



# SERVICE LETTER

No. 887

Piper Aircraft Corporation

Lock Haven, Pennsylvania, U.S.A.

FAA Approved

May 29, 1981

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Subject:

Starter and Battery Cable Inspection

Models Affected:

PA-31/PA-31-325 Navajo  
PA-31-350 Chieftain

Serial Numbers Affected:

31-7912091 through 31-8012002  
31-7952174 through 31-8052003

Compliance Time:

Recommended within the next one hundred (100) hours of operation or at the next scheduled maintenance event, whichever occurs first.

Purpose:

It has been determined that in some of the aircraft listed above, AMP Terminals on battery and starter cables may have been installed in such a manner that the crimp crushed and cut the wire strands. This condition, left uncorrected, could lead to separation of the wire from the terminal and loss of starting ability. This service release provides instructions for the inspection of terminals and for the replacement of AMP terminals.

Instructions:

1. Insure Master switch is OFF. Pull starter circuit breaker.
2. Remove bottom cowlings from left and right engines.
3. Refer to attached Sketch. Repeat Instructions 4 to 7, Left and Right.
4. Remove hardware attaching starter cable to starter. Check manufacturer's name on terminal. If Burndy terminal, reinstall hardware and proceed to Instruction 9. If AMP terminal, remove terminal from cable by cutting as close to terminal as possible. Strip insulation 1.125 inches from end of cable. Be sure NO strands are broken.
5. Install Thomas and Betts terminal 60123, Piper Part No. 556 806. For crimping tool information, see NOTES below. Install sufficient length of Thomas and Betts shrinkable insulator HS6-1, Piper Part No. 467 192, over terminal and wire insulation and apply heat (250° - 275°F) to shrink insulator.
6. Attach terminal to starter lug with hardware previously removed.
7. Reinstall bottom engine cowlings.
8. In forward baggage compartment, remove carpet and floor panels.

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Instructions: (continued)

9. Remove hardware attaching starter cables to starter solenoids and inspect terminals. If Burndy terminals, reinstall and proceed to Instruction 10. Replace any AMP Terminal found per Instructions 4 and 5. Reassemble starter cables to solenoids.
10. Refer to attached Sketch. Remove cable 14226-38 between external power solenoid and external power receptacle. If Burndy terminal, reassemble, and proceed to Instruction 11. If AMP Terminal, replace with new cable 71644-05.
11. Remove cable 41530-09 from forward side of right starter solenoid and external power solenoid. If Burndy terminal, reassemble parts and proceed to Instruction 12. If AMP Terminal replace with new cable 71644-09.
12. Remove cable 14226-27 from master contactor to forward side of left starter solenoid. If Burndy terminal, reassemble parts and proceed to Instruction 13. If AMP terminal replace with new cable 71644-04.
13. Remove cable 41530-04 from master contactor to battery. If Burndy Terminal, reassemble parts and proceed to Instruction 14. If AMP terminal, replace with new cable 71644-11.
14. Reinstall access panels and carpet.
15. Make appropriate logbook entry of compliance with this Service Release.

NOTES:

1. All Thomas and Betts terminals 60123 must be crimped with tool T & B Part No. TBM-8 with die catalog No. 13464 or T & B Part No. TBM-5 with die catalog No. 13457. Use die color-coded gold. Contact Thomas and Betts distributor (see attached list) for tool purchase or rental information.
2. If starter leads are too short to reach starter motor lugs after new terminal is installed, lengthen cable by splicing in required length of cable using Thomas and Betts connector 60522 covered with HS-6 Insulator shrunk over the connector. The T & B 60522 connector is not available from Piper and must be procured through a local supplier. T & B connector 60522 must be crimped with tool T & B Part No. TBM-5 with die catalog No. 13457.

Material Required:

1. 600V Aluminum aircraft (AL-1) wire, MIL-W-7072A, Piper Part No. 153 027. This is ordered by the foot as required.
2. HS6-1 Insulator, Piper Part No. 467 192. This is ordered by the foot as required.
3. Thomas and Betts Terminal 60123, Piper Part No. 556 806, as required.
4. Thomas and Betts connector 60522, if required. (Obtain locally.)
5. 71644-04 Cable Assembly, one (1) each as required.

Material Required: (continued)

6. 71644-05 Cable Assembly, one (1) each as required.
7. 71644-09 Cable Assembly, one (1) each as required.
8. 71644-11 Cable Assembly, one (1) each as required.

Availability of Parts:

Your Piper Field Service Facility or a local supplier.

Effectivity Date:

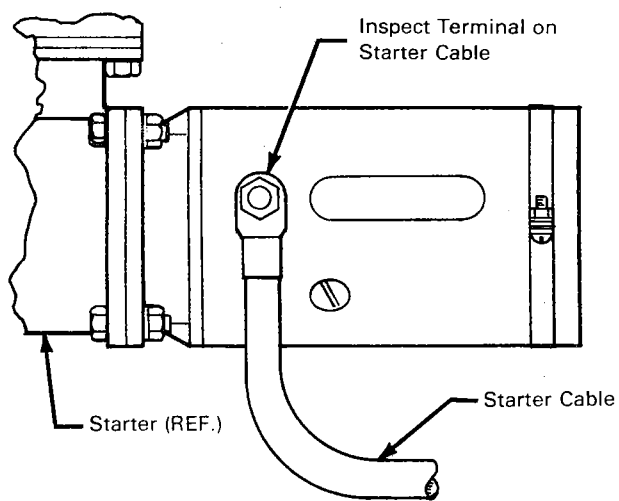
This Service Release is effective upon receipt.

Summary:

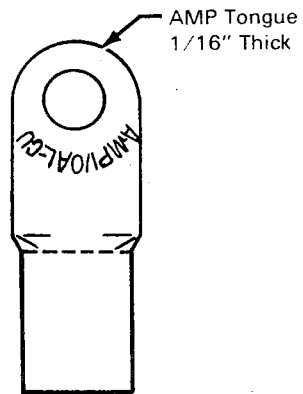
Please contact your Piper Field Service Facility to make arrangements for compliance with this Service Release in accordance with Compliance Time, listed.

Any applicable factory participation will remain in effect for a period of time not to exceed 180 days from the date of this Service Release.

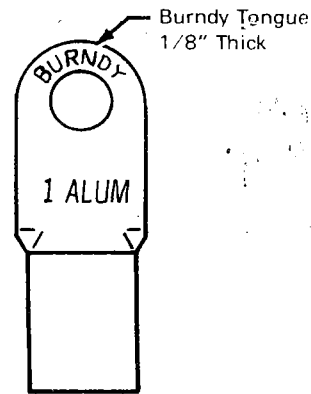
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STARTER CABLE ATTACHMENT DETAIL

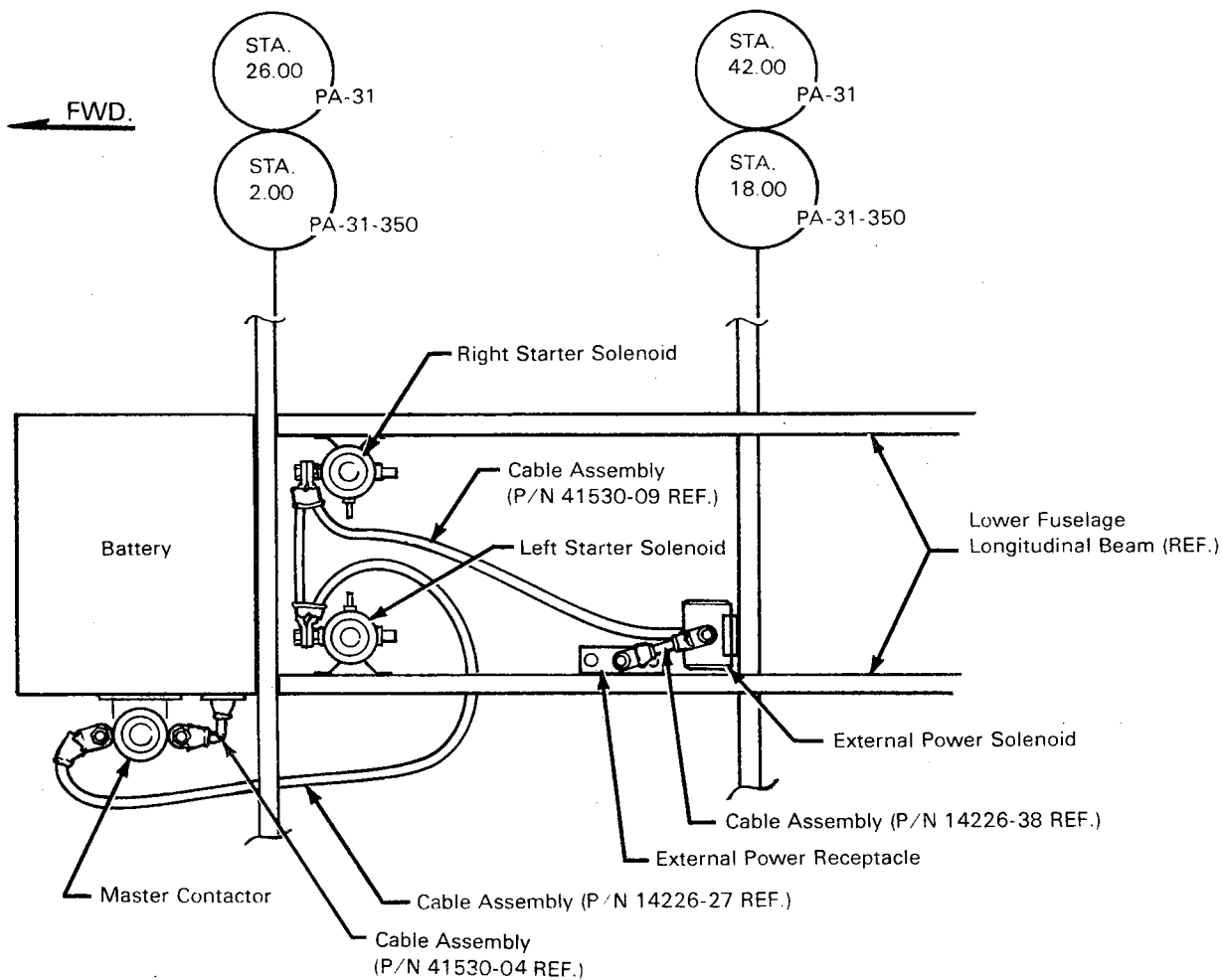


AMP TERMINAL



BURNDY TERMINAL

TERMINAL IDENTIFICATION DETAIL



VIEW LOOKING DOWN AT PERTINENT ELECTRICAL COMPONENTS  
(Located in Fuselage Nose Section)

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P.O. Box 19875, Station "N"  
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9039 Katy Freeway, Suite 340  
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Houston, Texas 77024  
713-461-7652

## T&B/THOMAS & BETTS LTD.-CANADA

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### AUSTRALIA

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P.O. Box 91  
Brookvale 2100, N.S.W.  
Australia  
Tel: (02) 938-1713

### SOUTH AFRICA

Thomas & Betts (SA) Pty. Ltd.  
P.O. Box 27169  
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Tel: 28-8134

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**T&B/Thomas & Betts**

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