

# SERVICE BULLETIN

# SB97-6B

Compliance Will Enhance Safety, Maintenance or Economy of Operation

**FAA APPROVED**  
Supersedes M87-11 REV. 2,  
SB97-6, 6A

**SUBJECT:** MANDATORY REPLACEMENT PARTS

**PURPOSE:** TO IDENTIFY ITEMS TO BE REPLACED DURING MAINTENANCE,  
PREVENTATIVE MAINTENANCE AND OVERHAUL

**COMPLIANCE:** DURING MAINTENANCE, PREVENTATIVE MAINTENANCE AND  
OVERHAUL

**MODELS AFFECTED:** ALL MODELS

During any maintenance or preventive maintenance of engine or components, replace all removed gaskets, seals, packings, hoses, "O" rings, cotter pins, retaining rings (snap rings), safety wire, self locking fasteners (including exhaust and connecting rod nuts) and lock washers with new parts.

Engine mounted accessories must be maintained in accordance with the manufacturer's instructions. All accessories must be overhauled at engine overhaul, or more frequently, in accordance with the manufacturer's instructions.

Items such as spark plugs, alternator drive belts and air-conditioning drive belts must be replaced on condition.

Do not re-use any fasteners that are worn, damaged or deformed. Do not replate any cadmium plated fasteners or washers. If the cadmium plating has been removed discard the item and replace it with a new part.


At engine overhaul the starter, starter adapter, alternator, magnetos, and engine fuel system must be replaced with New, Factory Rebuilt or FAA approved overhauled units. On turbocharged engines, the turbocharger, wastegate, all controllers, bypass valve and exhaust system must be replaced with New, Factory Rebuilt or FAA approved overhauled units. All engine baffles must be repaired or replaced and all flexible baffle seal replaced.

at engine overhaul the technician must review all service bulletins to insure compliance with the manufacturer's requirements for continued airworthiness.

In addition to the previously listed items, at engine overhaul the following parts must be discarded and replaced with **new parts**.

1. Bearings: connecting rod, crankshaft main and thrust, needle, ball, and roller
2. Bushings: rocker arm, connecting rod, counter weight and crankshaft counterweight blade
3. Counterweight pins, retaining plates and snap rings
4. All connecting rod bolts and nuts
5. Connecting rod forging number 626119, TCM P/N's 646320 and 646321 with beam width less than .625 inches. Reference TCM CSB96-13.
6. Camshaft gear bolts
7. Crankshaft gear bolts
8. Crankshaft alternator face gear bolts and lock plates
9. Woodruff keys
10. Magneto and Alternator rubber drive bushings
11. Exhaust valves
12. Exhaust valve rotocoils
13. Replace all intake valve rotocoils with new rotocoils or solid spring retainers as listed in number 14. following.

**NOTE....**Service bulletins published or revised subsequent to the issuance of this service bulletin may mandate the replacement of components and parts not included in this service bulletin. As such,

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14. Replace intake valve rotocoils with solid valve spring retainers on all E-series, O-470, IO-470, IO-520 / 550, TSIO-520 / 550 TSIOL-550 and GTSIO-520 engines.
15. Intake and exhaust valve keepers
16. Inner and outer valve springs
17. Piston pins
18. Piston rings
19. Pistons
20. Rocker shafts
21. Rocker shaft thrust washers
22. Crankcase through bolts
23. Cylinder deck stud nuts and through bolt nuts
24. Exhaust clamps (Turbocharged engines)
25. Cold Start primer diverter valves
26. Fuel pump drive coupling P/N 631263 must be replaced with 653359 , or subsequent part number drive coupling in accordance with TCM Mandatory Service Bulletin MSB 95-6 or latest revision
27. Crankshaft gear 536421 or 653631 must be replaced with 657175 or subsequent part number crankshaft gear in all SANDCAST applications; O470, IO470,TSIO470, IO520,LIO520, L/TSIO520, IO550and IOF550 engines.
28. Camshaft gear part numbers; 537432, 631845, 655430, 655516 and 656031 must be replaced at overhaul with 656818 or subsequent part number
29. Turbocharger oil supply and return check valves
30. Replace 360 series engine oil suction screens part numbers 649470, 649471, 652669, 652670 with current part number. Reference TCM Service Bulletin SB96-4.
31. Replace C-125, C-145 and O-300 series engine oil suction screen part number 633272 with current part number. Reference TCM Service Bulletin SB96-4.
32. O-300, IO-360, TSIO-360 and LTSIO-360 oil pump gears in accordance with TCM Service Bulletin SB 96-4 and CSB 96-5 or latest revision
33. Ignition system harness

All GTSIO520 starter adapter assemblies must be replaced at overhaul and/or on condition as instructed in MSB94-4 or latest revision and AD 2005-20-04. Replace with New or Factory Rebuilt starter adapter assemblies EQ6642 or current part number. It is recommended that a New or Factory Rebuilt replacement EQ6642 kit be installed during any SB96-11B (or current revision), Prop Strike/Sudden/Stoppage inspection. Replace all 631810 counterweights with 652833 at overhaul. 631810 are to be not to be reused, regardless of condition. (See current revision of SB00-3)

GTSIO-520; All EQ 6642 starter adapter assemblies both New and Factory rebuilt include New Torsional Damper, starter adapter shaftgear and crankshaft gear.

During overhaul, all hydraulic lifters (tappets) must be replaced with New or Factory Rebuilt lifters (tappets).

**AFFECTED PUBLICATIONS:** Make the appropriate annotations to applicable manuals to call attention to this service bulletin.

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