SUBJECT: EXHAUST SYSTEM INSPECTION

PURPOSE: Notification to Owners, Operators and Maintenance facilities of necessity to inspect exhaust systems manufactured by Wall Colmonoy for Teledyne Continental Motors.

COMPLIANCE: Within the next 100 hours time in service but not later than the next scheduled maintenance event or inspection.

MODELS AFFECTED: TSIO-360 - MB and TSIO-360-SB Engines

Inspection of a returned TSIO-360-MB / SB engine exhaust system has revealed a condition that if not corrected could result in disengagement of the exhaust slip joint at the number 5 cylinder riser crossover assembly, P/N 654890.

GENERAL INSPECTION:
Remove engine cowling as necessary to gain access to the engines exhaust system. Visually inspect the entire exhaust system for broken, missing or incorrectly assembled components.

It is not unusual for exhaust system expansion slip joints to exhibit some evidence of minor leakage. However; exhaust stains and / or discoloration of adjacent areas such as push rod housings, cylinder cooling fins, inter-cylinder baffles, engine mount structure and the nacelle are indicative of unacceptable expansion slip joint leakage.

DETAILED INSPECTION:
Inspect number 5 cylinder exhaust riser flange for evidence of leakage.

Visually inspect the number 5 cylinder exhaust riser crossover assembly, P/N 654890, slip joint link and brackets for cracks or broken welds. Refer to Figure 1.

Insure the number 5 cylinder exhaust riser crossover assembly, P/N 654890, slip joint link rod is centered between the “L” brackets welded on the crossover elbow and that the spacer, P/N 654309, is installed in the link rod slot. When assembled the link rod must move freely the full limit of its travel. Refer to Figure 2.

Inspect the exhaust system crossover slip joint located at the centerline of the engine for evidence of leakage. Refer to Figure 3.

Inspect that the slip joint heat shield is installed in accordance with the instructions provided in the Mooney Aircraft Service Manual. Failure to correctly install the heat shield will negate the function of the slip joint and cause thermal expansion stress loading to the system and possible exhaust system failure.
CORRECTIVE ACTION:

Replace any broken or cracked exhaust system component with a new part or a part that has been repaired and certified by a certificated repair agency. Refer to Figure 4 for part information.

Exhaust leaks at cylinder riser flanges must be repaired. Do not arbitrarily replace any exhaust system gaskets. Thoroughly inspect the component(s) for cracks, warped flanges, distortion and damaged sealing surfaces. Replace or repair component(s) with these conditions.

CAUTION

Do not operate any engine with broken, missing, damaged or incorrectly assembled exhaust systems or exhaust system components. Failure to correct exhaust leaks may result in a loss of engine power, elevated cylinder head and/or oil temperature.

FIGURE 1
NUMBER 5 CYLINDER RISER ASSY.
SLIP JOINT LINK ATTACHMENT:
INSURE PROPER ASSEMBLY AND
FREEDOM OF MOVEMENT THRU
THE FULL RANGE OF TRAVEL

SLIP JOINT FRONT CENTER LINE OF ENGINE
BETWEEN NUMBER 5 AND 6 CYLINDER

FIGURE 2

FIGURE 3
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* Part Number 654890 Riser and Crossover Assy. consist of 1 each 654881 crossover (body), 1 each 654882 number 5 exhaust rise and the attaching parts as listed above.