

Checklist

Falcon 4.0 BMS F-16C

EMERGENCY Prozedures



Not suited for Real Operations
For FALCON BMS Use Only!

ICEMAN

AIRSTART PROCEDURE

To accomplish an Airstart:

- | | |
|-------------|-------------|
| 1) Throttle | OFF |
| 2) Airspeed | as required |

When RPM is 50-25% with FTIT below 700°C

- | | |
|----------------|--------------------|
| 3) Throttle | IDLE, then advance |
| 4) Idle detent | Toggle |
| 5) RPM | chk increasing |

If RPM is below 20% with FTIT below 700°C

- | | |
|----------------|-------------------------------------|
| 3) Attitude | Below 20.000 feet and < 400 kts |
| 4) JFS | Start 2 |
| 5) Throttle | RPM at 20% min - IDLE, then advance |
| 6) Idle detent | Toggle |
| 7) RPM | chk increasing |
| 8) Throttle | idle |

If Engine responds normally:

- | | |
|----------------------|--------------------------|
| 9) JFS | Confirm OFF |
| 10) EPU sw | OFF then NORM |
| 11) ADI | chk OFF and/or AUX flags |
| 12) Throttle | as required |
| 13) LAND ASAP | |

If Engine does not respond Normally after airstarts:

- | | |
|-------------------------------------|-----------|
| 9) Refer to FLAMEOUT LANDING | Page C-12 |
|-------------------------------------|-----------|

- FTIT should decrease rapidly when throttle is OFF. If FTIT does not decrease rapidly, verify that throttle is OFF.
- Maintain max range or max endurance airspeed (200 or 170 kts respectively plus 5 kts per 1000 lbs of fuel/store weights over 3000 lbs)
- If warning flags are in view, refer to **TOTAL INS FAILURE** page F-6
- If only AUX flags are in view, pitch and roll attitude information is likely to be erroneous due to INS autorestart in the attitude mode when other than straight and level unaccelerated flight conditions existed.
- If SEC caution light is ON, refer to **SEC CAUTION LIGHT** page C-8

FLAMEOUT LANDING

- PFD	chk for engine Fire (Eject)
- Stores	Jettison (if required)
- EPU switch	ON
- AIR Sorce Knob	RAM
- Glide AoA	6° AoA (Glide Ratio: 1,4 Nm/1000 Ft)
- Best Glide Speed	210 kts (add 4kts for every 1000 lbs)
- Radio Tower	Declare Emergency - CNIPI
- Glide Path	Between 11° and 17°
- LG Handle	Down
- ALT GEAR handle	PULL (if required)
- Flare	Decrease Airspeed to 160 kts
- Final Approach Checks	

After touchdown:

- Drag chute (NE- NO)	DEPLOY
- Hook sw	DOWN (if required)

If brakes/JFS accumulator braking is used:

- Stop straight ahead and set parking brake

FUEL/ STORE	ALTITUDE - FEET AGL		KIAS		
	WT	HI	LOW	LG-UP	LG-DN
3.000	7.000	3.000	200	190	180
4.000	7.500	3.250	205	195	185
5.000	8.000	3.500	210	200	190
6.000	8.500	3.750	215	205	195
7.000	9.000	4.000	220	210	200
8.000	9.500	4.250	225	215	205
9.000	10.000	4.500	230	220	210
10.000	10.500	4.750	235	225	215

- Brake pedal deflection of 1/16 inch activates the brakes and bleeds the brake/JFS accumulators. To avoid brake activation and loss of accumulator fluid, do not rest feet on the brake pedals.

- Do not attempt to taxi clear of the runway. Loss of brake/JFS accumulator pressure results in the inability to stop or steer the aircraft.

OUT OF CONTROL RECOVERY

In the event of a departure from controlled flight, accomplish as much of the following as required to effect a recovery:

- | | |
|-------------|--------------|
| 1) Controls | Release |
| 2) Throttle | MIL if in AB |

if in an inverted deep stall:

- | | |
|-----------|------------------------|
| 3) Rudder | Opposite Yaw direction |
|-----------|------------------------|

if still out of control:

- | | |
|---------------|-----------------|
| 4) MPO switch | OVRD and HOLD |
| 5) Stick | Cycle in phase. |

Other considerations:

- Recovery from a deep stall condition will present a low airspeed situation in which the aircraft may require more than 6.000 ft of altitude to attain level flight.
- If other than AB - do not move the throttle.
- Neutralize rudder as rotation stops and then use as required to minimize rotation.
- Maintain firm pressure.
- The MPO switch must be held in the OVRD position until the deep stall is positively broken as evidenced by the pitch rate stopping, AoA in the normal range (-5 to 25°) and airspeed increasing above 200 kts
Early release of the MPO may delay recovery!

CONTROLLABILITY CHECK

- | | |
|---|----------------------------------|
| 1) Attain safe altitude | |
| 2) Gross weight | Reduce (as required) |
| 3) LE FLAPS switch | Lock (if required - LEF damage) |
| 4) Determine optimum configuration available for landing. | |
| 5) Stores | Selective Jettison (if required) |
| 6) Slow only to the AoA/airspeed which allows acceptable handling qualities | |

Other considerations:

- In the event that structural damage of unknown extent is encountered, consider accomplishing applicable EJECTION (TIME PERMITTING)
- If the aircraft is not controllable down to a reasonable landing speed (*given consideration to weather, runway conditions, facilities, pilot experience and fatigue, ...*) an ejection is recommended.

PILOT FAULT LIST

	PLF NAME	CAUSE	SYMPTOMS	CORRECTIVE ACTIONS REMARKS SEE EP CHECKS
FLCS WARNINGS	>STBY GAIN<	Dual Air Data failure	<i>FLCS in Stby Gains</i>	FLCS RESET - Land ASAP
	>FLCS DUAL FAIL<	FLCS Electr, Snsr, pwr failure	<i>None</i>	Not yet implemented
	>FLCS LEF LOCK<	LEFs locked or dmgd	<i>possible asymmetry</i>	chk FLCS panel LEF sw FLCS RESET
	>FLCS AP FAIL<	Autopilot has failed	<i>Autopilot unavailable</i>	Do not use Autopilot
	>FLCS BIT FAIL<	Failed FLCS BIT	<i>fault only on ground</i>	Not resettable through FLCS reset rerun FLCS BIT
	>SWIM ATTD FAIL<	INS attitude estimator fail	<i>TFR Auto fly-up</i>	Discontinue TFR ops Refer to TFR failure
	>SWIM NVP FAIL<	Navigation pod self mode failure	<i>TFR Auto fly-up</i>	Discontinue TFR ops Refer to TFR failure
	>SWIM RALT FAIL<	SDC monitor failure or CARA data bad	<i>TFR Auto fly-up</i>	Discontinue TFR ops Refer to TFR failure
FLCS CAUTION	FLCS ADC FAIL	Air data input signal failure	<i>Second ADC fail fires STBY GAIN and latch ADC fail against FLCS RESET attempt</i>	FLCS RESET - Land ASAP
	ISA RUD FAIL	Rudder servo actuators malfunction	<i>rudder problems</i>	FLCS RESET - Land ASAP
	ISA ALL FAIL	Controls servo actuators malfunction	<i>flight controls problems</i>	FLCS RESET - Land ASAP
	FLCS HOT TEMP	excess temperature in FLCS branches	<i>NONE</i>	Not yet implemented
	FLCS SNGL FAIL	single electronic or sensor failure in FLCS	<i>Only on Ground</i>	FLCS RESET
	FLCS MUX DEGR	FLCS BIT detected degradation of FLCC MUX interface. When attempting FLCS bit without FCC/MMC power		Not resettable through FLCS reset rerun FLCS BIT
ENGINE	ENG AI FAIL	Engine Anti-ice valve failed (Not implemented yet)		avoid areas of suspected icing conditions
	ENG A/B FAIL	Afterburner system failure	<i>No afterburner</i>	Go SEC mode LAND ASAP
	ENG AI TEMP	Possible engine damage (PW229)		

PILOT FAULT LIST

PLF NAME	CAUSE	SYMPTOMS	CORRECTIVE ACTIONS REMARKS SEE EP CHECKS
AMUX BUS FAIL	AMUX BUS failure	<i>FCC is forced to NAV</i>	Discontinue offensive operations
BLKR BUS FAIL	RWR system failure	<i>RWR is blind</i>	Discontinue offensive operations
BMUX BUS FAIL	BMUX BUS failure	<i>FCC is forced to NAV</i>	Discontinue offensive operations
CADC BUS FAIL		<i>No airdata available</i>	
CMDS BUS FAIL	CMDS bus failure	<i>CMDS nonoperational</i>	Discontinue offensive operations
CMDS DSPN DEGR	CMDS failure with chaffs	<i>Chaff release nonoperational</i>	at pilot discretion
CMDS INV DEGR	CMDS failure with flares	<i>Flare release nonoperational</i>	at pilot discretion
DLINK FAIL	Datalink system failure	<i>Datalink nonoperational</i>	at pilot discretion
DMUX BUS FAIL	DMUX BUS failure	<i>HUD, HMS, MFDs nonoperational</i>	RTB
EGI NAV FAIL	EGI failure	<i>GPS/INS nonoperational</i>	Go bakup system (CNI)
EPOD SLNT DEGR	ECM system failure	<i>ECM nonoperational</i>	Discontinue offensive operations
FCC FAIL	FCC Failure	<i>Fire Control Computer nonoperational</i>	Discontinue offensive operations
FCC TEMP	Overheat of the FCC system	<i>Possible damage if not shut off</i>	SHUT OFF FCC, check airtsource
FCR BUS FAIL	FCR Failure	<i>FCR nonoperational</i>	Discontinue offensive operations
FCR XMTR FAIL	FCR transmit operation failure	<i>FCR not emitting</i>	Discontinue offensive operations
FLCS BUS FAIL	FLCS System Failure	<i>illuminates AVIONIC FAULT light instead FLCS FAULT light</i>	Can't use PFD to review FLCS fault, use MFD Test page
FMS FAIL	Fuel Management system failure	<i>Fuel bingo capability degraded</i>	Monitor Fuel situation
GPS BUS FAIL	GPS failure	<i>GPS nonoperational</i>	at pilot discretion
HMCS LBUS FAIL	Left Bus HMCS failure	<i>Loss of HMCS</i>	at pilot discretion
HMCS RBUS FAIL	Right BUS HMCS failure	<i>Loss of HMCS</i>	at pilot discretion
HMCS TEMP FAIL	Overheat of the HMCS system	<i>HMCS will shutdown</i>	at pilot discretion
HUD BUS FAIL	HUD system failure	<i>No HUD</i>	RTB
IFF BUS FAIL	IFF system failure	<i>IFF nonoperational</i>	Not implemented
INS BUS FAIL	INS failure	<i>INS nonoperational</i>	Go bakup system (CNI)

AVIONICS FAULTS

PILOT FAULT LIST

PLF NAME	CAUSE	SYMPTOMS	CORRECTIVE ACTIONS REMARKS SEE EP CHECKS	
AVIONICS FAULTS	MFDS LFWD FAIL	MFD LEFT failure	<i>Left MFD nonoperational</i>	at pilot discretion
	MFDS RFWD FAIL	MFD RIGHT failure	<i>Right MFD nonoperational</i>	at pilot discretion
	MMC DEGR	Mission Modular computer	<i>MMC nonoperational</i>	RTB
	MMC TEMP	Overheat in the MMC system	<i>Possible damage if not shut off</i>	SHUT OFF MCC check airtsource
	MSL SLAV FAIL	Missile Slave failure	<i>Missile seeker will not follow radar line of sight</i>	use boresight mode
	NVP FAIL	Navigation pod failure	<i>Navigation pod inoperative</i>	Discontinue TFR operations
	NVP FLIR FAIL	FLIR failure	<i>FLIR inoperative</i>	Discontinue TFR/FLIR operations
	NVP TFR FAIL	TFR failure	<i>TFR inoperative</i>	Discontinue TFR operations
	RALT BUS FAIL	Radar Altitude system failure	<i>No Radar Altimeter</i>	at pilot discretion
	RWR BUS FAIL	RWR BUS failure	<i>RWR nonoperational</i>	reset RWR - RTB
	RWR DEGR	Problem in the RWR system	<i>All RWR quadrants inoperable</i>	reset RWR - RTB
	SMS BUS FAIL	SMS BUS failure	<i>All functions lost except EJ, SJ</i>	RTB
	SMS STA 1-9 DEGR	Station 1-9 degraded	<i>Command not executed correctly</i>	Discontinue offensive operations
	SMS STA 1-9 FAIL	Station 1-9 failure	<i>Station 1-9 operation inhibited</i>	Discontinue offensive operations
	SMS TEMP	Overheat in the SMS system		SHUT OFF SMS check airtsource
	TCN FAIL	Tacan system failure	<i>TACAN nonoperational</i>	use INS steerpoint
	TGP BUS FAIL	TGP system failure	<i>Total loss of TGP function</i>	Discontinue TGP operations
	TGP HADF FAIL	TGP unable to handoff to W	<i>No AGM-65 hand off or slaving</i>	Use Maverick in VIS Mode
	UFC BUS FAIL	DUFC system failure	<i>DED and PFLD nonoperational</i>	reset UFC
	UFC TEMP	UFC system failure	<i>Possible damage if not shut off</i>	SHUT OFF UFC, check airtsource

