

How not to mis-connect controls in LS Sailplanes

See video link. <https://youtu.be/dMV2IfF1XwE>

Two recent incidents in the BGA, have highted the subtle differences between locking systems that LS sailplanes use compared to other types of sailplane.

The LS1, LS3, most LS4 and LS6 have L'Hotelier control connections, the same as a lot of sailplanes built from the 1960s onwards. It was quickly realised that a secondary locking system for L'Hoteliers was desirable.

A system of R clips, Schemp Hirth springs, Wederkinds and for the LS sailplanes Uerling fittings were invented.

The Uerling Sleeve system is specific to LS sailplanes that is a bit different to all the other systems.

But after many years of service, it has been discovered that without fully understanding how these locking systems work, it is possible to think the controls are connected and locked, to pass a positive control check - only to have them disconnect in flight.

This document is purely about the LS series of sailplanes fitted with Uerling sleeves at build.



Unfortunately, some of the LS sailplanes control connections are very hard to visually inspect after the controls are connected.

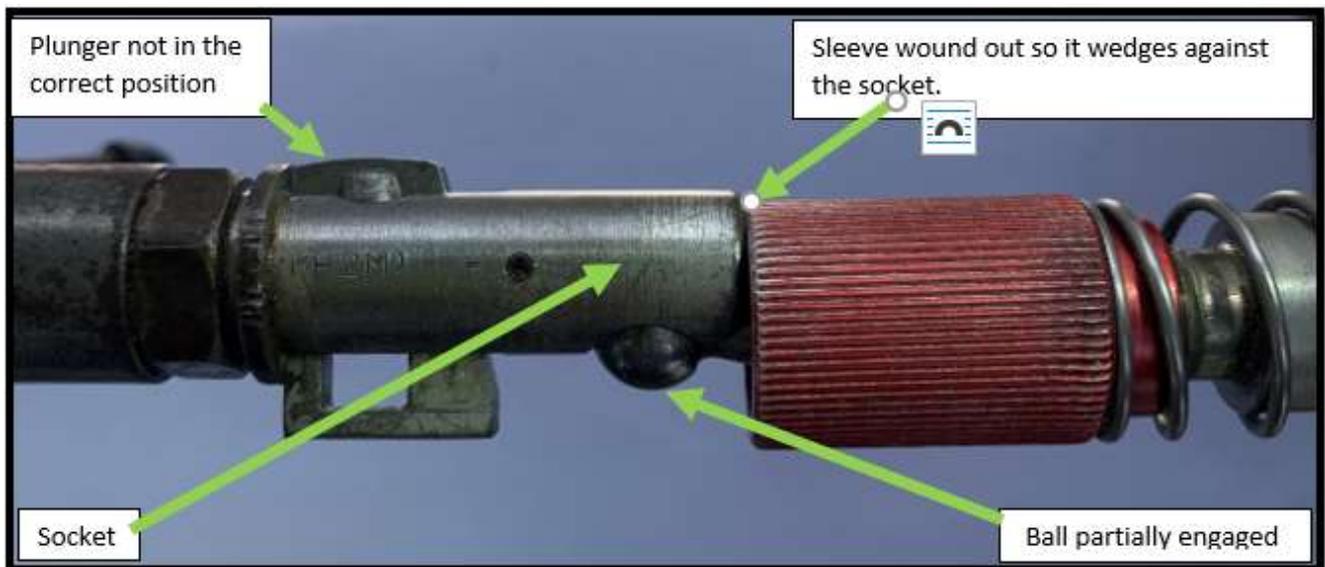
Some have a system of mirrors fitted for a visual inspection, but they only offer a view from one angle.

Only by totally understanding how it is possible to have a partial connection, will you have the knowledge of what a partial connection looks like and more importantly why not to fly in this state.

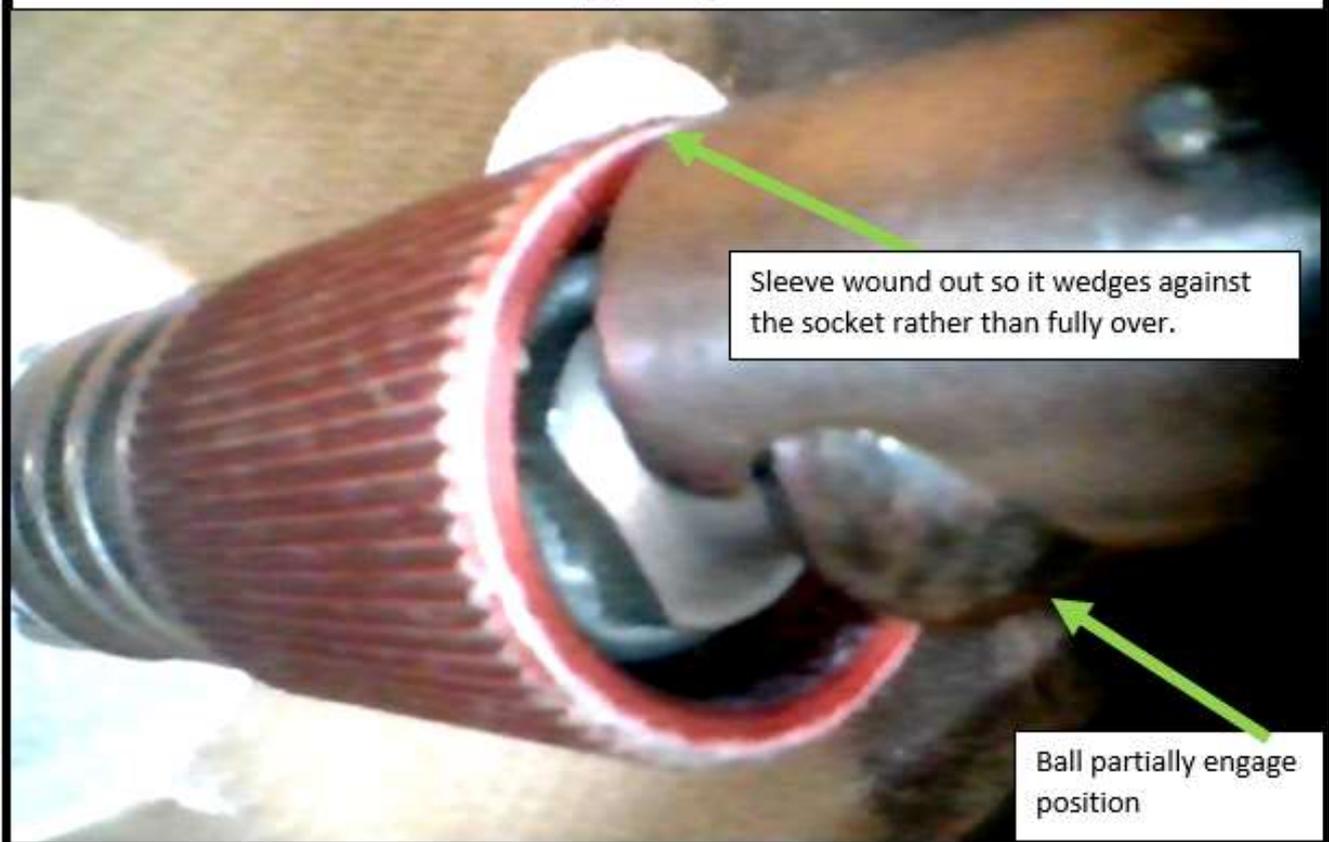
It is possible to have the ball partially in the socket. Screwing the Red Uerling sleeve into place can wedge the ball. That way the connection will work and can appear to be connected depending on the angle it is viewed from.

But as soon as the angle of the pushrod angle changes, it becomes disconnected! See video link below.

<https://youtu.be/dMV2IfF1XwE>



This is the view in the glider itself. You cannot see this with a direct vision eye. You either must use the Mirror built into the glider (but only gives one viewing angle) or a camera (do not drop!). You can learn what it feels like as well using your fingers. But visual confirmation is best.



You need to visually ensure these connectors are correctly connected using either mirrors or camera. Ask somebody else who is familiar with this system to independently confirm the connection and then carry out a positive control check.

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<https://www.gliding.co.uk/>