

# **RAMS**

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***Airworthiness Directive: 142***

***Date: 10-26-2022***

***Subject: Fuel Tank Shifting/swelling***

***Compliance: Mandatory***

***Models Effected: S-21, S-21LS and S-20 with 141 Wing***

Due to size variations in wing tanks, along with swelling of the fuel tank from fuel vapors, we have found the need for retaining the wing fuel tank from sliding and from swelling to the aft portion of the fuel tank cavity.

If the fuel tank slid back or became so enlarged, it could pinch the fuel line off through the root rib causing a fuel starvation. It also has been seen that the inboard screw for retaining the fuel inspection cover can rub against the fuel tank withdraw line. This can be easily fixed by rotating the fuel fitting for adequate clearance between the two.

**Instructions:**

1. Apply anti-chafe tape to the both fuel tank retention brackets in the locations shown in Figure-1.

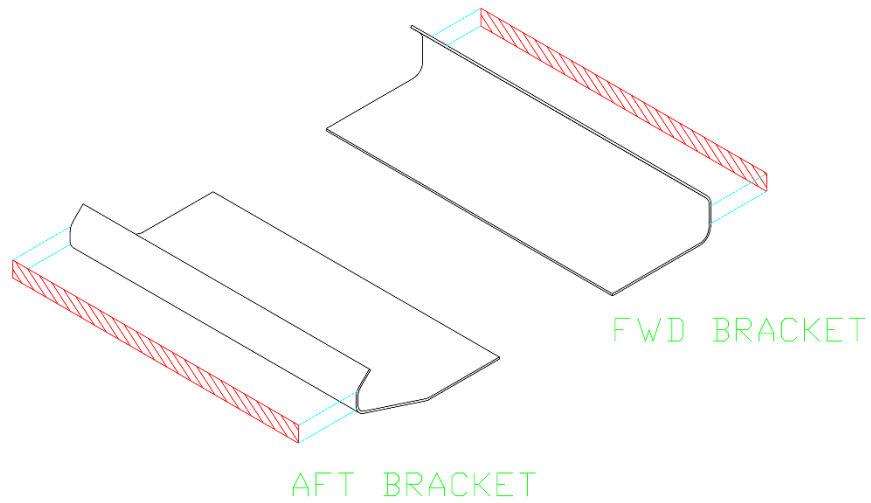


Figure-1

2. Layout the hole locations and drill #40. Debur the bottom wing skin as per Figure-2.

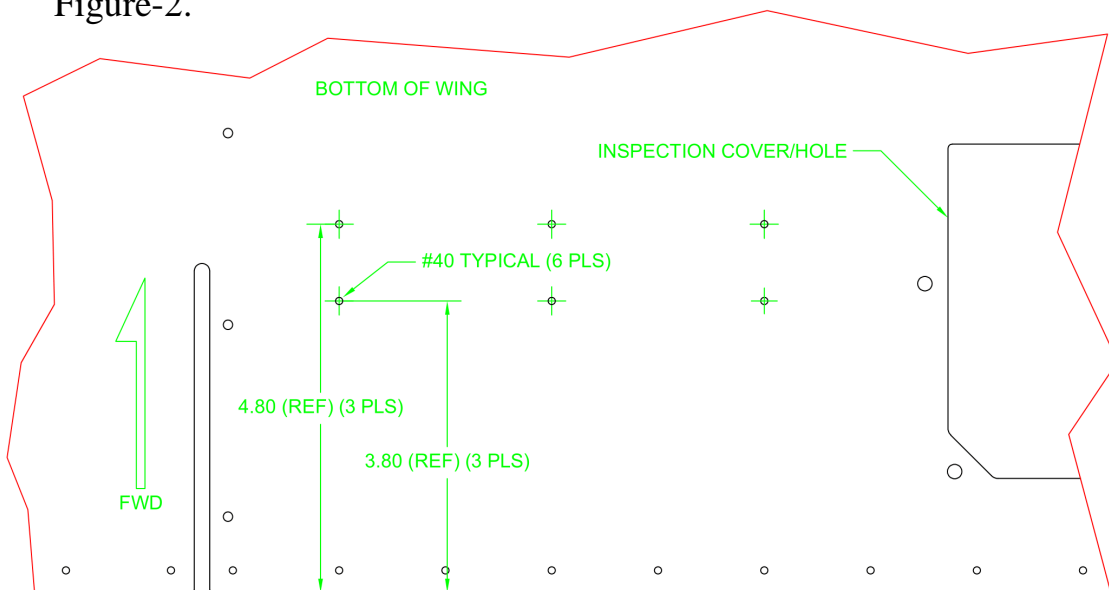


Figure-2

3. Insert the aft fuel tank retention bracket in the position shown in Figure-3. Make sure the bracket butts against the rib flange and is not overlapping. While holding the bracket firmly in place against the rear spar and not overlapping the rib flange, use a felt tipped marker to locate the rivet holes through the newly drilled #40 holes. Repeat the process by holding the **FWD Tank Retention Bracket** up to the fuel tank.

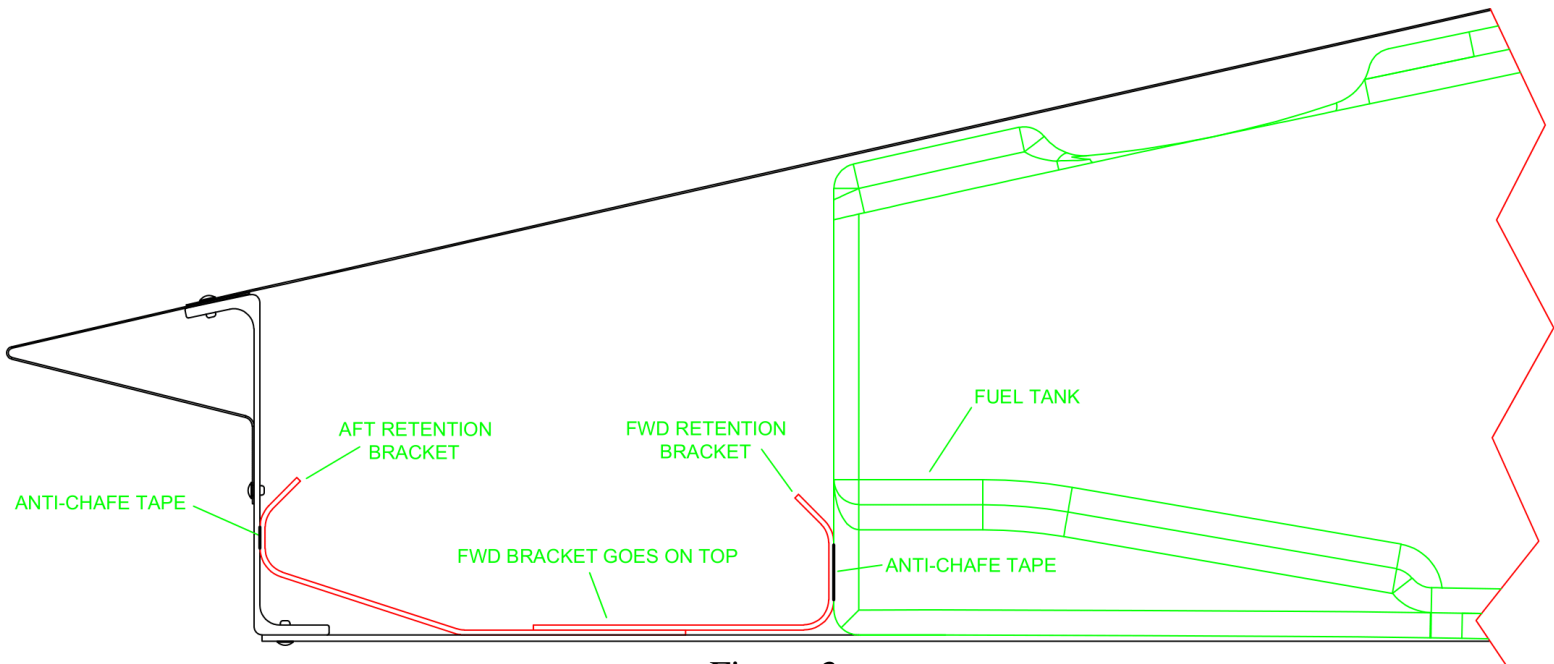


Figure-3

4. Drill both tank retention brackets on the marks to #40.
5. Place both brackets inside the wing, lined up with the holes. The FWD bracket overlaps on top. Cleco the brackets in place thru the two outer holes and transfer drill #30. Remove and debur.
6. Cleco the two brackets back in place thru the four outer holes and install **AAPQ-42** rivets. Remove the outer clecos and install **AAPQ-42** rivets in the remaining holes. Vacuum the wing cavity to remove any drill debris and install inspection cover to complete the installation.
7. Fly fun, fly safe!