

DESCRIPTION

Training Device : A320-200 FFS 6 - CDG

<u>Titre document</u>: Simulated Malfunctions List

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Objet : -

	Nom	Entité	Date
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A320-200 FFS6 LISTE DES MALFONCTIONS CLASSEES PAR ATA

Updated on May 20th, 2014

ATA 21 'AIR CONDITIONING & PRESS'

TITLE 'CAB PRESS SYS FAULT'

Loss of ambient pressure information at Cabin Pressure Controller input.

TITLE 'OUTFLOW VALVE STUCK'

Outflow valve flap mechanical is stuck in current position.

TITLE 'LDG ELEVATION FAULT'

Landing elevation data from FMGC not valid.

TITLE 'EXCESS CAB ALTITUDE'

Cabin Pressure Controller (CPC) undetected internal failure commanding outflow valve to fully open.

TITLE 'STRUCTURE DAMAGE'

Explosive decompression (window blow-out).

TITLE 'EXCESS CAB ALT - CABIN LEAK'

Cabin leak causes according effects on pressurization system.

TITLE 'NEGATIVE LO DIFFERENTIAL PRESSURE'

False warning. Controller does not command sufficient descent rate.

TITLE 'PACK OVERHEAT'

Compressor overheat due to compressor sensor 1(2) failure.

TITLE 'PACK REGUL FAULT'

RAM air inlet door is stuck closed.

TITLE 'PACK AUTO SHUT DOWN INOP FOR STARTING'

Failure of close relay 12 HB of the flow control valve. FCV remains open.

TITLE 'SHUT OFF VALVE FAULT'

Hot air shut off valve stuck in closed position.

TITLE 'CABIN DUCT OVERHEAT'

Drive failure commanding trim air valve to fully open.

TITLE 'CARGO DUCT OVERHEAT'

AFT CARGO TRIM AIR VALVE full open order (drive fails).

TITLE 'VENT EXTRACT FAULT'

Extract fan fails.

TITLE 'VENT BLOWERS FAULT'

Sensor fault.

TITLE 'OVBD VALVE FAULT'



OVBD valve stuck in current position.



ATA 22 'AUTO PILOT'

TITLE 'AP DISENGAGED'

Failure of FMGC AP function; FD not affected.

TITLE 'ROW/ROPS LOST'

Loss of TAWS label on ARINC bus received by FAC 1&2.

TITLE 'AUTO FLIGHT TCAS MODE FAULT'

Loss of TCAS ARINC bus received by FMGC.

TITLE 'ATHR FAULT'

Interruption of A/THR Bus information between FMGC 1(2) and EIU.

TITLE 'FD FAULT'

Flight director data to the EFIS is faulty.

TITLE 'FMGC FAULT'

Loss of 28V power supply to FMGC 1(2).

TITLE 'MCDU FAULT'

Loss of 115 VAC power supply to MCDU 1(2).

TITLE 'DRIFT LOC BEAM (AUTOLAND)'

LOC deviation sent by ILS1 and ILS2 to FMGC1 and FMGC2 has a drift of 20 microA/sec. AP/FD does not follow the localizer beam $\frac{1}{2}$

TITLE 'NO FLARE'

Error in the radio altitude transmitted by the radio altimeter 1 and 2 to FMGC1 and FMGC2 (RA1 = RA2 = RATRUE + 55 ft).

TITLE 'LONG FLARE'

Error in the radio altitude transmitted by the radio altimeter 1 and 2 to FMGC1 and FMGC2 (RA1 = RA2 = RATRUE - 25).

TITLE 'LAND CAPABILITY CHANGE'

Land capability is downgraded during approach.

TITLE 'FCU FAULT'

Channel 1(2) is declared invalid (internal power supply fails).

TITLE 'NO G/S MODE'

Glide deviation received by FMGC 1 and 2 is fixed to a value of 80uA (only values transmitted to FMGC 1 and 2 and EGPWS are altered)

TITLE 'NO LAND MODE'

Radio altitude of radio altimeter 1 and 2 received by FMGC 1 and 2 always above 400 ft (only values transmitted to FMGC 1 and 2 are altered)

TITLE 'MAP SHIFT'

Incorrect internal FM position computation due to IRS drift. Slow(Fast) map shift on both NDs.

TITLE 'FAC FAULT'

FAC fails internally (FAC not healthy).



TITLE 'YAW DAMPER FAULT'

Electrical power failure of actuator 1. Loss of CAT 3 DUAL capability.

TITLE 'RUDDER TRV LIM FAULT'

Electrical power failure of side 1 motor.

TITLE 'RUDDER TRIM FAULT'

Electrical power failure of side 1 motor

TITLE 'RUDDER TRIMS RESET FAULT'

Cut of the two normally open signals from the reset switch to FAC1 and FAC2.

TITLE 'RUDDER TRIM RUNAWAY'

The connector of the rudder trim control selector is stuck in the left position.



ATA 23 'COMMUNICATIONS'

TITLE 'ACP FAULT'

Internal power failure.— No transmission or reception possible on Capt, F/O or OBS ACP

TITLE 'ACARS FAULT'

ATSU power supply fails. ATSU prompt disappears from all MCDU menus

TITLE 'VHF 1(2)(3) EMITTING'

Respective VHF becomes permanent emitting.

ATA 24 'ELECTRICAL'

TITLE 'GEN FAULT (EXCITATION) - 1(2)'

Generator excitation circuit fails.

TITLE 'GEN FAULT (EXCITATION) - APU'

Generator excitation circuit fails.

TITLE 'GEN FAULT (EXCITATION) - EMERG'

Emergency generator excitation circuit fails

TITLE 'GEN VOLTAGE INC/DEC'

Generator excitation fails (voltage increases/decreases to 180 V/60 V at a rate of 3V/s).

TITLE 'GEN TRANSFER FAULT'

Contactor GLC1 (GLC2) fails open.

TITLE 'GEN FREQUENCY INC/DEC'

Speed regulation of the constant speed drive fails (frequency increases/decreases to 500 Hz/300 Hz at a rate of 4 Hz/s).

TITLE 'IDG OIL OVERHEAT'

Abnormal friction in the IDG constant speed drive

TITLE 'IDG OIL LO PRESS'

Oil low pressure switch fails.

TITLE 'AC BUS FAULT - 1(2)'

Contactor GLC 1(2) and BTC 1(2) fail open.

TITLE 'AC BUS FAULT - ESS'

Wire between contactor 3XC and AC ESS bus is cut.

TITLE 'AC BUS FAULT - ESS SHED'

Wire between contactor 3XC and the AC SHED ESS BUS is cut.

TITLE 'AC ESS FEED CONTACTOR FAULT'

Contactor 3XC side 1 and 2 fail open.

TITLE 'DC BUS FAULT'



 ${\tt DC}\ {\tt BUS}\ {\tt becomes}\ {\tt unpowered}\ {\tt and}\ {\tt unpowers}\ {\tt supplying}\ {\tt TR}\ {\tt due}\ {\tt to}\ {\tt minimum}\ {\tt current}\ {\tt protection}.$

TITLE 'DC BUS FAULT - ESS'
DC essential bus unpowers.

TITLE 'DC BUS FAULT - ESS SHED' Relay 1PH fails open.

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TITLE 'BAT FAULT'

Faulty BAT 1(2) overheat detection

TITLE 'TR FAULT'

Control of 5PU1(2)(3PE) contactor fail(wiring cut).

TITLE 'ESS TR FAULT'

Primary winding cut.

TITLE 'EMERG GEN FAULT'

Constant Speed Motor/Generator fails. EMER GEN not available with the electrical system in emergency configuration.

TITLE 'STATIC INV FAULT'

Static inverter internal failure.

ATA 26 'FIRE PROTECTION'

TITLE 'AIR CONDITIONING SMOKE'

Fire in the pack. Smoke escapes from eyeball air conditioning outlets and/or adjacent area $\$

TITLE 'AVIONIC SMOKE'

Electrical fire in avionics bay. Perceptible smoke emanates from foot area

TITLE 'CARGO SMOKE'

Fire in cargo compartment, detected by SDCU.

TITLE 'APU FIRE LOOP A(B) FAULT - LOW PRESSURE'

Low pressure in the loop detector

TITLE 'ENG 1 FIRE LOOP A(B) FAULT'

Low pressure in the loop detector.

TITLE 'ENG 2 FIRE LOOP A(B) FAULT'

Fire loop fault.



ATA 27 'FLIGHT CONTROLS'

TITLE 'ELAC FAULT'

ELAC 1(2) power supply fails.

TITLE 'SEC FAULT'

SEC power supply fails.

TITLE 'FCDC FAULT'

FCDC power supply fails.

TITLE 'SLAT SYS FAULT'

Power supply fails on the slats channel in SFCC 1(2).

TITLE 'SLATS LOCKED (WTB)'

Asymmetric slats movement detected by SFCC after control handle selection.

TITLE 'FLAP SYS FAULT'

Power supply fails on the flaps channel in SFCC\n1(2).

TITLE 'FLAPS LOCKED (WTB)'

Asymmetric flaps movement detected by SFCC after control handle selection.

TITLE 'SLATS/FLAP HANDLE INOP'

Flaps/slats do not respond to inputs from FLAP lever.

Flap lever position disappears 10s after insertion of malfunction (even if Flap lever is moved)

TITLE 'SIDE STICK FAULT'

Capt (F/O) side stick electronically fails (pitch and roll).

TITLE 'SIDE STICK PITCH FAULT - CAPT'

Captain pitch side stick transducer unit mechanically fails. The side stick pitch order is blocked to up (neutral) (down) deflection

TITLE 'SIDE STICK PITCH FAULT - F/O'

F/O pitch side stick transducer unit mechanically fails. The side stick pitch order is blocked to up (neutral) (down) deflection.

TITLE 'SIDE STICK ROLL FAULT - CAPT'

Captain roll side stick transducer unit mechanically fails. The side stick roll order is blocked to left (neutral) (right) deflection.

TITLE 'SIDE STICK ROLL FAULT - F/O'

F/O roll side stick transducer unit mechanically fails. The side stick roll order is blocked to left (neutral) (right) deflection.

TITLE 'STABILIZER JAM'

THS screw jack is blocked. THS remains blocked.

TITLE 'PITCH TRIM RUNAWAY UP'

THS runaway up. THS and control wheel runaway up to a speed of 0.225 deg/s

TITLE 'ELEVATOR FAULT'

Jamming of the left(right) elevator.



TITLE 'AIL SERVO FAULT'

Jamming of a slide in the left aileron blue servo.

TITLE 'SPOILER RETRACTION FAULT'

Jamming of the left spoiler #3 servo when out.

TITLE 'SPEED BRAKE FAULT'

Speed brake control transducer unit fails.



TITLE 'GROUND SPOILERS FAULT'

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Erroneous tachowheel signal to SEC.

TITLE 'DEMONSTRATION OF ALTERNATE LAW'

No existing cause: synthetic failure, used for demonstration only. The malfunction does not degrade any A/C system functions (except flight controls).

TITLE 'DEMONSTRATION OF DIRECT LAW'

No existing cause: synthetic failure, used for demonstration only. The malfunction does not degrade any A/C system functions (except flight controls).

ATA 28 'FUEL'

TITLE 'MAIN PUMP FAULT'

For the Left system malfunctions: Pump 21QA(25QA) mechanically failed. For the Right system malfunctions: Pump 22QA(26QA) mechanically failed.

TITLE 'TANK FUEL LEAK - OUTER'

Break in the L(R) outer tank (200 kg/min (441 lb/min))

TITLE 'TANK FUEL LEAK - INNER'

Leak in the L(R) inner tank (200 kg/min (441 lb/min)).

TITLE 'TANK FUEL LEAK - CENTER'

Leak in the center tank (200 kg/min (441 lb/min)).

TITLE 'WING QTY PROBE FAILED'

Loss of accuracy of the inner and outer probes.

TITLE 'FQI FAULT'

FQI fails internally.

TITLE 'X FEED VALVE FAIL'

Valve stuck in position.

TITLE 'OUTR TO INR FAULT'

L(R) Intercell valve is closed.

TITLE 'FUEL TEMP INC/DEC'

Left (Right) inner fuel temperature sensors are defective.

TITLE 'TANK PUMPS LO PRESS'

Both fuel pumps in the left(right) wing are failed.

TITLE 'FUEL QTY INC/DEC'

Incorrect operation of fuel quantity computer. Displayed left(right) inner cell fuel quantity varies from 0kg to 6000kg (13,227 lb) at a rate of 20kg/s (44 lb/s)



ATA 29 'HYDRAULIC SYSTEM'

TITLE 'RSVR FLUID QTY INC/DEC'

Reservoir quantity varies according to the quantity selected on the IOS.

TITLE 'G(Y) (B) RSVR LO LVL - INSTANTANEOUS'

Reservoir will empty in approximatively 2 sec.

TITLE 'HYD PRESS TRANSMITTER INC/DEC'

Faulty pressure switch and pressure transmitter (pressure varies to a selected pressure (from 0 to 3600 psi) at a rate of 200 psi/s).

TITLE 'RSVR OVERHEAT'

Temperature of the reservoir is greater than 93 degrees C.

TITLE 'RSVR LO AIR PRESS'

Air pressure in the affected reservoir is lower than 22 psi.

TITLE 'ENG PUMP LO PRESS - G1'

EDP 1 PUMP is seized.

TITLE 'ENG PUMP LO PRESS - Y'

EDP 2 PUMP is seized.

TITLE 'ELEC PUMP FAULT'

The three phase AC bus control unit fails and de-energizes the affected ELEC Pump actuator relay.

TITLE 'PTU FAULT'

PTU mechanical failure.

TITLE 'RAT NO AUTOMATIC EXTENSION'

RAT deployment solenoid failure.

TITLE 'BRAKES ACCUMULATOR LOW PRESSURE'

Nitrogen leak in the brakes accumulator.



ATA 30 'ANTI ICE SYSTEM'

TITLE 'PITOT HEAT FAULT'

PITOT power supply input of PHC 1(2)(3) fails.

TITLE 'TAT HEAT FAULT'

TAT power supply input of PHC 1(2) fails.

TITLE 'PROBES HEAT FAULT'

Heating availability output of PHC 1(2) in open circuit.

TITLE 'CAPT STAT HEAT FAULT'

L(R) static probes power supply of PHC 1 fails (open circuit).

TITLE 'F/O STAT HEAT FAULT'

L(R) static probes power supply of PHC 2 fails (open circuit).

TITLE 'WING A.ICE FAULT'

Wing anti-ice valve is stuck in the closed position.

TITLE 'ENG A.ICE VALVE FAULT'

Engine anti ice valve stuck in current position, effects accordingly.

TITLE 'WING A.ICE OPEN ON GROUND'

Time delay relay fails.

TITLE 'L(R) WINDSHIELD (WINDOW) - INTERNAL FAILURE OF WHC'

Internal failure of WHC. Fault signal for the affected windows are sent to the ECAM. Phase B of the AC power supply to the windshield and windows is lost.



ATA 31 'INDICATING/RECORDING'

TITLE 'DMC FAULT'

EIS DMC 1(2)(3) power supply fails.

TITLE 'FWC FAULT'

FWC fails internally.

TITLE 'SDAC FAULT'

SDAC 1(2) fails internally.

TITLE 'DISPLAY FAULT - PFD'

Capt(F/O) PFD display unit power supply failure.

TITLE 'DISPLAY FAULT - ND'

Capt(F/O) ND display unit power supply fails.

TITLE 'DISPLAY FAULT - UPPER ECAM'

Upper ECAM display unit power supply fails.

TITLE 'DISPLAY FAULT - LOWER ECAM'

Lower ECAM display unit power supply fails.

TITLE 'ECP FAULT'

ECP fails internally.

ATA 32 'LANDING GEAR'

TITLE 'L/G NOT DOWN LOCKED'

Affected downlock actuator inoperative.

TITLE 'LGCIU FAULT'

LGCIU 1(2) internally fails.

TITLE 'RETRACTION FAULT'

Selected L/G does not uplock.

TITLE 'NOSE WHEEL STEERING FAULT'

Captain(F/O) handwheel XMTR-N/WS (IGC) fails. Loss of tiller control on nosewheel steering.

TITLE 'BSCU FAULT'

Internal failure of the BSCU SYS 1(2).

TITLE 'BRAKE HOT'

Brake dragging on affected wheel.

TITLE 'NW TYRES LO PRESS/BURST AT 90KTS'

Low pressure (100 psi) and burst at selected speed (or 90 kts).

TITLE 'TYRE LO PR - NLG TYRE BURST'

Low pressure (0 psi) and selected tire blows.



TITLE 'ANTISKID FAULT'

A/SKID & N/W STRG switch fails.

TITLE 'AUTO BRK FAULT'

Servo valve norm brake is jammed closed.

TITLE 'AUTO BRK CONDITION FAULT'

The auto-brake conditions for arming flag are not set AUTO/BRK pb inoperative

TITLE 'LOSS OF BRAKING'

Disagreement between the two BSCU channels. Normal braking and Autobrake on all wheels are lost.

TITLE 'L/G - DOORS NOT CLOSED'

Selected L/G door uplock fail to lock closed.

TITLE 'L/G - GEAR UPLOCK FAULT'

Uplock mechanism fails (affected gear uplock in locked position when the ${\it L/G}$ is downlocked).

TITLE 'GEAR NOT DOWN (UP) LOCKED - IN TRANSIT (GRAV NOT POS)'

Selected landing gear actuator fails in transit during retraction or extension sequence

TITLE 'N.W. STEER FAULT'

Servo valve fails. Loss of tiller control on nosewheel steering. Rudder pedal steering also not available

TITLE 'RIGHT MAIN GEAR TIRES BURST ON GROUND'

Both tires burst on the right main landing gear.

TITLE 'LEFT MAIN GEAR TIRES BURST ON GROUND'

Both tires burst on the left main landing gear.

TITLE 'L/G LEVER LOCKED'

Lever latch fails. The baulk solenoid fails to release the mechanism when the shock absorbers are extended.



ATA 34 'NAVIGATION'

TITLE 'IR FAULT'

Internal failure detected.

TITLE 'ATT DISCREPANCY'

IR attitude error due to a sensor drift of 2 degrees/second, with a maximum drift of 15 degrees.

TITLE 'HDG DISCREPANCY'

IR 1(2)(3) heading computation drift.

TITLE 'ADR FAULT'

Internal ADR fault.

TITLE 'AIRSPEED CHANNEL ADR FAULT'

Octal label 206 computed airspeed: Bad transmission.

TITLE 'BLOCKED PITOT'

Obstruction of the hole of the CAPT (F/O)(STBY) pitot.

TITLE 'FAILED PITOT'

The total pressure deliver by the pitot become egal to the static pressure, so speed calculate with this value fall to zero.

TITLE 'ISIS HORIZON FAULT'

ISIS inertial measurement fails. On ISIS, symbolic horizon is lost and replaced by ATT red flag.

TITLE 'ILS RECEIVER FAIL'

ILS 1(2) receiver power supply fails.

TITLE 'TRANSMITTER FAILED (LOC)'

ILS transmitter stops transmitting. Localizer deviations indicators not in view on NDs and PFDs.

TITLE 'TRANSMITTER FAILED (GLIDE)'

Glideslope transmitter stops transmitting. Glideslope deviations on ND and PFD are not displayed.

TITLE 'VOR RECEIVER FAIL'

VOR 1(2) receiver power supply fails.

TITLE 'RMP FAULT'

Respective RMP power supply fails.

TITLE 'WX RADAR WAVEGUIDE DISCONNECT'

Antenna Waveguide is disconnected from the antenna.

TITLE '(NO ECAM) - WR R/T FAULT'

Radar 1 transceiver internal failure.

TITLE 'R/A RECEIVER FAULT'

Associated R/A receiver power supply failure.



TITLE 'ERRONEOUS RADIO ALTITUDE (-6 FT)'

Erroneous Radio Altitude Height Indication to RF Leak between

Transmitter and Receiver Antennas leading to a frozen negative value (- 6 ft).

TITLE 'RADIO ALTITUDE (PARAMETER FROZEN)'

Erroneous Radio Altitude Height Indication, due to a software issue inside RA Transmitter (Frozen Parameter).

TITLE 'GPWC FAILURE'

Total failure of the GPWS (115 VAC) power supply.

TITLE 'GPS1(2) FAULT - RECEIVER FAILURE'

Single GPS receiver failure due to an internal hardware fault)

TITLE 'GPS PRIMARY LOST'

Loss of Global Positioning System as primary source of navigation. Number of satellites tracked by GPS2 reduced to 3

TITLE 'GPS PRIMARY LOST CAPT OR F/O'

Loss of GPS Primary Navigation on CAPT or F/O side

TITLE 'FM/GPS POS DISAGREE'

Difference of more or equal than 0.5mn (0.5Nm) between FMGC and GPS1(2) position (lat/long)

TITLE '(NO ECAM) - GPWS FALSE WARNING'

Radio Altitude processing failure.

$\texttt{TITLE} \ \ \textbf{`(NO ECAM)} \ \ \textbf{-} \ \ \textbf{GPWS TERRAIN TERRAIN PULLUP WARNING'}$

Warning TERRAIN TERRAIN PULLUP is generated.

TITLE 'STBY IAS FAULT - STANDBY AIRSPEED INDICATOR FAULT'

Standby airspeed indicator fault : indicates 0 knots.

TITLE 'SPEED INDICATION INC/DEC FROM DMC 1(2)(3)'

DMC 1, 2 AND 3 speed indication increase or decrease to the selected value.

TITLE 'UNTIMELY STALL WARNING'

No existing cause: Synthetic failure setting Alarm STALL Only active in Flight Phases 5, 6 and 7.

TITLE 'SPEED INC/DEC CAUSE BY RAPID MODIFICATION OF PRES/TEMP'

As a result of rapid modification of external pressure, speed of aircraft inc/dec suddenly.

ATA 35 'OXYGEN'

TITLE 'LO PR OXY'

Leak in the high pressure oxygen circuit down to 600 psi.



ATA 36 'PNEUMATICS'

TITLE 'BLEED FAULT (HP VALVE)'

HP VALVE ENG 1(2) stuck in its current position.

TITLE 'BLEED FAULT (PR VALVE)'

Pressure regulating valve stuck in its current position.

TITLE 'BLEED LEAK'

Pylon duct leak.

TITLE 'WING BLEED LEAK'

Leak upstream of WING A/I VALVE.

TITLE 'BLEED LOW TEMP'

Temperature Control Thermostat (TCT) regulating precooler downstream temperature to below normal setting value.

TITLE 'BLEED NOT CLOSED'

Pressure Regulating Valve 1(2) stuck in open position.

TITLE 'X-BLEED FAULT'

X bleed valve stuck closed (auto control motor failure).

TITLE 'APU BLEED FAULT'

APU bleed valve is stuck closed when APU bleed is commanded ON.

ATA 49 'APU'

TITLE 'APU FIRE (EXTING)'

Fire in APU compartment. Fire indications extinguish 10s after discharge of agent.

TITLE 'APU FIRE (UNEXTING)'

Severe APU fire.

TITLE 'APU FAULT'

APIC: CPU operative fault

GARRETT: Fuel solenoid driver fails closed

ECB's protective circuit will operate to cause an automatic APU shutdown if the APU is running. If the APU is not running and normal starting procedure is carried out, starting of the APU is impossible.

TITLE 'LOW APU OIL QTY'

APU oil quantity in tank is equal to 3L(for ALLIED SIGNAL).

ATA 52 'DOOR'



TITLE 'FWD (AFT) CARGO DOOR OPEN (SWITCH)' Selected cargo door switch false open.

TITLE 'REAR LEFT/RIGHT SLIDE NOT ARMED'
Slide detected not armed (faulty switch).



ATA 70C POWER PLANT - CFM'

TITLE 'FLAME OUT (NO DAMAGE)'

Engine combustion stopped.

TITLE 'FLAME OUT (WITH DAMAGE)'

LP compressor damage due to the absorption of foreign matter.

TITLE 'EXTINGUISHABLE FIRE BY FIRST AGENT'

Overheat detected in engine core element. Fire indications will extinguish 10s after one agent

TITLE 'EXTINGUISHABLE FIRE BY SECOND AGENT'

Overheat detected in engine core element. Fire indications extinguish 10s after both agents

TITLE 'UNEXTINGUISHABLE FIRE'

Overheat detected in engine core element. Fire is not extinguishable.

TITLE 'SERIOUS DAMAGE WITH UNEXTINGUISHABLE FIRE'

Compressor stall with engine core fire.

TITLE 'SERIOUS DAMAGE WITH ABRUPT POWER LOSS'

Foreign object ingestion and engine seizure.

TITLE 'N2 ACCESSORY DRIVE LOST'

Radial drive shaft rupture.

TITLE 'COMPRESSOR STALL'

Compressor stalls.

TITLE 'START FAULT - HUNG START (LOW FUEL FLOW)'

Offset in the fuel metering valve position causing a fuel flow lower than normal during start.

TITLE 'ENG HOT START'

Incorrect engine operation. N2 acceleration is slower than normal. EGT increases towards an abnormal value.

TITLE 'IGNITION FAULT'

Ignition plugs fail. Start attempt takes place normally. FADEC detects no light up.

TITLE 'START VALVE FAULT'

Start valve stuck in position.

TITLE 'HP FUEL VALVE FAULT'

HPSOV stuck in position.

TITLE 'EIU FAULT'

EIU power supply fails.

TITLE 'FADEC FAULT'

FADEC internally fails.

TITLE 'REVERSER FAULT'

Thrust Reverser Direction Control Unit stuck in position.

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TITLE 'REVERSER UNLOCKED'

Reverser doors unlocked (door position remains below 5% of maximum door deployment).

TITLE 'THR LEVER DISAGREE'

Misrigging of one resolver: the intended position is higher than the real thrust lever position.

TITLE 'THR LEVER FAULT'

Both throttle resolvers fail.

TITLE 'FUEL FILTER CLOGGING'

Clogging of fuel filter.

TITLE 'HIDDEN FUEL LEAK'

Engine fuel pump assembly seal is broken.

TITLE 'OIL FILTER CLOGGED'

Clogging of oil filter.

TITLE 'OIL PRESS INC/DEC'

Oil pump failure or oil jet clogging.

TITLE 'OIL TEMP INC/DEC'

Oil temperature adjusts at a rate of 20 degrees C/s to the selected value.

TITLE 'OIL QTY INC/DEC'

Oil quantity adjusts to the selected value at a rate of 0.5 qts/s.

TITLE 'OIL LO PRESS - SENSOR FAIL'

Oil sensor failure.

TITLE 'N1 INC/DEC'

Malfunctioning of the fuel metering valve.

TITLE 'N2 INC/DEC'

Malfunctioning of the fuel metering valve.

TITLE 'EGT INC/DEC'

A value is entered, an offset is created which remains until the malfunction is removed or is set differently.

TITLE 'VIBRATION N1 INC/DEC'

Unbalanced engine. When the engine is running, N1 vibration adjusts to the selected value at a rate of 2 cockpit units/s.

TITLE 'VIBRATION N2 INC/DEC'

Incorrect engine operation. When the engine running, the N2 vibration adjusts to the selected value at a rate of 2 cockpit units/s.

TITLE 'VOLCANIC ASH'

Volcanic dust cloud above FL190.

TITLE 'ENGINE BIRDSTRIKE - ENGINE STALL'

Bird strike leading to non-recoverable engine stall.

TITLE 'ENGINE BIRDSTRIKE - HIGH VIBRATIONS'

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SIMULATED MALFUNCTIONS LIST

A bird strike causes a fan blade to be out of balance.

TITLE 'ENGINE BIRDSTRIKE - HIGH VIBRATIONS - NO N1 DROP' A bird strike causes a fan blade to be out of balance.

TITLE 'FLAME OUT (NO DAMAGE) - RESTARTABLE' Engine combustion is stopped.

TITLE 'FLAME OUT (NO DAMAGE) - NON-RESTARTABLE' Engine combustion is stopped.

TITLE 'N1 LIMITED TO 60 PERCENT'

N1 rise normally until 60 percent and then is blocked.

TITLE '(NO ECAM) - N1, FF & EGT DIFFER BETWEEN ENG1 AND ENG2' Values of N1, FF and EGT of ENG1 are 5% lower versus the same parameter of ENG2.

UNUSUAL ATTITUDE

TITLE 'UNUSUAL ATT 25 DEG UP, BANK 45 DEG RIGHT'

Pitch and bank angle change to 25 deg UP, +45 deg bank.

TITLE 'UNUSUAL ATT 15 DEG DN, BANK 45 DEG LEFT'

Pitch and bank angle change to 15 deg DN, -45 deg bank.

TITLE 'UNUSUAL ATT 40 DEG UP, BANK 40 DEG RIGHT'

Pitch and bank angle change to 40 deg UP, +40 deg bank.

TITLE 'UNUSUAL ATT 40 DEG DN, BANK 0 DEG '

Pitch and bank angle change to 40 deg DN, 0 deg bank.

TITLE 'UNUSUAL ATT 40 DEG DN, BANK 75 DEG RIGHT'

Pitch and bank angle change to 40 deg UP, +75 deg bank.

TITLE 'UNUSUAL ATT 10 DEG DN, BANK 130 DEG LEFT'

Pitch and bank angle change to 10 deg DN, -130 deg bank.