



**COMMUTER CATEGORY CONVERSION  
INCREASED MAXIMUM TAKEOFF WEIGHT**

## **PILOT CHECK LISTS**

**NORMAL PROCEDURES**

**EMERGENCY PROCEDURES**

**ABNORMAL PROCEDURES**

**FOR**

**KING AIR 200 SERIES AIRPLANES  
MODIFIED IN ACCORDANCE WITH  
CENTEX AEROSPACE HALO 250 STC SA11103SC**

**SERIALS:** BB-2 thru BB-1833  
BB-1835 thru BB-1842  
BL-1 thru BL-147  
BT-1 thru BT-43  
BN-1 thru BN-4  
BY-1 and After w/G1000

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This document is an abbreviation of the check lists and procedures contained in Section 3 Emergency Procedures, Section 3A Abnormal Procedures, and Section 4 Normal Procedures of the FAA Approved Airplane Flight Manuals for King Air 200 series airplanes. This document also merges the respective procedures from the CenTex Aerospace Halo 250 STC (SA11103SC) Commuter Category conversion and gross weight increase so the pilot operator has a single document to go to for combined procedures. These procedures are in abbreviated form so most explanatory items and some notes and cautions have been omitted for brevity. Consequently, users of this check list must be familiar with and operate the airplane in accordance with the applicable procedures contained in the FAA Approved basic Airplane Flight Manual and STC SA11103SC Airplane Flight Manual Supplement.

**NOTE**

Operators should add to these check lists any procedures from the applicable Airplane Flight Manual or Pilot's Operating Handbook and AFM Supplement(s) not already included in these check lists as required by 14 CFR 91.503.

**Current with AFMS 006-2, Revision 4**

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**NORMAL PROCEDURES  
PILOT CHECK LIST**

**TABLE OF CONTENTS**

| <i>SUBJECT</i>                                      | <i>PAGE</i> |
|---|-------------|
| AIRSPEDS FOR SAFE OPERATION .....                   | NP-2        |
| PREFLIGHT INSPECTION .....                          | NP-3        |
| CABIN/COCKPIT .....                                 | NP-3        |
| LEFT WING AND NACELLE .....                         | NP-3        |
| NOSE SECTION .....                                  | NP-4        |
| RIGHT WING AND NACELLE .....                        | NP-5        |
| RIGHT AFT FUSELAGE .....                            | NP-6        |
| TAIL SECTION .....                                  | NP-6        |
| LEFT AFT FUSELAGE .....                             | NP-6        |
| BEFORE ENGINE STARTING .....                        | NP-7        |
| ENGINE STARTING (Battery) .....                     | NP-9        |
| ENGINE STARTING (External Power) .....              | NP-10       |
| ENGINE CLEARING .....                               | NP-11       |
| BEFORE TAXI .....                                   | NP-11       |
| BEFORE TAKEOFF (Runup) .....                        | NP-12       |
| BEFORE TAKEOFF (Final Items) .....                  | NP-13       |
| TAKEOFF SPEEDS – FLAPS UP .....                     | NP-13       |
| TAKEOFF SPEEDS – FLAPS APPROACH .....               | NP-13       |
| TAKEOFF .....                                       | NP-13       |
| CLIMB .....   | NP-14       |
| CLIMB IN ICING CONDITIONS .....                     | NP-14       |
| CRUISE .....  | NP-14       |
| CRUISE IN ICING CONDITIONS .....                    | NP-14       |
| OUTSIDE OF ICING CONDITIONS .....                   | NP-14       |
| DESCENT .....                                       | NP-17       |
| BEFORE LANDING .....                                | NP-18       |
| LANDING SPEEDS .....                                | NP-18       |
| NORMAL LANDING .....                                | NP-19       |
| MAXIMUM REVERSE THRUST LANDING .....                | NP-19       |
| BALKED LANDING .....                                | NP-19       |
| AFTER LANDING .....                                 | NP-19       |
| SHUTDOWN AND SECURING .....                         | NP-20       |
| PRESSURIZATION CONTROLLER SETTING FOR LANDING ..... | NP-21       |

All airspeeds quoted in this section are indicated airspeeds (IAS) and assume zero instrument error.

### AIRSPEEDS FOR SAFE OPERATION

|   |  |
|---|--|
| Maximum Demonstrated Crosswind Component .....              | 25 Knots                                   |
| Maximum Demonstrated Wind Components for Coupled Approaches |  |
| Crosswind.....  | See basic AFM / POH                        |
| Tailwind.....   | See basic AFM / POH                        |
| Takeoff - Flaps Up  |  |
| Decision Speed, $V_1$ .....                                 | See TAKEOFF SPEEDS – FLAPS UP, NP-13       |
| Rotation, $V_R$ .....                                       | See TAKEOFF SPEEDS – FLAPS UP, NP-13       |
| Safety Speed, $V_2$ .....                                   | See TAKEOFF SPEEDS – FLAPS UP, NP-13       |
| Enroute Climb, $V_{ENR}$ .....                              | See TAKEOFF SPEEDS – FLAPS UP, NP-13       |
| Takeoff - Flaps Approach                                    |  |
| Decision Speed, $V_1$ .....                                 | See TAKEOFF SPEEDS – FLAPS APPROACH, NP-13 |
| Rotation, $V_R$ .....                                       | See TAKEOFF SPEEDS – FLAPS APPROACH, NP-13 |
| Safety Speed, $V_2$ .....                                   | See TAKEOFF SPEEDS – FLAPS APPROACH, NP-13 |
| Enroute Climb, $V_{ENR}$ .....                              | See TAKEOFF SPEEDS – FLAPS APPROACH, NP-13 |
| Two-Engine Best Angle-of-Climb ( $V_X$ ).....               | 100 Knots                                  |
| Two-Engine Best Rate-of-Climb ( $V_Y$ ) .....               | 125 Knots                                  |
| Cruise Climb:   |  |
| Sea level to 10,000 feet .....                              | 160 Knots                                  |
| 10,000 feet to 20,000 feet .....                            | 140 Knots                                  |
| 20,000 feet to 25,000 feet .....                            | 130 Knots                                  |
| 25,000 feet to 35,000 feet .....                            | 120 Knots                                  |
| Maximum Airspeed for Effective Windshield Anti-icing .....  | 226 Knots                                  |
| Operating Maneuvering Speed ( $V_o$ ) .....                 | 181 Knots                                  |
| Turbulent Air Penetration .....                             | 170 Knots                                  |

### CAUTION

For turbulent air penetration, use an airspeed of 170 knots. Avoid over-action on power levers. Turn off autopilot altitude hold. Keep wings level, maintain attitude and avoid use of trim. Do not chase airspeed and altitude. Penetration should be at an altitude which provides adequate maneuvering margins when severe turbulence is encountered.

### Landing Approach:

|  |                                       |
|--|---------------------------------------|
| Flaps Down.....  | $V_{REF}$ , see LANDING SPEEDS, NP-16 |
| Balked Landing Climb .....                                   | $V_{REF}$ , see LANDING SPEEDS, NP-16 |
| Intentional One-Engine-Inoperative Speed ( $V_{SSE}$ ) ..... | 104 Knots                             |
| Air Minimum Control Speed ( $V_{MCA}$ )                      |                                       |
| Hartzell & McCauley propellers .....                         | 86 Knots                              |
| Raisbeck Engineering STC SA2698NM-S,                         | Flaps Up ..... 91 Knots               |
|  | Flaps Approach ..... 88 Knots         |
| BLR Hartzell STC SA02130SE,                                  | Flaps Up ..... 92 Knots               |
|  | Flaps Approach ..... 87 Knots         |

**END**

**PREFLIGHT INSPECTION**

After the first flight of each day, the Preflight Inspection may be omitted except for items marked with a "+". Fuel tank caps, engine oil quantity, and filler cap need not be checked unless system(s) were serviced. External inspections with flaps down may be conducted at intervals deemed appropriate by the pilot.

**CABIN/COCKPIT**

1. Monogram Electric Toilet (If Installed) – KNIFE VALVE OPEN
- + 2. Baggage – SECURE
3. Emergency Lighting Cabin Switch – ON
4. Emerg Cabin Light Control Switch – ARM
5. Emergency Cabin Flood Lamps - CHECK (illuminated)
6. Emergency Exit - SECURE AND UNLOCKED
7. Trim Tabs - SET TO "0" UNITS

**CAUTION**

The elevator trim system must not be forced past the limits which are indicated on the elevator trim indicator scale, either manually, electrically, or by action of the autopilot.

8. Condition Levers - FUEL CUT OFF
9. Landing Gear Control - DN
10. Control Locks - REMOVE
11. Parking Brake - SET
12. Ignition and Engine Start - ENSURE OFF
13. Battery - ON, CHECK 23 VOLT MINIMUM
14. Emergency Cabin Flood Lamps - CHECK (not illuminated)
15. Fuel Quantity (Main and Auxiliary) – CHECK
16. Gear Down Annunciators - ILLUMINATED
17. Flap Control (if desired) - APPROACH, THEN DOWN (check indicator)
18. Oxygen System Preflight Inspection - COMPLETE
- + 19. Battery - OFF
20. Emergency Lighting Cabin Switch - OFF

**LEFT WING AND NACELLE**

1. Door Seal - CHECK
2. Flaps - CHECK
3. Oil Breather Vent - CLEAR
- + 4. Brake Lines, Brake Wear, Brake Deice Lines (if installed) - CHECK
5. Fire Extinguisher Pressure – CHECK

**FIRE EXTINGUISHER PRESSURE VS. TEMPERATURE**

| °F    | -40       | -20       | 0         | 20        | 40        | 60        | 80        | 100       | 120       |
|-------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| °C    | -40       | -29       | -18       | -7        | 4         | 16        | 27        | 38        | 49        |
| PSI   | 190       | 220       | 250       | 290       | 340       | 390       | 455       | 525       | 605       |
| RANGE | To<br>240 | To<br>275 | To<br>315 | To<br>365 | To<br>420 | To<br>480 | To<br>550 | To<br>635 | To<br>730 |

**CONTINUED**

6. Inverter Cooling Louver - CLEAR
7. Aileron and Tab - CHECK
8. Flush Outboard Wing Fuel Tank Sump - CHECK
9. Static Wicks (4) - CHECK
10. Navigation, Recognition, & Strobe Lights - CHECK
- + 11. Main Fuel Tank Cap - Secure
12. Stall Warning Vane - CHECK
- + 13. Tiedown - REMOVED
14. Outboard Deice Boot and Stall Strip - CHECKED
15. Ice Light - CHECK
16. Heated Fuel Vent - CLEAR
17. Ram Scoop Fuel Vent – CLEAR
18. Gravity Line Drain - DRAIN
19. Inverter Cooling Louvers - CLEAR
20. Wing Leading Edge Tank Sump - DRAIN
- + 21. Landing Gear (Doors, Wheel Well, Strut, Tires, Brakes) - CHECK
- + 22. Chock - REMOVE
23. Standby Pump Drain - DRAIN
24. Fuel Filter Strainer Sump - DRAIN
- + 25. Engine Oil - CHECK QUANTITY, CAP SECURE
26. Engine Compartment Door (Outbd) - SECURE, BLEED VALVE EXHAUST CLEAR
27. Exhaust Stack (Outbd) - CHECK FOR CRACKS
28. Top Cowling Locks (Outbd) - SECURE
29. Nacelle Cooling Ram Air Inlets - CLEAR
- + 30. Propeller - CHECK FOR NICKS, DEICE BOOT SECURE
31. Engine Intake - Clear
32. Top Cowling Locks (Inbd) - SECURE
33. Exhaust Stack (Inbd) - CHECK FOR CRACKS
34. Generator Cooling Inlet - CLEAR
35. Engine Compartment Door (Inbd) - SECURE, BLEED VALVE EXHAUST CLEAR
36. Heat Exchanger Inlet - CLEAR
- + 37. Auxiliary Fuel Tank Cap - SECURE
38. Hydraulic Landing Gear Service Door - SECURE
39. Inboard Deice Boot - CHECK
40. Heat Exchanger Outlet - CLEAR
41. Hydraulic Landing Gear Vent Lines - CLEAR
42. Auxiliary Fuel Tank Sump - DRAIN
43. Lower Antennas and Beacon - CHECK

NOSE SECTION

1. OAT Probe (Lower Fuselage) - CHECK
2. Avionics Panel - SECURE
3. Condenser Blower Outlet – CLEAR

**CONTINUED**



- + 4. Nose Gear (Doors, Strut, Nose Gear Steering Stop Block, Tire, Wheel Well)  
- CHECK
- + 5. Chock - REMOVE
- 6. Landing and Taxi Lights - CHECK
- 7. Pitot Masts - COVERS REMOVED, CLEAR
- 8. Radome - CHECK
- 9. Windshield Wipers - CHECK
- 10. Ram Air Inlet - CLEAR
- 11. Avionics Panel - Secure

RIGHT WING AND NACELLE

- 1. Auxillary Fuel Tank Sump - DRAIN
- 2. Battery Drain - CLEAR
- 3. Battery Air Inlet - CLEAR, VALVE FREE
- 4. Heat Exchanger Outlet - CLEAR
- 5. Inboard Deice Boot - CHECK
- 6. Battery Exhaust - CLEAR
- + 7. Auxiliary Fuel Tank Cap - SECURE
- 8. Heat Exchanger Inlet - CLEAR
- + 9. Engine Oil - CHECK QUANTITY, CAP SECURE
- 10. Engine Compartment Door (Inbd) - SECURE, BLEED VALVE EXHAUST CLEAR
- 11. Exhaust Stack (Inbd) - CHECK FOR CRACKS
- 12. Top Cowling Locks (Inbd) - SECURE
- 13. Nacelle Cooling Ram Air Inlets - CLEAR
- + 14. Propeller - CHECK FOR NICKS, DEICE BOOT SECURE
- 15. Engine Intake - CLEAR
- 16. Top Cowling Locks (Outbd) - Secure
- 17. Exhaust Stack (Outbd) - CHECK FOR CRACKS
- 18. Generator Cooling Inlet - CLEAR
- 19. Engine Compartment Door (Outbd) - SECURE, BLEED VALVE EXHST CLEAR
- 20. Fuel Filter Strainer Sump - DRAIN
- 21. Standby Pump Drain - DRAIN
- + 22. Landing Gear (Doors, Strut, Tires, Wheel Well) - CHECK
- 23. Fire Extinguisher (if installed) - CHECK PRESSURE
- + 24. Chock - REMOVE
- 25. Heated Fuel Vent - CLEAR
- 26. Ram Scoop Fuel Vent - CLEAR
- 27. Gravity Line Drain - DRAIN
- 28. Inverter Cooling Louvers - CLEAR
- 29. Wing Leading Edge Tank Sump - Drain
- + 30. External Power Door - CLOSED
- 31. Ice Light - CHECK
- 32. Outboard Deice Boot and Stall Strip - CHECK
- + 33. Tiedown - REMOVE
- 34. Flush Outboard Wing Fuel Tank Sump – DRAIN
- + 35. Main Fuel Tank Cap – SECURE

**CONTINUED**

- 36. Navigation, Recognition, and Strobe Lights - CHECK
- 37. Static Wicks (4) - CHECK
- 38. Aileron and Bendable Tab - CHECK
- 39. Flaps - CHECK
- 40. Inverter Cooling Louver - CLEAR
- + 41. Brake Lines, Brake Wear, Brake Deice Lines (If installed) - CHECK
- 42. Oil Breather Vent - CLEAR

RIGHT AFT FUSELAGE

- 1. Lower Antennas - CHECK
- 2. Ventral Fin Drain Holes - CLEAR
- 3. Lower AFT Cabin Access Door - SECURE
- + 4. Tiedown – REMOVED
- 5. Oxygen Service Access Door - SECURE
- 6. Static Ports - CLEAR
- 7. ELT - ARMED
- 8. Cabin Air Exhaust - CLEAR
- 9. Access Panel - SECURE

TAIL SECTION

- 1. Ventral Fin and Static Wick (1) - CHECK
  - 2. VOR Antennas (Right and Left) - CHECK
  - 3. Rudder, Rudder Tab, Stinger and Static Wicks (4) - CHECK
  - 4. Horizontal Stabilizer, Boots and Static Wick (Right and Left) - CHECK
  - 5. Elevator, Tab, and Static Wicks (3 each side) - CHECK
- Verify Tabs are in "O" (Neutral) Position

**NOTE**

The elevator trim tab "O" (neutral) position is determined by observing that the trailing edge of the elevator trim tab aligns with the trailing edge of the elevator when the elevator is resting against the down stops.

- 6. Position Light, Tail Floodlights (Left and Right if installed) - CHECK

LEFT AFT FUSELAGE

- 1. Access Panel - SECURE
- 2. VOR antennas (Right and Left) - CHECK
- 3. Drains (Aft Compartment, Oxygen Discharge, Relief Tube) – CLEAR

**END**

**BEFORE ENGINE STARTING**

**NOTE**

Items marked with an “\*” may be omitted at pilot’s discretion after the first flight of each day.

- \* 1. Cabin Door or Cabin Door/Cargo Door Circuitry Check - COMPLETE
- 2. Cabin Door or Cabin Door/Cargo Door - LOCKED

**WARNING**

**A crew member must close and lock the door.**

- \* 3. Monogram Electric Toilet (If installed) - CONFIRM KNIFE VALVE OPEN
- 4. Emergency Lighting Cabin Switch – ON
- 5. Load and Baggage - CONFIRM SECURE
- 6. Weight and C.G. - CHECKED
- 7. Seats – POSITIONED (SEATBACKS UPRIGHT, LATERAL-TRACKING SEATS - OUTBOARD POSITION
- 8. Emergency Exit - CONFIRM SECURE AND UNLOCKED
- 9. Passenger Briefing - COMPLETE
- 10. Control Locks - CONFIRM REMOVED
- 11. Seats and Rudder Pedals - ADJUSTED
- 12. Seatbelts and Shoulder Harnesses - FASTENED
- \* 13. Oxygen System Preflight Inspection - CONFIRM COMPLETE
- 14. Fuel Panel Circuit Breakers - IN
- 15. Pilot’s Instrument Panel - CHECK
  - a. Compass Control - SLAVED (Mode Switch Out)
  - b. EFIS Aux Power (if installed) - CHECK
    - 1) Test Switch - HOLD TO TEST FOR 5 SECONDS
    - 2) Test Switch - RELEASE TO OFF
  - c. Prop Sync Switch – ON (Type II) / OFF (Type I)
- \* 16. Pilot’s Clock (Control Wheel) - CHECK AND SET
- 17. Pilot’s Subpanel - CHECK
  - a. Mic Selector Switch - NORMAL
  - b. Parking Brake - CONFIRM SET
  - c. Engine Anti-ice Switches – ON

**NOTE**

The engine anti-ice system should be ON for all ground operations to minimize ingestion of ground debris. Turn engine anti-ice off when required to maintain oil temperature within limits.

- d. Pilot Air Control - AS REQUIRED
- e. Defrost Air Control - AS REQUIRED
- f. Landing Gear Control - DN
- g. Landing Gear Relay Circuit Breaker - IN
- h. All Other Switches - OFF
- 18. Avionics Panel Switches - AS REQUIRED
  - \* Radar - OFF OR STANDBY

**CONTINUED**

- 19. Power Console - CHECK
  - a. Power Levers - IDLE, FRICTION SET
  - b. Propeller Levers - FULL FORWARD, FRICTION SET
  - c. Condition Levers - FUEL CUT OFF, FRICTION SET
  - d. Elevator, Aileron, and Rudder Trim Controls - SET
  - e. Oxygen System Ready - PULL ON
  - \* f. Flashlight - CHECK
  - g. Landing Gear Alternate Extension Handle - STOWED
- 20. Pedestal - CHECK
  - a. EFIS Power Switches (if installed) - OFF
  - b. EFIS Reversionary Switches (if installed) - NORMAL
  - c. Cabin Pressure Switch - PRESS
  - d. Rudder Boost Switch - ON
  - e. Elevator Trim Switch - ON
  - f. Pressurization Controller - SET
- 21. Copilot's Instrument Panel - CHECK
  - \*Compass Control - SLAVED (Mode Switch Out)
- \*22. Copilot's Clock (Control Wheel) - CHECK AND SET
- 23. Copilot's Subpanel - CHECK
  - a. Cabin Sign - NO SMOKE & FSB
  - b. Vent Blower Switch - AUTO
  - c. Bleed Air Valve Switches - OPEN OR ENVIR OFF
  - d. Cabin Temp Mode Control - OFF
  - e. Cabin/Cockpit Air Control - AS REQUIRED
  - f. Copilot Air Control - AS REQUIRED
  - g. Mic Selector Switch - NORMAL
  - h. Oxygen Pressure - CONFIRM
  - i. All Other Switches - OFF
- 24. Copilot's Circuit Breaker Panel - CHECK
- \*25. Pilot's Static Air Source - NORMAL
- \*26. Fire Extinguisher (Under Copilot's Chair) – CHECK
- 27. Battery - ON
- \*28. Fuel Panel - CHECK
  - a. Firewall Shutoff Valves - CLOSE
  - b. Standby Pumps - ON
  - c. Firewall Shutoff Valves - OPEN
  - d. Standby Pumps - OFF
  - e. Crossfeed - ALTERNATELY LEFT AND RIGHT
  - f. Crossfeed - OFF
  - g. Auxiliary Tank Transfer - AUTO
  - h. No Transfer Lights - PRESS TO TEST (if extinguished)
- 29. Fuel Quantity (Main and Auxiliary) – CHECK
- \*30. Landing Gear Handle Lights – PRESS TO TEST
- \*31. Hydraulic Fluid Sensor – TEST
- 32. Beacon – ON

**CONTINUED**

- 33. DC Volt/Loadmeters – PRESS TO CHECK VOLTAGE (23 volt minimum)
- \*34. Annunciators – TEST
- \*35. Stall Warning – Test
- \*36. Fire Detectors and Fire Extinguishers – TEST
- 37. Left Power Lever – ADVANCE TO AT LEAST 80% POSITION
- 38. Autofeather Switch – ARM
- 39. Elevator Trim Warning System – TEST
- 40. Elevator Trim Control – SET FOR TAKEOFF
- 41. Autofeather Switch – OFF
- 42. Left and Right Power Levers – IDLE
- 43. Over-speed Aural Warning – TEST

#### **ENGINE STARTING (Battery)**

*FOR SERIAL BB-1463 AND SERIALS PRIOR TO BB-1444, BL-139, AND BW-1;  
EXCEPT SERIAL BB-1439*

- 1. Right Ignition and Engine Start – ON
- 2. Right Condition Lever – LOW IDLE (at 12%  $N_1$  or above)
- 3. ITT and  $N_1$  – MONITOR (1000°C maximum)

#### **CAUTION**

If no ITT rise is observed within 10 seconds after moving the condition lever to LOW IDLE, move the condition lever to FUEL CUTOFF. Allow 60 seconds for fuel to drain and starter to cool, and then follow ENGINE CLEARING Procedures.

- 4. Right Oil Pressure – CHECK
- 5. Right Condition Lever – HIGH IDLE
- 6. Right Ignition and Engine Start – OFF (at 50%  $N_1$  or above)
- 7. Right Generator – RESET (HOLD for 1 sec), THEN ON  
(Charge battery until loadmeter reads 50% or less) THEN OFF
- 8. Left ignition and Engine Start – ON
- 9. Left Condition Lever – LOW IDLE (at 12%  $N_1$  or above)
- 10. Right Generator - RESET (HOLD for 1 sec), THEN ON
- 11. ITT and  $N_1$  – MONITOR (1000° C maximum)
- 12. Left Oil Pressure – CHECK
- 13. Left Ignition and Engine Start – OFF (At 50%  $N_1$  or above)
- 14. D.C. Volt/Loadmeters – PRESS TO CHECK VOLTAGE (27.2-29.0 volts)
- 15. Left Generator – RESET (HOLD for 1 sec), THEN ON
- 16. Right Condition Lever – REDUCE TO LOW IDLE

**END**

**ENGINE STARTING (Battery)**

*FOR SERIALS BB-1439, BB-1444 & AFTER, BL-139 & AFTER, AND BW-1 & AFTER; EXCEPT SERIAL BB-1463*

1. Right Ignition and Engine Start – ON
2. Right Condition Lever – LOW IDLE (at 12% N<sub>1</sub> or above)
3. ITT and N<sub>1</sub> – MONITOR (1000°C maximum)

**CAUTION**

If no ITT rise is observed within 10 seconds after moving the condition lever to LOW IDLE, move the condition lever to FUEL CUTOFF. Allow 60 seconds for fuel to drain and starter to cool, and then follow ENGINE CLEARING Procedures.

4. Right Oil Pressure – CHECK
5. Right Ignition and Engine Start – OFF (at 50% N<sub>1</sub> or above)
6. Right Condition Lever – HIGH IDLE
7. Right Generator – RESET (HOLD for 1 sec), THEN ON (Charge battery until loadmeter reads approximately 50% or less.)
8. Left ignition and Engine Start – ON
9. Left Condition Lever – LOW IDLE (at 12% N<sub>1</sub> or above)
10. ITT and N<sub>1</sub> – MONITOR (1000° C maximum)
11. Left Oil Pressure – CHECK
12. Left Ignition and Engine Start – OFF (At 50% N<sub>1</sub> or above)
13. D.C. Volt/Loadmeters – PRESS TO CHECK VOLTAGE (27.2-29.0 volts)
14. Left Generator – RESET (HOLD for 1 sec), THEN ON
15. Right Condition Lever – REDUCE TO LOW IDLE

**ENGINE STARTING (External Power)**

**CAUTION**

NEVER CONNECT AN EXTERNAL POWER SOURCE TO THE AIRPLANE UNLESS A BATTERY INDICATING A CHARGE OF AT LEAST 20 VOLTS IS IN THE AIRPLANE. If the battery voltage is less than 20 volts, the battery must be recharged, or replaced with a battery indicating at least 20 volts, before connecting external power.

**NOTE**

When an external power source is used, it must be set to 28.0 to 28.4 volts and be capable of producing 1000 amperes momentarily and 300 amperes continuously. The battery should be on to absorb transients present in some external power sources. An EXT PWR annunciator is provided to alert the crew when an external DC power plug is connected to the airplane.

1. Avionics Master Switch - CONFIRM OFF
2. Left and Right Generator Switches - CONFIRM OFF
3. Battery - ON
4. External Power Source - TURN OFF, THEN CONNECT TO AIRPLANE
5. External Power Source - TURN ON
6. Voltmeter - 28.0 to 28.4 VOLTS

**CONTINUED**

7. Propeller Levers - FEATHER
8. Right Ignition and Engine Start - ON
9. Right Condition Lever - LOW IDLE (at 12% N<sub>1</sub> or above)
10. ITT and N<sub>1</sub> - MONITOR (1000°C maximum)

**CAUTION**

If no ITT rise is observed within 10 seconds after moving the condition lever to LOW IDLE, move the condition lever to FUEL CUTOFF. Allow 60 seconds for fuel to drain and starter to cool, and then follow ENGINE CLEARING Procedures.

11. Right Oil Pressure - CHECK
12. Right Ignition and Engine Start - OFF (at 50% N<sub>1</sub> or above)
13. Left Ignition and Engine Start - ON
14. Left Condition Lever - LOW IDLE (at 12% N<sub>1</sub> or above)
15. ITT and N<sub>1</sub> - MONITOR (1000°C maximum)
16. Left Oil Pressure - CHECK
17. Left Ignition and Engine Start - OFF (at 50% N<sub>1</sub> or above)
18. External Power Source - TURN OFF, DISCONNECT, SECURE DOOR
19. Left and Right Generators - RESET (HOLD for 1 sec), THEN ON
20. Propeller Levers - FULL FORWARD

**ENGINE CLEARING**

1. Condition Lever - FUEL CUT OFF
2. Ignition and Engine Start - STARTER ONLY (for a maximum of 40 seconds)
3. Ignition and Engine Start - OFF

**BEFORE TAXI**

**NOTE**

Items marked with an “ \* ” may be omitted at pilot’s discretion after the first flight of the day

1. Inverters – CHECK and SELECT
2. Loadmeters – PARALLEL WITHIN 10%
3. Avionics Master – ON
4. EFIS Power (if installed) – ON
5. EFIS Aux Power (if installed) – ON
6. External Lights – AS REQUIRED
7. Cabin Lights and Furnishings – AS REQUIRED
8. Cabin Sign – NO SMK & FSB
9. Bleed Air Valves – OPEN OR ENVIR OFF (as required)
10. Cabin Temp Mode – AUTO
11. Environmental System Controls – SET
12. Instruments – CHECK
- \* 13. Brake Deice (if installed) – CHECK
14. Flight Controls – CHECK PROPER DIRECTION AND FREEDOM OF MOVEMENT
15. Flaps – CHECK AND SET
16. Transponder – SET AND ON
17. Brakes – RELEASED AND CHECKED

**END**

**BEFORE TAKEOFF (Runup)**

**NOTE**

Items marked with an “ \* ” may be omitted at pilot’s discretion after the first flight of the day.

1. Avionics and Radar - CHECK
2. EFIS (if installed) - TEST
3. Pressurization - CHECK AND SET
- \*4. Autopilot - CHECK
- \*5. Yaw Damp - CHECK
- \*6. Elevator Trim - CHECK

**WARNING**

Operation of the electric trim system should occur only by movements of pairs of switches. Any movement of the elevator trim wheel while depressing only one switch denotes a system malfunction. The elevator trim control switch must then be turned OFF and flight conducted only by manual operation of the trim wheel.

7. Trim Tabs – SET FOR TAKEOFF
- \*8. Primary Governors, Overspeed Governors and Rudder Boost - TEST
9. Autofeather – CHECK, THEN ARM
10. Propeller Feathering (Manual) – CHECK
11. Propeller Levers – FULL FORWARD
12. Flaps – SET FOR TAKEOFF
- \*13. Vacuum and Pneumatic Pressure - CHECK
14. Engine Anti-ice - CHECK

**WARNING**

Either the main or standby engine anti-ice actuator must be operational on each engine before takeoff.

15. Systems For Icing Flight - CHECK, IF REQUIRED
16. Surface Deice Switch – SINGLE, THEN RELEASE
17. Stall Warning Ice Mode Annunciator - ILLUMINATED
18. Stall Warning - TEST
19. Stall Warning Ice Mode Annunciator - PRESS (to select Normal Mode)

**NOTE**

The stall warning system must not be in the Ice Mode during takeoff and initial climb-out. If a takeoff is conducted with the stall warning system in the Ice Mode, a misleading stall warning following lift-off will likely occur.

20. Fuel Quantity, Flight and Engine Instruments – CHECK
21. Brake Deice (if installed) – OFF
22. Electric Heat (if installed) – OFF
23. AFT Blower (if installed) - AS REQUIRED

**END**



**BEFORE TAKEOFF (Final Items)**

1. Left and Right Bleed Air - OPEN
2. Ice Protection - ON (if Required)
  - a. Auto Ignition - ON
  - b. Engine Anti-ice - CONFIRM ON
  - c. Windshield Anti-ice - NORMAL/HI
  - d. Prop Heat - AUTO
  - e. Left and Right Fuel Vent Heat - ON
  - f. Stall Warning Heat - ON
  - g. Left and Right Pitot Heat - ON
3. Generator Load - CHECK
4. Engine Anti-ice (if not required) – OFF
5. Annunciators - EXTINGUISHED OR CONSIDERED
6. External Lights - AS REQUIRED
7.  $V_1$ ,  $V_R$ ,  $V_2$ ,  $V_{ENR}$ , and Minimum Takeoff Power – CONFIRM

**TAKEOFF**

1. Brakes - HOLD
2. Power - SET (ensure Minimum Takeoff Power is available)
3. Autofeather Annunciator - ILLUMINATED
4. Brakes – RELEASE **NOTE**  
Increasing airspeed will cause torque and ITT to increase.
5.  $V_R$  - ROTATE TO APPROX 8° NOSE UP ATTITUDE
6. Landing Gear - (when positive climb established) – UP
7. Airspeed – MAINTAIN  $V_2$  UNTIL CLEAR OF OBSTACLES
8. Flaps (at  $V_2 + 5$  Knots) – UP

**TAKEOFF SPEEDS – FLAPS UP**

| Weight                 | $V_1$  | $V_R$ | $V_2$ | $V_{ENR}$ |
|------------------------|--|-------|-------|-----------|
| 13,420 LBS             | 114  | 115   | 125   | 125       |
| 13,000 LBS             | 112  | 113   | 123   | 123       |
| 12,500 LBS             | 110  | 111   | 121   | 121       |
| 12,000 LBS             | 108  | 109   | 120   | 120       |
| 11,500 LBS             | 106  | 107   | 118   | 118       |
| 11,000 LBS             | 104  | 105   | 115   | 115       |
| 10,500 LBS             | 102  | 103   | 113   | 113       |
| 10,000 LBS<br>and less | Takeoff speeds vary with pressure altitude.<br>See AFMS 006-2, Section 5 Performance |       |       |           |

**TAKEOFF SPEEDS – FLAPS APPROACH**

| Weight                 | $V_1$  | $V_R$ | $V_2$ | $V_{ENR}$ |
|------------------------|--|-------|-------|-----------|
| 13,420 LBS             | 96   | 97    | 107   | 125       |
| 13,000 LBS             | 95   | 97    | 106   | 123       |
| 12,500 LBS             | 95   | 97    | 105   | 121       |
| 12,000 LBS             | 94   | 97    | 104   | 120       |
| 11,500 LBS             | 94   | 97    | 104   | 118       |
| 11,000 LBS<br>and less | Takeoff speeds vary with pressure altitude.<br>See AFMS 006-2, Section 5 Performance |       |       |           |

### CLIMB

1. Yaw Damp - ON
2. Climb Power - SET
3. Propellers - 1900 RPM
4. Prop Sync – ON
5. Windshield Anti-Ice – NORMAL
6. Autofeather - OFF
7. Engine Instruments - MONITOR
8. Cabin Sign - AS REQUIRED
9. Pressurization - CHECK
10. Aft Blower (if installed) - AS REQUIRED
11. Lights - AS REQUIRED
12. Altimeter (at Transition Altitude) – 29.92

#### CLIMB IN ICING CONDITIONS

1. Engine Anti-Ice - CONFIRM ON  
L & R ENG ANTI-ICE annunciators ILLUMINATED
2. Auto Ignition – ARM
3. Prop Deice – AUTO
4. Stall Warning Heat - CONFIRM ON
5. Left and Right Fuel Vent Heat - CONFIRM ON
6. Left and Right Pitot Heat - CONFIRM ON
7. Windshield Anti-Ice - CONFIRM NORMAL OR HI

*At first sign of ice accretion on aircraft.*

8. Surface Deice Switch - SINGLE AND RELEASE (repeat as required)
9. Stall Warning Ice Mode Annunciator - ILLUMINATED
10. Climb Power - SET MAX CONT POWER (to expedite climb)
11. Airspeed - 145 KNOTS MINIMUM AIRSPEED

### CRUISE

#### WARNING

Do not lift power levers in flight.

1. Cruise Power - SET PER CRUISE POWER TABLES OR GRAPHS
2. Engine Instruments - MONITOR
3. Auxiliary Fuel Gages - MONITOR
4. Pressurization - MONITOR

#### CRUISE IN ICING CONDITIONS

*At first sign of ice accretion on aircraft.*

1. Airspeed – 145 KNOTS MINIMUM
2. Surface Deice Switch - SINGLE AND RELEASE
3. Stall Warning Ice Mode Annunciator – VERIFY ILLUMINATED

#### OUTSIDE OF ICING CONDITIONS AND WINGS FREE OF ICE

1. Stall Warning Ice Mode Annunciator - PRESS (to select Normal Mode)
2. Stall Warning Ice Mode Annunciator - EXTINGUISHED

**END**

ICING CONDITIONS

**WARNING**

Due to distortion of the wing airfoil, ice accumulation on the leading edges can cause a significant loss in rate of climb and in cruise speed, as well as increases in stall speed. Even after cycling deicing boots, the ice accumulation remaining on the boots plus ice accumulations on unprotected areas can cause large performance losses. In order to minimize ice accumulation on unprotected surfaces of the wing, maintain a minimum of 145 knots during operations in sustained icing conditions. In the event of windshield icing, reduce airspeed to 226 knots or below. Prior to a landing approach, cycle the deicing boots to shed any accumulated ice. The stall warning system will sound the aural warning at 15 to 20 knots above the normal warning speed when it is in the ice mode, which is appropriate when there is ice on the wings.

1. Engine Ice Protection

When visible moisture is encountered at an OAT of +5°C and below, or;  
At night when freedom from visible moisture is not assured at an OAT of +5°C and below (Operation of strobe lights will sometimes show ice crystals not normally visible)

a. Engine Anti-Ice – ON

[L ENG ANTI-ICE] and [R ENG ANTI-ICE] – ILLUMINATED

b. Check for proper operation by noting a drop in torque.

**WARNING**

Engine icing can occur even though no surface icing is present. If freedom from visible moisture cannot be assured, engine ice protection should be activated. Visible moisture is moisture of any form: clouds, ice crystals, snow, rain, sleet, hail or any combination of these. Operation of strobe lights will sometimes show ice crystals not normally visible. If in doubt, actuate the Engine Anti-Ice System.

**NOTE**

Illumination of the [L ENG ICE FAIL] or [R ENG ICE FAIL] caution annunciator indicates failure of selected system on affected engine. Immediate illumination indicates loss of power to the actuator. Select the other actuator(s).

**CONTINUED**

2. Auto Ignition – ARM

**NOTE**

Auto Ignition must be ARMED for icing flight, precipitation, and operation during turbulence. To prevent prolonged operation of the igniters with the system ARMED, do not reduce power levers below 500 ft-lbs torque.

3. Prop Deice – AUTO

- a.The system may be operated continuously in flight, and will function automatically until the switch is turned off.
- b.Relieve propeller imbalance due to ice by increasing rpm briefly and returning to the desired setting. Repeat as necessary.

**CAUTION**

If the deice ammeter does not indicate 18 to 24 amps or the automatic timer fails to switch, refer to AP-12, ABNORMAL PROCEDURES.

4. Surface Deice

**WARNING**

All components of the surface deice system must be monitored during icing flight to ensure the system is functioning normally. These components include:

Pneumatic Pressure Gage

The gage should indicate 12.0 to 20.0 psi before activating boots. The pressure will momentarily decrease when the boots are activated.

Vacuum Gage

The gage should indicate in the green arc. Vacuum will momentarily decrease when the boots are activated.

Pneumatic Boots

Visually monitor the boots, where possible, to ensure ice is being removed.

**CAUTION**

Operation of the surface deice system in ambient temperatures below -40°C can cause permanent damage to the deice boots.

**NOTE**

Either engine will supply sufficient pneumatic pressure for deice operation.

**CONTINUED**

*At first sign of ice accretion on aircraft:*

- a. Airspeed – 145 KNOTS MINIMUM
- b. Surface Deice Switch – SINGLE AND RELEASE
- c. Stall Warning Ice Mode Annunciator – VERIFY ILLUMINATED
- d. Repeat as required

*If Single Position of the Surface Deice Switch Fails:*

- e. Surface Deice Switch – MANUAL AND HOLD  
FOR A MINIMUM OF 6 SECONDS, THEN RELEASE
- f. Stall Warning Ice Mode Annunciator – VERIFY ILLUMINATED
- g. Repeat as required.

**OUTSIDE OF ICING CONDITIONS AND WINGS FREE OF ICE**

- a. Stall Warning Ice Mode Annunciator – PRESS (to select Normal Mode)
- b. Stall Warning Ice Mode Annunciator – EXTINGUISHED

**5. Windshield Anti-Ice – NORMAL/HIGH**

NOTE: Maximum airspeed for effective windshield anti-icing is 226 Knots.

6. Left and Right Fuel Vent Heat – CONFIRM ON
7. Left and Right Pitot Heat – CONFIRM ON
8. Stall Warning Heat – CONFIRM ON
9. Ice Lights – AS REQUIRED
10. Alt Static Air Source (if req) – Refer to AP-13 ABNORMAL PROCEDURES

**DESCENT**

1. Pressurization – SET PER TABLE (Refer to NP-27)
  - a. Cabin Altitude – SET
  - b. Rate Control – AS DESIRED
2. Altimeter - SET
3. Cabin Sign - AS REQUIRED
4. Windshield Anti-ice - AS REQUIRED
5. Fuel Balance - CHECK
6. Power - AS REQUIRED

**NOTE**

Approximately 75%  $N_1$  is required to maintain the cabin pressurization schedule during descent.

**END**

**BEFORE LANDING**

1. Approach Speed – CONFIRM  $V_{REF}$
2. Autofeather - ARM
3. Pressurization - CHECK
4. Cabin Sign - NO SMOKE & FSB
5. Flaps - APPROACH
6. Landing Gear - DN
7. Lights - AS REQUIRED

**NOTE**

Under low visibility conditions, landing and taxi lights should be left off due to light reflections.

8. Radar - AS REQUIRED
9. Surface Deice - CYCLE AS REQUIRED

*If wings are free of ice:*

10. Stall Warning Ice Mode Switch - PRESS (to select Normal Mode)

*If residual ice remains on wing boots:*

11. Surface Deice - CYCLE
12. Stall Warning Ice Mode Annunciator - ILLUMINATED
13. Approach Speed and Landing Distance – INCREASE  $V_{REF}$  BY 15 KNOTS AND INCREASE LANDING DISTANCE BY 25 PER CENT.

**NOTE**

Prior to the landing approach, cycle the wing deice boots to shed as much ice as possible, regardless of the amount of ice remaining on the boots. Stall speeds can be expected to increase as much as 15 knots if ice is present on the wings and/or horizontal tail surfaces.

**NOTE**

If crosswind landing is anticipated, determine crosswind component from Section 5, PERFORMANCE. Immediately prior to touchdown, lower upwind wing and align the fuselage with the runway by use of rudder. During rollout, hold aileron control into the wind and maintain directional control with rudder and brakes. Use propeller reverse as desired.

**LANDING APPROACH SPEEDS** (Note - no ice on wings)

| Weight<br>Lbs | Flaps DOWN<br>$V_{REF}$ Speeds,<br>Knots |
|---------------|--|
| 13,420        | 105                                      |
| 13,000        | 104                                      |
| 12,500        | 103                                      |
| 12,000        | 102                                      |
| 11,000        | 99                                       |
| 10,000        | 96                                       |
| 9,000         | 93                                       |

**END**

### **NORMAL LANDING**

1. Flaps - DOWN
2. Airspeed -  $V_{REF}$  (With ice on wings,  $V_{REF} + 15$ )
3. Yaw Damper - OFF
4. Power Levers - IDLE
5. Prop Levers - FULL FORWARD

#### **CAUTION**

To ensure constant reversing characteristics, the propeller levers must be in the high rpm position.

*After Touchdown:*

6. Power Levers – LIFT AND SELECT GROUND FINE
7. Brakes - AS REQUIRED

### **MAXIMUM REVERSE THRUST LANDING**

*When Landing Assured:*

1. Flaps - DOWN
2. Airspeed -  $V_{REF}$  (With ice on wings,  $V_{REF} + 15$ )
3. Yaw Damp - OFF
4. Condition Levers - HIGH IDLE
5. Propeller Levers - HIGH RPM

*After Touchdown:*

6. Power Levers - LIFT THROUGH GROUND FINE AND LIFT TO REVERSE
7. Brakes - AS REQUIRED
8. Condition Levers - LOW IDLE

#### **CAUTION**

If possible, propellers should be moved out of reverse at approximately 40 knots to minimize blade erosion. Care must be exercised when reversing on runways with loose sand, dust, or snow on the surface. Flying gravel will damage propeller blades and dust or snow may impair the pilot's visibility.

### **BALKED LANDING**

1. Power - MAXIMUM ALLOWABLE
  2. Airspeed – MAINTAIN  $V_{REF}$
- When clear of obstacles or 400 Feet AGL, whichever is higher:*
3. Airspeed –  $V_{REF} + 10$  Knots
  4. Flaps - UP
  5. Landing Gear – UP
  6. Airspeed – 125 KNOTS

### **AFTER LANDING**

1. Auto Ignition - OFF
2. Engine Anti-ice – ON

#### **CAUTION**

The engine anti-ice system should be on for all ground operations to minimize ingestion of ground debris. Turn engine anti-ice off, when required, to maintain oil temperatures within limits.

**CONTINUED**

3. Lights - AS REQUIRED
4. Ice Protection - OFF
5. Transponder - STANDBY
6. Radar - STANDBY or OFF
7. Trim Tabs - SET
8. Flaps - UP

**SHUTDOWN AND SECURING**

1. Parking Brake - SET
2. Standby Boost Pumps and Crossfeed - OFF
3. EFIS Power (if installed) - OFF
4. Avionics Master - OFF
5. Inverter - OFF
6. Autofeather (if installed) - OFF
7. Lights - OFF
8. Oxygen System Ready - PUSH OFF
9. Vent Blower - AUTO
10. Cabin Temp Mode - OFF
11. Electric Heat (if installed) - OFF
12. Aft Blower (if installed) - OFF
13. Battery - CHARGED
14. ITT - STABILIZED AT MINIMUM TEMPERATURE FOR ONE MINUTE
15. Condition Levers - FUEL CUT OFF

**CAUTION**

Monitor ITT during shutdown. If sustained combustion is observed, proceed immediately to the engine clearing procedure. During shutdown, ensure that the compressors decelerate freely. Do not close the firewall fuel valves for normal engine shutdown.

16. Propeller Levers - FEATHER
17. DC Volt/Loadmeters - CHECK VOLTAGE
18. Overhead Panel Switches – OFF
19. Emerg Cabin Lt Switch - OFF
20. Battery and Generator Switches - OFF (below 15% N1)
21. Control Locks - INSTALL
22. Emergency Exit – LOCKED
23. Emergency Cabin Light Power Switch - OFF
24. Electric Toilet (if installed) - SERVICE AS REQUIRED
25. Tiedowns and Chocks - AS REQUIRED
26. External Covers - AS REQUIRED
27. Propeller Locks – AS REQUIRED
28. Oil Quantity Check – AS REQUIRED

**END**



**PRESSURIZATION CONTROLLER SETTING FOR LANDING**

| Closest<br>Altimeter Setting | Add to<br>Airport Elevation |
|------------------------------|-----------------------------|
| 28.00.....                   | +2400                       |
| 28.10.....                   | +2300                       |
| 28.20.....                   | +2200                       |
| 28.30.....                   | +2100                       |
| 28.40.....                   | +2000                       |
| 28.50.....                   | +1900                       |
| 28.60.....                   | +1800                       |
| 28.70.....                   | +1700                       |
| 28.80.....                   | +1600                       |
| 28.90.....                   | +1500                       |
| 29.00.....                   | +1400                       |
| 29.10.....                   | +1300                       |
| 29.20.....                   | +1200                       |
| 29.30.....                   | +1100                       |
| 29.40.....                   | +1000                       |
| 29.50.....                   | +900                        |
| 29.60.....                   | +800                        |
| 29.70.....                   | +700                        |
| 29.80.....                   | +600                        |
| 29.90.....                   | +500                        |
| 30.00.....                   | +400                        |
| 30.10.....                   | +300                        |
| 30.20.....                   | +200                        |
| 30.30.....                   | +100                        |
| 30.40.....                   | 0                           |
| 30.50.....                   | -100                        |
| 30.60.....                   | -200                        |
| 30.70.....                   | -300                        |
| 30.80.....                   | -400                        |
| 30.90.....                   | -500                        |

**END**

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**EMERGENCY PROCEDURES**  
**PILOT CHECK LIST**  
**TABLE OF CONTENTS**

| <i>SUBJECT</i>   | <i>PAGE</i>  |
|--|--|
| EMERGENCY AIRSPEEDS .....  | EP-2   |
| ENGINE FAILURE   |  |
| EMERGENCY ENGINE SHUTDOWN.....   | EP-3   |
| ENGINE FIRE ON GROUND .....  | EP-3   |
| EMERGENCY ENGINE SHUTDOWN ON GROUND.....   | EP-3   |
| ENGINE FAILURE ON TAKEOFF (AT OR BELOW $V_1$ ) –<br>TAKEOFF ABORTED .....                                  | EP-3   |
| ENGINE FAILURE ON TAKEOFF (AT OR ABOVE $V_1$ ) –<br>TAKEOFF CONTINUED .....                                | EP-4   |
| ENGINE FAILURE IN FLIGHT BELOW AIR MIN CONTROL SPEED .....   | EP-4   |
| ENGINE FLAMEOUT (2 <sup>ND</sup> ENGINE).....  | EP-4   |
| FUEL SYSTEM  |  |
| FUEL PRESSURE LOW (L OR R FUEL PRESS Annunciator) .....  | EP-4   |
| SMOKE AND FUME ELIMINATION   |  |
| WINDSHIELD ELECTRICAL FAULT .....  | EP-5   |
| ELECTRICAL SMOKE OR FIRE .....   | EP-5   |
| ENVIRONMENTAL SYSTEM SMOKE OR FUMES.....   | EP-6   |
| CABIN OR CARGO DOOR UNLOCKED (DOOR UNLOCKED Annunciator).....  | EP-6   |
| EMERGENCY DESCENT .....  | EP-7   |
| GLIDE .....  | EP-7   |
| ELECTRICAL   |  |
| INVERTER INOPERATIVE (INVERTER Annunciator).....   | EP-8   |
| DUAL GENERATOR FAILURE [L DC GEN]&[R DC GEN] .....   | See basic AFM/POH                                      |
| FLIGHT CONTROLS  |  |
| UNSCHEDULED ELECTRIC ELEVATOR TRIM.....  | EP-8   |
| UNSCHEDULED RUDDER BOOST ACTIVATION .....  | EP-8   |
| ENVIRONMENTAL SYSTEMS  |  |
| USE OF OXYGEN.....   | EP-9   |
| PRESSURIZATION LOSS (ALT WARN Annunciator) .....   | EP-10  |
| AUTO-DEPLOYMENT OXYGEN SYSTEM FAILURE<br>(ALT WARN Annunciator, PASS OXY ON Annunciator Not Illuminated).. | EP-11  |
| EMERGENCY EXIT.....  | EP-11  |
| SPINS.....   | EP-12  |
| AVIONICS .....   | See basic AFM/POH and applicable system AFM Supplement |

All airspeeds quoted in this section are indicated airspeeds (IAS) and assume zero instrument error.

**EMERGENCY AIRSPEEDS**

|  |           |
|--|-----------|
| One-Engine Inoperative Best Angle-of-Climb ( $V_{XSE}$ ) ..... | 115 Knots |
| One-Engine Inoperative Best-Rate-of-Climb ( $V_{YSE}$ ).....   | 121 Knots |
| One-Engine-Inoperative Enroute Climb ( $V_{ENR}$ ):            |           |
| 13,420 pounds .....  | 125 Knots |
| 13,000 pounds .....  | 123 Knots |
| 12,000 pounds .....  | 120 Knots |
| 11,000 pounds .....  | 115 Knots |
| 10,000 pounds .....  | 111 Knots |
| 9,000 pounds .....   | 108 Knots |
| Air Minimum Control Speed ( $V_{MCA}$ ) .....                  | 86 Knots  |
| Raisbeck Engineering STC Prop Installation ( $V_{MCA}$ ).....  | 91 Knots  |
| BLR Aerospace STC Prop Installation ( $V_{MCA}$ ).....         | 92 Knots  |
| Emergency Descent .....  | 181 Knots |
| Maximum Range Glide.....                                       | 136 Knots |

**END**

## ENGINE FAILURE

### EMERGENCY ENGINE SHUTDOWN

*ENGINE TORQUE INCREASE – UNSCHEDULED (Ground or Flight) (Not Responsive to Power Lever Movement)*

*ENGINE FIRE IN FLIGHT*

*ENGINE FAILURE IN FLIGHT*

#### Affected Engine:

1. Condition Lever – FUEL CUTOFF
2. Propeller Lever – FEATHER
3. Firewall Shutoff Valve – CLOSED
4. Fire Extinguisher – ACUTATE (if required)

5. Auto Ignition – OFF
6. Generator – OFF
7. Prop Sync – OFF
8. Electrical Load – MONITOR

### ENGINE FIRE ON GROUND

#### Affected Engine:

1. Condition Lever – FUEL CUT OFF
2. Firewall Shutoff Valve – CLOSED
3. Ignition and Engine Start – STARTER ONLY
4. Fire Extinguisher – ACTUATE (if required)

### EMERGENCY ENGINE SHUTDOWN ON THE GROUND

1. Condition Levers – FUEL CUT OFF
2. Prop Levers – FEATHER
3. Firewall Shutoff Valves – CLOSE
4. Master Switch (gang bar) – OFF
5. ESIS Power (if installed) - OFF

### ENGINE FAILURE ON TAKEOFF (AT OR BELOW $V_1$ ) – TAKEOFF ABORTED

1. Power Levers – GROUND FINE
2. Brakes – MAXIMUM or AS REQUIRED (to stop on runway)
3. Operative Engine – MAXIMUM REVERSE or AS REQUIRED

#### WARNING

Extreme care must be exercised when using single engine reversing on surfaces with reduced traction.

**CONTINUED**

**ENGINE FAILURE ON TAKEOFF (AT OR ABOVE  $V_1$ ) –  
TAKEOFF CONTINUED**

- 1.  $V_R$  Speed – ROTATE TO APPROX 8° NOSE UP ATTITUDE**
- 2. Landing Gear (when positive climb established) - UP**
- 3. Airspeed -  $V_2$  (MAINTAIN TO 400 FEET AGL)**
- 4. Propeller Inoperative Engine - VERIFY FEATHER**
- 5. Airspeed at 400 Feet AGL -  $V_{ENR}$**
- 6. Flaps (if extended) - UP AT  $V_2 + 5$  KNOTS**
- 7. Climb to 1,500 Feet AGL**

**WARNING**

Do not retard engine power lever until the Autofeather system has completely feathered the propeller and propeller rotation has stopped.

8. Clean up (Inoperative engine)
  - a. Condition Lever - FUEL CUT OFF
  - b. Propeller Lever - FEATHER
  - c. Firewall Shutoff Valve - CLOSED
  - d. Auto Ignition - OFF
  - e. Autofeather - OFF
  - f. Generator - OFF
  - g. Prop Sync - OFF
9. Electrical Load - MONITOR

**ENGINE FAILURE IN FLIGHT BELOW AIR MIN CONTROL SPEED  $V_{MCA}$**

- 1. Power – Reduce as required to maintain directional control.**
- 2. Nose - Lower to accelerate above  $V_{MCA}$**

3. Power (operative engine) - AS REQUIRED
4. Failed Engine - SECURE (See EMERGENCY ENGINE SHUTDOWN)

**ENGINE FLAMEOUT (2<sup>ND</sup> Engine)**

- 1. Power Lever - IDLE**
- 2. Propeller Lever - DO NOT FEATHER**
- 3. Condition Lever - FUEL CUT OFF**
- 4. Conduct Air Start Procedures.**

**FUEL SYSTEM**

*FUEL PRESSURE LOW (L OR R FUEL PRESS Annunciator)*

- 1. Standby Pump (Failed Side) – ON**
2. Fuel Press Annunciator – EXTINGUISHED

**END**

## SMOKE AND FUME ELIMINATION

### WINDSHIELD ELECTRICAL FAULT

The smell of an electrical overheat, or observing smoke and/or fire at the lower inboard corner of either windshield, adjacent to the center post, may indicate an overheat condition in the electrical power terminal for the normal heat mode of the pilot's or copilot's windshield heat.

1. WDHLD ANTI-ICE – OFF

*If Smoke and /or Fire does not cease:*

2. Conduct ELECTRICAL SMOKE OR FIRE procedure.

*If Smoke and/or Fire cease:*

3. Continue flight with Windshield Anti-Ice OFF, if possible.

*If Windshield Anti-Ice is required:*

4. If the source of the smell, smoke, or fire can be isolated to the pilot's or copilot's windshield, the opposite windshield (without the overheat condition) may be operated in the NORMAL or HI windshield heat mode.

### ELECTRICAL SMOKE OR FIRE

#### 1. Oxygen

- a. Oxygen System Ready - PULL ON (Verify)
- b. Crew (Diluter Demand Masks) - DON MASKS (Mask Selector Switch - EMERG Position)
- c. Mic Selector - OXYGEN MASK
- d. Audio Speaker - ON

2. Cabin Temp Mode - OFF
3. Vent Blower - AUTO
4. Aft Blower (if installed) - OFF
5. Avionics Master - OFF
6. Nonessential Electrical Equipment - OFF

*If Fire or Smoke Ceases:*

7. Individually restore avionics and equipment previously turned off.
8. Isolate defective equipment.

#### WARNING

Dissipation of smoke is not sufficient evidence that a fire has been extinguished. If it cannot be visually confirmed that no fire exists, land at the nearest suitable airport.

*If Smoke Persists or if Extinguishing of Fire is Not Confirmed:*

9. Cabin Pressure - DUMP
10. Land as soon as practical.

**END**

### ENVIRONMENTAL SYSTEM SMOKE OR FUMES

- 1. Oxygen**
  - a. Oxygen System Ready - PULL ON (Verify)**
  - b. Crew (Diluter Demand Masks) - DON MASKS (Mask Selector Switch - EMERG Position)**
  - c. Mic Selector - OXYGEN MASK**
  - d. Audio Speaker - ON**

2. Cabin Temp Mode - OFF
3. Vent Blower - HIGH
4. Left Bleed Air Valve - ENVIR OFF

*If Smoke Decreases:*

5. Continue operation with left bleed air off.

*If Smoke Does Not Decreases:*

6. Left Bleed Air Valve - OPEN
7. Right Bleed Air Valve - ENVIR OFF
8. If smoke decreases, continue operation with right bleed air off.

### CABIN OR CARGO DOOR UNLOCKED (DOOR UNLOCKED Annunciator)

#### **WARNING**

Do not attempt to check the security of the airstair or cargo door in flight. Remain as far from the door as possible with seatbelts securely fastened.

#### **1. All Occupants - SEATED WITH SEAT BELTS SECURELY FASTENED**

2. Cabin Sign - NO SMOKE & FSB
3. Cabin Differential Pressure - REDUCE TO LOWEST VALUE PRACTICAL (zero preferred) by descending and/or selecting higher cabin altitude setting.
4. Oxygen - AS REQUIRED
5. Land at nearest suitable airport.

**END**



## EMERGENCY DESCENT

- 1. Oxygen - CREW REQUIRED (Passengers As Required)**
  - a. Oxygen System Ready - PULL ON
  - b. Crew (Diluter Demand Masks) - DON MASKS
  - c. Mic Selector - OXYGEN MASK
  - d. Audio Speaker - ON
  - e. Passenger Manual Drop Out - PULL ON

f. Passengers - PULL LANYARD PIN, DON MASK

- 2. Power Levers - IDLE**
- 3. Propeller Levers - FULL FORWARD**
- 4. Flaps - APPROACH**
- 5. Landing Gear - ON**
- 6. Airspeed - 181 KNOTS MAXIMUM**

## GLIDE

- 1. Landing Gear - UP**
- 2. Flaps - UP**

### WARNING

Determine that procedures for restarting first and second failed engines are ineffective before feathering second engine propeller.

- 3. Propellers - FEATHERED**
- 4. Airspeed - 136 KNOTS**

- 5. Glide Ratio - 2.0 nautical miles for each 1000 feet of altitude. Decrease by 0.2 nautical miles for each 10 knots of headwind.**

**END**

## ELECTRICAL

### INVERTER INOPERATIVE (INVERTER Annunciator)

- Select the other inverter.

### DUAL GENERATOR FAILURE [L DC GEN] & [R DC GEN]

See basic Airplane Flight Manual / Pilot's Operating Handbook

## FLIGHT CONTROLS

### UNSCHEDULED ELECTRIC ELEVATOR TRIM

1. Airplane Attitude - MAINTAIN (using elevator control)
  2. Control Wheel Disconnect Switch - DEPRESS FULLY (2<sup>nd</sup> level, ELEC TRIM OFF Annunciator - ILLUMINATED)
3. Manually retrim airplane.
  4. Elevator Trim - OFF

### UNSCHEDULED RUDDER BOOST ACTIVATION

1. Directional Control - MAINTAIN USING RUDDER PEDALS
2. Rudder Boost - OFF

*If Condition Persists:*

3. Rudder Boost Circuit Breaker - PULL
4. Either Bleed Air Valve - INSTR & ENVIR OFF
5. Rudder Trim - AS REQUIRED
6. Perform normal landing.

**END**

## ENVIRONMENTAL SYSTEMS

### USE OF OXYGEN

**WARNING**

The following table sets forth the average time of useful consciousness (TCU) (time from onset of hypoxia until loss of effective performance) at various altitudes.

| <u>Cabin Pressure Altitude</u> | <u>TUC</u> -       |
|--------------------------------|--------------------|
| 35,000 feet .....              | 1/2 - 1 minute     |
| 30,000 feet .....              | 1 - 2 minutes      |
| 25,000 feet .....              | 3 to 5 minutes     |
| 22,000.....                    | 5 to 10 minutes    |
| 12 - 18,000 feet .....         | 30 minutes or more |

1. Oxygen System Ready - PULL ON (Verify)
  2. Crew (Diluter Demand Masks) - DON MASKS
  3. Mic Selector - OXYGEN MASKS
  4. Audio Speaker - ON
  5. Passenger Manual Drop Out - PULL ON
6. Passengers - PULL LANYARD PIN, DON MASKS
  7. Oxygen Duration - CONFIRM
  8. First Aid Oxygen - AS REQUIRED
    - a. Oxygen Compartment - PULL OPEN
    - b. ON/OFF Valve - ON
    - c. Mask - DON

**CONTINUED**

**PRESSURIZATION LOSS (ALT WARN Annunciator)**

**1. Oxygen**

- a. Oxygen System Ready - PULL ON (Verify)**
- b. Crew - DON MASK**
- c. Mic Selector - OXYGEN MASK**
- d. Audio Speaker - ON**
- e. Passenger Manual Drop Out - PULL ON**

f. Passengers - PULL LANYARD PIN, DON MASK

**2. Descend as required**

**WARNING**

Adequate oxygen pressure is not provided to the passengers for sustained flight at cabin altitudes above 34,000 feet. The highest recommended cabin altitude for sustained flight is 25,000.

- 3. Range - DETERMINE FOR FINAL CRUISE ALTITUDE
- 4. Oxygen Duration - CONFIRM

**CONTINUED**

**AUTO-DEPLOYMENT OXYGEN SYSTEM FAILURE**  
**(ALT WARN Annunciator, PASS OXY ON Annunciator Not Illuminated)**

**1. Passenger Manual Drop Out - PULL ON**

2. First Aid Mask (if required) - DEPLOY MANUALLY

*To Isolate Oxygen Supply to the Crew and First Aid Mask:*

3. Oxygen Control Circuit Breaker - PULL

4. Passenger Manual Drop Out - PUSH OFF

**HIGH DIFFERENTIAL PRESSURE**  
**(Cabin Differential Pressure Exceeds 6.6 psi)**

**1. Bleed Air Valves - ENVIR OFF**

**2. Oxygen (Crew and Passengers) - AS REQUIRED**

**3. Descend - AS REQUIRED**

**BLEED AIR LINE FAILURE (L OR R BL AIR FAIL Annunciator)**

**1. Bleed Air Valve (affected engine) - INSTR & ENVIR OFF position**

2. Engine Instruments - MONITOR

**EMERGENCY EXIT**

- Emergency Exit Handle – PULL

**NOTE**

This is a plug-type hatch that opens into the cabin. The hatch can either be set aside inside the cabin, or placed outside the cabin through the hatch opening.

The outside handle may be locked from the inside with the EXIT LOCK lever. The inside EXIT-PULL handle will unlatch the door regardless of the position of the EXIT LOCK lever. Before flight, make certain the lock lever is in the unlocked position.

**END**

## SPINS

Intentional spins are prohibited. If an unintended spin is encountered, perform the following procedure IMMEDIATELY – THE LONGER THE DELAY, THE MORE DIFFICULT RECOVERY WILL BECOME. Steps 1 through 3 should be done AGGRESSIVELY and SIMULTANEOUSLY. The full forward position of the control column may be reduced slightly, if required, to prevent the airplane from exceeding a 90° nose down (inverted) attitude.

*If a spin is entered inadvertently:*

- 1. Control Column - FULL FORWARD**
- 2. Full Rudder - OPPOSITE DIRECTION OF SPIN**
- 3. Power Levers - IDLE**
- 4. Controls NEUTRALIZE WHEN ROTATION STOPS**
- 5. Execute a smooth pullout.**

### NOTE

The Federal Aviation Administration does not recommend the spin-testing of multi-engine airplanes. The recovery technique presented above is based upon the best available information, but shall not be construed as any assurance that the airplane can, in fact, be recovered from a spin. In accordance with industry practice, no spin tests have been conducted on this airplane.

## AVIONICS

See basic AFM/POH and applicable system AFM Supplement(s).

**END**



## ABNORMAL PROCEDURES

### PILOT CHECK LIST

#### TABLE OF CONTENTS

| <i>SUBJECT</i>  | <i>PAGE</i>  |
|---|--|
| AIR START   |  |
| STARTER ASSIST .....  | AP-2   |
| NO STARTER ASSIST (Wind-milling Engine and Propeller) ..... | AP-3   |
| LANDING   |  |
| FLAPS UP LANDING .....                                      | AP-4   |
| ONE-ENGINE INOPERATIVE APPROACH AND LANDING .....           | AP-5   |
| ONE-ENGINE INOPERATIVE GO-AROUND .....                      | AP-6   |
| OVERWEIGHT LANDING .....                                    | AP-7   |
| SYSTEMS   |  |
| ENGINE OIL SYSTEM.....                                      | AP-8   |
| LOW OIL PRESSURE INDICATION.....                            | AP-8   |
| CHIP DETECT .....   | AP-8   |
| FUEL SYSTEM .....   | AP-8   |
| CROSSFEED.....  | AP-8   |
| AUXILLARY FUEL TRANSFER FAILURE .....                       | AP-8   |
| ELECTRICAL SYSTEM.....                                      | AP-9   |
| SINGLE GENERATOR FAILURE.....                               | AP-9   |
| BATTERY CHARGE RATE .....                                   | AP-9   |
| EXCESSIVE LOADMETER INDICATION.....                         | AP-9   |
| CIRCUIT BREAKER TRIPPED .....                               | AP-9   |
| BUS FEEDER CIRCUIT BREAKER TRIPPED.....                     | AP-9   |
| AVIONICS MASTER POWER SWITCH FAILURE .....                  | AP-10  |
| LANDING GEAR SYSTEM.....                                    | AP-10  |
| LANDING GEAR MANUAL EXTENSION (Mechanical Gear) .....       | AP-10  |
| HYDRAULIC FLUID LOW.....                                    | AP-11  |
| LANDING GEAR MANUAL EXTENSION (Hydraulic Gear).....         | AP-11  |
| ENVIRONMENTAL SYSTEMS.....                                  | AP-12  |
| DUCT OVERTEMPERATURE .....                                  | AP-12  |
| ICE PROTECTION SYSTEM.....                                  | AP-12  |
| ELECTROTHERMAL PROPELLER DEICE (Auto System) .....          | AP-12  |
| ELECTROTHERMAL PROPELLER DEICE (Manual System).....         | AP-13  |
| ENGINE ANTI-ICE FAILURE .....                               | AP-13  |
| STATIC AIR SYSTEM .....                                     | AP-14  |
| CRACKED OR SHATTERED WINDSHIELD .....                       | AP-15  |
| CRACK IN ANY SIDE WINDOW (COCKPIT OR CABIN) .....           | AP-15  |
| SEVERE ICING CONDITIONS.....                                | AP-16  |
| AVIONICS.....   | See basic AFM/POH and applicable system AFM Supplement |
| CENTEX AEROSPACE CKL 006-2                                  |  |
| DECEMBER 2014   | AP-1   |

## ABNORMAL PROCEDURES

All airspeeds quoted in this section are indicated airspeeds (IAS) and assume zero instrument error.

Closed [BRACKETS] in this section denote annunciator(s).

## AIR START

### CAUTION

The pilot should determine the reason for engine failure before attempting an air start. Do not attempt an air start if  $N_1$  indicates zero and mechanical failure is suspected.

## STARTER ASSIST

### WARNING

Air start using the STARTER ASSIST procedures may momentarily cause the loss of attitude display on Electronic Flight Instrument System (EFIS) equipped airplanes, and lead to premature system failures. IF FLIGHT CONDITIONS DO NOT PERMIT THE TEMPORARY LOSS OF ATTITUDE REFERENCE, CONDUCT AIR START USING THE NO STARTER ASSIST PROCEDURES.

### CAUTION

Air starts may not be possible above 25,000 feet. Descend to a lower altitude if necessary. Above 20,000 feet, starts tend to be hotter. During engine acceleration to idle speed, it may become necessary to move the condition lever periodically into FUEL CUT OFF in order to avoid an over temperature condition.

## ABNORMAL PROCEDURES

1. Cabin Temp Mode - OFF
2. Vent Blower – AUTO
3. Bleed Air Valve (Inoperative engine) – ENVIR OFF
4. Aft Blower (if installed) – OFF
5. Furnishings – OFF
6. Radar - STANDBY or OFF
7. Windshield Heat – OFF
8. EFIS Power (If installed, and if EFIS Aus Power is not installed) – OFF IF CONDITIONS PERMIT
9. Power Lever - IDLE
10. Propeller Lever (inoperative engine) - LOW RPM
11. Condition Lever - FUEL CUT OFF
12. Firewall Shutoff Valve - OPEN

**CONTINUED**



13. Generator (inoperative engine) – OFF

**NOTE**

If Conditions permit, reduce operative engine ITT to 700°C or less to reduce the possibility of exceeding ITT limit. Reduce electrical load to minimum consistent with flight conditions.

14. Ignition and Engine Start - ON

15. Condition Lever (10% N<sub>1</sub> or above) - LOW IDLE

16. ITT and N<sub>1</sub> - MONITOR (1000°C MAXIMUM)

17. Ignition and Engine Start (N<sub>1</sub> above 50%)- OFF

18. Propeller Lever - AS REQUIRED

19. Power Lever - AS REQUIRED

20. Generator – ON

21. EFIS Power (if installed) – ON

22. Auto Ignition – ARM

23. Prop Sync - ON

24. Cabin Temp Mode - AUTO

25. Aft Blower (if installed) - AS REQUIRED

26. Radar - AS REQUIRED

27. Windshield Heat - AS REQUIRED

**NO STARTER ASSIST (Windmilling Engine and Propeller)**

1. Power Lever - IDLE

2. Propeller Lever - FULL FORWARD

3. Condition Lever - FUEL CUT OFF

4. Engine Anti-ice (inoperative engine) - OFF

5. Firewall Shutoff Valve - OPEN

6. Generator (inoperative engine) - OFF

7. Airspeed - 140 KNOTS MINIMUM

8. Altitude - BELOW 20,000 Feet

9. Auto Ignition – ARM, [IGNITION ON] – ILLUMINATED

10. Condition Lever (10% N<sub>1</sub> or above) - LOW IDLE

11. ITT and N<sub>1</sub> - MONITOR (1000°C MAXIMUM)

12. Power (after ITT has peaked) - AS REQUIRED

13. Generator - ON

14. Prop SYNC – ON

**END**

## LANDING

### FLAPS UP LANDING

Refer to Section 5 of Supplement AFM 006-2 for Flaps Up Landing Distance.

| WEIGHT ~ POUNDS | V <sub>REF</sub> (Flaps Up) ~ KNOTS |
|-----------------|-------------------------------------|
| 13,420          | 135                                 |
| 13,000          | 133                                 |
| 12,500          | 131                                 |
| 12,000          | 129                                 |
| 11,000          | 125                                 |
| 10,000          | 121                                 |
| 9,000           | 117                                 |

1. Approach Speed, V<sub>REF</sub> (Flaps UP) - CONFIRM
2. Autofeather - ARM
3. Pressurization - CHECK
4. Cabin Sign - NO SMOKE & FSB
5. Flaps – UP

### CAUTION

Do not silence the landing gear warning horn, since the flap actuated portion of the landing gear warning system will not be actuated during a flaps-up landing.

6. Flap Override (If installed) – SELECT
7. Landing Gear – DN
8. Lights - AS REQUIRED

### NOTE

Under low visibility conditions, landing and taxi lights should be left off due to light reflections.

9. Radar - AS REQUIRED
10. Surface Deice - CYCLE (as required)

*If wings are free of ice:*

11. Stall Warning Ice Mode Switch - PRESS (to select Normal Mode)

*If residual ice remains on wing boots:*

12. Surface Deice - CYCLE
13. Stall Warning Ice Mode Annunciator - ILLUMINATED
14. Approach Speed and Landing Distance – INCREASE V<sub>REF</sub> BY 15 KNOTS AND INCREASE LANDING DISTANCE BY 25 PER CENT.

See LANDING DISTANCE chart in Section 5 of Supplement AFM 006-2.

**CONTINUED**

**NOTE**

Prior to the landing approach, cycle the wing deice boots to shed as much residual ice as possible, regardless of the amount of ice remaining on the boots. Stall speeds can be expected to increase if ice is not shed from the deice boots.

**NOTE**

If crosswind landing is anticipated, determine Crosswind Component from Section 5, PERFORMANCE. Immediately prior to touchdown, lower upwind wing and align the fuselage with the runway by use of rudder. During rollout, hold aileron control into the wind and maintain directional control with rudder and brakes. Use propeller reverse as desired.

*When Landing Is Assured:*

15. Approach Speed -  $V_{REF}$  (With ice on wings,  $V_{REF} + 15$ )
16. Yaw Damp – OFF
17. Power Levers - IDLE
18. Propeller Levers - FULL FORWARD

*After Touchdown:*

19. Power Levers - LIFT AND SELECT GROUND FINE OR REVERSE (as req'd)
20. Brakes - AS REQUIRED

**ONE-ENGINE-INOPERATIVE APPROACH AND LANDING**

| WEIGHT ~ POUNDS | $V_{REF}$ ~ KNOTS |
|-----------------|-------------------|
| 13,420          | 105               |
| 13,000          | 104               |
| 12,500          | 103               |
| 12,000          | 102               |
| 11,000          | 99                |
| 10,000          | 96                |
| 9,000           | 93                |

1. Approach Speed,  $V_{REF}$  - CONFIRM
2. Fuel Balance - CHECK
3. Pressurization - CHECK
4. Cabin Sign - NO SMOKE & FSB

*When It is Certain that the Field Can Be Reached:*

5. Flaps - APPROACH
6. Landing Gear - *DN*
7. Propeller Lever - FULL FORWARD
8. Airspeed –  $V_{REF} + 10$  KNOTS
9. Interior and Exterior Lights - AS REQUIRED
10. Radar - As Required

**CONTINUED**

11. Surface Deice - CYCLE (as required)

*If wings are free of ice:*

12. Stall Warning Ice Mode Switch – PRESS (to select Normal Mode)

*If residual ice remains on wing boots:*

13. Surface Deice – CYCLE

14. Stall Warning Ice Mode Annunciator – ILLUMINATED

15. Approach Speed and Landing Distance – INCREASE  $V_{REF}$  BY 15 KNOTS AND  
INCREASE LANDING DISTANCE BY 25 PER CENT  
See LANDING DISTANCE chart in Section 5 of Supplement AFM 006-2.

**NOTE**

Prior to the landing approach, cycle the wing deice boots to shed as much residual ice as possible, regardless of the amount of ice remaining on the boots. Stall speeds can be expected to increase if ice is not shed from the deice boots.

**NOTE**

If crosswind landing is anticipated, determine Crosswind Component from Section 5, PERFORMANCE. Immediately prior to touchdown, lower upwind wing and align the fuselage with the runway. During rollout, hold aileron control into the wind and maintain directional control with rudder and brakes.

*When It is Certain There is No Possibility of a Go-Around*

16. Flaps - DN

17. Airspeed -  $V_{REF}$  (With ice on wings,  $V_{REF} + 15$ )

18. Perform normal landing.

**NOTE**

Single-engine reverse thrust may be used with caution after touchdown on smooth, dry, paved surfaces.

**ONE-ENGINE-INOPERATIVE GO-AROUND**

1. Power - MAXIMUM ALLOWABLE

2. Landing Gear - UP

3. Flaps – UP AT  $V_{REF} + 10$  KNOTS

4. Airspeed –  $V_{REF} + 20$  KNOTS

**END**

## OVERWEIGHT LANDING

| WEIGHT ~ POUNDS | V <sub>REF</sub> ~ KNOTS |
|-----------------|--------------------------|
| 13,420          | 105                      |
| 13,000          | 104                      |
| 12,500          | 103                      |

*When Landing Is Assured:*

1. Flaps - DOWN
2. Airspeed - V<sub>REF</sub>
3. Yaw Damp - OFF
4. Power Levers - IDLE
5. Propeller Levers - FULL FORWARD

### CAUTION

To ensure constant reversing characteristics, the propeller levers must be in the high rpm position.

6. Sink Rate - TOUCHDOWN WITH NOMINAL OR LESS SINK RATE

*After Touchdown:*

7. Power Levers - LIFT AND SELECT GROUND FINE
8. Brakes - AS REQUIRED

### NOTE

An overweight landing is defined as any landing made when the airplane gross weight is greater than 12,500 pounds, which is the maximum landing weight limitation (except for an airplane equipped with Beechcraft High Flotation landing gear). When the airplane is landed at a gross weight above 12,500 pounds (except an airplane equipped with Beechcraft High Flotation landing gear) the pilot should request that an inspection in accordance with the King Air 200 Series Maintenance Manual Section 5-50-00 Inspection After Hard Landing be performed before the next flight. Note that components in the standard landing gear have less overall strength margin than the corresponding components in the high flotation landing gear. Also, an overweight landing where the touchdown sink rate is nominal will not result in damage to the landing gear or airframe structure.

**END**

## SYSTEMS

### ENGINE OIL SYSTEM

#### *LOW OIL PRESSURE INDICATION*

60-85 psi - UNDESIRABLE. COMPLETE FLIGHT AT REDUCED POWER. DO NOT EXCEED 1100 FT-LBS TORQUE.

Below 60 psi - UNSAFE. SECURE ENGINE OR LAND AT THE NEAREST SUITABLE AIRPORT USING THE MINIMUM POWER REQUIRED.

#### *CHIP DETECT [L CHIP DETECT] OR [R CHIP DETECT]*

1. Engine Instruments – MONITOR
2. If Abnormal - SHUT DOWN ENGINE AT PILOT'S DISCRETION

### FUEL SYSTEM

#### *CROSSFEED (One-Engine-Inoperative Operation)*

1. Crossfeed - LEFT OR RIGHT, AS REQUIRED  
[FUEL CROSSFEED] – ILLUMINATED
2. Standby Pumps - OFF
3. Auxiliary Tank Transfer - AUTO
4. Fuel Balance - MONITOR

*If Fuel is Required from the Inoperative Engine's Auxiliary Fuel Tank and the Reason for Shutdown was Not an Engine Fire or Fuel Leak:*

5. Firewall Shutoff Valve (inoperative engine) – OPEN  
[FUEL PRESS] - EXTINGUISHED
6. No Transfer Light (inoperative engine) - EXTINGUISHED IN 30 TO 50 SECONDS

#### *TO DISCONTINUE CROSSFEED*

- Crossfeed Flow Switch - OFF (centered)

#### *AUXILIARY FUEL TRANSFER FAILURE (NO TRANSFER Light)*

1. Auxiliary Tank Transfer - OVERRIDE
2. No Transfer Light - EXTINGUISHED (If light does not extinguish, auxiliary fuel may not be available).
3. Auxiliary Fuel Quantity - MONITOR
4. Auxiliary Tank Transfer - AUTO (when auxiliary fuel tank is empty)

**END**

## **ELECTRICAL SYSTEM**

### *SINGLE GENERATOR FAILURE [L DC GEN] OR [R DC GEN]*

1. Loadmeter - VERIFY GENERATOR IS OFF (0% LOAD)
2. Generator - RESET, THEN ON

*If generator will not reset:*

3. Generator - OFF
4. Loadmeter - DO NOT EXCEED 100% (88% Above 31,000 feet)

### *BATTERY CHARGE RATE (BATTERY CHG Annunciator)*

#### *Ground Operations:*

The BATTERY CHG annunciator will illuminate after an engine start. Do not take off with annunciator illuminated unless a decreasing battery charge current is confirmed. See NICKEL-CADMIUM BATTERY CHECK in Section IV NORMAL PROCEDURES in the basic AFM/POH.

#### *In Flight:*

*In-flight illumination of the BATTERY CHG annunciator indicates a possible battery malfunction.*

1. Battery Switch - OFF
2. BATTERY CHG Annunciator Extinguished - CONTINUE TO DESTINATION
3. BATTERY CHG Annunciator Still Illuminated - LAND AT NEAREST SUITABLE AIRPORT

### *EXCESSIVE LOADMETER INDICATION (over 100%)*

1. Battery - OFF (monitor loadmeter)

*If Loadmeter Still Indicates Above 100%:*

2. Nonessential Electrical Equipment - OFF

*If Loadmeter Indicates 100% or Below:*

3. Battery – ON

### *CIRCUIT BREAKER TRIPPED*

1. Nonessential Circuit - DO NOT RESET IN FLIGHT
2. Essential Circuit:
  - a. Circuit Breaker (allow to cool for 10 seconds min.) – PUSH TO RESET

*If Circuit Breaker Trips Again*

- b. Circuit Breaker - DO NOT RESET

### *BUS FEEDER CIRCUIT BREAKER TRIPPED (Fuel Panel Bus Feeders and Right Circuit Breaker Panel Bus Feeders)*

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

#### **NOTE**

The items that may be inoperative can be determined from the electrical system schematic in Section 7, SYSTEMS DESCRIPTION in the basic POH/AFM.

**END**

### AVIONICS MASTER POWER SWITCH FAILURE

*If the Avionics Master Pwr Switch Fails to Operate in the ON Position:*

- Avionics Master Circuit Breaker – PULL

#### NOTE

Turning on the Avionics Master Pwr Switch removes power that holds the avionics relay open. If the switch fails to the OFF position, pulling the Avionics Master circuit breaker will remove power to the relay and should restore power to the avionics buses.

### LANDING GEAR SYSTEM

*Airplanes with electro-mechanical landing gear*

#### LANDING GEAR MANUAL EXTENSION

1. Airspeed – ESTABLISH 130 Knots
2. Landing Gear Relay Circuit Breaker (pilot's subpanel) - PULL
3. Landing Gear Control - DOWN
4. Emergency Engage Handle – LIFT AND TURN CLOCKWISE TO THE STOP TO ENGAGE
5. Extension Lever – PUMP up and down until the 3 green GEAR DOWN lights are illuminated.

#### CAUTION

Stop pumping when the 3 green GEAR DOWN lights illuminate. Further movement of the handle could damage the drive mechanism and prevent subsequent electrical gear retraction.

#### WARNING

If for any reason the green GEAR DOWN lights do not illuminate (e.g., in case of an electrical system failure), continue pumping until sufficient resistance is felt to ensure that the gear is down and locked, even though this procedure may damage the drive mechanism.

#### WARNING

After an emergency landing gear extension has been made do not stow the pump handle or move any landing gear controls or reset any switches or circuit breakers until the airplane is on jacks, since the failure may have been in the gear-up circuit and the gear might retract on the ground. The landing gear cannot be retracted manually.

**CONTINUED**



Airplanes with electro-hydraulic landing gear

HYDRAULIC FLUID LOW [HYD FLUID LOW]

*If The {HYD FLUID LOW} Illuminates During Flight:*

1. Landing Gear – ATTEMPT TO EXTEND NORMALLY AT DESTINATION.

*If Landing Gear Fails To Extend:*

2. Follow LANDING GEAR MANUAL EXTENSION PROCEDURES.

LANDING GEAR MANUAL EXTENSION

*If the Landing Gear Fails to Extend After Placing the Landing Gear Control Down, Perform the Following:*

1. Landing Gear Relay Circuit Breaker (pilot's subpanel) – PULL
2. Landing Gear Control – CONFIRM DN
3. Alternate Extension Handle – UNSTOW AND PUMP
  - a. Pump handle up and down until the three green gear-down annunciators are illuminated.
  - b. While pumping, do not lower handle to the level of the securing clip as this will result in loss of pressure.

*If All Three Green Gear-Down Annunciators Are Illuminated:*

4. Alternate Extension Handle – STOW
5. Landing Gear Controls – DO NOT ACTIVATE
  - a. The Landing Gear Control and the Landing Gear Relay Circuit Breaker MUST NOT BE ACTIVATED.
  - b. The landing gear should be considered UNSAFE until the airplane is on jacks and the system has been cycled and checked.

*If One or More Green Gear-Down Annunciators Do Not Illuminate for Any Reason and a Decision is Made to Land in this Condition:*

6. Alternate Extension Handle – CONTINUE PUMPING
  - a. Continue to pump the handle until maximum resistance is felt.
  - b. When pumping is complete, leave handle at the top of the stroke.  
DO NOT LOWER AND STOW.

*Prior To Landing*

7. Alternate Extension Handle – PUMP AGAIN
  - a. Pump the handle again until maximum resistance is felt.
  - b. When pumping is complete, leave handle at the top of the stroke.  
DO NOT LOWER AND STOW.

*After Landing*

8. Alternate Extension Handle – PUMP AGAIN WHEN CONDITIONS PERMIT
  - a. Pump the handle again, when conditions permit, to maintain hydraulic pressure until the gear can be mechanically secured.
  - b. DO NOT STOW HANDLE
  - c. DO NOT ACTIVATE THE LANDING GEAR CONTROL OR THE LANDING GEAR RELAY CIRCUIT BREAKER.
  - d. The landing gear should be considered UNLOCKED until the airplane is on jacks and the system has been cycled and checked.

**END**

## ENVIRONMENTAL SYSTEMS

### *DUCT OVERTEMPERATURE [DUCT OVERTEMP]*

1. Electric Heat – OFF
2. Vent Blower – HIGH
3. Cabin/Cockpit Air – PUSH TO INCREASE AIRFLOW TO CABIN

*If Condition Persists:*

4. Cabin Temp Mode – MAN HEAT
5. Manual Temp – DECR (60 Seconds)

*If Condition Continues to Persist:*

6. Left Bleed Air Valve – ENVIR OFF

*If The [DUCT OVERTEMP] Does Not Extinguish After 2 Minutes:*

7. Oxygen – AS REQUIRED
8. Right Bleed Air Valve – ENVIR OFF
9. Descend – AS REQUIRED

## ICE PROTECTION SYSTEM

### *ELECTROTHERMAL PROPELLER DEICE (Auto System)*

*Airplanes with three-blade propellers*

*Abnormal Reading on Deice Ammeter (Normal operation is 14 to 18 amps):*

1. Zero Amps:
  - a. Propeller Deice Switch (AUTO) - CHECK, ON
  - b. If OFF, reposition to ON after 30 seconds.
  - c. If ON with zero amps reading, system is inoperative: position the switch to OFF.
  - d. Use manual backup system. (No deice ammeter indication - monitor loadmeter)
2. Below 14 amps:
  - a. Continue operation.
  - b. If propeller imbalance occurs, increase rpm briefly to aid in ice removal.
3. Over 18 amps.
  - a. If circuit breaker does not trip, continue operation.
  - b. If propeller imbalance occurs, increase rpm briefly to aid in ice removal.
  - c. If circuit breaker trips, use manual system. Monitor loadmeter for excessive current drain.
  - d. If manual mode circuit breaker trips, avoid icing conditions.

*Airplanes with four-blade propellers*

*Abnormal Reading on Deice Ammeter (Normal operation is 18 to 24 amps):*

1. Zero Amps:
  - a. Prop Deice - CHECK AUTO
  - b. If OFF, reposition to AUTO after 30 seconds.
  - c. If in AUTO position with zero amps reading, system is inoperative: position the switch to OFF.

**CONTINUED**

- d. Use manual backup system. (No deice ammeter indication - monitor loadmeter)
2. Below 18 amps:
  - a. Continue operation.
  - b. If propeller imbalance occurs, increase rpm briefly to aid in ice removal.
3. Over 24 amps.
  - a. If the Auto Prep Deice circuit breaker switch does not trip, continue operation.
  - b. If propeller imbalance occurs, increase rpm briefly to aid in ice removal.
  - c. If the Auto Prop Deice circuit breaker switch trips, use the manual system. Monitor loadmeter for excessive current drain.
  - d. If the Prop Deice Control circuit breaker or the Left or Right Prop Deice circuit breaker trips, avoid icing conditions.

***ELECTROTHERMAL PROPELLER DEICE (MANUAL SYSTEM)***

***On Serials BB-2, BB-6 thru BB-815, BB-817 thru BB-624, BL-1 thru BL-29***

1. To use manual system, hold switch in outer position for approximately 30 seconds, then inner position for approximately 30 seconds.
2. Monitor manual system current requirement using the airplane's loadmeters when the switch is in the outer or inner position. A small needle deflection (approximately 5%) indicates the system is functioning.

***On airplanes other than serials listed above with three-blade propellers***

1. To use manual system, hold switch in MANUAL position for approximately 45 seconds. Repeat as required to avoid significant buildup of ice which will result in loss of performance, vibration, and impingement upon the fuselage.
2. Monitor manual system current requirement using the airplane's loadmeters when the switch is in the ON position. A small needle deflection (approximately 5%) indicates the system is functioning.

***On airplanes with four-blade propellers***

1. Prop Deice Switch - MANUAL FOR 90 SECONDS
2. Loadmeters - MONITOR FOR SMALL NEEDLE DEFLECTION (APPROX 5%)

***ENGINE ANTI-ICE FAILURE [L ENG ICE FAIL] OR [R ENG ICE FAIL]***

1. Engine Anti-ice Actuator – SELECT OTHER ACTUATOR

***If [ENG ICE FAIL] Does Not Extinguish:***

2. Exit icing conditions.
3. Assume engine anti-ice is ON for performance calculations.

**END**

## STATIC AIR SYSTEM

### *PILOT'S ALTERNATE STATIC AIR SOURCE*

THE PILOT'S ALTERNATE STATIC AIR SOURCE SHOULD BE USED IN SITUATIONS WHERE THE NORMAL STATIC SOURCE HAS BEEN OBSTRUCTED. After the airplane has been exposed to moisture and/or icing conditions (especially on the ground), the possibility of obstructed static ports should be considered. Partial obstructions will result in the rate of climb indication being sluggish during a climb or descent. Verification of suspected obstruction is possible by switching to the alternate system and noting a sudden sustained change in rate of climb. This may be accompanied by abnormal indicated airspeed and altitude changes beyond normal calibrated differences.

Whenever Any Obstruction Exists in The Normal Static Air System, or, When The Alternate Static Air System Is Desired For Use:

1. Pilot's Static Air Source (right side panel) – ALTERNATE
2. For Airspeed Calibration and Altimeter Correction, refer to basic AFM/POH SECTION 5 PERFORMANCE.

### **NOTE**

Be certain the static air valve is in the NORMAL position when the alternate system is not needed.

**END**

### **CRACKED OR SHATTERED WINDSHIELD**

The following procedure should be used when one or more cracks occur in the inner or outer ply of the windshield. The procedure is also applicable if the windshield shatters. This usually occurs in the inner ply and is characterized by a multitude of cracks which will likely obstruct the crew members' vision and may produce small particles or flakes of glass that can break free of the windshield.

1. Altitude – MAINTAIN 25,000 FEET OR LESS, IF POSSIBLE
2. Pressurization Controller – RESET
  - a. Cruise and Descent – MAINTAIN A CABIN DIFFERENTIAL PRESSURE OF 2.0 TO 4.6 PSI (A cabin differential pressure of 4.6 psi will produce approximately a 10,500-foot cabin altitude at an airplane altitude of 25,000 feet)
  - b. Before Landing – DEPRESSURIZE CABIN PRIOR TO TOUCHDOWN
3. Other In-flight Considerations
  - a. Visibility through a shattered windshield may be sufficiently reduced to dictate flying the airplane from the opposite side of the cockpit.
  - b. Precautions should be taken to prevent particles or flakes of glass from a shattered inner ply of the windshield from interfering with the crew's vision.
  - c. A cracked outer windshield ply may damage operating windshield wipers.
  - d. Windshield heat may be inoperative in the area of the crack(s).
  - e. The structural integrity of the windshield will be maintained.
4. Postflight Considerations – SEE SECTION 2 LIMITATIONS IN BASIC AFM/POH

### **CRACK IN ANY SIDE WINDOW (COCKPIT OR CABIN)**

1. Altitude – DESCEND IF REQUIRED
  - a. Descend to an altitude not requiring oxygen, if possible – or
  - b. Descend to at least 25,000 feet if passengers are on board.
2. Crew and Passengers – DON OXYGEN MASKS, IF REQUIRED
3. Pressurization Controller – RESET AS REQUIRED TO DEPRESSURIZE CABIN
4. Cabin Pressure switch - DUMP
5. Postflight Considerations – SEE SECTION 2, LIMITATIONS IN BASIC AFM/POH

**END**

## SEVERE ICING CONDITIONS

THE FOLLOWING WEATHER CONDITIONS MAY BE CONDUCTIVE TO SEVERE IN – FLIGHT ICING:

- Visible rain at temperatures below 0° Celsius outside air temperature.
- Droplets that splash or splatter on impact at temperatures below 0° Celsius outside air temperature.

PROCEDURES FOR EXITING THE SEVERE ICING ENVIROMENT:

These procedures are applicable to all phases of flight from takeoff to landing. Monitor the outside air temperature. While severe icing may form at all temperatures as cold as -18° Celsius, increased vigilance is warranted at temperatures around freezing with visible moisture present. If the visual cues specified in Section 2 Limitations of the Halo 250 FAA Approved AFM Supplement for identifying severe icing conditions are observed, accomplish the following.

1. Immediately request priority handling from Air Traffic Control to facilitate a route or an altitude change to exit the severe icing conditions in order to avoid extended exposure to flight conditions more severe than those for which the airplane has been certificated.
2. Avoid abrupt and excessive maneuvering that may exacerbate control difficulties.
3. Do not engage the autopilot.
4. If the autopilot is engaged, hold the control wheel firmly and disengage the autopilot.
5. If an unusual roll response or uncommanded roll movement is observed, reduce angle-of-attack.
6. Do not extend the flaps when holding in icing conditions. Operation with the flaps extended can result in a reduced wing angle-of-attack, with the possibility of ice forming on the upper surface further aft on the wing than normal, possibly aft of the protected area (i.e., leading-edge boot).
7. If the flaps are extended, do not retract them until the airframe is free from ice accumulations.
8. Report these weather conditions to Air Traffic Control.

## AVIONICS

See basic AFM/POH and applicable system AFM Supplement.

**END**