***TM 1-1510-225-CL**

**TECHNICAL MANUAL**

**Operator's and Crewmember's Checklist**

# ARMY MODELS
# C-12R AIRCRAFT
**NSN 1510-01-425-1355**

# C-12T3 AIRCRAFT
**NSN 1510-01-470-0220**

# C-12F3 AIRCRAFT
**NSN 1510-01-235-5840**



*This manual supersedes TM-1-1510-225-CL dated
10 June 1998.

**HEADQUARTERS**
**DEPARTMENT OF THE ARMY**
**4 SEPTEMBER 2001**

# GENERAL INFORMATION AND SCOPE

## SCOPE

This checklist contains the operator's and crewmember's checks to be accomplished during normal and emergency operations.

## GENERAL INFORMATION

This checklist consists of two parts, Part I for the C-12R model aircraft and Part II for the C-12T3/F3 model aircraft. Both Parts I and II consist of three parts: normal procedures, emergency procedures, and performance data. Normal procedures consist of the procedures required for normal flight. Emergency procedures are subdivided into seven classifications as follows: engine, propeller, fire, fuel, electrical, landing and ditching, and flight controls. Performance data consists of performance checks.

This checklist, printed from CD, must be printed on 4 1/2" x 8" paper and assembled in a checklist binder. This manual must be carried with the aircraft at all times. Users are authorized to remove those parts that are not applicable to their aircraft model and are not required to carry them on the aircraft.

**NOTE**

**This checklist does not replace the amplified version of the procedures in the operator's manual, TM 1-1510-225-10, but is a condensed version of each procedure.**

## NORMAL PROCEDURES PAGES

The normal procedures checklist is a condensed version of the amplified checklist appearing in the

normal procedures or crew duties portion of the applicable operator's manual.

## EMERGENCY PROCEDURES PAGES

The requirements for this section of the condensed checklist manual (CL) are identical to those for the normal procedures, except that the information is drawn from the amplified checks in the emergency procedures portion of the operator's manual. The emergency requirements are subdivided into the seven classifications listed in the General Information paragraph. Immediate actions are underlined and shall be memorized.

## PERFORMANCE PAGES

The contents of the performance checks procedures of this manual are a detailed version of the procedure from the Normal Procedures pages designated by a ★. The detailed procedures in the performance checklist are the same as those annotated with a ★ in the amplified normal procedures checklist in the operator's manual. The condensed normal procedures checklist has only the title of the procedure annotated with a ★, which indicates that the detailed procedure is included in the performance checklist.

Symbols Preceding Numbered Steps:

N — Indicates performance of step is mandatory for night flights.

I — Indicates a mandatory check for instrument flights.

O — Indicates if installed.

★ — Indicates a detailed procedure for this step is included in the performance checks section, located at the back of the checklist.

* ¾ Indicates performance of step is mandatory for all through flights.

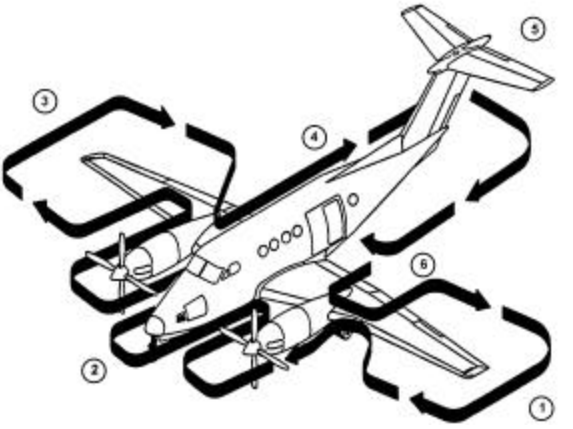
Immediate action emergency items are underlined.

## REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this checklist. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms) or DA Form 2028-2 directly to: Commander, US Army Aviation and Missile Command, ATTN: AMSAM-MMC-MA-NP, Redstone Arsenal, AL 35898-5230. A reply will be furnished to you. You may also send your comments electronically to our e-mail address, 2028@redstone.army.mil or by fax 256-842-6546/ DSN 788-6546.

## OZONE DEPLETING CHEMICALS INFORMATION

This document has been reviewed for the presence of Class I ozone-depleting chemicals. In the base document dated 10 June 1998, all references to Class I ozone-depleting chemicals have been removed from this document by substitution with chemicals that do not cause atmospheric ozone depletion.




*Exterior Walkaround Diagram*

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TM 1-1510-225-CL

# OPERATOR'S AND CREWMEMBER'S CHECKLIST

## PART I

# ARMY C-12R AIRCRAFT

## NSN 1510-01-425-1355

# NORMAL PROCEDURES

## BEFORE EXTERIOR CHECK

*1. Forms/publications – Check.

2. Toilet – Check.

3. Emergency equipment – Check.

*4. **LDG GEAR CONTROL – DN**.

*5. Manual gear extension handle – Down and latched.

*6. Parking brake – Set.

7. Flight controls – Check.

8. Manual trim – Check and set to zero.

*9. **IGNITION AND ENGINE START** switches – **OFF**.

*10. Circuit breakers – Check in.

★ 11. Fuel system – Check.

12. Exterior lights and heat – Check.

13. Cabin door annunciator light – Check on.

★ 14. Oxygen system – Check.

15. Annunciator lights – Check.

16. Hydraulic fluid sensor – Check.

17. Fire detection system – Check.

18. Fire extinguishers – **TEST**.

19. Stall and landing gear warning – Check.

20. **FLAPS** – As desired.

21. **ENGINE ANTI-ICE** – As desired.

22. **BATT** switch – **OFF**.

23. **EFIS AUX POWER** – Test.

## FUEL SAMPLE AND OIL CHECK

1. Fuel sample – Check.

## LEFT WING, AREA 1

1. Left wing area – Check.
2. Left main landing gear – Check.
3. Left engine and propeller – Check.
4. Left wing center section – Check.
5. Fuselage underside – Check.

## NOSE SECTION, AREA 2

1. Nose section – Check.

## RIGHT WING, AREA 3

1. Right wing center section – Check.
2. Right engine and propeller – Check.
3. Right main landing gear – Check.
4. Right wing – Check.

## FUSELAGE RIGHT SIDE, AREA 4

1. Fuselage right side – Check.

## EMPENNAGE, AREA 5

1. Empennage – Check.

## FUSELAGE LEFT SIDE, AREA 6

1. Fuselage left side – Check.
*2. Chocks and tiedowns – Removed.

## * INTERIOR CHECK

1. Cargo/loose equipment – Check secure.

★O 2. Ferry fuel tanks and caps – Check.

O 3. Ferry fuel tank selector valve(s) – Closed.

★ 4. Cabin door – Locked and checked.

5. Cargo door – Locked and checked.

★ 6. Crew/passenger briefing – Complete.

## BEFORE STARTING ENGINES

*1. Parking brake – Set.

*2. Oxygen system – Crew ready.

*3. Pilot's instrument panel – Check.

4. Pilot's clock – Check and set.

*5. Pilot's subpanel – Check.

*6. Avionics panel switches – As required.

*7. Power console – Check.

*8. Pedestal – Check.

*9. Copilot's instrument panel – Set.

10. Copilot's clock – Check and set.

*11. Copilot's subpanel – Check.

*12. Copilot's circuit breaker panel – Check.

13. Static air source – Normal.

*14. **BATT** – **ON**.

15. Overhead panel lights – As required.

16. Exterior lights – As required.

17. GPU – As required.

18. External power advisory light – As required.

19. DC volt/loadmeters – Check loads, voltage, and

current limiters.

## *FIRST ENGINE START (BATTERY START)

1. Propeller area – Clear.
2. Engine – Start.
3. **CONDITION** lever – **HIGH IDLE**.
4. **GEN** switch – **RESET**, then **ON**.
5. **BATTERY CHG** annunciator – Monitor**.**

## *SECOND ENGINE START (BATTERY START)

1. First engine generator load – 50% or less.
2. Propeller area – Clear.
3. Engine – Start.
4. **BATTERY CHG** annunciator – Check.
5. DC volt/loadmeters – Check loads, voltage, and current limiters.
6. Second engine **GEN** switch – **RESET**, then **ON**.
7. **CONDITION** levers – As required.
8. **CABIN TEMP MODE** – Set**.**
9. Inverters – Check and **ON**.
10. AC/DC power – Check.
11. **AVIONICS MASTER PWR** – **ON**.
12. **STANDBY HORIZON** – **ON** and uncaged.
13. **EFIS POWER** switches – **ON**.
14. **AP/TRIM POWER** switch – **ON**.
15. Autopilot self-test – Monitor.
16. Engine instruments – Check.

## ABORT START

1. **CONDITION** lever – **FUEL CUTOFF**.
2. **IGNITION AND ENGINE START** switch – **STARTER ONLY**.
3. **ITT** – Monitor for drop in temperature.
4. **IGNITION AND ENGINE START** switch – **OFF**.

## ENGINE CLEARING

1. **CONDITION** lever – **FUEL CUTOFF**.
2. **IGNITION AND ENGINE START** switch – **OFF** (1 minute minimum).
3. **IGNITION AND ENGINE START** switch – **STARTER ONLY** (15 seconds minimum, 40 seconds maximum).
4. **IGNITION AND ENGINE START** switch – **OFF**.

## *FIRST ENGINE START (GPU START)

1. Propeller area – Clear.
2. Engine – Start.
3. **CONDITION** lever – **HIGH IDLE**.
4. GPU – As required.
5. **GEN** switch (after GPU disconnected) – **RESET**, then **ON**.
6. **BATTERY CHG** annunciator – Monitor**.**

## *SECOND ENGINE START (GPU START)

1. Propeller area – Clear.
2. Engine – Start.
3. Right **PROP** lever – **FEATHER**.

4. GPU – Disconnect.
5. Right **PROP** lever – **HIGH RPM**.
6. **GEN** switches – **RESET**, then **ON**.
7. DC volt/loadmeters – Check loads, voltage, and current limiters.
8. **CONDITION** levers – As required.
9. **CABIN TEMP MODE** – Set.
10. Inverters – Check.
11. AC/DC power – Check.
12. **AVIONICS MASTER PWR** – **ON**.
13. **STANDBY HORIZON** – **ON** and uncaged.
14. **EFIS POWER** switches – **ON**.
15. **AP/TRIM POWER** switch – **ON**.
16. Autopilot self-test – Monitor.
17. Engine instruments – Check.

## BEFORE TAXIING

*1. **CABIN** signs – As required.
*2. **BLEED AIR VALVES** – As required.
*3. **AFT BLOWER** – As required.
*4. Avionics – Check and set.
*5. EFIS – **TEST.**
★ 6. Flight controls/autopilot system – Check.
*7. FMS – Check and Set.
*8. Voice and flight data recorders – Check.
9. Radar – As required.
*10. Altimeters – Set and check.
11. **FLAPS** – Check.

12. EFIS brightness – Set.

★ 13. **BRAKE DEICE** – Check, use as required.

*14. Exterior lights – As required.

*15. Taxi area – Clear.

## *TAXIING

1. Brakes – Check.
2. Flight instruments – Check.

## ENGINE RUNUP

1. Parking brake – Set.
2. Manual prop feathering – Check.

★ 3. **AUTOFEATHER/AUTO IGNITION** – Check as required.

★ 4. Overspeed governors and rudder boost – Check as required.

★ 5. Primary governors – Check as required.

★ 6. **ENGINE ANTI-ICE** – Check.

7. **CONDITION** levers – **HIGH IDLE**.

8. **POWER** levers – **IDLE**.

★ 9. Anti-ice/deice systems – Check.

★ 10. Vacuum and pneumatic system – Check.

★ *11. Pressurization – Check and set.

12. **CONDITION** levers – As required.

13. Ground collision avoidance system – Check.

14. Radar – Check.

## *BEFORE TAKEOFF

1. Fuel panel – Check fuel quantity and switch positions.
2. **AUTOFEATHER** – **ARMED**.
3. Flight and engine instruments – Check.
4. Avionics – Set.
5. Altitude alerter(s) – Set and check.
6. Propellers – **HIGH RPM**.
7. **FLAPS** – As required.
8. Trim – Set.
9. Autopilot/yaw damper – **OFF**.
10. **BLEED AIR VALVES** – As required.
11. Annunciator lights – Check.
12. Flight controls – Check.

★ 13. Departure briefing – Complete.

## *LINE UP

O 1. Transponder/TCAS/WX Radar – As required.

2. **LANDING, TAXI, RECOG** and **STROBE** lights – **ON**.
3. Anti-ice/deice – As required.
4. **ENGINE ANTI-ICE** – As required.
5. **AUTO IGNITION** – **ARM**.
6. **CONDITION** levers – **HIGH IDLE**.
7. Power stabilized – 27% torque minimum.

## AFTER TAKEOFF

1. **GEAR** – **UP**.
2. **FLAPS** (105 KIAS) – **UP**.
3. Climb power – Set.
4. **LANDING/TAXI** lights – **OFF**.
5. Wings and nacelles – Check.

## CLIMB

1. **YD** – As required.
2. **AUTOFEATHER** – As required.
3. Cabin pressurization – Check.
4. **CABIN** signs – As required.
5. **BRAKE DEICE** – As required.
6. **WSHLD ANTI-ICE** – As required.
7. Altimeters – Set.

O 8. **TCAS** – Set range.

## CRUISE

1. **POWER** – Set.
2. **ICE PROTECTION** switches – As required.
3. **CABIN** signs – As required.
4. **AUXILIARY** fuel gauges – Monitor.
5. Altimeters – Check.
6. Engine instruments – Check. Note indications.

O 7. **TCAS** – Set for en route.

## DESCENT - ARRIVAL

1. Cabin pressurization – Set.
2. **CABIN** signs – As required.
3. **ICE PROTECTION** switches – As required.
4. **WSHLD ANTI-ICE** – As required.
5. **RECOG** lights – **ON**.
6. Altimeters – Set to current setting.

O 7. **TCAS** – Set as required.

★ 8. Arrival briefing – Complete.

## DESCENT

**DESCENT – MAXIMUM RATE (CLEAN)**

1. Cabin pressurization – Set.
2. **CABIN** signs – As required.
3. **POWER** levers – **IDLE**.
4. **PROP** levers – **HIGH RPM**.
5. **GEAR** – **UP**.
6. **FLAPS** – **UP**.
7. Airspeed – $V_{mo}$ maximum.
8. **ICE PROTECTION** switches – As required.
9. **RECOG** lights – As required.

O 10. Ferry fuel caps – Loosen or remove if rate of descent exceeds 1500 fpm.

**DESCENT – MAXIMUM RATE (LANDING CONFIGURATION)**

1. Cabin pressurization – Set.

2. **CABIN** signs – As required.
3. **POWER** levers – **IDLE**.
4. **PROP** levers – **HIGH RPM**.
5. **FLAPS** – **APPROACH**.
6. **GEAR** – **DN**.
7. Airspeed – 181 KIAS maximum.
8. **ICE PROTECTION** switches – As required.
9. **RECOG** lights – As required.

O 10. Ferry fuel caps – Loosen or remove if rate of descent exceeds 1500 fpm.

## APPROACH

1. **HSI NAV SOURCE** – As required.

O 2. **TCAS** – Set as required.

## BEFORE LANDING

1. **CABIN** signs – **NO SMOKE & FSB**.
2. **AUTOFEATHER** – **ARM**.
3. **ENGINE ANTI-ICE** – As required.
4. **PROP** levers – As required.
5. **FLAPS** (below 200 KIAS) – **APPROACH**.
6. **GEAR** (below 181 KIAS) – **DOWN**/confirm.
7. **LANDING/TAXI LIGHTS** – As required.
8. **BRAKE DEICE** – As required.
9. **CONDITION** levers – **HIGH IDLE**.

O 10. **TCAS** – Set as required.

## LANDING

1. **AP** & **YD** – Disengaged.
2. Gear down lights – Check/confirm.
3. **PROP** levers – **HIGH RPM**.

## TOUCH AND GO LANDING

1. **PROP** levers – **HIGH RPM**.
2. **FLAPS** – As required.
3. Trim – Set.
4. Power stabilized – Check 27% torque minimum.
5. Takeoff power – Set.

## GO-AROUND/MISSED APPROACH

1. **POWER** – As required.
2. **GEAR** – **UP**.
3. **FLAPS – APPROACH**.
4. **FLAPS** (105 KIAS) – **UP**.
5. **LANDING/TAXI LIGHTS** – **OFF**.
6. Climb power – Set.
7. **YD** – As required.
8. **BRAKE DEICE** – **OFF**.

## AFTER LANDING

1. Radar/transponder – **STBY**.
2. **CONDITION** levers – As required.
3. **FLAPS** – **UP**.

4. **AUTO IGNITION** – **OFF**.
5. **AUTOFEATHER** – **OFF**.
6. **ENGINE ANTI-ICE** – As required.
7. **ICE PROTECTION** switches – As required.
8. **LANDING/TAXI LIGHTS** – As required.
9. **STROBE** lights – **OFF**.
10. **RECOG** lights – **OFF**.
11. Trim – Set.

## ENGINE SHUTDOWN

1. Parking brake – Set.
2. **EFIS POWER** switches – **OFF**.
3. **AP/TRIM POWER** switch – **OFF**.
4. Avionics – As required.
5. **STANDBY HORIZON** – Caged and **OFF**.
6. **INVERTER** – **OFF**.
7. **CABIN TEMP MODE** – **OFF**.
8. **BLEED AIR VALVES** – **ENVIR OFF**.
9. **VENT BLOWER** – **AUTO**.
10. **AFT BLOWER** – **OFF**.
11. **LANDING/TAXI LIGHTS** – **OFF**.
12. **ICE PROTECTION** switches– **OFF**.
13. Battery condition – Check.
14. **ITT** – Check.
15. **CONDITION** levers – **FUEL CUTOFF**.
16. **PROP** levers – **FEATHER**.
17. Exterior lights – **OFF**.

18. DC voltmeters – Check voltage.
19. Overhead panel switches – As required.
20. Oxygen system – Off.
21. **AVIONICS MASTER PWR** – **OFF**.
22. **MASTER SWITCH** – **OFF**.
23. Chocks – As required
24. Parking brake – As required.
25. Control locks – As required.

## BEFORE LEAVING AIRCRAFT

1. Wheels – Chocked.
2. Parking brake – As required.
3. Flight controls – Locked.
4. Overhead flood lights – **OFF**.
5. **STANDBY PUMPS** – **OFF**.
6. Transponder – As required.
7. COMSEC – Zeroize as required.
8. Emergency exit lock – As required.
9. Aft cabin light – **OFF**.
10. Door light – **OFF**.
11. Walk-around inspection – Complete.
12. Aircraft forms – Complete.
13. Aircraft secured – Check.

# EMERGENCY PROCEDURES

## ENGINE MALFUNCTION

### ENGINE MALFUNCTION BEFORE $V_1$ (ABORT)

1. **POWER** – **IDLE**.
2. Braking – As required.

### ENGINE MALFUNCTION AFTER $V_1$

1. **GEAR** (positive climb) – **UP**.
2. **POWER** – As required.
3. **FLAPS** (105 KIAS) – **UP**.

IF THE PROP DID NOT FEATHER, PERFORM STEP 4.

4. **PROP** lever (dead engine) – **FEATHER**.

ONCE THE PROP IS FEATHERED, PERFORM STEPS 5 THROUGH 8.

O 5. **TCAS** – Set **TA**.

6. **LANDING/TAXI LIGHTS** – **OFF**.
7. **BRAKE DEICE** – **OFF**.
8. Engine cleanup – Perform.

### ENGINE MALFUNCTION DURING FLIGHT

1. Autopilot/yaw damper – Disengage.
2. **POWER** – As required.
3. Dead engine – Identify.
4. **PROP** lever (dead engine) – **FEATHER**.
5. **GEAR** – As required.

6. **FLAPS** – As required.

O 7. **TCAS** – Set **TA**.

8. **POWER** – Set for single-engine cruise.

9. Engine cleanup – Perform.

## ENGINE MALFUNCTION DURING FINAL APPROACH

1. **POWER** – As required.

2. **GEAR** – **DN**.

## ENGINE MALFUNCTION (SECOND ENGINE)

1. Airspeed – As required.

2. **PROP** lever – As required.

## ENGINE SHUTDOWN IN FLIGHT

1. **POWER** lever – **IDLE**.

2. **PROP** lever – **FEATHER**.

3. **CONDITION** lever – **FUEL CUTOFF**.

4. Engine cleanup – Perform.

## ENGINE CLEANUP

1. **CONDITION** lever – **FUEL CUTOFF**.

2. **ENG AUTO IGNITION** switch – **OFF**.

3. **AUTOFEATHER** switch – **OFF**.

4. **GEN** switch – **OFF**.

## ENGINE RESTART DURING FLIGHT (USING STARTER)

1. **CABIN TEMP MODE** switch – **OFF**.
2. Electrical load – Reduce to minimum.
3. Fuel **FIREWALL SHUTOFF VALVE** – **OPEN**.
4. **POWER** lever – **IDLE**.
5. **PROP** lever – **FEATHER**.
6. **CONDITION** lever – **FUEL CUTOFF**.
7. **ITT** (operating engine) – 700°C or less.
8. Engine – Start.
9. **GEN** switch – **RESET**, then **ON**.
10. Engine cleanup – Perform if engine restart is unsuccessful.
11. **CABIN TEMP MODE** switch – As required.
12. Electrical equipment – As required.
13. **ENG AUTO IGNITION** switch – **ARM**.
14. **PROP SYN** switch – As required.
15. **POWER** – As required.

## ENGINE RESTART DURING FLIGHT (NOT USING STARTER)

1. **CABIN TEMP MODE** switch – **OFF**.
2. Electrical load – Reduce to minimum.
3. **GEN** switch (affected engine) – **OFF**.
4. Fuel **FIREWALL SHUTOFF VALVE** – **OPEN**.

5. **POWER** lever – **IDLE**.
6. **PROP** lever – **HIGH RPM**.
7. **CONDITION** lever – **FUEL CUTOFF**.
8. Airspeed – 140 KIAS minimum.
9. Altitude – Below 20,000 feet.
10. **ENG AUTO IGNITION** switch – **ARM**.
11. **CONDITION** lever – **LOW IDLE**.
12. **ITT** – 1000 °C, 5 seconds maximum.
13. Oil pressure – Check.
14. **GEN** switch – **RESET**, then **ON**.
15. Engine cleanup – Perform if engine restart is unsuccessful.
16. **CABIN TEMP MODE** switch – As required.
17. Electrical equipment – As required.
18. Propellers – Synchronized.
19. **POWER** – As required.

## SINGLE-ENGINE DESCENT/ARRIVAL

1. Cabin pressurization controller – Set.
2. **CABIN** signs – As required.
3. **ICE PROTECTION** switches – As required.
4. Altimeters – Set.
5. **RECOG** lights – On.

★ 6. Arrival briefing – Complete.

## SINGLE-ENGINE BEFORE LANDING

1. **CABIN** signs switch – **NO SMOKE & FSB**.
2. **BRAKE DEICE** switch – **OFF**.
3. **ENGINE ANTI-ICE** – As required.
4. **PROP** lever – As required.
5. **FLAPS** (below 200 KIAS) – **APPROACH**.
6. **GEAR** (below 181 KIAS) – **DN**. Confirm.
7. **LANDING/TAXI LIGHTS** – As required.

## SINGLE-ENGINE LANDING CHECK

1. **AP & YD** – Disengage.
2. **GEAR DOWN** lights – Check.
3. **PROP** lever (operative engine) – **HIGH RPM**.

## SINGLE-ENGINE GO-AROUND

1. **POWER** – As required.
2. **GEAR** – **UP**.
3. **FLAPS** – **APPROACH**.
4. **FLAPS** (105 KIAS) – **UP**.
5. **LANDING/TAXI LIGHTS** – **OFF**.
6. **POWER** – As required.
7. **YD** – As required.

## LOW OIL PRESSURE

1. Torque – 49% maximum. Oil pressure less than 100 psi below 21,000 feet or less than 85 psi above 21,000 feet.

2. Oil pressure below 60 psi – Perform engine shutdown, or land as soon as practicable using minimum power to ensure safe arrival.

## CHIP DETECT CAUTION LIGHT ILLUMINATED

If the **L CHIP DETECT** or **R CHIP DETECT** caution annunciator illuminates, and safe single-engine flight can be maintained, perform engine shutdown.

## DUCT OVERTEMP CAUTION LIGHT ILLUMINATED

1. **CABIN/COCKPIT AIR** control – In.
2. **CABIN TEMP MODE** switch – **AUTO**.
3. **CABIN TEMP** switch – Decrease.
4. **VENT BLOWER** switch – **HIGH**.
5. **CABIN TEMP MODE** switch – **MAN COOL**.
6. **CABIN TEMP** switch – Decrease (hold).
7. **LEFT BLEED AIR VALVE** switch – **PNEU & ENVIR OFF**.
8. Light still illuminated (after 30 seconds) **LEFT BLEED AIR VALVE** switch – **OPEN**.
9. **RIGHT BLEED AIR VALVE** switch – **PNEU & ENVIR OFF**.
10. Light still illuminated (after 30 seconds) **RIGHT BLEED AIR VALVE** switch – **OPEN**.

## ENGINE ANTI-ICE FAILURE (L OR R ENG ICE FAIL ANNUNCIATOR ILLUMINATED)

1. **ENGINE ANTI-ICE ACTUATOR** switch – **STANDBY**.

IF **ENG ICE FAIL** ANNUNCIATOR DOES NOT EXTINGUISH:

2. Icing conditions – Exit. Assume engine anti-ice is still on for performance calculations.

## ENGINE BLEED AIR SYSTEM MALFUNCTION

### L or R BL AIR FAIL ANNUNCIATOR ILLUMINATED

1. **BRAKE DEICE** switch – **OFF**.
2. **ITT** and **TORQUE** – Monitor (note readings).
3. **BLEED AIR VALVE** switch – **OFF**.
4. Cabin pressurization – Check.

### EXCESSIVE DIFFERENTIAL PRESSURE

1. Cabin pressurization controller – Select higher setting.

IF CONDITION PERSISTS:

2. Oxygen (crew and passengers) – As required.
3. **LEFT BLEED AIR VALVE** switch – **ENVIR OFF**.

IF CONDITION STILL PERSISTS:

4. **RIGHT BLEED AIR VALVE** switch – **ENVIR OFF**.
5. Descend – As required.

IF CONDITION STILL PERSISTS:

6. Oxygen masks – **100%** and on.
7. **CABIN PRESS** switch – **DUMP**.
8. **BLEED AIR VALVE** switches – **OPEN** (if cabin heating is required).

## LOSS OF PRESSURIZATION (ABOVE 10,000 FEET)

1. Crew oxygen masks – **100%** and on.
2. Passenger oxygen – **ON**. Check to ensure all passengers have oxygen masks on and are receiving supplemental oxygen if required.

## DOOR UNLOCKED WARNING ANNUNCIATOR ILLUMINATED

1. **CABIN** signs switch – **NO SMOKE & FSB**.
2. **BLEED AIR VALVE** switches – **ENVIR OFF**.
3. Altitude – Descend below 14,000 feet as soon as practicable.
4. Oxygen – As required.

## PROPELLER FAILURE (OVER 2120 RPM)

1. **POWER** lever (affected engine) – **IDLE**.
2. **PROP** lever (affected engine) – **FEATHER**.
3. **CONDITION** lever – As required.
4. Engine cleanup – As required.

## FIRE

## ENGINE FIRE

## ENGINE/NACELLE FIRE DURING START OR GROUND OPERATIONS

1. **PROP** levers – **FEATHER**.
2. **CONDITION** levers – **FUEL CUTOFF**.

3. Fuel **FIREWALL SHUTOFF VALVES – CLOSED**.

O 4. **PUSH TO EXTINGUISH** switch – Push.

5. **MASTER SWITCH – OFF**.

## ENGINE FIRE IN FLIGHT (IDENTIFIED)

1. **POWER** lever – **IDLE**.
2. **PROP** lever – **FEATHER**.
3. **CONDITION** lever – **FUEL CUTOFF**.
4. Fuel **FIREWALL SHUTOFF VALVE – CLOSED**.

O 5. **PUSH TO EXTINGUISH** switch – Push as required.

6. Engine cleanup – Perform.
7. Land as soon as practicable.

## FUSELAGE FIRE

1. Fight the fire.
2. Land as soon as possible.

## WING FIRE

1. Perform engine shutdown on affected side.
2. Land as soon as possible.

## ELECTRICAL FIRE

1. Crew oxygen masks – As required.
2. Passenger oxygen – As required.
3. **MASTER SWITCH – OFF** (visual conditions only).
4. All nonessential electrical equipment – Off.

5. **BATT** switch – **ON**.
6. **GEN** switches (individually) – **RESET**, then **ON**.
7. Circuit breakers – Check for indication of defective circuit.
8. Essential electrical equipment – On (individually until fire source is isolated).
9. Land as soon as practicable.

## SMOKE AND FUME ELIMINATION

1. Crew oxygen masks – **100%** and on.
2. Passenger oxygen – **ON**.
3. **BLEED AIR VALVE** switches – **PNEU & ENVIR OFF**.
4. **VENT BLOWER** switch – **AUTO**.
5. **AFT BLOWER** switch – **OFF**.
6. **CABIN TEMP MODE** switch – **OFF**.
7. If smoke and fumes are not eliminated, **CABIN PRESS** Switch – **DUMP**.

**NOTE**

**Opening storm window, after depressurizing, will facilitate smoke and fume removal.**

8. Passenger oxygen masks – Check. Confirm that all passengers are receiving supplemental oxygen.
9. Engine oil pressure – Monitor.

# FUEL SYSTEM

## FUEL PRESS WARNING LIGHT ILLUMINATED

1. **STANDBY PUMP** switch – **ON**.

2. **FUEL PRESS** light out – Check.
3. **FUEL PRESS** light still illuminated – Record unboosted time.

### NO TRANSFER INDICATOR LIGHT ILLUMINATED (FUEL PANEL)

1. **AUX TRANSFER** switch (affected side) – **OVERRIDE**.
2. Auxiliary fuel quantity – Monitor.
3. **AUX TRANSFER** switch (after respective auxiliary fuel has completely transferred) – **AUTO**.

### NACELLE FUEL LEAK

1. Perform engine shutdown.
2. Fuel **FIREWALL SHUTOFF VALVE** – **CLOSED**.
3. Land as soon as practicable.

### FUEL CROSSFEED

1. **AUX TRANSFER** switches – **AUTO**.
2. **STANDBY PUMPS** – **OFF**.
3. **CROSSFEED FLOW** – As required.
4. **FUEL CROSSFEED** annunciator illuminated – Check.
5. **FUEL PRESS** annunciator extinguished – Check.
6. Fuel quantity – Monitor.

## ELECTRICAL SYSTEMS EMERGENCIES

### DC GEN LIGHT ILLUMINATED

1. **GEN** switch – **OFF, RESET**, then **ON**.

IF THE GENERATOR DOES NOT RESET:

2. **GEN** switch – **OFF**.
3. Operating loadmeter – 100% maximum.

## BOTH DC GEN LIGHTS ILLUMINATED

1. All nonessential equipment – Off.
2. Land as soon as practicable.
3. Ferry fuel – Transfer using wobble pump as required.

## EXCESSIVE LOADMETER INDICATION (OVER 100%)

1. **BATT** switch – **OFF** (monitor loadmeter).

IF LOADMETER STILL INDICATES ABOVE 100%:

2. Nonessential Electrical Equipment – Off.

IF LOADMETER INDICATES 100% OR BELOW:

3. **BATT** switch – **ON**.

## INVERTER WARNING LIGHT ILLUMINATED

1. Select the other inverter.

## CIRCUIT BREAKER TRIPPED

1. Nonessential circuit – Do not reset in flight.
2. Essential circuit – Reset once. If it trips again, do not reset.

## BUS FEEDER CIRCUIT BREAKER TRIPPED (FUEL PANEL BUS FEEDERS AND RIGHT CIRCUIT BREAKER PANEL BUS FEEDERS)

1. A short is indicated, do not reset in flight.

## BATTERY CHG ANNUNCIATOR ILLUMINATED DURING GROUND OPERATIONS

1. One generator – **OFF**.
2. Voltmeter – Indicating 28 volts.
3. Momentarily turn battery **OFF** – Note change in loadmeter indication.

## BATTERY CHG ANNUNCIATOR ILLUMINATED IN FLIGHT

1. **BATT** – **OFF**.
2. **BATTERY CHG** annunciator – Check. If extinguished, continue flight. If light remains illuminated, land as soon as practicable.

## CURRENT LIMITER CHECK

1. If both **DC GEN** annunciators are illuminated – Individually press each volt/loadmeter switch and observe voltage. If generator voltage is not seen on voltmeter, that current limiter has burned open.
2. If one **DC GEN** annunciator is illuminated – Press both volt/loadmeter switches and observe voltage. If generator voltage is not seen on the affected side, one or more current limiters have burned open. If battery voltage is not seen on the affected side, the current limiter for that side has burned open.

## EMERGENCY DESCENT

1. **POWER** levers – **IDLE**.
2. **PROP** levers – **HIGH RPM**.
3. **FLAPS** – **APPROACH**.
4. **GEAR** – **DN**.

5. Airspeed – 181 KIAS maximum.

# LANDING EMERGENCIES

## LANDING GEAR UNSAFE INDICATION

1. **LDG GEAR CONTROL** – Check **DN**.
2. **LANDING GEAR RELAY** and **GEAR IND** circuit breakers – Check in.
3. **GEAR DOWN** lights – Check illuminated.

IF INDICATOR REMAINS UNSAFE:

4. Landing gear manual extension – Perform.

## LANDING GEAR MANUAL EXTENSION

1. Airspeed – Below 181 KIAS.
2. **LANDING GEAR RELAY** circuit breaker – Pull.
3. **LDG GEAR CONTROL** – **DN**.
4. Manual extension lever – Unstow. Pump until the three green **GEAR DOWN** lights are illuminated and resistance is felt.
5. Manual extension lever – If three green **GEAR DOWN** lights are illuminated, stow the lever.

## GEAR-UP LANDING (ALL GEAR UP)

1. Fuel load – Reduce.
2. Personnel emergency briefing – Complete.
3. Loose equipment – Stow/secure.
4. **BLEED AIR VALVES** – **ENVIR OFF** (below 10, 000 feet).
5. **CABIN PRESS** switch – **DUMP**.

6. Emergency exit hatch – Remove and stow.
7. Seat belts and harnesses – Fasten.
8. Gear manual extension handle – Stow.
9. **LDG GEAR CONTROL** – **UP**.
10. **LANDING GEAR RELAY** circuit breaker – Pull.
11. **LANDING GEAR WARN** horn circuit breaker – Pull.
12. Nonessential electrical equipment – Off.
13. **FLAPS** – As required (**DOWN** is recommended for landing).
14. **POWER** levers – **IDLE** when landing on the desired touchdown area is assured.
15. **CONDITION** levers – **FUEL CUTOFF**.
16. Fuel **FIREWALL SHUTOFF VALVES** – **CLOSED**.
17. **MASTER SWITCH** – **OFF**.

## LANDING WITH NOSE GEAR UNSAFE

1. Fuel load – Reduce.
2. Crew and passenger briefings – Complete.
3. Loose equipment – Stow/secure.
4. **BLEED AIR VALVES** – **ENVIR OFF** (below 10,000 feet).
5. Cabin Pressure switch – **DUMP** (after cabin has depressurized).
6. Emergency exit hatch – Remove and secure.
7. Seat belts and harnesses – Fasten.
8. Extension handle – Stow.

9. **LANDING GEAR CONTROL** – **DN**.
10. **LANDING GEAR RELAY** circuit breaker – Pull.
11. **LANDING GEAR WARN** horn circuit breaker – Pull.
12. Before landing checklist – Complete.

AFTER TOUCHDOWN:

13. **POWER** levers – **IDLE**.
14. **PROP** levers – **FEATHER**.
15. **CONDITION** levers – **FUEL CUTOFF**.

AFTER STOPPING:

16. Fuel **FIREWALL SHUTOFF VALVES** – **CLOSED**.
17. **MASTER SWITCH** – **OFF**.

## LANDING WITH ONE MAIN GEAR UNSAFE

1. Retract gear and make a **GEAR UP LANDING**.

IF THE GEAR WILL NOT RETRACT:

2. Fuel load – Reduce.
★ 3. Crew and passenger briefings – Complete.
4. Loose equipment – Stow/secure.
5. **BLEED AIR VALVES** – **ENVIR OFF** (below 10,000 feet).
6. Cabin pressure switch – **DUMP** (after cabin has depressurized).
7. Emergency exit hatch – Remove and secure.
8. Seat belts and harnesses – Fasten.
9. Extension handle – Stow.

10. **LDG GEAR CONTROL** – **DN**.
11. **LANDING GEAR RELAY** circuit breaker – Pull.
12. **LANDING GEAR WARN** horn circuit breaker – Pull.
13. Nonessential electrical equipment – Off.
14. Before landing checklist – Complete.
15. **FLAPS** – As required.
16. Airspeed – Normal approach speed.
17. **POWER** levers – **IDLE** when landing on the desired touchdown area is assured.
18. **CONDITION** levers – **FUEL CUTOFF**.

AFTER STOPPING:

19. Fuel **FIREWALL SHUTOFF VALVES** – **CLOSED**.
20. **MASTER SWITCH** – **OFF**.

## CRACKED WINDSHIELD

### INTERNAL CRACK

1. Descend – Below 25,000 feet.
2. Cabin pressure – Reset pressure differential to maintain 4.0 psi or less as required.

## CRACKED CABIN WINDOW

1. Crew oxygen masks – **100%** and on (if above 10,000 feet).
2. **CABIN** signs switch – **NO SMOKE & FSB**.
3. Passenger oxygen – On and checked (if above 10,000 feet).

4. Cabin pressure – Depressurize.
5. Land as soon as practicable.

## DITCHING

1. Radio calls/transponder – As required.
2. Personnel emergency briefing – As required.
3. **BLEED AIR VALVES** – **PNEU & ENVIR OFF**.
4. **CABIN PRESS** switch – **DUMP**.
5. **CABIN** signs switch – **NO SMOKE & FSB**.
6. Cabin emergency exit hatch – Remove and stow.
7. Seat belts and harnesses – Secure.
8. **GEAR** – **UP**.
9. **FLAPS** – **DOWN**.
10. Nonessential electrical equipment – Off.
11. Approach – Normal, power on.
12. Emergency lights – As required.

## FLIGHT CONTROLS MALFUNCTION

### UNSCHEDULED RUDDER BOOST ACTIVATION

1. **RUDDER BOOST – OFF**.

IF CONDITION PERSISTS:

2. **RUDDER BOOST** circuit breaker – Pull.
3. **BLEED AIR VALVE – OFF** (below 10,000 feet).
4. Rudder trim – Adjust.

## UNSCHEDULED ELECTRIC ELEVATOR TRIM

1. Control wheel disconnect switch – Press fully.
2. Elevator trim switch – **OFF**.
3. **AP TRIM POWER** circuit breaker – Out.

## ELECTROTHERMAL PROPELLER DEICE (AUTO SYSTEM) MALFUNCTION

**ZERO AMPS:**

1. **PROP** deice switch – Check **AUTO**.

IF AMPS REMAIN AT ZERO:

2. **PROP** deice switch – **OFF** (for 30 seconds).
3. **PROP** deice switch – **AUTO**.

IF AMPS REMAIN AT ZERO:

4. Manual backup system – Initiate. (See electrothermal propeller Deice Manual System Operation.)

**BELOW 18 AMPS:**

5. Operation – Continue.
6. RPM – Increase (briefly to aid in ice removal, if propeller imbalance occurs).

**OVER 24 AMPS**

7. Monitor – Continue operation if the **PROP** deice circuit breaker switch does not trip.
8. RPM – Increase (briefly to aid in ice removal, if propeller imbalance occurs).
9. Loadmeter – Monitor for excessive current drain. If the **PROP AUTO** deice circuit breaker switch trips, use the manual system.

10. If the **PROP AUTO** deice control circuit breaker or the left or right prop deice circuit breaker trips, avoid icing conditions.

## ELECTROTHERMAL PROPELLER DEICE MANUAL SYSTEM OPERATION

1. Manual propeller deice switch – Hold in **MANUAL** position for approximately 90 seconds, or until ice is dislodged from blades.
2. Manual system current requirement – Monitor the aircraft's loadmeters when the manual deice switch is in the **MANUAL** position. A small needle deflection (approximately 5%) indicates the system is functioning.

# PERFORMANCE CHECKS

## FUEL SYSTEM

1. Fuel **FIREWALL SHUTOFF VALVES** – **CLOSED**.
2. **STANDBY PUMPS** – **ON**.
3. **BATT** switch – **ON** (**L** and **R FUEL PRESS**, **L** and **R ENG ANT-ICE** annunciators illuminated).
4. **L** and **R FUEL PRESS** annunciators – Illuminated.
5. Fuel **FIREWALL SHUTOFF VALVES** – **OPEN**.
6. **L** and **R FUEL PRESS** annunciators – Extinguished.
7. **STANDBY PUMPS** – **OFF**.
8. **L** and **R FUEL PRESS** annunciators – Illuminated.
9. **CROSSFEED FLOW** alternately **LEFT** and **RIGHT (FUEL CROSSFEED** annunciator illuminated, **L** and **R FUEL PRESS** annunciators extinguished).
10. **CROSSFEED FLOW** – **OFF**.
11. Auxiliary fuel transfer – **AUTO**.
12. **NO TRANSFER** lights – **TEST**.
13. Fuel quantity – Check.

## OXYGEN SYSTEM

1. Passenger manual drop-out – Push off.
2. Oxygen system – Crew ready.
3. Crew masks – **100%**; check operation and stow.

**NOTE**

**1850 psi at 15° is a fully charged bottle. Read duration directly from the Oxygen Duration Table, P-1.**

a. Read oxygen pressure from the gauge.

b. Read the OAT (with battery on).

c. Determine the percent of usable capacity from Figure P-1 (e.g., 1100 psi at 0 °C = 57%).

d. Compute the oxygen duration in minutes from Table P-1 by multiplying the full bottle duration by the percent of usable capacity, as in the following example.

(1) Pilot and copilot with masks set at **100%** plus 6 passengers = 10 people using oxygen.

**NOTE**

**For oxygen duration computations, count each diluter-demand crew mask in use as two (e.g., with four passengers and a crew of two, enter the table at eight people using).**

(2) Cylinder volume = 115 cubic feet.

(3) Duration with full bottle = 73 minutes.

(4) Duration with 57% capacity: 0.57 x 73 = 41 minutes.

*Table P-1. Oxygen Duration*

| OXYGEN DURATION WITH FULL BOTTLE (100% CAPACITY) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **STATED CYLINDER SIZE (CU FT)** | ****NUMBER OF PEOPLE USING** | | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| | **DURATION IN MINUTES** | | | | | | | | |
| 22 | 144 | 72 | 48 | 36 | 26 | 24 | 20 | 18 | 16 |
| 50 | 317 | 158 | 105 | 79 | 63 | 52 | 45 | 39 | 35 |
| 77 | 488 | 244 | 182 | 122 | 97 | 81 | 69 | 61 | 54 |
| 115 | 732 | 366 | 244 | 183 | 146 | 122 | 104 | 91 | 81 |
| **STATED CYLINDER SIZE (CU FT)** | ****NUMBER OF PEOPLE USING** | | | | | | | | |
| | 10 | 11 | 12 | 13 | 14 | 15 | **16 | **17 | |
| | **DURATION IN MINUTES** | | | | | | | | |
| 22 | 14 | 13 | 12 | 11 | 10 | * | * | * | |
| 50 | 31 | 28 | 26 | 24 | 22 | 21 | 19 | 18 | |
| 77 | 48 | 44 | 40 | 37 | 34 | 32 | 30 | 28 | |
| 115 | 73 | 66 | 61 | 56 | 52 | 48 | 45 | 43 | |

* Will not meet oxygen requirements.

** For oxygen duration computations, count each diluter-demand crew mask in use as two (e.g., with four passengers and a crew of two, enter the table at eight people using).

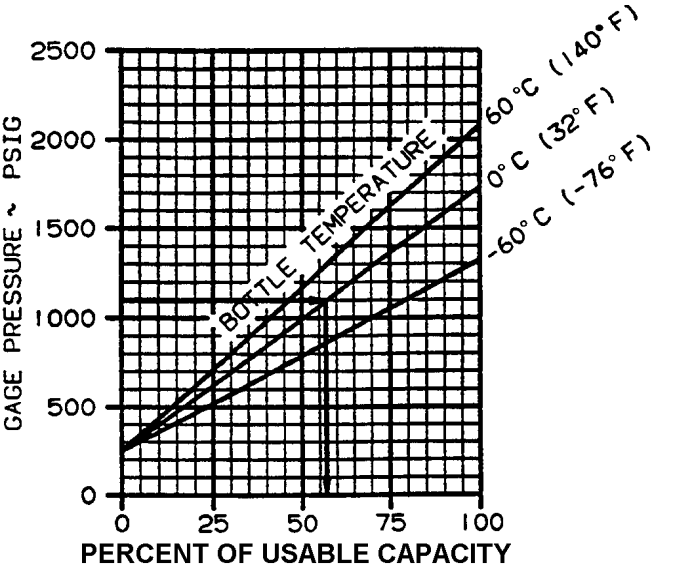



***Figure P-1. Percent of Usable Capacity***

## FIRE EXTINGUISHER PRESSURE

A gauge, calibrated in psi, is mounted on each supply cylinder for determining the level of charge and should be checked during preflight. Refer to Table P-2.

***Table P-2. Engine Fire Extinguisher Gauge Pressure***

| Temp °C | -40 | -29 | -18 | -06 | 04 | 16 | 20 | 38 | 48 |
|---|---|---|---|---|---|---|---|---|---|
| PSI | 190 to 240 | 220 to 275 | 250 to 315 | 290 to 365 | 340 to 420 | 390 to 480 | 455 to 550 | 525 to 635 | 605 to 730 |

## FERRY FUEL TANKS AND CAPS

O Visually check fuel level of each tank, condition of seal, and that cap is tight and properly installed. Check tiedowns and platform assemblies to determine if tanks are securely installed.

## CABIN DOOR

Ensure the cabin door is closed and locked as follows: Check position of safety arm and diaphragm plunger (lift door step) and each of the six rotary cam locks align within the orange sight indicators. In addition, the following inspection and test shall be performed prior to the first flight of the day.

1. Open cabin door – Check that **DOOR UNLOCKED** annunciator is extinguished.
2. Latch cabin door but do not lock – Check that **DOOR UNLOCKED** annunciator illuminates.
3. **BATT** switch – **ON**. Check that **DOOR UNLOCKED** annunciator is still illuminated.
4. Close and lock cabin door – Check that **DOOR UNLOCKED** annunciator is extinguished.
5. **BATT** switch – **OFF**.

## FLIGHT CONTROLS/AUTOPILOT SYSTEM

1. **AP XFER** switch – Select pilot's side.
2. **AP** Mode selector button (**AP**) – Press to engage autopilot.

**WARNING**

**If unable to overpower the autopilot in any axis, do not use.**

3. Flight controls – Overpower autopilot in pitch, roll and yaw axis.
4. Auto trim – Check.
    a. Apply nose up force on control wheel – Note nose down trim motion after approximately 3 seconds.
    b. Apply nose down force on control wheel – Note nose up trim motion after approximately 3 seconds.
    c. Press right rudder – Note left rudder trim motion after approximately 3 seconds.
    d. Press left rudder – Note right rudder trim motion after approximately 3 seconds.
    e. Select **HDG** mode – Observe **FD** commands and control wheel motion correspond to movement of the heading selector knob.
    f. **AP DISC & TRIM INTRPT** – Press and release. Note autopilot disconnection, flashing **AP** annunciation, and aural disconnect tone.
5. Manual electric trim – Check.
    a. Pilot and copilot control wheel trim switches – Check.

**WARNING**

**Operation of the electric trim switch system should occur only by movement of pairs of switches. Any movement of the elevator trim wheel while depressing only one switch element denotes a trim system malfunction. The AP/TRIM POWER switch must be turned OFF and flight conducted only by manual operation of the trim wheel.**

b. Pilot And Copilot Trim Switches – Check individual element for no movement of trim, then check proper operation of both elements.

c. Pilot Trim Switches – Check that pilot switches override copilot switches while trimming in opposite directions, and trim moves in direction commanded by pilot.

d. Pilot And Copilot Trim Switches – Check trim disconnects while activating pilot or copilot trim disconnect switches.

6. **AP XFER** Switch – Select copilot's side and repeat steps 1 through 5.

## BRAKE DEICE

**NOTE**

**Brake deice control valves may become inoperative if valves are not cycled periodically. One cycle of the valves is required daily regardless of the weather conditions.**

1. **BLEED AIR VALVES** – **OPEN**.
2. **BRAKE DEICE** – **ON**, annunciator illuminated.

3. **CONDITION** levers – **HIGH IDLE** if brake deice is to be used.
4. **BRAKE DEICE** – **OFF**, annunciator extinguished.
5. **CONDITION** levers – As required.

## AUTOFEATHER/AUTO IGNITION

1. **AUTO IGNITION** switches – **ARM**.
2. **POWER** levers – 22% torque. Auto ignition annunciators extinguish.
3. **AUTOFEATHER** switch – Hold to **TEST**. Both **AUTOFEATHER** annunciators illuminated.
4. **POWER** levers – Retard individually.

**NOTE**

**AUTOFEATHER annunciators will illuminate and extinguish with each fluctuation of torque as the propeller feathers.**

   a. Approximately 16 to 21% torque, opposite **AUTOFEATHER** annunciator extinguishes, **IGN ON** annunciator illuminated.
   b. Approximately 9 to 14% torque, both **AUTOFEATHER** annunciators extinguished (prop begins to feather).
   c. Return **POWER** levers to approximately 22% torque.

5. Repeat procedure with other engine.
6. **POWER** levers – **IDLE**.
7. **AUTOFEATHER** switch – **ARM**.
8. **AUTO IGNITION** switches – **OFF**.

## OVERSPEED GOVERNORS AND RUDDER BOOST

1. **RUDDER BOOST** switch – On.
2. **PROP** levers – **HIGH RPM**.
3. **PROP GOV TEST** switch – Hold in **TEST** position.
4. Left **POWER** lever – Increase until propeller is stabilized at 1830 – 1910 RPM. Continue to increase until rudder movement is noted. (Observe **ITT** and torque limits.)
5. **POWER** lever – Retard to **IDLE**.
6. Repeat steps 3, 4, and 5 for the right engine.

## PRIMARY GOVERNORS

1. **POWER** levers – Set 1800 RPM.
2. **PROP** levers – Retard to **FEATHER** detent. Note propellers stabilize between 1600 and 1640 RPM.
3. **PROP** levers – **HIGH RPM**. Note propellers return to 1800 RPM.

## ENGINE ANTI-ICE – CHECK

1. **ENGINE ANTI-ICE** – **ON**.
   a. Both advisory lights illuminated.
   b. Both bypass doors extended.
   c. Maximum time for a. and b. is 15 seconds.
2. **ENGINE ANTI-ICE** – **OFF**.
   a. Both advisory lights extinguish.
   b. Both bypass doors retracted.
   c. Maximum time for a. and .b is 15 seconds.

3. Electrical standby system – Check.

## ANTI-ICE/DEICE SYSTEMS – CHECK

1. **PROP** deice – Check. When **MANUAL** mode is selected, note rise on DC loadmeter. When **AUTO** mode is selected, monitor prop ammeter for 90 seconds and ensure the indicator remains in the normal operating range the entire time.

**NOTE**

**If windshield heat is needed prior to takeoff, use NORMAL setting for a minimum of 15 minutes prior to selecting HIGH to provide adequate preheating and minimize the effects of thermal shock. The windshield heat thermostat will invalidate the check in OAT above 20 to 30 °C.**

2. **WSHLD ANTI-ICE** – Check. Note increases on the loadmeter and cycle through both normal and high settings.
3. All anti-ice/deice switches – **OFF**
4. Surface deice system – Check.

## VACUUM AND PNEUMATIC SYSTEM

1. **LEFT BLEED AIR VALVE** – **OFF**.
   a. Pneumatic and suction pressures remain normal.
   b. **L BL AIR OFF** annunciator illuminates.
   c. Both **BL AIR FAIL** annunciators remain extinguished.
2. **RIGHT BLEED AIR VALVE** – **OFF**.
   a. Pneumatic and suction pressures read zero.

b. Both **BL AIR OFF** and **BL AIR FAIL** annunciators illuminated.

3. **LEFT BLEED AIR VALVE** – **ON**.

   a. Pneumatic and suction pressures return to normal.

   b. Both **BL AIR FAIL** annunciators extinguished.

   c. **L BL AIR OFF** annunciator extinguished.

4. **RIGHT BLEED AIR VALVE** – **ON**.

   a. **R BL AIR OFF** annunciator extinguished.

## PRESSURIZATION

1. **BLEED AIR VALVES** – Both **ON**.
2. **CABIN ALTITUDE** – Set 500 feet lower than field pressure altitude.
3. **CABIN PRESS** switch – **TEST**. Cabin climb/descent gauge indicates a descent.
4. **CABIN PRESS** switch – Release. Cabin climb/descent gauge indicates a climb, then stabilizes at zero climb.
5. Altitude selector – Set as required. Pressure altitude + 200 feet.

## CREW/PASSENGER BRIEFING

1. Crew Introduction.
2. Equipment.

   a. Personnel to include ID tags.

   b. Professional (medical equipment, etc.).

   c. Survival.

3. Flight Data.
    a. Route.
    b. Altitude.
    c. Time en route.
    d. Weather.
4. Normal Procedures.
    a. Entry and exit of aircraft.
    b. Seating and seat position.
    c. Seat belts.
    d. Movement in aircraft.
    e. Internal communications.
    f. Security of equipment.
    g. Smoking.
    h. Oxygen.
    i. Refueling.
    j. Weapons and prohibited items.
    k. Protective masks.
    l. Toilet.
5. Emergency Procedures.
    a. Emergency exits.
    b. Emergency equipment.
    c. Emergency landing/ditching procedures.

## DEPARTURE BRIEFING

1. ATC Clearance – Review.
    a. Routing.

b. Initial altitude.

2. Departure Procedure (DP) – Review.
   a. Named Departure Procedure.
   b. Obstacle Clearance Departure Procedure/ Noise Abatement Procedure.
   c. VFR departure route.
3. Copilot duties – Review.
   a. Adjust takeoff power.
   b. Monitor engine instruments.
   c. Power check at 65 knots.
   d. Call out engine malfunctions.
   e. Tune/identify all nav/comm radios.
   f. Make all radio calls.
   g. Adjust transponder and radar as required.
   h. Complete flight log during flight and note altitudes and headings.
   i. Note departure time.
   j. Retract gear and flaps as directed.
4. TOLD card – Review.
   a. Takeoff power.
   b. $V_1/V_r$.
   c. $V_2$ + 10 KIAS (climb to 1500' AGL).
   d. $V_2/V_{yse}$.

## ARRIVAL BRIEFING

1. Weather/altimeter setting.
2. Airfield/facilities – Review.

a. Field elevation.

b. Runway length.

c. Runway condition.

3. Approach procedure – Review.

   a. Approach plan/profile.

   b. Altitude restrictions.

   c. Missed approach.

      (1) Point.

      (2) Time.

      (3) Intentions.

   d. Decision height or MDA.

   e. Lost communications.

4. Backup approach/frequencies.

5. Copilot duties – Review.

   a. Nav/comm set-up.

   b. Monitor altitude and airspeeds.

   c. Monitor approach.

   d. Call out visual/field in sight.

6. Landing performance data – Review.

   a. Approach speed.

   b. Runway required.

7. Passenger briefing – As required.

# OPERATOR'S AND CREWMEMBER'S CHECKLIST

## PART II

# ARMY C-12T3 AIRCRAFT

## NSN 1510-01-470-0220

# ARMY C-12F3 AIRCRAFT

## NSN 1510-01-235-5840

# NORMAL PROCEDURES

## BEFORE EXTERIOR CHECK

*1. Forms/Publications – Check.

★ 2. Oxygen system – Check.

*3. Flight controls – Unlock/check.

*4. Parking brake – As required.

5. Manual trim – Check and set to zero.

*6. **LDG GEAR CONTROL** – **DN**.

O *7. **EFIS POWER** – **OFF**.

★ 8. Fuel pumps/crossfeed operation – Check.

9. Fuel gauges – Check quantity.

★O* 10. **EFIS POWER** switches and **INVERTER** – **ON**, check, **OFF**.

11. Subpanel – Check and set.

12. **FLAPS** – As desired.

13. **BATT** switch – **OFF**.

14. Galley power switches – **OFF**.

15. Toilet – Check.

16. Emergency equipment – Check.

## FUEL SAMPLE AND OIL CHECK

1. Fuel sample – Check.

## LEFT WING, AREA 1

1. Left wing area – Check.

2. Left main landing gear – Check.

3. Left engine and propeller – Check.

4. Left wing center section – Check.
5. Fuselage underside – Check.

## NOSE SECTION, AREA 2

1. Nose section – Check.

## RIGHT WING, AREA 3

1. Right wing center section – Check.
2. Right engine and propeller – Check.
3. Right main landing gear – Check.
4. Right wing – Check.

## FUSELAGE RIGHT SIDE, AREA 4

1. Fuselage right side – Check.

## EMPENNAGE, AREA 5

1. Empennage – Check.

## FUSELAGE LEFT SIDE, AREA 6

1. Fuselage left side – Check.
*2. Chocks and tiedowns – Removed.

## *INTERIOR CHECK

1. Cargo/loose equipment – Check secure.

★ O 2. Ferry fuel tanks and caps – Check.

O 3. Ferry fuel tank selector valve(s) – Closed.

★ 4. Cabin door – Locked and checked.

5. Cargo door – Check and lock.
6. Emergency exit – Check.

★ 7. Crew/passenger briefing – Complete.

## BEFORE STARTING ENGINES

*1. Parking brake – Set.

*2. Oxygen system – Set.

3. Circuit breakers – Check.

*4. Overhead panel – Check.

*5. Fuel panel switches – Check.

6. Magnetic compass – Check.

O 7. Clock and map lights – **OFF**.

*8. Pedestal controls – Set.

9. Lower console switches – Set.

10. Gear ratchet handle – Stowed.

11. Free air temperature gauge – Check.

12. Pilot's instrument panel – Check and set.

13. Copilot's instrument panel – Check and set.

## *FIRST ENGINE START (BATTERY START)

1. **BATT** switch – **ON**.

2. Exterior **LIGHTS** – As required.

3. Propeller area – Clear.

4. Engine – Start.

5. Engine and systems instruments – Check.

6. **CONDITION** lever – **HIGH IDLE**.

7. **GEN** switch – **RESET**, then **ON**.

## *SECOND ENGINE START (BATTERY START)

1. First engine generator load – 50% or less– **GEN** switch **OFF**.
2. Propeller area – Clear.
3. Engine – Start.
4. Engine and systems instruments – Check.
5. **BATTERY CHG** annunciator – Check.
6. **INVERTER** switch – **ON**, check **INVERTER** lights **OFF**.
7. Second engine **GEN** switch – **RESET**, then **ON**.
8. **CONDITION** levers – As required.
9. **RED ANTICOLLISION** light – Reset.

## ABORT START

1. **CONDITION** lever – **FUEL CUTOFF**.
2. **IGNITION AND ENGINE START** switch – **STARTER ONLY**.
3. **ITT** – Monitor for drop in temperature.
4. **IGNITION AND ENGINE START** switch – **OFF**.

## ENGINE CLEARING

1. **CONDITION** lever – **FUEL CUTOFF**.
2. **IGNITION AND ENGINE START** switch – **OFF** (1 minute minimum).
3. **IGNITION AND ENGINE START** switch – **STARTER ONLY** (15 seconds minimum, 40 seconds maximum).
4. **IGNITION AND ENGINE START** switch – **OFF**.

## *FIRST ENGINE START (GPU START)

1. **BATT** switch – **ON**.
2. GPU – Connect.
3. **EXTERNAL POWER** advisory light – **ON**.
4. Exterior **LIGHTS** switches – As required.
5. Propeller area – Clear.
6. Engine – Start.
7. Engine and systems instruments – Check.
8. **CONDITION** lever – **HIGH IDLE**.
9. GPU – Disconnect.
10. **GEN** switch (after GPU disconnected) – **RESET**, then **ON**.
11. **BATTERY CHG** annunciator – Monitor.

## *SECOND ENGINE START (GPU START)

1. Propeller area – Clear.
2. Engine – Start.
3. Engine and systems instruments – Check.
4. Right **PROP** lever – **FEATHER**.
5. GPU – Disconnect.
6. Right **PROP** lever – **HIGH RPM**.
7. **INVERTER** switch – **ON**, check **INVERTER** light **OFF**.
8. **GEN** switches – **RESET**, then **ON**.
9. **CONDITION** levers – As required.
10. **RED ANTICOLLISION** light – Reset.

## BEFORE TAXIING.

*1. **AC/DC** power – Check.

*2. **AVIONICS MASTER POWER** – **ON**.

O * 3. **EFIS POWER** switches – **ON**.

*4. **CABIN TEMP MODE** and temperature switch – Set as desired.

*5. **BLEED AIR VALVES** – As required.

*6. **BRAKE DEICE** – AS required.

*7. Avionics – Check and set as required.

O * 8. **TCAS** – **TEST** and set.

9. **FLAPS** – Check.

*10. Altimeters – Set and check.

## *TAXIING

1. Brakes – Check.

2. Flight instruments – Check.

## ENGINE RUNUP

1. Parking brake – As required.

2. Manual prop feathering – Check.

★ 3. **AUTOFEATHER/AUTO IGNITION** – Check as required.

★ 4. Overspeed governors and rudder boost – Check as required.

★ 5. Primary governors – Check as required.

★ 6. **ICE VANES** – Check.

7. **CONDITION** levers – **HIGH IDLE**.

8. **POWER** levers – **IDLE**.

★ 9. Anti-Ice/deice systems – Check.

★ 10. Vacuum and pneumatic system – Check.

★ 11. Automatic flight control system – Check.

★* 12. Pressurization – Check and set.

13. **CONDITION** levers – As desired.

14. GPWS – Check.

## *BEFORE TAKEOFF

1. **AUTOFEATHER** switch – **ARM**.

2. **BLEED AIR VALVES** – As required.

3. Fuel panel – Check fuel quantity and switches positions.

4. Flight and engine instruments – Check.

5. **CABIN CONTROLLER** – Set.

6. Annunciator panels – Check.

7. **PROP** levels – **HIGH RPM**.

8. **FLAPS** – As required.

9. Trim – Set.

10. Avionics – Set.

11. Flight controls – Check.

★ 12. Departure briefing – Complete.

13. **CABIN** signs – As required.

## *LINE UP

1. **ICE PROTECTION** switches – As required.

2. Altitude alerter – Check.

O 3. Transponder / TCAS / Wx Radar – As required.

4. **ENG AUTO IGNITION** – **ARM**.

5. Lights – As required.
6. **CONDITION** levers – **HIGH IDLE**.
7. **POWER** – Stabilized 600 ft-lb minimum.

## AFTER TAKEOFF

1. **GEAR** – **UP**.
2. **FLAPS** (105 KIAS)– **UP**.
3. **LANDING/TAXI** lights – **OFF**.
4. Climb power – Set.

## CLIMB

1. **YD** – As required.
2. Cabin pressurization – Check.
3. **AUTOFEATHER** – As required.
4. **BRAKE DEICE** – As required.
5. **WSHLD ANTI-ICE** – As required.
6. Wings and nacelles – Check.
7. **TCAS** – Set range.

## CRUISE

1. **POWER** – Set.
2. **ICE PROTECTION** switches – As required.
3. **CABIN** signs – As required.
4. **AUXILIARY** fuel gauges – Monitor.
5. Altimeters – Check.
6. Engine instruments – Check.
7. **RECOG l**ights – As required.

O 8. **TCAS** – Set for en route.

**DESCENT – ARRIVAL**

1. Cabin pressurization – Set.
2. **CABIN** signs – As required.
3. **ICE PROTECTION** switches – As required.
4. **WSHLD ANTI-ICE** – As required.
5. **RECOG** lights – **ON**.
6. Radar altimeters –As required.
7. Altimeters – Set to current setting.

O 8. **TCAS** – Set as required.

★ 9. Arrival briefing – Complete.

**DESCENT – MAXIMUM RATE (CLEAN)**

1. Cabin pressurization – Set.
2. **CABIN** signs – As required.
3. **POWER** levers – **IDLE**.
4. **PROP** levers – **HIGH RPM**.
5. **GEAR** – **UP**.
6. **FLAPS** – **UP**.
7. Airspeed – $V_{mo}$ maximum.
8. **ICE PROTECTION** switches – As required.
9. **RECOG** lights – As required.

O 10. Ferry fuel caps – Loosen or remove if rate of descent exceeds 1500 fpm.

**DESCENT – MAXIMUM RATE (LANDING CONFIGURATION)**

1. Cabin pressurization – Set.

2. **CABIN** signs – As required.
3. **POWER** levers – **IDLE**.
4. **PROP** levers – **HIGH RPM**.
5. **FLAPS** – **APPROACH**.
6. **GEAR** – **DN**.
7. Airspeed – 181 KIAS maximum.
8. **ICE PROTECTION** switches – As required.
9. **RECOG** lights – As required.

O 10. Ferry fuel caps – Loosen or remove if rate of descent exceeds 1500 fpm.

## APPROACH

1. **HSI NAV SOURCE** – As required.

O 2. **TCAS** – Set as required.

## BEFORE LANDING

1. **CABIN** signs – **NO SMOKE & FSB**.
2. **AUTOFEATHER** – **ARM**.
3. **BRAKE DEICE** – As required.
4. **PROP** levers – As required.
5. **FLAPS** (below 200 KIAS) – **APPROACH**.
6. **GEAR** (below 181 KIAS) – **DN**/confirm.
7. **LANDING/TAXI LIGHTS** – As required.
8. **CONDITION** levers – **HIGH IDLE**.

O 9. **TCAS** – Set as required.

## LANDING

1. **AP** & **YD** – Disengaged.
2. **GEAR DOWN** lights – Check/confirm.
3. **PROP** levers – **HIGH RPM**.

## TOUCH AND GO LANDING

1. **PROP** levers – **HIGH RPM**.
2. **FLAPS** – As required.
3. Trim – Set.
4. Power stabilized – Check 600 ft-lb torque minimum.
5. Takeoff power – Set.

## GO-AROUND/MISSED APPROACH

1. **POWER** – As required.
2. **GEAR** – **UP**.
3. **FLAPS** – **APPROACH**.
4. **FLAPS** (105 KIAS) **– UP**
5. **LANDING/TAXI LIGHTS** – **OFF**.
6. Climb power – Set.
7. **YD** – As required.
8. **BRAKE DEICE** – **OFF**.

## AFTER LANDING

1. **CONDITION** levers – As required.
2. **AUTO IGNITION** – **OFF**.
3. **ICE PROTECTION** switches – **OFF**.

4. **FLAPS** – **UP**.
5. **XPNDR** – As required.
6. Radar – As required.
7. Lights – As required.

## ENGINE SHUTDOWN

1. **BRAKE DEICE** – **OFF**.
2. Parking brake – Set.
3. **LANDING/TAXI** lights – **OFF**.
4. **EFIS POWER** switches – **OFF**.
5. **INVERTER** – **OFF**.
6. **AUTOFEATHER** switch – **OFF**.
7. **CABIN TEMP MODE** – **OFF**.
8. **VENT** and **AFT VENT BLOWER** – **AUTO/OFF**.
9. **BATT** condition – Check.
10. **ITT** – Check.
11. **CONDITION** levers – **FUEL CUTOFF**.
12. **PROP** levers – **FEATHER**.
13. **AVIONICS MASTER PWR** – **OFF**.
14. **MASTER PANEL LIGHTS** – **OFF**.
15. Exterior lights – **OFF**.
16. **MASTER SWITCH** – **OFF**
17. Oxygen system – **OFF**.
18. Chocks – As required.
19. Parking brake – As required.
20. Flight controls – As required.

## BEFORE LEAVING AIRCRAFT

1. Wheel chocks – As required.
2. Parking brake – As required.
3. Flight controls – Locked.
4. **OVERHEAD FLOOD** lights – **OFF**.
5. **STANDBY PUMPS** – **OFF**.

O 6. **MAP** lights – **OFF**.

7. Windows – As required.
8. Emergency exit lock – As required.
9. Galley power switches – **OFF**.
10. Aft cabin light – **OFF**.
11. Door light – **OFF**.
12. Walk-around inspection – Complete.
13. Aircraft forms – Complete.
14. Aircraft secured – Check.

# EMERGENCY PROCEDURES

## ENGINE MALFUNCTION

## ENGINE MALFUNCTION BEFORE $V_1$ (ABORT)

1. **POWER** – **IDLE**.
2. Braking – As required.

## ENGINE MALFUNCTION AFTER $V_1$

1. **GEAR** (positive climb) – **UP**.
2. **POWER** – As required.
3. **FLAPS** (105 KIAS) – **UP**.

IF THE PROP DID NOT FEATHER, PERFORM STEP 4.

4. **PROP** lever (dead engine) – **FEATHER**.

ONCE THE PROP IS FEATHERED, PERFORM STEPS 5 THROUGH 8.

O 5. **TCAS** – Set **TA**.

6. **LANDING/TAXI LIGHTS – OFF**.
7. **BRAKE DEICE – OFF**.
8. Engine cleanup – Perform.

## ENGINE MALFUNCTION DURING FLIGHT

1. Autopilot/yaw damper – Disengage.
2. **POWER** – As required.
3. Dead engine – Identify.

4. **PROP** lever (dead engine) – **FEATHER**.
5. **GEAR** – As required.
6. **FLAPS** – As required.
7. **TCAS** – Set **TA**.
8. **POWER** – Set for single-engine cruise.
9. Engine cleanup – Perform.

## ENGINE MALFUNCTION DURING FINAL APPROACH

1. **POWER** – As required.
2. **GEAR – DN**.

## ENGINE MALFUNCTION (SECOND ENGINE)

1. Airspeed – As required.
2. **PROP** lever – As required.

## ENGINE SHUTDOWN IN FLIGHT

1. **POWER** lever – **IDLE**.
2. **PROP** lever – **FEATHER**.
3. **CONDITION** lever – **FUEL CUTOFF**.
4. Engine cleanup – Perform.

## ENGINE CLEANUP

1. **CONDITION** lever – **FUEL CUTOFF**.
2. **ENG AUTO IGNITION** switch – **OFF**.
3. **AUTOFEATHER** switch – **OFF**.
4. **GEN** switch – **OFF**.

## ENGINE RESTART DURING FLIGHT (USING STARTER)

1. **CABIN TEMP MODE** switch – **OFF**.
2. Electrical load – Reduce to minimum.
3. Fuel **FIREWALL SHUTOFF VALVE – OPEN**.
4. **POWER** lever – **IDLE**.
5. **PROP** lever – **FEATHER**.
6. **CONDITION** lever – **FUEL CUTOFF**.
7. **ITT** (operating engine) - 700° C or less.
8. Engine – Start.
9. **GEN** switch – **RESET**, then **ON**.
10. Engine cleanup – Perform if engine restart is unsuccessful.
11. **CABIN TEMP MODE** switch – As required.
12. Electrical equipment – As required.
13. **ENG AUTO IGNITION** switch – **ARM**.
14. **PROP SYN** switch – As required.
15. **POWER** – As required.

## ENGINE RESTART DURING FLIGHT (NOT USING STARTER)

1. **CABIN TEMP MODE** switch – **OFF**.
2. Electrical load – Reduce to minimum.
3. **GEN** switch (affected engine) – **OFF**.
4. Fuel **FIREWALL SHUTOFF VALVE – OPEN**.

5. **POWER** lever – **IDLE**.
6. **PROP** lever **– HIGH RPM**.
7. **CONDITION** lever – **FUEL CUTOFF**.
8. Airspeed – 140 KIAS minimum.
9. Altitude – Below 20,000 feet.
10. **ENG AUTO IGNITION** switch – **ARM**.
11. **CONDITION** lever – **LOW IDLE**.
12. **ITT** – 1000 °C, 5 seconds maximum.
13. Oil pressure – Check.
14. **GEN** switch – **RESET**, then **ON**.
15. Engine cleanup – Perform if engine restart is unsuccessful.
16. **CABIN TEMP MODE** switch – As required.
17. Electrical equipment – As required.
18. Propellers – Synchronized.
19. **POWER** – As required.

## SINGLE-ENGINE DESCENT/ARRIVAL

1. Cabin pressurization controller – Set.
2. **CABIN** signs – As required.
3. **ICE PROTECTION** switches – As required.
4. Altimeters – Set.
5. **RECOG** lights – On.

★ 6. Arrival briefing – Complete.

## SINGLE-ENGINE BEFORE LANDING

1. **CABIN** signs switch – **NO SMOKE & FSB**.
2. **BRAKE DEICE** switch – **OFF**.
3. **ICE VANE** – As required.
4. **PROP** lever – As required.
5. **FLAPS** (below 200 KIAS)-**APPROACH**.
6. **GEAR** (below 181 KIAS)**– DN/**confirm.
7. **LANDING/TAXI LIGHTS** – As required.

## SINGLE-ENGINE LANDING CHECK

1. **AP & YD** – Disengage.
2. **GEAR DOWN** lights – Check.
3. **PROP** lever (operative engine) – **HIGH RPM**.

## SINGLE-ENGINE GO-AROUND

1. **POWER** – As required.
2. **GEAR –UP**.
3. **FLAPS – APPROACH**.
4. **FLAPS** (105 KIAS) – **UP**.
5. **LANDING/TAXI LIGHTS – OFF**.
6. **POWER** – As required.
7. **YD** – As required.

## LOW OIL PRESSURE

1. Torque – 1093 ft-lb maximum. Oil pressure less than 100 psi below 21,000 feet or less than 85 psi above 21,000 feet.

2. Oil pressure below 60 psi – Perform engine shutdown, or land as soon as practicable using minimum power to ensure safe arrival.

## CHIP DETECT CAUTION LIGHT ILLUMINATED

If the **L CHIP DETECT** or **R CHIP DETECT** caution annunciator illuminates, and safe single-engine flight can be maintained, perform engine shutdown.

## DUCT OVERTEMP CAUTION LIGHT ILLUMINATED

1. **CABIN/COCKPIT AIR** control – In.
2. **CABIN TEMP MODE** switch – **AUTO**.
3. **CABIN TEMP** switch – Decrease.
4. **VENT BLOWER** switch – **HIGH**.
5. **CABIN TEMP MODE** switch – **MAN COOL**.
6. **CABIN TEMP** switch – Decrease (hold).
7. **LEFT BLEED AIR VALVE** switch – **PNEU & ENVIR OFF**.
8. Light still illuminated (after 30 seconds) **LEFT BLEED AIR VALVE** switch – **OPEN**.
9. **RIGHT BLEED AIR VALVE** switch – **PNEU & ENVIR OFF**.
10. Light still illuminated (after 30 seconds) **RIGHT BLEED AIR VALVE** switch – **OPEN**.

## ENGINE BLEED AIR SYSTEM MALFUNCTION

## L or R BL AIR FAIL ANNUNCIATOR ILLUMINATED

1. **BRAKE DEICE** switch – **OFF**.
2. **ITT** and **TORQUE** – Monitor (note readings).
3. **BLEED AIR VALVE** switch – **OFF**.
4. Cabin pressurization – Check.

## EXCESSIVE DIFFERENTIAL PRESSURE

1. Cabin pressurization controller – Select higher setting.

IF CONDITION PERSISTS:

2. Oxygen (crew and passengers) – As required.
3. **LEFT BLEED AIR VALVE** switch – **ENVIR OFF**.

IF CONDITION STILL PERSISTS:

4. **RIGHT BLEED AIR VALVE** switch – **ENVIR OFF**.
5. Descend – As required.

IF CONDITION STILL PERSISTS:

6. Oxygen masks – **100%** and on.
7. **CABIN PRESS** switch – **DUMP**.
8. **BLEED AIR VALVE** switches – **OPEN** (if cabin heating is required).

## LOSS OF PRESSURIZATION (ABOVE 10,000 FEET)

1. Crew Oxygen Masks – **100%** and on.

2. Passenger Oxygen – **ON**. Check to ensure all passengers have oxygen masks on and are receiving supplemental oxygen if required.

## DOOR UNLOCKED WARNING ANNUNCIATOR ILLUMINATED

1. **CABIN** signs switch – **NO SMOKE & FSB**.
2. **BLEED AIR VALVE** switches – **ENVIR OFF**.
3. Altitude – Descend below 14,000 feet as soon as practicable.
4. Oxygen – As required.

## PROPELLER FAILURE (OVER 2120 RPM)

1. **POWER** lever (affected engine) – **IDLE**.
2. **PROP** lever (affected engine)– **FEATHER**.
3. **CONDITION** lever – As required.
4. Engine cleanup – As required.

## FIRE

## ENGINE FIRE

## ENGINE/NACELLE FIRE DURING START OR GROUND OPERATIONS

1. **PROP** levers – **FEATHER**.
2. **CONDITION** levers – **FUEL CUTOFF**.
3. Fuel **FIREWALL SHUTOFF VALVES – CLOSED**.
4. **PUSH TO EXTINGUISH** switch – Push.
5. **MASTER SWITCH – OFF**.

## ENGINE FIRE IN FLIGHT (IDENTIFIED)

1. **POWER** lever – **IDLE**.
2. **PROP** lever – **FEATHER**.
3. **CONDITION** lever – **FUEL CUTOFF**.
4. Fuel **FIREWALL SHUTOFF VALVE – CLOSED**.
5. **PUSH TO EXTINGUISH** switch – Push as required.
6. Engine cleanup – Perform.
7. Land as soon as practicable.

## FUSELAGE FIRE

1. Fight the fire.
2. Land as soon as possible.

## WING FIRE

1. Perform engine shutdown on affected side.
2. Land as soon as possible.

## ELECTRICAL FIRE

1. Crew oxygen masks – As required.
2. Passenger oxygen – As required.
3. **MASTER SWITCH – OFF** (visual conditions only).
4. All nonessential electrical equipment – Off.
5. **BATT** switch – **ON**.
6. **GEN** switches (individually) – **RESET**, then **ON**.

7. Circuit breakers – Check for indication of defective circuit.
8. Essential electrical equipment – On (individually until fire source is isolated).
9. Land as soon as practicable.

## SMOKE AND FUME ELIMINATION

1. Crew oxygen masks – **100%** and on.
2. Passenger oxygen – **ON**.
3. **BLEED AIR VALVE** switches – **PNEU & ENVIR OFF**.
4. **VENT BLOWER** switch – **AUTO**.
5. **AFT BLOWER** switch – **OFF**.
6. **CABIN TEMP MODE** switch – **OFF**.
7. If smoke and fumes are not eliminated, **CABIN PRESS** switch – **DUMP**.
8. Passenger oxygen masks – Check. Confirm that all passengers are receiving supplemental oxygen.
9. Engine oil pressure – Monitor.

## FUEL SYSTEM

## FUEL PRESS WARNING LIGHT ILLUMINATED

1. **STANDBY PUMP** switch – **ON**.
2. **FUEL PRESS** light out – Check.
3. **FUEL PRESS** light still illuminated – Record unboosted time.

## NO TRANSFER INDICATOR LIGHT ILLUMINATED (FUEL PANEL)

1. **AUX TRANSFER** switch (affected side) – **OVERRIDE**.
2. Auxiliary fuel quantity – Monitor.
3. **AUX TRANSFER** switch (after respective auxiliary fuel has completely transferred) – **AUTO**.

## NACELLE FUEL LEAK

1. Perform engine shutdown.
2. Fuel **FIREWALL SHUTOFF VALVE – CLOSED**.
3. Land as soon as practicable.

## FUEL CROSSFEED

1. **AUX TRANSFER** switches – **AUTO**.
2. **STANDBY PUMPS** – **OFF**.
3. **CROSSFEED FLOW** – As required.
4. **FUEL CROSSFEED** annunciator illuminated – Check.
5. **FUEL PRESS** annunciator extinguished – Check.
6. Fuel quantity – Monitor.

## ELECTRICAL SYSTEMS EMERGENCIES

## DC GEN LIGHT ILLUMINATED

1. **GEN** switch – **OFF, RESET**, then **ON**.

IF THE GENERATOR DOES NOT RESET:

2. **GEN** switch – **OFF**.

3. Operating loadmeter – 100% maximum.

## BOTH DC GEN LIGHTS ILLUMINATED

1. All nonessential equipment – Off.
2. Land as soon as practicable.

O 3. Ferry fuel – Transfer using wobble pump as required.

## EXCESSIVE LOADMETER INDICATION (OVER 100%)

1. **BATT** switch – **OFF** (monitor loadmeter).

IF LOADMETER STILL INDICATES ABOVE 100%:

2. Nonessential electrical equipment – Off.

IF LOADMETER INDICATES 100% OR BELOW:

3. **BATT** switch – **ON**.

## INVERTER WARNING LIGHT ILLUMINATED

1. Select the other inverter.

## CIRCUIT BREAKER TRIPPED

1. Nonessential circuit – Do not reset in flight.
2. Essential circuit – Reset once. If it trips again, do not reset.

## BUS FEEDER CIRCUIT BREAKER TRIPPED (FUEL PANEL BUS FEEDERS AND RIGHT CIRCUIT BREAKER PANEL BUS FEEDERS)

1. A short is indicated, do not reset in flight.

## BATTERY CHG ANNUNCIATOR ILLUMINATED DURING GROUND OPERATIONS

1. One generator – **OFF**.
2. Voltmeter – Indicating 28 volts.
3. Momentarily turn battery **OFF** – Note change in loadmeter indication.

## BATTERY CHG ANNUNCIATOR ILLUMINATED IN FLIGHT

1. **BATT – OFF**.
2. **BATTERY CHG** annunciator – Check. If extinguished, continue flight. If light remains illuminated, land as soon as practicable.

## GENERATOR OVERHEAT F3

1. **GEN** – **OFF**.
2. Electrical load – Check.
3. Current limiters – Check.

## CURRENT LIMITER CHECK

1. If Both **DC GEN** annunciators are illuminated – Individually press each volt/loadmeter switch and observe voltage. If generator voltage is not seen on voltmeter, that current limiter has burned open.
2. If one **DC GEN** annunciator is illuminated – Press both volt/loadmeter switches and observe voltage. If generator voltage is not seen on the affected side, one or more current limiters have burned open. If battery voltage is not seen on the affected side, the current limiter for that side has burned open.

## EMERGENCY DESCENT

1. **POWER** levers – **IDLE**.
2. **PROP** levers – **HIGH RPM**.
3. **FLAPS – APPROACH**.
4. **GEAR - DN**.
5. Airspeed – 181 KIAS maximum.

## LANDING EMERGENCIES

## LANDING GEAR UNSAFE INDICATION

1. **LDG GEAR CONTROL** – Check **DN**.
2. **LANDING GEAR RELAY** and **GEAR IND** circuit breakers – Check in.
3. **GEAR DOWN** lights – Check illuminated.

IF INDICATOR REMAINS UNSAFE:

4. Landing gear manual extension – Perform.

## LANDING GEAR MANUAL EXTENSION

1. Airspeed – Below 181 KIAS.
2. **LANDING GEAR RELAY** circuit breaker – Pull.
3. **LDG GEAR CONTROL** – **DN**.
4. Manual extension lever – Unstow. Pump until the three green **GEAR DOWN** lights are illuminated and resistance is felt.
5. Manual extension lever – If three green **GEAR DOWN** lights are illuminated, stow the lever.

## GEAR-UP LANDING (ALL GEAR UP)

1. Fuel load – Reduce.

2. Personnel emergency briefing – Complete.
3. Loose equipment – Stow/secure.
4. **BLEED AIR VALVES** – **ENVIR OFF** (below 10, 000 feet).
5. **CABIN PRESS** switch – **DUMP**.
6. Emergency exit hatch – Remove and stow.
7. Seat belts and harnesses – Fasten.
8. Gear manual extension handle – Stow.
9. **LDG GEAR CONTROL** – **UP**.
10. **LANDING GEAR RELAY** circuit breaker – Pull.
11. **LANDING GEAR WARN** horn circuit breaker – Pull.
12. Nonessential electrical equipment – Off.
13. **FLAPS** – As required (**DOWN** is recommended for landing).
14. **POWER** levers – **IDLE** when landing on the desired touchdown area is assured.
15. **CONDITION** levers – **FUEL CUTOFF**.
16. Fuel **FIREWALL SHUTOFF VALVES** – **CLOSED**.
17. **MASTER SWITCH – OFF**.

## LANDING WITH NOSE GEAR UNSAFE

1. Fuel load – Reduce.
2. Crew and passenger briefings – Complete.
3. Loose equipment – Stow/secure.
4. **BLEED AIR VALVES** – **ENVIR OFF** (below 10,000 feet).

5. Cabin pressure switch – **DUMP** (after cabin has depressurized).
6. Emergency exit hatch – Remove and secure.
7. Seat belts and harnesses – Fasten.
8. Extension handle – Stow.
9. **LANDING GEAR CONTROL – DN**.
10. **LANDING GEAR RELAY** circuit breaker – Pull.
11. **LANDING GEAR WARN** horn circuit breaker – Pull.
12. Before landing checklist – Complete.

AFTER TOUCHDOWN:

13. **POWER** levers – **IDLE**.
14. **PROP** levers – **FEATHER**.
15. **CONDITION** levers – **FUEL CUTOFF**.

AFTER STOPPING:

16. Fuel **FIREWALL SHUTOFF VALVES** – **CLOSED**.
17. **MASTER SWITCH – OFF**.

## LANDING WITH ONE MAIN GEAR UNSAFE

1. Retract gear and make a **GEAR UP LANDING**.

IF THE GEAR WILL NOT RETRACT:

2. Fuel load – Reduce.

★ 3. Crew and passenger briefings – Complete.

4. Loose equipment – Stow/secure.
5. **BLEED AIR VALVES** – **ENVIR OFF** (below 10,000 feet).

6. Cabin pressure switch – **DUMP** (after cabin has depressurized).
7. Emergency exit hatch – Remove and secure.
8. Seat belts and harnesses – Fasten.
9. Extension handle – Stow.
10. **LDG GEAR CONTROL** – **DN**.
11. **LANDING GEAR RELAY** circuit breaker – Pull.
12. **LANDING GEAR WARN** horn circuit breaker – Pull.
13. Nonessential electrical equipment – Off.
14. Before landing checklist – Complete.
15. **FLAPS** – As required.
16. Airspeed – Normal approach speed.
17. **POWER** levers – **IDLE** when landing on the desired touchdown area is assured.
18. **CONDITION** levers – **FUEL CUTOFF**.

AFTER STOPPING:

19. Fuel **FIREWALL SHUTOFF VALVES** – **CLOSED**.
20. **MASTER SWITCH** – **OFF**.

## CRACKED WINDSHIELD

## INTERNAL CRACK

1. Descend – Below 25,000 feet.
2. Cabin pressure – Reset pressure differential to maintain 4.0 PSI or less as required.

## CRACKED CABIN WINDOW

1. Crew oxygen masks – **100%** and on (if above 10,000 feet).
2. **CABIN** signs switch – **NO SMOKE & FSB**.
3. Passenger oxygen – On and checked (if above 10,000 feet).
4. Cabin pressure – Depressurize.
5. Land as soon as practicable.

## DITCHING

1. Radio calls/transponder – As required.
2. Personnel emergency briefing – As required.
3. **BLEED AIR VALVES** – **PNEU & ENVIR OFF**.
4. **CABIN PRESS** switch – **DUMP**.
5. **CABIN** signs switch – **NO SMOKE & FSB**.
6. Cabin emergency exit hatch – Remove and stow.
7. Seat belts and harnesses – Secure.
8. **GEAR – UP**.
9. **FLAPS – DOWN**.
10. Nonessential electrical equipment – Off.
11. Approach – Normal, power on.
12. Emergency lights – As required.

## FLIGHT CONTROLS MALFUNCTION

## UNSCHEDULED RUDDER BOOST ACTIVATION

1. **RUDDER BOOST – OFF**.

IF CONDITION PERSISTS:

2. **RUDDER BOOST** circuit breaker – Pull.
3. **BLEED AIR VALVE – OFF** (below 10,000 feet).
4. Rudder trim – Adjust.

## UNSCHEDULED ELECTRIC ELEVATOR TRIM

1. Control wheel disconnect switch – Press fully.

O 2. Elevator trim switch – **OFF**.

3. **AP TRIM POWER** circuit breaker – Out.

## ELECTROTHERMAL PROPELLER DEICE (AUTO SYSTEM) MALFUNCTION

**ZERO AMPS**

1. **PROP** deice switch – Check **AUTO**.

IF AMPS REMAIN AT ZERO:

2. **PROP** deice switch – **OFF** (for 30 seconds).
3. **PROP** deice switch – **AUTO**.

IF AMPS REMAIN AT ZERO:

4. Manual backup system – Initiate. (Refer to electrothermal propeller deice manual system operation.)

**BELOW 18 AMPS:**

15. Operation – Continue.

16. RPM – Increase (briefly to aid in ice removal, if propeller imbalance occurs).

**OVER 24 AMPS**

17. Monitor – Continue operation if the **PROP** deice circuit breaker switch does not trip.

18. RPM – Increase (briefly to aid in ice removal, if propeller imbalance occurs).

19. Loadmeter – Monitor for excessive current drain. If the **PROP AUTO** deice circuit breaker switch trips, use the manual system.

10. If the **PROP AUTO** deice control circuit breaker or the left or right prop deice circuit breaker trips, avoid icing conditions.

## ELECTROTHERMAL PROPELLER DEICE MANUAL SYSTEM OPERATION

1. Manual propeller deice switch – Hold in **MANUAL** position for approximately 90 seconds, or until ice is dislodged from blades.

2. Manual system current requirement – Monitor the aircraft's loadmeters when the manual deice switch is in the **MANUAL** position. A small needle deflection (approximately 5%) indicates the system is functioning.

# PERFORMANCE CHECKS

## OXYGEN SYSTEM

1. Passenger manual drop-out – Push off.
2. Oxygen system – Crew ready.
3. Crew masks – **100%**; check operation and stow.

**NOTE**

**1850 psi at 15° is a fully charged bottle. Read duration directly from P-1.**

a. Read oxygen pressure from the gauge.

b. Read the OAT (with battery on).

c. Determine the percent of usable capacity from Figure P-1 (e.g., 1100 psi at 0 °C = 57%).

d. Compute the oxygen duration in minutes from Table P-1 by multiplying the full bottle duration by the percent of usable capacity, as in the following example.

**NOTE**

**For oxygen duration computations, count each diluter-demand crew mask in use as two (e.g., with four passengers and a crew of two, enter the table at eight people using).**

(1) Pilot and copilot with masks set at **100%** plus 6 passengers = 10 people using oxygen.

(2) Cylinder volume =115 cubic feet.

(3) Duration with full bottle = 73 minutes.

(4) Duration with 57% capacity: 0.57 x 73 = 41 minutes.

*Table P-1. Oxygen Duration*

| OXYGEN DURATION WITH FULL BOTTLE (100% CAPACITY) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **STATED CYLINDER SIZE (CU FT)** | ****NUMBER OF PEOPLE USING** | | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| | **DURATION IN MINUTES** | | | | | | | | |
| 22 | 144 | 72 | 48 | 36 | 26 | 24 | 20 | 18 | 16 |
| 50 | 317 | 158 | 105 | 79 | 63 | 52 | 45 | 39 | 35 |
| 77 | 488 | 244 | 182 | 122 | 97 | 81 | 69 | 61 | 54 |
| 115 | 732 | 366 | 244 | 183 | 146 | 122 | 104 | 91 | 81 |
| **STATED CYLINDER SIZE (CU FT)** | ****NUMBER OF PEOPLE USING** | | | | | | | | |
| | 10 | 11 | 12 | 13 | 14 | 15 | **16 | **17 | |
| | **DURATION IN MINUTES** | | | | | | | | |
| 22 | 14 | 13 | 12 | 11 | 10 | * | * | * | |
| 50 | 31 | 28 | 26 | 24 | 22 | 21 | 19 | 18 | |
| 77 | 48 | 44 | 40 | 37 | 34 | 32 | 30 | 28 | |
| 115 | 73 | 66 | 61 | 56 | 52 | 48 | 45 | 43 | |

* Will not meet oxygen requirements.

** For oxygen duration computations, count each diluter-demand crew mask in use as two (e.g., with four passengers and a crew of two, enter the table at eight people using).

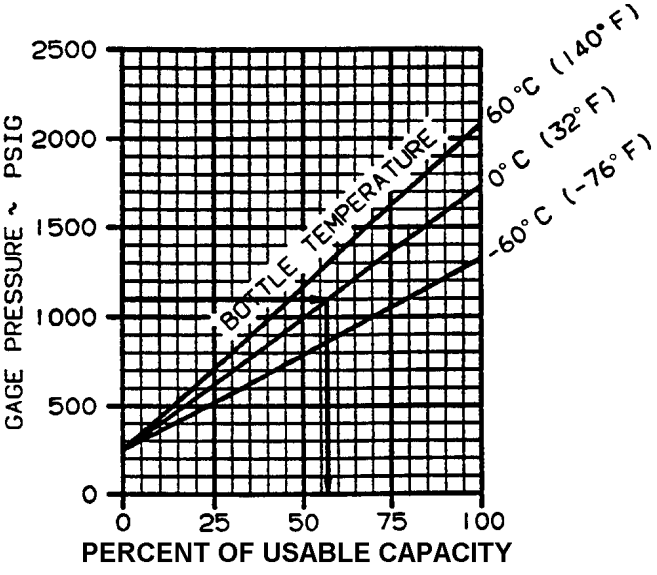



***Figure P-1. Percent of Usable Capacity***

## FUEL PUMPS/CROSSFEED OPERATION

1. Fuel **FIREWALL SHUTOFF VALVES – CLOSED**.
2. **STANDBY PUMPS – ON**.
3. **BATT** switch – **ON** (**L** and **R FUEL PRESS**, **L** and **R ENG ANTI-ICE** annunciators illuminated).
4. **L** and **R FUEL PRESS** annunciators – illuminated.
5. Fuel **FIREWALL SHUTOFF VALVES** – **OPEN**.
6. **L** and **R FUEL PRESS** annunciators – Extinguished.
7. **STANDBY PUMPS – OFF**.

8. **L** And **R FUEL PRESS** annunciators – Illuminated.
9. **CROSSFEED FLOW –** Alternately **LEFT** and **RIGHT (FUEL CROSSFEED** annunciator illuminated, **L AND R FUEL PRESS** annunciators extinguished).
10. **CROSSFEED FLOW – OFF**.
11. Auxiliary fuel transfer – **AUTO**.
12. **NO TRANSFER** lights – **TEST**.

## O*EFIS POWER SWITCHES AND INVERTER

1. **EFIS POWER** switches **–** Push **ON**.
2. **INVERTER** – Turn **ON** either.
3. EADI and EHSI – Ensure both pilots' are fully operational.
4. **EFIS POWER** switches and **INVERTER** – **OFF**.

## FERRY FUEL TANKS AND CAPS

O Visually check fuel level of each tank, condition of seal, and that cap is tight and properly installed. Check tiedowns and platform assemblies to determine if tanks are securely installed.

## CABIN DOOR

Ensure the cabin door is closed and locked as follows: Check position of safety arm and diaphragm plunger (lift door step) and each of the six rotary cam locks align within the orange sight indicators. In addition, the following inspection and test shall be performed prior to the first flight of the day.

1. Cabin door – Open. Check that **CABIN DOOR** annunciator is extinguished.
2. Cabin door – Latch but do not lock. Check that **CABIN DOOR** annunciator illuminates.
3. **BATT** switch – **ON**. Check that **CABIN DOOR** annunciator is still illuminated.
4. Cabin door – Close and lock. Check that **DOOR UNLOCKED** annunciator is extinguished.
5. **BATT** switch – **OFF**.

## AUTOFEATHER/AUTO IGNITION

1. **AUTO IGNITION** switches – **ARM**. **IGNITION ON** annunciators illuminated.
2. **POWER** levers – 500 ft-lb torque. **IGNITION ON** annunciators extinguish.
3. **AUTOFEATHER** switch – Hold to **TEST**. Both **AUTOFEATHER** annunciators illuminated.
4. **POWER** levers – Retard individually.
   a. Approximately 400 ft-lb torque, opposite **AUTOFEATHER** annunciator extinguished, **IGNITION ON** annunciator illuminated.
   b. Approximately 260 ft-lb torque, both **AUTOFEATHER** annunciators extinguished (prop begins to feather). Both **IGNITION ON** annunciators illuminated.

**NOTE**

**AUTOFEATHER annunciators will illuminate and extinguish with each fluctuation of torque as the propeller attempts to feather**.

   c. Return **POWER** levers to approximately 500 ft-lb torque.

5. Repeat procedure with other engine.
6. **POWER** levers – **IDLE**.
7. **AUTOFEATHER** switch – **ARM**.
8. **AUTO IGNITION** switch – Off.

## OVERSPEED GOVERNORS AND RUDDER BOOST

1. **RUDDER BOOST** switch – On.
2. **PROP** levers – **HIGH RPM**.
3. **PROP GOV TEST** switch – Hold in **TEST** position.
4. Left **POWER** lever – Increase until propeller is stabilized at 1830 – 1910 RPM. Continue to increase until rudder movement is noted. Observe **ITT** and torque limits; and **PROP** remains stabilized at 1830 – 1910 RPM.
5. **POWER** lever – Retard to **IDLE**.
6. Repeat steps 3, 4, and 5 for the right engine.

## PRIMARY GOVERNORS

1. **POWER** levers – Set 1800 RPM.
2. **PROP** levers – Retard to **FEATHER** detent. Note propellers stabilize between 1600 and 1640 RPM.
3. **PROP** levers – **HIGH RPM**. Note propellers return to 1800 RPM.

## ICE VANES

1. **ICE VANES** – **EXTEND**.
   a. Both advisory lights illuminated.
   b. Both bypass doors extended.

c. Maximum time for 1.a. and 1.b. is 15 seconds.

2. **ICE VANES** – **RETRACT**.

   a. Both advisory lights extinguish.

   b. Both bypass doors retracted.

   c. Maximum time for 2.a. and 2.b. is 15 seconds.

## ANTI-ICE/DEICE SYSTEMS

1. **PROP** Deice – Check. When **MANUAL** mode is selected, note rise on DC loadmeter. When **AUTO** mode is selected, monitor prop ammeter for 90 seconds and ensure the indicator remains in the normal operating range the entire time.

2. **WSHLD ANTI-ICE** – Check. Note increases on the loadmeter and cycle through both normal and high settings.

**NOTE**

**If windshield heat is needed prior to takeoff, use NORMAL setting for a minimum of 15 minutes prior to selecting HIGH to provide adequate preheating and minimize the effects of thermal shock. The windshield heat thermostat will invalidate the check in OAT above 20 to 30 °C.**

3. All Anti-Ice/Deice switches – **OFF**.

4. Surface Deice System – Check.

## VACUUM AND PNEUMATIC SYSTEM

1. **LEFT BLEED AIR VALVE** – **OFF**.
   a. Pneumatic and suction pressures remain normal.
   b. **L BL AIR OFF** annunciator illuminates.
   c. Both **BL AIR FAIL** annunciators remain extinguished.
2. **RIGHT BLEED AIR VALVE** – **OFF**.
   a. Pneumatic and suction pressures read zero.
   b. Both **BL AIR OFF** and **BL AIR FAIL** annunciators illuminated.
3. **LEFT BLEED AIR VALVE** – **ON**.
   a. Pneumatic and suction pressures return to normal.
   b. Both **BL AIR FAIL** annunciators extinguished.
   c. **L BL AIR OFF** annunciator extinguished.
4. **RIGHT BLEED AIR VALVE** – **ON**.
   a. **R BL AIR OFF** annunciator extinguished.

## AUTOMATIC FLIGHT CONTROL SYSTEM

1. Autopilot controller **TRIM UP**, **TRIM DN** annunciators – Check not illuminated. A steady illumination of **TRIM UP** or **TRIM DN** annunciator indicates that automatic synchronization is not functioning and autopilot should not be engaged.
2. Turn knob – In center detent position.
3. Elevator trim control switch – **ON**.
4. Control wheel – To mid travel.

5. Autopilot controller **AP** button – Press. **AP ENGAGE** and **YD ENGAGE** annunciators on autopilot controller will flash. Servo clutches will engage. **FD** flag on ADI in view.
6. Control movement – Check when pushed **ON**.

**WARNING**

**If autopilot or yaw damper disengages during overpower test, do not use. If AP ENGAGE or YD ENGAGE annunciator continues to flash, do not use.**

7. Rudder pedals – Overpower slowly. **YD ENGAGE** annunciator stops flashing. **FD** flag retracts.
8. Elevator trim follow-up – Check.
9. Control wheel – Hold aft of mid travel. Trim wheel should run nose down after approximately 3 seconds. Trim down annunciator should illuminate after approximately 8 seconds.
10. Control wheel – Hold forward of mid travel. Trim wheel should run nose up after approximately 3 seconds. **TRIM UP** annunciator should illuminate after approximately 8 seconds, and **AP TRIM FAIL** annunciator and **MASTER WARNING** flasher should illuminate after approximately 15 seconds.
11. **AP/YD & TRIM DISC** button – Press through second level. Autopilot and yaw damper should disengage and **ELECT TRIM OFF** annunciator should illuminate. **AP ENGAGE** and **YD ENGAGE** annunciators on instrument panel should flash 5 times and autopilot off aural alert should sound for one second.
12. **MASTER WARNING** flasher – Press to reset.

**WARNING**

**Operation of the electric trim switch system should occur only by movement of pairs of switches. Any movement of the elevator trim wheel while pressing only one switch element denotes a trim system malfunction. The AP/TRIM POWER switch must be turned OFF and flight conducted only by manual operation of the trim wheel. Do not use autopilot.**

13. Elevator trim control switch – **OFF**, then **ON** (resets electric trim; **ELECT TRIM OFF** annunciator should extinguish).
14. Electric elevator trim – Check.
    a. Elevator trim control switch – **ON**.
    b. Pilot and copilot trim switches – Check.
    c. Pilot and copilot. Check individual element for no movement of trim and check proper operation of both elements.
    d. Check pilot switches override copilot switches while trimming in opposite directions and trim moves in direction commanded by pilot.
    e. Check pilot and copilot trim disconnects while activating trim.
    f. Elevator trim switch – **OFF** and **ON** (**ELECT TRIM OFF** annunciator extinguishes).

## PRESSURIZATION

1. **BLEED AIR VALVES** – Both **ON**.
2. **CABIN ALTITUDE** – Set 500 feet lower than field pressure altitude.

3. **CABIN PRESS** switch – **TEST**. Cabin climb/descent gauge indicates a descent.
4. **CABIN PRESS** switch – Release. Cabin climb/descent gauge indicates a climb, then stabilizes at zero climb.
5. Altitude selector – Set as required. Pressure altitude + 200 feet.

## CREW/PASSENGER BRIEFING

1. Crew introduction.
2. Equipment.
   a. Personnel to include ID tags.
   b. Professional (medical equipment, etc.).
   c. Survival.
3. Flight data.
   a. Route.
   b. Altitude.
   c. Time en route.
   d. Weather.
4. Normal procedures.
   a. Entry and exit of aircraft.
   b. Seating and seat position.
   c. Seat belts.
   d. Movement in aircraft.
   e. Internal communications.
   f. Security of equipment.
   g. Smoking.

h. Oxygen.

i. Refueling.

j. Weapons and prohibited items.

k. Protective masks.

l. Toilet.

5. Emergency procedures.

   a. Emergency exits.

   b. Emergency equipment.

   c. Emergency landing/ditching procedures.

## DEPARTURE BRIEFING.

1. ATC clearance – Review.

   a. Routing.

   b. Initial altitude.

2. Departure Procedure (DP) – Review.

   a. Named departure procedure.

   b. Obstacle clearance departure procedure/ noise abatement procedure.

   c. VFR departure route.

3. Copilot duties – Review.

   a. Adjust takeoff power.

   b. Monitor engine instruments.

   c. Power check at 65 knots.

   d. Call out engine malfunctions.

   e. Tune/identify all nav/comm radios.

   f. Make all radio calls.

g. Adjust transponder and radar as required.

h. Complete flight log during flight and note altitudes and headings.

i. Note departure time.

j. Retract gear and flaps as indicated.

4. TOLD card– Review.

a. Takeoff power.

b. $V_1/V_r$.

c. $V_2$ + 10 KIAS (climb to 1500 feet AGL).

d. $V_2/V_{yse}$.

## ARRIVAL BRIEFING

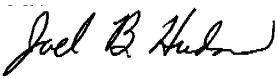
1. Weather/altimeter setting.
2. Airfield/facilities – Review.
   a. Field elevation.
   b. Runway length.
   c. Runway condition.
3. Approach procedure – Review.
   a. Approach plan/profile.
   b. Altitude restrictions.
   c. Missed approach.
      (1) Point.
      (2) Time.
      (3) Intentions.
   d. Decision height or MDA.
   e. Lost communications.

4. Backup approach/frequencies.
5. Copilot duties – Review.
    a. Nav/comm set-up.
    b. Monitor altitude and airspeeds.
    c. Monitor approach.
    d. Call out visual/field in sight.
6. Landing performance data – Review.
    a. Approach speed.
    b. Runway required.
7. Passenger briefing – As required.

**By Order of the Secretary of the Army:**

**Official:**

ERIC K. SHINSEKI
*General, United States Army*
*Chief of Staff*



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