

REASON FOR REVISION: Date in header 2008 should be 2009, changed to current date.

ES10024-1 (TCM P/N 656802) ALTERNATOR SLIP RING END HOUSING CRACKS

INTRODUCTION:

It has come to the attention of Kelly Aerospace Energy Systems, that a small group of ES10024-1 (TCM P/N 656802) alternators may experience cracks in the slip ring end housing. These cracks are related to a fixture used in the original machining of the housing and not to service use or time. This condition, left uncorrected, may eventually lead to the loss of alternator function.

This Service Bulletin is being issued to mandate the inspection for cracks in a specific area and if found the replacement of the existing ES10024-1 (TCM P/N 656802) alternator. *(See serial number affectivity below.)*

COMPLIANCE:

Within the next fifty (50) hours time in service or at the next regularly scheduled maintenance event or annual inspection which ever occurs first.

EFFECTIVITY:

All Aircraft* utilizing a Kelly Aerospace Energy Systems ES10024-1 (TCM P/N 656802) alternator installed per the serial numbers listed below.

Suspect Serial Numbers - ES10024-1

J070317	J070318	J070319	J070320	J070321	J070322	J070323	J070324	J070325	J070326
J070327	J070328	J070329	J070330	J070331	J070332	J070333	J070334	J070335	J070336
J070337	J070338	J071813	J071814	J071815	J071816	J071817	J071818	J071819	J071820
J071821	J071822	J071823	J071824	J071825	J071826	J071827	J071828	J071829	J071830
J071831	J071832	J071833	J071834	J071839	J071841	J071844	J071846	J071847	J071849

* Includes, but is not limited to Cirrus and Mooney model aircraft.

For questions concerning this instruction please contact KAES, Service Dept. at (888) 461-6077. Contact your local KAES distributor to purchase available service parts.

PROCEDURE:

CAUTION:

This procedure must be performed by competent and qualified personnel familiar with engine and airframe maintenance that is specific to the electrical system.

CAUTION:

Do not depend on this Service Bulletin for gaining access to the aircraft or engine. This instruction requires that you use the applicable manufacturers maintenance manuals. In addition, any preflight or inflight operational checks require use of the appropriate AFM or POH.

1. Remove all electrical power from the aircraft before beginning work. Assure that the aircraft battery has been disconnected and that no external power is hooked up.
2. Access the aircraft alternator by removing the engine cowling and panels as required in accordance with instructions contained in the applicable aircraft maintenance manual.

NOTE:

If there is enough room to remove the alternator brushes and inspect the area identified, the alternator need not be removed. If not, remove the alternator for inspection.

3. Remove the nut and field wire attached to the brush holder assembly. *(Alternator left on or taken off.)*
4. Remove the alternator from the engine in accordance with instructions contained in the applicable engine or aircraft maintenance manual. *(See note above.)*
5. Remove the two screws that hold the brush holder assembly in the slip ring end housing. Carefully remove the brush rack assembly from the slip end housing taking care not to allow brushes to spring out and fall as they may break or chip.
6. With the brush holder and brushes removed, use a 3x magnifying glass and inspect the brush holder cavity for cracks in the area shown in Figure 1. If cracks exist, continue with instruction 7. If there are no apparent cracks, continue with instruction 8.

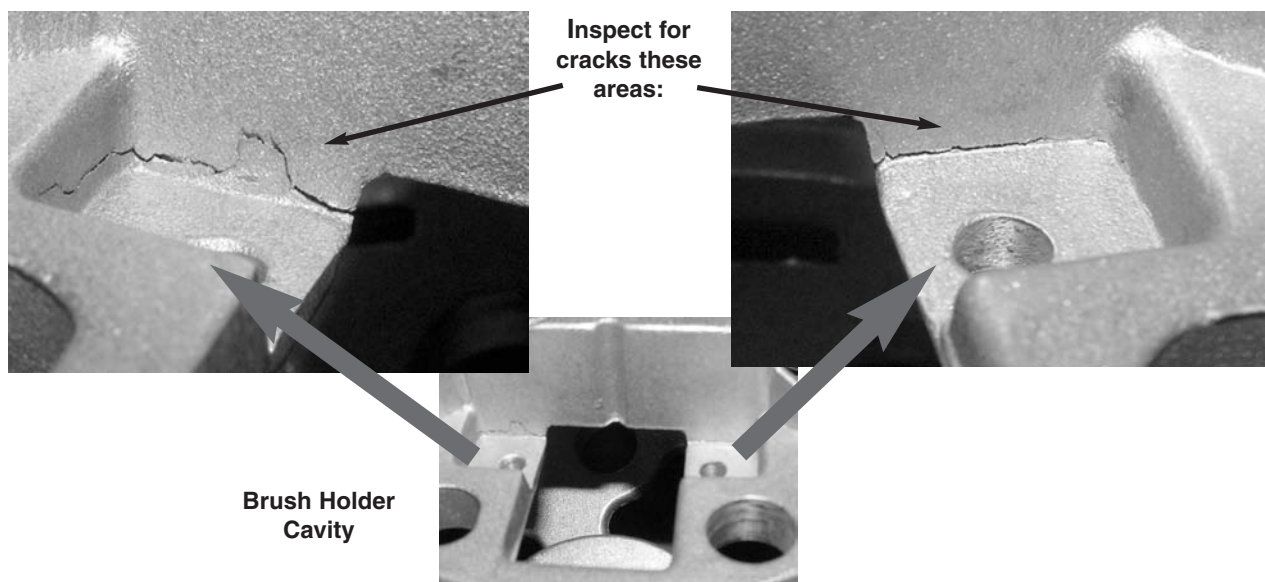


Figure 1 - Alternator Slip Ring Housing (at brush holder)

7. Reinstall the brush block assembly (unit must be complete for warranty consideration) and replace the ES10024-1 (TCM P/N P/N 656802) alternator with a new or serviceable unit. *If drawing from inventory, make sure that the new unit does not have an affected serial number.* (Continue with step 9.)
8. Before installing the brush holder assembly insert insulated wire to retain the brushes for installation. Reinstall the brush rack assembly and retaining screws. Torque the #10-32 screws 25 to 35 in.-lbs and remove the brush retaining wire to release the brushes. Reattach the field wire and nut removed from the brush holder assembly. Torque nut per the applicable aircraft maintenance manual instructions.
9. Reconnect electrical power and perform an engine run to check the security of installation and to check performance of the alternator. If good, proceed to the "Return to Service" below.

RETURN TO SERVICE:

1. Utilizing the applicable aircraft and engine manufacturers maintenance manuals, install any portion of the aircraft removed to gain access.
2. Upon successful completion of this service bulletin by inspection and/or replacement of the alternator, make an appropriate log book entry of compliance.

MATERIAL REQUIRED:

If required One (1) each, alternator, Kelly Part Number ES10024-1 or TCM part number 656802 as may be applicable to your aircraft installation.

AVAILABILITY OF PARTS:

Parts to support this service bulletin must be obtained from an authorized Kelly Aerospace Energy Systems or Teledyne Continental Motors (TCM) Distributor as may be applicable to your aircraft installation. Any supplementary part such as the alternator belt, must be obtained from the applicable engine or airframe manufacturer.

WARRANTY STATEMENT:

The sole warranty for the actions within this service bulletin are contained in the KAES Limited Warranty Policy issued with the purchase of each new alternator (see terms and conditions therein). Issuance of this service bulletin in no way constitutes an implied or expressed warranty of any kind.

Other warranty may apply per the terms and conditions in the aircraft or engine manufacturers Limited Warranty Policy, contact the appropriate party to enquire.

This publication does not imply or state any responsibility for the workmanship of any person or entity performing work or maintenance on the alternator or electrical system.

CONTACT INFORMATION:

If you have any questions concerning this service information letter, please contact Kelly Aerospace Energy Systems Technical Support at 888-461-6077. Or write:

**Kelly Aerospace Product Support
2900 Selma Highway
Montgomery, AL 36108, USA**