

Fly Safe! - Training for Pilot Competence

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Quick Reference Handbook Non-Normal-Checklist

Cessna C172

Memory Items

Checklist steps up to the dashed line should be memorized for accomplishment without reference to the procedure.

Checklistenschritte bis zur gestrichelten Linie sollten auswendig gelernt werden, um sie ohne Bezugnahme auf das Verfahren ausführen können.

Emergency Descent

Condition

One or more of these occurs:

- The oxygen supply is interrupted
- A rapid descent is needed

1. Without delay, descend to the lowest safe altitude
or 10.000 feet, whichever is higher.

2. Mixture

FULL RICH

3. Carburetor Heat

FULL

4. Throttle

CLOSE

Reduce power to set up a 500 to 800 ft/min rate of descent

Adjust the elevator trim and rudder trim (if installed) for a stabilized
descent at 70-80 KIAS

5. When approaching level off altitude

- Smoothly reduce rate of descent and level off
- Add power and stabilize on altitude and airspeed.

6. The new course of action is based on weather, oxygen, fuel remaining and available
airports.

AHRS* Failure PFD

Condition

One or more of these occurs:

- Attitude and / or Heading Data on the PFD is lost
- Completed PFD failure

1. Maintain control by reference to standby Instruments

2. AHRS Circuit Braker

CHECKED

3. AHRS Circuit Braker

RESET

4. During alignment keep wings straight and level in
un-accelerated flight

5. Choose one:

- AHRS Alignment successful
Continue normal operation
- AHRS Alignment not successfully
Go to step 6

6. Continue flight in reference to standby instruments

7. Maintain VMC

If unable to maintain VMC or above clouds

Go to step 8

8. Divert to the nearest suitable airport providing SRA or PAR approach

* Attitude and Heading Reference System

Engine Failure immediately after Takeoff

Condition

Engine severe damage or engine failure

- | | |
|-----------------------|--|
| 1. Airspeed | (flaps UP) 65 KIAS
(flaps DOWN) 60 KIAS |
| 2. Mixture | IDLE CUT-OFF |
| 3. Fuel Shutoff Valve | OFF
pull sharply to break safety wire |
| 4. Ignition Switch | OFF |
| 5. Wing Flaps | AS REQUIRED |
| 6. MASTER SWITCH | OFF |
-

Engine Failure in Flight

Condition

Engine severe damage or engine failure

- | | |
|-------------------|---------|
| 1. Safe Airspeed | 65 KIAS |
| 2. Suitable Field | SELECT |
-

- | | |
|------------------------|------|
| 3. Carburetor Heat | ON |
| 4. Fuel Shutoff Valve | ON |
| 5. Fuel Selector Valve | BOTH |
| 6. Fuel Pump Switch | ON |
| 7. Mixture lever | RICH |
| 8. Ignition Switch | BOTH |

or START if propeller has stopped

- | | |
|--|-----|
| 9. Choose one | |
| • Engine restart is successful | |
| Go to step 10 | |
| • Engine restart is not successful | |
| Go to the Engine Inoperative Landing Checklist | |
| 10. Power | SET |

Engine Roughness

Condition

- | | |
|-----------------------|--------------|
| 1. Mixture lever | ADJUST |
| 2. Carburetor Heat | ON |
| 3. Fuel Shutoff Valve | ON |
| 4. Engine Gauges | CHECKED |
| 5. Magnetos | L / R / BOTH |

6. Choose one:

- Engine is running smoothly again

Go to step 7

- Engine roughness persists

Go to step 8

7. If engine operation is satisfactory on either magneto, proceed on that magneto at reduced power, with full rich mixture to next available airport.
8. If engine roughness persists, prepare for a power off landing
9. Land nearest suitable airport

Deferred Items

Approach Checklist

Altimeter

Approach Briefing

_____ Completed

Landing Checklist

Mixture

RICH

Flaps

30° SET

Engine Inoperative Landing

Condition

A landing will be made without engine power

- | | |
|-----------------------|--------|
| 1. Throttle lever | CLOSE |
| 2. Mixture lever | CUTOFF |
| ----- | |
| 3. Fuel Shutoff Valve | CLOSED |
| 4. Ignition | OFF |

Deferred Items

Approach Checklist

- | | |
|--------------------|-----------|
| Altimeter | _____ |
| Approach Briefing | Completed |
| Passenger Briefing | Completed |

Landing Checklist

- | | |
|-------|---------|
| Flaps | 30° SET |
|-------|---------|

Short prior touchdown and landing assured

- | | |
|------------------|-----|
| Advise the tower | |
| Battery Master | OFF |

If evacuation will be needed after landing, go to the last page of this non-normal checklist for evacuation procedure.

Fire During Start on Ground

- | | |
|--|--------------|
| 1. Cranking | CONTINUE |
| to get start which would suck the flames and accumulated fuel through the carburetor and into the engine | |
| 2. Choose one: | |
| • If engine starts | |
| Go to step 3 | |
| • If engine fails to start | |
| Go to step 5 | |
| 3. Power – 1.700 for a few minutes | |
| 4. Engine SHUTDOWN and inspect for damage | |
| 5. Throttle | FULL OPEN |
| 6. Mixture | IDLE CUT-OFF |
| 7. Cranking | CONTINUE |
| 8. Fire Extinguisher | OBTAIN |
| 9. Engine | SECURE |
| a. Master Switch – OFF | |
| b. Ignition Switch – OFF | |
| c. Fuel Shutoff Valve – OFF | |

-
- | | |
|-----------------|------------------|
| 10. Fire | using EXTINGUISH |
| 11. Fire Damage | INSPECT |

Engine Fire in Flight

- | | |
|---|--------------|
| 1. Mixture | IDLE CUT-OFF |
| 2. Fuel Shutoff Valve | OFF |
| 3. Master Switch | OFF |
| 4. Cabin Heat and Air | OFF |
| 5. Airspeed | 100 KIAS |
| if fire is not extinguished, increase glide | |
| 6. Forced Landing | EXECUTE |
-

Electrical Fire in Flight

- | | |
|--|----------|
| 1. Master Switch | OFF |
| 2. Avionics Power Switch | OFF |
| 3. All other Switches (except ignition switch) | OFF |
| 4. Vents / Cabin Air / Heat | CLOSED |
| 5. Fire Extinguisher | ACTIVATE |

After discharging an extinguisher within closed cabin, ventilate the cabin

6. Choose:

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

Go to step 7

- Engine restart is not successful

Go to the Engine Inoperative Landing Checklist

- | | |
|---------------------------------|-------|
| 7. Master Switch | ON |
| 8. Circuit Breakers | CHECK |
| 9. Radio Switches | OFF |
| Avionics Power Switches | ON |
| 10. Radio / Electrical Switches | ON |
| 11. Vents / Cabin Air / Heat | OPEN |

Cabin Fire

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

After discharging an extinguisher within closed cabin, ventilate the cabin

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

Wing Fire

- | | |
|-------------------------------------|-----|
| 1. Landing / Taxi Light Switches | OFF |
| 2. Pitot Heat Switch | OFF |
| 3. Navigation / Strobe Light Switch | OFF |

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

Generator Malfunction

Condition

A generator malfunction occur.

- | | |
|---|---------|
| 1. Ammeter | CHECKED |
| 2. Electrical load | REDUCE |
| 3. Alternator Switch | OFF |
| 4. Alternator Circuit Brakers | RESET |
| 5. Alternator Switch | ON |
| 6. Choose one: | |
| • Alternator light stays illuminated | |
| Go to step 7 | |
| • Alternator light extinguishes and comes back online | |
| Continue normal operation | |
-

- | | |
|--|--------|
| 7. Electrical load | REDUCE |
| 8. Plan to land at the nearest suitable airport. Remaining battery power last approx. 30 minutes only, with a well charged battery. The battery is the only remaining source of electrical power | |

Pitot Heat

Condition

The probe heat system has failed.

- | | |
|--|----------|
| 1. Check Circuit Braker | CHECKED |
| 2. Pitot Heat switch | OFF |
| 3. Pitot Heat switch | RESET ON |
| 4. Choose one: | |
| • Pitot Heat annunciator extinguished | |
| Continue normal operation | |
| • Pitot Heat annunciator not extinguished | |
| Avoid icing conditions | |

Ditching

Condition

A landing will be made in water

Note:

- High Winds / Heavy Seas plan a approach into the wind
- Light Winds / Heavy Swells plan approach parallel to the swells

1. ATC	MAYDAY / 7700
2. ELT	ACTIVATE
3. Flaps	20°-30° SET
4. Speed	55 KIAS
5. Descent Rate	300 ft/min
6. Cabin Doors	UNLATCH
7. Touchdown	LEVEL ATTITUDE at 300 FT/MIN DESCENT
8. Seats	UPRIGHT
9. Seatbelts	FASTENED
10. Jettison or secure heavy objects in the cabin	SECURE

Ditching Procedure Review

Touch Down with a level attitude at a descent rate of 300 ft/min.

Prior Touch Down cushion your face with a folded coat or other soft items.

After Touch Down and a complete stop of the aircraft, evacuate the aircraft via all available exist. Do not inflate the life vests in the cabin.

Evacuation

Condition

Evacuation is needed.

1. Parking Brake	SET
2. Flaps	UP
3. Mixture lever	CUTOFF
4. Fuel Shutoff Valve	CLOSE
5. Ignition	OFF
6. Advise the passengers to evacuate	
7. Advise the tower	
8. Battery Master	OFF