

TO 1F-15C-1CL-1 BMS

FLIGHT CREW CHECKLIST

**BMS SERIES
F-15C/D**

BENCHMARK SIMS - FALCON BMS

Not suited for Real Operations.
Suitable only for FALCON BMS.

19 OCTOBER 2023

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INTRODUCTION

This checklist is a step-by-step guide in abbreviated form for use as a reference to ensure accomplishment of selected tasks by a predetermined sequence procedure. The intent of this checklist is to eliminate the probability of omission of a step in the accomplishment of the intended task.

The procedures contained herein are presented in the shortest practical form for use by qualified personnel and are not intended to provide full technical instructions.

This checklist does not replace the amplified version of the procedures in the Flight Manual and it is not intended as a stand-alone document. It assumes the reader already possesses a basic, working knowledge of F-15C/D aircraft. For a complete description of systems, the reader should consult the applicable documentation.

To fly the aircraft safely and efficiently, read and thoroughly understand why each step is performed and why it occurs in a certain sequence.

Changes to the checklist are made periodically to reflect functional changes to the Flight Manual, aircraft systems, procedures, or software, and are published by authorized authorities through official distribution channels.

Please note that the F-15C in BMS is under development process and not finished yet to its desired state. This document will reflect the progression and will be constantly updated.

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SECTION N

NORMAL PROCEDURES

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COCKPIT DESIGNATION CODE

System and/or component effectivity for a particular aircraft version/cockpit and engine version is denoted by a letter code enclosed in a box located in the text or on an illustration. The symbols and designations are as follows:

AIRCRAFT, COCKPIT

No code: F-16C and F-16D aircraft

C F-15C aircraft

D F-15D aircraft

DF F-15D aircraft, forward cockpit

DR F-15D aircraft, rear cockpit

An asterisk (*) preceding steps is used to highlight procedures for **D** aircraft which apply to both

DF Front and **DR** Rear cockpits.

ENGINE

PW 220 Pratt & Whitney F100-PW-220 engine.

PW 229 Pratt & Whitney F100-PW-229 engine.

SOFTWARE

FALCON BMS

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WARNINGS, CAUTIONS, NOTES, COMMS

The following definitions apply to Warnings, Cautions, Notes, and Comms found throughout the manual:

WARNING Operating procedures, techniques, etc., which could result in personal injury or loss of life if not carefully followed.

CAUTION Operating procedures, techniques, etc., which could result in damage to equipment if not carefully followed.

NOTE An operating procedure, technique, etc., which is considered essential to emphasize with additional information.

EPU CHECK **WARNING**

Aircraft system, component, procedure, that special attention, techniques, etc., is required.

USE OF WORDS AS DESIRED AND AS REQUIRED:

As desired allows pilot preference in switch/control positioning.

As required indicates those actions which vary based on mission requirements or dedicated SOP instructions.

PREFLIGHT CHECK

1. Speedbrake chaff loading – AS REQUIRED.

EXTERIOR INSPECTION

Refer to figure N-3, page N-15.

COCKPIT ACCESS

1. Extend canopy external control handle by pushing release button in center of handle.
2. To raise canopy, rotate handle AFT.
3. To lower canopy, rotate handle FWD.

BEFORE ENTERING COCKPIT

1. External electrical power – OFF
2. Canopy initiator indicator – NOT FIRED
3. Ejection controls safety lever – LOCKED
4. Seat hose quick disconnect coupling – CHECK SECURE
5. Safety pins – REMOVED
6. Auto/manual seat kit deployment selector- AUTO
7. Radio beacon auto/manual selector – AS DESIRED
8. Restraint emergency release handle – FULLY DOWN
9. Battery window – NO RED SHOWING
10. (F-15 A/C) Internal canopy manual unlocking handle – STOWED / PIN IN

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SECTION X

FAMILIARIZATION PROCEDURES

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This section is furnished for familiarization use. It will normally be inserted between BEFORE ENTERING COCKPIT and COCKPIT INTERIOR CHECK. It may also be inserted in another part of the checklist, removed, parts removed, or discarded as desired.

COCKPIT INTERIOR CHECK	X-2
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COCKPIT INTERIOR CHECK

1. * Loose or foreign objects - Check.
2. * Harness and personal equipment - Fasten.
3. * Rudder pedals - Adjust.

Left Console

- a. CC - OFF.
- b. Emergency air refueling handle/switch guard –
DOWN
- c. Intergrated communications controls –
AS REQUIRED
- d. IFF antenna select switch – BOTH
- e. IFF – ALL MODES OUT
- f. AAI – AS REQUIRED
- g. EW panel – AS REQUIRED
- h. External light controls – AS REQUIRED
 - (1) Anti-collision – ON
 - (2) Formation - OFF
- i. Flap switch – UP
- j. Throttles – OFF
- k. Friction lever – AS DESIRED
- l. Radar controls – AS DESIRED
 - (1) Rader power knob - OFF
- m. Fuel control panel – SET
 - (1) Fuel dump switch – NORM
 - (2) Wing switch – NORM
 - (3) Center switch - NORM
 - (4) Slipway switch – CLOSE
- n. NCTR enable switch – AS REQUIRED
- o. V-MAX switch – COVER CLOSED AND SAFETY
WIRED
- p. CAS switches – ON
- q. Miscellaneous control panel – SET
 - (1) Anti-skid switch – NORM
 - (2) Inlet ramp switches – AUTO

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- (3) Roll ratio switch – AUTO
- (4) Landing/taxi light switch - OFF
- r. ILS/TACAN controls – AS REQUIRED
- s. Canopy jettison handle – FORWARD
- t. Emergency landing gear handle – IN
- u. Arresting hook switch – UP

Left Console

- a. Landing gear handle – DOWN
- b. Pitch ratio switch – AUTO
- c. VSD controls – AS REQUIRED
- d. Master arm switch – SAFE
- e. Fire/overheat lights – NOT PRESSED
- f. Main communications controls – ON AND SET
- g. HUD display control panel – AS REQUIRED
- h. Gunsight camera control/video record panel – AS REQUIRED
- i. Emergency jettison button – NOT PRESSED
- j. Steermode knob – AS REQUIRED
- k. Attitude reference selector knob – AS REQUIRED
- l. Emergency brakes/stter handle – IN
- m. Standby attitude indicator – UNLOCKED
- n. Circuit breakers – IN

Right Console

- a. Emergency vent handle – IN AND VERTICAL
- b. Oxygen system – CHECK AND SET
 - Pressure – 55 to 120 psi
 - Regulator – CHECK
 - (1) Oxygen supply lever – FULLY ON
 - (2) Emergency lever – NORMAL
 - (3) MASK – ON
 - Indicator – CHECK
 - (1) Diluter lever – 100%
 - (2) Emergency lever – EMERGENCY
 - (3) Oxygen flow – CHECK

(Cont)

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Connections – CHECK

Emergency Oxygen – CHECKED

(1) Pressure – CHECK

(2) Actuating ring – STOWED and
CHECKED

c. Anti-Ice switches – OFF

d. Engine control panel – SET

(1) Generator switches – OFF

(2) Emergency generator switch – AUTO

(3) EEC/ENG CONTR switches – ON

(4) JFS starter switch – ON

(5) Engine master switches – ON

e. Temperature panel – AUTO and BOTH

f. INS mode knob – OFF

g. Interior lights controls – AS REQUIRED

h. Countermeasures control panel – AS
REQUIRED

i. Compass control panel – AS REQUIRED

(1) Latitude – SET

(2) Hemisphere - SET

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COCKPIT INTERIOR CHECK

1. Interior check – Complete.

AFTER COCKPIT CHECK IS COMPLETE – VERIFY

1. Emergency air refueling handle/switch guard –
DOWN
2. Throttles – OFF
3. Formation lights – OFF
4. Emergency landing gear handle – IN
5. Arresting hook switch – UP
6. Landing gear handle – DOWN
7. Master arm switch – SAFE
8. Emergency jettison button – NOT PRESSED
9. Emergency brake/steer handle – IN
10. Emergency vent handle – IN and VERTICAL
11. EEC/ENG CONTR switches – ON
12. Anti-ice switches – OFF
13. Avionics – OFF (CC, AAI, IFF, RADAR, ILS/TACAN,
VSD, HUD, INS, TEWS)

STARTING ENGINES

JFS START

1. Air Source – BOTH
2. JFS switch – ON
3. JFS handle – PULL AND RELEASE
Start 1 (50% JFS capacity) – Pull
Start 2 (100% JFS capacity) – Turn to the right
4. JFS Starter READY light – CHECK ON
(within 5 sec; 15 sec if temperature below 0°F)
5. Right Engine master switch – ON
6. Right Engine Generator Switch – ON
7. Right EEC Switch – ON

ENGINE START

8. Finger lift right engine – RAISE AND RELEASE
This engages the JFS to the right engine.
9. Tachometer – OBSERVE INDICATING
10. Right Throttle – IDLE (at 22% RPM)
11. Engine instruments – CHECK
Engine limits are contained on page N-21
12. JFS deceleration – CONFIRM
13. EMER BST ON light – OBSERVE ON
14. Other engine – START
15. JFS Switch – CONFIRM ON
16. JFS Starter READY light – CONFIRM ON
17. Left Engine master switch – ON
18. Left Engine Generator Switch – ON
19. Left EEC Switch – ON
20. Finger lift left engine – RAISE AND RELEASE
This engages the JFS to the left engine.
21. Left Throttle – IDLE (at 25% RPM)
22. Engine instruments – CHECK
23. ECS – CHECK
Ensure ECS light off and airflow present.
24. Inlet ramp switches – CHECK AUTO
25. EEC switches – CYCLE (warning lights out)
26. Engine anti-ice switch – AS REQUIRED
27. Close canopy – AS DESIRED

AFTER ENGINE START

1. Oxygen - ON
2. Internal Lights – AS DESIRED
3. External Lights – AS DESIRED
4. Verify ADI mode - ON
5. Radios – AS DESIRED
6. NCI Mode Selector Knob – GC
7. Data Select – PP
8. Numpad – press RDY
Verify NCI lights on
9. Numpad – Press ENTR
➔ GPS alignment is initiated
Verify:
After 60sec - End Coarse - solid ALN light
After 120sec - End partial - 1Hz flash ALN light
After 240sec - full - 4Hz flash ALN light
10. MPCD – AS DESIRED
11. DTM page – READ (DTC gets loaded)
12. VSD – AS DESIRED
13. HUD – AS DESIRED
14. ICS – AS DESIRED
15. RWR – ON
16. EWWS – ON
17. SET 1-3 – AS DESIRED
18. Radar Power – STBY
➔ Radar BIT is initiated (takes ~ 90 sec.)
➔ AV BIT light – CHECK ON
19. CMD Mode - STBY

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BEFORE TAXIING

1. Oxygen – CHECK
 - a. Quantity – CHECK
 - b. Oxygen test – Observe OXY LOW light at 2 liters
2. Fuel quantity gage – CHECK
 - a. Tank quantities – CHECK
3. Avionics – AS REQUIRED
(RADAR, ILS/TACAN, VSD, HUD, TEWS)
4. Speed brake – CYCLE
5. Flaps – DOWN
6. Slipway door – CHECK
(if air refueling is planned)
7. Trim – CHECK AND SET
 - a. Trim pitch, roll and yaw off neutral
8. Flight Controls – CHECK
 - a. Stick full aft and full left
 - b. Stick full forward and full left
 - c. Stick full forward and full right
 - d. Stick full aft and full right
 - e. Rudder – Check
9. Stick force sensor – CHECK
 - a. Pitch ratio switch – EMERG
 - b. Pitch trim – FULL AFT UNTIL STABILATOR MOVEMENT STOPS (~ 10 sec)
 - c. Stick – STRAIGHT FULL FORWARD AND HARD AGAINST FORWARD STOP
 - d. Observe root of both stabilator leading edges visible either with mirrors or with seat full up. If not visible, about flight.

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10. Brakes – CHECK
11. Avionics systems – CHECK/PROGRAM
12. PACS – PROGRAM AS REQUIRED
13. NCI Mode Selector Knob – INS
When aligned (4kHz flash ALN light)
14. Numpad – press RDY
Verify NCI lights on
15. Numpad – Press ENTR
16. Numpad – press RDY
Verify NCI lights OFF
17. Altimeters – SET
18. Ejection controls safety lever – ARMED
19. JFS LOW light – OUT
20. BIT lights – CHECK
Investigate any unusual BIT lights before taxiing.
21. Master Caution Light - OFF
22. Nose wheel steering – AS DESIRED
23. Taxi Light – TAXI LIGHT

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TAXIING

1. Brakes – CHECK
2. Nose gear steering – CHECK
3. Flight instruments – CHECK

BEFORE TAKEOFF

1. Radar – OPERATE
2. Ejection controls safety lever –
CHECK ARMED
3. Flights controls – CHECK FREE
4. Flaps – CHECK DOWN
5. IFF – AS REQUIRED (n/i)
6. T/O trim – CHECK
If the aircraft is manually trimmed nose
down from takeoff trim, nosewheel lift-off
speed may be increased.
7. Canopy – CLOSED AND LOCKED
The canopy may bounce slightly as it
lowers on canopy sill.
8. Pitot heat – ON (n/i)
9. Warning, caution, BIT lights, and circuit
breakers – CHECK.

TAKEOFF

Advance engines to 80% and check instruments. When ready for takeoff, release brakes and advance throttles to MIL or MAX as desired. Monitor engine instruments for proper operation, assuring that nozzles remain below 30% at MIL.

For normal takeoffs, move the stick to approximately 10° pitch attitude. For maximum performance takeoffs (minimum ground roll), move the stick full aft at a speed below the nose wheel lift-off speed and rotate 12° pitch attitude. Retract gear and flaps when airborne.

AFTERBURNER OPERATION

During normal afterburner operation, observe exhaust nozzles open progressively with each afterburner segment; thrust and fuel flow increase proportionately. As throttles are advanced from minimum to maximum afterburner, the increase in thrust is fairly smooth and continuous.

CLIMB TECHNIQUES

MIL Power – Climb at 350 knots to 0.90 Mach, then maintain 0.90 MACH.

MAX Power – Climb at 350knots to 0,95 Mach. If Mach increases above 0,95 at 40° pitch attitude, hold 40° and allow the Mach to increase.

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IN-FLIGHT

Continually monitor aircraft systems operation throughout the flight. Frequently check engine instruments, cabin pressure, oxygen system operation, fuel quantity and fuel transfer.

Optimal cruise and maximum endurance should be found in the performance data section *(WIP)* and is attained by flying the correct Mach number for configuration and altitude. If the performance charts are not available and accuracy is not a significant factor, 12 units AOA may be used for optimum cruise and 14.5 units AOA may be used for maximum endurance.

DESCENT/BEFORE LANDING

1. Armament master switch – SAFE
2. Altimeter – SET

AFTER LANDING

1. Ejection controls safety lever – LOCKED
2. Speed brake – IN
3. Flaps – UP
4. Slipway – CHECK
5. IFF mode switches – OUT (n/i)
6. Mode 4 function switch –
HOLD MOMENTARILY (n/i)
7. Radar power switch – STBY
8. Trim – T/O
9. Landing/taxi light – AS REQUIRED
10. Formation lights – OFF
11. Pitot head, windshield anti-ice switches -
OFF

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ENGINE SHUTDOWN

1. Slipway switch – CLOSE (if required)
2. INS – OFF
3. Video record switch –
STBY 10 SEC, THEN OFF (*n/i*)
4. Avionics switches – OFF
Turn avionics OFF before shutting down
the engines to prevent false BIT warnings
on the status panel.
5. UHF 2 mode selector switch – MAN
6. Engine anti-ice switch – OFF
7. Throttles – OFF AFTER 15 SECONDS
Wait 15 seconds after INS shutoff before
placing throttle(s) off.

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SCRAMBLE

AIRCRAFT SETUP

1. Complete your Before Flight procedures through Before Taxiing
2. When the INS has aligned in CC (flashing light), go to OFF without going to INS.
3. Perform Engine Shutdown procedure
4. Ejection controls safety lever – LOCKED
5. INS mode select knob – STOR
6. Avionics switches – ON (EXCEPT RADAR)
7. Do not move the aircraft.

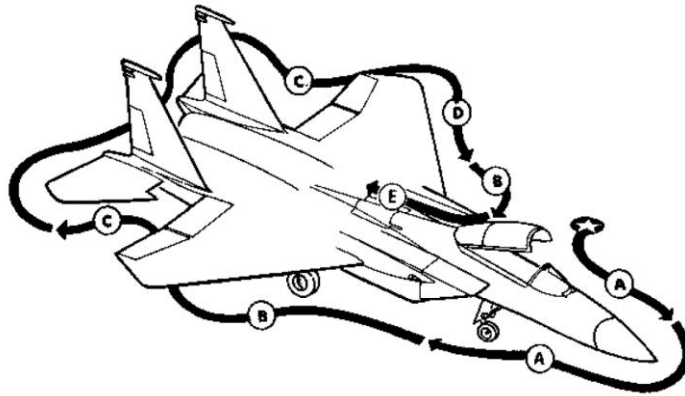
QUICK TURNAROUND

1. AFTER LANDING checks - Complete.
2. PRIOR TO ENGINE SHUTDOWN checks - Complete.
3. Communication with ground crew - Establish (if required).
4. ENGINE SHUTDOWN - COMPLETE.
5. Aircraft setup – COMPLETE (if required)

EXTERIOR INSPECTION (TYPICAL)

NOTE: Check aircraft for loose doors and fasteners, cracks, dents, leaks, and other discrepancies.

Figure N-3. (Sheet 1)



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NOSE - A

1. UNDERSIDE:
 - A. NLG TIRE WHEEL AND STRUT
CONDITION
 - B. NLG DOORS & LINKAGE SECURE,
GROUND LOCK REMOVED.
 - C. ANTENNAE CONDITION

2. FORWARD FUSELAGE:
 - A. PITOT-STATIC PROBE CONDITION (2)
 - B. AOA PROBE SECURE CONDITION (2)
 - C. ENGINE INTAKE DUCT CLEAR (2)

CENTER FUSELAGE & WING - B

1. WING:
 - A. EXTERNAL STORES & PYLONS SECURE
 - B. NAVIGATION & FORMATIONS LIGHTS
CONDITION
 - C. AIRLERON & FLAP CONDITION
 - D. FUEL DUMP/VENT MAST CONDITION

AFT FUSELAGE - C

1. GENERAL AREA:
 - A. ARRESTING HOOK
 - B. STABILATOR CONDITION
 - C. RUDDER CONDITION
 - D. ANTENNA COVER CONDITION
(VERTICAL STABELIZER)
 - E. NAVIGATION & FORMATION LIGHTS
CONDITION
 - F. ENGINE EXHAUST AREA CONDITION

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UNDERSIDE OF FUSELAGE - D

1. GENERAL AREA:
 - A. STORE & PYLON SECURE

2. MAIN GEAR AND WHEELWELL:
 - A. WHEEL, TIRE AND STRUT CONDITION
 - B. DOORS & LINKAGE SECURE
 - C. GROUND LOCK REMOVED

TOP OF FUSELAGE - E

1. GENERAL AREA:
 - A. SECONDARY HEAT EXCHANGER
EXHAUST COVER REMOVED
 - B. EQUIPMENT BAY FIVE SECURE

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AIRCRAFT SERVICING

SERVICING DIAGRAM

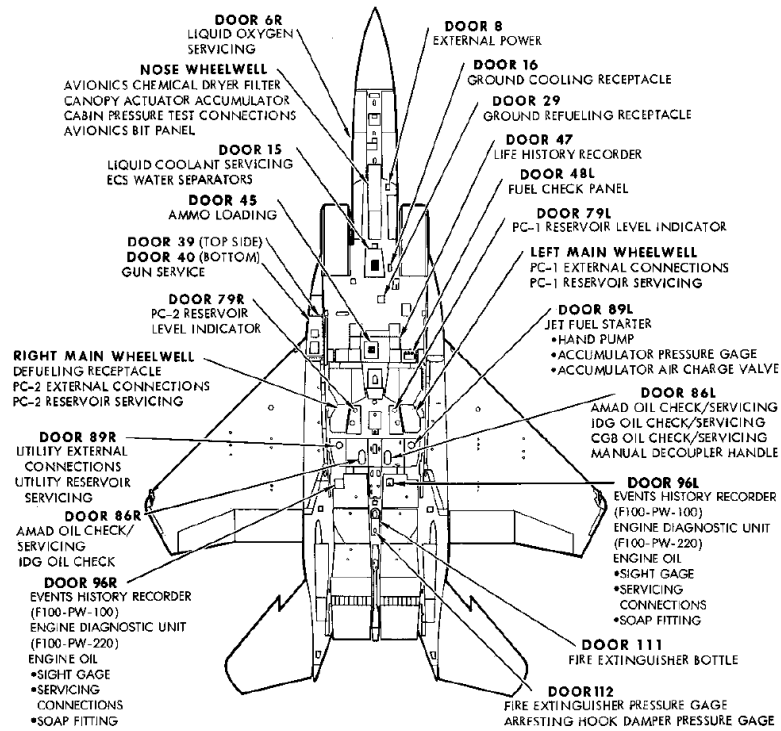


Figure N-4.

Takeoff and Landing Data Card

CONDITIONS

	TAKEOFF	LANDING
GW		
Runway Condition		
Runway Temp		
Pressure Altitude		
Wind		
Runway Length		
Runway Slope		

TAKEOFF

Rotation Speed	KIAS	
Takeoff Speed/Dist.	KIAS	FEET
Refusal Speed	KIAS	
Max Brake Speed	KIAS	

LANDING

	Immediately After Takeoff		Final Landing	
	GW		GW	
Approach Speed				
Touchdown Speed				
Landing Distance				

Figure N-5.

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ENGINE LIMITATIONS PW 220/PW 229

GROUND

CONDITION	FTIT °C	RPM %	OIL PSI	REMARKS
START	680	--	--	--
IDLE	-	-	15-80	--
MIL/AB	960	94	30-80	Notes 2,5 and 6
TRANSIENT	970	94	30-80	Notes 2,5 and 7
FLUCTUA- TION	±10	±1	±10	Notes 2,3 and 4

FLIGHT

CONDITION	FTIT °C	RPM %	OIL PSI	REMARKS
AIRSTART	800	--	--	--
IDLE	-	-	15-80	--
MIL/AB	970	96	30-80	Notes 1 and 2
TRANSIENT	990	96	30-80	Notes 2 and 8
FLUCTUA- TION	±10	±1	±10	Notes 2,3 and 4

NOTES

1. USE OF THE Vmax SWITCH IS PROHIBITED.
2. LIMITATIONS INCLUDE FLUCTUATIONS.
3. IN PHASE FLUCTUATION OF MORE THEN ONE INSTRUMENT, OR SHORT TERM CYCLIC FLUCTUATIONS ACCOMPANIED BY THRUST SURGES, INDICATE ENGINE ENTROL PROBLEMS.
4. NOZZLE FLUCTUATIONS ARE LIMIED TO +- 2% AT MILITARY POWER AND ABOVE. FLUCTUATIONS ARE NOT PERMITTED BELOW MILITARY POWER.
5. FOR ENGINE OPERATION AT MILITARY OR ABOVE, OIL PRESSURE MUST INCREASE 15 PSI MINIMUM ABOVE IDLE OIL PRESSURE.
6. ENGINE NOZZLE POSITION IS LIMITED TO 30% OPEN OR LESS AT MILITARY POWER.
7. MAXIMUM TEMPERATURE LIMITED TO 30 SECONDS.
8. MAXIMUM TEMPERATURE LIMITED TO 10 SECOUDS.

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SECTION EP
EMERGENCY PROCEDURES

WIP

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SECTION AR

AIR REFUELING PROCEDURES

WITH KC-135, KC-10, AND KDC-10

WIP

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TABLE

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EP

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TABLE

PW 220

PW 229