

LAA/AWA/20/05
27th March 2020

Ikarus C42 (All Models)

Technical Information Notice (TIN-04-2020)

OSB 33 Issue 1.0 Control Surface Corrosion and Cracking

The Light Aircraft Company Ltd. (TLAC), the Norfolk-based CAA Approved organisation supporting the Comco Ikarus C42 microlight aircraft, has recently issued a Technical Information Leaflet (TIN-04-2020) requiring a 'before next flight' visual inspection of the control surface hinge attachments on all C42 aircraft that are more than ten years old.

The publication of this TIN follows the discovery, during a C42's annual maintenance, of severe corrosion affecting the centre hinge eyebolt's attachment point (See Fig. 1).

On the C42, a number of hinge attachment points are hidden under the control surface's fabric covering. TLAC insists that, before the aircraft is next flown, a physical check of each hinge should be made by applying a force (about 10kg) to the trailing edge of each control surface against a fixed control stick (or rudder control), whilst monitoring each individual hinge for unusual movement.

Though this initial physical check will ensure the security of the attachment point, it will not reveal any ongoing corrosion that could eventually lead to the detachment of a control surface; for this, further inspection will be required.

TLAC suggest that a close visual inspection of the control surface attachment points should be made within the next ten hours flying time, though they do feel that where access is difficult, an endoscopic examination would be sufficient.

TIN-04-2020 may be downloaded [HERE](#).



Fig. 1 The above picture shows the failed eye-bolt attachment point in the leading-edge tube of the subject C.42. The reader will note that this tube has been failing for some considerable time, most likely as a result of dissimilar-metals (electrolytic) corrosion.

It is worrying that the 'beginnings' of this corrosion wasn't spotted during one of the aircraft's scheduled maintenance/inspection points, and a reminder that it is vital that deep (dismantlement) inspections are scheduled into the TMS at appropriate points ... especially where access is difficult.



Fig. 2 This picture shows previously 'unspotted' cracking in the area of the eye-bolt; clearly this cracking is due to stress in the aluminum alloy tube over time. As you can see, this aileron hinge wasn't that far from failing completely – had it done so, flight control may have been lost.