



====> BY HEART ITEM !

## ENGINE POWER LOSS IN FLIGHT

Best glide speed..... fly, trim **73 KT** (max TOW)  
**68 KT** (1000 kg)

Landing site..... determine

● If no time / low altitude:

**PREPARE FOR POWER OFF LANDING!**

● if time / altitude permits:

✦ Windmilling / turning propeller:

Airspeed..... 80 kt  
Electrical fuel pump..... on  
Fuel quantity..... lh / rh checked  
Fuel selector..... change tank  
Mixture control..... rich  
Alternate air..... on  
Magnetos / Ignition..... both / lh / rh  
Throttle / mixture control..... different settings

✦ Standing propeller:

Airspeed..... 80 kt  
Electrical equipment..... off  
Avionics masterswitch..... off  
Battery masterswitch..... check on  
Mixture control..... rich (leaner>5000ft)  
Throttle..... max. 3 cm open  
Fuel selector..... fullest tank  
Electrical fuel pump..... on  
Alternate air..... on  
Consider increase of airspeed... 130 kt  
Starter..... engage

● If power restored:

Alternate air..... off  
Electrical fuel pump..... off

● If power not restored:

Mixture control..... idle cutoff  
Mixture control..... slowly to rich

● If power still not restored:

**PREPARE FOR POWER OFF LANDING!**

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### POWER OFF LANDING

EMERGENCY CALL 121.500 „MAYDAY MAYDAY MAYDAY, HB-XXX...“

Seatbelts / cabin + passengers.....fastened / secured

Fuel selector..... off

Magnetos / igniton..... off

Mixture control..... idle cutoff

When landing site can easily be reached:

Flaps..... LDG

Speed..... final app { (71 KT max TOW)

Battery masterswitch..... off { (63 KT 1000 kg)

### POWER LOSS SHORT AFTER TAKEOFF

**Fly the aircraft**..... nose down, safe speed immediately:

Flaps T/O: **72 KT (max TOW) / 66 KT (1000 kg)**

At low altitude.....no narrow turns

Flaps..... as req, if poss. flaps LDG (2)

Fuel selector..... off

Mixture control..... idle cutoff

Magnetos / Ignition.....off

Battery / Alternator masterswitches..... off

### FIRE / SMOKE INFLIGHT

Source of fire / smoke..... identify

#### ● **Electrical fire / smoke:**

Battery masterswitch..... off

Cabinheat..... off

Emergency windows..... open

Front canopy..... partially open

**Land as soon as possible!**

#### ● **Engine fire / smoke:**

Cabinheat..... off

#### **Select landing site**

Fuel selector..... off

Throttle..... full open

Electrical fuel pump..... off

Battery masterswitch..... off

Emergency window(s)..... open { **73 KT (at max TOW)**

**Best glide speed**..... fly, trim { **68 KT (at 1000 KG)**

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### SPIN (VRILLE) RECOVERY

Throttle.....	idle
Rudder.....	full opposite direction
Elevator.....	full forward
Ailerons.....	neutral
Flaps.....	up

When rotation stops:

Rudder.....	neutral
Elevator.....	recover attitude

### FIRE DURING ENGINE START

Starter.....	crank
Mixture control.....	idle cut off
Throttle.....	full open
Electrical fuel pump.....	off
Fuel selector.....	off
Battery / alternator switches.....	off
Passengers / pilot.....	evacuate

### LOSS OF RPM

Electrical fuel pump.....	on
Fuel selector.....	check
Friction adjuster.....	check
Propeller.....	high RPM
if no change:.....	assume faulty governer
if change feelable.....	assume faulty indication

### PROPELLER OVERSPEED

Friction adjuster.....	check
Oil pressure.....	check
• if oil pressure low.....	emergency checklist for LOSS OF OIL PRESSURE
• if oil pressure normal.....	propeller reduce RPM (back) throttle.retard max. 2700 RPM

### HIGH FUEL FLOW

**FUEL PRESS**

If fuel pressure low.....possible fuel leak !

**CONSIDER PRECAUTIONARY LANDING!**

If fuel pressure normal.....	continue flight
Fuel quantity.....	check frequently

## ENGINE ROUGHNESS

- Speed..... 73 KT (max TOW) / 66 KT (1000 kg)
- Electrical fuel pump..... on
- Fuel selector..... check on other tank
- Engine instruments..... check for reason
- Throttle..... check different settings
- Propeller..... check different settings
- Mixture control..... check different settings
- Alternate air..... on
- Magnetos / ignition..... both / lh / rh

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## LOSS OF OIL PRESSURE

**OIL PRESS**

- If oilpress indication below green, but **no** oilpress warning light and oiltemp **normal**:

Continue flight (oilpress indication problem)

Monitor oilpress warning light and oiltemp and cylheadtemp

- If Oilpress warning light **on** or **flashing**  
**and/or**

Oilpress indication below green

**and/or**

Oiltemp or cylinderhead temp rising:

Reduce engine power to required minimum

Land as soon as possible

**PREPARE FOR POWER OFF LANDING!**

- If Oilpress indication towards zero with vibration, oil-loss, noise, smoke:  
Shutoff engine (throttle idle, mixture control idle-cutoff, ignition off)

**PREPARE FOR POWER OFF LANDING!**

## OPEN DOOR(s)

**DOOR**

**!!! NEVER EVER try to close a rear/aft (half-)open door in flight !!!!**

**Do not touch! Reduce speed below 140 kt.**

**Land as soon as possible with open door, close on ground only!**



## HIGH OIL PRESSURE / TEMPERATURE

- If oiltemp. indication normal: continue flight (assume faulty oilpress indication)
- If oiltemperature high:
  - If cylheadtemp **and** EGT normal: continue flight (assume faulty oiltemp indication)
  - If cylheadtemp **and/or** EGT high:
    - if oilpress low: perform Emergency-Checklist for LOSS OF OIL PRESSURE
    - if oilpress nml: check mixture + enrich, reduce power
    - if no improvement:

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## HIGH CYL-HEAD TEMPERATURE

Cylinder head temperature indication yellow or above:

- Check mixture enrich
- If oil temp high:
  - if oilpress low: perform Emergency-Checklist for LOSS OF OIL PRESSURE
  - if oilpress nml: reduce power
  - if no improvement:

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**PREPARE FOR POWER OFF LANDING!**

## TOTAL ELECTRICAL FAILURE

Battery / Alternator masterswitches..on

ALT-Circuitbreakers..... check and reset (only 1 X)

Essential bus switch..... try on (see list on next page below)

**Battery lasts for approx 30 min only**

Engine (if essential bus not avlbl).....set acc. normal sound / lever position

Flaps (if essential bus not avlbl)..... use existing setting for approach

Flaps up or T/O: **73 kt**

Flaps LDG: **71 kt**

## ELECTRICAL OVERLOAD (OVERVOLTAGE)

(VOLTAGE > 32 V)

Essential bus switch.....on (see list below)

Alternator switch..... off

Battery switch..... check on

Electrical loads.....reduce to minimum

Land as soon as possible and **anticipate complete electrical failure** as the **battery is the only remaining source** of electrical power for ca. 30 min.

## ALTERNATOR

### ALTERNATOR / ELECTRICAL FAILURE

Annunciator panel..... check and test

Ampèremeter output..... check (switch on consumer)

If ampèremeter **shows zero output:** go to **1**

If ampèremeter **shows some output:** go to **2**

**1** Alternator switch.....off

Electrical load..... reduce to minimum

ALT circuit breakers..... check, reset (only 1 x)

Alternator switch.....on

• Still no Altn. output: Alternator switch.....off

Essential bus switch..... on (s. list below)

Voltmeter..... check frequently

Land as soon as possible. **Battery is the only remaining source of elec. power for approx 30 min.**

• If power restored: Continue flight, check system after LDG

**2** Check circuit breakers of affected systems, reset (only 1 x)

• If no success..... Try essential bus switch on. Evaluate if destination can be reached (s. list below, **30 min**) or **precautionary landing** is necessary

• If successful..... Continue flight and check system after LDG

### POWERED SYSTEMS WITH ESSENTIAL BUS ON

for approx 30 minutes only, as alternator is disconnected !!!

NAV/COM 1 / transponder / attitude indicator (Horizont) / engine instruments / annunciator-panel / GPS / landing light / pitot-heat / flaps

(see circuit breakers of „essential“ and „essential avionic“ bus)

**No** pneumatically driven Instruments installed on this aircraft!