

MAINTENANCE MANUAL

Do read the Manual, it has useful information.!

AIRWORTHINESS DIRECTIVES & BGA ADVISORY

The LS4 has a high number of recurring AD's and BGA advisory inspections – none of these are particularly complex, but close attention should be paid, as several of them do recur quite frequently.

One of the frequent recurring faults is distortion of the undercarriage mounting rubbers – these need careful monitoring.

If replacement is necessary, they are a commercially available vehicle suspension component: Schwingmetall Torsion mounts 3off Part No' 1021205000 & 2off 1021103000 from Willbrandt Gummitechnik, Germany www.willbrandt.de.

UNDERCARRIAGE GAS STRUT

Another frequent fault is weakness of the undercarriage Gas Strut, potentially causing a gear collapse – the means of checking is given in the Maintenance Manual, however accurate measurement of the specified breakout force is difficult. The simple 'acid' test' is to push the downlock strut out of lock from the down and locked position and release it – if it does not immediately 'snap' back into lock, then the Gas Strut should be replaced.

Be careful to replace the correct gas strut – this is the one in the fuselage (see photo), not the one on the landing gear.! Access to the attachment points can be facilitated by supporting the wheel in a semi-retracted position.

It is a commercially available component from Gas Strut engineering Ltd.
www.gasstrutengineering.co.uk

**BELLY LANDINGS**

After a wheels up landing never lift the tail to put the wheel down on any glider. On an LS4 it will definitely damage the nose as the cockpit lower skin is quite thin. Either get a lot of people to lift it or de-rig it.

Aside from the usual inspections, carefully check the fuselage belly skin where it meets the fuselage frame behind the seat – it is very vulnerable to becoming detached or cracked at this location.

HEAVY LANDING DAMAGE

Check all the usual things but also check the top of the wheel bay where the control bellcranks and undercarriage mounts are attached – cracks here are not always obvious (See photo).



Additionally, check the condition of the suspension rubbers

WHEEL REMOVAL

Removal of the wheel is fairly straight-forward, however it requires disconnection of the wheel brake cable. Always disconnect the cable from the top of the wheel hub lever (see photo), rather than remove the lever from the hub, otherwise re-adjustment of the brake cable tension is very time-consuming.



RUDDER REMOVAL & RUDDER CABLE REPLACEMENT

Rudder cable replacement has to be very carefully planned, as there is no means of adjustment to obtain the correct and equal lengths.!! If they are installed at slightly different lengths, the only

means of adjustment to keep rudder pedals and rudder central with each other, is to twist the longer cable a few turns, thus shortening it before attaching to the rudder.

Therefor it is important on rudder removal to check if this method has been used and reproduce once the rudder is re-installed.! Check rudder pedals are centralised with rudder central once completed.

The lower rudder hinge is a needle roller bearing and very prone to dirt & corrosion (particularly if a 'P' tube is installed).

RUDDER CABLE GUIDES AT STERNPOST

The PVC tubes that guide the rudder cables through the sternpost are prone to coming loose and eventually disappearing inside the fuselage, at which point the rudder cables start to cut into the sternpost. Check for security and if necessary, re-bond with thickened resin. (See Photo)

