

SERVICE BULLETIN 44, Revision A

SUBJECT: GLASAIR FT NOSE LANDING GEAR MODIFICATION

APPLICATION: All Glasair I FT aircraft

MANUAL REFERENCE: FT Appendix, page D-46, FIGURE (D-34).

DESCRIPTION: The single length of 1/8" diameter safety cable has been found to be inadequate to withstand the drag loads imposed on it during some unusual landing conditions. Builders have experienced failure of the safety cable and subsequent shearing of the rubber shock mounts. The result has been for the nose gear assembly to fold under the airplane and to either shear off or cause the airplane to slide on its lower cowling.

SOLUTION: To prevent the drag landing gear loads from being absorbed by the rubber shock mounts and the safety cable, we require the installation of (2) AN7 bolts between the shock truss assembly and the nose landing gear strut channel. All drag loads will be transferred to these bolts and will not be transferred to the rubber shock mounts which are designed only to handle compression loads. Older Glasair I's and Glasair I's with injected engine mounts require AN7-47 bolts. All other Glasair FT's which did not need shims in the shock absorber assembly to lower the nose gear strut require AN7-43 bolts.

BOLT INSTALLATION INSTRUCTIONS:

1. Remove the nose gear strut assembly from the aircraft. Disassemble the shock truss assembly from the strut channel. Remove the rubber shock mounts from both assemblies. Save the 1/8" safety cable and cable attach tab for reinstallation.
2. Measure inboard 1.57" from the centers of the rubber shock mount attach holes, as shown in FIGURE (1), and mark the centers of the holes for the AN7 bolts at these points. Repeat this procedure to mark the locations of the two new bolt holes in both the shock truss and the strut channel, as shown in FIGURE (1).
3. Proceed to drill the four marked holes. Use a small bit to drill a pilot hole and then use a 7/16" diameter bit for the final hole.

NOTE: The shock truss assembly and the strut channel assembly are heat treated parts. The best procedure for drilling these parts is to:

- a. Use a drill press at a very slow speed.
- b. Use a sharp bit and avoid allowing the drill bit and the part being drilled to overheat and harden.
- c. Use cutting oil to cool and lubricate the drill bit.


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4. AN970-6 washers are used under the head of the bolt and under the nut because of their smaller outside diameters than AN970-7 washers. Before installing the AN970-6 washers, use a drill press and a 7/16" diameter drill bit to enlarge their original 3/8" diameter center holes.

5. Assemble the shock truss assembly to the strut channel assembly using the rubber shock mounts. Insert the AN7 bolts and washers into the landing gear assembly, as shown in View A-A FIGURE (1).

6. Reinstall the nose landing gear into the aircraft and allow the aircraft to rest on its landing gear. Tighten the AN310-7 castle nuts onto the AN7 bolts until the nuts can no longer be turned by hand. Add or subtract AN960-716 washers between the nuts and the modified AN970-6 washers until the cotter pin holes in the bolts line up with slots in the castle nuts. Install the AN381-3-14 cotter pins.

7. Check for possible interference between cables or wires immediately around and above the bolt heads. When the rubber of the shock mounts compresses, the bolt heads may extend upward. Verify that a minimum 1" clearance exists around each AN7 bolt head.

NOTE: If interference problems exist between the bolt heads and cables or wires immediately around them, drill a 3/32" Dia. hole in each bolt shank immediately below the shock truss assembly, as shown in View A-A FIGURE (1). Install a AN381-3-14 cotter pin to restrict the upward movement of the bolt, in the shock truss assembly.

8. Reinstall the 1/8" safety cable and attach tabs which protect against possible failure of the upper shock truss.

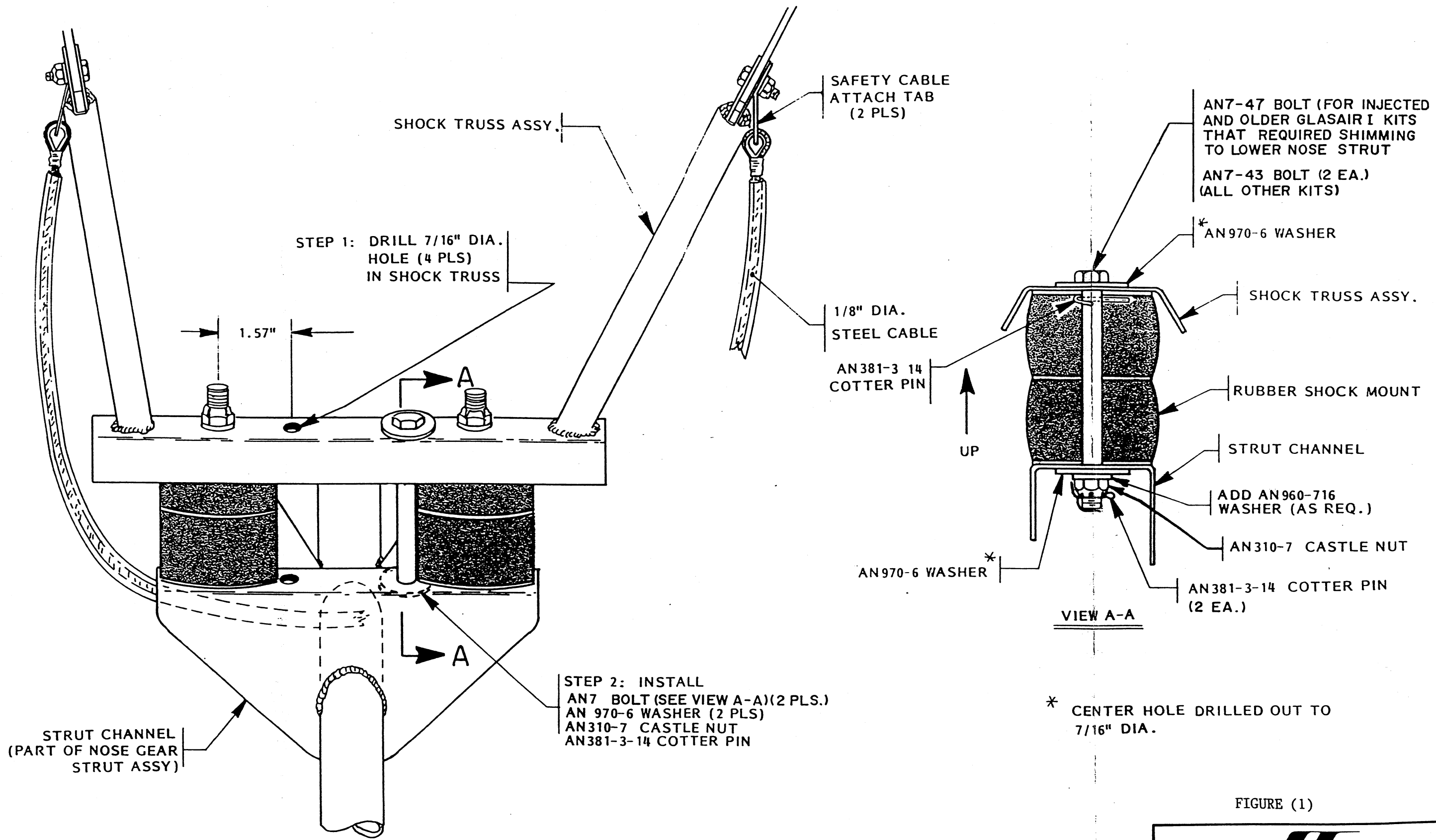
After receiving reports of two separate Glasair FT accidents involving failure of the nose gear strut assembly, Stoddard Hamilton Aircraft has investigated and tested both the strength of the gear strut and the drag load capability of the truss assembly. Although the nose gear strut itself proved to be very strong, the drag load capability of the truss assembly installation was marginal. Strengthening of the truss attachment per this Service Bulletin has proved to be a suitable fix both in destructive and non-destructive testing performed at our facilities.

WARNING: Compliance with this Service Bulletin is mandatory. Failure to do so could result in substantial damage to the aircraft and possible bodily injury.

Please inform Stoddard-Hamilton Aircraft if you need any of the hardware required by this Service Bulletin Revision. The only parts affected by this revision that you may not have received are the AN7-47 bolts and the AN381-3-14 cotter pins.


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STEP 1: DRILL 7/16" DIA. HOLE (4 PLS) IN SHOCK TRUSS

1.57"

SHOCK TRUSS ASSY.

SAFETY CABLE ATTACH TAB (2 PLS)

1/8" DIA. STEEL CABLE

AN381-3 14 COTTER PIN

UP

AN7-47 BOLT (FOR INJECTED AND OLDER GLASAIR I KITS THAT REQUIRED SHIMMING TO LOWER NOSE STRUT)
AN7-43 BOLT (2 EA.) (ALL OTHER KITS)

* AN970-6 WASHER

SHOCK TRUSS ASSY.

RUBBER SHOCK MOUNT

STRUT CHANNEL

ADD AN960-716 WASHER (AS REQ.)

AN310-7 CASTLE NUT

AN381-3-14 COTTER PIN (2 EA.)


VIEW A-A

* CENTER HOLE DRILLED OUT TO 7/16" DIA.

STEP 2: INSTALL AN7 BOLT (SEE VIEW A-A)(2 PLS.) AN 970-6 WASHER (2 PLS) AN310-7 CASTLE NUT AN381-3-14 COTTER PIN

STRUT CHANNEL (PART OF NOSE GEAR STRUT ASSY)

FIGURE (1)

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