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Sektion 2. Utlandstillverkad flygmateriel

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**TITEL:** Sprickkontroll av landställens "Side Brace Stud"

**GÄLLER:** Modeller och S/N angivna i bifogad kopia av FAA AD 97-01-01R1.

**ÅTGÄRD:** Utför åtgärder angivna i FAA AD 97-01-01R1 och dess appendix.

**TID FÖR ÅTGÄRD:** Inom tider och intervaller angivna i FAA AD 97-01-01R1.

**UNDERLAG:** FAA AD 97-01-01R1 och dess appendix och tillämpliga underhålls manualer.

**REFERENS:** FAA AD 97-01-01R1

**BESLUTSDATUM:** 1998-12-18

**LFS 1998:87**

Åtgärder enligt LVD utgör nödvändig förutsättning för ifrågavarande flygmateriels luftvärdighet. Referens BCL M 1.11.

Anteckning om åtgärd, som vidtagits i enlighet med LVD, skall införas i teknisk journal för berörd flygmateriel med hänvisning till ifrågavarande LVD-nummer. Angivet underlag refererar till senast gällande revision/utgåva. LVD utges i luftfartsverkets författningssamlingar LFS.

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# REVISED AIRWORTHINESS DIRECTIVE

Bilaga till LVD 2757R1

REGULATORY SUPPORT DIVISION  
P.O. BOX 26460  
OKLAHOMA CITY, OKLAHOMA 73125-0460

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

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Federal Aviation Regulations, Part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference FAR Subpart 39.3).

## 97-01-01 R1 THE NEW PIPER AIRCRAFT, INC.: Amendment 39-10864; Docket No. 96-CE-09-AD.

Applicability: The following airplane models and serial numbers, certificated in any category:

1. All serial numbers of Models PA-24, PA-24-250, PA-24-260, PA-24-400, PA-30, and PA-39 airplanes;
2. The following model and serial number airplanes that are not equipped with a Piper part number (P/N) 78717-02 (or FAA-approved equivalent part number) main gear sidebrace stud in both right and left main gear sidebrace bracket assemblies:

Model	Serial Numbers
PA-28R-180	28R-30002 through 28R-31135, and 28R-7130001 through 28R-7130013
PA-28R-200	28R-35001 through 28R-35820, and 28R-7135001 through 28R-7635539
PA-28R-201	28R-7737002 through 28R-7737096
PA-28R-201T	28R-7703001 through 28R-7703239
PA-32R-300	32R-7680001 through 32R-7780444
PA-34-200	all serial numbers
PA-34-200T	34-7570001 through 34-7770372

NOTE 1: P/N 78717-02 sidebrace stud was installed at manufacture on Piper Model PA-34-200T airplanes, serial numbers 34-7670325 through 34-7770372.

NOTE 2: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (e) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required initially as follows, and thereafter as specified in the body of this AD:

1. For the affected Models PA-28R-180, PA-28R-200, PA-28R-201, PA-28R-201T, PA-32R-300, PA-34-200, and PA-34-200T airplanes: Within the next 100 hours time-in-service (TIS) after the effective date of this AD; or, if the main gear sidebrace stud has already been inspected or replaced as specified in this AD, within 500 hours TIS after the last inspection or replacement; whichever occurs later.

2. For the affected Models PA-24, PA-24-250, PA-24-260, PA-24-400, PA-30, and PA-39 airplanes: Within the next 100 hours TIS after the effective date of this AD; or, if the main gear sidebrace stud has already been inspected or replaced as specified in this AD, within 1,000 hours TIS after the last inspection or replacement; whichever occurs later.

To prevent main landing gear (MLG) collapse caused by main gear sidebrace stud cracks, which could result in loss of control of the airplane during landing operations, accomplish the following:

NOTE 3: The paragraph structure of this AD is as follows:

Level 1: (a), (b), (c), etc.

Level 2: (1), (2), (3), etc.

Level 3: (i), (ii), (iii), etc.

Level 4: (A), (B), (C), etc.

Level 2, Level 3, and Level 4 structures are designations of the Level 1 paragraph they immediately follow.

(a) Remove both the left and right main gear sidebrace studs from the airplane in accordance with the instructions contained in the Landing Gear section of the maintenance manual, and inspect each main gear sidebrace stud for cracks, using Type I (fluorescent) liquid penetrant or magnetic particle inspection methods. Figure 1 of this AD depicts the area of the sidebrace stud shank where the sidebrace stud is to be inspected.

NOTE 4: All affected Models PA-24 and PA-24-250 airplanes were equipped at manufacture with P/N 20829-00 main gear sidebrace studs. All affected Models PA-24-260, PA-24-400, PA-30, and PA-39 airplanes were equipped at manufacture with P/N 22512-00 main gear sidebrace studs. The Appendix included with this AD contains information on determining the P/N of the bracket assembly (which contains the main gear side brace stud) on the affected PA-28R, PA-32R, and PA-34 series airplanes.

(1) For any main gear sidebrace stud found cracked, prior to further flight, replace the cracked stud with an FAA-approved serviceable part (part numbers referenced in the table in paragraph (b) of this AD or FAA-approved equivalent part number) in accordance with the instructions contained in the Landing Gear section of the applicable maintenance manual, and accomplish one of the following, as applicable:

(i) Reinspect (and replace as necessary) as specified in paragraph (b) of this AD; or

(ii) For the affected Models PA-28R-180, PA-28R-200, PA-28R-201, PA-28R-201T, PA-32R-300, PA-34-200, and PA-34-200T airplanes, the 9/16-inch main gear sidebrace studs (P/N 95299-00, 95299-02, or P/N 67543, as applicable) are no longer manufactured. Install a new main gear sidebrace stud bracket assembly, P/N 95643-06, P/N 95643-07, P/N 95643-08, or P/N 95643-09, as applicable. No repetitive inspections will be required by this AD for these affected airplane models when this bracket assembly is installed on both the left and right sides; or

(iii) For the affected Models PA-28R-180, PA-28R-200, PA-28R-201, PA-28R-201T, PA-32R-300, PA-34-200, and PA-34-200T airplanes, ream the existing two-piece bushings to an inside diameter of .624-inch to .625-inch, chamfer the head side of the bushing to accommodate the radius in the shank of the main gear sidebrace stud, and install the 5/8-inch stud, P/N 78717-02. No repetitive inspections will be required by this AD when this action is accomplished on both the left and right bracket assemblies. If the bushings cannot be reamed while installed in the bracket (i.e., the bushings are loose), then install a main gear sidebrace bracket assembly, P/N 95643-06, P/N 95643-07, P/N 95643-08, or P/N 95643-09, as applicable. Models PA-28R-180 and PA-28R-200 with serial numbers as specified in the Appendix to this AD may be equipped with a bracket casting identified with casting number 67073-2 or 67073-3 and may require the following modification to P/N 78717-02 for proper installation:

(A) Reduce the length of the stud to  $1.688 \pm 0.15$  inches;

(B) Add additional rolled threads to  $1.125 \pm .015$  inches from the flange. Note that the stud is heat treated to 180 to 200 ksi; and

(C) Drill an additional roll pin hole 90 degrees to the existing hole, and approximately 1.480 inches from the flange.

(iv) No repetitive inspections will be required by this AD when a P/N 78717-02 (or FAA-approved equivalent part number) main gear sidebrace stud is installed in the existing bracket assembly on both the left and right sides; or when a bracket assembly, P/N 95643-06 (or FAA-approved equivalent part number), P/N 95643-07 (or FAA-approved equivalent part number), P/N 95643-08 (or FAA-approved equivalent part number), or P/N 95643-09 (or FAA-approved equivalent part number), as applicable, is installed on both the left and right sides.

(2) For any main gear sidebrace stud not found cracked, prior to further flight, reinstall the uncracked stud in accordance with the instructions contained in the Landing Gear section of the applicable maintenance manual, and reinspect and replace (as necessary) as specified in paragraph (b) of this AD.

(b) Reinspect both the left and right main gear sidebrace studs, using Type I (fluorescent) liquid penetrant or magnetic particle inspection methods. Replace any cracked stud or reinstall any uncracked stud as specified in paragraphs (a)(1) and (a)(2) of this AD, respectively:

Part Number Installed	TIS Inspec- tion Interval	Model Airplanes Installed on
20829-00 (Piper parts) or FAA-approved equivalent part number	1,000 hours	PA-24 and PA-24-250
22512-00 (Piper parts) or FAA-approved equivalent part number	1,000 hours	PA-24-260, PA-24-400, PA-30, and PA-39

Part	tion Interval	TIS Inspec- Model Airplanes Installed on
Number Installed 95299-00 or 95299-02 (Piper parts) or FAA-approved equivalent part number	500 hours	PA-28R-180 and PA-28R-200 not equipped with casting number 67073-2 or 67073-3, PA-28R-201, PA-28R-201T, PA-32R-300, PA-34-200, and PA-34-200T
67543 (Piper parts) or FAA-approved equivalent part number	500 hours	PA-28R-180 and PA-28R-200 equipped with casting number 67073-02 or 67073-03

NOTE 5: Accomplishing the actions of this AD does not affect the requirements of AD 77-13-21, Amendment 39-3093. The tolerance inspection requirements of that AD still apply for Piper PA-24, PA-30, and PA-39 series airplanes.

(c) Owners/operators of the affected Models PA-28R-180, PA-28R-200, PA-28R-201, PA-28R-201T, PA-32R-300, PA-34-200, and PA-34-200T airplanes may accomplish one of the following at any time to terminate the repetitive inspection requirement of this AD:

(1) Install a main gear sidebrace bracket assembly, P/N 95643-06 (or FAA-approved equivalent part number), P/N 95643-07 (or FAA-approved equivalent part number), P/N 95643-08 (or FAA-approved equivalent part number), or P/N 95643-09 (or FAA-approved equivalent part number), as applicable, which contains the 5/8-inch diameter main gear sidebrace stud, P/N 78717-02 (or FAA-approved equivalent part number), and the one-piece bushing, P/N 67026-12 (or FAA-approved equivalent part number). Accomplish these installations in accordance with the instructions contained in the Landing Gear section of the applicable maintenance manual; or

(2) Ream the existing two-piece bushings to an inside diameter of .624-inch to .625-inch, chamfer the head side of the bushing to accommodate the radius in the shank of the main gear sidebrace stud, and install the 5/8-inch stud, P/N 78717-02 (or FAA-approved equivalent part number). No repetitive inspections will be required by this AD when this action is accomplished on both the left and right bracket assemblies. If the bushings cannot be reamed while installed in the bracket (i.e., the bushings are loose), then install a main gear sidebrace bracket assembly, P/N 95643-06 (or FAA-approved equivalent part number), P/N 95643-07 (or FAA-approved equivalent part number), P/N 95643-08 (or FAA-approved equivalent part number), or P/N 95643-09 (or FAA-approved equivalent part number), as applicable. Models PA-28R-180 and PA-28R-200 with serial numbers as specified in the Appendix to this AD may be equipped with a bracket casting identified with casting number 67073-2 or 67073-3 and may require the following modification to P/N 78717-02 (or FAA-approved equivalent part number) for proper installation:

- (i) Reduce the length of the stud to  $1.688 \pm 0.15$  inches;
- (ii) Add additional rolled threads to  $1.125 \pm .015$  inches from the flange. Note that the stud is heat treated to 180 to 200 ksi; and
- (iii) Drill an additional roll pin hole 90 degrees to the existing hole, and approximately 1.480 inches from the flange.

(d) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

(e) An alternative method of compliance or adjustment of the initial or repetitive compliance times that provides an equivalent level of safety may be approved by the Manager, Atlanta Aircraft Certification Office (ACO), One Crown Center, 1895 Phoenix Boulevard, suite 450, Atlanta, Georgia 30349.

(1) The request shall be forwarded through an appropriate FAA Maintenance Inspector, who may add comments and then send it to the Manager, Atlanta ACO.

(2) Alternative methods of compliance approved in accordance with AD 97-01-01, Amendment 39-9872 (revised by this action), or AD 95-20-07, Amendment 39-9386 (superseded by AD 97-01-01), are considered approved as alternative methods of compliance with this AD.

NOTE 6: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Atlanta ACO.

(f) Information related to this AD may be inspected at the FAA, Central Region, Office of the Regional Counsel, Room 1558, 601 E. 12th Street, Kansas City, Missouri.

(g) This amendment revises AD 97-01-01, Amendment 39-9872, which superseded AD 95-20-07, Amendment 39-9386.

(h) This amendment becomes effective on December 8, 1998.

#### FOR FURTHER INFORMATION CONTACT:

Mr. William O. Herderich, Aerospace Engineer, FAA, Atlanta Certification Office, One Crown Center, 1895 Phoenix Boulevard, suite 450, Atlanta, Georgia 30349; telephone: (770) 703-6084; facsimile: (770) 703-6097.

**APPENDIX TO AD 97-01-01 R1; AMENDMENT NO. 39-10864;  
DOCKET NO. 96-CE-09-AD  
INFORMATION TO DETERMINE MAIN GEAR SIDEBRACE STUD  
ASSEMBLY PART NUMBER (P/N)**

- The P/N 95643-00/-01/-02/-03 bracket assembly contains the 9/16-inch diameter main gear sidebrace stud, P/N 95299-00/-02, and a two-piece bushing, P/N 67026-6.

- The P/N 95643-06/-07/-08/-09 bracket assembly contains the 5/8-inch diameter main gear sidebrace stud, P/N 78717-02, and a one-piece bushing, P/N 67026-12.

- Both the one-piece and the two-piece bushing have a visible portion of the bushing flange, i.e., bushing shoulder.

- Whether a one-piece or two-piece bushing is installed may be determined by measuring the outside diameter of the bushing flange with a micrometer (jaws of the caliper must be 3/32-inch or less). The two-piece bushing will have an outside diameter of 1.00 inch and the one-piece bushing will have an outside diameter of 1.128 to 1.130 inches. This measurement is not valid for the following airplanes:

Model	Serial Numbers
PA-28R-180	28R-30004 through 28-31270
PA-28R-200	28R-35001 through 28R-35820, and 28R-7135001 through 28R-7135062

The main gear sidebrace studs on these airplanes will require removal to determine the P/N installed.

- The one-piece bushing contains a visible chamfer in the center of the bushing, and the chamfer in the two-piece bushing is not visible when the stud is installed.

- If P/N 95643-00/-01/-02/-03 bracket assembly is installed or the above information cannot be utilized, the main gear sidebrace stud will need to be removed from the bracket to determine the shank diameter and main gear sidebrace stud P/N.

- P/N 95299-00 and P/N 95299-02 main gear sidebrace studs are 9/16-inch in diameter.

- P/N 78717-00 main gear sidebrace studs are 5/8-inch in diameter.

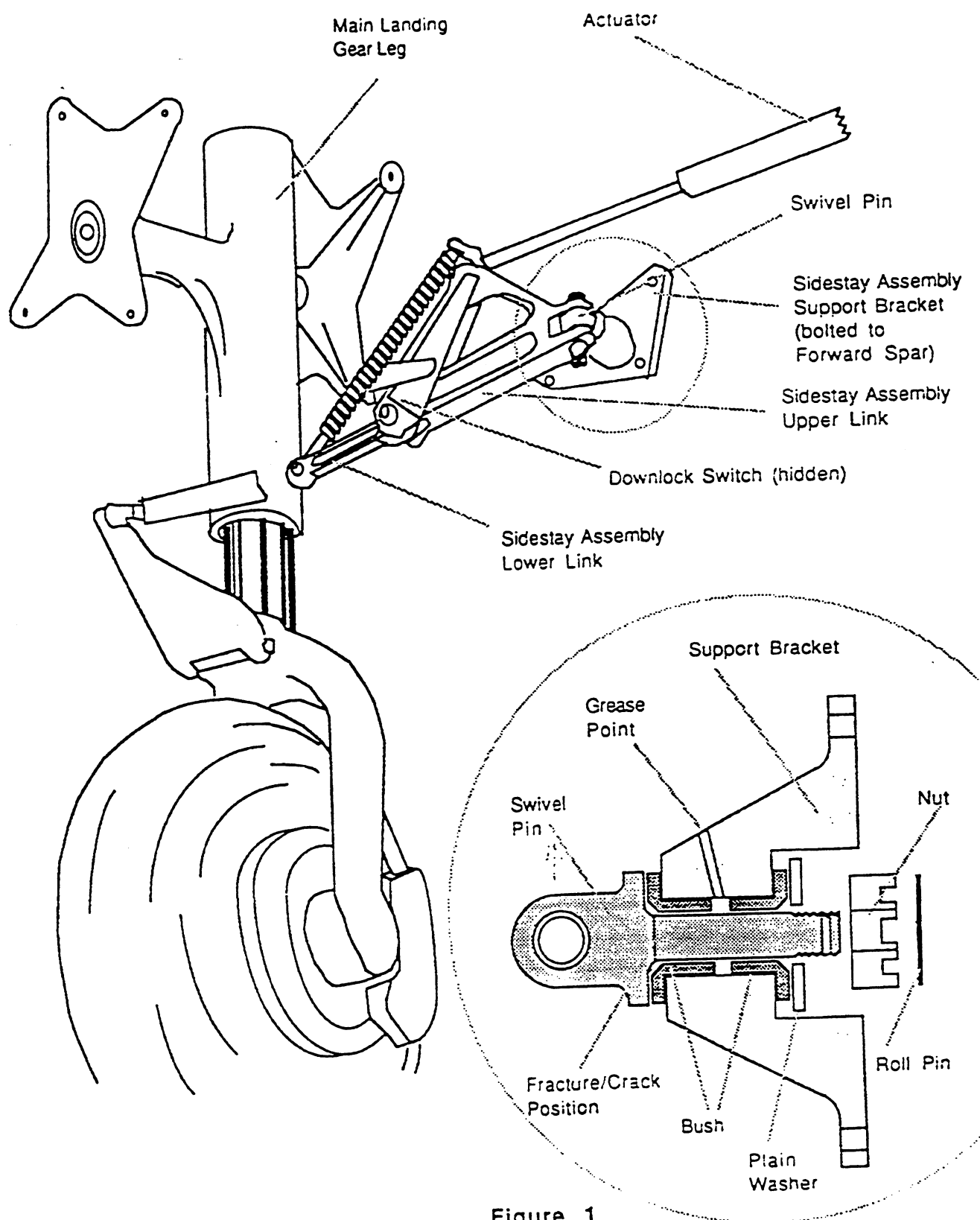
- P/N 95643-00/-01/-02/-03 bracket assembly may have been modified to accommodate the 5/8-inch diameter main gear sidebrace stud, P/N 78717-02.

- The embossed number of 95363 on the bracket forging is not the bracket assembly P/N.

- The bracket assemblies identified with casting number 67073-2 or 67073-3 contain a 9/16-inch diameter main gear sidebrace stud, P/N 67543, and two-piece bushing, P/N 67026-2 and 67026-3.

- Model PA-28R-180 airplanes, serial numbers 28R-30004 through 28R-31270; and Model PA-28R-200 airplanes, serial numbers 28R-35001 through 28R-35820 and 28R-7135001 through 28R-7135062, are equipped from the factory with bracket assemblies identified with casting number 67073-2 and 67073-3.

- P/N 67543 main gear sidebrace studs are 9/16-inch in diameter.

**Figure 1**

AD 97-01-01