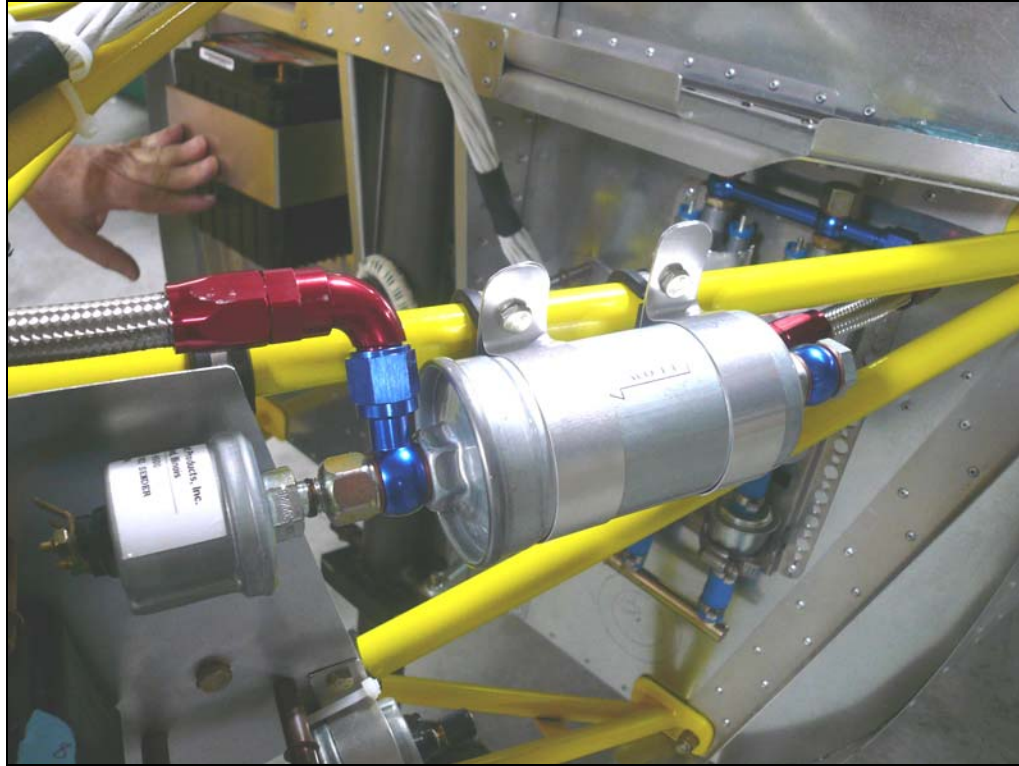


UL Power UL350 Series Engine Installation

Section 4 Fuel System



UL Power aircraft engines are manufactured and supported by UL Power Aero Engines of Belgium. Read and understand the UL Power manuals completely before starting with the engine installation, as they contain important engine installation, operation and maintenance information. Follow all of the important safety information provided in the UL Power manuals regarding the installation, operation and maintenance of the UL Power engine. Read and understand the UL Power Operating Manual before starting the engine.

Make sure that your engine is registered with UL Power or an authorized distributor so that the factory warranty is in effect. In the United States, the UL Power distributor is UL Power North America: <http://www.ulpower.net>. Contact a UL Power distribution or service partner if you do not understand the instructions or if you have any additional questions. Maintain copies of the manuals with the aircraft in case of sale. Obtain current versions of the manuals from the official UL Power website, as well as current service and maintenance information: www.ulpower.com

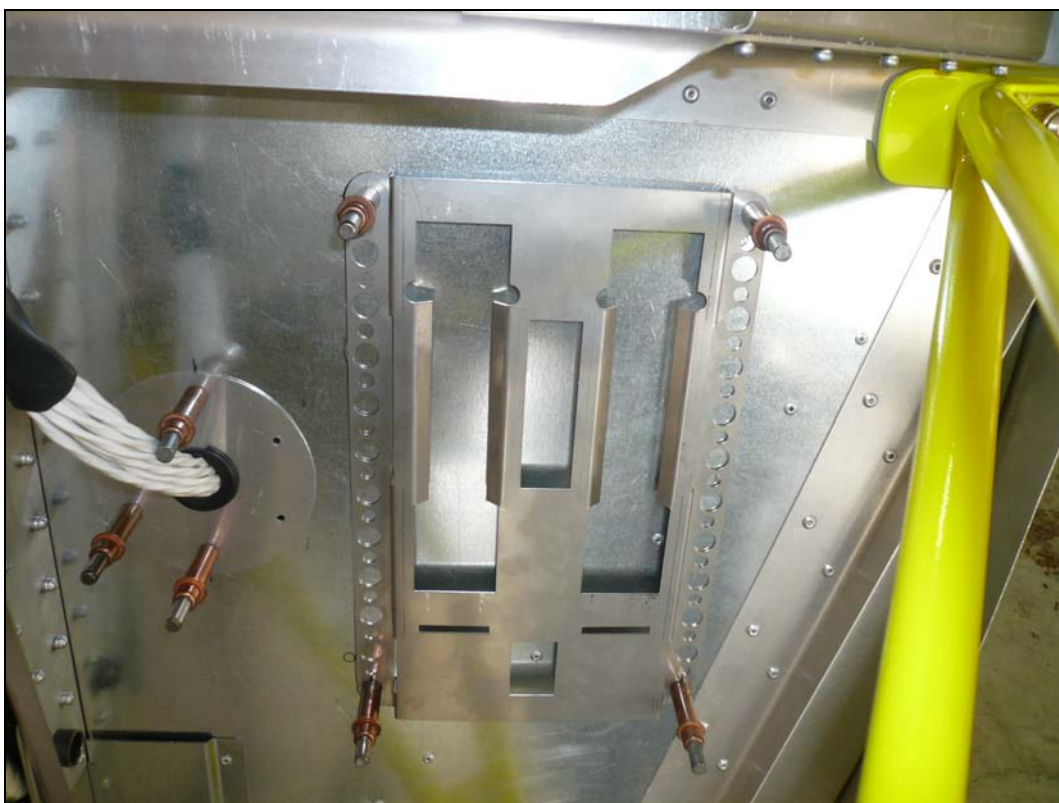
If a discrepancy arises between the information provided by UL Power and the following pages, the UL Power manuals and/or service information and instructions take precedence. Zenith Aircraft Company does not manufacture or directly support engines.

Note: Different engines will affect performance, specifications, and flight characteristics of the aircraft. Also, the weight and balance of the aircraft will be affected by different engines and the fuel system per the drawings may not be adequate or suitable for some engines.



P/N: E060003
Fuel Pump Bracket -
Double

Mark a hole locations in the corners of the Fuel Pump Bracket 7mm from the edges with a #40 drill bit.

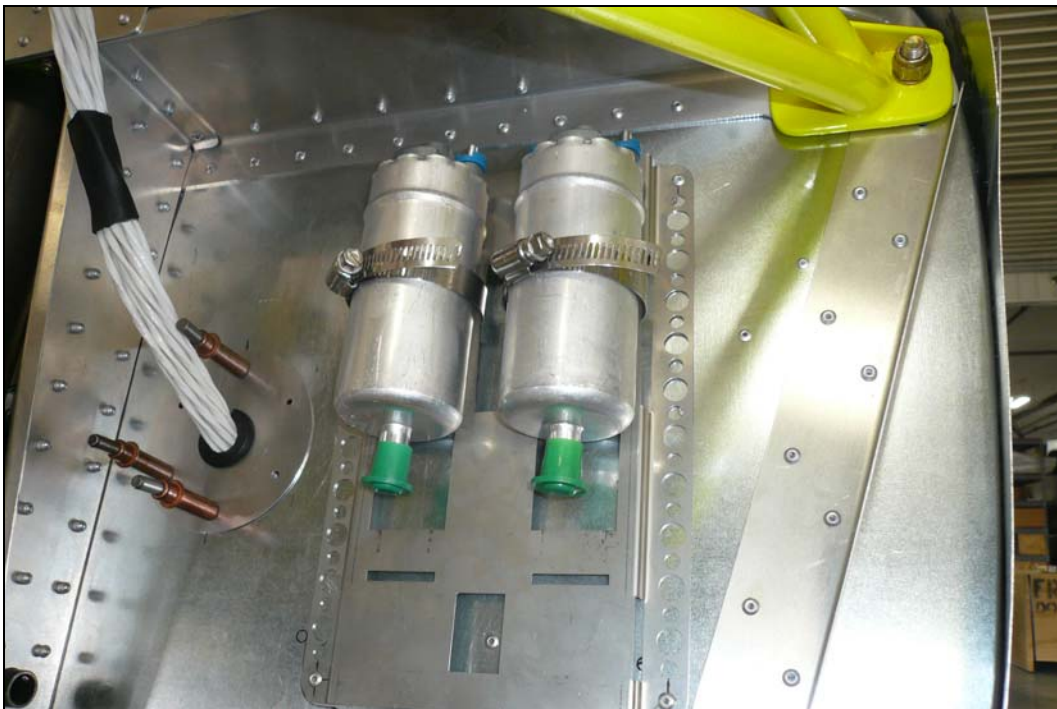


Mark a line 135mm from the Center Firewall Stiffener flange on the Pilot side. Mark a line 60mm down from the Firewall Top Stiffener web. Position the Bracket on the Firewall so the lines are visible through the holes in the Bracket. Back drill through the Bracket into the Firewall and cleco. Expand the holes with a #30 drill bit; then expand the holes with a #20 drill bit and cleco.



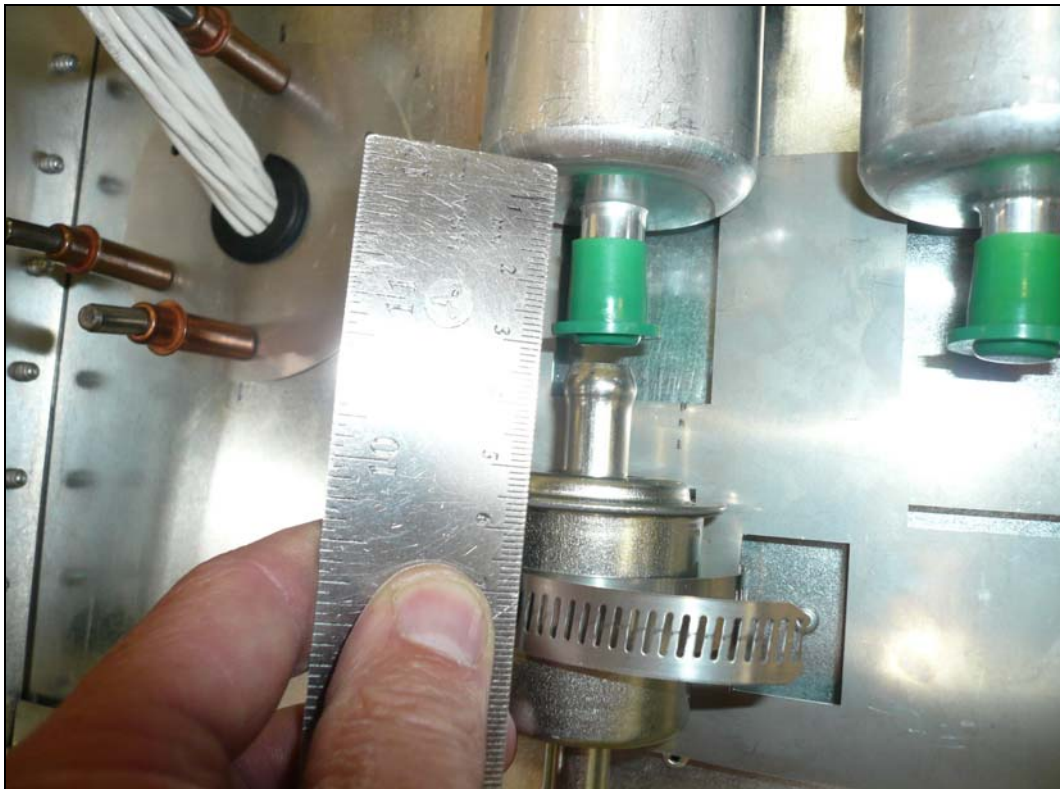
P/N: F2580003
Stainless Steel Hose
Clamps

Rivet the Bracket on the Firewall. Open the Stainless Steel Hose Clamps so they can be installed on the Bracket. Slip the Hose Clamps in the openings on the Bracket.



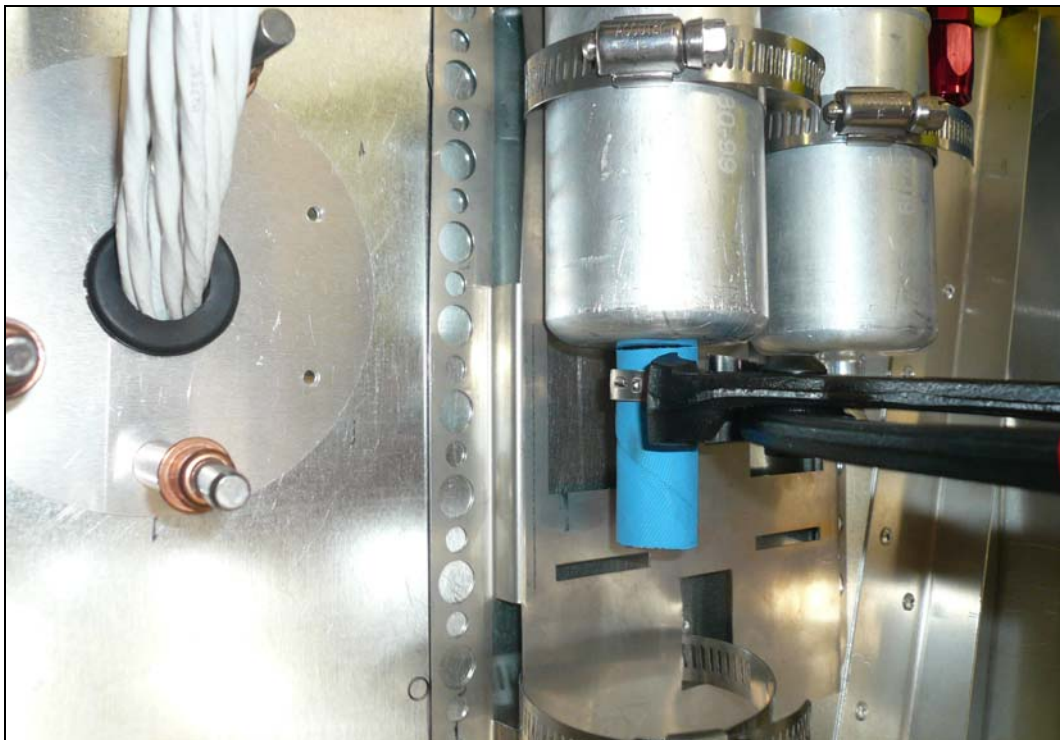
P/N: E063502A
Electric Fuel Pump

Set the Electric Fuel Pump in place. Tighten the Hose Clamps around the Fuel Pump.



P/N: E064003A
Course Fuel Filter

Temporarily install a Course Fuel Filter on the bottom of the Fuel Pump Bracket. Measure the distance between the Fuel Pump and the Filter. Remove the Filter from the Bracket.



P/N: F2580004
Hose Clamp

P/N: F2550008
Push on Hose 06 3/8



Oetiker Crimping Pliers

Cut the Hose to the length previously measured. Install the Hose on the bottom of the Fuel Pump. Use Oetiker Crimping Pliers to tighten the Hose Clamps.

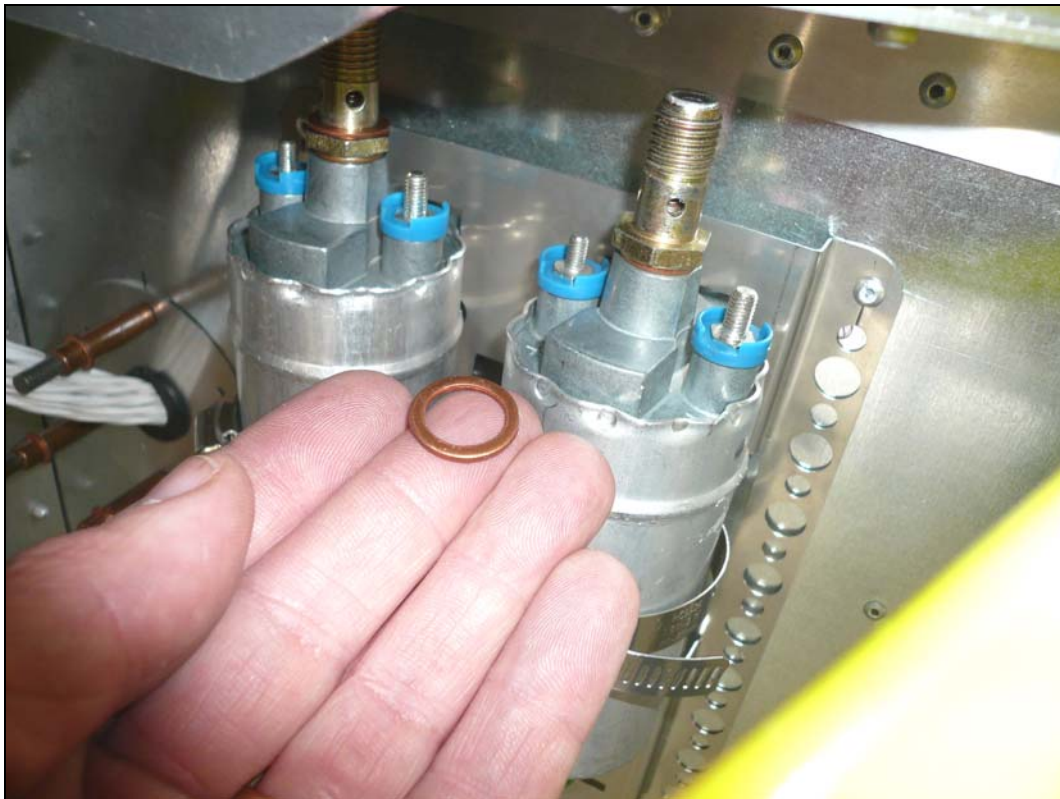


Install the Fuel Filter on the end of the Hose and tighten the Clamp. Install the Stainless Steel Clamp on the Filter around the Fuel Pump Bracket and tighten the Clamp. Cut and install the Hose and Filter on the second Fuel Pump using the same procedures.



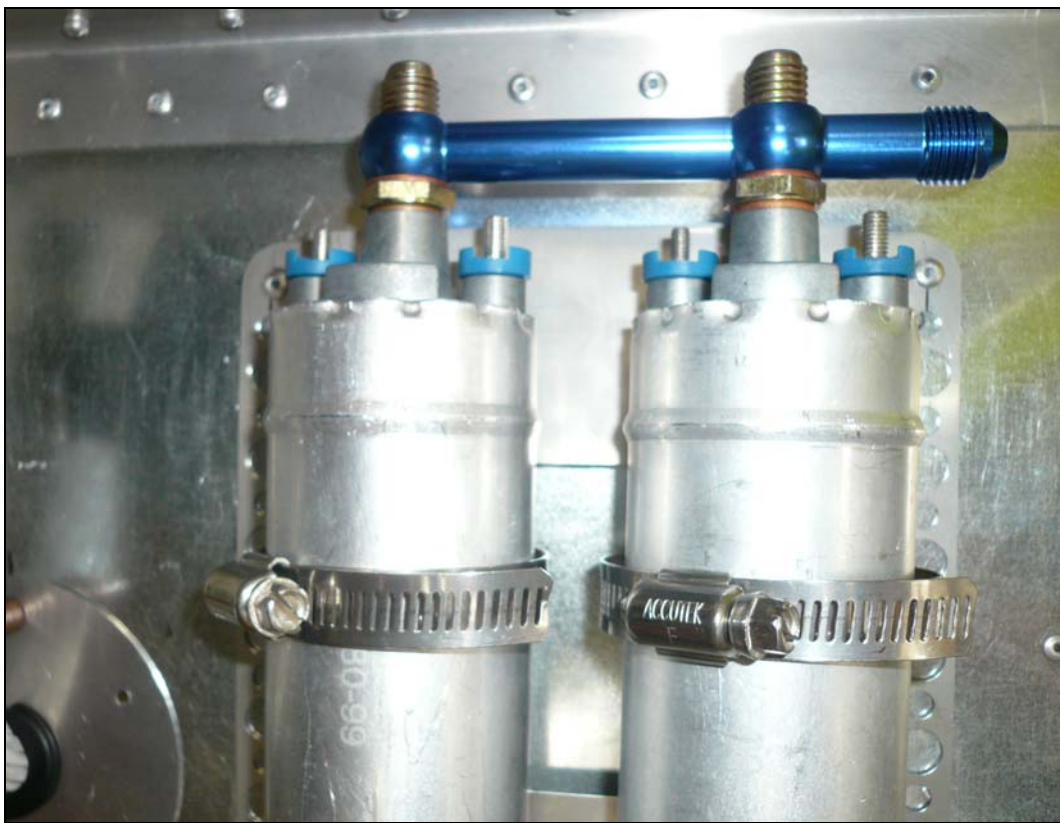
P/N: E063007
Suction Collector

Cut two more pieces of Hose the same length as before. Install the Hose and Clamps on the Fuel Filters. Slide a Clamp on each Hose and install the Suction Collector on the Hose. Tighten the Clamps on the Hoses.



P/N: S3121715
Copper Sealing Ring

Install a Copper Sealing Ring on top of each Fuel Pump.



P/N: E063001A
Double Fuel Pump
Ramp

Install the Double Fuel Pump Ramp on the Fuel Pumps.



P/N: F2531200
Hex Cap Nut M12x1.5

Install another Copper Sealing Ring on top of the Double Fuel Pump Ramp.
Install a Hex Cap Nut on each Fuel Pump.



P/N: F3008090
90 degree Swivel
AN-6JIC

Install the 90 degree Swivel on the Fuel Pump Ramp.



P/N: F2521200
Banjo Bolt M12x1.5

P/N: F2510312
Banjo Eye
M12 / AN-6JIC

P/N: S3121715
Copper Sealing Ring

Install one Copper Sealing Ring on the Banjo Bolt, followed by the Banjo Eye, and a second Copper Sealing Ring.



P/N: E064001
Fine Fuel Filter

Install the Banjo Bolt and Eye on the intake side of the Fine Fuel Filter.



P/N: F2560002
Adaptor
M12x1.5 – AN-6JIC

Slide a Copper Sealing Ring on the Adaptor, followed by a Banjo Eye, and a second Copper Sealing Ring.



Thread the Adaptor on the outlet of the Fine Fuel Filter.



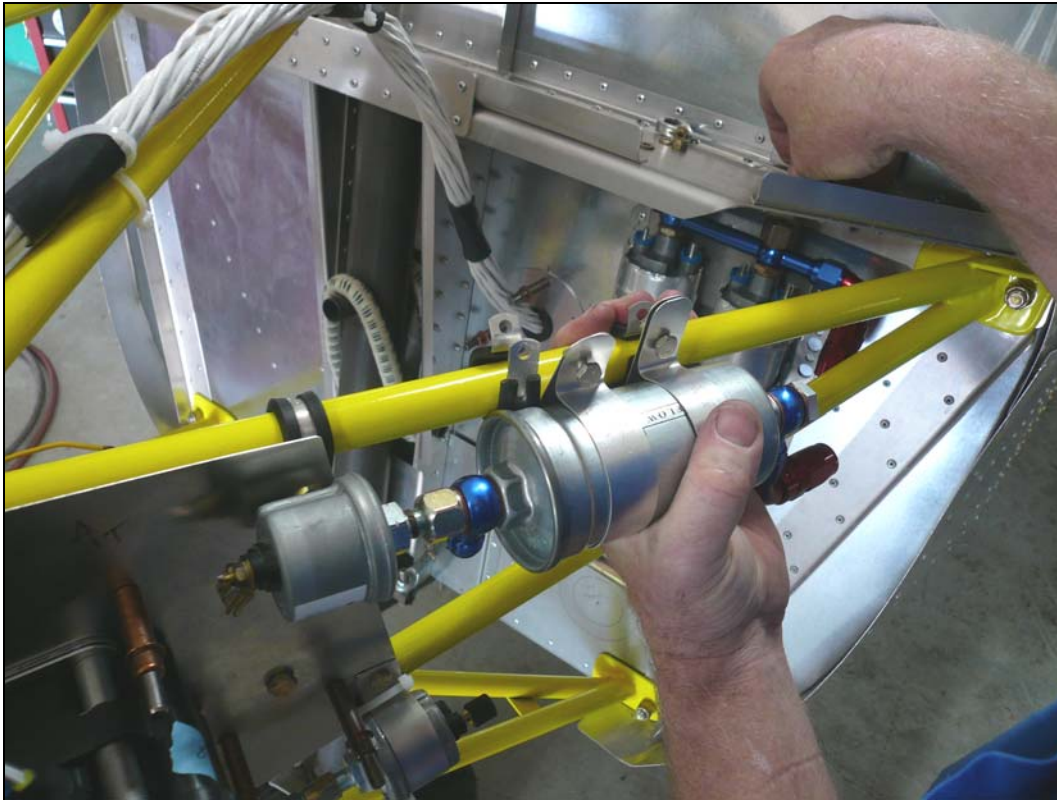
P/N: stsp
Aluminum Strip / Fuel
Filter Bracket

Mark a line 30mm from one end of the Aluminum Strip. Bend the Strip approximately 90 degrees.



Wrap the Aluminum Strip around the Fine Fuel Filter and clamp the ends together. Use a #40 drill bit to drill a hole in the Strip where the ends come together. Expand the hole in steps to 3/16". Trim the flange to approximately 10mm edge distance. Make a second Strap following the same procedures.

Note: The photo above has a Fuel Pressure Sensor threaded in the Adaptor; this is done at a later time.



P/N: MS21919-DG12
Adel Clamp

Install two Adel Clamps on the pilot side tubes of the Engine Mount. Bolt the Aluminum Strips to the Adel clamps to retain the Fine Fuel Filter to the Engine Mount. Make sure the flow direction is correct.



P/N: F3008090
90 degree Swivel
AN-6JIC

Thread the 90 degree Swivel on the Banjo Eye on the inlet to the Fine Fuel Filter and align it with the Swivel on the Fuel Pump Ramp.



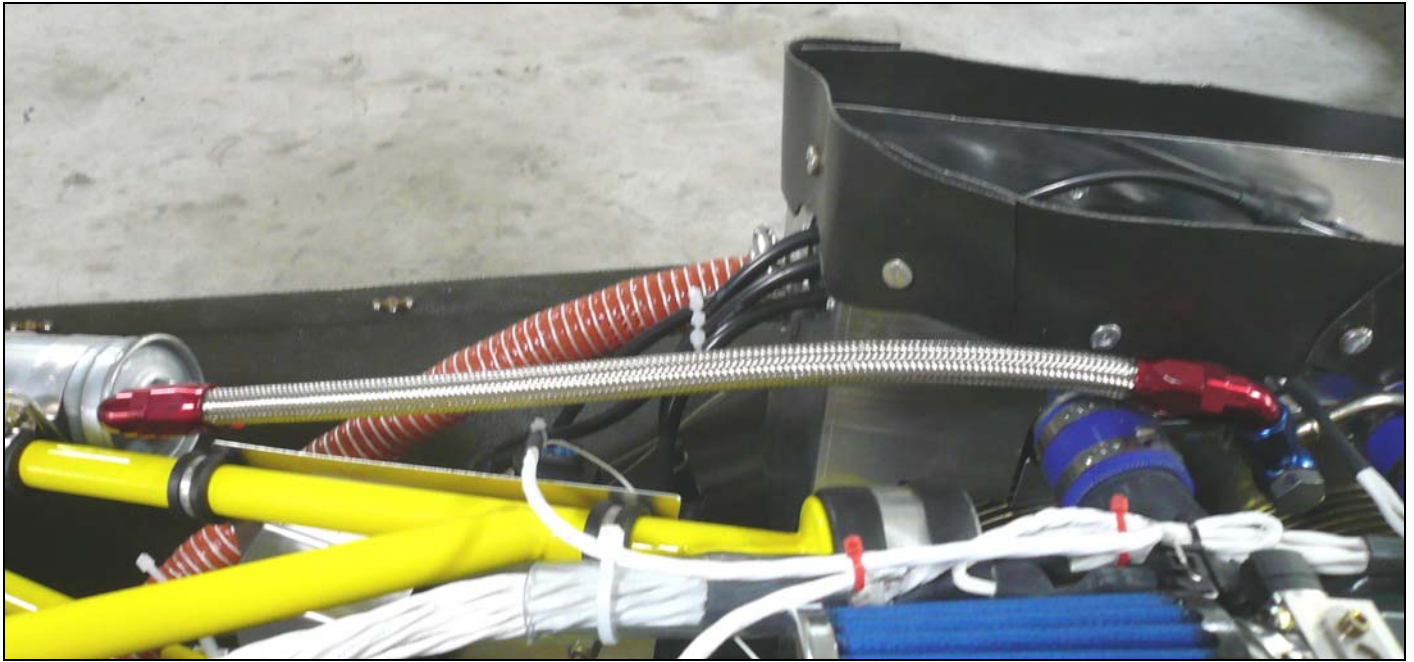
P/N: F2550002
3/8" ID. Stainless Braid
Hose

Make a Fuel Line from the Swivel installed on the Fuel Pump Ramp to the Swivel on the Fine Fuel Filter following the same procedures as used to make the Oil Lines.

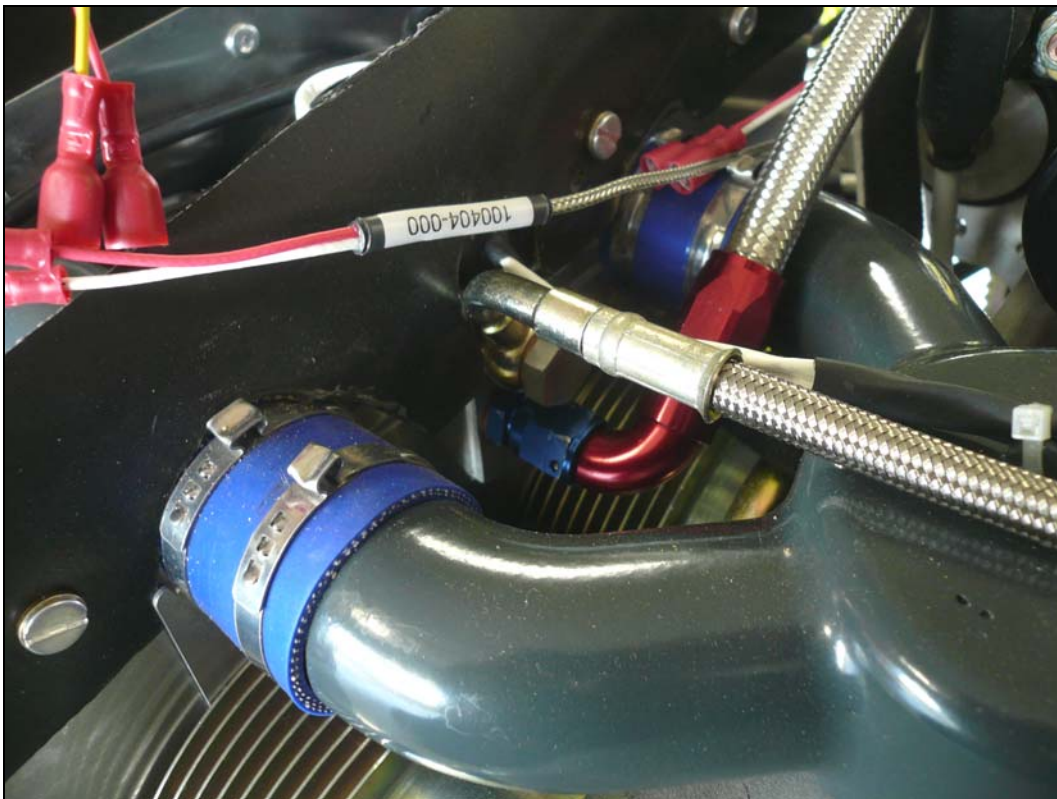


P/N: F3006045
45 degree Swivel
AN-6JIC

Install the 45 degree Swivel on the Banjo Eye on the Injector Holder on the pilot side of the Engine.



Cut and make a Fuel Line between the Swivel on the outlet of the Fine Fuel Filter and the Swivel on the Injector Holder.



P/N: F3008090
90 degree Swivel
AN-6JIC

Install the 90 degree Swivel on the end of the Braided Fuel line. Thread the Swivel on the fitting on the Injector Holder on the passenger side of the Engine and route the Braided Fuel Line over the Intake Manifold.



P/N: E065001A
Check Valve

P/N: F3006000
Straight AN-6JIC

Thread the Straight AN-6JIC fittings on the Check Valve.



P/N: MS21919-DG10
Adel Clamp

P/N: MS21919-DG12
Adel Clamp

Install an Adel Clamp to the diagonal tube of the Engine Mount on the passenger side. Install a smaller Adel Clamp on the first Adel Clamp (do not tighten the bolt yet). Slide the Return Fuel Line through the smaller Adel Clamp to determine the length of the Return Line and cut the Return Line far enough below the Adel Clamp to install the Check Valve.



Install the Straight AN-6JIC fitting on the end of the Return Line. **Note:** Check the direction of flow on the Check Valve before installing the Check Valve on the Return Line. Install the Check Valve on the Return Line.



Install the other Straight Fitting on the Return Line and attach it to the outlet of the Check Valve. Secure the Return line to the bottom tube of the Engine Mount with two Adel Clamps as previously secured.



P/N:
Grommet

Drill a hole in the Firewall for the Fuel Return line. Install a Grommet and slide the Return Line through the Grommet.