



Piper Aircraft Corporation  
Vero Beach, Florida, U.S.A.

# SERVICE *No. 836A* BULLETIN

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\* PIPER CONSIDERS \*  
\* COMPLIANCE MANDATORY \*  
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August 26, 1986

S/M

FAA Approved

Date

(Service Bulletin No. 836A supersedes and voids Service Bulletin No. 836, dated May 21, 1986)

SUBJECT:

Aluminum Wire Inspection/Replacement

REASON FOR REVISION:

To correct Serial Numbers Affected  
and Revise Instructions.

MODELS AFFECTED:

SERIAL NUMBERS AFFECTED:

E-2/J-2 Series Cub  
J-3, NE-1, L-4 Series Cub  
J-4 Series Coupe  
J-5, J-5C, L-14, AE-1, HE-1 Series  
Cub Cruiser  
PA-11 Cub Special  
PA-12 Super Cruiser  
PA-14 Family Cruiser  
PA-15 Vagabond  
PA-16 Clipper  
PA-17 Vagabond  
PA-18 Super Cub  
PA-19 Pacer  
PA-20 Pacer  
PA-22 Tripacer/Colt  
PA-23-150/160 Apache  
PA-23-235 Aztec  
PA-23-250 Aztec  
PA-24-180/250 Comanche  
PA-24-260 Comanche  
PA-24-400 Comanche  
PA-25-150 Pawnee  
PA-25-235 Pawnee  
PA-25-260 Pawnee  
PA-28-140 Cherokee  
PA-28-150/160 Cherokee  
PA-28-151 Warrior  
PA-28-161 Warrior II  
PA-28-180 Cherokee  
PA-28R-180 Arrow  
PA-28-181 Archer II

A11  
A11  
A11  
  
5-01 through 5-1389  
11-01 through 11-1678  
12-01 through 12-4036  
14-01 through 14-523  
15-01 through 15-388  
16-01 through 16-736  
17-01 through 17-215  
18-01 through 18-8309025  
19-01 through 19-03  
20-01 through 20-1121  
22-01 through 22-9848  
23-01 through 23-2046  
27-505 through 27-622  
27-01 through 27-7954121  
24-01 through 24-3687  
24-3642 through 24-6000  
26-01 through 26-148  
25-01 through 25-731  
25-2000 through 25-8056038  
25-4415 through 25-8156024  
28-20001 through 28-7725290  
28-01 through 28-4377  
28-7415001 through 28-7715314  
28-7716001 through 28-8216226  
28-671 through 28-7505259 and 28-E13  
28R-30001 through 28R-7130013  
28-7690001 through 28-8290061

(over)  
ATA: 2400

MODELS AFFECTED: (Cont'd)

PA-28R-200 Arrow/Arrow II  
PA-28R-201 Arrow III  
PA-28-201T Turbo Dakota  
PA-28R-201T Turbo Arrow III  
PA-28RT-201 Arrow IV  
PA-28RT-201T Turbo Arrow IV  
PA-28-235 Cherokee  
PA-28-236 Dakota  
PA-30 Comanche  
PA-31-300 Navajo  
PA-31-310 Navajo  
PA-31-325 Navajo  
PA-31-350 Navajo Chieftain  
PA-31P Pressurized Navajo  
PA-31T Cheyenne/Cheyenne II  
PA-31T1 Cheyenne I  
PA-32-301T Turbo Saratoga  
PA-34-200 Seneca I  
PA-34-200T Seneca II  
PA-34-220T Seneca III  
PA-36-285 Brave  
PA-36-300 Brave  
PA-36-375 Brave  
PA-38-112 Tomahawk  
PA-39 Twin Comanche  
PA-44-180 Seminole  
PA-44-180T Turbo Seminole

SERIAL NUMBERS AFFECTED: (Cont'd)

28R-35001 through 28R-7635545  
28R-7737001 through 28R-7837317  
28-7921001 through 28-7921091  
28R-7703001 through 28R-7803372  
28R-7918001 through 28R-8118082  
28R-7931001 through 28R-8131192  
28-10001 through 28-7710089 and 28-E11  
28-7911001 through 28-8211013  
30-02 through 30-2000  
31-228 through 31-511  
31-05 through 31-8012070  
31-7400990 through 31-8012070  
31-5001 through 31-8052153  
31P-03 through 31P-7730012  
31-7400001 through 31-7920094  
31-7804002 through 31-7904057  
32-8024001 only  
34-7250001 through 34-7450220  
34-7570001 through 34-8170092  
34-8133001 through 34-8233205  
36-7360001 through 36-7660135  
36-7760001 through 36-7960078  
36-7802001 through 36-7902051  
38-78A0001 through 38-82A0122  
39-01 through 39-155  
44-7995001 through 44-8195026  
44-8107001 through 44-8207020

COMPLIANCE TIME:

At the next regularly scheduled inspection event, but not to exceed fifty (50) hours of operation.

PURPOSE:

Field reports have been received of corrosion between the aluminum terminal and aluminum wire at the battery positive post, resulting in overheating of the wire due to high electrical resistance. If this condition exists and is left uncorrected, excessive heat build-up could result in an electrical fire. Corrosion and resulting high resistance can also occur in the battery to ground, battery to master relay, master relay to starter solenoid, starter solenoid to starter and engine return ground cables.

INSTRUCTIONS:

1. On each affected aircraft, locate and identify the following cables:

- A. Battery to ground
- B. Battery to master relay
- C. Master relay to starter solenoid
- D. Starter solenoid to starter
- E. Engine return ground cable (engine to airframe)

INSTRUCTIONS: (Cont'd.)

2. Inspect the cables listed above for the presence of aluminum wire.
3. If aluminum wire is found, replace the affected cable(s) with copper cable(s).

NOTE: Replacement cables for AL-1 wire shall be fabricated of AN-4 copper wire; for AL-00 wire, fabricate from AN-2 copper wire, using copper wire listed below, all wire recommended is of 150 C. rating.

Copper Wire

Mil-W-22759/4	Mil-W-22759/41
Mil-W-22759/8	Mil-W-81044/5
Mil-W-22759/13	Mil-W-81044/6
Mil-W-22759/16	Mil-W-81044/8
Mil-W-22759/34	Mil-W-81044/9

Use appropriate terminals listed below or equivalent.

<u>AN-2</u>	<u>AMP</u>	<u>AMP</u>	<u>Mil. Spec.</u>
1/4	51982	320383	MS20659-113
1/4	51982-1	322870	MS20659-147
5/16	51982-2	321600	MS20659-114
1/4	324034	-	MS20659-113 Requires 90° bend
3/8	35249	-	MS20659-114 Requires 90° bend
3/8	321600	-	MS20659-114
1/2	51982-3	321602	MS20659-133

  

<u>AN-4</u>	<u>AMP</u>	<u>AMP</u>	<u>Mil. Spec.</u>
1/4	321671	-	MS25036-123
5/16	322010	-	MS25036-124
3/8	322898	-	MS25036-125 Requires 90° bend
3/8	322011	-	MS25036-125
1/4	33469	-	MS20659-111
5/16	33470	-	MS20659-132
3/8	33471	-	MS20659-112
3/8	324102	-	MS25036-125 Requires 90° bend
3/8	321121	-	MS25189-115

CAUTION: Use of proper crimping tool for copper cable/terminal combination utilized is required.

MATERIAL REQUIRED:

To be determined by inspection.

(over)

AVAILABILITY OF PARTS:

Your Piper Field Service Facility or local procurement.

EFFECTIVITY DATE:

This Service Bulletin is effective upon receipt.

SUMMARY:

Please contact your Piper Field Service Facility to arrange for compliance with this Service Bulletin in accordance with Compliance Time indicated.

NOTE: If you are no longer in possession of this aircraft, please forward this information to the present owner.