

26 May 2009

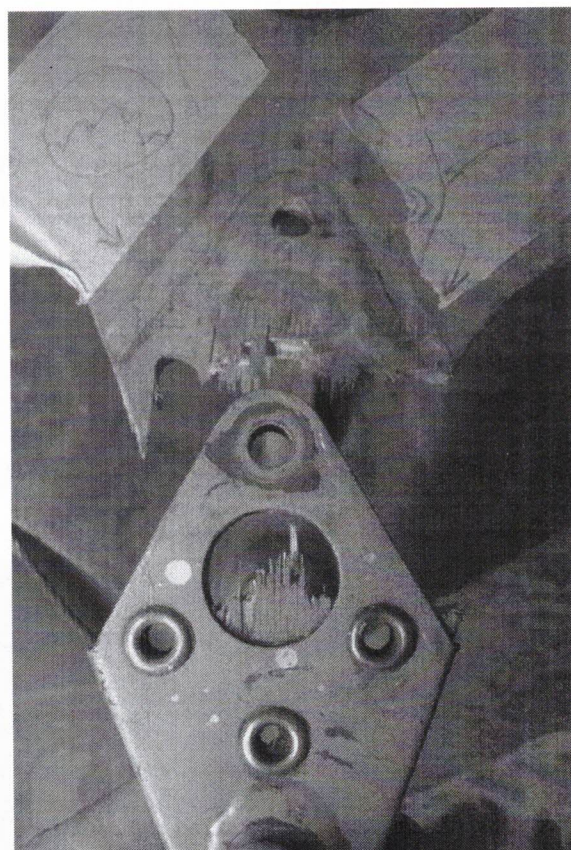
CANCELLED 14 OCT 2022
REFER GFA AN 0170
AIRWORTHINESS ALERT 2009-2. SZD-50-3 PUCHACZ

During an Annual Inspection the ply plate in the base of the fin which supports the rudder drive quadrant mounting bracket was found to be broken. Inspection of a second aircraft revealed similar damage.

The drive quadrant pivots on a steel bracket fabricated from two diamond shaped plates with side gussets & is attached to the plywood by three tubular rivets and an 8 mm bolt at the forward end. A nylon bush attached by this bolt serves as a rudder overtravel stop by limiting rotation of the drive quadrant. There are lightening holes in the upper & lower metal plates, through which the ply is visible.

The failures occurred spanwise between the tubular rivets on the left & right of the bracket, and may be visible in the lightening holes. It could be difficult to detect during a Form II and would be virtually impossible to detect during a normal DI.

When the rudder cable circuit & pedal stops are correctly adjusted the quadrant does not contact the rear stop, but incorrectly set pedal stops could permit significant foot loads to be applied to the rear stop. Violent deflection of the rudder in strong wind could also cause the quadrant to come in contact with the rear stop. This would be exacerbated by loose rear cables.



Before further flight the integrity of the plywood within the metal bracket must be checked.


1. Remove the rudder.
2. Slacken the rudder cables and remove from the drive quadrant. It is not necessary to remove the drive quadrant.
3. Remove the 8 mm bolt and the rudder stop, but **do not** remove the tubular rivets.

4. Check the ply for damage by gentle up & down movement of the bracket while observing in the area of the lightening holes above & below. Also apply a firm rearward pulling load (by hand). Cracks may be visible in the edges of the ply, but these could well be hidden by the gussets on the sides of the bracket too. (See diagrams on Page 1)
5. If damage is detected in the ply the aircraft is not to be flown until repairs have been carried out. Contact the GFA Airworthiness office for repair instructions.
6. If no damage is found the aircraft may be returned to service. When adjusting cables ensure correct tension is applied & check rudder deflections after refitting. Deflection limits are adjusted at the pedals & if correct the rudder drive quadrant will not contact the rear stop.
7. Please send results by e-mail or complete the enclosed tear off strip & return to GFA Airworthiness section ASAP.

The above actions are to be performed by, or under the supervision of, a person holding a current GFA Airworthiness Authority endorsed for Inspection for issue of a Maintenance Release or higher. Please report the findings directly to the GFA Airworthiness office using the included Advice Slip, or e-mail stoair@sec.gfa.org.au or phone (03) 9303-7805 or fax (03) 9303-7960.

It is likely that an AD may be issued to strengthen the attachment of the bracket in due course.

Particular care should be exercised when ground handling the Puchacz to ensure the rudder is not left unrestrained and allowed to contact the rear stop. It appears that the aircraft is particularly vulnerable in this area.




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