

TELEDYNE CONTINENTAL[®] AIRCRAFT ENGINE
CRITICAL SERVICE BULLETIN
COMPLIANCE NECESSARY TO MAINTAIN SAFETY

Category 2
CSB07-2

**Technical Portions FAA
Approved**

SUBJECT: TURBOCHARGER WASTEGATE OIL INLET FITTING
INSPECTION and REPLACEMENT

PURPOSE: To provide instructions for the inspection of the turbocharger wastegate oil inlet fitting for possible chafing on the adjacent structure and to provide instructions for fitting replacement.

COMPLIANCE Prior to the next aircraft flight.

MODELS

AFFECTED: TSIO-360-RB; LTSIO-360-R: See Serial Number Listing

GENERAL

Teledyne Continental Motors (TCM) has received a report from the field of possible interference between the turbocharger wastegate oil inlet fitting and the adjacent airframe engine mount structure. Damage to the wastegate oil inlet fitting could lead to fitting fracture and subsequent loss of engine oil.

WARNING

Loss of engine oil could lead to internal engine damage, loss of engine power, engine failure, damage to the airframe, personal injury or death.

All new TSIO-360-RB engines S/N 322761 to S/N 322793 and new LTSIO-360-RB engines S/N 322516 to 322546 that were shipped from the Teledyne Continental Motors factory to Piper Aircraft Inc. for installation in new aircraft **must** be inspected **prior to further flight** in accordance with the instructions contained in this Critical Service Bulletin.

In addition: All new LTSIO-360-RB engines S/N 322526 to S/N 322555;

All rebuilt LTSIO-360-RB engines S/N 819525 to S/N 819533


All new TSIO-360-RB engines S/N 322777 to S/N 322802

All rebuilt TSIO-360-RB engines S/N 819275 to S/N 819282

that were sold through an authorized TCM distributor for aftermarket installation **must** be inspected **prior to further flight** in accordance with the instructions contained in this Critical Service Bulletin.

WARRANTY

1. TCM will reimburse the inspection portion of this bulletin for up to .5 hour labor per engine at the posted shop labor rate. Labor warranty may be filed through any TCM authorized distributor.
2. Parts, shipping and an additional 1.5 hours labor at the posted shop labor rate will be reimbursed under warranty for each engine requiring fitting replacement.


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INSPECTION PROCEDURES

1. Using the airframe manufacturer's maintenance instructions, open or disconnect each engine cowl flap to allow access to the wastegate actuator. (Reference Figure 1)
2. Inspect the oil inlet fitting of the wastegate actuator.
3. If the fitting is a one-piece 90° fitting as shown in Figure 2A, no further action is required. Reassemble the previously removed airframe components using the applicable airframe manufacturer's maintenance instructions. Make engine log book entries for each engine inspected certifying compliance with this Critical Service Bulletin.
4. If the fitting is a two piece assembly (straight fitting and 90° fitting) as shown in Figure 2B, proceed to the fitting replacement instructions contained in this Critical Service Bulletin.

FITTING REPLACEMENT

1. Using the airframe manufacturer's maintenance instructions, open or disconnect the engine cowl flaps and remove the engine cowling as necessary to allow access to the wastegate actuator. (Reference Figure 1)
2. Disconnect the wastegate actuator oil inlet pressure hose P/N 646644S4S21.00 from the wastegate actuator by disconnecting hose from the wastegate oil inlet 90 degree fitting. Cap the hose to prevent contamination during the fitting replacement.
3. Remove the 90 degree fitting P/N MS51521B4, straight fitting MS51525B4, and O-ring seal P/N 630979-15 from the oil inlet on the wastegate and discard. (Reference Figure 3)
4. Inspect Hose P/N 646644S4S21.00 for any signs of chafing or damage to the fitting. Replace if any damage is noted.
5. Inspect the adjacent engine mount structure for any chafing damage from the wastegate actuator fitting or hose. If any damage to the engine mount structure is noted, inspect the damage per the applicable airframe manufacturer's maintenance instructions or contact Piper Customer Service at 1-772-978-6573.
6. Install replacement 90 degree fitting P/N AN833-4 with new O-ring P/N 630979-15 (O-Ring P/N MS28778-4 is an approved alternate) and Jam nut P/N AN924-4. Lightly lubricate the O-ring with clean 50W engine oil before installation.
7. Clock the P/N AN833-4 fitting to allow connection of wastegate oil pressure hose while maintaining sufficient clearance between the fitting and the airframe engine mount structure. While holding the fitting in position to ensure clearance between the fitting and the airframe engine mount structure, ensure that the o-ring is seated in the relief boss on the fitting. Screw

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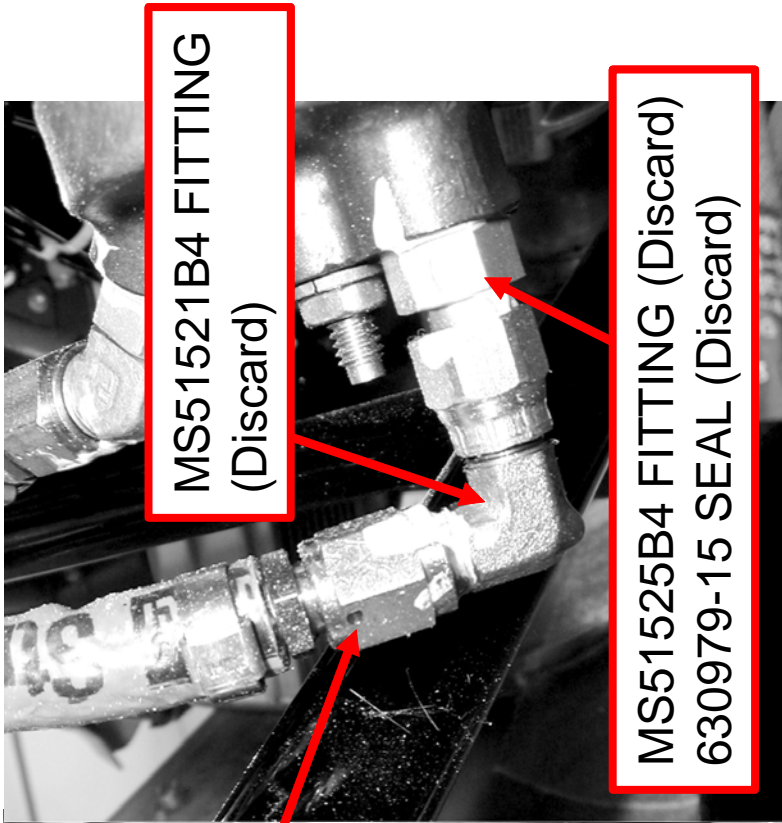
the jam nut finger tight against the fitting boss. Torque the jam nut to 85-105 inch-pounds while holding the correct fitting orientation.

8. Install the wastegate oil pressure supply hose P/N 646644S4S21.00 to the wastegate oil inlet 90 degree fitting. Using a back-up wrench, torque hose fittings in accordance with the instructions contained in the latest revision of TCM bulletin SB96-7.
9. Using the airframe manufacturer's maintenance instructions, reassemble any removed airframe components and reinstall the cowling.
10. Perform an engine ground run using the airframe manufacturer's pilots operating handbook. After the ground run check all engine lubricating system fittings for leaks and verify clearance was maintained between the wastegate oil inlet fitting and the engine mount structure. Repair any leaks found prior to further flight.
11. Make an engine logbook entry certifying compliance with this Critical Service Bulletin.

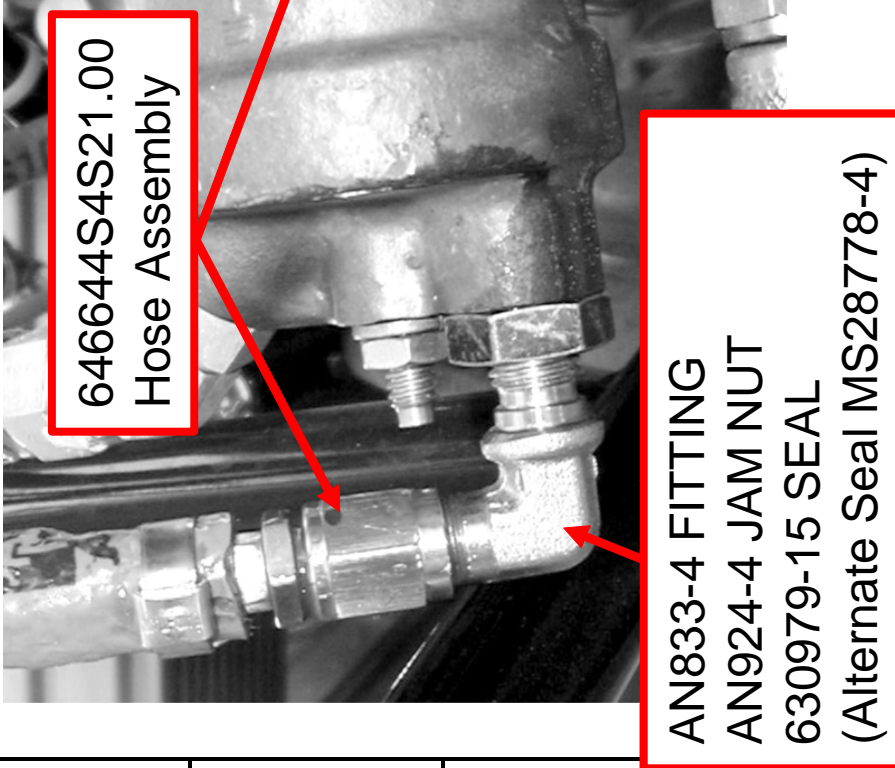


FIGURE 1
INSPECTION AREA

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**FIGURE 2B
OLD INSTALLATION**



**FIGURE 2A
NEW INSTALLATION**

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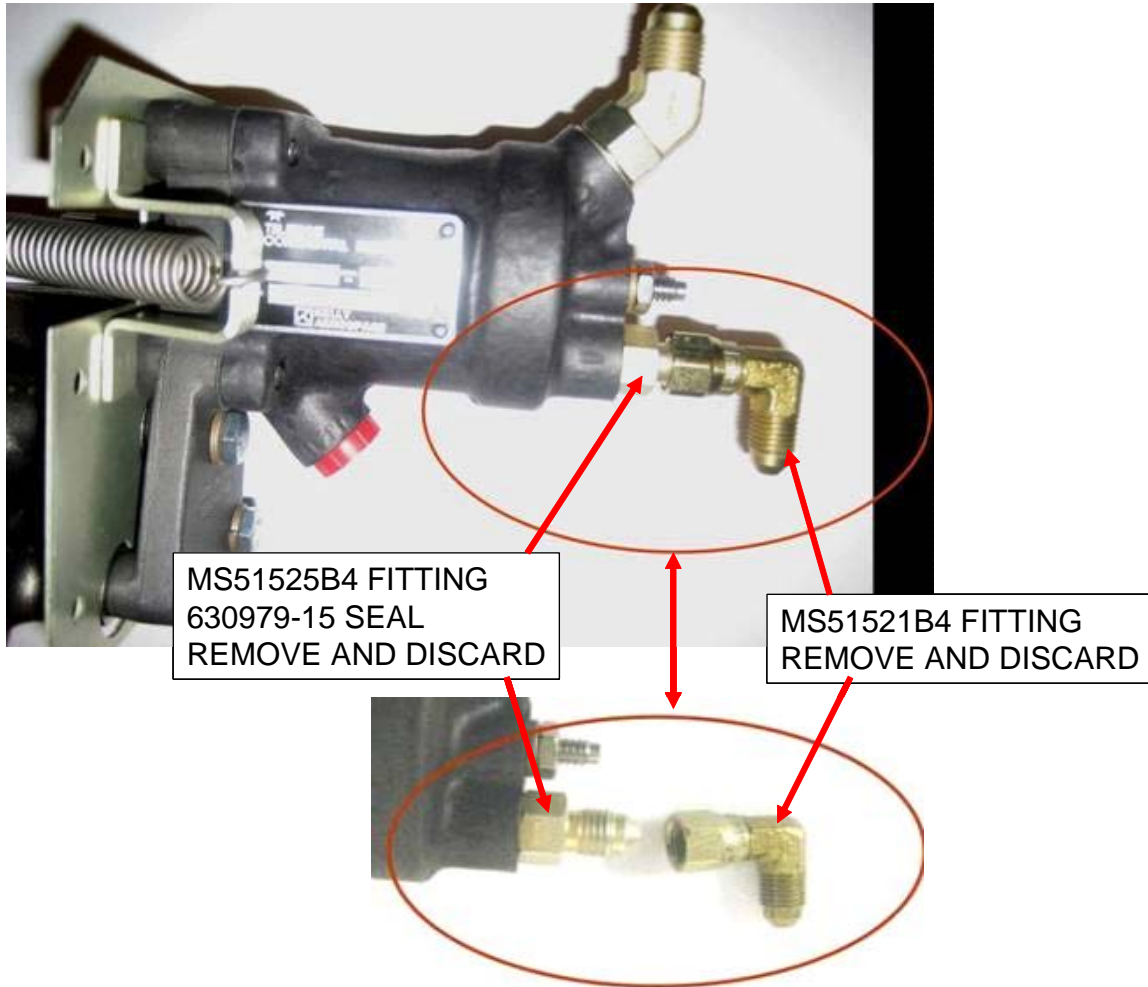



FIGURE 3
FITTING REPLACEMENT DETAIL

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