



QUICK REFERENCE HANDBOOK

A320-232

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Issue date: 23 NOV 21

This is the first issue of the QUICK REFERENCE HANDBOOK dated 23 NOV 21 for the A318/A319/A320/A321

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

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Please note that the entire manual is delivered.

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	SECTIONS/SUBSECTIONS	

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	PLP-LESS	LIST OF EFFECTIVE SECTIONS/SUBSECTIONS	23 NOV 21
	PLP-LETDU	LIST OF EFFECTIVE TEMPORARY DOCUMENTARY UNITS	23 NOV 21
	GEN	General	23 NOV 21
	ABN-01	[ADV] ECAM ADVISORY	23 NOV 21
	ABN-02	[RESET] SYSTEM RESET	23 NOV 21
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	ABN-25	MISC	23 NOV 21
	ABN-26	NAV	23 NOV 21
	ABN-27	SMOKE	23 NOV 21
	ABN-28	WHEEL	23 NOV 21
	NP	Normal Procedures	23 NOV 21
	OPS	Operational Data	23 NOV 21
	OEBPROC-PLP-LEOEB	LIST OF EFFECTIVE OPERATIONS ENGINEERING BULLETIN	23 NOV 21
	NCL	Normal Checklist	23 NOV 21

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

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M	Localization	DU Title	DU identification	DU date
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No Temporary Documentary Unit

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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
				320-232

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	J0006		20 NOV 17	FUEL SYSTEM - ADDITIONAL TREATMENT OF CENTRE TANK STRUCTURE AND INSTALLATION OF CENTRE TANK SYSTEM
	J0071		20 NOV 17	WING STRUCTURE-INTRODUCTION OF A WING TIP INCORPORATING A TIP FENCE FOR 72T MTOW A/C
	J1334		20 NOV 17	LANDING GEAR-MLG-LGCIU-INTRODUCTION OF A NEW STANDARD FOR IMPROVED PROXIMITY SENSOR FAULT MONITORING FUNCTION
	J1617		20 NOV 17	FLIGHT CONTROLS - GENERAL - DELETE LAF FEATURE FROM A320 DEFINITION (PRODUCTION SOLUTION)
	J2832	28-1159 00	05 JUN 19	MAIN FUEL PUMP SYSTEM - FUEL PUMPS - INSPECT AFFECTED EATON FUEL PUMPS
	K10516	49-1069 24 49-1075 01	05 JUN 19	AIRBORNE AUXILIARY POWER - CONTROL AND MONITORING INTRODUCE HONEYWELL VECB WITH SOFTWARE -04
	K1806		20 NOV 17	AIR CONDITIONING SYSTEM POWER SUPPLY - MODIFY POWER TO FLOW CONTROL VALVE
	K3984		12 JUN 18	AIR CONDITIONIN -COCKPIT AND CABIN TEMPERATURE CONTROL-INTRODUCE MODIFIED TEMPERATURE SENSOR -02 ON MIXER UNIT
	K4457	49-1069 24	20 NOV 17	INTRODUCTION OF NEW ALLIED SIGNAL APU GTPC 131-9 (A)
	K5213		20 NOV 17	AIR CONDITIONING - PACK TEMPERATURE CONTROL - INTRODUCE IMPROVED PACK TEMPERATURE CONTROLLER
	K5549		12 JUN 18	OXYGEN - PASSENGER OXYGEN - INTRODUCE CHEMICAL OXYGEN CONTAINER (15MIN) WITH IMPROVED ACTUATOR (VENDOR PURITAN)
	K6156	21-1118 00	20 NOV 17	AIR CONDITIONING-PACK TEMPERATURE CONTROL- INTRODUCE MODIFIED PACK TEMPERATURE CONTROLLER
	K7755	25-1305 06	30 OCT 18	EQUIPMENT/FURNISHINGS PAX COMPARTMENT INTRODUCE A MODIFIED INTRUSION AND PENETRATION RESISTANCE COCKPIT DOOR
	K7790	25-1305 06	30 OCT 18	DOORS PASSENGER COMPARTMENT FIXED PARTITIONS INTERIOR DOOR-ELECTRICAL COCKPIT DOOR RELEASE SYSTEM
	P0003		12 JUN 18	BASIC AIRCRAFT DEFINITION - ELECTRICS
	P0160		20 NOV 17	OXYGEN-FLIGHT CREW OXYGEN STORAGE-INSTALLATION OF A 115 CU/FT (STEEL) OXYGEN CYLINDER
	P1044		20 NOV 17	MAP VALID FOR ALL A/C WITH AN EMBODIMENT STARTING AT A/C 13
	P1573		20 NOV 17	POWERPLANT-POWER SUPPLY FOR HP FUEL SOLENOID IN EMERGENCY SITUATION
	P2217		20 NOV 17	INDICATING - FWS DEFINE FWC C3 STANDARD
	P3112		26 MAR 19	NAVIGATION - INSTALLATION OF TCAS II COLLINS SYSTEM
	P3259		12 JUN 18	LANDING GEAR - BRAKING - IMPROVE BRAKE DUAL DISTRIBUTION VALVE
	P4080		30 OCT 18	AUTO-FLIGHT/GENERAL(A319/A320/A321) FLIGHT MANAGEMENT AND GUIDANCE



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				COMPUTER(FMGC).PROVIDE ACARS AND PRINTER INTERFACES IN FMS (IAE VERSION)
	P4121		20 NOV 17	EXHAUST - THRUST REVERSER CONTROL AND INDICATING -ACTIVATE ADDITIONAL THRUST REVERSER LOCK CONTROL
	P4191		12 JUN 18	NAVIGATION AND COMMUNICATIONS REPLACE BFE EQUIPMENT BY SFE EQUIPMENT
	P4319	22-1058 49	20 NOV 17	AUTO FLIGHT/FCU DEFINE FD ENGAGEMENT IN CROSSED BARS AT GO AROUND
	P4502	46-1044 17	23 NOV 21	INFORMATION SYSTEMS - ATIMS - INSTALL ATSU COMPUTER FOR PRE-FANS CONFIGURATION
	P4664	31-1265 03 31-1281 02	12 JUN 18	INDICATING/RECORDING SYSTEM - SYSTEM DATA ACQUISITION CONCENTRATOR (SDAC) - DEFINE AND INSTALL A NEW SDAC
	P4705		12 JUN 18	NAVIGATION-VOR/MARKER-INSTALLATION OF 2 VOR/ MARKER RECEIVERS 900 COLLINS P/N 822-0297-020
	P4880		30 OCT 18	AUTOFLIGHT - FMGC - DEFINE AND INSTALL FMGC B546CCM0103 FOR A319 AUTOLAND IAE ENGINES (CAPABLE OF GPS/ACARS FUNCTION)
	P4965		30 OCT 18	INDICATING/RECORDING SYSTEM : FWC - DEFINE AND INSTALL FWC WITH FULL SOFTWARE ON OBRM (EM2 PROGRAM)
	P5168	34-1162 08	20 NOV 17	NAVIGATION-MMR-INSTALLATION OF COLLINS MULTI-MODE RECEIVERS PROVIDING ILS (FM IMMUNE) AND GPS PRIMARY FUNCTION
	P5180		30 OCT 18	AUTOFLIGHT - FMGC-IAE ENGINES - DEFINE AND INSTALLFMGC B54CCM0104 (FA817 STANDARD) CAPABLE OF GPS/ACARS FUNCTION
	P5451		20 NOV 17	ELECTRICAL POWER - GENERAL AC & DC MAIN DISTRIBUTION - INSTALL A/C AND DC SHEDDABLE BUSBARS
	P5518	32-1232 01 32-1336 01	30 OCT 18	LANDING GEAR - GENERAL - NORMAL BRAKING - INTRODUCE STD 8 BSCU TWIN VERSION
	P5591		26 MAR 19	NAVIGATION - MMR - INSTALL SEXTANT MMR (WITH ADIRUHNW) PROVIDING ILS (FM IMMUNE) AND GPS PRIMARY FUNCTION (HYBRID)
	P5706	31-1197 00 31-1257 01	30 OCT 18	INDICATING/RECORDING SYSTEMS- FLIGHT WARNING COMPUTER (FWC) INSTALL FWC STD H2/E3
	P5726		26 MAR 19	NAVIGATION - MMR - INSTALL SEXTANT MMR PROVIDING ILS (FM IMMUNE) P/N TLS755-01-0101B
	P5768		30 OCT 18	ELECTRICAL POWER - AC EMERGENCY GENERATION - ACTIVATE ON A320 SAME ELECTRICAL EMERG. CONFIGURATION THAN A321
	P5834	34-1444 01	12 JUN 18	NAVIGATION - SENSORS - INSTALL MODIFIED SEXTANT ANGLE OF ATTACK SENSORS P/N C16291AA
	P5895	34-1193 37	20 NOV 17	NAVIGATION-GPWS-INSTALL EGPWS P/N-206-206 & INHIBIT AUTOMATIC DEACTIVATION OF ENHANCED FUNCTIONS.
	P6054		26 MAR 19	NAVIGATION - MMR - SEXTANT MMR - ACTIVATE GPS PRIMARY FUNCTION (HYBRID) (WITH HONEYWELL OR LITTON ADIRU)
	P6183		26 MAR 19	NAVIGATION - MMR - REMOVE COLLINS MMR PROVIDING ILS (FM IMMUNE) AND GPS PRIMARY FUNCTION
	P6634	31-1265 03 31-1281 02	30 OCT 18	INDICATING/RECORDING SYSTEM - SDAC - INSTALL NEW STANDARD SDAC TO CORRECT TRIGGERING OF SPURIOUS ECAM AMBER CAUTION
	P6703	22-1079 08 22-1102 02 22-1226 04	05 JUN 19	AUTO FLIGHT - FLIGHT AUGMENTATION COMPUTER INSTALL NEW FAC SOFTWARE STANDARD P/N B397BAM0515
	P6801	31-1197 00 31-1257 01	30 OCT 18	INDICATING RECORDING SYSTEM - FWC INSTALL FWC STANDARD H2E4
	P6954	22-1102 02 22-1226 04	05 JUN 19	AUTO FLIGHT - FLIGHT AUGMENTATION COMPUTER (FAC SYSTEM) - INTRODUCE FAC SOFTWARE "BAM0516" CAPABLE OF A318



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	P6986	22-1083 03	30 OCT 18	AUTO FLIGHT - FMGC INSTALL FMGC P/N B546CCM0105 (IAE GPS/ACARS)
	P7005	32-1232 01 32-1336 01	30 OCT 18	LANDING GEAR - NORMAL BRAKING - INTRODUCE STD 9 BSCU (TWIN VERSION)
	P7125	31-1197 00 31-1257 01	05 JUN 19	INDICATING/RECORDING SYSTEMS - FWC - INSTALL FWC STANDARD H2 F1 ON A318 PW
	P7175		30 OCT 18	ELECTRICAL POWER - GENERAL - INSTALL A COMMERCIAL SHEDDING PUSH-BUTTON SWITCH IN COCKPIT
	P7218	22-1635 01	30 OCT 18	AUTOFLIGHT - FLIGHT MANAGEMENT AND GUIDANCE COMPUTER (FMGC) DEVELOP FMS 2ND GENERATION HONEYWELL STEP1
	P7372		26 MAR 19	AUTOFLIGHT - FMGC DEFINE AND INSTALL FMGC IAE C13043BA01 THALES (EQUIPPED WITH "FMS2" THALES/SMITH)
	P7455		30 OCT 18	ELECTRICAL POWER - GENERAL IN FLIGHT ENTERTAINMENT (IFE) POWER SUPPLY ON SHEDDABLE BUSBARS CONTROLLED BY "GALY & CAB" SW
	P7520	22-1635 01	30 OCT 18	AUTOFLIGHT - FMGC - INSTALL FMGC IAE C13042BA01 (EQUIPPED WITH FMS2 HONEYWELL)
	P7666		26 MAR 19	AUTO FLIGHT - FMGC DEVELOP FMS 2ND GENERATION THALES/SMITH REV 1 STANDARD
	P7810	32-1254 00 32-1336 01	30 OCT 18	LANDING GEAR / NORMAL BRAKING / INSTALL BSCU 9.1
	P8043	71-1030 02	30 OCT 18	POWER PLANT - ELECTRICAL HARNESS - IAE INTRODUCE SOURIAU POWER CONNECTOR ON IDG HARNESS (NACELLE SIDE)
	P9107	31-1267 03 31-1300 02	05 JUN 19	INDICATING/RECORDING SYSTEM FLIGHT WARNING COMPUTER - FWC - INSTALL FWC STANDARD H2 F3
	P9332	34-1350 02	05 JUN 19	NAVIGATION - ADIRU - INSTALL NORTHROP GRUMAN ADIRU P/N 465020-0303-0316
	22-1079 08		20 NOV 17	AUTO FLIGHT - FLIGHT AUGMENTATION COMPUTER - INSTALL NEW FAC SOFTWARE STANDARD PN B397BAM0515.
	22-1102 02		20 NOV 17	AUTO FLIGHT - FLIGHT AUGMENTATION COMPUTER - INSTALL FAC STANDARD BAM0617.
	22-1146 00		26 MAR 19	AUTO FLIGHT - FMGC - INTRODUCE FMS2 THALES REV 1+ (S2) ASSOCIATED TO FG STD I9 ON IAE ENGINES.
	22-1206 01		26 MAR 19	AUTO-FLIGHT-FLIGHT MANAGEMENT AND GUIDANCE COMPUTER(FMGC) - INSTALL FMS2 THALES S4(REV2+) STD ON IAE A/C.
	22-1226 04		20 NOV 17	AUTO FLIGHT - FLIGHT AUGMENTATION (FAC) INTRODUCE FAC SOFTWARE STD "BAM0619".
	22-1246 02		26 MAR 19	AUTO FLIGHT - FMGC - INSTALL FMGC STANDARD S4I11 ON IAE AND PW A/C.
	22-1296 06		20 NOV 17	AUTO-FLIGHT - FMGC - ACTIVATE MOD NAV GO AROUND ON FMGC
	22-1315 05		20 NOV 17	AUTO FLIGHT- FLIGHT MANAGEMENT SYSTEM - ACTIVATE NO AP DISCONNECTION BELOW MDA/MDH UNTIL MISSED



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				APPROACH POINT AND ACTIVATE BARO RADIO SETTING FUNCTION.
	22-1361 03		26 MAR 19	AUTOFLIGHT - FMGC - INSTALL FMS THALES RELEASE 1A S6 (WITH FG I11) ON IAE&PW A/C
	22-1463 02		27 JAN 20	AUTO FLIGHT - FMGC - INSTALL FMS THALES RELEASE 1A STANDARD S7A (WITH FG I12) ON IAE/PW AIRCRAFT
	22-1544 00		27 JAN 20	AUTO FLIGHT - FLIGHT MANAGEMENT AND GUIDANCE COMPUTER (FMGC) - INSTALL FMGC S7A I15 THALES ON IAE A/C
	22-1591 00		27 JAN 20	AUTO FLIGHT - FLIGHT MANAGEMENT - INTRODUCE FM THALES S7B ASSOCIATED TO FG 2G I15 (IAE/PW ENGINES)
	25-1444 02		20 NOV 17	EQUIPMENT/FURNISHINGS - CURTAINS AND PARTITIONS - INTRODUCE PPTC FOR COCKPIT DOOR STRIKE PROTECTION
	25-1BPJ 01		18 AUG 21	COCKPIT - REINFORCE COCKPIT DOCUMENTS STOWAGE BOX
	27-1182 04		30 OCT 18	FLIGHT CONTROL - ELAC SYSTEM - INTRODUCE ELAC L93 SOFTWARE STANDARD.
	27-1238 00		30 OCT 18	FLIGHT CONTROLS - ELAC - INSTALL L97 STANDARD ON ELAC B WITHOUT DATALOADING CAPABILITY
	27-1244 00		30 OCT 18	FLIGHT CONTROLS - ELEVATOR AILERON COMPUTER SYSTEM (ELAC) - INSTALL ELAC B L97+ WITHOUT DATALOADING
	27-1257 01		03 JUL 18	FLIGHT CONTROLS - SPOILER AND ELEVATOR COMPUTER (SEC) - INSPECTION OF SEC CONFIGURATION FOR OEB-50 CANCELLATION FOR AIRCRAFT PRE MOD NO. 39429P11174
	27-1264 00		26 MAR 19	FLIGHT CONTROLS - ELEVATOR AILERON COMPUTER SYSTEM (ELAC) - INSTALL SOFTWARE STANDARD L99 ON ELAC B WITHOUT DATALOADING CAPABILITY
	28-1159 00		12 JUN 18	FUEL - MAIN FUEL PUMP SYSTEM - FUEL PUMPS - APPLY CORRECT TORQUE AND SCREW LOCKING ON GAS RETURN OUTLET BOLTS
	31-1197 00		26 MAR 19	INDICATING RECORDING SYSTEM - FLIGHT WARNING COMPUTER (FWC) - INSTALL FWC STANDARD H2F2.
	31-1257 01		20 NOV 17	INDICATING RECORDING SYSTEM - FLIGHT WARNING COMPUTER (FWC) - INSTALL FWC STANDARD H2-F2.
	31-1267 03		12 JUN 18	INDICATING/RECORDING SYSTEMS - FLIGHT WARNING COMPUTER (FWC) - INSTALL FWC STANDARD H2F3.
	31-1300 02		12 JUN 18	INDICATING/RECORDING SYSTEMS - FLIGHT WARNING COMPUTER (FWC) - INSTALL FWC STANDARD H2-F3P.
	31-1334 04		20 NOV 17	INDICATING/RECORDING SYSTEMS - FLIGHT WARNING COMPUTER (FWC) - INSTALL FWC STANDARD H2-F5
	31-1373 00		20 NOV 17	INDICATING/RECORDING SYSTEMS - FLIGHT WARNING COMPUTER (FWC) - INSTALL FWC STANDARD H2-F6
	31-1414 03		20 NOV 17	INDICATING RECORDING SYSTEMS - FWC - INTRODUCE FWC STANDARD H2-F7
	31-1492 00		26 MAR 19	INDICATING/RECORDING SYSTEMS - FLIGHT WARNING COMPUTER (FWC) - INSTALL FWC H2-F9D FOR CEO AIRCRAFT
	32-1107 00		12 JUN 18	LANDING GEAR - NLG SHOCK ABSORBER - IMPROVEMENT OF CENTER ROD GUIDE
	32-1336 01		12 JUN 18	LANDING GEAR - NORMAL BRAKING - INSTALL BSCU STD 10 BY SB ONLY.
	32-1346 10		26 MAR 19	LANDING GEAR - EXTENSION AND RETRACTION - INTRODUCE POWER INTERRUPT PROTECTION CIRCUIT FOR LGCIUS
	32-1361 00		05 JUN 19	LANDING GEAR - NORMAL BRAKING - INSTALL BSCU L4.9B (EM2) FROM STD BSCU STD 10 OR 10.1 (PRE EM2).
	32-1407 01		12 JUN 18	LANDING GEAR - NORMAL EXTENSION AND RETRACTION - MODIFY THE MLG DOOR ACTUATOR DAMPING MECHANISM
	33-1057 03		12 JUN 18	LIGHTS - INSTRUMENT AND PANEL INTEGRAL LIGHTING - ENSURE EMERGENCY LIGHTING FOR STAND-BY INSTRUMENTS.



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	34-1350 02		20 NOV 17	NAVIGATION - ADIRU - INSTALL NORTHROP GRUMMAN ADIRU P/N 465020-0303-0316.
	34-1444 01		12 JUN 18	NAVIGATION - SENSORS, POWER SUPPLY AND SWITCHING - INSTALL THALES ANGLE OF ATTACK SENSORS P/N C16291AB.
	49-1069 24		02 SEP 20	POWER PLANT - REPLACE THE APU GTCP 36-300 BY APU HONEYWELL 131-9(A)
	49-1071 21		23 NOV 21	POWER PLANT - REPLACE THE HONEYWELL APU 131-9(A) WITH AN HONEYWELL APU GTCP36-300

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

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IMPORTANT

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).

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
 - PM - Pilot Monitoring - 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 levers, cockpit C/Bs, IR and guarded switches with PF's confirmation (except on ground).

ECAM CLEAR

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

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).

The flight crew can stop the procedure if the conditions for the application of the QRH procedure disappear.

NORMAL CHECKLIST

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

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

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.

EFFECTIVITY

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

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, 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)

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 transmittal letter
- The List of Effective Preliminary Pages (LEPP)
- 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
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ECAM ADVISORY CONDITIONS

SYSTEM	CONDITIONS	RECOMMENDED ACTION
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.
CAB PR	CAB VERTICAL SPEED V/S > 1 800 ft/min	CPC changeover is recommended: - MODE SEL: MAN - Wait 10 s - MODE SEL: AUTO • If unsuccessful: - MODE SEL: MAN - Manual pressure control
	CAB ALTITUDE altitude ≥ 8 800 ft	PACK FLOW: HI CPC changeover is recommended: - MODE SEL: MAN - Wait 10 s - MODE SEL: AUTO • If unsuccessful: - MODE SEL: MAN - Manual pressure control
	ΔP ≥ 1.5 PSI in phase 7	LDG ELEV: ADJUST • If unsuccessful: - MODE SEL: MAN - Manual pressure control
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.



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SYSTEM	CONDITIONS	RECOMMENDED ACTION
ENG	OIL PRESS P < 80 PSI	<ul style="list-style-type: none"> - 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 1(2) OIL LO PR alert, continue normal engine operation (it can be assumed that the oil pressure transducer is faulty). <p>In both cases, monitor other engine parameters, especially oil temperature and oil quantity.</p>
	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	<p>An oil temperature increase during normal steady-state operations indicates a system malfunction, and should be closely monitored for other symptoms of engine malfunction.</p> <p><i>Note: If the OIL TEMP increase follows thrust reduction, increasing thrust may reduce oil temperature.</i></p> <p><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></p> <ol style="list-style-type: none"> 1. <i>Low Speed</i> - Increase engine speed to increase fuel flow, and thereby cool IDG oil. 2. <i>High Speed</i> - Reduce generator load, or turn off generator. If oil temperature continues to rise, mechanically disconnect IDG.
	OIL QTY < 5 qt	<p>The oil quantity in the tank can decrease at high thrust setting due to the effect of oil gulping. In that case, the indicated oil quantity will increase after thrust reduction.</p> <p>Monitor the affected engine oil parameters and crosscheck with the other engine - As long as the oil temperature and the oil pressure of the affected engine remain within limits, normal engine operation is not affected.</p> <p>If the oil quantity continues to decrease, both of the following ECAM alerts can be triggered:</p> <ul style="list-style-type: none"> - ENG 1(2) OIL LO PR caution - ENG 1(2) OIL LO PR warning.
	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 ABN-19 HIGH ENGINE VIBRATION</i>).
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 ABN-21 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.
OXY	OXY Amber when pressure is < 400 PSI.	If mask is not being used, check if it is correctly stowed.

SYSTEM RESET - GENERAL

WARNING Only perform one reset at a time, unless indicated differently.

Guidelines to reset a system:

- Set the related normal cockpit control to 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),
- Set the related normal cockpit control to ON, or push the corresponding circuit breaker,
- Wait 3 s for the end of the reset.

■ **On ground:**

Reset ECU (CFM) or EEC (IAE) or EIU only when engine shut down.

Reset BSCU only when aircraft stopped.

Reset ELAC or SEC only when listed in the System Reset Table.

Other Systems not listed in the System Reset Table can be reset following the guidelines described above.

Refer to System Reset Table.

■ **In flight:**

WARNING The flight crew can attempt a system reset only when:

- An ECAM/OEB/FCOM/QRH procedure requests to reset the system, or
- The System Reset Table permits.

CAUTION Do not pull the following circuit breakers:

- SFCC
- ECU or EEC or EIU.

Note: Before taking any action on the cockpit C/Bs, both the PF and PM must crosscheck and ensure that the C/B label corresponds to the affected system.

Refer to System Reset Table.

SYSTEM RESET TABLE

ECAM System	System malfunction or ECAM Alert (Affected System)	Reset Procedure
A-ICE	ANTI ICE L(R) WINDSHIELD(WINDOW) (WHC)	<p>On ground: If the air conditioning packs are OFF with the OAT above 40 °C, and/or the windshield is under direct sunlight, a spurious ANTI ICE L(R) WINDSHIELD(WINDOW) may trigger.</p> <p>In that case, select both air conditioning packs to ON and wait at least 5 minutes for the cockpit temperature to decrease. After, pull, then push the C/B of the affected WHC:</p> <ul style="list-style-type: none">- X13 on 122VU (WHC1)- W13 on 122VU (WHC2).



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ECAM System	System malfunction or ECAM Alert (Affected System)	Reset Procedure
AIR	<p>AIR ENG 1(2) BLEED FAULT or AIR ENG 1(2) BLEED ABNORM PR (Engine Bleed Supply System)</p>	<div style="border: 1px solid orange; padding: 5px;"> <p>CAUTION If the BLEED NOT CLOSED subtitle is displayed in the AIR ENG 1(2) BLEED FAULT alert, do not reset the affected ENG BLEED.</p> </div> <p><u>Note:</u> Do not attempt more than one reset. However, if the first reset is unsuccessful and if the AIR ENG 1(2) BLEED FAULT alert occurred after takeoff with APU bleed ON, a second reset may be attempted when flight conditions permit and when the aircraft is stabilized in level flight.</p> <p>On ground or in flight: If the PACK (non-affected side) is operative, and If the Wing Anti-Ice is OFF:</p> <ul style="list-style-type: none"> - Set ENG BLEED pb-sw (affected side) to OFF <ul style="list-style-type: none"> ■ If ENG BLEED pb-sw FAULT light (affected side) is on: <ul style="list-style-type: none"> - Delay application of the reset until FAULT light extinguishes. ■ If ENG BLEED pb-sw FAULT light (affected side) is off: <ul style="list-style-type: none"> - Set X BLEED selector to AUTO - Set PACK pb-sw (affected side) to ON - Set ENG BLEED pb-sw (affected side) to ON - Check that the affected Engine Bleed Valve is open on the BLEED SD page. • If AIR ENG (AFFECTED) BLEED FAULT alert or AIR ENG (AFFECTED) BLEED ABNORM PR alert reoccur, or If Engine Bleed Valve (affected side) is not open on the BLEED SD page: <ul style="list-style-type: none"> - Set ENG BLEED pb-sw(affected side) to OFF - Set X BLEED selector to OPEN. <p><u>Note:</u> Record the ENG BLEED reset in the logbook (successful or unsuccessful).</p>
	<p>AIR ENG 1(2) BLEED NOT CLSD (Engine Bleed Supply System)</p>	<p><u>Note:</u> Do not attempt more than one reset.</p> <p>On ground only:</p> <ul style="list-style-type: none"> - Set ENG BLEED pb-sw (affected side) to OFF <ul style="list-style-type: none"> ■ If ENG BLEED pb-sw FAULT light (affected side) is on: <ul style="list-style-type: none"> - Delay application of the reset until FAULT light extinguishes. ■ If ENG BLEED pb-sw FAULT light (affected side) is off: <ul style="list-style-type: none"> - Set ENG BLEED pb-sw (affected side) to ON. - Check that the affected Engine Bleed Valve is closed on the BLEED SD page. <p><u>Note:</u> Record the ENG BLEED reset in the logbook (successful or unsuccessful).</p>



Continued from the previous page

ECAM System	System malfunction or ECAM Alert (Affected System)	Reset Procedure
AUTO FLT	<p>AUTO FLT A/THR OFF</p>	<p>On ground, before taxi only:</p> <ul style="list-style-type: none"> • If no engine running: <ul style="list-style-type: none"> - Press FCU A/THR pb in order to re-engage the A/THR (this will cancel the ECAM alert) - Press A/THR instinctive disconnect pb to disconnect A/THR. • If at least one engine is running: <ul style="list-style-type: none"> - Apply external power or APU generator power - ENG MASTER (running engine(s)).....OFF - Press FCU A/THR pb in order to re-engage the A/THR (this will cancel the ECAM alert) - Press A/THR instinctive disconnect pb to disconnect A/THR.
	<p>AUTO FLT FCU 1(2) FAULT (FCU)</p>	<p>In flight:</p> <ul style="list-style-type: none"> - Pull the C/B B05 on 49VU for FCU 1, or M21 on 121VU for FCU 2 - Push it after 5 s - Check the displayed targets and the barometer reference, and correct them if necessary. <p>On ground:</p> <ul style="list-style-type: none"> - Pull the C/B B05 on 49VU for FCU 1, or M21 on 121VU for FCU 2 - 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 FCU 1 and FCU 2 safety tests completion - Check the displayed targets and barometer reference, and correct them if necessary (RESET successful).
	<p>AUTO FLT FCU 1 + 2 FAULT (FCU)</p>	<p>In flight:</p> <ul style="list-style-type: none"> - Pull the C/B B05 on 49VU for FCU 1, and then pull M21 on 121VU for FCU 2 - Push them after 5 s - Check the displayed targets and the barometer reference, and correct them if necessary. <p>On ground:</p> <ul style="list-style-type: none"> - Pull the C/B B05 on 49VU for FCU 1, and then pull M21 on 121VU for FCU 2 - Push the C/Bs 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 at least 30 seconds for FCU 1 and FCU 2 safety tests completion - Check the displayed targets and barometer reference, and correct them if necessary (RESET successful) <p>FCU targets are synchronized on current aircraft values and displayed as selected targets.</p> <ul style="list-style-type: none"> - Re-enter the barometer altimeter setting value, if necessary.
	<p>AUTO FLT YAW DAMPER 1(2) (FAC 1(2))</p>	<p>In flight:</p> <p>If AP is inoperative:</p> <ul style="list-style-type: none"> - Set FAC 1(2) pb to OFF - Wait 3 s



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ECAM System	System malfunction or ECAM Alert (Affected System)	Reset Procedure
		- Set FAC 1(2) pb to ON.
	CAT 3 DUAL displayed in INOP SYS without any other ECAM Alert (FAC)	<p>On ground, or in flight:</p> <p><u>Note:</u> If the CAT 3 DUAL INOP SYS is associated to another ECAM message (in particular ADR FAULT or IR FAULT...), it means that the root cause is not an ADR or IR rejection by FAC or FMGC. Consequently, change of AP or FAC reset will not clear the CAT 3 DUAL inop.</p> <p>If CAT 3 DUAL is displayed in INOP SYS without any other failure being detected:</p> <ul style="list-style-type: none"> - Change the AP in command. <p>If unsuccessful:</p> <ul style="list-style-type: none"> - Set FAC 1 pb to OFF - Wait 3 s - Set FAC 1 pb to ON. <p>Wait for AUTO FLT FAC 1 FAULT to disappear, and:</p> <ul style="list-style-type: none"> - Set FAC 2 pb to OFF - Wait 3 s - Set FAC 2 pb to ON.
	One MCDU locked or blank (MCDU)	<p>On ground, or in flight:</p> <ul style="list-style-type: none"> - Pull the C/B for the locked or blank MCDU and push it back after 10 s. <p>The circuit breakers for the MCDUs are:</p> <ul style="list-style-type: none"> • 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 or FMGC malfunction (FMGC)	<p>The circuit breakers for the FMGCs are:</p> <ul style="list-style-type: none"> • AUTO FLT/FMGC 1 B2 ON 49 VU (Overhead Panel) • AUTO FLT/FMGC 2 M17 ON 121 VU (Right Rear Maintenance Panel) <p>Short FMGC Reset:</p> <p><u>On ground:</u></p> <ul style="list-style-type: none"> • If no engine running: <ul style="list-style-type: none"> - Apply external power or APU generator power. - Wait 2 min before resetting the FMGC circuit breakers. - Set FD 1(2) pb to OFF. - Pull the C/B of the affected FMGC. - Wait 10 s. - Push the C/B of the affected FMGC. <div style="border: 1px solid orange; padding: 5px; margin: 5px 0;"> <p>CAUTION Always wait 1 min after the reset, before engaging or reengaging the FD and the AP of the reset FMGC.</p> </div> <ul style="list-style-type: none"> • If engines running: <ul style="list-style-type: none"> - Set FD 1(2) pb to OFF. - Pull the C/B of the affected FMGC. - Wait 10 s. - Push the C/B of the affected FMGC. <div style="border: 1px solid orange; padding: 5px; margin: 5px 0;"> <p>CAUTION Always wait 1 min after the reset, before engaging or reengaging the FD and the AP of the reset FMGC.</p> </div> <ul style="list-style-type: none"> • If FMGC reset is unsuccessful: <ul style="list-style-type: none"> - Consider FMGC reset with engines not running.



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ECAM System	System malfunction or ECAM Alert (Affected System)	Reset Procedure
		<p><i>Note:</i> The FMGC reset is more effective with engines not running.</p> <p><u>In flight:</u></p> <ul style="list-style-type: none"> - Set FD 1(2) pb to OFF. - Pull the C/B of the affected FMGC. - Wait 10 s. - Push the C/B of the affected FMGC. <div style="border: 1px solid orange; padding: 5px; margin: 10px 0;"> <p>CAUTION Always wait 1 min after the reset, before engaging or reengaging the FD and the AP of the reset FMGC.</p> </div> <p>Long FMGC Reset:</p> <p><u>On ground:</u></p> <ul style="list-style-type: none"> • If no engine running: <ul style="list-style-type: none"> - Apply external power or APU generator power. - Wait 2 min before resetting the FMGC circuit breakers. - Set FD 1(2) pb to OFF. - Pull the C/B of the affected FMGC. - Wait 15 min. - Push the C/B of the affected FMGC. <div style="border: 1px solid orange; padding: 5px; margin: 10px 0;"> <p>CAUTION Always wait 1 min after the reset, before engaging or reengaging the FD and the AP of the reset FMGC.</p> </div> <ul style="list-style-type: none"> • If engines running: <ul style="list-style-type: none"> - Set FD 1(2) pb to OFF. - Pull the C/B of the affected FMGC. - Wait 15 min. - Push the C/B of the affected FMGC. <div style="border: 1px solid orange; padding: 5px; margin: 10px 0;"> <p>CAUTION Always wait 1 min after the reset, before engaging or reengaging the FD and the AP of the reset FMGC.</p> </div> <ul style="list-style-type: none"> • If FMGC reset is unsuccessful: <ul style="list-style-type: none"> - Consider FMGC reset with engines not running. <p><i>Note:</i> The FMGC reset is more effective with engines not running.</p> <p><u>In flight:</u></p> <ul style="list-style-type: none"> - Set FD 1(2) pb to OFF. - Pull the C/B of the affected FMGC. - Wait 15 min. - Push the C/B of the affected FMGC. <div style="border: 1px solid orange; padding: 5px; margin: 10px 0;"> <p>CAUTION Always wait 1 min after the reset, before engaging or reengaging the FD and the AP of the reset FMGC.</p> </div> <p><i>Note:</i> Consider a long FMGC reset only if a short FMGC reset has no effect.</p>



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ECAM System	System malfunction or ECAM Alert (Affected System)	Reset Procedure
BRAKES	<p style="color: orange; margin: 0;">BRAKES SYS 1(2) FAULT</p> <p style="margin: 0;">or</p> <p style="color: orange; margin: 0;">BRAKES BSCU CH 1(2) FAULT (BSCU)</p>	<p>On ground:</p> <ul style="list-style-type: none"> - 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. <p>• IF UNSUCCESSFUL:</p> <ul style="list-style-type: none"> - 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. <p>After a successful reset, resume to normal operation.</p> <p><u>Note:</u> <i>After any BSCU reset:</i></p> <ol style="list-style-type: none"> 1. Check brake efficiency 2. Record BSCU reset in the logbook. <p>In flight:</p> <p>When landing gear is up only:</p> <ul style="list-style-type: none"> - Set A/SKID & N/W STRG sw to OFF - Set A/SKID & N/W STRG sw to ON - If required, rearm the autobrake. <p>When landing gear is down: reset not authorized.</p> <p><u>Note:</u> <i>After any BSCU reset:</i></p> <ul style="list-style-type: none"> - Record BSCU reset in the logbook.
COM	<p style="color: orange; margin: 0;">COM CIDS 1+2 FAULT (CIDS)</p>	<p>On ground:</p> <ul style="list-style-type: none"> - Pull C/Bs in the following order: G02 on 49VU, M05 and N11 on 121VU - Wait 10 s - Push C/B G02 - Wait 5 min - Push C/B M05 - After CIDS reset, wait approximately 4 min before recovering normal operation. <p>In flight:</p> <ul style="list-style-type: none"> - Pull C/Bs in the following order: G02 on 49VU, M05 and N11 on 121VU - Wait 10 s - Push C/B G02 - Wait 10 s - Push C/Bs in the following order: N11 , M05 - After CIDS reset, wait approximately 4 min before recovering normal operation.
COM	<p>Uncommanded EVAC horn activation (CIDS)</p>	<p>On ground, or in flight:</p> <ul style="list-style-type: none"> - Press EVAC HORN SHUT OFF pb - Set EVAC CAPT & PURS/CAPT sw to CAPT position only - Wait 3 s. <p>• IF UNSUCCESSFUL:</p> <ul style="list-style-type: none"> - Pull C/Bs in the following order: G02 on 49VU, M05 and N11 on 121VU - Wait for 1 min - Push C/Bs in the following order: N11 , M05, G02 - After CIDS reset, wait approximately 4 min before recovering normal operation.



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ECAM System	System malfunction or ECAM Alert (Affected System)	Reset Procedure
COM	Frozen/blank RMP display (RMP)	On ground, or in flight: Flight crew must reset all RMPs one after the other via RMP control panel: <ul style="list-style-type: none"> - Set RMP ON/OFF sw to OFF position - Wait 5 s - Set RMP ON/OFF sw to ON position.
COM	FAP freezing (FAP or Tape reproducer/PRAM)	On ground, or in flight: <ul style="list-style-type: none"> - Pull FAP C/B M14 (or Q14) in 121VU - Wait 10 s - Push C/B M14 (or Q14) . <ul style="list-style-type: none"> • IF UNSUCCESSFUL: <ul style="list-style-type: none"> - Pull tape reproducer/PRAM C/B D01 or E01 or F07 on 2000VU (cabin) - Wait 10 s - Push C/B D01 or E01 or F07.
COM	Failure messages on CIDS FAP in the cabin (VSC)	On ground, or in flight: <ul style="list-style-type: none"> - Pull C/B A06 or B06 on 2001VU (aft cabin) - Wait 30 s - Push C/B A06 or B06.
COM	SATCOM malfunction (SATCOM)	On ground, or in flight: <ul style="list-style-type: none"> - Pull SATCOM C/B K01 on 121VU - Wait 5 s - Push SATCOM C/B K01 on 121VU. <p><i>Note:</i></p> <ul style="list-style-type: none"> - SDU should reset in less than 2 min - The flight crew cannot perform software reset for SATCOM via MCDU.



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ECAM System	System malfunction or ECAM Alert (Affected System)	Reset Procedure
DATALINK	ATSU	<p>The ATSU reset should be attempted, only if:</p> <ul style="list-style-type: none"> - INVALID DATA is displayed on the DCDU, or - Key selection has no effect on the DCDU or any of the MCDU ATSU DATALINK submenus, or - ADS-C, CPDLC or AOC are inoperative. <p>On ground or in flight:</p> <ul style="list-style-type: none"> - 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. <p>When the ATSU is reset, the following connections are no longer active:</p> <ul style="list-style-type: none"> - CPDLC: <ul style="list-style-type: none"> • The flight crew should send a notification to the ATC center to re-establish the CPDLC connection. - ADS-C: <ul style="list-style-type: none"> • The flight crew must check that ADS-C is ARMED or ON. • The flight crew should contact the ATC center by voice to re-establish the ADS-C connection. <p><i>Note:</i> As no ADS-C disconnect message is sent, the ATC center(s) consider that the ADS-C connection is still alive.</p>
	CINS	<p>If there is a malfunction of the CINS and if the reset by the cabin crew is unsuccessful, the flight crew can attempt to reset the system using the CINS RESET pb on the panel 45VU on the overhead panel.</p> <p><i>Note:</i> The CINS reset may take up to 10 min.</p>
	DATALINK ATC FAULT or DATALINK COMPANY FAULT or COM VHF 3 DATA FAULT (VHF3)	<p>On ground or in flight:</p> <ul style="list-style-type: none"> - Pull the COM / VHF3 C/B L05 on 121VU - Wait 5 s - Push the COM / VHF3 C/B L05 on 121VU.



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ECAM System	System malfunction or ECAM Alert (Affected System)	Reset Procedure
F/CTL	<p>F/CTL ELAC 1 PITCH FAULT (ELAC)</p>	<p>In flight:</p> <ul style="list-style-type: none"> - Not authorized. <p>On ground:</p> <div style="border: 1px solid orange; padding: 5px; margin-bottom: 10px;"> <p>CAUTION - Do not reset ELAC in case of dispatch with MMEL item SEC 1 or SEC 2.</p> <p>- Do not attempt more than one reset.</p> </div> <ul style="list-style-type: none"> - Set ELAC 2 pb-sw to OFF - Set pitch trim to 5 UP position - Set ELAC 1 pb-sw to OFF - Wait 3 s - Set ELAC 1 pb-sw to On - After 15 s, check pitch trim at 0 position - Perform a flight control check - Set ELAC 2 pb-sw to On - Set pitch trim to takeoff CG <p><i>Note:</i> Record the ELAC 1 reset in the logbook (successful or unsuccessful).</p>
	<p>F/CTL ELAC 2 PITCH FAULT (ELAC)</p>	<p>In flight:</p> <ul style="list-style-type: none"> - Not authorized. <p>On ground:</p> <div style="border: 1px solid orange; padding: 5px; margin-bottom: 10px;"> <p>CAUTION - Do not reset ELAC in case of dispatch with MMEL item ELAC 1, SEC 1 or SEC 2.</p> <p>- Do not attempt more than one reset.</p> </div> <ul style="list-style-type: none"> - Set ELAC 1 pb-sw to OFF - Set pitch trim to 5 UP position - Set ELAC 2 pb-sw to OFF - Wait 3 s - Set ELAC 2 pb-sw to On - After 15 s, check pitch trim at 0 position - Perform a flight control check - Set ELAC 1 pb-sw to On - Set pitch trim to takeoff CG <p><i>Note:</i> Record the ELAC 2 reset in the logbook (successful or unsuccessful).</p>
	<p>F/CTL AIL SERVO FAULT (ELAC)</p>	<p>In flight:</p> <ul style="list-style-type: none"> - Not authorized. <p>On ground:</p> <div style="border: 1px solid orange; padding: 5px; margin-bottom: 10px;"> <p>CAUTION - Do not reset ELAC if more than one aileron actuator indication box is displayed in amber on the F/CTL SD page.</p> <p>- Do not reset ELAC in case of dispatch with MMEL item ELAC 1, SEC 1, SEC 2 or SEC 3.</p> <p>- Do not attempt more than one reset.</p> </div> <ul style="list-style-type: none"> - Set ELAC 1 pb-sw to OFF



Continued from the previous page

ECAM System	System malfunction or ECAM Alert (Affected System)	Reset Procedure
		<ul style="list-style-type: none"> - Set ELAC 2 pb-sw to OFF - Wait 3 s - Set ELAC 2 pb-sw to On - Perform a flight control check - Set ELAC 2 pb-sw to OFF - Set ELAC 1 pb-sw to On - Perform a flight control check - Set ELAC 2 pb-sw to On - Set pitch trim to takeoff CG <p><i>Note:</i> Record the ELAC 1 and ELAC 2 resets in the logbook (successful or unsuccessful).</p>
	F/CTL SPLR FAULT (SEC)	<p>In flight:</p> <ul style="list-style-type: none"> - Not authorized. <p>On ground:</p> <div style="border: 2px solid orange; padding: 5px; margin: 5px 0;"> <p>CAUTION</p> <ul style="list-style-type: none"> - Do not reset SEC in case of dispatch with MMEL item ELAC 1, SEC 1, SEC 2 or SEC 3. - Do not attempt more than one reset. </div> <ul style="list-style-type: none"> - Set SEC 1 pb-sw to OFF - Wait 3 s - Set SEC 1 pb-sw to On - Set SEC 2 pb-sw to OFF - Wait 3 s - Set SEC 2 pb-sw to On - Set SEC 3 pb-sw to OFF - Wait 3 s - Set SEC 3 pb-sw to On - Perform a flight control check <p><i>Note:</i> Record the SEC 1, SEC 2 and SEC 3 resets in the logbook (successful or unsuccessful).</p>
FUEL	Loss of fuel quantity indication or Simultaneous triggering of FUEL L OUTER XFR CLOSED and FUEL R OUTER XFR CLOSED although FUEL SD indicates no anomaly. (FQIC)	<p>On ground, or in flight:</p> <ul style="list-style-type: none"> - Pull the three C/Bs: <ul style="list-style-type: none"> • Channel 1 (A13 on 49VU) • Channel 2 (M27 on 121VU) • Channel 1 and 2 (L26 on 121VU). - Wait 5 s, before pushing the three C/Bs. <p><i>Note:</i> The fuel quantity indication will be re-established within 1 min.</p>
FWS	FWS FWC 1(2) FAULT (FWC)	<p>On ground:</p> <p>Pull, then push, the C/B of the affected FWC:</p> <ul style="list-style-type: none"> - FWC 1 (F01 on 49VU) - FWC 2 (Q7 on 121VU). <p>Wait 50 s after pushing the C/Bs.</p> <p>In flight:</p> <p>Pull, then push, the C/B of the affected FWC:</p> <ul style="list-style-type: none"> - FWC 1 (F01 on 49VU) - FWC 2 (Q7 on 121VU).



Continued from the previous page

ECAM System	System malfunction or ECAM Alert (Affected System)	Reset Procedure
L/G	<p>L/G LGCIU 1(2) FAULT (LGCIU 1(2))</p>	<p>On ground only: The flight crew must depressurize the green hydraulic system before resetting the LGCIU: - ENG 1 PUMP OFF - PTU OFF.</p> <p>When there is no green hydraulic pressure: - To reset LGCIU 1: • Pull C/B Q34 on 121VU, then C09 on 49VU, then R32 on 121VU. • Wait for 15 s, then push the C/Bs. - To reset LGCIU 2: • Pull C/B Q35 on 121VU, then R33 on 121VU. • Wait for 15 s, then push the C/Bs.</p> <p>After the LGCIU reset, restore green hydraulic pressure (ENG 1 PUMP ON, PTU AUTO).</p>
NAV	<p>NAV TCAS FAULT (TCAS)</p>	<p>On ground only: - Pull C/B K10 on 121VU - Wait 5 s, then push the C/B.</p>
SMOKE	<p>SMOKE DET FAULT (SDCU)</p>	<p>On ground only: - Pull C/B C06 on 49VU, and C/B T18 on 122VU - Wait 10 s before pushing both C/Bs.</p>
VENT	<p>VENT AVNCS SYS FAULT (AEVC)</p>	<p>On ground only: - Pull C/B Y17 on 122VU - Wait 5 s before pushing the C/B.</p>
WHEEL	<p>WHEEL N.W STEER FAULT or WHEEL N/W STRG FAULT (BSCU)</p>	<p>On ground only:</p> <p>Case A If the three conditions below are fulfilled: - the WHEEL N/W STRG FAULT alert was triggered just after engine start - the N/W STRG DISC memo was displayed before the start of the pushback (before the aircraft starts moving) - the N/W STRG DISC memo remained displayed even after the pushback is finished (nosewheel steering selector bypass pin is in the steering position).</p> <p>Apply the below reset procedure. If the ECAM alert disappears after the reset, the flight crew may continue the flight without troubleshooting.</p> <p>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.</p> <p>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 - Set A/SKID & N/W STRG sw to ON.</p> <p>Note: After any BSCU reset: 1. Check brake efficiency 2. Check absence of aircraft veering 3. Record the BSCU reset in the logbook.</p>

A318/A319/A320/A321 QUICK REFERENCE HANDBOOK	ABNORMAL AND EMERGENCY PROCEDURES	10.01A 23 NOV 21
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DOUBLE AOA HEAT FAILURE

One of affected ADRs..... OFF
Keep preferably ADR1 available as ADR1 is supplied in EMER ELEC config.
NAV ADR 1(2)(3) FAULT

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BLEED 1+2 FAULT

- At ANY TIME of the procedure, if **CAB PR EXCESS CAB ALT** alert triggers:
APPLY ECAM PROC

CONTINUE DESCENT TO FL 100 / MEA-MORA

KEEP WING A.ICE OFF

AVOID ICING CONDITIONS

RCL pb.....PRESS

*This action enables to recover the subtitle (if any) associated with the **AIR ENG 1+2 BLEED FAULT** alert.*

- If no subtitle with **AIR ENG 1+2 BLEED FAULT** alert
and
If both engine bleeds lost NOT due to engine fire NOR Start Air Valve failed open:
APU.....START

■ If APU available:

- When at or below FL 200:
KEEP WING A.ICE OFF
APU BLEED.....ON

- If PACK 1 available:
PACK 2.....OFF

- If APU bleed available:
MAX FL: 200
PACK 1.....ON
PACK 2.....ON
ENG 1 BLEED.....ON
ENG 2 BLEED.....ON
APU BLEED.....OFF

- If no engine bleed recovered:
APU BLEED.....ON

- If PACK 1 available:
PACK 2.....OFF
ENG 1 BLEED.....OFF
ENG 2 BLEED.....OFF

WING A.ICE NOT AVAILABLE

- If APU bleed not available:
APU BLEED.....OFF

- When at or below FL 100 / MEA-MORA:
PACK 1.....ON
PACK 2.....ON
ENG 1 BLEED.....ON
ENG 2 BLEED.....ON



BLEED 1+2 FAULT (Cont'd)



- **If no engine bleed recovered:**
 ENG 1 BLEED..... OFF
 ENG 2 BLEED..... OFF
 MAX FL: 100 / MEA-MORA
 WING A.ICE NOT AVAILABLE
- **When CAB PR ΔP < 1 psi:**
 RAM AIR..... ON

- **If APU not available:**
 APU BLEED..... OFF

- **When at or below FL 100/ MEA-MORA:**
 PACK 1..... ON
 PACK 2..... ON
 ENG 1 BLEED..... ON
 ENG 2 BLEED..... ON

- **If no engine bleed recovered:**
 ENG 1 BLEED..... OFF
 ENG 2 BLEED..... OFF
 MAX FL: 100 / MEA-MORA
 WING A.ICE NOT AVAILABLE
- **When CAB PR ΔP < 1 psi:**
 RAM AIR..... ON

- **If LEFT LEAK subtitle with AIR ENG 1+2 BLEED FAULT alert**
 or

If engine 1 bleed lost due to engine 1 fire or Start Air Valve 1 failed open or APU leak fed by engine:

- **When at or below FL 100 / MEA-MORA:**
 PACK 2..... ON
 ENG 2 BLEED..... ON

- **If engine 2 bleed not recovered:**
 ENG 2 BLEED..... OFF
 MAX FL: 100 / MEA-MORA
 WING A.ICE NOT AVAILABLE

- **When CAB PR ΔP < 1 psi:**
 RAM AIR..... ON

- **If RIGHT LEAK subtitle with AIR ENG 1+2 BLEED FAULT alert**
 or

If engine 2 bleed lost due to engine 2 fire or Start Air Valve 2 failed open:
APU..... START



BLEED 1+2 FAULT (Cont'd)



- **If APU available:**
 - **When at or below FL 200:**
KEEP WING A.ICE OFF
APU BLEED..... ON
 - **If APU bleed available:**
MAX FL: 200
PACK 1..... ON
ENG 1 BLEED..... ON
APU BLEED..... OFF
 - **If engine 1 bleed not recovered:**
APU BLEED..... ON
ENG 1 BLEED..... OFF
WING A.ICE NOT AVAILABLE
 - **If APU bleed not available:**
APU BLEED..... OFF
 - **When at or below FL 100 / MEA-MORA:**
PACK 1..... ON
ENG 1 BLEED..... ON
 - **If engine 1 bleed not recovered:**
ENG 1 BLEED..... OFF
MAX FL: 100 / MEA-MORA
WING A.ICE NOT AVAILABLE
 - **When CAB PR ΔP < 1 psi:**
RAM AIR..... ON
- **If APU not available:**
APU BLEED..... OFF
- **When at or below FL 100 / MEA-MORA:**
PACK 1..... ON
ENG 1 BLEED..... ON
- **If engine 1 bleed not recovered:**
ENG 1 BLEED..... OFF
MAX FL: 100 / MEA-MORA
WING A.ICE NOT AVAILABLE
- **When CAB PR ΔP < 1 psi:**
RAM AIR..... ON



BLEED 1+2 FAULT (Cont'd)



- If both **LEFT LEAK** and **RIGHT LEAK** subtitles with **AIR ENG 1+2 BLEED FAULT** alert

or

If both engine bleeds lost due to engine fire or Start Air Valve failed open or APU leak fed by engine:

NO ENGINE BLEED CAN BE RECOVERED

MAX FL: 100 / MEA-MORA

WING A.ICE NOT AVAILABLE

- **When CAB PR $\Delta P < 1$ psi:**

RAM AIR..... ON

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RESIDUAL BRAKING

- **In flight:**
BRAKE PEDALS..... PRESS SEVERAL TIMES
 - **If residual pressure remains:**
A/SKID & N/W STRG sel..... KEEP ON
 - **For landing:**
AUTO/BRK.....MED
 - **If autobrake not available:**
APPLY BRAKING JUST AFTER TOUCHDOWN
- POSSIBLE BRAKING ASYMMETRY

Note: If tire damage is suspected after landing, refer to FCOM-LIM-LG Landing Gear-Taxi with Deflated or damaged Tires.

CABIN OVERPRESSURE

PACK 1 OR 2.....OFF
VENTILATION BLOWER.....OVRD
VENTILATION EXTRACT.....OVRD
 ΔP FREQUENTLY MONITOR

- If $\Delta P > 9$ PSI:

LAND ASAP

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

- 10 min before landing:

PACK 1.....OFF
PACK 2.....OFF
VENTILATION BLOWER.....AUTO
VENTILATION EXTRACT.....AUTO

- Before door opening: CHECK ΔP ZERO

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TOO HOT COCKPIT AND CABIN TEMPERATURE IN FLIGHT

PACKS OUTLET TEMP [BLEED SD PAGE].....CHECK

- **If difference between both packs at or above 10 °C:**
 PACK WITH THE HIGHEST OUTLET TEMP.....OFF

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COCKPIT DOOR FAULT

CKPT DOOR CONT [OVHD PANEL] CHECK

- **If one or more STRIKE status lights on:**

COCKPIT DOOR..... OPEN

COCKPIT DOOR sw..... UNLOCK 10 s THEN NORM

- **If two or more STRIKE status lights on:**

COCKPIT DOOR NOT INTRUSION PROOF.

- **If two CHAN status lights on:**

AUTOMATIC LATCH RELEASE NOT AVAILABLE AFTER COCKPIT DECOMPRESSION.

- **If no status light on:**

TO UNLOCK THE DOOR: COCKPIT DOOR HANDLE AVAIL

Intentionally left blank

DISPLAY UNIT FAILURE

- **If DU flashes:**
 - **If captain PFD, ND, Upper ECAM or MCDU 1 affected:**
 GEN 1.....OFF
 - **If DUs flash continues:**
 GEN 1..... ON
 - **If DUs flash stops:**
 KEEP GEN 1 OFF
 RUD TRIM..... CHECK/RESET
Use the sideslip indication to reset the rudder trim if necessary.
 APU START..... CONSIDER
 - **If first officer PFD, ND, lower ECAM or MCDU 2 affected:**
 GEN 2.....OFF
 - **If DUs flash continues:**
 GEN 2..... ON
 - **If DUs flash stops:**
 KEEP GEN 2 OFF
 RUD TRIM..... CHECK/RESET
Use the sideslip indication to reset the rudder trim if necessary.
 APU START..... CONSIDER
- **If DU blank or display distorted:**
 DU brightness knob (affected DU).....AS RQRD
 CONSIDER ECAM/ND XFR
 CONSIDER PFD/ND XFR
- **If diagonal line on affected DU:**
 CONSIDER EIS DMC SWITCHING
 - **If unsuccessful:**
 DU brightness knob (affected DU).....OFF THEN ON

Note: Reduce ND range, or deselect WPT or CSTR, and the ND display may automatically recover, after about 30 s.
- **If inversion of E/WD and SD:**
 ECAM UPPER DISPLAY brightness knob.....OFF THEN ON

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ELEC EMER CONFIG SUMMARY

CRUISE


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, use the performance application of the EFB.

APPROACH

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

FLARE: Only 2 spoilers per wing. Direct law

SPOILERS: Only 2 per wing

NO REVERSER

BRAKING: ALTERNATE without antiskid

MAX BRK PR : 1 000 PSI

NO NOSEWHEEL STEERING

GO-AROUND

- **When L/G uplocked:**
ALTN LAW: PROT LOST

ELEC EMER CONFIG SYS REMAINING

ELEC EMER CONFIG SYS REMAINING		EMER GEN RUNNING	BAT ONLY	
			IN FLIGHT	ON THE GROUND
ICE - RAIN	WING A.ICE	Norm	Inop	Inop
	ENG A. ICE VALVE	Open	Open	Open
	CAPT PITOT	Norm	Norm	Norm ^(a)
	CAPT AOA	Norm	Inop	Inop
	RAIN REPELLENT (CAPT)	Norm	Norm	Norm
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 ^(b)
	X BLEED (MAN CTL)	Norm	Inop	Inop
APU	ECB - STARTER	Norm ^(c)	Norm ^(d)	Inop ^(b)
	FUEL LP VALVE	Norm	Norm	Norm
	FUEL PUMP	Norm	Norm	Norm
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
AIR COND PRESS	PRESS AUTO SYS 1	Norm	Norm	Norm
	MAN PRESS CTL	Inop	Inop	Inop ^(b)
	RAM AIR	Norm	Norm	Norm
	PACK VALVE 1	Norm	Closure Inop	Closure Inop
	PACK VALVE 2	Closure Inop	Closure Inop	Closure Inop ^(b)
	AVIONIC VENT	Norm	Norm	Partial
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
EIS	PFD 1	Norm	Norm	Norm ^(a)
	ND 1	Norm	Inop	Inop
	ECAM upper disp.	Norm	Norm	Norm ^(a)
	DMC 1 or 3	Norm	Norm	Norm ^(a)
	SDAC 1, FWC 1	Norm	Norm	Norm ^(a)
	ECAM CONT. panel	Norm	Norm	Norm
FLT INS	CLOCKS	Norm	Norm	Norm



Continued from the previous page

ELEC EMER CONFIG SYS REMAINING		EMER GEN RUNNING	BAT ONLY	
			IN FLIGHT	ON THE GROUND
EMER EQPT	CREW OXY	Norm	Norm ^(e)	Norm ^(e)
	PAX OXY mask release (auto + man)	Norm	Inop	Inop
	SLIDES ARM/WARN	Norm	Norm	Norm
PWR PLT	FADEC	A + B ^(f)	A + B ^(f)	A + B ^(f)
	IGNITION	A only	A only	A only
	HP FUEL VALVE closure	Norm	Norm	Norm
FLT CTL	ELAC	N° 1 only	N° 1+ N° 2	N°1+ N°2 ^(g)
	SEC	N° 1 only	N° 1	N° 1 ^(g)
	FCDC	N° 1 only	Inop	Inop
	SFCC	N° 1 only	N° 1 only	N° 1 only
	Flaps POS ind	Norm	Norm	Norm ^(a)
FIRE	ENG 1 LOOP	A only	A only	A only
	ENG 2 LOOP	B only	B only	B only
	APU LOOP	Inop	Inop	Inop ^(b)
	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 ^(b)
	APU AUTO EXT.	Inop	Inop	Inop ^(b)
FUEL	LP VALVE	Norm	Norm	Norm
	FQI channel 1	Norm	Inop	Inop
	X FEED VALVE	Norm	Inop	Inop
	INTERTANK TRANSFER VALVE	Norm	Inop	Inop
HYD	FIRE VALVES	Norm	Norm	Norm
L/G	LGCIU SYS 1	Norm	Norm	Norm
	BRK PRESS IND	Norm	Norm	Norm
	PARK BRK	Norm	Norm	Norm
LIGHTS	EMER CKPT	Norm	Norm	Norm
	EMER CAB	Norm	Norm	Norm
MISC	MECH HORN	Norm	Norm	Norm



Continued from the previous page

ELEC EMER CONFIG SYS REMAINING		EMER GEN RUNNING	BAT ONLY	
			IN FLIGHT	ON THE GROUND
NAV	IR	N° 1 only ^(h)	N° 1 only ^(h)	N° 1 only ^(h)
	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 ^(a)
	MMR	N° 1 only	N° 1 only	N° 1 only ^(a)
	DME	N° 1 only	Inop	Inop
	DDRMI	Norm	Norm	Norm ^(a)
	ATC	N° 1 only	Inop	Inop
	STBY HORIZON	Norm	Norm	Norm
	STBY COMP (LT)	Norm	Norm	Norm
	STBY ALTI (VIB)	Norm	Inop	Inop

(a) Lost, when speed is below 50 kt.

(b) Restored, when speed is below 100 kt.

(c) For APU start only.

(d) Not available for 45 s, after the loss of both engine generators.

(e) Crew oxygen valve inoperative.

(f) Channels A and B are self-powered above 10 % N2. If N2 is below 10 % , only Channel A is powered.

(g) Lost 30 s after last engine shutdown.

(h) 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

C/B TRIPPED

■ **On ground:**

Do not reengage the circuit breaker (C/B) of the fuel pump(s) of any tank. For all other C/B, if the flight crew coordinates the action with maintenance, the flight crew may reengage a tripped C/B, provided that the cause is identified.

■ **In flight:**

Do not reengage a circuit breaker (C/B), unless the captain judges it necessary to do so for the safe continuation of the flight. Only one reengagement should be attempted.

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ALL ENG FAIL
LAND ASAP

EMER ELEC PWR MAN ON pb..... PRESS
 OPTIMUM RELIGHT SPEED..... 280/0.77
In case of both engines failure during climb or cruise, fly at or above the optimum relight speed.

PITCH TARGET IN CASE OF SPEED INDICATION FAILURE	
Gross Weight	Pitch (°)
At or below 50 000 kg	-2.5
60 000 kg	-1.5
70 000 kg	-0.5

APU (below FL 250)..... START
 THR LEVERS..... IDLE
 FAC 1..... OFF THEN ON
 GLIDING DISTANCE : 2 NM / 1000 FT

AT 280 KT: 2 NM / 1000 FT (500 FT/NM) NO WIND			
Flight Level	FL 200	FL 300	FL 400
Distance (NM)	40	60	80

DIVERSION..... INITIATE
 VHF1/HF1 /ATC1..... USE
 ATC..... NOTIFY
 CABIN CREW..... NOTIFY
 SIGNS..... ON
 CREW OXY MASK (FL > 100)..... USE
 FUEL QUANTITY..... CHECK

- **If engine relight can be attempted:**
 Refer to QRH 19.02A
- **If engine relight cannot be attempted:**
 Refer to QRH 19.03A



ALL ENG FAIL (Cont'd)




- **If engine relight can be attempted:**
ENG MODE sel..... IGN
- **Approaching or below FL 300: Windmill Relight**
ALL ENG MASTERS..... OFF 30 S THEN ON
ENGs RELIGHT..... TRY REGULARLY
Windmill relight attempts can be repeated until successful, or until the APU bleed is available.
APU (below FL 250)..... START
- **If APU available and windmill relight unsuccessful : Starter Assisted Relight below FL 200**
ALL ENG MASTERS..... OFF
OPTIMUM SPEED: GREEN DOT (REFER TO TABLE BELOW)

GREEN DOT SPEED WITH ALL ENGINES INOPERATIVE (kt)

Gross 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

- WING ANTI ICE..... OFF
- APU BLEED..... ON
- ENG MASTER (one at a time)..... ON
Between each attempt to relight the same engine, wait at least 30 s with the associated ENG MASTER lever set to OFF.

SPEED BRAKES AVAILABLE

- **When below 10 000 ft AGL:**
PREPARE CABIN AND COCKPIT
RAM AIR..... ON
BARO REF (if avail)..... SET
COMMERCIAL..... OFF
ELT  (when conditions permit)..... ON
ENGs RELIGHT..... TRY REGULARLY

USE RUDDER WITH CARE

- **If ditching anticipated:**
Refer to Ditching procedure - 19.04A



ALL ENG FAIL (Cont'd)



- **If forced landing anticipated:**

Refer to Forced landing procedure - 19.05A



ALL ENG FAIL (Cont'd)



- **If engine relight cannot be attempted:**
OPTIMUM SPEED: GREEN DOT (REFER TO TABLE BELOW)


GREEN DOT SPEED WITH ALL ENGINES INOPERATIVE (kt)			
Gross 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

GLIDING DISTANCE : 2.5 NM / 1000 FT

GLIDING DISTANCE AT GREEN DOT: 2.5 NM / 1000 FT (400 FT/NM) NO WIND			
Flight Level	FL 200	FL 300	FL 400
Distance (NM)	50	75	100

APU (below FL 250)..... START
 WING ANTI ICE..... OFF
 APU BLEED (below FL 200).....ON

SPEED BRAKES AVAILABLE

- **Below 10 000 ft AGL:**
 PREPARE CABIN AND COCKPIT
 RAM AIR..... ON
 BARO REF (if avail)..... SET
 COMMERCIAL.....OFF
 ELT  (when conditions permit)..... ON

USE RUDDER WITH CARE

- **If ditching anticipated:**
Refer to Ditching procedure - 19.04A
- **If forced landing anticipated:**
Refer to Forced landing procedure - 19.05A



ALL ENG FAIL (Cont'd)



- **If ditching anticipated:**
 MIN RAT SPEED : 140 KT
 GPWS SYS..... OFF
 GPWS TERR..... OFF
- **At appropriate altitude (above 3 000 ft AGL), configure aircraft for ditching:**
 FOR LANDING : USE FLAP 2
 KEEP LANDING GEAR UP
 VAPP..... DETERMINE

<i>Gross Weight (1000 kg)</i>	40	50	60	70	80	90	95
<i>VAPP (kt)</i>	150	150	163	173	183	193	198

- **At 2 000 ft AGL:**
 CABIN CREW..... NOTIFY FOR DITCHING
 DITCHING pb..... ON
Ditch the aircraft parallel to the swell. If that causes a strong crosswind, ditch the aircraft into the wind.
- **At 500 ft AGL:**
 BRACE FOR IMPACT..... ORDER
 TOUCH DOWN AT MIN V/S
 TARGET PITCH ATT 11 °
- **At touchdown:**
 ALL ENG MASTERS..... OFF
 APU MASTER SW..... OFF
- **After ditching:**
 ATC (VHF 1)..... NOTIFY
 ALL FIRE pb (ENGs & APU)..... PUSH
 ALL AGENT (ENGs & APU)..... DISCH
 EVACUATION..... INITIATE



ALL ENG FAIL (Cont'd)



● **If forced landing anticipated:**

DESCENT SLOPE (CONF 2, L/G DOWN) : 1.6 NM / 1000 FT (600 FT/NM)

MIN RAT SPEED: 140 KT

GPWS SYS..... OFF

GPWS TERR..... OFF

● **At appropriate altitude (above 3 000 ft AGL), configure aircraft for landing:**

FOR LANDING : USE FLAP 2

Only slats extend, and slowly.

VAPP DETERMINE

Gross Weight (1000 kg)	40	50	60	70	80	90	95
VAPP (kt)	150	150	163	173	183	193	198

● **When in CONF 2 and VAPP:**

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

Flight controls revert to direct law at landing gear extension.

MAN PITCH TRIM NOT AVAILABLE

Disregard the "USE MAN PITCH TRIM" message on the PFD.

● **When L/G downlocked:**

L/G lever..... DOWN

APPROACH SPEED..... ADJUST

Adjust the speed to the above-mentioned VAPP. However, to reach the landing field or runway, it is possible to increase the approach speed.

SPLRs..... ARM

MAX BRK PR : 1 000 PSI

● **At 2 000 ft AGL:**

CABIN CREW..... NOTIFY FOR LANDING

● **At 500 ft AGL:**

BRACE FOR IMPACT..... ORDER

● **At touchdown:**

ALL ENG MASTERS..... OFF

APU MASTER SW..... OFF

BRAKES ON ACCU ONLY

● **When aircraft stopped:**

PARKING BRK..... ON

ATC (VHF 1)..... NOTIFY

ALL FIRE pb (ENGs & APU)..... PUSH

ALL AGENT (ENGs & APU)..... DISCH

■ **If evacuation required:**

EVACUATION..... INITIATE



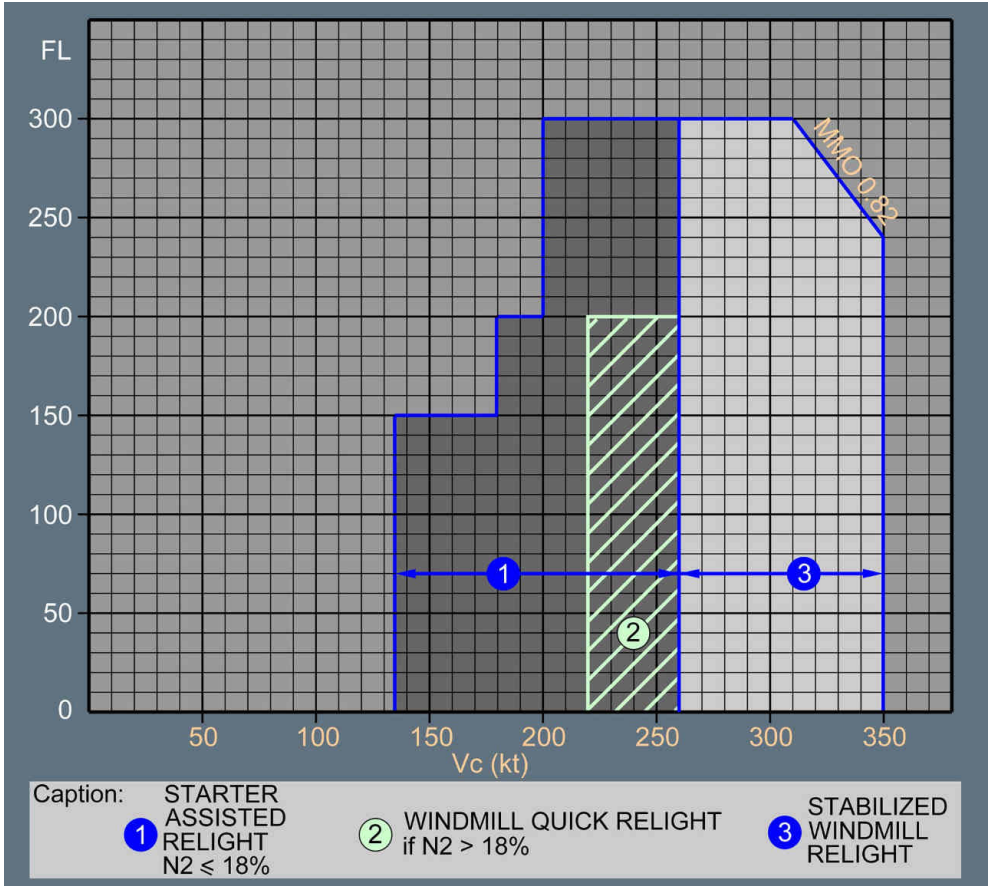
ALL ENG FAIL (Cont'd)



- **If evacuation not required:**
CABIN CREW and PASSENGERS (PA)..... NOTIFY

ENG RELIGHT
IN FLIGHT

Engine Relight Envelope



- ENG MASTER (affected engine).....OFF
- THR LEVER (affected engine)..... IDLE
- ENG MODE sel..... IGN
- X BLEED OPEN
- WING ANTI-ICE (for starter assisted)..... OFF
- ENG MASTER (affected engine)..... ON

Note: Engine light up should be achieved within 30 s after fuel flow increases.

AUTOMATIC START ABORT NOT AVAIL

■ **When idle reached:**

- ENG MODE selector..... NORM
- TCAS MODE selector..... TA/RA
- X BLEED.....AUTO
- Affected SYS..... RESTORE

■ **If no relight:**

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

ENG 1(2) STALL

■ **On 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 parameters:**

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

ENG 1(2) SHUT DOWN

■ **If normal ENG parameters:**

ENG ANTI-ICE (affected engine)..... ON
THR LEVER (affected engine)..... SLOWLY MOVE FORWARD

● **If stall recurs:**

THR LEVER (affected engine)..... MOVE BACKWARD
Reduce thrust and operate below the thrust threshold where stall recurs.

● **If stall does not recur:**

CONTINUE NORMAL ENGINE OPERATION

ENGINE TAILPIPE FIRE

CAUTION External fire agents can cause severe corrosive damage. Consider the use of external fire agents only if the following procedure does not stop engine tailpipe fire.

- ENG MASTER (affected engine).....OFF
- ENG MAN START pb (affected engine)..... OFF
- ESTABLISH AIR BLEED PRESS
- BEACON.....ON
- ENG MODE sel..... CRANK
- ENG MAN START pb (affected engine)..... ON
- **When fire stopped :**
 - ENG MAN START pb (affected engine)..... OFF
 - ENG MODE sel..... NORM

HIGH ENGINE VIBRATION

- **On ground, during ENG start if N2 VIB > 6.5:**
 ENG MASTER (affected engine)..... OFF
 A maximum of three new start attempts can be performed. Each start attempt must be initiated after the engine has completely spooled down.
 - **If still N2 VIB after third new start attempt: REQUEST MAINTENANCE ACTION**

- **In all other cases of high N1 or N2 vibrations:**
 ENG PARAMETERS.....CHECK
 - **If icing suspected:**
 A/THR..... OFF
 THRUST (one engine at a time).....IDLE THEN INCREASE N1 > 90 %
Reduce thrust to idle if flight conditions permit.
If ENG ANTI ICE is OFF, switch it ON at idle fan speed, one engine after the other with approximately 30 s interval.
To shed ice, it may be necessary to perform several thrust variations between idle and a thrust compatible with the flight phase.
 - **If icing not suspected:**
 - **If above vibration advisory and flight conditions permit:**
 THRUST (affected engine).....
 REDUCE BELOW ADVISORY THRESHOLD
 - **After landing, if vibrations continue : SHUT DOWN ENGINE WHEN POSSIBLE**

**ON GROUND - NON ENG SHUTDOWN
AFTER ENG MASTER OFF**

ECAM FUEL PAGE..... SELECT

LP FUEL VALVE POSITION (affected engine).....CHECK

■ **If LP fuel valve closed (cross line amber):**

NO CREW ACTION

■ **If LP fuel valve open:**

ENG FIRE pb-sw (affected engine).....PRESS

GROUND CREW.....NOTIFY

IN BOTH CASES, ENGINE WILL SHUT DOWN AFTER A TIME DELAY UP TO 2 MIN 30 S

ONE ENGINE INOPERATIVE - CIRCLING APPROACH

MAXIMUM WEIGHT FOR CIRCLING IN CONF 3 WITH GEAR DOWN (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							

- **If aircraft weight above maximum weight for circling in CONF 3 with gear down:**

DELAY GEAR EXTENSION TO MAINTAIN LEVEL FLIGHT

FOR LANDING: USE FLAP 3

GPWS LDG FLAP 3..... ON

- Note:*
- If circling below 750 ft RA, the "L/G GEAR NOT DOWN" alert will trigger. The pilot can cancel the aural warning by pressing the EMER CANC pb.
 - If the landing gear is not downlocked at 500 ft RA, GPWS "TOO LOW GEAR" aural alert will trigger.

ONE ENGINE INOPERATIVE - STRAIGHT-IN APPROACH

- **If NO level off expected during final approach:**
DELAY CONF FULL UNTIL ESTABLISHED ON FINAL DESCENT
- **If level off expected during final approach:**
FOR LANDING: USE CONF 3

LANDING WITH SLATS OR FLAPS JAMMED

LDG DIST PROC..... APPLY

Determine flap lever position for landing.

- **Repeat the following until landing configuration is reached:**

SPD SEL..... VFE NEXT - 5 kt

AT VFE NEXT: SELECT FLAPS LEVER ONE STEP DOWN

Note:

- *OVERSPEED alert, 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*
- *In some cases, the recommended speed for go around requested by the procedure might be slightly above the VFE displayed on PFD as the VFE is linked to the S/F lever position. The Overspeed Warning will not be triggered as it is taking into account the actual slat/flap position.*
- *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.*

- **When in landing CONF and in final approach:**

DECELERATE TO CALCULATED VAPP

AP BELOW 500 ft AGL : DO NOT USE

- **For Go-around:**

MAX SPEED					
Flaps	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		200 kt	200 kt	185 kt	
1 < S ≤ 3	177 kt				177 kt
S > 3					

■ **If SLATS FAULT:**

- **For circuit:**

MAINTAIN SLATS/FLAPS CONFIGURATION

Recommended speed: MAX SPEED - 10 kt

- **For diversion:**

SELECT CLEAN CONFIGURATION

Recommended speed for flaps retraction: between MAX SPEED - 10 kt and MAX SPEED

Recommended speed for diversion: MAX SPEED - 10 kt.

INCREASED FUEL CONSUMPTION

■ **If FLAPS FAULT:**

- **For circuit:**

MAINTAIN SLATS/FLAPS CONFIGURATION



LANDING WITH SLATS OR FLAPS JAMMED (Cont'd)



Recommended speed: MAX SPEED - 10 kt

- If **HYD G+Y SYS LO PR**:
Maintain speed close to VAPP
 - For diversion:
 - If **FLAPS jammed at 0**:
SELECT CLEAN CONFIGURATION
Recommended speed for slats retraction: between MAX SPEED - 10 kt and MAX SPEED
USE NORMAL OPERATING SPEEDS
 - If **HYD G+Y SYS LO PR**:
Maintain at least the higher of VAPP or VLS
 - If **FLAPS jammed > 0**:
MAINTAIN SLAT/FLAP CONFIGURATION
Recommended speed for diversion: MAX SPEED - 10 kt
 - If **HYD G+Y SYS LO PR**:
Maintain speed close to VAPP
- INCREASED FUEL CONSUMPTION

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, to obtain the fuel penalty required to reach the destination in the current configuration. *Refer to OPS Fuel Penalty Factors/ECAM Alert Table.*

RUDDER JAM

LDG DIST PROC..... APPLY

- **For approach:**
 AVOID LANDING WITH CROSSWIND FROM THE SIDE WHERE THE
 RUDDER IS DEFLECTED
 MAX XWIND FOR LDG: 15 kt
 AUTO BRK..... DO NOT USE
 FOR LANDING..... USE NORMAL CONF
 SPEED AND TRAJECTORY..... STABILIZE ASAP

- **For landing:**
 DIFFERENTIAL BRAKING..... USE ASAP
 REVERSER: SYMMETRIC USE ONLY
Use nosewheel steering handle below 70 kt.

STABILIZER JAM

AP..... OFF

MAN PITCH TRIM.....CHECK

The pitch trim wheel may not be fully jammed, the force needed may be higher than usual.

● **If MAN PITCH TRIM available:**

TRIM FOR NEUTRAL ELEV

● **If MAN PITCH TRIM not available:**

FOR LANDING: USE FLAP 3

GPWS LDG FLAP 3..... ON

CAT 1 ONLY

FUEL IMBALANCE

FOB..... CHECK

CAUTION

A fuel imbalance may indicate a fuel leak.
Do not apply this procedure, if a fuel leak is suspected. *Refer to
ABN-21 Fuel Leak*

FUEL X FEED..... ON

CTR TK PUMP 1..... OFF

CTR TK PUMP 2..... OFF

● **On lighter side :**

FUEL PUMPS..... OFF

● **When fuel balanced:**

ALL FUEL PUMPS..... ON

FUEL X FEED..... OFF

FUEL LEAK

LAND ASAP

- Leak from engine/pylon confirmed by excessive fuel flow, low N1, or visual check:
 - THR LEVER (affected engine)..... IDLE
 - ENG MASTER (affected engine)..... OFF
 - FUEL X FEED..... AS RQRD
 - DO NOT RESTART AFFECTED ENGINE

- Leak from engine/pylon not confirmed or leak not located:
 - FUEL X FEED..... MAINTAIN CLOSED
 - CTR TK PUMP 1..... OFF
 - CTR TK PUMP 2..... OFF
 - INNER TANK FUEL QUANTITIES..... MONITOR

- If one inner tank depletes faster than other by at least 300 kg (660 lb) in less than 30 min:
 - THR LEVER (engine on leaking side)..... IDLE
 - ENG MASTER (engine on leaking side)..... OFF
 - CTR TK PUMP 1..... ON
 - CTR TK PUMP 2..... ON
 - FUEL LEAK..... MONITOR

- If leak stops:
 - ENGINE LEAK CONFIRMED
 - FUEL X FEED..... AS RQRD
 - DO NOT RESTART AFFECTED ENGINE

- If leak continues (after engine shutdown):
 - WING LEAK 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.
----------------	--

- If both inner tanks deplete at a similar rate:
 - LEAK FROM CENTER TANK OR APU FEEDING LINE SUSPECTED
 - If fuel smell in cabin:
 - APU..... OFF
 - When fuel quantity in one inner tank less than 3 000 kg (6 600 lb):
 - CTR TK PUMP 1..... ON
 - CTR TK PUMP 2..... ON

- For landing: DO NOT USE REVERSERS

GRAVITY FUEL FEEDING

ENG MODE SEL.....IGN

AVOID NEGATIVE G FACTOR

MAX FL: GRAVITY FEED CEILING

- Current FL if flight time above FL 300 > 30 min.
- FL 300 if flight time above FL 300 < 30 min.
- Highest of FL 150 or 7 000 ft above takeoff airport if FL 300 never exceeded.
- FL 100 for JET B.

● **When reaching gravity feed ceiling:**

FUEL X FEED..... OFF

● **If no fuel leak and with one engine running (fed by gravity):**

FUEL X FEED..... ON

BANK ANGLE..... 1 ° WING DOWN ON LIVE ENG 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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FUEL OVERREAD

FOB / F. USED..... CHECK

- **If discrepancy confirmed:**
 - FUEL QTY UNRELIABLE
 - DISREGARD FMS FUEL PREDICTIONS
 - COMPUTE FOB FROM INITIAL FOB - F. USED
- FUEL LO LVL ALERTS REMAIN RELIABLE
- Maintenance action is due before next flight

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HYD B + Y SYS LO PR SUMMARY

CRUISE

MAX SPD : 320/0.77

MANEUVER WITH CARE

FLIGHT CONTROLS REMAIN IN NORMAL LAW

FUEL: Increased fuel consumption (*Refer to OPS Use of Fuel Penalty Factor Tables*)

For **Landing Performance** assessment, use the performance application of the EFB.

APPROACH

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

LANDING

FLARE: Only one ELEV and two spoilers per wing

SPOILERS: Only 2 per wing

REVERSER: Only N°1

BRAKING: NORMAL

GO-AROUND

MAX PITCH 15 DEG

NO GEAR RETRACTION

FUEL: Increased fuel consumption (*Refer to OPS Use of Fuel Penalty Factor Tables*)

HYD G + B SYS LO PR SUMMARY

CRUISE

SPD BRK : DO NOT USE

MAX SPD : 320/0.77

MANEUVER WITH CARE

ALTN LAW: PROT LOST

FUEL: Increased fuel consumption (*Refer to OPS Use of Fuel Penalty Factor Tables*)

For **Landing Performance** assessment, use the performance application of the EFB.

APPROACH

CAT 2 INOP

SLATS JAMMED/FLAPS SLOW

ATHR : OFF

FOR LANDING : USE FLAP 3

GPWS LDG FLAP 3 : ON

● **For Flaps extension:**

SPD SEL : VFE NEXT - 5 kt

● **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

● **When in landing CONF and in final approach:** DECELERATE TO CALCULATED VAPP

LANDING

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

GO-AROUND

MAX PITCH 15 DEG

NO GEAR RETRACTION

FUEL: Increased fuel consumption (*Refer to OPS Use of Fuel Penalty Factor Tables*)

● **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

MAX SPD : 320/0.77

MANEUVER WITH CARE

NO STABILIZER

ALTN LAW: PROT LOST

FUEL: Increased fuel consumption (*Refer to OPS Use of Fuel Penalty Factor Tables*)

For **Landing Performance** assessment, use the performance application of the EFB.

APPROACH

CAT 2 INOP

SLATS SLOW / FLAPS JAMMED

FOR LANDING : USE FLAP

GPWS FLAP MODE : OFF

● **For Flaps extension:**

SPD SEL : VFE NEXT - 5 kt

● **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

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

BRAKING: BRK Y ACCU PR ONLY (7 applications)

MAX BRK PR : 1 000 PSI

NO NOSEWHEEL STEERING

GO-AROUND

NO GEAR RETRACTION

FUEL: Increased fuel consumption (*Refer to OPS Use of Fuel Penalty Factor Tables*)

● **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 at least the higher of VAPP or VLS (due to pitch trim unusable)



Continued from the previous page

GO-AROUND

■ **If Flaps jammed above zero:**

MAINTAIN SLATS/FLAPS CONFIGURATION

Maintain speed close to VAPP (due to pitch trim unusable)

LANDING WITH ABNORMAL L/G

CAUTION

Do not apply this procedure if at least one green triangle is displayed on each landing gear on the WHEEL SD page. This is sufficient to confirm that the landing gear is undlocked. Disregard any possible GPWS "TOO LOW GEAR" aural alert.

CABIN CREW..... NOTIFY
ATC..... NOTIFY
GALY & CAB..... OFF

CONSIDER FUEL REDUCTION

● If NOSE L/G abnormal:

SHIFT CG AFT IF POSSIBLE

- 10 pax from front to rear moves the CG roughly 4 % aft.
- 10 pax from mid to rear moves the CG roughly 2.5 % aft.

● If one MAIN L/G abnormal:

FUEL DISTRIBUTION..... 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 (LOOSE EQPT)..... SECURE

● For approach:

GPWS SYS..... OFF

L/G lever..... CHECK DOWN

GRVTY GEAR EXTN handcrank..... TURN BACK TO NORMAL

DO NOT ARM AUTOBRAKE

EMER EXIT LT..... ON

CABIN REPORT..... OBTAIN

A/SKID & N/W STRG..... OFF

MAX BRAKE PR : 1 000 PSI

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

RAM AIR..... ON

DOMES LT..... DIM

● At 500 ft AGL:

BRACE FOR IMPACT..... ORDER

● At flare, touchdown and rollout:

DO NOT USE REVERSE

● If NOSE L/G abnormal:

KEEP NOSE 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..... SMOOTHLY APPLY

BEFORE NOSE IMPACT : ALL ENG MASTERS OFF



LANDING WITH ABNORMAL L/G (Cont'd)



● **If one MAIN L/G abnormal:**

AT TOUCHDOWN : ALL ENG MASTERS OFF
KEEP AFFECTED SIDE WING UP

● **If both MAIN L/G abnormal:**

DURING FLARE : ALL ENG MASTERS OFF
MIN PITCH ATT : 6 °

● **When aircraft stopped:**

PARK BRK..... ON
ALL FIRE pb (ENGs & APU)..... PUSH
ALL AGENT (ENGs & APU)..... 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).

L/G GRAVITY EXTENSION

CAUTION

Do not apply this procedure if at least one green triangle is displayed on each landing gear on the WHEEL SD page. This is sufficient to confirm that the landing gear is downlocked. Disregard 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 leverDOWN

GEAR DOWN indications (if available).....CHECK

The L/G LGCIU 2 FAULT or BRAKES SYS 1(2) FAULT alert may be spuriously triggered after a gravity extension.

N/W STEERING NOT AVAILABLE

■ **If successful:**

DO NOT RESET GRAVITY GEAR EXTN handcrank

■ **If unsuccessful:**

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

Refer to ABN-24 Landing with Abnormal L/G.

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DITCHING

ATC..... NOTIFY

ATC XPDR 7700..... CONSIDER

PREPARE CABIN AND COCKPIT

- 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

DISREGARD NORM C/Ls

ELT  (when conditions permit) ON

● **For approach and ditching:**

KEEP LANDING GEAR UP

SLATS / FLAPS..... MAX AVAIL

FOR FLARE: TARGET PITCH 11 ° & MIN V/S

Note: Prefer ditching parallel to the swell. If that causes a strong crosswind, ditch into the wind.

● **At 2 000 ft AGL:**

CAB PRESS MODE SEL..... CHECK AUTO

ALL BLEEDS (ENGs & APU)..... OFF

CABIN CREW..... NOTIFY FOR DITCHING

DITCHING pb..... ON

● **At 500 ft AGL:**

BRACE FOR IMPACT..... ORDER

● **At touchdown:**

ALL ENG MASTERS..... OFF

APU MASTER SW..... OFF

● **After ditching:**

ATC (VHF 1)..... NOTIFY

ALL FIRE pb (ENGs & APU)..... PUSH

ALL AGENTS (ENGs & APU)..... DISCH

EVACUATION..... INITIATE

EMER DESCENT

CREW OXY MASKS..... USE
SIGNS..... ON
EMER DESCENT..... INITIATE

● **If A/THR not active:**

THR LEVERS..... IDLE

SPD BRK..... FULL

● **When descent established:**

SPEED..... MAX/APPROPRIATE

● **If structural damage suspected: MANEUVER WITH CARE**

CONSIDER L/G EXTENSION

ENG MODE SEL..... IGN

ATC..... NOTIFY

EMER DESCENT (PA)..... ANNOUNCE

ATC XPDR 7700..... CONSIDER


CREW OXY MASKS DILUTION..... NORM

MAX FL: 100 / MEA-MORA

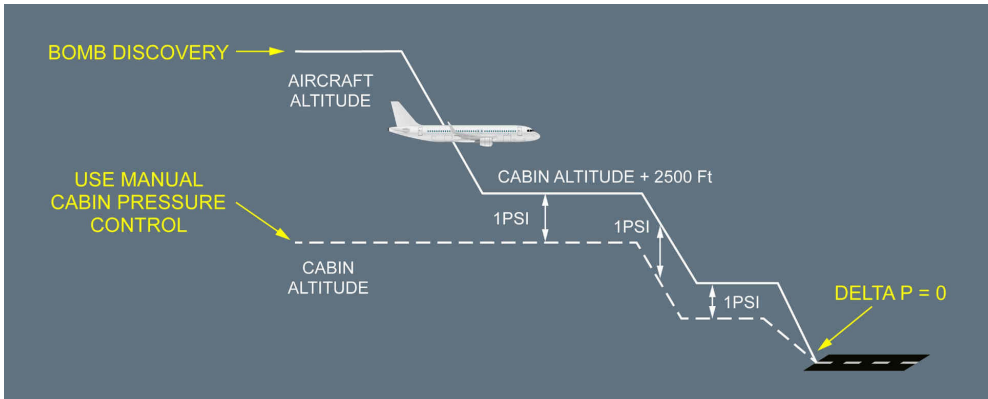
● **If CAB ALT above 14 000 ft:**

OXYGEN PAX MASK MAN ON..... PRESS

FORCED LANDING

- ATC..... NOTIFY
- ATC XPDR 7700..... CONSIDER
- PREPARE CABIN AND COCKPIT
 - 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
- DISREGARD NORM C/Ls
- ELT  (when conditions permit)..... ON
- **For approach and landing:**
 - RAM AIR..... ON
 - L/G lever..... DOWN
 - SLATS / FLAPS..... MAX AVAIL
 - GND SPLR..... ARM
- MAX BRK PR: 1000 PSI
- **At 2 000 ft AGL:**
 - CABIN CREW..... NOTIFY FOR LANDING
- **At 500 ft AGL:**
 - BRACE FOR IMPACT..... ORDER
- **At touchdown:**
 - ALL ENG MASTERS..... OFF
 - APU MASTER SW..... OFF
 - BRAKES ON ACCU ONLY
- **When aircraft stopped:**
 - PARKING BRK..... ON
 - ATC (VHF 1)..... NOTIFY
 - ALL FIRE pb (ENGs & APU)..... PUSH
 - ALL AGENTS (ENGs & APU)..... DISCH
 - **If evacuation required:**
 - EVACUATION..... INITIATE
 - **If evacuation not required:**
 - CABIN CREW and PASSENGERS (PA)..... NOTIFY

BOMB ON BOARD



CKPT / CAB COM..... ESTABLISH

■ If landing and evacuation possible within 30 min:

ATC / COMPANY..... NOTIFY
EVAC..... PREPARE

■ If landing and evacuation NOT possible within 30 min:

AIRCRAFT (IF CLIMBING)..... LEVEL OFF
CABIN PRESS MODE SEL..... MAN
MAINTAIN CAB ALT
ATC / COMPANY..... NOTIFY

TRGT SPEED: PREFER LO IAS

Low speed could reduce the consequences of possible structural damage, if the bomb explodes.

DESCENT TO CAB ALT + 2 500 ft or MEA-MORA..... INITIATE

AVOID SHARP MANEUVERS

MAINTAIN CAB ALT

● When at CAB ALT + 2 500 ft:

MAINTAIN 1 PSI ΔP

GALY & CAB..... OFF

FUEL RESERVES..... DETERMINE

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.

● When bomb secured at the LRBL or cannot be moved:

Least Risk Bomb Location (LRBL) is the center of the RH aft cabin door

EMER EXIT LT..... ON

COMMERCIAL..... OFF

● If fuel permits:

FLAPS..... AT LEAST CONF 1

L/G lever (except for flight over water)..... DOWN

USE NORMAL CONF FOR LANDING

DURING FURTHER DESCENT: MAINTAIN MAX 1 PSI ΔP

● During approach:

CABIN PRESS MODE SEL..... AUTO



BOMB ON BOARD (Cont'd)



- **When aircraft on ground and stopped in a remote area (if possible) :**

Refer to ABN-25 EMER EVAC

COCKPIT WINDSHIELD / WINDOW ARCING

Affected WINDOW/WINDSHIELD ANTI ICE C/B..... PULL

- 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]

COCKPIT WINDSHIELD / WINDOW CRACKED

SHOULDER HARNESS.....FASTEN
TOUCH THE CRACK WITH A PEN (OR CAREFULLY WITH FINGERNAIL)

■ **If no crack on cockpit side:**

NO LIMITATION

■ **If cracks on cockpit side:**

CREW OXY MASKS.....USE

MAX FL: 230 / MEA-MORA

CAB PRESS MODE SEL.....MAN

DISREGARD THE CAB ALT TARGET TABLE DISPLAYED ON THE ECAM

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

SET THE CABIN ALTITUDE ACCORDING TO THE TABLE BELOW TO
MAINTAIN ΔP 5 PSI

FL	100	150	200	230
CABIN ALTITUDE	0	3 000	6 000	8 000

● **When ΔP is 5 PSI:**

CREW OXY MASKS.....REMOVE

● **Below FL 100:**

CAB PRESS MODE SEL.....AUTO

● **If visibility not sufficient for approach due to damage:**

CONSIDER AUTOLAND

● **For approach, if AUTOLAND not available:**

CAB PRESS MODE SEL.....MAN

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

MAX SPEED: 200 kt

PF SLIDING WINDOW.....OPEN

OVERWEIGHT LANDING

USE CONF FULL FOR LANDING UNLESS SPECIFIED BY ABN PROC OR LIMITED BY LANDING PERF

LDG DIST PROC..... APPLY

● For approach:

PACK 1..... OFF OR SUPPLIED BY APU

PACK 2..... OFF OR SUPPLIED BY APU

- If landing CONF other than FULL: USE CONF 1+F FOR GO AROUND

SPEED AT RUNWAY THRESHOLD : VLS

MINIMIZE V/S AT TOUCHDOWN

● For landing:

INCREASE FLARE HEIGHT

USE MAX REVERSE ASAP

- After nosewheel touchdown: APPLY BRAKES AS NECESSARY

● When landing completed:

BRAKE FANS

ON

SEVERE TURBULENCE

SEAT BELTS.....ON
SPEED AND THRUST..... ADJUST

FL	SPD or Mach	WEIGHT (1 000 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

KEEP AUTO PILOT ON

- **If excessive thrust variations:** DISCONNECT A/THR

DESCENT TO OR BELOW OPT FL..... CONSIDER
Consider descending to or below OPT FL in order to increase the margin to buffet

- **For approach:**

A/THR..... ON
USE MANAGED SPEED

TAILSTRIKE

LAND ASAP


MAX FL: 100 / MEA-MORA

RAM AIR.....ON

PACK 1.....OFF

PACK 2.....OFF

VOLCANIC ASH ENCOUNTER

180 ° TURN.....	INITIATE
ATC.....	NOTIFY
A/THR.....	OFF
THRUST (IF CONDS PERMIT).....	REDUCE
CREW OXY MASKS.....	USE / 100 % / EMER
CABIN CREW.....	NOTIFY
OXYGEN PASSENGER MASK MAN ON.....	AS RQRD
ENG ANTI ICE.....	ON
WING ANTI ICE.....	ON
PACK FLOW.....	HI
CARGO ISOL VALVES 	OFF
ENGINE PARAMETERS.....	MONITOR
AIRSPPEED INDICATIONS.....	MONITOR

● **If visibility not sufficient for approach due to windshield damage:**

CONSIDER AUTOLAND

● **For approach, if AUTOLAND not available:**

CAB PRESS MODE SEL..... MAN

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

MAX SPEED: 200 kt

PF SLIDING WINDOW..... OPEN

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ADR CHECK PROC

Apply the UNRELIABLE SPEED INDICATION procedure.

UNRELIABLE SPEED INDICATION

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

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

● **To level off:**

- AP..... OFF
- A/THR..... OFF
- FD..... OFF
- SPEEDBRAKES..... CHECK RETRACTED
- PITCH/THRUST TABLE..... APPLY

PITCH / THRUST FOR LEVEL OFF

	80 t 175 000 lb	70 t 155 000 lb	60 t 130 000 lb	50 t 110 000 lb
--	---------------------------	---------------------------	---------------------------	---------------------------

SLATS / FLAPS EXTENDED

CONF	PITCH	THRUST % N1 (Resultant speed)			
3	7°	66% (165 kt)	62% (155 kt)	58% (140 kt)	54% (130 kt)
2	5.5°	66% (185 kt)	62% (175 kt)	58% (160 kt)	54% (145 kt)
1+F	5°	64% (200 kt)	62% (190 kt)	58% (175 kt)	54% (160 kt)
1	6.5°	64% (220 kt)	60% (205 kt)	56% (190 kt)	52% (175 kt)

CLEAN

PITCH	FL	THRUST % N1 (Resultant speed)			
4° at or below FL250	100	64% (265 kt)	60% (245 kt)	56% (225 kt)	52% (205 kt)
	200	72% (260 kt)	68% (245 kt)	66% (225 kt)	60% (205 kt)
3° above FL250	300	78% (280 kt)	76% (265 kt)	74% (245 kt)	70% (225 kt)
	350	/	80% (255 kt)	76% (240 kt)	74% (225 kt)
	400	/	/	82% (235 kt)	78% (220 kt)

FLYING TECHNIQUE TO STABILIZE SPEED



UNRELIABLE SPEED INDICATION (Cont'd)



Stabilize the altitude. When altitude is stabilized:

- If the pitch is above the target pitch, increase the thrust and maintain the altitude.
- If the pitch is below the target pitch, decrease the thrust and maintain the altitude.

When the pitch reaches the target pitch, adjust the thrust to keep this target pitch.

● **When flight path is stabilized:**

AP..... OFF
 A/THR..... OFF
 FD..... OFF
 SPEEDBRAKES..... CHECK RETRACTED
 FLIGHT PATH..... KEEP STABILIZED

RESPECT STALL WARNING

AFFECTED ADR IDENTIFICATION

PROBE/WINDOW HEAT..... ON
 ALL SPEED INDICATIONS..... CROSSCHECK

ADR3 and STBY speeds use the data of the same probe.

■ **If at least one ADR confirmed reliable:**

RELIABLE AIR DATA..... USE
 UNRELIABLE ADR pb(s) OFF

■ **If affected ADR(s) cannot be identified, or all ADRs affected:**

KEEP ONE ADR ON
 TWO ADR pbs..... OFF
 FOR LANDING: USE FLAP 3
 APP SPD VLS +10 kt
 LDG DIST PROC..... APPLY

● **For flight continuation: USE PITCH/THRUST TABLES**

CLIMB

CLIMB IN CLEAN CONFIGURATION					
		80 t 175 000 lb	70 t 155 000 lb	60 t 130 000 lb	50 t 110 000 lb
THRUST	FL	PITCH (Resultant speed)			
CLB	50	10° (255 kt)	11° (235 kt)	13° (215 kt)	15° (195 kt)
	100	9° (255 kt)	10° (235 kt)	12° (215 kt)	14° (195 kt)
	200	6° (255 kt)	7° (235 kt)	8° (220 kt)	10° (200 kt)
	300	5° (250 kt)	5° (235 kt)	6° (220 kt)	7° (200 kt)
	400	/	/	4° (215 kt)	5° (195 kt)

CRUISE

FLYING TECHNIQUE TO STABILIZE SPEED



UNRELIABLE SPEED INDICATION (Cont'd)



Stabilize the altitude. When altitude is stabilized:

- If the pitch is above the target pitch, increase the thrust and maintain the altitude.
- If the pitch is below the target pitch, decrease the thrust and maintain the altitude.

When the pitch reaches the target pitch, adjust the thrust to keep this target pitch.

LEVEL FLIGHT IN CLEAN CONFIGURATION

		80 t 175 000 lb	70 t 155 000 lb	60 t 130 000 lb	50 t 110 000 lb
PITCH	FL	THRUST % N1 (Resultant speed)			
4° at or below FL250	100	64% (265 kt)	60% (245 kt)	56% (225 kt)	52% (205 kt)
	200	72% (260 kt)	68% (245 kt)	66% (225 kt)	60% (205 kt)
3° above FL250	300	78% (280 kt)	76% (265 kt)	74% (245 kt)	70% (225 kt)
	350	/	80% (255 kt)	76% (240 kt)	74% (225 kt)
	400	/	/	82% (235 kt)	78% (220 kt)

Note: 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 %.

DESCENT

DESCENT IN CLEAN CONFIGURATION

		80 t 175 000 lb	70 t 155 000 lb	60 t 130 000 lb	50 t 110 000 lb
THRUST	PITCH	Resultant speed			
IDLE	1°	270 kt	255 kt	235 kt	215 kt

INITIAL / INTERMEDIATE APPROACH

APPLY FLYING TECHNIQUE TO STABILIZE SPEED

LEVEL FLIGHT

		80 t 175 000 lb	70 t 155 000 lb	60 t 130 000 lb	50 t 110 000 lb
WITH LANDING GEAR UP					
CONF	PITCH	THRUST % N1 (Resultant speed)			
0	5.5°	60% (240 kt)	56% (220 kt)	52% (200 kt)	50% (180 kt)
1	6.5°	64% (220 kt)	60% (205 kt)	56% (190 kt)	52% (175 kt)
1+F	5°	64% (200 kt)	62% (190 kt)	58% (175 kt)	54% (160 kt)
2	5.5°	66% (185 kt)	62% (175 kt)	58% (160 kt)	54% (145 kt)
WITH LANDING GEAR DOWN					
3	7°	70% (165 kt)	68% (155 kt)	62% (145 kt)	58% (130 kt)

FINAL APPROACH AT -3° DESCENT FLIGHT PATH

APPROACH IN CONF 3 AND L/G EXTENDED

		80 t 175 000 lb	70 t 155 000 lb	60 t 130 000 lb	50 t 110 000 lb
CONF	PITCH	THRUST (% N1)			
3	4°	54%	52%	48%	44%

ADR 1+2+3 FAULT

In case of triple ADR failure, ECAM only displays dual ADR alerts.

ALL ADR pbs.....OFF
 STBY INST.....USE
 DISREGARD ECAM ACTIONS FOR AIR DATA SWTG AND ATC
 TCAS & ATC ALT RPTG INOP
 EXPECT ALTN LAW

FL	390	370	350	330	310	290	280 and below
MAX SPEED (kt)	252	265	278	290	305	315	320

USE RUDDER WITH CARE
 WHEN L/G DOWN: DIRECT LAW
 CABIN PRESS MODE SEL.....MAN
 MAN V/S CTL..... AS RQRD
 Target CAB PRESS V/S:
 - Climb: 500 ft/min
 - Descent: 300 ft/min

AIRCRAFT CRZ FL	CAB ALT TARGET (ft)
410	8000
350	7000
300	5500
250	3000
<200	0

- **For approach:**
 CAT 1 ONLY
 FOR LANDING: USE FLAP 3
 GPWS LDG FLAP 3..... ON
 LDG DIST PROC..... APPLY
- **For L/G GRVTY EXTN:**
 LDG GEAR GRVTY EXTN handcrank..... PULL AND TURN
- **When L/G downlocked:**
 L/G lever..... DOWN
 GEAR DOWN indications..... CHECK
 L/G DOORS REMAIN OPEN
- **During final approach:**
 MAN V/S CTL..... FULL UP
- **Before door opening: CHECK ΔP ZERO**

IR ALIGNMENT IN ATT MODE

IR (affected) MODE SEL..... ATT
KEEP SPEED, HEADING, AND FL CONSTANT FOR 30 s

■ **For alignment through MCDU:**

FMS DATA page..... SELECT
IRS MONITOR key..... PRESS
[SET HDG key] A/C HDG..... ENTER

■ **For alignment through ADIRS panel:**

DISPLAY SYS sel..... SELECT AFFECTED SYS
DISPLAY DATA sel..... HDG

● **If “H” written on the “5” key of ADIRS panel:**

H key..... PRESS
Degree marker, zero decimal point, ENT, and CLR lights come on.

A/C HEADING..... INSERT
ENT key..... PRESS

CROSSCHECK HEADING REGULARLY WITH STBY COMPASS AND UPDATE
AS REQUIRED

NAV FM / GPS POS DISAGREE

A/C POS.....CHECK

- **During climb, cruise, or descent:**
FMS PROG page..... SELECT
 - **If ESTIMATED ACCUR below REQUIRED ACCUR:**
CONSIDER NAV MODE AND ND ARC/ROSE NAV
 - **If ESTIMATED ACCUR above REQUIRED ACCUR:**
HDG/TRK MODE.....SELECT
USE RAW DATA
CONSIDER SWITCHING OFF GPWS TERRAIN FUNCTIONSFMS POSITION MONITOR page.....SELECT
 - **If one FM position agrees with inside GPIRS position:**
USE ASSOCIATED AP/FD
 - **If both FM positions DO NOT agree with inside GPIRS position:**
GPS..... DESELECT
USE RAW DATA
- **During ILS/LOC/GLS approach:**
NAV MODE: DO NOT USE
CONTINUE APPROACH
- **During RNAV GNSS, or RNAV RNP approach:**
 - **If visual references not sufficient: GO AROUND**
- **During VOR, VOR-DME, NDB, or NDB-DME approach:**
HDG/TRK MODE.....SELECT
USE RAW DATA

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SMOKE / FUMES / AVNCS SMOKE

LAND ASAP

IF PERCEPTIBLE SMOKE / FUMES APPLY
IMMEDIATELY:

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

● **If smoke/fumes source immediately obvious,
accessible, and extinguishable:**

FAULTY EQPT..... ISOLATE

● **If smoke/fumes source not immediately isolated:**

DIVERSION..... INITIATE

DESCENT TO FL 100 / MEA-MORA INITIATE

● **At ANY TIME of the procedure, if SMOKE /
FUMES become the GREATEST THREAT:**

REMOVAL OF SMOKE / FUMES..... CONSIDER

Refer to ABN-27 Removal of Smoke / Fumes

ELEC EMER CONFIG..... CONSIDER

*Refer to the end of the procedure to set ELEC
EMER CONFIG.*

● **At ANY TIME of the procedure, if situation
becomes UNMANAGEABLE:**

IMMEDIATE LANDING..... CONSIDER



SMOKE / FUMES / AVNCS SMOKE (Cont'd)



● **If AIR COND smoke/fumes suspected:**

APU BLEED.....	OFF
VENTILATION BLOWER.....	AUTO
VENTILATION EXTRACT.....	AUTO
PACK 1.....	OFF

● **If smoke/fumes continue:**

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

● **If smoke/fumes persist:**

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

REMOVAL OF SMOKE / FUMES..... CONSIDER

Refer to ABN-27 Removal of Smoke / Fumes

● **If CABIN EQPT smoke/fumes suspected:**

● **If smoke/fumes continue:**

EMER EXIT LIGHT.....	ON
COMMERCIAL.....	OFF
SMOKE / FUMES DISSIPATION.....	CHECK
FAULTY EQPT	SEARCH / ISOLATE

● **If smoke/fumes persist or when faulty equipment confirmed isolated:**

COMMERCIAL..... NORM

REMOVAL OF SMOKE / FUMES..... CONSIDER

Refer to ABN-27 Removal of Smoke / Fumes



SMOKE / FUMES / AVNCS SMOKE (Cont'd)



- **If smoke/fumes source cannot be determined and persist or AVNCS / ELECTRICAL smoke/fumes suspected:**

ELEC EMER CONFIG.....CONSIDER
Refer to the end of the procedure to set ELEC EMER CONFIG.

- **If smoke/fumes disappear within 5 minutes:**

NORMAL VENTILATION..... RESTORE

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

APPLY ELEC EMER CONFIG 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 aircraft stopped:**

ALL GENs..... OFF

REMOVAL OF SMOKE / FUMES

EMER EXIT LIGHT..... ON

■ **If fuel vapors:**

CAB FANS..... ON

PACK 1..... OFF

PACK 2..... OFF

■ **If no fuel vapors:**

CAB FANS..... OFF

PACK FLOW..... HI

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

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

ATC..... NOTIFY

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

..... CONTINUE

Refer to ABN-27 Smoke / Fumes / AVNCS Smoke

● **At FL 100 or MEA-MORA:**

● **If in ELEC EMER CONFIG:**

APU MASTER sw ON

PACK 1..... OFF

PACK 2..... OFF

CABIN PRESS MODE SEL..... MAN

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

RAM AIR..... ON

APU MASTER sw OFF

● **If smoke/fumes persist:**

MAX SPEED: 200 kt

COCKPIT DOOR..... OPEN

HEADSETS..... ON

PM SLIDING WINDOW..... OPEN



REMOVAL OF SMOKE / FUMES (Cont'd)



● **When window open:**

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

*Refer to ABN-27 Smoke / Fumes / AVNCS
Smoke*

SMOKE / FIRE FROM LITHIUM BATTERY

If necessary, transfer control to the flight crewmember seated on the opposite side of the fire.

CKPT / CAB COM..... ESTABLISH
STORAGE AFTER Li BAT FIRE cabin procedure.....
..... REQUEST INITIATION

● **If flames:**

OXY MASK / GOGGLE (PF)... USE / 100% / EMERG
SMOKE HOOD (PM)..... USE
FIRE EXTINGUISHER..... USE

● **If no flames or when flames extinguished:**

■ **If not possible to remove device from cockpit:**

WATER or NON-ALCOHOLIC LIQUID.....
..... POUR ON DEVICE
DEVICE..... MONITOR

■ **If possible to remove device from cockpit:**

DEVICE..... TRANSFER TO CABIN

● **At ANY TIME of the procedure, if SMOKE becomes the GREATEST THREAT:**

REMOVAL OF SMOKE / FUMES procedure.....
..... CONSIDER

Refer to ABN-27 Removal of Smoke / Fumes.

● **At ANY TIME of the procedure, if situation becomes UNMANAGEABLE:**

IMMEDIATE LANDING..... CONSIDER

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WHEEL TIRE DAMAGE SUSPECTED

LDG DIST PROC..... **APPLY**

Performance impact of one burst tire is equivalent to one brake released if EFB LDG PERF application is used.

Performance impact of one burst tire is equivalent to one tire damage if the QRH is used.

TAXI WITH CARE

Refer to FCOM / LIM LG Landing Gear - Taxi with Deflated or Damaged Tires.

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SAFETY EXTERIOR INSPECTION

CM1	CM2
	* WHEEL CHOCKS..... CHECK
	* L/G DOORS..... CHECK POSITION
	* APU AREA..... CHECK

PRELIMINARY COCKPIT PREPARATION

AIRCRAFT SETUP:	
CM1	CM2
	ENG 1, 2 MASTER LEVERS..... OFF
	ENG MODE selector..... NORM
	* WEATHER RADAR..... OFF
	* WINDSHEAR/PWS sw..... OFF
	L/G lever..... DOWN
	Both WIPER selectors..... OFF

BATTERIES/EXTERNAL POWER:	
CM1	CM2
	BAT..... CHECK/AUTO
	EXT PWR pb..... ON

APU FIRE TEST/APU START:	
CM1	CM2
	RMP..... CHECK ON/SET
	APU FIRE TEST..... PERFORM
	APU..... START
	•When the APU is AVAIL: AIR COND panel..... SET
	* EXT PWR pb..... AS RQRD

ADIRS:	
CM1	CM2
	All IR MODE selectors..... NAV

COCKPIT LIGHTS:	
CM1	CM2
* COCKPIT LIGHTS..... AS RQRD	* COCKPIT LIGHTS..... AS RQRD

EFB INITIALIZATION:	
CM1	CM2
All EFB..... START	All EFB..... START
EFB/eQRH Version..... CHECK	EFB/eQRH Version..... CHECK
•If EFB SYNCHRO AVNCS is used: FMGS PRE-INITIALIZATION: * ENGINE & AIRCRAFT TYPE..... CHECK	



Continued from the previous page

EFB INITIALIZATION:	
CM1	CM2
* DATABASE VALID..... CHECK	
* FLT NBR & FROM/TO.....	INSERT/CHECK
* EFB SYNCHRO AVIONICS..... CLICK	* EFB SYNCHRO AVIONICS..... CLICK
* EFB STATUS page.....	INSERT/CHECK

AIRCRAFT ACCEPTANCE:	
CM1	CM2
* RCL pb.....	PRESS 3 s
* LOGBOOK AND MEL/CDL ITEMS.....	CHECK
* AIRCRAFT CONFIGURATION SUMMARY.....	CHECK
* OEB.....	CHECK
* AIRCRAFT ACCEPTANCE.....	PERFORM

PRELIMINARY PERFORMANCE DETERMINATION:	
CM1	CM2
* AIRFIELD DATA	OBTAIN
•If the LOADSHEET application is used:	
* PRELIMINARY LOADING.....	COMPUTE/CROSSCHECK
* MEL/CDL ITEMS.....	CHECK ACTIVATED
NAV CHARTS CLIPBOARD..... PREPARE	
* PRELIM T.O PERF DATA.....	COMPUTE
* PRELIM T.O PERF DATA.....	CROSSCHECK

BEFORE WALKAROUND:	
PF	PM
	* ECAM OXY PRESS/HYD QTY/ENG OIL QTY..... CHECK
	FLAPS..... CHECK POSITION
	* SPEED BRAKE lever..... CHECK RET AND DISARMED
	* ACCU/BRAKES PRESS..... CHECK
	* PARK BRK handle..... ON
	ALTN BRAKING..... CHECK
	EMER EQPT..... CHECK
	RAIN REPELLENT CHECK
	C/B PANELS..... CHECK
	* GEAR PINS and COVERS..... CHECK ONBOARD/STOWED
	* EXTERIOR WALKAROUND..... PERFORM

SECURING THE AIRCRAFT

CM1	CM2
PARK BRK handle.....	ON
	OXYGEN CREW SUPPLY pb-sw..... OFF
	EXTERIOR LIGHTS..... OFF
All IR MODE selectors.....	OFF
	APU BLEED pb-sw..... OFF



Continued from the previous page

CM1	CM2
	EXT PWR pb..... AS RQRD
	APU MASTER SW pb-sw..... OFF
	EMER EXIT LT sw..... OFF
	SIGNS sw..... OFF
	BAT 1 pb-sw + BAT 2 pb-sw..... OFF
SECURING THE AIRCRAFT C/L..... COMPLETE	SECURING THE AIRCRAFT C/L..... COMPLETE
EFB applications..... CLOSE	
All EFB..... SWITCH OFF	
	MAINT BUS sw..... AS RQRD

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Hydraulic Architecture..... OPS.06A

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Required Equipment for CAT2 and CAT3..... OPS.08A

Cost Index for Long Range Cruise Speed..... OPS.09A

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AIRCRAFT CONFIGURATION SUMMARY

For awareness and for the specified aircraft, the following table provides the flight crew with a list of optional aircraft systems and functions related to aircraft flight operations.

Item	System	Installed
ADS-B OUT	SURV	No
AP Automatic Disconnection at Minima	AUTO FLT	No
AP/FD TCAS	AUTO FLT	No
Automatic FD Bar Engagement at Go-Around	AUTO FLT	Yes
Backup Navigation Function of the MCDU	AUTO FLT	No
BUSS	NAV	No
CPDLC	DATALINK	No
Derated Takeoff	ENG	No
Descent Profile Optimization (DPO)	AUTO FLT	No
FANS	DATALINK	No
FLS Function in the FMS	AUTO FLT	No
FMS2 Release 1A (including RF leg capability)	AUTO FLT	Yes
GLS	AUTO FLT	No
GPS	NAV	Yes
GPS PRIMARY Function	NAV	Yes
HPFD	EIS	No
Metric Altitude Indications on the PFD	EIS	No
MLS	AUTO FLT	No
NAV Mode Automatically Engaged (Armed) at Go-Around	AUTO FLT	Yes
PED compatible Operation Manual and Checklist Stowage Aluminium Box	EQPT	Yes
PWS	SURV	No
QFE BARO Setting	NAV	No
RAAS	SURV	No
RNP AR	AUTO FLT	No
ROW/ROPS	SURV	No
Soft Go-Around Function	ENG	No

OPERATING SPEEDS

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

USE OF FUEL PENALTY FACTOR TABLES

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** or **FUEL CONSUMPT INCRSD** 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:
 $TRIP\ FUEL\ PENALTY = (FOB - EFOB\ at\ DEST) \times FPF$
 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:
 $TRIP\ FUEL\ PENALTY = (FOB - EFOB\ at\ DEST) \times (FPF1 + FPF2 + \dots)$
 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, $TRIP\ FUEL\ PENALTY = (FOB - EFOB\ at\ DEST) \times (10\ \% + 8\ \%)$





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.
Therefore, TRIP FUEL PENALTY = (FOB - EFOB at DEST) x 8 %

FUEL PENALTY FACTORS/ECAM ALERT TABLE

FUEL PENALTY FACTORS/ECAM ALERT TABLE

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

FUEL PENALTY FACTORS/ECAM ALERT TABLE				
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 (Refer to FCOM/PRO-NOR-SUP-LG-LG_DN Flight With Gear Down)	180 %
	GEAR NOT UNLOCKED			
	BOGIE ALIGN FAULT (option)			
	GEAR UNLOCK FAULT			
	DOORS NOT CLOSED	L/G DOOR	All landing gears doors are extended	15 %

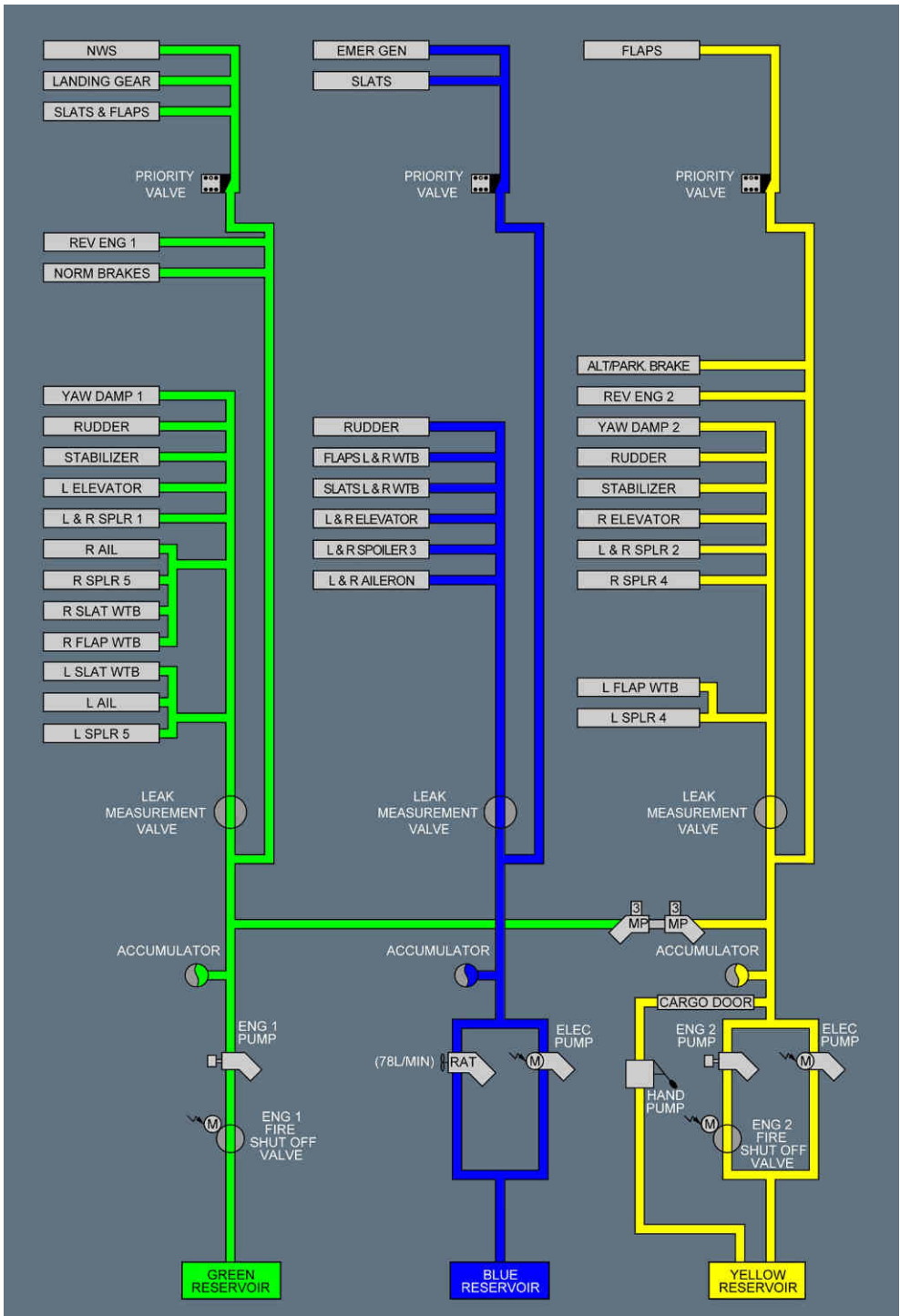
- (1) During the flight, the spoiler(s) may gradually extend and increase(s) the fuel consumption.
- (2) A spoiler can be suspected fully extended (runaway) if high roll rate has been experienced immediately after the failure, associated with a possible AP disconnection. A visual inspection, if time 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.

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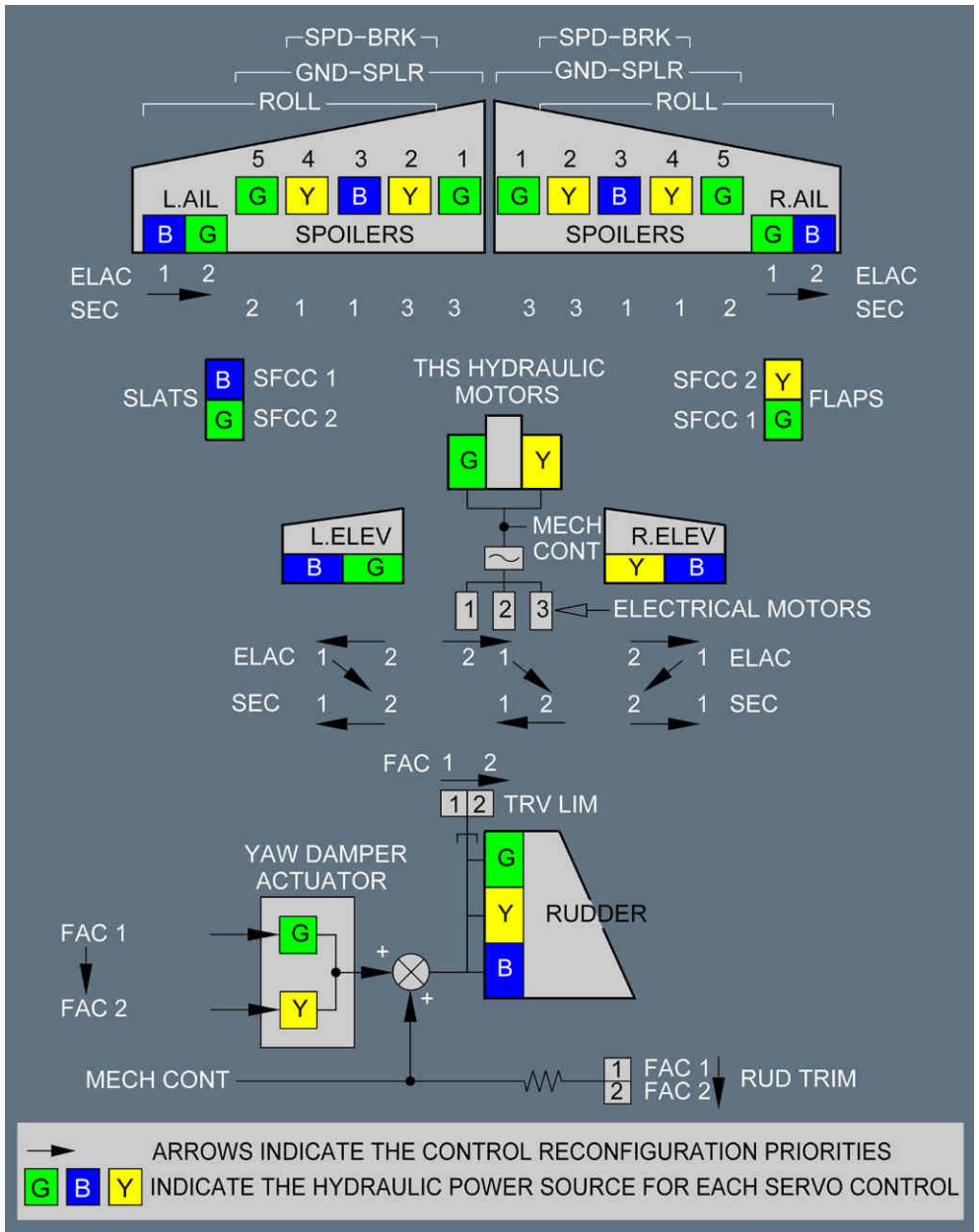
FUEL PENALTY FACTORS/INOP SYS TABLE

FUEL PENALTY FACTORS/INOP SYS TABLE			
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 %

HYDRAULIC ARCHITECTURE



FLIGHT CONTROLS ARCHITECTURE



REQUIRED EQUIPMENT FOR CAT2 AND CAT3

	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
	AUTOTHURST	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 PM	2	2
	ATTITUDE INDICATION ON PFD	2	2	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 PM			

(1) For automatic rollout, one is required. For autoland without automatic rollout, none is required.





- 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.*

COST INDEX FOR LONG RANGE CRUISE SPEED

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.

A318/A319/A320/A321 QUICK REFERENCE HANDBOOK	OPERATIONS ENGINEERING BULLETINS LIST OF EFFECTIVE OPERATIONS ENGINEERING BULLETIN	OEBPROC 1/2
		23 NOV 21

Identification	Title
OEB47 Issue 3	HYD ENG PUMP LO PR followed by a HYD RSVR OVHT ECAM Entry HYD G ENG 1 PUMP LO PR followed by a HYD Y RSVR OVHT , or HYD Y ENG 2 PUMP LO PR followed by a HYD G RSVR OVHT

A318/A319/A320/A321 QUICK REFERENCE HANDBOOK	OPERATIONS ENGINEERING BULLETINS LIST OF EFFECTIVE OPERATIONS ENGINEERING BULLETIN	OEBPROC 2/2
		23 NOV 21

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HYD ENG PUMP LO PR FOLLOWED BY A HYD RSVR OVHT

ECAM ENTRY

HYD G ENG 1 PUMP LO PR followed by a HYD Y RSVR OVHT, or

HYD Y ENG 2 PUMP LO PR followed by a HYD G RSVR OVHT

PROCEDURE

- HYD G ENG 1 PUMP LO PR followed by HYD Y RSVR OVHT
HYD Y RSVR OVHT ECAM alert..... DISREGARD
PTU.....OFF
YELLOW ENG 2 PUMP.....KEEP ON
- HYD Y ENG 2 PUMP LO PR followed by HYD G RSVR OVHT
HYD G RSVR OVHT ECAM alert..... DISREGARD
PTU.....OFF
GREEN ENG 1 PUMP.....KEEP ON

HYD ENG PUMP LO PR FOLLOWED BY A HYD RSVR OVHT - EXPLANATION

ROOT CAUSE

Following a green (yellow) hydraulic fluid leakage, the PTU may activate.

Due to the fact that the PTU cannot pressurize the green (yellow) system due to this leakage, it runs at high speed. This causes the hydraulic fluid in the yellow (green) hydraulic system to heat up.

OPERATIONAL CONSEQUENCE

The decrease in pressure due to the leakage triggers the **HYD G (Y) ENG 1 PUMP LO PR** ECAM alert.

The overheating of the hydraulic fluid in the yellow (green) hydraulic system triggers the **HYD Y(G) RSVR OVHT** ECAM alert. This alert triggers between 2 and 10 min after the triggering of the **HYD G(Y) ENG 1 PUMP LO PR** ECAM alert.

Application of the two associated procedures results in the loss of the yellow and green hydraulic systems. The **HYD G+Y SYS LO PR** ECAM alert triggers.

*Note: The **HYD G(Y) RSVR LO LVL** ECAM alert is inhibited during initial climb. Therefore, the action requested by this procedure to turn off the PTU may appear when the PTU is already overheating.*

END OF OEB47

GENERAL DESCRIPTION

OEB

Each OEB has an "OEB PROC" that includes all of the following items:

- The title of the OEB PROC,
- The "ECAM ENTRY" field:
This section identifies if one of the possible conditions to apply the OEB PROC is an ECAM warning/caution.
The flight crew must disregard the ECAM procedure and/or STATUS of the ECAM alerts listed in the "ECAM ENTRY" field and must apply the QRH's OEB procedure instead.
- The OEB operational procedure(s) that the flight crew must apply
- The technical explanation of the deviation from the initial design objectives.

LIST OF EFFECTIVE OEB

The List of Effective Operations Engineering Bulletins (LEOEB) enables the flight crew to check all the OEBs that are applicable to the aircraft MSN they operate.

Identification	Title
OEB26 Issue 1	Erroneous Radio Altimeter (RA) Height Indication <u>ECAM Entry</u> None
OEB33 Issue 1	Pack Flow Monitoring <u>ECAM Entry</u> None
OEB34 Issue 1	NAV ADR 1+2+3 FAULT ECAM Warning Undue Activation <u>ECAM Entry</u> NAV ADR 1+2+3 FAULT
OEB35 Issue 2	Loss of AP and A/THR Associated with Alternate Law Reversion <u>ECAM Entry</u> None

The LEOEB provides:

The "Identification" field that identifies the OEB number and its issue number.

The identification number and title of red OEBs are in bold font. The identification number and title of white OEBs are in regular font. This identification field enables the flight crew to easily check the OEBs before flight.

Note: OEBs are listed in numerical order regardless of the type of OEB (red or white).

The "Title" field provides the OEB title and the "ECAM Entry" part of the OEB PROC. This enables the flight crew to easily identify the ECAM procedure that is affected by the OEB.

CAUTION When Airbus provides the Operator with the LEOEB, the information "ECAM Entry" does not necessarily mean that (for Operators that use the OEB REMINDER function) the Operator's maintenance personnel activated the OEB REMINDER codes for this OEB onboard the aircraft.

It is the Operator's responsibility to define an appropriate process to provide the flight crew with confirmation that the OEB REMINDER codes are activated for the ECAM alerts affected by OEBs.

A vertical bar in the margin of the LEOEB identifies that the OEB is either new, revised, or has an aircraft validity change compared to the most recent published LEOEB.

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**EMER LANDING
ALL ENG FAILURE**

Apply the following if not able to maintain altitude after the loss of thrust near the ground.

DITCHING				FORCED LANDING			
APU..... START				APU..... START			
LANDING GEAR..... UP				LANDING GEAR..... DOWN			
FLAPS LEVER..... 2				FLAPS LEVER..... 2			
VAPP..... DETERMINE				VAPP..... DETERMINE			
GW	40 t	50 t	60 t	70 t	80 t	90 t	95 t
VAPP	150 kt	150 kt	163 kt	173 kt	183 kt	193 kt	198 kt
DITCHING pb..... ON				SPLRS..... ARM			
At 500 ft AGL or below:				At 1 000 ft AGL at the latest:			
BRACE FOR IMPACT..... ORDER				LANDING GEAR..... DOWN by GRVTY			
For flare:				At 500 ft AGL or below:			
TOUCH DOWN AT MIN V/S				BRACE FOR IMPACT..... ORDER			
TARGET PITCH ATT 11 °				For flare:			
At touchdown:				At touchdown:			
ALL ENG MASTERS..... OFF				ALL ENG MASTERS..... OFF			
APU MASTER SW..... OFF				APU MASTER SW..... OFF			
EMER EVAC PROC..... APPLY				EMER EVAC PROC..... APPLY			

EMER EVAC

- 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 ΔP not at zero:**
 - CAB PR MODE SEL..... MAN
 - V/S CTL..... FULL UP
- ALL ENG MASTERS..... OFF
- ALL FIRE pb (ENGs & APU)..... PUSH
- ALL AGENTS (ENGs & APU)..... AS RQRD
- **If evacuation required:**
 - EVACUATION..... INITIATE
- **If evacuation not required:**
 - CABIN CREW AND PASSENGERS (PA)..... NOTIFY

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COCKPIT PREPARATION
GEAR PINS & COVERS..... REMOVED FUEL QUANTITY..... ___ KG/LB SEAT BELTS..... ON ADIRS..... NAV BARO REF..... ___ (BOTH)

DEPARTURE CHANGE
RWY & SID..... FLAPS SETTING..... CONF ___ (BOTH) T.O SPEEDS & THRUST..... ___ (BOTH) FCU ALT.....

BEFORE START
PARKING BRAKE..... T.O SPEEDS & THRUST..... ___ (BOTH) WINDOWS..... CLOSED (BOTH) BEACON..... ON

APPROACH
BARO REF..... ___ (BOTH) SEAT BELTS..... ON MINIMUM..... AUTO BRAKE..... ENG MODE SEL.....

AFTER START
ANTI ICE..... ECAM STATUS..... CHECKED PITCH TRIM..... % RUDDER TRIM..... NEUTRAL

LANDING
ECAM MEMO..... LDG NO BLUE - LDG GEAR DN - SIGNS ON - CABIN READY <input type="checkbox"/> - SPLRS ARM - FLAPS SET

TAXI
FLIGHT CONTROL..... CHECKED (BOTH) FLAPS SETTING..... CONF ___ (BOTH) RADAR ON ENG MODE SEL..... ECAM MEMO..... TO NO BLUE - AUTO BRK MAX - SIGNS ON - CABIN READY <input type="checkbox"/> - SPLRS ARM - FLAPS TO - TO CONFIG NORM

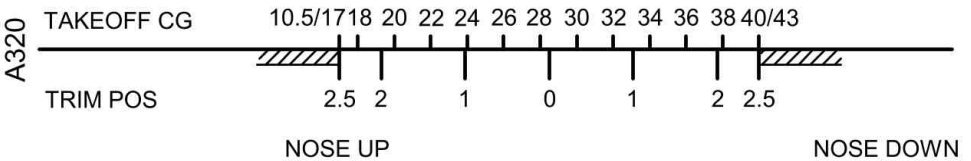
AFTER LANDING
RADAR..... OFF

LINE-UP
T.O RWY..... ___ (BOTH) TCAS..... PACKS 1 & 2.....

PARKING
PARK BRK OR CHOCKS..... SET ENGINES..... OFF WING LIGHTS..... OFF FUEL PUMPS..... OFF

SECURING THE AIRCRAFT
OXYGEN..... OFF EMER EXIT LT..... OFF EFBs..... OFF BATTERIES..... OFF

TAKEOFF CG/TRIM POS



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