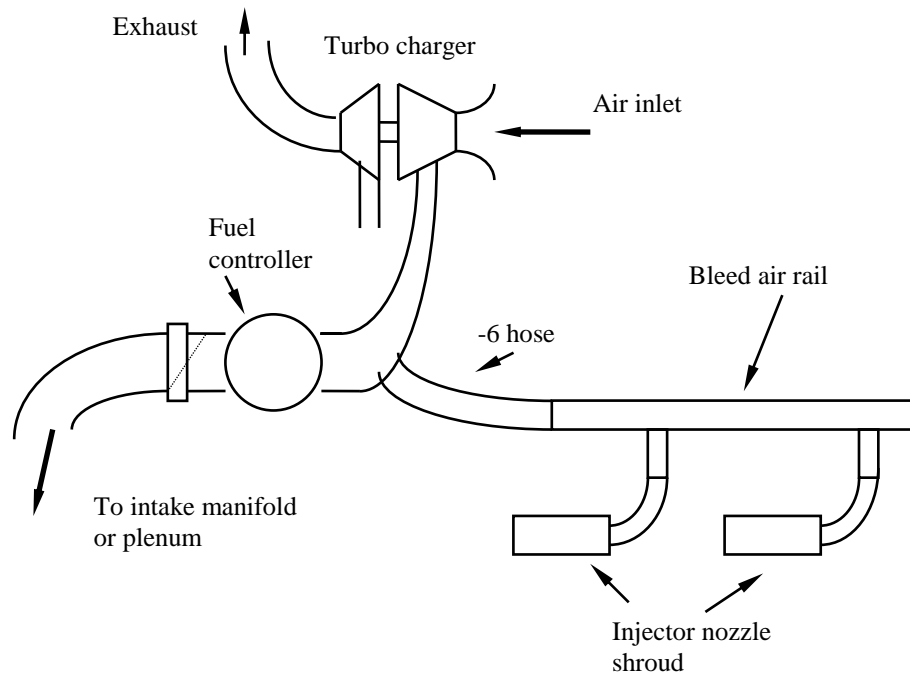
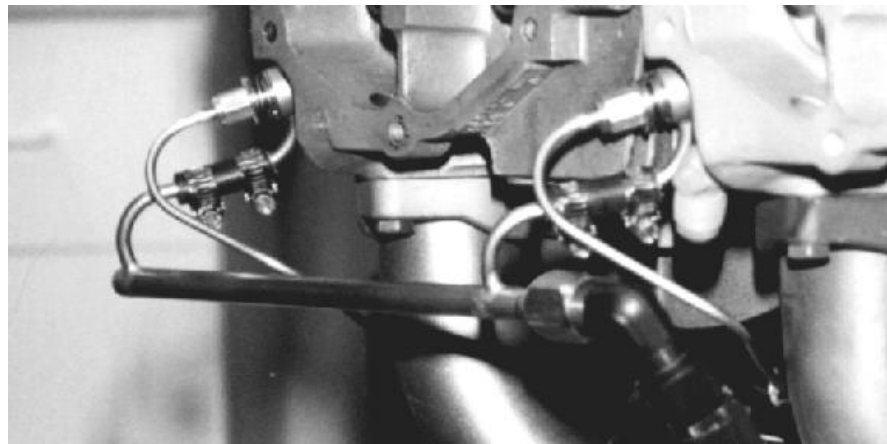


BLEED AIR NOZZLE RAIL

For turbo charged applications and applications where the nozzle discharge is higher than the vent on the nozzle body (primer port installation), a bleed air rail is used. The schematic shown below shows the hook up for a 'blow through' system. This can only be used if the manifold pressure will not exceed 31" Hg MAP. Typically this is called turbo normalizing. The bleed air nozzle rail connects directly to the turbo charger outlet. Short pieces of 3/16" hose connect the bleed air rail stubs to the nozzle shroud. Clamps are used to secure the hose connections.



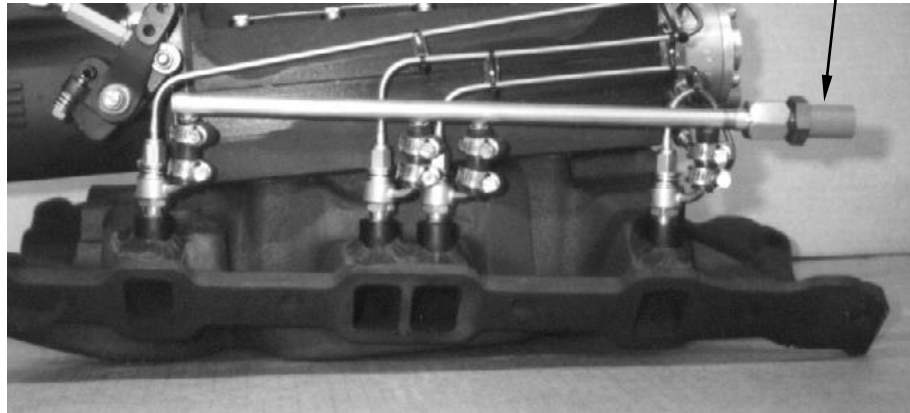
The bleed air rail assy. P/N 2090137 is shown here on a 360 Lycoming. The installation here is on a naturally aspirated engine and the bleed air rail serves to collect any fuel that may leak out on the injector nozzles that are installed in the primer ports. Notice the connection of the rail to the nozzle shroud tubes with the hose and clamps.



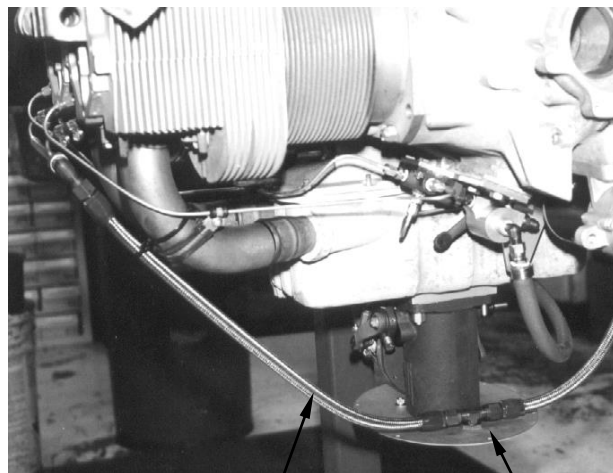
APPENDIX F (Continued)

Bleed air rail on this manifold system is for a turbo normalized (in this case a supercharger is used) induction system. The end of the bleed air rail will be connected to the supercharger discharge.

A -6 hose will be connected to the supercharger outlet from each rail (one per side)



On installations where bleed air rails are used on naturally aspirated engines, the rails can be vented via -6 hoses into the air cleaner box. This allows filtered air to be drawn into the nozzles.



Bleed air rail
hose

Filter box mounting
plate.

APPENDIX F (Continued)



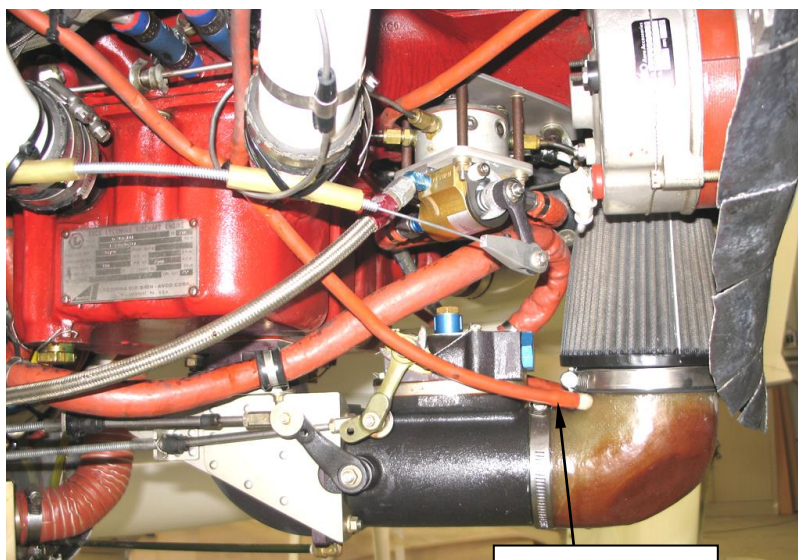
Bleed Air Rail Assembly

#6 Vent hose

Naturally aspirated GO-480 with injector nozzles installed in the primer ports. The bleed air rail is vented overboard through a #6 hose.

Installation in a Lycoming powered 360 Long EZ.

The hoses from the bleed air rails are vented to the air inlet after the air cleaner. This admits filtered to the bleed air rail.

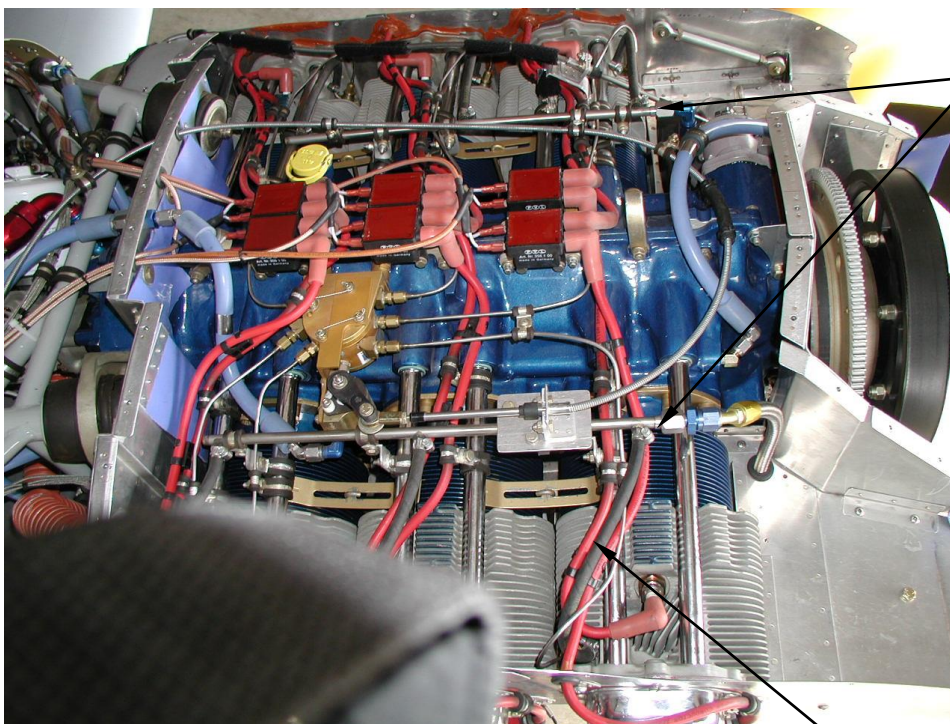


Bleed Air Hoses

APPENDIX F (Continued)



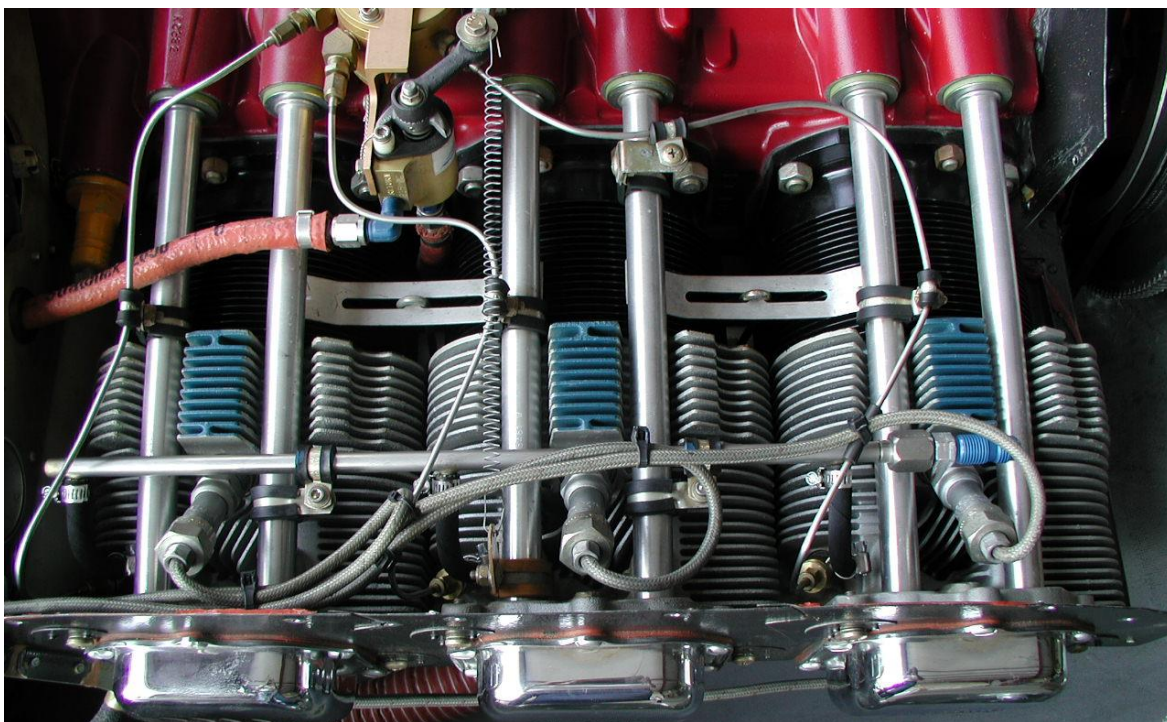
Long EZ Bleed Air Rail installation.



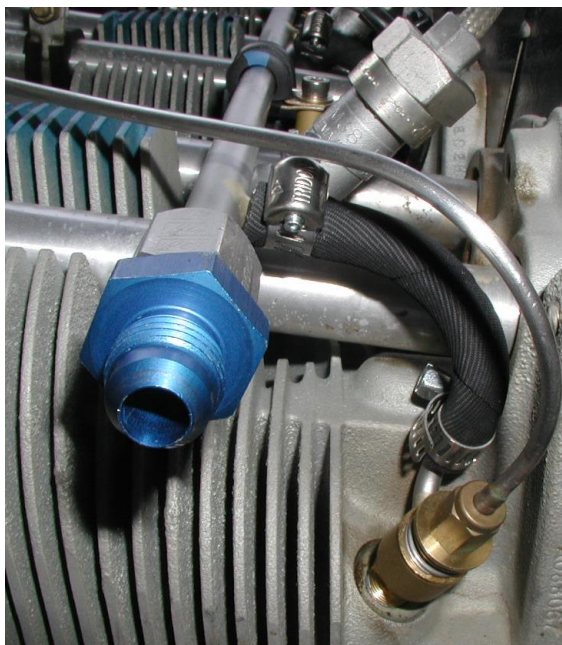
Supercharged 540. Bleed Air Rails are inboard on the cylinders.

Hoses connecting to nozzle shrouds

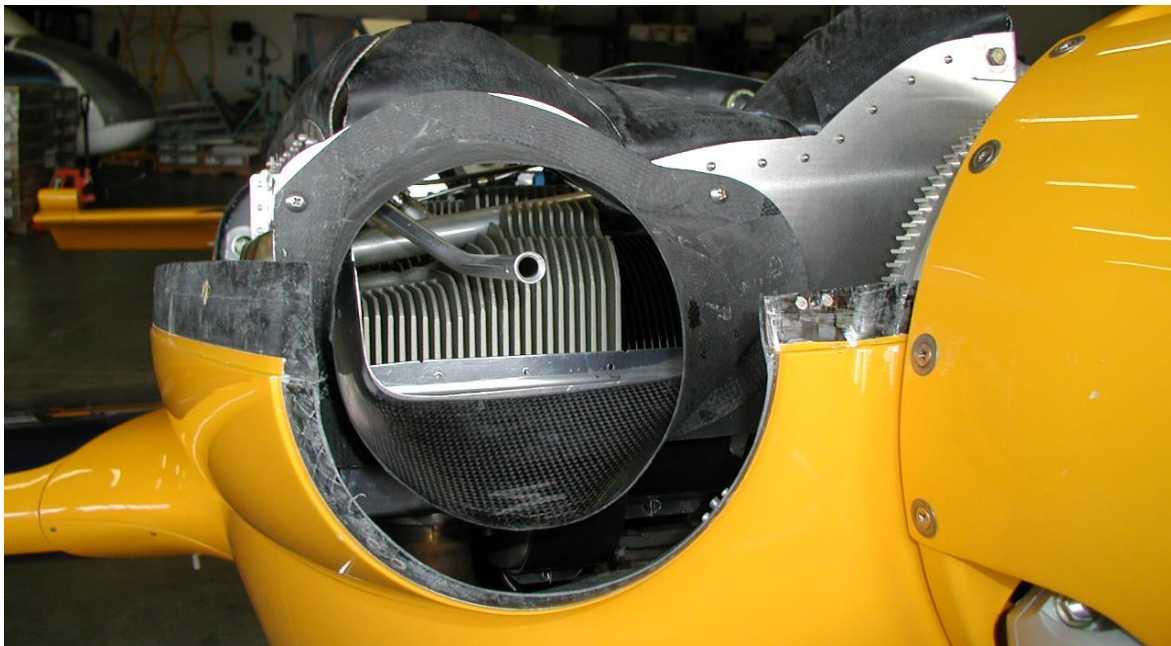
APPENDIX F (Continued)



RV-10 with pressure cowl Bleed Air Rail installation.



APPENDIX F (Continued)



Installations having tight pressure cowls using naturally aspirated engines may require that the injector nozzles be vented to a higher pressure. In these installations the engine has turbo injector nozzles installed and the bleed air rail is vented to ram pressure through the front of the cowl opening.