



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

SERVICE *No. 1060* BULLETIN

PIPER CONSIDERS COMPLIANCE MANDATORY

Date: May 15, 2001

(S)

SUBJECT:

Brake Pedal Binding

MODELS AFFECTED:

PA-46-310P Malibu

PA-46-350P Mirage

PA-46-500TP Meridian

SERIAL NUMBERS AFFECTED:

46-8408001 and up,
4608001 and up
4622001 and up,
4636001 through 4636313
4697001 through 4697055

COMPLIANCE TIME:

At the next regularly scheduled maintenance event, but not to exceed the next twenty five (25) hours time in service.

APPROVAL:

The alteration as specified in the instructions section 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 pin that attaches the brake master cylinder to the rudder pedals may be restricted in its movement, due to the installation of a spring washer, causing the brake pedals to bind and not fully release pressure to the brake system. This Service Bulletin provides instructions for the removal of the spring washer.

This condition, brake pedal binding, may result in ground steering to be inconsistent.

INSTRUCTIONS:

(Refer to Figure 1.)

1. Remove the attach pin and related hardware that attaches the brake master cylinder to the rudder pedal (4 locations).
2. Discard the spring washer and inspect the remaining hardware for condition and replace with new, if required.
3. Reinstall the attach pin and hardware without the spring washer.
4. Make a logbook entry indicating compliance with this Service Bulletin.

(OVER)

ATA: 3241

MATERIAL REQUIRED: N/A

AVAILABILITY OF PARTS: Your Piper Field 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/changes should be directed to:

THE NEW PIPER AIRCRAFT, INC.
Attn: Customer Care
2926 Piper Drive
Vero Beach, FL 32960

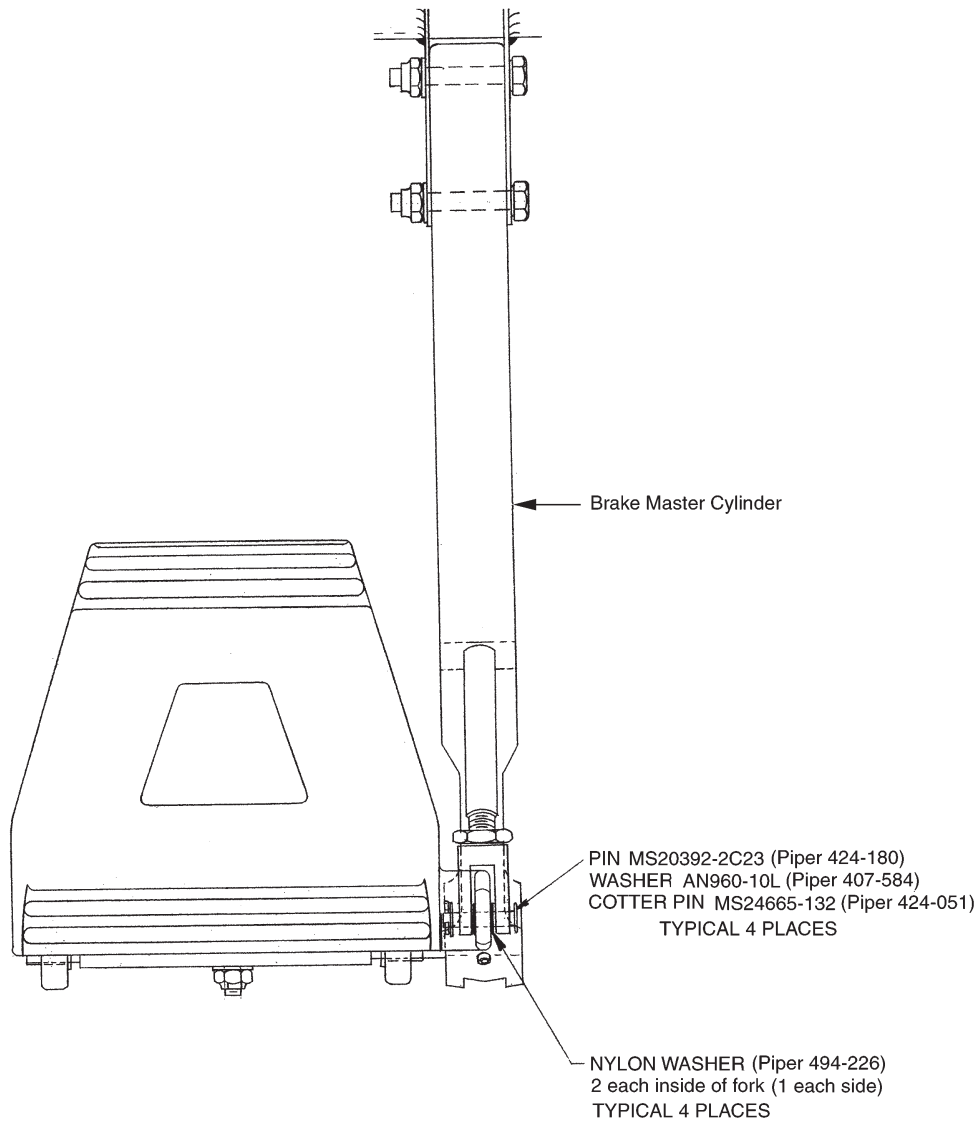


Figure 1
Brake Master Cylinder to Rudder Pedal Attach Pin Installation
(Shown with the spring washer removed)



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SERVICE **No. 1075A** BULLETIN

PIPER CONSIDERS COMPLIANCE MANDATORY

Date: May 5, 2003

(S)

SB 1075A adds the PA-46-310P aircraft to SB 1075 Effectivity. All warranty aircraft that were originally covered under SB 1075 were required to have been completed within 180 days following the issuance of SB 1075. There is no warranty available under SB 1075A.

SUBJECT:

MODIFICATION OF STEERING HORN

MODELS AFFECTED:

PA-46-310P Malibu

PA-46-350P Mirage

SERIAL NUMBERS AFFECTED:

46-8608001 through 4608140

4622001 through 4622200

4636001 through 4636313

COMPLIANCE TIME:

To coincide with next regularly scheduled maintenance event, but not to exceed the next one hundred (100) hours time in service. (For Warranty eligibility, see the Summary section of this document.)

APPROVAL:

The alteration as specified in the instructions section 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 when the aircraft is being towed (full left turn), the steering horn may contact and damage the engine mount tube located in the vicinity of the Nose Landing Gear (NLG).

INSTRUCTIONS:

1. Jack up the airplane per the Maintenance Manual. Gear is to be clear of the floor.
2. Disconnect both nose gear doors.
3. Retract the landing gear.
4. Trim the steering horn (P/N 85154-002) to incorporate the 0.25 radius as illustrated in Figure 1, (re-identify to P/N 85154-012) or replace the steering horn with a new steering horn, P/N 85154-012.
5. Prime and paint area in accordance with the Aircraft Maintenance Manual Chapter 51-00-00, paragraph 4. Corrosion Control. Priming and painting is not required for replacement with a new unit.
6. Inspect the engine mount for damage, pay particular attention to the area surrounding the nose gear steering horn. Repair any damage in the vicinity of steering horn per AC43-13. All welding to be done by a certified welder.
7. Reconnect both nose gear doors.
8. Swing the gear to verify proper function of system. Verify the gear and/or steering horn does not contact the engine mount or any other structure.
9. Make an appropriate log book entry indicating compliance with this Service Bulletin.

(OVER)

ATA: 3251

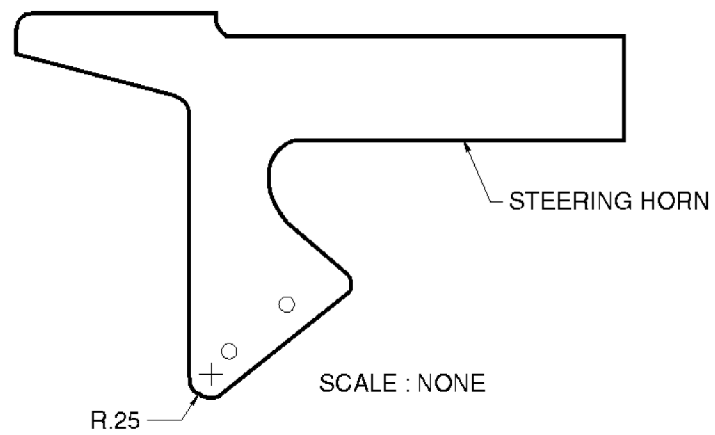


Figure 1
Steering Horn

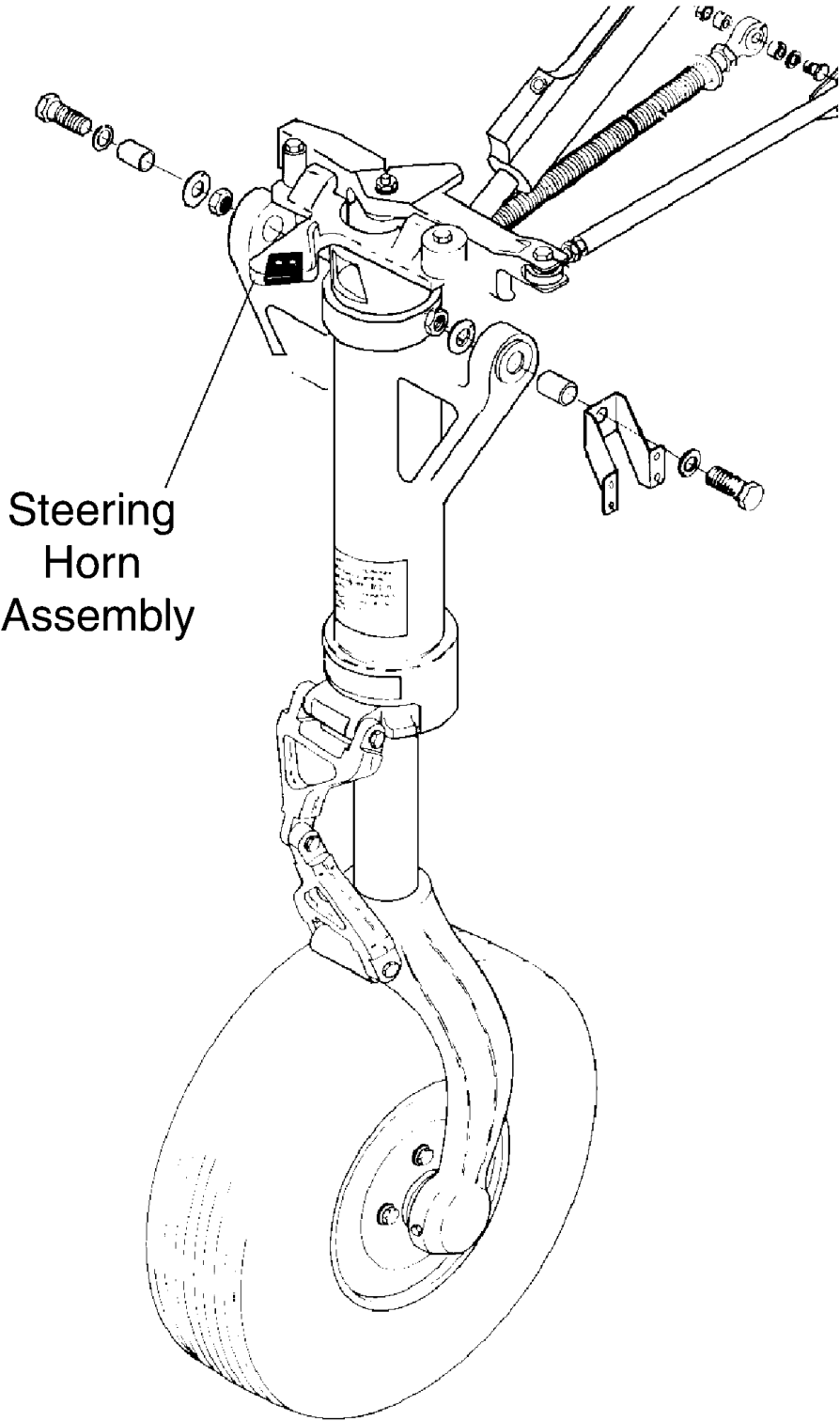


Figure 2
Nose Gear

MATERIAL REQUIRED: One (1) each, NLG Steering Horn Assembly, Piper P/N 85154-012, per aircraft, if replacement with a new unit is elected verses performing the repair.

AVAILABILITY OF PARTS: Your Piper Field Service Facility.

EFFECTIVITY DATE: This Service Bulletin is effective upon receipt.

SUMMARY: There is no Warranty eligibility on 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/changes should be directed to:

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SERVICE NO. 1103F BULLETIN

PIPER CONSIDERS COMPLIANCE MANDATORY

Date: September 1, 2015

(S)

Service Bulletin (SB) 1103F supersedes SB 1103E in its entirety. Aircraft that have previously complied with SB 1103E are in compliance with SB 1103F.

SUBJECT:

ENGINE MOUNT INSPECTION

REASON FOR REVISION:

SB 1103F adds a note specifying which personnel are qualified to do the fluorescent penetrant inspection, in accordance with FAA requirements.

MODELS AFFECTED:

PA-46-310P Malibu

PA-46-350P Mirage

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 4636620

4692001 through 4692207

COMPLIANCE TIME:**Part I. Inspection**

- For all PA-46-310P Malibu airplanes:
Upon reaching 850 hours time in service on the engine mount, initial inspection is to coincide with the next regularly scheduled maintenance event. Thereafter, compliance is accomplished with a recurring inspection not to exceed 100 hours time in service.
- For PA-46-350P Mirage and PA-46R-350T Matrix airplanes with engine mount P/N 89137-002, 89137-041 or 89137-042 installed:
Upon reaching 200 hours time in service on the engine mount, initial inspection is to coincide with the next regularly scheduled maintenance event. Thereafter, compliance is accomplished with a recurring inspection not to exceed each 100 hours time in service.

NOTE: For PA-46-350P Mirage and PA-46R-350T Matrix models only, Piper has developed a corrective action to eliminate the recurring inspection requirement, whether or not a crack has been discovered. If the engine mount on an affected PA-46-350P or PA-46R-350T model is replaced with P/N 89137-043 (Part II), the repetitive inspection requirement is eliminated.

Part II. Replacement

If cracks are found during the Inspection in Part I, the cracked engine mount is to be replaced.

APPROVAL:

The engineering aspects of this service document have been shown to comply with the applicable Federal Aviation Regulations and are FAA approved.

PURPOSE:

Cracks may develop in the area of the nose gear actuator attach feet on the engine mount (see Figure 1). This condition can occur when the nose landing gear is subjected to excessive loads due to hard landings, rough field operations, excessive speed turns, improper airplane towing (sudden, aggressive starts and stops), or other improper operations.

NOTE: If an airplane is subjected to the improper operations described above at any time, the inspection described in this service bulletin must be performed prior to next flight.

Part I of this service bulletin requires a repetitive inspection of the engine mount.

Part II of this service bulletin requires replacement of the engine mount.

INSTRUCTIONS:

NOTE: This service bulletin does not cancel or alter any Unscheduled Maintenance Checks in section 5-50-00 of applicable airplane maintenance manuals.

Part I. Inspection

NOTE: This fluorescent penetrant inspection shall be performed only by personnel with "Level I Special" qualification or higher, as described in Advisory Circular 65-31B, "Training, Qualification, and Certification of Nondestructive Inspection Personnel."

1. Clean the engine mount actuator attach feet area.
2. Completely remove all of the paint or Dinitrol AV8 and AV30, if the paint was previously removed and covered with Dinitrol AV8 and AV30, from the inspection area (refer to Figure 1).

NOTE: Paint must be removed using chemical processes only. The use of abrasives or other mechanical methods to remove the paint will hide the existence of any cracks, making an accurate inspection impossible. Use isopropyl alcohol to wipe clean the area of the engine mount where paint was removed.

3. Perform fluorescent penetrant inspection of the nose gear actuator attach feet for cracks per AC 43.13-1B, Chapter 5, Section 5. Inspect the surfaces identified in Figure 1, with specific emphasis on welded areas.
4. If a crack is discovered, the engine mount must be replaced prior to further flight (refer to Table 1).
5. If no cracks are found, continue the repetitive inspection per the compliance time above.
6. Clean the feet and apply a two-coat corrosion prevention compound (CPC) to the area where the paint was removed. This two-coat CPC consists of Dinitrol/Ardrox AV8 as a primer coating and (after the AV8 has dried) Dinitrol/Ardrox AV30 as a top coating.
7. Make an appropriate logbook entry of compliance with this service bulletin for each repetitive inspection.

Part II. Replacement

1. If cracks are found on the engine mount, order the appropriate replacement engine mount found in Table 1, and hardware, as required.
2. Install the new engine mount according to procedures in the applicable Piper airplane maintenance manual. For PA-46-350P Mirage or PA-46R-350T Matrix model airplanes only: fasten the aft end of the nose gear actuator to the engine mount using the hardware arrangement shown in Figure 2. Torque nut according to requirements in section 91-10-00 of the applicable Piper airplane maintenance manual. At all other locations, hardware in serviceable condition may be reused.
3. Reinstall nose gear according to instructions in the applicable Piper airplane maintenance manual. Confirm that the nose gear conforms to the following requirements:
 - Adjust length of nose gear actuator according to maintenance manual instructions.
 - With the landing gear in the down and locked position and airplane weight on the wheels, verify that the clearance between the steering rollers and the steering arm is between 0.010 and 0.030 inches. This clearance requirement applies to both rollers at the same time.

NOTE: As the engine may have been removed for a number of reasons, it is the responsibility of the installation agent to assure the proper re-installation, functional checks and operational suitability of the engine prior to returning the airplane to service. Refer to the applicable engine manufacturer's maintenance manual and Piper airplane maintenance manual in the appropriate chapters.

4. For PA-46-350P Mirage or PA-46R-350T Matrix model airplanes only; in the weight and balance record of the Pilot's Operating Handbook, revise the "weight and balance" as follows:

ADD 1.25 LBS AT ARM 78.00.

5. Make a logbook entry documenting compliance with Part II of this service bulletin.

TABLE 1
REPLACEMENT ENGINE MOUNTS

Aircraft Model	Engine Mount P/N	Recurring Inspection Required?
PA-46-310P	84010-002	YES
PA-46-350P	89137-043	NO
PA-46R-350T	89137-043	NO

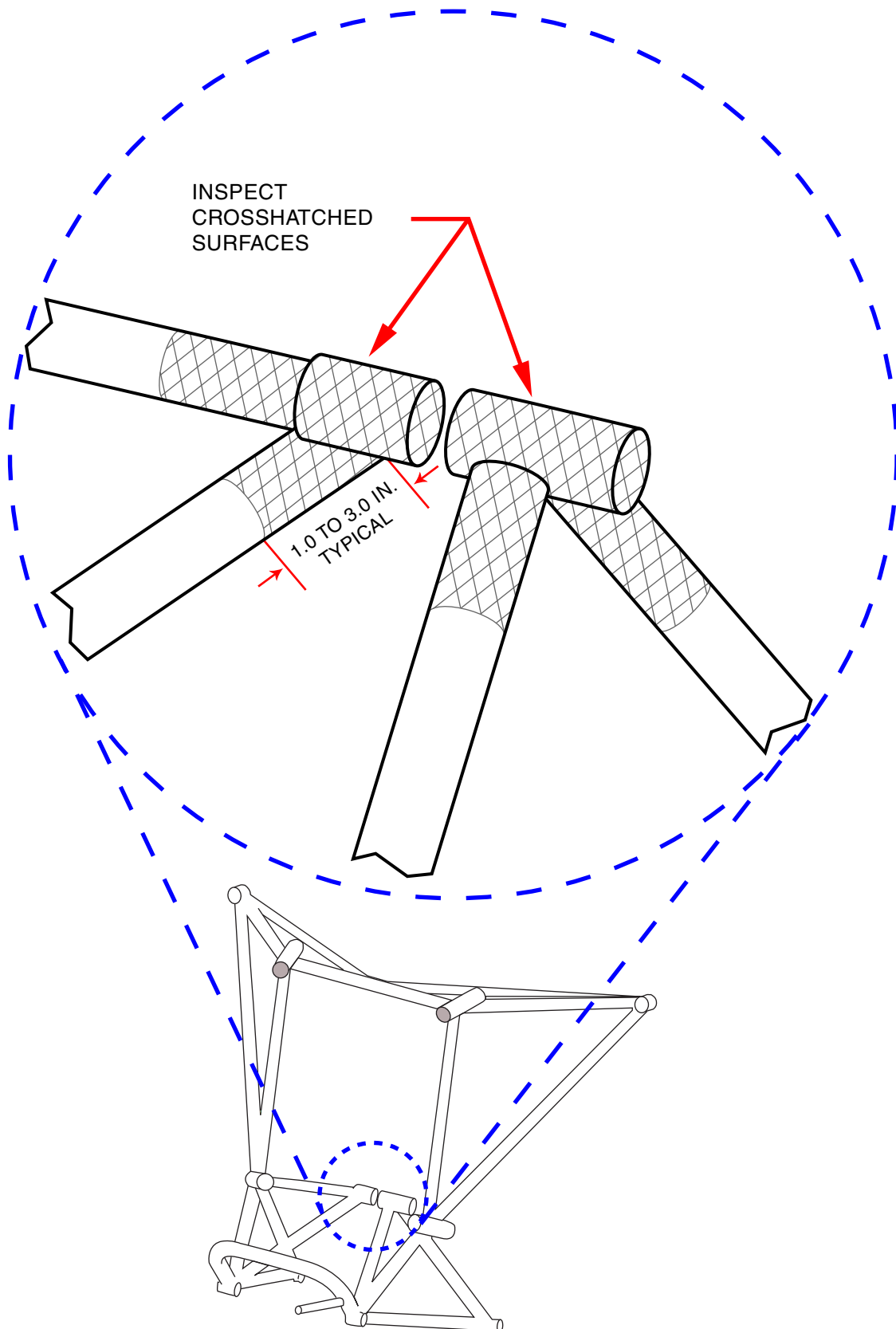
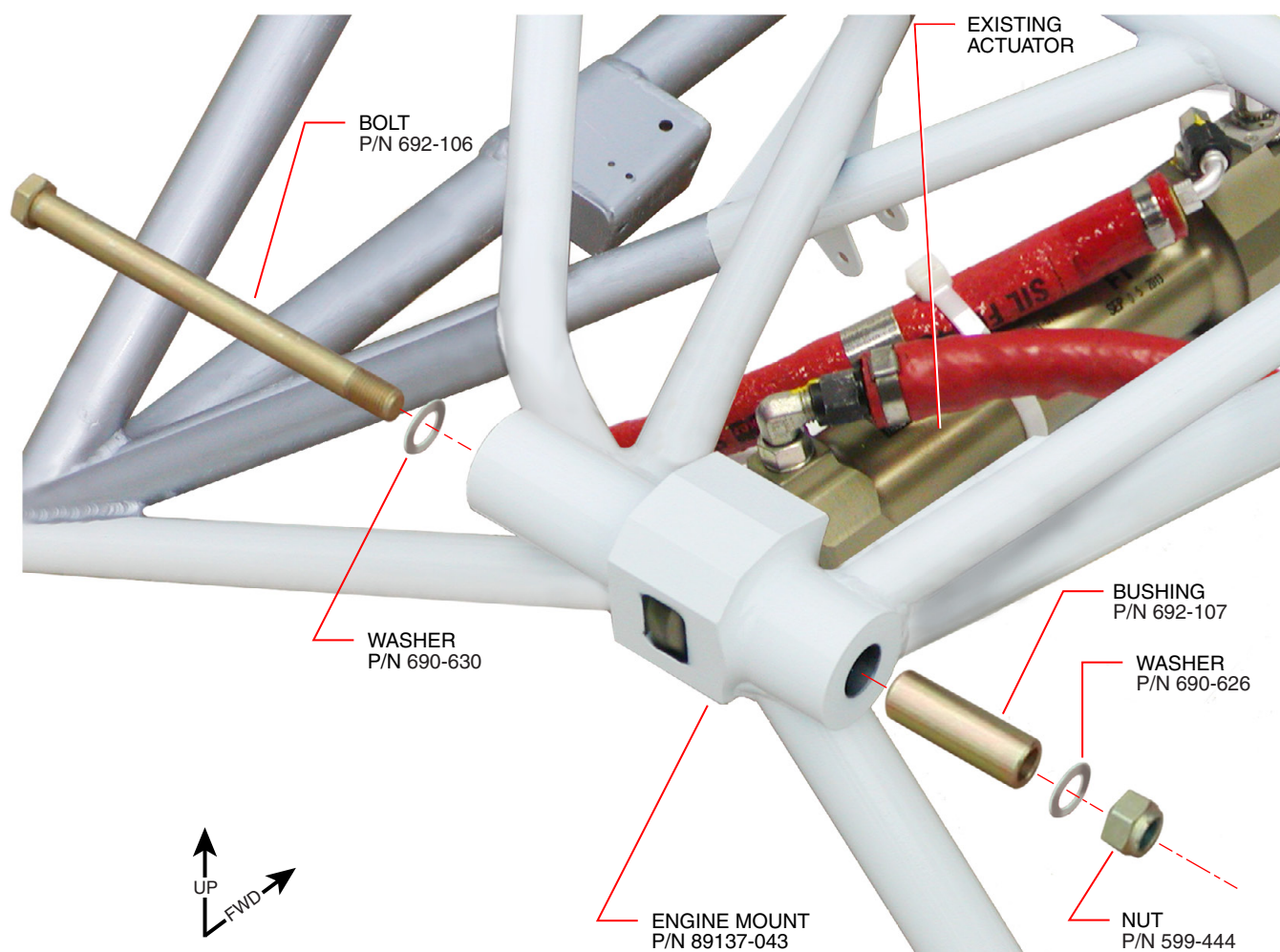


Figure 1
Engine Mount Inspection Areas

**Figure 2**

Engine Mount Hardware Installation - P/N 89137-043 Only

MATERIAL REQUIRED:

One (1) each engine mount, per aircraft, on condition. For P/N 84010-002, existing hardware in serviceable condition may be used on replacement engine mount.

84010-002 PA-46-310P Malibu

89137-043 PA-46-350P Mirage and PA-46R-350T Matrix

Hardware for 84010-002 (PA-46-310P)

Piper P/N	Part	Nomenclature
401-509	Bolt	AN7-15A
599-444	Nut	MS21044N7
690-630	Washer	NAS1149F0763P

Hardware for 89137-043 (PA-46-350P/PA-46R-350T)

Piper P/N	Part	Nomenclature
692-106	Bolt	AN7-55A
692-107	Bushing	NAS73-7E114
599-444	Nut	MS21044N7
690-626	Washer	NAS1149F0732P
690-630	Washer	NAS1149F0763P

AVAILABILITY OF PARTS:

Your Factory Authorized Piper Service Facility

EFFECTIVITY DATE:

This service bulletin is effective upon receipt.

SUMMARY:

Applicable factory participation is limited to new aircraft in warranty as of the release 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: Please notify the factory of any address/ownership corrections. Changes should include aircraft model, serial number, and current owner's name and address.

Corrections and/or changes should be directed to:

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Vero Beach, Florida, U.S.A. 32960

SERVICE BULLETIN

NO. 1256

PIPER CONSIDERS COMPLIANCE MANDATORY

Date: January 23, 2013

(S)

SUBJECT:

**NOSE LANDING GEAR TORQUE LINK HARDWARE
REPLACEMENT**

MODELS AFFECTED:

PA-46-310P Malibu

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

SERIAL NUMBERS AFFECTED:

46-8408001 thru 46-8408087,
46-8508001 thru 46-8508109,
46-8608001 thru 46-8608067;
4608001 thru 4608140
4622001 thru 4622200, 4636001 thru 4636572
4692001 thru 4692186
4697001 thru 4697510

COMPLIANCE TIME:

To coincide with the 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 Document has been shown to comply with the applicable Federal Aviation Regulations and is FAA approved.

PURPOSE:

To provide instructions for replacing the nut and reorienting the bolt used to connect the upper and lower torque links on the nose landing gear.

The nose gear oleo strut assembly includes an upper and lower torque link, which are connected by a single torque link connecting bolt. For the affected aircraft, this bolt is secured by a free running (i.e., non-self locking) castellated nut and a cotter pin.

Under certain conditions, use of tow straps may cause the loss of this cotter pin, which is the only means of preventing loss of the free running castellated nut and the torque link connecting bolt.

This Service Bulletin provides instructions for replacing the factory-installed free running castellated nut with a new castellated nut that includes a self locking feature, which provides a secondary locking mechanism. Additionally, the orientation of the bolt is specified.

INSTRUCTIONS:

1. Order replacement hardware as shown in TABLE 1.
2. Locate the torque link connecting bolt and associated hardware, as shown in Figure 1.
3. Remove and discard the existing cotter pin and castellated nut.
4. If necessary, remove torque link connecting bolt and reinstall to orient bolt head on left hand side of aircraft, as shown in Figure 1.
5. Install new self locking Castellated Nut (MS14144-4), Piper P/N 603-816 onto existing torque link connecting bolt, as described in the applicable maintenance manual. Tighten castellated nut only tight enough to allow no side play in the upper and lower torque links, yet still be loose enough to allow the torque link connecting bolt to freely rotate.
6. Secure castellated nut with new Cotter Pin (MS24665-132), Piper P/N 424-051.

NOTE: Install and secure cotter pin per FAA AC 43.13-1B CHG 1, Chapter 7, Section 7-127.

7. Make a log book entry indicating compliance with this Service Letter.

MATERIAL REQUIRED:

TABLE 1
Nose landing gear torque link replacement hardware

Quantity	Piper P/N	Nomenclature
1*	691-334	Bolt - (NAS6604D15)
1	603-816	Castellated Nut - (MS14144-4)
1*	690-613	Washer - (NAS1149F0432)
2*	690-611	Washer - (NAS1149F0463P)
1	424-051	Cotter Pin - (MS24665-132)

*Components may be re-used, provided they are in serviceable condition.

AVAILABILITY OF PARTS: Your Piper Service Facility.

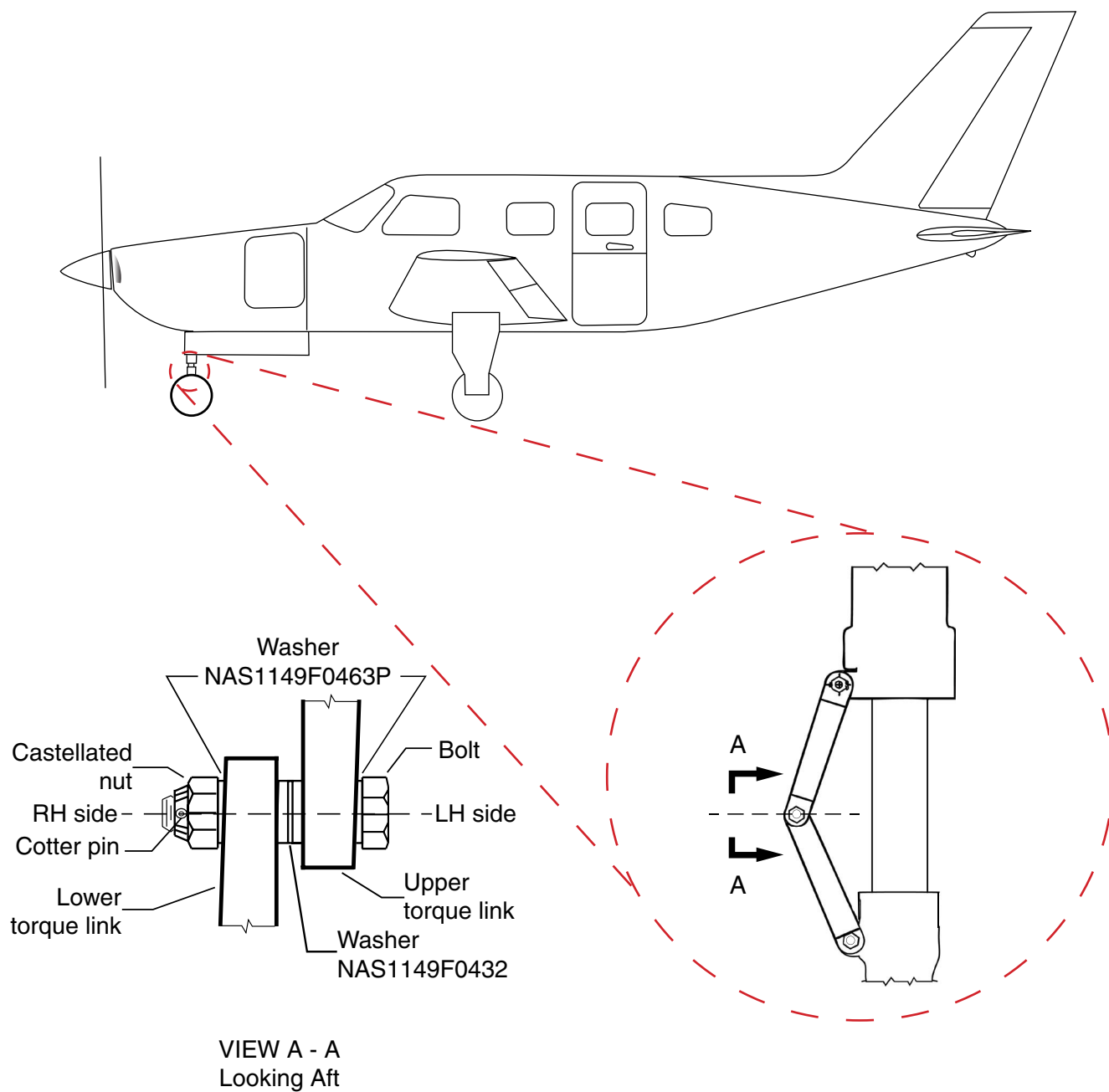
EFFECTIVITY DATE: This Service Bulletin is effective upon receipt.

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

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

Corrections and/or changes should be directed to:

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Vero Beach, FL 32960



Proper orientation of hardware shown
Figure 1



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

SERVICE *No. 1193* BULLETIN

PIPER CONSIDERS COMPLIANCE MANDATORY

Date: March 03, 2009

(S)

SUBJECT:

NOSE GEAR DOWN SPRING REPLACEMENT

MODELS AFFECTED:

PA-46-310P Malibu
PA-46-350P Malibu Mirage
PA-46R-350T Malibu Matrix
PA-46-500TP Malibu Meridian

SERIAL NUMBERS AFFECTED:

46-8408001 thru 46-8608067 and 4608001 through
4608140
4622001 through 4622200 and 4636001 through 4636440
4692001 through 4692016, 4692018 and 4692019
4697001 through 4697339, 4697341, 4697342 and 4697344
through 4697346

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 applicable Federal Aviation Regulations and is FAA approved.

PURPOSE:

The Down Spring used on the Nose Gear (NG) of affected aircraft can develop a permanent set over time, resulting in a reduction of spring force. In the event of hydraulic system failure, an aircraft containing a Down Spring with the described condition may require additional maneuvering, and/or require an excessively long time for the Nose Gear to reach the down and locked position.

This Service Bulletin provides for the mandatory replacement of the currently installed Down Spring with an improved Spring, Piper part number 687-931.

NOTE: The appropriate Illustrated Parts Catalogs will be revised to specify the new Spring (Piper part number 687-931) for all future service replacement.

INSTRUCTIONS:

1. Order a new NG Down Spring, Piper part number 687-931. Replace and test the new down spring per the Aircraft Maintenance Manual, Chapter 32-30-00
2. Make a logbook entry indicating compliance with this Service Bulletin.

(OVER)

ATA: 3230

SERVICE BULLETIN NO. 1193
PAGE 2 OF 2

MATERIAL REQUIRED:

<u>Qty</u>	<u>Piper Code #</u>	<u>Nomenclature</u>
1 (required)	687-931	SPRING (PS10087-2-5)

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.

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