

Service Letter: 438

Date: September 25, 2014

Title: Inspection of Fuselage Frame at Main Gear Attachment

Models: 7EC, 7ECA, 7GCAA, 7GCBC, 7KCAB, 8KCAB and 8GCBC, 1967 and Up

Description: Service instructions require inspection of the fuselage frame for bent, cracked, corroded, or otherwise damaged members at 100-hour intervals. This inspection shall include the fuselage longeron at the main gear attach point.

The inspection procedures described herein are not intended to be a substitute for a properly performed 100 hour / annual inspection. Refer to Advisory Circular (AC) 43.13-1B: Acceptable Methods, Techniques, and Practices: Aircraft Inspection and Repair.

Main gear loads contribute to stress at the u-bolt attach holes and forward longeron; cracks may develop in these areas. Special emphasis should be placed on aircraft having damage history, used for flight training, or operating frequently on unimproved surfaces.

Inspection: Inspect for cracks or other damage at every 100-hour or annual inspection

1. Remove belly pan or open lower wraparound. Remove forward metal belly skin (if equipped).
2. Visually inspect left and right main gear longerons as indicated in Figure 1. Removal of upholstery panels may be necessary to facilitate inspection at the aft u-bolt attachment. Cracks typically originate from the attachment holes.

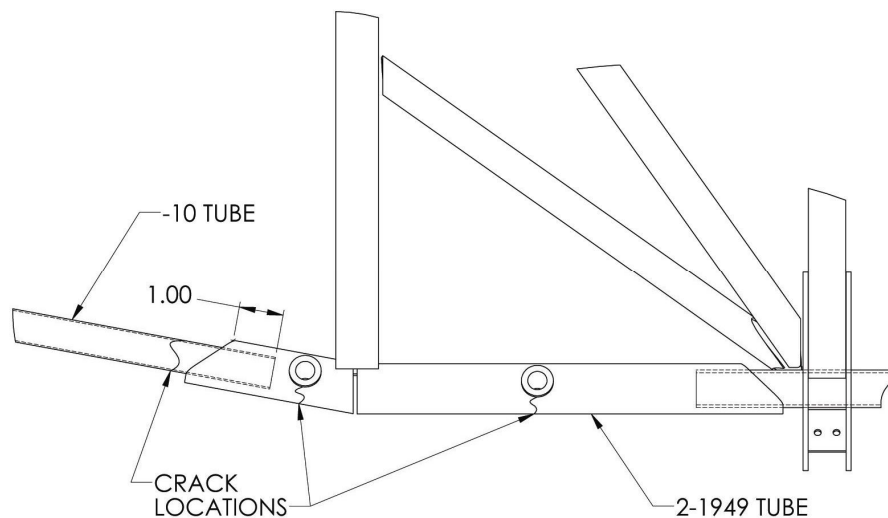


Figure 1, Longeron at Main Gear Attachment

Crack Repair -10 Tube:

1. Plan an inner-sleeve or outer-sleeve splice per AC 43.13-1B figure 4-37 or 4-38. Cut and remove damaged section of -10 tube.
2. Grind the weld as required to remove -10 tube from 2-1949.
3. Replace removed portion of -10 tube with .035 x Ø.75 4130 Steel Tubing Condition N (AMS-T-6736). Replacement tube must be inserted 1.00 inches into 2-1949 tube (see Figure 1). Effect an inner-sleeve or outer-sleeve splice. Weld per specification CW-1S or other approved method.

Crack Repair 2-1949 Tube:

Repair per drawing 4-1530, Installation – Gussets, rev. A or later. Weld cracks and gussets per specification CW-1S or other approved method.