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|  | Standard Modification Issue 1 | Mod No. SM10713 |
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| | | Compiled : I Rickard |
| | | Approved : F Donaldson |

TITLE : Wing Conduit Installation

APPLICABILITY : Europa XS
Mod Type : New build prior to closing the wing

1. Introduction

This mod installs a single plastic conduit in each pre-moulded wings of the Europa XS. These may be used to carry the pitot, static, stall warner tubes and electrical wiring as required. This setup also allows replacement of plastic tubes, following any degradation. In the original design this was impossible.

Each conduit is installed as two continuous lengths in each wing. The two conduits meet at the aileron bell crank inspection panel where they can be accessed easily. The choice of lightweight plastic conduit, from the wide range available commercially, is left to the builder. The conduit most not exceed 18mm diameter, or 10mm x 16mm oval.

2. Parts List

| Qty | Part No. | Description | Source |
|-----|--------------|---------------------------------|----------------|
| 2 | Conduit | 1.5M long | DIY Store |
| 2 | Conduit | 2.1M long | DIY Store |
| | Ampeg 21 | Epoxy laminating resin | Builders stock |
| | 92125 | Bidirectional (BID) glasscloth | Builders stock |
| | 92145 | Unidirectional (UNI) glasscloth | Builders stock |
| | Araldite 420 | Epoxy adhesive | Builders stock |

List of related Drawings / Photo's

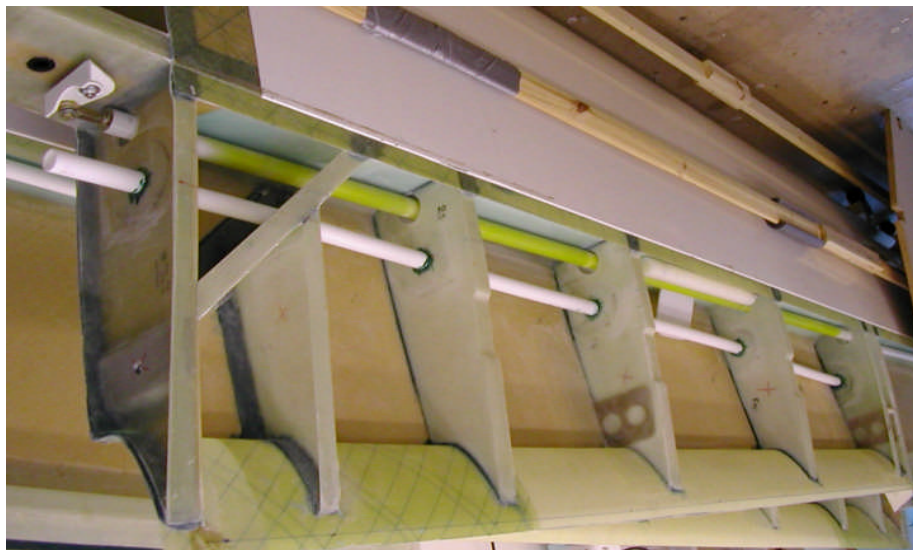
| Drawing No. | Title / Description | Issue |
|-------------|---|-------|
| None | All illustrations are included in this document | |

3. Action

3.1 Installation Overview. Installation must be carried out prior to closing the wing. The reinforcement at each hole should be a "donut ring" of 92125 BID glass cloth around the hole on each rib, [one side only]. Make the diameter 2" bigger than the hole. Orient the plies at 45° to each other. Ensure the bonding area is thoroughly scuff sanded prior to the layup.

3.2 Inboard Conduit.

The inboard conduit runs, in a straight line, from the root rib to the outboard side of the double rib. At the root rib the conduit is located at the centre (vertically) and approximately 5" from the spar. At the double rib the conduit is located on the lower skin and 5" from the spar. (See Inboard picture).



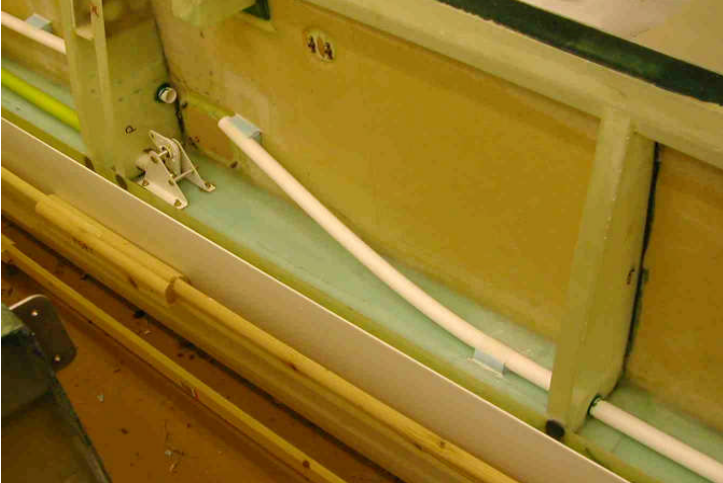
Mark the position of the holes required and ensure that the conduit passes through the diagonal rib (first outboard from the root) just forward of its junction with the chord-wise rib).Cut the required holes and reinforce with two plies of BID on one side of the rib, overlapping onto the lower skin as required

Inboard conduit

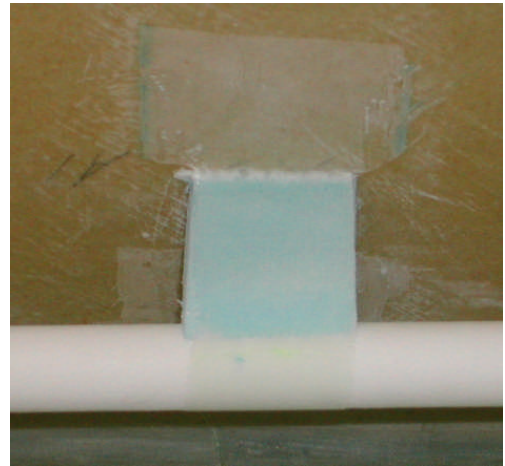
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3.3 Outboard Conduit

The outboard conduit runs along the vertical centre line of the spar from the tip of the spar through the outboard rib. From the rib it is curved to a convenient position adjacent to the aileron bell crank inspection panel. (See Outboard picture). The hole required in the outboard rib must be reinforced with two plies of BID on one side of the rib, overlapping the spar.



Outboard conduit



Strap

3.4 Strap

Create support straps mid way between the ribs consisting of a shaped block of styrofoam covered with a single ply of 92145 UNI lapping onto the structure about 25mm (1"). (See Strap picture).

4. Weight and Balance

4.1 The weight will be included when the aircraft is completed and weighed. Total weight is less than 1lb.

5. Flight Test and Special Instructions

5.1 Inspector to verify quality of installation prior to closing wing

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| Approved: | F Donaldson B.Tech C.Eng FRAeS Chief Engineer | Signed: | |
|-----------|--|---------|--|