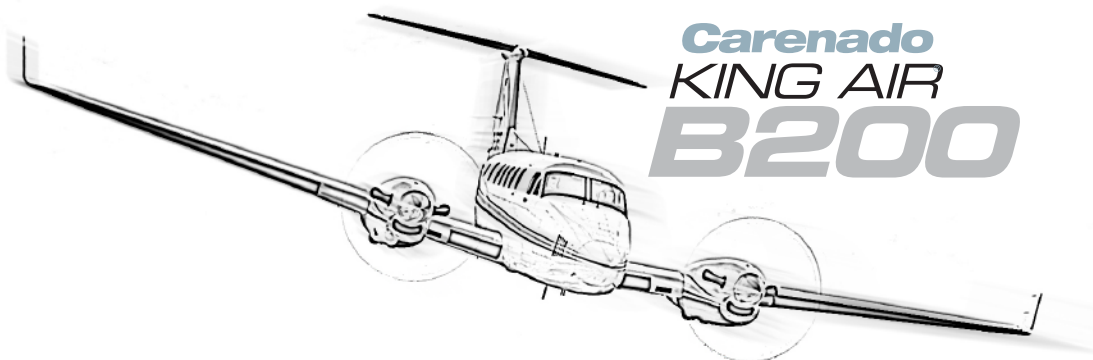


Normal Procedures



Carenado
KING AIR
B200

BEFORE STARTING ENGINES.

NOTE

GPU engine starts are the preferred starting method.

1. Parking brake – Set.
2. Oxygen system – Crew ready.
3. Pilot's instrument panel – Check.
 - a. Compass control – SLV.
 - b. PROP SYN switch – ON.
4. Pilot's clock – Check and set.
5. Pilot's subpanel – Check.
 - a. MIC selector switch – NORMAL.
 - b. Engine ice vanes – As required.

NOTE

The **ENGINE ANTI-ICE** switch should be set to **ON** for all ground operations to minimize ingestion of ground debris. Set switch to **OFF** to maintain engine temperatures within limits.

- c. PILOT AIR control – As required.
 - d. DEFROST AIR control – As required.
 - e. LDG GEAR CONTROL – DN.
 - f. LANDING GEAR RELAY circuit breaker– In.
 - g. All other switches – Off.
6. Avionics panel switches – As required.

NOTE

Where excessive gravel/debris is present, or the ramp is slippery, the pilot may consider starting the engines with the props in **FEATHER**, but must closely monitor ITT on engine start.

7. Power console – Check.
 - a. POWER levers – IDLE.
 - b. PROP levers – As required.
 - c. CONDITION levers – FUEL CUTOFF.
 - d. Trim tabs – Set.
 - e. Landing gear alternate extension handle – Stowed.
8. Pedestal – Check.
 - a. EFIS POWER switches – OFF.
 - b. AP/TRIM POWER switch – OFF.
 - c. CABIN PRESS switch – PRESS.
 - d. RUDDER BOOST switch – On.
 - e. Pressurization controller – Set.
9. Copilot's instrument panel – Set. Compass control – SLV.
10. Copilot's clock – Check and set.
11. Copilot's subpanel – Check.
 - a. CABIN signs – As required.
 - b. VENT BLOWER switch – As required.
 - c. AFT BLOWER – OFF.
 - d. BLEED AIR VALVES switches – ENVIR OFF.
 - e. CABIN TEMP MODE control – OFF.
 - f. CABIN/COCKPIT AIR control – OFF.
 - g. COPILOT AIR control – As required.
 - h. MIC selector switch – NORMAL.
 - i. Oxygen pressure – Check.

12. Copilot's circuit breaker panel – Check.
13. Static air source – Normal.
14. BATT – ON (23 volts minimum for battery start, 20 volts for GPU start).
15. Overhead panel lights – As required.
16. Exterior lights – As required.

CAUTION

Never connect an external power source to the aircraft unless a battery indicating a charge of at least 20 volts is in the aircraft and in the ON position. 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. Use only an external power source fitted with an antyep plug.

17. GPU – As required.
18. External power advisory light – As required.
19. DC volt/loadmeters – Check loads, voltage, and current limiters.

When an external power source is used, it must be set as follows:

- 28.0 to 28.4 volts
- 1000 amps capacity
- 300 amps maximum continuous

NOTE

If the battery is partially discharged, the BATTERY CHG annunciator will illuminate approximately 6 seconds after external power is on line.

The battery should be on to absorb transients present in some auxiliary power units. An EXT PWR annunciator alerts the crew when an external power plug is connected to the aircraft.

1. FIRST ENGINE START (BATTERY START).

NOTE

After turning on the BATT SWITCH, wait a full 10 seconds before starting the engines to allow the ETM to complete its setup procedures.

Starting procedures are identical for both engines except the second engine generator is kept off line after the second engine start to allow performing the current limiters check. When making a battery start, the right engine should be started first. A crewmember should monitor the outside observer throughout the engine start.

1. Propeller area – Clear.
2. Engine – Start.
 - a. IGNITION AND ENGINE START switch – ON. IGN ON annunciator should illuminate and associated FUEL PRESS annunciator should extinguish.

CAUTION

If ignition does not occur within 10 seconds after moving the condition lever to LOW IDLE initiate Engine Clearing procedure, Paragraph 4. If for any reason the starting attempt is discontinued, the entire starting sequence must be repeated after allowing the engine to come to a complete stop (1-minute minimum).

- b. CONDITION lever (after N1 stabilizes at or above 12% for 5 seconds minimum) – LOW IDLE.

CAUTION

Monitor ITT to avoid a hot start. If there is a rapid rise in ITT, be prepared to abort the start before limits are exceeded. During starting, the maximum allowable ITT is 1000 °C for 5 seconds. If this limit is exceeded, use Abort Start procedure, Paragraph 3, and discontinue start.

- c. ITT and N1 – Monitor. ITT 1000 °C maximum. N1 minimum 61%.
 - d. Oil pressure – Check (60 psi minimum).
 - e. IGNITION AND ENGINE START switch – OFF after 50% N1 and ITT decreasing.
3. CONDITION lever – HIGH IDLE. Monitor ITT as the condition lever is advanced.

NOTE

Ensure N1 is at high idle before turning on generator.

- 4. GEN switch – RESET, then ON.
- 5. BATTERY CHG annunciator – Monitor.

2. SECOND ENGINE START (BATTERY START).

- 1. First engine generator load – 50% or less.
- 2. Propeller area – Clear.
- 3. Engine – Start.
 - a. IGNITION AND ENGINE START switch – ON. IGN ON light should illuminate and FUEL PRESS light should extinguish.

CAUTION

If ignition does not occur within 10 seconds after moving the condition lever to LOW IDLE, initiate Engine Clearing procedure, Paragraph 4. If for any reason the starting attempt is discontinued, the entire starting sequence must be repeated after allowing the engine to come to a complete stop (1 minute minimum).

- b. CONDITION lever (after N1 stabilizes at or above 12% for 5 seconds minimum) – LOW IDLE.

CAUTION

Monitor ITT to avoid a hot start. If there is a rapid rise in ITT, be prepared to abort the start before limits are exceeded. During starting, the maximum allowable ITT is 1000 °C for 5 seconds. If this limit is exceeded, use Abort Start procedure, Paragraph 3, and discontinue start.

- c. ITT and N1 – Monitor. ITT 1000 °C maximum. N1 minimum 61%.
 - d. Oil pressure – Check (60 psi minimum).
 - e. IGNITION AND ENGINE START switch – OFF after 50% N1 and ITT decreasing.
- 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.
 - a. Frequency and volts:
 - (1) AC frequency 380 to 420 Hz.
 - (2) AC voltage – 105 to 120 Vac.
 - (3) DC voltage – 27.5 to 29.0 Vdc.
 - b. DC loads: Parallel within 10%.
 - (1) 75% maximum – LOW IDLE.

- (2) 85% maximum – HIGH IDLE.
- (3) 85% maximum – Ground Operations.

- 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.
 - a. Allow 3-4 minutes for gyros to erect, HDG and ATTITUDE flags clear.
 - b. AP FAIL and AP TRIM FAIL – Annunciators illuminate upon initial application of AP/TRIM POWER and then extinguish (followed by an audio test tone) after successful completion of the self-test. Allow 60 seconds after gyros are valid.
 - c. Repeat self-test on copilot side.

CAUTION

Taxi with caution. The autopilot temporarily engages the servos during the automatic self-test. Be prepared to overpower the autopilot as required.

NOTE

Illumination of the AP FAIL annunciator other than during initial power-up indicates a failure. This failure annunciation will result in power being removed from the roll, pitch, yaw, pitch trim, and rudder trim servos. The flight director may remain functional depending upon the nature of the failure. The continuous self-test feature may also inhibit flight director, autopilot, and electric trim use without illumination of the AP FAIL annunciator.

- 16. Engine instruments – Check.

3. 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.

4. ENGINE CLEARING.

- 1. CONDITION lever – FUEL CUTOFF.
- 2. IGNITION AND ENGINE START switch – OFF (1 minute minimum).

CAUTION

Do not exceed starter limitation of 40 seconds on and 60 seconds off for two starting attempts and engine clearing procedure. Allow 30 minutes off before additional starter operation.

- 3. IGNITION AND ENGINE START switch – STARTER ONLY (15 seconds minimum, 40 seconds maximum).
- 4. IGNITION AND ENGINE START switch – OFF.

5. FIRST ENGINE START (GPU START).

NOTE

After turning on the GPU, wait a full 10 seconds before starting the engines to allow the ETM to complete its setup procedures. When making a GPU start, the left engine should be started first due to the GPU receptacle being located adjacent to the right engine. Normally, only one engine is started utilizing the GPU, reverting to a battery start procedure for the second engine start.

1. Propeller area – Clear.
2. Engine – Start.
 - a. IGNITION AND ENGINE START switch – ON. IGN ON light illuminated and associated FUEL PRESS light extinguished.

CAUTION

If ignition does not occur within 10 seconds after moving the condition lever to LOW IDLE, initiate Engine Clearing procedure, Paragraph 4. If for any reason the starting attempt is discontinued, the entire starting sequence must be repeated after allowing the engine to come to a complete stop (1-minute minimum).

- b. CONDITION lever (after N1 stabilizes at or above 12% for 5 seconds) – LOW IDLE.

CAUTION

Monitor ITT to avoid a hot start. If there is a rapid rise in ITT, be prepared to abort the start before limits are exceeded. During engine start, the maximum allowable ITT is 1000 °C for 5 seconds. If this limit is exceeded, use Abort Start procedure, Paragraph 3, and discontinue start.

- c. ITT and N1 – Monitor. ITT 1000 °C maximum. N1 minimum 61%.
- d. Oil pressure – Check (60 psi minimum).
- e. IGNITION AND ENGINE START switch – OFF after 50% N1 and ITT decreasing.
3. CONDITION lever – HIGH IDLE. Monitor ITT as the condition lever is advanced.
4. GPU – As required. Disconnect if second engine start is to be a battery start.

CAUTION

Do not turn on generators with GPU connected.

5. GEN switch (after GPU disconnected and ensure N1 is at High Idle) – RESET then ON.

NOTE

After starting the first engine with a GPU, the second engine is normally started utilizing a battery start. If a GPU start is required or desired for the second engine start, use the Second Engine Start (GPU Start) procedure, Paragraph 6. Otherwise, use Second Engine Start (Battery Start) procedure, Paragraph 2.

6. BATTERY CHG annunciator – Monitor.

6. SECOND ENGINE START (GPU START).

1. Propeller area – Clear.
2. Engine – Start.
 - a. IGNITION AND ENGINE START switch – ON. IGN ON light illuminated and the associated FUEL PRESS light extinguished.

CAUTION

If ignition does not occur within 10 seconds after moving condition lever to low idle, initiate Engine Clearing procedure, Paragraph 4. If for any reason a starting attempt is discontinued, the entire starting sequence must be repeated after allowing the engine to come to a complete stop (1-minute minimum).

- b. CONDITION lever (after N1 RPM stabilizes at or above 12% for 5 seconds) – LOW IDLE.

CAUTION

Monitor ITT to avoid a hot start. If there is a rapid rise in ITT, be prepared to abort the start before limits are exceeded. During engine start, the maximum allowable ITT is 1000 °C for 5 seconds. If this limit is exceeded, use Abort Start procedure, Paragraph 3, and discontinue start.

- c. ITT and N1 – Monitor. ITT 1000 °C maximum. N1 minimum 61%.
- d. Oil pressure – Check (60 psi minimum).
- e. IGNITION AND ENGINE START switch – OFF after 50% N1 and ITT decreasing.
- 3. Right PROP lever – FEATHER.
- 4. GPU – Disconnect.
- 5. Right PROP lever – HIGH RPM when ground personnel are clear.
- 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.
 - a. Frequency and Volts:
 - (1) AC frequency - 380 Hz to 420 Hz.
 - (2) AC voltage – 105 Vac to 120 Vac.
 - (3) DC voltage – 27.5 Vdc to 29.0 Vdc.
 - b. DC loads (Parallel within 10%):
 - (1) 75% maximum – LOW IDLE
 - (2) 85% maximum – HIGH IDLE.
 - (3) 85% maximum – Ground Operations.
- 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.
 - a. Allow 3-4 minutes for gyros to erect, HDG and ATTITUDE flags clear.
 - b. A/P FAIL and A/F TRIM FAIL – Annunciators illuminate upon initial application of AP/TRIM POWER and then extinguish (followed by an audio test tone) after successful completion of the self-test. Allow 60 seconds after gyros are valid.
 - c. Repeat self-test on copilot's side.

CAUTION

Taxi with caution. The autopilot temporarily engages the servos during the automatic self-test. Be prepared to overpower the autopilot as required.

NOTE

Illumination of the AP FAIL annunciator other than during initial power-up indicates a failure. This failure annunciation will result in power being removed from the roll, pitch, yaw, pitch trim, and rudder trim servos. The flight director may remain functional depending upon the nature of the failure. The continuous self-test feature may also inhibit flight director, autopilot, and electric trim use without illumination of the AP FAIL annunciator.

17. Engine instruments – Check.

7. 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.
 - a. AP XFER switch – Select pilot's side.
 - b. AP mode selector button (AP) – Press to engage autopilot.
 - c. Press red INTRP & TRIM AP DISC button – Ensure AP disengages.

WARNING

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

- d. Flight controls – Overpower autopilot in pitch, roll and yaw axis.
- e. Auto trim – Check.
 - (1) Apply nose up force on control wheel – Note nose down trim motion after approximately 3 seconds.
 - (2) Apply nose down force on control wheel – Note nose up trim motion after approximately 3 seconds.
 - (3) Press right rudder – Note left rudder trim motion after approximately 3 seconds.
 - (4) Press left rudder – Note right rudder trim motion after approximately 3 seconds.
 - (5) Select HDG mode – Observe FD commands and control wheel motion correspond to movement of the heading selector knob.
 - (6) **AP DISC & TRIM INTRPT** – Press and release. Note autopilot disconnection, flashing AP annunciation, and aural disconnect tone.
- f. Manual electric trim – Check.
 - (1) 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.

- (2) Pilot and copilot trim switches – Check individual element for no movement of trim, then check proper operation of both elements.
- (3) Pilot trim switches – Check that pilot switches override copilot switches while trimming in opposite directions, and trim moves in direction commanded by pilot.
- (4) Pilot and copilot trim switches – Check trim disconnects while activating pilot or copilot trim disconnect switches.
- g. **AP XFER** switch – Select copilot's side and repeat steps b through e.
- 7. **FMS** – Check and Set.
 - a. Initialize. Insert identifier for current airfield during initialization.
 - b. Load flight plan as required.
- 8. Voice and flight data recorders – Check.
- 9. Radar – As required.
- 10. Altimeters – Set and check.
- 11. FLAPS – Check.
- 12. EFIS brightness – Set.

CAUTION

Do not leave brake deice on longer than required to check function of annunciators when ambient temperatures are above 15 °C.

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

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.

- a. **BLEED AIR VALVES** – OPEN.
- b. **BRAKE DEICE** – ON, annunciator illuminated.
- c. **CONDITION** levers – HIGH IDLE if brake deice is to be used.
- d. **BRAKE DEICE** – OFF, annunciator extinguished.
- e. **CONDITION** levers – As required.
- 14. **TCAS** – TEST and set.
- 15. **EGPWS** – Test.
- 16. Exterior lights – As required.
- 17. Taxi area – Clear.

8. TAXIING.

CAUTION

Never taxi with a flat tire or a flat shock strut. During taxi operations, particular attention should be given to propeller tip clearance. Extreme caution is required when operating on unimproved or irregular surfaces or when high winds exist. If operations produce a propeller RPM over 1600, retard propeller levers to the detent to limit RPM to 1600 to help reduce the possibility of ingestion of ground debris.

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

9. ENGINE RUNUP.

- 1. Parking brake – Set.
- 2. Manual prop feathering – Check.
- 3. **AUTOFEATHER/AUTO IGNITION** – Check as required.
 - a. **AUTO IGNITION** switches – ARM.

- b. POWER levers – 22% torque. Auto ignition annunciators extinguish.
- c. AUTOFEATHER switch – Hold to TEST. Both AUTOFEATHER annunciators illuminated
- d. POWER levers – Retard individually.

NOTE

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

- (1) Approximately 16 to 21% torque, opposite AUTOFEATHER annunciator extinguishes, IGN ON annunciator illuminated.
- (2) Approximately 9 to 14% torque, both AUTOFEATHER annunciators extinguished (prop begins to feather).
- (3) Return POWER levers to approximately 22% torque.
- e. Repeat procedure with other engine.
- f. POWER levers – IDLE.
- g. AUTOFEATHER switch – ARM.
- h. AUTO IGNITION switches – OFF.
- 4. Overspeed governors and rudder boost – Check as required.
 - a. RUDDER BOOST switch – On.
 - b. PROP levers – HIGH RPM.
 - c. PROP GOV TEST switch – Hold in TEST position.
 - d. 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.)
 - e. POWER lever – Retard to IDLE.
 - f. Repeat steps c, d, and e for the right engine.
- 5. Primary governors – Check as required.
 - a. POWER levers – Set 1800 RPM.
 - b. PROP levers – Retard to FEATHER detent. Note propellers stabilize between 1600 and 1640 RPM.
 - c. PROP levers – HIGH RPM. Note propellers return to 1800 RPM.
- 6. ENGINE ANTI-ICE – Check. If already ON, reverse steps a and b.
 - a. ENGINE ANTI-ICE – ON.
 - (1) Both advisory lights illuminated.
 - (2) Both bypass doors extended.
 - (3) Maximum time for (1) and (2) is 15 seconds.
 - b. ENGINE ANTI-ICE – OFF.
 - (1) Both advisory lights extinguish.
 - (2) Both bypass doors retracted.
 - (3) Maximum time for (1) and (2) is 15 seconds.
 - c. Electrical standby system – Check.
- 7. CONDITION levers – HIGH IDLE.
- 8. POWER levers – IDLE.
- 9. Anti-ice/deice systems – Check.
 - a. 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.

- b. WSHLD ANTI-ICE – Check. Note increases on the loadmeter and cycle through both normal and high settings.
 - c. All anti-ice/deice switches – OFF.
 - d. Surface deice system – Check.
- 10. Vacuum and pneumatic system – Check.
 - a. LEFT BLEED AIR VALVE – OFF.
 - (1) Pneumatic and suction pressures remain normal.
 - (2) L BL AIR OFF annunciator illuminates.
 - (3) Both BL AIR FAIL annunciators remain extinguished.
 - b. RIGHT BLEED AIR VALVE – OFF.
 - (1) Pneumatic and suction pressures read zero.
 - (2) Both BL AIR OFF and BL AIR FAIL annunciators illuminated.
 - c. LEFT BLEED AIR VALVE – ON.
 - (1) Pneumatic and suction pressures return to normal.
 - (2) Both BL AIR FAIL annunciators extinguished.
 - (3) L BL AIR OFF annunciator extinguished.
 - d. RIGHT BLEED AIR VALVE – ON.
 - (1) R BL AIR OFF annunciator extinguished.
- 11. Pressurization – Check and set.
 - a. BLEED AIR VALVES – Both ON.
 - b. CABIN ALTITUDE – Set 500 feet lower than field pressure altitude.
 - c. CABIN PRESS switch – TEST. Cabin climb/descent gauge indicates a descent.
 - d. CABIN PRESS switch – Release. Cabin climb/descent gauge indicates a climb, then stabilizes at zero climb.
 - e. Altitude selector – Set as required. Pressure altitude + 200 feet.
- 12. CONDITION levers – As required.
- 13. Radar – Check.

10. 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.

11. LINE UP.

- 1. Transponder / TCAS / Wx Radar / EGPWS – 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.

12. ON TAKEOFF RUN.

- 1.- Autofeather annunciators: CHECK ILLUMINATED
- 2.- Engines: CHECK ITT/TQ IN LIMITS

13. AFTER TAKEOFF.

WARNING

During takeoff and climb, the pilot flying the aircraft should avoid adjusting controls located on the aft portion of the extended pedestal to preclude inducing spatial disorientation.

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

14. CLIMB.

a. Cruise Climb. Cruise climb is performed at a speed that is the best combination of climb, fuel burn-off, and distance covered. Set propellers at 1900 RPM and torque at maximum allowable (or maximum climb ITT, monitor N1). Adhere to the following airspeed schedule as closely as possible.

SL to 10,000 feet.....	160 KIAS
10,000 to 20,000 feet.....	140 KIAS
20,000 to 25,000 feet.....	130 KIAS
25,000 to 35,000 feet.....	120 KIAS

b. Climb – Maximum Rate. Maximum rate of climb performance is obtained by setting propellers at 2000 RPM, torque at maximum allowable (or maximum ITT, monitor N1), and maintaining best rate-of-climb airspeed. Refer to Figure 1 for best rate-of climb airspeed (Vy) for specific weights.

c. Climb Checklist. Complete as follows:

1. YD – As required.
2. AUTOFEATHER – As required.
3. Cabin pressurization – Check. Adjust rate control knob so that cabin rate-of-climb equals one third of aircraft rate-of-climb. Recommend setting cruise altitude +1000 ft.
4. CABIN signs – As required.
5. BRAKE DEICE – As required.
6. WSHLD ANTI-ICE – As required.

NOTE

Turn the windshield heat on to **NORMAL** when passing 10,000 feet MSL or prior to entering the freezing level, whichever comes first. Leave on until no longer required during descent for landing. **HIGH** temperature may be selected as required after a minimum warmup period of 15 minutes.

7. Altimeters – Set.
8. TCAS – Set range.

15. CRUISE.

1. POWER – Set. Refer to the performances tables document.

Figure 1

CLIMB - TWO ENGINES - FLAPS UP

ASSOCIATED CONDITIONS:

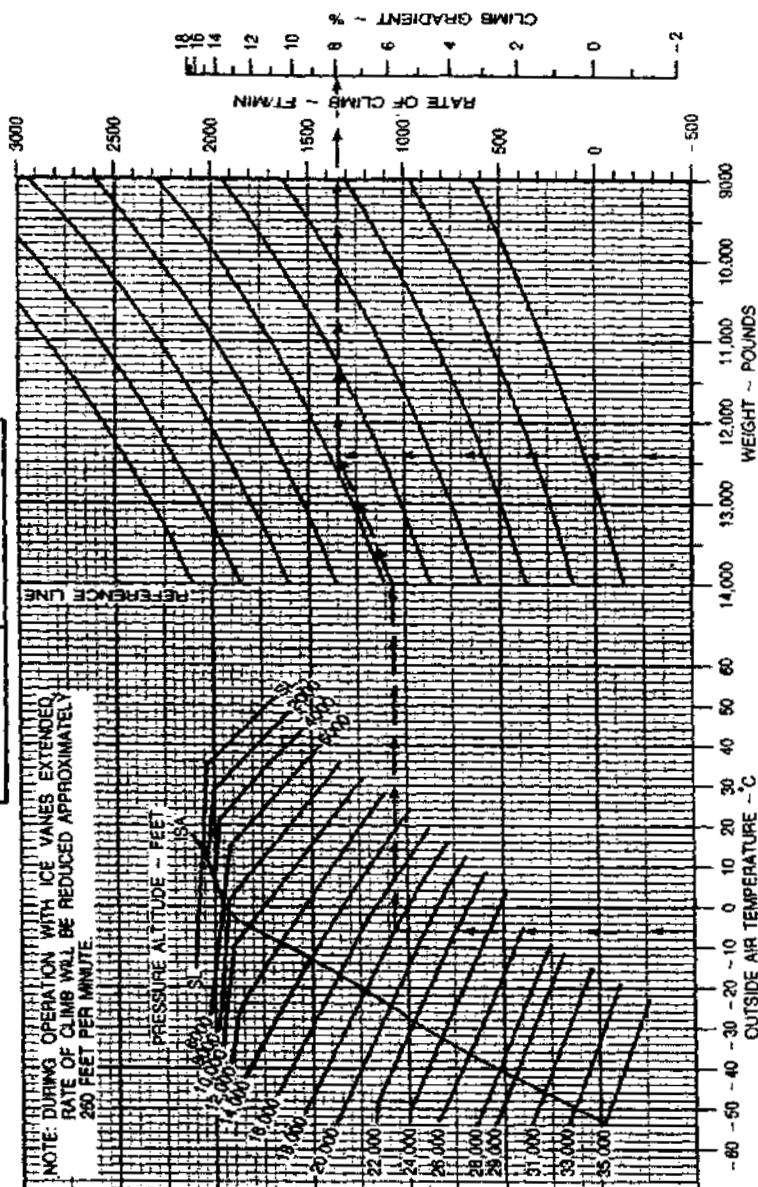
POWER MAXIMUM CONTINUOUS
FLAPS UP
LANDING GEAR UP

SUBTRACT 100 FT. PER MINUTE
FROM GRAPH VALUE

WEIGHT -- POUNDS	CLIMB SPEED V ₂ -- KNOTS
14,000	129
13,000	128
12,500	125
12,000	123
11,000	121
10,000	118
9,000	115

EXAMPLE:

OAT -6°C
PRESSURE ALTITUDE 18,000 FT
WEIGHT 12,391 LBS
RATE OF CLIMB 1340 FT/MIN
CLIMB GRADIENT 7.9%
CLIMB SPEED V₂ 125 KNOTS



NOTE

A new engine operated at the torque value presented in the cruise power charts will show an ITT margin below the maximum cruise limit for the torque value presented in the charts. With ice vanes retracted, ENGINE ANTI-ICE OFF, if cruise torque settings shown on the power charts cannot be obtained without exceeding ITT limits, the engine should be inspected.

2. ICE PROTECTION switches – As required. Ensure anti-ice equipment is activated before entering icing conditions.
3. CABIN signs – As required.
4. AUXILIARY fuel gauges – Monitor. Ensure fuel is being transferred from auxiliary tanks.
5. Altimeters – Check. Verify altimeter settings are correct.
6. Engine instruments – Check. Note indications.
7. TCAS – Set for enroute.

16. DESCENT – ARRIVAL.

Perform the following checks prior to the final descent for landing.

1. Cabin pressurization – Set. Adjust cabin controller dial as required.
2. CABIN signs – As required.
3. ICE PROTECTION switches – As required.

NOTE

Set windshield heat to **NORMAL** or **HIGH** as required well before descent into icing conditions or into warm moist air to aid in defogging. Turn off windshield heat when descent is completed to lower altitudes and when heating is no longer required. This will preclude possible windshield distortions.

4. WSHLD ANTI-ICE – As required.
5. RECOG lights – ON.
6. Altimeters – Set to current setting.
7. TCAS – Set as required.
8. Arrival briefing – Complete.

17. DESCENT.

Descent from cruise altitude should normally be made by letting down at cruise airspeed with reduced power.

NOTE

Cabin pressure controller should be adjusted prior to starting descent.

- a. Descent – Maximum Rate (Clean). To obtain the maximum rate of descent in clean configuration, perform the following:
 1. Cabin pressurization – Set. Adjust cabin controller dial as required. While descending, adjust rate control knob so that cabin rate of descent equals one-third aircraft rate of descent.
 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.
10. Ferry fuel caps – Loosen or remove if rate of descent exceeds 1500 fpm.

b. Descent – Maximum Rate (Landing Configuration). If required to descend at a low airspeed (e.g., to conserve airspace or in turbulence), approach flaps and landing gear may be extended to increase the rate and angle of descent while maintaining a slower airspeed. To perform, use the following procedure:

1. Cabin pressurization – Set. Adjust cabin controller dial as required. While descending, adjust rate control knob so that cabin rate of descent equals one-third aircraft rate of descent.
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.
10. Ferry fuel caps – Loosen or remove if rate of descent exceeds 1500 fpm.

18. APPROACH.

1. HSI NAV SOURCE – As required.
 - a. Ensure the correct navigational source for the approach has been selected .
2. TCAS – Set as required.

19. BEFORE LANDING.

1. CABIN signs – NO SMOKE & FSB.
2. AUTOFEATHER – ARM.
3. ENGINE ANTI-ICE – As required.
4. PROP levers – As required.

NOTE

During approach, propellers should be set at 1900 RPM to prevent glideslope interference (ILS approach), provide better power response during approach, and minimize attitude change when advancing propeller levers for landing.

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.
10. TCAS – Set as required.
11. EGPWS – Set as required. Select Terrain Inhibit (TERR INHBT) for runways shorter than 3,500 feet and/or non-hard-surfaced.

20. LANDING.

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

21. TOUCH AND GO LANDING.

The instructor must select a point on the runway where all pre-takeoff procedures will have been completed prior to the pilot's initial application of power. In selecting this point, prime consideration shall be given to the required accelerate-stop distance pre-computed on a current TOLD Card. The nose wheel should be on the runway and rolling straight before the power is advanced. After the pilot applies power to within 5% of the takeoff power, the instructor's actions are the same as during a normal takeoff. Use the following procedure:

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

22. GO AROUND/MISSED APPROACH.

Accomplish the maneuver in accordance with the ATM utilizing the following procedure:

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

23. AFTER LANDING.

Complete the following procedures after the landing rollout is complete and normal taxi speed is attained:

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.

24. ENGINE SHUTDOWN.

NOTE

To prevent sustained loads on rudder shock links, the aircraft should be parked with the nose gear centered.

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. Battery charge light should be extinguished. If it is illuminated, turn the battery switch OFF momentarily and note loadmeter reading. Turn the battery switch ON and wait approximately 90 seconds, then turn the battery switch OFF and note loadmeter reading. Battery condition is unsatisfactory if the battery charge light remains illuminated and charge current fails to decrease between checks.

CAUTION

Monitor ITT during shutdown. If sustained combustion is observed, proceed immediately to Abort Start procedure, Paragraph 3.

14. ITT – Check. Must be 750° or below for 1 minute prior to shutdown.
15. CONDITION levers – FUEL CUTOFF.
16. PROP levers – FEATHER.

WARNING

Do not turn off exterior lights until propeller rotation has stopped.

17. Exterior lights – OFF.
18. DC voltmeters – Check voltage.
19. Overhead panel switches – As required.
20. Oxygen system – Off.
21. AVIONICS MASTER PWR – OFF.

NOTE

Wait until the gas generator speed of both engines drops below 10% prior to turning off the MASTER SWITCH.

22. MASTER SWITCH – OFF.
23. Chocks – As required.
24. Parking brake – As required.
25. Control locks – As required.

25. BEFORE LEAVING AIRCRAFT.

1. Wheels – Chocked.

NOTE

Brakes should be released after chocks are in place (ramp conditions permitting).

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.

CAUTION

If strong winds are anticipated while the aircraft is unattended, the propellers shall be secured to prevent windmilling with zero engine oil pressure.

11. Walk-around inspection – Complete. Conduct a thorough walk-around inspection, checking for damage, fluid leaks, and levels. Check that covers, tiedowns, restraints, and chocks are installed as required.
12. Aircraft forms – Complete.