

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

EMERGENCY AIRSPEEDS (3400 LBS)

Emergency Descent	154 KTS
Maximum Glide Range	105 KTS
Emergency Landing Approach	83 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.

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 ON

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.

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

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. (See GLIDE and LANDING WITHOUT POWER Procedures)

ON THE GROUND

1. Fuel Selector Valve - OFF
2. Mixture - IDLE CUT-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 154 KTS

MAXIMUM GLIDE CONFIGURATION

1. Landing Gear - UP

NOTE

On S/N CE-1301, CE-1307 and after, and CJ-180 and after, the landing gear will not retract unless the throttle is in a position corresponding to approximately 17 in. Hg manifold pressure or above.

2. Flaps - UP
3. Cowl Flaps - CLOSED
4. Propeller - PULL for LOW RPM
5. Airspeed - 105 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 78 TO 83 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)

NOTE

On S/N CE-1301, CE-1307 and after, and CJ-180 and after, the landing gear will not retract unless the throttle is in a position corresponding to approximately 17 in. Hg manifold pressure or above.

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:

NOTE

On S/N CE-1301, CE-1307 and after, and CJ-180 and after, the landing gear will not retract unless the throttle is in a position corresponding to approximately 17 in. Hg manifold pressure or above.

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

NOTE

On S/N CE-1301, CE-1307 and after, and CJ-180 and after, the landing gear will not retract unless the throttle is in a position corresponding to approximately 17 in. Hg manifold pressure or above.

2. Airspeed - REDUCE
3. Oil Pressure - CHECK

WARNING

If loss of oil pressure was the cause of over-speed, 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

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illumination of the 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.

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.

UNSCHEDULED ELECTRIC ELEVATOR TRIM

1. Airplane Attitude - MAINTAIN using elevator control
2. Elevator Trim Thumb Switch (On Control Wheel) - MOVE IN DIRECTION OPPOSITE UNSCHEDULED PITCH TRIM to open circuit breaker
3. Elevator Trim ON-OFF Switch (On Instrument Panel) - OFF
4. Manual Elevator Trim Control Wheel - RETRIM AS DESIRED

NOTE

Do not attempt to operate the electric trim system until the cause of the malfunction has been determined and corrected.

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.

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.

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

NOTE

On S/N CE-1301, CE-1307 and after, and CJ-180 and after, the landing gear will not retract unless the throttle is in a position corresponding to approximately 17 in. Hg manifold pressure or above.

INDUCTION SYSTEM ICING

If the induction system alternate air source door becomes frozen in the closed position, the Alternate Air Pull and Release Control T-handle should be pulled and released to force the door open.

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.

**Section III
Emergency Procedures**

**BEEHCRAFT Bonanza F33A
CE-674 and after**

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.

EMERGENCY EXITS

Emergency exits, provided by the openable window on each side of the cabin, may be used for egress in addition to the cabin door and the optional cargo door.

NOTE

For access past the 3rd and/or 4th seats, rotate the red handle, located on the lower inboard side of the seat back, and fold the seat back over.

To Open Each Emergency Exit:

Serials CE-674 thru CE-928, Except CE-919, CE-923, CE-925 and CE-927; CJ-129 thru CJ-155:

An emergency exit placard is installed below the left and right openable windows.

1. Lift the latch.
2. Pull out the emergency release pin and push the window out.

Serials CE-919, CE-923, CE-925, CE-927, CE-929 and after; CJ-156 and after:

1. Remove cover as indicated by placard in the center of the Ventilation/Emergency Exit latch.
2. Rotate handle up as indicated by placard, breaking safety wire, and push window out.

NOTE

Anytime the window has been opened by breaking the safety wire on the red emergency latch, the window must be reattached and wired by a qualified mechanic using QQ-W-343, Type S, .020 diameter copper wire prior to further airplane operation.

UNLATCHED DOOR IN FLIGHT

If the cabin door is not locked it may unlatch in flight. This may occur during or just after takeoff. The door will trail open approximately 3 inches but the flight characteristics of the airplane will not be affected, except that rate of climb will be reduced. Return to the field in a normal manner. If practicable, during the landing flare-out have a passenger hold the door to prevent it swinging open.

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.