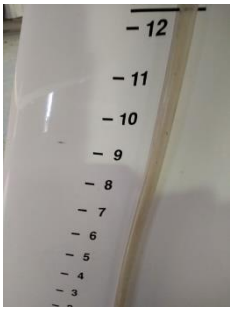
DG 505 fin tank ‘B’

The lower fin tank – referred to as the B tank in the flight manual, is used to counteract the weight of the rear seat occupant by moving the glider’s CofG aft to a position similar to where it would be if the occupant in the front seat was flying it solo.
In other words – it will spin more readily. (See example below)
It is VITAL that after the flight any water ballast in this tank is drained unless the glider is being handed over to another instructor for the same purpose.

If water is to be used in this tank, it is important to use the ballast chart to establish the correct amount of water to be used. There is a chart in the glider side pocket.

When water is added, the filling kit in the plastic box at the launch point must be used. Plug in filler, hold clear plastic tube in line with markings on fin until the correct amount added, then remove the clear plastic tube from the join and seal it with the orange coloured plug, leaving the short pipe attached to the glider. (This plug should always be left in the front cockpit pocket if water ballast not needed)
It is the responsibility of ALL pilots flying the DG to check the water ballast before flight during the ‘B’ part of CBSIFTCBE – or ideally the ‘B’ of the ABCDE checks before getting in the glider. This includes checking for lead weights that can be installed under the starboard carpet inside the cockpit.

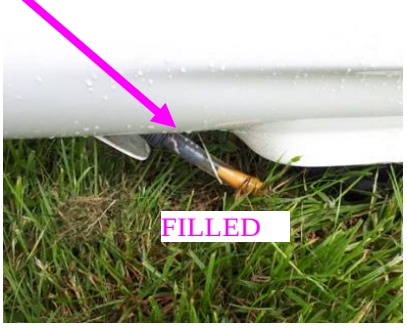


Orange sealing plug.
If water NOT required, leave in front pocket on this lanyard. If its NOT in the front pocket, double check water isn’t already in fin.

The glider MAY NOT be left at ANY TIME unattended on the field with water ballast in the fin tank, because if it is then flown solo, the C of G would be so far aft as to make an accident highly possible! (see example below)

To drain the water, remove the orange plug from the tube in front of the tail wheel on the bottom of the fuselage and put it back in the front cockpit on its lanyard
The short filling tube is left connected.
This pipe is only a couple of inches long and doesn’t make any appreciable difference to the glider including wind noise.

Filling:



Example of the effect of Fin Tank ‘B’ ballast.

NB DG505 C of G limits are 0.185m to 0.48m measured from the leading edge datum point.The following demonstrates the change of the glider’s C of G for a pupil flying solo and flying with an instructor with and without fin ballast.

Solo flight C of G when pilot mass is 70kg is 0.436m

Dual flight C of G with Instructor mass of 95kg (no ballast in Fin) is 0.315m

Dual flight C of G with Instructor mass of 95kg (11.6kg ballast in Fin) is 0.413m

NB DG state “When flying solo Tank ’B’ must be emptied! Otherwise you will fly with dangerous CG position.”

Using the above example if the pupil were to fly Solo with the 11.6kg ballast in Fin the Cof G would be 0.549m.