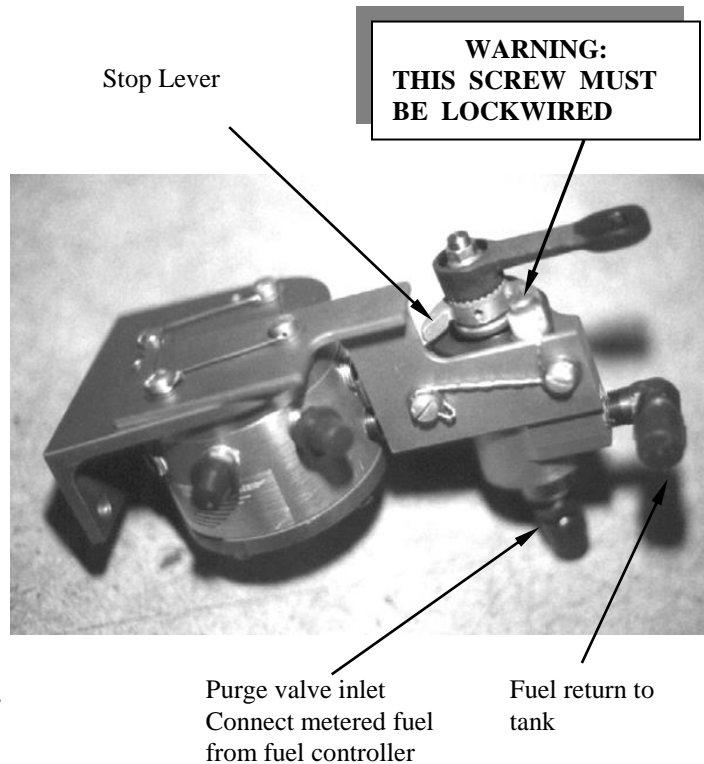


PURGE VALVE INSTALLATION

The following shows possible purge valve installations. The important thing to consider in the installation is to keep the connection between the purge valve and the flow divider or distribution block as short as possible. The purpose is to purge as much of the metered fuel in the system as possible. Also a fuel return to a fuel tank is necessary to accomplish the purge operation. Returning the fuel to the fuel pump inlet will do nothing but circulate the hot fuel and vapor through the system. This will accomplish nothing. Also capping the return line and using the purge valve, as a shut off valve will not allow correct operation of the valve.

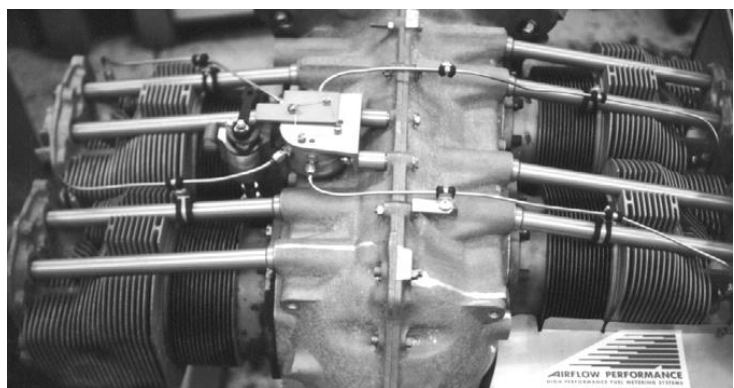
Here the purge valve is connected directly to the flow divider.

Notice how the purge valve stop and two mounting screws are lock wired together. If removal of the valve is necessary, make sure to re lock wire the purge valve stop screw. Failure to do so will result in sudden stoppage of the engine if the screw backs out.



The stop lever is marked "R" and "ICO". When "R" is against the plastic stop the valve is in the run position. Likewise when "ICO" is against the plastic stop, the valve is in the purge or bypass return position. There is some valve 'dead band' that means that the valve will not start bypassing as soon as the lever is moved from the "R" position

Purge valve / flow divider assembly mounted to Lycoming engine. The purge valve inlet is between cylinders 1 and 3.



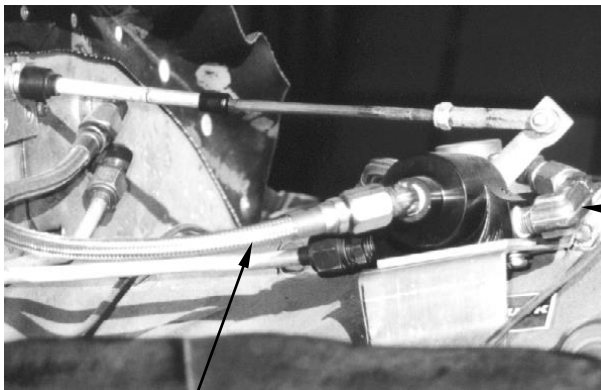
APPENDIX I (Continued)

Purge Valve installation on a Lycoming engine. The purge return is not yet hooked up in this photo. The purge return is typically -4, but a line as small as 1/8" could be used as approximately only 4 to 6 GPH is flowing through the valve during the purge operation.



Purge return

Purge inlet

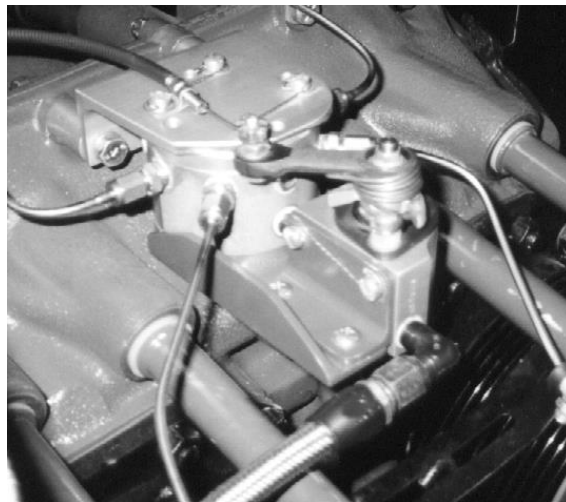


Purge valve inlet.
Metered fuel hose from
fuel controller

This is a remote mounted purge valve. Note the short -4 hose from the purge valve outlet to the flow divider.

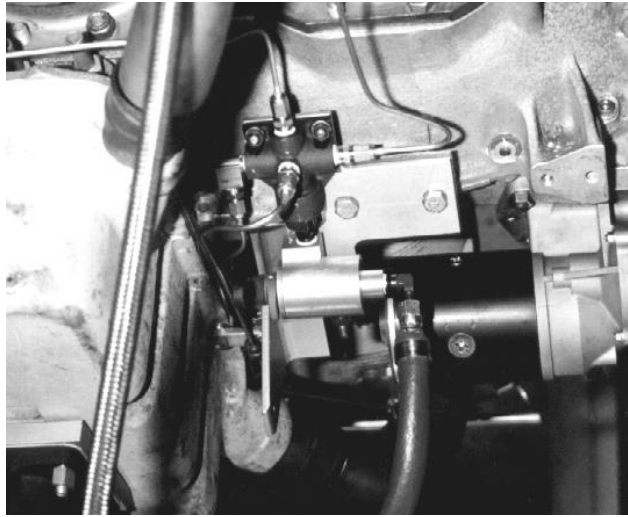
Purge valve outlet to flow
divider

A modification of the purge valve bracket. A return spring has been installed to return the valve to the "R" position in the unlikely event that the cable would fail.

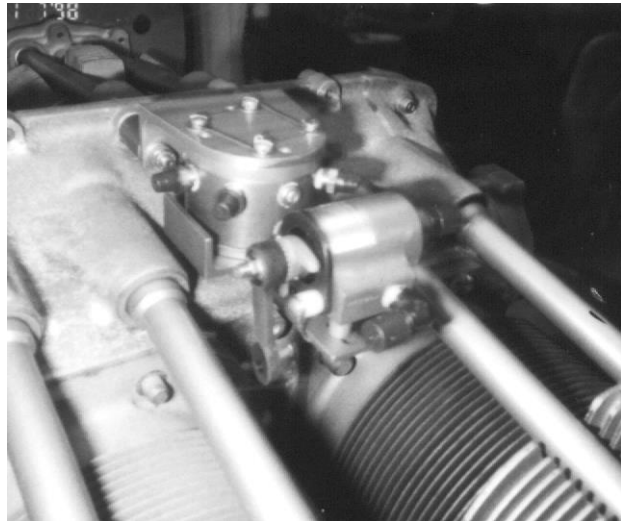


APPENDIX I (Continued)

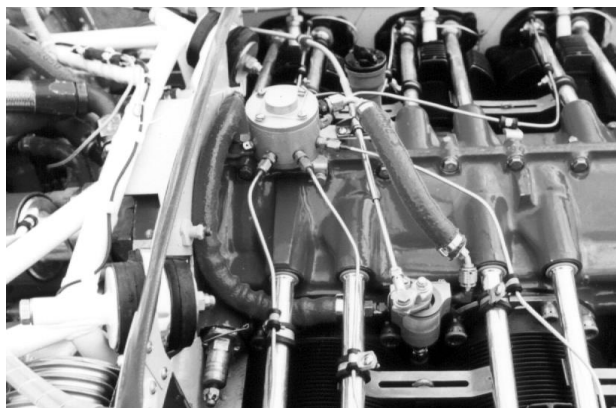
Installation of the purge valve mounted to a distribution block. This is a typical installation for a Long Ez or Cozy, or where the engine is up draft cooled.



For installations where a pressure cowl is used or the cowling is tight to the engine, a horizontal mount purge valve can be used. The actuating lever is mounted down. The metered fuel hose is routed around the front of cylinder #1 on this four cylinder Lycoming. This is a typical installation on RV-4's and Lancair's.

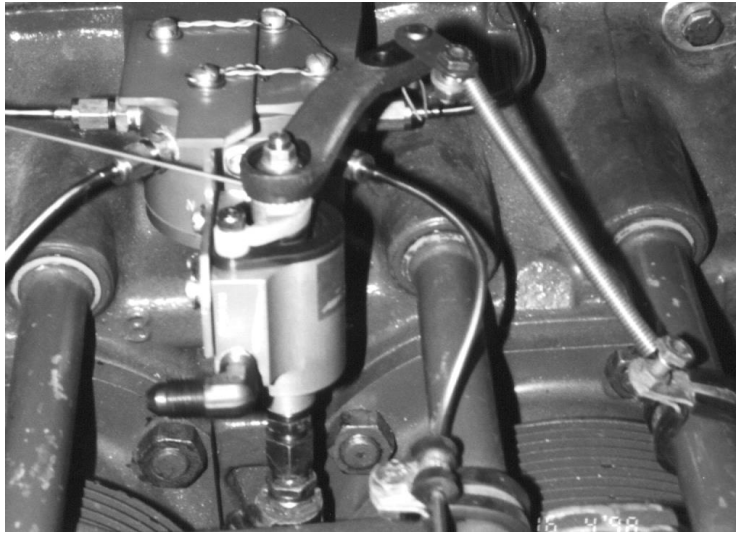


A remote purge valve installation on this Lycoming 540. A short fire sleeved metered fuel hose connects the purge valve outlet to the flow divider inlet.

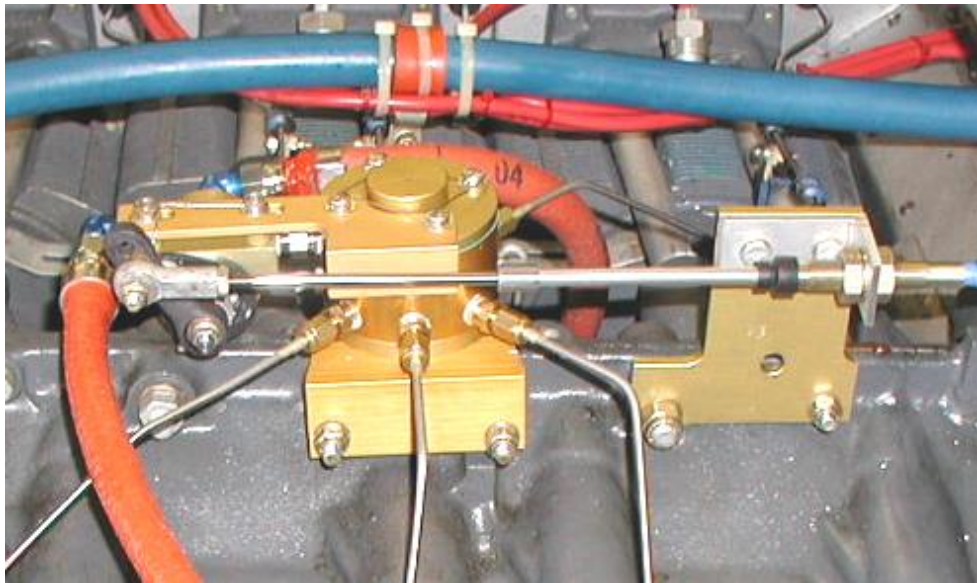


APPENDIX I (Continued)

A number of different levers are available to fit different clearance requirements. Shown here is a standard throttle lever (P/N 2090118) installed. An offset lever with 1 1/2" offset (P/N 2090156) and a reverse offset lever with 1/2" reverse offset (P/N 2090155) are available from Airflow Performance. The purge valve comes standard with a straight (P/N 2090083) lever.

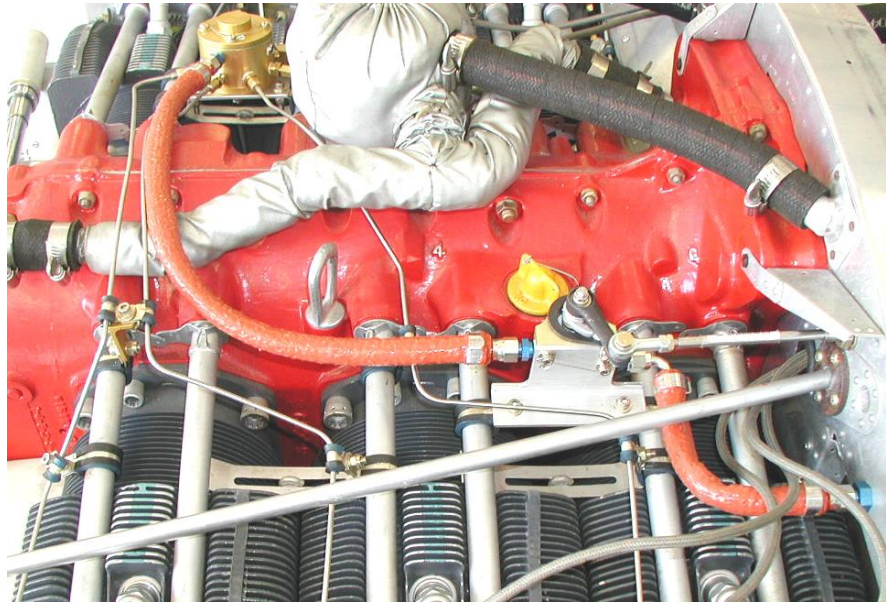


There are many installation possibilities for the purge valve /flow divider assembly. Depending on the application, purge valve rotation can be CW or CCW to run the position.

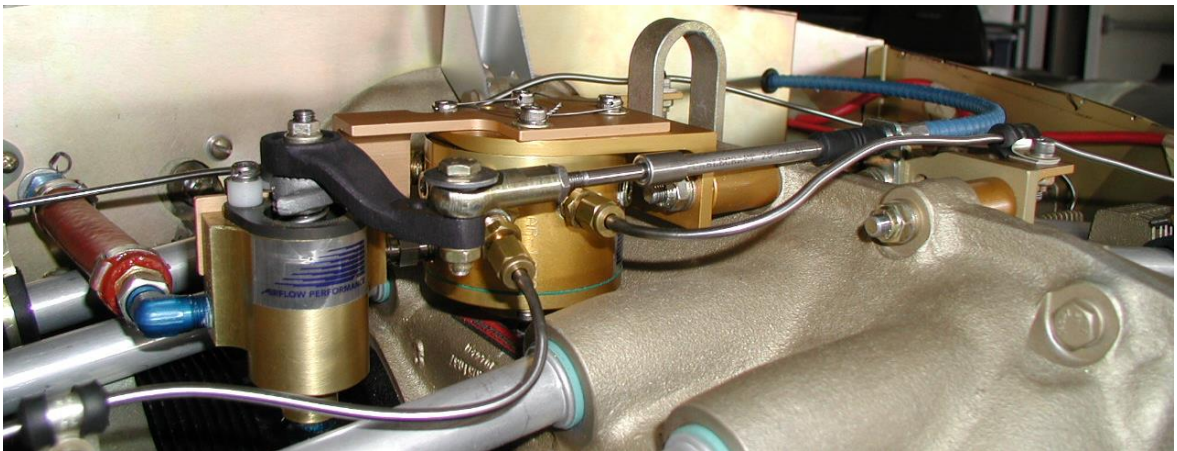


APPENDIX I (Continued)

This installation has the flow divider and purge valve mounted to brackets that are supported by the push rod tubes with Adel clamps.

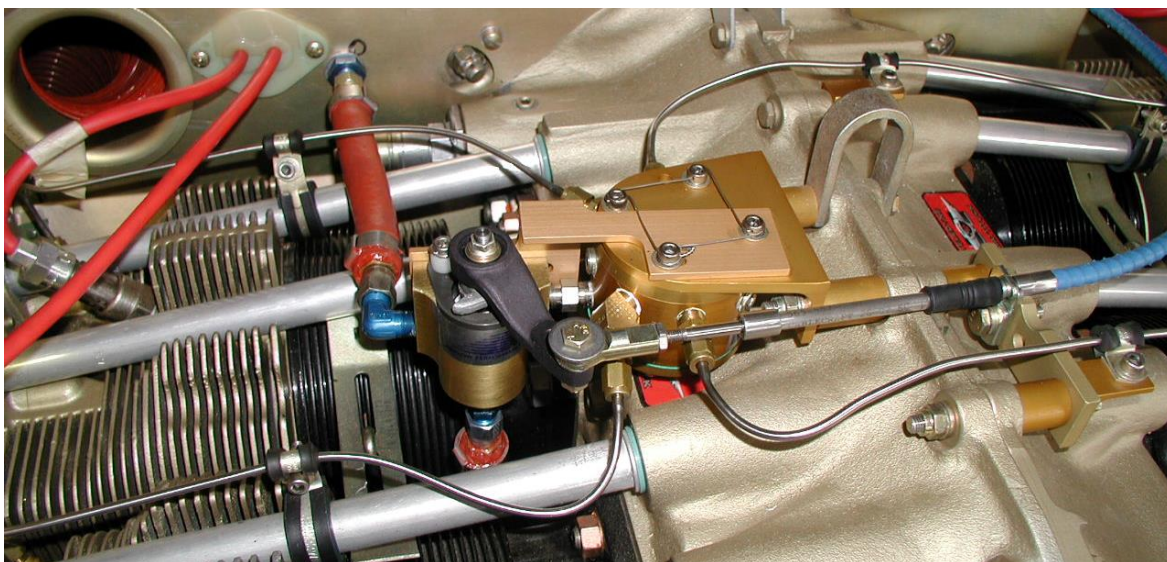


Installation in a Lancair 320. The horizontal mount CCW purge valve is used in this installation



A reverse offset lever (P/N 2090155) allows more clearance to the cowl.

APPENDIX I (Continued)

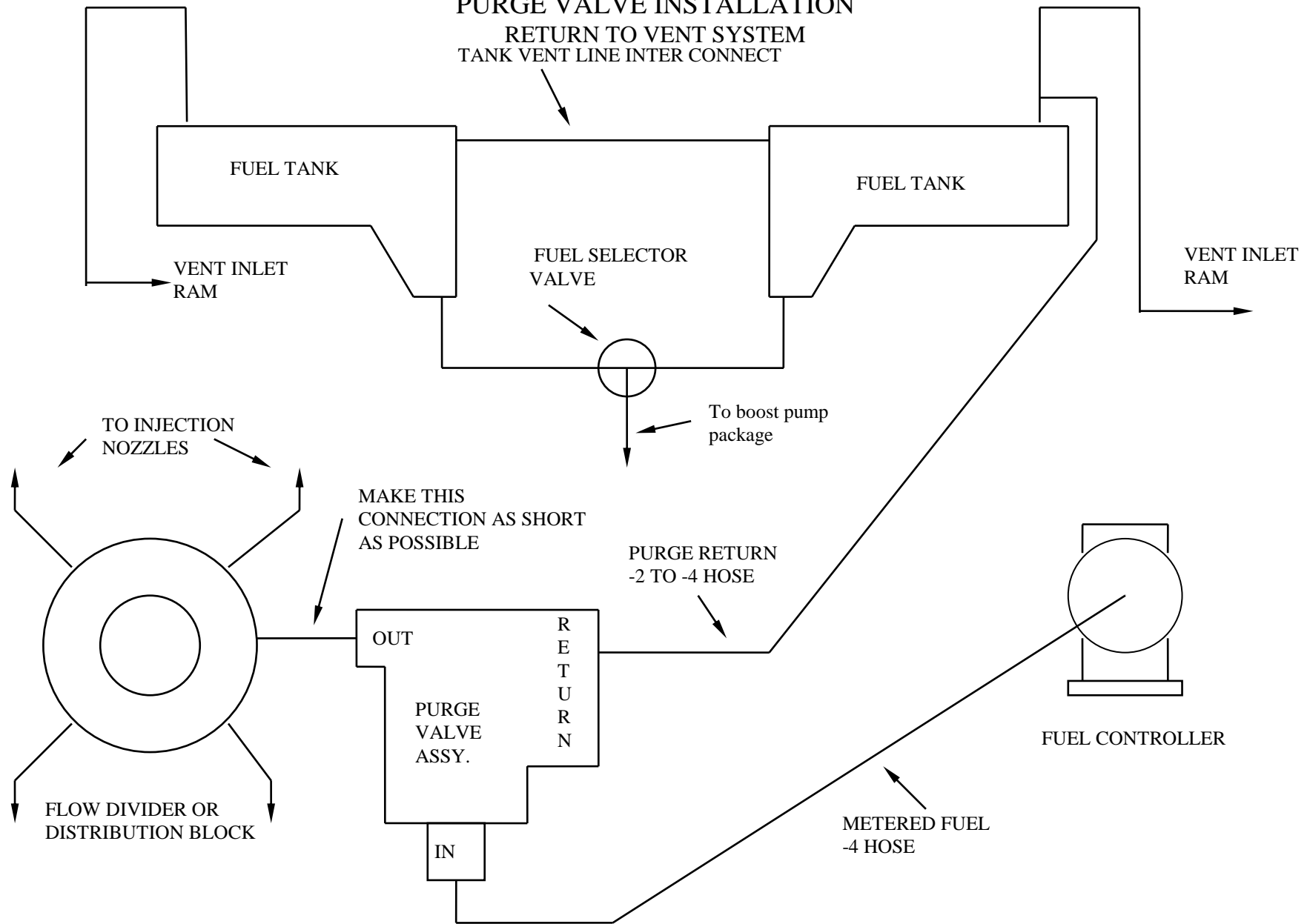


Purge Valve cable is supported by a bracket, which is spaced off crank case center mount bolts.

APPENDIX I (Continued)

PURGE VALVE INSTALLATION

RETURN TO VENT SYSTEM
TANK VENT LINE INTER CONNECT



APPENDIX I (Continued) RETURN TO FUEL TANK

