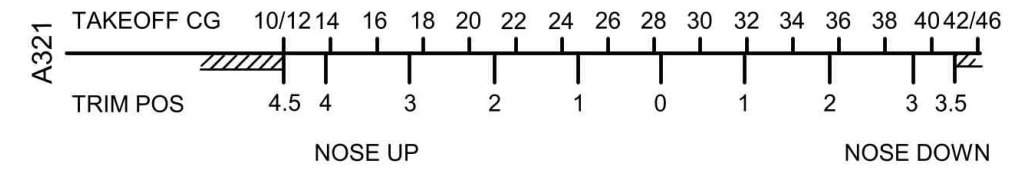
AFTER LANDING
Ident.: 00010990.0002001 / 17 AUG 10 Applicable to: ALL
FLAPS..... RETRACTED SPOILERS..... DISARMED APU..... START RADAR..... OFF/STBY PREDICTIVE WINDSHEAR SYSTEM..... OFF

PARKING
Ident.: 00010991.0001001 / 17 AUG 10 Applicable to: ALL
APU BLEED..... ON ENGINES..... OFF SEAT BELTS..... OFF EXT LT..... AS RQRD FUEL PUMPS..... OFF PARK BRK and CHOCKS..... AS RQRD Consider HEAVY RAIN

SECURING THE AIRCRAFT
Ident.: 00010992.0001001 / 09 FEB 11 Applicable to: ALL
ADIRS..... OFF OXYGEN..... OFF APU BLEED..... OFF EMER EXIT LT..... OFF SIGNS..... OFF APU AND BAT..... OFF Consider COLD WEATHER

TAKEOFF CG/TRIM POS

Ident.: 00010994.0002001 / 30 AUG 12
Applicable to: MSN 1219-1843, 2927-3120



TAKEOFF CG/TRIM POS

Ident.: 00010994.0007001 / 30 AUG 12
Applicable to: MSN 2649

