

X'Air Airworthiness Alert

All Raj Hamsa X'Air and X'Air Falcon Owners

22nd July 2010

Dear Owner,

It was recently reported by one of our inspectors that an aileron turnbuckle on an X'Air had witness marks from the tooling / extrusion process. One mark appeared to have developed into a crack. Once the turnbuckle was removed and inspected it could be clearly seen that the crack went all the way through and for the entire length of the thread. See the accompanying images.

All the turnbuckles were different, as the tolerances seemed to vary considerably. The cracked one had a taper that made the threaded area very thin. This is from the manufacturing process and not from any wear or damage. New turnbuckles, sourced directly from X'Air, also have the manufacturing marks on them.

The machine in question has only 190 hours flight time. The aileron is a cable closed loop system and, although the loads are relatively light, a failure would lead to both ailerons becoming uncontrolled.

I am writing to you:

- o To make you aware of this problem so that you can check your aircraft, and
- o To request feedback (good as well as bad!) so that we – The Wessex Light Aeroplane Company and the BMAA – can better understand the scale of the problem when deciding our future course of action.

To inspect the turnbuckles they should be clean and well illuminated. Check the entire surface of each tapered end of both turnbuckles.

Look for any significant tooling marks and check each mark for a possible crack propagating from the end. If a crack is suspected remove the turnbuckle from the aircraft and then disassemble the suspect end for a closer look. Hold it up to a bright light to help identify a crack, and to check whether it penetrates right through the thread.

Please **do** feedback the results of your inspection, preferably via email. We are particular interested in:

- o Whether or not there is any cracking of your aircraft's turnbuckle ends.
- o Whether or not there are significant tooling marks on your aircraft's turnbuckle ends.
- o Please **do not** hesitate to get in touch with any queries or comments.

Yours sincerely,



Adrian Jones
Design Approval Engineer
BMAA
adrian.jones@bmaa.org

Notes:

- o Add a careful inspection of the turnbuckle ends to your daily inspection.
- o Do not fly with a cracked turnbuckle. Replace with a new turnbuckle from The Wessex Light Aeroplane Company.
- o Refit the turnbuckles in accordance with the UK Build Manual.
- o Disturbed primary controls require a second inspection by a suitably qualified person before further flight.



