



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

SERVICE No. 921 BULLETIN

* PIPER CONSIDERS *
* COMPLIANCE MANDATORY *
* August 15, 1989 *

Date

SUBJECT:

Aileron Inspection

MODELS AFFECTED:

PA-46-310P Malibu
PA-46-350P Malibu Mirage

SERIAL NUMBERS AFFECTED:

46-8408001 through 46-8608067
4608001 through 4608140
4622001 through 4622052

COMPLIANCE TIME:

To coincide with the next regularly scheduled inspection event but not to exceed one-hundred (100) hours time in service.

PURPOSE:

It has been determined that cracks may originate at the aileron balance weight attachment screw points. These cracks may appear at one or more of the four attachment screws and should the crack extend across all four attach screws security of the aileron balance weight may be in jeopardy.

This Service Bulletin provides the necessary instructions to inspect left and right ailerons for the condition described above, and announces the availability of an Aileron Balance Weight Doubler to reinforce the affected areas.

APPROVAL:

The technical contents of this Service Bulletin have been approved by the FAA.

INSTRUCTIONS:

1. Locate the aileron balance weights on the left and right ailerons. This can be done by looking just inboard of the outboard hinge on each aileron and locating the four "phillip's-head" screws along the leading edge seam. These four screws retain the balance weight. It will not be necessary to remove the aileron to complete these instructions.
2. Examine the area around the four attachment screws. Should obvious cracks exist, proceed to Step 4. If no cracks appear to be present, remove the aileron balance weight attachment screws one at a time and inspect the surrounding area using a 10X magnifying glass.

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INSTRUCTIONS: (Cont'd)

3. If no cracks are found, install one each, Aileron Balance Weight Doubler, Piper Part Number 89639-3 to left and right ailerons. When installing the doubler ensure that at least one attachment screw is loosely in place to prevent the balance weight from becoming separated inside the aileron. Be sure to include only one AN960-8 washer beneath the head of each screw. Tighten screws. Check for clearance of screw heads by moving each aileron up and down their full travel. Paint doubler as required. Weight of this doubler is negligible and will not require balancing of the aileron. If entire aileron is painted, balancing will be necessary.
4. If cracks are found, replace the aileron with (one side or both) a right aileron, Piper Part Number 83160-05, or a left aileron, Piper Part Number 83160-04.

NOTE:

If aileron is replaced, refer to the appropriate chapter of the Maintenance Manual for removal, installation, rigging, and balance.

5. Upon successful completion of this Service Bulletin make an appropriate logbook entry of compliance.

MATERIAL REQUIRED: Two (2) each, Aileron Balance Weight Doubler, Piper Part Number 89639-03. If required by inspection, one (1) each, Left Aileron, Piper Part Number 83160-04, one (1) each, Right Aileron, Piper Part Number 83160-05, and eight (8) each, AN960-8 Washers, Piper Part Number 407-563.

AVAILABILITY OF PARTS: Your Piper Field Service Facility.

SUMMARY: Please contact your Factory Authorized Piper Field Service Facility to make arrangements for compliance with this Service Letter in accordance with the Compliance Time indicated, and to obtain information concerning any applicable factory participation.

Special pricing is in effect for Aileron Balance Weight Doubler, Piper Part Number 89639-03 and if required, Left Aileron, Piper Part Number 83160-04, and Right Aileron, Piper Part Number 83160-05, for 180 days from the effective date of this Service Bulletin.

NOTE: If you are no longer in possession of this aircraft, please forward this information to the present owner/operator and notify the factory of address/ownership corrections. Changes should include the aircraft model, serial number, and the current owner's name and address.

Corrections/Changes should be directed to:

Piper Aircraft Corporation
Attn: Customer Services
P.O. Box 1328
Vero Beach, Florida 32961-1328



Piper Aircraft, Inc.
2926 Piper Drive
Vero Beach, Florida, U.S.A. 32960

SERVICE No. 1190B BULLETIN

PIPER CONSIDERS COMPLIANCE MANDATORY

Date: January 22, 2009

(S)

SB 1190B adds PA-46-500TP aircraft serial numbers 4697364 through 4697369 and PA-46R-350T aircraft serial numbers 4692060 through 4692066.

SUBJECT:

AILERON QUADRANT INSPECTION

MODELS AFFECTED:

PA-46-310P Malibu

PA-46-350P Mirage
PA-46-500TP Meridian
PA-46R-350T Matrix

SERIAL NUMBERS AFFECTED:

46-8408001 through 46-8408087
46-8508001 through 46-8508109
46-8608001 through 46-8608067
4608001 through 4608140
4622001 through 4622200; 4636001 through 4636445
4697001 through 4697369
4692001 through 4692066

COMPLIANCE TIME:

To coincide with next regularly scheduled maintenance event, but not to exceed the next one hundred (100) hours time in service.

APPROVAL:

The technical content of this Service Bulletin has been shown to comply with the applicable Federal Aviation Regulations and is FAA approved.

PURPOSE:

It has been discovered that the cable guards associated with the left and right Aileron Quadrants (located on the aft side of the forward pressure bulkhead) may not ensure positive retention of the aileron control cable for all situations. Left uncorrected, this condition could allow the aileron control cable to move to the opposite side of the cable guard, resulting in roughness and/or friction during roll-control inputs from the control wheel.

This Service Bulletin provides clearance dimensions between the cable guard and the aileron quadrant, along with instructions for reworking the cable guard, if necessary, to achieve these dimensions.

INSTRUCTIONS:

1. Locate the Aileron Quadrant Assembly, which is mounted on the aft face of the forward pressure bulkhead, coaxial with the control column tube, both left and right sides. Refer to Figure 1 for clarification (right side shown, left side opposite).
2. Verify that aileron cables are rigged properly, and are nested into the groove of the Aileron Quadrant Assembly (refer to Detail A), in accordance with the standard practices and procedures described in the "Flight Controls" chapter of the Maintenance Manual. Measure clearances between the 82858-002 Cable Guard and the following components: 82857-004 Angle (LH only), 82857-005 Angle (RH only), 85212-002 Aileron Quadrant Assembly (LH only), and 85213-002 (RH only), as shown in SECTION B-B. Rotation of the control wheel will be needed to align the 82857 Angle under the 82858 Cable Guard.

(OVER)

ATA: 2710

INSTRUCTIONS: (Continued)

3. Hand form the 82858-002 Cable Guard, as needed to achieve the clearances shown in SECTION B-B, using a sheet metal bend radius of at least .16 inches (Note: 82858-002 Cable Guard is fabricated from .040 thick 2024-T3 clad aluminum sheet).
4. If the 82858-002 Cable Guard becomes damaged during rework, order and install a replacement Cable Guard. During installation, ensure that clearances conform to SECTION B-B, and install on aft face of forward pressure bulkhead with quantity two (2) NAS1738B rivets (rivet code AAO). Seal rivets in accordance AC 43.13-1B, Change 1, Chapter 6, Section 8.
5. Rotate the control wheels through the full range of travel and verify that there is no roughness and/or friction, binding or chafing. Examine motion of Aileron Quadrant Assembly for proper clearances at all positions.
6. Make a logbook entry indicating compliance with this Service Bulletin.

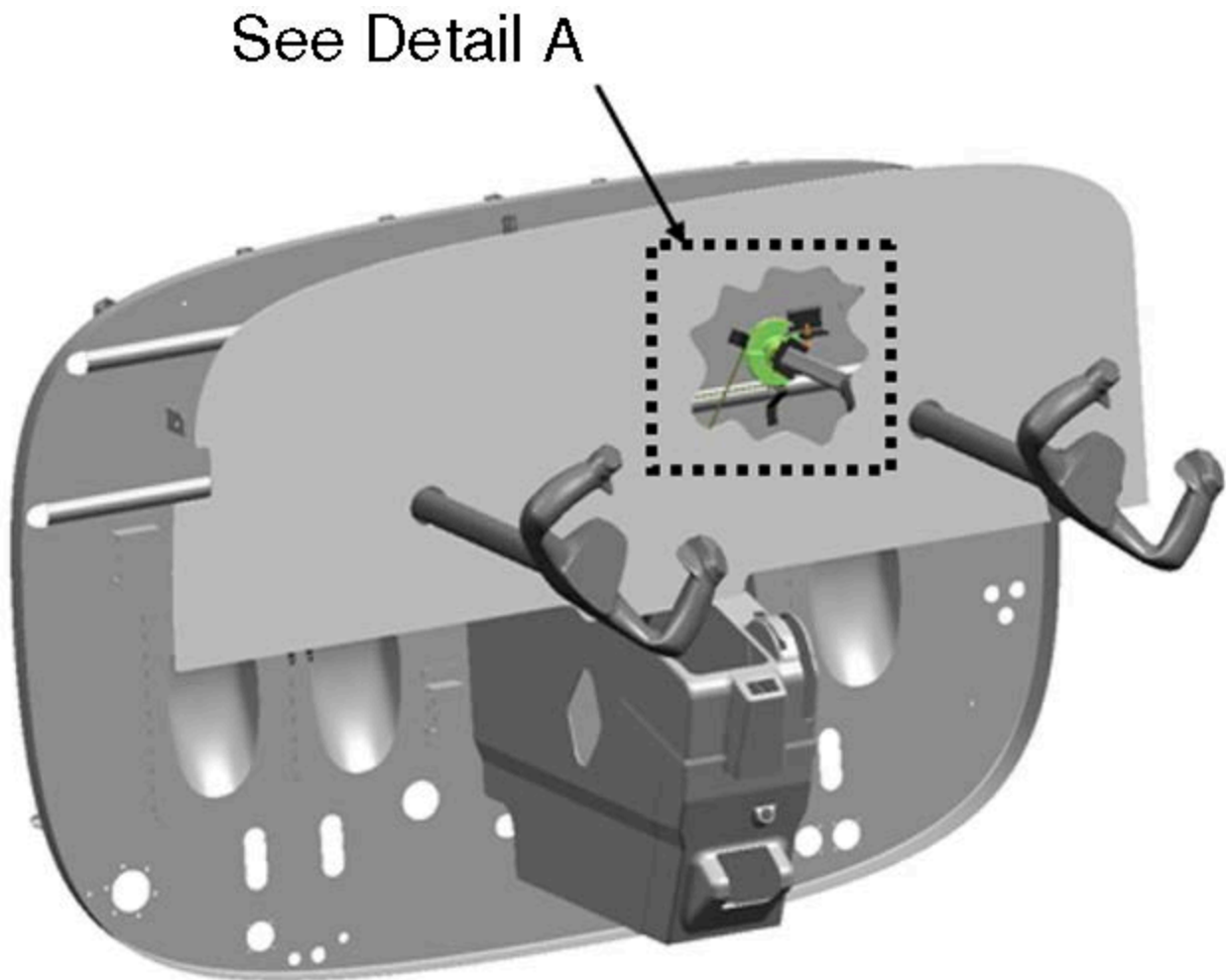
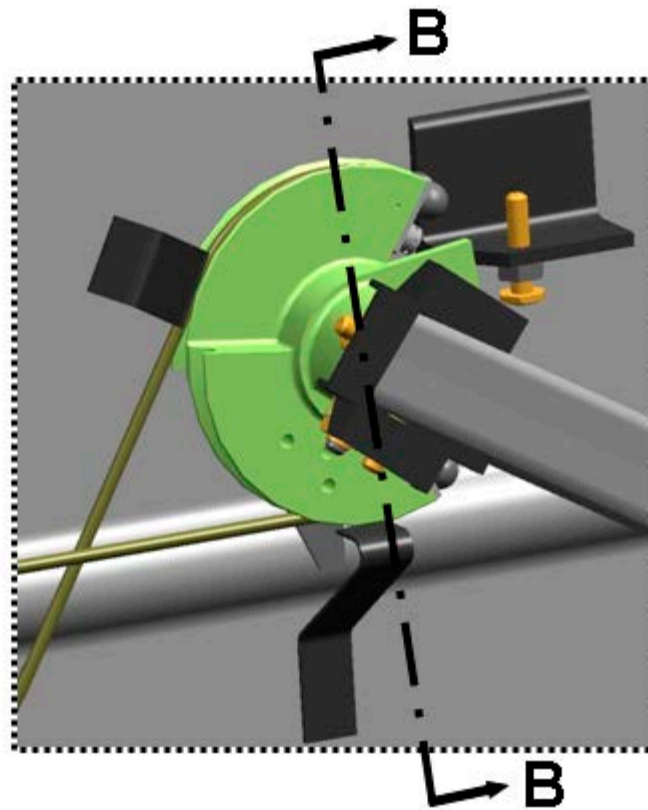
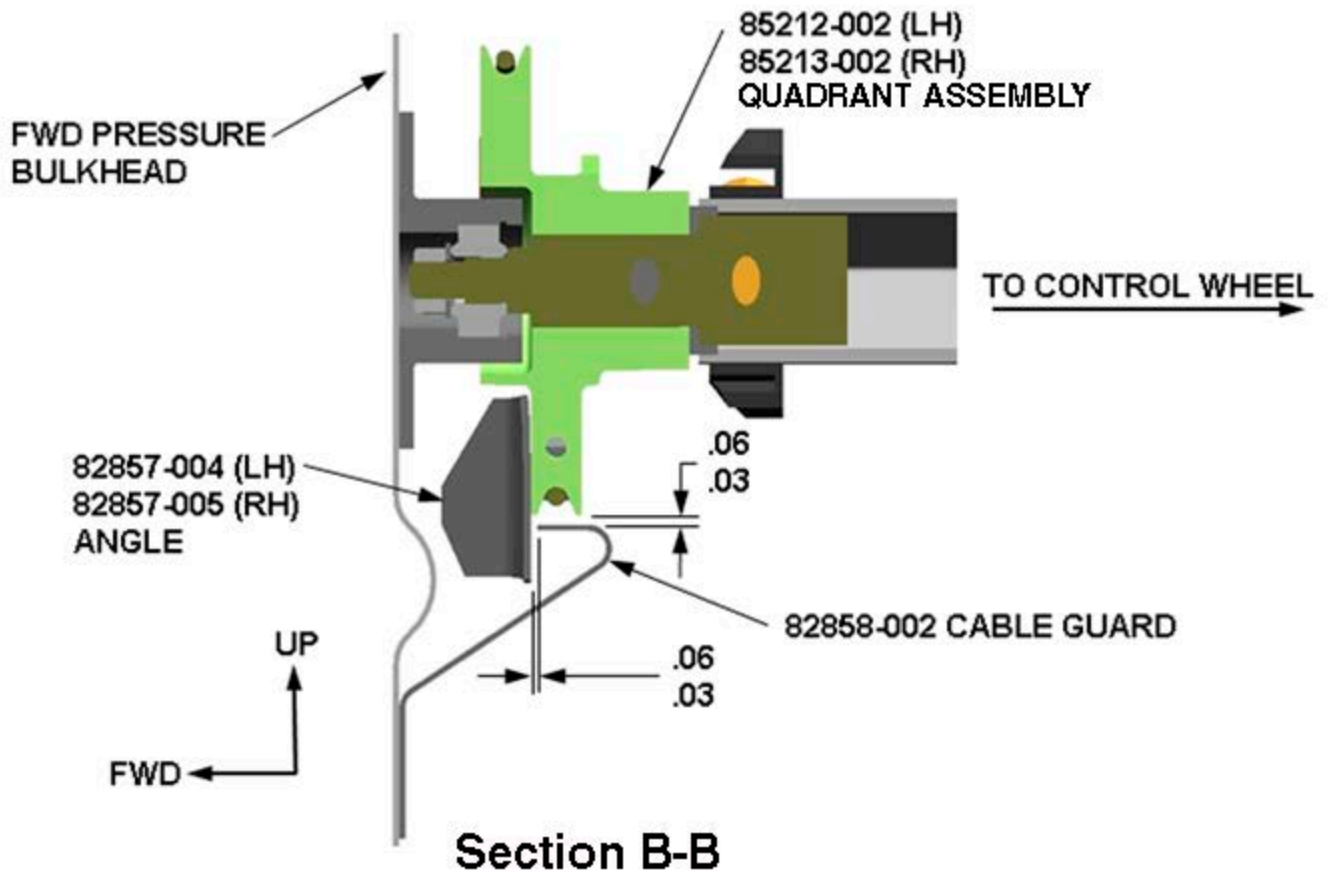


Figure 1



Detail A



Section B-B

MATERIAL REQUIRED:

<u>Qty</u>	<u>Piper Part #</u>	<u>Nomenclature</u>
2 (on condition)	82858-002	Cable Guard

AVAILABILITY OF PARTS: Your Piper Service Facility.

EFFECTIVITY DATE: This Service Bulletin is effective upon receipt.

SUMMARY: Applicable Factory Participation is limited to new aircraft in warranty at the time of compliance. Factory Participation will remain in effect for a period of time not to exceed 180 days from the date of this Service Bulletin.

Please contact your Factory Authorized Piper Service Facility to make arrangements for compliance with this Service Bulletin in accordance with the compliance time indicated.

NOTE: If you are no longer in possession of this aircraft, please forward this information to the present owner/operator and notify the factory of address/ownership corrections. Changes should include aircraft model, serial number, current owner's name and address.

Corrections and/or changes should be directed to:

PIPER AIRCRAFT, INC.
Attn: Customer Service
2926 Piper Drive
Vero Beach, FL 32960



Piper Aircraft, Inc.
2926 Piper Drive
Vero Beach, Florida, U.S.A. 32960

SERVICE NO. 1131 LETTER

Date: August 4, 2010

(S)

MAINTENANCE ALERT

SUBJECT:

**AILERON SECTOR BEARING LUBRICATION
REQUIREMENTS**

MODELS AFFECTED:

PA-46-310P Malibu

PA-46-350P Mirage

PA-46R-350T Matrix
PA-46-500TP Meridian

SERIAL NUMBERS AFFECTED

46-8408001 through 46-8408087;
46-8508001 through 46-8508109;
46-8608001 through 46-8608067;
4608001 through 4608140
4622001 through 4622200;
4636001 and Up
4692001 and Up
4697001 and Up

COMPLIANCE TIME:

To occur at every one hundred (100) hours of operation, or annually, whichever occurs first.

APPROVAL:

The technical content of this Service Letter has been shown to comply with the applicable Federal Aviation Regulations and is FAA approved.

PURPOSE:

A field report was received of corrosion in an Aileron Sector needle bearing, leading to difficulty of operation during flight. Proper lubrication procedures are critical for prolonging the service life of all aircraft.

This Service Letter clarifies the lubrication requirements of the Aileron Sector. All affected Maintenance Manuals will be updated to include the content of this Service Letter at the next revision.

INSTRUCTIONS:

Locate both Aileron Sectors, one on each wing, as shown in Figure 1. (See also Lubrication Charts, 12-20-00, of the appropriate maintenance manual.)

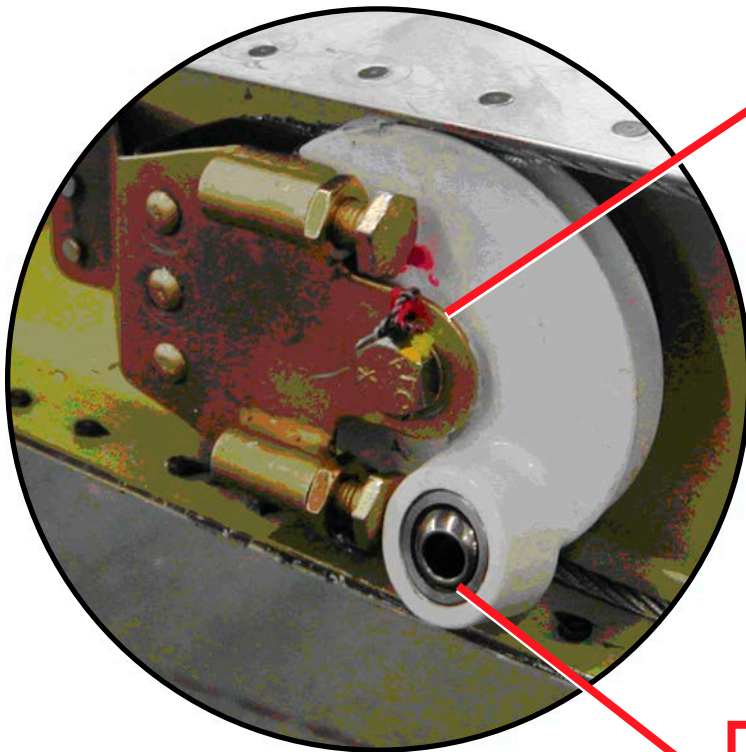
1. Clean exterior of Aileron Sector needle bearings with a quick-drying solvent, then apply "LUBRICATING OIL, GENERAL PURPOSE, LOW TEMPERATURE" conforming to MIL-PRF-7870C.
2. Wipe the Self Aligning Bearing area clean of old grease, oil, dirt, etc., then apply "DRY LUBRICANT conforming to MIL-L-60326.

(OVER)

ATA: 5755



LEFT HAND SHOWN, RIGHT HAND OPPOSITE



NEEDLE BEARING
Apply Lubricating Oil,
General Purpose, Low
Temperature
conforming to
MIL-PRF-7870C

SELF ALIGNING BEARING
Apply Dry Lubricant
conforming to
MIL-L-60326

VIEW A

(AILERON REMOVED FOR CLARITY)

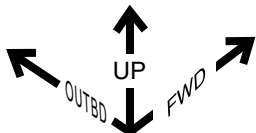


Figure 1
Aileron Sectors to be Lubricated

MATERIAL REQUIRED: A/R* MIL-PRF-7870C Lubricating Oil, General Purpose, Low Temperature
A/R* MIL-L-60326 Dry Lubricant
* Quantity is as required. Procure locally.

AVAILABILITY OF PARTS: N/A

EFFECTIVITY DATE: This Service Letter is effective as of release date.

SUMMARY: N/A

Please contact your Factory Authorized Piper Service Facility to make arrangements for compliance with this Service Letter in accordance with the compliance time indicated.

NOTE: Please notify the factory of any address/ownership corrections. Changes should include aircraft model, serial number, current owner's name and address.

Corrections and/or changes should be directed to:

PIPER AIRCRAFT, INC.
Attn: Customer Service
2926 Piper Drive
Vero Beach, FL 32960