

DG 505 Maintenance sheet

General

If dismantling anything, especially the main wheel, take lots of pictures first. You won't remember which spacer went where etc.

Wheel brake

The brake fluid is normal car brake fluid, Dot 4 or Dot 5. The red aircraft fluid will eat the seals and pipes.

Change the pads every year, they only just last a year in normal club use.

Main wheel

To remove the wheel first remove the 10mm A/F (Across Flats) nuts, retaining shaft and "washers". The axle, which is a tube, can be difficult to remove. Either drive it out using a suitable sized aluminium bar or make up a special puller. If hitting hard is necessary get an assistant to hold a large mass, eg a sledge hammer, against the opposite side U/C leg so that the U/C is not damaged. If the axle is thoroughly cleaned with emery and any burs removed before lubrication it will be easier to fit and remove in future.

Retracting U/C



Four 6mm bolts are welded to the U/C "H" frame, see picture above showing two of them. They hold the springs compressed and prevent them falling out and the U/C dismantling its self. If two bolts break the U/C jams sideways and is very difficult to remove. If all four break the springs fall out, the U/C dangles down and the landing is very interesting.

Check all four bolts regularly, more often than once a year and do not fly it if one is broken. The nut and broken part of the bolt will fall out and be missing. If the U/C gets stiff to operate something is wrong and needs investigating.

The U/C is very strong but with many years of Club abuse it can crack. Clean and inspect it every year. You will need a mirror or camera to check all parts for cracks.

Release system

The cables from the two cockpits that operate the hooks are attached to a lever under the rear floor. You need to remove the rear instrument panel pedestal to get at these parts. When one release handle is pulled the other cable is bent. The cables therefore fatigue and fail near their attachment point under the rear floor. Inspect these cables visually or with a camera at least once a year. If one cable is damaged change them both, they both have roughly the same fatigue life.

If this, or any glider, still has small yellow release cable balls replace them with “T” handles. A normal hand, but especially a gloved hand, can slip off a ball in an emergency and result in a major accident. Manufacturers have all approved “T” handles and they are a CS 22 requirement but for some extraordinary reason they are not always fitted.

Fitting the winch hook

The winch hook spring is a poor design and breaks at the kink after about 2500 launches.

Unlike most gliders the winch hook is fitted (and removed) from inside the glider.

Miss-Rigging

The end of each wing spar stub pokes into the other wing root rib. If a wing is lowered too far or dropped while the wings are in position, but the pins aren't in, a root rib may be majorly damaged by having the wing skin levered off the root rib by the other wing spar stub. If a wing is dropped while rigging or derigging check very carefully for cracks.

Towing kit

Do not use a tip dolly attached to the 20 Meter tips. It wears out the tip attachment bearings.

Tail wheel tyre

Either use a foam filled tyre or the strong 6 ply pneumatic tyre. Cheap tyres aren't cheap because they don't last. Insist that the tail dolly is always used otherwise the tail wheel and tyre will be quickly destroyed by people turning the glider with the tail wheel on the ground. Paint the dolly red to discourage people from launching with it on. The original ones were white!

Tim Macfadyen 18 August 2026