



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

# SERVICE NO. 1197E BULLETIN

## PIPER CONSIDERS COMPLIANCE MANDATORY

Date: November 2, 2017

(S) (M)

SB 1197E supersedes SB 1197D in its entirety. Aircraft that were previously made compliant with SB 1197, SB 1197A, SB 1197B, SB 1197C, or SB 1197D are in compliance with SB 1197E.

**SUBJECT:**

**CONTROL WHEEL SHAFT INSPECTION**

**REASON FOR REVISION:**

SB 1197E adds a caution and corrects minor errors, and includes minor changes for clarity and current document format.

**MODELS AFFECTED:**

PA-28-140 Cherokee Cruiser  
  
PA-28-150 Cherokee  
PA-28-160 Cherokee  
PA-28-180 Cherokee  
  
PA-28S-160 Cherokee  
PA-28S-180 Cherokee  
  
PA-28-235 Cherokee Pathfinder  
  
PA-28-235 Cherokee Pathfinder  
PA-28-236 Dakota  
  
PA-28-151 Warrior  
PA-28-161 Cadet  
PA-28-161 Warrior II  
  
PA-28-161 Warrior III  
PA-28-180 Archer  
PA-28-181 Archer II  
  
PA-28-181 Archer III  
PA-28-201T Turbo Dakota  
PA-28R-180 Arrow

**SERIAL NUMBERS AFFECTED:**

28-20001 through 28-26946;  
28-7125001 through 28-7725290  
  
28-03; 28-1 through 28-4377 and 28-1760A  
28-03; 28-1 through 28-4377 and 28-1760A  
  
28-03; 28-671 through 28-5859;  
28-7105001 through 28-7205318  
  
28-1 through 28-1760 and 28-1760A  
  
28-671 through 28-5859;  
28-7105001 through 28-7105234  
  
28-10001 through 28-11378;  
28-7110001 through 28-7210023  
  
28E-11; 28-7310001 through 28-7710089  
  
28-7911001 through 28-8611008;  
2811001 through 2811050  
  
28-7415001 through 28-7715314  
2841001 through 2841365  
  
28-7716001 through 28-8216300; 28-8316001 through  
28-8616057; 2816001 through 2816109  
  
2816110 through 2816119; 2842001 through 2842305  
  
28-E13; 28-7305001 through 28-7505260  
  
28-7690001 through 28-8690056; 28-8690061;  
28-8690062; 2890001 through 2890205  
  
2890206 through 2890231; 2843001 through 2843672  
  
28-7921001 through 28-7921095  
  
28R-30002 through 28R-31270;  
28R-7130001 through 28R-7130013

ATA/JASC: 2710

(OVER)

PA-28R-200 Arrow	28R-35001 through 28R-35820; 28R-7135001 through 28R-7135229
PA-28R-200 Arrow II	28R-7235001 through 28R-7635545
PA-28R-201 Arrow III	28R-7737002 through 28R-7837317; 2837001 through 2837061; 2844001 through 2844138
PA-28R-201T Turbo Arrow III	28R-7703001 through 28R-7803374; 2803001 through 2803012
PA-28RT-201 Arrow IV	28R-7918001 through 28R-7918267
PA-28RT-201 Arrow IV	28R-8018001 through 28R-8218026
PA-28RT-201T Turbo Arrow IV	28R-7931001 through 28R-8631005; 2831001 through 2831038
PA-32-260 Cherokee Six	32-03; 32-04; 32-1 through 32-1297; 32-7100001 through 32-7800008
PA-32-300 Cherokee Six	32-15; 32-21; 32-40000 through 32-40974; 32-7140001 through 32-7940290
PA-32S-300 Cherokee Six Seaplane	32S-15; 32S-40000 through 32S-40974; 32S-7140001 through 32S-7240137
PA-32R-300 Lance	32R-7680001 through 32R-7880068
PA-32RT-300 Lance II	32R-7885002 through 32R-7985106
PA-32RT-300T Turbo Lance II	32R-7787001; 32R-7887002 through 32R-7987126
PA-32R-301 Saratoga SP	32R-8013001 through 32R-8613006; 3213001 through 3213028; 3213030 through 3213041
PA-32R-301 Saratoga II HP	3213029; 3213042 through 3213103; 3246001 through 3246217; 3246219; 3246223
PA-32R-301 Saratoga II HP (with Entegra)	3246218; 3246220 through 3246222; 3246224 through 3246244
PA-32R-301T Turbo Saratoga SP	32R-8029001 through 32R-8629008; 3229001 through 3229003
PA-32-301 Saratoga	32-8006002 through 32-8606023; 3206001 through 3206019; 3206042 through 3206044; 3206047; 3206050 through 3206055; 3206060
PA-32-301T Turbo Saratoga	32-8024001 through 32-8424002
PA-32R-301T Saratoga II TC	3257001 through 3257483
PA-32-301FT Piper 6X	3232001 through 3232074
PA-32-301XTC Piper 6XT	3255001 through 3255014; 3255026
PA-32-301XTC Piper 6XT (with Entegra)	3255015 through 3255025; 3255027; 3255051
PA-34-200 Seneca	34-E4; 34-7250001 through 34-7450220
PA-34-200T Seneca II	34-7570001 through 34-8170092
PA-34-220T Seneca III	34-8133001 through 34-8633031; 3433001 through 3433172; 3448001 through 3448037
PA-34-220T Seneca IV	3448038 through 3448079; 3447001 through 3447029
PA-34-220T Seneca V	3449001 through 3449377
PA-44-180 Seminole	44-7995001 through 44-8195026
PA-44-180 Seminole	4495001 through 4495013; 4496001 through 4496251
PA-44-180T Seminole	44-8107001 through 44-8207020

**COMPLIANCE TIME:** To coincide with next regularly scheduled maintenance event, but not to exceed the next 100 hours time in service

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

**PURPOSE:** Piper has received two field reports of incorrectly-assembled control wheel shafts. Specifically, the shaft common to the sprocket and the universal joint (both pilot and copilot sides) may not have been inserted fully into the universal joint prior to match-drilling the hole for the taper pin that fastens the shaft to the universal joint. The cause of this condition is unknown. Holes mis-drilled in such a manner may appear visually to be acceptable, when in fact the hole in the shaft may be too close to the end of the shaft, causing a significant reduction in joint strength.

Left uncorrected, this condition could lead to separation of the control wheel shaft, resulting in loss of pitch and roll control.

This service bulletin provides instructions for a mandatory inspection of the shaft to universal joint interface to ensure that they are assembled correctly on all aircraft that might be affected.

#### **INSTRUCTIONS:**

**NOTE:** Some steps in these instructions are identified as “required for compliance” (RC). If this service bulletin is mandated by an airworthiness directive (AD), the steps identified as RC must be done to comply with the AD. Steps not identified as RC are recommended and may be deviated from, done as a part of other actions, or done with accepted methods different from those given in this service bulletin, if the RC steps can be done and the airplane can be put back in a serviceable condition.

1. RC – Gain access to the forward end of the control wheel column between the instrument panel and the forward firewall.

2. Locate the shaft and the universal joint (2 per aircraft), which are fastened together with a threaded taper pin, as shown in Figures 1 and 2. These components are installed on the aft side of the T-bar assembly.

**NOTE:** Some early model aircraft may have a hex head bolt installed, instead of a taper pin. In both cases, inspection is required to verify adequate edge distance for the hole in the shaft.

**NOTE:** Each universal joint must be fastened to the mating shaft with either a taper pin or a bolt. Any other configuration does not conform to type design.

3. RC – Inspect each universal joint for the presence of a witness hole, as shown in Figure 2. Most aircraft will have this witness hole feature. However, some early model aircraft may not have a witness hole. If no witness hole exists, proceed to step 5.

4. RC – Insert a 3/64 inch diameter drill rod into each witness hole as far as it will go with hand pressure. Measure the depth of penetration:

- If the drill rod penetration depth measures approximately 0.2 inches, this indicates that the drill rod is bottoming out against the near side of the fully inserted shaft. This installation is correct. Proceed to step 9.
- If the drill rod penetration depth exceeds 0.2 inches, this indicates that the drill rod is bottoming out against the far side inner wall of the universal joint, and is not making contact with the shaft. Universal joints with this condition may have a shaft with inadequate edge distance, and will require further inspection. Proceed to step 5.b.

## 5. RC – Additional Inspection

If the inspection from step 3 identifies a universal joint without a witness hole, perform the instructions in either step 5.a or step 5.b, at the operator's discretion.

If the inspection from step 4 identifies a shaft with potentially inadequate edge distance, perform the instructions in step 5.b.

## a. Witness hole drilling procedure

- 1) Order Witness Hole Drill Fixture, Piper part number (P/N) 766-585.
- 2) Temporarily remove the taper pin (or bolt, as applicable). See Figures 4 and 5, Views A and B.
- 3) Temporarily pin the Witness Hole Drill Fixture, P/N 766-585, over the universal joint by installing the 400-453 bolt through the hole in the universal joint created by the removal of the taper pin (or bolt, as applicable), from step 5.a.2), directly above. Install 404-534 nut, finger tight.

NOTE: The Bolt, P/N 400-453, and Nut, P/N 404-534, are components of Witness Hole Drill Fixture, P/N 766-585. See Figure 5, View C.

NOTE: P/N 766-585 should fit over the universal joint with little or no relative movement possible. If necessary, temporarily wrap masking tape around the outside of the universal joint to increase the outside diameter, and enable a snug fit prior to proceeding to step 4) below.

**WARNING: WEAR EYE PROTECTION WHEN DRILLING.**

- 4) Using a #40 drill bit (0.098 inch diameter) and P/N 766-585 for alignment, drill a witness hole in the universal joint, to a depth of 0.185 to 0.235 inches measured from the outer surface of the universal joint.
- 5) Remove P/N 766-585 and insert a 3/64 inch diameter drill rod into the newly created witness hole as far as it will go with hand pressure. Measure the depth of penetration:
  - If the drill rod penetration depth measures 0.235 inches or less, this indicates that the drill rod is bottoming out against the near side of the fully inserted shaft. This installation is correct. Proceed to step 8.
  - If the drill rod penetration depth exceeds 0.235 inches, this indicates that the drill rod is bottoming out against the far side inner wall of the universal joint, and is not making contact with the shaft. Universal joints with this condition may have a shaft with inadequate edge distance, and will require further inspection. Proceed to step 5.b.

## b. Disassembly and components measurement

Temporarily remove the taper pin (or bolt, as applicable) and disassemble the universal joint from the shaft. Then, measure from the end of the shaft to the taper pin (or bolt) hole.

- If the distance from the end of the shaft to the centerline of the hole for the taper pin (or bolt) measures 0.19 inches or more, the edge distance is adequate, and existing parts may be reassembled. Proceed to step 7.
- If the distance from the end of the shaft to the centerline of the hole for the taper pin (or bolt) measures less than 0.19 inches, the edge distance is inadequate, and replacement of the shaft is required. Proceed to step 6.

## 6. If the inspection from step 5 identifies a shaft that must be replaced, identify and order the correct replacement shaft using Table 1, 2 or 3, as applicable.

NOTE: In some cases, the replacement part that is delivered to the customer may have a different part number than the one specified in Tables 1 through 3 of this service bulletin. Differences in part numbers may be due to special service requirements, design improvements, or changes in part number naming convention over time. Table 4 provides all part numbers that are acceptable replacements for each part number specified in Tables 1 through 3.

7. In addition, replace any universal joint that exhibits damage, corrosion or excessive wear. Mate the shaft to the universal joint using the following procedure:
- a. For installations using taper pins:
    - 1) Insert shaft into universal joint, to a depth that achieves a minimum of 0.19 inches from the end of the shaft to the centerline of the hole for the taper pin. Drill hole through mated parts at taper pin location, using a #5 (0.2055 inch diameter) drill bit.
    - 2) Ream drilled hole in steps, with a #1 tapered reamer, Piper P/N 906-713. In a properly sized tapered hole, the tapered pin shall install to a depth such that the small end of the tapered shank (where the threads begin) is between 0.030 inches inside and 0.062 inches outside of outer surface.
  - b. For installations using hex head bolts:

Insert shaft into universal joint, to a depth that achieves a minimum of 0.19 inches from the end of the shaft to the centerline of the hole for the bolt. Drill hole through mated parts at bolt location, using a #16 (0.1770 inch diameter) drill bit. Ream hole to final size of 0.1870 to 0.1875 inches in diameter.
8. RC – Reinstall threaded fastener

**CAUTION:** DO NOT USE FORCE TO DRIVE THE THREADED FASTENER INTO HOLE, AS COMPONENT DAMAGE MAY OCCUR.

- a. For taper pins:

Install tapered pin through mated parts. (See Figure 3). Install the appropriate washer under the nut, using the following criteria:

  - If pin shoulder (small taper end) does not protrude past outer surface, install an NAS1149F0363P washer (Piper P/N 690-612) under nut.
  - If pin shoulder (small taper end) protrudes past tube surface, install an AN975-3 washer (Piper part number 494-093) under nut.

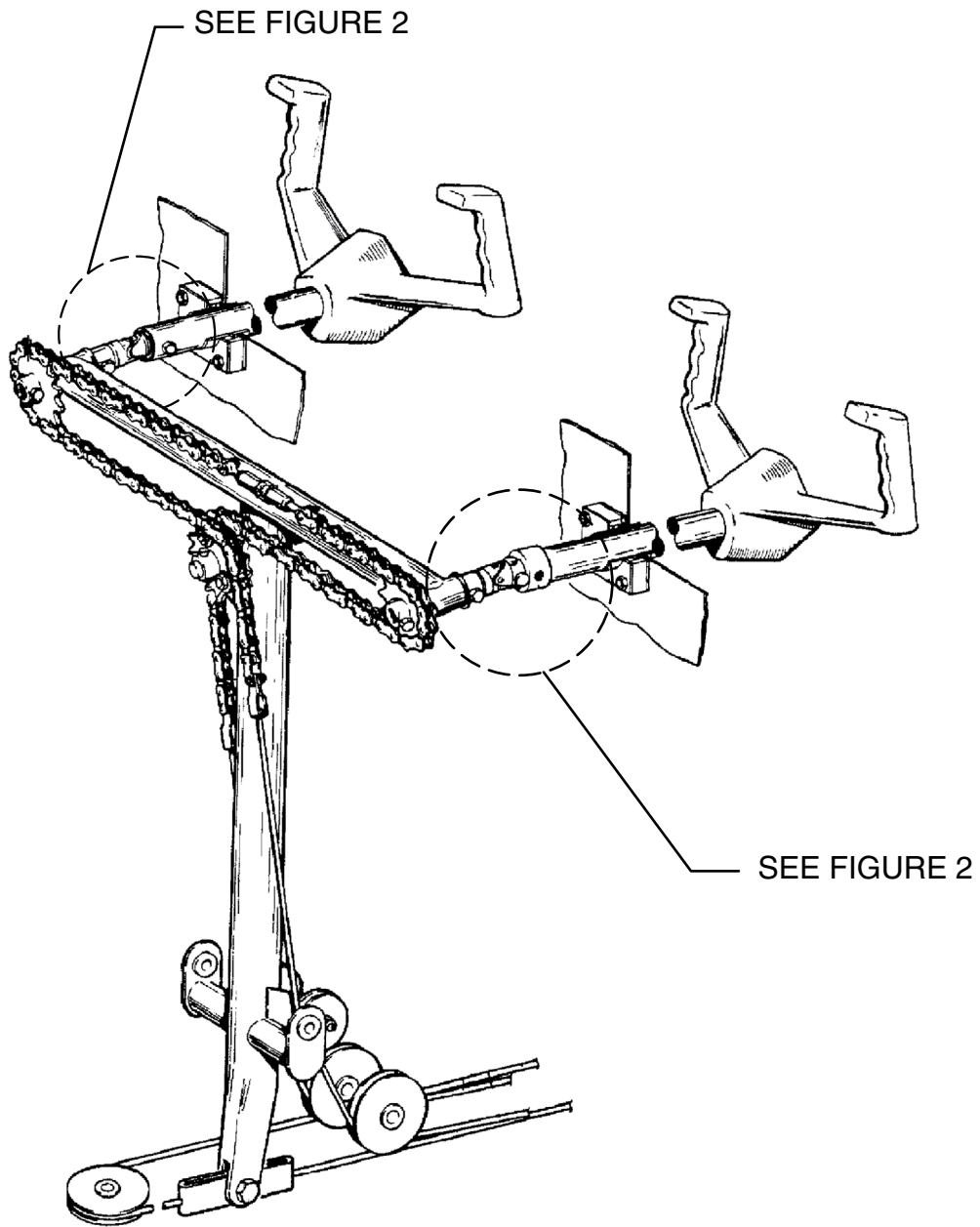
**NOTE:** Do not reuse the nut that installs the taper pin. Taper pins, washers, sprockets and universal joints may be reused, if they are determined to be in airworthy condition.

- b. For hex head bolts:

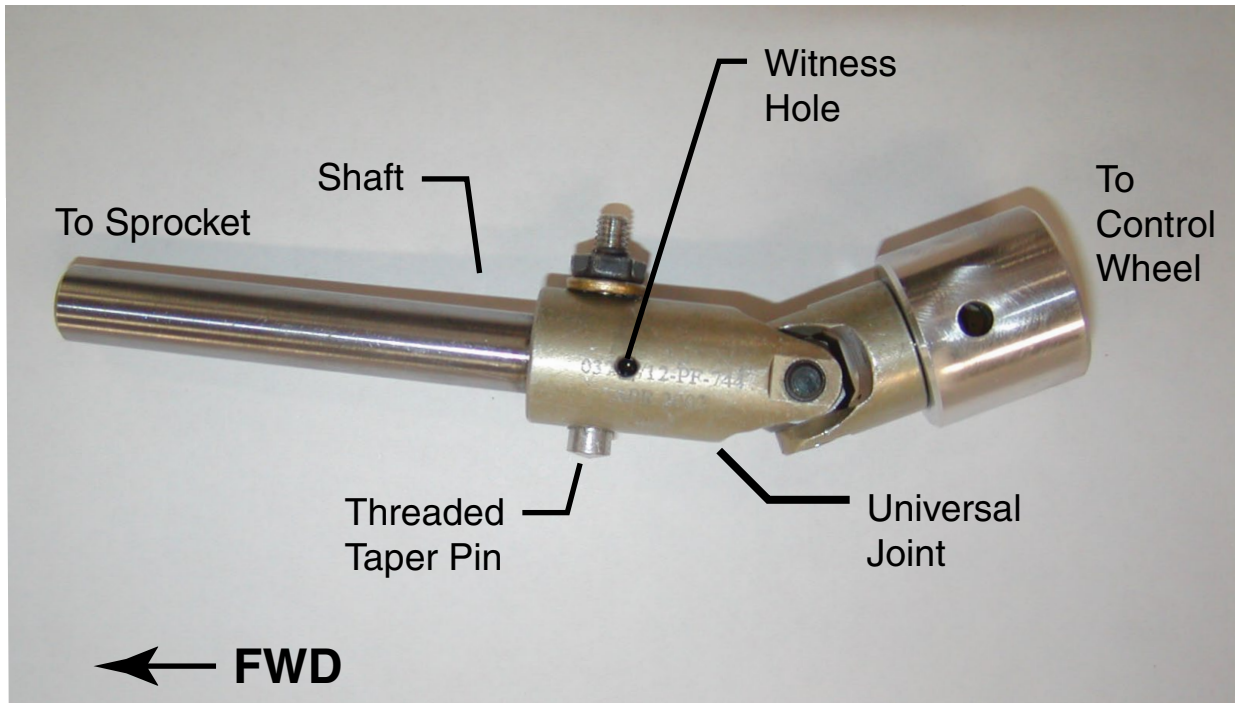
Install bolt, washer and nut to match original hardware stack up.

**NOTE:** Do not reuse the nut that installs the bolt. Bolts, washers, sprockets and universal joints may be reused, if they are determined to be in airworthy condition.

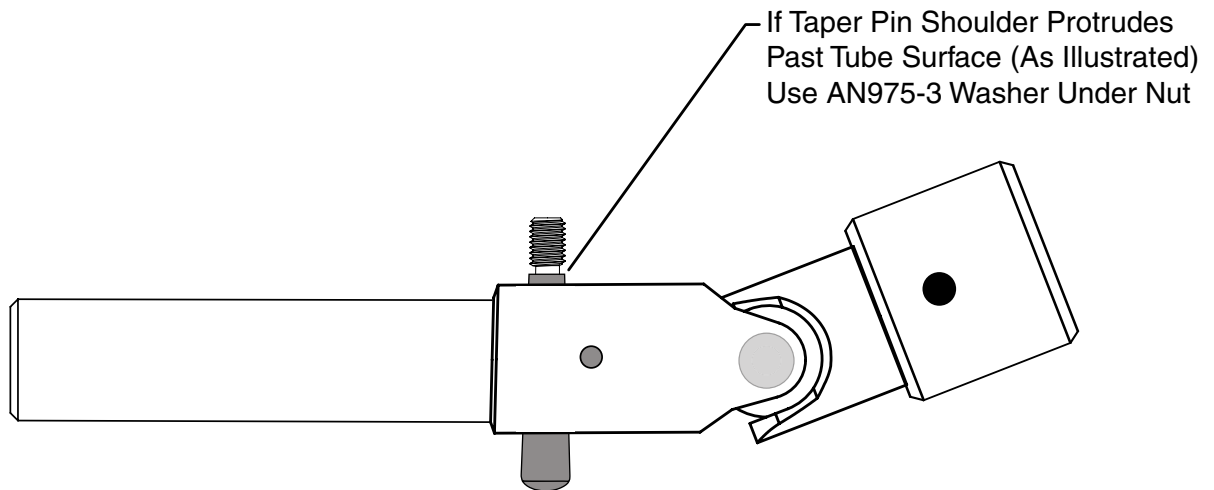
9. RC – Make a logbook entry documenting compliance with this service bulletin.



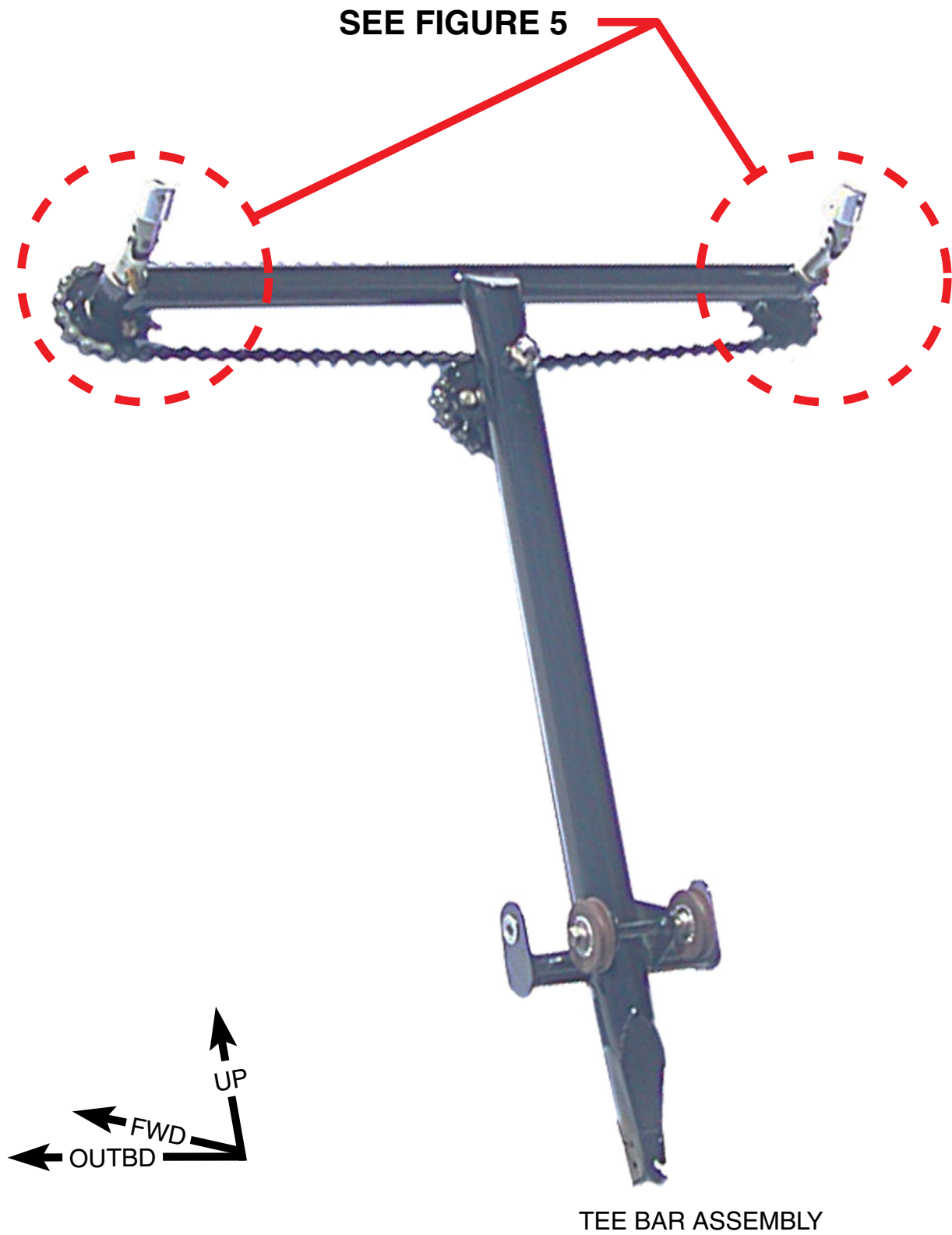
**Figure 1**  
Control Column Assembly



**Figure 2**  
Shaft Fastened to Universal Joint

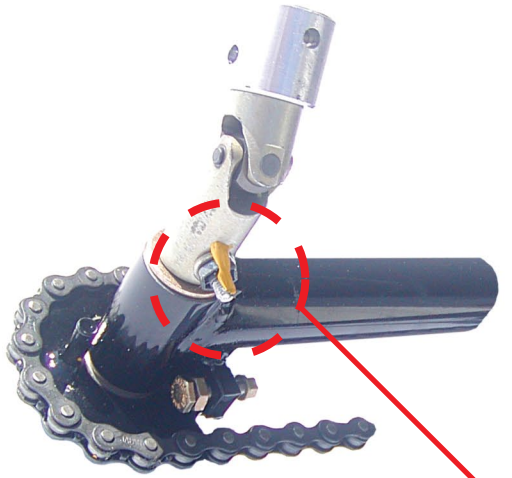


**Figure 3**  
Taper Pin Protrusion



**Figure 4**  
Witness Hole Drilling Procedure

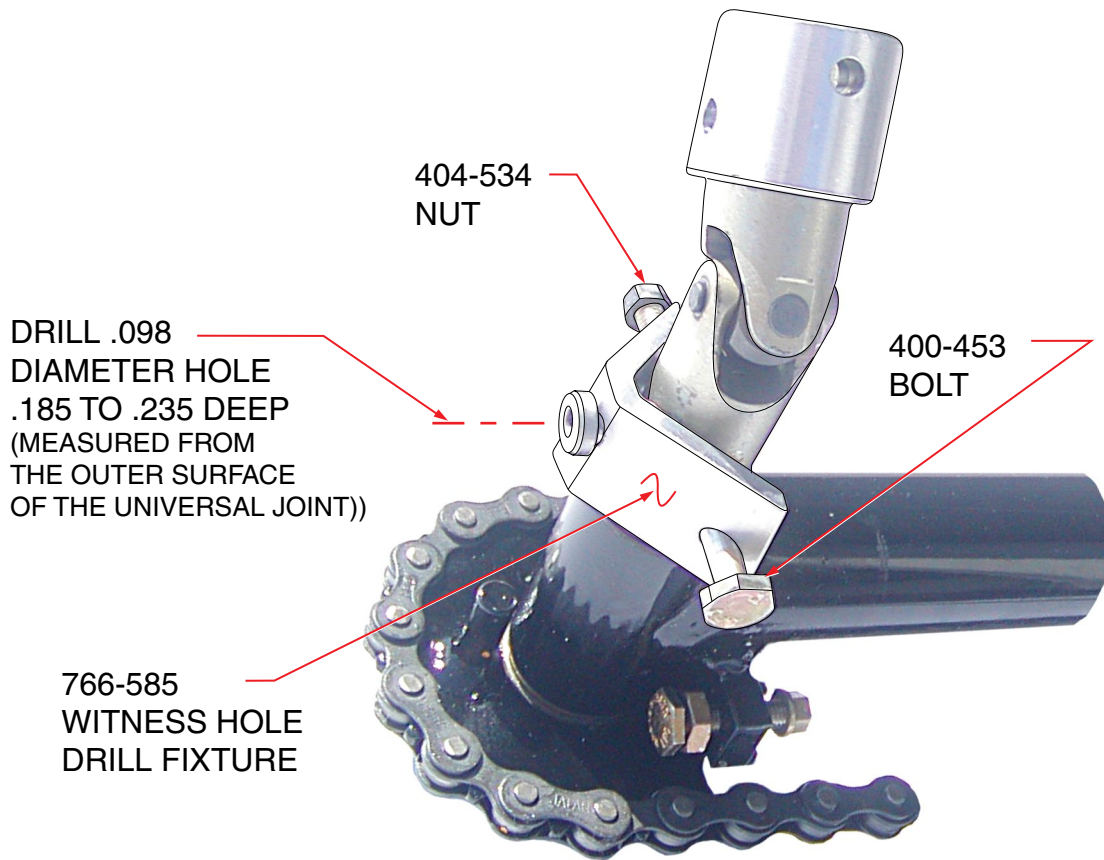




TAPER PIN INSTALLED  
**VIEW A**



TAPER PIN REMOVED  
**VIEW B**



DRILL .098  
DIAMETER HOLE  
.185 TO .235 DEEP  
(MEASURED FROM  
THE OUTER SURFACE  
OF THE UNIVERSAL JOINT))

404-534  
NUT

400-453  
BOLT

766-585  
WITNESS HOLE  
DRILL FIXTURE

**VIEW C**

766-585 WITNESS HOLE DRILL FIXTURE PINNED IN PLACE

**Figure 5**  
Witness Hole Drilling Procedure

**MATERIAL REQUIRED:** The correct part numbers may be found in the applicable Piper Airplane Parts Catalog and Tables 1, 2 and 3.

One (1) each, Witness Hole Drill Fixture, P/N 766-585 (includes nut and bolt)

**AVAILABILITY OF PARTS:** Your Piper Approved Service Center

**EFFECTIVITY DATE:** This service bulletin is effective upon receipt.

**SUMMARY:** Please contact your Piper Approved Service Center 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:

PIPER AIRCRAFT, INC.  
Att'n: Customer Service  
2926 Piper Drive  
Vero Beach, FL 32960  
or:  
CustomerService@piper.com  
Please include in subject line: "Aircraft ownership update"

**TABLE 1  
REPLACEMENT SHAFT AND UNIVERSAL JOINT**

Model	Serial Number	Shaft		Universal Joint
		left (Pilot)	right (Copilot)	
PA-28-140 Cherokee	28-20001 through 28-20160	62716-002	62716-003	62834-000
	28-20161 through 28-21845 28-21931 through 28-21934	62716-004	62716-005	62834-000
	28-21846 through 28-21930 28-21935 through 28-25400	62716-006	62716-007	62834-002
	28-25401 through 28-26946 28-7125001 through 28-7725290	62716-007	62716-007	62834-002
PA-28-150 Cherokee	28-1 through 28-1760 28-03, 28-1760A	62716-002	62716-003	62834-000
	28-1761 through 28-3377	62716-004	62716-005	62834-000
	28-3378 through 28-4377	62716-006	62716-007	62834-002
PA-28-160 Cherokee	28-1 through 28-1760 28-03, 28-1760A	62716-002	62716-003	62834-000
	28-1761 through 28-3377	62716-004	62716-005	62834-000
	28-3378 through 28-4377	62716-006	62716-007	62834-002
PA-28-180 Cherokee	28-671 through 28-1760 28-03	62716-002	62716-003	62834-000
	28-1761 through 28-3377	62716-004	62716-005	62834-000
	28-3378 through 28-4377	62716-006	62716-007	62834-002
	28-4378 through 28-5859 28-7105001 through 28-7205318	62716-007	62716-007	62834-002
PA-28S-160 Cherokee	28-1 through 28-1760 28-1760A	62716-002	62716-003	62834-000
PA-28S-180 Cherokee	28-671 through 28-1760	62716-002	62716-003	62834-000
	28-1761 through 28-3377	62716-004	62716-005	62834-000
	28-3378 through 28-4377	62716-006	62716-007	62834-002
	28-4378 through 28-5859 28-7105001 through 28-7105234	62716-007	62716-007	62834-002
PA-28-235 Cherokee	28-10001 through 28-10486	62716-002	62716-003	62834-000
	28-10487 through 28-10719	62716-004	62716-005	62834-000
	28-10720 to 28-11039	62716-006	62716-007	62834-002
	28-11040 through 28-11378 28-7110001 through 28-7210023 28E-11 28-7310001 through 28-7710089	62716-007	62716-007	62834-002
PA-28-236 Dakota	28-7911001 through 28-8611008 2811001 through 2811050	62716-007	62716-007	62834-002
PA-28-151 Warrior	28-7415001 through 28-7715314	62716-007	62716-007	62834-002
PA-28-161 Cadet	2841001 through 2841365	62716-007	62716-007	62834-002
PA-28-161 Warrior II	28-7716001 through 28-8216300 28-8316001 through 28-8616057 2816001 through 2816109 2816110 through 2816119 2842001 through 2842305	62716-007	62716-007	62834-002

**TABLE 2**  
**REPLACEMENT SHAFT AND UNIVERSAL JOINT**

Model	Serial Number	Shaft		Universal Joint
		left (Pilot)	right (Copilot)	
PA-28-161 Warrior III	2816110 through 2816119 2842001 through 2842305	62716-007	62716-007	62834-002
PA-28-180 Archer	28-E13 28-7305001 through 28-7505260	62716-007	62716-007	62834-002
PA-28-181 Archer II	28-7690001 through 28-8690056 28-8690061, 28-8690062 2890001 through 2890205	62716-007	62716-007	62834-002
PA-28-181 Archer III	2890206 through 2890231 2843001 through 2843672	62716-007	62716-007	62834-002
PA-28-201T Turbo Dakota	28-7921001 through 28-7921095	62716-007	62716-007	62834-002
PA-28R-180 Arrow	28R-30002 through 28R-31270 8R-7130001 through 28R-7130013	62716-007	62716-007	62834-002
PA-28R-200 Arrow	28R-35001 through 28R-35820 28R-7135001 through 28R-7135229	62716-007	62716-007	62834-002
PA-28R-200 Arrow II	28R-7235001 through 28R-7635545	62716-007	62716-007	62834-002
PA-28R-201 Arrow III	28R-7737002 through 28R-7837317 2837001 through 2837061 2844001 through 2844138	62716-007	62716-007	62834-002
PA-28R-201T Turbo Arrow III	28R-7703001 through 28R-7803374 2803001 through 2803012	62716-007	62716-007	62834-002
PA-28RT-201 Arrow IV	28R-7918001 through 28R-7918267 28R-8018001 through 28R-8218026	62716-007	62716-007	62834-002
PA-28RT-201T Turbo Arrow IV	28R-7931001 through 28R-8631005 2831001 through 2831038	62716-007	62716-007	62834-002
PA-32-260 Cherokee Six	32-03, 32-04	62716-004	62716-005	62834-000
	32-1 through 32-600	62716-006	62716-007	62834-002
	32-601 through 32-690	62716-007	62716-007	62834-002
	32-691 through 32-1297 32-7100001 through 32-7800008	62716-007	62716-007	62834-002
PA-32-300 Cherokee Six	32-15, 32-21	62716-004	62716-005	62834-000
	32-40000 through 32-40415	62716-006	62716-007	62834-002
	32-40416 through 32-40974	62716-007	62716-007	62834-002
	32-7140001 through 32-7940290	62716-007	62716-007	62834-002
PA-32S-300 Cherokee Six Seaplane	32S-15	62716-004	62716-005	62834-000
	32S-40000 through 32S-40415	62716-006	62716-007	62834-002
	32S-40416 through 32S-40974	62716-007	62716-007	62834-002
	32S-7140001 through 32S-7240137	62716-007	62716-007	62834-002
PA-32R-300 Lance	32R-7680001 through 32R-7880068	62716-007	62716-007	62834-002
PA-32RT-300 Lance II	32R-7885002 through 32R-7985106	62716-007	62716-007	62834-002
PA-32RT-300T Turbo Lance II	32R-7787001 32R-7887002 through 32R-7987126	62716-007	62716-007	62834-002

**TABLE 3  
REPLACEMENT SHAFT AND UNIVERSAL JOINT**

Model	Serial Number	Shaft		Universal Joint
		left (Pilot)	right (Copilot)	
PA-32R-301 Saratoga SP	32R-8013001 through 32R-8613006 3213001 through 3213028 3213030 through 3213041	62716-007	62716-007	62834-002
PA-32R-301 Saratoga II HP	3213029 3213042 through 3213103 3246001 through 3246217 3246219; 3246223	62716-007	62716-007	62834-002
PA-32R-301 Saratoga II HP (with Entegra)	3246218 3246220 through 3246222 3246224 through 3246244	62716-007	62716-007	62834-002
PA-32R-301T Turbo Saratoga SP	32R-8029001 through 32R-8629008 3229001 through 3229003	62716-007	62716-007	62834-002
PA-32-301 Saratoga	32-8006002 through 32-8606023 3206001 through 3206019 3206042 through 3206044 3206047 3206050 through 3206055 3206060	62716-007	62716-007	62834-002
PA-32-301T Turbo Saratoga	32-8024001 through 32-8424002	62716-007	62716-007	62834-002
PA-32R-301T Saratoga II TC	3257001 through 3257483	62716-007	62716-007	62834-002
PA-32-301FT Piper 6X	3232001 through 3232074	62716-007	62716-007	62834-002
PA-32-301XTC Piper 6XT	3255001 through 3255014 3255026	62716-007	62716-007	62834-002
PA-32-301XTC Piper 6XT (with Entegra)	3255015 through 3255025 3255027, 3255051	62716-007	62716-007	62834-002
PA-34-200 Seneca	34-E4 34-7250001 through 34-7450220	62716-007	62716-007	62834-002
PA-34-200T Seneca II	34-7570001 through 34-8170092	62716-007	62716-007	62834-002
PA-34-220T Seneca III	34-8133001 through 34-8633031 3433001 through 3433172 3448001 through 3448037	62716-007	62716-007	62834-002
PA-34-220T Seneca IV	3448038 through 3448079 3447001 through 3447029	62716-007	62716-007	62834-002
PA-34-220T Seneca V	3449001 through 3449377	62716-007	62716-007	62834-002
PA-44-180 Seminole	44-7995001 through 44-8195026 4495001 through 4495013 4496001 through 4496251	62716-007	62716-007	62834-002
PA-44-180T Seminole	44-8107001 through 44-8207020	62716-007	62716-007	62834-002

**TABLE 4**  
**ACCEPTABLE REPLACEMENT SHAFT AND UNIVERSAL JOINT PART NUMBERS**

<b>Piper Part Number</b> (as stated in Table 1)	<b>Acceptable Replacement Part Numbers</b>
62716-002	62716-2 62716-02
62716-003	62716-3 62716-03 62716-7 62716-07 62716-007
62716-004	62716-4 62716-04
62716-005	62716-5 62716-05 62716-7 62716-07 62716-007
62716-006	62716-6 62716-06
62716-007	62716-7 62716-07
62834-000	62834 62834-0 62834-00
62834-002	62834-2 62834-02 62834-802



U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

Aircraft Certification Service  
Compliance & Airworthiness Division

Atlanta ACO Branch  
1701 Columbia Ave.  
College Park, Georgia 30337

November 29, 2017

**In Reply, Reference FAA Correspondence #7A0-17-2662**

Mr. Eric A. Wright  
ODA Administrator  
The Piper Aircraft, Inc  
2926 Piper Drive  
Vero Beach, Florida 32960

Subject: Alternative Method of Compliance (AMOC) for Airworthiness Directive 2010-15-10,  
Paragraphs (e) and (h).

Dear Mr. Wright:

The Federal Aviation Administration (FAA) received your proposal dated November 6, 2017, proposing an alternative method of compliance (AMOC) to paragraphs (e) and (h) of Airworthiness Directive 2010-15-10 for Piper Model PA-28, PA-32, PA-34, and PA-44 aircraft. This AD requires owners/operators to inspect the control wheel shaft on both the pilot and copilot sides and replace the control wheel shaft as required.

Your letter indicated that Piper Service Bulletin (SB) 1197E has superseded SB1197D, SB1197C, SB 1197B, SB 1197A and requested that SB 1197E be accepted as an AMOC to AD 2010-15-10.

The Atlanta Aircraft Certification Office approves your AMOC proposal. The ACO has reviewed SB 1197E and has determined that it provides an acceptable level of safety and may be used in lieu of SB 1197A, SB 1197B, SB1197C, and SB1197D when complying with AD 2010-15-10 paragraphs (e) and (h).

This AMOC does not relieve any other requirements of the AD.

When complying with AD 2010-15-10 using this alternative method of compliance, a copy of this letter shall be inserted into the maintenance records of the airplane. Please include a copy of this AMOC when distributing SB 1197E.

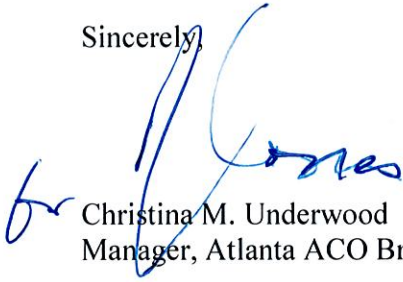
This FAA AMOC is transferable with the aircraft to another owner/operator.

Before using this AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local Flight Standards District Office/Certificate Holding District Office.

The preceding paragraph also applies to any applicable foreign-registered aircraft upon transfer of the aircraft to the U.S. registry if compliance with the AMOC has not been accomplished.

Should you have any questions or concerns, please feel free to contact me at 404-474-5587 or via email at [Hector.Hernandez@FAA.gov](mailto:Hector.Hernandez@FAA.gov).

Sincerely,



Christina M. Underwood  
Manager, Atlanta ACO Branch

CC:

1. Transport Canada
2. European Aviation Safety Agency (EASA)