AIRSPEEDS FOR EMERGENCY OPERATION

Engine Failure After Takeoff - 65 KIAS
Maneuvering Speed:
- 2300 lbs - 97 KIAS
- 1950 lbs - 89 KIAS
- 1600 lbs - 80 KIAS

Maximum Glide - 65 KIAS
Precautionary Landing With Engine Power - 60 KIAS
Landing Without Engine Power:
- Wing Flaps Up - 65 KIAS
- Wing Flaps Down - 60 KIAS

ENGINE FAILURE DURING TAKEOFF ON GROUND

1. Throttle - CLOSED
2. Braking - MAXIMUM
3. Wing Flaps - RETRACT
4. Mixture - IDLE CUTOFF
5. Magneto Switch - OFF

ENGINE FAILURE IMMEDIATELY AFTER LIFT-OFF

1. Airspeed - 65 KIAS (Flaps UP)
   60 KIAS (Flaps DOWN)
2. Throttle - CLOSED
3. Mixture - IDLE CUTOFF
4. Fuel Selector Valve - OFF
5. Ignition Switch - OFF
6. Wing Flaps - AS REQUIRED
7. Master Switch - OFF

ENGINE FAILURE DURING FLIGHT

1. Airspeed - 65 KIAS
2. Carburetor Heat - ON
3. Mixture Control - FULL RICH
4. Fuel Selector Valve - BOTH
5. Primer - IN AND LOCKED
6. Ignition Switch - BOTH (or START if propeller is stopped)
7. Perform EMERGENCY LANDING WITHOUT ENGINE POWER checklist (below) - EXECUTE

EMERGENCY LANDING WITHOUT ENGINE POWER

1. Airspeed - 65 KIAS (flaps UP)
   60 KIAS (flaps DOWN)
2. Mixture - IDLE CUTOFF
3. Fuel Selector Valve - OFF
4. Ignition Switch - OFF
5. Wing Flaps - AS REQUIRED (40° recommended)
6. Master Switch - OFF
7. Doors - UNLATCH PRIOR TO TOUCHDOWN
8. Touchdown - SLIGHTLY TAIL LOW
9. Brakes - APPLY HEAVILY

ENGINE FIRE IN FLIGHT

1. Mixture - IDLE CUTOFF
2. Fuel Selector Valve - OFF
3. Master Switch - OFF
4. Cabin Heat and Air - OFF except overhead vents
5. Airspeed - 100 KIAS

NOTE: If fire is not extinguished, increase glide speed to find an airspeed which will provide an incombustible mixture.

6. Perform EMERGENCY LANDING WITHOUT ENGINE POWER checklist (below)

EMERGENCY LANDING WITHOUT ENGINE POWER

1. Airspeed - 65 KIAS (flaps UP)
   60 KIAS (flaps DOWN)
2. Mixture - IDLE CUTOFF
3. Fuel Selector Valve - OFF
4. Ignition Switch - OFF
5. Wing Flaps - AS REQUIRED (40° recommended)
6. Master Switch - OFF
7. Doors - UNLATCH PRIOR TO TOUCHDOWN
8. Touchdown - SLIGHTLY TAIL LOW
9. Brakes - APPLY HEAVILY

ENGINE FIRE DURING START ON GROUND

1. Cranking - CONTINUE

If engine starts:

2. Power - 1700 RPM for a few minutes
3. Engine - SHUTDOWN and inspect for damage

If engine fails to start:

2.Throttle - FULL OPEN
3. Mixture - IDLE CUT-OFF
4. Cranking - CONTINUE for two or three minutes
5. Fire Extinguisher - OBTAIN

NOTE: Have ground attendants obtain if not installed.

6. Engine - SECURE
   - Master Switch - OFF
   - Ignition Switch - OFF
   - Fuel Selector Valve - OFF
7. Fire - EXTINGUISH
8. Fire Damage - INSPECT

CABIN FIRE

1. Master Switch - OFF
2. Vents/Cabin Air/Heat - CLOSED to avoid drafts
3. Fire Extinguisher - ACTIVATE

WARNING: ***After discharging an extinguisher within a closed cabin, ventilate the cabin.***

4. Land the airplane as soon as possible to inspect for damage.

WING FIRE

1. Navigation Light Switch - OFF
2. Pitot Heat Switch - OFF

NOTE: Perform a sideslip to keep the flames away from the fuel tank/cabin, and land as soon as possible using flaps only as needed for final approach and touchdown.

ELECTRICAL FIRE IN FLIGHT

1. Master Switch - OFF
2. All Other Electrical Switches (except Ignition Switch) - OFF
3. Vents/Cabin Air/Heat - CLOSED
4. Fire Extinguisher - ACTIVATE

If fire appears out and electrical power is necessary for continuance of flight:

5. Master Switch - ON
6. Circuit Breakers - CHECK for faulty circuit, do not reset
7. Radio/Electrical Switches - ON ONE AT A TIME, with delay after each until faulty circuit is localized
8. Vents/Cabin Air/Heat - OPEN when it is ascertained that fire is completely extinguished

OVER-VOLTAGE LIGHT ILLUMINATES

1. Master Switch - OFF (both sides)
2. Master Switch - ON

If over-voltage light extinguishes:

3. Flight - CONTINUE while monitoring alternator system

If over-voltage light illuminates again:

3. Perform AMMETER SHOWS DISCHARGE checklist (next page)

AMMETER SHOWS DISCHARGE

1. Alternator - OFF
2. Nonessential Electrical Equipment - OFF
3. Flight - TERMINATE as soon as practical.

WARNING: Aircraft electrical system is powered ONLY by battery.

INADVERTENT ICING ENCOUNTER

1. Turn pitot heat switch ON.
2. Turn back or change altitude to obtain an outside air temperature that is less conductive to icing.
3. Pull cabin heat control full out and open defroster outlet to obtain maximum windshield defroster airflow. Adjust the cabin air control to get maximum defroster heat and airflow.
4. Open the throttle to increase engine speed and minimize ice build-up on propeller blades.
5. Watch for signs of carburetor air filter ice and apply carburetor heat as required. An unexpected loss of engine speed could be caused by carburetor ice or air intake filter ice. Lean the mixture for maximum RPM if carburetor heat is used continuously.
6. Plan a landing at the nearest airport. With an extremely rapid ice build-up, select a suitable “off-airport” landing site.
7. With an ice accumulation of 1/4 inch or more on the wing leading edges, be prepared for significantly higher stall speed.
8. Leave wing flaps retracted. With a severe ice build-up on the horizontal tail, the change in wing wake airflow direction caused by wing flap extension could result in a loss of elevator effectiveness.
9. Open the window and, if practical, scrape ice from a portion of the windshield for visibility in the landing approach.
10. Perform a landing approach using a forward slip, if necessary, for improved visibility.
11. Approach at 65 to 75 KIAS depending upon the amount of ice accumulation.
12. Perform a landing in level attitude.

LANDING WITH A FLAT MAIN TIRE

1. Approach - Normal
2. Touchdown - GOOD TIRE FIRST, hold airplane off flat tire as long as possible.

PRECAUTIONARY LANDING WITH ENGINE POWER

1. Airspeed - 60 KIAS
2. Wing Flaps - 20°
3. Selected Field - FLY OVER, noting terrain and obstructions, then retract flaps upon reaching a safe altitude and airspeed
4. Radio and Electrical Switches - OFF
5. Wing Flaps - 40° (on final approach)
6. Airspeed - 60 KIAS
7. Master Switch - OFF
8. Doors - UNLATCH PRIOR TO TOUCHDOWN
9. Touchdown - SLIGHTLY TAIL LOW
10. Ignition Switch - OFF
11. Brakes - APPLY HEAVILY

DITCHING

1. Radio - TRANSMIT MAYDAY ON 121.5, giving location and intentions
2. Heavy Objects, including baggage - SECURE OR JETTISON
3. Flaps - 20° - 40°
4. Power - ESTABLISH 300 FT/MIN DESCENT AT 55 KIAS
5. Approach High Winds, Heavy Seas - INTO THE WIND
   Light Winds, Heavy Swells - PARALLEL TO SWELLS

NOTE: If no power is available, approach at 65 KIAS with flaps up or at 60 KIAS with 10° flaps.

6. Seat Belts and Shoulder Harnesses - SECURE
7 Cabin Doors - UNLATCH
8. Life Vests - DON BUT DO NOT INFLATE
9. Touchdown - LEVEL ATTITUDE AT 300 FT/MIN DESCENT
10. Face - CUSHION AT TOUCHDOWN
11. Airplane - EVACUATE

NOTE: Evacuation should be through cabin doors. If necessary, open window(s) and flood cabin to equalize pressure so doors can be opened.

12. Life Vests and Raft - INFLATE

EMERGENCY LANDING WITHOUT ENGINE POWER

1. Airspeed - 65 KIAS (flaps UP)
   60 KIAS (flaps DOWN)
2. Mixture - IDLE CUTOFF
3. Fuel Selector Valve - OFF
4. Ignition Switch - OFF
5. Wing Flaps - AS REQUIRED (40° recommended)
6. Master Switch - OFF
7. Doors - UNLATCH PRIOR TO TOUCHDOWN
8. Touchdown - SLIGHTLY TAIL LOW
9. Brakes - APPLY HEAVILY