

Flight manual DG-1000S

3 Emergency procedures

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3.1 Introduction

Section 3 provides a checklist and amplification for coping with emergencies that may occur. Emergency situations can be minimized by proper pre-flight inspections and maintenance.

Caution: Canopy jettison and bailing out should be trained several times on the ground before flying the aircraft.

3.2 Canopy jettison

To bail out the white-red canopy opening handle (left) has to be operated with your right hand. Open the canopy as far as possible.

If the canopy doesn't stay open (or is not blown away by the oncoming air), but is closed by the air pressure, you have to release the canopy in its closed position by operating the red emergency release handle (right) with your left hand, then push the canopy upwards.

The retaining lines will tear off.

The gas struts (if installed) will disengage automatically

3.3 Bailing out

First jettison both canopies, then open the safety harness and bail out.

The low walls of the front cockpit allow for a quick push-off exit.

3.4 Stall recovery

Easing the stick forward and picking up a dropping wing with sufficient opposite rudder the glider can be recovered from the stall.

To recognize and prevent the stall, please refer to section 4.5.2.

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3.5 Spin Recovery

Apply full opposite rudder against direction of the spin, pause.

Then ease stick forward until the rotation ceases, centralize the controls and carefully pull out of the dive.

The ailerons should be kept neutral during recovery.

Caution: To prevent unintentional spinning do not stall the sailplane. Fly with enough speed reserve especially in gusty conditions and in the landing pattern. Intentional spins with waterballast are not permitted.

Height loss during recovery	ca. 50-100 m (160-320ft)
max. speed during recovery	max. 200 km/h (108 kts.)

3.6 Spiral dive recovery

Apply rudder and aileron in opposite direction and carefully pull out of the dive.

Spiral dive occurs only when spinning more than 2 turns with medium C.G. positions, see section 4.5.8.

To prevent spiral dives intentional spinning should only be executed at aft C.G. positions.

Recovery from unintentional spinning should be done immediately.

3.7 Recovery from unintentional cloud flying

Spins are not to be used to loose altitude. In an emergency, pull out the dive brakes fully before exceeding a speed of 200 km/h and fly with max. 200 km/h (108 kts.) until leaving the cloud.

At higher speeds up to V_{NE} pull out the dive brakes very carefully because of high aerodynamic and g-loads.

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3.8 Flight with asymmetric waterballast

If you suspect that the waterballast does not dump symmetrically you have to close the dump valves of the wingtanks immediately, to avoid greater asymmetry.

Asymmetry can be verified by the necessary aileron deflection in straight flight at low airspeeds.

When flying with asymmetric waterballast you have to increase the airspeed, especially in turns, so that you can avoid a stall at all costs.

Fly the landing pattern and touch down approx. 10 km/h (6 kts.) faster than usually and after touch down control carefully the bank angle to avoid the wing touching the ground too early.

3.9 Defective fin ballast dump

If the fin ballast dump valve handle can be operated with unusually low effort (force of the retaining spring is no longer apparent), you must assume that the fin ballast may no longer be dumped. In such a case, to avoid unsafe rearward C.G position, do not dump the wing ballast. Take into account the high mass of your glider and especially for the landing, increase the approach speed accordingly.

3.10 Emergency wheel up landing

It is not recommended to execute a wheel up emergency landing, as the energy absorption capability of the fuselage is much smaller than that of the landing gear.

If the landing gear can't be extended touch down with small angle of attack.

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3.11 Emergency ground loop

If there is the risk of overshooting the landing strip you have to decide at least 40 m (130 ft) before the end of the field to execute a controlled ground loop:

- If possible turn into the wind!
- At the same time try to lift the tail by pushing the stick forward.

3.12 Emergency landing on water

From the experience with emergency water landing we know that it is likely that the sailplane will dive into the water, cockpit first.

Therefore an emergency landing on water should be the last choice. In the case of a water landing, however, extend the landing gear.

Recommended procedures :

On downwind leg of the landing pattern: Extend the landing gear, unlock the parachute harness (not the seat harness)

Touch down: With landing gear extended and airspeed as low as possible.

At point of touch-down: Use your left arm to protect your face against possible canopy fracture.

After touch down: Unfasten seat belt harnesses and undo parachute.

Leaving the cockpit under water: If the canopy has not fractured, opening the canopy may be possible only after the forward fuselage is almost completely filled with water.