

Auster AOP.9

Inspection of Rivets Securing the Aileron Operating Rod end Fittings

LAA Engineering has just issued an Airworthiness Information Leaflet (AIL) (LAA/MOD/920/001 issue 1) requiring owners of Auster AOP.9 aircraft to inspect the riveted connection between the rod-end fitting to the aileron operating rod.

During the development of the AOP.9, the specification of the rivets used to attach the operating rod end-fittings to two of the operating rods in the aileron control system were changed, to increase the strength of the joint, after calculations showed the operating rods to be marginal in strength as originally configured. This modification was believed to have been carried out under Auster modification 995, although a copy of this mod. has not yet been traced.

The originally specified rivets were also of a type known to be prone to stress corrosion cracking, which can be very difficult to detect visually but, if left unchecked, can lead to the head of the rivet separating.

It has come to light that one AOP.9 operating in the LAA fleet was fitted with the pre-mod. 995 type aileron operating rods; i.e. fitted with the lower strength rivets. Close inspection of these rivets revealed that they were also exhibiting signs of serious stress corrosion cracking.

Failure of the rivets would lead to an end-fitting separating from the operating rod, loss of control over one aileron and the potential of a jam in the aileron circuit.

A copy of the (LAA/MOD/920/001 issue 1) can be downloaded [HERE](#).

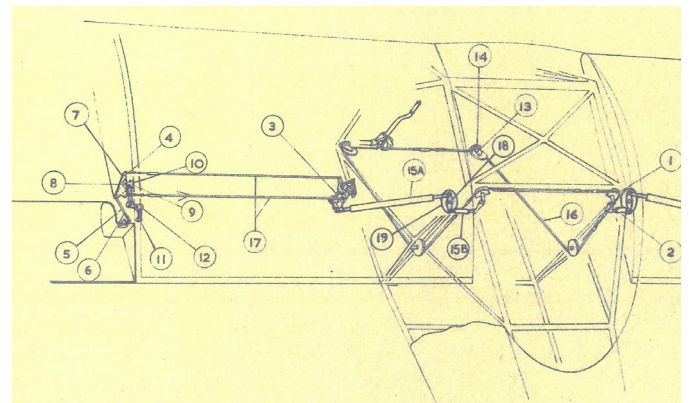


Fig. 1 The drawing above shows the port side aileron operating circuit (the view is from above and slightly behind the wing): the operating rod to be checked is item 5 in the drawing with the Chobert rivets listed as item 6.

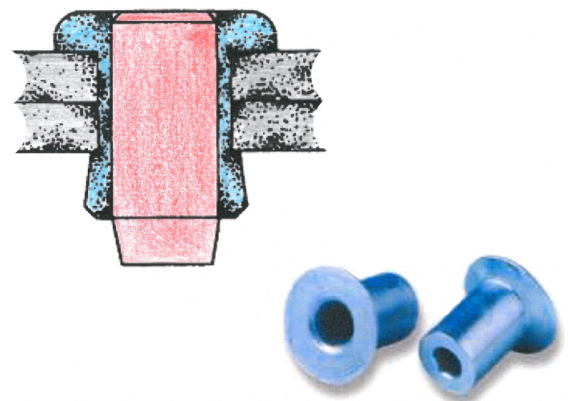


Fig. 2 The sketch above shows a cross section of a Chobert rivet in place securing two separate pieces of material; note that the rivet is shaded blue (as are the unformed rivets shown below right), the sealing pin, essential in the rivets used in the AOP.9 aileron operating rod, is shaded red.