**Emergency Checklist**

 ****

 **The Flying School**

**EMERGENCY PROCEDURES:**

## ENGINE FIRE ON GROUND

* Ignition: **OFF**
* Fuel Valve: **CLOSED**
* Master Switch: **OFF**
* Parking Brake: **SET**
* Evacuate Aircraft

### ENGINE FAILURE DURING TAKEOFF RUN

* Throttle: **IDLE**
* Brakes: **APPLY**
* Ignition: **OFF**
* Fuel Valve: **CLOSED**
* Master Switch: **OFF**

### ENGINE FIRE DURING TAKEOFF RUN

* Throttle: **IDLE**
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ENGINE FAILURE IMMEDIATELY AFTER TAKEOFF

* **NOSE DOWN!**
* Airspeed: **65 Knots**
* Find a suitable place on the ground to land safely. The landing should be planned

straight ahead with only small changes in direction not exceeding 45° to the left

or 45° to the right

* Flaps: **AS REQUIRED**
* Ignition Switch: **OFF**
* Master switch: **OFF**
* Fuel selector valve: **CLOSED**

## ENGINE OUT GLIDE

* Flaps: **RETRACT**
* Speed: **65 KIAS**
* In-flight Engine re-start

**NOTE**

**Glide ratio is 10:1 therefore with 1000 feet of altitude; it is possible to cover**

**~1.7 nautical miles in zero wind conditions**

**IN-FLIGHT ENGINE RESTART – IF TIME PERMITS**

* Fuel Valve: **OPEN**
* Electric Fuel Pump: **ON**
* Throttle: **MIDDLE POSITION**
* Master Switch: **ON**
* Ignition switch: **START, then both**
* If the restart fails: Procedure for a Forced

 Landing Without Engine Power: **APPLY**

* If engine starts: Land as soon as possible

###### FORCED LANDING WITHOUT ENGINE POWER

* **Establish: 65 KIAS, Flaps Up**
* **Locate suitable terrain, land into wind**
* Radio / Transponder: **121.5 / 7700**
* ELT: **Activate near ground**
* Fuel valve: **CLOSED**
* Electric fuel pump: **OFF**
* Ignition Switch: **OFF**
* Safety belts: **TIGHTEN**
* Doors: **UNLATCHED / PROP OPEN**
* Flaps: **AS NECESSARY**
* Master switch: **OFF**

### JETTISON OF DOORS

* Door Lock: **OPEN**
* Hinge Pin: **PULL**
* Door: **Jettison**

**ENGINE FIRE IN-FLIGHT**

* Cabin heat: **OFF**
* Fuel Valve: **CLOSED**
* Electric fuel pump: **OFF**
* Throttle: **FULL IN until the engine stops running**
* Cabin vents: **OPEN**
* Pitch for 130 KIAS to snuff out flames
* Employ slip to keep flames away from firewall

*Do not attempt an in-flight restart*

* Procedure for a Forced Landing Without Engine Power: **APPLY**

**ELECTRICAL FIRE IN CABIN IN FLIGHT**

* Master switch: **OFF**
* Cabin vents: **OPEN**
* Emergency descent and Procedure for a Power-On Forced Landing
* If flaps needed, Master switch: **ON**
* Flaps: **AS REQUIRED**
* Master switch: **OFF**

## CABIN FIRE DURING FLIGHT

* Cabin heat: **OFF**
* Cabin vents: **OPEN**
* Doors: **OPEN, if necessary**
* Master switch: **OFF**
* Emergency descent and Procedure for a Power-On Forced Landing
* If flaps needed, Master switch: **ON**
* Flaps: **AS REQUIRED**
* Master switch: **OFF**

## POWER-ON FORCED LANDING

* Descent: **ESTABLISH**
* Airspeed: **65 KIAS**
* Landing area: **SELECT**
* Safety belts: **TIGHTEN**
* Doors: **UNLATCH**

**Landing assured:**

* Flaps: **AS REQUIRED**
* Fuel valve: **CLOSED**
* Electric fuel pump: **OFF**
* Ignition Switch: **OFF**
* Master switch: **OFF**

**IRREGULAR ENGINE RPM**

* Throttle: **CHECK**
* Engine gauges: **CHECK**
* Fuel quantity indicator: **CHECK**
* Electric fuel pump: **ON**
* Fuel Valve: **Check OPEN**

If the engine continues to run irregularly, land as soon as possible

**LOW FUEL PRESSURE (below the 0.15 bar limit)**

* Fuel quantity indicator: **CHECK**
* Electric fuel pump: **ON**
* Fuel Valve: **Check OPEN**

If the fuel pressure continues to be low, land as soon as possible

**LOW OIL PRESSURE**

* Oil temperature: **CHECK**
* If oil temperature is stable

 within the green arc: **LAND as soon as possible**

* If oil temp. increasing: **LAND** as soon as possible and be alert for

impending engine failure

## GENERATOR LIGHT ON

* Reduce electrical load
* If Generator light is ON: Land as soon as possible

**Battery power is good for 20 minutes**

**TRIM SYSTEM FAILURE**

* In case the trim control should not respond, act as follows:
* Airspeed: Adjust speed to control aircraft without excessive stick force
* Land aircraft as soon as possible, flaps up

**Note:** If trim should fail in cruise position, deploying flaps after slowing the plane may

reduce trim pressure for landing

**LANDING WITH A FLAT TIRE**

* Apply rudder and brakes to stay on runway
* Make radio call to UNICOM and inbound traffic about closed runway
* Push plane off runway

### CARBURETOR ICING

* Carb Heat: **ON**
* Electric Fuel Pump: **ON**
* Throttle: **Full Power**

## UNINTENTIONAL FLIGHT INTO ICING CONDITIONS

* Carb Heat: **ON**
* Get away from icing conditions by changing altitude or direction of flight in order

to reach an area with warmer external temperature

* Increase rpm to avoid ice formation on propeller blades
* Cabin heat: **ON**
* Land as soon as practical
* Do NOT use flaps

**WARNING**

**In case of ice formation on wing leading edge, stall speed may increase**

**NOTE: It may be necessary to slip the plane on landing to see outside**

## RECOVERY FROM UNINTENTIONAL SPIN

* Reduce the power to idle
* Position the ailerons to neutral
* Apply full opposite rudder against the rotation
* Apply positive, brisk, forward stick (forward of neutral) to break stall
* After spin rotation stops, neutralize the rudder
* Begin applying back-elevator pressure to raise the nose to level flight

##### LOST PROCEDURES

* Climb and Circle to better see prominent landmarks
* Conserve fuel
* Communicate with ATC (121.5)
* Comply with ATC instructions

**V – Speeds and Performance:**

Vr – 49 KIAS

Vx – 65 KIAS

Vy – 76 KIAS

**Best Glide – 65 KIAS** (Glide Ratio 10:1)

Vne – 134 KIAS (100 KIAS with doors off)

Vno – 107 KIAS

Va – 94 KIAS

Vfe – 70 KIAS

Vs1 – 44 KIAS

Vs0 – 38 KIAS

Maximum Cross Wind – 15 knots

Maximum Ceiling (gross weight) – 15,000 feet

Take-off run (gross weight) – 495 feet

Take-off run (50ft @ gross weight) – 721 feet

Landing run (gross) – 341 feet

Landing run (50ft @ gross) – 676 feet

75% power, 2000’ (5,200 rpm – 5.2 gph)

65% power 2000’ (5,000 rpm – 4.8gph)

55% power 2000’ (4,600 rpm – 4.0 gph)

Useful Load – 115GX: 622 lbs. (496 lbs. with full fuel)

 Weight Arm Moment

Empty 698 7845

Pilot & Pass. 8.3

Fuel (21 gal max) 37.8

Bag (66 lbs. max) 37.4

Max Gross Weight: 1320 lbs. C.G. Range: 9.6 – 16.3 in.