

## **Avoidance of Stall/Spin Accidents to Gliders**

### **\*Advisory to All Glider Instructors and Pilots\***

Stall/Spin continue to be a leading cause of fatal glider accidents around the world. Stall spins accidents happen to pilots of all experience and skill. However, they are avoidable if we follow the recommendations:

### **\*Glider Instructor/Examiners:\***

All glider instructors should be standardised to provide scenario based instructions for upset prevention and recovery training (UPRT) applicable to various segments of the flight and various glider configurations. This includes:

1. Stall/Spin prevention
2. Stall/Spin recognition
3. Stall/spin recovery

Glider instructors should take over control, after starting base leg, anytime the student allows the speed to drop below the minimum approach speed (even marginally) and land the glider themselves. Do not handover the control back to the student.

### **\*Glider Pilots:\***

All glider pilots should undergo stall/spin prevention, recognition, recovery reinforcement exercises during biennial refreshers and skill tests.

The glider pilots are also encouraged to seek the above training from qualified instructors whenever they feel a need for one in between.

### **\*Student Pilots:\***

The instructors should ensure that stall/spin reinforcement exercises are given before a student is cleared for solo flying and the same are repeated before skill test for PL(G).

### **\*Recommendations for Spin Avoidance during Various Stages of Flight\***

#### **\*Recommendations for Safe Circuits:\***

1. Always fly the glider coordinated. Make well banked and coordinated turns.
2. Increase the speed to 1.5 Vs (45-50kts for L-23) when joining the circuit and definitely at high-key area.
3. Glider circuits are dynamic. Monitor speed, rate of sink, distance-out, height and adjust the circuit.
4. Increase the speed to approach speed (50-55kts for L-23) before reaching low key area and maintain the same through the remaining part of the circuit.
5. Use the diagonal leg from low key area to base-leg.

6. Avoid use of airbrake on base leg.
7. Aim to complete the base-leg to final turn not less than 300 feet.
8. Maintain approach speed throughout the approach till flare to land.

**\*Thermalling:\***

Use of well banked coordinated turns. It is the best guarantee against spin.

**\*Do not over rudder in a turn\***

If the wing drops or any symptom of stall appears relax the back pressure on stick and pick up the wing using coordinated use of aileron and rudder.

Do not circle after reaching low key area.

**\*After Cable Break or Launch Failure:\***

Lower the nose to recovery the attitude.

Wait for speed to pick-up to 50 kts. Confirm that speed is 50 kts before manoeuvring the glider. Maintain this speed throughout the flight.

Land straight ahead, if possible. Else turn after speed has built up to 50 kts and execute a short circuit.

**\*Base-leg to Final Turn:\***

A spin here is always fatal and impossible to recover from. Spin prevention is the only answer.

Maintain approach speed throughout base-leg and final approach.

Avoid use of airbrake on base-leg. If high, prepare to land deep.

**\*Final Approach: \***

Make at least  $\frac{2}{3}$  brake approach at appropriate speed.

Recommended minimum approach speeds for L-23. (There is no margin on lower side. But ten knots margin on the higher side.)

50 kts in calm wind

55 kts in moderate wind

60 kts in strong wind

(Note: Add 5kts to above speed if conditions are gusty)

**The spin accidents are avoidable if we follow the above recommendations.**