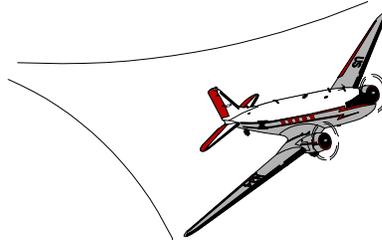


# SPECIAL AIRWORTHINESS INFORMATION BULLETIN



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

AIRCRAFT CERTIFICATION SERVICE  
800 INDEPENDENCE AVENUE, S.W.  
WASHINGTON, DC 20591

No. ACE-95-05  
December 20, 1995

Published by: FAA, AFS-613, P.O. Box 26460, Oklahoma City, OK 73125

This is issued for informational purposes only and any recommendation for corrective action is not mandatory.

## INTRODUCTION:

The purpose of this Special Airworthiness Information Bulletin is to provide owners/operators with information pertaining to Airworthiness Directive (AD) 95-20-07. AD 95-20-07 will be superseded to reflect the information contained in this bulletin as soon as possible. The additional information contained in this bulletin is not mandatory.

## BACKGROUND:

AD 95-20-07 was issued on September 28, 1995, to require repetitive inspection of the main gear side brace studs for cracks and replacement of any cracked main gear side brace stud on certain Piper PA24, PA28R, PA30, PA32R, PA34 and PA39 series airplanes. Prior to the issuance of the AD, the Federal Aviation Administration (FAA) was aware of only two main gear side brace assembly configurations for the PA28R, PA32R, and early serial numbers of PA34 Models. The two configurations in the field were believed to be an assembly containing a 9/16-inch stud (part number (P/N) 95299-0/-2) with a two-piece bushing (P/N 67026-6) in the bracket and an assembly (P/N 95643-06/-07/-08/-09) containing a 5/8-inch stud (P/N 78717-02) with a one-piece bushing (P/N 67026-12) in the bracket.

Based on review of the known service history, AD 95-20-07 was issued to require fluorescent liquid penetrant or magnetic particle inspection of the 9/16-inch stud at 500 hour intervals. The models and serial numbers of those aircraft that left the factory with the 9/16-inch stud installed were listed in the applicability section of the AD.

Since the issuance of AD 95-20-07, the FAA has received additional information which is summarized as follows:

1. The FAA has become aware of a third main gear side brace assembly configuration which contains the 5/8-inch stud (P/N 78717-02) with a two-piece bushing (P/N 67026-9) in the bracket. The "third" configuration was installed by the manufacturer on Model PA34-200T aircraft, serial numbers (S/Ns) 34-7670325 through 34-7770372. This configuration is an approved bracket assembly and does not require replacement as specified in paragraph (a)(2) of AD 95-20-07. AD 95-20-07 will be superseded to correct the serial number effectivity in the AD "Applicability" section to state, "Model PA34-200T, S/N 34-7570001 through 34-7670324;" thereby eliminating Model PA34-200T aircraft, S/N 34-7670325 through 34-7770372, from the AD applicability.

However, it should be mentioned that Piper no longer sells the two-piece bushings (P/N 67026-9). If wear in the bushings is detected under routine maintenance inspections, two-piece bushings, P/N 67026-6, may be purchased and reamed to .624 to .625 inch and installed in accordance with the PA34-200T Service Manual or an airworthy bracket assembly (P/N 95643-06/-07/-08/-09) is required to be installed.

2. Based on additional review of the 9/16-inch stud and two-piece bushing assembly, the FAA has made the determination that should owners/operators elect to eliminate the 500 hour repetitive inspections, they may accomplish one of the following options:

- a. Install an airworthy main gear side brace bracket assembly (P/N 95643-06/-07/-08/-09) which contains the 5/8-inch stud (P/N 78717-02) and one-piece bushing (P/N 67026-12); or
- b. Ream the existing two-piece bushings (P/N 67026-6) to .624 to .625 inch and install the 5/8-inch stud (P/N 78717-02). If the bushings can not be reamed while installed in the bracket (i.e. if the bushings are loose), install an airworthy main gear side brace bracket assembly (P/N 95643-06/-07/-08/-09) which contains the 5/8-inch stud (P/N 78717-02) and one-piece bushing (P/N 67026-12).

3. Inspection of the main gear side brace studs for cracks requires the use of Type I (fluorescent) liquid penetrant or magnetic particle inspection methods. As originally issued, AD 95-20-07 stated that the inspection "must be accomplished by a facility authorized by the FAA to accomplish the applicable inspection method." AD 95-20-07 was corrected to reflect that the inspection "must be accomplished by a facility **or persons** authorized by the FAA to accomplish the applicable inspection method." Therefore, an individual having at least an Airframe rating who has the capability to perform the applicable inspection method is authorized to perform the inspection.

4. AD 95-20-07 specifies that a "new" main gear side brace stud bracket assembly (P/N 95643-06/-07/-08/-09) must be installed if a cracked side brace stud is found. Any one of the following actions is considered acceptable to the FAA:

- a. Install an airworthy 9/16-inch stud (P/N 95299-0/-2) and continue the repetitive 500-hour inspections as specified in AD 95-20-07;
- b. Ream the two-piece bushings to accommodate a 5/8-inch stud (P/N 78717-02) and terminate the repetitive inspection requirement of AD 95-20-07; or
- c. Install an airworthy main gear side brace stud bracket assembly, P/N 95643-06, 95643-07, 95643-08, 95643-09, as applicable, and terminate the repetitive inspection requirement of AD 95-20-07.

5. For the PA28R-180, PA28R-200, PA28R-201, PA28R-201T, PA32R-300, PA34-200 Model aircraft as specified in AD 95-20-07, and PA34-200T, S/N 34-7570001 through 34-7670324, aircraft, the FAA has become aware of a method of determining the shank diameter of the main gear side brace stud without removing the stud from the bracket assembly. Both the two-piece bushing (P/N 67026-6) and one-piece bushing (P/N 67026-12) have a visible portion of the bushing flange (i.e. bushing shoulder). By measuring the outside diameter (OD) of the bushing flange with a micrometer (jaws of the calipers must be 3/32 inch or less), one can determine if the two-piece or the one-piece bushing is installed. The two-piece bushing will have an OD of 1.00 inch and the one-piece bushing will have an OD of 1.128 to 1.130 inches. In addition, the one-piece bushing contains a visible chamfer in the center of the bushing, whereas the two-piece bushing does not contain a visible chamfer. The 9/16-inch stud is installed if a two-piece bushing is present. The 5/8-inch stud (P/N 78717-02) is installed if a one-piece bushing is present. If this method can not be accomplished, the stud will have to be removed from the bracket to determine the shank diameter and stud P/N.

6. The main gear side brace bracket for the PA28R-180, PA28R-200, PA28R-201, PA28R-201T, PA32R-300 and PA34-200 Models containing the 9/16-inch stud (P/N 95299-0/-2) and two-piece bushing (P/N 67026-6) will not accommodate the one-piece bushing (P/N 67026-12) and 5/8-inch stud (P/N 78717-02) due to machining differences in the bracket. Similarly, the main gear side brace bracket for the PA34-200T Model containing the 5/8-inch stud (P/N 78717-02) and two-piece bushing (P/N 67026-9) will not accommodate the one-piece bushing (P/N 67026-12) due to machining differences in the bracket.

#### **RECOMMENDATIONS:**

The information contained in this bulletin is approved by the FAA, Atlanta Aircraft Certification Office, and may be referenced by an owner/operator as an approved alternative method of compliance during the interim time frame until AD 95-20-07 is superseded.

#### **FOR FURTHER INFORMATION CONTACT:**

Christina Marsh, Aerospace Engineer, FAA, Atlanta Aircraft Certification Office, Campus Building, 1701 Columbia Avenue, Suite 2-160, College Park, Georgia 30337-2748; telephone (404) 305-7362; facsimile (404) 305-7348.