

# **F-16** Block 50/52 (GE129)

## **Checklists - Main Volume**

Not suited for Real Operations Made for FALCON 4 and suitable only for BMS 4.34 version

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#### Annex1: Blank page for notes

### <u>NOTE:</u>

## Refer to Cockpit Interior check Rev 1902 for placing all switches before entering the aircraft

### **VERIFY CHECK**

The following items are important switches that if not correctly positioned, could cause a safety hazard and/or improperly operated systems during engine start.

Please refer to cockpit / interior checklist for a full cockpit check.

- 1. FUEL MASTER switch
- 2. ENGINE FEED knob N
- 3. EPU switch
- 4. ENG CONT switch
- 5. THROTTLE
- 6. LD GEAR handle
- 7. HOOK switch
- 8. MASTER ARM switch
- 9. AIR SOURCE knob
- ON Guard down NORM NORM – Guard down PRI – Guard down OFF Confirm Down and locked UP OFF
- NORM

### **BEFORE ENGINE START**

1. MAIN PWR switch	BATT :
2. FLCS PWR TEST switch	Verify FLCS RLY light ON TEST and hold Verify lights ON ACFT BATT TO FLCS FLCS PMG FLCS PWR (4)
3. FLCS PWR TEST switch 4. MAIN PWR Switch	Verify FLCS RLY light OFF Release MAIN PWR: Verify lights ON ELEC SYS HYD/OIL PRESS FLCS RLY
<ol> <li>5. EPU GEN &amp; EPU PMG lights</li> <li>6. Communications</li> <li>7. Canopy</li> <li>8. Chocks</li> <li>9. COM1 &amp; COM2 Vol knob</li> <li>10. Backup UHF radio</li> </ol>	SEC ENGINE Confirm OFF All set to assigned UHF Backup Closed – locked - no light Confirm in place Set both CW (turns radio ON) Establish comms if required

#### Note:

To prevent possible depletion of battery power, do not allow MAIN PWR switch to remain in BATT or MAIN PWR for more than 5 minutes without engine running.

### **STARTING ENGINE (GE129)**

- 1. JFS
- 2. THROTTLE
- 3. Idle Detent
- 4. SEC caution light
- 5. FTIT
- 6. ENGINE warning light
- 7. JFS Switch
- 8. HYD/OIL PRESS light

START 2 check JFS light ON within 30 seconds Advance to IDLE at 20% RPM minimum. Toggle (Unless idle/cutoff code enabled in bmsconfig) Check OFF around 20% RPM Monitor: Rapid increase past 750°= HOTSTART OFF at 60% RPM Confirm OFF (snaps OFF at 55% RPM)

OFF between 15 and 70% RPM

Note :

Engine light-off occurs within 10 seconds after throttle advance and is indicated by an airframe vibration and an increase in RPM followed by an increase of FTIT.

### ENGINE CHECK AT IDLE

- 1. FUEL FLOW
- 2. OIL pressure
- 3. NOZ POS
- 4. RPM
- 5. FTIT
- 6. HYD PRESS A&B
- 7. Throttle cutoff release

700 – 1700 PPH MIN 15 PSI Greater than 94% 62 – 80% Below 650°C 2850 - 3250psi - around 12 O'clock position Check – Attempt to retard the throttle to OFF without depressing the cutoff release.

### AFTER ENGINE START

1. Gear lights

### Confirm 3 greens

- 2. TEST switch panel check:
  - PROBE HEAT switch: PROBE HEAT: check caution light OFF

TEST: check caution light flashes OFF

- Fire and Overheat Detect Button: TEST & HOLD
  - Check ENG FIRE Warning light ON
  - Check OVER HEAT caution light
  - Check MASTER CAUTION light ON

- MAL&IND LTS button: DEPRESS and HOLD Proper VMS operation is verified by the presence of each word in priority sequence.

#### Caution:

EPU checks (21) might be performed before Avionic power on to avoid possible sub system failure due to EPU power surge

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3.	AVIONICS POWER Pa a. MMC (FCC) switch b. ST STA (SMS) swi c. MFD switch: d. UFC switch: e. DL switch: f. EGI:	n: ON
4.	<b>SNSR PWR panel:</b> a. LEFT HDPT switch: b. RIGHT HDPT switch c. FCR switch: d. RDR ALT switch	As required
5.	HUD Panel:	As desired Set HUD SYM WHEEL ON
6.	IFF PANEL	CNI (C&I) knob: UFC IFF MASTER: STBY
7.	DTC:	<b>Load</b> (always load the DTC prior to setting up the UFC subpages)
8.	UFC radio:	Set COM1 & COM2 frequency as briefed.
9.	MFL:	Clear (MFD TEST page)
10.	e. RPM: f. THROTTLE:	IDLE ENGAGE, no PARKING BRAKES SEC ON - Nozzle: Less than 5% Stabilized Snap to MIL then snap to IDLE when RPM reaches 85%. Check for normal indication and smooth operation less within 30 sec after selecting SEC. PRI

#### 11. FLIGHT CONTROLS: CYCLE & CHECK

#### 12. FLCS BIT:

#### Initiate and monitor.

Position BIT switch to BIT. The RUN light on FLCP illuminates. At successful completion of BIT (approximately 45seconds) the RUN light goes OFF, the BIT switch returns to OFF and the FAIL light and FLCS warning light remain OFF. Caution & WARNING lights might be displayed during BIT test. A BIT pass message appears on the FLCS MFD page

#### Note:

If the FLCS BIT reports a failure through the FLCS warning light and the FAIL light on the FLCP, the failure cannot be reset. The BIT must be reinitiated. In this case, the RUN light and the FAIL light are simultaneously illuminated for the first steps of the BIT, after which the FAIL light goes OFF unless BIT detects a subsequent failure.

#### 13. SPD BRK switch: Cycle

#### 14. WHEELS down lights: Three green

#### 15. FUEL QTY SEL knob Check

The following Values are based on JP-4 or JP5/8

a. Totalizer qty: b. TEST:	Check according to flight planning. FWD/AFT fuel low lights ON Tot: 6000 lbs A/L – F/R: 2000 lbs
c. NORM:	A/L : 2675/2810 lbs
	F/R: 3100/3250 lbs
d. RSVR:	both 460/480 lbs
e. INT WING:	both 525/550 lbs
f. EXT WING:	both 2300/2420 lbs (if 370-gallon carried)
	both 3750/3925 lbs (if 600-gallon carried)
g. EXT CTR:	F/R: 1800/1890 lbs
	A/L: 0 lbs
h. FUEL QTY SEL:	NORM

#### 16. EPU FUEL QTY: 95 – 102%

#### 17. AVIONICS (Program as required and verify (manual or DTC))

a. Threat Warning Aux: ON b. CMDS RWR switch: ON

JMR switch: CHAFF cmds switch: FLARE cmds switch: MODE knob: PGRM knob:

#### c. ECM switch:

- d. Threat Warning prime Handoff MSL Launch
- SYS TEST e. MFD
  - S-Jettison: Master Mode:
- f. AUDIO COM1&2 Volume

MSL /Threat Volume ILS Volume knob

g. DED – UFC ALOW – MSL – BINGO: CRUS – TACAN - IDM: Bullseye: ON ON ON Set as required Set as required Set as required (OPR)

Diamond Float mode (short press) Press to test Press to test

Preset Jettison and exit S-J mode Preset SMS as required for each MM

- SET & check
- SET & check
- SET & check
- SET & check (all headset sounds)

Check M-Sel TOS and Check SET & Mode Selected.

#### 18. DBU CHECK (AFTER FLCS BIT completed)

- a. DIGITAL BACKUP switch:
- b. DBU ON warning light:
- c. Operate controls:
- d. DIGITAL BACKUP switch:
- e. DBU ON warning light:

#### **19. TRIM CHECKS**

a. TRIM AP DISC switch:

- b. Stick TRIM buttons:
- c. TRIM AP DISC switch:
- d: Stick TRIM buttons:

e. Rudder trim check:

BACKUP Verify ON & WARN displayed in HUD All surfaces respond normally OFF Verify OFF

DISC Activate in

Activate in ROLL and PITCH No control surface, no indicator motion NORM Check and centre Control surface & indicator motion YAW TRIM knob: Check and centre

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#### **20. AIR REFUEL CHECKS**

a. AIR REFUEL switch: OPEN CHECK RDY light ON, DSC light OFF b. A/R DISC button: Depress DSC light ON; RDY Light OFF then 3sec later, RDY light ON, DSC light OFF c. AIR REFUEL switch: CLOSE

#### 21. EPU CHECK

- a. Request EPU PIN removal from the Ground ATC menu
- b. EPU GEN and EPU PMG lights: Confirm OFF

c. O <sup>2</sup> :	100%
d. Toe brakes:	Engage
e. EPU switch:	OFF
f. EPU switch:	NORM
g. THROTTLE:	80%
h. EPU/GEN TEST switch:	EPU/GEN and hold.
Check lights:	EPU AIR light ON
	EPU GEN and EPU PMG light OFF
	FLCS PWR lights ON
	EPU RUN light ON within 5 seconds
i. EPU/GEN TEST switch:	Release (OFF)
j. THROTTLE	IDLE
k. O²:	NORMAL
If no run light within 10 sec r	einitiate test with throttle at IDLE +15%

If no run light within 10 sec, reinitiate test with throttle at IDLE +15%

#### 22. OBOGS CHECK (At least 2 minutes after engine start)

	<ul> <li>a. OBOGS BIT switch:</li> <li>b. VERIFY LIGHT:</li> <li>c. Pressure:</li> <li>d. Mode Lever:</li> <li>e. Diluter lever:</li> <li>f. EMERGENCY lever</li> <li>g. FLOW indicator</li> </ul>	CHEC	DW (right brow) ON for 10sec then OFF ( 25-40 PSI N (as required)	
23.	MPO CHECK a. Push stick forward b: Depress and hold M c: Release MPO switch	PO	Check stabilizers positions Check that stabilizers have moved higher Check stabilizers in original position.	

#### 24. ATIS

Listen to departure airbase VHF ATIS freq

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### **BEFORE TAXI**

1. Landing Lights	ON
2. Drift Co Switch	Set Norm
3. INS/EGI Check	Check ALIGN flashes in HUD
4. INS/EGI switch	NAV position
5. Aircraft Lights	As SOP (AC ON – Wing/fus: ON – FLASH)
6. QNH	Confirm QNH received from lead or ATC
7. Radio	Remove chocks
	Get clearance to taxi from ATC Ground

<u>Note 1:</u> Beware of spending excessive time checking the aircraft. Always refer to your next TOS.

Note 2: Be sure the AUX flag disappears from the ADI before scrambling. EGI will be accurate 90 seconds after initial alignment (AUX flag OFF) Note 3: Excessive use of wheel brakes and/or differential braking is to be avoided. Maximum safe taxi speed on ramps is 20Kts. (15kts in turns) Max 80% RPM

### TAXI

Check ON

1.	NoseWheel Steering	
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2. Seat

3. Wheelbrakes

4. IDM

Armed – Caution light OFF Test Check in sequence

Caution:

Pods (TGP) should be stowed for Taxi & Take-off

### IF CHECKS

- 1. Pressure Instruments
  - AIRSPEED: Zero
    - ALTIMETER: Set QNH
    - VVI: Zero.
- 2. Gyroscopic Instruments
  - TURNS: Needle/balls HSI Following
- 3. Navigation Instruments
  - NAV: Check correct bearings for WAYPOINTS
  - TACAN: Set TCN channel and Course for Departure
- 4. Miscellaneous:
  - HUD Compass tape Track heading change
  - HSD Compass tape Track heading change
  - HSI Compass tape Track heading change
  - STDBY Compass Track heading change
  - Clock and Chrono : Check and Reset
  - Engine instruments: Check

### **BEFORE TAKE OFF**

<ul> <li>ALT FLAPS switch</li> <li>MANUAL TF FLY UP switch</li> <li>Trims</li> <li>Trims</li> <li>Speedbrake</li> <li>Stores Config Switch</li> <li>GND JET ENABLE switch</li> <li>Radar Altimeter</li> <li>External Tanks</li> <li>Flight Controls</li> <li>Flight Controls</li> <li>Flight Controls</li> <li>Altimeter</li> <li>Check PITCH and YAW centred, ROLL as required</li> <li>Check (DED) &amp; NORM (IFF pane</li> <li>Check closed</li> <li>Cat1/Cat3 as required</li> <li>As required</li> <li>Set ON</li> <li>Flight Controls</li> <li>Cycle</li> <li>Oll pressure</li> <li>Check PSI (min 15)</li> <li>All warning &amp; caution lights</li> <li>Check OFF</li> <li>UHF Tower</li> <li>Commit to memory</li> </ul>	
NORMAL TAKE OFF	

1. HSI	Check on Runway heading
2. Toe brakes	HOLD
3. RPM 85-90%	Check gauges & lights
	Oil pressure increase – nozzle closing
	Engine instruments in the green
	NO CAUTION / NO WARNING
4. Brakes	Release
5. Throttle	Full MIL, AB as required
6. NWS	Disengage at 70 kts
7. Rotation	As computed
8. Positive Climb	(VSI + Alt) Gear Up

- Normal engine operation during MIL takeoff is indicated by an exhaust nozzle position of 15% or less after 5 seconds at MIL.
- Normal engine operation during an AB takeoff is indicated by the nozzle preopening up to 10% more than MIL when AB is first selected. AB is indicated by an increasing fuel flow and nozzle position.
- Apply power smoothly, note computed speeds for 8-12 degrees pitch rotation as briefed.
- Do not exceed 14 degrees pitch in rotation.
- Insure LG is up and locked before exceeding 300 knots.
- Since TEF and LG retract at the same time, do not rush LG retraction after takeoff, a significant loss of lift may occur.

### **AIRBORNE / CLIMB**

- 1. U/C
- 2. Engine
- 3. FUEL
- 4. Radio
- 5. DED
- 6. DRIFT CO Switch
- 7. Wingman
- 8. Altimeter

Check Retracted - handle light Off Gauges in the Green Verify Tank feeding and check NORM Call airborne (UHF departure) or visual (VHF wingman) next steerpoint Set Drift Set Formation and Route QNE (29.92 – 1013) at transition altitude

### **AERIAL REFUELLING**

#### Tanker rejoin :

- 1. Radio
- 2. TCN
- 3. TCN Mode
- 4. Heading
- 5. Altitude

#### **Before Precontact:**

- 6. Master ARM
- 7. Sensors (FCR)
- 8. EW Mode knob & ECM
- 9. RDR ALT
- 10. EXT Lights
- 11. ANTI COLLISION light
- 12. AIR REFUEL switch
- 13. AR status indicator
- 14. Seat

#### Contact:

- 15. Position
- 16. AR status indicator
- 17. Fuel Transfer

#### Disconnect:

- 18. A/R DISC button
- 19. Throttle

#### Post Air refuelling:

- 20. Radio
- 21. Seat
- 22. Air Refuel switch
- 23. Master Arm / SMS
- 24. Tacan
- 25. EW Mode knob & ECM
- 26. FCR
- 27. RDR ALT
- 28. EXT Lights

Set AAR & Request Refuelling. Select TCN Channel SET A/A TR Course to Intercept (HSI) Tanker ALT – 1000 Ft

Check Safe Check Nose Cold (STBY) STBY and OFF STBY DIM (night) – STEADY OFF at Night Open Check RDY Light On SAFE (As desired)

Follow Director Lights Check AR/NWS Light On Monitor (List - #2)

Depress Decrease power

Call DONE refuelling ARM CLOSE As required As required As required As required As required As required

<u>Note: Tanker overtake speed</u> Over 1Nm : 100 Kts overtake		
••••	000 Ft : 60Kts	
	000 Ft : 50Kts	
	d by 10 Kts for every 1000 Ft closure.	
When within 1000 Ft to 1	anker: Do not exceed 10Kts overtake.	
FENCE IN (AG)		
1. Master Mode	AG	
2. Master ARM	Set ARM	
3. LASER Switch	ON if required	
4. Sensors (FCR/TGP/FLIR)	As Required	
5. Chaff/ Flares PGM mode	As Required	
6. ECM Jammer	As Required	
7. RWR/EWS	Set	
8. RWR Mode	Diamond Float mode or as required	
9. PFLD	Check no Faults	
10.Master A/C Lights	Check Off	
11. IFF	Check Norm and set Mode as required	
12. IDM	Initiate CONT if required	
13. A/G Weapons	Check release parameters	
14. SPI	Cancel slew : CZ (Cursor Zero)	
15. Volumes		
	Check threat, com, msl vol	
16. Missile power	Check ON if required – double check	
17. AIM-9 Cooling head	Check Cool	
18. CAT config	Check correct	
19. Master mode	MRM once all AG system set	

### **INITIAL POINT (AG)**

AG

- 1. Master Mode
- 2. Master Arm
- 3. Sensors
- 4. MFDs
- 5. Weapons
- 6. Target
- 7. Egress plan
- 8. Action point
- 9. Countermeasures
- 10. AVTR

Double check ARM SET SET SET

- Capture
- Review
- Initiate attack
- Initiate program as required As required

### EGRESS

- 1. Heading
- 2. Caution Panel
- 3. Master Mode
- 4. Awacs
- 5. MFD
- 6. Store config
- 7. ECM Jammer
- 8. EWMS mode+pgr
- 9. Flight
- 10. DED A-LOW
- 11. Flight

Check to friendly airspace Check for damage MRM Check Nearest threat Cycle As Required Set Cat I (if possible) As Required At pilot discretion Rejoin / Cover Set for Egress Check Status & Fuel - Rejoin

Note:

When engaging an A/A threat, Jettison remaining A/G stores, and select Cat 1 config. If threat is less than 10 Nm, Use Dogfight Mode

### FENCE OUT

- 1. Threat
- 2. Master ARM
- 3. Laser switch
- 4. Master Mode
- 5. ECM Jammer
- 6. RWR/EWS Mode
- 7. PFLD
- 8. Master A/C lights
- 9. IDM
- 10.IFF

Assume A/A Threat - AWACS According to remaining threat OFF NAV OFF (According to Threat) As required Check no Faults ON As required Check NORM and set Mode as desired

### **IF CHECKS MNEMONIC**

#### Holding/enroute

- W Weather
- H Holding
- O Obtain app clearance
- L Letdown plate review
- D Descent checks
- S Speeds

#### Approach setup

- M Minimas
- A Altimeter
- I Initial descent rate
- L Letdown plate
- M Missed Approach
- A Approach speeds
- N Navaids

### DESCENT

4. AltimeterSet & C5. ApproachReview6. Instr Mode Select switchAs requ7. TACAN channelSet acc8. HSI course and bearingsSet acc9. GPSInput co	e escending at TOD computation check (transition)
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Note:

Listen first to ATIS on VHF, Contact ATC approach once within 30Nm of landing airbase.

Request OVERHEAD if VFR or Request VECTORS for VISUAL APPROACH if VFR Request UNRESTRICTED APPROACH or Request VECTORS for INSTRUMENT APPROACH if IFR

ATC must be contacted prior to landing or the airport lights will not be turned ON.

### APPROACH

1. ATC

2. Fuel

3. At IAF

30 Nm Check Quantity/Transfer/Balance Follow ATC instructions

Initiate Contact with Approach within

Caution:

Pods (TGP) should be stowed for Landing & Taxi

### **BEFORE LANDING**

- 1. DED
- 2. Gear
- 3. A/C LDG/Taxi Lights
- 5. Speed brake
- Drift Co switch
- 7. Traffic

Display wind Check 3 greens - handle light off Check ON As required Set Norm Announce traffic in sight if required

### FINAL APPROACH

- 1. Speed brake
- 2. Gear
- 3. Speed
- 4. Touchdown
- 5. Landing clearance

Extended Down 3 greens On speed AOA (green 11° AOA) 11 to 13° AOA Received

Note:

Final approach speed/13° AOA Cross Check: 136 kts + 4 kts per 1000 Pound of FUEL/STORE weight

### LANDING

- 1. Speed
- 2. AOA
- 3. Speed 90-100 kts
- 4. Wheel brakes
- 5. NWS

Throttle Idle Maintain Max 13° for aerobraking Let the nose wheel drop on the ground Maintain gentle AFT stick As required Engage at control speed (70Kts max)

Note:

Smoothly apply moderate to heavy braking to decelerate to taxi speed. Using less than moderate braking increases the likelihood of a hot brake(s)

### AFTER LANDING (VACATING RWY)

- 1. Speedbrake
- 2. PROBEHEAT switch
- 3. IFF
- 4. ILS
- 5. Landing/ Taxi Lights
- 6. Radar Alt
- 7. Radio

CLOSE OFF HOLD & STBY OFF As required OFF Clearance to taxi back received from GROUND UHF

### PRIOR TO ENGINE SHUT DOWN

1. Radio (ATC menu) Request chocks in place Request EPU pin IN 2. Ejection Seat Safe OFF 3. RWR PWR 4. JMR&ECM PWR OFF 5. Chaff & Flares CMDs OFF 6. HUD ICP SYM knob OFF 7. L/R Hardpoints Power OFF 8. FCR Power OFF 9. MMC (FCC) Power OFF 10. ST STA (SMS) Power OFF 11. MFD Power OFF 12. UFC/DED Power OFF 13. D/Link Power OFF 14. EGI OFF Request Pin from ATC menu 15. EPU & OFF 16. IFF OFF 16. C&I switch BACKUP

### **ENGINE SHUT DOWN**

4.	AIR Source Radios & Volume knobs Throttle Throttle (Idle Detent) JFS RUN light	Set OFF All OFF - Stabilize at 75-78% RPM for 5-10 sec - Idle to allow nozzle to open (1 to 2 sec) Cut OFF position Check
Aft	er Main GEN drops offline:	
7. 8. 9. 10	EPU Light check Engine FEED switch Master LIGHT switch Canopy . Main Power . Oxygen regulator	EPU GEN / EPU PMG lights OFF Set OFF OFF Open OFF -2 clicks when RPM < 20% OFF & 100%

### HOTPIT REFUEL

### **Prior to HOTPIT Entry**

- 1. AFTER LANDING CHECKS
- 2. Radio Frequency
- 3. AIR REFUEL switch
- 4. TACAN power knob
- 5. GND JETT ENABLE switch

### Prior to Hot Refuelling

- 1. EPU safety PIN
- 2. Canopy
- 3. Radio

### **During Hot Refuelling**

2. Radio freq

3. Flight controls

#### Hot Refuelling complete

- 1. AIR REFUEL switch
- 2. EPU GEN & EPU PMG lights
   3. EPU safety PIN
- 3. EPU Sai
- 4. Taxi

Complete Check proper ATC frequency tuned Open ; RDY light ON Power OFF OFF

REQUEST IN (ATC menu) As desired request Hot PIT Refuelling

Monitor ATC freq & guard Do not touch

CLOSE Confirm OFF REQUEST OUT (ATC menu) Taxi clear of the hotpit area and contact ground

#### Note:

Hotpit refuelling requires ground crew to establish intercom communication, inspect tires and install the EPU safety pin.

### SUPPLEMENTAL PROCEDURE : ILS

- 1. ILS Power
- 2. DED
- 3. ILS frequency
- 4. CRS setting
- 5. Cmd STRG
- 6. HSI
- 6. INSTR Mode knob

Check ON (Audio 2 panel) Select T-ILS page Enter ILS frequency and ENTR Enter approach course Check Mode selected Set Inbound localizer course ILS/TCN or ILS/NAV

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