



CLASS I

SERVICE INSTRUCTIONS

33, 35, 36, 55, 58, 58P, 58TC

No. 0546-359, Rev. II
ATA Code 24-30
Recurring Inspection

SUBJECT: ELECTRICAL POWER - ALTERNATOR - PERIODIC INSPECTION OF ROTOR SHAFT BEARINGS.

SYNOPSIS OF CHANGES: Service Instructions have been changed to Class I and are rewritten to current format. Airworthiness Directive No. 76-02-07 amendment No. 39-2500, and Prestolite Service Bulletin No. ASM-10, against ALV-9400 series alternators, have been added as references. Baron 58P, 58PA, 58TC, and 58TCA airplanes have been added.

EFFECTIVITY: The following BEECHCRAFT Debonairs, Bonanzas, and Barons if equipped with Continental IO-520 or TSIO-520 series engines and ALV-9400 series Prestolite alternators after accumulating 100 or more service hours; and all other of the following airplanes with Continental IO-520 or TSIO-520 series engines and other Prestolite or Delco-Remy series gear-driven alternators after accumulating 400 or more service hours.

- All Debonair/Bonanza 35-C33A, E33A, and F33A airplanes;
- All Bonanza E33C and F33C airplanes;
- All Bonanza S35, V35, V35TC, V35A, V35A-TC, V35B, and V35B-TC airplanes;
- All Bonanza 36 and A36 airplanes;
- All Baron 95-C55, 95-C55A, D55, D55A, E55, and E55A airplanes;
- All Baron 58 and 58A airplanes;
- All Baron 58P and 58PA airplanes;
- All Baron 58TC and 58TCA airplanes.

REASON: To assure that the alternator rotor shaft bearings receive adequate maintenance. Engine oil contamination is possible in the event of alternator bearing seizure.

COMPLIANCE: Airplanes equipped with ALV-9400 series alternators: Beech Aircraft Corporation considers this to be a mandatory inspection and it should be accomplished within the next 25 service hours, but no later than the next scheduled inspection, and at 100 service hour intervals thereafter. Airworthiness Directive No. 76-02-07 amendment 39-2500 has been issued on this subject.
All other airplanes equipped with any other Prestolite series or Delco-Remy series gear-driven alternators: Beech Aircraft Corporation considers this to be a mandatory inspection and it should be accomplished within the next 100 service hours, but no later than the next scheduled inspection, and at 400 service hour intervals thereafter.

DESCRIPTION: ALV-9400 series alternators: The alternator is removed from the airplane, the slip ring end bearing is inspected for condition and is replaced if necessary.
All other gear-driven alternators: The alternator is removed from the airplane, the driven end and slip ring end bearings are inspected for condition and are replaced if necessary.

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Beech Aircraft Corporation issues service information for the benefit of owners and fixed base operators in the form of three classes of Service Instructions. CLASS I (Red Border) are changes, inspections and modifications that could effect safety. The factory considers compliance is mandatory. These are mailed to:

- (a) Owners of record on the FAA Registration list;
- (b) Those having a publications subscription;
- (c) BEECHCRAFT Parts and Service Outlets;

Those owners previously requesting notification by card will receive a card on Class I and II Service Instructions. CLASS II (Green Border) covers changes, modifications, improvements or inspections the factory

feels will benefit the owner and although highly recommended, they are not considered mandatory compliance, unless specified at the time of issuance. CLASS III (No Border) covers changes which are optional, maintenance aids, product improvement kits and miscellaneous service information. Compliance is at the owner or operator's prerogative. Copies of Class II and III are distributed per b and c above. Information on Owner Notification Service or Subscriptions can be obtained through any BEECHCRAFT Aviation Center, Support Center, International Distributor, or the Factory. As Service Instructions are issued, temporary notation in the index should be made until the index is revised. Warranty will be allowed only when specifically defined in the Service Instructions and in accordance with Beech Warranty Policy.

05-34-239B

Service Instructions No. 0546-359, Rev. II

APPROVAL: FAA Approved - DOA CE-2.

MANPOWER: The following information is for planning purposes only.

Estimated man-hours: 2 hours per alternator.
Suggested number of men: 1 man.

MATERIAL: If alternator replacement bearings cannot be obtained locally, it is recommended that the following manufacturers be contacted:
Delco-Remy Division, General Motors Corporation, Anderson, Indiana 46011.
or
Prestolite Electrical Products, The Prestolite Company, Division of ELTRA Corporation, 511 Hamilton Street, Toledo, Ohio 43694.

WARRANTY: BEECHCRAFT Warranty on a new airplane is 180 days from delivery or 180 days from the date noted on the Owner Warranty Card. Warranty credit for parts and labor to the extent noted under MATERIAL and MANPOWER will be allowed on BEECHCRAFTS within warranty at the time these Service Instructions are released.

All warranty reimbursements are handled through franchised BEECHCRAFT outlets. Owners and operators may arrange with these outlets to perform the work and to submit the standard Beech Aircraft Corporation warranty claim form to the Commercial Service Department, Beech Aircraft Corporation, Wichita, Kansas 67201.

SPECIAL TOOLS: None.

WEIGHT AND BALANCE: None.

REFERENCES: Prestolite Service Bulletin No. ASM-10 or subsequent (attached); Airworthiness Directive No. 76-02-07, amendment 39-2500 or subsequent.

PUBLICATIONS AFFECTED: It is recommended that a note to "See Service Instructions No. 0546-359, Rev. II" be made on the following:

BEECHCRAFT Debonair/Bonanza 33 series Shop Manual copies, P/N 33-590011-1C or subsequent, Section 7;
Bonanza 35 series Shop Manual copies, P/N 35-590096B or subsequent, Section 7;
Bonanza 36 Shop Manual copies, P/N 36-590001-3B or subsequent, Section 16;
Baron 55 and 58 series Shop Manual copies, P/N 55-590000-13D or subsequent, Section 16;
Baron 58P and 58TC Maintenance Manual copies, P/N 102-590000-5 or subsequent, Chapter 5-10.

ACCOMPLISHMENT INSTRUCTIONS: These Service Instructions may be accomplished as follows:

1. Remove the alternator from the airplane, noting installation details such as attaching parts and electrical connections to ensure correct reinstallation.
2. Disassemble the alternator as necessary to gain access to either or both of the driven end bearing and slip ring end bearing, whichever is appropriate.
3. Inspect the rotor shaft bearing(s) for condition and replace if necessary.
4. Reassemble the alternator.
5. Reinstall the alternator on the airplane.
6. Check the alternator for proper operation.

RECORD COMPLIANCE: After each inspection of the alternator(s), as described in these Service Instructions, make an appropriate maintenance record entry.



NUMBER **ASM-10** ISSUED **12-1-75**
SUBJECT **SLIP RING END BEARING INSPECTION AND LUBRICATION**
APPLICATION **ALV-9400 SERIES ALTERNATORS**
PAGE NO. **1** OF **1** PAGES

It is recommended that the subject bearing be inspected and, if necessary, relubricated at each 100 hour engine inspection. The subject bearing is accessible by removing the bearing cover as shown in Figure 1. Use a small sharp chisel, knife blade, or screwdriver to pry the cover out the end head. **Care must be taken not to damage the end head. If the bearing cover is damaged during removal, a new cover must be installed.**

Without further disassembly visually inspect the bearing and shaft end for discoloration or any sign of overheating or wear. Pay particular attention to the bearing inner and outer race. See Figure 2. If there is any sign of overheating or an indication that the rotor shaft has been turning in the inner race or the outer race has been turning in the end head, the alternator must be removed and repaired.

If the rotor shaft has been turning in the bearing inner race, the rotor and bearing must be replaced. If the bearing outer race has been turning in the end head, the bearing and end head must be replaced.

Check the bearing grease for any sign of overheating or contamination such as dirt, or metal filings. If the grease is a dark brown or black color, or is so contaminated, the alternator must be removed and the bearing replaced.

If the bearing shows no sign of discoloration, overheating, wear, or contamination, fill the bearing only (not the entire cavity) with Chevron BRB #2 or Chevron SRI #2 grease, see figure 2, and replace the bearing cover. **Do not use a substitute lubricant.**

Refer to Prestolite Form No. L664 for disassembly and assembly procedures when repairing the alternator.

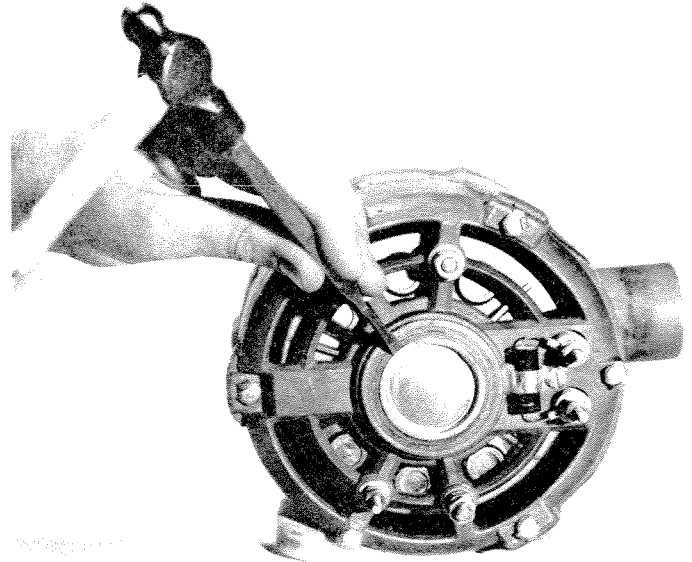


Figure 1

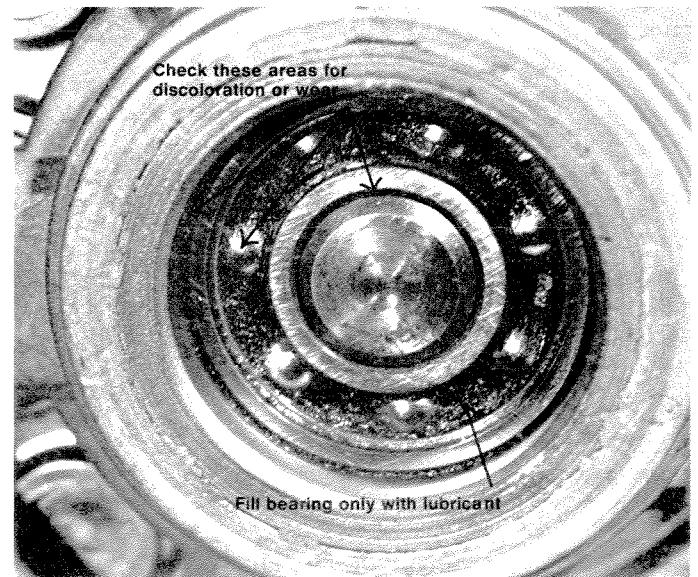


Figure 2