



Power Systems

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Service Information Letter

The technical content of this letter is FAA Approved

Letter No. A-115

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RECOMMENDED SERVICE/INSPECTION FOR ALTERNATOR SERIES ALE, ALU, ALY, ALX

INTRODUCTION:

In response to recent complaints of nuisance tripping of the voltage regulator at overvoltage, Kelly Aerospace has completed an investigation of this fault. Our investigation has revealed that voltage spikes, most likely due to brush hop, are the cause of this occurrence. The primary cause identified in our investigation pertained to the run out of the slip ring. This condition presents itself immediately upon operation and is further amplified if a "starved electrolyte" battery is used in the aircraft electrical system. Brush hop is not an uncommon condition and can occur for a number of reasons as well as the one above. This SIL provides instruction for contact with Kelly Aerospace should nuisance tripping be identified in the specified range of alternators. *Note: Nuisance tripping may be defined as loss of electrical power during normal operation of the alternator more than one time each flight but which can be easily reset.*

EFFECTIVITY:

Any aircraft experiencing nuisance tripping of the voltage regulator and equipped with an ALE, ALU, ALY, and ALX series alternators manufactured from April 2004 through November 2004 of any serial number. This includes both new and overhauled units. *Note: See Procedure 3 below to identify manufacture date.*

COMPLIANCE:

At any service pertaining to nuisance tripping of the voltage regulator. *Compliance is NOT required if you have NOT experienced nuisance tripping of the voltage regulator.*

PROCEDURE:

1. Access the aircraft alternator and determine the model and serial number.
2. If the alternator model begins with ALE, ALU, ALY or ALX, record the serial number for determination of the manufacture date. No further action is necessary if the alternator model does not begin with the model letters above.

F.A.A. APPROVED
Page 1 of 2
OFFICE GENERAL
By: <i>KLB ACE-118A</i>
Date: <i>2/18/05</i>

3. Examine the serial number taken from the data tag affixed to the alternator. The manufacture date is established by the first three digits. You will look for "E" as the first digit. E represents the year 2004. The next two digits represent the month. Example E11234, is 2004 November. Affected models will have 2004 months April (04) through November (11). The last three digits are the sequence number made for that month (001, 002, 003, etc.).
4. If the serial number is affected and nuisance tripping is experienced, proceed to instruction 5 below. *Note: Nuisance tripping may be defined as loss of electrical power during normal operation of the alternator more than one time each flight but which can be easily reset.*
5. Due to the variations in conditions leading to "brush hop"; it is necessary to contact our technical support to determine the best course action. In many cases nuisance tripping may be related to the airframe voltage regulator or electrical system rather than the alternator. Alternator faults may be worn brushes, weak brush springs, rough slip ring surface, or out of tolerance slip ring run out. For technical support, contact Kevin Grant at 888-461-6085, Fax 334-227-0168 or e mail kgrant@kellyaerospace.com. – or – Mike McCluskey at 888-461-6077, Fax 334-227-0168 or e mail mmccluskey@kellyaerospace.com. If approved, the affected units may be returned for warranty consideration through your local Kelly Aerospace distributor.
6. After determination and completion of the Kelly Aerospace recommended action, make an appropriate logbook entry of compliance with this SIL.

