

SERVICE BULLETIN 89 MANDATORY

SUBJECT: FT NOSE GEAR STRUT REINFORCEMENT

APPLICATION: All Glasair I FT and Glasair II FT nose gear struts shipped before 7/13/90 or before kit number 2083.

DESCRIPTION: After two failures of FT nose gear struts in the field, we are requiring that the struts be reinforced to prevent further failures that may cause serious damage or injury. Nose gear struts may fail at either the upper or the lower weld around the 1-3/8" diameter tube at the shock truss assembly, as shown in FIGURE (1).

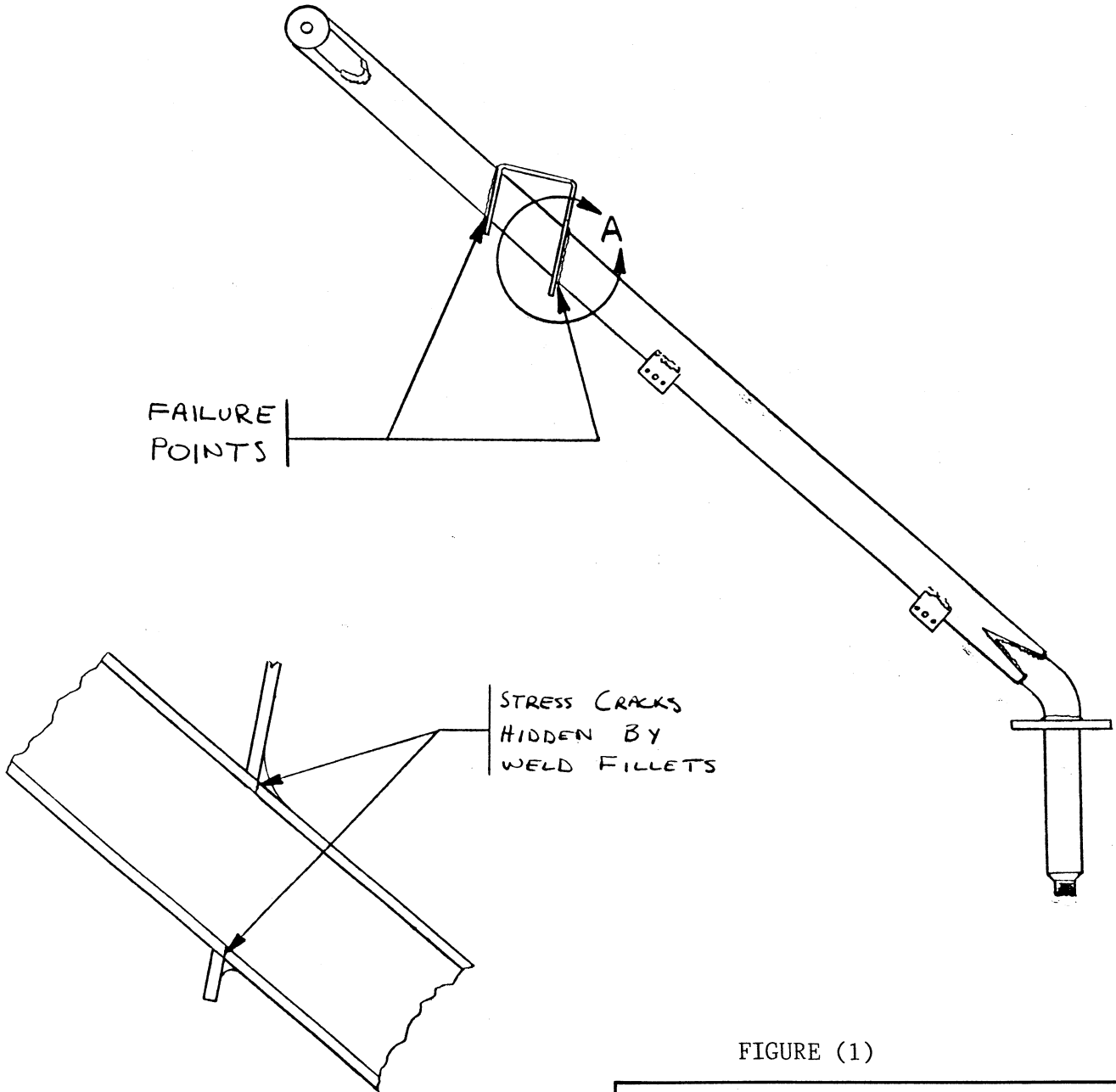


FIGURE (1)



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The exact cause of the failures is unknown, but they have occurred at highly stressed parts of the strut. In both instances, a stress crack began under the weld between the shock strut channel and the strut tube in a location that cannot be inspected until after a failure has occurred. Refer to the Detail in FIGURE (1).

SOLUTION:

*****WARNING: COMPLIANCE WITH THIS SERVICE BULLETIN IS MANDATORY*****

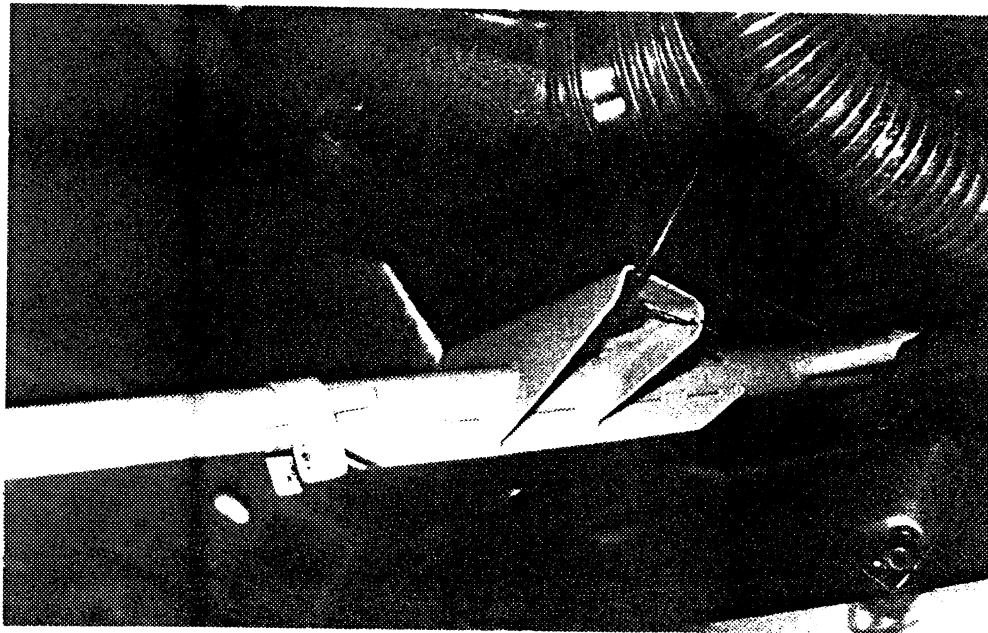


FIGURE (2)

If you wish to have Stoddard-Hamilton Aircraft rework your nose gear strut, return it to us by 11/30/90. We will modify the strut by welding a 4130 steel channel reinforcement to the underside, as shown in FIGURE (2). Since the welding process alters the original heat treatment, we will have the strut reheat-treated to the original specification. After heat treatment, the strut will be cadmium plated and powder coated. As with all of our engine mounts and landing gear struts, we now specify a light gray powder coating (rather than black) to make any possible future cracks more visible. The cost for reworking your strut is \$119.00 plus shipping. The first 100 struts received by Stoddard-Hamilton will be returned to the builders by 1/31/91. A second production run for strut rework will be scheduled later, with a return date to be announced.

NOTE: All FT nose gear struts returned to Stoddard-Hamilton must be tagged with the builder's name, the kit number, the date, and specific instructions: "Rework per Service Bulletin 89." The tag must be wired to the strut for ease of removal; DO NOT use tape.


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 AIRCRAFT, INCORPORATED

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Alternatively, you may wish to have the strut reworked locally. The 4130 steel reinforcement channel (trimmed, slotted, and ready for installation) may be purchased from Stoddard-Hamilton Aircraft for \$10.50, plus shipping. Your total cost for the rework may be higher locally because of minimum lot charges, but the work could be done on your own schedule.

To reinforce the nose gear strut, first have it stripped of paint and cadmium plating. Before welding, preheat the strut in the areas of the welds to 400° F. Weld using the TIG (tungsten inert gas) welding process. After welding, let the strut cool slowly in air or in sand, and then have it heat-treated in a local shop to 140-150 Ksi. Finally, have the strut cadmium plated for corrosion protection, and then powder coated or painted.

CAUTION: Cadmium plated steel parts must be baked by the electroplating shop after plating to drive out any hydrogen that might have been introduced into the steel by the electroplating process. Such hydrogen, if not removed, can lead to cracking in the steel; this is known as hydrogen embrittlement. Also, when ordering the cadmium plating, stipulate that it must meet the QQ-P-416E Type II Class 3 specification.



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