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

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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

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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 pull sharply to break safety wire	OFF
4.	Ignition Switch	OFF
5.	Wing Flaps	AS REQUIRED
6.	MASTER SWITCH	OFF

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Engine Failure in Flight

Condition

Engine severe damage or engine failure

1.	Safe Airspeed	65 KIAS
2.	Suitable Field	SELECT

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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 or START if propeller has stopped	BOTH

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

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

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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

Advice the tower	
Battery Master	OFF

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

Fire Durfing 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

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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

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Electrical Fire in Flight

1.	Master Switch	OFF
2.	Avionics Power Switch	OFF
3.	All other Switches (expect ignition switch)	OFF
4.	Vents / Cabin Air / Heat	CLOSED
5.	Fire Extinguisher	ACTIVATE
	After discharging an extinguisher within closed cabin, ventilate the cabin	

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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	

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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

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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

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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