



King Air 200



Operating Handbook

Revision 0



cae.com

Use of Operating Handbook

The CAE Operating Handbook is both a training aid for the simulator and a practical tool for the cockpit. This handbook is comprised of four sections.

- The normal procedures section (N-pages) are inserted in vinyl sleeves for increased durability and ease of page replacement. The checklists provided are CAE developed Standard Operating Procedures (SOP). If your company has its own SOP, you may replace the CAE SOP with your own SOP.

Early S/Ns BB2, 6 thru 733, 735 thru 792, 794 thru 828, 830 thru 853, 871 thru 873, 892, 893, 895, and 912; BL-1 thru BL-36.

Mid S/Ns BB-734, 793, 829, 854 thru 870, 874 thru 891, 894, 896 thru 911, 913 thru 1438, and 1440 thru 1443; BL-37 thru 138.

Late S/Ns BB-1439, 1444 and subsequent except 1463; BL-139 and subsequent, and BW-1 and subsequent.

- The flight planning section (F-pages) contains charts and graphs to facilitate flight planning.
- The emergency/abnormal procedures section (E-pages) contains checklists for emergency and abnormal situations. All immediate action (memory) items are printed in red; procedures with immediate action items also have red titles.

This section may be accessed in one of three ways: by table of contents (EMER tab, front), by system tab (front), or by numbered tab (back).

If you are accessing a procedure by the table of contents or by system, simply place your thumb on the proper tab and open the book. For example, place your thumb on the EMER tab and open the handbook; the E-pages table of contents is displayed.

If you are accessing the procedures by cockpit indication, reference the back page of this handbook. Locate the appropriate item and note the number in the adjacent circle. Next, locate the similarly numbered tab; place your thumb on that page and open the handbook. The procedure will be on one of the two pages now open or immediately following.

DEFINITIONS

Land As Soon As Possible: Land at the nearest suitable airport. Extreme situations could require an off-airport landing. Primary consideration is safety of occupants.

Land As Soon As Practical: Land at a suitable airport. Primary consideration is the urgency of the emergency or abnormal situation. Continuing to the destination or an alternate with appropriate service facilities may be an option.

WARNING: An operating procedure, technique, etc., that may result in personal injury or loss of life if not carefully followed.

CAUTION: An operating procedure, technique, etc., that may result in damage to equipment if not carefully followed.

NOTE: An operating procedure, technique, etc., considered essential to emphasize.

NOTICE: This King Air 200 Operating Handbook is to be used for aircraft familiarization and training purposes only. It is not to be used as, nor considered a substitute for, the manufacturer's Pilot or Maintenance Manuals.



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PREFLIGHT INSPECTION

NOTE: After the first flight of the day the Preflight Inspection can be omitted except for those items indicated by a “★”. The fuel tank caps and engine oil quantity/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

- Electric Toilet (if installed)..... KNIFE VALVE OPEN
- ★ Baggage SECURE
- Emergency Exit SECURE AND UNLOCKED
- Control Locks REMOVE AND STOWED
- Trim Tabs SET TO “0” UNITS
- Condition Levers FUEL CUTOFF
- Landing Gear Control DN
- Parking Brake SET
- Ignition and Engine Start..... ENSURE OFF
- Battery..... ON, CHECK 23V MINIMUM
- Fuel Quantity (main and auxiliary) CHECK
- ELT (cockpit installations)..... ARM [XMT] — EXTINGUISHED
- Gear Down Annunciators ILLUMINATED
- Flap Control (if desired)..... APPROACH, THEN DOWN
(check indicator)
- Airstair Door (B200) Circuitry CHECK
- Airstair Door (B200C) Circuitry..... CHECK
- Oxygen System Preflight Inspection COMPLETE
- ★ Battery..... OFF

LEFT WING AND NACELLE

- Cabin Door Seal, Step Extension Cable, Light Wire,
Damper, and HandrailsCHECK
- Cabin Windows..... CHECK
- ★ Auxiliary Fuel Tank Cap..... SECURE
- Flaps (condition, asymmetry protection, and flap tracks) CHECK
- Oil Breather Vent CLEAR
- ★ Brake Lines, Brake Wear, Brake Deice Lines (if installed) CHECK
- Fire Extinguisher (if installed)..... CHECK PRESSURE

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 240	to 275	to 315	to 365	to 420	to 480	to 550	to 635	to 730

continued on next page

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Inverter Cooling Louver	CLEAR
Aileron and Tab	CHECK
Flush Outboard Wing Fuel Tank Sump	DRAIN
Static Wicks (4)	CHECK
Navigation, Recognition, & Strobe Lights	CHECK
★ Main Fuel Tank Cap	SECURE
Stall Warning Vane	CHECK
★ Tiedown	REMOVE
Outboard Deice Boot and Stall Strip	CHECKED
Ice Light	CHECK
Heated Fuel Vent	CLEAR
Ram Scoop Fuel Vent	CLEAR
Gravity Line Drain	DRAIN
Inverter Cooling Louvers	CLEAR
Wing Leading Edge Tank Sump	DRAIN
★ Landing Gear (doors, wheel well, strut, tires, brakes)	CHECK
★ Chock	REMOVE
Fuel Filter and Fuel Stainer Drains	DRAIN
★ Engine Oil	CHECK QUANTITY, CAP SECURE
Engine Compartment Door (outbd)	SECURE, BLEED VALVE EXHAUST CLEAR
Exhaust Stack (outbd)	CHECK FOR CRACKS
Top Cowling Locks (outbd)	SECURE
Nacelle Cooling Ram Air Inlets	CLEAR
★ Prop	CHECK FOR NICKS, DEICE BOOT SECURE
Engine Intake	CLEAR
Top Cowling Locks (inbd)	SECURE
Exhaust Stack (inbd)	CHECK FOR CRACKS
Generator Cooling Inlet	CLEAR
Engine Compartment Door (inbd)	SECURE, BLEED VALVE EXHAUST CLEAR
Heat Exchanger Inlet	CLEAR
Hydraulic Landing Gear Service Door	SECURE
Inboard Deice Boot	CHECK
Heat Exchanger Outlet	CLEAR
Hydraulic Landing Gear Vent Lines	CLEAR
Auxiliary Fuel Tank Sump	DRAIN
Lower Antennas and Beacon	CHECK

NOSE

OAT Probe/Relief Tube Vent	CHECK
Brake Reservoir Vent	CLEAR
Left Avionics Access Panel	SECURE
Air Conditioning Condenser Exhaust Duct	CLEAR
Windshield and Wipers	CHECK
Radome	CHECK
Pitot Masts	CLEAR
Landing and Taxi Lights	CHECK
★ Nose Gear (shimmy damper, stop block, torque knee, strut, tire) . . .	CHECK
★ Chocks	REMOVE
Nose Gear Doors and Wheel Well	CHECK
Air Conditioner Condenser Intake Duct	CLEAR
Right Avionics Access Panel	SECURE

RIGHT WING AND NACELLE

Ejector Exhaust	CLEAR
Auxiliary Fuel Tank Sump	DRAIN
Battery Drain	CLEAR
Battery Air Inlet (Airplane Prior to BB-1632, BL-141, and BW-30)	CLEAR, VALVE FREE
Heat Exchanger Outlet	CLEAR
Inboard Deice Boot	CHECK
Battery Exhaust (Airplanes Prior to BB-1632, BL-141, and BW-30)	CLEAR
Heat Exchanger Inlet	CLEAR
★ Engine Oil	CHECK QUANTITY, CAP SECURE
Engine Compartment Door (inbd)	SECURE
	BLEED VALVE EXHAUST CLEAR
Exhaust Stack (inbd)	CHECK FOR CRACKS
Top Cowling Locks (inbd)	SECURE
Nacelle Cooling Ram Air Inlets	CLEAR
★ Prop	CHECK FOR NICKS, DEICE BOOT SECURE
Engine Intake	CLEAR
Top Cowling Locks (outbd)	SECURE
Exhaust Stack (outbd)	CHECK FOR CRACKS
Generator Cooling Inlet	SECURE
Engine Compartment Door (outbd)	SECURE
	BLEED VALVE EXHAUST CLEAR
Fuel Filter and Fuel Strainer Drains	DRAINS
★ Landing Gear (doors, strut, tires, wheel well)	CHECK
Fire Extinguisher (if installed)	CHECK PRESSURE
★ Chock	REMOVE
Heated Fuel Vent	CLEAR
Ram Scoop Fuel Vent	CLEAR
Gravity Line Drain	DRAIN
Inverter Cooling Louvers	CLEAR
Wing Leading Edge Tank Sump	DRAIN

continued on next page

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- ★ External Power DoorCLOSED
- Ice Light.CHECK
- Outboard Deice Boot and Stall StripCHECK
- ★ Tiedown. REMOVE
- Flush Outboard Wing Fuel Tank Sump DRAIN
- ★ Main Fuel Tank CapSECURE
- Navigation, Recognition, and Strobe LightsCHECK
- Static Wicks (4).CHECK
- Aileron and Bendable TabCHECK
- Flaps (condition, asymmetry protection, flap tracks,
limit switches, and position transmitter)CHECK
- Inverter Cooling Louver CLEAR
- ★ Brake Lines, Brake Wear, Brake Deice Lines (if installed)CHECK
- Oil Breather Vent CLEAR
- ★ Auxiliary Fuel Tank CapSECURE
- Cabin WindowsCHECK

RIGHT AFT FUSELAGE

- Lower AntennasCHECK
- Ventral Fin Drain Holes CLEAR
- Lower Aft Cabin Access DoorSECURE
- ★ Tiedown. REMOVED
- Oxygen Service Access DoorSECURE
- Static Ports CLEAR
- ELT (aft fuselage installations) ARMED
- Cabin Air Exhaust CLEAR
- Access PanelSECURE

TAIL

- Ventral Fin and Static Wick (1)CHECK
- VOR Antennas (right and left)CHECK
- Rudder, Rudder Tab, Stinger and Static Wicks (4)CHECK
- Horizontal Stabilizer, Boots and Static Wicks
(right and left)CHECK
- Elevator, Tab, and Static Wicks (3 each side)CHECK
- Position Light, Tail Floodlights (if installed)
(left and right)CHECK

LEFT AFT FUSELAGE

- Access PanelSECURE
- Static Ports CLEAR
- Oxygen Overpressure Discharge and
Aft Compartment Drain Tubes CLEAR
- Relief Tube CLEAR

ICING CONDITIONS

The Following Weather Conditions May Be Conducive to Severe In-Flight Icing:

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

Procedures for Exiting the Severe Icing Environment

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

- 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.
- Avoid abrupt and excessive maneuvering that may exacerbate control difficulties.
- Do not engage the autopilot.
- If the autopilot is engaged, hold the control wheel firmly and disengage the autopilot.
- If an unusual roll response or un-commanded roll control movement is observed, reduce the angle-of-attack.
- Do not extend flaps when holding in icing conditions. Operation with 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.
- If the flaps are extended, do not retract them until the airframe is clear of ice.
- Report these weather conditions to Air Traffic Control.

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► Intermediate stop/fast turnaround.

BEFORE STARTING ENGINES

Passenger Briefing (see N-11) COMPLETED
 Cabin Door/Cargo Door Circuitry Check COMPLETED
 ► Cabin Door/Cargo Door LOCKED
 ► Load and Baggage SECURED
 ► Weight and Balance CHECKED
 ► Emergency Exit CONFIRM SECURE/UNLOCKED
 ► Control Locks REMOVED
 ► Seats POSITIONED
 ► Fire Extinguisher CHECKED
 ► Seat belts/Shoulder Harnesses FASTENED
 ► Brakes SET
 ► Sub Panel Switches SET
 ► Landing Gear Switch Handle DOWN
 ► Power Levers IDLE
 ► Propeller Controls FULL FORWARD
 ► Condition Levers CUT-OFF
 ► Friction Locks AS DESIRED
 ► Pedestal Switches SET
 ► Cabin Sign BOTH
 ► Cabin Temp Mode OFF
 ► Vent Blower AUTO
 ► Aft Blower OFF
 ► Radiant Heat OFF
 Pilot's Static Air Source NORMAL
 Fuel System (see N-11) CHECKED
 Battery ON
 ► Fuel Quantity (Main and Auxiliary) CHECKED
 ► DC Volts/Loadmeters PRESS TO CHECK VOLTAGE
 ► Annunciator Lights TEST
 ► Landing Gear Handle Lights Test Switch PRESS TO TEST
 ► Stall Warning TEST
 ► Fire Detectors and Fire Extinguishers TEST
 ► Rotating Beacon ON
 Oxygen Supply Pressure CHECK

continued on next page

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Oxygen Supply Control Handle	CHECK
Manual System	PUSH OFF
Automatic System	PULL ON/SYS READY
Oxygen System Preflight (see N-12)	COMPLETE
Microphone Switches	NORMAL
▶Circuit Breakers	IN

BEFORE STARTING — EXTERNAL POWER

Avionics Master Switch	OFF
Left/Right Generator Switches	OFF
External Power	OFF/CONNECTED
Battery	ON
External Power	ON
Voltmeters	.28 TO 28.4V
Propeller Levers	FEATHER
Left Ignition/Engine Start Switch	ON
Left Condition Lever	LOW IDLE (N ₁ STABLE)
ITT N ₁	MONITOR/1000°C MAX
Left Oil Pressure	CHECKED
Left Ignition/Engine Start Switch	OFF(N ₁ 50% MIN)
External Power	OFF/DISCONNECT/SECURE
Left Generator	ON/BATTERY CHARGE/OFF
Generator OFF when loadmeter reads approx. 50%	
Right Ignition/Engine Start Switch	ON
Left Generator	ON (R N ₁ 12% MIN)
Right Condition Lever	LOW IDLE (R N ₁ STABLE)
ITT N ₁	MONITOR/1000°C MAX
Right Oil Pressure	CHECKED
Right Ignition/Engine Start Switch	OFF(N ₁ 50% MIN)
Voltmeters	.28 TO 28.4V
Right Generator	ON

BEFORE STARTING (BATTERY)

Right Ignition and Engine Start ON
 Right Condition Lever LOW IDLE (N_1 STABLE)
 ITT and N_1 MONITOR/1000°C MAX
 Right Oil Pressure CHECKED
 Right Condition Lever HIGH IDLE
 Right Ignition and Engine Start OFF (N_1 50% MIN)
 Right Generator ON/CHARGE BATTERY/OFF
 Generator OFF when loadmeter reads approximately 0.50

 Left Ignition and Engine Start ON
 Right Generator ON (L N_1 12% MIN)
 Left Condition Lever LOW IDLE (L N_1 12% MIN)
 ITT and N_1 MONITOR/1000°C MAX
 Left Oil Pressure CHECKED
 Left Ignition and Engine Start OFF (N_1 50% MIN)
 DC Volts/Loadmeters CHECKED (27.5 TO 29V)
 Left Generator RESET/THEN ON
 Right Condition Lever LOW IDLE

ENGINE CLEARING

Condition Lever FUEL CUT OFF
 Ignition/Engine Start STARTER ONLY/15 SEC MAX
 Starter Use DO NOT EXCEED LIMITS
 Starter Limitation — 40 secs ON/60 secs OFF/40 secs ON/
 60 secs OFF/40 secs ON/30 mins OFF
 Ignition/Engine Start OFF

AFTER STARTING AND TAXING

Inverters ON
 DC Voltage and Loadmeters CHECKED
 AC Voltage and Frequency CHECKED
 Avionics Master ON
 Lights AS REQUIRED
 Cabin Temperature and Mode AS REQUIRED
 Instruments CHECKED/NO FLAGS
 Propellers FULL FORWARD
 Brakes CHECKED



BEFORE TAKEOFF (RUNUP)

- Autopilot (page N-15) CHECKED
- Pressurization (page N-14) CHECKED/SET
- Vacuum and Pneumatic Pressure (page N-14) CHECKED
- Primary, Overspeed Governors
and Rudder Boost (page N-15) TESTED
- Engine Ice Vanes (Cold Weather Ops N-18) CONSIDERED
- Autofeather (if installed) (page N-16) CHECKED
- Autofeather (if installed) ARM
- Propeller Feathering (manual) CHECKED
- Engine Controls Friction Locks SET
- Flaps CHECKED/SET
- Flight Controls FREE/CORRECT/MOVEMENT
- Elevator Trim (page N-14) CHECKED
- Trim Tabs CONFIRM SET
- Fuel Quantity CHECKED
- Flight Instruments CHECKED
- Engine Instruments CHECKED

BEFORE TAKEOFF

- Avionics and Radar CHECKED
- Bleed Air Valves OPEN
- Annunciators CONSIDERED
- Transponder ON
- Ice Protection AS REQUIRED
- Propeller Synchrophaser OFF
- Engine Auto-Ignition ARMED

TAKEOFF

- Ignition Annunciators EXTINGUISHED
- Autofeather Annunciators ILLUMINATED
- ITT/Torque MONITOR

CLIMB

Landing Gear UP
Flaps UP (V_{YSE} MIN)
Yaw Damper ON
Climb Power SET
ITT/Torque/ N_1 Limits MONITOR
Propeller 1,900 RPM
Propeller Synchrophaser ON
Autofeather OFF
Engine Instruments MONITOR
Cabin Sign AS REQUIRED
Cabin Pressurization CHECKED
Aft Blower AS REQUIRED
Exterior Lights
Outside Check COMPLETE

CRUISE

Cruise Power SET/SEE TABLES & GRAPHS
Engine Instruments MONITOR
Systems MONITOR
Auxiliary Fuel Gauges MONITOR
Pressurization MONITOR
Destination Weather CONSIDER
Approach Procedure CONSIDER
Landing Data REVIEW

	WEIGHT X 1,000 LBS				
	12.5	12	11	10	9
V _{YSE}	121	119	117	114	111
V _{REF} 0 FLAPS	132	130	126	122	117
V _{REF} 100% FLAPS	103	102	99	96	93

Landing — 100% Flaps

WT (LBS) X 1000 V _{REF} V _{YSE}	TEMP °C	LANDING DISTANCE (FT)			
		PRESSURE ALTITUDE (FT)			
		SL	2000	4000	6000
12.5	40	3150	3300	3550	3900
	20	2950	3150	3300	3550
	0	2750	2950	3150	3300
	-20	2550	2750	2950	3150
12	40	2950	3150	3350	3650
	20	2750	2950	3150	3350
	0	2550	2750	2950	3150
	-20	2450	2550	2750	2950
11	40	2750	2950	3150	3400
	20	2550	2750	2950	3150
	0	2350	2550	2750	2950
	-20	2250	2350	2550	2750
10	40	2600	2800	3000	3200
	20	2400	2600	2800	3000
	0	2200	2400	2600	2800
	-20	2100	2200	2400	2600
9	40	2450	2650	2850	3050
	20	2250	2450	2650	2850
	0	2050	2250	2450	2650
	-20	1950	2050	2250	2450

The data given is estimated and is based on zero wind conditions. For exact values, refer to POH, Performance.

Wind factor for VAP is 1/2 Wind Speed Component + Gust Factor (Max. 10 Kts).

For other/associated conditions, refer to pages F-34/F-35.

DESCENT

Pressurization (see Table page N-9) SET
 Altimeters SET
 Cabin Sign AS REQUIRED
 Ice Protection AS REQUIRED
 Exterior Lights CONSIDERED
 Power AS REQUIRED

APPROACH

Approach Speeds CONFIRM
 Pressurization CHECK
 Cabin Sign NO SMOKE/FSB
 Autofeather Switch ARM
 Flaps APPROACH
 Propeller Levers FULL FORWARD
 Landing Gear DOWN
 Landing and Taxi Lights AS REQUIRED
 Radar AS REQUIRED

NORMAL LANDING

When Landing Assured:

Airspeed V_{REF}
 Flaps DOWN/100%
 Yaw Damper OFF

MAXIMUM REVERSE THRUST LANDING

When Landing Assured:

Condition Levers HI IDLE
 Propellers FULL FORWARD
 Flaps DOWN
 Airspeed V_{REF}
 Yaw Damp OFF
 Power Levers LIFT & REVERSE AFTER TOUCHDOWN



BALKED LANDING

Power	MAXIMUM ALLOWABLE
Airspeed	100 KTS
When clear of obstacles:	
Normal Climb Attitude	ESTABLISHED
Flaps	UP (V _{YSE} MIN)
Landing Gear	UP

AFTER LANDING

Landing and Taxi Lights	AS REQUIRED
Engine Ice Vanes	EXTEND
Monitor oil pressure and engine ITT.	
Ice Protection	OFF
Transponder	OFF
Radar	STBY/OFF
Engine Auto-Ignition	OFF
Electrical Loads	OBSERVE LIMITS
Trim	SET
Flaps	UP

SHUTDOWN AND SECURING

Parking Brake	SET
Standby Boost Pumps	OFF
Crossfeed	OFF
Inverter	OFF
Avionics Master	OFF
Autofeather	OFF
Exterior Lights	OFF
Cabin Temp Mode	OFF
Vent Blower	AUTO
Aft Blower	OFF
Radiant Heat	OFF
Battery	CHARGED
ITT	STABILIZED AT MIN TEMP FOR ONE MINUTE
Condition Levers	CUT OFF
Propeller Levers	FEATHER
DC Volts/Loadmeters	CHECK VOLTAGE
Overhead Panel Switches	OFF
Battery/Generator Switches	OFF BELOW 10% N ₁
Oxygen Supply Control Handle	PUSH OFF
Control Locks	INSTALLED
Baggage Compartment Light	OFF
Tiedowns/Chocks	AS REQUIRED
External Covers	AS REQUIRED

PASSENGER BRIEFING

The passenger briefing should include the following items:

- Smoking
- Use of Safety Belts
- Compliance with FSB/Smoking Sign
- Seat Positions for Takeoff & Landing
- Normal and Emergency Exit Operation
- Fire Extinguisher Location & Operation
- Oxygen Use (if required)
- Survival Equipment (if required)
- Overwater Equipment (if required).

NOTE: This briefing is required to be given by the Pilot in Command, crewmember, or other person designated by the Certificate Holder before takeoff. It may be delivered by means of an approved playback device but must be supplemented by printed cards appropriate to the aircraft.

FUEL SYSTEM CHECK

Firewall Valve CBs PULL

Boost Pump CBs PULL

Firewall Shutoff Valves CLOSE

Standby Pumps ON

Listen for standby pump operation.

Battery Switch ON

L/R FUEL PRESS annunciators illuminate.

Firewall Shutoff Valves OPEN

L/R FUEL PRESS annunciators extinguish.

Standby Pumps OFF

L/R FUEL PRESS annunciators illuminate.

Crossfeed ALTERNATE LEFT/RIGHT

The FUEL CROSSFEED and respective L/R FUEL PRESS annunciators illuminate.

Crossfeed OFF

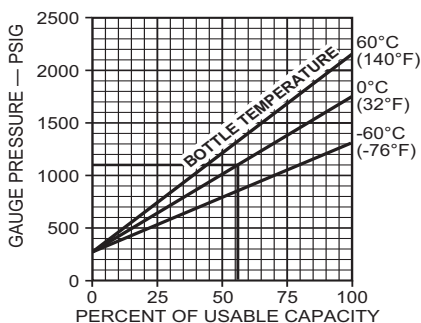
No Transfer LightsPRESS TO TEST

Firewall Valve and Boost Pump CBsRESET

OXYGEN SYSTEM CHECK

- Oxygen Pressure Gauge CHECK/SUFFICIENT
- Percent of Usable Capacity DETERMINE
- Oxygen Duration COMPUTE
 - Duration with Full Bottle SEE TABLE
 - Duration with Less than Full Bottle COMPUTE
- Compute oxygen duration in minutes from the table by multiplying the full bottle duration by the percent of usable capacity.
- Pilot and copilot are each counted as two people with diluter demand masks set at 100% or NORMAL mode.
- Mask Mic Operation CHECK
- Oxygen System Control PULL ON SYS READY
- Diluter Demand System CHECK OPERATION/MASKS 100%

WARNING: Oxygen duration is computed for the auto-deployed type mask, rated at 3.7 Standard Liters per Minute - NTPD flow. Early Puritan-Bennett masks are not color coded, new masks have an orange and black fitting end. Scott-Sierra masks have a green fitting-end. This table is also used for the quick-donning diluter demand crew oxygen masks by doubling the number of crewmasks is use for computation. Crew masks are to use either the normal or the 100% mode up to 20,000 ft pressure altitude and the 100% mode above 20,000 ft pressure altitude.



Stated Cylinder Size (cu ft)	**Number of People Using								
	1	2	3	4	5	6	7	8	9
	Duration in Minutes								
22	144	72	48	36	28	24	20	18	16
50	317	158	105	79	63	52	45	39	35
77	488	244	162	122	97	81	69	61	54
115	732	366	244	183	146	122	104	91	81
Stated Cylinder Size (cu ft)	**Number of People Using								
	10	11	12	13	14	15	**16	**17	
	Duration in Minutes								
22	14	13	12	11	10	*	*	*	
50	31	28	26	24	22	21	19	18	
77	48	44	40	37	34	32	30	28	
115	73	66	61	56	52	48	45	43	

*Will not meet oxygen requirements.

**For normal oxygen duration computations, count each diluter-demand crew mask in use as 2 (e.g., with a crew of 2 and 4 passengers, enter the table at 8 people using).

INVERTER CHECK

Inverter No. 1 ON

Verify INVERTER annunciator extinguishes. Check that inverter voltage and frequency are within tolerances.

Inverter No. 2 ON

Verify INVERTER annunciator extinguishes. Check that inverter voltage and frequency are within tolerances.

- PC-17A Inverters: 115VAC + 5/-7% -400 Hz $\pm 1\%$
- PC-250 Inverters: 115VAC + 5% -400 Hz $\pm 1\%$



PRESSURIZATION CHECK

- Condition Levers HI IDLE
- Cabin Altitude Selector SET
 - Adjust so that CABIN ALT dial indicates an altitude 1,000 ft below field pressure altitude. Consider Vacuum and Pneumatic Pressure Check below.
- Rate Control Selector Knob SET INDEX AT 12 O'CLOCK
- Cabin Pressurization Switch HOLD IN TEST
- Cabin Climb Indicator CHECK FOR DESCENT INDICATION
- Cabin Pressurization Switch RELEASE WHEN PRESSURIZATION CONFIRMED
- Cabin Altitude Selector Knob ADJUST
 - Adjust selector knob so that inner scale (ACFT ALT) indicates planned cruise altitude plus 1,000 ft. If this setting does not result in an outer scale (CABIN ALT) indication of at least 500 ft above takeoff field pressure, adjust as required.

VACUUM AND PNEUMATIC PRESSURE CHECK

- Left Bleed Air Valve INSTR & ENVIR OFF
 - L/R BLEED FAIL Annunciators EXTINGUISH
 - L BL AIR OFF Annunciator ILLUMINATED
 - Gyro Suction Gauge IN GREEN ARC
 - Pneumatic Pressure Gauge IN GREEN ARC
- Right Bleed Air Valve INSTR & ENVIR OFF
 - R BL AIR OFF Annunciator ILLUMINATED
 - L/R BLEED FAIL Annunciators ILLUMINATED
 - Gyro Suction Gauge ZERO
 - Pneumatic Pressure Gauge ZERO
- Left Bleed Air Valve OPEN
- L BL AIR OFF Annunciator EXTINGUISHED
- Right Bleed Air Valve OPEN

ELEVATOR TRIM CHECK

- Elevator Trim ON
- Pilot's and Copilot's Switches CHECK OPERATION
- Trim Quick Disconnect CHECK
- ELECT TRIM OFF Annunciator ILLUMINATED
- Elevator Trim RESET
- ELECT TRIM OFF Annunciator EXTINGUISHED
- WARNING:** Electric trim system operation should only occur with movement of pairs of switches. Any elevator trim wheel movement while depressing only one switch indicates system malfunction. The elevator trim control switch must then be turned off and flight conducted using only manual trim wheel.

Elevator Trim Switch	ON
Autopilot	ENGAGE
Check the YAW and AP annunciators are open.	
Pitch Trim Switches (both pairs)	PRESS
Check the autopilot disengages, but yaw damper remains engaged.	
Control Wheel	CENTER
Autopilot	ENGAGE
Control Wheel	PUSH FORWARD/HOLD
With the control wheel pushed forward, the trim wheel should move toward nose-up, and red TRIM annunciator illuminates	
Control Wheel	PULL AFT/HOLD
With the control wheel pulled aft, the trim wheel should move toward nose-down, and red TRIM annunciators illuminates	
Pitch Wheel	ROLL UP/DN
The control wheel should follow pitch wheel movement.	
Turn Knob	LEFT/RIGHT
The control wheel should follow turn knob movement.	
HSI Heading Marker	SET UNDER LUBBER LINE
Flight Director	SELECT HDG MODE
Heading Marker	MOVE
The control wheel should follow heading marker movement.	
Control Wheel Disconnect Switch	PRESS
Autopilot should disengage. Press AP-YD/TRIM switch to extinguish flashing amber AP DISC annunciator.	
Autopilot	ENGAGE
Primary Controls	CHECK FREEDOM OF MOVEMENT
Mode Annunciator	TEST

Rudder Boost	ON
Prop Governor Test Switch	HOLD IN PROP GOV TEST
ITT/Torque Limits	OBSERVE
Left Power Lever	INCREASE UNTIL STABLE AT 1870 ±40 RPM
Left Propeller Lever	RETARD TO DETENT THEN FULL FORWARD
Left Power Lever	INCREASE UNTIL RUDDER MOVES
Left Power Lever	IDLE
Right Power Lever	INCREASE UNTIL STABLE AT 1870 ±40 RPM
Right Propeller Lever	RETARD TO DETENT THEN FULL FORWARD
Right Power Lever	INCREASE UNTILL RUDDER MOVES
Right Power Lever	IDLE
Prop Governor Test Switch	RELEASE

AUTOFEATHER CHECK

Auto Ignition Switches	ON
Power Levers	APPROX 500 FT-LBS TORQUE
Autofeather Switch	HOLD TO TEST
L/R AUTOFEATHER Annunciators	ILLUMINATED
Left Power Lever	RETARD
At approximately 410 ft-lbs R AUTOFEATHER and L IGNITION annunciators illuminate.	
At Approximately 260 ft-lbs L AUTOFEATHER annunciator begins flashing with prop feathering action.	
Left Power Lever	INCREASE TO REGAIN AUTOFEATHER ANNUNCIATORS
Right Power Lever	RETARD
At approximately 410 ft-lbs L AUTOFEATHER and R IGNITION annunciators illuminate.	
At Approximately 260 ft-lbs L AUTOFEATHER annunciator begins flashing with prop feathering action.	
Power Levers	RETARD BOTH
Auto Ignition Switches	OFF

HEATING/COOLING SYSTEM

Bleed Air ValvesOPEN

Select ENVIR OFF for more efficient cooling on the ground.

Cabin Temp ModeAUTO

Cabin Temperature AS REQUIRED

Vent BlowerAUTO

Aft Blower (if installed) AS REQUIRED

Cabin/Cockpit Air Control..... AS REQUIRED

- With the CABIN TEMP MODE switch in AUTO, MAN HEAT or MAN COOL, the ventilation blower operates at low speed. For increased air circulation, turn the vent blower to HIGH.
- For maximum cooling, the ventilation blower should be in the HIGH mode and the aft blower (if installed) should be selected ON.
- For maximum heating, the ventilation blower should be selected to HIGH and the aft blower should be selected OFF.

CABIN DOOR CIRCUITRY CHECK

Battery Switch ON
 Door OPEN AND LOCKED

Verify CABIN DOOR annunciator illuminated.

Cabin Door Fwd SwitchPRESS

Pressing the lower forward bayonet receiver should extinguish CABIN DOOR annunciator

Cabin Door UNLOCK/CLOSE

Verify CABIN DOOR annunciator remains illuminated.

Cabin Door CLOSED/LATCHED

Verify CABIN DOOR annunciator extinguishes.

NOTE: Observe the requirement for both bayonet and locking mechanism micro-switches to be continued before CABIN DOOR annunciator will extinguish. Otherwise consult MEL.

Cabin Door AS DESIRED.

NI-CAD BATTERY CHECK (GROUND OPERATION ONLY)

Either Generator OFF

VoltmeterENSURE 28V INDICATION

Battery Switch OFF MOMENTARILY/NOTE
 LOADMETER DECREASE

If decrease exceeds 2.5%:

Battery CONTINUE CHARGING/REPEAT
 ABOVE STEPS EVERY 90 SECS

Battery Charge Annunciator EXTINGUISHED WHEN
 LOADMETER DECREASE BELOW 2.5%

BEFORE TAKEOFF (RUNUP) – COLD WEATHER OPS

The following checks should be completed in addition to the normal checklist items during cold weather operations. Please refer to the AFM Section 4 for complete procedures to be accomplished during cold weather operation.

- Auto Ignition. **CHECK**
 Power Levers **IDLE**
 Auto Ignition **ARM**
 L/R IGNITION ON annunciators illuminated.
 Power Levers **ADVANCE ABOVE 360-460 FT- LBS**
 L/R IGNITION ON annunciators extinguished.
 Power Levers **IDLE**
 L/R IGNITION ON annunciators illuminated.
 Auto Ignition **OFF**
 L/R IGNITION ON annunciators extinguished.
- Engine Anti-Ice. **CHECK**
 Before Takeoff:
 Power Levers **1800 RPM**
 Engine Ice Vane Controls. **EXTEND**
 Verify Torque drop. Monitor ICE VANE annunciators.
 Engine Ice Vane Controls. **RETRACT**
 Verify Torque increase. Monitor ICE VANE annunciators.
 Power Levers **1800 RPM**
- Windshield Anti-Ice **CHECK**
 Windshield Anti-Ice **HIGH**
 Observe increase on left and right loadmeters and magnetic compass fluctuation.
 Windshield Anti-Ice **OFF/THEN NORMAL**
 Observe increase on left and right loadmeters and magnetic compass fluctuation.
 Windshield Anti-Ice **OFF**
- Electrothermal Propeller Deice. **CHECK**
 Automatic Prop Deice **AUTO**
 Deice Ammeter **14 TO 18 AMPS**
 Monitor for 90 seconds to ensure automatic timer operation.
 Manual Prop Deice Switch **HOLD IN MANUAL POSITION**
 Small deflection on both loadmeters indicates system operation. Deice ammeter should indicate zero amps.
 Manual Prop Deice Switch **RELEASE**
 Deice Ammeter **14 TO 18 AMPS**
 Automatic Prop Deice **OFF**

CAUTION: Do not operate propeller deice when the propellers are static.

continued on next page

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Surface Deice System	CHECK
Preflight	CLEAN/UNDAMAGED
Condition Levers	HIGH IDLE
Pneumatic Pressure	CHECK
Surface Deice Switch	SINGLE CYCLE/RELEASE
Pneumatic pressure decreases momentarily. Visually check for boot inflation then hold down. The wing boots inflate in six seconds followed by the horizontal stabilizer boots in four seconds.	
Surface Deice Switch	MANUAL/HOLD
Pneumatic pressure decreases momentarily. Visually check the boots for inflation.	
Surface Deice Switch	RELEASE
Condition Levers	LOW IDLE

WARNING: Do not cycle the boots during takeoff.

Stall Warning and Pitot Heat	CHECK
------------------------------------	-------

CAUTION: Prolonged use of stall warning and pitot heat on the ground will damage the heating elements.

Pages N-20 and N-21 have been intentionally omitted from this handout.

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ICING CONDITIONS

The Following Weather Conditions May Be Conducive to Severe In-Flight Icing:

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

Procedures for Exiting the Severe Icing Environment

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

- 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.
- Avoid abrupt and excessive maneuvering that may exacerbate control difficulties.
- Do not engage the autopilot.
- If the autopilot is engaged, hold the control wheel firmly and disengage the autopilot.
- If an unusual roll response or un-commanded roll control movement is observed, reduce the angle-of-attack.
- Do not extend flaps when holding in icing conditions. Operation with 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.
- If the flaps are extended, do not retract them until the airframe is clear of ice.
- Report these weather conditions to Air Traffic Control.

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► Intermediate stop/fast turnaround.

BEFORE STARTING ENGINES

Passenger Briefing (see N-12) COMPLETED
 Cabin Door/Cargo Door Circuitry Check COMPLETED
 ► Cabin Door/Cargo Door LOCKED
 Electric Toilet (if installed) KNIFE VALVE OPEN
 ► Load and Baggage SECURED
 ► Weight and Center-of-Gravity CHECKED
 ► Seats POSITIONED
 ► Control Locks REMOVED
 ► Seats/Rudder Pedals ADJUSTED
 Seat belts/Shoulder Harnesses FASTENED
 Oxygen System Ready PULL ON
 Oxygen System Preflight (page N-17) COMPLETED
 Fuel Panel Circuit Breakers IN
 ► Pilot's Instrument Panel CHECKED
 ► Compass Control SLAVED
 ► TYPE I Prop Sync Switch (if installed) OFF
 ► TYPE II Prop Sync Switch (if installed) ON
 Pilot's Clock CHECKED/SET
 ► Pilot's Subpanel CHECKED
 ► Mic Selector Switch NORMAL
 ► Parking Brake CONFIRM SET
 ► Engine Ice Vane Switches EXTENDED
 ► Pilot Air Control AS REQUIRED
 ► Defrost Air Control AS REQUIRED
 ► Landing Gear Control DN
 ► Landing Gear Relay Circuit Breaker IN
 ► All Other Switches OFF
 ► Avionics Panel Switches AS REQUIRED
 Radar OFF OR STANDBY
 ► Power Console CHECKED
 ► Power Levers IDLE/FRICTION SET
 ► Propeller Levers FULL FORWARD/FRICTION SET
 ► Condition Levers FUEL CUT OFF/FRICTION SET
 ► Elevator/Aileron/Rudder Trim SET
 ► Landing Gear Alternate Extension STOWED

continued on next page

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▶ Pedestal	CHECK
▶ Cabin Pressure Switch	PRESS
▶ Rudder Boost Switch	ON
▶ Elevator Trim Switch	ON
▶ Pressurization Controller	SET
▶ Copilot's Instrument Panel	CHECK
Compass Control	SLAVED
Copilot's Clock (control wheel)	CHECK/SET
▶ Copilot's Subpanel	CHECK
▶ Cabin Sign	NO SMOKE/FSB
▶ Vent Blower Switch	AUTO
▶ Bleed Air Valve Switches	ENVIR OFF
▶ Cabin Temp Mode Control	OFF
▶ Cabin/Cockpit Air Control	AS REQUIRED
▶ Copilot Air Control	AS REQUIRED
▶ Mic Selector Switch	NORMAL
▶ Oxygen Pressure	CONFIRM
▶ All Other Switches	OFF
▶ Copilot's CB Panel	CHECKED
Pilot's Static Air Source	NORMAL
Fire Extinguisher	CHECKED
▶ Fuel System Check (page N-12)	CHECKED
▶ Battery Switch	ON
▶ Fuel Quantity	CHECK MAIN/AUXILIARY
Hydraulic Fluid Sensor (if installed)	TESTED
HYD FLUID LOW Annunciator	ILLUMINATED
▶ Beacon	ON
▶ DC Volts/Loadmeters	VOLTAGE CHECKED/23V MIN
▶ Landing Gear Handle Lights	TESTED
Annunciators	TESTED
Stall Warning	TESTED
Fire Detectors/Fire Extinguishers	TESTED
▶ Before Starting Engine Checklist	COMPLETED

ENGINE STARTING (BATTERY)

Right Ignition and Engine Start ON
 Right Condition Lever LOW IDLE (12% N₁ MIN)
 ITT and N₁ MONITOR/1000°C MAX
 Right Oil Pressure CHECKED
 Right Condition Lever HIGH IDLE
 Right Ignition and Engine Start OFF (N₁ 50% MIN)
 Right Generator ON/CHARGE BATTERY/OFF
 Generator OFF when loadmeter reads approximately 0.50
 Left Ignition and Engine Start ON
 Right Generator ON (L N₁ 12% MIN)
 Left Condition Lever LOW IDLE (L N₁ 12% MIN)
 ITT and N₁ MONITOR/1000°C MAX
 Left Oil Pressure CHECKED
 Left Ignition and Engine Start OFF (N₁ 50% MIN)
 DC Volts/Loadmeters CHECKED (27.5 TO 29V)
 Left Generator RESET/THEN ON
 Right Condition Lever LOW IDLE

ENGINE STARTING-EXTERNAL POWER

Avionics Master Switch OFF
 Left/Right Generator Switches OFF
 Battery ON
 External Power OFF/CONNECTED
 External Power ON
 Voltmeter 28 TO 28.4 V
 Propeller Levers FEATHER
 Right Ignition/Engine Start ON
 R FUEL PRESS Annunciator EXTINGUISHED
 Right Condition Lever LOW IDLE (12% N₁ MIN)
 ITT/N₁ MONITOR/1000°C MAX
 Right Oil Pressure CHECKED
 Right Ignition/Engine Start OFF (N₁ 50% MIN)
 Left Ignition/Engine Start ON
 L FUEL PRESS Annunciator EXTINGUISHED
 Left Condition Lever LOW IDLE (12% N₁ MIN)
 ITT/N₁ MONITOR/1000°C MAX
 Left Oil Pressure CHECKED
 Left Ignition/Engine Start OFF (N₁ 50% MIN)
 External Power OFF/DISCONNECT/SECURED
 Left and Right Generators RESET/THEN ON
 Propeller Levers FULL FORWARD

ENGINE CLEARING

Condition Lever FUEL CUT OFF
Ignition/Engine Start STARTER ONLY/40 SEC MAX
Starter Use DO NOT EXCEED LIMITS
 Starter Limitation - 40 secs ON/60 secs OFF/40 secs ON/
 60 secs OFF/40 secs ON/30 mins OFF
Ignition/Engine Start OFF

BEFORE TAXI

▶ Inverters (page N-13).....CHECKED
▶ InvertersSELECT No. 1 OR No. 2
▶ Loadmeters PARALLELED WITHIN 10%
▶ Avionics Master..... ON
▶ External Lights AS REQUIRED
▶ Cabin Lights AS REQUIRED
▶ Bleed Air Valves OPEN OR ENVIR OFF
▶ Cabin Temp Mode AUTO
▶ Cabin Temperature AS REQUIRED
▶ InstrumentsCHECKED
Brake Deice (if installed).....CHECKED
▶ Flight Controls.....CHECKED/FREE MOVEMENT
▶ Flaps.....CHECKED/SET
▶ Brakes RELEASED/CHECKED

BEFORE TAKEOFF (RUNUP)

▶ Avionics and Radar.....CHECKED
▶ Pressurization (page N-13).....CHECKED/SET
Autopilot (page N-14)CHECKED
Elevator Trim (page N-14)CHECKED
▶ Trim Tabs CONFIRM SET
Primary and Overspeed Governors
and Rudder Boost (page N-15).....TESTED
Autofeather (if installed) (page N-15).....CHECKED
▶ Autofeather (if installed)..... ARMED
▶ Propeller Feathering (manual).....CHECKED
Vacuum and Pneumatic Pressure (page N-16)CHECKED
▶ Engine Ice Vanes.....CHECKED
▶ Systems for Icing Flight (page N-19).....CHECKED
▶ Fuel QuantityCHECKED
▶ Flight Instruments.....CHECKED
▶ Engine Instruments.....CHECKED

Propeller Levers	FULL FORWARD
Flaps	SET
Trim	SET
Brake Deice (if installed)	OFF
Left/Right Bleed Air	OPEN
Aft Blower	AS REQUIRED
Annunciators	EXTINGUISHED/CONSIDERED
Ice Protection	ON IF REQUIRED
Auto Ignition	ON (L and R IGNITION ON annunciators illuminated)
Engine Ice Vanes	CONFIRM EXTENDED (L and R ENG ANTI-ICE annunciators illuminated)
Windshield Anti-Ice	NORMAL/HI
Prop Heat	AUTO
Left and Right Fuel Vent Heat	ON
Stall Warning Heat	ON
Left and Right Pitot Heat	ON
Generator Load	CHECKED
Engine Ice Vanes	RETRACTED IF NOT REQUIRED
External Lights	AS REQUIRED
Transponder	ON
Crew Briefing	COMPLETE

Brakes.....HOLD
Power.....SET
Autofeather Annunciators (if installed).....ILLUMINATED
Brakes.....RELEASED
Landing Gear.....UP AT POSITIVE CLIMB
Flaps.....UP (V_{YSE} MIN)

Yaw Damper	ON
Climb Power	SET
ITT/Torque/N ₁ Limits	MONITOR
Propeller	1900 RPM
Propeller Synchrophaser	ON
Autofeather	OFF
Engine Instruments	MONITOR
Cabin Sign	AS REQUIRED
Cabin Pressurization	CHECKED
Aft Blower	AS REQUIRED
Lights	AS REQUIRED



CRUISE

- Cruise PowerSET/SEE TABLES & GRAPHS
- Engine Instruments MONITOR
- Auxiliary Fuel Gauges MONITOR
- Pressurization MONITOR

DESCENT

- Pressurization SET
- Cabin Altitude Selector Knob SET
- Rate Control Selector KnobAS DESIRED
- Altimeter SET
- Cabin Sign AS REQUIRED
- Windshield Anti-IceAS REQUIRED/NORMAL/HI
- Autofeather (if installed) ARMED
- Fuel Balance. CHECKED
- Power AS REQUIRED

	WEIGHT X 1,000 LBS				
	12.5	12	11	10	9
V _{YSE}	121	119	117	114	111
V _{REF} 0 FLAPS	132	130	126	122	117
V _{REF} 100% FLAPS	103	102	99	96	93

Landing — 100% Flaps

WT (LBS) X 1000 V _{REF} V _{YSE}	TEMP °C	LANDING DISTANCE (FT)			
		PRESSURE ALTITUDE (FT)			
		SL	2000	4000	6000
12.5	40	3150	3300	3550	3900
	20	2950	3150	3300	3550
	0	2750	2950	3150	3300
	-20	2550	2750	2950	3150
12	40	2950	3150	3350	3650
	20	2750	2950	3150	3350
	0	2550	2750	2950	3150
	-20	2450	2550	2750	2950
11	40	2750	2950	3150	3400
	20	2550	2750	2950	3150
	0	2350	2550	2750	2950
	-20	2250	2350	2550	2750
10	40	2600	2800	3000	3200
	20	2400	2600	2800	3000
	0	2200	2400	2600	2800
	-20	2100	2200	2400	2600
9	40	2450	2650	2850	3050
	20	2250	2450	2650	2850
	0	2050	2250	2450	2650
	-20	1950	2050	2250	2450

The data given is estimated and is based on zero wind conditions. For exact values, refer to AFM, Performance.

Wind factor for VAP is 1/2 Wind Speed Component + Gust Factor (Max. 10 Kts).

For other/associated conditions, refer to pages F-34/F-35.



BEFORE LANDING

Approach SpeedCONFIRMED
Pressurization (see F-33)CHECKED
Cabin SignNO SMOKE/FSB
Flaps APPROACH
Landing Gear DN
Lights AS REQUIRED
Prop Sync (Type I) OFF
Radar..... AS REQUIRED
Surface Deice CYCLED AS REQUIRED

NORMAL LANDING

Flaps DOWN
Airspeed NORMAL APPROACH SPEED
Yaw Damper OFF
Power Levers IDLE
Propeller Levers..... FULL FORWARD
Power LeversBETA/REVERSE AFTER TOUCHDOWN
Brakes..... AS REQUIRED

MAXIMUM REVERSE THRUST LANDING

Flaps DOWN
Airspeed NORMAL APPROACH SPEED
Yaw Damper OFF
Condition LeversHIGH IDLE
Propeller Levers.....HIGH RPM
Power LeversLIFT/REVERSE AFTER TOUCHDOWN
Brakes..... AS REQUIRED
Condition Levers LOW IDLE

BALKED LANDING

Power MAXIMUM ALLOWABLE
Airspeed100 KTS
When clear of obstacles:
Normal Climb Attitude ESTABLISHED
FlapsUP (V_{YSE} MIN)
Landing Gear UP

AFTER LANDING

Auto Ignition OFF
Engine Ice Vanes EXTENDED
Lights AS REQUIRED
Ice Protection OFF
Transponder STANDBY
Radar STANDBY OR OFF
Trim Tabs SET
Flaps UP

SHUTDOWN

Parking Brake SET
Standby Boost Pumps/Crossfeed OFF
Avionics Master OFF
Inverter OFF
Autofeather OFF
Lights OFF
Vent Blower AUTO
Cabin Temp Mode OFF
Aft Blower OFF
Radiant Heat OFF
Battery CHARGED
ITT STABILIZED AT MIN TEMP FOR ONE MINUTE
Condition Levers FUEL CUT OFF
Propeller Levers FEATHER
DC Volts/Loadmeters CHECK VOLTAGE
Overhead Panel Switches OFF
Oxygen System Ready PUSH OFF
Battery/Generator Switches OFF BELOW 15% N₁
Control Locks INSTALLED
Emergency Exit LOCKED
Electric Toilet SERVICED AS REQUIRED
Tiedowns/Chocks AS REQUIRED
External Covers AS REQUIRED
Propeller Locks AS REQUIRED
Oil Quantity Check AS REQUIRED

PASSENGER BRIEFING

The passenger briefing should include the following items:

- Smoking
- Use of Safety Belts
- Compliance with FSB/Smoking Sign
- Seat Positions for Takeoff & Landing
- Normal and Emergency Exit Operation
- Fire Extinguisher Location & Operation
- Oxygen Use (if required)
- Survival Equipment (if required)
- Overwater Equipment (if required).

NOTE: This briefing is required to be given by the Pilot in Command, crewmember, or other person designated by the Certificate Holder before takeoff. It may be delivered by means of an approved playback device but must be supplemented by printed cards appropriate to the aircraft.

FUEL SYSTEM CHECK

- Battery..... ON
L/R FUEL PRESS and L/R ICE VANE EXT annunciators illuminate.
- Firewall Shutoff Valves CLOSE
Standby Pumps ON
Listen for operation. L/R FUEL PRESS annunciators illuminate.
- Firewall Shutoff ValvesOPEN
L/R FUEL PRESS annunciators extinguish.
- Standby Pumps OFF
L/R FUEL PRESS annunciators illuminate.
- CrossfeedALTERNATELY LEFT/RIGHT
FUEL CROSSFEED Annunciators ILLUMINATE
L/R FUEL PRESSURE AnnunciatorsEXTINGUISH
Crossfeed OFF
Auxiliary Tank TransferAUTO
No Transfer LightsPRESS TO TEST

INVERTER CHECK

Inverter No. 1 ON

Verify INVERTER annunciator extinguishes. Check that inverter voltage and frequency indicates 105 to 120V and 380 to 420 HZ respectively.

Inverter No. 2 ON

Verify INVERTER annunciator extinguishes. Check that inverter voltage and frequency indicates 105 to 120V and 380 to 420 HZ respectively.

PC-17A Inverters: 115V AC +5/-7% – 400 Hz $\pm$ 1%

PC-250 Inverters: 115V AC $\pm$ 3% – 400 Hz $\pm$ 1%

PRESSURIZATION CHECK

Bleed Air Valves OPEN

Cabin Altitude Selector SET

Adjust so that CABIN ALT dial indicates an altitude 1,000 ft below field pressure altitude.

Rate Control Selector Knob SET INDEX AT 12 O'CLOCK

Cabin Pressurization Switch HOLD IN TEST

Cabin Climb Indicator CHECK FOR DESCENT INDICATION

Cabin Pressurization Switch RELEASE WHEN
PRESSURIZATION CONFIRMED

Cabin Altitude Selector Knob ADJUST

Adjust selector knob so that inner scale (ACFT ALT) indicates planned cruise altitude plus 1,000 ft. If this setting does not result in an outer scale (CABIN ALT) indication of at least 500 ft above takeoff field pressure altitude, adjust as required.

AUTOPILOT CHECK

- Control Wheel.....PULL TO MID-TRAVEL
Autopilot.....ENGAGE
Control Wheel..... PUSH FORWARD/HOLD
 With the control wheel pushed forward, the trim wheel should move toward nose-up.
Control Wheel..... PULL AFT/HOLD
 With the control wheel pushed forward, the trim wheel should move toward nose-down.
Pitch Wheel..... MOVE UP/DN
 The control wheel should follow pitch wheel movement.
Turn Knob..... LEFT/RIGHT
 The control wheel should follow turn knob movement.
HSI Heading Marker.....SET UNDER LUBBER LINE
Flight Director SELECT HDG MODE
Heading Marker MOVE
 The control wheel should follow heading marker movement.
Control Wheel Disconnect SwitchPRESS
Autopilot.....DISENGAGES
 If AP DISC light begins flashing, press AP-YD/TRIM switch to extinguish light.
Autopilot.....ENGAGE
Electric Trim..... ON
Pitch Trim Switches..... TOUCH
 Autopilot should disconnect but yaw damper remains engaged.
Primary ControlsCHECK FREEDOM OF MOVEMENT

ELEVATOR TRIM CHECK

- Elevator Trim ON
Pilot's and Copilot's Switches CHECK OPERATION
Trim Quick Disconnect CHECK
ELECT TRIM OFF Annunciator.....ILLUMINATED
Elevator Trim OFF THEN ON
ELEC TRIM OFF Annunciator..... EXTINGUISHED

WARNING: Electric trim system operation should only occur with movement of pairs of switches. Any elevator trim wheel movement while depressing only one switch indicates system malfunction. The elevator trim control switch must then be turned off and flight conducted using only manual trim wheel.

Rudder Boost	ON
Prop Governor Test Switch	HOLD IN PROP GOV TEST
ITT/Torque Limits	OBSERVE
Left Power Lever	INCREASE UNTIL STABLE AT 1830 TO 1910 RPM
Left Propeller Lever	RETARD TO DETENT THEN FULL FORWARD
Left Power Lever	INCREASE UNTIL RUDDER MOVES
Left Power Lever	IDLE
Right Power Lever	INCREASE UNTIL STABLE AT 1830 TO 1910 RPM
Right Propeller Lever	RETARD TO DETENT THEN FULL FORWARD
Right Power Lever	INCREASE UNTIL RUDDER MOVEMENT
Right Power Lever	IDLE
Prop Governor Test Switch	RELEASE

Power Levers APPROX 500 FT-LBS TORQUE
Autofeather Switch HOLD TO TEST
L/R AUTOFEATHER Annunciators ILLUMINATED
Left Power Lever RETARD
 ■ At approximately 410 ft-lbs R AUTOFEATHER annunciator
 extinguishes.
 ■ At approximately 260 ft-lbs both AUTOFEATHER annunciators
 extinguish.
Right Power Lever RETARD
 ■ At approximately 410 ft-lbs L AUTOFEATHER annunciator
 extinguishes.
 ■ At approximately 260 ft-lbs both AUTOFEATHER annunciators
 extinguish.
Power Levers RETARD BOTH

NOTE: Autofeather annunciators will cycle on and off with torque fluctuation as propeller feathers.

VACUUM AND PNEUMATIC PRESSURE CHECK

- Left Bleed Air Valve INSTR & ENVIR OFF
 - L BL AIR OFF Annunciator ILLUMINATED
 - Gyro Suction Gauge IN GREEN ARC
 - Pneumatic Pressure Gauge IN GREEN ARC
- Right Bleed Air Valve INSTR & ENVIR OFF
 - R BL AIR OFF Annunciator. ILLUMINATED
 - L/R BLEED FAIL Annunciators. ILLUMINATED
 - Gyro Suction Gauge ZERO
 - Pneumatic Pressure Gauge ZERO
- Left Bleed Air Valve OPEN
 - L BL AIR OFF Annunciator. EXTINGUISHED
 - L/R BLEED FAIL Annunciators. EXTINGUISHED
- Right Bleed Air Valve OPEN
 - R BL AIR OFF Annunciator. EXTINGUISHED

HEATING/COOLING SYSTEM

- Bleed Air Valves OPEN
 - Select ENVIR OFF for more efficient cooling on the ground.
- Cabin Temp Mode AUTO
- Cabin Temperature AS REQUIRED
- Vent Blower AUTO
- Aft Blower (if installed) AS REQUIRED
- Cabin/Cockpit Air Control AS REQUIRED

With the CABIN TEMP MODE switch in AUTO, MAN HEAT or MAN COOL, the ventilation blower operates at low speed. For increased air circulation, turn the vent blower to HIGH. For maximum cooling, the ventilation blower should be in the HIGH mode and the aft blower (if installed) should be selected ON. For maximum heating, the ventilation blower should be selected to HIGH and the aft blower should be selected OFF.

OXYGEN SYSTEM PREFLIGHT

Passenger Manual Drop Out.....PUSH OFF

Oxygen System ReadyPULL ON

Crew Diluter MasksDON/CHECK FIT/OPERATION/STOW

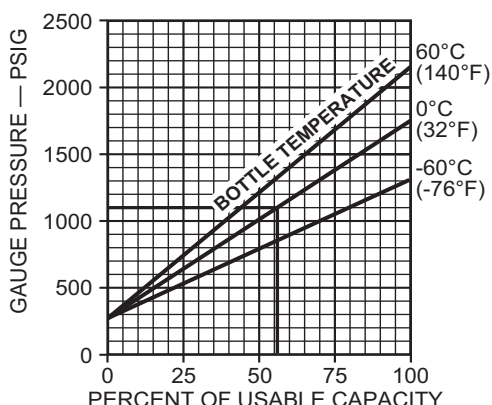
Oxygen Duration DETERMINE

- A bottle of 1850 PSIG at 15°C is fully charged (100% capacity).
Read duration directly from the table.

Oxygen Pressure Gauge..... CHECK

Usable Oxygen Capacity..... DETERMINE FROM GRAPH

- Compute oxygen duration in minutes from the table by multiplying the full bottle duration by the percent of usable capacity.
- Pilot and copilot are each counted as two people with diluter demand masks set at 100% or NORMAL mode.



Stated Cylinder Size (cu ft)	**Number of People Using								
	1	2	3	4	5	6	7	8	9
	Duration in Minutes								
22	144	72	48	36	28	24	20	18	16
50	317	158	105	79	63	52	45	39	35
77	488	244	162	122	97	81	69	61	54
115	732	366	244	183	146	122	104	91	81

Stated Cylinder Size (cu ft)	**Number of People Using							
	10	11	12	13	14	15	**16	**17
	Duration in Minutes							
22	14	13	12	11	10	*	*	*
50	31	28	26	24	22	21	19	18
77	48	44	40	37	34	32	30	28
115	73	66	61	56	52	48	45	43

*Will not meet oxygen requirements.

**For normal oxygen duration computations, count each diluter-demand crew mask in use as 2 (e.g., with a crew of 2 and 4 passengers, enter the table at 8 people using).

CABIN DOOR CIRCUITRY (B200)

- Battery..... ON
- Door..... OPEN/MECHANISM LOCKED
- With door open and the mechanism locked, verify the DOOR UNLOCKED annunciator illuminates.
- Door..... CLOSED AND LATCHED/NOT LOCKED
- With the door closed and latched but not locked, verify the DOOR UNLOCKED annunciator remains illuminated.
- Door..... CLOSED AND LOCKED
- With the door closed and locked, the DOOR UNLOCKED annunciator should extinguish.
- Battery..... OFF
- Ensure that the door is closed and locked using the following:
- Ensure that the door handle will not move out of the locked position without depressing the release button.
 - Lift the top doorstep and ensure that the red safety arm is around the plunger.
 - Ensure that the green index mark on each of the four locking bolts align with the black pointer in the observation port.

NI-CAD BATTERY CHECK (GROUND OPERATION ONLY)

- Either Generator..... OFF
- Voltmeter..... ENSURE 28V INDICATION
- Battery Switch OFF MOMENTARILY/NOTE
LOADMETER DECREASE
- If decrease exceeds 2.5%
- Battery..... CONTINUE CHARGING/REPEAT
ABOVE STEPS EVERY 90 SECS
- Battery Charge Annunciator EXTINGUISHED WHEN
LOADMETER DECREASE BELOW 2.5%

BEFORE TAKEOFF (RUNUP) – COLD WEATHER OPS

The following checks should be completed in addition to the normal check-list items during cold weather operations. Please refer to AFM Section 4 for complete procedures to be accomplished during cold weather operation.

- Auto Ignition CHECK
 Power Levers IDLE
 Auto Ignition ARM
 L/R IGNITION ON annunciators illuminated.
 Power Levers ADVANCE ABOVE 360 – 460 FT-LBS
 L/R IGNITION ON annunciators extinguished.
 Power Levers IDLE
 L/R IGNITION ON annunciators illuminated.
 Auto Ignition OFF
 L/R IGNITION ON annunciators extinguished.
- Engine Anti-Ice CHECK
 Engine Ice Vanes RETRACT
 L/R ICE VANE EXT annunciators extinguished.
 Engine Ice Vanes EXTEND
 L/R ICE VANE EXT annunciators illuminated.
- Windshield Anti-Ice CHECK
 Windshield Anti-Ice HIGH
 Observe increase on left and right loadmeters.
 Windshield Anti-Ice OFF/THEN NORMAL
 Observe increase on left and right loadmeters.
 Windshield Anti-Ice OFF
- Electrothermal Propeller Deice CHECK
 Automatic Prop Deice AUTO
 Deice Ammeter CHECK
 Monitor for 90 seconds to ensure automatic timer operation.
 Manual Prop Deice Switch HOLD IN MANUAL POSITION
 Small deflection on both loadmeters indicates system operation.
 Deice ammeter should indicate zero amps.
 Manual Prop Deice Switch RELEASE
 Deice Ammeter CHECK
 Automatic Prop Deice OFF

CAUTION: Do not operate propeller deice when the propellers are static.

- Surface Deice System CHECK
 Condition Levers HIGH IDLE
 Pneumatic Pressure CHECK
 Surface Deice Switch SINGLE/RELEASE
 Pneumatic pressure decreases momentarily. Visually check for boot inflation then hold down. The wing boots inflate in six seconds followed by the horizontal stabilizer boots in four seconds.

continued on next page

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- Surface Deice Switch. MANUAL/HOLD
Pneumatic pressure decreases momentarily. Visually check the boots for inflation.
- Surface Deice Switch. RELEASE
- Condition Levers LOW IDLE
- WARNING:** Do not cycle the boots during takeoff.
- Stall Warning and Pitot Heat. CHECK
- CAUTION:** Prolonged use of stall warning and pitot heat on the ground will damage the heating elements.

LOCAL TRAINING

AFTER LANDING/TAXIBACK

Auto-Ignition OFF
 Ice Protection AS REQUIRED
 Flaps AS REQUIRED
 Trims SET

BEFORE TAKEOFF

Crew Briefing COMPLETED
 Radios SET
 Altitude Alerter SET
 Flight Director SET
 Flaps CHECKED
 Trim CHECKED
 Final Items:
 Headings CHECKED
 Auto-Ignition ARMED
 Autofeather ARMED
 Ice Protection AS REQUIRED

TAKEOFF

Ignition Lights OFF
 Autofeather Lights ON
 Power SET
 Engine Instruments CHECKED

CLIMB

Gear UP
 Flaps UP
 Landing/Taxi Lights OFF
 Yaw Damper ON
 Power SET

LOCAL TRAINING

APPROACH

- Crew Briefing COMPLETED
- Altimeters SET/CHECK
- Autofeather. ARMED
- Flaps APPROACH

BEFORE LANDING

- Landing GearDOWN/3 GREEN
- Landing/Taxi Lights ON
- Final Items:
 - Flaps AS REQUIRED
 - Yaw Damper OFF
 - Prop FORWARD AT TOUCHDOWN

ICING CONDITIONS

The Following Weather Conditions May Be Conducive to Severe In-Flight Icing:

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

Procedures for Exiting the Severe Icing Environment

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

- 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.
- Avoid abrupt and excessive maneuvering that may exacerbate control difficulties.
- Do not engage the autopilot.
- If the autopilot is engaged, hold the control wheel firmly and disengage the autopilot.
- If an unusual roll response or un-commanded roll control movement is observed, reduce the angle-of-attack.
- Do not extend flaps when holding in icing conditions. Operation with 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.
- If the flaps are extended, do not retract them until the airframe is clear of ice.
- Report these weather conditions to Air Traffic Control.

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► Intermediate stop/fast turnaround.

BEFORE STARTING ENGINES

Passenger Briefing (see N-12) COMPLETE
 Cabin Door/Cargo Door Circuitry Check COMPLETE
 ► Cabin Door/Cargo Door LOCKED
 Electric Toilet (if installed) KNIFE VALVE OPEN
 ► Load and Baggage CONFIRM SECURED
 ► Weight and Center-of-Gravity CHECKED
 ► Seats POSITIONED
 ► Emergency Exit CONFIRM SECURE AND UNLOCKED
 ► Control Locks REMOVED
 ► Seats/Rudder Pedals ADJUSTED
 Seat belts/Shoulder Harnesses FASTENED
 Oxygen System Ready PULL ON
 Oxygen System Preflight (page N-17) COMPLETED
 Fuel Panel Circuit Breakers IN
 ► Pilot's Instrument Panel CHECK
 ► Compass Control SLAVED
 ► EFIS Aux Power (if installed) CHECKED
 ► Test Switch HOLD IN TEST FOR 5 SECONDS
 ► Test Switch RELEASE TO OFF
 ► Prop Sync Switch OFF
 Pilot's Clock CHECK/SET
 ► Pilot's Subpanel CHECK
 ► Mic Selector Switch NORMAL
 ► Parking Brake CONFIRM SET
 ► Pilot Air Control AS REQUIRED
 ► Defrost Air Control AS REQUIRED
 ► Landing Gear Control DN
 ► Landing Gear Relay Circuit Breaker IN
 ► All Other Switches OFF
 ► Avionics Panel Switches AS REQUIRED
 Radar OFF OR STANDBY
 ► Power Console CHECKED
 ► Power Levers IDLE/FRICTION SET
 ► Propeller Levers FULL FORWARD/FRICTION SET
 ► Condition Levers FUEL CUT OFF/FRICTION SET

continued on next page

BEFORE STARTING ENGINES — CONTINUED

- ✦ Elevator/Aileron/Rudder Trim SET
- ✦ Landing Gear Alternate Extension STOWED
- ✦ Oxygen System Ready CONFIRM ON
- ✦ Pedestal CHECK
 - ✦ EFIS Power Switches (if installed) OFF
 - ✦ EFIS Reversionary Switches (if installed) NORMAL
 - ✦ Cabin Pressure Switch PRESS
 - ✦ Rudder Boost Switch ON
 - ✦ Elevator Trim Switch ON
 - ✦ Pressurization Controller SET
- ✦ Copilot's Instrument Panel CHECK
- Compass Control SLAVED
- Copilot's Clock (control wheel) CHECK/SET
- ✦ Copilot's Subpanel CHECK
 - ✦ Cabin Sign NO SMOKE/FSB
 - ✦ Vent Blower Switch AUTO
 - ✦ Bleed Air Valve Switches ENVIR OFF
 - ✦ Cabin Temp Mode Control OFF
 - ✦ Cabin/Cockpit Air Control AS REQUIRED
 - ✦ Copilot Air Control AS REQUIRED
 - ✦ Mic Selector Switch NORMAL
 - ✦ Oxygen Pressure CONFIRM
 - ✦ All Other Switches OFF
- ✦ Copilot's CB Panel CHECK
- Pilot's Static Air Source NORMAL
- Fire Extinguisher CHECK
- Battery ON
(OFF FOR FUEL SYSTEM CHECK)
- Fuel System Check (page N-13) CHECKED
- ✦ Fuel Quantity CHECK MAIN/AUXILIARY
- Landing Gear Handle Lights PRESS TO TEST
- Hydraulic Fluid Sensor (if installed) PRESS TO TEST
- HYD FLUID LOW Annunciator ILLUMINATED (4 seconds)
- ✦ Beacon ON
- ✦ DC Volts/Loadmeters VOLTAGE CHECKED/23V MIN
- Annunciators TEST
- Stall Warning TEST
- Fire Detectors/Fire Extinguishers TEST
- ✦ Before Starting Engine Checklist COMPLETE

ENGINE STARTING (BATTERY)

Right Ignition and Engine Start ON
 IGNITION light — ILLUMINATED
 FUEL PRESS light — EXTINGUISHED

Right Condition Lever (12% N₁ MIN) LOW IDLE

ITT and N₁ MONITOR/1000°C MAX

Right Oil Pressure CHECK

Right Ignition and Starter OFF (N₁ 50% MIN)

Right Condition Lever HIGH IDLE

Right Generator ON

Battery CHARGE
 (until loadmeter reads approximately 50% or less.)

Left Ignition and Engine Start. ON
 IGNITION light — ILLUMINATED
 FUEL PRESS light — EXTINGUISHED

Left Condition Lever LOW IDLE (N₁ 12% MIN)

ITT and N₁ MONITOR/1000°C MAX

Left Oil Pressure CHECK

Left Ignition and Engine Start. OFF (N₁ 50% MIN)

DC Volts/Loadmeters CHECK (27.5 TO 29V)

NOTE: C.L. should be checked prior to resetting second generator.

Left Generator RESET/THEN ON

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 20V IS IN THE AIRPLANE. If the battery voltage is less than 20V, the battery must be recharged, or replaced with a battery indicating at least 20V, before connecting external power.

Avionics Master Switch	OFF
Left/Right Generator Switches	OFF
Battery	ON
External Power	TURN OFF, THEN CONNECT TO AIRPLANE
External Power	TURN ON
Voltmeter	.28 TO 28.4V
Propeller Levers	FEATHER
Left Ignition/Engine Start	ON IGNITION light — ILLUMINATED FUEL PRESS light — EXTINGUISHED
Left Condition Lever	LOW IDLE (12% N ₁ MIN)
ITT/N ₁	MONITOR/1000°C MAX
Left Oil Pressure	CHECK
Left Ignition/Engine Start	OFF (N ₁ 50% MIN)

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- Right Ignition/Engine Start ON
 - IGNITION light — ILLUMINATED
 - FUEL PRESS light — EXTINGUISHED
- Right Condition Lever LOW IDLE (12% N₁ MIN)
- ITT/N₁ MONITOR/1000°C MAX
- Right Oil Pressure CHECKED
- Right Ignition/Engine Start OFF (N₁ 50% MIN)
- External Power OFF/DISCONNECT/SECURE DOOR
- Left and Right Generators RESET/THEN ON
- Propeller Levers FULL FORWARD

HOT START OR HUNG START

If rate of ITT increase predicts an over-temperature occurrence, or if N₁ ceases to accelerate in a normal manner:

- Condition Lever FUEL CUTOFF
- Ignition and Engine Start STARTER ONLY
 - (for remainder of starter time limit)
- Ignition and Engine Start OFF
- Do not attempt another start until the cause of the hot start or hung start has been corrected.

NO LIGHT START

If no ITT rise is observed within 10 seconds after moving the Condition Lever to LOW IDLE:

- Condition Lever FUEL CUTOFF
- Ignition and Engine Start OFF
- Follow ENGINE CLEARING procedure.

ENGINE CLEARING

Use the following procedure to remove internally trapped fuel and vapor, or if there is evidence of a fire within the engine.

- Condition Lever FUEL CUT OFF
- Starter COOL FOR 1 MINUTE AFTER
 - PREVIOUS START ATTEMPT
- Ignition/Engine Start STARTER ONLY
 - (for a maximum of 40 seconds)
- Ignition/Engine Start OFF
- Starter COOL FOR 1 MINUTE AFTER
 - PREVIOUS START ATTEMPT

BEFORE TAXI

- ▶ Inverters (page N-13) CHECK BOTH
- ▶ Inverter Switch SELECT No. 1 OR No. 2
- ▶ Loadmeters PARALLELED WITHIN 10%
- ▶ Avionics Master ON
- ▶ EFIS Power ON
- ▶ EFIS Aux Power ON
- ▶ External Lights AS REQUIRED
- ▶ Cabin Lights AS REQUIRED
- ▶ Cabin Sign NO SMK & FSB
- ▶ Vent Blower AS REQUIRED
- ▶ Cabin Temp Control AS REQUIRED
- ▶ Cabin Temp Mode AUTO
- ▶ Bleed Air Valves OPEN OR ENVIR OFF
- ▶ Aft Blower (if installed) AS REQUIRED
- ▶ Instruments CHECK
- Brake Deice (if installed) CHECK
- ▶ Flight Controls CHECK/FREE MOVEMENT
- ▶ Flaps CHECK/SET
- ▶ Brakes RELEASE/CHECK

BEFORE TAKEOFF (RUNUP)

- ▶ Avionics and Radar CHECK
- ▶ EFIS (if installed) TEST
- ▶ Pressurization (page N-14) CHECK/SET
- Autopilot CHECK
- Elevator Trim (page N-15) CHECK
- ▶ Trim Tabs CONFIRM SET
- Primary and Overspeed Governors and
- Rudder Boost (page N-15) CHECK
- Autofeather (if installed) (page N-16) CHECK
- ▶ Autofeather Switch (if installed) ARM
- ▶ Propeller Feathering (manual) CHECK
- Vacuum and Pneumatic Pressure (page N-16) CHECK
- ▶ Engine Ice Vanes (see N-19) CHECK
- ▶ Systems for Icing Flight (see N-19) CHECK
- ▶ Fuel Quantity, Flight & Engine Instruments CHECK
- ▶ Crew Briefing COMPLETE

BEFORE TAKEOFF (FINAL ITEMS)

Auto Ignition (if required)	ARM
(L and R IGNITION ON — Illuminated if ARMED)	
Engine Anti-Ice	AS REQUIRED
(L and R ENG ANTI-ICE — Illuminated if ON)	
Autofeather (if installed)	CONFIRM ARM
Prop Sync	AS REQUIRED
Exterior Lights	AS REQUIRED
Ice Protection	AS REQUIRED
Windshield Anti-Ice	NORMAL/HI
Prop Heat	AUTO
Left and Right Fuel Vent Heat	ON
Stall Warning Heat	ON
Left and Right Pitot Heat	ON
Transponder	ALT
Prop Levers	CONFIRM FULL FORWARD
Trim	3 CONFIRM SET
Flaps	CONFIRM SET
Interior Lights	AS REQUIRED
Left/Right Bleed Air	OPEN
Aft Blower (if installed)	AS REQUIRED
Electric Heat (if installed)	OFF
Generator Load	CHECK
Battery Ammeter	
(BB-1632 and sub; BL-141 and sub)	0 TO 10 AMPS
Annunciators	EXTINGUISHED/CONSIDERED

TAKEOFF

WARNING: Do not cycle boots during takeoff.

Brakes	HOLD
Power	SET
Autofeather Annunciators (if installed)	ILLUMINATED
Brakes	RELEASE
Landing Gear (when positive climb established)	UP
Flaps (at 121 Kts minimum)	UP

CLIMB

Yaw Damper	ON
Climb Power	SET
Propeller	1,900 RPM
Propeller Synchrophaser	ON
Windshield Heat	NORMAL
Engine Instruments	MONITOR
Cabin Sign	AS REQUIRED
Cabin Pressurization	CHECK
Aft Blower	OFF
Exterior Lights	AS REQUIRED

CRUISE

Cruise PowerSET/SEE TABLES & GRAPHS
 Engine Instruments MONITOR
 Auxiliary Fuel Gauges MONITOR
 Pressurization MONITOR
 Autofeather (if installed) OFF
 Ice VanesAS DESIRED

DESCENT

Pressurization (page F-35) SET
 Cabin Altitude Selector Knob SET
 Rate Control Selector KnobAS DESIRED
 Altimeter SET
 Cabin Sign AS REQUIRED
 Windshield Anti-Ice AS REQUIRED
 Fuel Balance CHECK
 Power AS REQUIRED
 Seats/Tables SECURE

BEFORE LANDING

Approach Speed CONFIRM
 Pressurization CHECK
 Cabin SignNO SMOKE/FSB
 Autofeather (if installed)ARM
 Flaps APPROACH
 Landing Gear DN
 Lights AS REQUIRED
 Radar AS REQUIRED
 Surface DeiceCYCLE AS REQUIRED

NORMAL LANDING

Flaps DOWN
 Airspeed NORMAL APPROACH SPEED
 Yaw Damper OFF
 Power Levers IDLE
 Propeller Levers FULL FORWARD
 After Touchdown:
 Power Levers GND FINE/REVERSE
 Brakes AS REQUIRED

	WEIGHT X 1,000 LBS				
	12.5	12	11	10	9
V _{YSE}	121	119	117	114	111
V _{REF} 0 FLAPS	132	130	126	122	117
V _{REF} 100% FLAPS	103	102	99	96	93

Landing — 100% Flaps

WT (LBS) X 1000 V _{REF} V _{YSE}	TEMP °C	LANDING DISTANCE (FT)			
		PRESSURE ALTITUDE (FT)			
		SL	2000	4000	6000
12.5	40	3150	3300	3550	3900
	20	2950	3150	3300	3550
	0	2750	2950	3150	3300
	-20	2550	2750	2950	3150
12	40	2950	3150	3350	3650
	20	2750	2950	3150	3350
	0	2550	2750	2950	3150
	-20	2450	2550	2750	2950
11	40	2750	2950	3150	3400
	20	2550	2750	2950	3150
	0	2350	2550	2750	2950
	-20	2250	2350	2550	2750
10	40	2600	2800	3000	3200
	20	2400	2600	2800	3000
	0	2200	2400	2600	2800
	-20	2100	2200	2400	2600
9	40	2450	2650	2850	3050
	20	2250	2450	2650	2850
	0	2050	2250	2450	2650
	-20	1950	2050	2250	2450

The data given is estimated and is based on zero wind conditions. For exact values, refer to AFM, Performance.

Wind factor for VAP is 1/2 Wind Speed Component + Gust Factor (Max. 10 Kts).

For other/associated conditions, refer to pages F-17/F-18.

MAXIMUM REVERSE THRUST LANDING

Flaps DOWN
 Airspeed NORMAL APPROACH SPEED
 Yaw Damper OFF
 Condition Levers HIGH IDLE
 Power Levers IDLE
 Propeller Levers FULL FORWARD
 Power Levers LIFT THROUGH GND FINE AND LIFT TO REVERSE
 Brakes AS REQUIRED
 Condition Levers LOW IDLE

CAUTION: If possible, propellers should be moved out of reverse at approximately 40 Kts 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

Power MAXIMUM ALLOWABLE
 Airspeed 100 KTS
 Flaps (when clear of obstacles) UP
 Landing Gear (with a positive rate-of-climb) UP
 Airspeed ESTABLISH NORMAL CLIMB

AFTER LANDING

Auto Ignition OFF
 Engine Ice Vanes EXTEND
 Lights AS REQUIRED
 Ice Protection OFF
 Transponder STANDBY
 Radar STANDBY OR OFF
 Trim Tabs SET
 Flaps UP
 Pressurization Differential VERIFY 0
 Bleed Air Valves ENVIR. OFF

SHUTDOWN

Parking Brake.....	SET
Electric Heat.....	OFF
Standby Boost Pumps/Crossfeed.....	OFF
EFIS Power (if installed).....	OFF
EFIS Aux Power (if installed).....	OFF
Avionics Master.....	OFF
Oxygen System Ready.....	PUSH OFF
Inverter.....	OFF
Autofeather.....	OFF
Lights.....	OFF
Vent Blower.....	AUTO
Cabin Temp Mode.....	OFF
Aft Blower.....	OFF
Battery.....	CHARGED
ITT.....	STABILIZED AT MIN TEMP FOR ONE MINUTE
Condition Levers.....	FUEL CUT OFF
Propeller Levers.....	FEATHER
DC Volts/Loadmeters.....	CHECK VOLTAGE
Overhead Panel Switches.....	OFF
Battery/Generator Switches.....	OFF BELOW 15% N ₁
Control Locks.....	INSTALL
Emergency Exit.....	LOCKED
Electric Toilet.....	SERVICED AS REQUIRED
Tiedowns/Chocks.....	AS REQUIRED
External Covers.....	AS REQUIRED
Propeller Locks.....	AS REQUIRED
Oil Quantity Check.....	AS REQUIRED

PASSENGER BRIEFING

The passenger briefing should include the following items:

- Smoking
- Use of Safety Belts
- Compliance with FSB/Smoking Sign
- Seat Positions for Takeoff & Landing
- Normal and Emergency Exit Operation
- Fire Extinguisher Location & Operation
- Oxygen Use (if required)
- Survival Equipment (if required)
- Overwater Equipment (if required).

NOTE: This briefing is required to be given by the Pilot in Command, crewmember, or other person designated by the Certificate Holder before takeoff. It may be delivered by means of an approved playback device but must be supplemented by printed cards appropriate to the aircraft.

FUEL SYSTEM CHECK

Firewall Shutoff Valves CLOSE

Battery ON

Standby Pumps ON

- Listen for standby pump operation. The L/R FUEL PRESS annunciators illuminate.

Firewall Shutoff Valves OPEN

- L/R FUEL PRESS annunciators extinguish.

Standby Pumps OFF

- L/R FUEL PRESS annunciators illuminate.

Crossfeed ALTERNATELY LEFT/RIGHT

- CROSSFEED annunciator illuminates and L/R FUEL PRESS annunciators extinguish.

Crossfeed OFF

Auxiliary Transfer Switches AUTO

No Transfer Lights (if extinguished) PRESS TO TEST

YAW DAMP

Yaw Damp ON

(YAW) — annunciator ILLUMINATED

Rudder Pedals CHECK FOR ADDED RESISTANCE

AP/Trim Disconnect DEPRESS TO FIRST LEVEL

(YAW DIS) annunciator — ILLUMINATED,
FLASHING THEN EXTINGUISHED

Repeat steps above for copilot's side.

INVERTER CHECK

Inverter No. 1 ON

- Verify INVERTER annunciator extinguishes. Check that inverter voltage and frequency indicates 105 to 120V and 380 to 420 HZ respectively.

Inverter No. 2 ON

- Verify INVERTER annunciator extinguishes. Check that inverter voltage and frequency indicates 105 to 120V and 380 to 420 HZ respectively.



PRESSURIZATION CHECK

- Bleed Air ValvesOPEN
Pressurization Controller SET
- Adjust so that CABIN ALT dial indicates an altitude 1,000 ft below field pressure altitude.
 - Set Rate Knob to 12 O’Clock Position
- Cabin Pressure Switch HOLD IN TEST POSITION
Cabin Climb Indicator CHECK FOR DESCENT INDICATION
Cabin Pressure SwitchRELEASE TO PRESS POSITION
Cabin Altitude Selector Knob ADJUST
- ACFT ALT = Cruise Altitude + 1000 Ft
OR
 - CABIN ALT = Field Pressure Altitude + 500 Ft

AUTOPILOT CHECK

- Control Wheel.....PULL TO MID-TRAVEL
Autopilot..... ENGAGE
Control Wheel..... PUSH FORWARD/HOLD
With the control wheel pushed forward, the trim wheel should move toward nose-up.
- Control Wheel..... PULL AFT/HOLD
With the control wheel pushed forward, the trim wheel should move toward nose-down.
- Pitch Wheel..... MOVE UP/DN
The control wheel should follow pitch wheel movement.
- Turn Knob..... LEFT/RIGHT
The control wheel should follow turn knob movement.
- HSI Heading Marker.....SET UNDER LUBBER LINE
Flight Director SELECT HDG MODE
Heading Marker MOVE
The control wheel should follow heading marker movement.
- Control Wheel Disconnect SwitchPRESS
Autopilot.....DISENGAGES
If AP DISC light begins flashing, press AP-YD/TRIM switch to extinguish light.
- Autopilot..... ENGAGE
Electric Trim..... ON
Pitch Trim Switches..... TOUCH
Autopilot should disconnect but yaw damper remains engaged.
- Primary ControlsCHECK FREEDOM OF MOVEMENT

ELECTRIC ELEVATOR TRIM

Electric Elevator Trim ON
Pilot's and Copilot's Trim Switches CHECK OPERATION
Move each dual-element switch fore and aft - verify trim is inop.
Move both dual-element switches fore and aft - verify trim operates nose down and nose up.
Ensure pilot's trim switch overrides copilot's trim switch.
A/P Trim Disconnect PRESS TO 2ND LEVEL
(ELEC TRIM OFF) — ILLUMINATED
Electric Elevator Trim OFF, THEN ON
(ELEC TRIM OFF) — EXTINGUISHED

WARNING

Operation of the electric elevator trim system should occur only when both elements of the dual-element switch are activated. Any movement of the elevator trim wheel while activating only one element denotes a system malfunction. The electric elevator trim must then be turned off and the flight conducted only by manual operation of the elevator trim control.

PRIMARY GOVERNORS, OVERSPEED GOVERNORS, AND RUDDER BOOST

1. Rudder Boost ON
2. Prop Governor Test Switch HOLD TO TEST
3. Power Levers (Individually) INCREASE UNTIL PROP
IS STABILIZED AT 1830 TO 1910 RPM
4. Prop Lever RETARD TO DETENT, THEN FULL FORWARD
(to check primary governor)
5. Power Lever CONTINUE TO INCREASE UNTIL
RUDDER MOVEMENT IS NOTED
(Observe ITT and Torque Limits)
6. Power Lever IDLE
7. Repeat Steps 3 thru 6 on opposite engine.
8. Prop Governor Test Switch RELEASE

AUTOFEATHER CHECK

Power Levers APPROX 500 FT-LBS TORQUE
Autofeather Switch HOLD TO TEST
(L AUTOFEATHER & R AUTOFEATHER) — ILLUMINATED
Power Levers RETARD INDIVIDUALLY, THEN
ADVANCE BACK TO 500 FT-LB
At Approximately 410 ft-lbs OPPOSITE ANNUNCIATOR
EXTINGUISHED
At Approximately 260 ft-lbs BOTH ANNUNCIATORS EXTINGUISHED
(prop starts to feather)
Power Levers IDLE
(L AUTOFEATHER & R AUTOFEATHER) — EXTINGUISHED
(neither prop feathers)
Autofeather Switch RELEASE

NOTE: Autofeather annunciators will cycle on and off with torque fluctuation as propeller feathers.

VACUUM AND PNEUMATIC PRESSURE CHECK

Left Bleed Air Valve	INSTR & ENVIR OFF
L BL AIR OFF Annunciator	ILLUMINATED
Gyro Suction Gauge	IN GREEN ARC
Pneumatic Pressure Gauge	IN GREEN ARC
Right Bleed Air Valve	INSTR & ENVIR OFF
R BL AIR OFF Annunciator	ILLUMINATED
L/R BLEED FAIL Annunciators	ILLUMINATED
Gyro Suction Gauge	ZERO
Pneumatic Pressure Gauge	ZERO
Left Bleed Air Valve	OPEN
L BL AIR OFF Annunciator	EXTINGUISHED
L/R BLEED FAIL Annunciators	EXTINGUISHED

HEATING/COOLING SYSTEM

Bleed Air Valves OPEN
 Select ENVIR OFF for more efficient cooling on the ground.

Cabin Temp Mode	AUTO
Cabin Temperature	AS REQUIRED
Vent Blower	AUTO
Aft Blower (if installed)	AS REQUIRED
Cabin/Cockpit Air Control	AS REQUIRED

With the CABIN TEMP MODE switch in AUTO, MAN HEAT or MAN COOL, the ventilation blower operates at low speed. For increased air circulation, turn the vent blower to HIGH. For maximum cooling, the ventilation blower should be in the HIGH mode and the aft blower (if installed) should be selected ON. For maximum heating, the ventilation blower should be selected to HIGH and the aft blower should be selected OFF.

OXYGEN SYSTEM CHECK

Passenger Manual Drop Out.....PUSH OFF

Oxygen System ReadyPULL ON

Crew Diluter MasksDON/CHECK FIT/OPERATION/STOW

Oxygen Duration DETERMINE

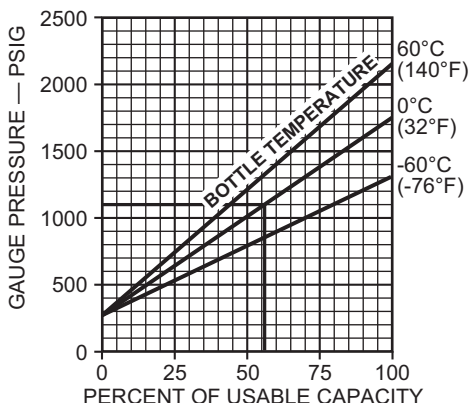
■ A bottle of 1850 PSIG at 15°C is fully charged (100% capacity). Read duration directly from the table.

Oxygen Pressure Gauge CHECK

Usable Oxygen Capacity..... DETERMINE FROM GRAPH

■ Compute oxygen duration in minutes from the table by multiplying the full bottle duration by the percent of usable capacity.

■ Pilot and copilot are each counted as two people with diluter demand masks set at 100% or NORMAL mode.



Stated Cylinder Size (cu ft)	**Number of People Using								
	1	2	3	4	5	6	7	8	9
22	144	72	48	36	28	24	20	18	16
50	317	158	105	79	63	52	45	39	35
77	488	244	162	122	97	81	69	61	54
115	732	366	244	183	146	122	104	91	81

Stated Cylinder Size (cu ft)	**Number of People Using							
	10	11	12	13	14	15	**16	**17
22	14	13	12	11	10	*	*	*
50	31	28	26	24	22	21	19	18
77	48	44	40	37	34	32	30	28
115	73	66	61	56	52	48	45	43

*Will not meet oxygen requirements.

**For normal oxygen duration computations, count each diluter-demand crew mask in use as 2 (e.g., with a crew of 2 and 4 passengers, enter the table at 8 people using).

CABIN DOOR CIRCUITRY (B200)

- Battery..... ON
- Door..... OPEN/MECHANISM LOCKED
- With door open and the mechanism locked, verify the DOOR UNLOCKED annunciator illuminates.
- Door..... CLOSED AND LATCHED/NOT LOCKED
- With the door closed and latched but not locked, verify the DOOR UNLOCKED annunciator remains illuminated.
- Door..... CLOSED AND LOCKED
- With the door closed and locked, the DOOR UNLOCKED annunciator should extinguish.
- Battery..... OFF

- Ensure that the door is closed and locked using the following:
- Ensure that the door handle will not move out of the locked position without depressing the release button.
 - Lift the top doorstep and ensure that the red safety arm is around the plunger.
 - Ensure that the green index mark on each of the four locking bolts align with the black pointer in the observation port.

NI-CAD BATTERY CHECK (GROUND OPERATION ONLY)

- Either Generator..... OFF
- Voltmeter..... ENSURE 28V INDICATION
- Battery Switch..... OFF MOMENTARILY/NOTE
LOADMETER DECREASE
- If decrease exceeds 2.5%
- Battery..... CONTINUE CHARGING/REPEAT
ABOVE STEPS EVERY 90 SECS
- Battery Charge Annunciator..... EXTINGUISHED WHEN
LOADMETER DECREASE BELOW 2.5%

BEFORE TAKEOFF (RUNUP) – COLD WEATHER OPS

The following checks should be completed in addition to the normal checklist items during cold weather operations. Please refer to the AFM Section 4 for complete procedures to be accomplished during cold weather operation.

AUTO IGNITION

Power Levers IDLE

Auto Ignition ARM

L/R IGNITION ON annunciators ILLUMINATED.

Power Levers APPROXIMATELY 500 FT. LBS

L/R IGNITION ON annunciators EXTINGUISHED.

Power Levers IDLE

L/R IGNITION ON annunciators ILLUMINATED.

Auto Ignition OFF

L/R IGNITION ON annunciators EXTINGUISHED.

ENGINE ANTI-ICE

Engine Anti-Ice Actuators STANDBY

Engine Anti-Ice OFF

L/R ENGINE ANTI-ICE annunciators EXTINGUISHED.

Engine Anti-Ice Actuators MAIN

Engine Anti-Ice ON

L/R ENGINE ANTI-ICE annunciators ILLUMINATED.

WINDSHIELD ANTI-ICE

Windshield Anti-Ice HIGH

Observe increase on left and right loadmeters.

Windshield Anti-Ice OFF/THEN NORMAL

Observe increase on left and right loadmeters.

Windshield Anti-Ice OFF

ELECTROTHERMAL PROPELLER DEICE

Automatic Prop Deice AUTO

Deice Ammeter 18 TO 24 AMPS

Monitor for 90 seconds to ensure automatic timer operation.

Manual Prop Deice Switch HOLD IN MANUAL POSITION

Small deflection on both loadmeters indicates system operation.

Deice ammeter should indicate zero amps.

Manual Prop Deice Switch RELEASE

Deice Ammeter 18 TO 24 AMPS

Automatic Prop Deice OFF

CAUTION: Do not operate propeller deice when the propellers are static.

continued on next page



continued from previous page

SURFACE DEICE SYSTEM

- Condition LeversHIGH IDLE
- Pneumatic Pressure CHECK
- Surface Deice Switch SINGLE/RELEASE
- Pneumatic pressure decreases momentarily. Visually check for boot inflation then hold down. The wing boots inflate in six seconds followed by the horizontal stabilizer boots in four seconds.
- Surface Deice Switch MANUAL AND HOLD
- Pneumatic pressure decreases momentarily. Visually check the boots for inflation.
- Surface Deice Switch RELEASE
- Condition Levers LOW IDLE

WARNING: Do not cycle the boots during takeoff.

STALL WARNING AND PITOT HEAT CHECK

CAUTION: Prolonged use of stall warning and pitot heat on the ground will damage the heating elements.

LOCAL TRAINING**AFTER LANDING/TAXIBACK**

Auto-Ignition OFF
Ice Protection AS REQUIRED
Flaps AS REQUIRED (RH)
Trims 3 SET

BEFORE TAKEOFF

Crew Briefing COMPLETE
Radios SET
Altitude Alerter SET (RH)
Flight Director SET
Flaps CHECK (RH)
Trim 3 CHECK
Final Items:
 Headings CHECK
 Auto-Ignition ARM
 Ice Protection (Hot 5) AS REQUIRED

TAKEOFF

Ignition Lights OFF (RH)
Autofeather Lights ON (RH)
Power SET (RH)
Engine Instruments CHECK (RH)

CLIMB

Gear UP (RH)
Flaps UP (RH)
Landing/Taxi Lights OFF
Yaw Damper ON (RH)
Power SET



LOCAL TRAINING

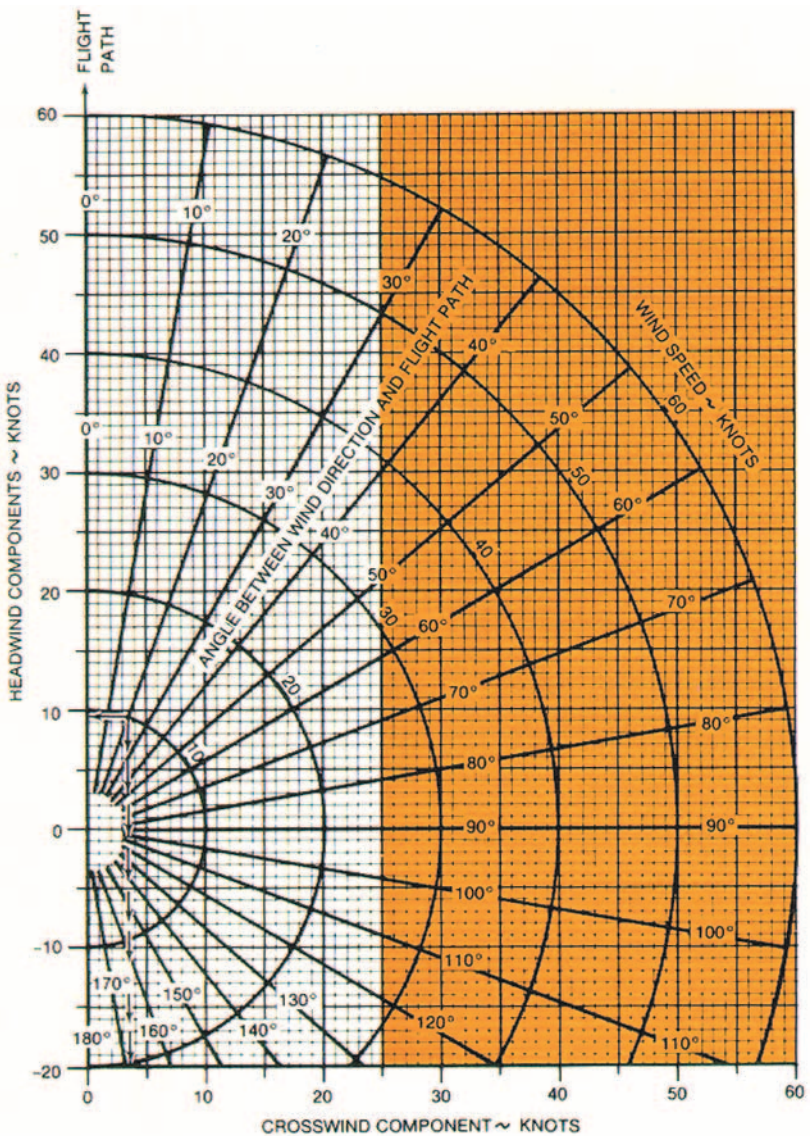
APPROACH

- Crew BriefingCOMPLETE
- Altimeters SET/CHECK
- Autofeather.....ARM
- Auto Ignition..... CONFIRM ON
- Flaps APPROACH (RH)

BEFORE LANDING

- Landing GearDOWN (RH)/3 GREEN (BOTH)
- Landing/Taxi Lights ON
- Final Items:
 - Flaps.....AS REQUIRED (RH)
 - Yaw Damper..... OFF
 - Prop FORWARD AT TOUCHDOWN (RH)

WIND COMPONENTS



NOTE:

1. Maximum Demonstrated Crosswind Component: 25 KTS
2. Maximum Charted Tailwind Component for Takeoff or Landing: 10 KTS

TAKEOFF

MIN T.O. Power	Foot lbs Torque
ACC/STOP	Accelerate-Stop (Feet)
ACC/GO	Accelerate-Go (Feet)
CLIMB GRAD	Net Gradient of Climb (Percent)

Net Gradient of Climb includes .8% Reduction of Climb gradient for pilot technique and turbulence.

The given data is estimated and is based on zero wind conditions. For exact values, refer to P.O.H. performance section.

SPEEDS	 KIAS
Runway	 Paved, Level, Dry Surface
Power	 Set Prior to Brake Release
Autofeather	 Armed
Ice Vanes	 Retracted – For operation with ice vanes extended, refer to AFM performance section

NOTE: If Takeoff weight complies with FAR PART 25 Climb Requirements, Single Engine Positive Rate of Climb at Lift off is guaranteed.

NOTE: WITH ICE VANES EXTENDED, ACCELERATE STOP DISTANCE performance is not affected. Accelerate Go Distance with ice vanes extended, add 6°C to the actual OAT. Net Gradient of Climb with ice vanes extended, add 10°C to the actual OAT. Air Distance is 50% of Accelerate Go Takeoff field length.

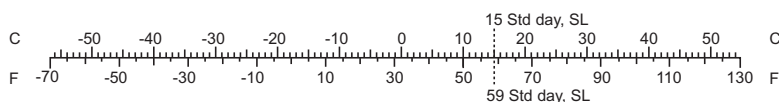
TAKEOFF

FLAPS 0%

SEA LEVEL

 $V_1/V_R = 95$

GW X 1000	Temp °C	-20	-10	0	10	20	30	40
	Min T.O. Power	2230	2230	2230	2230	2230	2230	2085
12.5 $V_2=121$ $V_{yse}=121$	ACC/STOP ACC/GO CLIMB GRAD	2925 5100 5.8	3025 5500 5.6	3175 5900 5.3	3325 6200 5.1	3475 6600 4.9	3625 6900 4.6	3850 7900 3.9
12 $V_2=119$ $V_{yse}=119$	ACC/STOP ACC/GO CLIMB GRAD	2850 4600 6.4	2925 5000 6.2	3075 5300 5.9	3325 5600 5.7	3375 5900 5.5	3525 6200 5.2	3750 7000 4.4
11.5 $V_2=117$ $V_{yse}=118$	ACC/STOP ACC/GO CLIMB GRAD	2775 4100 7.0	2850 4500 6.8	3000 4800 6.5	3150 5000 6.3	3300 5300 6.1	3450 5500 5.7	3650 6200 4.9
11 $V_2=115$ $V_{yse}=117$	ACC/STOP ACC/GO CLIMB GRAD	2725 3700 7.6	2800 4000 7.4	2925 4300 7.1	3075 4500 6.9	3225 4700 6.7	3375 4900 6.3	3550 5500 5.5
10.5 $V_2=113$ $V_{yse}=116$	ACC/STOP ACC/GO CLIMB GRAD	2675 3400 8.4	2750 3600 8.1	2850 3800 7.8	3000 4000 7.6	3150 4200 7.4	3300 4400 7.0	3475 4900 6.2
10 $V_2=111$ $V_{yse}=114$	ACC/STOP ACC/GO CLIMB GRAD	2625 3100 9.1	2700 3300 8.8	2800 3400 8.5	2925 3600 8.3	3075 3800 8.1	3225 3900 7.7	3400 4400 6.9
9.5 $V_2=110$ $V_{yse}=113$	ACC/STOP ACC/GO CLIMB GRAD	2575 2700 9.9	2650 2900 9.6	2750 3000 9.3	2875 3200 9.1	3000 3400 8.9	3150 3500 8.4	3325 3900 7.6
9 $V_2=108$ $V_{yse}=111$	ACC/STOP ACC/GO CLIMB GRAD	2550 2400 10.9	2625 2600 10.5	2725 2700 10.2	2850 2900 10.9	2975 3000 9.7	3100 3100 9.2	3250 3500 8.3



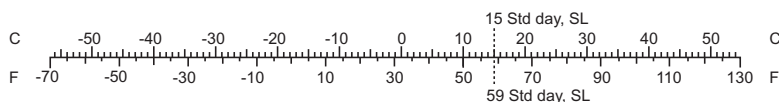
TAKEOFF

1000 FT

FLAPS 0%

 $V_1/V_R = 95$

GW X 1000	Temp °C	-20	-10	0	10	20	30	40
	Min T.O. Power	2230	2230	2230	2230	2230	2195	2030
12.5 $V_2=121$ $V_{yse}=121$	ACC/STOP ACC/GO CLIMB GRAD	3025 5500 5.6	3175 5900 5.3	3325 6200 5.1	3475 6600 4.9	3625 7000 4.7	3825 7500 4.2	4050 8700 3.5
12 $V_2=119$ $V_{yse}=119$	ACC/STOP ACC/GO CLIMB GRAD	2925 5000 6.2	3075 5300 5.9	3225 5600 5.7	3375 5900 5.5	3525 6300 5.2	3725 6700 4.8	3950 7700 3.9
11.5 $V_2=117$ $V_{yse}=118$	ACC/STOP ACC/GO CLIMB GRAD	2850 4500 6.8	3000 4800 6.5	3150 5000 6.3	3300 5300 6.1	3450 5600 5.8	3625 5900 5.3	3850 6800 4.4
11 $V_2=115$ $V_{yse}=117$	ACC/STOP ACC/GO CLIMB GRAD	2800 4000 7.4	2925 4300 7.1	3075 4500 6.9	3225 4700 6.7	3375 5000 6.4	3525 5300 5.9	3750 6000 4.9
10.5 $V_2=113$ $V_{yse}=116$	ACC/STOP ACC/GO CLIMB GRAD	2750 3600 8.1	2850 3800 7.8	3000 4000 7.6	3150 4200 7.4	3300 4500 7.1	3450 4700 6.6	3675 5300 5.6
10 $V_2=111$ $V_{yse}=114$	ACC/STOP ACC/GO CLIMB GRAD	2700 3300 8.8	2800 3500 8.5	2925 3600 8.3	3075 3800 8.1	3225 4000 7.8	3375 4200 7.3	3575 4800 6.2
9.5 $V_2=110$ $V_{yse}=113$	ACC/STOP ACC/GO CLIMB GRAD	2650 2900 9.6	2750 3100 9.3	2875 3200 9.1	3000 3400 8.9	3150 3600 8.5	3300 3800 8.0	3500 4300 6.9
9 $V_2=108$ $V_{yse}=111$	ACC/STOP ACC/GO CLIMB GRAD	2625 2600 10.5	2725 2800 10.2	2850 2900 10.0	2975 3000 9.7	3100 3200 9.4	3225 3300 8.7	3425 3800 7.6



TAKEOFF

FLAPS 0%

2000 FT
 $V_1/V_R = 95$

GW X 1000	Temp °C	-20	-10	0	10	20	30	40
	Min T.O. Power	2230	2230	2230	2230	2230	2130	1970
12.5 $V_2=121$ $V_{yse}=121$	ACC/STOP ACC/GO CLIMB GRAD	3175 5800 5.3	3300 6200 5.1	3450 6600 4.9	3625 7000 4.7	3800 7400 4.5	4000 8200 3.9	4250 9500 3.1
12 $V_2=119$ $V_{yse}=119$	ACC/STOP ACC/GO CLIMB GRAD	3100 5200 5.9	3225 5600 5.7	3375 5900 5.5	3525 6300 5.3	3700 6700 5.0	3900 7200 4.4	4150 8300 3.5
11.5 $V_2=117$ $V_{yse}=118$	ACC/STOP ACC/GO CLIMB GRAD	3025 4700 6.5	3150 5000 6.3	3300 5300 6.1	3450 5600 5.9	3600 5900 5.5	3800 6400 4.9	4050 7300 3.9
11 $V_2=115$ $V_{yse}=117$	ACC/STOP ACC/GO CLIMB GRAD	2950 4200 7.1	3075 4500 6.9	3225 4700 6.7	3375 5000 6.5	3525 5300 6.1	3700 5700 5.5	3950 6500 4.4
10.5 $V_2=113$ $V_{yse}=116$	ACC/STOP ACC/GO CLIMB GRAD	2875 3700 7.8	3000 4000 7.6	3150 4200 7.4	3300 4500 7.1	3450 4700 6.8	3600 5100 6.2	3850 5700 5.0
10 $V_2=111$ $V_{yse}=114$	ACC/STOP ACC/GO CLIMB GRAD	2800 3400 8.5	2925 3600 8.3	3075 3800 8.1	3225 4000 7.8	3375 4200 7.5	3525 4500 6.9	3750 5100 5.6
9.5 $V_2=110$ $V_{yse}=113$	ACC/STOP ACC/GO CLIMB GRAD	2750 3000 9.3	2875 3200 9.1	3000 3400 8.9	3150 3600 8.5	3300 3800 8.2	3450 4100 7.6	3675 4600 6.3
9 $V_2=108$ $V_{yse}=111$	ACC/STOP ACC/GO CLIMB GRAD	2725 2700 10.2	2825 2900 10.0	2950 3000 9.7	3100 3200 9.4	3225 3400 9.1	3375 3600 8.3	3600 4000 7.0



TAKEOFF

FLAPS 0%

3000 FT

 $V_1/V_R = 95$

GW X 1000	Temp °C	-20	-10	0	10	20	30	40
	Min T.O. Power	2230	2230	2230	2230	2205	2075	1910
12.5 $V_2=121$ $V_{yse}=121$	ACC/STOP ACC/GO CLIMB GRAD	3300 6200 5.1	3450 6600 4.9	3625 7000 4.7	3800 7400 4.5	4000 8100 4.1	4225 9200 3.4	4525 10600 2.7
12 $V_2=119$ $V_{yse}=119$	ACC/STOP ACC/GO CLIMB GRAD	3225 5600 5.7	3375 5900 5.5	3525 6300 5.3	3700 6700 5.0	3900 7200 4.6	4125 8000 3.9	4425 9400 3.1
11.5 $V_2=117$ $V_{yse}=118$	ACC/STOP ACC/GO CLIMB GRAD	3150 5000 6.3	3300 5300 6.1	3450 5600 5.9	3600 5900 5.5	3800 6400 5.1	4000 7100 4.3	4300 8200 3.6
11 $V_2=115$ $V_{yse}=117$	ACC/STOP ACC/GO CLIMB GRAD	3075 4500 6.9	3225 4700 6.7	3375 5000 6.5	3525 5300 6.1	3700 5700 5.7	3900 6400 4.9	4200 7200 4.1
10.5 $V_2=113$ $V_{yse}=116$	ACC/STOP ACC/GO CLIMB GRAD	3000 4000 7.6	3150 4200 7.4	3300 4500 7.1	3450 4700 6.8	3625 5100 6.3	3800 5700 5.5	4075 6400 4.7
10 $V_2=111$ $V_{yse}=114$	ACC/STOP ACC/GO CLIMB GRAD	2925 3600 8.3	3075 3800 8.1	3225 4000 7.8	3375 4200 7.5	3550 4500 7.0	3725 5000 6.2	3975 5600 5.2
9.5 $V_2=110$ $V_{yse}=113$	ACC/STOP ACC/GO CLIMB GRAD	2875 3200 9.1	3000 3400 8.9	3150 3600 8.5	3300 3800 8.2	3475 4100 7.7	3650 4400 6.9	3900 5000 5.9
9 $V_2=108$ $V_{yse}=111$	ACC/STOP ACC/GO CLIMB GRAD	2825 2900 10.0	2950 3000 9.7	3100 3200 9.4	3225 3400 9.1	3400 3600 8.5	3575 3900 7.6	3800 4400 6.6

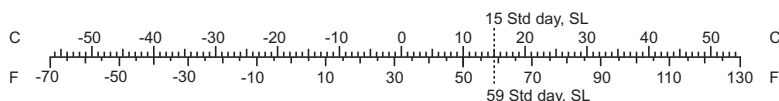


TAKEOFF

FLAPS 0%

4000 FT
 $V_1/V_R = 95$

GW X 1000	Temp °C	-20	-10	0	10	20	30	40
	Min T.O. Power	2230	2230	2230	2230	2140	2010	1865
12.5 $V_2=121$ $V_{yse}=121$	ACC/STOP ACC/GO CLIMB GRAD	3475 6600 4.9	3600 7000 4.7	3775 7500 4.5	3975 7900 4.2	4200 8700 3.8	4450 10100 3.0	4800 11700 2.3
12 $V_2=119$ $V_{yse}=119$	ACC/STOP ACC/GO CLIMB GRAD	3375 5900 5.5	3500 6300 5.3	3675 6700 5.0	3875 7000 4.6	4075 7700 4.2	4325 8800 3.4	4675 10400 2.7
11.5 $V_2=117$ $V_{yse}=118$	ACC/STOP ACC/GO CLIMB GRAD	3300 5300 6.1	3400 5600 5.9	3575 5900 5.5	3775 6200 5.1	3975 6900 4.7	4200 7800 3.8	4550 9100 3.2
11 $V_2=115$ $V_{yse}=117$	ACC/STOP ACC/GO CLIMB GRAD	3225 4700 6.7	3325 5000 6.5	3475 5300 6.1	3675 5500 5.7	3875 6100 5.3	4100 7000 4.4	4425 7900 3.6
10.5 $V_2=113$ $V_{yse}=116$	ACC/STOP ACC/GO CLIMB GRAD	3150 4200 7.4	3250 4500 7.1	3400 4700 6.8	3575 4900 6.4	3775 5400 5.9	4000 6100 4.9	4300 7000 4.2
10 $V_2=111$ $V_{yse}=114$	ACC/STOP ACC/GO CLIMB GRAD	3075 3800 8.1	3175 4000 7.8	3325 4200 7.5	3500 4400 7.1	3700 4800 6.6	3900 5400 5.5	4200 6100 4.7
9.5 $V_2=110$ $V_{yse}=113$	ACC/STOP ACC/GO CLIMB GRAD	3025 3400 8.9	3125 3600 8.5	3275 3800 8.2	3425 3900 7.8	3625 4300 7.3	3825 4800 6.2	4100 5300 5.3
9 $V_2=108$ $V_{yse}=111$	ACC/STOP ACC/GO CLIMB GRAD	2975 3000 9.7	3075 3200 9.4	3225 3400 9.1	3375 3500 8.6	3550 3800 8.0	3750 4200 6.9	4000 4800 5.9



TAKEOFF

FLAPS 0%

5000 FT

 $V_1/V_R = 95$

GW X 1000	Temp °C	-20	-10	0	10	20	30	40
	Min T.O. Power	2230	2230	2230	2165	2065	1950	1800
12.5 $V_2=121$ $V_{yse}=121$	ACC/STOP ACC/GO CLIMB GRAD	3625 7000 4.7	3775 7500 4.5	3975 8000 4.1	4200 8700 3.8	4450 9900 3.3	4750 10900 2.6	5100 ★ 1.9
12 $V_2=119$ $V_{yse}=119$	ACC/STOP ACC/GO CLIMB GRAD	3525 6300 5.3	3625 6700 5.0	3875 7000 4.5	4075 7700 4.2	4325 8800 3.6	4625 10100 2.9	4975 ★ 2.3
11.5 $V_2=117$ $V_{yse}=118$	ACC/STOP ACC/GO CLIMB GRAD	3450 5600 5.9	3575 5900 5.5	3775 6300 5.0	3975 6900 4.7	4200 7700 4.1	4500 8900 3.4	4825 ★ 2.7
11 $V_2=115$ $V_{yse}=117$	ACC/STOP ACC/GO CLIMB GRAD	3375 5000 6.5	3475 5300 6.1	3675 5600 5.6	3875 6100 5.3	4100 6800 4.7	4375 7800 3.9	4700 ★ 3.1
10.5 $V_2=113$ $V_{yse}=116$	ACC/STOP ACC/GO CLIMB GRAD	3300 4500 7.1	3400 4700 6.8	3575 4900 6.3	3775 5400 5.9	4000 6000 5.3	4275 6900 4.4	4575 ★ 3.7
10 $V_2=111$ $V_{yse}=114$	ACC/STOP ACC/GO CLIMB GRAD	3225 4000 7.8	3325 4200 7.5	3500 4400 7.0	3700 4800 6.6	3900 5300 5.9	4150 6000 5.0	4450 ★ 4.1
9.5 $V_2=110$ $V_{yse}=113$	ACC/STOP ACC/GO CLIMB GRAD	3150 3600 8.5	3275 3800 8.2	3425 4000 7.7	3625 4300 7.3	3825 4700 6.6	4050 5300 5.7	4350 ★ 4.8
9 $V_2=108$ $V_{yse}=111$	ACC/STOP ACC/GO CLIMB GRAD	3100 3200 9.4	3225 3400 9.1	3375 3500 8.5	3550 3800 8.0	3750 4200 7.3	3975 4700 6.3	4225 ★ 5.4

★ Data Not Available



TAKEOFF

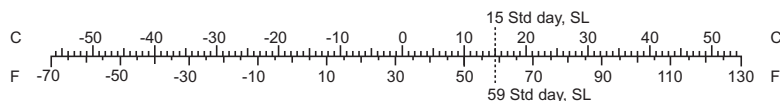
FLAPS 0%

6000 FT

$V_1/V_R = 95$

GW X 1000	Temp °C	-20	-10	0	10	20	30	40
	Min T.O. Power	2230	2230	2180	2105	2010	1890	1745
12.5 $V_2=121$ $V_{yse}=121$	ACC/STOP ACC/GO CLIMB GRAD	3800 7500 4.4	3975 8000 4.1	4200 8500 3.8	4450 9600 3.3	4725 10900 2.8	5025 ★ 2.2	5375 ★ 1.6
12 $V_2=119$ $V_{yse}=119$	ACC/STOP ACC/GO CLIMB GRAD	3700 6700 4.9	3875 7000 4.5	4075 7500 4.2	4325 8400 3.8	4600 9800 3.2	4900 ★ 2.5	5250 ★ 1.9
11.5 $V_2=117$ $V_{yse}=118$	ACC/STOP ACC/GO CLIMB GRAD	3600 5900 5.4	3775 6300 5.0	3975 6700 4.7	4200 7400 4.2	4475 8400 3.6	4775 ★ 3.0	5075 ★ 2.3
11 $V_2=115$ $V_{yse}=117$	ACC/STOP ACC/GO CLIMB GRAD	3500 5300 6.0	3675 5600 5.6	3825 5900 5.3	4100 6600 4.7	4350 7400 4.1	4650 ★ 3.5	4950 ★ 2.8
10.5 $V_2=113$ $V_{yse}=116$	ACC/STOP ACC/GO CLIMB GRAD	3425 4700 6.7	3575 4900 6.3	3775 5200 5.9	4000 5800 5.3	4250 6500 4.7	4525 ★ 4.0	4825 ★ 3.3
10 $V_2=111$ $V_{yse}=114$	ACC/STOP ACC/GO CLIMB GRAD	3350 4200 7.4	3500 4400 7.0	3700 4700 6.6	3900 5100 5.9	4150 5700 5.3	4400 ★ 4.6	4700 ★ 3.7
9.5 $V_2=110$ $V_{yse}=113$	ACC/STOP ACC/GO CLIMB GRAD	3275 3800 8.1	3425 4000 7.7	3625 4200 7.3	3825 4600 6.6	4050 5000 5.9	4275 ★ 5.2	4575 ★ 4.4
9 $V_2=108$ $V_{yse}=111$	ACC/STOP ACC/GO CLIMB GRAD	3225 3400 9.0	3375 3500 8.5	3550 3700 8.0	3750 4100 7.3	3950 4500 6.6	4175 ★ 5.8	4450 ★ 5.0

★ Data Not Available



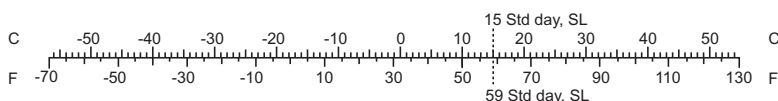
TAKEOFF

FLAPS 40%

SEA LEVEL

$$V_1/V_R = 94$$

GW X 1000	Temp °C	-20	-10	0	10	20	30	40
	Min T.O. Power	2230	2230	2230	2230	2230	2230	2085
12.5 $V_2=106$ $V_{yse}=121$	ACC/STOP ACC/GO CLIMB GRAD	2950 3900 4.7	3050 4100 4.4	3200 4300 4.2	3350 4600 4.0	3500 4900 3.8	3650 5300 3.5	3850 6000 2.8
12 $V_2=105$ $V_{yse}=119$	ACC/STOP ACC/GO CLIMB GRAD	2875 3500 5.3	2975 3700 5.0	3125 3900 4.8	3275 4100 4.6	3425 4400 4.4	3575 4800 4.0	3750 5400 3.3
11.5 $V_2=104$ $V_{yse}=118$	ACC/STOP ACC/GO CLIMB GRAD	2825 3200 6.0	2925 3300 5.7	3050 3500 5.4	3200 3700 5.2	3350 4000 5.0	3500 4300 4.6	3650 4800 3.9
11 $V_2=103$ $V_{yse}=117$	ACC/STOP ACC/GO CLIMB GRAD	2775 2900 6.7	2875 3000 6.4	3000 3200 6.2	3125 3400 6.0	3275 3600 5.7	3425 3900 5.3	3575 4400 4.5
10.5 $V_2=102$ $V_{yse}=116$	ACC/STOP ACC/GO CLIMB GRAD	2725 2600 7.5	2825 2700 7.2	2950 2900 7.0	3075 3100 6.8	3200 3300 6.5	3350 3500 6.0	3500 4000 5.2
10 $V_2=101$ $V_{yse}=114$	ACC/STOP ACC/GO CLIMB GRAD	2675 2400 8.4	2775 2500 8.0	2900 2600 7.8	3025 2800 7.6	3150 3000 7.3	3275 3200 6.9	3425 3600 6.0
9.5 $V_2=100$ $V_{yse}=113$	ACC/STOP ACC/GO CLIMB GRAD	2625 2200 9.4	2725 2300 9.0	2850 2400 8.8	2975 2500 8.6	3100 2700 8.3	3225 2900 7.8	3350 3200 6.8
9 $V_2=99$ $V_{yse}=111$	ACC/STOP ACC/GO CLIMB GRAD	2600 2100 10.0+	2675 2200 10.0+	2800 2300 9.9	2925 2400 9.6	3050 2500 9.2	3175 2700 8.7	3300 3000 7.6

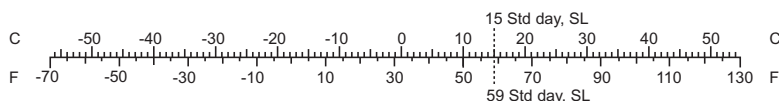


TAKEOFF

FLAPS 40%

1000 FT
 $V_1/V_R = 94$

GW X 1000	Temp °C	-20	-10	0	10	20	30	40
	Min T.O. Power	2230	2230	2230	2230	2230	2195	2030
12.5 $V_2=106$ $V_{yse}=121$	ACC/STOP ACC/GO CLIMB GRAD	3050 4100 4.4	3200 4300 4.2	3350 4600 4.0	3500 4900 3.8	3650 5300 3.5	3825 5800 3.1	4050 6700 2.3
12 $V_2=105$ $V_{yse}=119$	ACC/STOP ACC/GO CLIMB GRAD	2975 3700 5.0	3125 3900 4.8	3275 4100 4.6	3425 4400 4.4	3575 4800 4.0	3750 5200 3.6	3950 5900 2.8
11.5 $V_2=104$ $V_{yse}=118$	ACC/STOP ACC/GO CLIMB GRAD	2925 3300 5.7	3050 3500 5.4	3200 3700 5.2	3350 4000 5.0	3500 4300 4.6	3650 4700 4.2	3850 5300 3.4
11 $V_2=103$ $V_{yse}=117$	ACC/STOP ACC/GO CLIMB GRAD	2875 3000 6.4	3000 3200 6.2	3125 3400 6.0	3275 3600 5.7	3425 3900 5.3	3575 4200 4.8	3775 4800 4.0
10.5 $V_2=102$ $V_{yse}=116$	ACC/STOP ACC/GO CLIMB GRAD	2825 2700 7.2	2950 2900 7.0	3075 3100 6.8	3200 3300 6.5	3350 3500 6.0	3500 3800 5.5	3675 4300 4.6
10 $V_2=101$ $V_{yse}=114$	ACC/STOP ACC/GO CLIMB GRAD	2775 2500 8.0	2900 2600 7.8	3025 2800 7.6	3150 3000 7.3	3275 3200 6.9	3425 3500 6.3	3600 3900 5.4
9.5 $V_2=100$ $V_{yse}=113$	ACC/STOP ACC/GO CLIMB GRAD	2725 2300 9.0	2850 2400 8.8	2975 2500 8.6	3100 2700 8.3	3225 2900 7.8	3375 3100 7.2	3525 3500 6.1
9 $V_2=99$ $V_{yse}=111$	ACC/STOP ACC/GO CLIMB GRAD	2675 2200 10.0+	2800 2300 9.9	2925 2400 9.6	3050 2500 9.2	3175 2700 8.7	3300 2900 8.1	3475 3200 7.0



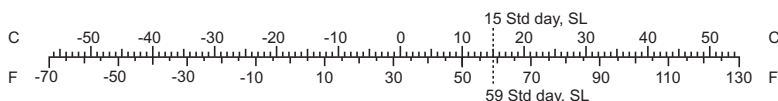
TAKEOFF

FLAPS 40%

2000 FT

 $V_1/V_R = 94$

GW X 1000	Temp °C	-20	-10	0	10	20	30	40
	Min T.O. Power	2230	2230	2230	2230	2230	2130	1970
12.5 $V_2=106$ $V_{yse}=121$	ACC/STOP ACC/GO CLIMB GRAD	3175 4300 4.2	3325 4600 4.0	3475 4900 3.7	3625 5200 3.5	3800 5500 3.3	4000 6200 2.7	4250 7300 1.9
12 $V_2=105$ $V_{yse}=119$	ACC/STOP ACC/GO CLIMB GRAD	3100 3900 4.8	3250 4100 4.6	3400 4400 4.3	3550 4700 4.0	3700 5000 3.8	3900 5500 3.2	4150 6400 2.4
11.5 $V_2=104$ $V_{yse}=118$	ACC/STOP ACC/GO CLIMB GRAD	3025 3500 5.4	3175 3700 5.2	3325 3900 4.8	3475 4200 4.6	3625 4500 4.4	3800 5000 3.8	4050 5700 2.9
11 $V_2=103$ $V_{yse}=117$	ACC/STOP ACC/GO CLIMB GRAD	2975 3200 6.2	3100 3400 6.0	3250 3600 5.6	3400 3800 5.3	3550 4000 5.1	3725 4500 4.4	3950 5100 3.5
10.5 $V_2=102$ $V_{yse}=116$	ACC/STOP ACC/GO CLIMB GRAD	2925 2900 7.0	3050 3100 6.8	3175 3300 6.4	3325 3500 6.1	3475 3700 5.8	3650 4100 5.1	3850 4500 4.1
10 $V_2=101$ $V_{yse}=114$	ACC/STOP ACC/GO CLIMB GRAD	2875 2600 7.8	3000 2800 7.6	3125 3000 7.2	3250 3200 6.9	3400 3400 6.6	3575 3700 5.8	3775 4100 4.8
9.5 $V_2=100$ $V_{yse}=113$	ACC/STOP ACC/GO CLIMB GRAD	2825 2400 8.8	2950 2500 8.6	3075 2700 8.1	3200 2900 7.8	3325 3100 7.5	3500 3300 6.6	3700 3700 5.5
9 $V_2=99$ $V_{yse}=111$	ACC/STOP ACC/GO CLIMB GRAD	2775 2300 9.9	2900 2400 9.6	3025 2500 9.0	3150 2700 8.7	3275 2800 8.4	3425 3000 7.5	3625 3300 6.4

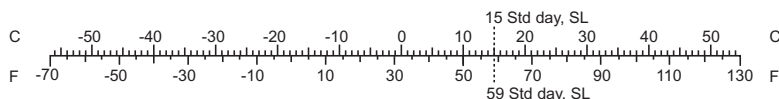


TAKEOFF

FLAPS 40%

3000 FT
 $V_1/V_R = 94$

GW X 1000	Temp °C	-20	-10	0	10	20	30	40
	Min T.O. Power	2230	2230	2230	2230	2205	2075	1910
12.5 $V_2=106$ $V_{yse}=121$	ACC/STOP ACC/GO CLIMB GRAD	3325 4600 4.0	3475 4900 3.7	3625 5200 3.5	3800 5500 3.3	4000 6100 2.9	4225 7000 2.2	4525 8175 1.5
12 $V_2=105$ $V_{yse}=119$	ACC/STOP ACC/GO CLIMB GRAD	3250 4100 4.6	3400 4400 4.3	3550 4700 4.0	3700 5000 3.8	3900 5500 3.4	4125 6200 2.7	4400 7300 2.0
11.5 $V_2=104$ $V_{yse}=118$	ACC/STOP ACC/GO CLIMB GRAD	3175 3700 5.2	3325 3900 4.8	3475 4200 4.6	3625 4500 4.4	3825 4900 4.0	4025 5500 3.3	4300 6400 2.5
11 $V_2=103$ $V_{yse}=117$	ACC/STOP ACC/GO CLIMB GRAD	3100 3400 6.0	3250 3600 5.6	3400 3800 5.3	3550 4000 5.1	3725 4400 4.6	3925 4900 3.9	4200 5700 3.0
10.5 $V_2=102$ $V_{yse}=116$	ACC/STOP ACC/GO CLIMB GRAD	3050 3100 6.8	3175 3300 6.4	3325 3500 6.1	3475 3700 5.8	3650 4000 5.3	3850 4400 4.5	4100 5000 3.6
10 $V_2=101$ $V_{yse}=114$	ACC/STOP ACC/GO CLIMB GRAD	3000 2800 7.6	3125 3000 7.2	3250 3200 6.9	3400 3400 6.6	3575 3700 6.1	3775 4000 5.2	4000 4500 4.3
9.5 $V_2=100$ $V_{yse}=113$	ACC/STOP ACC/GO CLIMB GRAD	2950 2500 8.6	3075 2700 8.1	3200 2900 7.8	3325 3100 7.5	3500 3300 6.9	3700 3600 6.0	3925 4100 5.0
9 $V_2=99$ $V_{yse}=111$	ACC/STOP ACC/GO CLIMB GRAD	2900 2400 9.6	3025 2500 9.0	3150 2700 8.7	3275 2800 8.4	3425 3000 7.8	3625 3300 6.8	3850 3700 5.9



TAKEOFF

FLAPS 40%

4000 FT

 $V_1/V_R = 94$

GW X 1000	Temp °C	-20	-10	0	10	20	30	40
	Min T.O. Power	2230	2230	2230	2230	2140	2010	1865
12.5 $V_2=106$ $V_{yse}=121$	ACC/STOP ACC/GO CLIMB GRAD	3475 4900 3.7	3625 5200 3.5	3800 5500 3.3	3975 6000 3.0	4200 6600 2.5	4450 7700 1.8	4475 9400 1.0
12 $V_2=105$ $V_{yse}=119$	ACC/STOP ACC/GO CLIMB GRAD	3400 4400 4.3	3550 4700 4.0	3700 5000 3.8	3875 5400 3.5	4100 5900 3.0	4325 6800 2.3	4650 8100 1.6
11.5 $V_2=104$ $V_{yse}=118$	ACC/STOP ACC/GO CLIMB GRAD	3325 3900 4.8	3475 4200 4.6	3625 4500 4.4	3775 4800 4.1	4000 5300 3.6	4225 6000 2.8	4525 7100 2.1
11 $V_2=103$ $V_{yse}=117$	ACC/STOP ACC/GO CLIMB GRAD	3250 3600 5.6	3400 3800 5.3	3550 4000 5.1	3700 4400 4.7	3900 4700 4.2	4125 5300 3.4	4425 6200 2.6
10.5 $V_2=102$ $V_{yse}=116$	ACC/STOP ACC/GO CLIMB GRAD	3175 3300 6.4	3325 3500 6.1	3475 3700 5.8	3625 4000 5.4	3800 4300 4.9	4025 4700 4.0	4325 5500 3.2
10 $V_2=101$ $V_{yse}=114$	ACC/STOP ACC/GO CLIMB GRAD	3125 3000 7.2	3250 3200 6.9	3400 3400 6.6	3550 3600 6.2	3725 3900 5.6	3950 4300 4.6	4225 4900 3.8
9.5 $V_2=100$ $V_{yse}=113$	ACC/STOP ACC/GO CLIMB GRAD	3075 2700 8.1	3200 2900 7.8	3325 3100 7.5	3475 3200 7.0	3650 3500 6.4	3875 3800 5.4	4125 4400 4.6
9 $V_2=99$ $V_{yse}=111$	ACC/STOP ACC/GO CLIMB GRAD	3025 2500 9.0	3150 2700 8.7	3275 2800 8.4	3400 3000 7.9	3575 3200 7.2	3800 3500 6.2	4050 4000 5.4

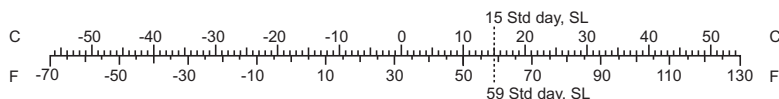


TAKEOFF

FLAPS 40%

5000 FT
 $V_1/V_R = 94$

GW X 1000	Temp °C	-20	-10	0	10	20	30	40
	Min T.O. Power	2230	2230	2230	2165	2065	1950	1800
12.5 $V_2=106$ $V_{yse}=121$	ACC/STOP ACC/GO CLIMB GRAD	3625 5200 3.5	3800 5500 3.3	3975 6000 3.0	4225 6600 2.5	4475 7500 2.0	4700 8950 1.4	5050 11000 0.6
12 $V_2=105$ $V_{yse}=119$	ACC/STOP ACC/GO CLIMB GRAD	3550 4700 4.0	3700 5000 3.8	3875 5400 3.5	4100 5900 3.0	4350 6700 2.4	4600 7800 1.8	4095 9400 1.0
11.5 $V_2=104$ $V_{yse}=118$	ACC/STOP ACC/GO CLIMB GRAD	3475 4200 4.6	3625 4500 4.4	3775 4800 4.1	4000 5300 3.6	4225 5900 2.9	4500 6800 2.3	4800 8200 1.6
11 $V_2=103$ $V_{yse}=117$	ACC/STOP ACC/GO CLIMB GRAD	3400 3800 5.3	3550 4000 5.1	3700 4400 4.7	3925 4700 4.3	4125 5200 3.5	4375 6000 2.9	4700 7200 2.1
10.5 $V_2=102$ $V_{yse}=116$	ACC/STOP ACC/GO CLIMB GRAD	3325 3500 6.1	3475 3700 5.8	3625 4000 5.4	3825 4300 4.9	4025 4700 4.1	4275 5300 3.4	4575 6300 2.6
10 $V_2=101$ $V_{yse}=114$	ACC/STOP ACC/GO CLIMB GRAD	3250 3200 6.9	3400 3400 6.6	3550 3600 6.2	3750 3900 5.7	3950 4300 5.2	4200 4800 4.2	4475 5600 3.3
9.5 $V_2=100$ $V_{yse}=113$	ACC/STOP ACC/GO CLIMB GRAD	3200 2900 7.8	3325 3100 7.5	3475 3200 7.0	3675 3500 6.5	3875 3800 6.0	4100 4300 5.0	4350 5000 3.9
9 $V_2=99$ $V_{yse}=111$	ACC/STOP ACC/GO CLIMB GRAD	3150 2700 8.7	3275 2800 8.4	3400 3000 7.9	3600 3200 7.3	3800 3500 6.3	4025 3900 5.6	4275 4500 4.7



TAKEOFF

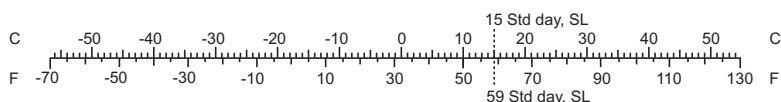
FLAPS 40%

6000 FT

 $V_1/V_R = 94$

GW X 1000	Temp °C	-20	-10	0	10	20	30	40
	Min T.O. Power	2230	2230	2180	2105	2010	1890	1745
12.5 $V_2=106$ $V_{yse}=121$	ACC/STOP ACC/GO CLIMB GRAD	3775 5500 3.3	3975 6000 3.0	4200 6500 2.6	4450 7300 2.1	4725 8400 1.6	5000 10100 0.9	5350 ★ 0.2
12 $V_2=105$ $V_{yse}=119$	ACC/STOP ACC/GO CLIMB GRAD	3675 5000 3.8	3875 5400 3.5	4100 5800 3.1	4325 6400 2.6	4600 7400 2.1	4900 8700 1.4	5200 ★ 0.6
11.5 $V_2=104$ $V_{yse}=118$	ACC/STOP ACC/GO CLIMB GRAD	3575 4500 4.4	3775 4800 4.1	4000 5200 3.7	4225 5700 3.2	4475 6500 2.6	4750 7600 1.8	5050 ★ 1.2
11 $V_2=103$ $V_{yse}=117$	ACC/STOP ACC/GO CLIMB GRAD	3500 4100 5.1	3700 4400 4.7	3900 4700 4.3	4125 5100 3.8	4375 5700 3.2	4625 6600 2.4	4950 ★ 1.6
10.5 $V_2=102$ $V_{yse}=116$	ACC/STOP ACC/GO CLIMB GRAD	3425 3700 5.8	3625 4000 5.4	3800 4300 5.0	4025 4600 4.5	4275 5100 3.8	4525 5800 2.9	4825 ★ 2.1
10 $V_2=101$ $V_{yse}=114$	ACC/STOP ACC/GO CLIMB GRAD	3350 3400 6.6	3550 3600 6.2	3725 3900 5.7	3950 4100 5.2	4175 4600 4.4	4425 5200 3.5	4700 ★ 2.7
9.5 $V_2=100$ $V_{yse}=113$	ACC/STOP ACC/GO CLIMB GRAD	3300 3100 7.5	3475 3200 7.0	3650 3500 6.5	3875 3700 6.0	4075 4100 5.2	4325 4700 4.2	4575 ★ 3.3
9 $V_2=99$ $V_{yse}=111$	ACC/STOP ACC/GO CLIMB GRAD	3250 2800 8.4	3400 3000 7.9	3575 3200 7.4	3800 3300 6.8	4000 3700 5.9	4225 4200 5.0	4475 ★ 4.1

★ Data Not Available



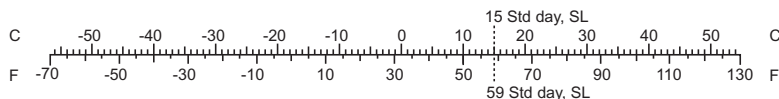
TAKEOFF

SEA LEVEL

FLAPS 0%

 $V_1/V_R = 95$

GW X 1000	Temp °C	-20	-10	0	10	20	30	40
	Min T.O. Power	2230	2230	2230	2230	2230	2230	2085
12.5 $V_2=121$ $V_{yse}=121$	ACC/STOP ACC/GO CLIMB GRAD	2925 5300 5.5	3025 5700 5.3	3175 6100 5.1	3325 6500 4.9	3475 6900 4.7	3625 7400 4.5	3850 8200 3.7
12 $V_2=119$ $V_{yse}=119$	ACC/STOP ACC/GO CLIMB GRAD	2850 4800 6.1	2925 5200 5.9	3075 5500 5.7	3225 5800 5.4	3375 6100 5.2	3525 6600 5.0	3750 7200 4.2
11.5 $V_2=117$ $V_{yse}=118$	ACC/STOP ACC/GO CLIMB GRAD	2775 4300 6.8	2850 4700 6.6	3000 4900 6.3	3150 5200 6.0	3300 5500 5.8	3450 5900 5.6	3650 6400 4.7
11 $V_2=115$ $V_{yse}=117$	ACC/STOP ACC/GO CLIMB GRAD	2725 3900 7.4	2800 4200 7.2	2925 4400 6.9	3075 4600 6.6	3225 4900 6.4	3375 5200 6.1	3550 5700 5.2
10.5 $V_2=113$ $V_{yse}=116$	ACC/STOP ACC/GO CLIMB GRAD	2675 3500 8.1	2750 3700 7.8	2850 3900 7.6	3000 4100 7.3	3150 4300 7.0	3300 4600 6.7	3475 5100 5.8
10 $V_2=111$ $V_{yse}=114$	ACC/STOP ACC/GO CLIMB GRAD	2625 3200 8.8	2700 3400 8.5	2800 3500 8.3	2925 3700 7.9	3075 3900 7.7	3225 4100 7.4	3400 4500 6.4
9.5 $V_2=110$ $V_{yse}=113$	ACC/STOP ACC/GO CLIMB GRAD	2575 2800 9.6	2650 3000 9.3	2750 3100 9.0	2875 3300 8.7	3000 3500 8.5	3150 3700 8.2	3325 4000 7.2
9 $V_2=108$ $V_{yse}=111$	ACC/STOP ACC/GO CLIMB GRAD	2550 2500 10.4	2625 2700 10.1	2725 2800 9.8	2850 3000 9.5	2975 3100 9.3	3100 3300 9.0	3250 3600 7.9



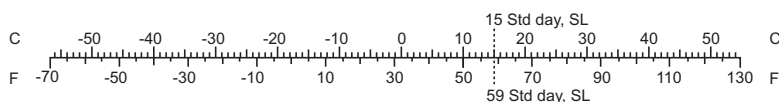
TAKEOFF

1000 FT

FLAPS 0%

 $V_1/V_R = 95$

GW X 1000	Temp °C	-20	-10	0	10	20	30	40
	Min T.O. Power	2230	2230	2230	2230	2230	2195	2030
12.5 $V_2=121$ $V_{yse}=121$	ACC/STOP ACC/GO CLIMB GRAD	3025 5700 5.3	3175 6100 5.1	3325 6500 4.9	3475 6900 4.7	3625 7400 4.5	3825 8100 4.1	4050 9100 3.4
12 $V_2=119$ $V_{yse}=119$	ACC/STOP ACC/GO CLIMB GRAD	2925 5100 5.9	3075 5500 5.7	3225 5800 5.5	3375 6200 5.2	3525 6600 5.0	3725 7200 4.6	3950 8000 3.8
11.5 $V_2=117$ $V_{yse}=118$	ACC/STOP ACC/GO CLIMB GRAD	2850 4600 6.6	3000 5000 6.3	3150 5200 6.1	3300 5500 5.8	3450 5900 5.6	3625 6300 5.1	3850 7100 4.3
11 $V_2=115$ $V_{yse}=117$	ACC/STOP ACC/GO CLIMB GRAD	2800 4100 7.2	2925 4400 6.9	3075 4700 6.7	3225 4900 6.4	3375 5300 6.2	3525 5600 5.7	3750 6300 4.8
10.5 $V_2=113$ $V_{yse}=116$	ACC/STOP ACC/GO CLIMB GRAD	2750 3700 7.9	2850 3900 7.6	3000 4100 7.3	3150 4400 7.0	3300 4700 6.8	3450 5000 6.3	3675 5600 5.4
10 $V_2=111$ $V_{yse}=114$	ACC/STOP ACC/GO CLIMB GRAD	2700 3400 8.6	2800 3600 8.2	2925 3700 8.0	3075 3900 7.7	3225 4200 7.5	3375 4400 6.9	3575 4900 6.0
9.5 $V_2=110$ $V_{yse}=113$	ACC/STOP ACC/GO CLIMB GRAD	2650 3000 9.3	2750 3200 9.0	2875 3300 8.8	3000 3500 8.5	3150 3700 8.2	3300 4000 7.7	3500 4400 6.7
9 $V_2=108$ $V_{yse}=111$	ACC/STOP ACC/GO CLIMB GRAD	2625 2700 10.1	2725 2900 9.8	2850 3000 9.6	2975 3200 9.3	3100 3300 9.0	3225 3500 8.5	3425 3900 7.5

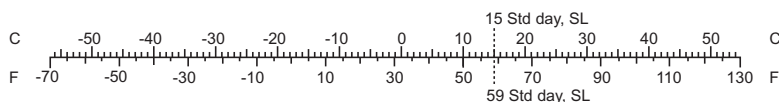


TAKEOFF

FLAPS 0%

2000 FT
 $V_1/V_R = 95$

GW X 1000	Temp °C	-20	-10	0	10	20	30	40
	Min T.O. Power	2230	2230	2230	2230	2230	2130	1970
12.5 $V_2=121$ $V_{yse}=121$	ACC/STOP ACC/GO CLIMB GRAD	3175 6000 5.1	3300 6500 4.9	3450 6900 4.7	3625 7300 4.5	3800 7900 4.3	4000 8700 3.7	4250 10000 3.0
12 $V_2=119$ $V_{yse}=119$	ACC/STOP ACC/GO CLIMB GRAD	3100 5400 5.7	3225 5800 5.4	3375 6100 5.2	3525 6600 5.0	3700 7100 4.8	3900 7700 4.2	4150 8800 3.4
11.5 $V_2=117$ $V_{yse}=118$	ACC/STOP ACC/GO CLIMB GRAD	3025 4800 6.3	3150 5200 6.0	3300 5500 5.8	3450 5800 5.6	3600 6300 5.4	3800 6700 4.7	4050 7700 3.8
11 $V_2=115$ $V_{yse}=117$	ACC/STOP ACC/GO CLIMB GRAD	2950 4300 6.9	3075 4600 6.6	3225 4900 6.4	3375 5200 6.1	3525 5600 5.9	3700 6000 5.2	3950 6800 4.3
10.5 $V_2=113$ $V_{yse}=116$	ACC/STOP ACC/GO CLIMB GRAD	2875 3900 7.6	3000 4100 7.3	3150 4300 7.0	3300 4600 6.7	3450 5000 6.5	3600 5300 5.8	3850 6000 4.9
10 $V_2=111$ $V_{yse}=114$	ACC/STOP ACC/GO CLIMB GRAD	2800 3500 8.3	2925 3700 7.9	3075 3900 7.7	3225 4100 7.4	3375 4400 7.2	3525 4700 6.4	3750 5300 5.5
9.5 $V_2=110$ $V_{yse}=113$	ACC/STOP ACC/GO CLIMB GRAD	2750 3100 9.0	2875 3300 8.7	3000 3500 8.5	3150 3700 8.2	3300 3900 7.9	3450 4200 7.2	3675 4700 6.1
9 $V_2=108$ $V_{yse}=111$	ACC/STOP ACC/GO CLIMB GRAD	2725 2800 9.8	2825 3000 9.5	2950 3100 9.3	3100 3300 9.0	3225 3500 8.7	3375 3700 7.9	3600 4200 6.9



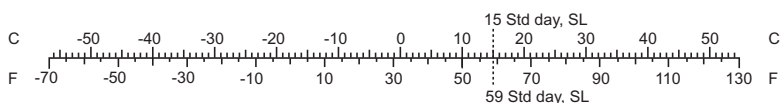
TAKEOFF

FLAPS 0%

3000 FT

 $V_1/V_R = 95$

GW X 1000	Temp °C	-20	-10	0	10	20	30	40
	Min T.O. Power	2230	2230	2230	2230	2205	2075	1910
12.5 $V_2=121$ $V_{yse}=121$	ACC/STOP ACC/GO CLIMB GRAD	3300 6500 4.9	3450 7000 4.7	3625 7400 4.5	3800 7900 4.3	4000 8500 3.9	4225 9600 3.3	4525 11300 2.6
12 $V_2=119$ $V_{yse}=119$	ACC/STOP ACC/GO CLIMB GRAD	3225 5800 5.4	3375 6200 5.2	3525 6600 5.0	3700 7000 4.8	3900 7600 4.4	4125 8500 3.8	4425 10000 3.0
11.5 $V_2=117$ $V_{yse}=118$	ACC/STOP ACC/GO CLIMB GRAD	3150 5200 6.0	3300 5600 5.8	3450 5900 5.6	3600 6200 5.3	3800 6800 5.0	4000 7400 4.2	4300 8700 3.5
11 $V_2=115$ $V_{yse}=117$	ACC/STOP ACC/GO CLIMB GRAD	3075 4600 6.6	3225 4900 6.3	3375 5300 6.1	3525 5500 5.8	3700 6000 5.5	3900 6600 4.8	4200 7600 4.0
10.5 $V_2=113$ $V_{yse}=116$	ACC/STOP ACC/GO CLIMB GRAD	3000 4100 7.3	3150 4400 7.0	3300 4700 6.7	3450 4900 6.4	3625 5300 6.1	3800 5800 5.3	4075 6700 4.5
10 $V_2=111$ $V_{yse}=114$	ACC/STOP ACC/GO CLIMB GRAD	2925 3700 7.9	3075 3900 7.6	3225 4200 7.4	3375 4400 7.1	3550 4700 6.7	3725 5100 5.9	3975 5900 5.0
9.5 $V_2=110$ $V_{yse}=113$	ACC/STOP ACC/GO CLIMB GRAD	2875 3300 8.7	3000 3500 8.4	3150 3700 8.1	3300 3900 7.9	3475 4200 7.4	3650 4500 6.6	3900 5200 5.7
9 $V_2=108$ $V_{yse}=111$	ACC/STOP ACC/GO CLIMB GRAD	2825 3000 9.5	2950 3200 9.2	3100 3300 9.0	3225 3500 8.7	3400 3700 8.2	3575 4000 7.4	3800 4600 6.4

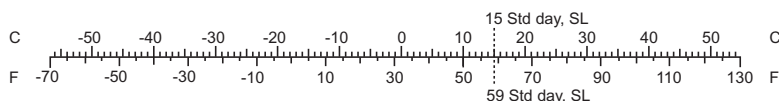


TAKEOFF

FLAPS 0%

4000 FT
 $V_1/V_R = 95$

GW X 1000	Temp °C	-20	-10	0	10	20	30	40
	Min T.O. Power	2230	2230	2230	2230	2140	2010	1865
12.5 $V_2=121$ $V_{yse}=121$	ACC/STOP ACC/GO CLIMB GRAD	3475 6900 4.6	3600 7400 4.4	3775 7900 4.2	3975 8400 4.0	4200 9100 3.5	4450 10500 2.9	4800 12600 2.2
12 $V_2=119$ $V_{yse}=119$	ACC/STOP ACC/GO CLIMB GRAD	3375 6100 5.1	3500 6600 4.9	3675 7100 4.7	3875 7400 4.5	4075 8100 4.0	4325 9200 3.3	4675 11100 2.6
11.5 $V_2=117$ $V_{yse}=118$	ACC/STOP ACC/GO CLIMB GRAD	3300 5500 5.7	3400 5900 5.5	3575 6300 5.3	3775 6500 5.0	3975 7200 4.5	4200 8100 3.7	4550 9600 3.1
11 $V_2=115$ $V_{yse}=117$	ACC/STOP ACC/GO CLIMB GRAD	3225 4900 6.2	3325 5200 6.0	3475 5600 5.8	3675 5800 5.5	3875 6300 5.0	4100 7100 4.3	4425 8400 3.5
10.5 $V_2=113$ $V_{yse}=116$	ACC/STOP ACC/GO CLIMB GRAD	3150 4300 6.9	3250 4600 6.6	3400 5000 6.3	3575 5200 6.1	3775 5600 5.6	4000 6200 4.8	4300 7300 4.0
10 $V_2=111$ $V_{yse}=114$	ACC/STOP ACC/GO CLIMB GRAD	3075 3900 7.5	3175 4100 7.3	3325 4400 7.0	3500 4600 6.8	3700 4900 6.2	3900 5500 5.4	4200 6400 4.6
9.5 $V_2=110$ $V_{yse}=113$	ACC/STOP ACC/GO CLIMB GRAD	3025 3500 8.3	3125 3700 8.0	3275 3900 7.7	3425 4100 7.5	3625 4400 6.9	3825 4900 6.0	4100 5600 5.2
9 $V_2=108$ $V_{yse}=111$	ACC/STOP ACC/GO CLIMB GRAD	2975 3100 9.2	3075 3300 8.9	3225 3500 8.6	3375 3700 8.3	3550 3900 7.7	3750 4300 6.8	4000 5000 5.8



TAKEOFF

FLAPS 0%

5000 FT

 $V_1/V_R = 95$

GW X 1000	Temp °C	-20	-10	0	10	20	30	40
	Min T.O. Power	2230	2230	2230	2165	2065	1950	1800
12.5 $V_2=121$ $V_{yse}=121$	ACC/STOP ACC/GO CLIMB GRAD	3625 7400 4.4	3775 7900 4.2	3975 8500 4.0	4200 9200 3.6	4450 10200 3.1	4750 12000 2.4	5100 ★ 1.8
12 $V_2=119$ $V_{yse}=119$	ACC/STOP ACC/GO CLIMB GRAD	3525 6600 4.9	3625 7000 4.7	3875 7600 4.4	4075 8100 4.1	4325 9000 3.5	4625 10600 2.8	4975 ★ 2.2
11.5 $V_2=117$ $V_{yse}=118$	ACC/STOP ACC/GO CLIMB GRAD	3450 5900 5.5	3575 6200 5.3	3775 6800 4.9	3975 7100 4.6	4200 8000 4.0	4500 9200 3.3	4825 ★ 2.6
11 $V_2=115$ $V_{yse}=117$	ACC/STOP ACC/GO CLIMB GRAD	3375 5200 6.0	3475 5500 5.8	3675 6000 5.5	3875 6300 5.1	4100 7000 4.6	4375 8000 3.8	4700 ★ 3.0
10.5 $V_2=113$ $V_{yse}=116$	ACC/STOP ACC/GO CLIMB GRAD	3300 4600 6.6	3400 4900 6.4	3575 5300 6.1	3775 5600 5.7	4000 6100 5.1	4275 7000 4.3	4575 ★ 3.6
10 $V_2=111$ $V_{yse}=114$	ACC/STOP ACC/GO CLIMB GRAD	3225 4200 7.3	3225 4400 7.1	3500 4700 6.7	3700 4900 6.4	3900 5400 5.7	4150 6100 4.9	4450 ★ 4.0
9.5 $V_2=110$ $V_{yse}=113$	ACC/STOP ACC/GO CLIMB GRAD	3150 3700 8.0	3275 3900 7.8	3425 4200 7.5	3625 4400 7.0	3825 4800 6.4	4050 5400 5.6	4350 ★ 4.7
9 $V_2=108$ $V_{yse}=111$	ACC/STOP ACC/GO CLIMB GRAD	3100 3300 8.9	3225 3500 8.6	3375 3700 8.3	3550 4000 7.8	3750 4300 7.1	3975 4800 6.1	4225 ★ 5.3

★ Data Not Available



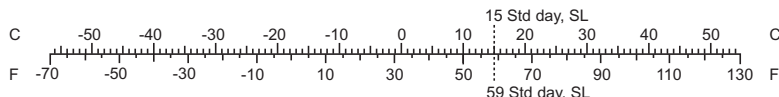
TAKEOFF

FLAPS 0%

6000 FT
 $V_1/V_R = 95$

GW X 1000	Temp °C	-20	-10	0	10	20	30	40
	Min T.O. Power	2230	2230	2180	2105	2010	1890	1745
12.5 $V_2=121$ $V_{yse}=121$	ACC/STOP ACC/GO CLIMB GRAD	3800 7800 7.2	3975 8400 4.0	4200 9100 3.7	4450 9900 3.2	4725 11300 2.7	5025 13500 2.1	5375 ★ 1.4
12 $V_2=119$ $V_{yse}=119$	ACC/STOP ACC/GO CLIMB GRAD	3700 7000 4.7	3875 7400 4.4	4075 8100 4.1	4325 8700 3.7	4600 9900 3.1	4900 11900 2.4	5250 ★ 1.8
11.5 $V_2=117$ $V_{yse}=118$	ACC/STOP ACC/GO CLIMB GRAD	3600 6200 5.3	3775 6500 4.9	3975 7200 4.6	4200 7700 4.1	4475 8700 3.5	4775 10200 2.9	5075 ★ 2.2
11 $V_2=115$ $V_{yse}=117$	ACC/STOP ACC/GO CLIMB GRAD	3500 5500 5.8	3675 5800 5.5	3825 6300 5.2	4100 6700 4.6	4350 7600 4.0	4650 8800 3.4	4950 ★ 2.6
10.5 $V_2=113$ $V_{yse}=116$	ACC/STOP ACC/GO CLIMB GRAD	3425 4900 6.3	3575 5200 6.1	3775 5600 5.8	4000 5900 5.2	4250 6600 4.6	4525 7700 3.9	4825 ★ 3.1
10 $V_2=111$ $V_{yse}=114$	ACC/STOP ACC/GO CLIMB GRAD	3350 4400 7.0	3500 4600 6.8	3700 4900 6.4	3900 5200 5.8	4150 5800 5.2	4400 6700 4.5	4700 ★ 3.6
9.5 $V_2=110$ $V_{yse}=113$	ACC/STOP ACC/GO CLIMB GRAD	3275 3900 7.7	3425 4100 7.5	3625 4400 7.2	3825 4700 6.5	4050 5100 5.8	4275 5900 5.1	4575 ★ 4.2
9 $V_2=108$ $V_{yse}=111$	ACC/STOP ACC/GO CLIMB GRAD	3225 3500 8.6	3375 3700 8.3	3550 3900 7.9	3750 4200 7.2	3950 4600 6.5	4175 5300 5.7	4450 ★ 4.8

★ Data Not Available



TAKEOFF

FLAPS 40%

SEA LEVEL

$V_1/V_R = 94$

GW X 1000	Temp °C	-20	-10	0	10	20	30	40
	Min T.O. Power	2230	2230	2230	2230	2230	2230	2085
12.5 $V_2=106$ $V_{yse}=121$	ACC/STOP ACC/GO CLIMB GRAD	2950 4100 4.3	3050 4400 4.1	3200 4700 3.9	3350 5000 3.6	3500 5300 3.4	3650 5600 3.2	3850 6500 2.4
12 $V_2=105$ $V_{yse}=119$	ACC/STOP ACC/GO CLIMB GRAD	2875 3700 4.9	2975 4100 4.7	3125 4400 4.4	3275 4700 4.1	3425 4900 3.9	3575 5200 3.8	3750 5900 2.9
11.5 $V_2=104$ $V_{yse}=118$	ACC/STOP ACC/GO CLIMB GRAD	2825 3400 5.4	2925 3800 5.3	3050 4000 5.0	3200 4200 4.8	3350 4400 4.5	3500 4600 4.3	3650 5300 3.5
11 $V_2=103$ $V_{yse}=117$	ACC/STOP ACC/GO CLIMB GRAD	2775 3100 6.1	2875 3400 5.9	3000 3700 5.7	3125 3900 5.4	3275 4000 5.2	3425 4200 5.0	3575 4700 4.1
10.5 $V_2=102$ $V_{yse}=116$	ACC/STOP ACC/GO CLIMB GRAD	2725 2800 6.8	2825 3100 6.6	2950 3200 6.4	3075 3400 6.1	3200 3600 5.9	3350 3800 5.7	3500 4300 4.7
10 $V_2=101$ $V_{yse}=114$	ACC/STOP ACC/GO CLIMB GRAD	2675 2600 7.6	2775 2900 7.4	2900 3000 7.2	3025 3200 6.9	3150 3300 6.6	3275 3400 6.5	3425 3900 5.5
9.5 $V_2=100$ $V_{yse}=113$	ACC/STOP ACC/GO CLIMB GRAD	2625 2400 8.4	2725 2600 8.2	2850 2700 8.0	2975 2900 7.7	3100 3000 7.4	3225 3100 7.3	3350 3500 6.2
9 $V_2=99$ $V_{yse}=111$	ACC/STOP ACC/GO CLIMB GRAD	2600 2300 9.5	2675 2500 9.3	2800 2600 9.1	2925 2700 8.8	3050 2800 8.5	3175 2900 8.4	3300 3300 7.1

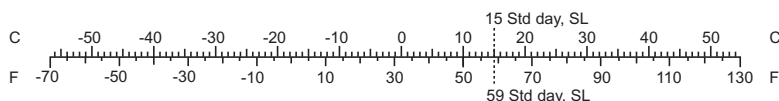


TAKEOFF

FLAPS 40%

1000 FT
 $V_1/V_R = 94$

GW X 1000	Temp °C	-20	-10	0	10	20	30	40
	Min T.O. Power	2230	2230	2230	2230	2230	2195	2030
12.5 $V_2=106$ $V_{yse}=121$	ACC/STOP ACC/GO CLIMB GRAD	3050 4400 4.0	3200 4700 3.8	3350 5000 3.6	3500 5300 3.4	3650 5800 3.2	3825 6000 2.8	4050 7200 2.0
12 $V_2=105$ $V_{yse}=119$	ACC/STOP ACC/GO CLIMB GRAD	2975 4100 4.6	3125 4300 4.4	3275 4400 4.1	3425 4700 3.9	3575 5100 3.7	3750 5400 3.4	3950 6400 2.5
11.5 $V_2=104$ $V_{yse}=118$	ACC/STOP ACC/GO CLIMB GRAD	2925 3700 5.2	3050 3800 5.0	3200 4000 4.7	3350 4400 4.5	3500 4700 4.3	3650 4800 3.9	3850 5600 3.0
11 $V_2=103$ $V_{yse}=117$	ACC/STOP ACC/GO CLIMB GRAD	2875 3400 5.8	3000 3500 5.6	3125 3700 5.4	3275 3800 5.2	3425 4100 4.9	3575 4400 4.5	3775 5100 3.6
10.5 $V_2=102$ $V_{yse}=116$	ACC/STOP ACC/GO CLIMB GRAD	2825 3100 6.5	2950 3200 6.3	3075 3300 6.1	3200 3500 5.9	3350 3700 5.6	3500 3900 5.3	3675 4500 4.2
10 $V_2=101$ $V_{yse}=114$	ACC/STOP ACC/GO CLIMB GRAD	2775 2800 7.3	2900 2900 7.1	3025 3000 6.9	3150 3200 6.7	3275 3400 6.3	3425 3600 6.0	3600 4100 4.9
9.5 $V_2=100$ $V_{yse}=113$	ACC/STOP ACC/GO CLIMB GRAD	2725 2600 8.1	2850 2700 8.0	2975 2800 7.7	3100 2900 7.5	3225 3100 7.1	3375 3300 6.5	3525 3700 5.7
9 $V_2=99$ $V_{yse}=111$	ACC/STOP ACC/GO CLIMB GRAD	2675 2500 9.3	2800 2600 9.0	2925 2700 8.8	3050 2800 8.5	3175 2900 8.1	3300 3000 7.8	3475 3400 6.5



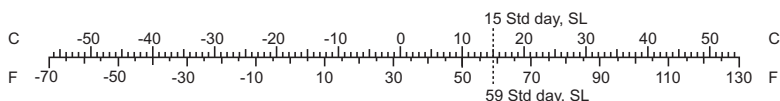
TAKEOFF

FLAPS 40%

2000 FT

 $V_1/V_R = 94$

GW X 1000	Temp °C	-20	-10	0	10	20	30	40
	Min T.O. Power	2230	2230	2230	2230	2230	2130	1970
12.5 $V_2=106$ $V_{yse}=121$	ACC/STOP ACC/GO CLIMB GRAD	3175 4400 3.8	3325 4700 3.6	3475 5000 3.4	3625 5600 3.2	3800 6000 3.0	4000 6500 2.4	4250 8000 1.6
12 $V_2=105$ $V_{yse}=119$	ACC/STOP ACC/GO CLIMB GRAD	3100 4100 4.4	3250 4300 4.2	3400 4600 3.9	3550 5100 3.7	3700 5400 3.5	3900 5900 2.9	4150 7000 2.1
11.5 $V_2=104$ $V_{yse}=118$	ACC/STOP ACC/GO CLIMB GRAD	3025 3700 5.0	3175 3900 4.8	3325 4100 4.5	3475 4600 4.3	3625 4800 4.1	3800 5300 3.5	4050 6200 2.4
11 $V_2=103$ $V_{yse}=117$	ACC/STOP ACC/GO CLIMB GRAD	2975 3400 5.6	3100 3500 5.4	3250 3700 5.2	3400 4200 5.0	3350 4500 4.7	3725 4800 4.1	3950 5600 3.1
10.5 $V_2=102$ $V_{yse}=116$	ACC/STOP ACC/GO CLIMB GRAD	2925 3100 6.3	3050 3300 6.1	3175 3400 5.9	3325 3800 5.7	3475 3900 5.3	3650 4300 4.8	3850 4900 3.7
10 $V_2=101$ $V_{yse}=114$	ACC/STOP ACC/GO CLIMB GRAD	2875 2900 7.1	3000 3000 6.9	3125 3100 6.6	3250 3400 6.5	3400 3600 6.0	3575 3900 5.5	3775 4400 4.4
9.5 $V_2=100$ $V_{yse}=113$	ACC/STOP ACC/GO CLIMB GRAD	2825 2700 7.9	2950 2800 7.8	3075 2900 7.5	3200 3100 7.3	3325 3300 6.8	3500 3500 6.2	3700 4000 5.1
9 $V_2=99$ $V_{yse}=111$	ACC/STOP ACC/GO CLIMB GRAD	2775 2500 8.9	2900 2600 8.8	3025 2800 8.5	3150 2900 8.3	3275 3000 7.8	3425 3200 7.1	3625 3600 5.9



TAKEOFF

FLAPS 40%

3000 FT

$V_1/V_R = 94$

GW X 1000	Temp °C	-20	-10	0	10	20	30	40
	Min T.O. Power	2230	2230	2230	2230	2205	2075	1910
12.5 $V_2=106$ $V_{yse}=121$	ACC/STOP ACC/GO CLIMB GRAD	3325 4700 3.6	3475 5200 3.4	3625 5600 3.2	3800 6000 2.9	4000 6400 2.6	4225 7500 2.0	4500 9300 1.0
12 $V_2=105$ $V_{yse}=119$	ACC/STOP ACC/GO CLIMB GRAD	3250 4300 4.2	3400 4600 4.0	3550 5200 3.7	3700 5400 3.5	3900 5700 3.1	4125 6700 2.5	4400 8200 1.7
11.5 $V_2=104$ $V_{yse}=118$	ACC/STOP ACC/GO CLIMB GRAD	3175 3800 4.9	3325 4200 4.6	3475 4700 4.3	3625 4900 4.0	3825 5100 3.7	4025 6000 3.0	4300 7100 2.1
11 $V_2=103$ $V_{yse}=117$	ACC/STOP ACC/GO CLIMB GRAD	3100 3500 5.4	3250 3800 5.2	3400 4200 5.0	3550 4400 4.7	3725 4600 4.3	3925 5300 3.6	4200 6500 2.6
10.5 $V_2=102$ $V_{yse}=116$	ACC/STOP ACC/GO CLIMB GRAD	3050 3200 6.1	3175 3400 5.9	3325 3800 5.6	3475 3900 5.3	3650 4100 4.9	3850 4800 4.3	4100 5600 3.3
10 $V_2=101$ $V_{yse}=114$	ACC/STOP ACC/GO CLIMB GRAD	3000 3000 6.9	3125 3100 6.7	3250 3500 6.3	3400 3600 6.1	3575 3800 5.7	3775 4300 4.9	4000 5000 4.0
9.5 $V_2=100$ $V_{yse}=113$	ACC/STOP ACC/GO CLIMB GRAD	2950 2700 7.7	3075 2900 7.6	3200 3200 7.2	3325 3300 6.9	3500 3400 6.4	3700 3900 5.7	3925 4500 4.7
9 $V_2=99$ $V_{yse}=111$	ACC/STOP ACC/GO CLIMB GRAD	2900 2500 8.7	3025 2700 8.6	3150 2900 8.1	3275 3000 7.9	3425 3100 7.3	3625 3500 6.5	3850 4100 5.5



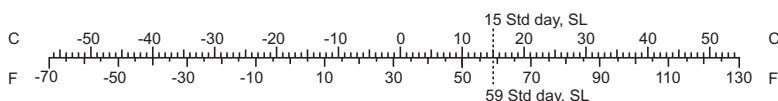
TAKEOFF

FLAPS 40%

4000 FT

 $V_1/V_R = 94$

GW X 1000	Temp °C	-20	-10	0	10	20	30	40
	Min T.O. Power	2230	2230	2230	2230	2140	2010	1865
12.5 $V_2=106$ $V_{yse}=121$	ACC/STOP ACC/GO CLIMB GRAD	3475 5200 3.4	3625 5600 3.2	3800 6000 3.0	3975 6400 2.6	4200 6900 2.1	4450 8300 1.6	4700 9400 0.8
12 $V_2=105$ $V_{yse}=119$	ACC/STOP ACC/GO CLIMB GRAD	3400 4700 3.9	3550 5100 3.7	3700 5400 3.5	3875 5700 3.2	4100 6300 2.7	4325 7200 2.1	4600 8800 1.0
11.5 $V_2=104$ $V_{yse}=118$	ACC/STOP ACC/GO CLIMB GRAD	3325 4300 4.6	3475 4600 4.3	3625 4800 4.1	3775 5100 3.7	4000 5500 3.3	4225 6400 2.4	4525 7600 1.7
11 $V_2=103$ $V_{yse}=117$	ACC/STOP ACC/GO CLIMB GRAD	3250 3800 5.2	3400 4100 5.0	3550 4300 4.7	3700 4600 4.3	3900 4900 3.9	4125 5700 3.1	4425 6700 2.1
10.5 $V_2=102$ $V_{yse}=116$	ACC/STOP ACC/GO CLIMB GRAD	3200 3500 5.9	3325 3700 5.7	3475 3800 5.3	3625 4100 4.9	3800 4400 4.5	4025 5100 3.7	4325 5900 2.8
10 $V_2=101$ $V_{yse}=114$	ACC/STOP ACC/GO CLIMB GRAD	3150 3200 6.7	3250 3400 6.5	3400 3500 6.0	3550 3700 5.7	3725 4000 5.3	3950 4600 4.4	4225 5300 3.6
9.5 $V_2=100$ $V_{yse}=113$	ACC/STOP ACC/GO CLIMB GRAD	3100 2900 7.5	3200 3100 7.3	3325 3200 6.8	3475 3400 6.5	3650 3600 6.0	3875 4100 5.1	4125 4700 4.2
9 $V_2=99$ $V_{yse}=111$	ACC/STOP ACC/GO CLIMB GRAD	3050 2700 8.5	3150 2900 8.3	3275 3000 7.7	3400 3100 7.4	3575 3300 6.9	3800 3700 5.9	4050 4200 5.0

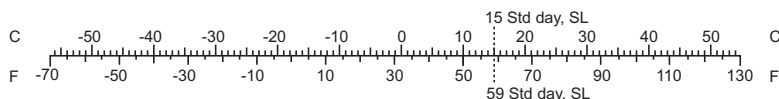


TAKEOFF

FLAPS 40%

5000 FT
 $V_1/V_R = 94$

GW X 1000	Temp °C	-20	-10	0	10	20	30	40
	Min T.O. Power	2230	2230	2230	2165	2065	1950	1800
12.5 $V_2=106$ $V_{yse}=121$	ACC/STOP ACC/GO CLIMB GRAD	3625 5600 3.2	3800 6000 3.1	3975 6500 2.7	4225 7000 2.2	4475 8000 1.7	4550 9800 1.0	5050 12200 0.4
12 $V_2=105$ $V_{yse}=119$	ACC/STOP ACC/GO CLIMB GRAD	3550 5100 3.8	3700 5300 3.5	3875 5800 3.2	4100 6300 2.8	4350 6900 1.9	4600 8500 1.6	4900 10000 0.8
11.5 $V_2=104$ $V_{yse}=118$	ACC/STOP ACC/GO CLIMB GRAD	3450 4600 4.4	3625 4700 4.1	3775 5200 3.8	4000 5600 3.3	4225 6200 2.8	4500 7400 2.0	4800 8700 1.2
11 $V_2=103$ $V_{yse}=117$	ACC/STOP ACC/GO CLIMB GRAD	3400 4200 5.0	3550 4300 4.7	3700 4700 4.4	3925 5100 3.8	4125 5500 3.4	4375 6500 2.6	4700 7600 1.7
10.5 $V_2=102$ $V_{yse}=116$	ACC/STOP ACC/GO CLIMB GRAD	3325 3800 5.6	3475 3900 5.4	3625 4200 5.0	3825 4500 4.4	4025 5000 3.9	4275 5700 3.1	4575 6700 2.3
10 $V_2=101$ $V_{yse}=114$	ACC/STOP ACC/GO CLIMB GRAD	3250 3400 6.4	3400 3500 6.1	3550 3700 5.7	3750 4100 5.2	3950 4500 4.7	4200 5100 3.8	4475 5900 3.0
9.5 $V_2=100$ $V_{yse}=113$	ACC/STOP ACC/GO CLIMB GRAD	3200 3200 7.2	3325 3300 6.9	3475 3400 6.5	3675 3700 6.1	3875 4000 5.4	4100 4600 4.5	4350 4300 3.6
9 $V_2=99$ $V_{yse}=111$	ACC/STOP ACC/GO CLIMB GRAD	3150 2900 8.1	3275 3000 7.9	3400 3100 7.4	3600 3300 6.8	3800 3600 6.2	4025 4200 5.3	4275 4700 4.3



TAKEOFF

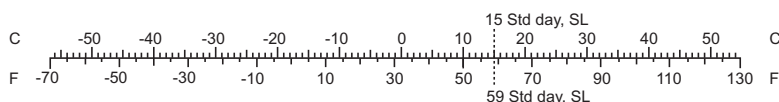
FLAPS 40%

6000 FT

 $V_1/V_R = 94$

GW X 1000	Temp °C	-20	-10	0	10	20	30	40
	Min T.O. Power	2230	2230	2180	2105	2010	1890	1745
12.5 $V_2=106$ $V_{yse}=121$	ACC/STOP ACC/GO CLIMB GRAD	3775 6000 3.0	3975 6400 2.6	4200 7000 2.3	4450 7800 1.8	4650 9000 1.2	5000 11300 0.6	5300 ★ 0.0
12 $V_2=105$ $V_{yse}=119$	ACC/STOP ACC/GO CLIMB GRAD	3675 5300 3.4	3875 5700 3.2	4100 6400 2.8	4325 6900 2.3	4600 7900 1.7	4900 9550 1.0	5200 ★ 0.3
11.5 $V_2=104$ $V_{yse}=118$	ACC/STOP ACC/GO CLIMB GRAD	3575 4700 4.1	3775 5200 3.8	4000 5600 3.4	4225 6200 2.8	4475 6900 2.3	4800 8100 1.5	5050 ★ 0.7
11 $V_2=103$ $V_{yse}=117$	ACC/STOP ACC/GO CLIMB GRAD	3500 4300 4.7	3700 4600 4.4	3900 5000 4.0	4125 5400 3.3	4375 6200 2.8	4625 7300 2.0	4900 ★ 1.3
10.5 $V_2=102$ $V_{yse}=116$	ACC/STOP ACC/GO CLIMB GRAD	3425 3900 5.3	3625 4200 5.0	3800 4500 4.6	4025 4900 3.9	4275 5400 3.4	4525 6400 2.5	4825 ★ 1.8
10 $V_2=101$ $V_{yse}=114$	ACC/STOP ACC/GO CLIMB GRAD	3350 3500 6.0	3550 3800 5.7	3725 4100 5.3	3950 4400 4.6	4175 4900 4.1	4425 5700 3.1	4700 ★ 2.3
9.5 $V_2=100$ $V_{yse}=113$	ACC/STOP ACC/GO CLIMB GRAD	3300 3300 6.8	3475 3400 6.5	3650 3600 6.1	3875 3900 5.3	4075 4400 4.8	4325 5100 3.8	4575 ★ 2.9
9 $V_2=99$ $V_{yse}=111$	ACC/STOP ACC/GO CLIMB GRAD	3250 3000 7.7	3400 3100 7.4	3575 3300 7.0	3800 3600 6.1	4000 3900 5.6	4225 4500 4.6	4475 ★ 3.5

★ Data Not Available



DISTANCE OVER 50 FT OBSTACLE W/O PROPELLER REVERSING SEA LEVEL

LANDING

$V_{AP} \text{ 40\% FLAPS} = V_{REF} (100\% \text{ FLAPS}) + 20 \text{ KTS} + \text{WIND FACTOR}$

$V_{AP} \text{ 0\% FLAPS} = V_{REF} (0\% \text{ FLAPS}) + 10 \text{ KTS} + \text{WIND FACTOR}$

GW X 1000	Flap Setting %	VREF	Temp °C			
			-20	0	20	40
12.5 $V_{yse}=121$	100 0	103 KIAS 132 KIAS	2550 3500	2750 3750	2950 4000	3150 4300
12 $V_{yse}=119$	100 0	102 KIAS 130 KIAS	2450 3350	2550 3500	2750 3750	2950 4000
11 $V_{yse}=117$	100 0	99 KIAS 126 KIAS	2250 3100	2350 3250	2550 3500	2750 3750
10 $V_{yse}=114$	100 0	96 KIAS 122 KIAS	2100 2950	2200 3050	2400 3300	2600 3550
9 $V_{yse}=111$	100 0	93 KIAS 117 KIAS	1950 2750	2050 2850	2250 3100	2450 3350

2000 FT

$V_{AP} \text{ 40\% FLAPS} = V_{REF} (100\% \text{ FLAPS}) + 20 \text{ KTS} + \text{WIND FACTOR}$

$V_{AP} \text{ 0\% FLAPS} = V_{REF} (0\% \text{ FLAPS}) + 10 \text{ KTS} + \text{WIND FACTOR}$

GW X 1000	Flap Setting %	VREF	Temp °C			
			-20	0	20	40
12.5 $V_{yse}=121$	100 0	103 KIAS 132 KIAS	2750 3750	2950 4000	3150 4300	3300 4450
12 $V_{yse}=119$	100 0	102 KIAS 132 KIAS	2550 3500	2750 3750	2950 4000	3150 4300
11 $V_{yse}=117$	100 0	99 KIAS 126 KIAS	2350 3250	2550 3500	2750 3750	2950 4000
10 $V_{yse}=114$	100 0	96 KIAS 122 KIAS	2200 3050	2400 3300	2600 3550	2800 3850
9 $V_{yse}=111$	100 0	93 KIAS 117 KIAS	2050 2850	2250 3100	2450 3350	2650 3650

The data given is estimated and is based on zero wind conditions. For exact values refer to AFM. performance section.

Wind Factor for V_{AP} : $1/2 \text{ Wind Speed} + \text{Gust Factor (Maximum 10 Knots)}$

Associated Conditions:

Power To maintain 800 ft/min or final approach
(900 ft/min with zero flaps)

Runway Paved, Level, Dry Surface

Approach Speed IAS as Tabulated

Propeller Controls Full Fwd (for zero flaps)

Braking Maximum

LANDING

DISTANCE OVER 50 FT OBSTACLE W/O PROPELLER REVERSING

4000 FT

 $V_{AP} \text{ 40\% FLAPS} = V_{REF} \text{ (100\% FLAPS)} + 20 \text{ KTS} + \text{WIND FACTOR}$
 $V_{AP} \text{ 0\% FLAPS} = V_{REF} \text{ (0\% FLAPS)} + 10 \text{ KTS} + \text{WIND FACTOR}$

GW X 1000	Flap Setting %	VREF	Temp °C			
			-20	0	20	40
12.5 $V_{yse}=121$	100 0	103 KIAS 132 KIAS	2950 4000	3150 4300	3300 4450	3550 4800
12 $V_{yse}=119$	100 0	102 KIAS 130 KIAS	2750 3750	2950 4000	3150 4300	3350 4550
11 $V_{yse}=117$	100 0	99 KIAS 126 KIAS	2550 3500	2750 3750	2950 4000	3150 4300
10 $V_{yse}=114$	100 0	96 KIAS 122 KIAS	2400 3300	2600 3550	2800 3850	3000 4100
9 $V_{yse}=111$	100 0	93 KIAS 117 KIAS	2250 3100	2450 3350	2650 3650	2850 3900

6000 FT

 $V_{AP} \text{ 40\% FLAPS} = V_{REF} \text{ (100\% FLAPS)} + 20 \text{ KTS} + \text{WIND FACTOR}$
 $V_{AP} \text{ 0\% FLAPS} = V_{REF} \text{ (0\% FLAPS)} + 10 \text{ KTS} + \text{WIND FACTOR}$

GW X 1000	Flap Setting %	VREF	Temp °C			
			-20	0	20	40
12.5 $V_{yse}=121$	100 0	103 KIAS 132 KIAS	3150 4300	3300 4450	3550 4800	3900 5250
12 $V_{yse}=119$	100 0	102 KIAS 130 KIAS	2950 4000	3150 4300	3350 4550	3650 4900
11 $V_{yse}=117$	100 0	99 KIAS 126 KIAS	2750 3750	2950 4000	3150 4300	3400 4600
10 $V_{yse}=114$	100 0	96 KIAS 122 KIAS	2600 3550	2800 3850	3000 4100	3200 4350
9 $V_{yse}=111$	100 0	93 KIAS 117 KIAS	2450 3350	2650 3650	2850 3900	3050 4150

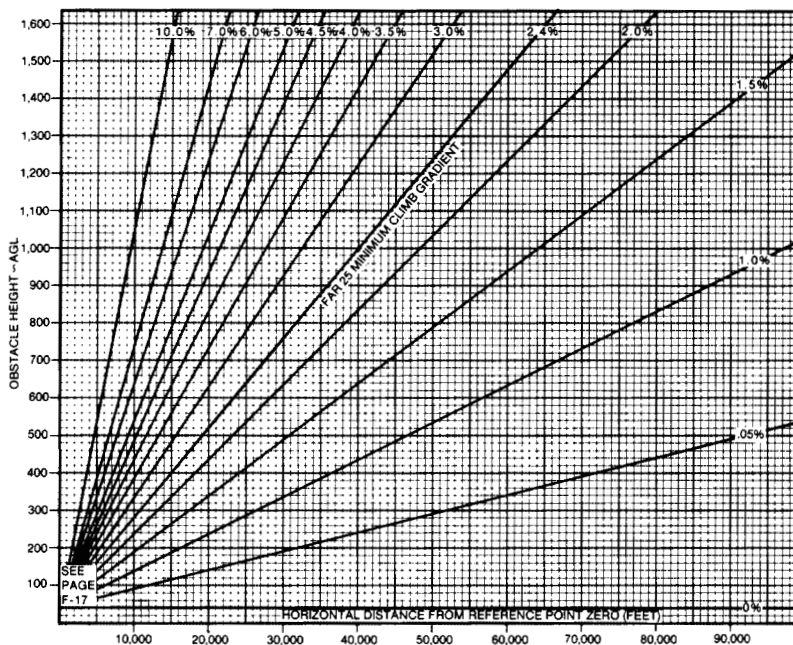
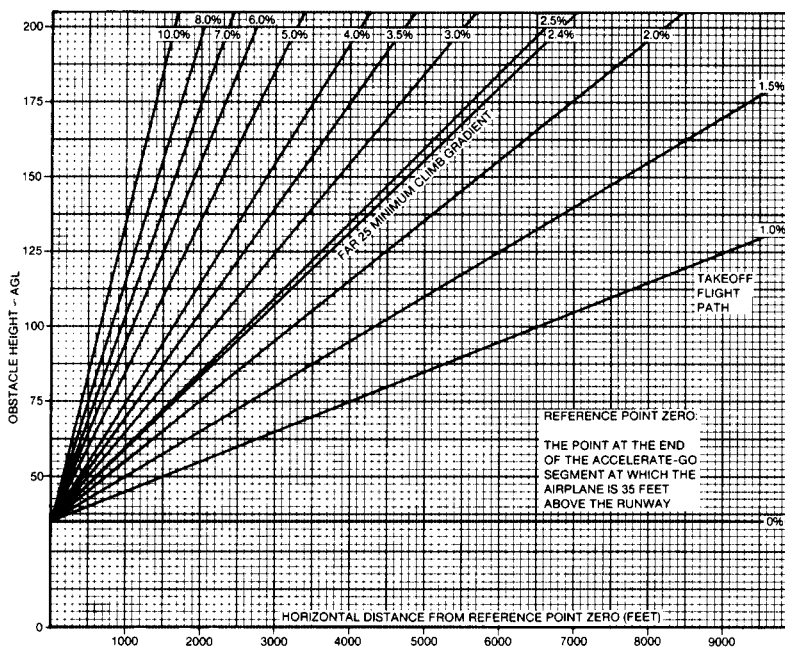
The data given is estimated and is based on zero wind conditions. For exact values refer to AFM, performance section.

Wind Factor for V_{AP} : $1/2 \text{ Wind Speed} + \text{Gust Factor (Maximum 10 Kts)}$

Associated Conditions:

Power To maintain 800 ft/min or final approach
(900 ft/min with zero flaps)
Runway Paved, Level, Dry Surface
Approach Speed IAS as Tabulated
Propeller Controls Full Fwd (for zero flaps)
Braking Maximum

CLIMB GRADIENT

Required Aircraft Performance
(For Obstacle Clearance)

ENGINE OPERATING LIMITS

PRATT & WHITNEY CANADA PT6A-41

Operating Condition	SHP	Torque ft-lbs ¹	Max Obs ITT °C	Gas Generator RPM N ₁		Prop RPM %	Oil Press PSI ²	Oil Temp °C
				RPM	%			
Starting	—	—	1000 ³	—	—	—	—	-40 (min)
Low Idle	—	—	660 ⁴	19,500	52 (min)	—	60 (min)	-40 to 99
High Idle	—	—	—	—	5	—	—	-40 to 99
Takeoff & Max Continuous	850	2230	750	38,100	101.5	2000	100 to 135	0 to 99
Max Cruise	850	2230 ⁸	750	38,100	101.5	2000	100 to 135	0 to 99
Cruise Climb & Rec (Normal) Cruise	850	2230 ⁶	725	38,100	101.5	2000	100 to 135	0 to 99
Max Reverse ⁷	800	—	750	—	88	1900	100 to 135	0 to 99
Transient	—	2750 ³	850	38,500 ⁸	102.6 ⁸	2200 ³	—	0 to 104 ⁹

¹ Torque limit applies within range of 1,600 to 2,000 propeller RPM (N₂). Below 1,600 RPM, torque limited to 1,100 ft-lbs.

² When gas generator speeds are above 27,000 RPM (72% N₁) and oil temperatures are between 60 and 71°C, normal oil pressure are:

100 to 135 PSI below 21,000 ft and 85 to 135 PSI at 21,000 ft and above

During extremely cold starts, oil pressure may reach 200 PSI. Oil pressure between 60 and 85 PSI is undesirable; it should be tolerated only for the completion of the flight, and then only at a reduced power setting not exceeding 1100 ft-lbs torque.

Oil pressure below 60 PSI is unsafe; it requires that either the engine be shut down, or that a landing be made at the nearest suitable airport with a minimum power to sustain flight. Fluctuations of ±10 PSI are acceptable.

³ These values are time limited to 5 seconds.

⁴ Heat ITT at ground idle may be corrected by reducing accessory load then increasing the N₁ RPM.

⁵ At approximately 70% N₁.

⁶ Cruise torque values vary with altitude and temperature.

⁷ This operation is time limited to 1 minute.

⁸ These values are time limited to 10 seconds.

⁹ These values are time limited to 5 minutes.

ENGINE OPERATING LIMITS

PRATT & WHITNEY CANADA PT6A-42

Operating Condition	SHP	Torque ft-lbs ¹	Max Obs ITT °C	Gas Generator RPM N ₁		Prop RPM %	Oil Press PSI ²	Oil Temp °C ^{3,4}
				RPM	%			
Starting	—	—	1000 ⁵	—	—	—	—	-40 (min)
Low Idle	—	—	750 ⁶	21,000	56 (min)	—	60 (min)	-40 to 99
Low Idle (late SNs)*	—	—	750 ⁶	22,875	61 (min)	1100 ¹² 1180	60 (min)	-40 to 99
High Idle	—	—	—	—	7	—	—	-40 to 99
Takeoff & Max Continuous	850	2230 ⁸	800	38,100	101.5	2000	100 to 135	0 to 99
Max Cruise	850	2230 ⁸	800	38,100	101.5	2000	100 to 135	0 to 99
Cruise Climb & Rec (Normal) Cruise	850	2230	770	38,100	101.5	2000	100 to 135	0 to 99
Max Reverse ⁷	800	—	750	—	88	1900	100 to 135	0 to 99
Transient (late SNs)*	—	2750 ⁵	850	38,500 ¹⁰	102.6 ¹¹	2200	— 200*	0 to 104 ¹¹

¹ Torque limit applies within range of 1,600 to 2,000 propeller RPM (N₂). Below 1,600 RPM, torque limited to 1,100 ft-lbs.

² When gas generator speeds are above 27,000 RPM (72% N₁) and oil temperatures are between 60 and 71°C, normal oil pressure are:

100 to 135 PSI below 21,000 ft and 85 to 135 PSI at 21,000 ft and above

During extremely cold starts, oil pressure may reach 200 PSI. Oil pressure between 60 and 85 PSI is undesirable; it should be tolerated only for the completion of the flight, and then only at a reduced power setting not exceeding 1100 ft-lbs torque.

Oil pressure below 60 PSI is unsafe; it requires that either the engine be shut down, or that a landing be made at the nearest suitable airport with a minimum power to sustain flight. Fluctuations of ±10 PSI are acceptable.

³ A minimum oil temperature of 55°C is recommended for fuel heater operation at takeoff power.

⁴ Oil temperature limits are -40°C and 99°C. However, temperatures of up to 104°C are permitted for a maximum time of 10 minutes.

⁵ These values are time limited to 5 seconds.

⁶ Heat ITT at ground idle may be corrected by reducing accessory load then increasing the N₁ RPM.

⁷ At approximately 70% N₁.

⁸ Cruise torque values vary with altitude and temperature.

⁹ This operation is time limited to 1 minute.

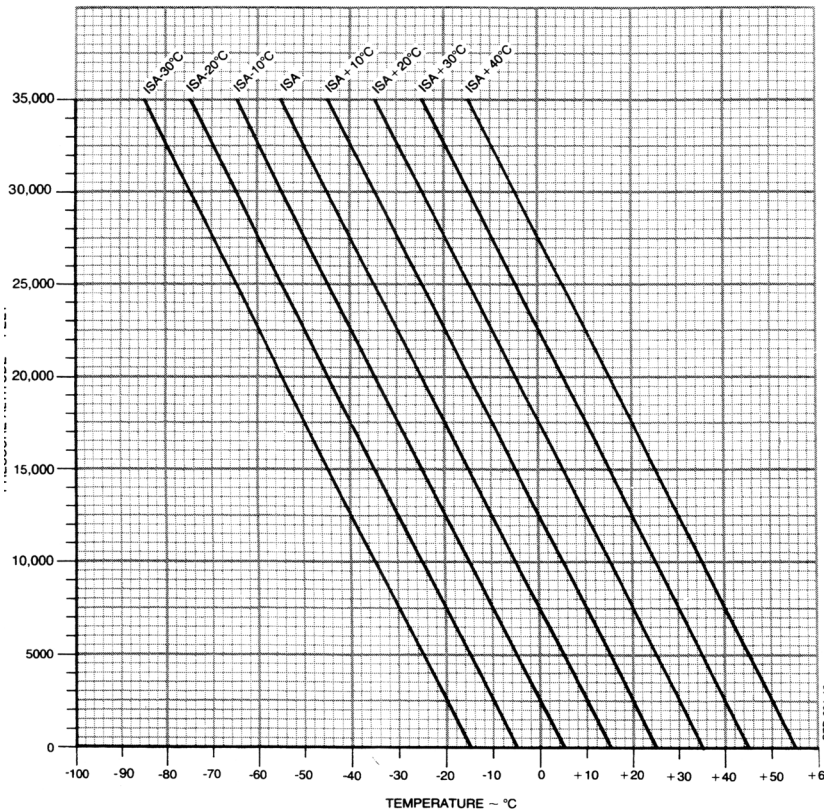
¹⁰ These values are time limited to 10 seconds.

¹¹ Values above 99°C are time limited to 10 minutes

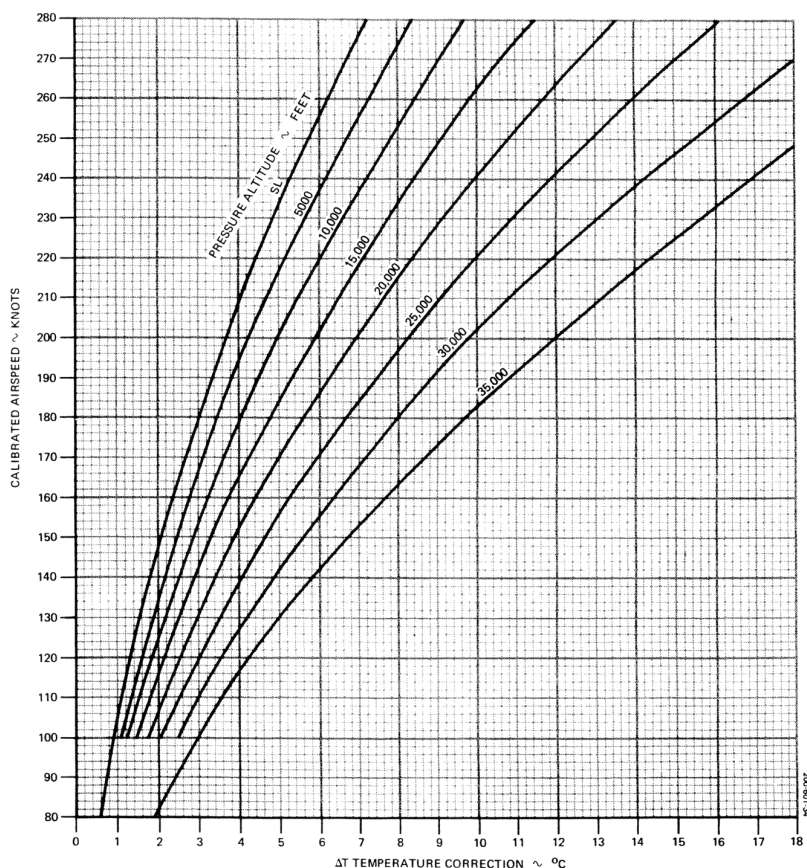
¹² 1100 RPM for McCauley propeller and 1180 RPM for Hartzell propeller.

*Late SNs refers to aircraft S/N BB-1439, BB-1444, and subsequent except BB-1463; BL-139 and subsequent; and BW-1 and subsequent.

ISA CONVERSION



INDICATED OUTSIDE AIR TEMPERATURE CORRECTION



NOTE: Subtract ΔT from indicated (gauge) OAT to obtain true OAT (ΔT assumes a recovery factor of 0.7).

SERVICE CEILING

ONE ENGINE INOPERATIVE

KING AIR 200

ASSOCIATED CONDITIONS:

POWER..... MAXIMUM CONTINUOUS
LANDING GEAR..... UP
INOPERATIVE PROPELLER..... FEATHERED
FLAPS..... 0%

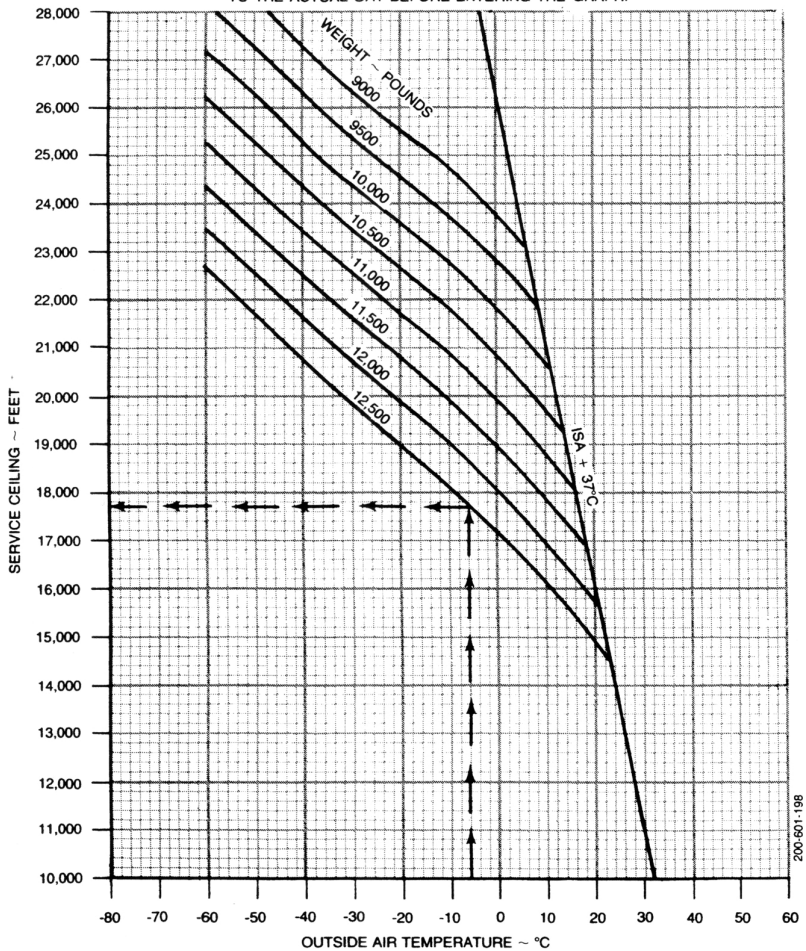
NOTE: SERVICE CEILING IS THE PRESSURE ALTITUDE WHERE THE AIRPLANE HAS CAPABILITY OF CLIMBING 50 FT MINUTE WITH ONE PROPELLER FEATHERED.

EXAMPLE:

OAT AT MEA -6°C
WEIGHT 12,500 LBS
ROUTE SEGMENT MEA 16,000 FT
SERVICE CEILING 17,700 FT

NOTE: SERVICE CEILING IS ABOVE ENROUTE MEA

NOTE: FOR OPERATION WITH ICE VANES EXTENDED, ADD 10°C TO THE ACTUAL OAT BEFORE ENTERING THE GRAPH.



SERVICE CEILING

ONE ENGINE OPERATIVE

KING AIR B200

ASSOCIATED CONDITIONS:

POWER..... MAXIMUM CONTINUOUS
 LANDING GEAR..... UP
 INOPERATIVE PROPELLER..... FEATHERED
 FLAPS..... UP

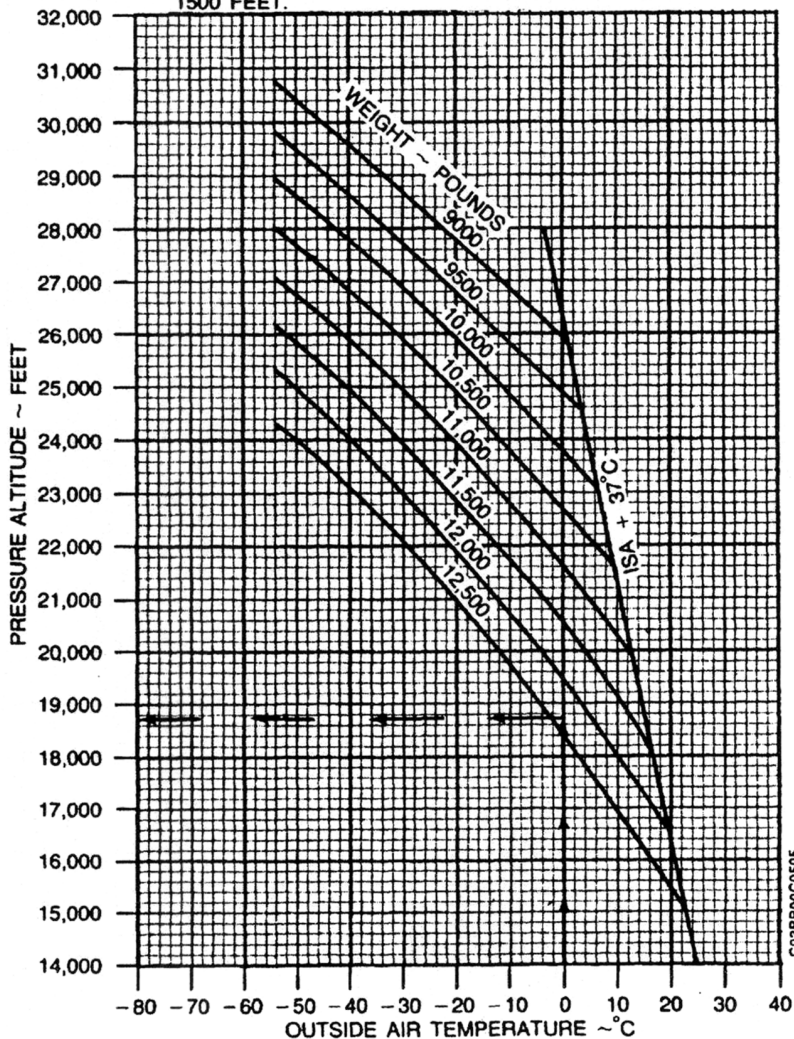
NOTE: SERVICE CEILING IS THE MAXIMUM PRESSURE ALTITUDE AT WHICH THE AIRPLANE IS CAPABLE OF CLIMBING 50 FT/MINUTE WITH ONE PROPELLER FEATHERED.

EXAMPLE:

OAT AT MEA 0°C
 WEIGHT 12,393 LBS
 ROUTE SEGMENT MEA 18,000 FT
 SERVICE CEILING 18,730 FT

NOTE: SERVICE CEILING IS ABOVE ENROUTE MEA

NOTE: DURING OPERATION WITH ICE VANE EXTENDED. SERVICE CEILING WILL BE LOWERED APPROXIMATELY 1500 FEET.



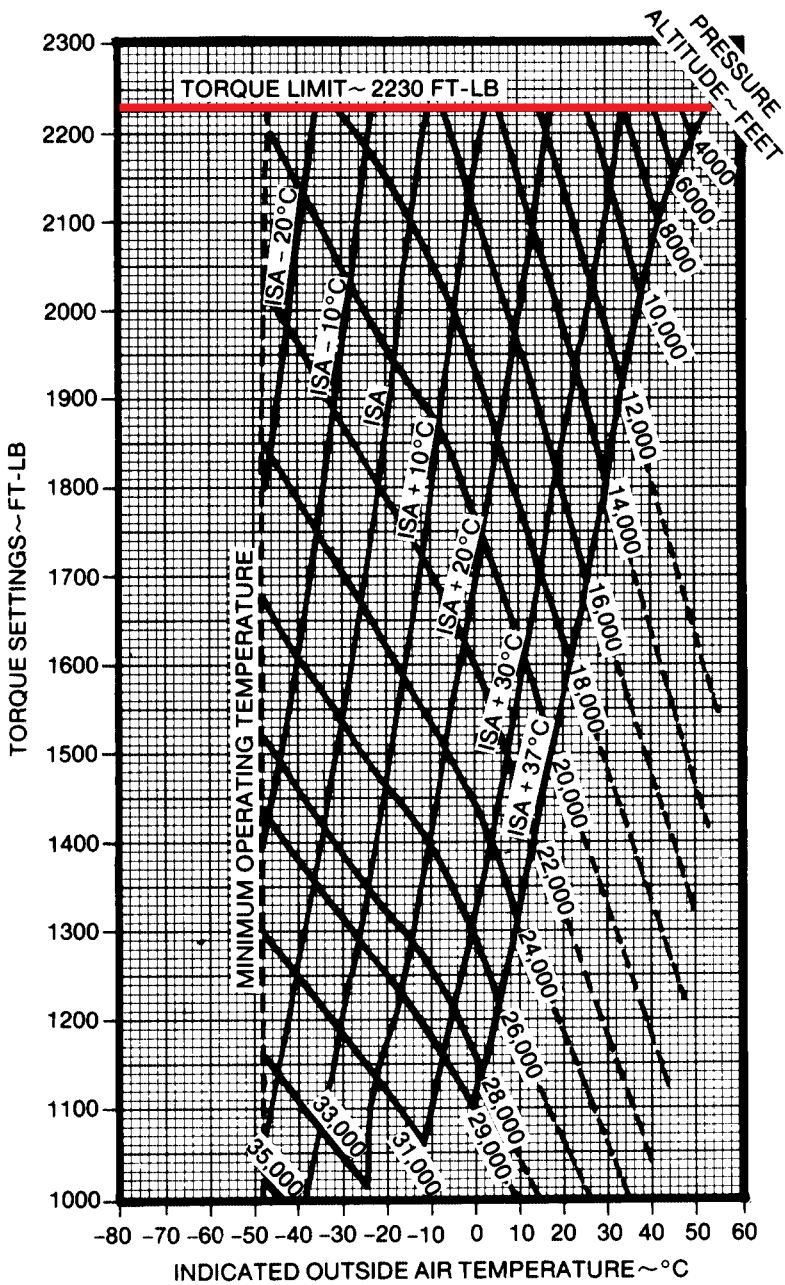
RECOMMENDED POWER

CRUISE

200

1700 RPM

NOTE:For operation with ice vanes extended, add 35°C to the actual OAT before entering the graph.



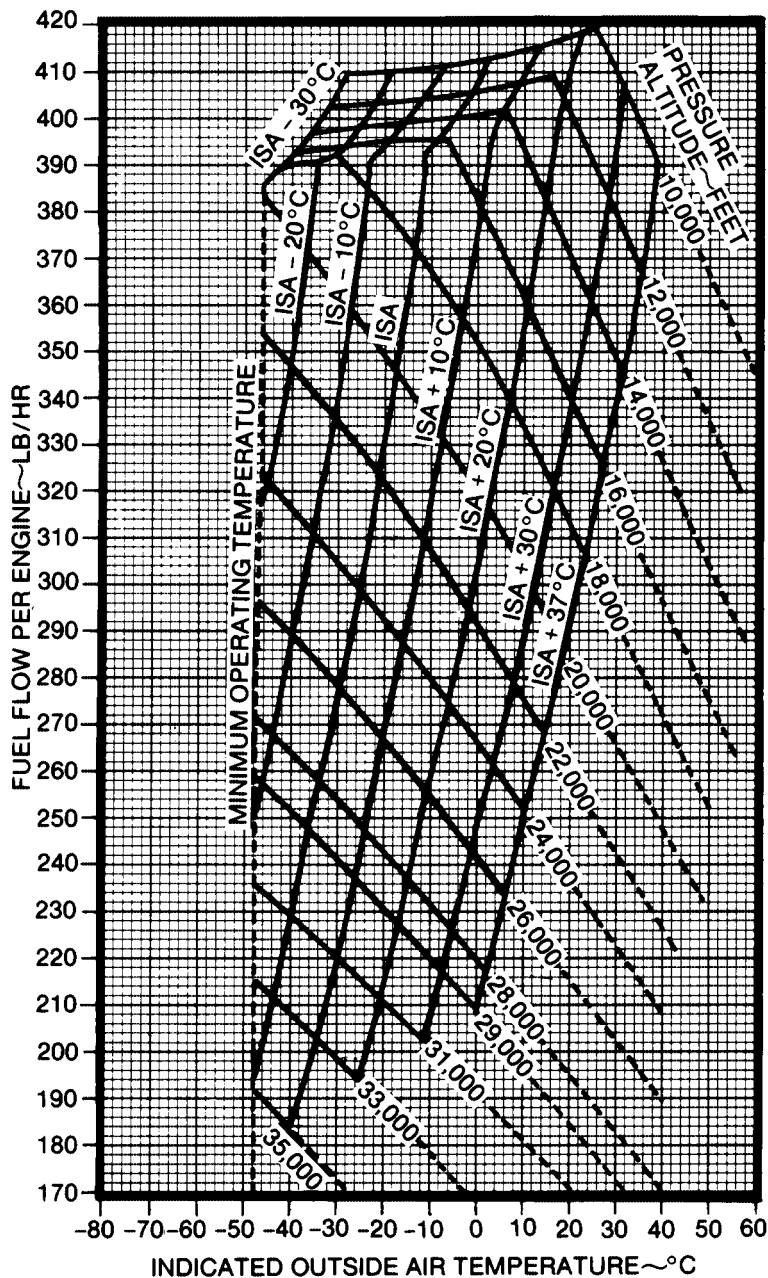
CRUISE

FUEL FLOW/
RECOMMENDED POWER

200

1700 RPM

NOTE: For operation with ice vanes extended, add 30°C to the actual OAT before entering the graph.



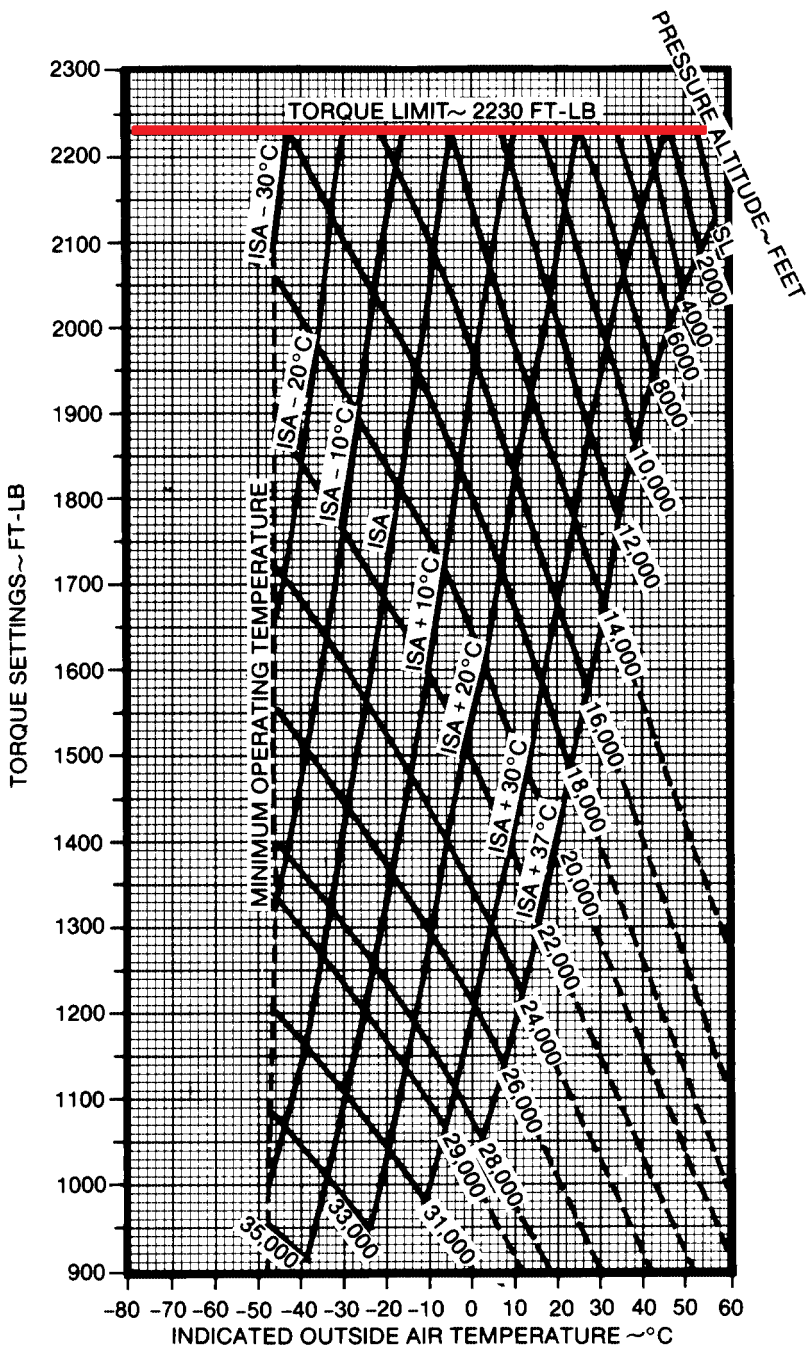
MAXIMUM POWER

CRUISE

200

1900 RPM

NOTE: For operation with ice vanes extended, add 40°C to the actual OAT before entering the graph.



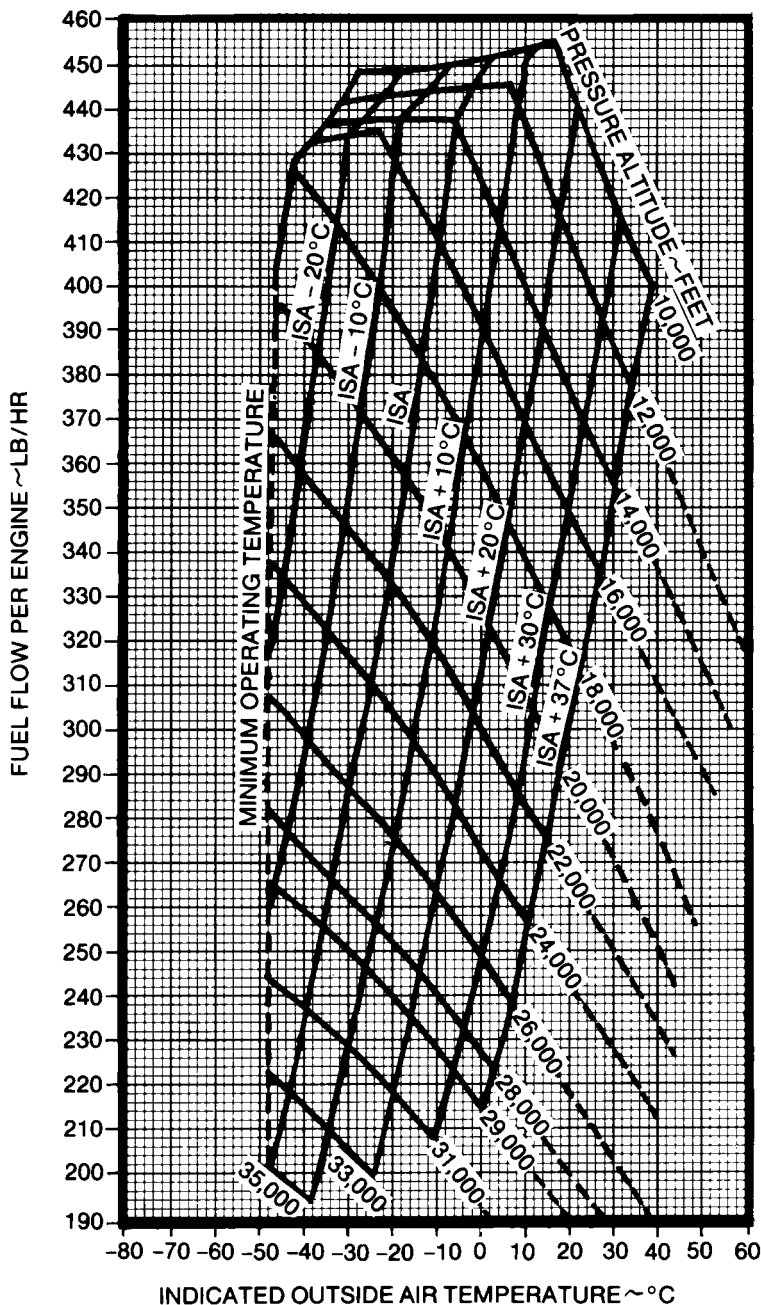
CRUISE

FUEL FLOW/
MAXIMUM POWER

200

1900 RPM

NOTE: For operation with ice vanes extended, add 30°C to the actual OAT before entering the graph.

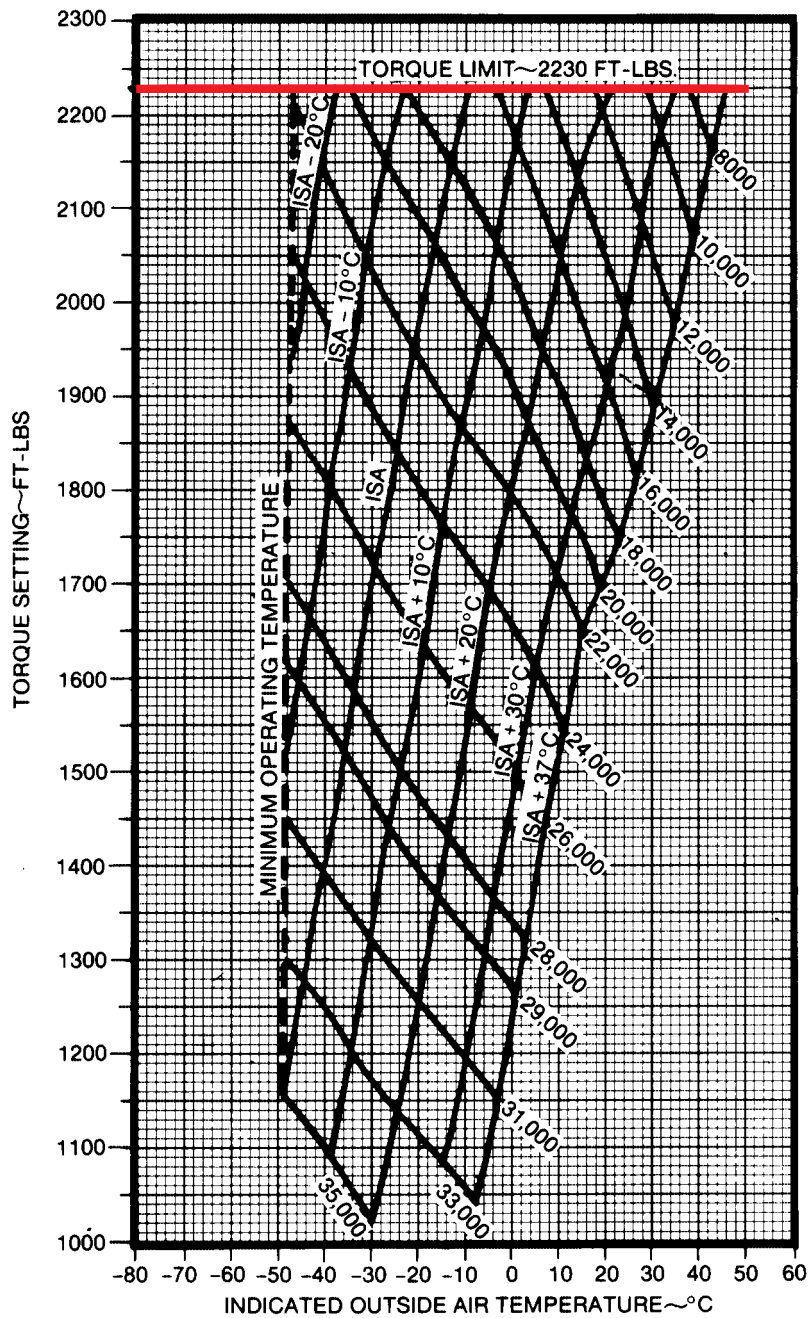


NORMAL POWER

CRUISE

B200

1700 RPM



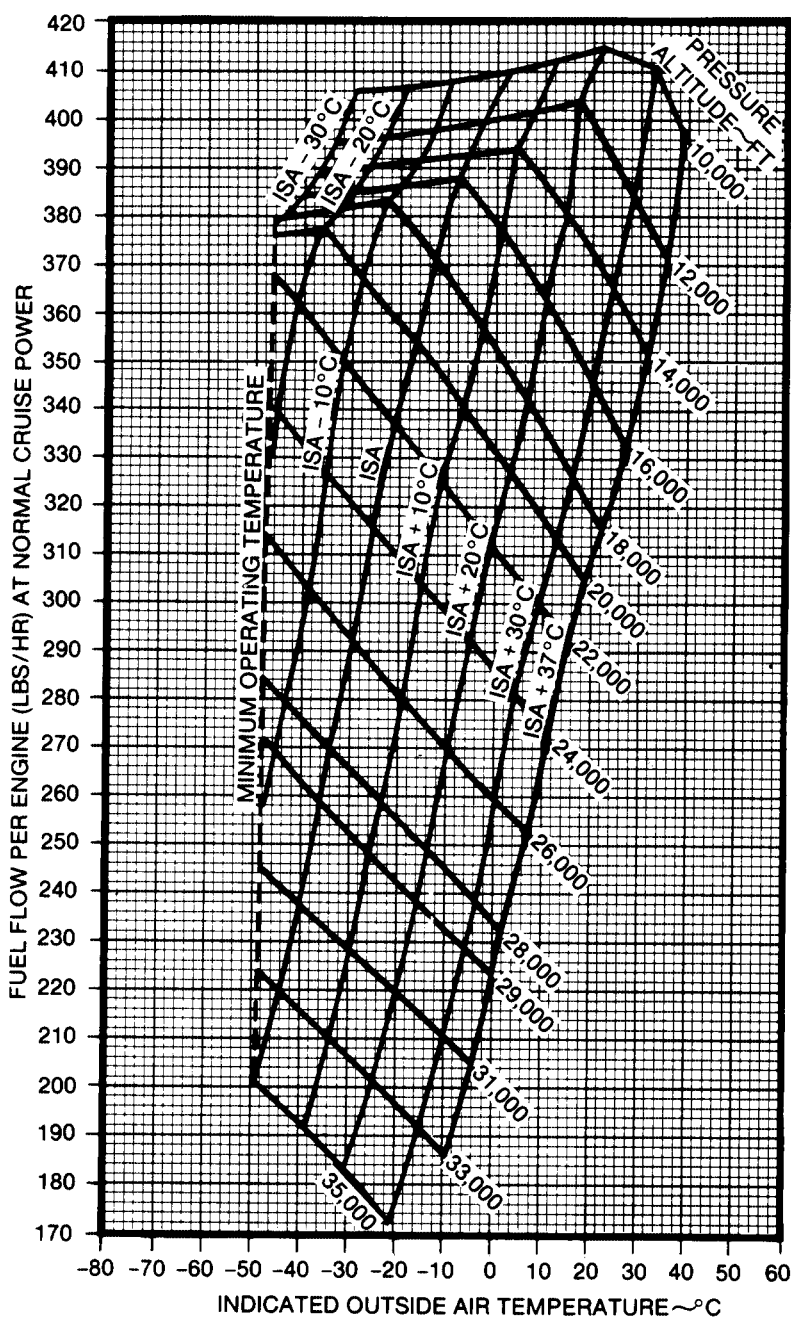
NOTE: Cruise Power settings for aircraft equipped with HFG vary slightly from those with standard gear. For exact figures, consult the AFM.

CRUISE

FUEL FLOW/
NORMAL POWER

B200

1700 RPM



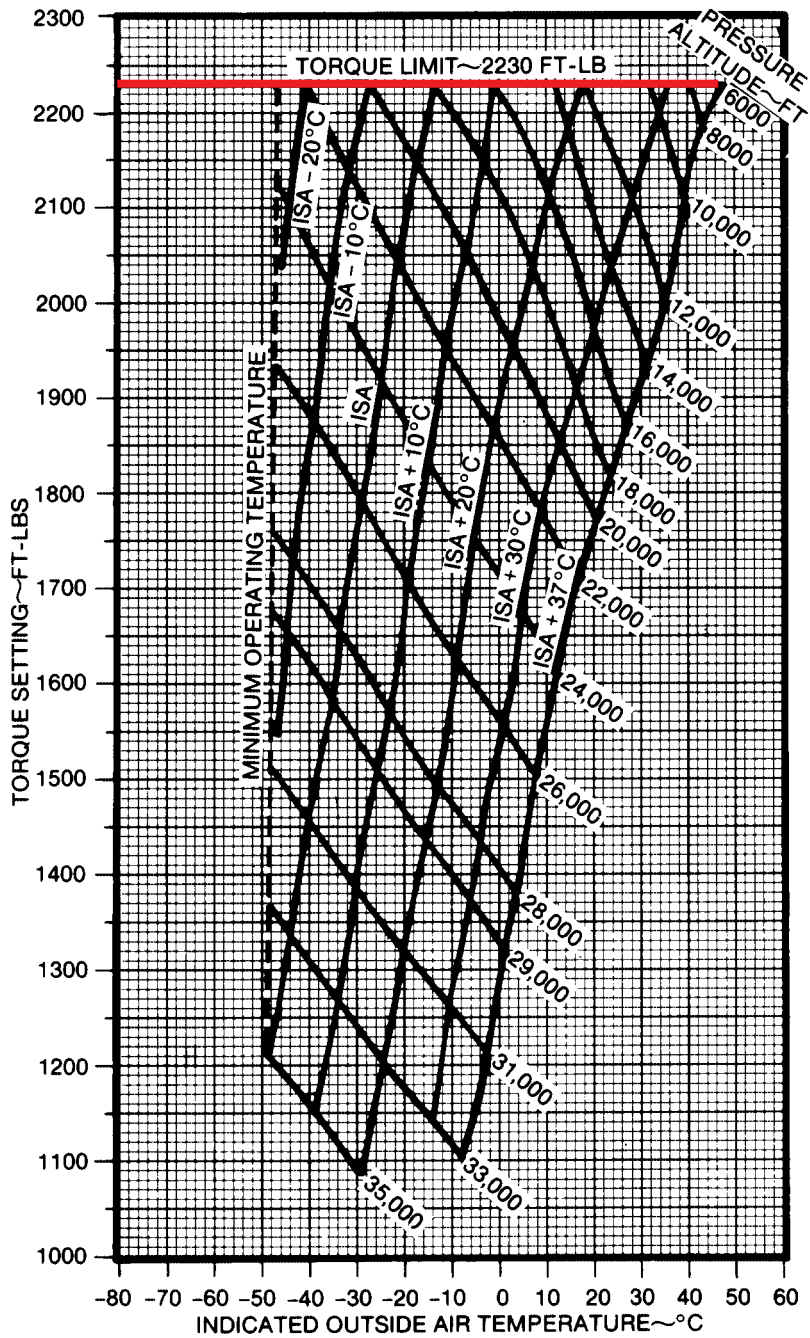
NOTE: Fuel Flow settings for aircraft equipped with HFG vary slightly from those with standard gear. For exact figures, consult the AFM.

MAXIMUM POWER

CRUISE

B200

1700 RPM



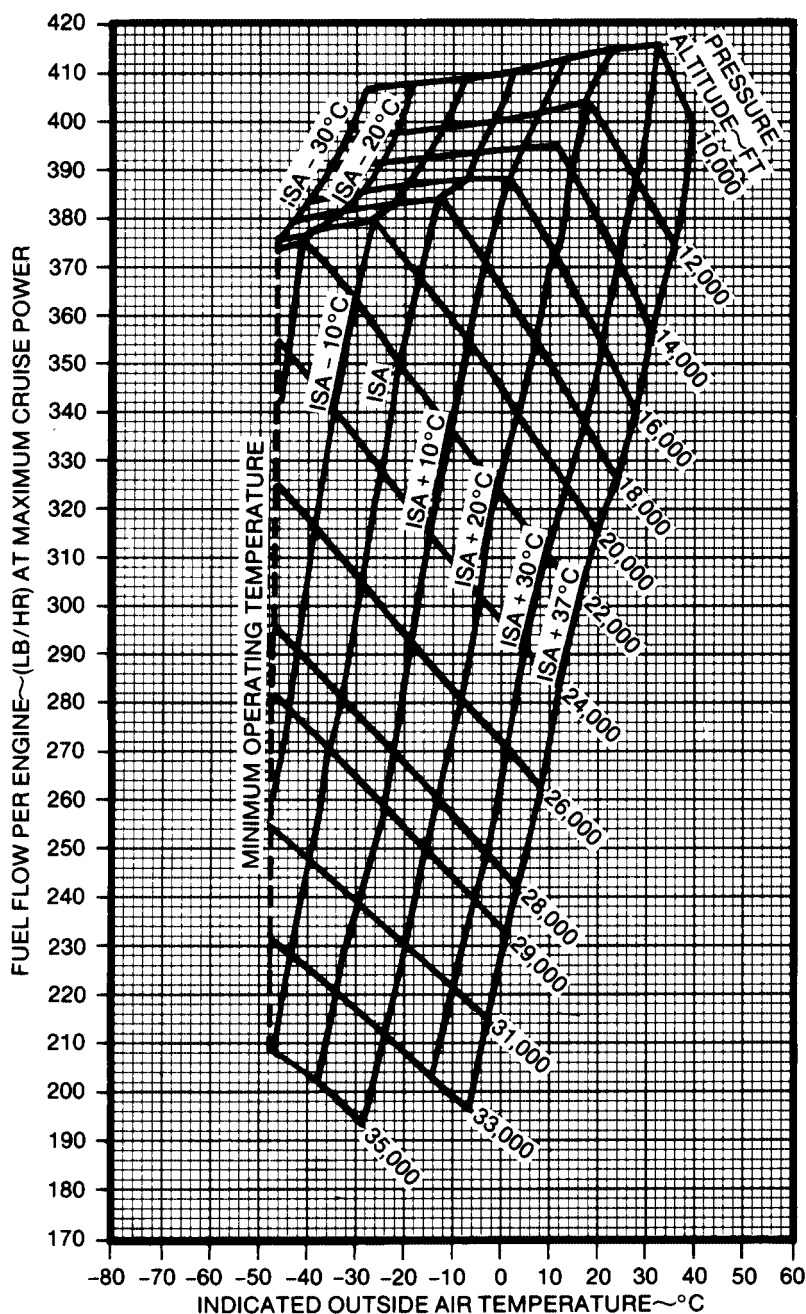
NOTE: Cruise Power settings for aircraft equipped with HFG vary slightly from those with standard gear. For exact figures, consult the AFM.

CRUISE

FUEL FLOW/
MAXIMUM POWER

B200

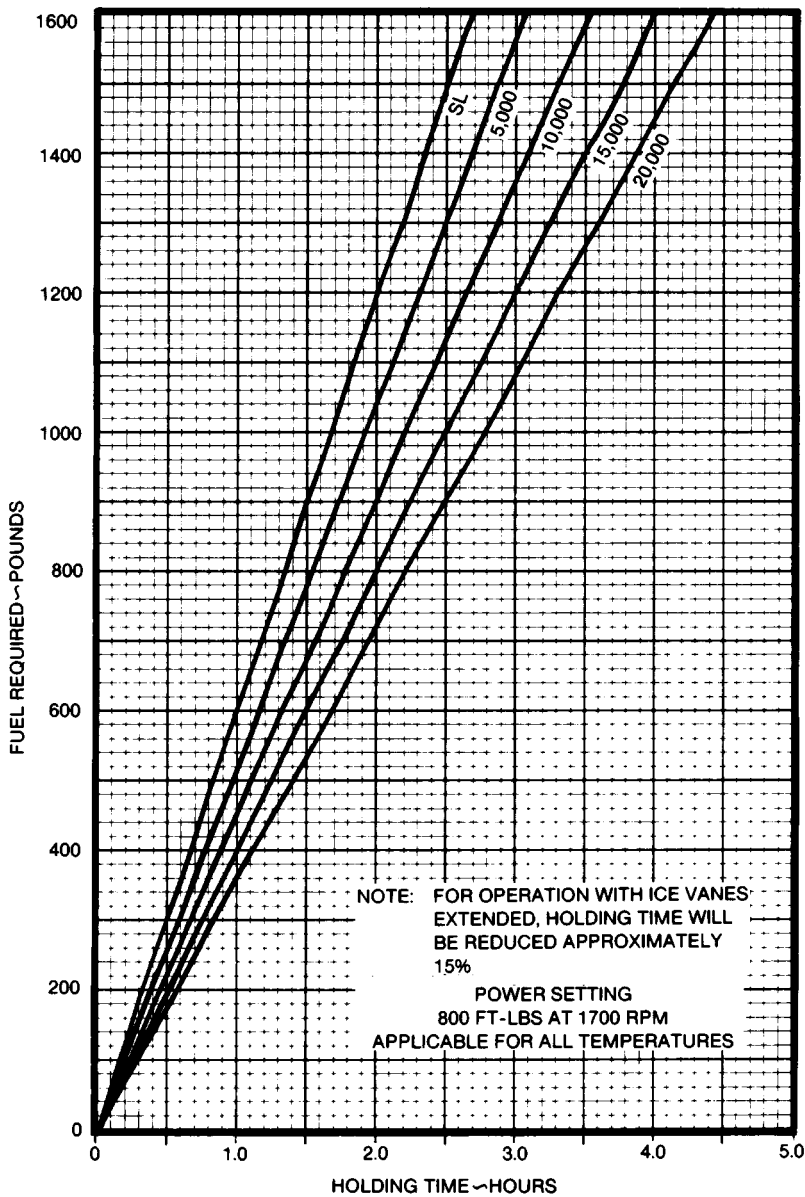
1700 RPM



NOTE: Fuel Flow settings for aircraft equipped with HFG vary slightly from those with standard gear. For exact figures, consult the AFM.

TIME/FUEL

HOLDING



LANDING

PRESSURIZATION CONTROLLER SETTING FOR LANDING

Closest Altimeter Setting	Add To 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

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EMERGENCY AIRSPEEDS (12,500 LBS)

One-engine-Inoperative Best Angle-of-climb (V_{XSE}).....	115 Kts
One-engine-Inoperative Best Rate-of-Climb (V_{YSE}).....	121 Kts
One-engine-Inoperative Enroute Climb.....	121 Kts
Air Minimum Control Speeds (V_{MCA}).....	86 Kts
Emergency Descent.....	181 Kts
Maximum Range Glide.....	135 Kts

ENGINE FAILURE/EMERGENCY ENGINE SHUTDOWN

This procedure applies for any of the following conditions:

- *Unscheduled torque increases in flight (not responsive to power lever movement)*
- *Engine Fire/Failure in flight*
- *Oil/fuel leak*
- *Chip detector light ON (200 only)*

Affected Engine:

1. Condition Lever — FUEL CUTOFF
2. Propeller Lever — FEATHER
3. Firewall Shutoff Valve — CLOSE
4. Fire Extinguisher (if installed) — ACTUATE IF WARNING PERSISTS
5. Generator — OFF
6. Auto Ignition — OFF
7. Autofeather (if installed) — OFF
8. Brake Deice (if installed) — OFF
9. Electrical Load — MONITOR
10. Synchrophaser — OFF

ENGINE FAILURE DURING TAKEOFF (AT OR BELOW V_1) —TAKEOFF ABORTED

1. Power Levers — IDLE
2. Brakes — AS REQUIRED
3. Operating Engine — MAXIMUM REVERSE (if required)

WARNING: Exercise extreme care when using single engine reversing on surfaces with reduced traction.

If insufficient runway remains for stopping:

Emergency Engine Shutdown — EXECUTE

4. Condition Levers — FUEL CUT-OFF
5. Propeller Levers — FEATHER
6. Fuel Firewall Valves — CLOSED
7. Master Switch — OFF (gang bar down)

ENGINE FAILURE IN FLIGHT BELOW V_{MCA}

1. Power — REDUCE AS REQUIRED ON OPERATING ENGINE TO MAINTAIN DIRECTIONAL CONTROL
2. Nose — LOWER TO ACCELERATE ABOVE V_{MCA}
3. Power (operating engine) — ADJUST AS REQUIRED
4. Failed Engine — SECURE (EMERGENCY ENGINE SHUTDOWN)

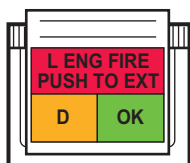
①

L ENG FIRE

R ENG FIRE

Illumination of ENG FIRE lights indicates fire detected in nacelle area. Moisture in system or reflected sunlight can activate annunciator(s) for aircraft prior to BB1439, 1444, BL 139 and BW1 except BB 1463.

②



Illumination of D light indicates extinguisher explosive squib has discharged. In test mode, light bulb tests OK.

Illumination of OK light indicates explosive squib has not discharged; electrical circuitry for fire extinguisher system is intact. Does not indicate bottle pressure.

ENGINE FIRE IN FLIGHT**If visual indication of fire:**

1. ENGINE SHUTDOWN Checklist — ACCOMPLISH (E-2)

If fire persists:

2. EMERGENCY DESCENT — ACCOMPLISH (E-29)

If no visual indication of fire:

Aircraft prior to BB 1439, 1444; BL 139 and BW1 except BB1463:

3. Heading Change (in bright sunlight) — 45 to 90 degrees

If annunciator does not extinguish:

4. ENGINE SHUTDOWN Checklist — CONSIDER (E-2)

For Engine Fire on ground, see page E-4.

ENGINE FIRE ON GROUND**Affected engine:**

1. Condition Lever — FUEL CUT-OFF
2. Fuel Firewall Valve — CLOSE
3. Ignition and Engine Start Switch — STARTER ONLY

If fire persists:

4. Fire Extinguisher — ACTUATE

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

1. Power — MAXIMUM ALLOWABLE
2. Airspeed — MAINTAIN TAKEOFF SPEED OR ABOVE
3. Landing Gear — UP
4. Propeller (Inop Engine) — CONFIRM AUTOFEATHER OR FEATHER
5. Airspeed — V_2 (after obstacles cleared, V_{YSE})

NOTE: If autofeather system in use, do not retard failed engine power lever until autofeather system has completely stopped propeller rotation. To do so, deactivates the autofeather circuit and prevents automatic feathering.

6. Flaps — UP AT V_{YSE}
7. Inoperative Engine — CLEAN UP
 - Condition Lever — FUEL CUT-OFF
 - Propeller Lever — FEATHER
 - Fuel Firewall Valve — CLOSE
 - Generator — OFF
 - Auto Ignition — OFF
 - Auto Feather — OFF
 - Synchrophaser — OFF
8. Electrical Load — MONITOR

ENGINE FLAMEOUT (2ND ENGINE)

1. Power Lever — IDLE
2. Propeller — DO NOT FEATHER
3. Condition Lever — FUEL CUT-OFF
4. Airstart Procedures — CONDUCT (E-7)

NOTE: The propeller will not unfeather without engine operation. If no possibility exists for airstart, feather both propellers and conduct glide procedures.

GLIDE (BOTH ENGINES INOPERATIVE)

1. Landing Gear — UP
2. Flaps — UP

WARNING: Do not feather second engine if restart is possible.

3. Propellers — FEATHERED
4. Airspeed — 135 KTS
5. Electrical Load — REDUCE
6. Cabin Sign — NO SMOKE/FASTEN SEATBELTS
7. Glide Ratio — 2.0 NM PER 1,000 FT ALTITUDE
Decrease by .2 NM for each 10 Kts of headwind.

AIRSTART — STARTER ASSIST

1. Cabin Temp Mode — OFF
2. Vent Blower — AUTO
3. Radiant Heat — OFF
4. Aft Blower — OFF
5. Radar — STANDBY OR OFF
6. Windshield Heat — OFF
7. Power Lever — IDLE
8. Propeller Lever (inoperative engine) — LOW RPM
9. Condition Lever — FUEL CUT-OFF
10. Fuel Firewall Valve — OPEN

NOTE: If conditions permit, retard operating engine ITT to 700°C or less to reduce possibility of exceeding limits. Reduce electrical load to minimum for flight conditions.

11. Ignition and Engine Start — ON
(IGNITION ON annunciator illuminates)
12. Condition Lever — LOW IDLE

When N_1 above 50%:

13. Ignition and Engine Start — OFF
14. Propeller Lever — MATCH TO OPERATING ENGINE
15. Power Lever — MATCH TO OPERATING ENGINE
16. Generator — ON
17. Auto Ignition — ARM
18. Prop Sync — ON
19. Cabin Temp Mode — AUTO
20. Aft Blower (if installed) — AS REQUIRED
21. Bleed Air Valve — OPEN (AS REQUIRED)
22. Radar — AS REQUIRED
23. Windshield Heat — AS REQUIRED

ENGINE FLAMEOUT (2ND ENGINE)

1. Power Lever — IDLE
2. Propeller — DO NOT FEATHER
3. Condition Lever — FUEL CUT-OFF
4. Airstart Procedures — CONDUCT (E-7)

NOTE: The propeller will not unfeather without engine operation. If no possibility exists for airstart, feather both propellers and conduct glide procedures.

GLIDE (BOTH ENGINES INOPERATIVE)

1. Landing Gear — UP
2. Flaps — UP
3. Propellers — FEATHERED
4. Airspeed — 135 KTS
5. Electrical Load — REDUCE
6. Cabin Sign — NO SMOKE/FASTEN SEATBELTS
7. Glide Ratio — 2.0 NM PER 1,000 FT ALTITUDE
Decrease by .2 NM for each 10 Kts of headwind.

**AIRSTART — STARTER ASSIST
(AIRCRAFT WITH EFIS INSTALLED)**

WARNING: If EFIS equipped airplanes not equipped with an EFIS aux power supply: Airstarts may momentarily cause the loss of the attitude display 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.

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. Power Lever — IDLE
9. Prop Lever (inoperative engine) — LOW RPM
10. Condition Lever — FUEL CUT-OFF
11. Firewall Shutoff Valve — OPEN
12. Generator (inoperative engine) — OFF
13. EFIS Power (if installed, & if EFIS aux power is not installed)
— OFF IF CONDITIONS PERMIT
14. Ignition and Engine Start — ON
(IGNITION ON annunciator illuminated)
15. Condition Lever (10% N_1 or Above) — LOW IDLE
16. ITT and N_1 — MONITOR/1,000°C MAXIMUM
17. Ignition and Engine Start (N_1 above 50%) — OFF
18. Prop 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. Bleed Air Valve — OPEN
25. Cabin Temp Mode — AUTO
26. Aft Blower (if installed) — AS REQUIRED
27. Radar — AS REQUIRED
28. Windshield Heat — AS REQUIRED

AIRSTART — NO STARTER-ASSIST (WINDMILLING ENGINE AND PROPELLER)

1. Power Lever — IDLE
2. Propeller Lever — FULL FORWARD
3. Condition Lever — FUEL CUT-OFF
4. Engine Ice Vane (inoperative engine) — RETRACT
5. Fuel Firewall Valve — OPEN
6. Generator (inoperative engine) — OFF
7. Airspeed — 140 KTS MINIMUM
8. Altitude — BELOW 20,000 FT
9. N_1 — 10% MIN
10. Auto Ignition — ARM
(IGNITION ON annunciator illuminates)
11. Condition Lever — LOW IDLE
12. ITT and N_1 — MONITOR (1,000°C MAXIMUM)

After ITT peaks:

13. Power — MATCH TO OPERATING engine
14. Generator — RESET, THEN ON
15. Prop Sync — ON
16. Engine Ice Vanes — AS REQUIRED

ONE ENGINE INOPERATIVE APPROACH AND LANDING

1. Approach Speed — CONFIRM
2. Fuel Balance — CHECK
3. Pressurization — CHECK
4. Cabin Sign — NO SMOKE & FSB
5. Propeller Lever — FULL FORWARD

When certain field can be reached:

6. Flaps — APPROACH
7. Landing Gear — DN
8. Airspeed — $V_{REF} + 30$
9. Interior and Exterior Lights — AS REQUIRED
10. Radar — AS REQUIRED
11. Surface Deice — CYCLE (AS REQUIRED)

If residual ice remains on wing boots:

12. Approach Speed and Landing Distance — INCREASE

When certain no possibility of a go-around:

13. Flaps — DOWN
14. Airspeed — V_{REF}
15. Perform Normal Landing

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

FLAP 100%	LANDING WEIGHT X 1000 (LBS)				
	12.5	12	11	10	9
V_{REF}	103	102	99	96	93

ONE ENGINE INOPERATIVE GO-AROUND

1. Power — **MAXIMUM ALLOWABLE**
2. Landing Gear — **UP**
3. Flaps — **UP**
4. Airspeed — **V_{YSE} MINIMUM**

CHIP DETECT

Indicates possible metal contamination in the engine oil supply. May indicate N₂ power section failure or impending failure.

200 only:	B200 only:
③ L CHIP DETECT 1. Affected Engine — EMERGENCY SHUTDOWN (E-2)	③ R CHIP DETECT R CHIP DETECT 1. Engine Parameters — MONITOR If engine parameters are abnormal, at pilot's discretion: 2. Affected Engine — EMERGENCY SHUTDOWN (E-2)

④

L OIL PRESS

Indicates engine oil pressure is below 40 PSI.

R OIL PRESS

1. 85 - 99 PSI 21,000 ft and Above — **NO ACTION REQUIRED**
2. 85 - 99 PSI below 21,000 ft OR
60 - 84 PSI above 21,000 ft
 - a. **DO NOT EXCEED 1,100 ft - lbs TORQUE**
 - b. **Correct fault prior to next flight**
3. Below 60 PSI —
ENGINE — EMERGENCY ENGINE SHUTDOWN (SEE E-2) OR
Continue using minimum power for flight.
LAND AT NEAREST SUITABLE AIRPORT.

HIGH OIL PRESSURE INDICATION (ABOVE 135 PSI BUT NOT EXCEEDING 200 PSI)

Ground operation, excluding transients during cold ground starts.

- **Correct fault prior to flight.**

In Flight:

1. **Continue flight to destination at pilot's discretion.**
2. **Correct fault prior to next flight.**

5

L IGNITION ON**R IGNITION ON**

Indicates ignition system is activated; either the ignition and start switch is in ON, or auto ignition switch is in ARM and engine torque is below approximately 400 ft. lbs.

If illumination for no obvious reason during take-off, climb, or cruise:

1. Engine Oil Pressure/Torquemeter — CHECK

If oil pressure low:

2. EMERGENCY ENGINE SHUTDOWN Checklist — CONSIDER (SEE E-2)

⑥

RVS NOT READY

Propeller control lever(s) not full forward when landing gear switch handle is in DOWN.

Before reversing thrust:

1. Prop Control Levers — FULL FORWARD

WARNING: Using reverse without propeller levers full forward will result in reduced power reverse thrust, and possible asymmetric thrust condition.

⑦

PROP SYNC ON

Propeller synchrophaser is ON with landing gear extended.

For takeoff, landing, and single engine operation:

1. Synchrophaser — OFF

⑧

L AUTOFEATHER**R AUTOFEATHER**

Illumination of both lights indicate the autofeather switch is in ARM and both engines are operating above 90% N_1 . Unless both annunciators are illuminated, the autofeather system is not fully armed and operational.

Simuflite Tip:

If there is any loss of normal propeller control such as the following symptoms:

1. Propeller above redline (approximately 2,080 RPM) and propeller controls are ineffective (propeller governor failure)
2. Propeller speed is controlled by power lever (apparent fixed pitched propeller)

Propeller can not be controlled by propeller lever (linkage problem)

Do NOT use reverse thrust upon landing. With these types of failures, Engine speed and propeller pitch may not be controllable when reverse thrust is selected. Plan on longer landing distances.

Also, propeller may have lost the ability to feather. Do not shut down the engine unless absolutely necessary.

The diagram illustrates the aircraft's electrical architecture. At the top, the **EXT POWER RIGHT WING** is connected to an **EXT POWER RELAY**. The **BATT** (battery) is connected to a **HOT BAT BUS**, which is linked to a **BATTERY RELAY** and the **MAIN BAT BUS**. Two **START GEN** units (Left and Right) are connected to the **MAIN BAT BUS** via **LEFT START RELAY** and **RIGHT START RELAY**, respectively. Each start generator is also connected to a **G C P** (Generator Control Panel) and a **VOLT/LOAD METER**. The **MAIN BAT BUS** feeds into an **ISOLATION BUS**, which then splits into **LEFT GENERATOR BUS** and **RIGHT GENERATOR BUS**. The **ISOLATION BUS** is protected by a 325 AMP circuit breaker. The **LEFT GENERATOR BUS** and **RIGHT GENERATOR BUS** are each protected by 325 AMP circuit breakers. Both generator buses supply power to four **DUAL FED BUS** units (#1, #2, #3, #4), each protected by a 50 AMP circuit breaker. The **LEFT GENERATOR BUS** also supplies power to **#1 AVIONICS BUS** and **#3 AVIONICS BUS** through **#1 AVIONICS POWER RELAY** and **#3 AVIONICS POWER RELAY**, respectively. The **RIGHT GENERATOR BUS** supplies power to **#2 AVIONICS BUS** through **#2 AVIONICS POWER RELAY**. A **LANDING GEAR MOTOR** is connected to the **RIGHT GENERATOR BUS** through a 60 AMP circuit breaker. Both generator buses also supply power to a set of **EQUIPMENT** (SEE EQUIPMENT LIST) through a series of circuit breakers. At the bottom, the **LEFT GENERATOR BUS** supplies power to **#1 INVERTER** through a 50 AMP circuit breaker and an **INVERTER RELAY**. The **RIGHT GENERATOR BUS** supplies power to **#2 INVERTER** through a 50 AMP circuit breaker and an **INVERTER RELAY**. Both inverters output 115 VAC and 26 VAC.

ELECTRICAL DISTRIBUTION (TYPICAL)

DC SYSTEM	DC SYSTEM (CONT.)
LEFT GEN BUS ● #1 Avionics Power #1 Inverter #3 Avionics Power Condenser Blower Left Radiant Heat Pilot's Windshield Anti-Ice RIGHT GEN BUS ● #2 Avionics Power #2 Inverter Aft Evaporator Blower Power Air Conditioner Clutch Copilot's Windshield Anti-Ice DC Test Jack Landing Gear Motor Mod Optional Equipment Right Radiant Heat Vent Blower Power HOT BAT BUS Battery Relay Entry Lts/Clock Lt/EXT PWR Sense L/R Eng Fire Ext L/R Firewall Shutoff Valve R NAV Memory ▲ Standby Pumps BB-1 to 1097 Stereo ▲ #1 DUAL FED BUS #1 Inverter Control Annunciator Power Automatic Oxygen Control Avionics Master Switch Beacon Lights Switch Brake Deice ▲ Cabin Pressure Control Encoder Altimeter ▲ Fire Detection Fuel Drain Collector Pumps Instrument Indirect Lights Landing Gear Warning Horn Left Bleed Air Control Left Bleed Air Warning Left Chip Detector Left Engine Fuel Control Heat Left Fuel Flow ◆ Left Fuel Vent Heat Left Gen Control Left Gen Overheat ▲ Left Ice Vane Control Left Landing Light Switch Left Oil Pressure Left Oil Pressure Warning ▲	#1 DUAL FED BUS (cont.) Left Oil Temperature Left Pitot Heat Switch Overhead/Side Panel Lights Pilot's Turn and Slip Pitch Trim Pneumatic Surface Deice Prop Automatic Heat Switch Prop Synchrophaser Right/Gyro Instrument Lights Stall Warning System Strobe Lights Switch Yaw Damper #2 DUAL FED BUS #2 Inverter Control Annunciator Indicator Autofeather Avionics & Engine Instrument Lights Cabin Pressure Loss ▲ Cabin Reading Lights Cabin Temperature Control Cigarette Lighter Copilot Trn and Slip Fluorescent Lights/NO SMK./SB/Cabin Furnishings Master Control Ice Lights Switch Landing Gear Control Landing Gear Position Indicator Navigation Light Switch Recognition Light Switch Right Bleed Air Control Right Bleed Air Warning Right Chip Detector Right Engine Fuel Control Heat Right Fire Detection Right Fuel Flow ◆ Right Fuel Vent Heat Right Generator Control Right Generator Overheat ▲ Right Ice Vane Control Right Landing Light Switch Right Oil Pressure Indicator Right Oil Pressure Warning ▲ Right Oil Temperature Indicator Right Pitot Heat Switch Rudder Boost Control Stall Warning Heat Switch Subpanel and Console Lights Taxi Lights Switch Windshield Wiper

▲ Optional

● Single Fed Items

▼ BB-1 to 224

■ BB-1 to 234

◆ BB-225 and subsequent

DC SYSTEM (CONT.)	DC SYSTEM (CONT.)
#3 DUAL FED BUS Flap Control and Indicator Flap Motor Left Aux Fuel Qty/Warn/Xfer Left Firewall Valve Left Fuel Pressure Warning Left Fuel Quantity Left Ignitor Power Left Manual Prop Deice Left Standby Fuel Pump Left Start Control	#4 DUAL FED BUS Fuel Crossfeed Manual Prop Deice Control Propeller Governor Test Right Aux Fuel Qty/Warn/Xfer Right Firewall Valve Right Fuel Pressure Warning Right Fuel Quantity Right Ignitor Power Right Manual Prop Deice Right Standby Fuel Pump Right Starter Control
AC SYSTEM	AC SYSTEM (CONT.)
115 VAC BUS AC Avionics Equipment Inverter Fail Warning Light	26 VAC BUS Left Fuel Flow ▼ Left Torque Meter Right Fuel Flow ■ Right Torque Meter Yaw Rate

▲ Optional

● Single Fed Items

▼ BB-1 to 224

■ BB-1 to 234

◆ BB-225 and subsequent

EXCESSIVE LOADMETER INDICATION (OVER 100%)

1. Loadmeter — MONITOR AS BATTERY SWITCH MOVED TO OFF

If loadmeter still indicates above 100%:
--

2. Non-Essential Electrical Equipment — OFF

If loadmeter indicates 100% or below:

2. Battery — ON

BUS FEEDER CIRCUIT BREAKER TRIPPED

(Fuel panel bus feeders and right circuit breaker panel bus feeders)

1. Do Not Reset in Flight

A short on the bus is indicated. See ELECTRICAL DISTRIBUTION table (E-12).

CIRCUIT BREAKER TRIPPED

If non-essential circuit affected:

1. Do Not Reset In Flight

If essential circuit affected:

1. Circuit Breaker
(After allowing to cool for a minimum of 10 sec) — RESET

If CB trips again:

2. Do Not Reset

AVIONICS MASTER POWER SWITCH FAILURE

The avionics master PWR switch fails to operate in ON.

1. Avionics Master CB — PULL

Turning the avionics master PWR switch ON removes power that holds the avionics relay open. If the switch fails to OFF, pulling the CB removes power to the relay and restores power to the avionics buses.

CURRENT LIMITER CHECK

1. One Generator — OFF
2. Voltmeters — CHECK (press for volts)

See ELECTRICAL DISTRIBUTION table (E-12).

NOTE: A 28V reading corresponds to the generator that is ON except for the first example, where either generator may be ON.

IF		THEN
L VOLTMETER	R VOLTMETER	
28	28	Both limiters OK; all buses operating.
28	BAT VOLTS	Left limiter failed. Reduce electrical load on Right Generator bus, which is powered by battery only
BAT VOLTS	28	Right limiter failed. Reduce electrical load on Left Generator bus, which is powered by battery only.
28	ZERO	Right limiter failed; Right Generator bus inoperative.
ZERO	28	Left limiter failed; Left Generator bus inoperative.

This schematic diagram illustrates a dual-fed power system, designed for redundancy and flexibility in power distribution. The system is divided into two main sections: the left generator section and the right generator section, each featuring a generator, a control unit, and associated switching components.

Left Generator Section:

- Generator:** L DC GEN (Left DC Generator).
- Control Unit:** GENERATOR CONTROL UNIT.
- Switching:** LEFT GEN SWITCH, LEFT STARTER RELAY, LEFT LINE CONTACTOR.
- Meters:** LEFT VOLT-LOAD METER.
- Field Connection:** TO GENERATOR FIELD.

Right Generator Section:

- Generator:** R DC GEN (Right DC Generator).
- Control Unit:** GENERATOR CONTROL UNIT.
- Switching:** RIGHT GEN SWITCH, RIGHT STARTER RELAY, RIGHT LINE CONTACTOR.
- Meters:** RIGHT VOLT-LOAD METER.
- Field Connection:** TO GENERATOR FIELD.

Power Distribution and Backup:

- Battery (BATT):** Provides backup power to the system.
- BATT AMMETER:** Monitors battery current.
- BATT SWITCH:** Controls the battery connection.
- BATT RELAY:** Controls the battery connection to the MAIN BATTERY BUS.
- EXTERNAL POWER RELAY:** Controls the connection to the EXTERNAL POWER RECEPTACLE.
- EXTERNAL POWER RECEPTACLE:** Provides external power to the system.

Central Distribution and Avionics:

- MAIN BATTERY BUS:** The central hub for power distribution.
- ISOLATION BUS:** Connects the MAIN BATTERY BUS to the dual-fed buses.
- DUAL FED BUSES:** #1, #2, #3, and #4, providing redundant power paths.
- AVIONICS BUSES:** AVIONICS BUS #1, AVIONICS BUS #2, and AVIONICS BUS #3 (OPTIONAL), providing power to the avionics system.
- AVIONICS RELAY:** Controls the connection to the avionics buses.
- INVERTER RELAY:** Controls the connection to the inverters.

Generators and Inverters:

- LEFT GENERATOR BUS:** The output of the left generator.
- RIGHT GENERATOR BUS:** The output of the right generator.
- #1 INVERTER:** Provides 115 VAC and 26 VAC output.
- #2 INVERTER:** Provides 115 VAC and 26 VAC output.

DC BUS EQUIPMENT LIST

(Aircraft with EFIS installed)

NO. 1 DUAL FED BUS	
AVIONICS Alt Alert Aural Warning Avionics Master Control Display PRC SR ⁽⁴⁾ Multi FCTN PRC SR. L ⁽⁴⁾ Inverter Cont. No. 1 ⁽¹⁾ Pilot Altm Air Data Pilot Audio CVR	FLIGHT INSTRUMENTS OAT EADI, Pilot ⁽⁴⁾ EHSI, Pilot ⁽⁵⁾ Turn and Slip, Pilot
ELECTRICAL Gen Control, L	LIGHTS Instrument Indirect Lights ⁽¹⁾ Cabin Lights ⁽²⁾ Avionics and Engine Instr Lights ^{(2) (3)} Flight Instr Lights, Plt Flight Instr Lights, Coplt ⁽¹⁾ Side Panel Lights Overhead Flood Lights ^{(1) (2)} Beacons Strobes Tail Flood Lights Ldg Light, L Avionics Annunciators
ENGINES Chip Detect, L Engine Fuel Control Heed, L Fire Detection Eng Anti-Ice, Main, L Eng Anti-Ice, Standby, L	PROPELLER Prop Auto Heal Prop Sync
ENGINE INSTRUMENTS Eng Instr Power, L ⁽³⁾ Fuel Flow, L Oil Press, L Oil Temp, L N1, L ⁽³⁾ N2, L ⁽³⁾ Torque, L ⁽³⁾ ITT, L ⁽³⁾	WARNINGS/ANNUNCIATORS Annunciator Power Avionics Ann Bleed Air Warning, L Landing Gear Warn Horn Oil Press Warn, L NO SMOKE & FSB Signs ^{(2) (3)} Stall Warning System N ₁ , L ⁽³⁾
ENVIRONMENTAL Bleed Air Control, L Oxygen Control, Auto Press Control	WEATHER Fuel Vent Heat, L Pneumatic Surface Deice Brake Deice Pitot Heat, L
FLIGHT CONTROLS Pitch Trim	

(1) BB-1439, BB-1444 thru BB-1448, BB-1450 thru BB-1457

(2) BB-1449, BB-1458 thru BB-1462, BB-1464 thru BB-1485, except BB-1484; BL-139 and BL-140

(3) BB-1484, BB-1486 thru BB-1842, except BB-1834; BL-141 thru BL-147; BW-1 thru BW-29

(4) EFIS-85 Installations

(5) EFIS-84 Installations

(6) BB-1802 thru BB-1842, except BB-1834

DC BUS EQUIPMENT LIST (CONT.)

(Aircraft with EFIS installed)

NO. 2 DUAL FED BUS	
AVIONICS Inverter Cont, No. 2 ⁽¹⁾ Copilot Audio Cabin Audio Multi FCTN PRC SR, R ⁽⁴⁾ ELECTRICAL Generator Control, R ENGINES/PROPELLERS Autofeather Engine Fuel Control Heat, R Chip Detect, R Eng Anti-ice, Main, R Eng Anti-ice, Standby, R ENGINE INSTRUMENTS Eng Instr Power, R ⁽³⁾ Fuel Flow, R Oil Press, R Oil Temp, R N ₁ , R ⁽³⁾ N ₂ , R ⁽³⁾ Torque, R ⁽³⁾ ITT, R ⁽³⁾ ENVIRONMENTAL Bleed Air Control, R Cabin Temp Control FLIGHT CONTROLS Rudder Boost Control FLIGHT INSTRUMENTS EADI Pilot ⁽⁵⁾ EH SI, P ⁽⁴⁾ Encoding Altimeter, Copilot Turn and Slip, Copilot	FURNISHINGS Cigar Lighter Furnishings Master Control LANDING GEAR Landing Gear Relay LIGHTS Instrument Indirect Lights ⁽²⁾ Cabin Lights ⁽¹⁾ Avionics and Engine Instr Lights ⁽¹⁾ Cabin Reading Lights Flight Instr Lights, Copilot ^{(2) (3)} Overhead, Subpanel and Console Lights Taxi Lights Ice Lights Nav Lights Ldg Light, R Recog Light WARNINGS/ANNUNCIATORS Annunciator Indicator Bleed Air Warning, R Landing Gear Pos Indicators No Smoke & FSB Signs ⁽¹⁾ Oil Press Warn, R WEATHER Fuel Vent Heat, R Windshield Wiper Stall Warning Heat Pitot Heat, R

(1) BB-1439, BB-1444 thru BB-1448, BB-1450 thru BB-1457

(2) BB-1449, BB-1458 thru BB-1462, BB-1464 thru BB-1485, except BB-1484; BL-139 and BL-140

(3) BB-1484, BB-1486 thru BB-1842, except BB-1834; BL-141 thru BL-147; BW-1 thru BW-29

(4) EFIS-85 Installations

(5) EFIS-84 Installations

(6) BB-1802 thru BB-1842, except BB-1834

DC BUS EQUIPMENT LIST (CONT.)

(Aircraft with EFIS installed)

NO. 3 DUAL FED BUS	NO. 4 DUAL FED BUS
ENGINES Start Control, L Igniter Power, L	ENGINES Start Control, R Igniter Power, R
FUEL Firewall Shutoff Valve, L Stby Fuel Pump, L Aux Fuel Qty Warning, L Aux Fuel Trans, L Fuel Quantity, L Fuel Pressure Warning, L	FUEL Firewall Shutoff Valve, R Stby Fuel Pump, R Aux Fuel Qty. Warning, R Aux Fuel Trans, R Fuel Crossfeed Fuel Quantity, R Fuel Pressure Warning, R
PROPELLERS Prop Deice, Manual L	PROPELLERS Prop Governor Prop Deice, Manual R Prop Deice Control, Manual
FLIGHT CONTROLS Flap Motor Flap Control Flap Indicator	

AVIONIC BUSES			
NO. 1 AVIONICS BUS	NO. 2 AVIONICS BUS	AC BUSES	
		26 VAC	115 VAC
Comm 1	Comm 2		
Nav 1	Nav 2	Nav 1 & 2	Vertical Gyro
DME 1	DME 2 ₍₄₎	Torque, L & R _{(1) (2)}	
Transponder 1	Transponder 2		
RMI 2 ₍₄₎	RMI 1 ₍₄₎		
Compass 1	Compass 2 ₍₄₎	Compass 1 & 2	
ADF	EFIS Aux Battery	ADF	
A/P Servo	TAS	Autopilot	
FCS Power	EHSI-74, Copilot		
	MFD ₍₄₎		Radar
Radio Altimeter		Yaw Rate ₍₁₎₍₂₎	AC Test Jack
EFIS Fan NORM	EFIS Fan STBY		
FMS		FMS	
EGPWS ₍₆₎			

- (1) BB-1439, BB-1444 thru BB-1448, BB-1450 thru BB-1457
- (2) BB-1449, BB-1458 thru BB-1462, BB-1464 thru BB-1485, except BB-1484; BL-139 and BL-140
- (3) BB-1484, BB-1486 thru BB-1842, except BB-1834; BL-141 thru BL-147; BW-1 thru BW-29
- (4) EFIS-85 Installations
- (5) EFIS-84 Installations
- (6) BB-1802 thru BB-1842, except BB-1834

DC BUS EQUIPMENT LIST (CONT.)

(Aircraft with EFIS installed)

LEFT GENERATOR BUS	RIGHT GENERATOR BUS
AVIONICS Avionics Bus No. 1 Avionics Bus No. 3 ⁽¹⁾⁽²⁾ No. 1 Inverter Control ENVIRONMENTAL Condensed Blower FWD Electric Heat WEATHER Pilots Windshield Heat	AVIONICS Avionics Bus No. 2 No. 2 Inverter Control ELECTRICAL DC Test Jack ENVIRONMENTAL Aft Blower Aft Electric Heat Air Conditioner Clutch Vent Blower WEATHER Copilots Windshield Heat FURNISHINGS Toilet Refreshment Bars, L&R Inverter (Cabin Outlets) ⁽³⁾ LANDING GEAR Landing Gear Motor
HOT BAT BUS	
Nav Memory ^{(1) (2)} Battery Relay External Power Sense Eng Fire Extinguisher, L Eng Fire Extinguisher, R Firewall Shutoff Valve, L Firewall Shutoff Valve, R Entry Light Clock Light	

- (1) BB-1439, BB-1444 thru BB-1448, BB-1450 thru BB-1457
- (2) BB-1449, BB-1458 thru BB-1462, BB-1464 thru BB-1485, except BB-1484; BL-139 and BL-140
- (3) BB-1484, BB-1486 thru BB-1842, except BB-1834; BL-141 thru BL-147; BW-1 thru BW-29
- (4) EFIS-85 Installations
- (5) EFIS-84 Installations
- (6) BB-1802 thru BB-1842, except BB-1834

EXCESSIVE LOADMETER INDICATION (OVER 100%)

1. Loadmeter — MONITOR AS BATTERY SWITCH MOVED TO OFF

If loadmeter still indicates above 100%:

2. Non-Essential Electrical Equipment — OFF

If loadmeter indicates 100% or below:

2. Battery — ON

BUS FEEDER CIRCUIT BREAKER TRIPPED

(Fuel panel bus feeders and right circuit breaker panel bus feeders)

1. Do Not Reset in Flight

A short on the bus is indicated. See ELECTRICAL DISTRIBUTION table (E-12).

DUAL GENERATOR FAILURE

L DC GEN AND R DC GEN

NOTE: This checklist applies to BB-1439, BB-1444 thru BB-1842 except BB-1463 and BB-1834;BL-139 thru BL-147;BW-1 thru BW-29.

WARNING: The following procedure is intended to provide 30 minutes of battery life for a typical airplane. This battery life is based on specific assumptions which may not occur in every instance such as the generator loads at the time of failure, battery condition, the time required to load shed non-essential equipment and the electrical equipment installed on the airplane.

1. GeneratorsRESET, THEN ON
- If Either Generator Will Reset:
2. Operating Generator LoadmeterDO NOT EXCEED 100%
(88% above 31,000 ft.)
3. Inoperative Generator OFF
- If Neither Generator Will Reset:
4. Generators OFF
5. Maintain airplane control using the following instruments:
- a. Pilot's and Copilot's Airspeed
- b. Copilot's Attitude Indicator
- c. Copilot's Altimeter
- d. Copilot's EHSI/HSI or Standby Compass
6. Non-essential Equipment:

WARNING: The following step will cause the pilot's attitude indicator and the autopilot to become inoperative.

- a. Inventor OFF
- b. Auto-Ignition OFF
- c. Engine Anti-Ice LEAVE IN EXISTING POSITION
- d. Traffic Advisory System (if installed) OFF
- e. All Exterior Lights..... OFF
- Beacon on when required
- f. All Ice Protection Except L Pitot heat OFF
- Surface Deice. ACTIVATE WHEN REQUIRED
- g. Landing Gear Relay CB PULL
- h. Comm 1 OFF
- i. NAV 1 OFF
- j. Transponder SELECT NO.2
- k. Radar OFF
- l. ADF..... OFF
- m. Cabin Furnishings, Lights, No Smoke/FSB OFF
- n. Vent Blower AUTO
- o. Right Bleed Air Valve ENVIR OFF
- p. Aft Blower (if installed). OFF
- q. Cabin Temp Mode Control OFF
- r. EFIS Power OFF

- s. FMS (if installed) OFF
- t. Electric Trim OFF
- u. Overhead Flood Lights (if required) ON
- v. Instrument Indirect Lights OFF
- w. Master Panel Lights OFF
- x. Left and Right Fuel Control
 - Heat CBs (right panel) PULL
- y. Avionics No. 1 Circuit Breaker (right panel) PULL
- z. EFIS Aux Battery CB (right panel) PULL
- 7. Verify that only the following equipment are on and all other optional equipment not mentioned above are off.
 - a. Battery
 - b. Avionics Master
 - c. L Pitot Heat (if required)
 - d. Comm 2 and NAV 2
 - e. Flood lights (if required)
- 8. Battery Ammeter (if installed) MONITOR
(should be 28 amps or less)
- 9. Avoid icing conditions, if possible.
- 10. Land NEAREST SUITABLE AIRPORT
- 11. Flaps DO NOT LOWER
- 12. Landing Gear EXTEND MANUALLY
- 13. Restrict use of Landing/Taxi Lights to one light for 5 minutes or less.

If An ILS Approach Is Required:

- 14. Obtain Radar Vectors to final, tune NAV 2, and monitor the copilot's HSI.

WARNING: The following step may cause the airplane battery to be depleted in less than 30 minutes.

If Navigation Using VOR Equipment Is Required:

- 15. Select either inverter ON, tune NAV 2, and monitor the copilot's HSI.

CIRCUIT BREAKER TRIPPED

If non-essential circuit affected:

1. Do Not Reset In Flight

If essential circuit affected:

2. Circuit Breaker (after allowing to cool for a minimum of 10 seconds) — RESET

If CB trips again:

3. Do Not Reset

AVIONICS MASTER POWER SWITCH FAILURE

The avionics master PWR switch fails to operate in ON.

1. Avionics Master CB — PULL

Turning the avionics master PWR switch ON removes power that holds the avionics relay open. If the switch fails to OFF, pulling the CB removes power to the relay and restores power to the avionics buses.

CURRENT LIMITER CHECK

1. One Generator — OFF
2. Voltmeters — CHECK (press for volts)

See ELECTRICAL DISTRIBUTION table (E-12).

NOTE: A 28V reading corresponds to the generator that is ON except for the first example, where either generator may be ON.

IF		THEN
L VOLTMETER	R VOLTMETER	
28	28	Both limiters OK; all buses operating.
28	BAT VOLTS	Left limiter failed. Reduce electrical load on Right Generator bus, which is powered by battery only
BAT VOLTS	28	Right limiter failed. Reduce electrical load on Left Generator bus, which is powered by battery only.
28	ZERO	Right limiter failed; Right Generator bus inoperative.
ZERO	28	Left limiter failed; Left Generator bus inoperative.

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INVERTER

Indicates the selected inverter is inoperative.

INVERTER FAILURE

1. Other Inverter — **SELECT**
2. AC voltage/frequency — **CHECK**
Normal range is 380-480 Hz and 105-120V.

10

R GEN OVHT

Indicates the generator frame temperature is above 157°C (315°F).

L GEN OVHT**GENERATOR OVERHEAT****If during flight:**

1. Affected Generator — **OFF**

If annunciator does not extinguish:

2. **ENGINE SHUTDOWN Checklist — CONSIDER EMERGENCY SHUTDOWN (E-2)**

If during ground operations:

1. Electrical Load — **REDUCE**

OR

1. **ENGINE — SHUTDOWN**

⑪

L DC GEN

Indicates the associated generator is off-line or failed.

R DC GEN**SINGLE GENERATOR INOPERATIVE**

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

If generator does not reset:

3. Generator — OFF
4. Loadmeter — DO NOT EXCEED 100% (88% ABOVE 31,000 FT)

NOTE: Current limiters check (E-14).

If Current Limiter failed

Inverter – consider matching to operating generator.

⑫

EXT PWR

Indicates external power plug is connected to the aircraft; does not indicate the operational status of the external power unit.

1. Voltmeters — CHECK

Verify the GPU is providing power and is set for proper voltage.

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BATTERY CHARGE

Illumination indicates battery is being charged with 7 amps or more for 6 seconds or more.

In Flight:

2. Battery Switch — OFF
Note loadmeter change

If annunciator extinguishes:

3. Continue To Destination

If annunciator does not extinguish:

4. Land At Nearest Suitable Airport

On ground after engine start:

- Illumination of the BATTERY CHG indicates an above normal charge current.
- The BATTERY CHG should extinguish within 5 minutes after a battery start.
- If the BATTERY CHG does not extinguish, or it re-illuminates, the battery charge current should be checked every 90 seconds using the procedure below until the BATTERY CHG extinguishes.
- No decrease in charging current between checks indicates an unsatisfactory condition. Remove battery and check prior to flight.
- Do not takeoff with the BATTERY CHG illuminated unless a decreasing charge current is confirmed.

1. Either Generator..... OFF
2. VoltmeterVERIFY INDICATION OF 28 VOLTS
3. Battery.....OFF MOMENTARILY
NOTING DECREASE IN LOADMETER
4. Battery..... ON

If Decrease in Loadmeter Exceeds 2.5%.

5. Battery.....CONTINUE TO CHARGE,
REPEATING STEPS 3 & 4 EVERY 90 SECONDS
6. BATTERY CHG EXTINGUISHED WHEN
DECREASE IN LOADMETER IS LESS THAN 2.5%

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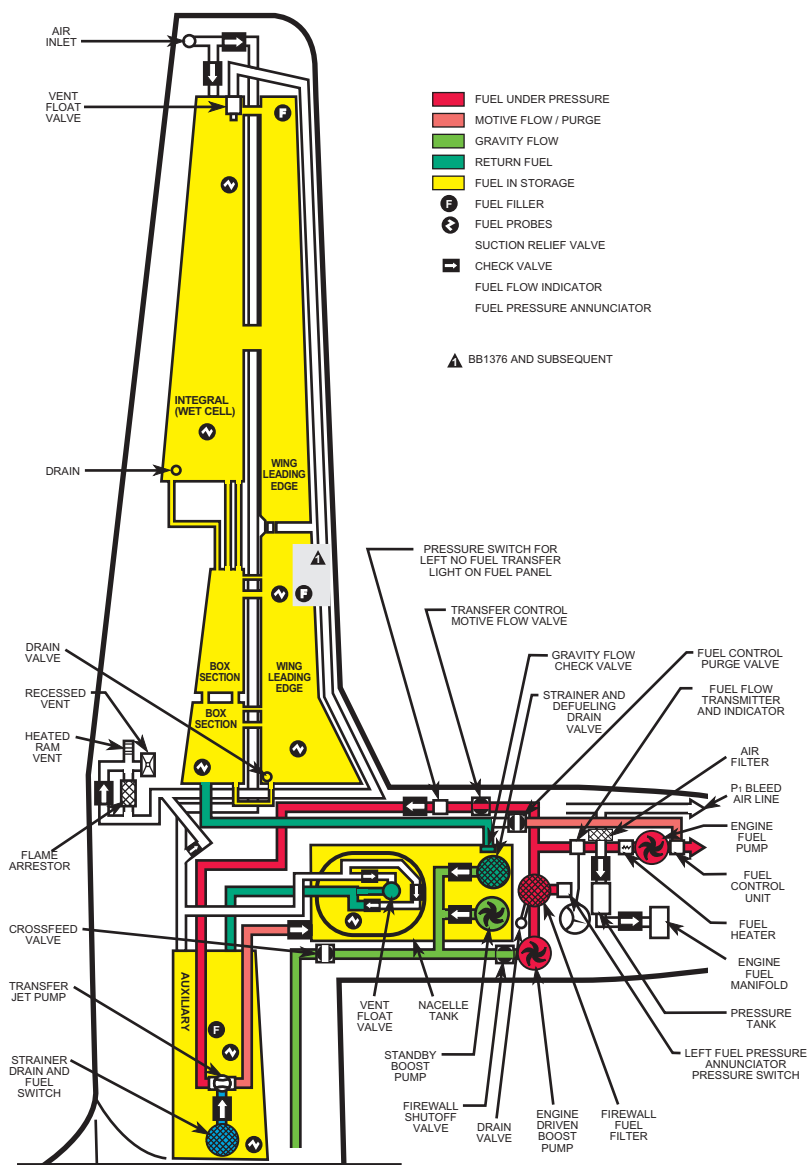


Spare annunciator light position for optional equipment not installed. Spare lights should illuminate during annunciator test.

In flight, they can be used as a temporary source of spare bulbs for:

- gear handle in transit lights
- gear down-and-locked lights
- other annunciator lights
- elevator trim switch/button
- master caution flasher
- master warning flasher
- fuel no transfer lights
- instrument panel post lights
- pressurization controller lights
- magnetic compass light.

FUEL SYSTEM



15

L FUEL PRESS

R FUEL PRESS

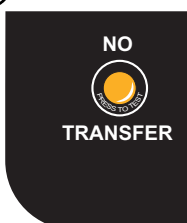
Indicates fuel pressure between the engine-driven boost pump and the main fuel pump is below 10 ± 1 PSI.

1. Standby Boost Pump (failed side) — ON
2. FUEL PRESS annunciator should extinguish.
3. Monitor oil temperature and oil pressure

Failure of the engine-driven boost pump is uncommon. Thus, illumination of either FUEL PRESS annunciator may signal a fuel leak. Unusually high or low fuel flow indications may be evidence of a fuel leak. Illumination could also indicate that the oil scavenge pump has failed because it uses the same drive shaft as the boost pump.

NOTE: Check for evidence of fuel leak. If fuel leaking, see EMERGENCY ENGINE SHUTDOWN (PAGE E-2).

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Indicates (1) fuel is in the auxiliary tank, and (2) fuel is not transferring from the auxiliary tank to the nacelle tank.

AUXILIARY FUEL TRANSFER FAILURE

1. Auxiliary Transfer Switch — OVERRIDE
NO TRANSFER annunciator should extinguish.
If the annunciator remains ON, auxiliary fuel may not be usable.
2. Auxiliary Fuel Quantity — MONITOR

When auxiliary fuel tank empty:

3. Auxiliary Tank Transfer — AUTO

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FUEL CROSSFEED

Indicates the fuel crossfeed switch is in the crossfeed position (left or right); the annunciator does not prove the valve is open.

1. Standby Boost Pumps — OFF
2. Auxiliary Transfer Switches — AUTO
3. Crossfeed — LEFT OR RIGHT (FUEL CROSSFEED ILLUMINATED)

4. Fuel Gauges — MONITOR
Verify fuel is crossfeeding.

When crossfeed is discontinued:

5. Fuel Gauges — MONITOR
Verify that crossfeed has stopped.

If fuel is required from the inoperative engine's auxiliary fuel tank and the reason for engine shutdown was not an engine fire or fuel leak:

6. Fuel Firewall Valve (inoperative engine) — OPEN
FUEL PRESS Annunciator extinguished.
7. No Transfer Light (inoperative engine) — EXTINGUISHED IN 30 TO 50 SECONDS

To discontinue crossfeed:

8. Crossfeed Switch — OFF (centered)
9. Fuel crossfeed — EXTINGUISHED

LANDING GEAR MANUAL EXTENSION (MECHANICAL SYSTEM)

NOTE: On aircraft prior to BB-1193 and BL-73 without Beech Kit P/N 101-8018-1, gear fails to extend after placing gear control handle down.

1. Airspeed — 130 KTS (CONSIDER FLAPS 40%)
2. Landing Gear Relay CB (pilot's subpanel) — PULL
3. Gear Handle — DOWN
4. Emergency Engage Handle — LIFT AND TURN CLOCKWISE TO THE STOP TO ENGAGE
5. Alternate Extension Handle — PUMP
Pump up and down until the 3 green GEAR DOWN lights illuminate.

WARNING: If the 3 green gear down lights do not illuminate (e.g., in case of electrical system failure), check gear warning system using flaps past approach or either power lever reduced. If unable to verify gear down, continue pumping (even though this may damage the drive mechanism) until sufficient resistance is felt to ensure gear down and locked.

CAUTION: Stop pumping when the 3 green gear down lights illuminate. Further movement could damage drive mechanism and prevent electrical gear retraction.

WARNING: After performing an emergency landing gear extension, do not stow pump handle, move any landing gear controls, or reset any switches or CBs until the aircraft is on jacks. The Landing gear should be considered UNSAFE until aircraft is on jacks. Landing gear cannot be retracted manually.

LANDING GEAR MANUAL EXTENSION (HYDRAULIC SYSTEM)

Gear fails to extend after placing gear control handle down on following aircraft:

- aircraft with Beech Kit P/N 101-8018-1;
- BB-1158 and BB-1167;
- BB-1193 and subsequent;
- BL-73 and subsequent;
- BW-1 and subsequent.

1. Landing Gear Relay CB (pilot's subpanel) — PULL

2. Gear Handle — DN

3. Alternate Extension Handle — PUMP

While pumping, do not lower handle to level of the securing clip. This results in pressure loss. Pump up and down until the 3 green GEAR DOWN lights illuminate.

If all 3 green GEAR DOWN lights illuminate:

4. Alternate Extension Handle — STOW

5. Landing Gear Controls — DO NOT ACTIVATE

Landing gear handle and gear relay CB MUST NOT BE ACTIVATED. Gear should be considered UNSAFE until system is cycled and checked with aircraft on jacks.

If one or more green GEAR DOWN lights do not illuminate:

6. Alternate Extension Handle — CONTINUE PUMPING UNTIL MAX RESISTANCE FELT

7. Alternate Extension Handle — LEAVE AT TOP OF UP STROKE

Prior to landing:

8. Alternate Extension Handle — PUMP AGAIN UNTIL MAX RESISTANCE FELT/ DO NOT LOWER HANDLE AND STOW.

After landing when conditions permit:

9. Alternate Extension Handle — CONTINUE PUMPING

This maintains hydraulic pressure until gear can be mechanically secured. DO NOT STOW HANDLE. DO NOT ACTIVATE LANDING GEAR HANDLE OR GEAR RELAY CB. The landing gear should be considered unsafe and unlocked until system is cycled and checked with aircraft on jacks.

LANDING GEAR RETRACTION AFTER PRACTICE MANUAL EXTENSION

1. Alternate Extension Handle — CONFIRMED STOWED

2. Landing Gear Relay CB (pilot's subpanel) — PUSH IN

3. Gear Handle — UP

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HYD FLUID LOW

Indicates hydraulic fluid level in power pack is below critical level on the following:

- aircraft with Beech Kit P/N 101-8018-1;
- BB-1158 and BB-1167;
- BB-1193 and subsequent;
- BL-73 and subsequent.

Upon reaching destination:

1. Attempt Normal Gear Extension

If gear fails to extend:

2. LANDING GEAR MANUAL EXTENSION (HYDRAULIC SYSTEM)
Procedure — COMPLETE (E-22)

NOTE: Loss of system pressure may cause gear to extend without command. If so, reduce airspeed to 181 KIAS.

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LDG/TAXI LIGHT

Indicates the landing and/or taxi lights are ON with the gear retracted.

1. Landing and/or Taxi Lights — OFF

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Indicates one or more of the following:

- landing gear in transit
- one or more gear not down and locked
- one or more gear not fully retracted
- landing gear UP and one or both power levers below approximately 78% N_1
- landing gear UP and flaps extended beyond APPROACH position (regardless of power lever position).

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If all three lights are not on, Left, right main gear, or nose gear may not be down and locked.

1. Press To Test Bulb

If bulb is bad:

2. Insert Different Bulb
Obtain from unused annunciator panel channel or post lights

Continued on next page

Continued from previous page.

If bulb is good:

- 3. Verify Gear Unsafe**
If gear handle also illuminated, gear is unsafe.
- 4. Power Lever — BELOW 78% N_1**
Warning horn sounds (unsafe).
- 5. Flaps — LOWER BEYOND APPROACH**
Warning horn sounds (unsafe).
- 6. Appropriate LANDING GEAR MANUAL EXTENSION Procedure — ACCOMPLISH (E-21/E-22)**

UNSCHEDULED ELECTRIC ELEVATOR TRIM

1. Aircraft Attitude — MAINTAIN USING ELEVATOR CONTROL

2. Control Wheel Disconnect — DEPRESS FULLY (2nd level)

ELECT TRIM OFF annunciator illuminates (if installed); autopilot and yaw damper disengages.

3. Retrim Aircraft Manually

4. ELEV TAB Control Switch (pedestal) — OFF

UNSCHEDULED RUDDER BOOST ACTIVATION

Rudder boost activation without a large variation of power between engines.

1. Directional Control — MAINTAIN WITH RUDDER PEDALS

2. Rudder Boost — OFF

If condition persists:

3. Rudder Boost CB — PULL

4. Either Bleed Air Valve — INSTR & ENVIR OFF

5. Rudder Trim — AS REQUIRED

6. Perform Normal Landing

INADVERTENT SPIN

1. Control Column — FULL FORWARD, AILERONS NEUTRAL

2. Full Rudder — OPPOSITE DIRECTION OF SPIN

3. Power Levers — IDLE

4. Controls — NEUTRALIZE WHEN ROTATION STOPS

5. Execute Smooth Pullout

NOTE: Intentional spins are prohibited. If an unintentional 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.

FLAP SYSTEM FAILURE

A split-flap or other flap system malfunction occurred.

1. Flap Handle — RETURN TO PREVIOUS POSITION

See FLAPS UP LANDING procedure.

There are no provisions for emergency flap operation. If flaps are inoperative and function cannot be restored, land in existing flap configuration. Refer to zero flap landing distance charts.

FLAPS UP LANDING

For flaps up landing distance, refer to AFM Section V or F-17/F-18.

1. Approach Speed — CONFIRM
2. Autofeather — ARM
3. Pressurization — CHECK
4. Cabin Sign — NO SMOKE & FSB
5. Flaps — UP

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

6. Propellers Levers — FULL FORWARD
7. Landing Gear — DN
8. Lights — AS REQUIRED
9. Radar — AS REQUIRED
10. Surface Deice — CYCLE (AS REQUIRED)

When landing assured:

11. Approach Speed — ESTABLISHED (INCREASE WITH RESIDUAL ICE)
12. Yaw Damper — OFF
13. Power Levers — IDLE

After touchdown:

14. Power Levers — LIFT/SELECT REVERSE (BB-1439: OR GROUND FINE, AS REQUIRED)
15. Brakes — AS REQUIRED

ZERO FLAPS V _{REF}	LANDING WEIGHT X 1000 (LBS)				
	12.5	12	11	10	9
	132	130	126	122	117

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A/P DISC**A/P FAIL**

Sperry Equipped Aircraft: Autopilot disengaged by other than pilot's AP/YD (control wheel) disconnect switch.

If annunciator due to intentional disconnect:

1. AP-YD TRIM Disconnect (pilot's control wheel) — PUSH

If annunciator due to autopilot malfunction:

2. Do Not Use Autopilot

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A/P TRIM FAIL

Sperry Equipped Aircraft: Indicates improper trim commands, trim runaway, or trim failure. Control wheel trim switches activated with autopilot engaged.

1. Do Not Re-engage Autopilot

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ELEC TRIM OFF

Sperry Equipped Aircraft: Electric elevator trim system is disarmed.

1. Elevator Trim Switch — OFF THEN ON

Intentionally Left Blank.

HIGH DIFFERENTIAL PRESSURE

Cabin differential pressure exceeds 6.1 PSI (6.6 PSI for B200).

1. Bleed Air Valves — ENVIR OFF
2. Oxygen (crew and passengers) — AS REQUIRED
3. Descend As Required

EMERGENCY DESCENT

1. Power Levers — IDLE
2. Propeller Levers — FULL FORWARD
3. Flaps — APPROACH
4. Landing Gear — DN
5. Airspeed — 181 KIAS

NOTE: Gear retract speed — 163 KIAS

SMOKE AND FUME ELIMINATION

NOTE: Attempt to identify the source of smoke or fumes. Smoke associated with electrical failures is usually gray or tan in color, and irritating to the nose and eyes. Smoke produced by environmental system failures is generally white in color and much less irritating to the nose and eyes.

If smoke is prevalent in the cabin, cabin oxygen masks should not be intentionally deployed. If masks are automatically deployed due to an increase in cabin altitude, passengers should be instructed not to use them unless cabin altitude exceeds 15,000 ft.

ENVIRONMENTAL SYSTEM SMOKE OR FUMES

1. Crew Masks (diluter demand) — DON/EMERG
2. Oxygen System Ready — CONFIRM ON (BB-1439; BB-1444 and sub. — EMERG)
3. Audio Speaker — ON
4. Mic Selector — OXYGEN MASK
5. Cabin Temp Mode — OFF
6. Vent Blower — HIGH
7. Left Bleed Air Valve — ENVIR OFF

If smoke decreases:

8. Continue Operation With Left Bleed Air OFF

If smoke persists:

9. Left Bleed Air Valve — OPEN

10. Right Bleed Air Valve — ENVIR OFF

If smoke decreases:

11. Continue Operation With Right Bleed Air OFF

NOTE: Each bleed air valve must remain closed long enough to allow time for smoke purging to positively identify smoke source.

If smoke persists

12. Bleed Air Valves — ENVIR OFF (Left and Right)**13. Cabin Pressurization — DUMP****14. Storm Window — Open (If required)****15. Land — NEAREST SUITABLE AIRPORT****WINDSHIELD ELECTRICAL FAULT**

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

1. WSHLD ANTI-ICE Switches —

If smoke and/or fire does not cease

2. ELECTRICAL SMOKE OR FIRE checklist — CONDUCT

If smoke and/or fire ceases:

3. Flight — CONTINUE WITH WSHLD ANTI-ICE OFF

If windshield anti-ice required:

4. Source — ISOLATE IF POSSIBLE

Unaffected side (without overheat condition):

5. WSHLD ANTI-ICE — NORMAL/HI

ELECTRICAL SMOKE OR FIRE

1. Crew Masks (diluter demand) — DON/EMERG
2. Oxygen System Ready — CONFIRM ON (BB-1439; BB-1444 and sub.: EMERG)
3. Audio Speaker — ON
4. Mic Selector — OXYGEN MASK
5. Cabin Temp Mode — OFF
6. Vent Blower — AUTO
7. Aft Blower (if installed) — OFF
8. Avionics Master — OFF
9. Non-Essential Electrical Equipment — OFF

If fire or smoke ceases:

10. Avionics/Equipment Previously Turned Off — RESTORE INDIVIDUALLY
11. Defective Equipment — ISOLATE

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 extinguishing of fire is not contained:

12. Cabin Pressure — DUMP
13. Storm Window — OPEN
14. LAND AT NEAREST SUITABLE AIRPORT

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CABIN DOOR

DOOR
UNLOCK

Indicates cabin airstair or cargo door is unlocked or open.

CABIN OR CARGO DOOR UNLOCKED

Annunciator illuminated or an unlatched airstair/cargo door is suspected.

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 seat belts securely fastened.

1. All Occupants — SEATED/SEAT BELTS FASTENED SECURELY
2. Cabin Sign — NO SMOKE & FSB
3. Cabin Differential Pressure — REDUCE TO LOWEST VALUE PRACTICAL (zero preferred)
 - a. Descend and/or
 - b. Select higher cabin altitude setting
4. Oxygen — AS REQUIRED
5. Land At Nearest Suitable Airport

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ALT WARN

Indicates cabin altitude is 12,500 ft or higher.

PRESSURIZATION LOSS

1. Crew Masks — DON
2. Oxygen System Ready — PULL ON (verify)
3. Passenger Manual Drop Out — PULL ON
4. Audio Speaker — ON
5. Mic Selector — OXYGEN MASK
6. Descend As Required
7. Passengers — PULL LANYARD PIN/DON MASKS

WARNING: Adequate passenger oxygen pressure not provided for sustained flight at cabin altitudes above 34,000 ft. Highest recommended cabin altitude for sustained flight is 25,000 ft.

8. Range — DETERMINE FOR FINAL CRUISE ALTITUDE
9. Oxygen Duration — CONFIRM
Refer to oxygen system duration tables in AFM Section IV.

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PASS OXY ON

Indicates passenger oxygen masks deployed. If masks automatically deploy and cabin altitudes descend below 12,500 ft, Annunciator extinguishes. If manually deployed, Annunciators will remain on.

ALT WARN**PASS OXY**

ALT WARN annunciator illuminated; PASS OXY ON annunciator not illuminated.

AUTO-DEPLOYMENT OXYGEN SYSTEM FAILURE

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 CB — PULL**
4. **Passenger Manual Drop Out — PUSH OFF**

USE OF OXYGEN

CREW:

1. **Crew Masks (diluter demand) — DON**
2. **Oxygen System Ready — PULL ON (verify)**
3. **Audio Speaker — ON**
4. **Mic Selector — OXYGEN MASK**

To Discontinue Use:

5. **Return to Overhead container**
6. **MIC Switches — Normal**

PASSENGER:

1. **Passenger Manual Drop Out — PULL ON (PASS OXY ILLUMINATED)**
2. **Lanyard Pin — PULL FOR EACH MASK**
3. **Mask — DON**
4. **Oxygen Duration — CONFIRM**

To Discontinue Use:

5. **Passenger Manual Drop Out — PUSH OFF**
6. **Lanyard Pin — INSERT**
7. **Mask — RETURN TO COMPARTMENT**
8. **Compartment Cover — CLOSE (IF BELOW 12,500 FT)**

FIRST AID OXYGEN:

1. **Oxygen Compartment — PULL COVER OPEN**
2. **ON/OFF Valve — ON**
3. **Mask — DON**

To Discontinue Use:

4. **ON/OFF Valve — OFF**
5. **Mask — RETURN TO COMPARTMENT**
6. **Compartment Cover — CLOSE**

WARNING: The following data is the average Time of Useful Consciousness (TUC) (i.e, from onset of hypoxia until loss of effective performance) at various altitudes.

CABIN PRESSURE ALTITUDE	TUC
35,000 FT.....	1/2 TO 1 MINUTE
30,000 FT.....	1 TO 2 MINUTES
25,000 FT.....	3 TO 5 MINUTES
22,000 FT.....	5 TO 10 MINUTES
12,000 TO 18,000 FT.....	30 MINUTES+

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

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 very 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 FT OR LESS IF POSSIBLE
2. Pressurization Controller — RESET
3. Cruise and Descent — MAINTAIN CABIN DIFFERENTIAL PRESSURE OF 2.0 TO 4.6 PSI
4. Before Landing — DEPRESSURIZE CABIN PRIOR TO TOUCHDOWN

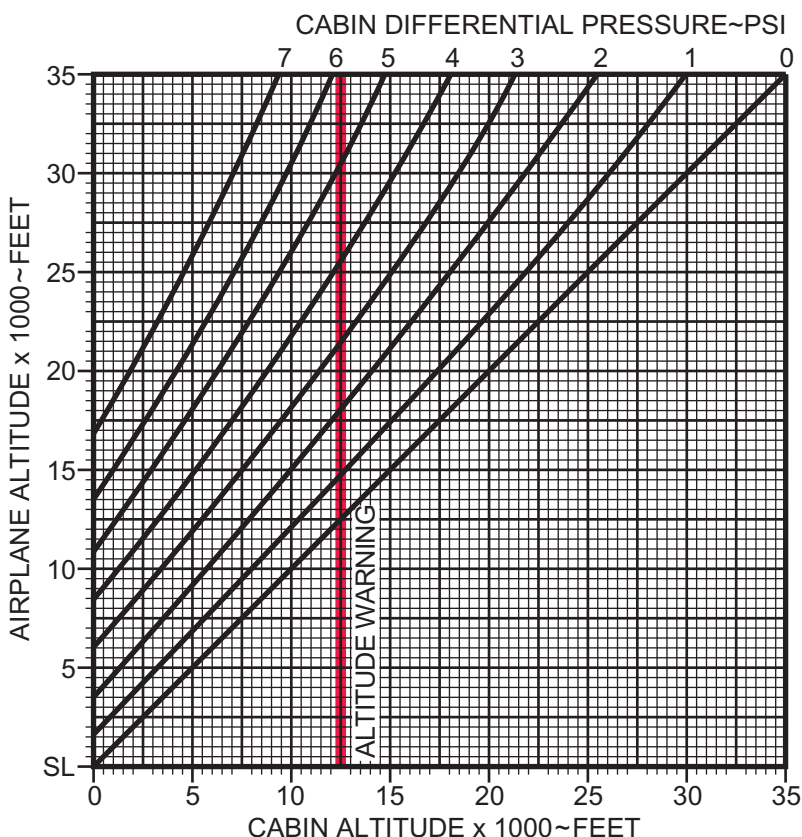
Other Inflight Considerations:

- Visibility through a shattered windshield may be sufficiently reduced to dictate flying the airplane from the opposite side of the cockpit
- 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
- A cracked outer windshield ply may damage operating windshield wipers
- Windshield heat may be inoperative in the area of the crack(s).
- The structural integrity of the windshield will be maintained.

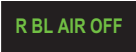
See AFM Section II, Limitations for postflight considerations.

CRACK IN ANY SIDE WINDOW**1. Altitude — DESCEND IF REQUIRED**

Descend to an altitude not requiring oxygen, if possible or descend to at least 25,000 ft 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 AFM SECTION II, LIMITATIONS.****CABIN/AIRCRAFT ALTITUDE**

(28)

L BL AIR OFFR BL AIR OFF

During ground operations at high ambient temperatures, both bleed air switches may be moved to ENVIR OFF for improved cabin cooling. Illumination indicates the environmental bleed air valves are selected closed.

(29)

L BL AIR FAILR BL AIR FAIL

Indicates a possible rupture of the bleed air line aft of the engine firewall. Bleed air warning system is depressurized.

BLEED AIR LINE FAILURE

1. Bleed Air Valve (affected engine) — INSTR/ENVIR OFF (Monitor ITT and torque to ensure valve closed.)
2. Engine Instruments — MONITOR ITT/TORQUE

NOTE: Annunciator does not extinguish.

NOTE: With bleed air in INSTR & ENVIR OFF, rudder boost inoperative and brake deice unusable.

PILOT'S ALTERNATE STATIC AIR SOURCE

When exposed to moisture and/or icing conditions (especially on the ground), aircraft static ports may become obstructed. Partial obstructions result in sluggish rate-of-climb indication during climb or descent. To verify suspected obstruction, switch to alternate system. Note a sudden sustained change in rate-of-climb, which may be accompanied by abnormal indicated airspeed and altitude changes on the pilot's instruments only.

1. Pilot's Static Air Source (right side panel) — ALTERNATE
2. Refer to AFM Section V for airspeed calibration and altimeter correction.

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

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AIR COND N₁ LOW

Indicates air conditioning compressor clutch has disengaged due to right engine N₁ below approximately 62% (B200) or 60% (200) with air conditioner ON.

3. Right (Or Both) Condition Lever — ADJUST TO RAISE N₁ TO 62% OR ABOVE

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ELEC HEAT ON

Illumination indicates electric heat system operating. When system selected to OFF, the annunciator must extinguish before blowers are switched to OFF.

32

DUCT OVERTEMP

Indicates the environmental air duct temperature exceeds 149°C (300°F).

1. Electric Heat (if installed) — 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 persists:

6. Left Bleed Air Valve — ENVIR OFF

If the DUCT OVERTEMP annunciator does not extinguish after 2 minutes:

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

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**ELECTROTHERMAL PROPELLER DEICE (AUTO SYSTEM) —
ZERO AMPS**

*Normal operation: min 14 to max 18 amps for three blade props
min 18 to max 24 amps for four blade props*

1. Propeller Deice Switch — CHECK/AUTO

If propeller deice switch is OFF:

2. Wait 30 Seconds
3. Propeller Deice Switch — AUTO

If still zero amps (system inoperative):

4. Propeller Deice Switch — OFF
5. Use Manual Backup System — Refer to page E-40
6. No deice ammeter indication; monitor loadmeter to verify operation.

**ELECTROTHERMAL PROPELLER DEICE (AUTO SYSTEM) —
BELOW MINIMUM AMPS**

1. Continue Operation

If propeller imbalance occurs:

2. RPM — INCREASE BRIEFLY TO AID ICE REMOVAL

**ELECTROTHERMAL PROPELLER DEICE (AUTO SYSTEM) —
OVER MAXIMUM AMPS**

If AUTO PROP DEICE CB (switch-type) does not trip:

1. Continue Operation

If propeller imbalance occurs:

2. RPM — INCREASE BRIEFLY TO AID ICE REMOVAL

If AUTO PROP DEICE CB trips:

3. Use Manual System — Refer to page E-40
4. Loadmeter — MONITOR FOR EXCESSIVE CURRENT DRAIN

If AUTO PROP DEICE CB or L/R PROP DEICE CB trips:

5. Avoid Icing Conditions

33

BRAKE DEICE ON

Indicates the brake deice switch is ON.

1. Brake Deice System — VERIFY OPERATING
Check for slight increase in ITT (deice valves open).

If illuminated more than 10 minutes after landing gear retracted:

2. Brake Deice Switch — OFF

ELECTROTHERMAL PROPELLER DEICE (MANUAL SYSTEM)**Aircraft prior to BB-829:**

1. Propeller Deice Switch — OUTER (30 seconds)
2. Propeller Deice Switch — INNER (30 seconds)
3. Loadmeters — MONITOR

Aircraft BB-829 and subsequent; BL-37 and subsequent:

4. Propeller Deice Switch — MANUAL (90 seconds)
5. Loadmeters — MONITOR

NOTE: Monitor manual system current requirement with loadmeters with deice switch in MANUAL. Small needle deflection (approx 5%) indicates system functioning.

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L ICE VANE

L ENG ICE FAIL

R ICE VANE

R ENG ICE FAIL

Engine anti-ice vane position does not agree with the position of the ice vane switch.

ENGINE ANTI-ICE FAILURE

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

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L ICE VANE EXT

L ENG ANTI-ICE

R ICE VANE EXT

R ENG ANTI-ICE

Indicates the associated engine anti-ice vane is extended.

1. Vane Extension — VERIFY

Check for an ITT increase and a torque decrease.

ICING PROCEDURES REQUIRED BY FAA AD 96-09-13 & 98-20-38

The following conditions may be conducive to severe in-flight icing:

- visible rain at temperatures below 0°C (32°F) ambient air temperature
- droplets that splash or splatter on impact at temperatures below 0°C (32°F) ambient air temperature

PROCEDURES FOR EXITING THE SEVERE ICING ENVIRONMENT:

If visual cues specified in the limitations section of the AFM for identifying severe icing conditions are observed, accomplish the following:

1. Immediately request priority handling from ATC 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 autopilot engaged, hold control wheel firmly and disengage.
5. If an unusual roll response or uncommanded roll control movement is observed, reduce the angle-of-attack
6. Do not extend flaps during extended operation in icing conditions. Operation with flap extended can result in a reduced wing angle-of-attack. Ice may form on upper surface further aft than normal and out of the protected area.
7. If flaps are extended, do not retract until airframe clear of ice.
8. Report weather conditions to ATC

EMERGENCY EXIT

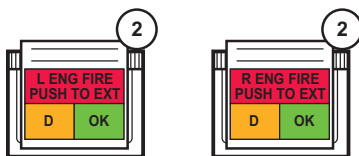
1. Emergency Exit Handle — PULL

The plug-type door opens into the cabin.

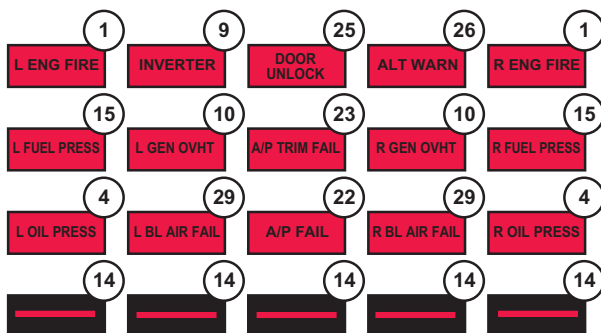
CAUTION: The outside handle may be locked from inside with the EXIT LOCK lever; the inside EXIT-PULL handle unlatches the door regardless of the lever position. Before flight, ensure the lock lever is in the unlocked position.

COCKPIT ANNUNCIATORS

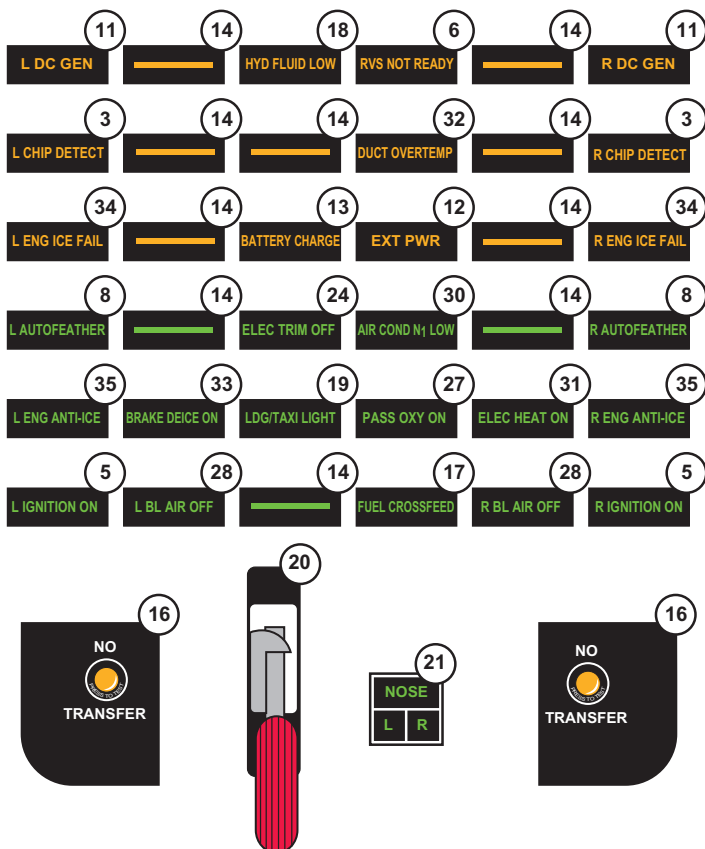
(BB 1439 and subsequent; BL-139 and subsequent)



WARNING LIGHTS

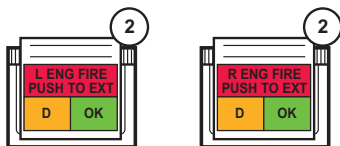


CAUTION/ADVISORY LIGHTS

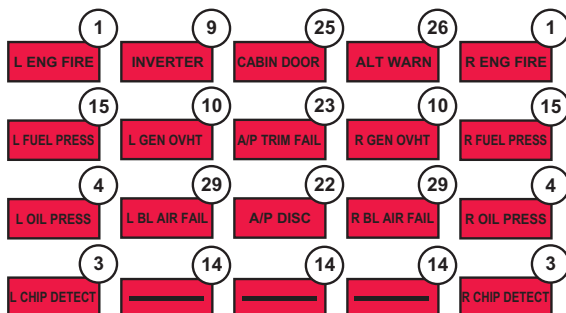


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COCKPIT ANNUNCIATORS (Prior to BB 1439; Prior to BL-139)



WARNING LIGHTS



CAUTION/ADVISORY LIGHTS

