

# FALCON

# 50

## EMERGENCY/ABNORMAL PROCEDURES



Revision 9.1

# PILOT CHECKLIST

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**INSERT LATEST REVISED PAGES, DESTROY SUPERSEDED PAGES  
LIST OF EFFECTIVE PAGES**

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These are suggested procedures only and in no way supersede current procedures outlined in the FAA-approved Flight Manual and any revisions thereto. In the case of conflict, the Flight Manual takes precedence.

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## **EMERGENCY PROCEDURES**

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Compliance with the order prescribed for application of these procedures is recommended.

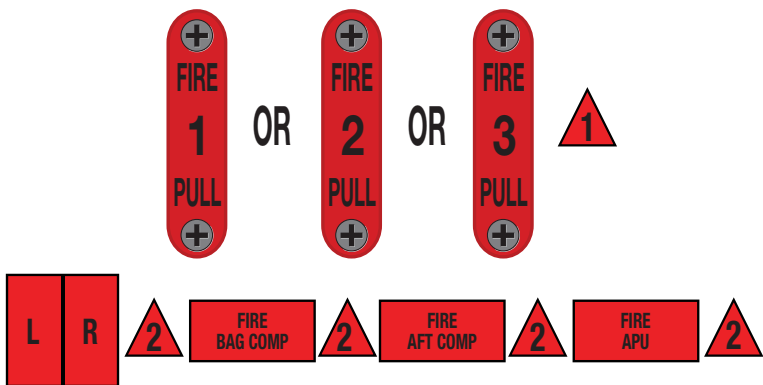
**PHASE I** These items require immediate action for the safety of flight. It is recommended to perform them from memory.

**PHASE II** These items shall be completed only after the PHASE I items have been completed by the checklist.

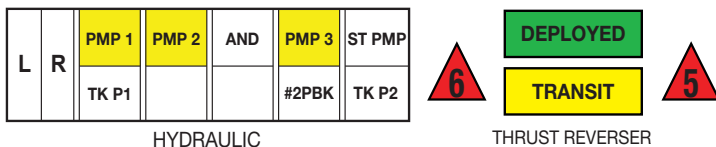
**PHASE III** These items shall be completed as soon as time permits.

AURAL WARNINGS shall be identified before silencing. Once the malfunction has been identified, silencing the aural warning will enable better coordination in performing the emergency procedure.

FALCON 50 EMERGENCY/ABNORMAL CHECKLIST



AIR DATA 1	COND'G OVHT	AIR DATA 2
FLAP ASYM	BLEED APU	BLEED OVHT
L PITOT	AUTO SLATS	R PITOT
T/O CONFIG	REV UNLOCK	CABIN
AIL ZERO	MACH TR	Q-UNIT
AP TRIM	AP	MISTRIM
GEN 1	AND GEN 2	AND GEN 3
BAT 1	BUS TIED	BAT 2
AC 1	HOT BAT	AC 2
OIL 1	OIL 2	OIL 3
CMPTR 1	CMPTR 2	CMPTR 3
FUEL 1	FUEL 2	FUEL 3
LO FUEL	GPU DOOR OPEN	FUELING



## EMERGENCY PROCEDURES

	ENGINE FIRE IN FLIGHT	
	ENGINE FIRE ON GROUND	<b>1</b>
	TAIL PIPE FIRE	
	SMOKE IN THE BAGGAGE COMPARTMENT	
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	WHEEL WELL OVERHEAT	
	ELECTRICAL SMOKE OR FIRE	<b>3</b>
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# FIRE AND SMOKE

## ENGINE FIRE IN FLIGHT



+ AURAL WARNING

### Phase I

- 1. Power Lever..... CUTOFF
- 2. FIRE PULL handle ..... PULL
- 3. Airspeed..... BELOW 250 KNOTS
- 4. Fire Extinguisher Switch .....POSITION 1

If the fire persists:

- 5. Fire Extinguisher Switch .....POSITION 2

### Phase II

Complete shutdown of engine:

- 6. Booster Pump..... OFF
- 7. Generator Switch..... OFF

### \*NOTE

In icing conditions, the #1 or #2 engine anti-ice system should be operated even with the #1 or #2 engine shutdown.

- \*8. Engine Anti-ice..... OFF
- 9. HP Bleed (and PRV in the case of #2 Engine) ..... OFF

If #3 engine is shutdown:

- 10. Bus Tie Switch..... TIED
- 11. Hydraulic Standby Pump..... ON (AS REQUIRED)
- 12. Land as soon as possible.
- 13. Fuel Management..... as required

Consult One Engine Inoperative Approach/Landing/Go-Around Procedures, Yellow Tab 6, page A-12 or Approach And Landing With Two Engines Inoperative, Red Tab 10, pages E-24 and E-25.

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## ENGINE FIRE ON GROUND

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+ AURAL  
WARNING

### Phase I

1. Power Lever..... IDLE
2. Airplane.....STOP
3. Parking Brake .....FIRST DETENT
4. Power lever.....CUT OFF
5. FIRE PULL handle ..... PULLED
6. Fire Extinguisher ENG.....POSITION 1
7. Fire Extinguisher ENG.....POSITION 2
8. EMERGENCY EVACUATION .....Do

Consult Red Tab 12 page E-29.

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## TAIL PIPE FIRE

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There will be no warning or alarm in the cockpit (the turbine area is designed to withstand very high temperatures);

Detection and reporting mainly rely on ground crew or ATC.

### Phase I

1. Power Lever.....CUT OFF
2. Start selector switch .....MOTOR START STOP  
De-activates the igniters and enables motoring to ventilate the engine core
3. Start Pushbutton.....Held DEPRESSED FOR 15 SECONDS

### Phase II

If the fire is reported out

4. Start selector switch .....GRD START

If the fire cannot be contained before the end of the motoring sequence:

5. EMERGENCY EVACUATION .....DO

Consult Red Tab 12 page E-29.

**SMOKE IN THE BAGGAGE COMPARTMENT**

**FIRE BAG COMP**

+ AURAL WARNING

**Phase I**

- 1. Bag Air Switch ..... OFF
- 2. Bag Compartment Fire Extinguisher .....POSITION 1
- 3. Omega ..... OFF

**Phase II**

If INS malfunction(s) observed:

- 4. INS ..... OFF
- 5. LAND AS SOON AS POSSIBLE.

**NOTE**

Aircraft w/Aft Avionics Cooling, Crew Bleed Air Switch – OFF.

**APU FIRE**

**FIRE APU**

+ AURAL WARNING

**Phase I**

- 1. APU Master .....PUSHED
- 2. APU Fire Extinguisher Switch .....POSITION 1

**Phase II**

- 3. APU Bleed ..... OFF
- 4. APU Generator Switch..... OFF

If the fire persists:

- 5. #2 Engine Fire Handle..... PULL

Complete shutdown of #2 engine:

- 6. Power Lever ..... CUTOFF
- 7. Booster Pump..... OFF
- 8. Generator Switch..... OFF
- 9. Engine Anti-ice..... OFF
- 10. HP Bleed Switch..... OFF
- 11. PRV Switch..... OFF

Evacuate the aircraft.

Consult Emergency Evacuation procedure Red Tab 12 page E-29.



**AFT COMPARTMENT FIRE**



+ AURAL WARNING

**NOTE**

A pause should be made after each operation to check resulting effects.

**Phase I**

1. HP Bleed and PRV (All Switches) ..... OFF
2. #2 Engine Anti-ice Switch..... OFF
3. Battery Switches..... BOTH OFF
4. Hydraulic Standby Pump Switch..... OFF

If the fire persists:

5. AFT Compartment Fire Extinguisher Switch .....POSITION 1

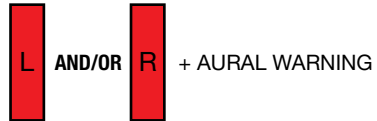
**Phase II**

If the fire persists:


6. ITT (All Three Engines) .....CROSS-CHECK
7. HOT Engine ..... IDLE
8. LAND AS SOON AS POSSIBLE.

Once the fire is extinguished, all circuits in operating condition may be re-activated to continue flight to nearest landing airport.

**WHEEL WELL OVERHEAT**



1. Airspeed..... 190 KNOTS OR LESS
2. Landing Gear ..... DOWN

Keep the landing gear extended until the WHEEL  lights go out, but not less than 10 minutes.

**CAUTION**

The overheat condition may have caused the tires to deflate. Make a shallow final approach and as soft a landing as possible.

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**ELECTRICAL SMOKE OR FIRE**

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Indications: Smoke and unusual odors

**Phase 1**

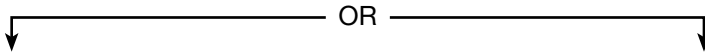
1. Crew Oxygen Masks..... DONNED— 100% + EMERGENCY
2. Smoke Goggles ..... DONNED—Vent valve open
3. Microphone Selector ..... MASK—Tested
4.  Light Pushbutton ..... ON

ONLY IF NO FLAME IN CABIN:

5. PASSENGER OXYGEN Controller ..... OVERRIDE
6. Passenger Masks ..... DONNED—Checked

**Phase II**

7. Crew Air Gaspers..... OPEN
8. E. BATT Switch ..... OFF
9. #2 Battery Switch ..... OFF
10. #3 Generator Switch..... OFF
11. Bus Tie Switch..... FLT NORMAL
12. Crew Temp Controller ..... MANUAL/COLD



**If Smoke Persists:**

- 13. #2 Battery Switch ..... ON
- 14. #3 Generator Switch..... ON
- 15. #1 Battery Switch .....OFF
- 16. #1 Generator Switch.....OFF
- 17. #2 Generator Switch.....OFF
- 18. Passenger Temp  
Controller ..... MANUAL/COLD
- 19. Cabin Pressure  
Selector Switch..... MANUAL
- 20. Manual Pressurization  
Knob .....UP
- 21. Cabin Altitude .....MONITOR

**If Smoke Disappears:**

Keep the faulty equipment off.

3

**If Smoke Continues:**

Apply the Smoke Removal checklist;  
Tab 4, page E-9.



If the fire is NOT verified to be out:

- 22. Land as soon as possible.  
See Key Bus Item/Listing;  
Blue Tab 3, page QR-4.

**If Smoke Disappears:**

Keep the faulty equipment off.



If the fire IS verified to be out:

- 22. Continue the flight.


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## AIR CONDITIONING SMOKE

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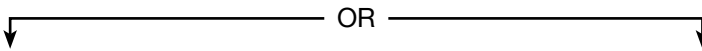
Indication: Smoke at the Air Conditioning outlets

### Phase I

1. Crew Oxygen Masks..... DONNED— 100% + EMERGENCY
2. Smoke Goggles ..... DONNED— Vent valve open
3. Microphone Selector ..... MASK— Tested
4.  Light Pushbutton ..... ON
5. PASSENGER OXYGEN Controller ..... OVERRIDE
6. Passenger Masks ..... DONNED— Checked

### Phase II

7. Crew Air Gaspers..... OPEN
8. Bleed-air Isolation Knob ..... ISOLATION
9. Crew Bleed-air Switch ..... OFF
10. PRV Switch ..... OFF
11. Temperature Controllers (both) ..... MANUAL/COLD



If Smoke Persists:

12. Crew Bleed Air Switch..... ON
13. Cabin Bleed Air Switch..... OFF

If Smoke Disappears:

Continue the flight with the faulty BLEED AIR system isolated.



If Smoke Continues:

14. Crew Bleed Air Switch.....OFF  
Apply the Smoke Removal checklist;  
Tab 4, page E-9.
15. Descent..... Initiate

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## SMOKE REMOVAL

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### Phase I

1. Crew Oxygen Masks..... DONNED— 100% + EMERGENCY
2. Smoke Goggles ..... DONNED—Vent valve open
3. Microphone Selector ..... MASK—Tested
4.  Light Pushbutton ..... ON
5. Crew air gaspers..... OPEN

#### ONLY IF NO FLAME IN CABIN:

6. PASSENGER OXYGEN Controller ..... OVERRIDE
7. Passenger Masks ..... DONNED—Checked
8. Passenger cabin air gaspers ..... OPEN

### Phase II

9. Temperature Controllers ..... MANUAL/COLD  
Descend to below 12,000 feet, or to a safe altitude for the route flow.

**CAUTION**

The following procedure must not be applied if flames are present in the cabin or cockpit.

At 12,000 feet or below:

10. Cabin Pressurization Selector ..... (A BUS PWR) DUMP
11. Manual Pressurization Knob ..... UP

At 180 knots or less:

12. DV Window ..... OPEN

### Phase III

If smoke persists:

13. LAND AS SOON AS POSSIBLE.

## PRESSURIZATION

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### RAPID DEPRESSURIZATION

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**CABIN**

+ AURAL  
WARNING

#### Phase I

1. Crew Oxygen Masks..... DONNED— 100% + EMERGENCY
2. Microphone Selector ..... MASK— Tested
3.  and  Light Pushbuttons ..... ON
4. PASSENGER OXYGEN Controller ..... OVERRIDE
  - a. Passenger Masks ..... DONNED— Checked
5. Emergency descent ..... INITIATED

5

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### EMERGENCY DESCENT

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**CAUTION**

This procedure assumes structural integrity of the aircraft. If structural integrity is questioned, limit airspeed to lowest practical value, and avoid high maneuvering loads.

#### Phase

1. Autopilot ..... DISENGAGE
2. Power Levers ..... IDLE
3. Airbrakes ..... POSITION #2
4. Descent Airspeed .....  $V_{MO}$   $M_{MO}$  (SMOOTH AIR)
5. Transponder ..... MAYDAY CODE "7700"

# SYSTEMS

## THRUST REVERSER DEPLOYMENT IN FLIGHT

**REV  
UNLOCK**

AND POSSIBLY

**DEPLOYED**

**TRANSIT**

Pitch down moment.  
Abnormal noise and  
buffeting.

### Phase I

1. #2 Power Lever..... IDLE
2. T/R Emergency Stow Switch.....STOW
3. Airspeed.....230 KNOTS OR LESS

### Phase II

If the thrust reverser stows, continue the flight with the EMERG/STOW switch in the STOW position.

If the thrust reverser remains deployed:

4. T/R Emergency Stow Switch..... MAINTAIN IN STOW POSITION

With thrust reverser deployed:

5. Land as soon as possible.

5

### NOTE

The Actuator ensures stowing of the Reverser up to IAS = 180 KT.

### NOTE

The drag resulting from an idle #2 engine with the thrust reverser deployed adversely affects the performance characteristics. The engine should therefore be shutdown whenever necessary.

### Engine Shutdown:

1. Power Lever (Idle for 1 minute if possible) ..... CUTOFF
2. Booster Pump..... OFF
3. Generator Switch..... OFF

### NOTE

In icing conditions, operate the #2 engine anti-ice even though the #2 engine is inoperative.

4. Engine Anti-ice..... OFF
5. HP Bleed..... OFF
6. PRV..... OFF
7. Fire Handle..... PULL

Consult One Engine Inoperative Approach/Landing/Go-Around Procedures, Yellow Tab 6, page A-12 or Approach And Landing With Two Engines Inoperative, Red Tab 10, pages E-24 and E-25.

**LOSS OF BOTH HYDRAULIC SYSTEMS**

PMP 1

PMP 2

PMP 3

AND POSSIBLY

Q UNIT

WITH BOTH INDICATORS HYDRAULIC PRESSURE DROP AND FLUID LEVELS IN THE RED

**Phase I**

1. Autopilot and Yaw Damper..... OFF
2. Airspeed.....260 KNOTS/0.76 M OR LESS

**CAUTION**

The hydraulic power off condition results in greater pilot forces, and landing requires increased caution because directional control is available mainly by rudder and differential forward thrust.

**Phase II**

Avoid high pitch attitudes and zones of turbulence.

**Landing:**

3. Slat/Flap Handle .....LEFT IN POSITION

**NOTE**

Without pressure in the two hydraulic systems the Slat/flap handle must not be moved.

4. Approach Speed..... BUGS SET  
Clean.....VREF+ 30 KNOTS

**NOTE**

In the situation where the high lift devices are already extended, observe the following approach speeds:

- Slats Only.....VREF + 20 KNOTS
- Slats + Flaps 20 .....VREF + 15 KNOTS
- Slats + Flaps 48 .....VREF + 10 KNOTS

5. Landing Gear ..... FREE FALL EXTENSION

Consult Landing Gear Emergency Extension, Abnormal section; Tab 11, page A-22.

6. Final Approach Vertical Speed ..... 300 FT/MIN

**NOTE**

With no antiskid, add 30% to L.D./L.F.L. With no slats/flaps, add 3000/5000 feet. With no airbrakes, add 600/1000 feet. Check AFM (P.5.50.8) whether speed VREF +30 KT is less than VMBE. (See Tab 2, QR-3: Landing Distance/ Landing Field Length Additives.)

After touchdown:

7. Thrust Reverse..... FULL POWER
8. Parking Brake .....\*INTERMEDIATE DETENT  
\*Be cautious and avoid cycling pressure on and off.



## UNRELIABLE AIRSPEEDS AT HIGH ALTITUDE

WARNING - Frozen or abnormal pilot and copilot IAS / MI indications and possibly:

- **AIRSPEED INDICATORS PERFORM LIKE ALTIMETERS** (airspeed decreasing in descent and increasing in climb),
- Illumination of one or both following lights:
 

**Q UNIT**

**AUTO SLATS**
- VMO / MMO audio warning sounds,
- **IAS** miscompare flag on EADI (if any),
- AP disengagement,
- Disagreement with stand-by IAS / MI indications,
- In cruise / level flight: unusual pitch trim activity.

### PHASE I

1. AP ..... DISENGAGED
2. YD ..... DISENGAGED
3. Avoid large displacements and rapid movements of control surfaces.
4. Fly wings level.
5. Stabilize airplane altitude using, if necessary, the stand-by instrument altitude indication.
  - Pitch attitude ..... Between 1° and 4° nose up
  - Engine power ..... Smoothly fully forward

**WARNING**

INAPPROPRIATE FLIGHT DIRECTOR GUIDANCE MAY BE ACTIVATED.

DO NOT FOLLOW CORRESPONDING FD.

**CAUTION**

Stall aural warning remains reliable.

**PHASE II**

1. Do not apply SLAT MONITORING SYSTEM procedure (Yellow Tab 10).

**CAUTION**

Do not re-engage AP or YD before pitot probes unblocking.

**LEVEL FLIGHT**

Set N1 as indicated in the table below, corresponding to MI = 0.75 (assumed temperature is ISA -10 °C):

Flight Level	Weight	N1	Pitch Attitude
FL 490	24,000 lb	97%	Between 1 and 4 degrees nose up
	22,000 lb	95%	
FL 450	30,000 lb	97%	
	22,000 lb	92%	
FL 410	38,000 lb	98%	
	30,000 lb	93%	
	22,000 lb	91%	
FL 370	38,000 lb	94%	
	30,000 lb	91%	
	22,000 lb	90%	
FL 330	38,000 lb	92%	
	30,000 lb	91%	
	22,000 lb	90%	
FL 310	38,000 lb	93%	
	30,000 lb	91%	
	22,000 lb	91%	

2. TCAS: TA ONLY ..... Selected
3. Advise ATC that both displayed altitude and XPDR-reported altitude may be unreliable and tightly monitor trajectory of closest airplanes.
4. When conditions permit, set N1 corresponding to cruise Mach = 0.75 at current flight altitude and airplane weight, using TAT as reference or standard atmosphere temperature if TAT is not usable. (Performance Manual 5-05 pages 3 to 7).
5. Limit attitude to 4° nose up or less.

**CAUTION**

VMO / MMO audio warning may be unreliable. If it is certain that the VMO / MMO audio warning is inappropriate, do not modify flight parameters.

If VMO / MMO audio warning sounds:

- 6. AUDIO WARN A / AUDIO WARN B circuit breakers..... PULLED

**CAUTION**

All aural warnings (STALL included) are inoperative except TCAS aural warning.

- 7. After a positive identification of the malfunction , continue the flight while complying with the following procedures for climb and descent phases:

**CLIMB**

- 1. N1 speed .....Climb power as per Performance Manual 4-50
- 2. Pitch attitude ..... Between 4° and 5° nose up

If vertical speed drops below 100 ft / min:

- 3. Airplane..... Level Off

**DESCENT**

Initiating the descent earlier than scheduled to recover non icing conditions is let to pilot's discretion.

**CAUTION**

If IAS goes down to 50 kt due to blocked pitot probes, expect loss of airspeed display on both EADI (if any):

- Do not apply PILOT AIR DATA COMPUTER INOPERATIVE procedure.
- Do not apply COPILOT AIR DATA COMPUTER INOPERATIVE procedure.
- Use ADI attitude and stand-by altimeter until pitot probes unblocking.

- 1. Start selector switches (all 3).....AIR START

ANTI-ICE:

- 2. ENG 1 and ENG 3 ANTI-ICE switches..... ON
  - 30 seconds later:
    - ENG 2 ANTI-ICE switch..... ON
  - 30 seconds later:
    - AIRFRAME ANTI-ICE switch ..... NORMAL
- 3. N1 speed ..... See table below

*FALCON 50 EMERGENCY/ABNORMAL CHECKLIST*

<b>TAT</b>	Between -30°C and -20°C	Between -20°C and -10°C	Between -10°C and 0°C	0°C and above
<b>N1</b>	84%	81%	78%	73%

4. Airbrake handle..... Position 1
5. Pitch attitude ..... Between 0° and 2° nose down
6. Vertical speed indicator ..... Between -2,000 and -3,000 ft / min

**NOTE**

- 1 - Check airplane altitude frequently on the stand-by altimeter.
- 2 - If prior to the problems, flight was performed at a static temperature lower than the authorized minimum limit (see 1-15-9), descend as soon as possible until air-data indications are back to normal.

**STATUS** (2 blocked pitot probes):

<b>INOPERATIVE / UNRELIABLE ITEMS</b>	<b>OPERATIVE / RELIABLE ITEMS</b>
<b>Basic fight parameters</b>	
IAS / MI / TAS on both ADI and on stand-by instrument.	IRS Ground Speed in FMS CDU. GPS Ground Speed in FMS CDU.
	Pitch and roll attitude on both ADI.
Pitch and roll attitude on both ADI.	Altitude displayed on both altimeters and stand-by instrument (max error +/- 600 ft). GPS altitude in NZ2000 FMS CDU (if any). VS on both VSI.
SAT, ISA deviation	TAT. Temperature data provided by AFIS / Operational flight plan / Weather briefing.
	Heading and Track.
	Wind data provided by AFIS / Operational flight plan / Weather briefing.
<b>Warnings</b>	
VMO / MMO audio warning	
Gear aural warning. Stall aural warning if AUDIO WARN C/Bs pulled	
<b>Flight controls</b>	
Automatic Slats extension.	Stall protection: IGN.
Roll Arthur position inconsistent with actual true flight condition.	Pitch Arthur (Arthur position is based on THS value).
<b>Automatic flight control system</b>	
AP, FD, and YD	
Mach Trim	
<b>Engine</b>	
	Engine primary parameters (N1, ITT, N2, FF) and controls.
<b>Airplane Systems</b>	
	All systems controls and displays

**NOTE**

Descent should cause airspeed and total air temperature to increase thereby facilitating the pitot probes unblocking and a return to correct IAS indication after about 2 minutes.

**NOTE**

An indicated airspeed increasing in descent is a good evidence of the pitot probes unblocking.

7. After return to unblocked pitot probes situation, wait for 1 more minute then:
    - AP and YD.....As required
  8. AUDIO WARN A / AUDIO WARN B circuit breakers..... Re-engaged
  9. TCAS..... NORMAL - Checked
  10. Start selector switches (all 3)..... NORMAL
  11. Airbrake handle.....As required
- ANTI-ICE:
- ANTI-ICE ENG 1 and 3 switches .....As required
  - ANTI-ICE ENG 2 switch .....As required
  - ANTI-ICE AIRFRAME switch .....As required

**FAILURE OF ALL THREE GENERATORS**



**Phase I**

1. Bus C and D Switches..... OFF

**NOTE**

Autopilot will disengage.

2. Bus Tie Switch.....FLIGHT NORMAL
3. Generator Switches ..... ATTEMPT RESETS (MAX 2 EACH)

**Phase II**

If all three generator lights remain illuminated:

Switch off as many systems as possible to reduce the battery load and maintain the current drain as low as possible:

4. BOOSTER Pumps Switches (All 3)  
Depending on the Fuel Envelope..... OFF
5. XFR Pumps Switches (All 3) ..... OFF
6. WINDSHIELD Switches (All 3) ..... OFF
7. ANTI-ICE:  
ENG and AIRFRAME Switches Depending  
on Flight Conditions..... OFF
8. PITOT Switch (Pilot) Depending on Flight Conditions ..... OFF
9. INTERIOR LIGHTS Switches ..... OFF
10. EXTERIOR LIGHTS Switches ..... OFF
11. Lighting Rheostat..... FULLY CCW

LAND AS SOON AS POSSIBLE and avoid icing conditions.

**CAUTION**

The batteries in good condition will provide:

- 40 minutes of operation with an average load of 25 Amp per battery (approximate load after load shedding in non icing conditions).
- 20 minutes of operation with an average load of 50 Amp per battery (approximate load after load shedding in icing conditions).
- If conditions permit, the battery current is reduced by switching off:
  - All three BOOSTER pumps and three XFR pumps.
  - INS and Radio Navigation systems.
  - Windshield heat system.

In icing conditions, it is imperative to keep the following switched on:

- Pilot windshield heating system.
- Engine and wing anti-ice systems

In icing conditions battery life is reduced by one minute for every minute that the systems are on.

### **NOTE**

- The No. 1 Radio Navigation system is operable with battery power supply.
- The flap system, the rudder trim system and the emergency aileron trim system are inoperative (D bus switched off).
- The nose wheel steering system and the normal aileron trim system are inoperative (C bus switched off).
- Flap and nose wheel steering system loss.

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## AUTOPILOT NOSEDOWN HARDOVER

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1. Autopilot .....DISENGAGE

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## HORIZONTAL TRIM STABILIZER RUNWAY

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### WARNING

Audio warning: continuous clacker.

Warning panel: possible amber **MISTRIM**

#### Phase I:

1. Firmly hold the control column to maintain the desired path while actuating the normal pitch trim.
2. Actuate the TAILPLANE EMERG switch to trim the airplane.

#### FSI NOTE

This procedure is found in the Operating Manual, Book 1 of the Emergency Section (Not in AFM).

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## AILERON TRIM RUNAWAY

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8

#### NOTE

With autopilot engaged, MISTRIM caution light is illuminated. Nevertheless, the flight-crew might not detect the failure before the trim reaches full travel as both yaw damper and autopilot counteract the roll.

1. Aileron trim..... Actuate in the opposite direction
2. Control wheel.....Stop the roll
3. TRIM AILERON circuit breaker .....Pull
4. EMERG AILERON trim.....Trim the airplane

#### FSI NOTE

This procedure is found in the Operating Manual, Book 1 of the Emergency Section (Not in AFM).



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## **RUDDER TRIM RUNWAY**

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### **NOTE**

With autopilot engaged, the flight-crew might not detect the failure before the trim reaches full travel as both yaw damper and autopilot counteract the roll.

1. Rudder trim..... Actuate in the opposite direction
2. Control wheel..... Maintain wings level
3. Rudder pedals ..... Cancel sideslip
4. Autopilot ..... Disengage
5. Yaw damper..... OFF
6. Differential thrust.....Reduce the effort on the pedals  
(as necessary)
7. Recommended maximum crosswind for landing..... 23 kts

### **FSI NOTE**

This procedure is found in the Operating Manual,  
Book 1 of the Emergency Section (Not in AFM).

## ENGINES INOPERATIVE

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### ALL ENGINES OUT CONDITION

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#### Phase I

1. Bus C and D SWITCHES ..... OFF
2. Communications..... VHF 1/ATC 1
3. Establish the aircraft within the In Flight Relight Envelope. (See page E-23)
4. Switch off as many services as necessary to decrease the battery load down to 50 amps per battery.
5. Relight all 3 engines per applicable procedure, Yellow Tab 3 or Yellow Tab 4.

#### Phase II

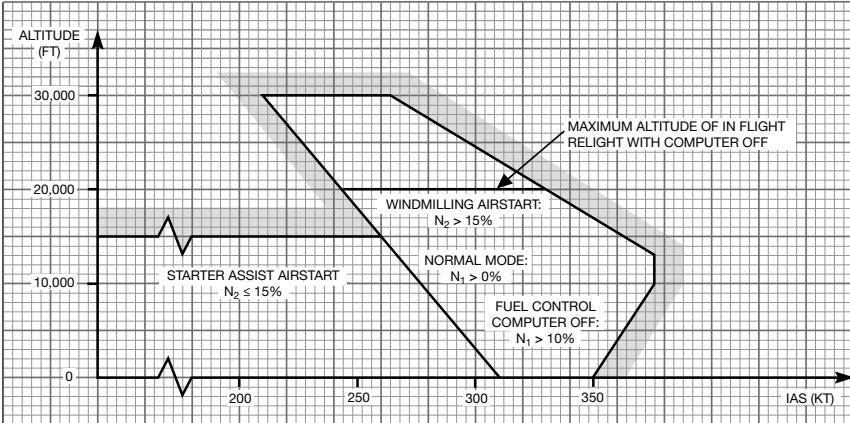
If no engine can be relighted:

Be prepared to execute a Forced Landing or Ditching, Emergency section, Red Tab 11, page E-26 or E-27.

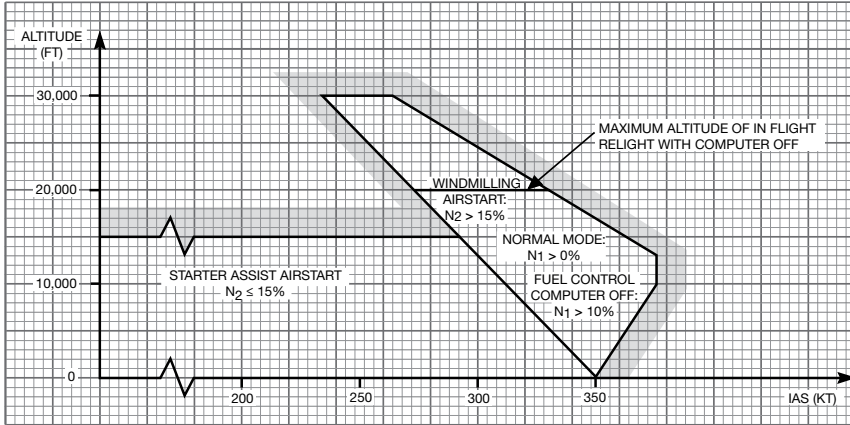
6. Standby Pump Switch ..... ON
7. At VFE extend the slats using the emergency slat system if necessary.
8. If a forced landing is anticipated, extend the landing gear at VLO, if possible, using the Landing Gear Free Fall procedure, Abnormal section; Yellow Tab 11, page A-22. This should take approximately two minutes.

## IN FLIGHT RELIGHT ENVELOPE

ENGINES 1 AND 3



ENGINE 2



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## APPROACH AND LANDING WITH TWO ENGINES INOPERATIVE

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### Preliminary Steps

Reduce the aircraft weight to minimum practical.

Determine the weight limitation for enroute climb gradient.

Determine the landing configuration and the landing distance/ field length additive.

- a. Use S+20 Landing Distance Charts (Normal Procedures Checklist, Performance Tab, P-20, 21)
  1. Slats only ..... Add 1400/2300 FT
  2. S+20 ..... Charted Data
  3. Outboard slats only ..... Add 1580/2600 FT
  4. Outboard S+20 ..... Add 180/300 FT
- b. If brakes are supplied by the #2 hydraulic system, increase landing distance/landing field length by 30%.
  1. Fuel System Situation ..... CHECKED
  2. Bus Tie Switch ..... TIED
  3. Limit Generator Load ..... 300 AMPS MAX
  4. Crew and Cabin Bleed Air Switches ..... OFF
  5. With #1 and #2 Engines Inoperative ..... Brakes #2 OFF
  6. Hydraulic Standby Pump Switch ..... ON
  7. Avoid icing conditions.

### Approach

With engines #1 and #2 inoperative, refer to checklist **(A)**.

With engines #1 and #3 inoperative, or engines #2 and #3 inoperative, refer to checklist **(B)**.

**(A)** Engines #1 and #2 inoperative.

1. Slats (200 KIAS) ..... Emergency Slats Switch  
When committed for landing:
2. Landing Gear (190 KIAS) ..... EXTEND (YELLOW TAB 11)
  - a. Normal Gear Handle ..... DOWN
  - b. EMERG GEAR Handle ..... PULL
  - c. Main Gear Manual Release Handles ..... PULL
  - d. Nose Gear Manual Release Handle ..... PULL
3. Slat Flap Handle ..... S+20, or as previously determined
4. Approach Speed:
  - Outboard slats only ..... VREF + 25 KNOTS
  - Outboard S+20 ..... VREF + 10 KNOTS

Use moderate braking with brakes supplied by the #2 hydraulic system.

- Ⓑ Engines #1 and #3 inoperative, or engines #2 and #3 inoperative.
  - 1. Slats.....EXTENDED
  - 2. At no less than 1000 FT AGL, decision .....GO AROUND OR LAND  
When committed for landing:
  - 3. Landing Gear ..... DOWN
  - 4. Slat Flap Handle ..... S + Flaps 20, or as previously determined
  - 5. Approach Speed:
    - Slats Only.....VREF + 20 KNOTS
    - S+20 .....VREF + 5 KNOTS

**After Touchdown**

Normal deceleration procedure if braking with antiskid is available and if thrust reverser is available.

**GO-AROUND WITH TWO ENGINES INOPERATIVE**

**CAUTION**

The decision to land or go-around must be made at or above 1,000 feet AGL.

The altitude loss associated with the go-around procedure is approximately 500 feet.

The landing gear cannot be retracted with #1 and #2 engines inoperative.

- 1. Take-off Thrust.....SET
- 2. Landing Gear Handle..... UP

Accelerate while in descent on normal slope.

At VREF + 25 knots

- 3. Slat Flap Handle ..... CLEAN

Accelerate to the enroute climb speed, and initiate climb.

---

## EMERGENCY CONDITIONS

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### FORCED LANDING

---

#### Preliminary Steps:

1. Transmission of Distress Signal.....“MAYDAY”
2. Transponder Code..... 7700
3. Passenger Briefing and Preparation..... COMPLETE
4. Fasten Seat Belt/No Smoking Sign..... ON
5. Cockpit Jump Seat (If Possible) ..... STOWED

#### Approach:

6. Airframe Anti-ice..... OFF
7. Crew Bleed Air Switch..... OFF
8. Cabin Bleed Air Switch..... OFF
9. HP Bleed Switches..... OFF
10. PRV Switch..... OFF
11. Cabin Pressure Switch ..... DUMP
12. Manual Pressurization Knob..... UP
13. Landing Gear ..... EXTENDED
14. Slats/Flaps..... SLATS + FLAPS 48
15. Approach Speed..... VREF

#### Just Before Touchdown:

16. Vertical Speed..... APPROX 300 FT/MIN
17. Generator Switches..... OFF
18. Battery Switches..... OFF
19. Power Levers..... CUTOFF

#### After the aircraft has come to rest:

20. Fire Handles (All Three)..... PULL
21. Engine Fire Extinguisher (All Three)..... POSITION 2
22. Cockpit Jump Seat..... STOWED/AISLE CLEARED

Use emergency exits and cabin access door to evacuate the aircraft.

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## DITCHING

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**Preliminary Steps:**

1. Transmission of Distress Signal ..... “MAYDAY”
2. Transponder Code ..... 7700
3. Passenger Briefing and Preparation ..... COMPLETE
4. Life Jackets ..... DONNED/CHECKED
5. Fasten Seat Belt/No Smoking Sign ..... ON
6. Cockpit Jump Seat (If Possible) ..... STOWED
7. Audio Warning Circuit Breakers ..... PULLED

**Approach (Parallel to Main Swell):**

8. Airframe Anti-ice Switch ..... OFF
9. Crew Bleed Air Switch ..... OFF
10. Cabin Bleed Air Switch ..... OFF
11. Bag Air Switch ..... OFF
12. ECU Inlet Control Door Handle ..... PULL
13. HP Bleeds ..... OFF
14. PRV Switch ..... OFF
15. Cabin Pressurization Selector Switch ..... DUMP
16. Manual Pressurization Knob ..... UP
17. Landing Gear ..... UP
18. Slats/Flaps ..... SLATS + FLAPS 48
19. Airspeed ..... VREF

**Prior to contact:**

20. Vertical Speed ..... APPROX 300 FT/MIN
21. Generator Switches ..... OFF
22. Battery Switches ..... OFF

Ditch the aircraft on the crest and parallel to swell at the slowest practical speed and with a noseup attitude of 11 to 13°.

**After touchdown:**

23. Power Levers ..... SHUTOFF
24. Engine Fire Handles (All Three) ..... PULL
25. Cockpit Jump Seat ..... STOWED/AISLE CLEAR

**CAUTION**

Do not open the main cabin door.

Use emergency exits to evacuate the aircraft.

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## BOMB ON BOARD

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To avoid the activation of an altitude sensitive or timer ignition bomb, the following procedure focuses on:

- Making the cabin altitude not exceed the value at which the bomb was discovered
- Trying to minimize the flight time.

To reduce the effects of explosions by helping the blast to go outwards, the flight-crew should maintain approximately 1 psi differential pressure (which corresponds to a 2,500 ft difference between the airplane altitude and the cabin altitude).

### Procedure

1. Airplane.....LEVEL OFF
2. FASTEN BELTS and no smoking light pushbuttons..... ON  
Seat belts must be fastened, properly adjusted and sufficiently tightened. The crew must also put on their harnesses and check that they are locked.
3. Transmission of distress signal..... MAYDAY
4. ATC transponder..... MAYDAY CODE
5. UP-DN control ..... Between 1 and 2 o'clock  
minimum 30 seconds
6. Cabin pressure selector switch ..... MAN
7. Cabin vertical speed ..... MAINTAIN TO 0
8. Divert to the nearest suitable airport in the shortest time.
9. Descent to altitude = cabin altitude + 2,500 ft ( $\Delta p = 1$  psi) or safety altitude.
10. When at cabin altitude + 2,500 ft:  
Continue descent maintaining  $\Delta p$  CABIN = 1 psi.

**CAUTION**

If structural integrity is questioned:

- Limit airspeed value to lowest practical value,
- Avoid high maneuvering load factors



**NOTE**

Approach and landing are performed using the normal procedures and checklist.

**Before Landing**

- 10. Cabin pressure selector switch .....AUTO
- 11. UP–DN control ..... DN POSITION (Full CCW)

**After landing and when airplane stopped in a remote area:**

- 12. EMERGENCY EVACUATION procedure..... ACCOMPLISHED

**FSI NOTE**

This procedure is found in the Operating Manual, Book 1 of the Emergency Section (Not in AFM).

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**EMERGENCY EVACUATION**

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**Phase I**

- 1. Park Brake .....SET
- 2. ATC—Distress Transmission..... NOTIFY
- 3. Passengers ..... INSTRUCTED

**Phase II**

- 4. Fire Pull Handles (All 3) ..... PULL
- 5. GEN and BAT Switches (All 5) ..... OFF
- 6. EMERG LIGHTS Switch..... ON
- 7. Engine Fire Extinguisher DISCH Switch (All 3) ..... POSITION 2
- 8. APU Fire Extinguisher DISCH Switch .....POSITION 1
- 9. Third Cockpit Seat ..... STOWED
- 10. Evacuation ..... INITIATE

**FSI NOTE**

This procedure is found in the Operating Manual, Book 1 of the Emergency Section (Not in AFM).

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## VOLCANIC ASH ENCOUNTER

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**WARNING**

EXIT ASH CLOUD AS QUICKLY AS POSSIBLE. DO NOT ATTEMPT TO CLIMB OUT OF THE ASH CLOUD.

**CAUTION**

Weather radar does not detect volcanic ash.

1. Land at the nearest suitable airport.
2. Course ..... Reverse, 180° turn (1)
3. ATC transponder..... 7700
4. MAYDAY message..... TRANSMIT
5. Crew oxygen masks ..... DONNED - 100 % + EMERGENCY
6. Smoke goggles..... DONNED - VENT VALVE OPEN
7. Start selector switches (all 3)..... AIR START
  - IGN lights ..... ON
8. ANTI-ICE ENG switches (all 3)..... ON (2)
9. Power levers: one by one ..... SMOOTHLY REDUCE THRUST TO LOWEST ITT (3)

If unable to maintain altitude:

- Fly a drift down descent.
10. Power levers ..... AVOID RAPID THRUST CHANGES (3)
  11. Engines parameters..... MONITOR

If engine surge is evidenced:

- Corresponding engine ..... SMOOTHLY REDUCE THRUST UNTIL ENGINE STABILIZES
- Be prepared to apply ENGINE FAILURE IN FLIGHT procedure Yellow tab Tab 2, A-2 or ALL ENGINES OUT CONDITION procedure Red tab Tab 9, E-22 (4).

12. Airspeed indications ..... MONITOR

If airspeed indications become unreliable:

- Apply UNRELIABLE AIRSPEEDS AT HIGH ALTITUDE procedure Red tab Tab 6, E-13.

If smoke, acrid odor or volcanic dust fill the cabin:

- NO SMOKING light pushbutton..... ON
- PASSENGER OXYGEN controller OVERRIDE (5)
- Passenger masks..... DONNED - CHECKED

**Technical Status**

Many airplane systems can be severely affected.

**Operational Status**

The pilot should land at the nearest suitable airport.

**Technical Explanations**

For additional explanations, refer to “operations in contaminated air-space” procedure (section 2-80).

**FSI NOTE**

This procedure is found in the Operating Manual, Book 1 of the Emergency Section (Not in AFM).

**Expanded Explanations**

(1) 180 turn:

Considering that an ash cloud can extend for hundred of miles, a 180 turn in descent is the best escape strategy. Depending on the situation, an emergency descent may be necessary.

(2) ANTI ICE: ENG switches (all 3):

This improves the engine stall margins by increasing the bleed air flow, and increases the fuel /air ratio in the combustion chamber.

(3) Thrust levers:

Keeping ITT at the lowest value lowers the fused ash buildup on turbine blades and hot section components.

Rapid thrust variation must be avoided since engine surge margins may be reduced.

(4) Engine relight:

If engine relight is attempted, it could take longer than normal to reach the idle thrust due to the combined effects of high altitude and volcanic ash ingestion.

(5) PASSENGER OXYGEN controller:

Select OVERRIDE to ensure the masks boxes to open and oxygen to be supplied to the passenger masks

## STALL RECOVERY

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### Phase I

SIMULTANEOUSLY and SMOOTHLY:

1. Autopilot .....DISENGAGE
2. Pitch.....NOSE DOWN
3. Bank.....WINGS LEVEL
4. Power levers ..... FULL FORWARD
5. Airbrakes..... POSITION 0
6. Pitch trim .....AS REQUIRED

### Phase II

7. Pitch attitude ..... CLOSE TO HORIZON
8. Thrust.....ADJUST
9. Speed and FD modes.....AS REQUIRED
10. Autopilot ..... AS REQUIRED

### FSI NOTE

This procedure is found in the Operating Manual,  
Book 1 of the Emergency Section (Not in AFM).

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## UNUSUAL ATTITUDE RECOVERY - NOSE UP

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### Phase I

1. Autopilot .....DISENGAGE
2. Power levers .....FULL FORWARD
3. Bank the aircraft by the shortest way .....80° TO 90° BANK
4. Airbrakes ..... POSITION 0

When aircraft nose is close to horizon:

5. Bank ..... WINGS LEVEL
6. Power levers .....ADJUST

### Phase II

7. Speed and FD modes .....AS REQUIRED
8. Autopilot ..... AS REQUIRED

### FSI NOTE

This procedure is found in the Operating Manual, Book 1 of the Emergency Section (Not in AFM).

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## UNUSUAL ATTITUDE RECOVERY - NOSE DOWN

---

### Phase I

1. Autopilot .....DISENGAGE
2. Power levers .....Idle
3. Bank .....Wings level
4. Airbrakes .....AS REQUIRED
5. Nose up pitch .....SMOOTHLY APPLY

When aircraft nose is close to horizon:

6. Airbrakes ..... POSITION 0
7. Power levers .....ADJUST

### Phase II

8. Speed and FD modes .....AS REQUIRED
9. Autopilot .....AS REQUIRED

### FSI NOTE

This procedure is found in the Operating Manual, Book 1 of the Emergency Section (Not in AFM).

## PILOT INCAPACITATION

---

If a pilot becomes incapacitated, the remaining pilot must:

1. Maintain control of the aircraft by:
  - Taking over the controls,
  - Selecting the AP XFR switch button on the valid pilot side,
  - Engaging the AP as soon as possible.  
If transfer of the autopilot control is necessary, verify control modes. The autopilot will remain engaged, however, the modes may possibly revert to basic modes or not be the same as the original side prior to the transfer.
2. Check position of essential controls and switches.
3. Inform ATC and declare an emergency.  
Communications are preferably performed using the headset.
4. Request the help of a cabin crew or a passenger to assist the incapacitated pilot:
  - Pull the pilot back by the shoulders,
  - Tighten and manually lock the shoulder harness of the incapacitated pilot,
  - Place and secure the hands under the belt harness,
  - Move the seat completely aft,
  - Recline the seat back if possible,
  - Lift each knee to remove the pilot's feet from the rudder pedals,
  - Move the rudder pedals of the incapacitated pilot fully forward,
  - Perform a medical assessment of the incapacitated pilot (including vital signs),
  - Administer first aid as necessary,
  - Consider use of the oxygen mask or therapeutic oxygen and mask,
  - Contact medical assistance if time and environmental conditions permit,
  - Remove the incapacitated pilot from the seat if phase of flight and environmental conditions permit.

5. Reorganize the cockpit workload:
  - Distribute the workload among the remaining crew if possible,
  - Perform checklists earlier than normal,
  - Request radar vectoring whenever possible,
  - Achieve landing configuration earlier than normal.
6. Divert to the nearest suitable airport depending on medical emergency level and flight conditions as required.

**NOTE**

It takes two people to remove the weight of an unconscious person from a seat without endangering any controls and switches.

If it is not possible to remove the incapacitated pilot, the cabin crew or any medically qualified passenger must remain in the cockpit to take care of and observe the incapacitated pilot.

**FSI NOTE**

This procedure is found in the Operating Manual, Book 1 of the Emergency Section (Not in AFM).

## **ABNORMAL PROCEDURES**

Procedures in this section address foreseeable situations involving failures, in which the system's redundancy or selection of an alternate system will maintain an acceptable level of air worthiness.

- I. **IMMEDIATE ACTION**—There are no memory items involved with these procedures. When a failure occurs, the crew should assess its priority in relationship to the immediate effect on aircraft controllability and the continuance of the planned flight path.

Procedures that could have an immediate effect, but involve actions that are fundamental to basic airmanship, are:

- Air Data System Failures—Refer to standby instruments or transfer control.
  - Engine Vibration (Actual)—Reduce thrust.
  - Pitch Trim Runaway—Override or disconnect.
- II. **SPECIFIC PRIORITIES**—Where there is no immediate action required, it is advisable to complete a Normal Checklist if in progress or due prior to calling for the Abnormal Checklist.

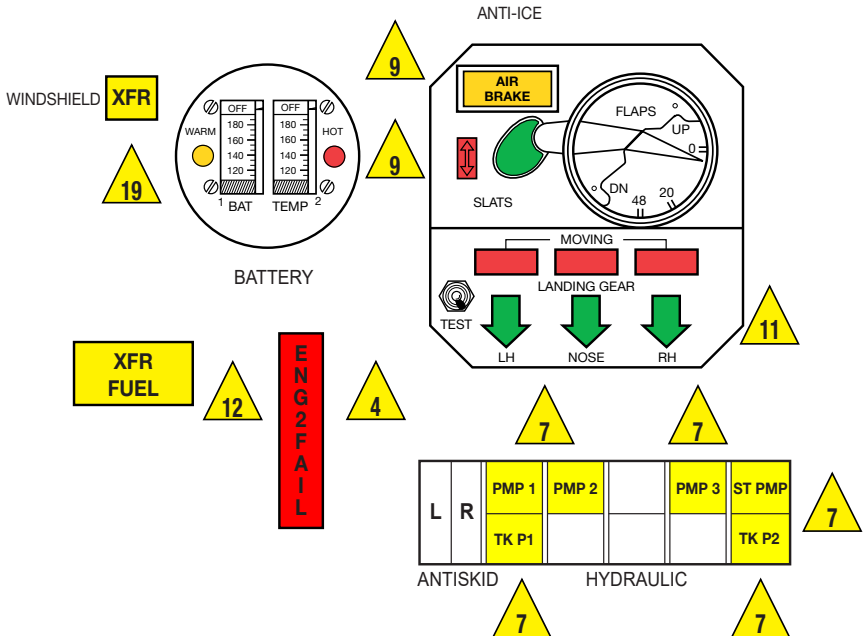
Because of the interrelationship of systems, a failure in one can have an effect on other systems.

The system that can produce multiple annunciations are (1) Engine, (2) Electric, (3) Hydraulic and should be dealt with in priority as numbered.



FALCON 50 EMERGENCY/ABNORMAL CHECKLIST

AIR DATA 1	20	COND'G OVHT	19	AIR DATA 2	20
FLAP ASYM	8	BLEED APU	QR 1	BLEED OVHT	19
L PITOT	21	AUTO SLATS	9 20	R PITOT	21
T/O CONFIG	QR 1	REV UNLOCK		CABIN	18
AIL ZERO		MACH TR	19 20	Q UNIT	7 10 20 21
AP TRIM	19	AP	19	MISTRIM	19
GEN 1	14 15	GEN 2	14 15	GEN 3	14 15
BAT 1	14	BUS TIED		BAT 2	14
AC 1	16	HOT BAT	14	AC 2	16
OIL 1	5	OIL 2	5	OIL 3	5
CMPTR 1	5	CMPTR 2	5	CMPTR 3	5
FUEL 1	12	FUEL 2	12	FUEL 3	12
LO FUEL	13	GPU DOOR OPEN		FUELING	12 QR 1



## ABNORMAL PROCEDURES

	ENGINE FAILURE BEFORE V1	
	ENGINE FAILURE AFTER V1	<b>1</b>
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	INFLIGHT RELIGHT ENVELOPE	<b>2</b>
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	FLAMEOUT AND HIGH SPEED AIRSTART	
	ENGINE NO. 2 AIR INLET DOOR OPEN	<b>4</b>
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	LOSS OF NO. 1 HYDRAULIC SYSTEM	
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	LOSS OF NO. 2 HYDRAULIC SYSTEM	
	LOSS OF NO. 3 ENGINE DRIVEN PUMP	
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	AILERON SYSTEM JAMMING	<b>8</b>
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	SLAT MONITORING SYSTEM MALFUNCTION	<b>9</b>
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	Q UNIT	<b>10</b>
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	INOPERATIVE STABILIZER LANDING	
<b>LANDING GEAR STEERING BRAKES</b>	LANDING GEAR RETRACTION MALFUNCTION	
	LANDING GEAR EXTENSION MALFUNCTION	
	NOSEWHEEL STEERING FAILURE	
	NOSEWHEEL SHIMMY	<b>11</b>
	NO. 1 BRAKE SYSTEM OR ANTISKID INOPERATIVE	
	NO. 1 AND NO. 2 BRAKE SYSTEMS INOPERATIVE	

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<b>FUEL</b>	FUEL TRANSFER SYSTEM INOPERATIVE	<b>12</b>
	FUELING LIGHT ON INFLIGHT	
	WING TANK LEVEL ABNORMALLY LOW	
	FUEL FEEDER TANK LEVEL LOW	<b>13</b>
FEEDER TANK LEVEL HIGH		
<b>ELECTRICAL</b>	TWO GENERATORS INOPERATIVE	<b>14</b>
	BATTERY FAILURE	
	BATTERY OVERHEAT	
	ONE GENERATORS INOPERATIVE	<b>15</b>
	INVERTER FAILURE	
FAILURE OF BOTH INVERTERS	<b>16</b>	
<b>ANTI-ICE</b>	ENGINE ANTI-ICE SYSTEM INOPERATIVE	<b>17</b>
	ENGINE ANTI-ICE SYSTEM UNWANTED OPERATION	
	AIRFRAME ANTI-ICE SYSTEM INOPERATIVE	
	AIRFRAME ANTI-ICE SYSTEM UNWANTED OPERATION	
	ICE PROTECTION—LATE ACTIVATION	
<b>PRESSURIZATION / AIR CONDITIONING</b>	HIGH CABIN ALTITUDE OR SLOW DEPRESSURIZATION	<b>18</b>
	HIGH CABIN PRESSURE DIFFERENTIAL	
	IMPROPER CABIN VERTICAL SPEED	
	NO AUTOMATIC PRESENTATION OF PASSENGER MASKS	
	CABIN DOOR UNLOCKED	
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	COMPARISON FLAGS (ALL AMBER)	
	ATTITUDE FAIL	
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<b>COLLINS EFIS</b>	DCP FAILURE	
	RADIO ALTIMETER FAILURE	
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	HEADING COMPARISON MONITOR	
	IAS COMPARISON MONITOR	
	LOC OR GS COMPARISON MONITOR	<b>26</b>
	RA COMPARISON MONITOR	

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# ENGINE

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## ENGINE FAILURE BEFORE V1

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Abort the takeoff:

1. Brakes.....MAXIMUM
2. Power Levers..... IDLE
3. Airbrake Handle .....POSITION 2
4. Thrust Reverser ..... DEPLOYED

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## ENGINE FAILURE AFTER V1

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Continue the takeoff:

1. At VR.....ROTATE NORMALLY
2. Take Off Attitude .....SET
3. Airspeed..... MAINTAIN V2
4. Positive Rate of Climb .....GEAR UP

**CAUTION**

If the engine failure occurs at a speed above V2, maintain that speed.

Above 400 feet AGL:

5. Level Flight Acceleration..... INITIATE
6. Airspeed:
  - a. Slats + 20° .....V2 + 15 KNOTS
  - b. Slats Only .....V2 + 25 KNOTS
7. Slat/Flap Handle ..... CLEAN
8. Climb Speed..... MAINTAIN 1.5 VS

5 minutes after brake release:

9. Maximum Continuous Thrust .....SET
10. After Takeoff Checklist..... COMPLETE
11. Refer to Inflight Engine Failure checklist, Yellow Tab 2, page A-2.

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## INFLIGHT ENGINE FAILURE

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Identify the failed engine. If engine integrity is not questionable:  
Proceed to Airstart Checklist, Tab 3, page A-4.

If engine integrity is questionable, or if airstart is unsuccessful:  
Complete engine shutdown as follows:

1. Power Lever..... IDLE FOR 1 MINUTE IF POSSIBLE,  
THEN CUTOFF
2. Booster Pump..... OFF
3. Generator Switch..... OFF

### \*NOTE

In icing conditions, if the #1 or #2 engine has been  
shutdown, continue to operate respective engine anti-  
ice system.

- \*4. Engine Anti-ice Switch..... OFF
5. HP Bleed Switch..... OFF
6. PRV Switch (With #2 Engine Inoperative)..... OFF
7. Fire Handle..... PULL

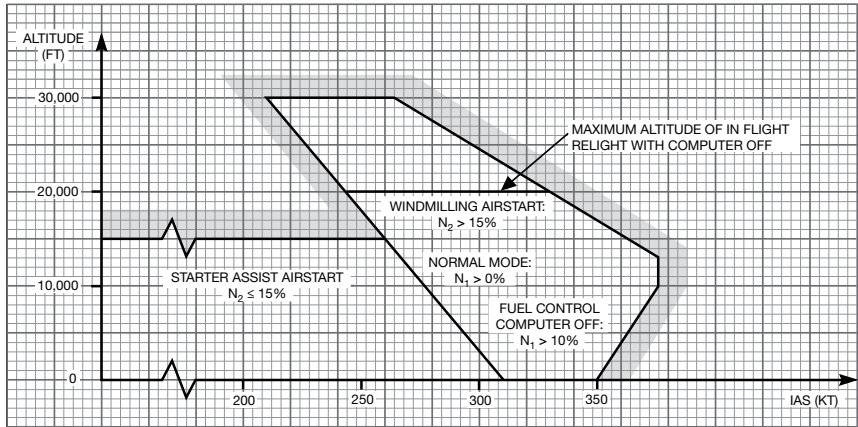
If engine #3 is shutdown:

8. Bus Tie Switch..... TIED
9. Hydraulic Standby Pump Switch..... ON (AS REQUIRED)

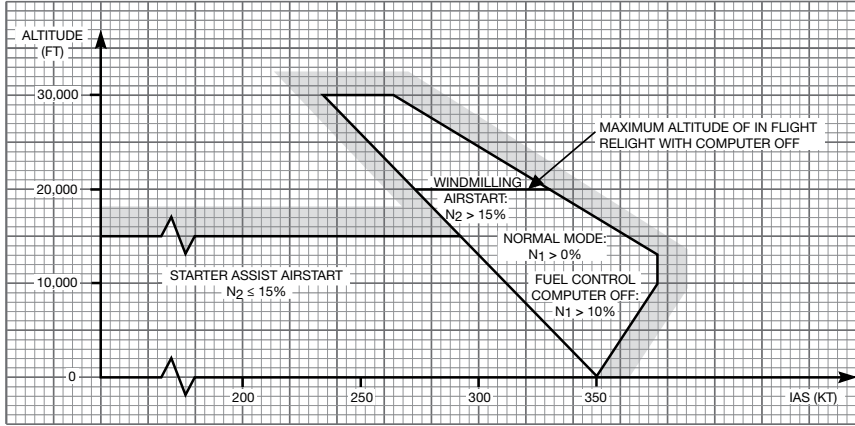
Consult One Engine Inoperative Approach/Landing/Go-Around  
Procedures, Yellow Tab 6, page A-12 or Approach And Landing With Two  
Engines Inoperative, Red Tab 10, Pages E-24 and E-25.

# INFLIGHT RELIGHT ENVELOPE

ENGINES 1 AND 3



ENGINE 2



RR12150  
FIG A-1  
OCT 26 1993

**AIRSTART**

3

**WARNING**

DO NOT ATTEMPT TO RELIGHT AN ENGINE AFTER AN ENGINE FIRE OR IF THE ENGINE INTEGRITY IS QUESTIONABLE.

**CAUTION**

Wait 10 seconds between two consecutive airstart attempts. Do not make more than three successive airstart attempts.

**Preliminary Steps:**

\*Establish aircraft within the Airstart envelope; Tab 2, page A-3.

- 1. Fire Handle.....IN
- 2. Power Lever..... CUTOFF
- 3. Generator Switch.....ON
- 4. Engine Computer Switch.....ON
- 5. Booster Pump.....ON
- 6. Engine Anti-ice Switch..... OFF (IF POSSIBLE)
- 7. Airframe Anti-ice Switch ..... OFF (IF POSSIBLE)
- 8. Bus Tie Switch..... TIED

If N2 speed greater than 15% and indication of N1 rotation, use procedures (A), Windmilling Airstart, page A-5.

OR

N2 speed not greater than 15%, use procedure (B), Starter Assist Airstart, page A-6.

OR

If Engine Computer is inoperative, use procedure (C), Airstart with Fuel Control Computer Off, page A-7.

**NOTE**

Abort the airstart if:

- Oil pressure does not rise within 10 seconds after light-off.
- ITT does not rise within 10 seconds after light-off.
- ITT is rising rapidly and approaching 907°C limit.
- N1 remains close to zero when N2 = 20%.
- N2 speed is not rising rapidly and smoothly to 24% after light-off.
- During an Airstart with Fuel Control Computer Off, the N1 exceeds 80% with the power lever at idle.



**NOTE**

If ignition light remains on through N2 speed greater than 50%:

1. Start Selector Switch .....MOTOR START STOP  
Check that the IGN light is out.
2. Start Selector ..... GROUND START

**(A) Windmilling Airstart**

1. Start Selector Switch .....AIRSTART (IGN LIGHT ON)
2. Power Lever ..... IDLE  
Check that the ITT rises within 10 seconds.

When N2 speed greater than 50%:

3. Start Selector Switch .....GROUND START (IGN LIGHT OUT)  
Check that the IGNITION, GENERATOR, and OIL lights are out.
4. Engine Instruments ..... CHECKED
5. Bus Tie Switch .....FLIGHT NORMAL  
Check that the BUS TIED light is out.

**NOTE**

To abort airstart:

1. Power Lever ..... CUT-OFF
2. Start Selector Switch ..... MOTOR START STOP
3. Return to Inflight Engine Failure checklist, Yellow tab 2 page A-2.

**AIRSTART (Cont)**

---

**B Start Assist Airstart**

**NOTE**

A starter assist airstart may cause disengagement of the autopilot system.

1. Start Selector Switch.....AIR START (IGN LIGHT ON)
2. Start Pushbutton..... DEPRESSED (LESS THAN 2 SECONDS)

When N2 speed is 12-15% and indication of N1 rotation:

3. Power Lever..... IDLE  
Check that the ITT rises within 10 seconds, and that N1, fuel flow, and oil pressure are rising.

When N2 speed is greater than 50%:

4. Start Selector Switch.....GROUND START (IGN LIGHT OUT)  
When the N2 stabilizes, check that the generator, oil, and the pump lights are out.
5. Engine Instruments..... CHECKED
6. Bus Tie Switch.....FLIGHT NORMAL  
Check that the BUS TIED light is out.

**NOTE**

To abort airstart:

1. Power Lever ..... CUT-OFF
2. Start Selector Switch .....MOTOR START STOP
3. Return to Inflight Engine Failure checklist, Yellow Tab 2, page A-2.

**© Airstart with Fuel Control Computer Off**

**Windmilling Airstart**

Use Windmilling Airstart procedures, page A-5, for normal mode, but with N2 speed greater than 15% and N1 speed greater than 10%.

**Starter Assist Airstart**

1. Start Selector Switch.....AIR START (IGN LIGHT ON)
2. Start Pushbutton..... DEPRESS (LESS THAN 2 SECONDS)

**3**

When N2 speed is 10% and N1 rotation is observed:

3. Power Lever..... IDLE  
Check that ITT rises within 10 seconds.

When N2 speed is 50%:

4. Start Selector Switch.....MOTOR START STOP  
Check that the ignition, generator, and the oil lights are out.
5. Engine Instruments..... CHECKED
6. Start Selector Switch.....GROUND START
7. Bus Tie Switch.....FLIGHT NORMAL  
Check that the BUS TIED light is out.

**NOTE**

To abort airstart:

1. Power Lever .....CUT-OFF
2. Start Selector Switch.....MOTOR START STOP
3. Return to Inflight Engine Failure checklist, Yellow Tab 2, page A-2.

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**FLAME-OUT AND HIGH SPEED AIRSTART**

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**WARNING**

DO NOT ATTEMPT TO RELIGHT AN ENGINE AFTER AN ENGINE FIRE OR IF THE ENGINE INTEGRITY IS QUESTIONABLE.

**CAUTION**

Wait 10 seconds between two consecutive airstart attempts. Do not make more than three successive airstart attempts.

**N2 RPM 15% or above**

**NOTE**

This immediate airstart may be attempted at high altitude even at altitudes above the maximum start envelope.

1. Power Lever.....IMMEDIATELY TO IDLE
2. Start Selector Switch.....AIR START (IGN LIGHT ON)

Check that the ITT rises within 10 seconds.

3. Power Lever.....ADVANCE

After relight:

4. Start Selector Switch.....GROUND START (IGN LIGHT OUT)
5. Engine Instruments.....CHECKED

**ENGINE NO. 2 AIR INLET DOOR OPEN**

**E  
N  
G  
I  
N  
E  
F  
A  
I  
L**

- If the failure occurs on the ground before V1, abort the takeoff.
- If the failure occurs on the ground after V1, continue the takeoff.

**In Flight:**

1. Engine #2 Power Lever..... IDLE  
If the engine surges or abnormal conditions are observed, shutdown the #2 engine.

**Engine Shutdown Procedure:**

1. Power Lever..... CUTOFF
2. Booster Pump..... OFF
3. Generator Switch..... OFF

**\*NOTE**

In icing conditions, continue to operate #2 engine anti-ice system.

- \*4. Engine Anti-ice Switch..... OFF
5. HP Bleed Switch..... OFF
6. PRV Switch (With #2 Engine Inoperative)..... OFF
7. Fire Handle..... PULL

Consult One Engine Inoperative Approach/Landing/Go-Around Procedures, Yellow Tab 6, page A-12 or Approach And Landing With Two Engines Inoperative, Red Tab 10, pages E-24 and E-25.

**ENGINE COMPUTER INOPERATIVE**

**COMPTR**

**NOTE**

Prior to step No. 1, if operationally feasible, reduce power on affected engine below 80% N1.

1. Engine Computer Switch.....OFF THEN ON

If the COMPTR light remains on:

2. Do not let the ITT of affected engine exceed indicated ITT of other engines.
3. Avoid rapid displacements of power lever.

**CAUTION**

- Maximum thrust may not be obtained.
- Idle thrust may be higher than normal.
- At a given N1 speed, fuel flow is approximately 5% higher.
- Surge Bleed valve will assume the 1/3 open position.

**ENGINE OIL**



**NOTE**

The illumination of the OIL light indicates a low oil pressure condition, or the presence of metal chips in the lubrication system.

If the oil pressure is normal:

1. Monitor Oil Pressure and Temperature.
2. Reduce Power if Possible.

If the oil pressure is less than 25 PSI:

1. Reduce power.
2. Shutdown the engine as soon as possible.

**Engine Shutdown Procedure:**

**5**

1. Power Lever..... CUTOFF
2. Booster Pump..... OFF
3. Generator Switch..... OFF

**NOTE**

In icing conditions, if the #1 or #2 engine has been shutdown, continue to operate respective engine anti-ice system.

4. Engine Anti-ice Switch..... OFF
5. HP Bleed Switch..... OFF
6. PRV Switch (With #2 Engine Inoperative) ..... OFF
7. Fire Handle..... PULL

If engine #3 is shutdown:

8. Bus Tie Switch..... TIED
9. Hydraulic Standby Pump Switch..... ON (AS REQUIRED)

Consult One Engine Inoperative Approach/Landing/Go-Around Procedures, Yellow Tab 6, page A-12 or Approach And Landing With Two Engines Inoperative, Red Tab 10, pages E-24 and E-25.

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# ONE ENGINE INOPERATIVE PROCEDURE

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## ONE ENGINE INOPERATIVE APPROACH/ LANDING/GO-AROUND (APPROACH CONFIGURATION SLATS OR S+20)

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1. Hydraulic Implications .....CHECK
2. Electrical Implications.....CHECK
3. Landing Distance and Climb Requirements .....CHECK

### Approach

4. Slat/Flap Handle ..... Slats or S + 20
5. Landing Gear ..... DOWN
6. Approach Speed.....SET  
S+20 ..... VREF + 5 KNOTS  
Slats Only..... VREF + 20 KNOTS
7. Approach and Landing Checklists..... COMPLETE

### NOTE

When landing is assured and the possibility of a go-around is excluded, the slats / flaps may be extended to:

- Approach with S+ 20 .....S + 48 (VREF)
- Approach with Slats .....S + 20 (VREF+5)

### Go-Around

1. Power Levers ..... SET T/O N1
2. Pitch Attitude ..... 14°
3. Landing Gear ..... UP
4. Climb Speed .....SET  
S + 20 ..... VREF + 5 KNOTS  
Slats Only..... VREF + 20 KNOTS

At no lower than 400 feet AGL:

5. Level Flight Acceleration..... INITIATE  
At VREF + 15 Knots ..... SLATS ONLY  
At VREF + 25 Knots ..... CLEAN
6. Enroute Climb Speed.....Attain 1.5 V5
7. After T/O Checklist ..... COMPLETE



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**APPROACH**

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1. Slats/Flaps .....SET
2. Seat Belt Sign/No Smoking Signs ..... ON
3. Anti-Icing ..... AS REQUIRED
4. Radios.....SET FOR APPROACH
5. Passenger Briefing..... COMPLETED
6. Start Selector Switches .....AIRSTART
7. Ignition Lights ..... (3) ON

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**LANDING**

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1. Landing Gear ..... DOWN/THREE GREEN
2. Brake Selector ..... #1 ON
3. Antiskid ..... TESTED
4. Hydraulics (Pressure/Quantity) ..... CHECKED
5. Test/Stall (Aircraft without SB166) ..... STALL 1/STALL 2 TESTED
- Test/Stall (Aircraft with SB166) ..... AUTO SLAT LIGHT OUT
6. Flaps .....SET
7. No Smoking Sign.....ON
8. Taxi Light ..... ON
9. Windshield Wipers ..... AS REQUIRED
10. Airbrakes.....IN/LIGHT OUT
11. Yaw Damper ..... AS REQUIRED
12. Autopilot .....OFF (LIGHT OUT)
13. Landing Lights ..... AS REQUIRED

**6**

## HYDRAULICS

### UNWANTED OPERATION OF STANDBY PUMP

**ST PUMP**

1. Hydraulic Standby Pump Switch..... OFF

### LOSS OF NO. 1 HYDRAULIC SYSTEM

**PMP 1**

**PMP 2**

AND POSSIBLY

**Q UNIT**

lights

- Reduce airspeed down to 260 KIAS or  $M = 0.76$ .
- Descend to an altitude not to exceed 45,000 ft. (for airplanes incorporating SB F50-163, maximum altitude extended to 49,000 ft).
- ST BY PUMP Switch ..... ON

#### EFFECTS

LOSS OF	REMARKS
Servo-actuator barrel No. 1	Barrel No. 2 available.
Pitch and roll ARTHUR units.	If <b>Q UNIT</b> light on, disengage autopilot.
Normal Slat control system	Use EMERG SLATS switch: – Landing in S + FLAPS 48° configuration: • Speed, VREF + 5 kt. • Increase the S+48 landing distance by 180ft/55m and the landing field length by 300 ft / 91 m.  – Landing in S + FLAPS 20° configuration: • Speed, VREF + 10 kt. • Increase the S+20 landing distance by 180ft/55m and the landing field length by 300 ft / 91 m.
Normal and EMERG–GEAR: PULL controls.	Free fall extension of the gear. TAB 11
Braking supplied by #1.	Select #2 for braking (landing without antiskid) Additional increase of the determined landing distance or landing field length of: – 25 percent for S + FLAPS 48° landing. – 30 percent for S + FLAPS 20° landing.
Thrust Reverser	Dependent on Thrust Reverser availability.

### DEPRESSURIZATION OF HYDRAULIC RESERVOIRS

**TKP1**

AND/  
OR

**TKP2**

1. Hydraulic Fluid Level and Pressure ..... CHECKED
- If pressure starts fluctuating:
2. Conditions Permitting, Descend..... BELOW 20,000 FEET

**LOSS OF NO. 2 HYDRAULIC SYSTEM**

**PMP 3**

- Reduce airspeed down to 260 KIAS or MI = 0.76 max.

If reservoir 2 level is within the red range:

1. ST BY PUMP switch ..... OFF

As long as the altitude is above 45,000 ft: (for airplanes incorporating SB F50-163, maximum altitude extended to 49,000 ft).

2. ST BY PUMP Switch ..... OFF

**EFFECTS**

LOSS OF	REMARKS	
Servo-actuator barrel No. 2.	Barrel No. 1 available.	
Airbrake system.	The landing distance is increased by 600ft/183m (which makes 1,000ft/305m more on the landing field length)	
Emergency slat control system.	Use normal slat control system.	
No. 2 braking system.	The Park Brake system can still operate with accumulator pressure.	
Nose wheel steering system	Use #1 braking system and differential brake pressure.	
Flap system.	0° Landing with slats only, at VREF + 20 kt: - The S + FLAPS 20° landing distance is increased by 2,000ft/610m (which makes 3,300 ft/1,006m more on the landing field length). This figure includes the consequence of airbrake system loss.	
		20° Land using VREF + 5kt.
		48° Land using VREF.

7

**LOSS OF NO. 3 ENGINE DRIVEN PUMP**

**PMP 3**

**NOTE**

Avoid using the stand-by pump before initiating descent.

If the stand-by pump is used:

1. ST BY PUMP Switch ..... ON
2. No. 2 System Pressure (1,500 – 2,150 psi)..... CHECKED
3. No. 2 Fluid Quantity Indicator..... MONITORED

If the stand-by pump is not used:

- Reduce airspeed down to 260 KIAS or MI = 0.76 max.

## FLIGHT CONTROLS

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### FLAP SYSTEM JAMMING OR ASYMMETRY

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FLAP ASYM

[MAY BE ON]

#### WARNING

DO NOT CHANGE FLAP LEVER POSITION.

With flaps extended between 0° and 20°:

1. Approach Speed..... VREF + 20 KNOTS
2. Landing Distance/Landing Field Length..... ADD 1400/2300 FEET

With flaps extended between 20° and 48°:

1. Approach Speed..... VREF + 5 KNOTS
2. Landing Distance/Landing Field Length..... S+20 FLAPS data

#### CAUTION

If the flap handle has not been selected to 48°, the “landing gear not extended” warning horn may not sound if the landing gear is not properly extended.

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## AILERON SYSTEM JAMMING

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**CAUTION**

Use EMERG AILERON with caution due to possible reverse roll (depending on the location of the jamming).

1. Rudder pedals .....STOP THE ROLL
2. EMERG AILERON trim..... BANK / TRIM THE AIRPLANE
3. Maximum bank angle ..... 15°

For Landing:

1. Recommended maximum crosswind ..... 14 KTS
2. Use rudder pedals to roll the airplane.
3. Slats-flaps.....S + FLAPS 48°
4. Approach speed (zero wind).....  $V_{REF} + 10$  KTS
5. Fly a shallow final approach.
6. Increase the landing distance by 14% for every 10 kts extra speed.

**FSI NOTE**

This procedure is found in the Operating Manual, Book 1 of the Abnormal Section (Not in AFM).

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## RUDDER JAMMING

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1. Use differential thrust to control the airplane.
2. Recommended maximum crosswind for landing ..... 10 KTS
3. In case of go-around with one engine inoperative, bank the airplane up to 5° to maintain heading.

**FSI NOTE**

This procedure is found in the Operating Manual, Book 1 of the Abnormal Section (Not in AFM).

**AIRBRAKES DO NOT RETRACT**

**AIRBRAKE**

**With the Airbrakes Extended to Position #1:**

Approach Speed:

Slats + Flaps 20° ..... VREF + 15 KNOTS

Slats + Flaps 48° ..... VREF + 10 KNOTS

Landing Distance/Landing Field Length..... ADD 480/800 FEET

**With Airbrakes Extended to Position #2:**

Approach Speed:

Slats + Flaps 20° ..... VREF + 20 KNOTS

Slats + Flaps 48° ..... VREF + 15 KNOTS

Landing Distance/Landing Field Length..... ADD 480/800 FEET

**NOTE**

Place the airbrake control handle in the position which matches the airbrake configuration.

**SLAT MONITORING SYSTEM MALFUNCTION**

**AUTO-SLATS**

AT TAKEOFF

No arming of the Automatic Slat Extension System

(Airplanes equipped with automatic monitoring of the flight/ground proximity switches, FSo-166 Service Bulletin)

- 1. Airspeed Range ..... 1.3 VS to 270 KIAS

**AUTO-SLATS**

IN FLIGHT

- 1. Limit Airspeed to Below..... 270 KIAS

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**Q UNIT**

**Q UNIT**

1. Limit Airspeed.....260 KTS/0.76 M MAXIMUM
2. Fasten Seat Belts Sign ..... ON
3. Autopilot .....DISENGAGE

**CAUTION**

The pitch and roll control forces may be higher or lower than normal depending on whether the ARTHUR units fails in “high” or “low” speed position.

**With Light Control Forces:**

Avoid large displacements and rapid movements of the control surfaces.

**CAUTION**

Maintain speed below 260 KIAS or MI 0.76.

**With Heavy Control Forces:**

Use normal or emergency trim system and execute a shallow approach at VREF.

**NOTE**

- The **Q UNIT** light can illuminate for an ARTHUR Q failure, or #1 hydraulic system inoperative, or in the event of an engine No. 1 PT2 TT2 probe malfunction in icing conditions.
- A No. 1 ADC failure may illuminate the **Q UNIT** light without incurring any Q-Unit failure.



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## INOPERATIVE ELEVATOR LANDING

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Approach Speed:

Slats + Flaps 20° ..... VREF + 15 KNOTS

Slats + Flaps 48° ..... VREF + 10 KNOTS

Landing Distance/Landing Field Length..... ADD 1800/3000 FEET

Use very short actuation signals to set stabilizer to desired position.

Make a shallow final approach.

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## INOPERATIVE STABILIZER LANDING

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1. Autopilot ..... DISENGAGE

**If the stabilizer is jammed in the range +1° to -5°:**

Make a shallow approach.

2. Slat-Flap Handle ..... S + FLAPS 20°

3. Airspeed..... VREF + 20 KNOTS

4. Landing Distance/Landing Field Length..... ADD 480/800 FEET

<b>CAUTION</b>
----------------

Do not reduce engine thrust before touchdown.

The “Landing Gear Not Extended” warning horn may not sound.

**If the stabilizer is jammed in the range -5° to -11°:**

Make a normal approach.

2. Slat-Flap Handle ..... S + FLAPS 48°

3. Airspeed..... VREF

# LANDING GEAR STEERING BRAKES

## LANDING GEAR RETRACTION MALFUNCTION

1. Airspeed..... 190 KNOTS MAX

In icing conditions or if the takeoff was made through snow or slush on the runway, if the red landing gear lights fail to go out upon retraction of the landing gear, ice may be preventing the main landing gear from locking in the UP position. Cycle the GEAR DOWN and up to get rid of the ice.

If Non-icing conditions or if takeoff was made without snow or slush on the runway: Extend and keep the landing gear down.

## LANDING GEAR EXTENSION MALFUNCTION

### WARNING

- ONE OR MORE GREEN GEAR LIGHT OUT.
- LANDING GEAR HANDLE LIGHT BLINKING.
- LANDING GEAR NOT EXTENDED WARNING HORN MAY SOUND.

1. Landing Gear Handle..... DOWN - CHECKED

2. Emerg Gear Handle ..... PULLED

If three green gear lights come on and the landing gear handle light goes out, the landing gear is down and locked. Do not actuate landing gear controls.

If at least one green light does not come on and the landing gear handle light remains blinking, apply the FREE FALL EXTENSION procedure.

### Free Fall Procedure

### NOTE

Free fall extension of all 3 gears takes approximately 2 minutes.

3. Airspeed..... NOT LESS THAN 160 KNOTS

If necessary, extend the main gear first; one after the other:

4. Manual Main Gear Release Handles ..... PULL

Slip the aircraft left and right while accelerating to 190 KIAS until illumination of each green light is achieved. Gently come back to neutral rudder.

If necessary, then extend the nose gear:

5. Manual Nose Gear Release Handle..... PULL

Accelerate until illumination of the green light is achieved.

**CAUTION**

Do not actuate landing gear controls once all three gears are locked down. Keep the landing gear down.

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**NOSEWHEEL STEERING FAILURE**

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1. Release or return the steering control to the neutral position.
2. Use differential braking.

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**NOSEWHEEL SHIMMY**

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1. Hold the nose wheel steering control depressed.

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**NO. 1 BRAKE SYSTEM OR ANTISKID INOPERATIVE**

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If the Antiskid Test was abnormal:

1. Brake Selector Switch ..... #2 OFF  
Perform several successive brake applications.  
Increase the landing distance/landing field length:
  - For landing S + 48° Flaps ..... ADD 25%
  - For landing S + 20° Flaps ..... ADD 30%

---

**NO. 1 AND NO. 2 BRAKE SYSTEMS INOPERATIVE**

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The thrust reverser and the parking brake are sufficient to permit the aircraft to be brought to rest.

Apply brake pressure cautiously, pulling the parking brake handle to intermediate detent only, and avoid alternate application/release actions

**NOTE**

With **≠ 2P BK** light blinking, residual pressure allows for one brake application only.

## FUEL

### LOW BOOSTER PUMP PRESSURE



1. Associated Crossfeed..... OPEN
2. Associated Booster Pump..... OFF

If the light goes out:

Continue flight maintaining balanced fuel levels in wing tanks.

If the light remains on:

3. Crossfeed ..... CLOSED
4. Associated Total Fuel Quantity Indicator ..... MONITOR

If a fuel loss is evident:

5. Power Lever..... CUTOFF
6. Associated Engine Fire Handle..... PULL
7. Booster Pump..... OFF
8. Generator Switch..... OFF

### NOTE

In icing conditions, if the #1 or #2 engine has been shutdown, continue to operate respective engine anti-ice system.

9. Engine Anti-ice Switch..... OFF
10. HP Bleed Switch..... OFF
11. PRV Switch (With #2 Engine Inoperative) ..... OFF

If engine #3 is shutdown:

12. Bus Tie Switch..... TIED
13. Hydraulic Standby Pump Switch..... ON (AS REQUIRED)
14. Continue flight maintaining balanced fuel levels in wing tanks.

Consult One Engine Inoperative Approach/Landing/Go-Around Procedures, Yellow Tab 6, page A-12 or Approach and Landing with Two Engines Inoperative, Red Tab 10, pages E-24 and E-25.

### FUEL TRANSFER SYSTEM INOPERATIVE

**XFR  
FUEL**

1. Associated Transfer Pump..... OFF
2. Fuel Levels..... MONITOR

If feeder tank level is maintaining regulation:

3. Continue flight checking fuel quantity and fuel burn.

If feeder tank level is low, or if fuel loss is evident:

4. Fuel Transfer Shutoff Valve On Affected Side..... CLOSE
5. Transfer Intercom On Affected Side ..... OPEN

---

**FUELING LIGHT ON INFLIGHT**

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**FUELING**

To prevent overboard discharge of fuel through vent outlets:

1. Avoid rapid changes in attitude.
2. Restrict pitch and bank to low angles.
3. Abort flight if conditions permit.

---

**WING TANK LEVEL ABNORMALLY LOW**

---

1. Associated "Low" Tank Transfer Intercom..... OPEN
2. Associated "Low" Tank Transfer Pump ..... OFF
3. Total Fuel Quantity Indicator..... MONITOR

**If the wing tank level keeps decreasing:**

4. Both Transfer Intercoms ..... OPEN
5. Transfer Pump (Low Tank) ..... ON
6. Transfer Pumps (Associated with Normal Level Tanks).... BOTH OFF

When the fuel in the low tank is exhausted:

7. Transfer Pumps (Associated with Normal Level Tanks)..... BOTH ON
8. Transfer Pump (Associated with Empty Tank) ..... OFF
9. Transfer Intercom Associated With Normal Level Tank ..... CLOSE

**If wing tank level stops decreasing:**

10. Fuel Quantity And Fuel Burn..... MONITOR

If a fuel leak is evident:

11. Engine Shutdown (Yellow Tab 2)..... COMPLETE

Maintain balanced fuel in wing tanks.

**CAUTION**

Fuel crossfeeds must not be used for fuel level balancing unless it is evident the fuel asymmetry is not due to a fuel leak.

**FUEL FEEDER TANK LEVEL LOW**

**LO FUEL**

Indication: Rear quantity indicator(s) below green arc and light possibly on.

• **Verify the level drop is not due to a fuel leakage.**

1. Total Quantity Indications (All 3) ..... CROSS-CHECKED
2. Fuel Quantity Indicators.....REAR

• **If the total air temperature is very low, the failure may be due to fuel freezing.**

In case of extended cruise in cold atmosphere with total air temperature below fuel freezing point, wing-to-feeder tank transfer may be lost. Therefore, monitor the total air temperature, the fuel temperature indicator (SB 136), and carefully monitor the transfer. If necessary, increase mach number or decrease altitude to raise the total air temperature.

• **AIRPLANES EQUIPPED WITH AN EMERGENCY WING-TO-SIDE FEEDER TANK TRANSFER SYSTEM “EMERG FUEL TRANSFER” (AMD-BA F50-175 SB APPLIED)**

If Side Feeder Level(s) Low, consult procedure (A) or

If Center Feeder Level Low with at least one of the side regulations Normal, consult procedure (B) or

If center feeder level low with Abnormal side feeder regulation, consult procedure (C) page A-27.

**(A) Side Feeder Level(s) Low**

1. Emergency Fuel Transfer Switch ..... ON AFFECTED FEEDER SIDE
  - Hold the switch in position until feeder level has risen to 700 lbs (320 kgs). Then check **LO FUEL** light goes out.
  - Fold down the switch guard.
2. Keep checking the feeder level. It should go down to 600 lbs (272 kgs) and stabilize. If not, resume the procedure at step A.

**(B) Center Feeder Level Low, with at least one of the side regulations normal**

1. X Feed (On the side where feeder regulation is normal)..... OPEN
2. Center Feeder Booster ..... OFF
3. XFR Intercom  
(On the side where X Feed is open)..... AS REQUIRED

Continue flight maintaining balanced fuel levels in wing tanks.

**(C) Center Feeder Level Low, with abnormal side feeder regulations**

**LO FUEL**

1. One of the X Feeds .....  
OPEN

**LO FUEL**

2. Center Feeder Booster .....  
OFF

3. Emergency Fuel Transfer Switch ..... ON THE SIDE OF  
THE OPEN X FEED

- Hold the switch in position until affected side feeder level has risen to 800 lbs (363 kgs).
  - Fold down the guard.
4. Closely monitor that side feeder. Level should drop to 600 lbs (272 kgs) then stabilize. If not, resume the procedure at step (C).
5. XFR Intercom  
(On the side where X Feed is open)..... AS REQUIRED

**• AIRPLANES NOT EQUIPPED WITH AN EMERGENCY WING-TO-SIDE**

**FEEDER TANK TRANSFER SYSTEM “EMERG FUEL TRANSFER”  
(AMD-BA F50-175 SB NOT APPLIED)**

If Side Feeder Tank Level Low, consult procedure (D).

If two Side Feeder Tanks Level(s) Low, consult procedure (E).

If Center Feeder Level Low, with at least one of the side feeder regulations normal, consult procedure (F).

**(D) Side Feeder Tank Level Low**

1. Associated X Feed ..... OPEN
2. Booster Associated with “LOW TANK” ..... OFF
3. XFR Intercom ..... AS REQUIRED

Continue flight maintaining balanced fuel levels in wing tanks.

**(E) Two Side Feeder Tanks Level(s) Low**

1. X Feed (All 2) ..... OPEN
2. Side Feeders Booster ..... OFF
3. XFR Intercom (All 2) ..... OPEN

Continue flight checking tank levels.

**(F) Center Feeder Level Low, with at least one of the side feeder regulations normal**

1. X Feed (On the Side Where Feeder Regulation is Normal) ..... OPEN
2. Center Feeder Booster ..... OFF
3. XFR Intercom (On the side where X feed is open) ..... AS REQUIRED
4. Apply the same procedure for the other side feeder.

Continue flight maintaining balanced fuel levels in wing tanks.

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**FEEDER TANK LEVEL HIGH**

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1. Transfer Pumps (All 3)..... OFF
2. Both Crossfeed Switches ..... OPEN
3. “Normal” Level Boost Pump(s)..... OFF

If fuel level keeps increasing in affected feeder tank:

4. Associated Transfer Shutoff Valve ..... AS REQUIRED

If fuel level is restored to normal in affected feeder tank:

5. Booster Pumps (All) ..... ON
6. X Feed (Both) ..... CLOSED
7. XFR Pump (Associated With the Two  
Normal Level Feeder Tanks) ..... ON
8. Fuel Management..... AS REQUIRED



# ELECTRICAL

## TWO GENERATORS INOPERATIVE

**GEN** AND **GEN**, AND POSSIBLY TRIPPED SWITCHES

1. Associated Generator(s); Volts/Amps ..... CHECKED
2. Batteries; Volts/Amps ..... CHECKED
3. Associated Generator Switches ..... ATTEMPT RESETS  
(MAX TWO EACH)

If resetting cannot be achieved:

4. Associated Generator Switch(es) ..... OFF
5. Bus Tie Switch ..... TIED

### CAUTION

Switch services off as necessary and isolate **(C)** and **(D)** buses to limit load of the operative generator.

**BATTERY FAILURE** **BAT 1** AND/OR **BAT 2** AND

Associated BAT Switch is tripped.

1. Associated Battery Switch ..... ATTEMPT RESET (TWO MAX)

**BATTERY OVERHEAT** **HOT BAT** AND  AND 

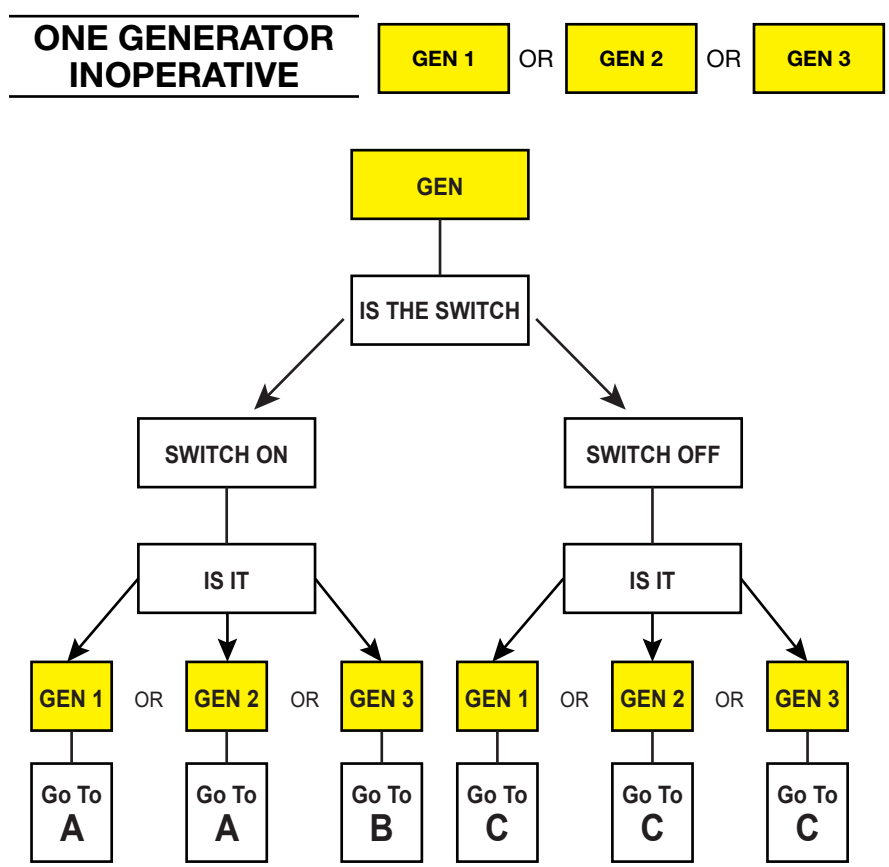
1. Associated Battery Switch ..... OFF

If battery temperature keeps increasing:

2. Land as soon as possible.

### NOTE

If necessary, the faulty battery may be switched back on for landing, providing the **HOT BAT** light has gone out.



**A GEN 1 or GEN 2, switch has not tripped:**

- If voltage is greater than 28.5:
2. On Line  
Generator Switch.....OFF
  3. Volts/Amps..... CHECKED

- If voltage is normal (28.5):
2. Assoc. Generator  
Switch.....ATTEMPT  
RESET (2 MAX)

If the voltage is 28.5:  
Leave the faulty generator switch off.

If the reset was unsuccessful:  
3. Assoc. Generator  
Switch.....OFF

Limit the load on the operative generators.

Limit the load on the operative generators.

**B GEN 3, switch has not tripped:**

1. Volts and Amps..... CHECKED
2. Generator Switch.....ATTEMPT RESET (2 MAX)

- If reset has been unsuccessful:
3. Generator Switch..... OFF
  4. Bus Tie Switch..... TIED

Limit the load on the operative generators.

**Ⓒ GEN 1, GEN 2, or GEN 3 switch has tripped:**

**CAUTION**

Only one reset attempt should be made, and only if the associated battery circuit indicates normal loading, and the idle power requirement does not affect the safety of flight.

- 1. Volts/Amps..... CHECKED
- 2. Associated Battery Switch .....CHECKED/ON
- 3. Bus Tie Switch.....FLIGHT NORMAL
- 4. Associated Power Lever..... IDLE
- 5. Idle Power.....ACHIEVED
- 6. Associated Generator Switch..... ON

If the voltmeter goes to maximum, turn generator switch off.

**If unsuccessful:**

- 7. Faulty Generator Switch..... OFF
- 8. Bus Tied Switch..... TIED IN THE CASE OF GEN 3 FAILURE
- 9. Limit the load on the operating generators.
- 10. Associated Power Lever..... AS REQUIRED

Generator Limitations

- 1 Minute ..... 350 AMPS MAX
- Below FL 390..... 300 AMPS MAX
- Above FL 390 ..... 250 AMPS MAX

**If successful:**

- 7. Associated Power Lever..... AS REQUIRED

**INVERTER FAILURE**

AC 1

OR

AC 2

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**THREE INVERTER SYSTEM**

**Aircraft NOT incorporating Simplified Power AC Generation (Modification M1703), and with SB 214**

- 1. Associated Inverter Switch..... OFF
- 2. Standby Inverter ..... SELECTED TO FAIL SIDE

Verify associated inverter fail warning light out.

**TWO INVERTER SYSTEM**

**Aircraft WITH Simplified Power AC Generation (Modification M1703)**

Inverter No. 1 Failure:

- 1. Inverter #1 Switch..... OFF

Systems inoperative:

- Copilot RMI
- GPWS (If Installed)
- DFDR (If Installed)
- Left electrical rack blower

Inverter No. 2 Failure:

- 1. Inverter #2 Switch..... OFF
- 2. Weather Radar Stabilization Switch ..... OFF

Systems Inoperative:

- Pilot RMI
- Weather radar antenna stabilization
- Right electric rack blower
- Glareshield lighting
- CVR (if installed)

**FAILURE OF BOTH  
INVERTERS**

**AC 1**

AND

**AC 2**

**FOR USE WITH THREE INVERTER SYSTEM ONLY**

A/C NOT INCORPORATED WITH MOD 1703

1. AC Bus No.1 and No. 2 Voltage ..... CHECKED
2. Inverter No. 1 and No. 2 Switches..... BOTH OFF
3. Standby Inverter Switch ..... CHECKED (CENTER POSITION)
4. Inverter Switch No. 1 ..... ON
5. Inverter No. 1 Fail Light ..... CHECKED
6. AC Bus No. 1 Voltage ..... CHECKED

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If an inverter is recovered;

Comply with Inverter Failure procedure; page A-34.

If the malfunction persists:

7. Inverter No. 1 Switch ..... OFF
8. Inverter No. 2 Switch ..... ON
9. Inverter No. 2 Fail Light ..... CHECKED
10. Inverter No. 2 Voltage ..... CHECKED

If no inverter is recovered:

11. Inverter No. 1 and No. 2 Switches..... BOTH OFF
12. Standby Inverter Switch ..... AC NO. 1
13. AC No. 1 Bus Voltage ..... CHECKED

**NOTE**

The following is inoperative:

- Autopilot and yaw damper
- VOR 2, LOC 2, MKR 2, ADF 2 information
- LRN, FMS information
- Weather radar
- Hydraulic system No. 2 pressure indication
- Right radio rack blower

Copilot's side:

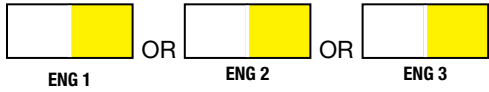
- ADI (EADI)
- HSI (or EHSI)
- Flight Director

Pilot's side:

- HDG No. 2 information on RMI

## ANTI-ICE

### ENGINE ANTI-ICE SYSTEM INOPERATIVE



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WITH ASSOCIATED ENG ANTI-ICE SWITCH ON

TAT	-30 to -20°C	-20 to -10°C	-10 to -0°C	0 to +10°C
Minimum N1 speed in <b>cruise</b> condition	84%	81%	78%	73%
Minimum N1 speed in <b>approach</b> condition	78%	78%	78%	73%
<b>One engine</b> inoperative condition	91%	88%	84%	80%

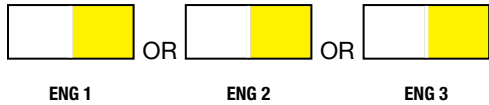
1. N1 Speed Above Minimum Required ..... CHECKED

If amber light remains on:

Avoid icing conditions, or leave icing conditions as soon as possible.

Consult Aircraft Operation In Icing Conditions, Additional Information Tab, Pages AI-3 and AI-4 in normal procedures checklist.

### ENGINE ANTI-ICE SYSTEM UNWANTED OPERATION



WITH ASSOCIATED ENG ANTI-ICE SWITCH OFF

**With TAT greater than +10° C:**

If failure affects No. 1 or No. 3 engine:

1. Affected Engine .....REDUCE RPM AS SOON AS POSSIBLE

If failure affects No. 2 Engine:

1. Bleed Air Isolation Switch..... ISOLATION
2. Bleed Air HP2 ..... OFF
3. No. 2 Engine RPM .....REDUCE RPM AS SOON AS POSSIBLE

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**AIRFRAME ANTI-ICE  
SYSTEM INOPERATIVE**

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AIRFRAME

WITH ASSOCIATED  
AIRFRAME ANTI-ICE  
SWITCH ON NORMAL

1. N1 Speed Above minimum required..... CHECKED

If amber light remains on:

2. Airframe Switch .....STANDBY

If amber light remains on:

Avoid icing conditions, or leave icing conditions as soon as possible.

Consult *Normal Procedures Checklist*, Aircraft Operation In Icing Conditions, Additional Information Tab, Pages AI-3 and AI-4 in normal procedures checklist.

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**AIRFRAME ANTI-ICE SYSTEM  
UNWANTED OPERATION**

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AIRFRAME

WITH ASSOCIATED  
AIRFRAME ANTI-ICE  
SWITCH OFF

**With TAT greater than +10° C:**

1. Bleed Air Isolation..... ISOLATION
2. Bleed Air HP 1 and HP 3 ..... OFF
3. Engine No. 1 and  
Engine No. 3 RPM .....REDUCE AS SOON AS POSSIBLE

---

**ICE PROTECTION – LATE ACTIVATION**

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1. Start Selector Switches (All Three) .....AIRSTART
2. Engine No. 1 and Engine No. 3 Anti-ice Switches .....ON

Wait 30 seconds, then:

3. Engine No. 2 Anti-ice Switch .....ON

Wait 30 seconds, then:

4. Airframe Anti-ice Switch .....NORMAL

## PRESSURIZATION/AIR CONDITIONING

### HIGH CABIN ALTITUDE OR SLOW DEPRESSURIZATION

CABIN

AURAL WARNING

Cabin altitude higher than 10,000 feet.

1. Crew Oxygen Masks.....DONNED/NORMAL
2. Microphone Selector ..... MASK/TESTED
3. Crew Bleed Air Switch ..... ON or AUTO
4. Cabin Bleed Air Switch..... ON or AUTO
5. PRV Switch..... AUTO
6. UP-DOWN Controller.....BETWEEN 1 AND 2 O’CLOCK
7. Cabin Pressure Selector Switch .....MANUAL (AS REQUIRED)
8. UP-DOWN Controller..... DOWN (AS REQUIRED)

If necessary:

9. No Smoking Sign..... ON
10. Passenger Oxygen Masks.....DONNED/CHECKED
11. Nose ..... CLOSED
12. Bag Air ..... OFF

If necessary:

Execute an Emergency Descent, Emergency Section Tab 5, page E-10, To 14,000 Feet or safe altitude.

### HIGH CABIN PRESSURE DIFFERENTIAL

1. Higher Cabin Altitude..... SELECTED

If cabin pressure does not decrease:

2. UP-DOWN Controller.....BETWEEN 1 AND 2 O’CLOCK
3. Cabin Pressure Selector Switch ..... MANUAL
4. UP-DOWN Controller.....UP (AS REQUIRED)

If cabin pressure keeps increasing:

5. Bleed Air (Crew and Cabin) ..... OFF

Continue flight using the crew and cabin switches to maintain a cabin altitude not higher than 8,000 feet, or a cabin differential pressure not greater than approximately 8.5 psi.



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**IMPROPER CABIN VERTICAL SPEED**

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1. UP-DOWN Controller Aligned with Green Mark..... CHECKED
2. Crew Bleed Air Switch..... ON or AUTO
3. Cabin Bleed Air Switch..... ON or AUTO
4. PRV Switch..... AUTO
5. Cabin Rate Knob ..... ADJUST CABIN VERTICAL SPEED

If vertical speed cannot be adjusted:

6. UP-DOWN Controller..... BETWEEN 1 AND 2 O’CLOCK
7. Cabin Pressure Selector Switch..... MANUAL
8. UP-DOWN Controller..... ADJUST CABIN VERTICAL SPEED

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**NO AUTOMATIC PRESENTATION  
OF PASSENGER OXYGEN MASKS**

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1. Oxygen Controller..... OVERRIDE
2. Passenger Masks .....DONNED/CHECKED

**CAUTION**

DO NOT use the reset pushbutton in flight when oxygen system is operating.

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**CABIN DOOR UNLOCKED**

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**CABIN**

NO AURAL  
WARNING

**On the ground only:**

Visually check that all 10 access latches are in proper position and that the interior control handle is properly locked.

If these are NOT properly set; do not take off.

**In Flight:**

**CAUTION**

Crew and passengers must remain seated, seatbelts fastened and adjusted.

1. FASTEN BELTS light pushbutton..... ON
2. Airspeed.....REDUCE
3. Descend..... 10,000’ or safe altitude
4. Maneuver ..... use Caution
5. Land as soon as possible

**NOTE**

In case of unpressurized flight conditions, do not pressurize the airplane.

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## CABIN AIR CONDITIONING OVERHEAT

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COND’G OVHT

1. Temperature Controllers ..... MANUAL-COLD
- If COND’G OVHT stays on:
2. BLEED AIR: CABIN Switch ..... OFF
- If COND’G OVHT stays on:
3. BLEED AIR: CABIN Switch ..... AUTO
  4. BLEED AIR: CREW Switch ..... OFF

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## BLEED AIR OVERHEAT

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BLEED OVHT

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1. Bleed Air PRV ..... OFF
  - a. If BLEED OVHT light starts blinking and then goes out:  
Leave PRV off and continue flight.
  - b. If BLEED OVHT light starts blinking and continues to blink:  
Engine No. 2 ..... IDLE
  - c. If BLEED OVHT light remains on and steady:  
BLEED AIR PRV ..... AUTO
2. Successively apply the same procedure for HP1, HP2, and HP3.  
Should the light blink and continue to blink, the affected thrust should be reduced.

## WINDSHIELD

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### CRACKED WINDSHIELD PANE

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1. Airspeed ..... 230 KNOTS MAXIMUM
2. Cabin Differential Pressure ..... DO NOT EXCEED 7.5 PSI
3. Associated Windshield Heat Switch ..... NORMAL

**WINDSHIELD HEAT SYSTEM  
MALFUNCTION**

**XFR**

1. Pilot and Copilot Windshield Heat Switches .....SAME POSITION  
If possible, before landing:
2. Pilot and Copilot Windshield Heat Switches ..... OFF

**AUTOPILOT/TRIM**

**AUTOPILOT FAILURE**

**AP**

AND WITH AIRCRAFT  
EQUIPPED WITH APS  
85 AUTOPILOT +  
AUDIBLE WARNING

1. Autopilot .....DISENGAGE

**AUTOPILOT PITCH TRIM INOPERATIVE**

**AP TRIM**

1. Autopilot .....DISENGAGE

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**OUT OF TRIM CONDITION**

**MISTRIM**

Hold the control wheel firmly.

1. Autopilot .....DISENGAGE

Retrim the aircraft, and attempt to re-engage the autopilot.

**MACH TRIM INOPERATIVE**

**MACH TR**

1. Mach Trim Switch .....ON

If mach trim cannot be re-engaged:

Do not exceed 0.78 M without the autopilot engaged.

# FLIGHT INSTRUMENTS

## PILOT AIR DATA COMPUTER INOPERATIVE

Indication:

- **AIR DATA** light on, and possibly:
- **Q UNIT**, **AUTO SLATS**, and **MACH TR** lights on
- VMO/MMO warning horn activated
- Pilot altimeter and ALT ALERT flags in view

**Airplane equipped with one air data computer:**

1. AP and YD ..... DISENGAGED  
Do not use pilot flight director system vertical modes.  
Do not exceed MI = 0.78.

Effects: See Table B, page A-43.

**Airplane equipped with two air data computers:**

1. Do not use pilot flight director system vertical modes.
2. AIR DATA TRANS Push Switch..... ON, AMBER

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LOSS OF	INDICATION	REMARKS
Slat Extension prevention at high speed	If <b>AUTO SLATS</b> light is on.	Reduce airspeed to no more than 270 KIAS as soon as possible.
<ul style="list-style-type: none"> <li>• Pilot altimeter indication.</li> <li>• ATC 1 transponder altitude report</li> </ul>	Pilot altimeter flag in view.	<ul style="list-style-type: none"> <li>• Use standby or copilot altimeter.</li> <li>• Switch over to ATC 2 transponder.</li> </ul>
Pilot VMO/MMO WARNING:		<ul style="list-style-type: none"> <li>• The second VMO/MMO warning system remains operative</li> </ul>
<ul style="list-style-type: none"> <li>• -5° ANU stabilizer travel limit switch.</li> </ul>		<ul style="list-style-type: none"> <li>• Use emergency trim if necessary.</li> </ul>
<ul style="list-style-type: none"> <li>• Wind and drift on INS.</li> <li>• True airspeed on LRN.</li> </ul>	<b>MSG</b> or <b>WRN</b> blinks on LRN.	<ul style="list-style-type: none"> <li>• Enter speed in LRN manually for DR mode.</li> </ul>
<ul style="list-style-type: none"> <li>• Mach data to mach trim system.</li> </ul>	Possibly, <b>MACH TR</b> light on if MI is higher than 0.78	<ul style="list-style-type: none"> <li>• Refer to: Mach Trim Inoperative. (Page A-41)</li> </ul>

If **AIR DATA** light goes out:

Effects:

**TABLE A**

If **AIR DATA** light stays on:

3. AIR DATA TRANS Push Switch.....OUT
4. Autopilot and Yaw Damper..... DISENGAGED
5. Do not exceed MI = 0.78

Effects:

**TABLE B**

<b>LOSS OF</b>	<b>INDICATION</b>	<b>REMARKS</b>
ARTHUR unit monitoring.	Possible <b>Q UNIT</b> light on.	<ul style="list-style-type: none"> <li>Refer to: Arthur Unit Inoperative.</li> </ul>
Slat extension prevention at high speed.	If <b>AUTO SLATS</b> light is on.	Reduce airspeed to no more 270 KIAS as soon as possible.
<b>ALTITUDE INDICATION:</b> A/C with one ADC <ul style="list-style-type: none"> <li>Pilot altimeter indication.</li> <li>ATC 1 transponder altitude report</li> </ul>	Pilot altimeter flag in review.	<ul style="list-style-type: none"> <li>Use standby or copilot altimeter.</li> <li>Switch over to ATC 2 transponder, if copilot has encoding altimeter.</li> </ul>
A/C with two ADC <ul style="list-style-type: none"> <li>Pilot and copilot altimeters.</li> <li>ATC 1 and 2 transponder altitude report.</li> </ul>	Pilot and copilot altimeters flag in view.	<ul style="list-style-type: none"> <li>Use standby altimeter.</li> </ul>
<ul style="list-style-type: none"> <li>Altitude Monitoring System</li> </ul>	ALT ALERT flag in view.	
<b>VMO/MMO WARNING:</b> A/C with one ADC <ul style="list-style-type: none"> <li>Pilot system.</li> </ul>		<ul style="list-style-type: none"> <li>The second warning system remains operative (if SB F50-11 is incorporated)</li> </ul>
A/C with two ADC <ul style="list-style-type: none"> <li>Pilot and copilot systems.</li> </ul>		
<ul style="list-style-type: none"> <li>5° ANU stabilizer travel limit switch</li> </ul>		<ul style="list-style-type: none"> <li>Use emergency trim if necessary</li> </ul>
<ul style="list-style-type: none"> <li>Outside air temperature indications (SAT/TAT)</li> </ul>		<ul style="list-style-type: none"> <li>Avoid areas of known icing conditions</li> <li>Increase fuel consumption in ISA conditions by 5%.</li> <li>Set engine parameters for cruise at constant Mach No in ISA conditions.</li> </ul>
<ul style="list-style-type: none"> <li>True airspeed indication.</li> <li>Wind and drift on INS.</li> <li>True airspeed on LRN.</li> </ul>	<b>MSG</b> or <b>WRN</b> blinks on LRN.	<ul style="list-style-type: none"> <li>Enter speed in LRN manually for DR mode.</li> </ul>
<ul style="list-style-type: none"> <li>Mach data to mach trim system.</li> </ul>	Possibly, <b>MACH TR</b> light on if MI is higher than 0.78	<ul style="list-style-type: none"> <li>Refer to: Mach Trim Inoperative. (Page A-41)</li> </ul>

**PILOT AIR DATA COMPUTER INOPERATIVE (Cont)**

**Aircraft equipped with Mod 1610 incorporated:**

Indication:

- **ADC 1** light on, and possibly
- **Q UNIT**, **AUTO SLATS**, and **MACH TR.** lights on
- VMO/MMO warning horn activated
- Pilot altimeter and ALT ALERT flags in view
- Do not use pilot flight director system vertical modes.
- Press the pilot **ADC 1** **ADC 2** pushbutton light:
  1. **ADC 2** of Pilot **ADC 1** **ADC 2** Light  
Illuminates Amber ..... CHECKED
  2. **XADC** Annunciator on Pilot EADI ..... CHECKED

**EFFECTS**

LOSS OF	INDICATION	REMARKS
Slat Extension prevention at high speed	If <b>AUTO SLATS</b> light is on.	Reduce airspeed to no more than 270 KIAS as soon as possible.
Pilot VMO/MMO WARNING:		The second VMO/MMO warning remains operative (copilot).
Horizontal stabilizer deflection at low speeds: deflection limited to -5°		Use emergency trim if necessary.
Mach data to mach trim system.	Possibly, <b>MACH TR</b> light on if MI is higher than 0.78	• Refer to: <b>MACH TRIM INOPERATIVE.</b>
True airspeed data to corresponding LRN.	<b>MSG</b> or <b>WRN</b> blinks on LRN.	Manually enter speed in LRN.
Pilot mach airspeed and airspeed bug.	Pilot mach airspeed flag	

**Aircraft equipped with Mod 1610 incorporated:**

Indication:

- **ADC 2** light on, and possibly
- **AUTO SLATS** lights on
- VMO/MMO warning horn activated
- Copilot altimeter and ALT ALERT flags in view
- Do not use pilot flight director system vertical modes.
- Press the copilot **ADC 2** **ADC 1** pushbutton light:
  1. **ADC 1** of Pilot **ADC 2** **ADC 1** Light  
Illuminates Amber ..... CHECKED
  2. **XADC** Annunciator on Copilot EADI ..... CHECKED

**EFFECTS**

<b>LOSS OF</b>	<b>INDICATION</b>	<b>REMARKS</b>
Slat Extension prevention at high speed	If <b>AUTO SLATS</b> light is on.	Reduce airspeed to no more than 270 KIAS as soon as possible.
Copilot VMO/MMO WARNING:		The first VMO/MMO warning remains operative (pilot).
True airspeed data to corresponding LRN.	<b>MSG</b> or <b>WRN</b> blinks on LRN.	Manually enter speed in LRN.
Copilot mach airspeed and airspeed bug.	Copilot mach airspeed flag.	
Speed indication on EFIS.		

## PITOT STATIC

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### PILOT PITOT-STATIC SYSTEM MALFUNCTION

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**CAUTION**

Inaccurate airspeed and/or altitude indications.

- **L PITOT** light possibly on.

1. Static Selector Switch ..... EMERG

If pilot indications become consistent with copilot's:

- Loss of standby altimeter and rate-of-climb.
- Use other pilot instruments.

If pilot indications remain inaccurate:

- Loss of pilot altimeter, mach airspeed indicator and air data computer.
- Use copilot's indicators.

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### COPILOT PITOT-STATIC SYSTEM MALFUNCTION

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**CAUTION**

Inaccurate airspeed and/or altitude indications.

- **Q UNIT** light possibly on.
- **R PITOT** light possibly on.

1. PITOT-STATIC SELECTOR.....PANEL ONLY

The selection of the PANEL ONLY position causes the loss of:

- Both Arthur units
- Warning horn for landing gear not locked down at speeds below 160 KIAS.
- Cabin differential pressure indications

**NOTE**

The loss of the copilot pitot-static system causes the yaw damper to disengage.

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**FLIGHT WITH SUSPECTED BLOCKED PITOT PROBES**

WARNING - Frozen or abnormal pilot, copilot and possibly stand-by IAS / MI indications and possibly:

- **AIR SPEED INDICATORS PERFORM LIKE ALTIMETERS** (decreasing in descent and increasing in climb),
- Illumination of one or both following lights:  

Q UNIT	AUTO SLATS
--------	------------
- VMO / MMO audio warning sounds,
- **IAS** miscompare flag on EADI (if any),
- AP disengagement,
- Disagreement with stand-by IAS / MI indications,
- In cruise / level flight: unusual pitch trim activity.

**WARNING**

INAPPROPRIATE FLIGHT DIRECTOR GUIDANCE MAY BE ACTIVATED. DO NOT FOLLOW CORRESPONDING FD.

**CAUTION**

Stall aural warning remains reliable.

- Do not apply SLAT MONITORING SYSTEM MALFUNCTION procedure (Yellow Tab 9).

**LEVEL FLIGHT**

1. Pitch attitude ..... Between 2° and 4° nose up
2. Avoid large displacements and rapid movements of control surfaces.

Set N1 as indicated in the table below, corresponding to MI = 0.75 (assumed temperature is ISA -10°C):

Flight Level	Weight	N1	Pitch Attitude
FL 490	24,000 lb	97%	Between 1 and 4 degrees nose up
	22,000 lb	95%	
FL 450	30,000 lb	97%	
	22,000 lb	92%	
FL 410	38,000 lb	98%	
	30,000 lb	93%	
	22,000 lb	91%	
FL 370	38,000 lb	94%	
	30,000 lb	91%	
	22,000 lb	90%	

**LEVEL FLIGHT** (cont'd)

**STATUS** (2 BLOCKED PITOT PROBES):

<b>INOPERATIVE / UNRELIABLE ITEMS</b>	<b>OPERATIVE / RELIABLE ITEMS</b>
<b>Basic flight parameters</b>	
IAS / MI / TAS on both ADI and on stand-by instrument.	IRS Ground Speed in FMS CDU. GPS Ground Speed in FMS CDU.
	Pitch and roll attitude on both ADI.
Altitude reported by XPDR mode C.	Altitude displayed on both altimeters and stand-by instrument (max error +/- 600 ft). GPS altitude in NZ2000 FMS CDU (if any). VS on both VSI.
SAT, ISA deviation	TAT. Temperature data provided by AFIS / Operational flight plan / Weather briefing.
	Heading and Track.
	Wind data provided by AFIS / Operational flight plan / Weather briefing.
<b>Warnings</b>	
VMO / MMO audio warning	
Gear aural warning. Stall aural warning if AUDIO WARN C/Bs pulled	
<b>Flight controls</b>	
Automatic Slats extension.	Stall protection: Automatic Slat Extension; IGN on.
Roll Arthur position inconsistent with actual true flight condition.	Pitch Arthur (Arthur setting dependent on the Pressure (Pt) Measurement by the #1 Engine Probe.
<b>Automatic flight control system</b>	
AP, FD, and YD	
Mach Trim	
<b>Engine</b>	
	Engine primary parameters (N1, ITT, N2, FF) and controls.
<b>Airplane Systems</b>	
	All systems controls and displays

3. After a positive identification of the malfunction, continue the flight while complying with the following procedures for climb and descent phases:

**CLIMB**

1. AP ..... DISENGAGED
2. YD ..... DISENGAGED

**CAUTION**

Do not re-engage AP or YD before pitot probes unblocking.

3. Avoid large displacements and rapid movements of control surfaces.
4. N1 speed ..... Climb power as per Performance Manual 4-50
5. Pitch attitude ..... Between 4° and 5° nose up  
If vertical speed drops below 100 ft / min:
6. Airplane.....Level off  
If VMO / MMO audio warning sounds:
7. AUDIO WARN A / AUDIO WARN B circuit breakers..... Pulled

**CAUTION**

All audio warnings (STALL included) are inoperative except TCAS aural warning.

**DESCENT**

Initiating the descent earlier than scheduled to recover non icing conditions is let to pilot's discretion.

**CAUTION**

If IAS goes down to 50 kt due to blocked pitot probes, expect loss of airspeed display on both EADI (if any):

- Do not apply PILOT AIR DATA COMPUTER INOPERATIVE procedure.
- Do not apply COPILOT AIR DATA COMPUTER INOPERATIVE procedure.
- Use ADI attitude and the stand-by altimeter until pitot probes unblocking.

1. AP ..... DISENGAGED
2. YD ..... DISENGAGED

**21**

**CAUTION**

Do not re-engage AP or YD before pitot probes unblocking.

3. Avoid large displacements and rapid movements of control surfaces.
  4. Start selector switches (all 3).....AIR START
- ANTI-ICE:
5. ENG 1 and ENG 3 ANTI-ICE switches..... ON
    - 30 seconds later:
      - ENG 2 ANTI-ICE switch..... ON
    - 30 seconds later:
      - AIRFRAME ANTI-ICE switch ..... NORMAL
  6. N1 speed ..... See table below

TAT	Between -30°C and -20°C	Between -20°C and -10°C	Between -10°C and 0°C	0°C and above
<b>N1</b>	84%	81%	78%	73%

7. Airbrake handle..... Position 1
8. Pitch attitude .....Between 0° and 2° nose down
9. Vertical speed indicator ..... Between -2,000 and -3,000 ft / min

**NOTE**

An indicated airspeed increasing in descent is a good evidence of the pitot probes unblocking.

**NOTE**

Descent should cause airspeed and total air temperature to increase thereby facilitating the pitot probes unblocking and a return to correct IAS indication after about 2 minutes.

**NOTE**

1. Check airplane altitude frequently on the stand-by altimeter.
2. If prior to the problems, flight was performed at a static temperature lower than the authorized minimum limit (see 1-15-9), descend as soon as possible until air-data indications are back to normal.

10. After return to unblocked pitot probes situation, wait 1 more minute then:
  - AP and YD.....As required
11. AUDIO WARN A / AUDIO WARN B circuit breakers..... Re-engaged
12. TCAS..... NORMAL - Checked
13. Start selector switches (all 3)..... NORMAL
14. Airbrake handle.....As required

ANTI-ICE:

- ANTI-ICE ENG 1 and 3 switches .....As required
- ANTI-ICE ENG 2 switch.....As required
- ANTI-ICE AIRFRAME switch .....As required

22

# EFIS

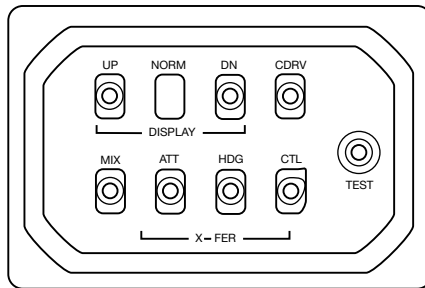
## EFIS MALFUNCTIONS

### NOTE

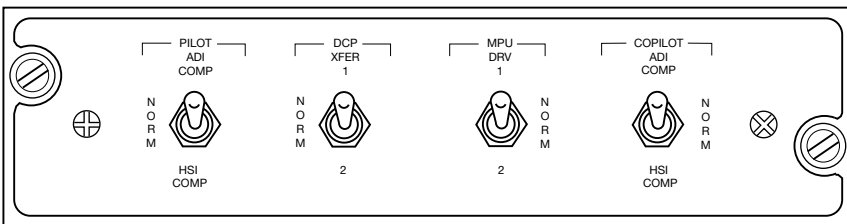
These checklists are applicable to Collins EFIS 85/86 systems.

Various types of avionics equipment may be installed in this aircraft, and specific warning/comparator flags, annunciators, and switches, described herein, may not appear in certain installations. Consult the *Aircraft Flight Manual Supplement* for data relating to specific equipment installation.

PANEL (A)



PANEL (B)



### EADI DISPLAY FAILURE

---

Indication: Display goes out or color is altered.

1. Display Reversion Switch ..... DOWN

---

### EHSI DISPLAY FAILURE

---

Indication: Display goes out or color is altered.

1. Display Reversion Switch ..... UP

---

### SIMULTANEOUS FAILURE OF EADI AND EHSI DISPLAYS ON SAME SIDE

---

Indication: both displays go out or color is altered, Red **FAIL** or **DRV** flag on the EADI and EHSI.

1. Select CDRV or MPU DRV on failed side.
2. AMBER **CDRV** flag displayed.

If unsuccessful:

3. Select MIX or ADI COMP or HSI COMP.

---

### SUCCESSIVE FAILURE OF EADI AND EHSI DISPLAYS ON SAME SIDE

---

Indication: Both displays successively go out.

If panel A is installed:

1. Select CDRV on failed side.
2. Select MIX on failed side.

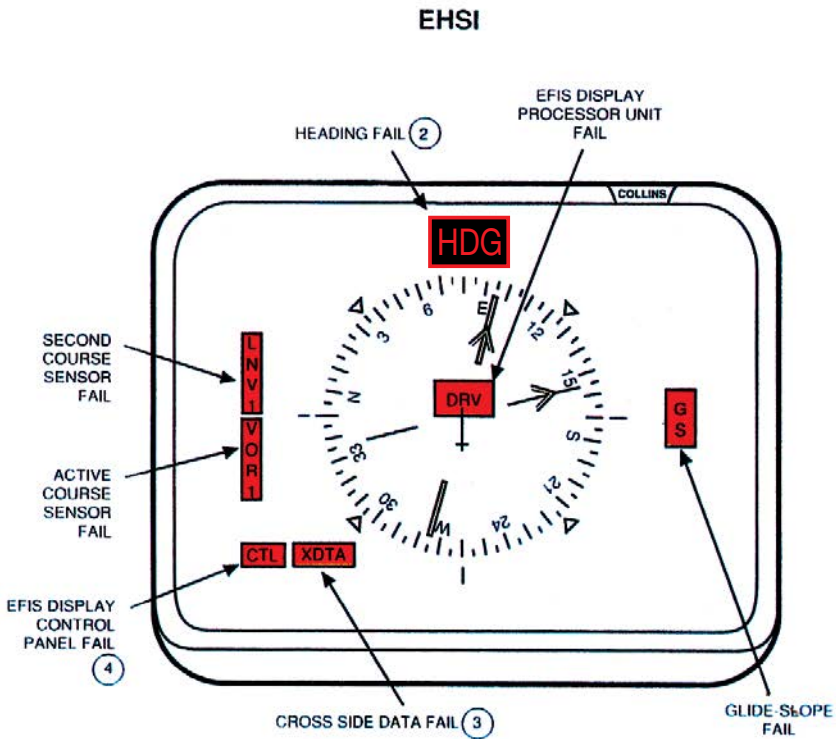
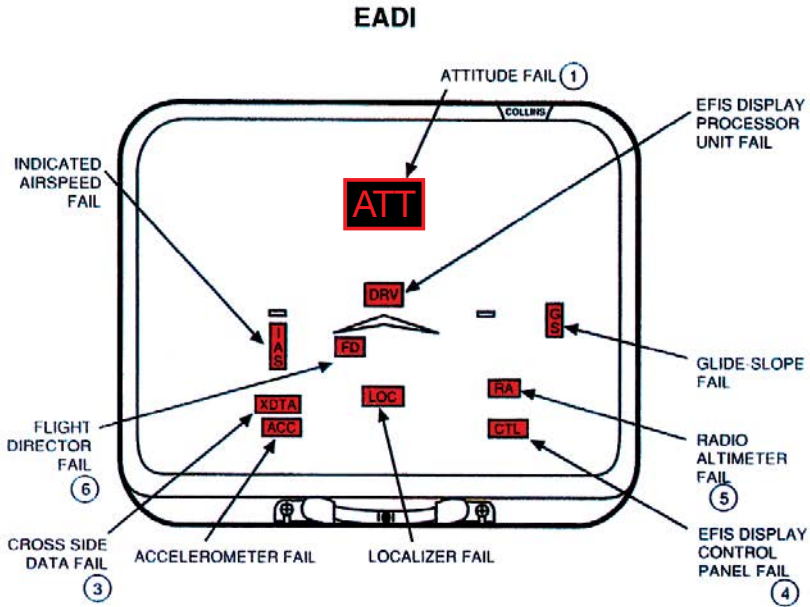
If panel B is installed:

1. Select MPU DRV on the failed side.
2. Select ADI COMP or HSI COMP on failed side.

#### NOTE

A composite ADI/HSI will be displayed on the Multi-Function Display (MFD).

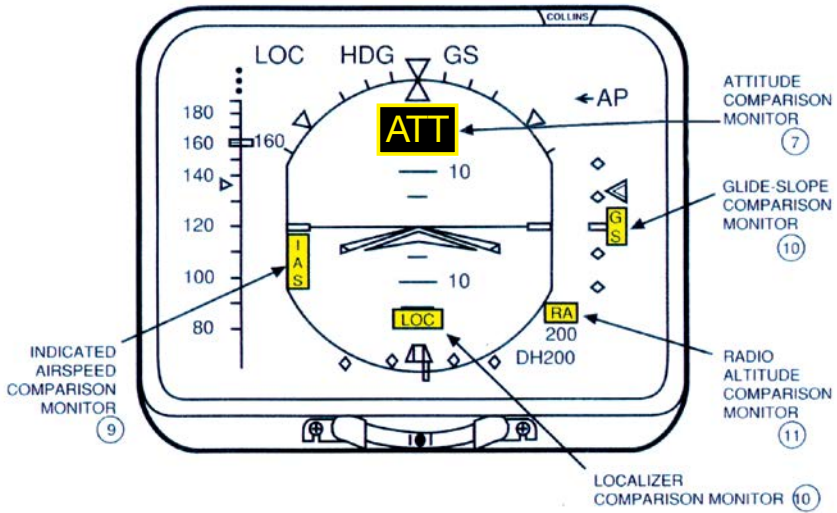
**FAILURE MONITOR FLAGS (ALL RED)**



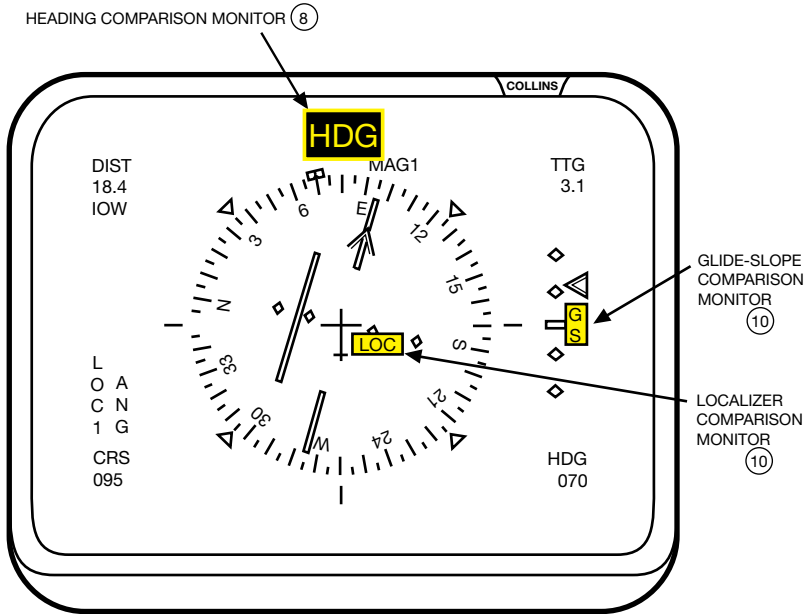
# COLLINS EFIS

## COMPARISON FLAGS (ALL AMBER)

### EADI



### EHSI





① **ATTITUDE FAILURE**

Indications: Red **ATT** flag on EADI  
Loss of attitude reference.

1. ATT Transfer Switch ..... SELECTED
2. **XATT** or **ATT#** Annunciator ..... ILLUMINATED

② **HEADING FAILURE**

Indications: Red **HDG** flag on EHSI  
Displayed heading may be incorrect.

1. HDG Transfer Switch ..... SELECTED
2. **HDG#** or **MAG#** Annunciator ..... ILLUMINATED

③ **MPU FAILURE (MULTI-FUNCTION DISPLAY PROCESSOR UNIT)**

Indications: MFD Display goes out  
Red **XDTA** flag on both EADIs

**CAUTION**

- Pilots and copilots HDG bugs are no longer synchronized.
- Comparison monitors are inoperative.

1. MPU DISC or MPU FAIL Switch (If Installed).....DEPRESS AND ILLUMINATED AMBER

If red **XDTA** flag stays on, or if the MPU switch is not installed,

2. MFD Power..... OFF

**NOTE**

There is no backup for a MPU failure.



**⑥ FLIGHT DIRECTOR FAILURE**

Indication: Red **FD** fail, command bars removed

If FD #1 fails, and the autopilot is required:

1. AP XFR Switch.....SELECTED

**NOTE**

The autopilot will now follow commands from the copilot's flight director.

**⑦ ATTITUDE COMPARISON MONITOR**

Indications: Amber **ATT** or **PIT** or **ROL** flags on both EADIs,  
**MSTR COMP** lights illuminated

1. Autopilot .....DISENGAGE
2. Standby Horizon ..... CHECKED
3. Faulty Attitude Source .....IDENTIFY
4. Attitude Transfer Switch (Faulty Side).....DEPRESS
5. **XATT** or **ATT #** Annunciator ..... ILLUMINATED
6. Master Comparators..... RESET
7. Autopilot ..... RE-ENGAGE

**⑧ HEADING COMPARISON MONITOR**

Indications: Amber **HDG** flags on both EHSIs **MSTR COMP** light illuminated

1. Standby Compass ..... CHECKED
2. Faulty HDG Source .....IDENTIFY
3. HDG Transfer Switch (Faulty Side) .....DEPRESS
4. **XHDG** or **HDG #** Annunciator ..... ILLUMINATED
5. Master Comparators..... RESET

⑨ **IAS COMPARISON MONITOR**

---

Indication: Amber **IAS** flags on both EADIs

1. Standby Airspeed Indicator .....CHECK
2. Faulty Airspeed Indicator.....IDENTIFY

⑩ **LOC OR GS COMPARISON MONITOR**

---

Indication: Amber **LOC** or **GS** flags

1. Faulty NAV Source.....IDENTIFY
2. Functional NAV Source.....SELECTED TO BOTH SIDES

**NOTE**

If operationally feasible, discontinue the approach for any comparison monitor flag.

⑪ **RA COMPARISON MONITOR**

---

\*Aircraft with dual radio altimeters only

Indications: Amber **RA** flags on EADIs

1. Faulty Radio Altimeter .....IDENTIFY
2. Radio Altimeter Transfer Switch .....SELECTED TO FUNCTIONAL  
RADIO ALTIMETER

## QUICK REFERENCE

MASTER WARNING INDICATIONS	<b>1</b>
LANDING DISTANCE/LANDING FIELD LENGTH ADDITIVES	<b>2</b>
ELECTRICAL – KEY BUS ITEMS	
DUAL-FUNCTIONING CIRCUIT BREAKERS	<b>3</b>
GROUND/FLIGHT SWITCHES	
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TO MOVE FUEL FROM THE FEEDER TANKS	<b>6</b>
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EMERGENCY PROCEDURE ANNUNCIATORS	
ABNORMAL PROCEDURE ANNUNCIATORS	

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## QUICK REFERENCE

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### MASTER WARNING INDICATIONS

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**T/O  
CONFIG.**

1. Slats not extended.
2. Flaps beyond 22°.
3. Airbrakes not stowed.
4. Stabilizer trim not in takeoff range (-3° to -7°).
5. Autopilot ON.
6. Parking brake (SB 240) ON.

**FUELING**

1. Bus D - OFF.
2. Gravity Fueling switch ON.
3. Fueling door open.
4. Vent valve handle not stowed.
5. Defueling switch ON.
6. C/B in rear compartment - OUT
7. Any 1 of 3 air vent valves not closed.

**APU  
BLEED**

1. APU BLEED Valve is open when it has been commanded to close.

**LANDING DISTANCE/LANDING FIELD LENGTH ADDITIVES**

2

If landing with Slats + 48 Flaps, use the Slats + 48 Flaps landing charts and apply additives to this landing data. If landing with less than Slats + 48 Flaps, use the Slats + 20 Flaps landing charts and apply additives to this landing data. Antiskid corrections are applied to the basic landing data first before applying all other additives.

**(E) Emergency Checklist**

**(A) Abnormal Checklist**

Malfunction..... LND DIST/LND FLD LNTN

**(E) Loss of Both Hydraulic Systems, Assumes a Clean Wing, VREF + 30 KT**

- 1. No Antiskid .....30%/30%
- 2. No Slats and Flaps ..... 3,000/5,000 FEET
- 3. No Airbrakes ..... 600/1,000 FEET

To land in CLEAN configuration:

- 1. Check AFM whether speed VREF + 30 kt is less than VMBE.
  - In that case, landing distance is increased by 3,000 ft/914m and the landing field length by 5,000 ft/1,524m.
  - If not, braking cannot be initiated until the speed has decreased below VMBE: Add to the above figure an extra landing distance of 280 ft/85m (470 ft/143m for landing field length) for each knot of difference between VREF + 30 kt and VMBE.

**(A) Approach and Landing, 2 Engines Inoperative**

- 1. Slats Only, VREF + 20 KT ..... 1,400/2,300 FEET
- 2. S + 20 Flaps, VREF + 10 KT ..... 180/300 FEET

**(A) Approach and Landing, One Engine Inoperative**

- 1. S + 20 Flaps, VREF + 5 KT ..... CHART/CHART DATA
- 2. Slats Only, VREF + 20 KT ..... 1,400/2,300 DATA

**(A) Loss of #1 Hydraulic System**

- 1. No Antiskid:
  - a. S + 20 Flaps.....30%/30%
  - b. S + 48 Flaps.....25%/25%
- 2. Emergency Slats + 48, VREF + 5 KT ..... 180/300 FEET
- 3. Emergency Slats + 20, VREF + 10 KT ..... 180/300 FEET

**(A) Loss of #2 Hydraulic System**

- 1. No Airbrakes ..... 600/1,000 FEET
- 2. Slats Only, VREF + 20 KT ..... 1,400/2,300 FEET

**A Airbrakes Do Not Retract**

1. With Airbrakes in Position 1:
  - a. S + 20 Flaps, VREF + 15 KT ..... 480/800 FEET
  - b. S + 48 Flaps, VREF + 10 KT ..... 480/800 FEET
2. With Airbrakes in Position 2:
  - a. S + 20 Flaps, VREF + 20 KT ..... 480/800 FEET
  - b. S + 48 Flaps, VREF + 15 KT ..... 480/800 FEET

**A Flap Asymmetry**

1. S + Up to 20 Flaps, VREF + 20 KT ..... 1,400/2,300 FEET
2. S + 20 to 48 Flaps, VREF + 5 KT ..... CHART/CHART DATA

**A Elevator Inoperative Landing**

1. S + 20 Flaps, VREF + 15 KT ..... 1,800/3,000 FEET
2. S + 48 Flaps, VREF + 10 KT ..... 1,800/3,000 FEET

**A Stabilizer Inoperative Landing**

1. If Stab is +1 to -5 Degrees:
  - a. S + 20 Flaps, VREF + 20 KT ..... 480/800 FEET
2. If Stab is -5 to -11 Degrees:
  - b. S + 48 Flaps, VREF ..... CHART/CHART DATA



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**ELECTRICAL—KEY BUS ITEMS**

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**DUAL-FUNCTIONING CIRCUIT BREAKERS**

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**BUS A**

1. LANDING GEAR CONTROL
2. AIRBRAKE CONTROL
3. NORMAL PITCH TRIM
4. CENTRAL ADC
5. HP 1 & 2 & PRV
6. ANTI-ICE ENGINES 1 & 2
7. FIRE DETECTION ENGS.  
1, 2, BAGGAGE & AFT  
COMPARTMENT
8. #2 BRAKES
9. GAGES ENGINES 1 & 2
10. AUTO PRESSURE CONTROL  
AND DUMP CIRCUIT
11. STANDBY HYDRAULIC PUMP  
CONTROL
12. SLATS INDICATOR
13. THRUST REVERSER
14. PILOT'S INVERTER

**BUS C**

1. NOSE WHEEL STEERING
2. TRIM INDICATOR
3. AILERON TRIM
4. COCKPIT TEMPERATURE  
CONTROL
5. #1 HYDRAULIC QUANTITY  
INDICATOR
6. FUEL X-FEED 1-2
7. STBY AIRFRAME ANTI-ICE
8. OIL PRESS/TEMP GAGE #1  
AND #2

**BUS B**

1. EMERGENCY SLATS
2. EMERGENCY PITCH TRIM
3. MACH TRIM
4. ANTISKID
5. ISOLATION VALVE
6. HP 3
7. STANDBY INVERTER
8. FLAP/AIRBRAKE INDICATOR
9. FUEL SYSTEM INTERCONNECT
10. COPILOT'S INVERTER
11. #3 ENG ANTI-ICE
12. FIRE DETECTION—#3 ENG., APU
13. NORMAL AIRFRAME ANTI-ICE
14. GAGES ENGINE 3

**BUS D**

1. FLAPS
2. RUDDER TRIM
3. CABIN TEMPERATURE  
CONTROL
4. #2 HYDRAULIC QUANTITY  
INDICATOR
5. FUEL X-FEED 2-3
6. EMERGENCY AILERON TRIM
7. OIL PRESS/TEMP GAGE #3

**PRIMARY (LABELED)**

ST-BY PUMP  
ENG 2  
HP BLEED 3  
RH AUTO SLATS  
TRANSFER INTERCOM

**SECONDARY**

BRAKE SELECTOR  
PRV + H.P. 2  
ISOLATION VALVE  
EMERGENCY SLATS  
EMERGENCY FUEL TRANSFER  
(SB 175)

**GROUND FLIGHT SWITCHES**

<b>LEFT MAIN GEAR</b>	<b>NOSE GEAR</b>	<b>RIGHT MAIN GEAR</b>
<b>Switch No. 1</b>	<b>Switch No. 1</b>	<b>Switch No. 1</b>
Stall No. 1 Test Stall warning flight—left vane  Standby hydraulic pump	Landing gear control solenoid  <b>Switch No. 1 or 2</b>	Stall No. 2 Test Stall warning flight—right vane
<b>Switch No. 2</b>	Nosewheel steering amplifier	<b>Switch No. 2</b>
Air-conditioning valve control Air data computer APU ground flight relay Battery blower Cabin pressurization Engine-starting relays Landing gear control solenoid Nose fan control Single-point refueling Standby horizon Takeoff warning  Thrust reverser—ground only	<b>Switch No. 1 and 2</b>  Brake control antiskid Engine No. 2 fail-ground	Air-conditioning valve control Air data computer APU ground/flight relay Battery blower Cabin pressurization Engine starting relays INS  Nose fan control Standby horizon Single-point refueling Takeoff warning Thrust reverser—ground only

3

**FUEL CONVERSION CHART**

JET FUEL—6.75 POUNDS AT 60° F

Gallons	Liters	Weight	Gallons	Liters	Weight	Gallons	Liters	Weight
50	189	338	1050	3974	7088	2050	7759	13838
100	378	675	1100	4163	7425	2100	7948	14175
150	568	1013	1150	4353	7763	2150	8138	14513
200	757	1350	1200	4542	8100	2200	8327	14850
250	946	1688	1250	4731	8438	2250	8516	15188
300	1135	2025	1300	4920	8775	2300	8705	15525
350	1325	2463	1350	5110	9113	2350	8895	15863
400	1514	2700	1400	5300	9450	2400	9084	16200
450	1703	3038	1450	5488	9788	2450	9273	16537
500	1892	3375	1500	5677	10125	2500	9462	16875
550	2082	3713	1550	5867	10463	2550	9652	17212
600	2271	4050	1600	6056	10800	2600	9841	17550
650	2460	4388	1650	6245	11138	2650	10030	17887
700	2650	4725	1700	6434	11475	2700	10219	18225
750	2839	5063	1750	6623	11813	2750	10409	18562
800	3028	5400	1800	6813	12150	2800	10598	18900
850	3217	5738	1850	7002	12488	2850	10787	19237
900	3406	6075	1900	7191	12825	2900	10976	19575
950	3596	6413	1950	7381	13163	2950	11166	19912
1000	3785	6750	2000	7570	13500	3000	11355	20250

*FALCON 50 EMERGENCY/ABNORMAL CHECKLIST*

OVERHEAD CIRCUIT BREAKER PANEL  
 BUS BAR A CONSUMERS                      BUS BAR C CONSUMERS

DC 1 ADF 1 DME 1 VOR 1 ICS 1	VHF 1 ATC 1	<u>RADIO</u> <u>NAV</u>	INS ADEU RAD ALT WEATHER RADAR TAPE
--	----------------	----------------------------	--

CENTER CIRCUIT BREAKER PANEL

INST LH LANDING LH ANTICOL FIN CKPIT READING DIGIT 1 NAV	CENTER LH OVERHEAD	<u>LIGHTS</u> <u>MISC</u>	GALLEY CABIN READING CREW SEATS STROBE
INV 1		<u>INVERTER</u>	
IGNITER AUTO REVERSE CONTROL REVERSE WARN ITT 1 N1-N2 1 CPTR 1 IGNTR 1	ITT 2 N1-N2 2 CPTR 2 IGNTR 2	<u>ENGINE</u>	OIL 1 OIL 2
BOOST 1 BOOST 2 FUEL FLOW 1 GAGES LH	FUEL FLOW 2 GAGES CENTER	<u>FUEL</u>	XFR 1 XFR 2
WSHLD FRONT LH LH PITOT HEAT WIPER LH ENGINE 1 COND'G CREW	CABIN PRESS ENGINE 2 HP BLEED DV WINDOW	<u>ANTI-ICE</u>	STD-BY AIR FR AFT SIDE WINDOW CKPT TEMP CONTROL CABIN TEMP NOSE FAN CKPT FLOOR HEATING
LG CONTROL STD-BY PUMP		<u>HYDR</u>	NOSE WHL HYDR 1
A/B CONTROL Q UNIT STAB NORMAL	LH AUTO SLAT SLAT INDIC	<u>FLT</u> <u>CONTROL</u>	A/A INDIC TRIM INDIC TRIM AILERON

RH CIRCUIT BREAKER PANEL

LIGHTS WARN A-B LIGHTS WARN A AUDIO WARN A BAT TEMP REAR CMPT BAG COMPT	ENGINE FAIL 2 DETECT 1 DETECT 2 EXTING 1-2	<u>FIRE</u> <u>WARNING</u>	
AIR DATA AIR DATA AIR DATA EXT TEMP FLIGHT RECORD A/P RUD A/P ELV A/P AIL A/P CMPTR HRZN STD-BY PWR INST 1 ANNUNC LH COMPAR FD 1		<u>AFCS</u>	

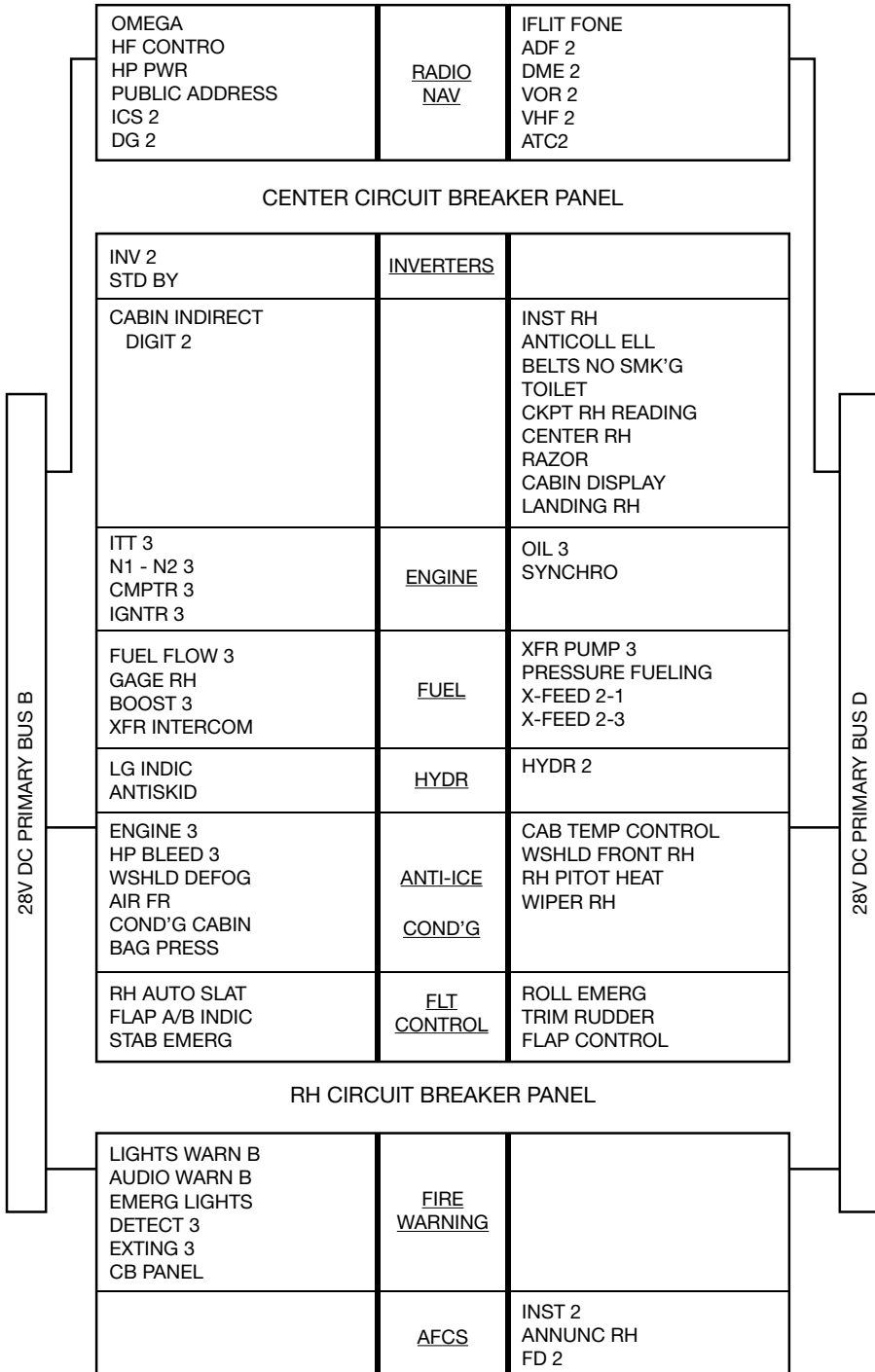
DISTRIBUTION OF THE 28V DC BUS BAR A AND C CONSUMERS

4

28V DC PRIMARY BUS A

28V DC AUXILIARY BUS C

OVERHEAD CIRCUIT BREAKER PANEL  
BUS BAR B CONSUMERS      BUS BAR D CONSUMERS



DISTRIBUTION OF THE 28V DC BUS BAR B AND D CONSUMERS

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**SINGLE POINT PRESSURE REFUELING  
(DA-50)**

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1. Refueling Panel Door ..... OPEN
2. Refueling Coupling Cover..... REMOVE
3. Single Point Refueling.....CONNECT
4. Wing Tank Refueling Switches ..... ON
5. Rear Tanks Switch ..... HIGH

**NOTE**

Assure red “Stop Fueling” light is out and green “Fueling O.K.” light is illuminated.

6. Start Refueling ..... PUMPING PRESS. 30–50 PSI
7. Refueling Test Lever ..... ROTATE  
(When Fuel Truck Meter Stops, Rotate Lever Back to OFF)
8. Rear Tanks Switch ..... LO

**NOTE**

If full load is desired switch rear switch to HI after fuel truck meter stops.

**When Tanks are Filled to Desired Level**

1. All Switches ..... OFF
2. Refueling Nozzle..... DISCONNECT
3. Refueling Coupling Cover..... INSTALL
4. Vent Valve Control Lever..... DOWN
5. Refueling Panel Door..... CLOSED

---

**SINGLE POINT GRAVITY REFUELING CHECKLIST  
(DA-50)**

---

**NOTE**

Unlock and remove the left wing tank filler port cap. Insert fuel nozzle and start pumping. The following steps need to be accomplished in order to move fuel from left wing tank to the center wing, right wing and feeder tanks.

**Interior Setup**

- 1. APU or GPU..... ON
- 2. Gravity Refueling Switch ..... ON
- 3. Left Transfer Pump ..... ON
- 4. Left Boost Pump..... ON
- 5. Left Crossfeed ..... OPEN

**Refueling Panel Setup**

- 6. Defueling Switch..... ON
- 7. Right Wing Tank Refueling Switch..... ON

**5**

**After Refueling Check-Interior**

- 1. Gravity Refueling Switch ..... OFF
- 2. Left Transfer Pump ..... OFF
- 3. Left Boost Pump..... OFF
- 4. Left Crossfeed ..... CLOSED

**Refueling Panel Setup**

- 5. Defueling Switch..... OFF
- 6. Right Wing Tank Refueling Switch..... OFF
- 7. Refueling Panel Door..... CLOSED

**REFUELING WITH FULL WING TANKS CHECKLIST  
(DA-50)**

---

**NOTE**

These procedures are intended to avert fuel spills on the ramp and a continuous STOP FUELING light on the refueling panel when venting the tanks.

The in flight procedure is for use after a short flight and the center feeder tank has not decreased to regulation level and more fuel needs to be added for the next leg of the flight. This procedure should be performed in-flight.

The On Ground procedure is for the same situation except, the crew is unaware that more fuel is needed for the next flight until the aircraft is on ground and the engines are shut down.

**Inflight Procedure**

6

1. Fuel Transfer Intercoms ..... BOTH OPEN
2. L & R Wing Transfer Pumps..... OFF
3. Operate in this Configuration for 15 Minutes.
4. L & R Wing Transfer Pumps..... ON
5. Fuel Transfer Intercoms ..... BOTH CLOSED

**On Ground Procedure**

**NOTE**

Aircraft must have a continuous power source for the on ground procedure. Don't use battery power for this operation.

1. Fuel Transfer Intercoms ..... BOTH OPEN
2. Center Wing Tank Transfer Pump ..... ON
3. Emergency Transfer Switch ..... LEFT/RIGHT  
(Hold in each position until lateral feeder tank quantity rises 250lb.)
4. Center Wing Tank Pump ..... OFF
5. Fuel Transfer Intercoms ..... BOTH CLOSED

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**TO MOVE FUEL FROM THE FEEDER TANKS  
TO THE WING TANKS (DA-50)**

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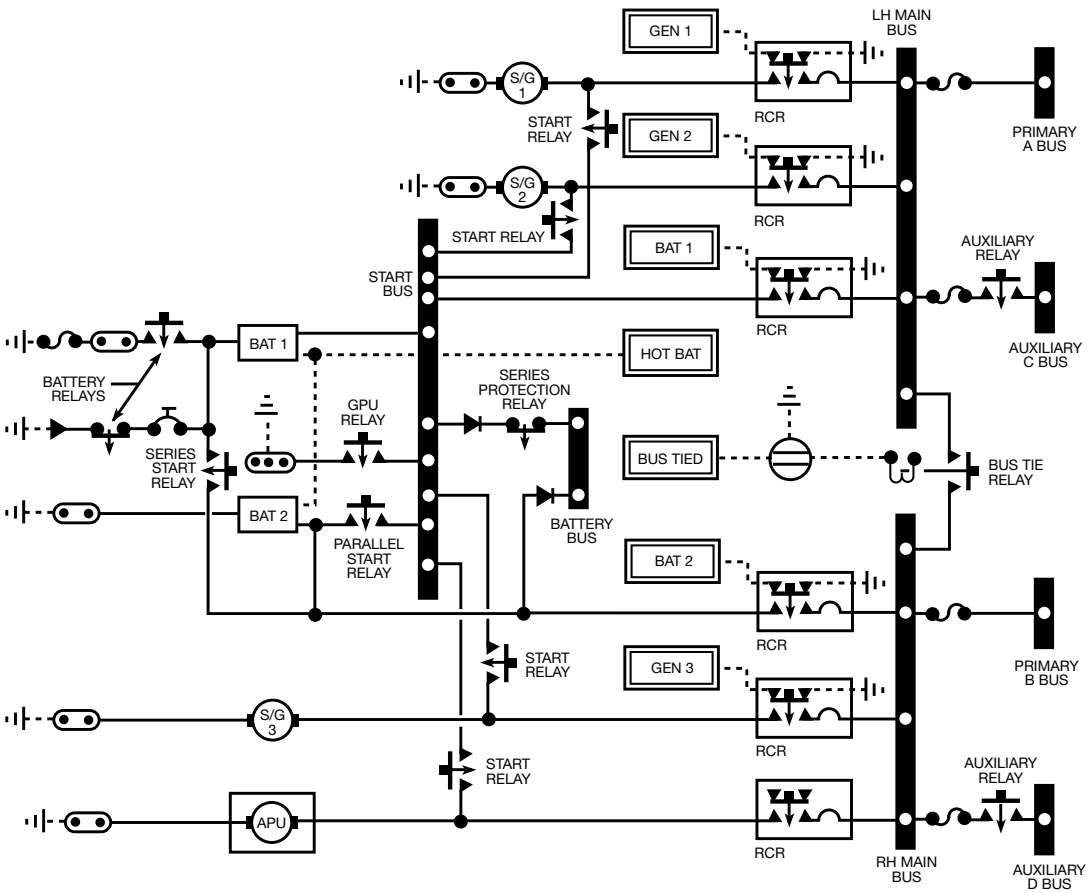
1. APU or GPU..... START
2. Refueling Panel Door..... OPEN
3. Vent Valve Control Lever..... UP  
(Assure green FUELING OK light is illuminated.)
4. Wing Tank Refueling Switches ..... ON
5. Defueling Switch..... ON
6. Left & Right Crossfeeds..... OPEN
7. All 3 Boost Pumps ..... ON

**When Finished**

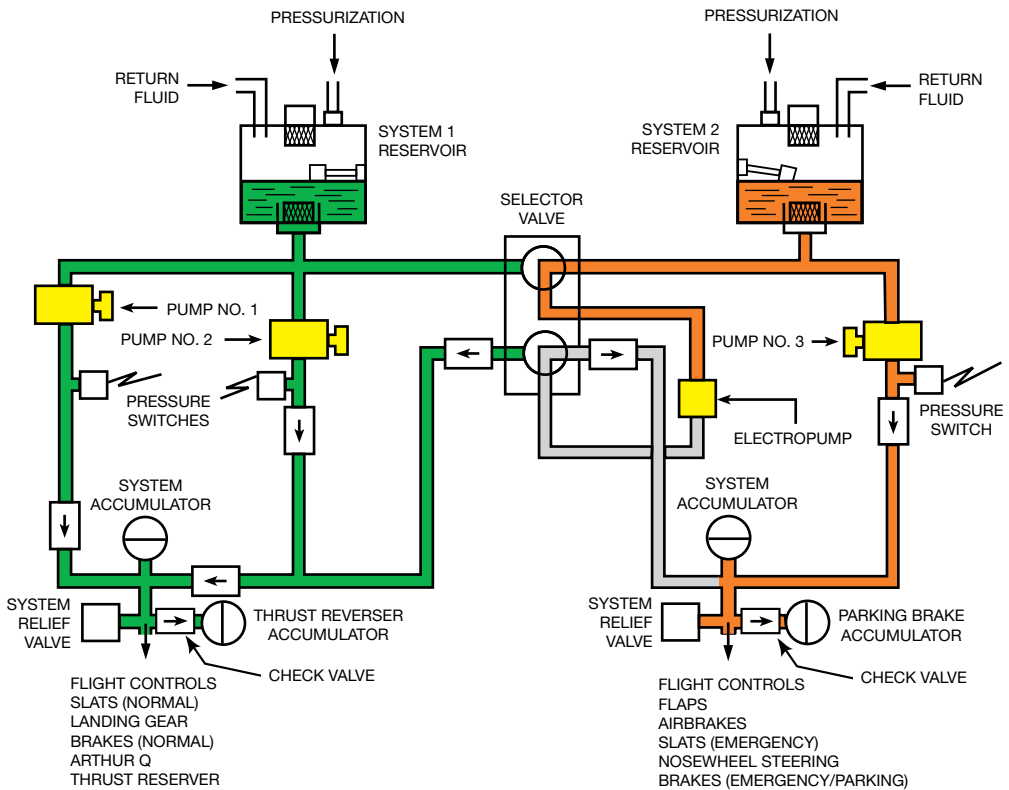
1. All 3 Boost Pumps ..... OFF
2. Left & Right Crossfeeds..... CLOSED
3. Defueling Switch..... OFF
4. Wing Tank Refueling Switches ..... OFF
5. Vent Valve Control Lever..... DOWN
6. Refueling Panel Door..... CLOSED



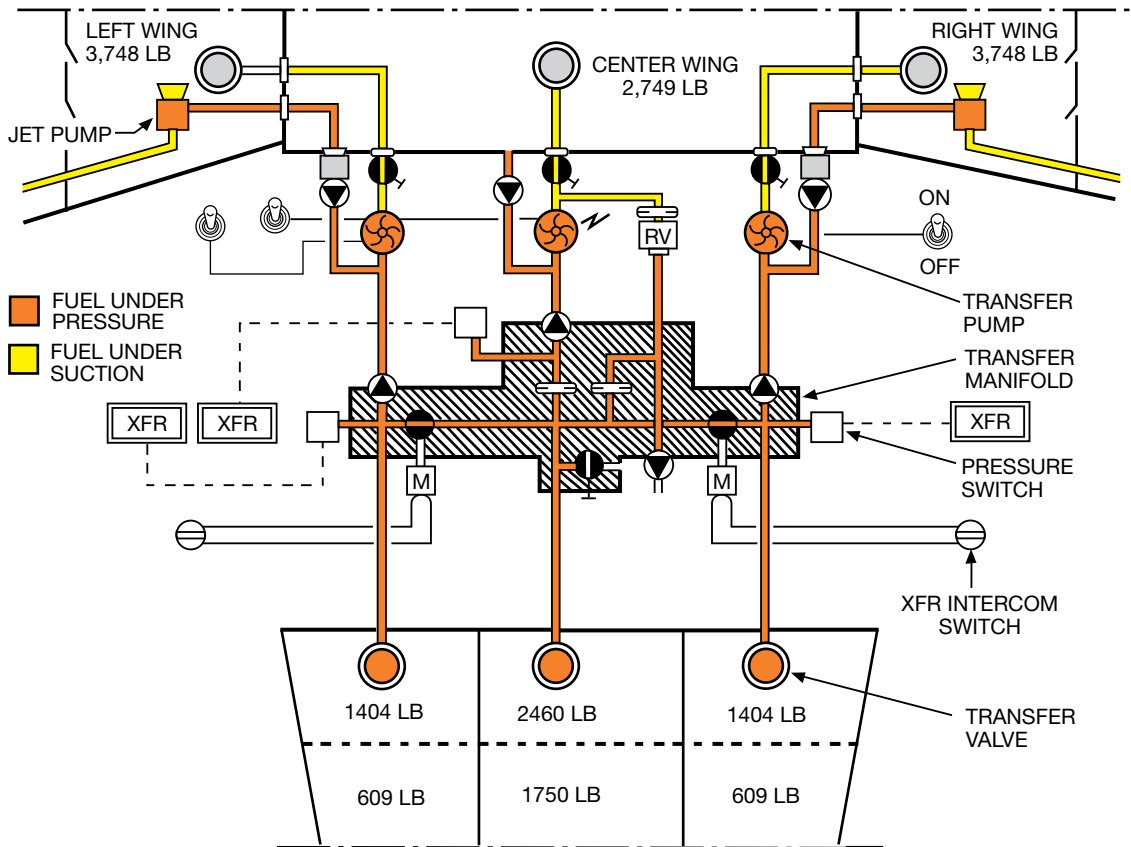
**ELECTRICAL SCHEMATIC**



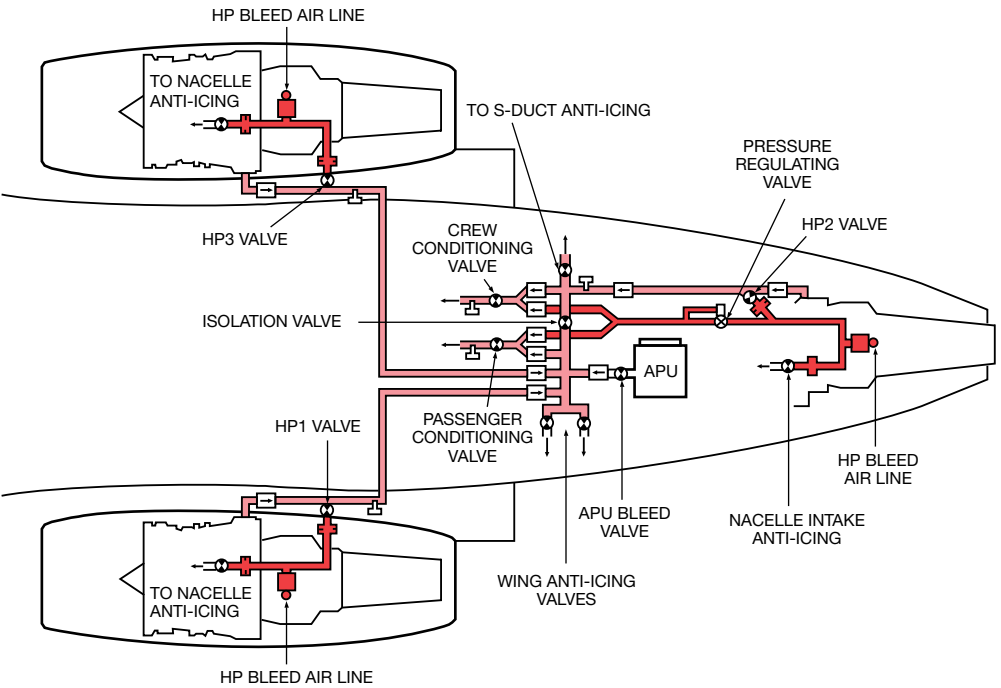
**HYDRAULIC SCHEMATIC**



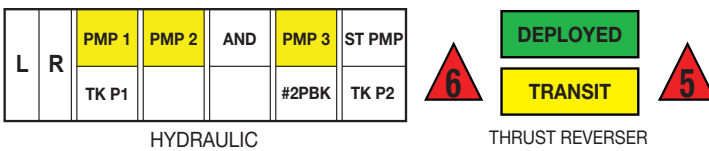
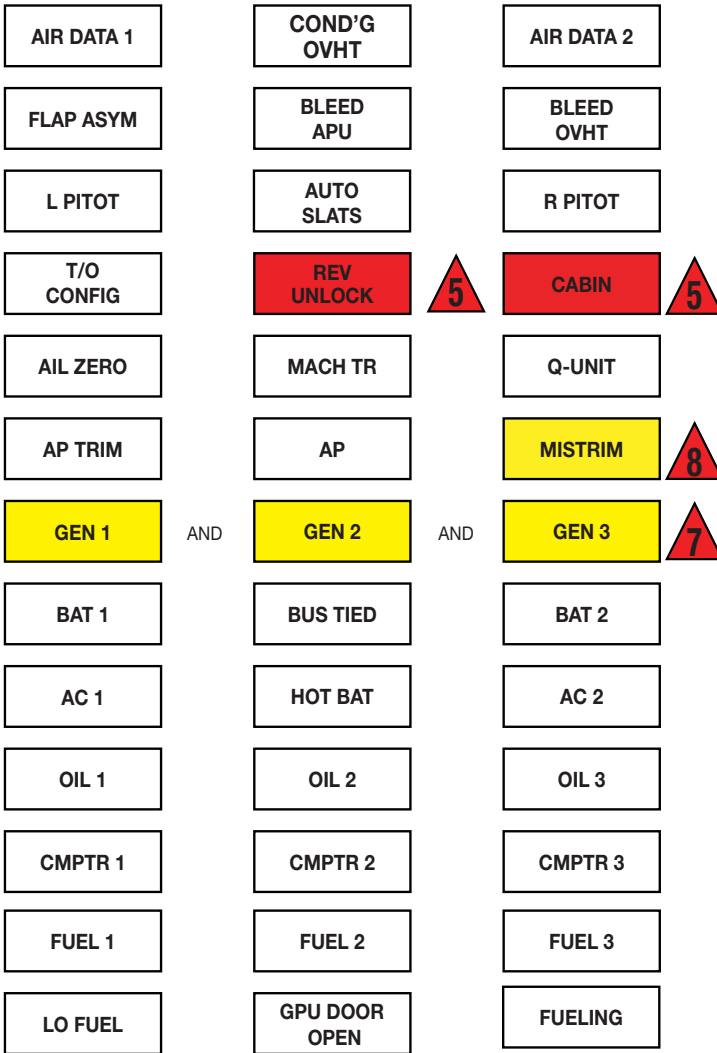
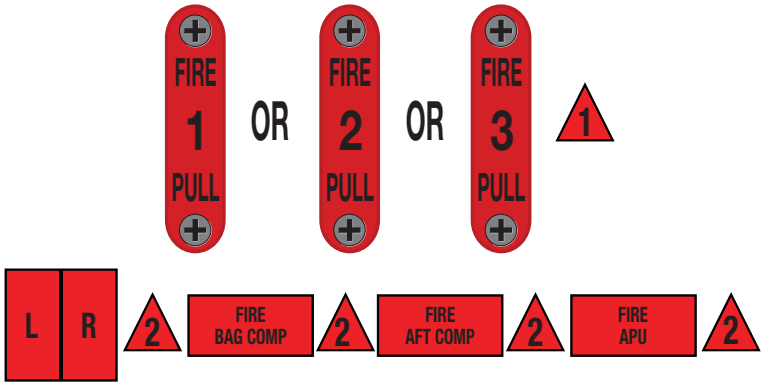
**FUEL SCHEMATIC**



# PNEUMATIC SCHEMATIC



## EMERGENCY PROCEDURE ANNUNCIATORS



FALCON 50 EMERGENCY/ABNORMAL CHECKLIST

AIR DATA 1	20	COND'G OVHT	19	AIR DATA 2	20
FLAP ASYM	8	BLEED APU	QR 1	BLEED OVHT	19
L PITOT	21	AUTO SLATS	9, 20	R PITOT	21
T/O CONFIG	QR 1	REV UNLOCK		CABIN	18
AIL ZERO		MACH TR	19, 20	Q UNIT	7, 10, 20, 21
AP TRIM	19	AP	19	MISTRIM	19
GEN 1	14, 15	GEN 2	14, 15	GEN 3	14, 15
BAT 1	14	BUS TIED		BAT 2	14
AC 1	16	HOT BAT	14	AC 2	16
OIL 1	5	OIL 2	5	OIL 3	5
CMPTR 1	5	CMPTR 2	5	CMPTR 3	5
FUEL 1	12	FUEL 2	12	FUEL 3	12
LO FUEL	13	GPU DOOR OPEN		FUELING	12, QR 1

