

LAA/AWA/19/25
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Trio 'Gold Standard' Auto-Pilot Servo

Addition of Fail-Safe Washers and Cotter Pin to Prevent the Possibility of a Control Jam

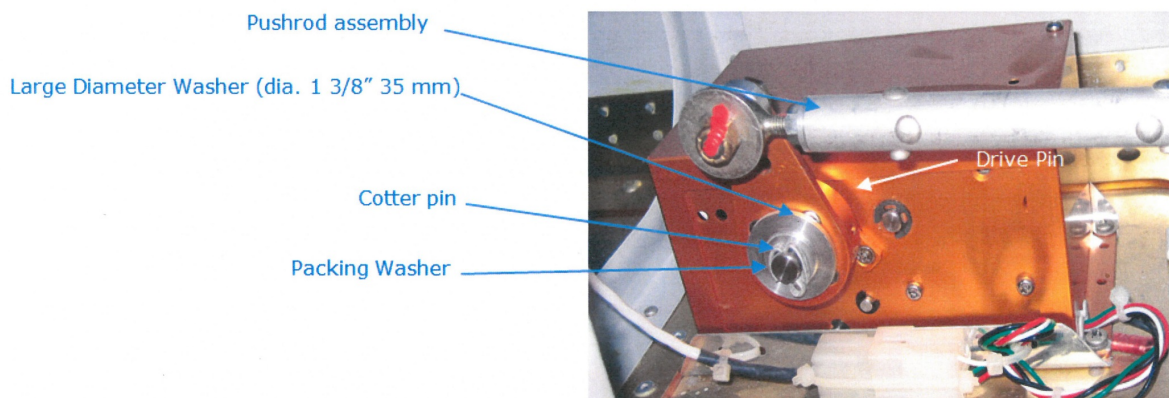


Fig 2. A Trio auto-pilot servo as fitted to a Van's RV-10

LAA has recently re-issued a 2012 Airworthiness Information Leaflet (AIL) (LAA/MOD/EQUIP/002 Issue 1). Issue 2 of this Leaflet has been created to introduce a requirement to fit a large diameter washer on the output drive shaft between the cotter pin, packing washer(s), and the drive arm.

The initial 2012 Leaflet required the fitment of a cotter pin and packing washers because, during an annual inspection of a Vans RV10 aircraft, the owner noticed significant movement in the connection between the output drive shaft and the drive arm; after further investigation, it was discovered that the drive pin itself was loose and was in danger of falling out. The loss of the drive pin would mean that the drive arm would be free to move on the drive shaft which, in addition to the loss of auto-pilot function, the drive arm could become detached from the shaft completely, with a consequential risk of a control jam. The addition of the cotter pin and washers would prevent this.

This later requirement (to fit the large diameter washer) has been added to prevent the egress of the four screws attaching the drive arm to the shaft attachment from coming loose.

After fitment of the washers inspectors must check controls for full range of movement, ensure that the servo operates normally throughout its full range, and that there is no possibility that the linkage could lock over-centre.

LAA/MOD/EQUIP/002 Issue 2 may be downloaded [HERE](#).