

19, 23, 24

No. 1146
ATA Code 24-30

Kit No. 23-3009-1 S

SUBJECT: ELECTRICAL POWER - INSTALLATION OF AN ALTERNATOR OUTPUT CURRENT LIMITER

EFFECTIVITY: BEECHCRAFT B19 Sport 150, serials MB-622 through MB-722 and MB-724 through MB-905; C23 Sundowner 180, serials M-1491 through M-2130; B24R and C24R Sierra 200, serials MC-191 through MC-642.

REASON: To provide a continuous maximum alternator output during peak demands.

COMPLIANCE: Beech Aircraft Corporation recommends this modification be accomplished as soon as possible after receipt of these Service Instructions, but no later than the next scheduled inspection.

APPROVAL: FAA Approved - DOA CE-2.

MANPOWER: The following information is for planning purposes only:
Estimated man-hours: 2 hours.
Suggested number of men: 1 man.

MATERIAL: The parts required to accomplish these Service Instructions are contained in Kit No. 23-3009-1 S.

The kit may be ordered through BEECHCRAFT Aero or Aviation Centers and International Distributors and Dealers. The value of the kit required to incorporate these Service Instructions on one airplane is to be advised. Price, when issued, will be subject to change without notice. Beech Aircraft Corporation reserves the right to supersede, cancel and/or declare obsolete any kits or publications that may be referenced in these Service Instructions without prior notice.

WARRANTY: None.

SPECIAL TOOLS: None.

WEIGHT AND BALANCE: None.

REFERENCES: None.

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- BEECHCRAFT Aero or Aviation Centers and International Distributors and Dealers.
- Owners of record on the FAA Registration list and the

BEECHCRAFT International Owner Notification Service List.
(c) Those having a publications subscription.

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 III are distributed per a and c above. Information on Owner Notification Service or Subscriptions can be obtained through any BEECHCRAFT Aero or Aviation Center, International Distributor and Dealer, 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.

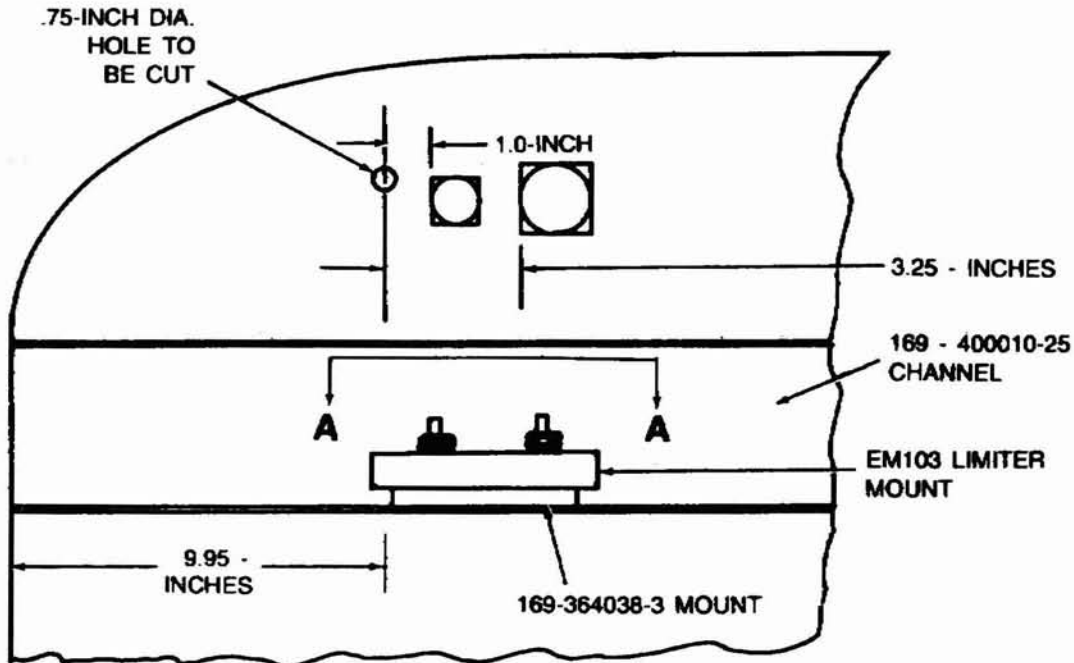
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PUBLICATIONS

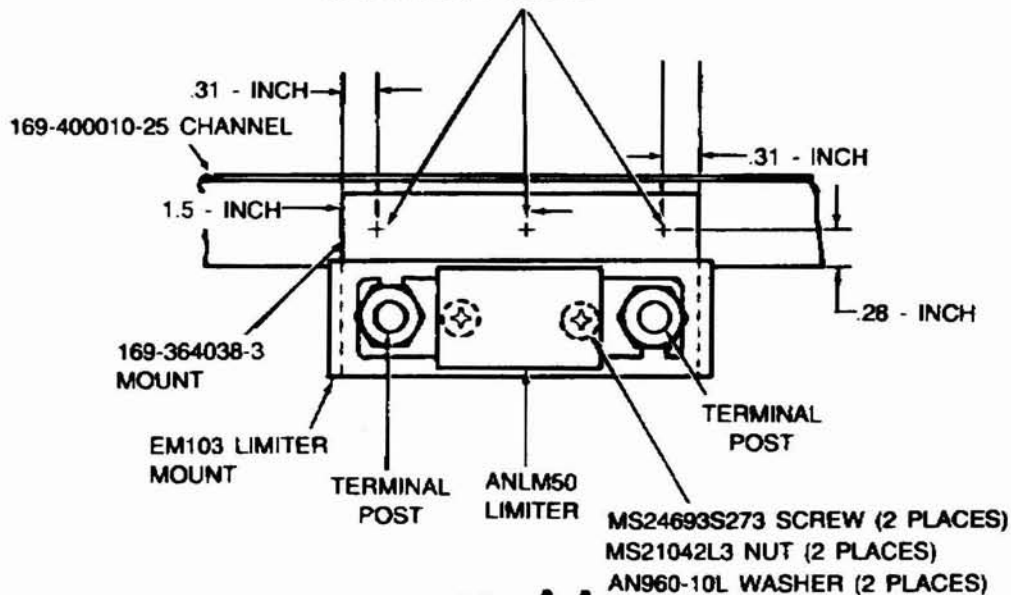
AFFECTED:

It is recommended that a note to "See Service Instructions No. 1146" be made in the following:

19, 23, and 24 Shop Manual copies, P/N 169-590015G or subsequent, Section 4;
19, 23 and 24 Parts Catalog copies, P/N 169-590012I or subsequent, Figures 11, 111, and 392A;
B19, C23, and C24R Parts Catalog copies, P/N 169-590026C or subsequent, Figures 11, 111, and 392.



DRILL THREE .128/.133-INCH DIAMETER HOLES AND INSTALL 169-364038-3 MOUNT USING THREE MS 20470AD4-5 RIVETS



VIEW A-A

Figure 1

ACCOMPLISHMENT

INSTRUCTIONS: These Service Instructions may be accomplished as follows:

1. Turn off and/or disconnect all electrical power.
2. Remove the engine cowling.
3. Disconnect wire P7A8 from the alternator, disconnect the shield ground wire, and cut the wire and shield ground approximately three inches from the connector at the firewall. Cut all wire ties from P7A8 and remove and discard the wire.
4. Dead-end cap and stow the three inch portion of wire remaining in the firewall connector using one of the 324487 wire caps supplied with the kit.
5. Refer to Figure 1 and position the 169-364038-3 mount on the upper channel of the firewall as shown. Drill three .128/.133-inch diameter holes through the lower flange of the channel to match the position of the holes in the mount (see Figure 1, View A-A).
6. Attach the mount to the channel using three MS20470AD4-5 rivets.
7. Install the EM103 limiter mount on the channel mount installed in Step 6.
8. Locate and cut a .75-inch diameter hole in the firewall as shown in Figure 1.
9. Locate new wire P7A8 in the 169-360030-651 wiring harness supplied with the kit. Attach new wire P7A8 to the alternator terminal from which the old wire P7A8 was removed in Step 3. Use the original attaching hardware and torque the attaching bolt to 70-85 in./lbs.
10. Using the original attaching hardware, attach the shield ground wire on wire P7A8 to the ground connection from which the original ground connection was removed in Step 3.
11. Remove the attaching hardware from the EM103 limiter mount terminal posts and install the ANLM50 current limiter on the limiter mount installed in Step 7.
12. Place an MS25171-2S boot over the remaining terminal lug of wire P7A8 and the forward terminal lug of

wire P7B8. Install these two terminal lugs on the limiter mount terminal posts and secure with the attaching hardware.

13. Install the two MS25171-2S boots over the terminal posts of the limiter mount.

14. Route the harness assembly through the hole in the firewall, place the two 112149-8 grommets around the harness in the engine compartment, and slide this assembly along the harness, inserting it into the .75-inch diameter hole cut in the firewall.

15. Secure the harness assembly with MS3367-1-9 straps.

16. Inside the cabin, install the NAS51-75 snap ring around the grommets.

17. Disconnect wire P7B8 from the alternator circuit breaker and wire P2A8 from the circuit breaker bus bar. Cut wire P7B8 approximately 3 inches from the connector in the firewall and remove it from the airplane. Dead end cap and stow the remaining portion of the wire using a 324487 wire cap contained in the kit.

18. Remove and discard the 50 amp alternator circuit breaker from the circuit breaker panel.

19. Install the DP437 plug button in the alternator circuit breaker opening.

20. Install the 169-324008-27 clip with the attaching hardware removed when disconnecting wires P7B8 and P2A8 in Step 17 (see Figure 2).

21. Install new wire P7B8 which is contained in the 169-360030-651 harness assembly, and the existing wire P2A8 on the clip as shown in Figure 2.

22. Reconnect the battery.

23. Reinstall the engine cowling.

24. Ground run the engine prior to flight and check for proper operation of the charging system.

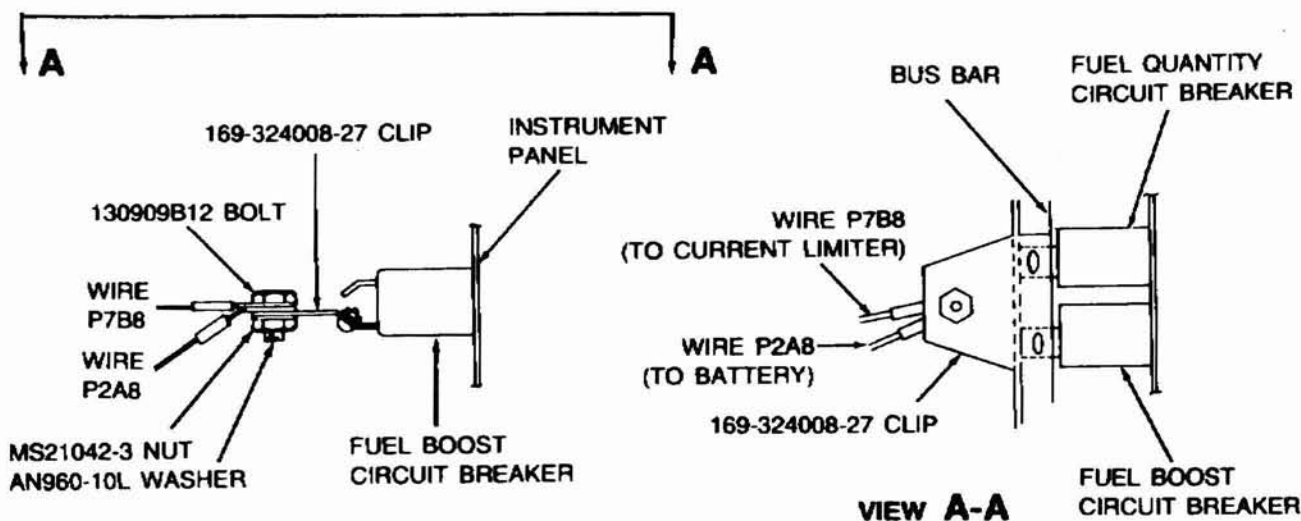


Figure 2

Service Instructions No. 1146

RECORD

COMPLIANCE:

Upon completion of these Service Instructions, make an appropriate maintenance record entry specifying the kit identification number and the kit serial number. It is recommended that the parts list contained in the kit be filed for future reference until the listing of parts has been incorporated into the Parts Catalog and Shop Manual.