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# PILOTS/ FLIGHT MECHANIC'S

*CONTROL NO. 6960-02-1*

## FLIGHT CREW CHECKLIST

USAF SERIES

# C-118A AND VC-118A

AIRCRAFT

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Commanders are responsible for bringing this checklist to the attention of all personnel cleared for operation of the aircraft.

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## **FLIGHT MECHANIC'S PREFLIGHT CHECK-LIST.**

### **PRE-INSPECTION.**

- \*1. Landing gear pins and chocks - Checked.
- \*2. Ground power unit - Properly positioned.
3. Ladder and fire extinguisher - Available.

### **INTERIOR COCKPIT INSPECTION.**

- \*1. Form 781.- Checked.
- \*2. Circuit breakers - As required.
- \*3. Ignition switches - OFF.
4. Engine selector switch - OFF.
5. Battery master switch - OFF.
6. Batteries - UP.

**WARNING**

Do not raise or lower aircraft batteries with external power connected and Master Switch on or GTPU operating.

- \*7. Emergency inverter - Checked and OFF.
- \*8. Battery master switch - ON.
- \*9. Ground power - Connected and ON.

**NOTE**

If the ground power supply cannot be monitored for any extended period of time, one battery should be lowered.

- \*10. Fire warning system - Checked.
- 11. APU/GTPU (when utilized) - ON.
- \*12. Bus voltage - Checked.
- 13. Propeller deicing - Checked and OFF.

14. Pitot heat - Checked and OFF.

**CAUTION**

The maximum ground operating time of the pitot heater is one minute, due to lack of cooling airflow.

15. Emergency hydraulic pump and pressures - Checked.
16. Wing flaps - Set for exterior inspection, pressure relieved.

**CAUTION**

Visually clear the area below wing flaps prior to lowering for inspection.

17. Oxygen system pressure - Checked.
18. Trim tabs and flight controls - Checked.
19. Carburetor air doors - Checked.

20. Oil cooler doors - Check operation; set open for exterior inspection.
21. Cowl flaps - Check operation; set open for exterior inspection.
22. Windshield alcohol - Checked.
23. Landing lights - Checked.
24. Cockpit lights - Checked.
25. Inverters and instrument switches - Checked.
26. Cabin heater - Checked and OFF.
27. Heading indicators, RMIs, and magnetic compass - Checked.

28. Altimeters - Checked.

**WARNING**

As a preflight check, special attention should be given the altimeter to assure that the 10,000-foot pointer is reading correctly. It is possible for the correct reading to be set on the barometric scale while the altimeter reading is 10,000 feet in error.

29. Quantity gages. - Checked.
30. Emergency airbrake pressure - Checked.
31. Fuel system - Checked.
32. Inverters - OFF.
33. Press-to-test lights - Checked.
34. External lights - Checked and set.

## **EXTERIOR INSPECTION.**

### **NOTE**

TOP OF AIRCRAFT INSPECTION may be accomplished as first item of Flight Mechanic's Exterior Inspection at the discretion of the pilot when transporting patients and/or passengers.

### **NOSE SECTION.**

1. Radome - Check for cracks, dents, alignment, and condition.
2. Pitot tubes and static ports - Check alignment of pitot tubes and covers removed. Drain both systems and check valves to be closed. Static ports should be unobstructed.
3. CO<sub>2</sub> bottles and discharge discs - Check security and inspection date. Check discharge discs.

4. Antiskid brake accumulator - Check for proper pressure.
5. Gear uplatch - Check for proper position and evidence of damage.
6. Downlock mirror - Check for cleanliness.
- \*7. Nose gear - Check strut (minimum extension of 2 inches at maximum gross loading), tire wheel plate for cracks in torque links, safety pin engaged and seated, and nosewheel collar. Check wheel for condition and tire for inflation. Check microswitches, followup cables, and taxi light for cleanliness and security.
- \*8. Condition - Check hydraulic lines, cables, ducting for radome heating, tire friction brake, wiring, and doors.

**NOSE TO BELLY SCOOP.**

1. Nosewheel steering compartment - Check for hydraulic leaks, security of cables, and snubbing pressure within limits.
2. Battery compartments - Check for evidence of spilled acid, security, corrosion, and condition.
3. Outside air temperature bulbs - Check condition.
4. Cabin pressure dump valve - Check condition and proper position.
5. Crew compartment door - Check condition and door seals.
6. Forward baggage compartment - Check APU webbing and housing (if installed) to be in place and secured. Check condition of compartment door and seals. After inspection, lights should be out and compartment door secured.

- \*7. Antennas - Check for security and condition.
8. APU CO<sub>2</sub> discharge discs (if installed) - Checked.
9. APU air intake and exhaust port (if installed) - Check for obstruction.
10. Hydraulic compartment - Check accumulator pressure, fluid level, and for evidence of leaks. Check cables, flap control valve, and condition of compartment. After inspection, lights should be out and compartment secured.
11. Wing leading edge inboard of No. 3 engine - Check condition.
12. Fuselage skin and fairing - Check condition.
13. Belly scoop - Check for condition, foreign matter and oil leaks.

**BELLY SCOOP TO RIGHT MAIN GEAR.**

1. Fuel leaks - Check along main spar and underside of wing for stains or seepage.

2. Wing drain holes - Check for obstruction.
3. Skin - Check condition.
4. Pressurization control valve exhaust - Check for foreign matter and damaged baffles.
5. Main gear - Check tires for condition and inflation; hydraulic and air lines for security, leaks and fraying; micro-switches and strut exposure (minimum 3-1/4 inches). Check condition of strut, deboosters extension (minimum 2-1/2 inches with maximum separation of 1/2 inch) actuating cylinders, and lines, fittings, and lugs for security. Check bungee cables for tautness and evidence of fraying.
6. Fuel dump chute - Check flush with nacelle fairing. Check for evidence of leaks and condition.
7. No. 3 ADI tank vent - Checked for obstruction and condition.

**INSIDE WHEEL WELL NO. 3 CHECK.**

- \*1. Fuel drain valve, booster pumps, and tank selector - Check drain valve position and safety. Check bulkhead plates for strains and fuel leaks. Check pumps and fuel lines for condition and leakage.
- \*2. Wheel well area - Check condition of exposed wiring, conduits, fittings, cables, pulleys, tubing, and spars.
3. Heater fuel selector valve (if installed) - Check to be in tank-to-system position and safetied.
4. Gear uplatch - Check for evidence of straining and jamming, and that the latch is positioned approximately 45 degrees from vertical.
5. Electrical junction box - Checked, covers in place and secured.
6. ADI tank, pump and strainer - Check pump for peeled paint or cracked housing. Check strainer and tank for condition, security and drain valves closed.

7. ADI drain valve - Check in tank-to-system position and safetied.
8. Firewall shutoff valves - Check valve connected to actuating linkage and positioned approximately 45 degrees to the horizontal position.
9. Hydraulic dampener - Check for leaks, security and condition.
- \*10. Heater fuel strainer drain valve - Check for leaks.

### **NO. 3 ENGINE, PROPELLER AND NACELLE.**

- \*1. Cowl flaps - Check for excessive wear, binding, loose or bent connecting links, bonding, lubrication, and condition.
- \*2. Exhaust stacks - Check exhaust deflector, collector ring, and clamps for installation and security.
- \*3. Intake pipes - Check for fuel leaks.

- \*4. Rear of engines - Check for loose articles, indications of leaks, and security of fire detectors.
5. Carburetor air and oil radiator air-scoops - Check condition of scoop cowling, foreign matter in scoop intake area, and generator blast tube intake unobstructed.
- \*6. Cowling - Check security, proper fit, and positive lock.
- \*7. Front of engine - Check condition of BMEP transmitter, distributors, magneto, and propeller governor. Check for loose or frayed ignition cables, foreign matter, and oil leaks.
8. Propeller - Check for blade looseness, pitting, nicks, cracks, and oil leaks. Check condition and security of spinner and deicer boots.
9. Nacelle - Check condition.

**BETWEEN NO. 3 AND NO. 4 NACELLES.**

1. Leading edge - Check condition.
2. Supercharger and wing heater airscoop - Check for condition and foreign matter.
3. Skin - Check condition.
- \*4. Underside of wing - Check for fuel leaks.
5. Landing lights - Check condition and deflector correctly positioned.

**NO. 4 ENGINE, PROPELLER AND NACELLE.**

- \*1. Repeat inspection given for No. 3 engine, propeller and nacelle.
2. Supercharger - Check condition, evidence of oil leaks, interior of nacelle and fire control door for open position.
3. Fuel dump chute - Check flush with nacelle fairing. Check for evidence of leaks and condition.

4. Wing heater exhaust - Check for condition and foreign matter.
5. Wing heater fuel regulator balance line - Check for damage and foreign matter.

### **OUTER WING PANEL.**

- \*1. Underside - Check for fuel leaks and skin condition. Check fuel tank vents, drains and No. 4 ADI tank vent for condition and foreign matter.
2. Leading edge - Check condition and air-foil ventilating air exhaust for foreign matter.
3. Navigation light - Check condition and operation.

### **WING TRAILING EDGE.**

1. Aileron - Check surfaces and static discharges in good condition.
2. Tabs - Check position and condition of aerodynamic tabs. Check ground adjustable tab for security and condition (right wing only).

3. Flaps - Check surfaces for warping and condition (clearance between flap and aileron is approximately 1/2 inch). Check condition of actuators and flap well area.

### **RIGHT WING FILLET TO EMPENNAGE.**

1. Alcohol gage, pressure filler neck, and access door - Check alcohol quantity and filler valve in OFF position and drain valve tank-to-system. Check pump for evidence of overheating and damage. Access door secure.
2. Heater compartment - Check condition and security of units. Turn out light and secure door.
3. Aft baggage compartment - Check condition of compartment area, door and seals. Turn out light and secure door.
4. Tail heater and GTPU fuel line shroud drains - Check for evidence of leaks.
5. External heater inlet and access door - Check condition and secure door.

6. Water service panel - Check condition and that the cap is on the vent line and locked. Secure door.
- \*7. Antennas - Check security and condition.

**EMPENNAGE SECTION.**

1. Tail compartment access door- Check security.
2. Emergency relief valves - Check condition and position.
3. Tail skin - Check condition.
4. GTPU air intake, exhaust port and CO<sub>2</sub> discharge discs (if installed) - Check condition, foreign matter at air intake door, evidence of burn through exhaust and CO<sub>2</sub> discharge disc.
5. Skin - Check condition.
6. Control surfaces and static discharge.  
- Check condition.
7. Airfoil hot air outlets - Check for condition and foreign matter.

8. Tabs - Check position and condition.
9. Tail lights and tail cone - Check condition and light operation.
10. Tail heater fuel regulator balance line - Check for damage and foreign matter.
11. Tail heater ground blower intake, exhaust outlet and CO<sub>2</sub> discharge discs - Check ground blower intake for obstruction, evidence of burn through or damaged exhaust duct, and CO<sub>2</sub> discharge discs.

#### **EMPENNAGE TO LEFT WING FILLET.**

1. Skin - Check condition.
2. Lavatory service panel (if installed) - Check condition. Secure door.
3. Cabin and cargo doors (outside) - Check condition of doors, seals, and pressurization warning lights.
4. Auxiliary oil transfer lines - Check security, evidence of leaks and secure door.

5. Cabin heater, ground blower intake and CO<sub>2</sub> discharge disc - Check flap-per door for freedom of movement and discharge discs.
6. Belly scoop air exhaust - Check for condition and foreign matter.
7. Cabin heater exhaust port - Check for condition and foreign matter.
8. Cabin heater fuel regulator balance line - Check for damage and foreign matter.
- \*9. Antennas - Check for security and condition.

## **LEFT WING INSPECTION.**

### **NOTE**

The left wing inspection is identical to the complete right wing inspection, with two exceptions. Check the wing flap position indicator for condition; check the cabin heater combustion air intake for condition and foreign matter.

**LEFT WING TO NOSE.**

1. Skin - Check condition.
2. Forward cargo door - Check condition and pressurization warning lights.

**NOTE**

After completion of EXTERIOR INSPECTION, return to cockpit and turn off all unnecessary equipment.

**TOP OF AIRCRAFT INSPECTION.**

1. Fuel quantity - Checked.
2. Oil quantity - Checked.
3. ADI quantity - Checked.
4. Auxiliary oil quantity - Checked.
5. Top of wings and fuselage areas - Checked.
6. Check outside release handle over wing emergency exits for lateral movement.

## **INTERIOR INSPECTION.**

### **NOTE**

The interior inspection will be performed by the pilot or designated crewmember.

## **CREW COMPARTMENT.**

1. Forward cargo door - Check latches are engaged and safety pin installed and secure. Check door actuating cylinder and lines for leaks.
2. Emergency escape ladder (if installed) - Secured.
3. Crash axe - Secured.
4. Portable oxygen bottles - Check pressure and secure.
5. Lights - Check operation.
6. Fire extinguishers - Checked and secured.
- \*7. Circuit breakers and fuses - Checked.

8. Anticipate bulb desiccators (if installed) - Check for discoloration.
9. Compartment viewer - Clean and stowed.
10. Night curtains - Installed.
11. Aldis lamp (if installed) - Check operation and secure.
12. Smoke masks - Check for cleanliness and stowed.
13. Crew call - Checked.
- \*14. Windshield and windows - Checked.
- \*15. Condition of compartment - Checked.
16. Public address system - Checked.

**MAIN CARGO COMPARTMENT OR PASSENGER CABIN.**

1. Cargo compartment lights - Check entrance lights (bright and dim), impact lights, pilot's call and pressurization lights not obscured.
2. Pressure dome access plate - Secure.

3. Water filler valve - OFF.
4. Hand fire extinguisher - Checked and secured.
5. Aft cargo doors - Check latches engaged, safety pin installed and secure, cargo door crank stowed. Check actuating cylinders and lines for leaks.
6. Cabin door emergency release and hinges - Inspect condition of door hinges and cables. Check release handle down and secure.
7. Escape chute - Installed.
8. Emergency exits - Closed, handles horizontal and safetied.
9. Thermistor - Checked.
10. Crash axe - Stowed.

**BEFORE STARTING ENGINES.**

**PHASE I.**

1. Propeller deicers - OFF
2. Pitot and scoop heaters - OFF.

3. Battery master switch - As required.
4. Inverter circuit breakers - ON.
5. Tachometer isolation switch - NORMAL.
6. Emergency propeller deicers - OFF.
7. Oil transfer - OFF.
- \*8. Oil coolers - AUTOMATIC.
- \*9. Cowl flap switches - POSITIONING.
10. ADI - OFF.
11. Booster pump circuit breakers - ON.
12. Booster pumps - OFF.
- \*13. Navigation, cockpit, and SEAT BELT  
and NO SMOKING lights - Set.
14. Ignition switches - OFF.
15. Engine selector - OFF.
16. Generators - ON.
17. Cockpit temperature - Set.

18. Windshield heat - Set.
19. Radome anti-icing - OFF.
- \*20. Fire warning - Tested.
21. Wing heater CO<sub>2</sub> selector - LEFT BANK.
22. Heater control panel - Set.
- \*23. Landing lights - Set.
24. Blowers - LOW.
25. Turbine switch - OFF.
26. Cabin temperature control - Set.
27. Emergency cabin altitude control - Set.
28. Cabin superchargers - Set.
- \*29. Fuel and oil pressure warning light isolation switches - ON.
30. Firewall selectors - IN.
31. Emergency air brakes - OFF/Safetied.

32. Static selectors - NORMAL.
- \*33. Fuel selectors - MAIN.
- \*34. Crossfeeds - OFF.
35. Propeller master lever and engine selector switch - FORWARD and on No. 3.
36. Throttles - Set.
37. Mixtures - IDLE CUTOFF.
38. Gear lever - DOWN.
39. Gear safety solenoid - Visually checked.
40. Carburetor air doors - OPEN.
41. Wing flap lever - Set.

**PHASE II.**

1. "Phase I check completed." FM
2. Forms 781 and 365F - "Checked and signed." P