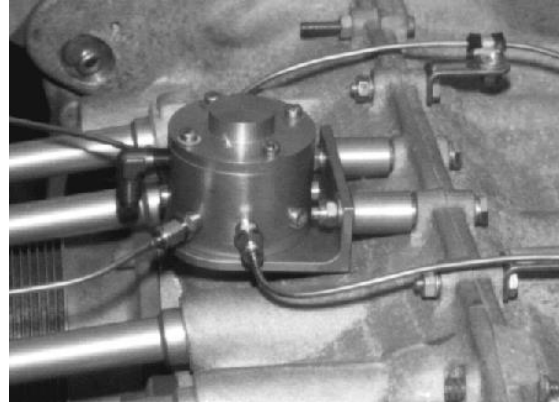


FLOW DIVIDER INSTALLATION

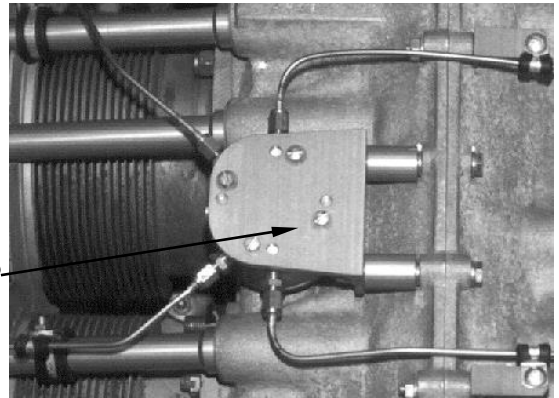
Flow dividers are used when the engine is not level at idle (tail dragger aircraft) or when the injector nozzles are below the distribution point. The flow divider will divide the metered fuel equally among the ports that are connected to it, regardless of the height of the injector nozzles to each other. The flow divider needs to be mounted on the cool side of the engine (where the cooling air is coming in) and in some cases an insulator block and or blast air will help in hot low power operation. Also a vent allowing the hot air to escape above the flow divider after shut down is helpful for hot starts.

Flow divider bracket P/N 2090148 can be used to mount the flow divider to most Lycoming engines. Mount the bracket as shown between cylinders #1 and #3. The bracket hardware kit P/N LFDHDKT has the necessary spacers and bolts to attach the bracket to the engine.



An alternate method of mounting is to flip the flow divider upside down. This gives a little lower profile for a tight cowling. The four 10-24 screws need to be lock wired.

Lock wire screws after mounting flow divider to bracket.



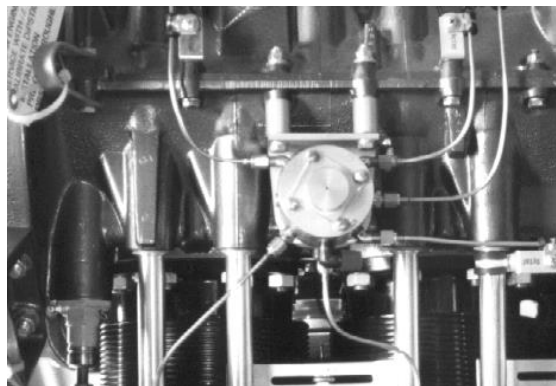
Standard Lycoming 'L' shaped brackets can also be used to mount the flow divider. This provides a center mount on the engine. Notice the fuel flow gauge line plumbed into one of the nozzle lines.

#3 restricted fitting for fuel flow gauge. Old flow divider design shown. New flow divider design has "GAGE" port to connect gage fitting directly to flow divider body without restrictor in fitting.



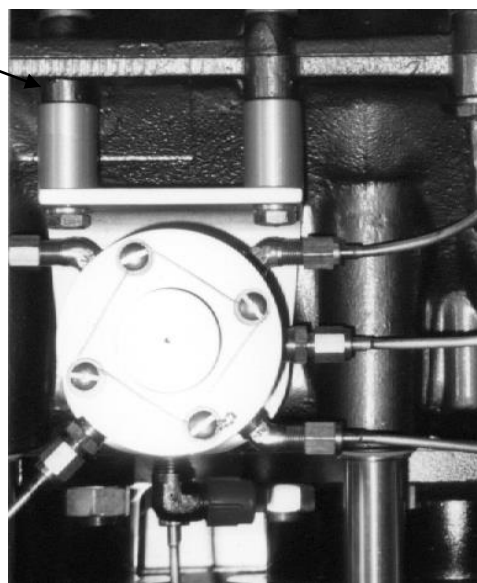
APPENDIX D (Continued)

Side mount flow divider installation on Lycoming 540. Mount Airflow Bracket P/L 2090148 using mount kit P/N LFDHDKT between cylinders #3 and #5.

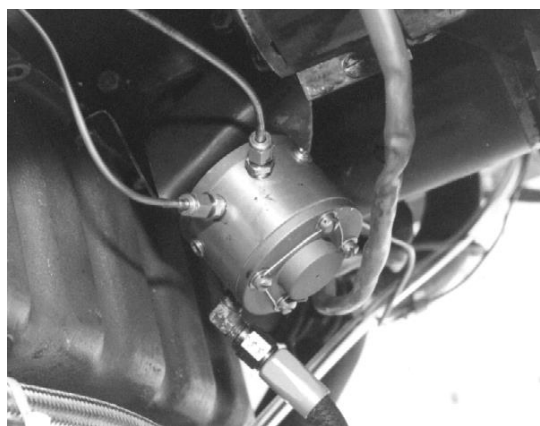


Additional flow divider bracket spacer

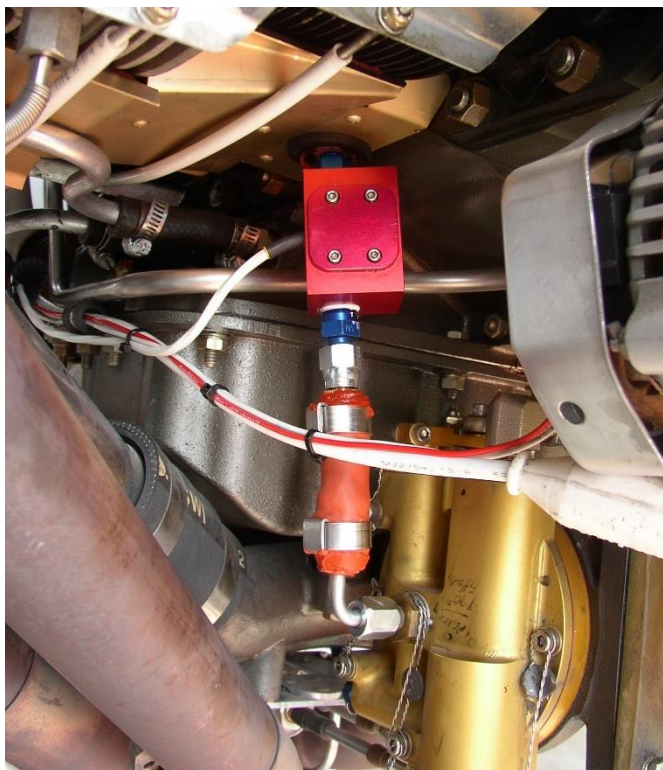
Install the 45-degree nozzle line fittings and slide bracket mounting bolts through the bracket. Note: omit washers under bolt head for clearance. Then mount the flow divider to the bracket. Don't forget to lock wire the four 10-24 mounting screws on the bottom side of the bracket. Some Lycoming crankcases (narrow deck Lycomings) may require additional spacers for clearance of the flow divider bracket.



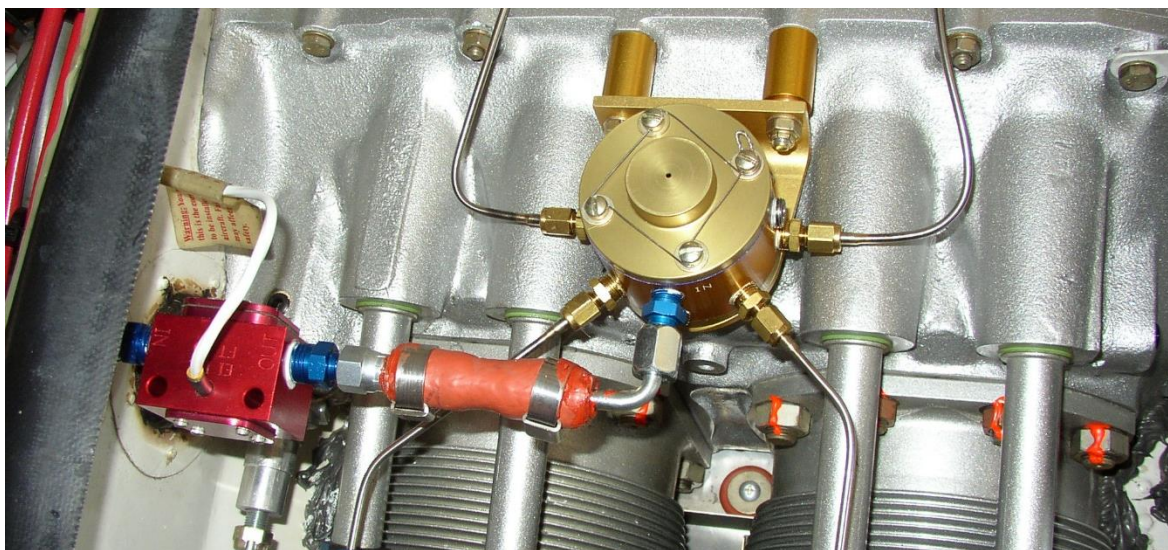
For updraft cooled engines requiring a flow divider, the flow divider can be mounted off a bracket, which is mounted to the sump. The flow divider can be mounted in any position.



APPENDIX D (Continued)



On this FM-150 installation the fuel flow meter is mounted between the fuel control and flow divider. A short hose with a full flow 90 connects to the inlet of the flow meter from the metered fuel outlet of the fuel control. Straight fittings are installed in the flow meter inlet and outlet (in this case AN816-4-4D). A grommet supports the hose as it passes through the lower inner cylinder baffle. Note that the hose supports the flow meter. It is not attached to the engine. This keeps vibration inputs to the flow meter to a minimum. Also of importance is the metered fuel hose is made a short as possible. This helps with hot re-starts. After leak check the flow meter will be wrapped in fire sleeve to protect it from engine heat.



In this case the shortest route for the metered hose is routed from the fuel control was behind the accessory section. To keep the flow meter on the cold side of the engine the metered hose passes through a grommet in rear baffling. The flow meter is then attached with a short hose connecting the flow meter outlet to the flow divider inlet. Again the hose supports the flow meter. On this installation the flow meter is left exposed so that cooling air in flight keeps the component cool.

Manifold systems come complete with all components mounted. The flow divider is typically mounted off the plenum. This keeps the flow divider somewhat insulated from engine heat.

