Forced Aeromotive Technologies
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SERVICE BULLETIN 0511-002
11-25-2005, Revision IR

BOOST CUTOFF SHAFT BUSHINGS

Background:

Several instances of wear have been observed in the bushings on the boost cutoff valve shaft. The suspected cause of the wear is vibration. The wear causes the bushings to become oval where they contact the shaft. While the wear causes no operational difficulty, the condition must be addressed before the bushings wear through to the housing and damage results to the supercharger duct and/or the shaft.

Boost cutoff bushing inspection:

Within the next 10 hours:

1. Inspect the boost cutoff valve shaft for radial play and ensure the bushings are not warn out of round. The bushing on the back side can be checked with a mirror. There will always be some wear over time, however: if the bushing is worn more than half way to the outside edge of the bushing (figure 1), replace the bushing. Release the butterfly valve by removing the two screws that hold the valve to the shaft and remove the valve and shaft. Extract the bushing from the supercharger duct and replacing it with Cessna P/N 0532104. After pressing the new bushing in, cut it flush with the outer surface. Replace the shaft and valve using new MS24693S26 screws. Use blue threadlock on the screws and peen the exposed threads. (If the bushing is warn less than half way through, go to step 4).

   As an alternative, send the assembly to F.A.T. for repair.

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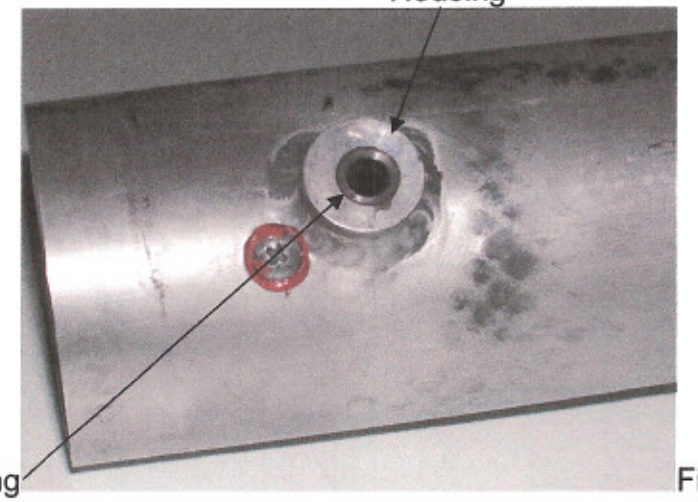

Figure 1

2. Reinstall the duct assembly. Slide the cable through the attachment bolt, P/N 05-16245, on the butterfly valve and secure the cable to the supercharger duct using MS21919 DG40 and AN742-D3 clamps (figure 2 and 4). Accurate cable adjustment is necessary for proper supercharger performance. To adjust the cable for proper operation, rotate the valve lever upward (the valve is now closing) aligning the marks on the valve shaft and the duct housing so that the mark on the lever is two marks width past the mark on the housing . (Figure 2). Tighten the clamps so that the valve lever will touch the cable housing and stop its upward movement at this point.

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Figure 2
CABLE HOUSING P/N 05-16245 attachment bolt CLOSED ALIGNMENT MARKS

3. After making sure that the Boost Cutoff control is in the full forward position, align the marks on the valve shaft and the shaft housing and tighten the attachment bolt on the cable. The valve lever will have moved downward and be approximately 45° to the supercharger duct. The butterfly valve will be in the full open position (figure 3).

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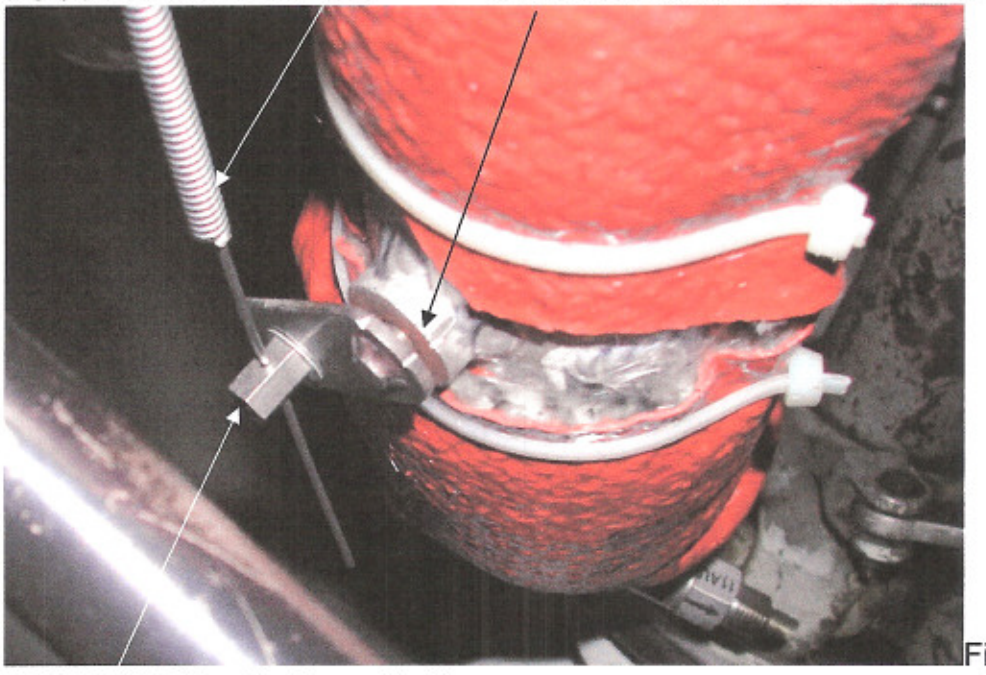

Figure 3

4. Install a second clamp assembly on the boost cable as close as possible to the boost cutoff valve (figure 4). The second clamp assembly is made from an AN742-D3 and an MS21919 DG40 clamp, the same as the existing cable clamp. Check for smooth operation of the boost cutoff cable.

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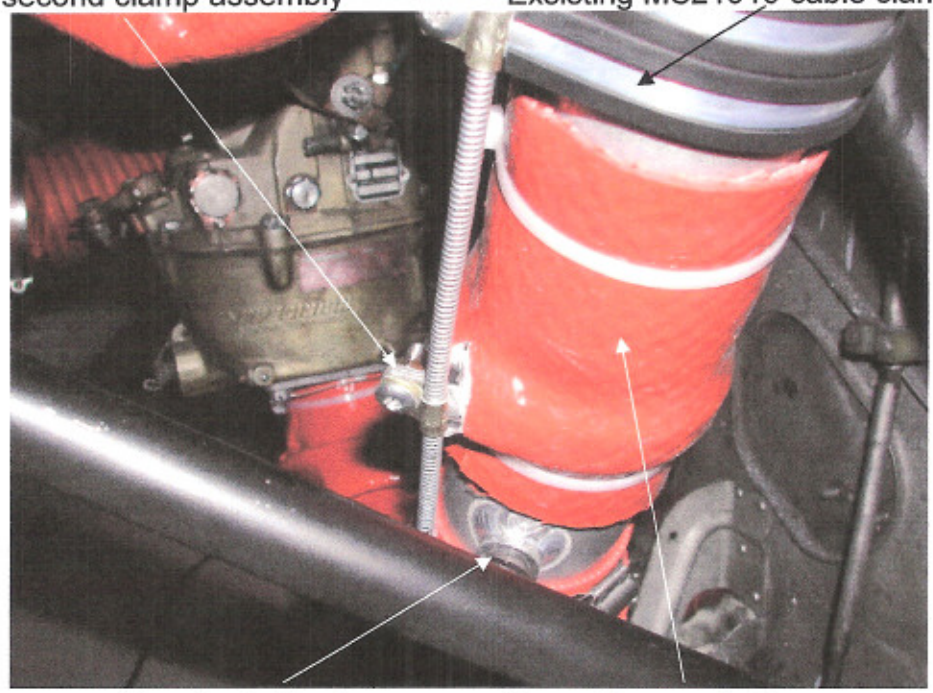

Figure 4

Every 100 hours and at annual:

Inspect the bushing for wear per this service bulletin and replace the bushing if necessary.

Failure to comply with this service bulletin may void the F.A.T. supercharger warranty.

Contact FAT for technical assistance.

END