

| | | | | | | |
|--|--|--|--|---|---|---|
| POWER PLANT | ENGINE FIRE OR DAMAGE | ENG FAIL/INFLT ENG SHUTDOWN | ABORTED START | TWO ENGINE FLAMEOUT | ▶ | |
| | ONE ENGINE OUT OPERATION | | OIL PRESS HIGH / OIL QTY INCR | | ▶ | |
| | OIL PRESS LOW | OIL TEMP HI | OIL QTY LOW | INFLT ENG RESTART | ▶ | |
| APU & FIRE PROT | APU FIRE | APU WINDMILL START | APU NO ROTATION / NO START | | ▶ | |
| | FIRE DETECTOR LOOP AND ONE LOOP | | | | ▶ | |
| PNEU & AIR COND & PRESS | TAIL COMPT TEMP HIGH | TRANSFER LOCKOUT LT ON AND STANDBY ON | | | ▶ | |
| | CABIN ALTITUDE WARNING OR RAPID DECOMPRESSION | | EMER DESCENT | AIR COND SYS PRESS DROPS TO ZERO PSI | ▶ | |
| | FLOW | CABIN DIFF PRESS UNCONTROLLABLE, OFF SCHEDULE OR OSCILLATES | | | ▶ | |
| ANTI ICE | AIRFL ICE PRESS ABNML | L/R ICE PROT TEMP HIGH | L/R ICE PROT TEMP LOW | | ▶ | |
| | PITOT / STALL HEAT OFF | | L/R ICE FOD ALERT | | ▶ | |
| HYD | L/R HYD TEMP HIGH | HYD SYS LEAK OR LOSS | L/R HYD PRESS LOW | | ▶ | |
| FLT CONTR | STALL IND FAILURE | RUDDER CONTROL MAN | JAMMED STABILIZER | | ▶ | |
| LDG GEAR | RED GEAR LT ON WITH LEVER DOWN | | GEAR LTS THREE GREEN BRAKE OVERHEAT | | ▶ | |
| | ANTI-SKID | | GEAR DOOR OPEN IN FLT | | ▶ | |
| FLT INSTR | PFD/ND DISPLAY FAILURE | SYMBOL GENERATOR UNIT FAILURE | FMS FAILURE | | ▶ | |
| ELEC & AUTO FLT | LOSS OF BOTH GENS | | APU GEN OFF | | ▶ | |
| | L/R GEN OFF | L/R CSD OIL PRESS LOW | AC EMER BUS OFF | | ▶ | |
| | DC EMER BUS OFF | | DC BUS OFF | | ▶ | |
| | L/R ELEC SYS FAILURE / AC CROSSTIE LOCKOUT | | | ABN CSD OIL OUTLET TEMP | | ▶ |
| | | | | AP TRIM | | ▶ |

ENGINE FIRE OR DAMAGE/SEPARATION SUSPECTED

AUTOTHROTTLE / THRUST LEVER (Affected Engine).....DISENGAGE/IDLE 1

Fire Warnings/Engine Indicators.....CK 1/2



Still on or severe eng damage/separation suspected

FUEL SHUTOFF LEVER (Affected Engine).....OFF 1

| | |
|---|---|
| ENGINE FIRE SHUTOFF HANDLE.....PULLED AGENT DSCH (1 OR 2) / ON | 2 |
|---|---|

Pull the handle and turn it to the extinguisher you want to use and verify the AGENT LOW light is on.

CLOCK.....STARTED 2

FIRE WARNING.....CK 1/2



Still on after 30 sec.

| | |
|--|---|
| ENGINE FIRE SHUTOFF HANDLE.PULLED AGENT LOW Lt.....AGENT DSCH (Other Bottle)/ON | 2 |
|--|---|

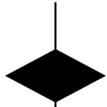
Off

Apply emergency procedure INFLIGHT ENGINE SHUTDOWN

Off and severe eng damage/separation not suspected
 Continue engine operation at Captain's discretion

ABORTED START

FUEL Shutoff Lever Position 1



OFF

ENG START Sw.....RELEASED 1

ENG IGN SEL.....OFF 1

Before attempting another start, wait until N₂ RPM indicates zero.

ON

FUEL Shutoff Lever.....OFF 1

ENG Start Sw 1



Released (ENG START Switch OFF)

N₂ RPM.....CK ZERO 1

ENG START Sw.....HOLD FOR 20 SEC, THEN OFF 1

ENG IGN SEL.....OFF 1

Before attempting a new start wait until N₂ RPM indicates zero.

Still ON

ENG START Sw.....HOLD FOR 20 SEC, THEN OFF 1

ENG IGN SEL.....OFF 1

Before attempting another start, wait until N₂ RPM indicates zero.

CAUTION: In case of tailpipe fire or torching, engage starter at any N₂ RPM below 20% RPM and keep it engaged until fire goes out then call maintenance.

TWO ENGINE FLAMEOUT

| | | |
|---|---|-----|
| EMER PWR Sw..... | ON | 1 |
| ENG IGN Sel..... | OVRD | 2 |
| CABIN PRESS Control Lever..... | MANUAL (DOWN) | 2 |
| THNDRTSTRM LT Sw (if rqd)..... | ON | 2 |
| Airspeed..... | MINIMUM MANEUVERING (NOT LESS THAN 170 KIAS) | 1 |
| Thrust Levers..... | IDLE | 1 |
| ENG Anti-Ice Sws..... | ON | 2 |
| BATT sw..... | CK ON/LOCKED | 2 |
| START PUMP Sw..... | ON | 2 |
| FUEL TANK PUMPS Sws..... | ALL ON | 2 |
| GEN Sws..... | OFF | 2 |
| ENG HYD PUMP Sws..... | OFF | 2 |
| FUEL Shutoff Levers..... | ON | 1 |
| FUEL X-FEED Lever..... | OFF | 2 |
| Engine(s) Restarted | | 1/2 |
| Neither APU..... | ATTEMPT WINDMILL START | 2 |
| NOTE: Attempt APU start regardless of altitude and airspeed | | |
| Starts L&R APU BUS Sws..... | ON | 2 |
| Does not start | | |
| Continue engine start attempts. When one or both engine are started: | | |
| One or both | | |
| Electrical system..... | AS RQD | 2 |
| ENG HYD PUMP Sws..... | AS RQD | 2 |
| CABIN PRESS Control Lever..... | AUTO (UP) | 2 |
| START PUMP Sw..... | OFF | 2 |
| ENG Anti-Ice Sws..... | AS RQD | 2 |

ONE ENGINE OUT OPERATION

Appropriate configuration and speed (if rqd).....ACHIEVE 1
 MEA.....CHECK 1/2
 Altitude capability (if rqd).....DETERMINE 2
 ATC.....ADVISE 2
 Transponder.....AS RQD OR A 7700 2
 Phase of flight 1/2



After takeoff

Brake temperature.....CHECK 2
 Landing Gear.....UP/LTS OUT 2
 FLAP/SLAT Lever.....UP/RET 2
 FLAP T.O. Sel.....STOW 2
 SPEEDBRAKE Lever.....FLIGHT MODE 2
 Landing Lt Sws.....RET & OFF 2
 Cabin Signs.....AS RQD 2
 ENG IGN Sel.....AS RQD 2
 Fuel System.....AS RQD 2
 Air Conditioning and Pressurization.....CK/SET 2

Altimeters.....1013/1013 1/2

After takeoff checklist completed

Other phases

Airplane Altitude (if rqd).....CHECK 1



Below Altitude Capability

MEA (at least).....ACHIEVE 1



Above Altitude Capability

Driftdown Speed Schedule.....CK/MAINTAIN 1
 At bottom of driftdown

At altitude capability

Appropriate cruise chart (if rqd).....SELECT 1
 Maximum landing weight.....CHECK 2
 Approach and final Procedures.....REVIEW 1/2
 Missing Approach Procedure.....REVIEW 1/2

DESCENT

| | | |
|--------------------------------------|-----------------|-----|
| MEA..... | CHECK | 1/2 |
| WINDSHIELD ANTI FOG Sw..... | AS RQD | 1 |
| ENG HYD PUMP Sw (Operative eng)..... | HI | 2 |
| AUX HYD PUMP and TRANS HYD PUMP..... | ON | 2 |
| Altimeters..... | SET | 1/2 |
| Pressurization..... | SET 3000 FT AGL | 2 |

Descent checklist completed

APPROACH

| | | |
|---|-------------|-----|
| Cabin Signs..... | ON | 2 |
| AIR COND SUPPLY Sw (Operative eng)..... | OFF | 2 |
| RAM AIR Sw..... | ON | 2 |
| Altimeters..... | SET | 1/2 |
| Radio altimeters..... | FT | 1/2 |
| Audio Marker..... | ON | 1/2 |
| Landing Data..... | REVIEW | 1/2 |
| V Bugs..... | ___/___/___ | 1/2 |
| Approach Briefing..... | PERFORM | 1 |

Approach checklist completed

FINAL

| | | |
|----------------------------------|----------------|-----|
| Altimeters..... | QNH/QNH & X-CK | 1/2 |
| Fuel Sys..... | SET | 2 |
| TRC..... | GA | 1/2 |
| Landing Gear/Lts..... | DOWN/3 GREEN | 2 |
| FLAP/SLAT Lever..... | 28/EXT | 2 |
| SPEED BRAKE Lever..... | ARM | 1 |
| ENG IGN Sel..... | BOTH | 2 |
| Annunciator Panel..... | CHECK | 1/2 |
| Rudder Trim (At 100 ft AGL)..... | NEUTRAL | 1 |

Final checklist completed

OIL PRESS HIGH / QTY INCREASING

CAUTION: Takeoff (when below V₁) should be aborted if oil pressure exceeds 60 psi and oil quantity is increasing.

Oil Pressure, Quantity & Eng Parameters

1/2



Press in normal range, qty increasing and other Parameters normal

Continue normal operation monitoring eng parameters (END).



Press above 55 psi (display flashing), qty increasing and/or other abnormal indications

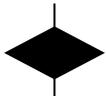
Apply Emer Proc ENGINE FAILURE/INFLIGHT ENGINE SHUTDOWN (END).

Press above 55 psi (display flashing), qty & other parameters normal

- Autothrottle.....DISENGAGE 1
- Related Thrust Lever.....RETARD 1

OIL PRESS indication

1/2



Normal range

Continue at reduced thrust setting to maintain oil pressure Below 55 psi.

Above 55 psi (display flashing)

Apply Emer Proc ENGINE FAILURE/INFLIGHT ENGINE SHUTDOWN (END).

LOW OIL PRESSURE AND/OR L/R OIL PRESS LOW ANNUN

Phase of flight 1/2



After Start

Oil Pressure

1/2



Above 40 psi

Oil Temperature & Quantity.....MONITOR 1/2

Below 40 psi

FUEL Shutoff Lever.....OFF 1/2

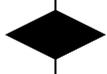
Ask for appropriate maintenance action
(END)

Other Phases

Autothrottle.....DISENGAGE 1

Related Thrust Lever.....RETARD 1

OIL PRESS Annun/Oil Parameters 1/2



OIL PRESS LOW Annun displayed

Oil Pressure, Temperature & Quantity 1/2



Normal

Assume faulty annunciation. Operate engine normally.
(END)

Below 40 psi

Apply Emer Proc ENGINE FAILURE/INFLIGHT ENGINE
SHUTDOWN (END).

Oil pressure below 35 psi, OIL PRESS LOW Annun not displayed

Oil Temperature & Quantity 1/2



Normal

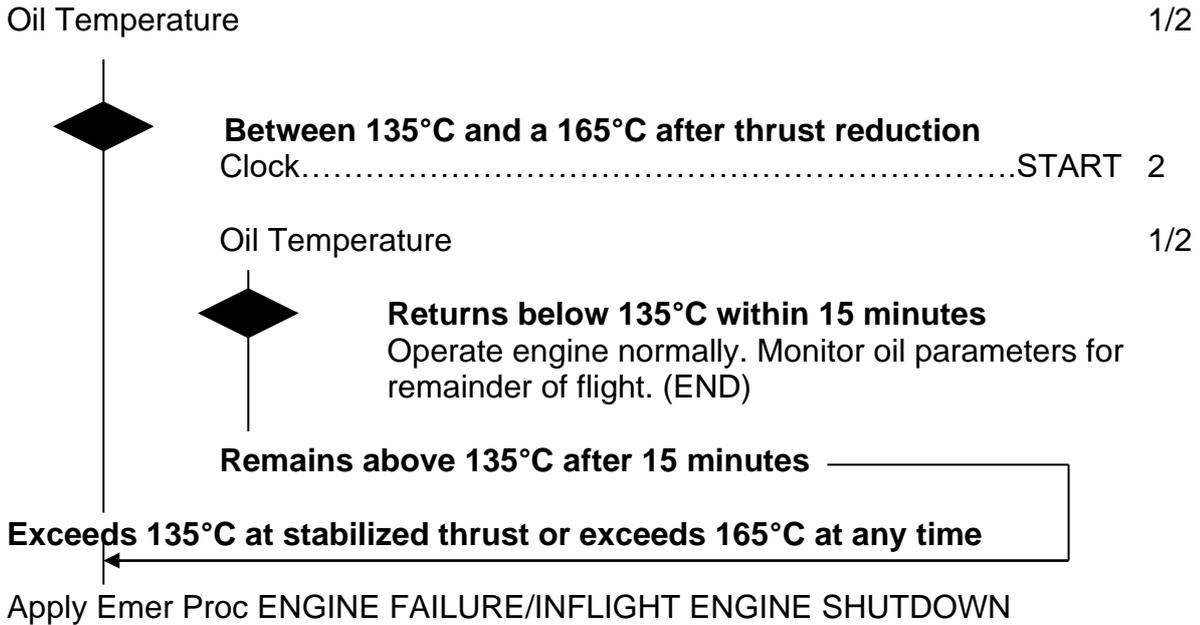
Continue normal engine operation
(END)

Abnormal

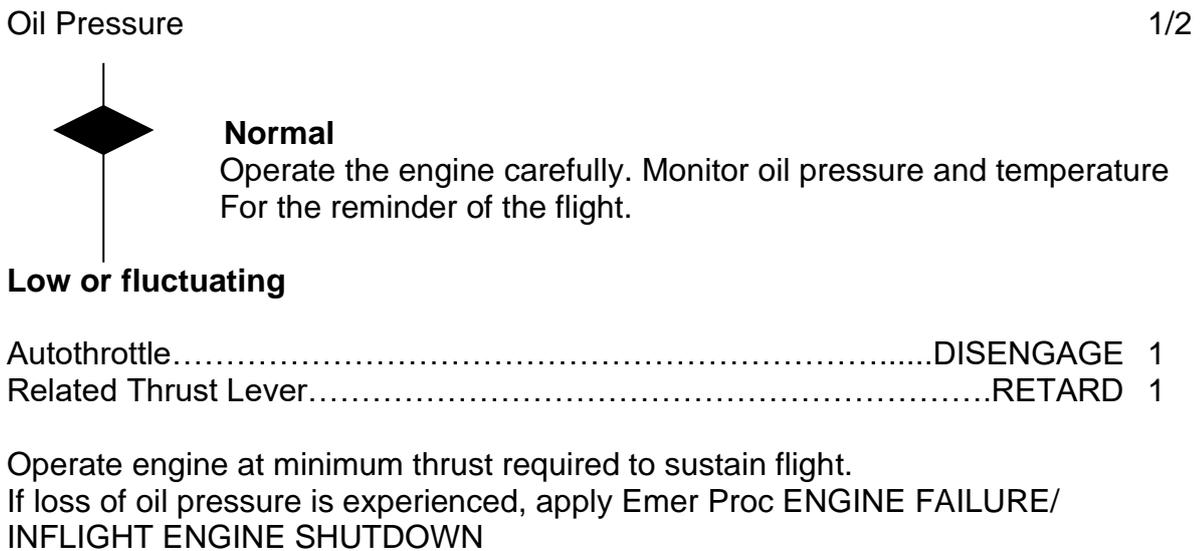
Apply Emer Proc ENGINE FAILURE/INFLIGHT ENGINE SHUTDOWN

OIL TEMPERATURE HIGH

NOTE: Oil temperature may increase after a thrust reduction

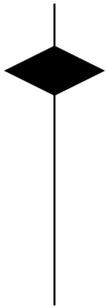


OIL QUANTITY LOW OR DECREASING



INFLIGHT ENGINE RESTART

| | | |
|----------------------------------|------------------------------|-----|
| IAS & Altitude..... | CK INFLIGHT RELIGHT ENVELOPE | 2 |
| Thrust Lever..... | IDLE | 2 |
| FUEL Shutoff Lever..... | OFF | 2 |
| ENG FIRE Shutoff Handle..... | FULLY IN | 2 |
| Related ENG Anti-Ice Sw..... | ON | 2 |
| Related FUEL TANK PUMPS Sws..... | BOTH ON | 2 |
| INLET FUEL PRESS LO Annun..... | OFF | 2 |
| OIL PRESS Indicator/Readout..... | INDICATING | 1/2 |
| | | |
| ENG IGN Sel..... | OVRD | 2 |
| FUEL Shutoff Lever..... | ON | 1 |
| Clock..... | START | 2 |
| RPM & EGT | | 1/2 |



No rise within 20 secs

Abort start.

CAUTION: If start is not successful with initial EGT above 100°C, Allow EGT to cool below 100°C before attempting a second start. If start is still unsuccessful, apply Emer Proc ENGINE FAILURE/ INFLIGHT ENGINE SHUTDOWN

Rise within 20 secs

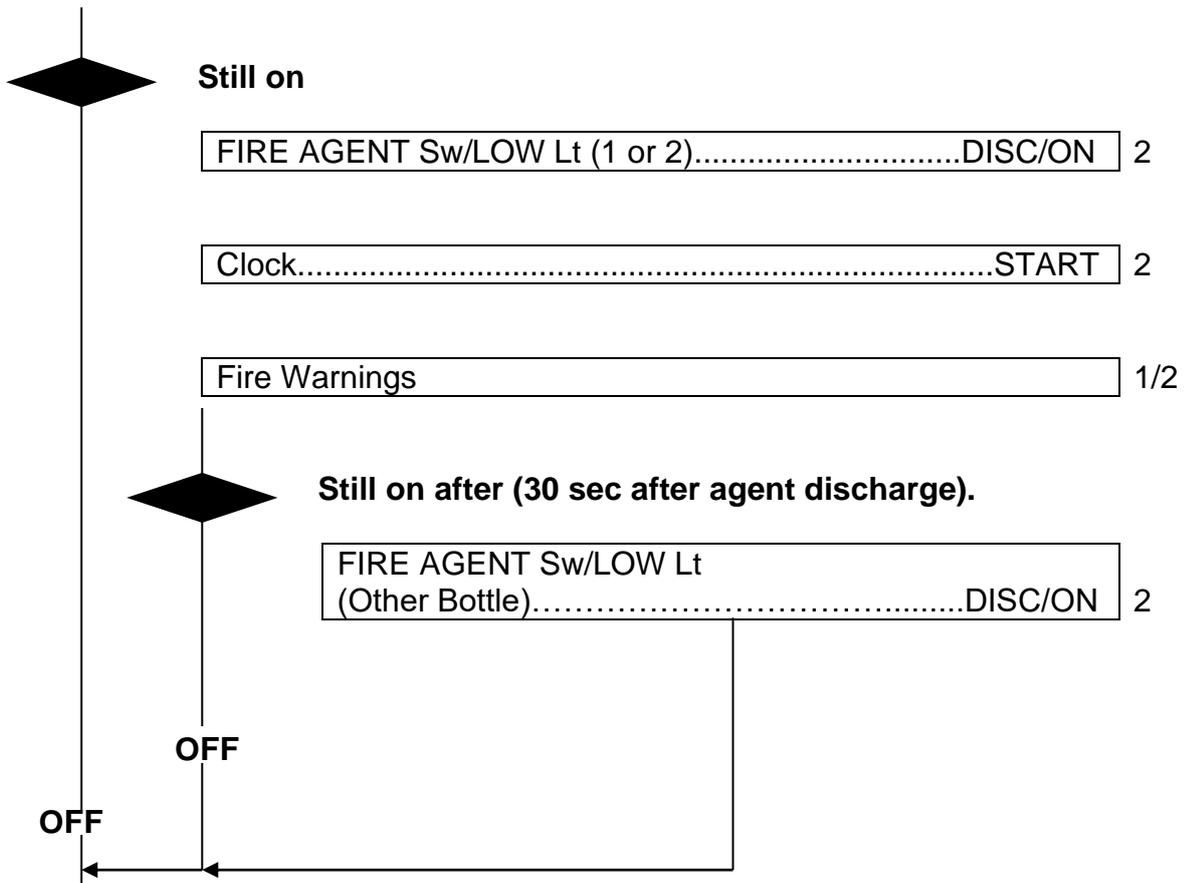
| | | |
|---|------------------------------|---|
| Engine Parameters..... | STABILIZED | 2 |
| ENG IGN Sel..... | AS RQD | 2 |
| | Observe ignition duty cycle. | |
| GEN Sw..... | RESET/ON | 2 |
| Fuel Management..... | AS RQD | 2 |
| ENG Anti-ice Sw..... | AS RQD | 2 |
| HYD PUMP Sws..... | AS RQD | 2 |
| Pneumatic & Air Conditioning Systems..... | AS RQD | 2 |

APU FIRE

APU FIRE CONT Switch.....OFF & AGENT ARM 2

*NOTE: If APU does not shutdown, pull APU CONTROL C/B
(Ovhd Pnl B 21)*

Fire Warnings 1/2



APU MASTER Sw.....OFF 2
 APU DOORS Sw.....AUTO 2

| |
|--|
| FIRE DETECTOR LOOP ANN AND ONLY ONE LOOP LT WITHOUT FIRE WARNINGS |
|--|

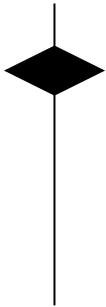
Affected ENG / APU

LOOPS Selector Sw.....SET TO LOOP NOT LIGHTED 2

Observe that LOOP light goes off.

Selected LOOPS TEST Button.....PUSH 2

Test Indications (Fire Warnings) 1/2



Satisfactory (fire warn norm)

Release LOOPS test button.

No further action required. Continue flight with loops selector switch in the selected operative position (END).

Unsatisfactory (fire warn not norm)

Affected ENG / APU

LOOPS Selector Sw.....SET TO OPPOSITE POSITION 2

If fire warning is now received, apply Emer. Proc.

ENG FIRE or APU FIRE as appropriate

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| |
|---------------------------|
| APU WINDMILL START |
|---------------------------|

- BATT Sw.....ON/LOCK 2
- APU FIRE CONT Sw.....NORM 2
- APU AIR Sw.....OFF 2
- APU MASTER Sw.....OFF 2
- APU DOORS Sw.....AUTO 2

- START PUMP Sw.....ON 2
- APU MASTER Sw.....START/RUN 2
- APU RPM & EGT Indicators.....MONITOR 1/2

- APU OIL PRESS LOW Annun
 (At or prior to 95% RPM).....CK OFF 2

- Verify APU stabilize in normal operating range, then:
- APU GEN VOLT & FREQ.....CHECK 1/2
- APU L/R BUS Sws.....AS RQD 1/2
- R FUEL TANK PUMPS Sws.....BOTH ON 2

- After AC powered fuel tank pressure available:
- START PUMP Sw.....OFF 2

APU NO ROTATION OR NO START

Meter Sel.....BATT VOLT 2
 APU MASTER Sw.....START 2
 Battery Voltage.....CHECK 2

Check battery voltage after applying APU starter load



Below 22 V

APU MASTER Sw.....OFF 2
 Do not attempt another start.
 Battery is discharged. Call maintenance.
 (END)

22 V or above

APU MASTER Sw.....OFF 2
 APU CONTROL C/B (Ovhd Pnl B 21).....IN 2
 GEAR HDL REL Button.....CHECK 1/2



Retracted

Call maintenance.
 (END)

Extended

APU MASTER Sw.....RUN 2
 APU Doors



Open

Attempt another start.
 (END)

Closed

APU DOORS Sw.....NON RAM 24 SEC THEN OFF 2
 Attempt another start.
 (END)

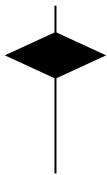
TAIL COMPT TEMP HIGH LT ON

PNEU X-FEED VALVE Levers.....CLOSED 2

L&R AIR FOIL Ice Protect Sws.....OFF 2

L&R AIR COND Supply Sws.....HP BLD OFF 2

Phase of Flight



Final Approach (5 minutes from touchdown)
Continue approach using minimum thrust settings.
(END)

Takeoff, climb, cruise, descent or Initial approach

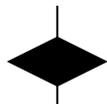
AIR COND SHUTOFF Sw.....OFF 2
ENG SYNC Sel.....OFF 2
Autothrottle.....DISENGAGE 1
L Eng Thrust Lever.....IDLE 1
Clock.....START 2
TAIL COMPT TEMP HIGH LT 1/2



Off (within 2 min)
L AIR COND SUPPLY Sw.....OFF 2
L Eng Thrust Lever.....RESTORE THRUST 1
TAIL COMPT TEMP HIGH LT 1/2



Off
AIR COND SHUTOFF Sw.....AUTO 2
R AIR COND SUPPLY Sw.....AUTO 2
TAIL COMPT TEMP HIGH Lt 1/2



Off

On
R AIR COND SUPPLY Sw.....HP BLD OFF 2
L AIR COND SUPPLY Sw.....AUTO 2

If necessary:
L PNEU X-FEED VALVE Lever.....OPEN 2
AIR FOIL Ice Protect Sw.....ON 2
(END)

On

| | | | |
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L Eng Thrust Lever.....AS RQD TO KEEP LT OFF 1

CONTINUE

R AIR COND SUPPLY Sw.....AUTO 2

If necessary:

R PNEU X-FEED VALVE Lever.....OPEN 2

AIR FOIL Ice Protect Sw.....ON 2

If TAIL COMPT TEMP HIGH light comes on again:

AIR FOIL Ice Protect Sw.....OFF 2

Avoid icing conditions.

On (after 2 min)

L Eng Thrust Lever.....RESTORE THRUST 1

R Eng Thrust Lever.....IDLE 1

Clock.....START 2

TAIL COMPT TEMP HIGH LT 1/2



Off (within 2 min)

R AIR COND SUPPLY Sw.....OFF 2

R Eng Thrust Lever.....RESTORE THRUST 1

TAIL COMPT TEMP HIGH LT 1/2

Off

AIR COND SHUTOFF Sw.....AUTO 2

On

L Eng Thrust Lever.....AS RQD TO KEEP LT OFF 1

L AIR COND SUPPLY Sw.....AUTO 2

If necessary:

L PNEU X-FEED VALVE Lever.....OPEN 2

AIR FOIL Ice Protect Sw.....ON 2

(END)

On (after 2 min)

R Eng Thrust Lever.....RESTORE THRUST 1

AIR COND SHUTOFF Sw.....AUTO 2

Avoid icing areas and land at nearest suitable airport.

If unable to avoid icing areas with airfoil anti-ice off, add 5 kts to all maneuvering speeds and land with 28/EXT configuration using target speed not less than V_{TH} + 5 kts.

TRANSFER LOCKOUT LIGHTS ON AND STBY ON LIGHTS ON

CAUTION: Do not push to reset the TRANSFER LOCKOUT and STDBY ON lights if both are on

Stby System Operation 1/2

 **Satisfactory**
 Continue normal operation monitoring system for the remainder of the flight.
(END)

Unsatisfactory

System Selector Sw.....STBY then PRIMARY 2
 STBY ON Lt 1/2

 **On**
 No further action required
 Only one pressurization system is operational, stand by system not available

Off

TRANSFER LOCKOUT LIGHT.....PUSH AND CHECK 1/2
 Press the light to reset the light warning

 **Off**
 Continue normal operation
(END)

On

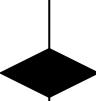
No further action required.
 Only one pressurization system is operational, stand by system not available

RAPID DECOMPRESSION

A rapid decompression may be detected by:

- Sudden explosion
- Condensation of the moisture in the air
- High noise
- Dust and debris flying around
- Rapid increase of cabin altitude
- Decrease of cabin differential pressure

When cabin altitude reaches approximately 10000 ft the warning horn will sound followed by the vocal warning “cabin altitude” and the CABIN ALT and MASTER WARNING lights will come on.

| | | |
|---|------------------------------|----------|
| Oxygen Masks..... | ON/100% | 1/2 |
| Crew Communications..... | ESTABLISHED | 1/2 |
| Cabin Air Outflow Valve..... | MANUALLY CLOSED & LOCKED | 2 |
| PNEU X-FEED VALVE Levers..... | CLOSED | 2 |
| Air Cond Systems..... | CKD NORMAL OPERATION | 1/2 |
| Pax Oxy Masks (if rqd)..... | MANUALLY DEPLOYED | 2 |
| Cabin Pressure..... | CHECK | 1/2 |
|  | Under control | |
| | Cabin Air Outflow Valve..... | AS RQD 2 |
| | (END) | |
| Out of control | | |
| Emergency Descent (if rqd)..... | STARTED | 1/2 |

| | | | |
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EMERGENCY DESCENT

Autopilot.....AS DESIRED 1

Speedbrakes..... EXTENDED 1

ATS/Thrust Levers.....AS DESIRED/IDLE 1

Airspeed.....MACH .80 - .82 or 320 to 340 kias 1

ATC.....ADVISED 1

Cabin Signs.....ON 2

Transponder.....AS RQD OR A 7700 2

Level Flight (Minimum Safe Altitude or 10000 ft,
 whichever is higher).....ESTABLISH 1

CAUTION: in any case reach 10000ft within 15 minutes after activation of the oxygen system..

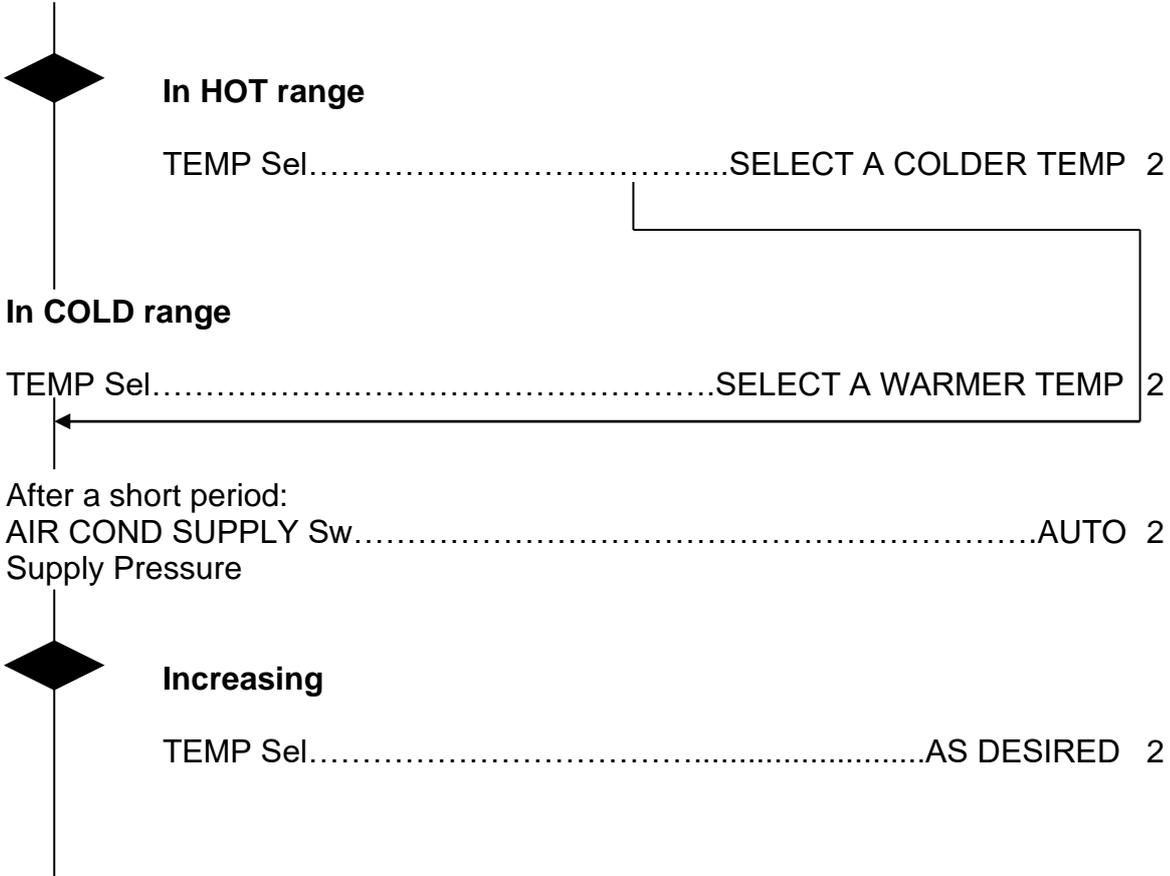
Speedbrakes.....RETRACT 1

Autopilot/ATS.....AS DESIRED 1/2

AIR CONDITIONING SYSTEM SUPPLY PRESSURE DROPS TO ZERO PSI

Affected System:

AIR COND SUPPLY Sw.....OFF 2
 Temp Control Valve Indicator.....1/2

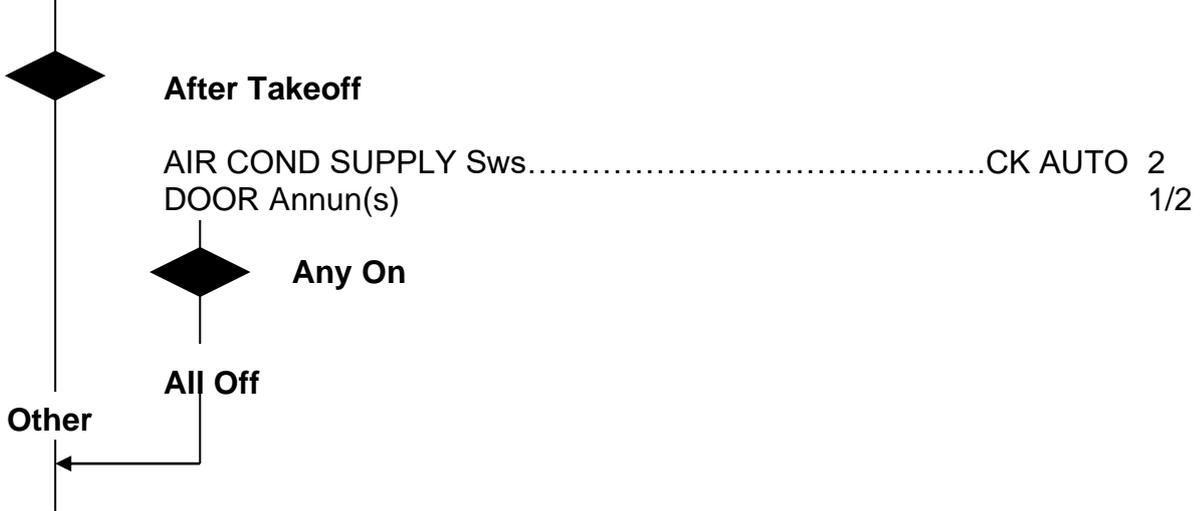


Remains at zero

Pack is inoperative. Do not allow cabin altitude to go above 10000 ft.

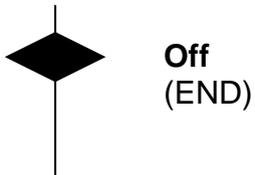
FLOW LT ON

Phase of Flight 1/2



Thrust Levers (if at low thrust).....ADJUST 1

Flow Lt 1/2

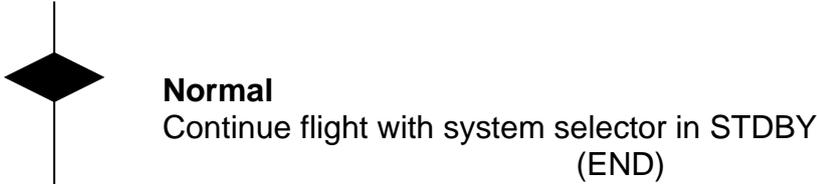


On and cabin continues to climb

Descent to an altitude where normal pressurization can be maintained.

CABIN DIFFERENTIAL PRESSURE UNCONTROLLABLE, OFF SCHEDULE OR OSCILLATES

System Selector Sw.....STDBY 2
 Pressurization Condition 1/2



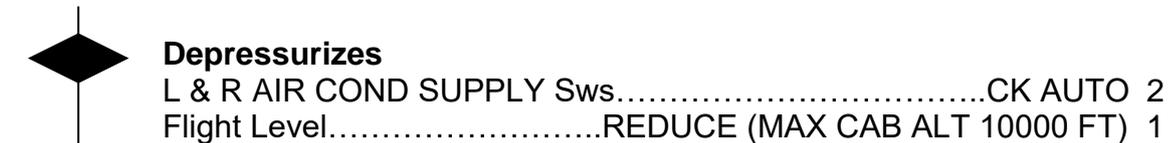
Uncontrollable

CABIN PRESS Control Lever.....MANUAL 2
 CABIN PRESS Control Wheel.....OPERATE 2

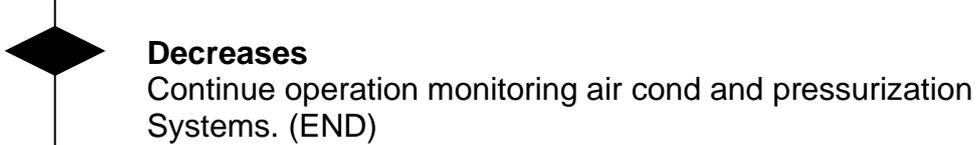


Control Wheel & Indicator jammed

Cabin Pressurization 1/2



During descent:
 Differential Pressure 1/2



Doesn't decrease

**Pressur-
 izes**

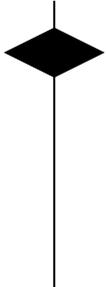
RADIO RACK Sw.....VENTURI 2
 L & R AIR COND SUPPLY Sws.....HP BLD OFF 2
 Autothrottle.....DISENGAGE 1
 Either One or Both Thrust Lever.....ADJUST 1

CONTINUE

Flight Level.....REDUCE 1

During descent:

Differential Pressure 1/2



Doesn't decreases

L or R AIR COND SUPPLY Sw.....OFF 2

Thrust Lever (Eng supplying
 Operating air cond sys.....REDUCE SLOWLY
 TO IDLE 1

Decreases

Below 10000 ft:

L or R AIR COND SUPPLY Sw (one at a time).....OFF 2

CAUTION: Cabin must be unpressurized prior to landing

RAM AIR Sw.....ON 2

AIRFL ICE PRES ABNML ANNUN

Phase of Flight 1/2

Ground
PNEU X-FEED VALVE Levers.....CLOSE 2
APU AIR Sw.....OFF 1

Flight
AIR FOIL Ice Protect Sw Position 1/2

OFF
PNEU X-FEED VALVE Levers.....CLOSE 2
Continue normal flight.
(END)

ON
PNEU X-FEED VALVE Levers.....CK OPEN 2
PNEU PRESS Indicator.....ABOVE 22 PSI 2

AIR ICE PRESS ABNML Annun

OFF
Continue normal flight.
(END)

ON
AIR FOIL Ice Protect Sw.....OFF 2
PNEU X-FEED VALVE Levers.....CLOSE 2
Avoid icing areas

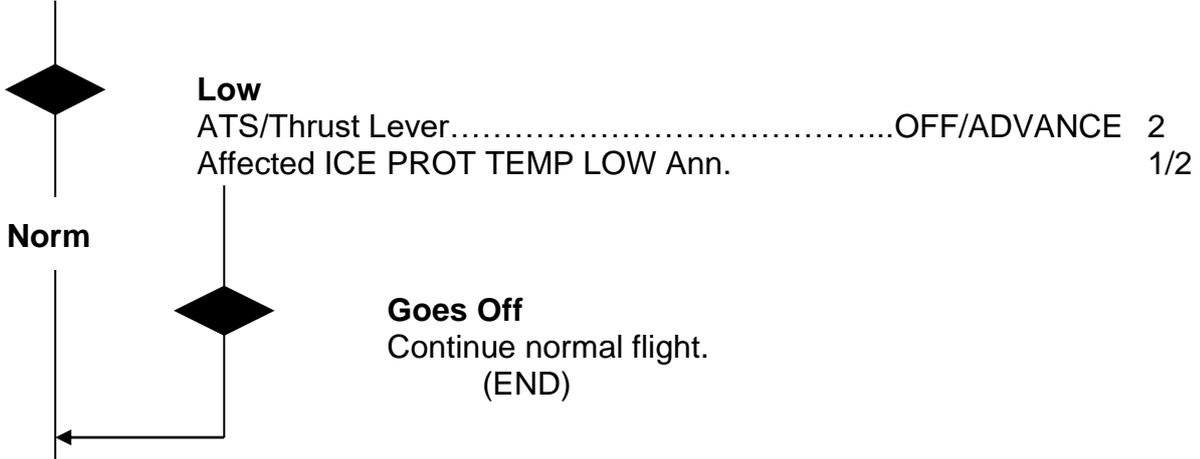
If unable to avoid icing areas with airfoil anti-ice off, add 5 kts to all maneuvering speeds and land with 28/EXT configuration using target speed not less than V_{TH} + 5 kts.

L/R ICE PROT TEMP HIGH ANNUN

AIR FOIL Ice Protect Sw.....OFF 2
PNEU X-FEED VALVE Levers.....CLOSE 2

L/R ICE PROT TEMP LOW ANNUN

Associated PNEU X-FEED VALVE Lever.....OPEN 2
 Engine Thrust 1/2

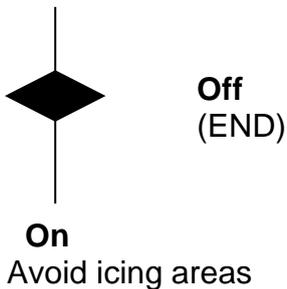


Still on

AIR FOIL Ice Protect Sw.....OFF 2
 PNEU X-FEED VALVE Lever.....CLOSE 2

PITOT / STALL HEAT OFF ANNUN

Related C/B (C12 Ovhd Pnl).....IN 2
 PITOT / STALL HEAT OFF Annun 1/2



On
 Avoid icing areas

ICE FOD ALERT

Wing Upper Surface.....ASK FOR HAND FEEL INSPECTION 2

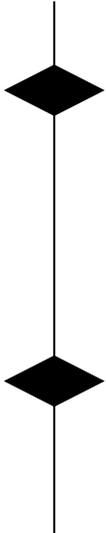
| | | | |
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Ask ground personnel de-icing treatment for wings and flight controls.

LOW HYD PRESS AND/OR L/R HYD PRESS LOW ANNUN

TRANS HYD PUMP Sw.....OFF 2

Affected HYD PRESS & FLUID QTY Indications 1/2



Press low & qty low or abnormally high

CAUTION: Do not operate transfer pump or both systems may lose hydraulic pressure.

Apply Abn Proc HYDRAULIC SYSTEM LEAK OR LOSS
(END)

Press & qty normal

TRANSFER HYD PUMP Sw.....AS RQD 2
(END)

Press low & qty normal

Associated ENG HYD PUMP Sw.....HI 2

Affected HYD PRESS indication 1/2



Press normal

Leave hyd pump at HI
TRANSFER HYD PUMP Sw.....AS RQD 2
(END)

Press low

Use AUX or TRANS HYD PUMPS for approach and landing as required.

| |
|--------------------------------|
| L/R HYD TEMP HIGH ANNUN |
|--------------------------------|

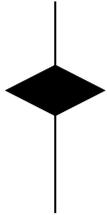
TRANS HYD PUMP Sw.....OFF 2
 Affected ENG HYD PUMP Sw.....OFF 2
 AUX HYD PUMP Sw (R Sys Affected only).....OFF 2

Repressurize affected system for approach and landing

| |
|--------------------------------------|
| HYDRAULIC SYSTEM LEAK OR LOSS |
|--------------------------------------|

TRANS HYD PUMP Sw.....OFF 2

Affected System



Right

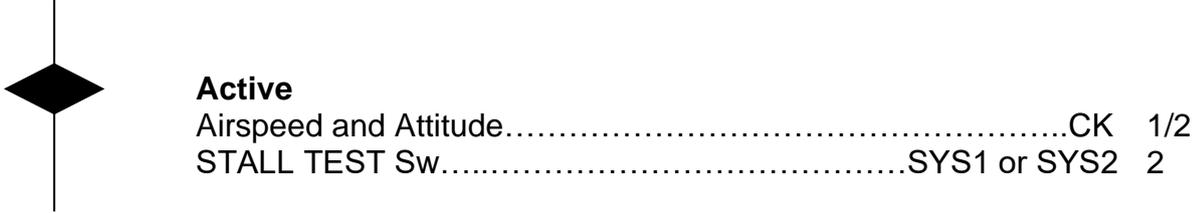
AUX HYD PUMP Sw.....OFF 2
 R ENG HYD PUMP Sw.....OFF 2

Left

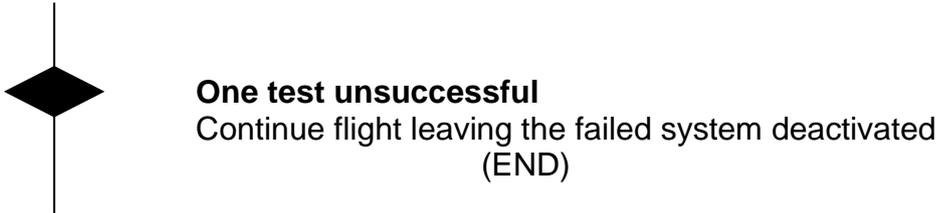
L ENG HYD PUMP Sw.....OFF 2

STALL IND FAILURE ANNUN IN FLIGHT

All Other Stall Warning Indications



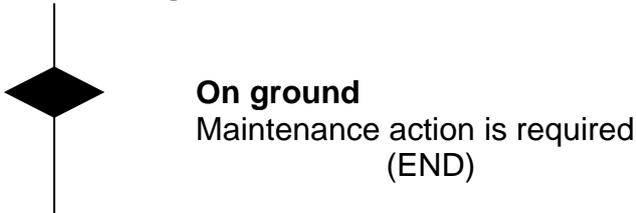
None Active
 Both Systems.....TEST 2



Both test successful
 Continue normal flight. A false indication occurred.

RUDDER CONTROL MAN ANNUN

Phase of flight 1/2



Inflight
 RUD HYD CONT Lever.....MAN 1
 Continue operation with rudder in manual mode.

APPROACH AND GO-AROUND

Due to VMCA, approach, final and go-around speed should not be less than 135 KIAS.

JAMMED STABILIZER

STABILIZER TRIM Sw.....NORM 2
Autopilot.....DISENGAGE 1
Primary Trim Sys.....OPERATE 1
LONG TRIM indicator 1/2

 **Moves**
Continue normal operation.
(END)

Doesn't move
ALT LONG TRIM Levers.....OPERATE 1
LONG TRIM indicator 1/2

 **Moves**
Autopilot.....AS RQD 1
Continue flight using the alternate long trim levers for stabilizer operation.
(END)

Doesn't move
Consider the stabilizer to be jammed

FLAPS/TRIM Condition 1/2

 **28 or 40 and airplane trimmed**
Land with selected flap.
(END)

Any other setting or airplane not trimmed
Land with flap 15 and use a target speed not less than VMAN of flap 15, increased by the speed increment obtained from the table below.

| | | C.G. (% MAC) | | | | | |
|---|--------|--------------|----|----|----|----|----|
| | | -0.8 | 0 | 5 | 10 | 15 | 20 |
| S T A B I L I Z E R A N G L E | 2° AND | 40 | 40 | 32 | 24 | 17 | 8 |
| | 1° AND | 35 | 34 | 27 | 19 | 12 | 4 |
| | 0 | 30 | 29 | 22 | 15 | 8 | 0 |
| | 1° ANU | 25 | 24 | 18 | 11 | 4 | 0 |
| | 2° ANU | 21 | 20 | 14 | 7 | 1 | 0 |
| | 3° ANU | 17 | 16 | 10 | 4 | 0 | 0 |
| | 4° ANU | 14 | 13 | 7 | 1 | 0 | 0 |
| | 5° ANU | 10 | 9 | 4 | 0 | 0 | 0 |
| | 6° ANU | 7 | 6 | 1 | 0 | 0 | 0 |
| | 7° ANU | 4 | 3 | 0 | 0 | 0 | 0 |
| 8° ANU | 2 | 0 | 0 | 0 | 0 | 0 | |

| | | | |
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GND PROX WARN Sw.....OVRD 2

| | | | |
|---|--|-----------|-------|
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| |
|---|
| RED LANDING GEAR LIGHT WITH LEVER DOWN |
|---|

- TRANSPONDER.....AS RQD OR 7700 2
- FUEL QUANTITY (If applicable).....REDUCE 1
- CABIN SIGN.....ON 2
- Cabin Attendants/Passengers.....WARN 1/2
- L & R AIR COND SUPPLY Sws.....OFF 2
- RADIO RACK Sw.....FAN 2
- FLAP/SLAT Lever.....28/EXT 2
- At 500 Feet AGL:
BRACE FOR IMPACT.....COMMAND 1

RECOMMENDATION FOR LANDING WITH PARTIALLY EXTENDED MAIN LANDING GEAR.

If there is choice of airports within fuel range, consideration should be given to an airport with fire fighting and rescue facilities and favourable weather conditions. It is better to land on the longest runway and into wind.

LANDING TECHNIQUE

Consider touching down on the side of the runway corresponding to extended main landing gear.

- Gear lever Down
- **Do not arm spoilers** to prevent abrupt decrease of lift on the unsupported wing at touchdown
- Touchdown on the extended main gear and hold the nose gear off the runway as long as possible

While elevator control is still effective, lower the nose gear gently to the runway and hold wings level with ailerons as long as possible.

| | | | |
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**GEAR DOOR OPEN LT ON INFLIGHT
GEAR LTS THREE GREEN**

NOTE

This procedure assumes hydraulic pressure is normal and landing gear is down. If the GEAR DOOR OPEN light is on with landing gear lever up and the LEFT/RIGHT RED GEAR light(s) are not illuminated, a faulty indication has occurred.

Gear door position may be verified by a control tower observation. If gear door(s) is open.

Emergency Landing Gear Lever¹.....PULL FULL UP 2
Holding Latch.....CHECK FULLY ENGAGED 2

NOTE

Gear doors will remain open and GEAR DOOR OPEN light will be on. Nosewheel steering to left will be restricted.

CAUTION

Stop airplane straight ahead on runway and establish communication with maintenance personnel. Maintenance personnel must close and latch main gear doors manually. Landing gear pins must be installed prior to taxi or tow.

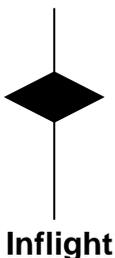
¹In the simulator the emergency landing gear extension is performed using the keystroke assigned to this event for the SIM (by default CTRL+G)

BRAKE OVERHEAT LT ON

NOTE: OVHT light comes on when any one brake temperature exceeds 400°C and goes off when brakes cool to 360°C

Phase of flight

1/2



On ground

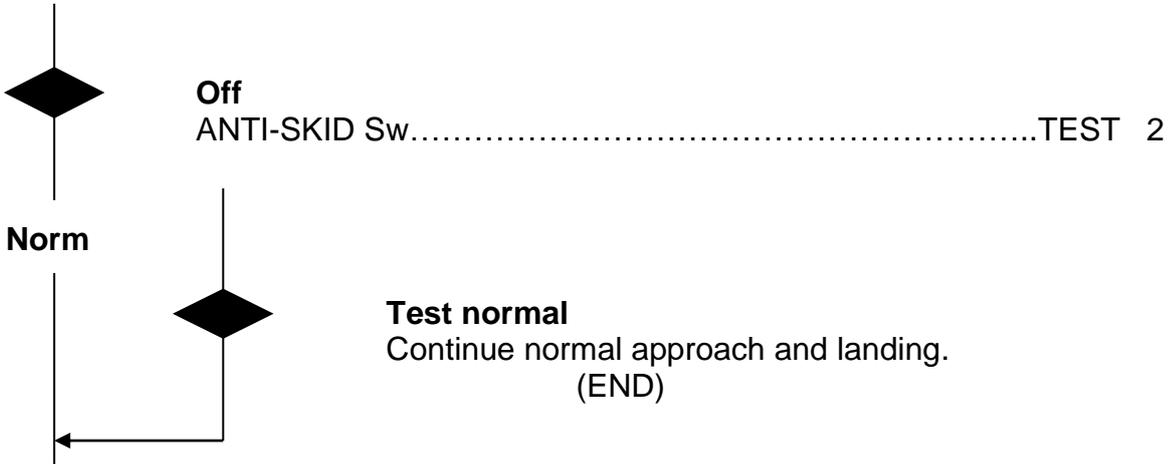
Stop airplane as soon as practical. Do not set parking brake.

| | | | |
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Flight condition permitting, extend landing gear (Max 300 KIAS/.70 Mach) until brake OVHT light goes off.

ANTI-SKID ANNUN

ANTI-SKID Sw.....CHECK ARM 2
 ANTI-SKID Annunciations 1/2



Landing performance.....CHECK 1/2
 Refer to appropriate performance table to determine landing distance with anti-skid inoperative. Make a normal landing.
 Brakes.....APPLY SMOOTHLY AND GRADUALLY PF

CAUTION
 Do not initiate manual braking until nosewheel is on the runway
 and ground spoilers have fully deployed

| ESTIMATED LANDING DISTANCE (UNFACTORED) FOR 40/EXT AND ANTI-SKID INOPERATIVE | | | | | | | | | | |
|--|-----|------|------|------|------|------|------|------|------|------|
| WEIGHT (1000 Kg) | | 36 | 40 | 44 | 48 | 52 | 56 | 60 | 64 | 68 |
| SL STD =15°C | DRY | 1126 | 1202 | 1278 | 1353 | 1427 | 1500 | 1573 | 1645 | 1716 |
| | WET | 1291 | 1379 | 1466 | 1552 | 1637 | 1722 | 1805 | 1888 | 1970 |
| 2000 FT STD =11°C | DRY | 1166 | 1246 | 1326 | 1405 | 1484 | 1562 | 1639 | 1715 | 1791 |
| | WET | 1337 | 1430 | 1522 | 1613 | 1703 | 1792 | 1881 | 1969 | 2056 |
| 4000 FT STD = 7°C | DRY | 1214 | 1298 | 1381 | 1464 | 1546 | 1628 | 1709 | 1790 | 1870 |
| | WET | 1393 | 1489 | 1585 | 1680 | 1775 | 1869 | 1962 | 2055 | 2147 |
| 6000 FT STD =3°C | DRY | 1260 | 1348 | 1436 | 1523 | 1610 | 1697 | 1784 | 1870 | 1957 |
| | WET | 1445 | 1547 | 1648 | 1748 | 1848 | 1948 | 2048 | 2147 | 2247 |
| 8000 FT STD =-1°C | DRY | 1311 | 1405 | 1498 | 1591 | 1683 | 1775 | 1866 | 1957 | 2048 |
| | WET | 1505 | 1612 | 1719 | 1826 | 1932 | 2038 | 2143 | 2247 | 2351 |

Note: Standard day, no wind, zero slope, two engines at forward idle, thrust until stopped (included air run distances)

| | | | |
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PFD/ND DISPLAY FAILURE

BRT KNOB (Failed Display).....COMPACT PM

Turn corresponding brightness knob, on Control and Dimming Panel, fully counter-clockwise past the detent, selecting compact mode on the operational PFD or ND display.

NOTE: If the ND is the operational display, weather radar brightness controls horizon sphere colour brightness.

SYMBOL GENERATOR UNIT FAILURE

EFIS Switching Selector.....AS RQD PM

Position EFIS Switching Selector BOTH ON 1 or 2 as required

FMS FAILURE

FMS Switching Selector.....AS RQD PM

Position FMS Switching Selector BOTH ON 1 or 2 as required

LOSS OF BOTH GENERATORS

This emergency condition is indicated by:

- Amber MASTER CAUTION and red MASTER WARNING lights on
- AC EMER BUS OFF and DC EMER BUS OFF red lights on
- L and R AC BUS OFF, L and R GEN OFF, DC BUS OFF annuns displayed

CAUTION: A generator must be reset only once for a given fault.

| | |
|--------------------|---|
| EMER PWR Sw.....ON | 1 |
|--------------------|---|

CAUTION: AHRS1 requires 45 seconds to realign in normal mode

| | |
|---------------------------------|---|
| THNDRSTRM Lt Sw (if rqd).....ON | 2 |
|---------------------------------|---|

BATT Sw.....CK ON/LOCKED 2

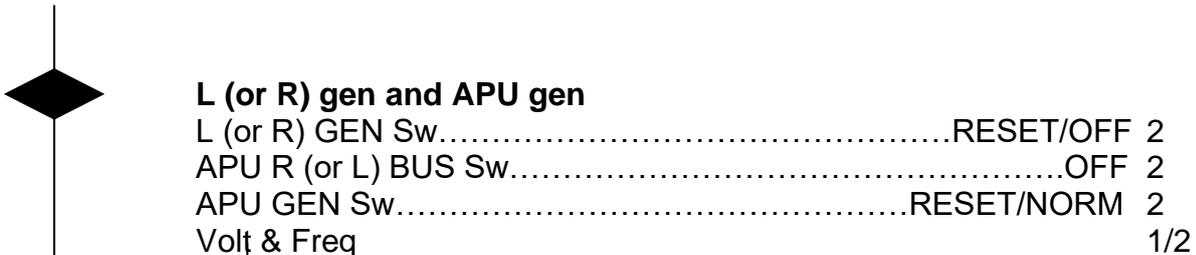
GALLEY Sw.....OFF 2

CABIN PRESS CONTROL Lever.....MANUAL (DOWN) 2

CKPT/CABIN TEMP Selectors.....MANUAL 2

AC BUS X TIE Sw.....OPEN 2

Failed Gen's 1/2



L (or R) gen and APU gen
 L (or R) GEN Sw.....RESET/OFF 2
 APU R (or L) BUS Sw.....OFF 2
 APU GEN Sw.....RESET/NORM 2
 Volt & Freq 1/2

Abnormal for both gen's
 Land at nearest suitable airport. Refer to CAUTION
 At the end of this procedure. (END)

Normal for one or both gen's
 L and R GEN Sw.....ON 2

Both eng gen's

| | | |
|--|-------------------------------------|-----|
| L & R Gen Sws..... | RESET/OFF | 2 |
| Volt & Freq | | 1/2 |
|  Normal for both gen's | | |
| L & R GEN Sws..... | ON | 2 |
|  Normal for one gen only | | |
| Gen Sw (Operating gen)..... | ON | 2 |
| APU (If available)..... | START/ONE AT TIME BUSES ON | 2 |
| Abnormal for both gen's | | |
| APU (If available) | WINDMILL START/ONE AT TIME BUSES ON | 2 |
| AC X TIE Sw..... | AUTO | 2 |
| CABIN PRESS CONTROL Lever..... | AUTO | 2 |
| CKPT/CABIN TEMP Selectors..... | AUTO | 2 |
| EMER PWR Sw..... | OFF | 1 |
| GALLEY Sw..... | ON | 2 |
| With one gen only, prior to landing: | | |
| L (or R) AIR COND SUPPLY Sw..... | OFF | 2 |

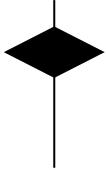
CAUTION: If no generator is restored, descent below 14000 ft as soon as practicable.

| |
|--------------------|
| APU GEN OFF |
|--------------------|

APU BUS Sws.....OFF 2
 Meter Sel.....APU 2
 APU GEN Sw.....RESET/NORM 2

CAUTION: A generator must be reset only once for a given fault.

AC Volt/Freq 1/2



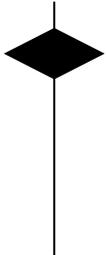
Not within allowable limits

Generator capability lost. (END)

Within allowable limits

NOTE: If APU generator is only power source, move galley sw to OFF before energizing generator buses.

APU BUS Sws (One at a time).....ON 2
 AC Volt/Freq & APU GEN OFF Annun 1/2



Volt/Freq zero or annun displayed

Generator capability lost.

APU BUS Sws.....OFF 2
 (END)

Volt/Freq normal and annun out

Continue normal operation.

L/R GEN OFF ANNUN

This emergency condition is indicated by:

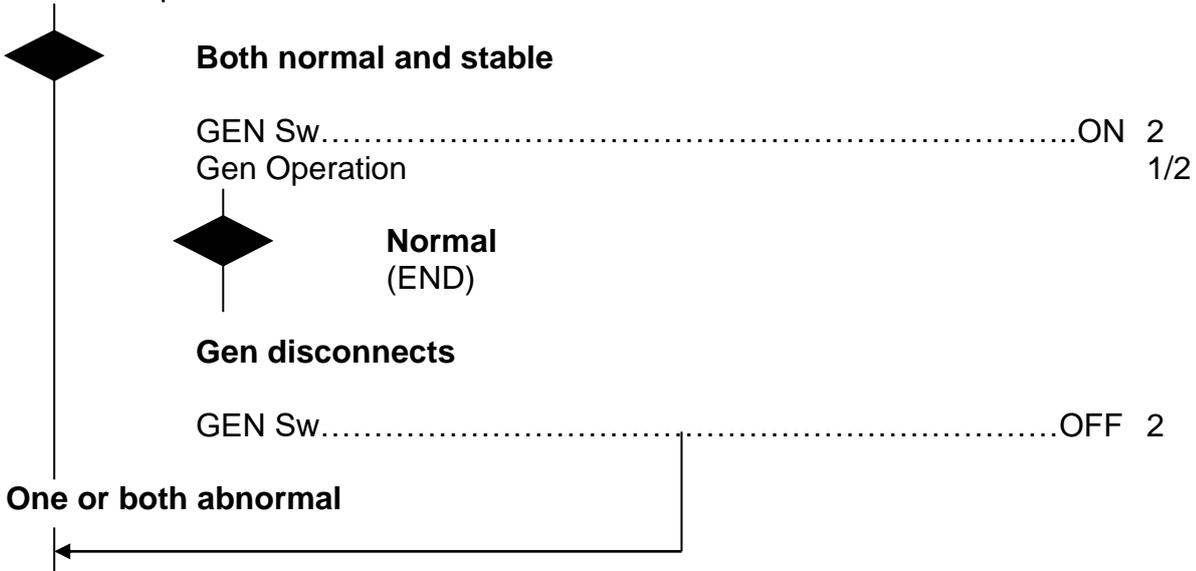
- Amber MASTER CAUTION light on
- L (or R) GEN OFF annun displayed

NOTE: if CSD OIL PRESS LOW annun is also on, apply Abn Proc CSD OIL PRESS LOW ANNUN

GEN Sw (Affected gen).....RESET/OFF 2

CAUTION: A generator must be reset only once for a given fault

Meter Sel.....AFFECTED GEN POSITION 2
 Volt & Freq 1/2



APU.....START/AFFECTED APU BUS SW ON 2

NOTE: It may be necessary to move the APU gen sw to RESET.

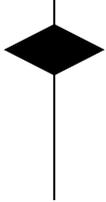
AC Load.....MONITOR 1/2

With one gen only, prior to landing:

L (or R) AIR COND SUPPLY Sw.....OFF 2

| |
|------------------------------------|
| L/R CSD OIL PRESS LOW ANNUN |
|------------------------------------|

Outlet Temp & Freq (Affected gen) 1/2



Both normal

Continue generator operation. Periodically monitor indications.
(END)

One or both abnormal

GEN Sw (Affected gen).....OFF 2
 Meter Sel.....AFFECTED GEN POSITION 2

CAUTION: Next switch action is irrevocable. Make certain switch selected is for malfunctioning CSD.

Associated CSD Sw (hold at least 3 seconds).....DISC 2

APU.....START/AFFECTED APU BUS SW ON 2

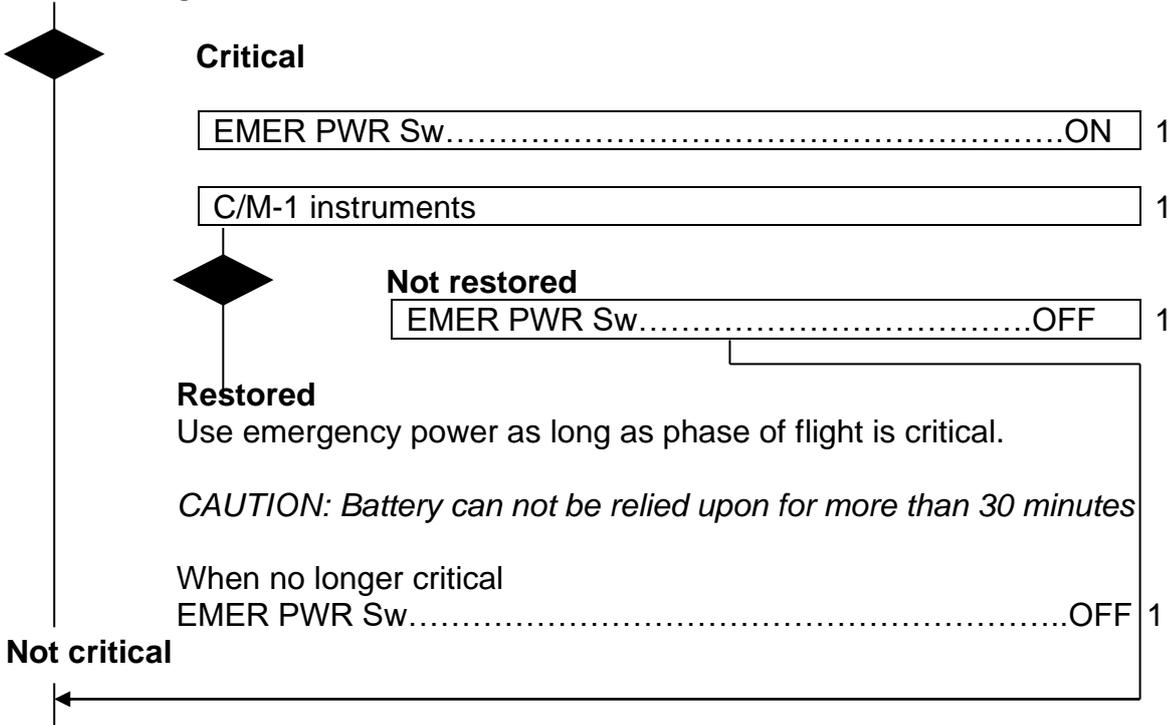
NOTE: It may be necessary to move the APU gen sw to RESET.

With one gen only, prior to landing:
 Remaining APU BUS Sw.....ON 2
 L (or R) AIR COND SUPPLY Sw.....OFF 2

AC EMER BUS OFF LT ON

NOTE: The AC EMER BUS OFF light may illuminate due to a tripped circuit breaker. Resetting (one time only) the C/B (C7 Ovhd Pnl) may restore normal indication.

Phase of Flight 1/2



At Captain's discretion and taking into account the battery capacity:
EMER PWR Sw.....ON 1

NOTE: Battery charger will not operate while EMER PWR Sw is ON.

DC EMER BUS OFF LT ON

NOTE: The DC EMER BUS OFF light may illuminate due to a tripped circuit breaker. Resetting (one time only) the C/B (B12 Ovhd Pnl) may restore normal indication.

Continue flight with emergency DC bus inoperative, or at Captain's discretion and taking into account the battery capacity:

EMER PWR Sw.....ON 1

NOTE: Battery charger will not operate while EMER PWR Sw is ON.

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| |
|-------------------------|
| DC BUS OFF ANNUN |
|-------------------------|

DC BUS X-TIE Sw.....CLOSE 2

**L/R ELECTRICAL SYS FAILURE
(AC CROSSTIE LOCKOUT ANNUN)**

FUEL TANKS PUMP Sws.....ALL ON 2
 DC BUS X-TIE Sw.....CLOSE 2

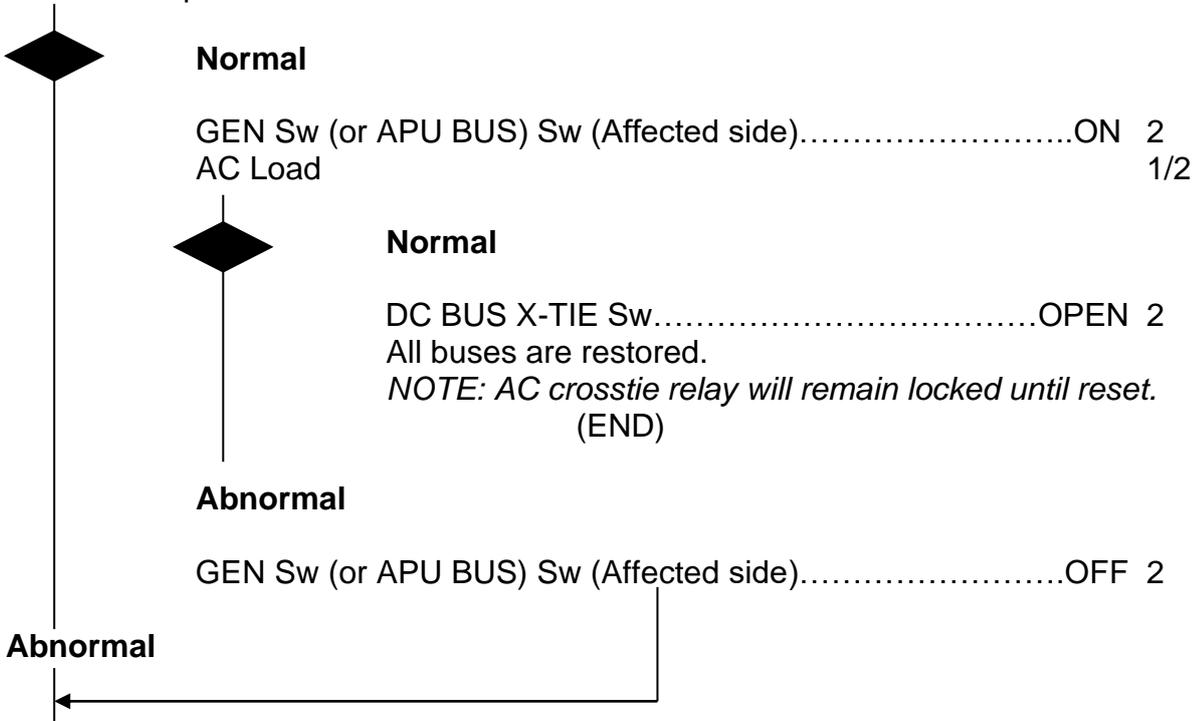
DC BUS OFF annun should go off, monitor DC LOAD meters.

APU BUS Sw (Affected side).....OFF 2

Meter Sel.....AFFECTED GEN POSITION 2

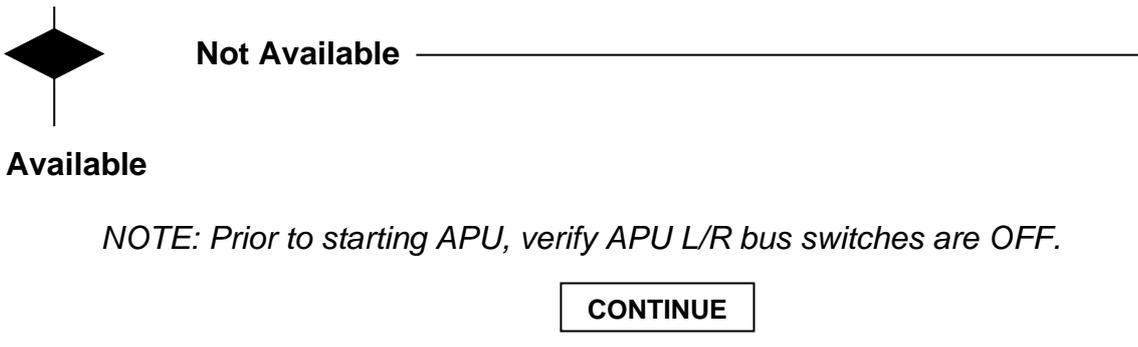
GEN Sw (or APU BUS) Sw (Affected side).....RESET/OFF (OR NORM) 2

AC Volt/Freq 1/2



CAUTION: Gen cannot be used, do not attempt additional reset.

APU Gen Availability 1/2



CONTINUE

APU.....START/AFFECTED APU BUS SW ON 2

NOTE: It may be necessary to move the APU gen sw to RESET.

AC Volt/Freq/AC Load 1/2



Normal

DC x-tie BUS Sw.....,OPEN 2
All buses are restored.
NOTE: AC crosstie relay will remain locked until reset.
(END)

Abnormal

APU BUS Sw (Affected side).....OFF 2

APU GEN Sw (If rqd).....RESET/NORM 2

APU BUS Sw (Operating sys).....ON 2

F/D, A/P, ATS.....OFF 1

Center Tank Fuel Quantity 1/2



Zero fuel remaining

CTR FUEL TANK PUMPS Sws.....OFF 2

Fuel remaining

CTR FUEL TANK PUMPS Sws.....ON 2

L & R FUEL TANK PUMPS Sws (One at a time).....OFF 2

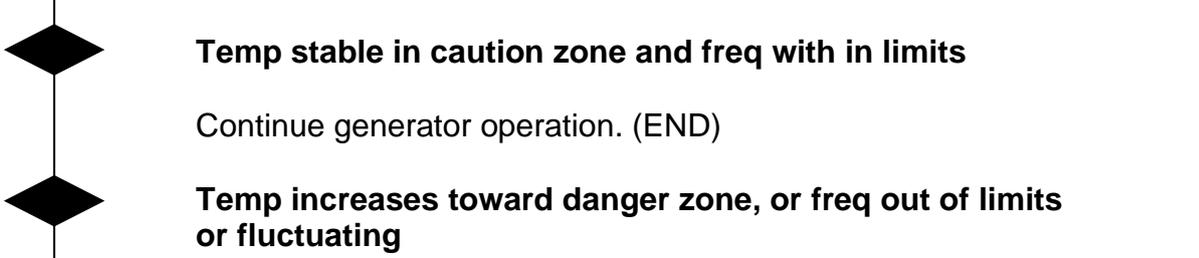
When remaining center tank fuel is approx 225 kgs:

L & R FUEL TANK PUMPS Sws.....ON 2

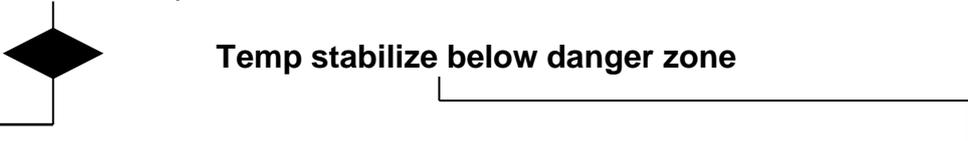
Continue flight with affected systems inoperative.

ABNORMAL CSD OIL OUTLET TEMPERATURE

Outlet Temp & Freq (Affected gen) 1/2



GEN Sw (Affected gen).....OFF 2
 Outlet temp 1/2



Temp increases and stabilize in danger zone

GEN Sw (Affected gen).....OFF 2
 Meter Sel.....AFFECTED GEN POSITION 2

CAUTION: Next switch action is irrevocable. Make certain switch selected is for malfunctioning CSD.

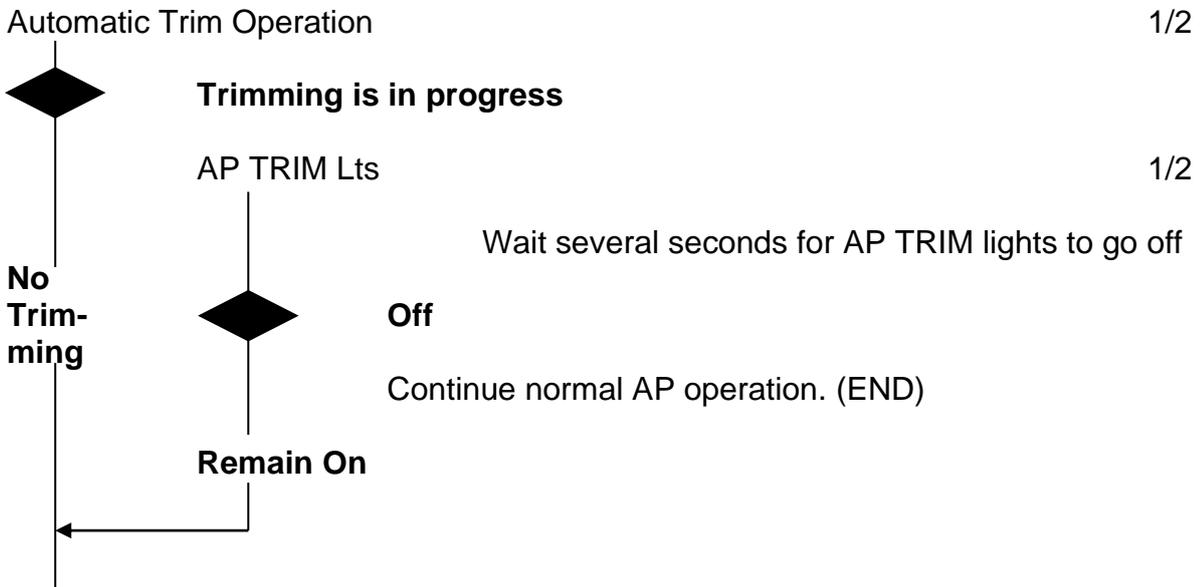
Associated CSD Sw (hold at least 3 seconds).....DISC 2

APU.....START/AFFECTED APU BUS SW ON 2

NOTE: It may be necessary to move the APU gen sw to RESET.

With one gen only, prior to landing:
 Remaining APU BUS Sw.....ON 2
 L (or R) AIR COND SUPPLY Sw.....OFF 2

AP TRIM LTS ON



CAUTION: A sudden pitch change can be expected as the autopilot elevator input are removed

Long Trim Wheel Sws.....OPERATE 1
 Operate switches in desired direction to trim the airplane.

Autopilot (Other Channel).....ENGAGE 1
 Move DFGS selector to the other position and re-engage autopilot.