



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

SERVICE *No. 1139A* BULLETIN

PIPER CONSIDERS COMPLIANCE MANDATORY

Date: April 9, 2004

(S)(M)

SB1139A supersedes SB 1139. This revision adds a screw retaining clip to the control wheel installation and adds aircraft models and serial numbers to the effectivity.

SUBJECT:

**CONTROL WHEEL ATTACHMENT INSPECTION &
RETAINER CLIP INSTALLATION**

This is a two part service bulletin:

Aircraft in Group A require accomplishment of Part I and Part II. Aircraft in Group B require accomplishment of Part II only.

Aircraft listed in Group A that were modified in accordance with the original issuance of this service bulletin are considered in compliance with Part I. Proceed to Part II.

MODELS AFFECTED:

SERIAL NUMBERS AFFECTED:

Group A

PA-28-161 Warrior III
PA-28-181 Archer III
PA-28R-201 Arrow
PA-32R-301 Saratoga II HP
PA-32R-301T Saratoga II TC
PA-34-220T Seneca V
PA-44-180 Seminole
PA-46-350P Mirage
PA-46-500TP Meridian

2842026 through 2842180
2843112 through 2843565
2844014 through 2844099
3246098 through 3246214
3257028 through 3257327
3449042 through 3449292
4496020 through 4496173 & 4496175
4636132 through 4636344
4697001 through 4697162

Group B

PA-28-161 Warrior III
PA-28-181 Archer III
PA-28R-201 Arrow
PA-32R-301 Saratoga II HP
PA-32R-301T Saratoga II TC
PA-32-301FT Piper 6X
PA-32-301XTC Piper 6XT
PA-34-220T Seneca V
PA-44-180 Seminole
PA-46-350P Mirage
PA-46-500TP Meridian

2842181 through 2842203
2843566 through 2843588
2844100 through 2844104
3246215 through 3246219
3257328 through 3257340
3232001 through 3232013
3255001 through 3255014
3449293 through 3449301
4496174 & 4496176 through 4496180
4636345 through 4636348
4697163 through 4697174

COMPLIANCE TIME:

Part I - Within the next 25 hrs of operation.

Part II - Within the next 100 hrs of operation.

(OVER)

ATA: 2701

APPROVAL:

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

PURPOSE:

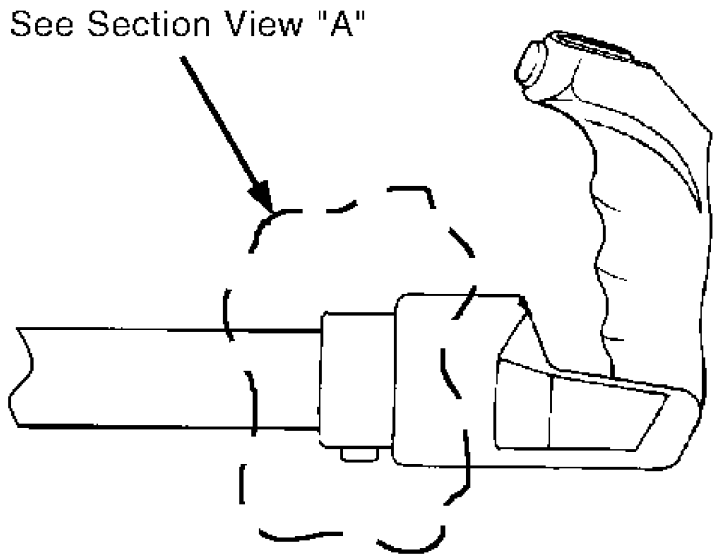
A report from the field has been received of a pilot side control wheel separating from the control wheel shaft resulting in loss of control of the aircraft from the pilot seat location. The incident occurred on a 2002 model, PA-28-181 Archer III aircraft that utilizes the modern control wheel introduced in all New Piper production models in early 1998. The method of attachment of the control wheel to the shaft was changed at the time of introduction of the new control wheel and this publication is applicable only to those aircraft that utilize this new type of control wheel. This Service Bulletin requires a one time inspection of the control wheel attaching hardware for proper installation, addition of Loctite thread locking compound to the screw installation, and installation of a secondary mechanical locking device (a retainer clip) to the control wheel attachment.

INSTRUCTIONS:**PART I**

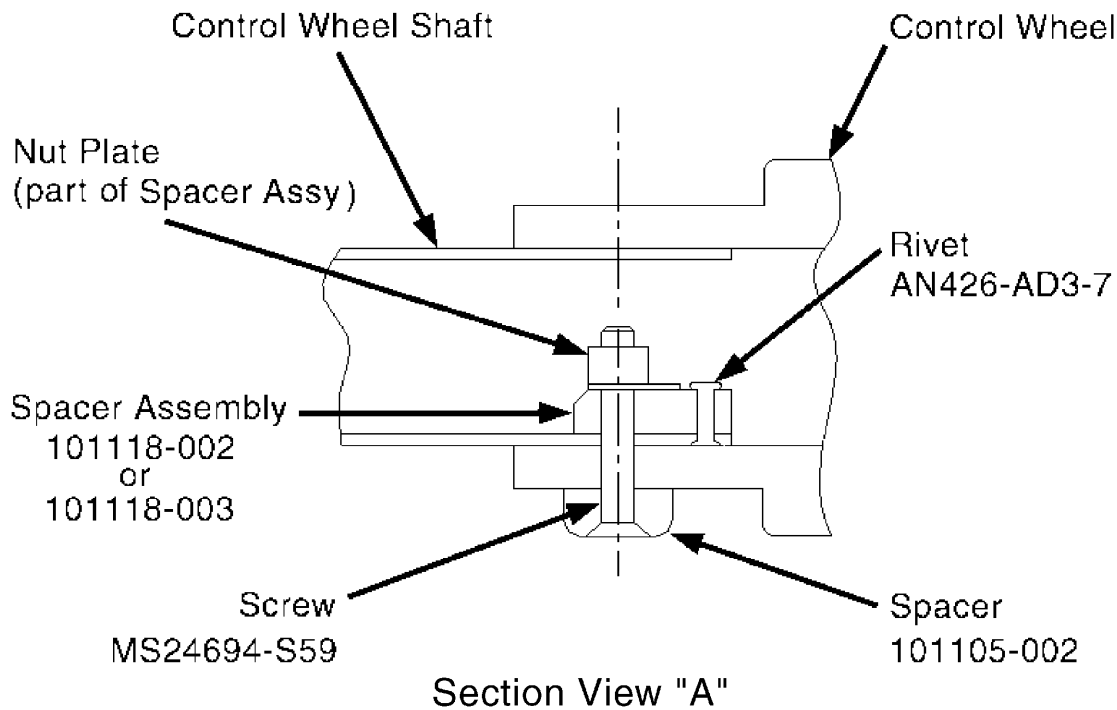
(Reference Figure 1)

NOTE: Steps 1 through 4 are to be accomplished on both the left hand and right hand control wheel installations.

1. Inspect the control wheel attachment screw for proper thread engagement as follows:
 - a) Remove the Piper logo medallion, P/N 474-364, from the front of the control wheel by removing the 4 allen head cap screws, P/N 520-025 (NAS1352-06-12), from the back side of the control wheel to gain access to the inside diameter of the control wheel and control wheel shaft.
 - b) Inspect the end of the screw, P/N 410-046, (MS24694-S59) that secures the control wheel to the shaft for proper thread engagement through the nut plate (minimum 1 thread showing past the end of the nut plate).
 - c) If insufficient thread engagement is found, replace the screw with the next longer screw, P/N 410-047 (MS24694-S60) during re-assembly.
2. Check the nut plate for sufficient locking characteristics as follows:
 - a) Remove the screw, P/N 410-046, (MS24694-S59) and the spacer, P/N 101105-002 (Ref Section View "A") from the control wheel column.
 - b) Remove the control wheel from the shaft.
 - c) Re-install the screw into the nut plate located within the control wheel shaft and attempt to fully tighten the screw by hand (without the aid of a screwdriver). If the screw can be fully inserted into the nut plate by hand (one thread past the end of nut), then replacement of the nut plate is required. The nut plate is part of the spacer assembly P/N 101118-002 (On PA-46-350P & PA-46-500TP) or P/N 101118-003 (on all other models). If replacement is required, carefully drill out the rivet, P/N 420-706 (AN426-AD3-7), securing the spacer assembly to the control wheel shaft to remove the spacer assembly. Order and install a new spacer assembly P/N 101118-002 (On PA-46-350P & PA-46-500TP) or P/N 101118-003 (on all other models) and secure to the control wheel shaft using rivet, P/N 420-706 (AN426-AD3-7).



Control Wheel and Shaft Assembly



Control Wheel Attachment Inspection
Figure 1

INSTRUCTIONS: (Continued)

3. Re-assemble the control wheel onto the control wheel shaft as follows:

- a) **Thoroughly clean the nut plate on the spacer assembly (P/N 101118-002 or -003), the screw (P/N MS24694-S59 or -S60), and the spacer (P/N 101105-002) with acetone or similar solvent to ensure the parts are thoroughly degreased for application of Loctite thread locking compound.**
- b) Re-install the control wheel onto the control wheel shaft and line up the screw hole in the wheel to the hole in the shaft.

Note: The screw installation must be completed promptly after application of the Loctite thread locking compound due to the short cure time of the compound.

- c) Apply Loctite Primer #7649 and Loctite thread locking compound #271 to the screw threads per the manufacturer's instructions and install the screw, 410-046 (MS24694-S59) or 410-047 (MS24694-S60) and the spacer, P/N 101105-002. Tighten the screw until fully seated.
- d) Re-install the Piper logo medallion, P/N 474-364, and secure to the control wheel using the 2 upper allen head cap screws, P/N 520-025 (NAS1352-06-12), previously removed (lower cap screws to be replaced per Part II).

4. Proceed with retainer clip installation per Part II of this Service Bulletin.

Note: If Part II of this Service Bulletin is not being accomplished at this time, the 2 lower allen head cap screws, P/N 520-025 (NAS1352-06-12) must be installed. Make an appropriate logbook entry indicating compliance with Part I of this Service Bulletin.

PART II

(Reference Figure 2)

NOTE: Steps 1 through 3 are to be accomplished on both the left hand and right hand control wheel installations. On aircraft S/N's listed in Group A, ensure that Part I of this Service Bulletin is accomplished before continuing with Part II.

1. From the back side of the control wheel, remove the 2 lower, allen head cap screws, P/N 520-025 (NAS1352-06-12) securing the Piper logo medallion to the front face of the control wheel (if not previously removed during Part I).
2. Install the retainer clip P/N 104687-002 over the control wheel shaft and slide the clip up against the back of the control wheel. Rotate the clip to line up the holes in the clip with the medallion mounting holes on the backside of the control wheel and to allow the lower tab of the clip to cover the head of the control wheel mounting screw.
3. Install 2 screws P/N 416-390 (MS24693S40) to secure the retainer clip in place being careful not to over tighten the screws and damage the logo medallion.
4. Make an appropriate logbook entry indicating compliance with this Service Bulletin.

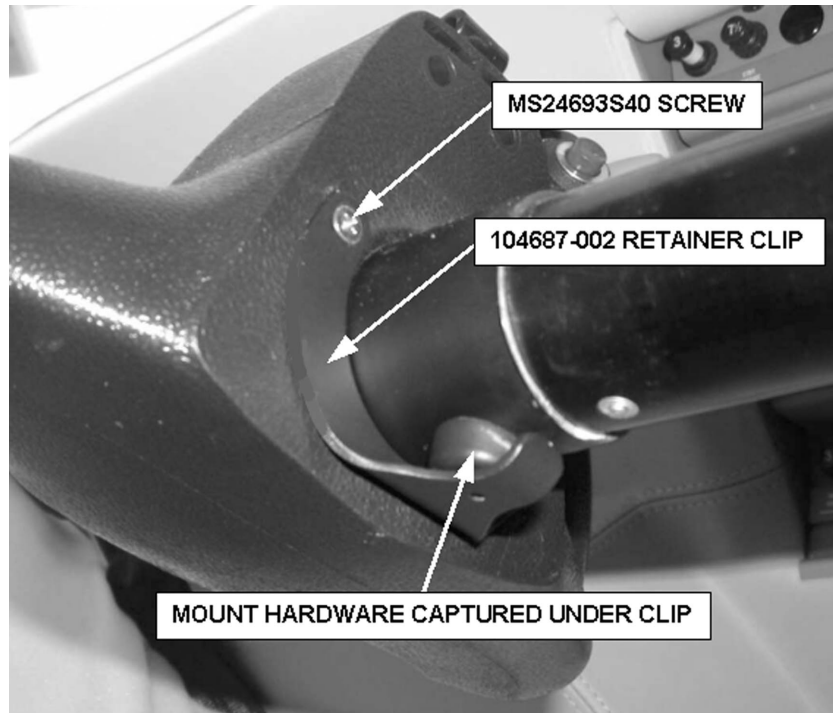


Figure 2

MATERIAL REQUIRED:

Part I

Two (2) each, Screw, New Piper P/N 410-047 (MS24694-S60),
Spacer Assembly, New Piper P/N 101118-002 (for PA-46-350P & PA-46-500TP)
Spacer Assembly, New Piper P/N 101118-003 (for all other models)
Rivet, New Piper P/N 420-706 (AN426-AD3-7), if required, per aircraft.

Part II

Two (2) each, Retainer Clip 104687-002
Four (4) each, Screw P/N 416-390 (MS24693S40)

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 and/or changes should be directed to:

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