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ULTRALIGHT AIRCRAFT AIRWORTHINESS NOTICE AIRWORTHINESS NOTICE IDENTIFICATION NUMBER : 12-2003

VAMPIRE AIRCRAFT TAIL BOOM CRACKING

To: All owners and operators of VAMPIRE Aircraft.

Background: An owner has reported severe cracking of both tail booms, forward of the rear spar of the centre wing section, but rearward of the boom mounting point.

The right angle brackets that secure the boom tubes, both front and rear require inspecting for security and cracks. It would appear that the radius is too small on these brackets.

Discussion: The cracking of the boom tubes on this aircraft example is severe, with a crack radius of about 75% of the diameter. The cracks are consistent with excessive movement of the booms in the vertical plane, this situation is likely to occur when the aircraft is being transported by trailer. When the aircraft is tied down to the trailer it must be secured by the wheel and lower fork area only, allowing the aircraft to ride on its own suspension. If tied down by the upper gear assy then any road movement will be transmitted through the airframe, causing excessive bending forces through the boom tubes.

This situation can occur in a very short travelling time.

Action Required:

BEFORE NEXT FLIGHT: Both boom tubes are to be inspected.

This inspection is difficult. To inspect the wing must be in a partially folded position, so a visual inspection can be made through an inspection hole. A bright torch and mirror will be required to visually inspect the tubes. Inspection of rivets, mounting points and gussets is also required.

Any sign of cracking renders the boom unserviceable requiring replacement before next flight.

At Each Daily Inspection. Visually inspect for cracking and any deformation.

Recommended Further Action. This is a continuing airworthiness .

Reports and Recording. The initial inspection is to be recorded in the aircraft log book Citing AN 12-2003 and any deficits found are to be reported to the AUF office

Jeff Shepherd
Technical Manager

Defect Reporting is one of the primary ways we have in ensuring continued safety in our operations.

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