

EMERGENCY PROCEDURES C-172

ENGINE FAILURE DURING TAKEOFF ROLL

1. Throttle—Idle.
2. Brakes—Apply.
3. Wing Flaps—Retract.
4. Mixture—Idle cut off.
5. Ignition Switch—Off.

ENGINE FAILURE IMMEDIATELY AFTER TAKEOFF

1. Airspeed— 65 KIAS (flaps up).
60 KIAS (flaps down).
2. Mixture—Idle cut off
3. Fuel Selector Valve—OFF
4. Ignition Switch-Off.
5. Wing Flaps-As required.
6. Master Switch-Off.

ENGINE FAILURE DURING FLIGHT

1. Airspeed -- 65 KIAS.
2. Carburetor - Heat-On.
3. Fuel Selector -Valve-Both.
4. Mixture -Rich.
5. Ignition Switch-Both (or Start if propeller is stopped).
6. Primer-In and locked.

EMERGENCY LANDING WITHOUT ENGINE POWER

1. Airspeed- 65 KIAS (flaps up).
60 KIAS (flaps down).
2. Mixture—Idle cut off.
3. Fuel selector valve-Off.
4. Ignition Switch—Off.
5. Wing Flaps—a s required (40° recommended).
6. Doors –Unlatch prior to touch down.
7. Touchdown—slightly tail low.
8. Brakes—Apply Heavily.

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PRECAUTIONARY LANDING WITH ENGINE POWER

1. Wing Flaps—20°
2. Airspeed—70 KIAS.
3. Selected field—Fly over, noting terrain and obstruction, then retract flaps upon reaching a safe altitude and airspeed.
4. Radio and Electrical Switch—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 MHz, giving location and intentions.
2. Heavy Objects (in baggage area) - Secure or Jettison.
3. Flaps-20°-40°.
4. Power- Establish 300ft/ min Descent at 55 KIAS

NOTE

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

5. Approach- High Winds, Heavy Seas-Into the wind.
Light winds, heavy Swells-Parallel to Swells.
6. Cabin Doors—Unlatch.
7. Touchdown—Level attitude at establish descent.
8. Face—Cushion at touchdown with folded coat or seat cushion.
9. Airplane-Evacuate through cabin doors. If necessary, open window and flood cabin to equalize pressure so doors can be opened.
10. Life Vests and Raft- Inflate.

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FIRES

ENGINE FIRE DURING START ON GROUND

1. Cranking-Continue, to get a start which would suck the flames and accumulated fuel through the carburetor and into the engine.
2. If engine starts:
 - Power-1700 rpm for a few minutes.
 - Engine-Shutdown and inspect for damage.
3. If engine fails to start:
 - Throttle-Full open.
 - Mixture-Idle cut-off.
 - Cranking-Continue for two or three minutes.
4. Fire extinguisher-Obtain (have ground attendants obtain if not installed).
5. Engine-Secure.
 - Master Switch-Off.
 - Ignition Switch-Off.
 - Fuel Shutoff Valve-Off.
6. Fire-Extinguish using fire extinguisher, seat cushion, wool blanket, or dirt. If practical try to remove carburetor air filter if it is ablaze.
7. Fire Damage –Inspect, repair damage or replace damaged components or wiring before conducting another flight.

ENGINE FIRE IN FLIGHT

1. Mixture-Idle cut-off.
2. Fuel Selector Valve-Off.
3. Master Switch-Off.
4. Cabin Heat and Air-Off (except overhead vents).
5. Airspeed-100 KIAS (if fire is not extinguished, increase glide speed to find an airspeed which will provide an incombustible mixture).

6. Forced landing Execute (as describe in emergency landing without engine power).

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FIRES

ELECTRICAL FIRE IN FLIGHT

1. Master Switch-Off.
2. All Other switches (except ignition switch)-Off.
3. Vents/Cabin Air/Heat-Closed.
4. Fire Extinguisher-Activate (if available)

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 short circuit is localized.
8. Vents/Cabin Air/Heat-Open when it is ascertained that fire is completely extinguished.

CABIN FIRE

1. Master Switch — Off.
2. Vents/Cabin Air/Heat—closed (to avoid drafts).
3. Fire Extinguisher-Activate (if available).
4. Warning
5. After discharging an extinguisher within a closed cabin, ventilate the cabin.
6. 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 and cabin, and land as soon as possible using flaps only as required for final approach and touchdown.

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INADVERTENT ICING ENCOUNTER

1. Turn pitot heat switch on (if installed).
2. Turn back or change altitude to obtain an outside air temperature that is less conducive to icing.
3. Pull cabin heat control full out and open defroster outlet to obtain maximum windshield defroster heat and airflow. Adjust 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.
5. Watch for signs of carburetor air filter ice and apply carburetor heat as required. An unexplained loss in engine speed could be caused by carburetor ice or intake filter ice. Lean the mixture for maximum RPM if carburetor heat is use 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 $\frac{1}{4}$ inch or more on the wing leading edges, be prepared for significantly higher stall speed.
8. Leave wing flaps retracted. With a severed ice build-up on the horizontal tail, the change in wing wake airflow direction caused by wing flaps extension could result in a loss of elevator effectiveness.
9. Open left 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 the accumulation.
12. Perform a landing in level attitude.

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STATIC SOURCE BLOCKAGE

(Erroneous instrument reading suspected)

1. Alternate Static Source Valve-Pull on.
2. Airspeed-Consult appropriate Calibration tables in section 5 from POH.

LANDING WITH A FLAT MAIN TIRE

1. Approach-Normal.
2. Touchdown-Good tire first, hold airplane off flat tire as long as possible.

ELECTRICAL POWER SUPPLY SYSTEM MALFUNCTION

Over-voltage light illuminates

1. Master Switch-Off (both sides).
2. Master Switch-On.
3. Over-voltage light-Off.

If over-voltage light illuminates again:

4. Flight-Terminate as soon as possible.

Ammeter shows discharge

1. Alternator-Off.
2. Nonessential electrical equipment-Off.
3. Flight terminates as soon as practical.