3. EMERGENCY PROCEDURES

SECTION 3

3. EMERGENCY PROCEDURES

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3.1 Introduction

Section 3 describes operations and procedures for emergency situation solutions that could possibly occur during airplane operation.

3.2 Speeds for performing emergency procedures

Airspeed for the best gliding ratio (flaps retracted)	59 KIAS (68 mph IAS)
Precautionary landing (engine running, flaps in landing position - 50°)	55 KIAS (63 mph IAS)
Emergency landing (engine stopped, flaps in landing position - 50°)	55 KIAS (63 mph IAS)

3.3 Engine failure

3.3.1 Engine failure at take-off run

1.	THROTTLE lever	idle
2.	Brakes	as necessary
3.	FUEL SELECTOR	OFF
4.	Ignition	OFF
5.	Master switch	OFF

3.3.2 Engine failure at take-off

1. Gliding speed:
   with flaps in take-off position (15°) min. 55 KIAS (63 mph IAS)
   with flaps retracted (0°) min. 59 KIAS (68 mph IAS)
2. Altitude:
   - Land in take-off direction if below 150 ft:
   - Land in take-off direction or you can perform turn up to 90° if altitude is 150 - 400 ft:
   - You can try start engine if altitude is above 250 ft
   - You can perform turn up to 180° if altitude is above 400 ft:
3. THROTTLE lever idle

4.	Flaps	as needed
5.	FUEL SELECTOR	OFF
6.	Ignition	OFF
7.	ATC	report
8.	Master switch	OFF
9.	After touch down	brake as needed

3.3.3 Engine failure in flight

1.	Gliding speed	59 KIAS (68 mph IAS)
2.	Altitude	take a decision and carry out:

- Engine starting in flight - paragraph 3.4
- Emergency landing - paragraph 3.8.1

3.4 Engine starting at flight

NOTE

It is possible to start the engine by means of the starter within the whole range of operation speeds as well as flight altitudes. The engine started up immediately after switching the ignition to START position.

If the engine is shut down, the altitude loss during engine starting can reach up to 1000 ft.

1.	Gliding speed	59 KIAS (68 mph IAS)
2.	Altitude	check
3.	Master switch	ON
4.	Electrical fuel pump (if installed)	ON
5.	Unnecessary electrical equipment	switch off
6.	FUEL SELECTOR	LEFT (or RIGHT if left is empty)
7.	Choke	as needed

8.	THROTTLE lever	idle (choke opened) or increased idle (choke closed)

The propeller is rotating:

9.	Ignition	BOTH

The propeller is not rotating:

10.	Ignition	START

11. If engine starting does not occur, increase gliding speed up to 108 KIAS (124 mph IAS) (see NOTE), so that air-flow turns the propeller and engine will start.

12.	Ignition	BOTH

13. If engine starting is unsuccessful, then continue according to paragraph 3.8.1 Emergency landing.

3.5 Engine fire

3.5.1 Fire on the ground

1.	FUEL SELECTOR	OFF
2.	Brakes	brake
3.	THROTTLE lever	full
4.	HOT AIR knob (if installed)	push

After the engine stops:

5.	Ignition	OFF
6.	Master switch	OFF
7.	Airplane	leave
8.	Manual extinguisher (if available)	use

3.5.2 Fire during take-off

1.	FUEL SELECTOR	OFF
2.	THROTTLE lever	full
3.	Airspeed	65 KIAS (75 mph IAS)
4.	HOT AIR knob (if installed)	push

5.	COLD AIR knob (if installed)	push

After the engine stops:

6.	Gliding speed	55 KIAS (63 mph IAS)
7.	Ignition	OFF
8.	Master switch	OFF
9.	Land	
10.	Airplane	leave
11.	Manual extinguisher (if available)	use

3.5.3 Fire in flight

1.	FUEL SELECTOR	OFF
2.	THROTTLE lever	full
3.	HOT AIR knob (if installed)	push
4.	COLD AIR knob (if installed)	push
5.	Gliding speed	59 KIAS (68 mph IAS)
6.	Ignition	OFF
7.	ATC	report if possible
8.	Master switch	OFF

NOTE

For extinguishing the engine fire, you can perform slip under assumption that you have sufficient altitude and time.

WARNING

AFTER EXTINGUISHING THE ENGINE FIRE START ENGINE ONLY IF IT NECESSARY TO SAFE LANDING. FUEL LEAK IN ENGINE COMPARTMENT COULD CAUSE FIRE AND FIRE COULD RESTORE AGAIN.

9. If you start engine again, switch off all switches, switch on the Master switch, and then subsequently switch on only equipment necessary to safe landing.

10.	Emergency landing	carry out according to paragraph 3.8.1
11.	Airplane	leave
12.	Manual extinguisher (if available)	use as needed

3.6 Fire in the cockpit (if manual extinguisher available aboard)

1.	Fire source	identify
2.	Master switch in case that the source of fire is electrical equipment.	OFF
3.	Manual extinguisher	use
4.	After fire extinguishing	aerate the cockpit open eye-ball vents
5.	Carry out safety landing according to 3.8.2	

WARNING
NEVER AGAIN SWITCH THE DEFECTIVE SYSTEM.

NOTE

If a defective electrical system circuit was detected as the fire source, then switch off appropriate circuit breaker and switch over Master Switch to ON position.

3.7 Gliding flight

NOTE

Gliding flight can be used for example in case of engine failure.

Wing flaps position	Retracted (0°)	Take-off (15°)
Airspeed	59 KIAS (68 mph IAS)	55 KIAS (63 mph IAS)

3.8 Emergency landing

3.8.1 Emergency landing - with non-operating engine

1.	Airspeed	59 KIAS (68 mph IAS)
2.	Landing area	choose, determine wind direction
3.	Safety harness	tighten up
4.	Flaps	landing position (50°)
5.	Airspeed	60 KIAS (69 mph IAS)
6.	Radiostation	notify situation to ATC (if possible)
7.	FUEL SELECTOR	OFF
8.	Ignition	OFF
9.	Master switch	OFF before touch down

3.8.2 Safety landing- with engine operating

1.	Area for landing	choose, determine wind direction, carry out passage flight with speed of 59 KIAS (68 mph IAS), flaps in take-off position (15°)
2.	Radiostation	notify situation to ATC (if possible)
3.	Safety harness	tighten up
4.	Flaps	landing position (50°)
5.	Airspeed	60 KIAS (69 mph IAS)
6.	Landing	carry out

3.8.3 Landing with burst tire

CAUTION

WHEN LANDING AT HOLDING, KEEP THE WHEEL WITH BURST TIRE ABOVE THE GROUND AS LONG AS POSSIBLE BY MEANS OF AILERONS. IN CASE OF NOSE WHEEL BY MEANS OF ELEVATOR.

1. At running hold airplane direction by means of foot control and brakes

3.8.4 Landing with damaged landing gear

1. In case of nose landing gear damage touch down at the lowest possible speed and try to keep the airplane on main landing gear wheels as long as possible
2. In case of main landing gear damage touch down at his lowest possible speed and if possible keep direction at running

3.9 Unintentional spin recovery

NOTE

The airplane has not, when using normal techniques of pilotage, tendency to go over to spin spontaneously.

Standard procedure of recovery from spin:

1.	THROTTLE lever	idle
2.	Control stick	ailerons - neutral position
3.	Pedals	kick the rudder pedal push against spin rotation direction
4.	Control stick	push forward and hold it there until rotation stops
5.	Pedals	immediately after rotation stopping, set the rudder to neutral position
6.	Control stick	recover the diving

CAUTION

ALTITUDE LOSS PER ONE TURN AND RECOVERING FROM THE SPIN IS 500 UP TO 1000 FT.

3.10 Other emergency procedures

3.10.1 Vibration

If abnormal vibrations occur on the airplane then:

1. Set engine RPM to the mode in which the vibrations are the lowest
2. Land on the nearest possible airport, possibly perform safety landing according to par. 3.8.2. Safety landing.

3.10.2 Carburetor icing

Carburetor icing happens when air temperature drop in the carburetor occurs due to its acceleration in the carburetor and further cooling by evaporating fuel. Carburetor icing mostly happens during descending and approaching for landing (low engine RPM). Carburetor icing shows itself by engine power decreasing and by engine temperature increasing.

Recommended procedure for engine power regeneration is as follows:

1. CARB. PREHEATER (if installed) — ON
2. THROTTLE lever — set idle and cruising power again

NOTE

Ice coating in the carburetor should be removed by decrease and reincrease of engine power.

3. If the engine power is not successfully increased, then carry out landing at the nearest suitable airport or, if it is not possible, carry out precautionary landing according to par. 3.8.2 Precautionary landing.

3.11 Canopy opening in flight

WARNING

ALWAYS MAKE SURE BEFORE A TAKEOFF, THAT COCKPIT CANOPY IS FULLY CLOSED - THE RED WARNING LIGHT ON THE DASHBOARD MUST GO OFF OR, IF THE AIRPLANE IS EQUIPPED WITH DIGITAL INTEGRATED INSTRUMENTS LIKE DYNON EFIS, TL INTEGRA, FLYMAP ETC., THE APPROPRIATE LIGHT ON THE DISPLAY MUST INDICATE CLOSED CANOPY!!

If the canopy would open in flight due to improper closing, wake behind opened canopy would cause vibrations of the horizontal tail unit and consequently vibrations of the control sticks and airplane controllability would be affected.

Proceed as follows to solve such situation:

1. Grasp shaking control stick(s). This will reduce control sticks and horizontal tail unit vibrations caused by wake behind opened canopy.
2. Pull the throttle lever to reduce airspeed to approximately 120 km/h IAS, 65 KIAS, 75 mph IAS.
3. Pull opened canopy down by holding the canopy frame on either side (solo flight) or on both sides (dual flight) and keep holding the canopy pulled down. This will reduce wake acting on the horizontal tail unit and improve airplane controllability.
4. Try to close the canopy; this could be possible in dual flight. If not, keep holding the canopy down by either hand.
5. Perform Safety landing according to 3.8.2.
6. It is required after landing to check conditions of the canopy and lock system. Horizontal tail unit must be inspected, as well.
7. Found faults must be fixed before next flight

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