

# Handling, Towing & Parking Gliders

## Objective

Manoeuvring, parking and positioning club gliders on the airfield or in the hangar are accomplished either by manhandling or by towing behind a vehicle. Whichever method is used, there are a number of principles that need to be observed, both for the safety of the glider and for those moving it.

## General Glider Handling

A number of general points should be observed at all times.

- Whenever the glider is being moved, someone must hold on to one wingtip, unless appropriate reverse towing gear is used.
- When changing the holding of wings from one person to another, the person handing over calls "YOUR WING" and the receiver of the other wing replies "MY WING". This is a clear, concise handover and must be used whether on the field or in the hangar.
- Glider canopies are easily damaged and are expensive to repair. Never leave the canopy open when the glider is unattended. Always close and lock the canopy.
- Avoid reaching through the clear vision panel of the canopy to close airbrakes or to release the cable.
- Never reach through the clear vision panel of the canopy when the glider is moving.
- Never lift the canopy by the edge of the clear vision panel. If the canopy is stuck or will not open, summon qualified assistance.

## Airfield Operations

Manhandling the glider is the preferred method for short distances or downhill. The correct method for handling the glider is as follows:

- It is always preferable to move the glider backwards.
- If a glider has a tail-skid, it must be lifted clear of the ground, using the handle provided (NOT the tailplane or the elevator).
- If the glider has a tail dolly or removable tail wheel, it should be attached.
- Always push on the strongest part of the wing which is the leading edge. (No glider should be pulled or pushed by the trailing edge of the wing, rudder or canopy).
- Whenever the glider is being moved by hand, someone must always hold on to one wingtip. This is necessary
  - a) To control the direction by steering the glider.
  - b) To ensure that the glider cannot be blown over by a gust of wind.
- In strong winds, someone should be seated in the glider to prevent it from lifting off and to hold the controls steady.
- When moving a glider downwind, always ensure that the ailerons and rudder are held, either by placing restricting locks in place or by someone seated securely in the cockpit holding the controls or by someone walking behind the control surface and holding it firmly to prevent it from slamming against stops or hinges when caught by the wind.

## Towing Gliders

Towing is the preferred method when the glider needs to be moved quickly or for greater distances. Towing involves hooking the glider to a vehicle and pulling it in a forward direction while being stabilised and steered by hand. Safe towing requires the following points to be observed:

- The rope used should not be less than one wing's length and should preferably be a wingspan in length. This is to ensure that if the glider is turned unintentionally while on tow, the wing will not hit the towing vehicle.
- Attach the rope to the belly hook of the glider. This will ensure that if the glider is ground looped, the back release will operate detaching the glider from the towrope and avoiding further damage. It also makes the glider easier to steer by the wingtip holder.
- A third member of the crew must always walk in front of the glider. They can stop the glider from over-running the tow vehicle, release the towrope if necessary and can communicate between the wingtip holder and the tow driver.
- The driver of the tow vehicle and the wing holder must be in constant communication with each other so that in an emergency, the driver can stop immediately if required. It is not always possible to be in verbal communication, but visual communication is essential. The tow driver should keep a constant watch on the wingtip holder and respond to previously agreed signals.
- If the tow vehicle is a car, the windows should be open and the radio turned off, so that the towing team can communicate.

## Parking Gliders

Gliders should always be parked so that they are secure and stable and cannot be blown over and damaged by a strong gust of wind. The built-in stability of a glider can cause it to weathercock into wind. Once facing into wind, the wings will generate lift and if the wind is strong enough, the glider will take off on its own or will simply blow over. To avoid that happening, take the following precautions:

- Gliders should always be parked with one wing into wind, with the airflow from slightly behind the trailing edge.
- The into-wind wing should be held firmly on the ground by using pickets or some form of ballast that cannot damage the wingtip.
- Always place moveable ballast so that it moves with the wing. Do not place tyres partly on the ground and partly on the wing. If the wingtip moves, the tyres will be displaced, the wing will rise and the glider may blow over.
- Prevent the glider from weathercocking by placing ballast or a chock under the nose skid and by placing tyres or chocks on the downwind side of the tailskid or by picketing the tail.
- Remove tail dollies or detachable tailwheels. Lock airbrakes in the "Closed" position to prevent ingress of water and to reduce drag.
- Prevent the rudder from slamming against its stops or hinges, either by placing a "rudder lock" in position or by moving the rudder to its full travel on the downwind side and carefully placing ballast against the rudder on the upwind side.
- Close and lock canopies.
- To provide additional stability when parking in strong winds or when strong gusts are anticipated, place a tall trestle or park a vehicle (suitably cushioned and protected) under the high wing.

### Notes.

Some glass fibre gliders are very tail-heavy and will not weathercock. Those gliders may be parked safely by placing the downwind wing on the ground and leaving the into wind wing up. That parking configuration has the added benefit of avoiding the need to place tyres or ballast on highly polished, expensive gel coat.

Parking "wing up into wind" is not recommended for all glass fibre gliders, since many (e.g. Ka21) are not tail-heavy and need to be parked in the standard manner.