Single Engine

Service Bulletin

January 22, 2001  SB01-71-01

TITLE
ENGINE FUEL FLOW DIVIDER INSTALLATION MODIFICATION

EFFECTIVITY

<table>
<thead>
<tr>
<th>Model</th>
<th>Serial Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>172R</td>
<td>17280001 thru 17280990</td>
</tr>
<tr>
<td>172S</td>
<td>172S8001 thru 172S8720</td>
</tr>
</tbody>
</table>

REASON
To transmit Textron/Lycoming Service Instruction No.1502; Installation of Inverted Flow Divider.

DESCRIPTION
To aid in reducing possible fuel vapor during ground operations, the engine fuel flow divider installation may be modified by inverting the flow divider.

COMPLIANCE
Optional, may be accomplished whenever engine fuel vapor conditions are experienced during ground operations, or sooner if desired.

APPROVAL
Refer to Textron/Lycoming Service Instruction No.1502 (or latest revision)

MANPOWER
4.4 man-hours to modify the installation of the engine fuel flow divider.

REFERENCES
Textron/Lycoming Service Instruction No.1502 (or latest revision)

NOTE: Ensure all publications used are complete and current.

NOTE: This information shall be considered an amendment to the Cessna Manufacturer's Service/Maintenance Manual and should be accomplished within the specified time requirement.
OTHER PUBLICATIONS AFFECTED

Model 172R And Model 172S Illustrated Parts Catalog

NOTE: Ensure all publications used are complete and current.

MATERIAL PRICE AND AVAILABILITY

The following are available from Cessna Parts Distribution through an appropriate Cessna Service Station for the suggested list price shown.

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Qty/Airplane</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>05K23084</td>
<td>Kit, Inverted Flow</td>
<td>1</td>
<td>$ 491.63 (LM) ea.</td>
</tr>
<tr>
<td></td>
<td>Divider</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0556033-1</td>
<td>Fuel Line Assembly</td>
<td>1</td>
<td>$ 190.00 (S) ea.</td>
</tr>
<tr>
<td>MS21919WGDG6</td>
<td>Clamp</td>
<td>2</td>
<td>$ 0.72 (PS) ea.</td>
</tr>
<tr>
<td>MS21919WGDG9</td>
<td>Clamp</td>
<td>1</td>
<td>$ 1.03 (PS) ea.</td>
</tr>
<tr>
<td>MS21042L3</td>
<td>Locknut</td>
<td>1</td>
<td>$ 0.17 (PS) ea.</td>
</tr>
<tr>
<td>MS35207-263</td>
<td>Screw</td>
<td>1</td>
<td>$ 0.10 (PS) ea.</td>
</tr>
<tr>
<td>NAS1149D0332K</td>
<td>Washer</td>
<td>2</td>
<td>$ 0.07 (PS) ea.</td>
</tr>
<tr>
<td>S2209-1</td>
<td>Tie Strap</td>
<td>1</td>
<td>$ 3.00 (VR) pkg.</td>
</tr>
<tr>
<td>S2209-5</td>
<td>Tie Strap</td>
<td>1</td>
<td>$ 4.00 (VR) pkg.</td>
</tr>
</tbody>
</table>

ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE

CREDIT INFORMATION

Applicable parts credit and a labor allowance credit of 4.4 man-hours per airplane will be provided to modify the installation of the engine fuel flow divider as directed by Textron/Lycoming Service Instruction No.1502 (or latest revision).

To receive credit, the work must be completed and a Quick Claim submitted by a Cessna Single Engine Service Station before the dates shown below.

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Domestic</td>
<td></td>
<td>January 22, 2002</td>
</tr>
<tr>
<td>International</td>
<td></td>
<td>January 22, 2002</td>
</tr>
</tbody>
</table>
ACCOMPLISHMENT INSTRUCTIONS

Weight And Balance Information

MODEL ......................... 172R/172S
WEIGHT CHANGE ................. Negligible

The following parts will be required to complete this service bulletin:

<table>
<thead>
<tr>
<th>NEW P/N</th>
<th>QUANTITY</th>
<th>DESCRIPTION</th>
<th>OLD P/N</th>
<th>DISPOSITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>0556033-1</td>
<td>1</td>
<td>Fuel Line Assembly</td>
<td>0500118-169</td>
<td>Discard</td>
</tr>
<tr>
<td>MS21919WDG6</td>
<td>1</td>
<td>Clamp</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>MS21919WDG9</td>
<td>1</td>
<td>Clamp</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>MS21042L3</td>
<td>1</td>
<td>Locknut</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>MS35207-263</td>
<td>1</td>
<td>Screw</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>NAS1149D0332K</td>
<td>2</td>
<td>Washer</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>S2209-1</td>
<td>1</td>
<td>Nylon Tie</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>S2209-5</td>
<td>1</td>
<td>Nylon Tie</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

Instructions

1. Electrically ground the airplane and turn all switches to the "OFF" position.


3. Disconnect electrical power from the airplane by disconnecting the battery and external power. Attach maintenance warning tags to the battery and external power receptacle stating: DO NOT CONNECT ELECTRICAL POWER - MAINTENANCE IN PROGRESS.

4. (Refer to Figure 1, Sheet 1 and Sheet 2.) Modify the engine fuel flow divider as directed by Textron/Lycoming Service Instruction No.1502 (or latest revision).

**NOTE:** While accomplishing Step 8. of the Lycoming Service Instruction, remove and discard the existing 0500118-169 Fuel Line Assembly and install the new 0556033-1 Fuel Line Assembly.

**NOTE:** Proceed to Step 4.A. if hose assembly does not provide enough length for connection to the fuel flow divider.

A. (Refer to Figure 2, Sheet 1 and Sheet 2.) Re-position hose assembly over intake manifold and up to fuel flow divider.

B. Secure line with one (1) MS21919WDG6 Clamp, one (1) MS2191WDG9 Clamp, two (2) NAS1149D0332K Washers, one (1) MS35207-263 Screw and one (1) MS21042L3 Locknut to the throttle support.

**NOTE:** Ensure hose assembly is clear of the throttle control assembly when securing line.

C. (Refer to Figure 2, Sheet 1.) Secure hose assembly to intake manifold with one (1) each S2209-5 and S2209-1 Nylon Tie.

5. Check and adjust the idle speed and mixture control as required. (Refer to the Model 172 Series 1996 And On Maintenance Manual, Chapter 73, Idle and Mixture Adjustment.)


7. Remove maintenance warning tags and reconnect the airplane battery.

SB01-71-01
January 22, 2001
8. Make appropriate entries in the engine and airframe logbooks stating compliance with Service Bulletin SB01-71-01/Textron/Lycoming Service Instruction No.1502 (or latest revision).
Figure 1. Fuel Flow Divider (Sheet 1)
Figure 1. Fuel Flow Divider (Sheet 2)
DETAIL A

VIEW LOOKING INBOARD AT RIGHT SIDE

Figure 2. Fuel Flow Divider Hose Routing (Sheet 1)
Figure 2. Fuel Flow Divider Hose Routing (Sheet 2)
OWNER NOTIFICATION

On February 5, 2001 the following Owner Advisory message will be sent to applicable owners of record in SB01-71-01A.

Dear Cessna Owner:

This Owner Advisory is to inform you that Textron/Lycoming has issued Service Instruction No.1502 which provides a modification for the installation of the engine fuel flow divider.

To aid in reducing possible fuel vapor during ground operations, the engine fuel flow divider installation may be modified by inverting the flow divider.

Compliance is optional, may be accomplished whenever engine fuel vapor conditions are experienced during ground operations, or sooner if desired.

The information contained in the referenced Cessna Service Bulletin shall be considered an amendment to the Cessna Manufacturer's Service/Maintenance Manual.

Applicable parts credit and a labor allowance credit of 4.4 man-hours per airplane will be provided to modify the installation of the engine fuel flow divider as directed by Textron/Lycoming Service Instruction No.1502 (or latest revision).

To receive credit, the work must be completed and a Quick Claim submitted by a Cessna Single Engine Service Station before the dates shown below.

Domestic ...................... January 22, 2002
International .................. January 22, 2002

Please contact a Cessna Single Engine Service Station for detailed information and arrange to have Cessna Service Bulletin SB01-71-01/Textron/Lycoming Service Instruction No.1502 (or latest revision) accomplished on your airplane.
DATE: December 19, 2000

SERVICE INSTRUCTION

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.-lbf. 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.-lbf. (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:

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>07A22995</td>
<td>Bracket</td>
</tr>
<tr>
<td>1</td>
<td>07A22996</td>
<td>Bracket</td>
</tr>
<tr>
<td>4</td>
<td>STD-82</td>
<td>Screw</td>
</tr>
<tr>
<td>4</td>
<td>STD-251</td>
<td>Washer</td>
</tr>
<tr>
<td>1</td>
<td>MS20822-4</td>
<td>Elbow</td>
</tr>
<tr>
<td>2</td>
<td>STD-160</td>
<td>Washer</td>
</tr>
</tbody>
</table>

Figure 1.

Figure 2.
Figure 3.

Inverted View

Figure 4.

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