

Carenado *Bonanza* A36



Normal & Emergency Checklist



Bonanza
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AIRSPEEDS FOR SAFE OPERATION (3600 LBS)

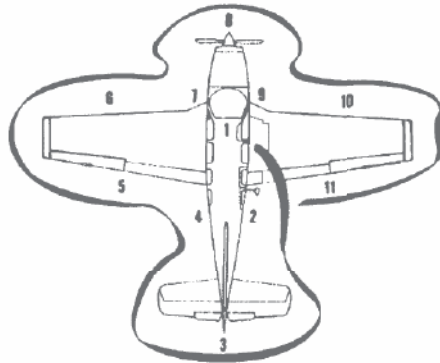
Maximum Demonstrated	
Crosswind Component	17 kts
Takeoff:	
Lift-off	70 kts
50-ft Speed	78 kts
Best Angle-of-Climb (V_X)	78 kts
Best Rate-of-Climb (V_Y)	96 kts
Cruise Climb	109 kts
Turbulent Air Penetration	140 kts
Landing Approach	76 kts
Balked Landing Climb	76 kts

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PREFLIGHT INSPECTION



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1. CABIN:
 - a. Parking Brake - SET
 - b. Control Lock - REMOVE
 - c. All Switches - OFF
2. RIGHT FUSELAGE:
 - a. Utility Door - SECURE
 - b. Static Pressure Button - UNOBSTRUCTED
 - c. Emergency Locator Transmitter - ARMED

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3. EMPENNAGE:
 - a. Control Surfaces - CHECK
 - b. Tie Down - REMOVE
 - c. Position Light - CHECK
 - d. Cabin Air Intake - CHECK
4. LEFT FUSELAGE:
 - a. Static Pressure Button - UNOBSTRUCTED
 - b. All Antennas - CHECK
5. LEFT WING TRAILING EDGE:
 - a. Flap - CHECK
 - b. Aileron - CHECK
 - c. Wing Tip - CHECK
 - d. Position Light - CHECK
6. LEFT WING LEADING EDGE:
 - a. Stall Warning - CHECK
 - b. Pitot Tube - CHECK; Cover - REMOVE
 - c. Fuel Tank - CHECK QUANTITY; Filler Cap - SECURE
 - d. Cabin Air Intake - CHECK
 - e. Tie Down and Chocks - REMOVE
7. LEFT LANDING GEAR:
 - a. Wheel Well Door, Tire and Strut - CHECK
 - b. Fuel Vent - CHECK
 - c. Fuel Sump - DRAIN
 - d. Fuel Selector Valve Sump (located under access cover on fuselage) - DRAIN; Cover - SECURE

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8. NOSE SECTION:

- a. Left Cowl Flap - CHECK
- b. Engine Oil - CHECK; Cap - SECURE
- c. Left Cowl - SECURE
- d. Propeller - CHECK
- e. Wheel Well Doors, Tire and Strut - CHECK
- f. Landing and Taxi Lights - CHECK
- g. Induction Air Intake - CLEAR
- h. Engine - CHECK GENERAL CONDITION
- i. Right Cowl - SECURE
- j. Right Cowl Flap - CHECK
- k. Chocks - REMOVE

9. RIGHT LANDING GEAR:

- a. Fuel Vent - CHECK
- b. Fuel Sump - DRAIN
- c. Wheel Well Door, Tire and Strut - CHECK

10. RIGHT WING LEADING EDGE:

- a. Cabin Air Intake - CHECK
- b. Tie Down and Chocks - REMOVE
- c. Fuel Tank - CHECK QUANTITY; Filler Cap - SECURE

11. RIGHT WING TRAILING EDGE:

- a. Position Light - CHECK
- b. Wing Tip - CHECK
- c. Aileron - CHECK
- d. Flap - CHECK

BEFORE STARTING

- 1. Seats - POSITION AND LOCK; Seat Backs - UPRIGHT
- 2. Seat Belts and Shoulder Harnesses - FASTEN
- 3. Parking Brake - SET
- 4. All Avionics - OFF
- 5. Circuit Breakers - IN
- 6. Landing Gear Handle - DOWN

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7. Flaps - UP
8. Cowl Flaps - OPEN
9. Light Switches - OFF
10. Electric Elevator Trim Switch - OFF
11. Fuel Selector Valve - CHECK OPERATION, THEN SELECT TANK MORE NEARLY FULL
12. Battery and Alternator Switches - ON (If external power is used, turn Alternator Switch - OFF)
13. Fuel Quantity Indicators - CHECK QUANTITY

WARNING

Do not take off if gages indicate in yellow arc or with less than 13 gallons in each tank.

EXTERNAL POWER

The following precautions shall be observed while using external power:

CAUTION

Never use external power without a battery installed in the airplane.

1. The Battery Switch shall be ON and all avionics and electrical switches OFF. This protects the voltage regulators and associated electrical equipment from voltage transients (power fluctuations).
2. The airplane has a negative ground system. Connect the positive and negative leads of the external power unit to the corresponding positive and negative terminals of the airplane's external power receptacle.
3. In order to prevent arcing, no power shall be supplied while the connection is being made.

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STARTING ENGINE USING AUXILIARY POWER UNIT

1. Alternator, Electrical, and Avionics Equipment - OFF
2. Battery Switch - ON
3. Auxiliary Power Unit - CONNECT
4. Auxiliary Power Unit - SET OUTPUT
(28-volt system - 27.0 to 28.5 volts)
(14-volt system - 13.5 to 14.25 volts)
5. Auxiliary Power Unit - ON
6. Engine - START using normal procedures
7. Auxiliary Power Unit - OFF (after engine has been started)
8. Auxiliary Power Unit - DISCONNECT
9. Alternator Switch - ON (check for charging)

STARTING

CAUTION

Vernier-type engine controls should not be rotated clockwise after being advanced to the full forward position.

1. Mixture - FULL RICH
2. Propeller - HIGH RPM
3. Throttle - FULL OPEN

NOTE

If the engine is hot, and the ambient temperature is 90°F or above, place mixture control in IDLE CUT-OFF, switch aux fuel pump to ON for 30 to 60 seconds, then OFF. Return mixture control to FULL RICH.

4. Auxiliary Fuel Pump - ON until fuel flow peaks then OFF
5. Throttle - OPEN ¼ inch APPROXIMATELY
6. Magneto/Start Switch - START position; release to BOTH position when engine fires

CAUTION

Do not engage starter for more than 30 seconds in any 4-minute time period.

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7. In Event of Overprime Condition:
 - a. Mixture - IDLE CUT-OFF
 - b. Throttle - OPEN
 - c. Magneto/Start Switch - START position
 - d. As engine fires, reduce throttle to IDLE and advance the mixture control to FULL RICH.

NOTE

During hot starts, turn the Auxiliary Fuel Pump ON momentarily after starting to purge the system, then turn OFF.

8. Throttle - 1000 to 1200 RPM
9. Oil Pressure - CHECK
10. External Power (if used) - DISCONNECT
11. Alternator Switch - ON; CHECK FOR CHARGING
12. All Engine Indicators - CHECK
13. Starter Energized Warning Light (if installed) - CHECK; Should be illuminated during start and extinguished after start.

CAUTION

If starter energized warning light is inoperative or is not installed, the ammeter indication should be less than 25% of full charge at 1000 to 1200 rpm within two minutes, with no additional equipment on. If not, turn off the battery and alternator switches and do not take off.

AFTER STARTING, AND TAXI

CAUTION

Never taxi with a flat shock strut.

1. Brakes - RELEASE AND CHECK
2. Avionics Equipment - ON, AS REQUIRED
3. Lights - AS REQUIRED

NOTE

Do not operate engine above 1200 RPM until oil temperature reaches 24°C.

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BEFORE TAKEOFF

1. Seat Belts and Shoulder Harnesses - CHECK
2. Parking Brake - SET
3. Radios - CHECK
4. Engine Instruments - CHECK
5. Flight Instruments - CHECK AND SET

NOTE

To ensure adequate gyro pressure when operating two air-driven gyros during ground operation and/or holding prior to takeoff, maintain an engine speed of 700-800 rpm in order to hold a value of 4.3 in. Hg on the instrument pressure gage. With a requirement of three or more air-driven gyros, maintain an engine speed of 1200 rpm.

6. Starter Energized Warning Light (if installed) - CHECK (should not be illuminated). If light is not installed or is inoperative, the ammeter indication should show some decrease from the initial indication.
7. Throttle - 1700 RPM
8. Propeller - EXERCISE to obtain 300 to 400 rpm drop, then return to high rpm
9. Magnetos - CHECK at 1700 rpm on each magneto (variance between individual magnetos should not exceed 50 rpm; maximum drop should not exceed 150 rpm.)
10. Trim - SET
 - a. Aileron - NEUTRAL
 - b. Elevator - 3" (6" nose up if only front seats are occupied)
11. Flaps - UP
12. Doors and Windows - SECURE
13. Flight Controls - CHECK PROPER DIRECTION AND FREEDOM OF MOVEMENT
14. Mixture - FULL RICH or as required by field elevation

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15. Brakes - RELEASED
16. Instruments - CHECK (Make final check of manifold pressure, fuel flow, and rpm at the start of take-off run.)

TAKEOFF

Take-off Power Full Throttle, 2700 RPM

1. Power - SET TAKE-OFF POWER (Mixture - SET as required by field elevation)
2. Brakes - RELEASE. THEN ACCELERATE to recommended speed
3. Landing Gear - RETRACT when positive rate of climb is established
4. Airspeed - ESTABLISH DESIRED CLIMB SPEED when clear of obstacles

CLIMB

Maximum Continuous

Power (Serials E-927 thru E-1608

with 2- or 3-Blade Propeller Installed and

E-1609 and after with McCauley 3-Blade

Propeller Installed) Full Throttle, 2700 rpm

Maximum Normal Operating Power (Serials E-1609 and after with 2-Blade Propeller

Installed) Full Throttle, 2550 rpm

Cruise Climb Power 25 in. Hg at 2500 rpm

1. Engine Temperatures - MONITOR
2. Power - SET
3. Mixture - SET FUEL FLOW

CRUISE

See Cruise Charts in PERFORMANCE Section

1. Cowl Flaps - CLOSED
2. Power - SET
3. Mixture - SET FUEL FLOW

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LEANING USING THE EXHAUST GAS TEMPERATURE INDICATOR (EGT)

A thermocouple-type exhaust gas temperature (EGT) probe is mounted in the right side of the exhaust system. This probe is connected to an indicator on the right side of the instrument panel. The indicator is calibrated in degrees Fahrenheit. Use EGT system to lean the fuel/air mixture when cruising at 75% power or less in the following manner:

1. Lean the mixture and note the point on the indicator that the temperature peaks and starts to fall.
 - a. **CRUISE (LEAN) MIXTURE** - Increase the mixture until the EGT shows a drop of 25°F below peak on the rich side of peak.
 - b. **BEST POWER MIXTURE** - Increase the mixture until the EGT shows a drop of 100°F below peak on the rich side of peak.

CAUTION

Do not continue to lean mixture beyond that necessary to establish peak temperature.

2. Continuous operation is recommended at 25°F or more below peak EGT only on the rich side of peak.
3. Changes in altitude and power settings require the peak EGT to be rechecked and the mixture reset.

DESCENT

1. Altimeter - SET
2. Cowl Flaps - CLOSED

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3. Power - AS REQUIRED (avoid prolonged idle settings and low cylinder head temperatures)
4. Mixture - ENRICH AS REQUIRED

BEFORE LANDING

1. Seat Belts and Shoulder Harnesses - FASTENED; Seat Backs - UPRIGHT
2. Fuel Selector Valve - SELECT TANK MORE NEARLY FULL
3. Cowl Flaps - AS REQUIRED
4. Mixture - FULL RICH or as required by field elevation
5. Landing Gear - DOWN AND CHECK (Maximum extension airspeed 153 KIAS)
6. Landing and Taxi Lights - AS REQUIRED
7. Flaps - FULL DOWN (maximum extension airspeed 123 KIAS)
8. Airspeed - ESTABLISH NORMAL LANDING APPROACH SPEED
9. Propeller - HIGH RPM

BALKED LANDING

1. Power - FULL THROTTLE, 2700 RPM
2. Airspeed - 76 KTS until clear of obstacles, then trim to normal climb speed
3. Flaps - UP
4. Landing Gear - UP
5. Cowl Flaps - OPEN

AFTER LANDING

1. Landing and Taxi Lights - AS REQUIRED
2. Flaps - UP
3. Trim Tab - SET TO 3°
4. Cowl Flaps - OPEN

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All airspeeds quoted in this section are indicated airspeeds (IAS).

EMERGENCY AIRSPEEDS (3600 LBS)

Emergency Descent	153 kts
Maximum Glide Range	110 kts
Emergency Landing Approach	81 kts

The following information is presented to enable the pilot to form, in advance, a definite plan of action for coping with the most probable emergency situations which could occur in the operation of the airplane. Where practicable, the emergencies requiring immediate corrective action are treated in check list form for easy reference and familiarization. Other situations, in which more time is usually permitted to decide on and execute a plan of action, are discussed at some length.

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ENGINE FAILURE

DURING TAKE-OFF GROUND ROLL

1. Throttle - CLOSED
2. Braking - MAXIMUM
3. Fuel Selector Valve - OFF
4. Battery and Alternator Switches - OFF

AFTER LIFTOFF AND IN FLIGHT

Landing straight ahead is usually advisable. If sufficient altitude is available for maneuvering, accomplish the following:

1. Fuel Selector Valve - SELECT OTHER TANK (feel for detent)
2. Auxiliary Fuel Pump - ON
3. Mixture - FULL RICH, then LEAN AS REQUIRED
4. Magnetos - CHECK LEFT, RIGHT, THEN BOTH

NOTE

The most probable cause of engine failure would be loss of fuel flow or improper functioning of the ignition system.

If No Restart:

1. Select most favorable landing site.
2. The use of landing gear is dependent on the terrain where landing must be made.

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ENGINE DISCREPANCY CHECKS

CONDITION: ROUGH RUNNING ENGINE

1. Mixture - FULL RICH, then LEAN as required
2. Magneto/Start Switch - "BOTH" position (check to verify)

CONDITION: LOSS OF ENGINE POWER

1. Fuel Flow Gage - CHECK

If fuel flow is abnormally low:

- a. Mixture - FULL RICH
- b. Auxiliary Fuel Pump - ON (then OFF if performance does not improve in a few moments)

2. Fuel Quantity Indicator - CHECK for fuel supply in tank being used

If tank being used is empty:

Fuel Tank Selector Valve - SELECT OTHER FUEL TANK
(feel for detent)

AIR START PROCEDURE

1. Fuel Selector Valve - SELECT TANK MORE NEARLY FULL (feel for detent)
2. Throttle - RETARD
3. Mixture Control - FULL RICH
4. Auxiliary Fuel Pump - ON until power is regained, then OFF (Leave On if Engine Driven Fuel Pump is inoperative.)
5. Throttle - ADVANCE to desired power
6. Mixture - LEAN as required

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ENGINE FIRE

IN FLIGHT

The red FIREWALL AIR control on the outboard side of the left lower subpanel should be pulled to close off all heating system outlets so that smoke and fumes will not enter the cabin. In the event of engine fire, shut down the engine as follows and make a landing:

1. Firewall Air Control - PULL TO CLOSE
2. Mixture - IDLE CUT-OFF
3. Fuel Selector Valve - OFF
4. Battery, Alternator, and Magneto/Start Switches - OFF
(Extending the landing gear can be accomplished manually if desired.)
5. Do not attempt to restart engine.

ON THE GROUND

1. Mixture - IDLE CUT-OFF
2. Fuel Selector Valve - OFF
3. Battery, Alternator and Magneto/Start Switches - OFF
4. Fire Extinguisher - USE TO EXTINGUISH FIRE

EMERGENCY DESCENT

1. Power - IDLE
2. Propeller - HIGH RPM
3. Landing Gear - DOWN
4. Airspeed - ESTABLISH 153 KTS

MAXIMUM GLIDE CONFIGURATION

1. Landing Gear - UP
2. Flaps - UP
3. Cowl Flaps - CLOSED

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4. Propeller - PULL for LOW RPM
5. Airspeed - 110 KTS

Glide distance is approximately 1.7 nautical miles (2 statute miles) per 1000 feet of altitude above the terrain.

LANDING EMERGENCIES

LANDING WITHOUT POWER

When assured of reaching the landing site selected, and on final approach:

1. Airspeed - ESTABLISH 76 TO 81 KTS
2. Fuel Selector Valve - OFF
3. Mixture - IDLE CUT-OFF
4. Magneto/Start Switch - OFF
5. Flaps - AS REQUIRED
6. Landing Gear - DOWN or UP (depending on terrain)
7. Battery and Alternator Switches - OFF

LANDING GEAR RETRACTED - WITH POWER

If possible, choose firm sod or foamed runway. Make a normal approach, using flaps as necessary. When sure of reaching the selected landing spot:

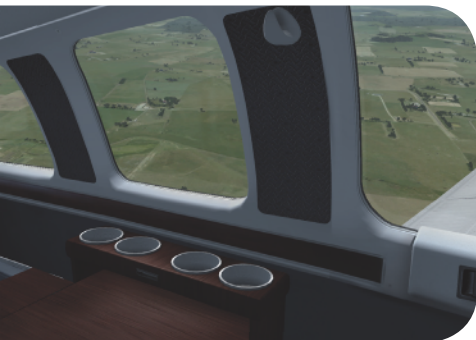
1. Throttle - CLOSED
2. Mixture - IDLE CUT-OFF
3. Battery, Alternator and Magneto/Start Switches - OFF
4. Fuel Selector Valve - OFF
5. Keep wings level during touchdown.
6. Get clear of airplane as soon as possible after it stops

SYSTEMS EMERGENCIES

PROPELLER OVERSPEED

1. Throttle - RETARD TO RED LINE
2. Airspeed - REDUCE
3. Oil Pressure - CHECK

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WARNING

If loss of oil pressure was the cause of overspeed, the engine will seize after a short period of operation.

4. Land - SELECT NEAREST SUITABLE SITE and follow LANDING EMERGENCIES procedure.

STARTER ENERGIZED WARNING LIGHT ILLUMINATED (if installed)

After engine start, should the starter relay remain engaged, the starter will remain energized and the starter energized warning light will remain illuminated. Continuing to supply power to the starter will result in eventual loss of electrical power.

On The Ground:

1. Battery and alternator switches - OFF
2. Do not take off.

In Flight After Air Start:

1. Battery and alternator switches - OFF.
2. Land as soon as practical.

ALTERNATOR-OUT PROCEDURE

An inoperative alternator will place the entire electrical operation of the airplane except engine ignition on the battery. An alternator failure will be indicated by the illumination of the ALT OUT warning light, located on the instrument panel below the flight instruments.

The warning light will not illuminate until the alternator output is almost zero. A verification of alternator malfunction would be a discharge shown on the ammeter. There is no indication of overvoltage except that the warning light will illuminate as though the alternator is out.

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Alternator Warning Light Illuminated:

1. Verify alternator out with ammeter - will show discharge.

NOTE

If the ammeter does not show a discharge, a malfunction in the warning light system is indicated, and the alternator switch should be left ON.

2. If ammeter shows a discharge, Alternator Switch - OFF MOMENTARILY, THEN ON (this resets the overvoltage relay)

If the warning light does not illuminate, continue to use the alternator.

3. If the warning light illuminates, Alternator Switch - OFF
4. Nonessential Electrical Equipment - OFF to conserve battery power.

LANDING GEAR MANUAL EXTENSION

Manual extension of the landing gear can be facilitated by first reducing airspeed. Then proceed as follows:

1. LDG GR MOTOR Circuit Breaker (Right Subpanel) - OFF (pull out)
2. Landing Gear Switch Handle - DOWN position
3. Handcrank Handle Cover (at rear of front seats) - REMOVE
4. Handcrank - ENGAGE and TURN COUNTERCLOCKWISE AS FAR AS POSSIBLE (approximately 50 turns)

CAUTION

The manual extension system is designed to lower the landing gear only. DO NOT ATTEMPT TO RETRACT THE GEAR MANUALLY.

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5. If electrical system is operative, check landing gear position lights and warning horn (check LDG GR RELAY circuit breaker engaged).
6. Handcrank - DISENGAGE. Always keep it stowed when not in use.

WARNING

Do not operate the landing gear electrically with the handcrank engaged, as damage to the mechanism could occur. After emergency landing gear extension, do not move any landing gear controls or reset any switches or circuit breakers until airplane is on jacks as failure may have been in the gear up circuit and gear might retract on the ground.

LANDING GEAR RETRACTION AFTER PRACTICE MANUAL EXTENSION

After practice manual extension of the landing gear, the gear can only be retracted electrically, as follows:

1. Handcrank - CHECK, STOWED
2. Landing Gear Motor Circuit Breaker - IN
3. Landing Gear Switch Handle - UP

INDUCTION SYSTEM BLOCKAGE

An alternate induction air door, spring-loaded to the closed position, is located downstream from the induction air filter. If the induction air filter becomes blocked (e.g., ice, etc.), the differential air pressure normally opens the alternate induction air door to provide induction air from the bottom of the engine compartment. If the alternate induction air door becomes stuck in the closed position, it can be opened by pulling and releasing the T-handle located directly below the propeller control knob. This T-handle is placarded **ALTERNATE AIR PULL AND RELEASE**.

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EMERGENCY STATIC AIR SOURCE SYSTEM

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

Whenever any obstruction exists in the Normal Static Air System or the Emergency Static Air System is desired for use:

1. Pilot's Emergency Static Air Source - Switch to ON EMERGENCY.
2. For Airspeed Calibration and Altimeter Correction, refer to PERFORMANCE Section.

NOTE

The Emergency Static Air valve should be in the NORMAL position when the system is not needed.

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SPINS

Spins are prohibited. If a spin is entered inadvertently:

Immediately move the control column full forward and simultaneously apply full rudder opposite to the direction of the spin; continue to hold this control position until rotation stops and then neutralize all controls and execute a smooth pullout. Ailerons should be neutral and throttle in idle position at all times during recovery.

EMERGENCY SPEED REDUCTION

In an emergency, the landing gear may be used to create additional drag. Should disorientation occur under instrument conditions, the lowering of the landing gear will reduce the tendency for excessive speed buildup. This procedure would also be appropriate for a non-instrument rated pilot who unavoidably encounters instrument conditions or in other emergencies such as severe turbulence.

Should the landing gear be used at speeds higher than the maximum extension speed, a special inspection of the gear doors in accordance with maintenance manual procedures is required, with repair as necessary.

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MAXIMUM RECOMMENDED CRUISE POWER SETTINGS

20°C RICH

26.0 IN. HG (OR FULL THROTTLE) @ 2500 RPM
CRUISE RICH MIXTURE
3400 LBS.

OF PEAK EGT

	PRESS. ALT	IOAT		MAN. PRESS.	FUEL FLOW		AIR- SPEED
	FEET	°C	°F	IN. HG	PPH	GPH	KIAS KTAS
ISA - 20° C (ISA - 36° F)	SL	-3	27	25.0	102.1	17.0	172 164
	2000	-6	21	25.0	105.6	17.6	172 160
	4000	-10	14	25.0	109.1	18.2	172 174
	6000	-14	7	24.1	108.1	17.7	160 175
	8000	-18	-1	22.3	97.7	16.3	162 173
	10,000	-22	-8	20.6	90.2	15.0	155 170
	12,000	-26	-15	19.1	83.5	13.9	147 167
	14,000	-30	-22	17.7	78.3	13.1	140 163
	16,000	-34	-30	16.3	73.1	12.2	131 158
STANDARD DAY (ISA)	SL	18	64	25.0	98.1	16.4	167 165
	2000	14	57	25.0	101.3	16.9	167 170
	4000	10	50	25.0	104.6	17.4	167 175
	6000	6	43	24.1	101.8	17.0	164 176
	8000	2	36	22.3	93.9	15.7	157 174
	10,000	-2	28	20.6	86.9	14.5	150 171
	12,000	-6	21	19.1	80.8	13.5	142 167
	14,000	-10	14	17.1	76.0	12.7	134 163
	16,000	-14	6	16.3	71.2	11.9	125 157
ISA + 20° C (ISA + 36° F)	SL	38	100	25.0	94.1	15.7	163 166
	2000	34	93	25.0	97.2	16.2	163 171
	4000	30	86	25.0	100.3	16.7	162 176
	6000	26	79	24.1	97.7	16.3	150 177
	8000	22	72	22.3	90.3	15.1	152 174
	10,000	18	64	20.6	83.6	14.0	144 171
	12,000	14	57	19.1	78.1	13.0	137 167
	14,000	10	50	17.7	73.9	12.3	129 162
	16,000	6	42	16.3	69.8	11.6	119 155

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NOTES:

1. Full throttle manifold pressure settings are approximate.
2. Shaded area represents operation with full throttle.
3. Fuel flows are to be used for flight planning only and will vary from airplane to airplane. Lean using the EGT.

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RECOMMENDED CRUISE POWER SETTINGS

20°C LEAN

25.0 IN. HG (OR FULL THROTTLE) @ 2500 RPM
CRUISE LEAN MIXTURE
3400 LBS.

OF PEAK EGT

	PRESS. ALT	IOAT		MAN. PRESS.	FUEL FLOW		AIR- SPEED	
	FEET	°C	°F	IN. HG	PPH	GPH	KIAS	KTAS
ISA - 20° C (ISA - 36° F)	SL	-3	27	25.0	86.3	14.4	168	159
	2000	-6	20	25.0	89.3	14.9	168	164
	4000	-10	13	25.0	92.3	15.4	168	169
	6000	-14	8	24.1	89.8	15.0	164	170
	8000	-18	-1	22.3	82.6	13.8	157	168
	10,000	-22	-8	20.6	76.0	12.7	150	165
	12,000	-26	-15	19.1	70.2	11.7	143	162
	14,000	-30	-23	17.7	65.5	10.9	135	158
	16,000	-35	-30	16.3	60.8	10.1	126	152
STANDARD DAY (ISA)	SL	17	63	25.0	82.9	13.8	163	160
	2000	14	56	25.0	85.6	14.3	163	165
	4000	10	50	25.0	88.5	14.8	163	170
	6000	6	42	24.1	86.1	14.4	158	171
	8000	2	35	22.3	79.3	13.2	152	169
	10,000	-2	28	20.6	73.3	12.2	145	166
	12,000	-6	21	19.1	67.8	11.3	137	162
	14,000	-10	13	17.7	63.5	10.6	129	157
	16,000	-15	6	16.3	59.1	9.9	120	150
ISA + 20° C (ISA + 36° F)	SL	37	99	25.0	79.5	13.3	158	161
	2000	34	92	25.0	82.1	13.7	158	166
	4000	30	85	25.0	84.7	14.1	156	171
	6000	26	79	24.1	82.5	13.8	154	172
	8000	22	71	22.3	76.2	12.7	147	169
	10,000	18	64	20.6	70.5	11.8	140	165
	12,000	14	57	19.1	65.5	10.9	132	161
	14,000	10	49	17.7	61.5	10.3	123	155
	16,000	5	42	16.3	57.5	9.6	113	148

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- NOTES:
1. Full throttle manifold pressure settings are approximate.
 2. Shaded area represents operation with full throttle.
 3. Fuel flows are to be used for flight planning only and will vary from airplane to airplane. Lean using the EGT.

Carenado

RECOMMENDED CRUISE POWER SETTINGS

20°C LEAN

23.0 IN. HG (ON FULL THROTTLE) @ 2300 RPM
CRUISE LEAN MIXTURE
3400 LBS

OF PEAK EGT



Carenado
A36

	PRESS. ALT.	IOAT		MAN. PRESS.	FUEL FLOW		AIR- SPEED	
	FEET	°C	°F	IN. HG	PPH	GPH	KIAS	KTAS
ISA - 20° C (ISA - 36° F)	SL	-3	26	23.0	67.6	11.3	152	144
	2000	-7	20	23.0	69.7	11.6	152	149
	4000	-11	13	23.0	72.1	12.0	153	154
	6000	-15	6	23.0	74.4	12.4	153	158
	8000	-18	-1	22.4	73.8	12.3	150	160
	10,000	-23	-9	20.7	68.4	11.4	143	157
	12,000	-27	-16	19.2	63.8	10.6	135	153
	14,000	-31	-23	17.8	60.0	10.0	127	148
	16,000	-35	-31	16.4	55.3	9.4	117	141
STANDARD DAY (ISA)	SL	17	62	23.0	65.4	10.9	147	145
	2000	13	56	23.0	67.4	11.2	147	149
	4000	9	49	23.0	69.4	11.6	148	154
	6000	5	42	23.0	71.7	12.0	148	159
	8000	2	35	22.4	71.1	11.9	145	160
	10,000	-3	27	20.7	66.2	11.0	137	157
	12,000	-7	20	19.2	61.8	10.3	129	152
	14,000	-11	13	17.8	58.5	9.8	120	146
	16,000	-15	5	16.4	55.3	9.2	109	137
ISA + 20° C (ISA + 36° F)	SL	37	98	23.0	63.2	10.5	142	145
	2000	33	92	23.0	65.1	10.9	143	149
	4000	29	85	23.0	67.1	11.2	143	154
	6000	25	78	23.0	69.0	11.5	142	158
	8000	22	71	22.4	68.5	11.4	140	160
	10,000	17	63	20.7	64.0	10.7	132	156
	12,000	13	56	19.2	60.0	10.0	123	151
	14,000	9	48	17.8	57.1	9.5	113	142
	16,000	—	—	—	—	—	—	—

SYC0440

NOTES:

1. Full throttle manifold pressure settings are approximate.
2. Shaded area represents operation with full throttle.
3. Fuel flows are to be used for flight planning only and will vary from airplane to airplane. Lean using the EGT.

Carenado

RECOMMENDED CRUISE POWER SETTINGS

20°C RICH

25.0 IN. HG (OR FULL THROTTLE) @ 2100 RPM
CRUISE RICH MIXTURE
3400 LBS

OF PEAK EGT



Carenado
A36

	PRESS. ALT.	IOAT		MAN. PRESS.	FUEL FLOW		AIR- SPEED	
	FEET	°C	°F	IN. HG	PPH	GPH	KIAS	KTAS
ISA - 20° C (ISA - 36° F)	SL	-3	27	25.0	79.5	13.3	155	148
	2000	-7	20	25.0	82.6	13.6	156	153
	4000	-11	13	25.0	85.8	14.3	157	158
	6000	-15	6	24.3	85.1	14.2	154	159
	8000	-19	-1	22.5	79.5	13.3	147	157
	10,000	-23	-9	20.8	74.9	12.5	140	153
	12,000	-27	-16	19.3	70.9	11.8	132	149
	14,000	-31	-23	17.9	66.2	11.4	123	144
	16,000	-35	-31	16.5	65.6	10.9	112	135
STANDARD DAY (SEA)	SL	17	63	25.0	77.0	12.8	150	148
	2000	13	56	25.0	79.9	13.3	151	153
	4000	9	49	25.0	82.9	13.6	152	158
	6000	5	42	24.3	82.3	13.7	148	160
	8000	1	35	22.5	77.1	12.9	142	157
	10,000	-3	27	20.8	72.9	12.2	134	153
	12,000	-7	20	19.3	69.5	11.8	126	148
	14,000	-11	12	17.9	67.2	11.2	118	141
	16,000	-15	5	16.5	64.9	10.8	107	127
ISA + 20° C (ISA + 36° F)	SL	37	99	25.0	74.9	12.5	146	148
	2000	33	92	25.0	77.3	12.9	146	153
	4000	29	85	25.0	80.1	13.4	146	158
	6000	25	78	24.3	79.5	13.3	143	160
	8000	21	71	22.5	74.9	12.5	136	156
	10,000	17	63	20.8	71.0	11.8	128	152
	12,000	13	56	19.3	68.1	11.4	119	145
	14,000	9	48	17.9	66.1	11.0	107	135
	16,000	—	—	—	—	—	—	—

SVC0441

NOTES:

1. Full throttle manifold pressure settings are approximate
2. Shaded area represents operation with full throttle
3. Fuel flows are to be used for flight planning only and will vary from airplane to airplane. Lean using the EGT.

Carenado

RECOMMENDED CRUISE POWER SETTINGS

20°C LEAN

25.0 IN. HG (OR FULL THROTTLE) @ 2100 RPM
CRUISE LEAN MIXTURE
3400 LBS

OF PEAK EGT



Carenado
A36

	PRESS. ALT	IOAT		MAN. PRESS.	FUEL FLOW		AIR- SPEED	
	FEET	°C	°F	IN. HG	PPH	GPH	KIAS	KTAS
ISA - 20° C (ISA - 36° F)	SL	-3	26	25.0	63.8	10.6	148	140
	2000	-7	19	25.0	66.4	11.1	149	145
	4000	-11	12	25.0	68.9	11.5	149	150
	6000	-15	5	24.3	68.3	11.4	147	152
	8000	-19	-2	22.5	63.9	10.7	139	148
	10,000	-23	-9	20.8	60.1	10.0	132	144
	12,000	-27	-17	19.3	58.7	9.5	123	139
	14,000	-31	-24	17.9	54.5	9.1	113	132
	16,000	-35	-32	16.5	52.2	8.7	95	114
STANDARD DAY (ISA)	SL	17	62	25.0	61.9	10.3	143	140
	2000	13	55	25.0	64.2	10.7	143	145
	4000	9	48	25.0	66.6	11.1	144	150
	6000	5	41	24.3	66.1	11.0	141	152
	8000	1	34	22.5	61.9	10.3	134	148
	10,000	-3	27	20.8	58.5	9.8	126	143
	12,000	-7	19	19.3	55.6	9.3	116	138
	14,000	-11	12	17.9	53.5	8.8	103	125
	16,000	—	—	—	—	—	—	—
ISA + 20° C (ISA + 36° F)	SL	37	98	25.0	60.1	10.0	136	140
	2000	33	91	25.0	62.1	10.4	138	145
	4000	29	84	25.0	64.4	10.7	136	150
	6000	25	77	24.3	63.9	10.7	136	151
	8000	21	70	22.5	60.2	10.0	128	147
	10,000	17	63	20.8	58.8	9.5	119	141
	12,000	13	55	19.3	54.5	9.1	106	131
	14,000	—	—	—	—	—	—	—
	16,000	—	—	—	—	—	—	—

SVC0442

NOTES:

1. Full throttle manifold pressure settings are approximate.
2. Shaded area represents operation with full throttle.
3. Fuel flows are to be used for flight planning only and will vary from airplane to airplane. Lean using the EGT.

Carenado

RECOMMENDED CRUISE POWER SETTINGS

20°C RICH

21.0 IN. HG (OR FULL THROTTLE) @ 2100 RPM
CRUISE RICH MIXTURE
3400 LBS

OF PEAK EGT



Carenado
A36

	PRESS. ALT	IOAT		MAN. PRESS.	FUEL FLOW		AIR- SPEED	
	FEET	°C	°F	IN. HG	PPH	GPH	KIAS	KTAS
ISA - 20° C (ISA - 36° F)	SL	-4	28	21.0	66.0	11.0	135	128
	2000	-7	19	21.0	67.5	11.3	137	134
	4000	-11	12	21.0	68.3	11.6	138	139
	6000	-15	5	21.0	71.1	11.9	139	144
	8000	-19	-2	21.0	73.4	12.2	140	149
	10,000	-23	-9	20.8	74.9	12.5	140	153
	12,000	-27	-16	19.3	70.8	11.8	132	149
	14,000	-31	-23	17.9	68.2	11.4	123	144
	16,000	-35	-31	16.5	65.6	10.9	112	135
STANDARD DAY (ISA)	SL	17	62	21.0	65.2	10.9	130	127
	2000	13	55	21.0	66.3	11.1	131	133
	4000	9	48	21.0	67.9	11.3	133	138
	6000	5	41	21.0	69.7	11.6	134	144
	8000	1	34	21.0	71.5	11.9	135	149
	10,000	-3	27	20.8	72.9	12.2	134	153
	12,000	-7	20	19.3	68.5	11.6	126	148
	14,000	-11	12	17.9	67.2	11.2	116	141
	16,000	-16	5	16.5	64.9	10.8	101	127
ISA + 20° C (ISA + 36° F)	SL	36	98	21.0	64.5	10.8	124	126
	2000	33	91	21.0	65.5	10.9	126	132
	4000	29	84	21.0	66.6	11.1	127	137
	6000	25	77	21.0	68.3	11.4	128	143
	8000	21	70	21.0	70.0	11.7	129	148
	10,000	17	63	20.8	71.0	11.8	128	152
	12,000	13	56	19.3	68.1	11.4	119	145
	14,000	9	48	17.9	66.1	11.0	107	135
	16,000	—	—	—	—	—	—	—

SVC0443

NOTES:

1. Full throttle manifold pressure settings are approximate.
2. Shaded area represents operation with full throttle.
3. Fuel flows are to be used for flight planning only and will vary from airplane to airplane. Lean using the EGT.

Carenado

ECONOMY CRUISE POWER SETTINGS

20°C LEAN

21.0 IN. HG (OR FULL THROTTLE) @ 2100 RPM
CRUISE LEAN MIXTURE
3400 LBS

OF PEAK EGT



Carenado
A36

	PRESS. ALT.	IOAT		MAN. PRESS.	FUEL FLOW		AIR- SPEED	
	FEET	°C	°F	IN. HG	PPH	GPH	KIAS	KTAS
ISA - 20° C (ISA - 36° F)	SL	-4	25	21.0	52.7	8.8	125	120
	2000	-8	18	21.0	54.0	9.0	128	125
	4000	-11	12	21.0	55.4	9.2	130	130
	6000	-15	5	21.0	56.9	9.5	131	138
	8000	-19	-2	21.0	58.9	9.8	132	141
	10,000	-23	-8	20.8	60.1	10.0	132	144
	12,000	-27	-17	19.3	58.7	9.5	123	139
	14,000	-31	-24	17.9	54.5	9.1	113	132
	16,000	-35	-32	16.5	52.2	8.7	95	114
STANDARD DAY (ISA)	SL	16	61	21.0	51.8	8.6	120	118
	2000	12	54	21.0	53.1	8.9	123	124
	4000	9	48	21.0	54.4	9.1	124	129
	6000	5	41	21.0	55.7	9.3	125	134
	8000	1	34	21.0	57.3	9.6	126	140
	10,000	-3	27	20.8	58.6	9.8	126	143
	12,000	-7	19	19.3	55.6	9.3	116	137
	14,000	-11	12	17.9	53.5	8.9	103	125
	16,000	—	—	—	—	—	—	—
ISA + 20° C (ISA + 36° F)	SL	36	97	21.0	50.8	8.5	114	113
	2000	32	90	21.0	52.1	8.7	116	121
	4000	29	83	21.0	53.4	8.9	118	127
	6000	25	77	21.0	54.7	9.1	119	132
	8000	21	70	21.0	56.0	9.3	120	137
	10,000	17	63	20.8	56.8	9.5	119	141
	12,000	13	55	19.3	54.5	9.1	108	131
	14,000	—	—	—	—	—	—	—
	16,000	—	—	—	—	—	—	—

SYCD444

NOTES:

1. Full throttle manifold pressure settings are approximate.
2. Shaded area represents operation with full throttle.
3. Fuel flows are to be used for flight planning only and will vary from airplane to airplane. Lean using the EGT.

Carenado



Carenado