



C42FBUK MICROLIGHT TO C42FB UK VLA RETROFIT INSTRUCTIONS

The retrofit kit comprises of the following items:

- 1 x sheet of Fiberfrax firewall material.
- 1 x bottle of Fiberfrax glue.
- 8 x replacement “butterfly” rivets.
- 1 x pitot drain “T” piece.
- 1 x labels for weight change & ASI correction.
- 1 x VLA pilots operating handbook.

ACCOMPLISHMENT INSTRUCTIONS

Area: Hanger or Workshop with adequate heat & lighting [do no attempt to glue in cold damp conditions]

- Remove top and bottom engine cowlings.
- Remove exhaust springs holding Haggerman silencer to the Port and Starboard exhaust pipes, also the cold air inlet hose and hot air outlet hose from the Haggerman silencer.
- Remove the oil inlet, outlet and breather hoses from the oil tank, **tape up the open ends to prevent any debris entering the tank or hoses whilst carrying out the retrofit.**
- Remove the oil tank bracket, **Tip:** you will need to “Peel back” the adhesive backed grey sound proofing material in the cabin, this will allow access to the oil tank nuts, place a sheet of polythene on the “peeled back” adhesive side, this will stop your hands and tools sticking to the sound proofing when removing, and refitting the washers & nuts.
- Remove the hot air control valve with its input and output hoses from the port side including the Bowden control cable. De-rivet the “U” bracket securing the hot air outlet hose. De-rivet the Bowden outer “L” bracket [only if the bracket is riveted on top of the existing firewall aluminium/glass material if riveted directly to the firewall leave intact.] .
- Carefully remove the silencer from between the firewall and the engine.
- Remove the “butterfly” rivets and washers securing the foil/glass material to the firewall, some rivets may require an angled drill for access.

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- With a sharp knife cut a slit in the existing aluminium/glass fire retardant material. Cut the slit upward from the engine control and Vapour Return firewall entry holes, this will allow the material to be removed without disturbing control cables, fuel lines etc. Disconnect the 2ea steering rods [lower firewall] this will allow the material to be removed over the steering rod boot
- With the aid of a hot air blower carefully peel off the self adhesive middle, upper and lower aluminium/glass fire retardant material and place on polythene sheets to protect the adhesive backing. The material will be refitted later.
- Thoroughly clean the exposed firewall removing any glue, grease oil etc. Spirit based cleaners work well on this material.

FITTING THE FIBREFRAX

- Cover a clean bench with newspaper and “lay out” the Fiberfrax material.
- Using the lower aluminium/glass fire retardant material as a template “cut out” the Fiberfrax lower covering. Leave a margin of around 20mm on each side and the top, stick the self adhesive lower fire retardant material to the Fiberfrax. Use a hot air blower as required to soften the adhesive. Additional adhesive can be used if required.
- Using the upper removed fire retardant aluminium/glass covering as a template “cut out” the Fiberfrax upper covering, depending on the material you may need to use two pieces, if so overlap by around 20mm. Leave a margin of around 20mm on each side and the top, stick the self adhesive upper fire retardant covering to the Fiberfrax. Use a hot air blower as required to soften the adhesive, additional adhesive can be used if required. Slit the Fibrefrax above the engine control and vapour return entry holes.
- Cut a piece of Fiberfrax approximately 950mm x 150mm this will be glued along the angle between the upper and lower firewalls, also cut a piece approximately 100mm x 50mm this will be glued above the engine control and vapour return firewall entry holes.
- Protect the engine with a plastic sheet to stop any glue splashing on engine components. Using a clean brush coat the firewall with the glue provided.
- Liberally coat one side of the 950mm x 150mm Fiberfrax material with glue, fit centred along the middle firewall angle with equal amounts of Fiberfrax on the upper and lower firewall.

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- Liberally coat one side of the 100mm x 50mm Fiberfrax material with glue, fit just above the engine control & vapour return holes. A wooden roller or a block of wood is useful to smooth the material into place.
- Liberally coat the exposed lower firewall Fiberfrax material with glue, fit to the bottom firewall. Position the material so that the existing holes for the oil tank bracket, hot air valve and associated brackets are aligned. A wooden roller or a block of wood is useful to smooth the material into place.
- Liberally coat the exposed upper firewall Fiberfrax material with glue, fit to the upper firewall. Position the material so that the existing holes for the engine controls, vapour return line, and the holes from the drilled out “butterfly” rivets are aligned. A wooden roller or a block of wood is useful to smooth the material into place.
- Refit the middle aluminium/glass fire retardant material between the upper and lower firewalls [behind Haggerman silencer] position the material so that the existing holes for the drilled out “Butterfly” rivets are aligned. Use a hot air gun to soften the adhesive backing if required. A wooden roller or a block of wood is useful to smooth the material into place.
- Replace the “Butterfly” rivets and washers that secure the original upper & middle aluminium/glass fire retardant material to the firewall.
- Refit the Haggerman exhaust system and its associated components. Refit the exhaust springs.
- Refit the oil tank retaining bracket and the oil tank. Refit the oil inlet, outlet and oil breather pipes ensure pipes are adequately tightened.
- Refit hot air control valve. Refit and fit safety clips to the two steering rods.
- Re-rivet Bowden “L” bracket and heater hose “U” bracket through the existing firewall holes. Butterfly rivets or if preferred 5mm Allen screws, washers, and nuts can be used.
- Refit the heater hoses, tighten the hose clips as required. Do not refit the cowlings at this stage as your PFA inspector will require to check the work and carry out ground runs. Refit the cowlings when your PFA inspector is satisfied.

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INSTALLING THE PITOT DRAIN

- Remove the baggage hatch and locate the pitot tubing, at the lowest point cut the tubing and insert a "T" drain valve (a "T" piece with an air tight lower screw-on fitting would be acceptable) use small cable ties to secure the tubing to the "T" piece.
- Use 2 x large cable ties to secure the drain valve at the lowest point of the pitot tube run, this will normally be at the rear of the main undercarriage cross beam close to the swinging arm attachment bolt.

WEIGHT AND BALANCE

- Reweigh the aircraft as per the pilots operating handbook, record the figures and amend the VLA cockpit placard.

PLACARDS

- Install the ASI correction placard adjacent to the ASI. Replace the Microlight weight & limitations placard with the appropriately amended VLA cockpit placard.
- The modification should now be ready for your PFA inspectors final clearance.

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