

TELEDYNE CONTINENTAL[®] AIRCRAFT ENGINE
SERVICE BULLETIN
 Compliance Will Enhance Safety

CATEGORY 3

SB95-3B
TECHNICAL
PORTIONS ARE
FAA APPROVED

SUBJECT: ALTERNATOR/GENERATOR DRIVE COUPLING INSPECTION

PURPOSE: Field reports and inspection of coupling assemblies have revealed parts that are severely worn or damaged. This bulletin requires inspection of affected alternator couplings to preclude the possibility of coupling failure.

COMPLIANCE: Alternator/generator drive couplings used on the affected engines with more than 500 hours total time in service must be inspected in accordance with the instructions set forth in this bulletin within the next 25 hours of operation and every 500 hours thereafter.

Affected drive coupling assemblies with less than 500 hours total time in service must be inspected upon the accumulation of 500 hours and every 500 hours thereafter.

MODELS AFFECTED: All C-75, C-85, C-90, C-115, C-125, C-145, E-165, E-185, E-225, O-200, O-300, GO-300, GIO-300, IO-240, IO-360, TSIO-360 and LTSIO-360 model engines that utilize alternator/generator drive couplings described in this bulletin.

A. INSPECTION OF COUPLING ASSEMBLY - SEE FIGURE 1.

1. Remove engine cowling and other airframe components as necessary to allow the removal of the alternator or generator.
2. Remove the alternator or generator and discard the gasket and attaching hardware.
3. Identify the type of drive coupling that is installed on the alternator or generator. See Figures 1 and 2. If one piece coupling P/N 635796 (see Figure 2) is installed, refer to section B for inspection and testing of one piece coupling. If coupling assembly (see Figure 1) is installed, proceed as follows.
4. Remove P/N MS24665-151 cotter pin and discard. Mount the alternator coupling gear in the protected jaws of a vise, only tight enough to loosen and remove P/N 530412 nut.
5. Remove coupling assembly parts 531325 gear, P/N 530407 sleeve, P/N 632050 bushings and 653982 retainer. Do not remove P/N 653983 hub unless replacement is required. Discard bushings and retainer. Inspect nut, gear and sleeve for wear and damage and replace if necessary.

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NOTE: Certain applications call for the use of the P/N 626543 bushings. In those applications, the P/N 632050 bushings can be used as a substitution. However, the P/N 626543 bushings must NOT be used in those applications that specify the use of the P/N 632050 bushings.

6. Install new replacement P/N 653982 retainer and two P/N 632050 bushings into the P/N 653983 hub on the alternator shaft. Bushings must be installed as indicated in Figure 1. Install P/N 530407 sleeve, P/N 531325 gear and P/N 530412 nut.
7. Clamp the alternator and hub assembly gear into the protected vise jaws only tight enough the torque the nut. Torque the P/N 530412 nut to 175 inch pounds. Torque may be increased to a maximum of 200 inch pounds to align castellated nut with the cotter pin hole. If alignment cannot be achieved with torque between 175 - 200 inch pounds, replace nut. Do not over or under torque! Install new P/N MS24665-151 cotter pin and secure in accordance with TCM Service Information Letter SIL93-15 or current revision as applicable.
8. Reinstall alternator/generator using new gasket and specified attaching hardware. Torque attaching nuts to 180 - 220 inch pounds.
9. Reattach airframe components and cowling in accordance with the airframe manufacturer's instructions. Perform a leak check run on the engine and repair any leaks prior to returning the aircraft to service.
10. Make a log book entry, "Performed TCM Service Bulletin SB95-3B, compliance required again upon accumulation of 500 operating hours from this date." and return aircraft to service.

B. INSPECTION AND TESTING OF ONE PIECE COUPLING - SEE FIGURE 2.

The P/N 635796 single piece coupling is designed to slip when abnormal torque is required to rotate the alternator/generator. This can prevent internal engine damage in the event of an alternator/generator seizure. The one piece coupling may be substituted for the coupling assembly shown in Figure 1.

Inspect the one piece coupling for shearing or tearing of the elastomeric (rubber) element. Replace coupling if damage is observed. The following test must be performed at engine overhaul or when slippage is suspected.

1. With the coupling removed from the alternator/generator, place the coupling body in the protected jaws of a vise.
2. Figure 3 provides necessary dimensions to produce a tool for checking coupling slippage torque.
3. Install the tool over the coupling gear and apply 100 inch pounds of torque. No slippage can occur at or below 100 inch pounds of torque. Replace couplings that fail this test.
4. Install serviceable or replacement couplings in accordance with section A, paragraphs 7, 8 and 9.

WARRANTY:

None.

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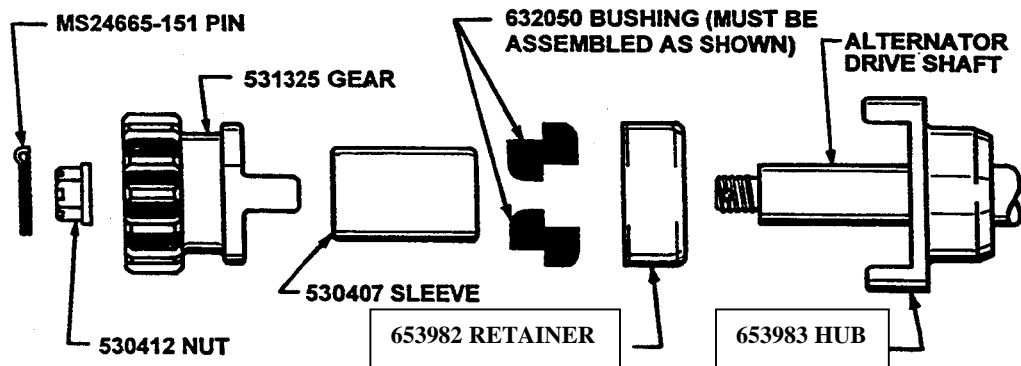


FIGURE 1

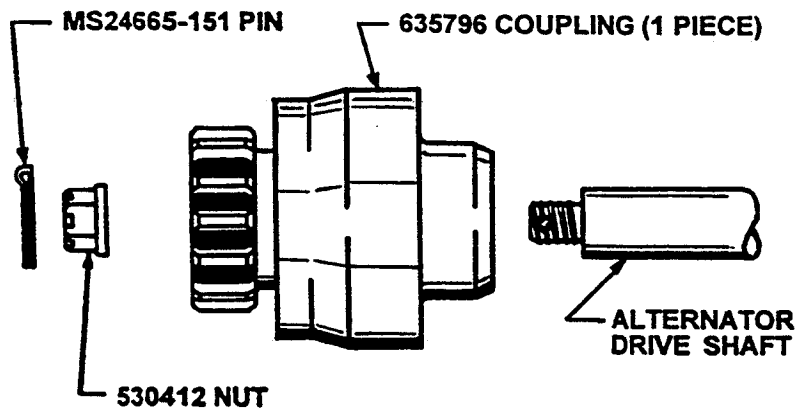


FIGURE 2

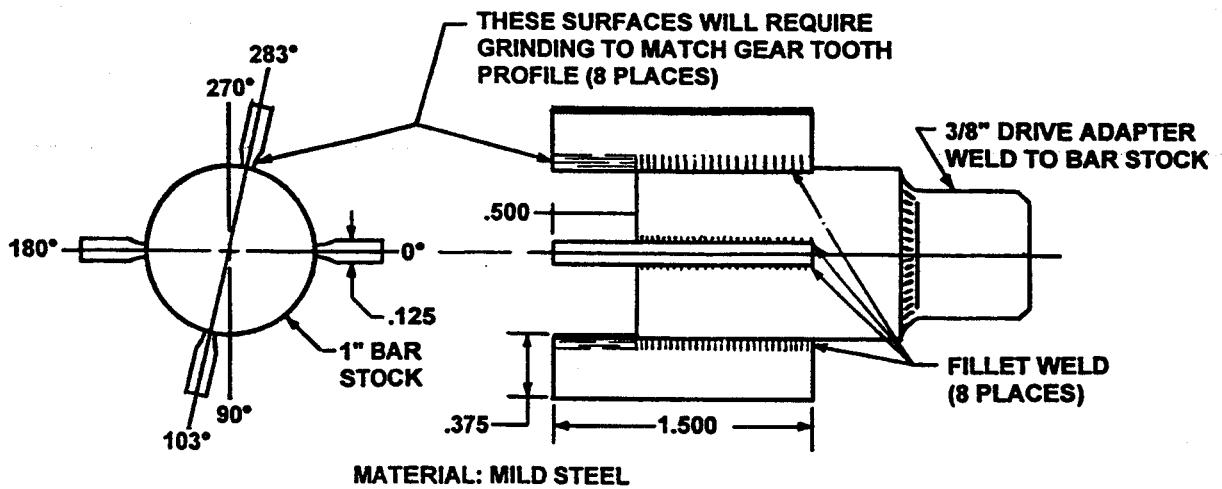


FIGURE 3

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