



MODIFICATIONS

The latest mandatory modification is still Mod 58, the replacement of the anti-servo/trim tab drive pins. Kits dispatched after December 1st 2000 are not affected by this modification.

Modifications that are classified as Mandatory will be sent to every affected builder/operator, whereas optional modifications are announced in this newsletter, shown in the Parts Catalogue and also on the Europa website (www.europa-aircraft.com).

Mod 68 – Electric flaps (conventional taildraggers)

This optional modification makes the electric flap drive mechanism used in the Tri-gear version of the Europa available to those Europas converted to conventional tail dragger configuration.

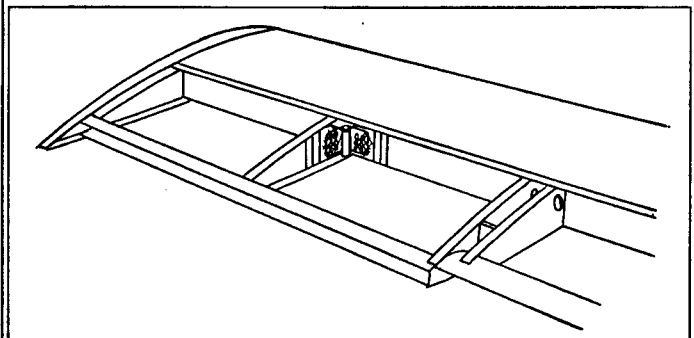
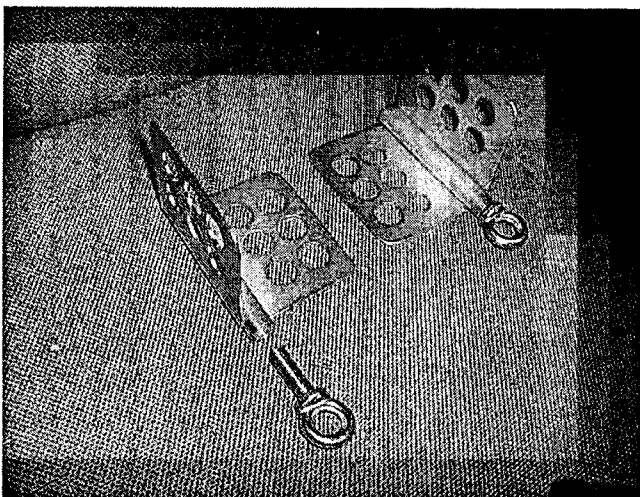
Mod 69 – Wing tie downs (XS wings)

If you have yet to close the wings and wish to include tie downs in them, then Mod 69 may be of interest to you. Each of the two anchorages for the tie downs is a threaded steel tube with flanges welded to it for bonding to the spar/outboard rib junction.

An eyebolt is screwed into the anchor point when the tie down is required, but removed for flight. All the parts are plated against corrosion.

The strength of the tie down installation is calculated to be sufficient for each of them to hold the aircraft in a 70-knot wind.

This modification will be available from May 2004.



The photograph (left) shows the tie-down assemblies before installation and the view of the wing (above) shows the installed position.

BUILD MATTERS

EUR 001 washers

These washers are commonly used in conjunction with BC4W10 bellcrank bearings. The washers should be flat but some have been found to be slightly conical, causing the bearing to become stiff when tightening its pivot nut and bolt.

If you suffer from a bellcrank bearing that becomes stiff, either turn the washer over, or select a flat one. The slightly conical ones can safely be used with rod ends.

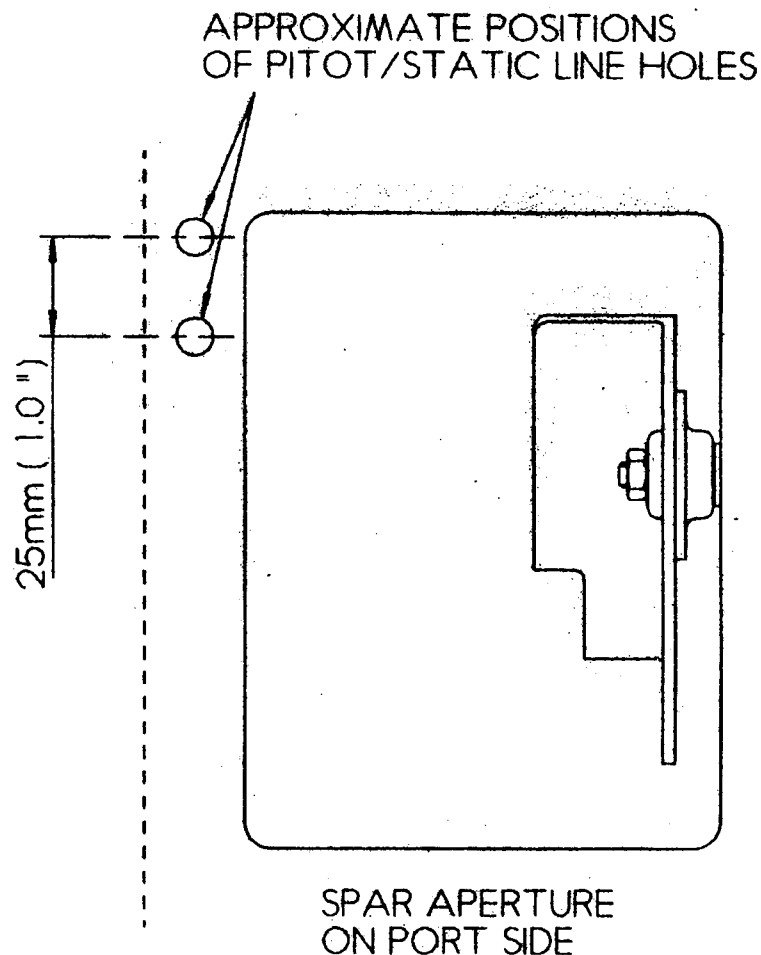
EUR 002 bolts

Many of you have already discovered that the EUR002 bolts supplied in some kits are not threaded all the way to the bolt head as is intended. These bolts are used in the end fittings of the large tailplane push rod. If you have been provided with EUR002 bolts only partially threaded please contact either the UK or US office for correct bolts to be sent to you.

Pitot/static line entry holes in fuselage

We have neglected to mention how to route the pitot / static lines through the fuselage side.

Due to the proximity of the wing lift sockets (quite important parts!) the positioning of holes through the fuselage side in this area is important. The figure below shows the recommended position for the holes to allow the lines to pass through before routing forward, under the doorsill, and towards the instrument panel.



Pitch trim switch placard

It has only just been noticed that incorrect trim switch placards have been supplied in some recently supplied pitch trim servo kits.

The placard should read 'ELEV. TRIM DOWN' at the top, and 'UP' at the bottom. If you find that your placard is incorrect please contact either the UK or US office for a replacement. (Note that the indicator placard should read TRIM UP at the top and DOWN at the bottom)

Battery position (XS engine installation)

The engine in the XS type installation is 10 cm (4") further forward than in the Classic, and it was found necessary to move the battery from its original position on the starboard footwell to a position just behind the flap operating cross tube. This results in a sensible empty Centre of Gravity (C G) without installing ballast in the tail. Usually the extra weight of the longer electrical cables will be significantly less than any ballast that would otherwise be required.

As an illustration, moving a 6 kg (13.5 lb) battery from the footwell to behind the flap cross tube will typically result in the CG moving 2.8 cm (1.1") aft. The CG change is of course greater with a heavier battery. The additional length of cable would typically weigh approximately 1 kg (2.2 lb). Leaving the battery on the footwell would require 3.5 kg (7.25 lb) of ballast in the sternpost area to achieve the same shift in CG.

ROTAX ENGINES

914 fuel pressure gauges

A standard fuel pressure gauge system will not work on the 914 engines, as the fuel pressure reading is only correct when compared with the airbox pressure. Fitting two gauges, one for the airbox and one for the fuel, so that a comparison can be made, is not a practical solution, so a single differential pressure gauge system has been developed.

We are pleased to announce that analogue gauges in two sizes; 2 1/4" and 1 1/4" diameter, will soon be available; (expected at the end of April). In addition to the analogue display of this 2 1/4" instrument, a version is being developed with integral warning lamps that will illuminate at both the maximum and minimum fuel pressure thresholds. All versions will use the same sender.

30 Amp slow-blow fuse

The wiring diagram in the Rotax engine installation manual shows a 30 Amp slow-blow fuse in the cable between the battery and the main positive bus. The terminology 'slow-blow fuse' has caused some confusion; so a little clarification may be helpful.

A thermal circuit breaker falls into the category of 'slow-blow' fuse. In the event of an overload, this type of circuit breaker will not trip instantaneously, but only after a pre-determined time depending on the degree of overload and hence overheating experienced. This feature protects against spurious trips in the event of 'spikes' or very short-lived overloads. A magnetic circuit breaker, on the other hand, will trip at the instant its rated current is exceeded, and therefore should not be used in this application.

While on the subject, it is worth pointing out that instead of a 30 Amp rated circuit breaker, we have found that a 25 Amp circuit breaker is suitable. Both the UK demonstrator aircraft have been fitted with 25 Amp breakers for over a year now, and no trips have been experienced. The alternator is only able to generate about 22 Amps at 5,800 rpm and the recommended 10 AWG cable is rated to take 35 Amps continuously, so the use of a 25 Amp circuit breaker could be regarded as more conservative than Rotax intend.

The motivation for opting for the 25 Amp circuit breaker is that this is the highest rating we have found for the same compact size of the lower rated circuit breakers that we use. Space in the Europa panel is not generous, so this is an important consideration.