



Installation of underwing pitot/static

Classification	Highly recommended
Applicability	All pre XS Europa aircraft
Compliance	N/A

Introduction

The static source on the sides of the fuselage, in some aircraft, is subject to instability when operating close to the stall, causing substantial oscillation of the A.S.I. needle.

Europa Aircraft have carried out flight testing to determine an optimum position for the pitot/static under the wing. This Modification describes the installation of a pitot/static unit suitable for underwing fitting to Europa aircraft having foam filled wings. Pitot/static units fitted in accordance with this Modification will have pitot/static errors within the limits imposed by JAR VLA.

Action

1. Mark a position on the under surface of the port wing 13" outboard of the flap/aileron interface, and 12" aft of the rear face of the spar.
2. With a 45 mm (1 3/4") diameter hole saw carefully cut through the wing skin and foam.
3. Cut the plywood supplied to make a disc with an outside diameter of 45 mm (1 3/4") and trim to fit in the hole cut in the wing. Cut out an oval hole as shown in figure 1. Drill through the plywood 2 holes 4.8 mm diameter 1" apart, countersink the holes, and fit the two MS21047-3 anchor nuts, using TLPK424BS pop rivets.

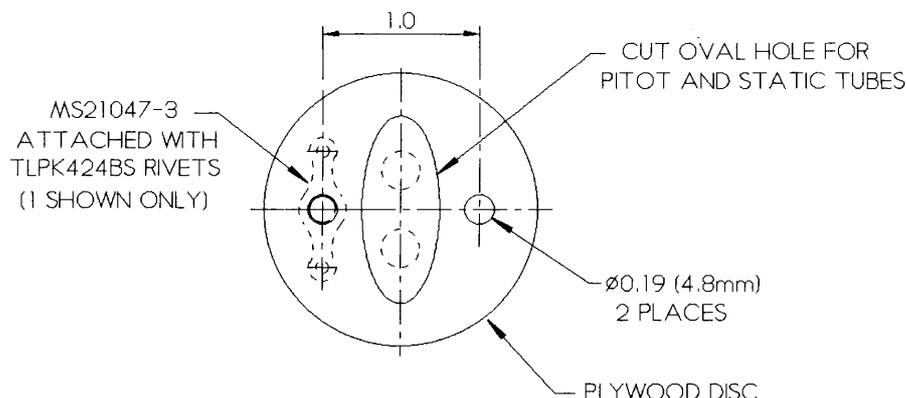


Fig 1. Pitot/static mounting block.

4. Pass the plywood disc over the free ends of the tubing, and floc it into position so that it is 1.5 mm (1/16") below the wing surface.
5. Scuff sand 4 cm (1 5/8") around the hole, removing any paint completely, and layup two layers of 'bid' over the plywood disc lapping 3 and 2 cm (1 1/2" and 1") onto the wing skin. Make a fillet of floc around the edge of the hole first to eliminate air bubbles. Peel ply and leave to cure.
6. Drill a 12 mm (1/2") diameter hole starting at the front of the flap outboard close out as far forward as possible and as low as possible, and aimed directly at the hole cut in the wing skin. This will break out into the same lightening hole as the one cut in the wing skin. You will need to disconnect the outrigger mechanism push-rod OR5 to pivot the flap out of the way
7. Feed two lengths of the 3 mm x 6 mm PVC through the hole and fish the ends out leaving about 5 cm (2") free for later fitting to the pitot/static unit. Run the tubes along the front lower edge of the wing trailing edge close out, securing them at intervals with scraps of 'bid'. Pass the tubes over the top of the spar and fix them to the root rib with a scrap of 'bid', leaving about 30 cm (12") of slack.
8. Fit one tube with a plug fitting (PMC 22-02) and the other with a socket fitting (PMC 17-02). This allows them to be fitted together with the wing derigged, and avoids confusion as to which is pitot or static.
9. Fit the two tubes onto the pitot/static assembly and clamp them in place with wire, being careful not to over tighten the wire or you could cut through the tubing.
10. Fit the pitot/static assembly to its mounting with the AN525-10R8 bolts.
11. Drill two 1/4" holes through the fuselage side near the bottom of the area covered by the wing and just forward of the spar cutout. Feed two lengths of the 3 mm x 6 mm tubing through these and lead them along the door reveal to the instrument panel area. The "T" pieces and union fittings are provided for instrument fitting. Fit the outer ends of the tubing with the quick release fittings PMC 22-02 and PMC 17-02, ensuring that the static ports of the instruments match the static vent and vice versa.