Single Engine

Service Bulletin

March 1, 2004  SB04-24-01

TITLE

ALTERNATOR CONTROL UNIT INSPECTION/REPLACEMENT

EFFECTIVITY

The following airplanes delivered with a part number AC2101 Alternator Control Unit (ACU) with serial number 195601 through 205400.

<table>
<thead>
<tr>
<th>Model</th>
<th>Serial Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>172R</td>
<td>17281151 thru 17281181, 17281183 thru 17281196</td>
</tr>
<tr>
<td>172S</td>
<td>172S9330 thru 172S9448, 172S9450 thru 172S9463, 172S9465 thru 172S9481, 172S9483 thru 172S9502, 172S9504, 172S9505 and 172S9507 thru 172S9520</td>
</tr>
<tr>
<td>182T</td>
<td>18281202 thru 18281237, 18281240 thru 18281248, 18281250 thru 18281256, 18281262, 18281266 and 18281267</td>
</tr>
<tr>
<td>T182T</td>
<td>T18208193 thru T18208221</td>
</tr>
<tr>
<td>206H</td>
<td>20608194 thru 20608199</td>
</tr>
<tr>
<td>T206H</td>
<td>T20608409 thru T20608414 and T20608416</td>
</tr>
</tbody>
</table>
The following airplanes are also affected:

If a part number AC2101 ACU with serial number 195601 through 205400 shipped from Cessna on January 1, 2003 through November 19, 2003 has been installed.

If a part number MC01-3A Power Junction Box (PJB) containing a part number AC2101 ACU with serial number 195601 through 205400 shipped from Cessna on January 1, 2003 through November 19, 2003 has been installed.

<table>
<thead>
<tr>
<th>Model</th>
<th>Serial Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>172R</td>
<td>17280001 thru 17281208</td>
</tr>
<tr>
<td>172S</td>
<td>172S8001 thru 172S9612</td>
</tr>
<tr>
<td>182S</td>
<td>18280001 thru 18280944</td>
</tr>
<tr>
<td>182T</td>
<td>18280945 thru 18281320</td>
</tr>
<tr>
<td>T182T</td>
<td>T18208001 thru T18208232</td>
</tr>
<tr>
<td>206H</td>
<td>20608001 thru 20608215</td>
</tr>
<tr>
<td>T206H</td>
<td>T20608001 thru T20608448</td>
</tr>
</tbody>
</table>

Also affected are any part number AC2101 ACU with serial number 195601 through 205400 or part number MC01-3A PJB containing a part number AC2101 ACU with serial number 195601 through 205400 in Service Station stock that was shipped from Cessna on January 1, 2003 through November 19, 2003.

**REASON**

It has been determined that some airplanes may have been delivered with an alternator control unit that may cause the alternator field circuit breaker to trip during or soon after an engine start.

**DESCRIPTION**

The ACU shall be inspected and if necessary replaced as described in this Service Bulletin. Non-compliance with this Service Bulletin could result in nuisance tripping of the alternator field circuit breaker during or soon after an engine start.

**COMPLIANCE**

Mandatory: the inspection shall be accomplished at the next scheduled inspection not to exceed the next 100 hours of operation.

**NOTE:** If tripping of the alternator field circuit breaker during or soon after an engine start is occurring and a replacement ACU is not readily available, a Temporary Revision (172PHTR01 or 182PHTR01 or 206PHTR01 as applicable) may be inserted in the Pilot's Operating Handbook (POH) and the procedures followed until a replacement unit is available.

Full compliance, which includes replacement of the affected ACU and removal of the Temporary Revision (172PHTR01 or 182PHTR01 or 206PHTR01 as applicable) if installed as described in this Service Bulletin shall be accomplished by no later than (12 months).

**APPROVAL**

FAA approval has been obtained on technical data in this publication that affects airplane type design.
MANPOWER

If necessary, 0.5 man-hour per airplane for ACU replacement when accomplished during a scheduled inspection.

REFERENCES

Lamar Service Information Letter LSI-008 Rev. B (or latest revision)

NOTE: Make sure all publications used are complete and current.

NOTE: This information shall be considered an amendment to the Cessna Manufacturer's Service/Maintenance Manual or Instructions for continued airworthiness and must be accomplished for ongoing airworthiness compliance as required per 14 CFR Part 43.13.

OTHER PUBLICATIONS AFFECTED

Model 172R and Model 172S Illustrated Parts Catalog
Model 172R, 172R180, and 172S Pilot's Operating Handbook
Model 182S/182T/T182T Illustrated Parts Catalog
Model 182S, 182T, and T182T Pilot's Operating Handbook
Model 206H & Model T206H Illustrated Parts Catalog
Model 206H and T206H Pilot's Operating Handbook

NOTE: Make sure all publications used are complete and current.

MATERIAL PRICE AND AVAILABILITY

The parts below are available from Cessna Parts Distribution through an appropriate Cessna Service Station for the suggested list price shown.

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Qty/Airplane</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>AC2101</td>
<td>Alternator Control Unit (ACU)</td>
<td>1 (if required)</td>
<td>$326.00 (I) ea</td>
</tr>
<tr>
<td>172PHTR01</td>
<td>Temporary Revision 01, Model 172 Pilot's Operating Handbook</td>
<td>1 (if required)</td>
<td>$9.00 (F) ea</td>
</tr>
<tr>
<td>182PHTR01</td>
<td>Temporary Revision 01, Model 182 Pilot's Operating Handbook</td>
<td>1 (if required)</td>
<td>$9.00 (F) ea</td>
</tr>
<tr>
<td>206PHTR01</td>
<td>Temporary Revision 01, Model 206 Pilot's Operating Handbook</td>
<td>1 (if required)</td>
<td>$9.00 (F) ea</td>
</tr>
</tbody>
</table>

ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE
CREDIT INFORMATION

If necessary, applicable parts credit and a labor allowance credit of 0.5 man-hour per airplane will be provided to replace the ACU as described in this Service Bulletin.

To receive credit, the work must be completed and a Warranty Claim submitted by a Cessna Single Engine Service Station within 30 calendar days of Service Bulletin compliance before the credit expiration dates shown below. The removed ACU must be returned with the Warranty Claim.

NOTE: Affected ACU’s in Service Station stock may be returned to Cessna Warranty Administration for credit per standard procedures.

Domestic ........................ March 1, 2005
International ...................... March 1, 2005

ACCOMPLISHMENT INSTRUCTIONS

Weight And Balance Information

MODEL ....................... 172R/172S 182S/182T/182T 206H/T206H
WEIGHT CHANGE ............ Negligible Negligible Negligible

Material Information

The part below may be necessary:

<table>
<thead>
<tr>
<th>New P/N</th>
<th>Quantity</th>
<th>Description</th>
<th>Old P/N</th>
<th>Disposition</th>
</tr>
</thead>
<tbody>
<tr>
<td>AC2101 (Revision 1.C.4 or above)</td>
<td>1 (As Necessary)</td>
<td>Alternator Control Unit (ACU)</td>
<td>AC2101</td>
<td>Return to Cessna</td>
</tr>
</tbody>
</table>

Instructions

NOTE: If tripping of the alternator field circuit breaker during or soon after an engine start is occurring and a replacement ACU is not readily available, a Temporary Revision (172PHTR01 or 182PHTR01 or 206PHTR01 as applicable) may be inserted in the Pilot’s Operating Handbook (POH) and the procedures followed until a replacement unit is available.

1. Electrically ground the airplane and turn all switches to the "OFF" position. If external electrical power is connected to the airplane, disconnect external electrical power.

2. Remove the engine cowl as necessary to get to the ACU. (Refer to the applicable Maintenance Manual, Chapter 71, Cowl - Removal/Installation.)

3. Disconnect the airplane battery. (Refer to the applicable Maintenance Manual, Chapter 24, Electrical Power.)

4. Attach maintenance warning tags to the battery and external power receptacle that have "DO NOT CONNECT ELECTRICAL POWER - MAINTENANCE IN PROGRESS" written on them.

NOTE: The Power Junction Box is referred to by LAMAR Service Information Letter LSI-008 Rev B as the Master Control Unit (MCU).

5. Read the attached LAMAR Service Information Letter LSI-008 Rev B (or latest revision) and do an inspection to determine if an affected ACU is installed. Any part number AC2101 ACU that has a serial number 195601 through 205400 identified on the ACU must be replaced.

A. If a replacement ACU is available, go to Step 7.

B. If a replacement ACU is not available, go to Step 6.
6. Insert Temporary Revision 172PHTR01, 182PHTR01 or 206PHTR01 as applicable in the Pilot's Operating Handbook (POH) until the ACU is replaced.

7. Replace the ACU in accordance with Lamar Service Information Letter LSI-008 Rev. B (or latest revision). (Refer to the applicable Maintenance Manual, Chapter 24, Power Junction Box - Maintenance Practices.)

**NOTE:** Before you remove the Power Junction Box (PJB) cover, disconnect the air coolant hose from the PJB cover coolant shield. After the AC2101 Alternator Control Unit work is complete and the PJB cover is installed, reconnect the air coolant hose to the coolant shield. Do not remove the PJB from the firewall.

8. After the affected ACU has been replaced, remove Temporary Revision 172PHTR01, 182PHTR01 or 206PHTR01 as applicable from the POH, if installed.

9. Remove maintenance warning tags from battery and external power receptacle.

10. Reconnect the airplane battery. (Refer to the applicable Maintenance Manual, Chapter 24, Electrical Power.)

11. Install the engine cowl as necessary. (Refer to the appropriate Maintenance Manual, Chapter 71, Cowl - Removal/Installation.)

12. Make an entry in the airplane logbook that states compliance and method of compliance with this Service Bulletin/Lamar Service Information Letter LSI-008 Rev. B (or latest revision).
OWNER NOTIFICATION

On March 1, 2004 the following Owner Advisory message and applicable POH Temporary Revision will be sent to applicable owners of record in SB04-24-01A.

Dear Cessna Owner:

This Owner Advisory is to inform you that it has been determined that some new production airplanes may have been delivered with an alternator control unit that could cause the alternator field circuit breaker to trip during or soon after an engine start. Other airplanes may also be affected if an alternator control unit has been replaced.


Other airplanes are affected if a replacement part number AC2101 ACU with serial number 195601 through 205400 shipped from Cessna on January 1, 2003 through November 19, 2003, or a replacement part number MC01-3A PJB containing a part number AC2101 ACU with serial number 195601 through 205400 shipped from Cessna on January 1, 2003 through November 19, 2003 has been installed. Affected airplane serial numbers are: 172S80001 thru 172S8120, 172S8001 thru 172S9612, 182S8001 thru 182S8944, 182S8945 thru 182S8132, T18208001 thru T18208232, 2060801 thru 20608215 and T20608001 thru T20608448.

The ACU shall be inspected and if necessary replaced as described in Service Bulletin SB04-24-01. Non-compliance with Service Bulletin SB04-24-01 could result in nuisance tripping of the alternator field circuit breaker during or soon after an engine start.

Compliance is mandatory: the inspection shall be accomplished at the next scheduled inspection not to exceed the next 100 hours of operation.

NOTE: If tripping of the alternator field circuit breaker during or soon after an engine start is occurring and a replacement ACU is not readily available, a Temporary Revision (172PHTR01 or 182PHTR01 or 206PHTR01 as applicable) may be inserted in the Pilot's Operating Handbook (POH) and the procedures followed until a replacement unit is available.

Full compliance, which includes replacement of the affected ACU and removal of the Temporary Revision (172PHTR01 or 182PHTR01 or 206PHTR01 as applicable) if installed as described in Service Bulletin SB04-24-01 shall be accomplished by no later than (12 months).

The information contained in the referenced Cessna Service Bulletin shall be considered an amendment to the Cessna Manufacturer's Service/Maintenance Manual or Instructions for continued airworthiness, and must be accomplished for ongoing airworthiness compliance as required per 14 CFR Part 43.13.

If necessary, applicable parts credit and a labor allowance credit of 0.5 man-hour per airplane will be provided to remove and replace the ACU as described in Service Bulletin SB04-24-01.

To receive credit, the work must be completed and a Warranty Claim submitted by a Cessna Single Engine Service Station within 30 calendar days of Service Bulletin compliance before the credit expiration dates shown below.

<table>
<thead>
<tr>
<th>Type</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domestic</td>
<td>March 1, 2005</td>
</tr>
<tr>
<td>International</td>
<td>March 1, 2005</td>
</tr>
</tbody>
</table>

Please contact a Cessna Single Engine Service Station for detailed information and arrange to have Cessna Service Bulletin SB04-24-01/Lamar Service Information Letter LSI-008 Rev. B (or latest revision) accomplished on your airplane.
SUBJECT: Service Information for Master Control Unit, Part Number MC01-XXXXX. Removal/Replacement of AC2101 Alternator Control Module

PURPOSE:
To provide instructions for removal and replacement of the AC2101 Alternator Control Module on MC01 Master Control Units (MCU).

EFFECTIVITY:
This service information letter is applicable to all Master Control Units Part Number MC01-XXXXX (any model of the MC01), containing AC2101 modules falling between the serial numbers 195601 to 205400.

REASON:
To prevent the occurrence of alternator field circuit breaker tripping during engine start.

DESCRIPTION:
The following instructions detail the procedure to remove and install the AC2101 Alternator Control Unit on the MC01.

PARTS REQUIRED:

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
<th>Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>AC2101</td>
<td>Alternator Control Unit</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Revision I.C. 4 or above</td>
<td></td>
</tr>
<tr>
<td>LSI-008</td>
<td>Service Information Letter</td>
<td>1</td>
</tr>
</tbody>
</table>
PROCEDURE:

Note: The following procedure can be accomplished with the MCU mounted on the aircraft, or with the MCU removed.

1.) Remove cover from MCU.

2.) Inspect the label on the alternator control module (A). If the part number on the module is AC2101 and the serial number of the module falls between 195601 and 205400, it should be replaced with a new AC2101, revision I.C. 4 or above, per this procedure. If the part number is AC2100 or the serial number falls outside this range, no upgrade is necessary.

3.) If MCU is on aircraft, disconnect the alternator power cable from the AC2101 bus bar by removing the nut and bolt (B).

4.) Disconnect the cable plug from the AC2101 (C). The plug latch must be lifted to disengage.

5.) Remove the nut and washer securing the AC2101 bus bar to the alternator contactor (D).

6.) Loosen and remove the two screws securing the AC2101 to the base (E).

7.) Remove the AC2101 from the MCU.

8.) Install new AC2101 (revision I.C. 4 or above) over the alternator contactor post and onto MCU base.

9.) Install two screws to secure AC2101 to base (E). Assure that ground wire lug is under one screw (F). Tighten screws to 12 in-lb.

10.) Install nut and lock washer securing AC2101 bus bar to alternator contactor (D). Tighten nut to 35 - 45 in-lb.

11.) Reconnect the cable plug to the AC2101 connector (C). Assure plug is fully seated by observing latch engagement.

12.) If MCU is on aircraft, reconnect the alternator power cable to the AC2101 bus bar (B) with nut, bolt and washer. Tighten nut to 35-45 in-lb.

13.) Replace the cover on the MCU and secure in place with the screws.

14.) Assure that aircraft log book entry is made identifying that MCU has been upgraded per this procedure.
(A) AC2101 label (back side)

(B) Alternator cable connection

(C) Cable plug

(D) Alternator contactor connection

(E) AC2101 base screws

(F) Ground wire lug