

Replacement of OR4P, OR4S, OR7, and OR11 in outrigger mechanism

Classification

This Modification has been classified as Mandatory

Applicability

All aircraft

Compliance

Before next flight unless original OR4s have been reinforced in which case compliance should be within the next 10 hours.

Introduction

As detailed in issue 1 of this Mod dated 4 December 1995, some of the components in the outrigger mechanism are to be replaced. The reason for this is that it has been found that the latch arm OR4 is prone to deformation during normal service operations. This resulted in the mechanism becoming unlatched and the outrigger retracting.

In addition to strengthening the OR4 the replacement incorporates a cam which ensures that the outrigger leg is fully retracted and not hanging down as had been seen in some cases.

During the investigations into this problem it was also decided to address the problem of excessive wear being found on the latch block OR7. The aluminium component is to be replaced by a hardened steel component and, to minimize weight increase, only the central portion of OR7 will be steel and is identified as OR7B. The outer portions remain as aluminium and are to be made using the original OR7 component and are identified as OR7A.

Electrolytic corrosion between these parts should not be an issue as the steel part has a corrosion resistant coating.

Action

Remove the existing OR4 latch arms, OR7 latch blocks, and OR11 springs from the outriggers. Discard the springs as they are to be replaced by weaker springs.

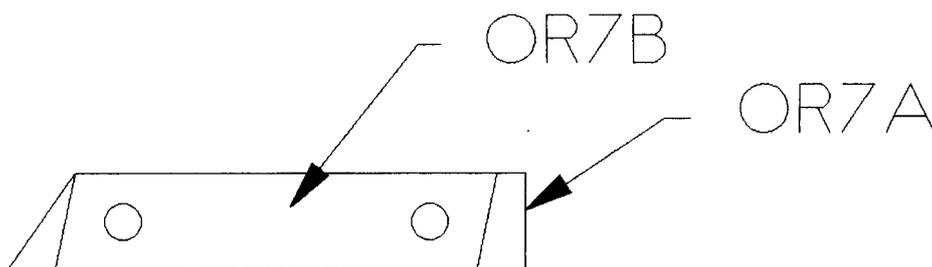
There is no countersunk hole in the new OR4 latch arm so the MS24693-S58 countersink bolt will not be required. Use in its place an AN525-10R16 bolt.

If you have already received the fuselage kit, the AN525-10R16 bolt is supplied; its originally intended use being to attach the rudder cable to the end of the rudder pedal crank CS21. See figure 4 "Installation, Rudder Pedal Assembly" of the rudder pedal installation chapter.

The MS24693-S58 countersink bolt from the outrigger assembly may be used instead of the AN525-10R16 bolt on the rudder pedal crank CS21. Use a Tinnerman type countersunk washer instead of the AN970-3 washer.

The advantages of doing this bolt swap is that you don't have to countersink the OR4 and there will be added clearance between the rudder pedal crank and the engine mounting frame.

Cut each of the original OR7*s along its length to remove the central 1/2" of material, and file the edges square. The new OR7B steel block is to be fitted here. Note that it is possible to fit OR7B any of four ways - only two are correct.



The angled end face of OR7B relative to OR7A should be as shown in the figure below.

The coating on OR7B is corrosion resistant so no interface compound should be required, however, a coat of paint on the aluminium parts OR7A would be desirable.

Install the OR7A/OR7B sandwich back in the outrigger side plates then, having filed smooth the edges, install the OR4, filing the latching face to match the angle of OR7B.

You will need to file a slot in the lower flange of the flap close-out to allow clearance for OR4 as it operates. This slot should not extend forward as far as the vertical skin of the close-out.

Note that, to enable OR4 to engage, there will be a small amount of play between the latching face and the end of OR7B when the outrigger is fully down.

OR4 is only 5 mm (0.2") thick and the fork gap in OR1 it fits into is 7.6mm (0.3"). To hold OR4 properly within the slot use one AN960-416 washer and one AN960-416L washer each side to take up any play.

Use the new lighter OR11 springs provided in place of the stronger spring.