SERVICE BULLETIN 137: **MANDATORY**

SUBJECT: Glasair III Main Landing Gear Side Brace Stud Replacement

APPLICABILITY: All Glasair III kits shipped prior to December 1993 that have main landing gear serial numbers up to and including #262. (Gear strut serial numbers are located on the top surface of the trunnion cylinder.) This bulletin supersedes Service Bulletin 126, Upgrade #1.

DESCRIPTION: We have received several field reports of side brace studs that have separated from the main gear trunnion cylinder at a groove machined into the base of the stud.

The original side brace attach point on the main gear is a welded-in stud with a diameter of .375" in the area of the bearing shoulder. Removal of the original stud and machining of a threaded boss will provide a means for the installation of one of two sizes of heat-treated replacement studs made of stronger material.

OPTION #1: Replace the original studs with ones that are the same .375" diameter but with 83% more tensile strength than the original studs.

OPTION #2: As an alternative, a yet stronger, .435" diameter side brace stud **(highly recommended)** can be retrofitted to the heavy-duty side braces per Service Bulletin 126. The .435" diameter stud provides 150% more strength than the original studs and may be threaded into the same boss.

NOTE: If the alternate .435" diameter side brace studs (P/N 353-5133-003) are used, they **require** the use of the Heavy Duty G-III Side Braces (P/N 353-5205-103 and -104) and Down Lock Component Kits (P/N 353-5290-501). The heavy-duty side brace arms are sized to use larger bearings for the trunnion attach points. These bearings have an internal diameter of .437" to coincide with the shoulder of the alternate replaceable trunnion stud. These side braces also have an increased cross-sectional area to brace the main gear against side loads that may be encountered. If not already installed, these parts can be purchased from our Order Desk. If the G-III Emergency Gear Extension Retrofit Kit (P/N 353-5800-502) has already been installed, then the Heavy Duty Side Brace and Down Lock assemblies have also been installed because of the requirement to use the heavier side braces for this installation. In this case, a bushing would have been used to adapt the heavy-duty side braces to the original, smaller, .375" diameter trunnion studs.

REQUIRED ACTION: Within the next 25 hours in service, cut off the original .375" diameter stud and machine the side brace saddle to a 3-1/2° angle. Drill and tap the existing side brace stud pilot hole (.510" ∅) for 5/8-18 threads. A lock wire hole (3/32" ∅) should be machined at a convenient location. All affected machined surfaces must then be primed for corrosion protection. Apply a thread adhesive to the threads, thread in the P/N 353-5133-003 (.435" diameter) or P/N 353-5133-009 (.375" diameter) stud and torque it to 1,100-1,300 inch-pounds. Secure the stud with .040" lock wire. Use a countersunk washer with the countersunk side against the radius at the base of the stud shank, as shown in figure (1).

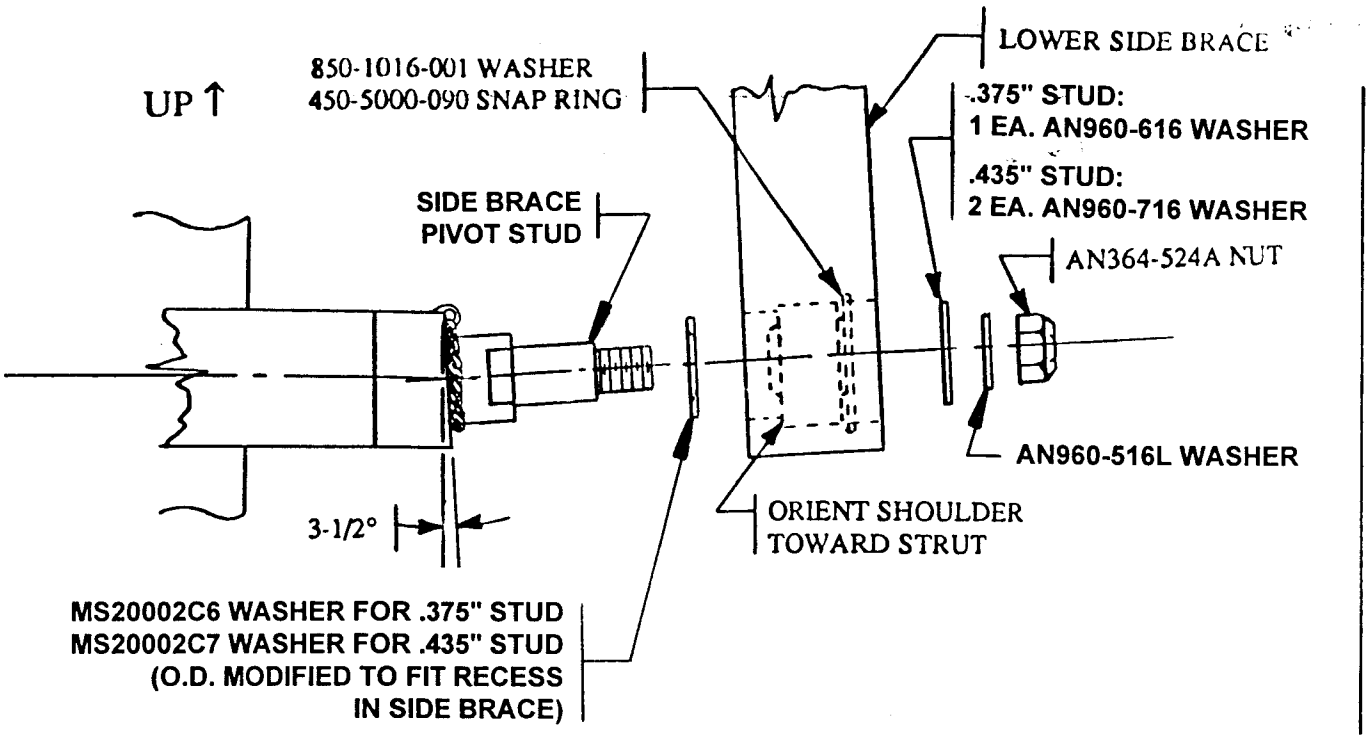


FIGURE (1)

COST:

To order the threaded side brace studs please contact our Order Desk at (360) 435-8533 and refer to the part numbers given below.

NOTE: Two are required per aircraft.

P/N 353-5133-009 .....Side Brace Stud, Threaded, .375" diameter.....$51.00 ea.
P/N 353-5133-003 .....Side Brace Stud, Threaded, .435" diameter.....$51.00 ea.
(Price is subject to change after December 1995)

NOTE: P/N 353-5133-003 was numbered incorrectly as P/N 353-5110-003 in Service Bulletin #126.

These procedures are likely beyond the capabilities of most builders (access to a machine shop is necessary), so as was done in Service Bulletin #126, Stoddard-Hamilton is putting together a program with our landing gear vendor to upgrade a group run of gear legs, taking advantage of quantity pricing.

If you wish to have Stoddard-Hamilton Aircraft upgrade your Glasair III main gear as described above, the gear legs must be returned to us no later then October 31, 1995. The upgraded unit will be returned to the builder approximately eight weeks after the above date for a one-time offer of $184.60 per set ($225.00 after the October 31, 1995, deadline) which includes the machining, the price of the new threaded studs, priming, and touch-up with white paint.

Please send your main gear struts to us complete less the axles, brake calipers, upper trunnion bearing housings, and side braces. Please attach a tag to each strut with your name, kit number, and address for identification, and a note indicating the work requested.

RECOMMENDED ACTION: For an additional $20.00 charge ($75.00 after the October 31, 1995, deadline; the price includes parts), Stoddard-Hamilton can also upgrade your axle bolts as mentioned in Service Bulletin #126. Please specify this with the work request attached to your struts if you desire.

If you wish to do this work yourself, we have reprinted the instructions below from Service Bulletin #126 for your reference.

AXLE BOLT REPLACEMENT INSTRUCTIONS: In order to install the higher strength NAS6604-24 bolts, remove the existing AN4H13A bolts connecting the axle to the half fork. Drill out the threads with a .250" diameter drill. After each hole is drilled, prime the bare metal inside each hole with an epoxy primer. Install the torque plates and axles using the NAS6604-24 bolts, AN960-416L washers, and NAS1758-L4 nuts, as shown in Figure (2).

To order any of the above items, please contact our Order Desk at (360)435-8533 and refer to this bulletin number.

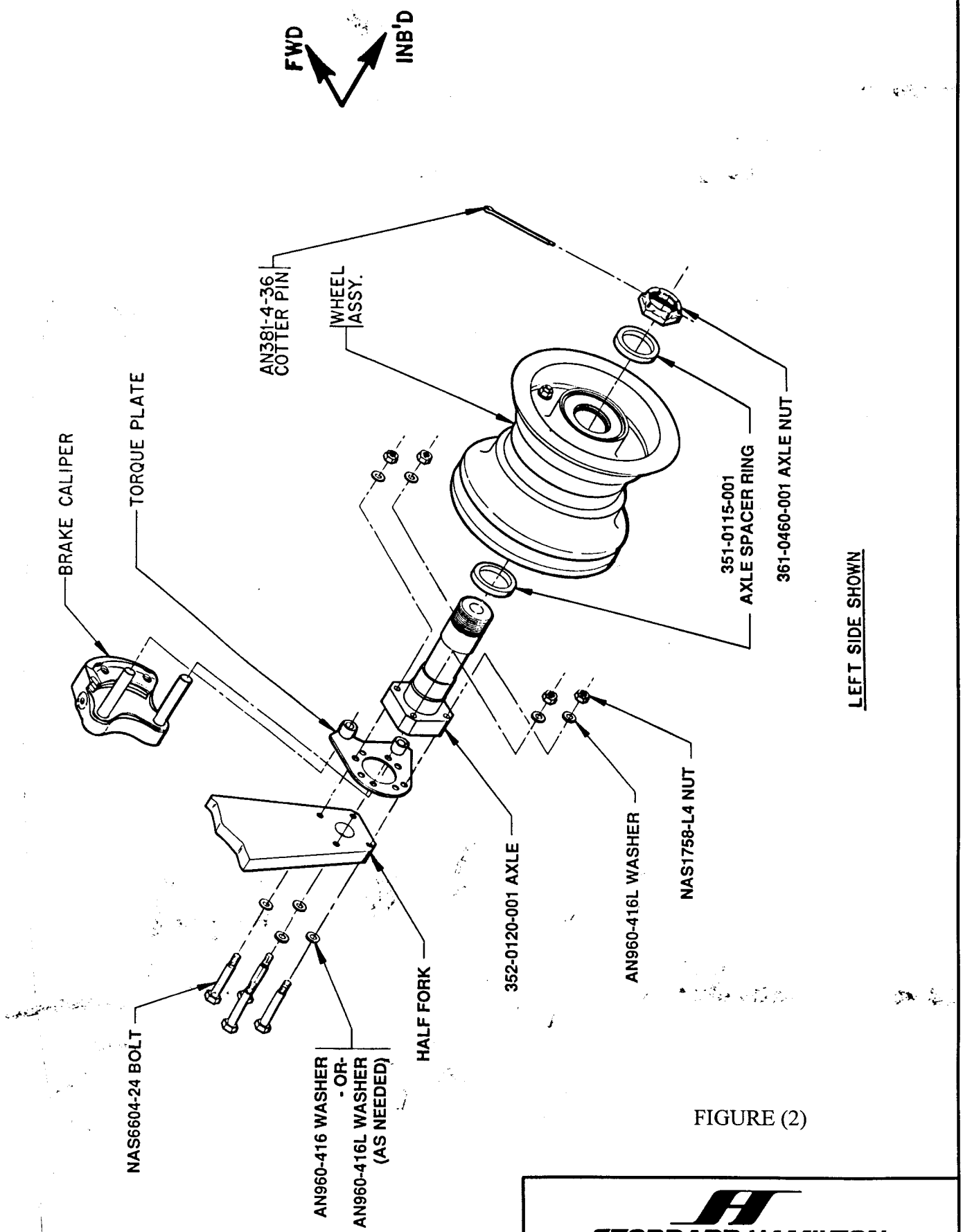


FIGURE (2)

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