6 Emergency Procedures

This section will show you all the procedures which have to be applied in case of an emergency or another dangerous situation. You will also get important information regarding the use of the recommended rescue system.

6.1 Door Emergency Eject

1. Unlock the doors, by rotating back the door lock handle.
2. Unlock the hinges by pushing the securing pin (red knob) forward. Do not throw away the pin!
3. Push out the unlocked door by hand.

6.2 Recovering from Stall

Push the control stick forward carefully until the indicated airspeed comes to the normal operation range.

6 Emergency Procedures

6.3 Rescue System (optional)

The installation of the rescue system shall be carried out complying with the recommendations of the manufacturer. To do so, the aircraft is already prepared for the installation of a BRS/Magnum rescue system. For maximum safety there are Kevlar bridles used, to connect the parachute with the main spar in the wing/fuselage section. These bridles are built into the fuselage, protected from dust and dirt (see illustration). They need not to be checked or serviced, access is only possible by destroying the top skin of the fuselage. A special steel clamp is used to connect the bridles with the rescue system, which has to be inspected before each flight to assure that it is fixed securely.

Attention: Do not make changes or modifications to any part of the rescue system to guarantee safety and proper operation. Follow the recommendations published by the manufacturer of your installed system and pay special attention to the maintencance intervals.

Before each flight remove the securing pin at the emergency handle of the rescue system so the system is ready for use in case of an emergency. Reinstall the pin after each flight, so that the rescue system cannot be activated by mistake.

6.4 Operating the Rescue System

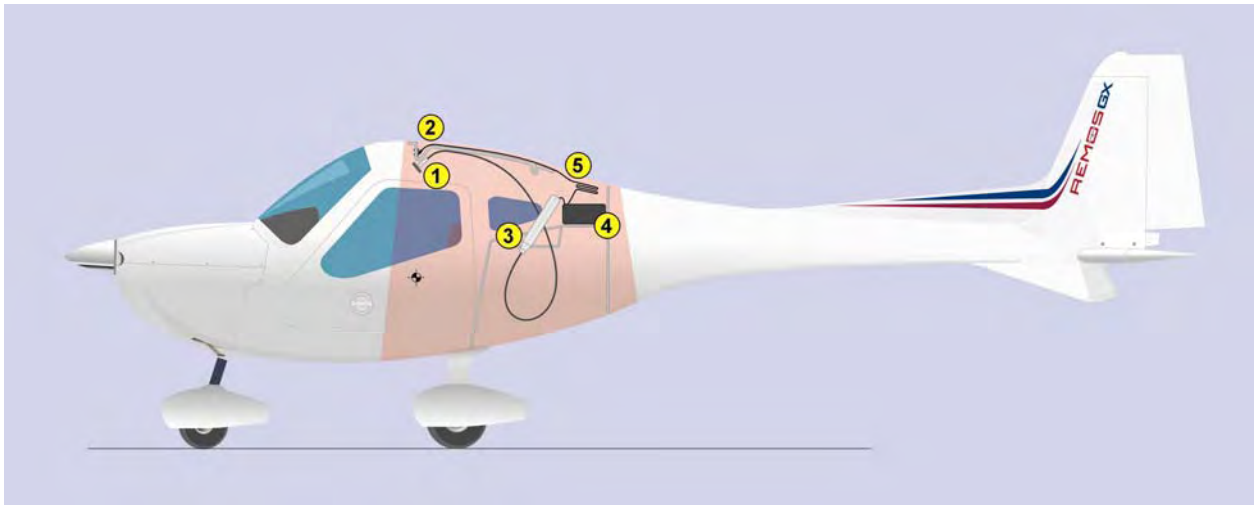
1. Stop the engine by switching off the ignition
2. Shut the fuel valve
3. Pull out the emergency handle

Refer to the latest version of the manufacturer opterators manual for detailed advisory.

6 Emergency Procedures

6.5 Illustrated Rescue System Installation

1. Emergency handle
2. Connection, kevlar bridles to main spar
3. Recovery system rocket
4. Parachute softpack
5. Rubber protection of the eject area



6 Emergency Procedures

6.6 Engine Failure / Loss of Power before Take-Off

If any trouble regarding engine power is determined during taxiing or take-off run, the following procedures shall be applied:

- Pull throttle lever to idle position
- Activate wheel brakes by pushing the brake lever carefully
- Stop the engine and determine the problem and remedy of repair as necessary

6.7 Engine Failure after Take-Off

If the engine fails during climbing after take-off, apply the following procedures:

A – Below 500 ft above ground

1. Push the control stick forward carefully to get into a safe airspeed range
2. Cut off the ignition and close fuel valve
3. Touch down straight forward, or choose a suitable landing field, depending on obstacles and pilot experience.

B – More than 500 ft above ground

1. Push the control stick forward carefully to get into a safe airspeed range
2. Cut off the ignition and close fuel valve
3. Touch down straight forward, or make a turn back to the airfield, or to a suitable landing field, depending on obstacles and pilot experience.

6 Emergency Procedures

6.8 Engine Failure in Flight

If the engine fails during flight, check the fuel level first. Now try to get the engine started again. If the engine does not start again, an emergency landing in gliding configuration has to be conducted.

6.9 Emergency Landing Procedure

1. Determine the wind direction
2. Search for a possible landing area – pay attention to the wind direction
3. Touch down into the wind, if at all possible

6.10 Minimum Glide Ratio

The following table shows, what distances can be flown in gliding configuration (engine shut-off) from different altitudes.

Altitude in ft	500	1,000	1,500	2,000	3,000
Distance in NM	0.8	1.6	2.4	3.2	4.8

6 Emergency Procedures

6.11 In-Flight Engine Fire Procedure

1. Shut-off fuel flow by closing fuel valve
2. Push the throttle lever fully forward until engine stops
3. Try to extinguish the flames by a fast descent carried out as slip
4. Land as soon as possible

Notice: Do not activate the rescue system!

6.12 Emergency Landing on Water

1. The final approach has to be carried out into the wind
2. Cut-off the ignition and close fuel valve
3. Eject doors
4. Touch down on the water surface with minimum possible airspeed
5. Unbuckle and exit the aircraft immediately after touch down

6.13 Recovery from Unintended Spin

It is generally prohibited to carry out an intentional spin, but if an unintended spin has to be recovered, please follow the procedures below:

1. Move rudder and control surfaces to neutral position
2. Apply rudder against spin direction
3. After spin stops, apply elevator carefully to recover normal flight condition

7 Normal Procedures

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7 Normal Procedures

This section provides you with all the procedures for normal operation of the aircraft including preflight preparations.

7.1 Preflight Check

Before each flight the following checks have to be conducted:

Checks outside the aircraft

1. Before moving the aircraft drain possible water from the fuel tank, using the drain valve
2. Check engine oil level (between 1/2 and 1/4 of marking)*
3. Check level of engine coolant (between min. and max. marking)
4. Check proper condition of engine mounting
5. Check mounting and condition of the exhaust system
6. Check all water hoses and hose connections
7. Check that the cowling is closed and properly secured
8. Check propeller for damage and wear
9. Check gear and wheels/tires for damage, wear and correct air pressure
10. Check wings and control surfaces for damage
11. Check wing main bolts, struts and stabilizer for damage
12. Check all control surfaces and connections for proper operation
13. Check for free and full travel of all control surfaces
14. Check pitot tube, static ports and hoses for damage and dirt
15. Check fuel level and tank filler cap

* Please refer to the Rotax engine operators manual, latest issue, for detailed information!

7 Normal Procedures

Checks inside the aircraft

1. Check fuel level
2. Check mounting of rescue system
3. Check that both seats are properly secured in position
4. Close and lock both doors
5. Buckle up
6. Set parking brake
7. Check proper functioning of the flap drive and gauge
8. Set oil temperature regulator flap to take-off position (cooler)
9. Remove rescue system securing pin from emergency handle
10. Open fuel valve

7.2 Starting the Engine

NEVER start the engine without being in the cabin, at the controls with the doors closed and locked. Now switch on the master switch, the ACL and ensure that the propeller area is clear.

Starting a cold engine:

1. Pull the throttle lever back to the idle postion
2. Pull out choke lever
3. Switch on electric fuel pump (if fitted)
4. Turn the key clockwise to the “Start“ position and hold until the engine has started. Do not hold the key in that position for more than 10 seconds, in order to avoid overheating the starter.

7 Normal Procedures

If the engine does not start, release the key to position "0", wait 2 minutes and repeat the procedure.

5. Release ignition key, immediately after the engine has started
6. Push the choke lever forward
7. Switch of the electric fuel pump (if fitted)

Starting a hot engine:

1. Pull the throttle lever back to idle position
2. Turn the key clockwise to the “Start“ position and hold until the engine has started. Do not hold the key in that position for more than 10 seconds, in order to avoid overheating the starter.
3. Release ignition key, immediately after the engine has started

After starting the engine:

1. Check oil pressure immediately after the engine has started
2. Adjust engine rpm as required - for warm up **maximum 2,500 rpm**
3. Before take-off, oil and CHT temperature must reach **120°F** at least
4. Switch on avionics master switch and all required avionics devices

Engine rpm and propeller check:

1. Set parking brake
2. Adjust engine to 4,000 rpm
3. Check both magnetos – maximum rpm decrease 300 rpm
4. Set engine to idle

7 Normal Procedures

7.3 Taxiing

The steerable nosewheel of the REMOS GX allows easy ground handling. Turns of 49 feet in diameter can be conducted easily. The main gear is equipped with effective hydraulic disc brakes, which are operated by a lever on top of the middle section between the seats.

7.4 Normal Take-Off

1. Set flaps to 15° position
2. Set electric trim to neutral position
3. Switch on electric fuel pump (if fitted)
4. Move rudder and elevator to neutral position (with crosswind aileron in wind direction)
5. Move throttle lever to full power position
6. After reaching a speed of about 35 mph (30 kts), gently raise the nose
7. The aircraft will get airborne after exceeding a speed of about 46 to 52 mph (40 to 45 kts)

The minimum engine speed for take-off is 4,900 rpm.

Remark: Take-off from concrete or hard surface runways can also be done with flaps in retracted position (0°, flaps up).

7 Normal Procedures

7.5 Best Angle of Climb Speed (V_X)

The best angle of climb is achieved at an airspeed of 68 to 75 mph (59 to 65 kts). Please watch oil and water temperature during long periods of climbing. If an oil temperature regulation flap is mounted, it must be set to position "open" or "cooler".

Flight conditions: Full throttle, flaps up, within the ICAO standard atmosphere.

7.6 Best Rate of Climb Speed (V_Y)

The maximum climb rate of 1,050 ft/min. with fixed pitch propeller is achieved at an airspeed of about 85 to 88 mph (73 to 76 kts). Please watch oil and water temperature during long periods of climbing. If an oil temperature regulation flap is mounted, it must be set to position "open" or "cooler".

Flight conditions: Full throttle, flaps up, within the ICAO standard atmosphere.

7.7 Cruise

For continuous operation the engine speed must not exceed 5,500 rpm. In no case the maximum permissible airspeed (V_{NE}) of 155 mph (134 kts) shall be exceeded.

Recommended power setting for continuous cruise: 4,800 to 5,000 rpm

7 Normal Procedures

7.8 Approach

To prepare for approach, switch on the electric fuel pump (if fitted) and set the elevator trim to the neutral position, set carburetor heat to "warm" (pull) as necessary. When entering final, we recommend establishing an airspeed of 75 to 80 mph (65 to 70 kts) and extending flaps to the 40° position.

7.9 Normal Landing

The airspeed for touch down should indicate about 44 mph (38 kts) with flaps down (40°) and 48 mph (42 kts) with flaps retracted (0°). The touch down should be first onto the main gear. The maximum permissible crosswind component demmonstrated is 17 mph (15 kts). In a headwind component of more than 17 mph (15 kts) it is recommended to carry out the landing with a flaps setting of 15°.

7.10 Short Field Take-Off

To conduct a short field take-off, set flaps to 15° position, apply brakes and move the throttle to the full power position. Release brakes and proceed as normal take-off. After the aircraft is airborne, establish an airspeed of 68 to 75 mph (59 to 65 kts) until all obstacles are cleared.

7.11 Aborted Landing Procedure

Apply full throttle, establish an airspeed of 68 to 75 mph (59 to 65 kts) while climbing. After all obstacles have been cleared then retract flaps. Climb to required altitude while increasing airspeed to 85 to 88 mph (73 to 76 kts).

7 Normal Procedures

7.12 Low Airspeed and Stall

If the center of gravity is within the permissible range, the aircraft will be fully controllable until reaching the stall speed. If stall speed is reached, the pilot should lower the nose of the aircraft to reestablish a safe airspeed.

Performing a stall from level flight

CG at most rearward position (airspeeds as CAS)

Flap Position	0°	15°	30°	40°
$V_{min.}$ at idle	51 mph (44 kts)	47 mph (41 kts)	45 mph (39 kts)	44 mph (38 kts)
$V_{min.}$ at full power	50 mph (43 kts)	47 mph (41 kts)	44 mph (38 kts)	44 mph (38 kts)

CG at most forward position (airspeeds as CAS)

Flap Position	0°	15°	30°	40°
$V_{min.}$ at idle	50 mph (43 kts)	46 mph (40 kts)	44 mph (38 kts)	43 mph (37 kts)
$V_{min.}$ at full power	47 mph (41 kts)	46 mph (40 kts)	44 mph (38 kts)	43 mph (37 kts)

7 Normal Procedures

Performing a stall in turns

CG at most rearward position (airspeeds in CAS), 30° bank

Flap Position	0°	15°	30°	40°
$V_{min.}$ at idle	51 mph (44 kts)	47 mph (41 kts)	44 mph (38 kts)	44 mph (38 kts)
$V_{min.}$ at full power	53 mph (46 kts)	47 mph (41 kts)	44 mph (38 kts)	44 mph (38 kts)

CG at most forward position (airspeeds in CAS), 30° bank

Flap Position	0°	15°	30°	40°
$V_{min.}$ at idle	53 mph (46 kts)	49 mph (42 kts)	45 mph (39 kts)	44 mph (38 kts)
$V_{min.}$ at full power	54 mph (47 kts)	50 mph (43 kts)	46 mph (40 kts)	44 mph (38 kts)

As the aircraft approaches the stall speed, this will be indicated by slight aerodynamic buffeting. The stall speed is reached when the aircraft becomes unstable in flight, but should still be controllable. It is also possible to perform a stall while in a turn, but it has to be considered that the stall speed will increase (see table above).