

**SERVICE
INSTRUCTION**

DATE: December 19, 2000

Service Instruction No. 1502A
(Supersedes Service Instruction No. 1502)
Engineering Aspects are
FAA Approved

SUBJECT: Installation of Inverted Flow Divider

MODELS AFFECTED: All Textron Lycoming IO-360-L2A aircraft engines.

TIME OF COMPLIANCE: Whenever the engine has vapor related problems, or at owner's discretion.

To reduce the possibility of vapor related problems in aircraft employing IO-360-L2A model engines, the flow divider should be modified into an inverted flow divider.

The modification of the flow divider is accomplished as follows using Kit P/N 05K23084:

1. Remove top cowling.
2. Remove all fuel lines and the hose connected to the flow divider.
3. Remove the bolts, washers, two spacers and two brackets which secure the flow divider to the engine.
4. Remove the mounting brackets from the flow divider.
5. Modify the flow divider assembly as follows making sure that no foreign material is introduced into the part and the diaphragm is not damaged:

NOTE

During the modification procedure, the fuel inlet elbow fitting faces the front.

- a. Remove the lockwire, screws and washers from the top of the flow divider assembly. (Figure 1.)
- b. With the cap vent pointing left, slightly lift the manifold cap, making sure that it is separated from the diaphragm. Then carefully rotate it until cap vent points right. (180° from original position.) (Figure 1.) Be sure that the spring held in place by the cap is not dislodged.
- c. Reinstall the flat washers and screws. (Torque the four screws to 20-30 in.lbs. Retighten after 20 minutes.) Lockwire the screws together as before.
- d. To allow removal and installation of the 90° fuel inlet elbow, first remove the fuel gage fitting close to the elbow on the forward side of the flow divider. (Figure 2.)
- e. Holding the flow divider with the manifold cap up, remove the 90° elbow P/N MS20822-4 and install the new 90° elbow with the elbow positioned below the gage fitting port pointed left and tilted approximately 20° below horizontal. Reinstall gage nipple. The angle allows clearance for hose connections. Before reinstalling the fittings, apply Loctite Hydraulic Sealant or an equivalent fuel soluble sealant sparingly. Do not apply sealant to the first two lead threads. (Figure 2.)
- f. Vibropeen "INV" following the P/N 63B22623 which is located on the outside diameter of the flow divider assembly base.

6. Install the new mounting brackets P/N 07A22995 and P/N 07A22996 on the flow divider assembly using the new screws and lockwashers P/N STD-82 and P/N STD-251 respectively. Torque to 49 in.-lbs. With the flow divider assembly positioned with the cap down and the 90° elbow toward the front of the engine, P/N 07A22995 should be installed on the right and P/N 07A22996 on the left. (Figure 3.) With new brackets installed, lockwire screws. (Figure 4.)
7. Install flow divider brackets on the engine using the bolts, washer, and spacers that were removed initially and new STD-160 washers. Torque to 96 in.-lbs. (Figure 3.)
8. Reconnect all hoses.
9. Check the idle speed and mixture and reset to specified values if necessary.
10. Enter compliance in the airframe and/or maintenance records as required.

Kit P/N 05K23084 contains:

1	07A22995	Bracket
1	07A22996	Bracket
4	STD-82	Screw
4	STD-251	Washer
1	MS20822-4	Elbow
2	STD-160	Washer

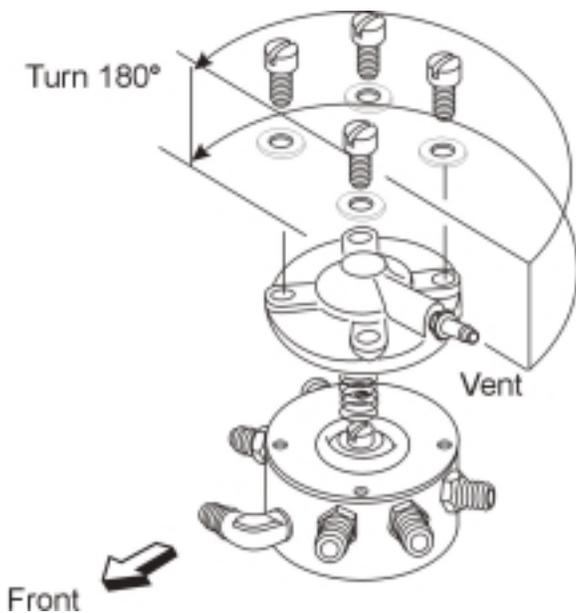


Figure 1.

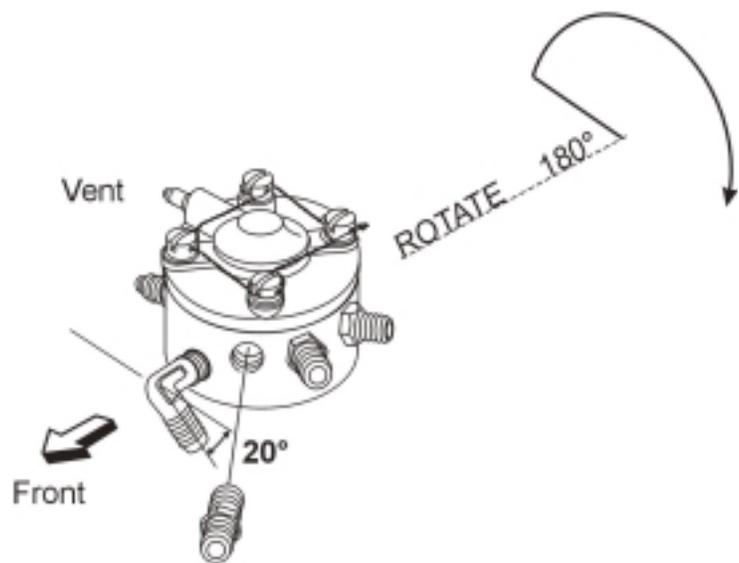


Figure 2.

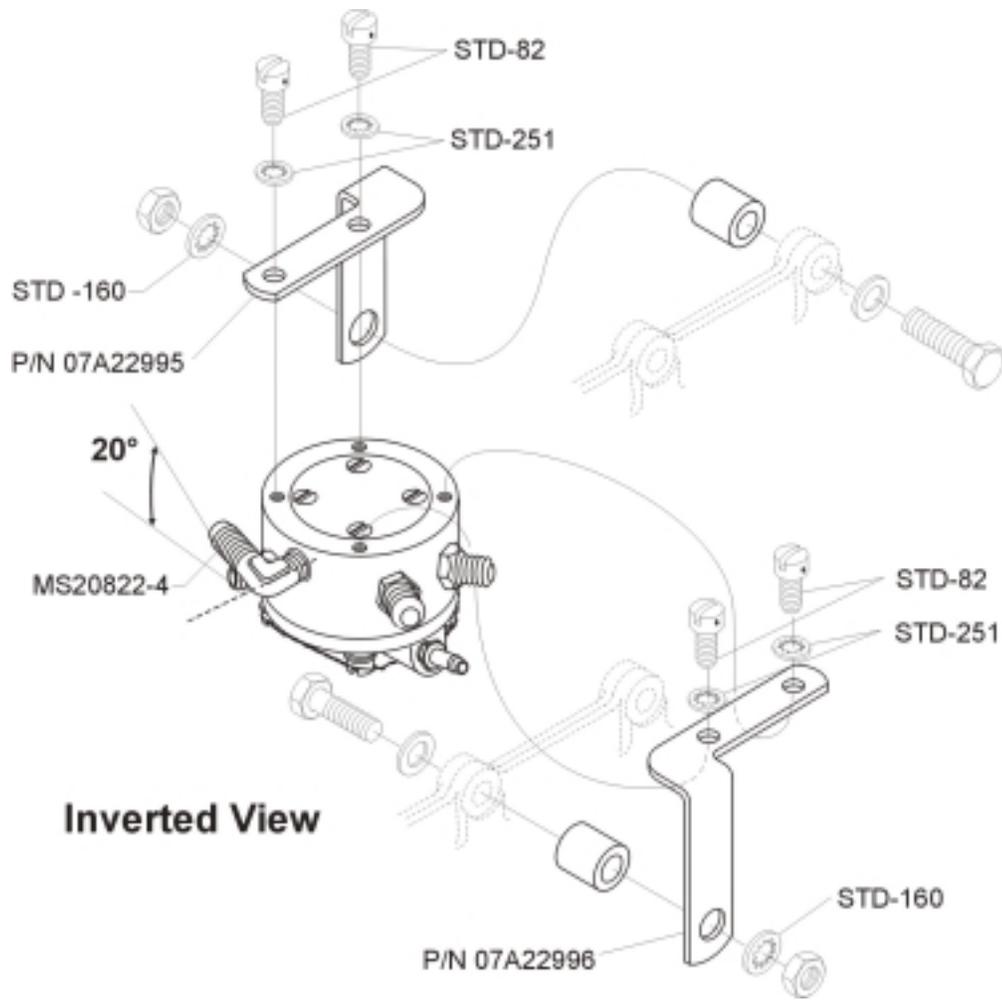


Figure 3.

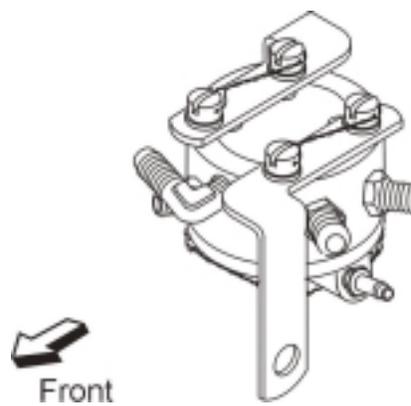


Figure 4.

NOTE: Revision "A" to this Service Instruction changes the torque requirements in step 7.