

EMERGENCY OPERATIONS

Ref: AFM 3.3

This section contains abbreviated checklists for emergency operations of the airplane. Refer to the Checklist Usage section of the SFT Training Handbook for school standards and practices. Refer to the AFM for more in-depth information about emergency operations.

Engine Failure In Flight (or engine running roughly)

Airspeed..... Pitch for Best Glide
Landing Field..... Select a Suitable
place to land
Electric Fuel Pump..... On
Mixture Control Lever..... Set Full Rich
Fuel Tank Selector..... Switch Tanks
Alternate Air..... Open
Ignition Switch..... Check R-L-Both
Throttle/RPM/Mixture..... Try various settings if
time allows
Communicate..... Call Approach/Tower or 121.5
Transponder..... Squawk 7700
When landing field is assured
Flaps..... T/O (Below 108)
On final
Flaps..... LDG (Below 91)

Engine Restart in Flight (with Windmilling Prop)

Airspeed..... 80 kts
Electric Fuel Pump..... On
Mixture..... Rich
Fuel Tank Selector..... Fullest Tank
Alternate Air..... Open
Ignition Switch..... Both

If engine does not start

Mixture..... Lean
Push mixture forward slowly until engine starts

Engine Restart in Flight (with Stationary Prop)

Caution: Allow for at least 1000 ft altitude loss

Airspeed..... 130 kts

When propeller begins turning

Airspeed..... 80 kts
Avionics Master Switch..... Off
Battery Master..... Check On
Electric Fuel Pump..... On
Mixture..... Rich
Fuel Tank Selector..... Fullest Tank
Alternate Air..... Open
Ignition Switch..... Both

If engine does not start

Mixture..... Lean
Push mixture forward slowly until engine starts

Engine Fire on the Ground

Fuel Tank Selector..... OFF
Cabin Heat..... OFF
Brakes..... Apply

After Standstill:

Throttle..... Max Power
Master Switch (BAT)..... OFF

When the Engine has Stopped:

Ignition Switch..... OFF
Canopy..... Open
Airplane..... Evacuate Immediately

Electrical Fire on the Ground

Master Switch (BAT)..... OFF

If the Engine is Running:

Throttle..... Idle
Mixture Control Lever..... Lean - Shut Off Engine

When the Engine has Stopped

Ignition Switch..... OFF
Canopy..... Open
Airplane..... Evacuate Immediately

Spin Recovery

Immediately and Simultaneously:

Throttle..... Idle
Rudder..... Full Deflection Against the Spin
Control Stick (Elevator)..... Full Forward
Ailerons..... Neutral
Flaps..... Up

After Rotation has Stopped:

Rudder..... Neutral
Control Stick (Elevator)..... Smoothly Pull Nose Up
Do Not Exceed Vne

Loss of Oil Pressure or High Oil Temperature

If Oil Pressure is low and Oil Temperature and CHT are normal, it is likely a sensor failure

Cylinder Head Temperature (CHT)..... Monitor
Oil Temperature.....Monitor (stays within Green Band)

If Oil Temperature is high and Oil Pressure and CHT are normal, it is likely a sensor failure

Cylinder Head Temperature (CHT)..... Monitor
Oil Pressure.....Monitor (stays within Green Band)

If Oil Pressure is low and Oil Temperature or CHT is Climbing

Throttle..... Reduce to Minimum Required Power
Landing Field..... Select (in case of sudden engine failure)

LAND AS SOON AS POSSIBLE

If Oil Temperature is High and CHT is Climbing

Oil Pressure..... Check in Green Band
If Oil Pressure is in the Green Band

Mixture..... Enrich
Throttle..... Reduce Power

If Oil Temperature is High with Low Oil Pressure and CHT Climbing

Throttle..... Reduce to Minimum Required Power
Landing Field..... Select (in case of sudden engine failure)

LAND AS SOON AS POSSIBLE

High Cylinder Head Temperature

Mixture..... Enrich

Oil Temperature..... Check

Oil Pressure..... Check

If Oil Temperature is High

Throttle..... Reduce to Minimum Required

CHT..... Monitor (CHT should fall)

Landing Field..... Select (in case of sudden engine failure)

If CHT or Oil Temperature Remain High

LAND AS SOON AS POSSIBLE

HIGH RPM

Oil Pressure..... Check

If Oil Pressure is Normal

Prop Lever..... Reduce

If Prop Lever does not change RPM

Throttle..... Reduce to control RPM

If Oil Pressure is Low

Loss of Oil Pressure Checklist..... Run

Alternator Failure

Circuit Breakers..... Check

If a Circuit Breaker is Open, it can only be reset once

Voltmeter..... Check

If Voltmeter continues to show a discharge

ESS Bus Switch..... On

The Main Battery will provide at least 30 minutes of
power to the ESS Bus

See Circuit Breaker Panel for items on the ESS Bus

LAND AS SOON AS POSSIBLE

If flight exceeds battery life

Emergency Horizon Switch..... On

The Emergency Battery will provide at least 90 minutes
of power to the Standby Attitude Indicator and Cockpit

Floodlight

LAND AS SOON AS POSSIBLE

Flaps will not operate. If Flaps are Up or T/O plan for
longer landing roll

Smoke and Fire in Flight

For Engine fire in flight

Cabin heat.....Off

Select appropriate emergency landing field

When certain landing field will be reached

Fuel tank selector.....Off

Throttle.....Max PWR

Electrical fuel pump.....Off

Master switch (BAT).....On

Emergency window(s).....Open

if required

Carry out emergency landing with engine off.

For Electrical fire with smoke in flight

Emergency switch.....On

Master switch (BAT).....Off

Caution

Master switch off will result in total electrical failure
aside from the backup horizon indicator if the
emergency switch is in the “on” position.

Cabin heat.....Off

Emergency window(s).....Open

if required

Land at an appropriate airfield as soon as possible

Caution

In case of extreme smoke development, the front
canopy may be unlatched during flight. This
improves ventilation. The canopy will remain open
in this position. Flight characteristics will not be
affected significantly.