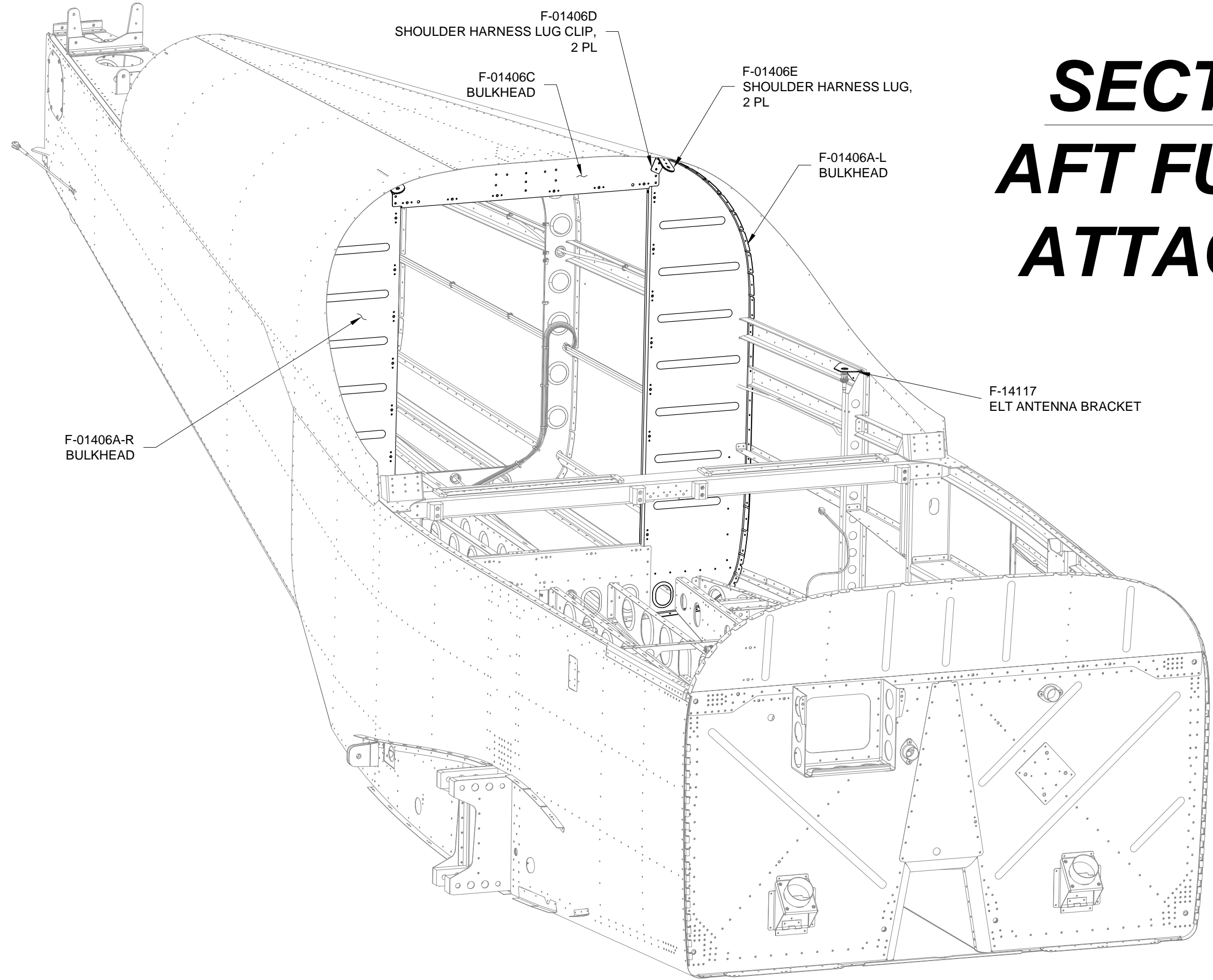
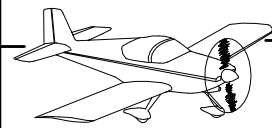


SECTION 30: AFT FUSELAGE ATTACHMENT



NOTE: Special tools required to complete this section: none.

DATE OF COMPLETION:	_____		
PARTICIPANTS:	_____		
DATE: 05/01/14	REVISION: 0	RV-14	PAGE 30-01



NOTE: Except where separate instructions and/or figures exist for both left and right sides of the aircraft, only the left side parts, assemblies, or installations will be shown.

Unless otherwise directed it is the builder's choice whether to complete all steps for the left side before repeating those steps for the right side or to complete each step for both left and right sides before moving to the next step.

Refer to Figures 1 and 2 unless otherwise noted.

Step 1: Dimple the #40 holes in the flanges of the F-01406A-L and F-01406C Bulkheads except as noted in Figure 1.

Step 2: Dimple the #40 nutplate attach holes in the F-01406A-L and F-01406C Bulkheads.

Step 3: Dimple the indicated #30 holes in the F-01406A-L and F-01406C Bulkheads.

Step 4: Rivet the nutplates to the F-01406A-L and F-01406C Bulkheads.

Step 5: Use a step drill to enlarge the .191 [4.9 mm] hole to 3/4 in the F-01406A-L Bulkhead as shown in Figure 1. Do not repeat this step for the F-01406A-R Bulkhead.

Step 6: Flute flanges as required for proper hole alignment around the perimeter of the F-01406A-L and F-01406C Bulkheads.

Step 7: Cleco the F-01406A-L and F-01406C Bulkheads into the Aft Fuselage Assembly to determine if the fluting is adequate. See Page 30-04, Figure 1 and Page 30-05, Figure 1.

Remove the bulkheads when satisfied with the fit.

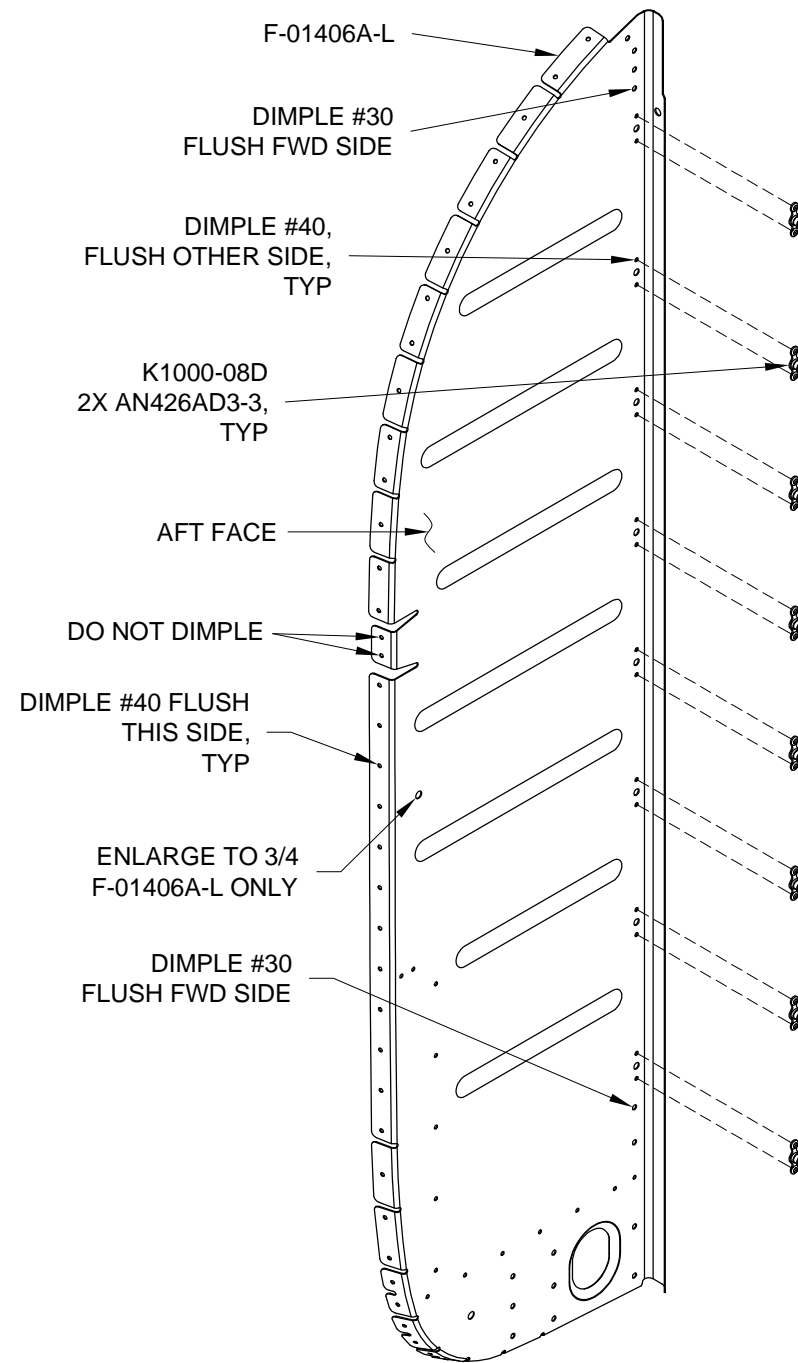


FIGURE 1: INSTALL NUTPLATES

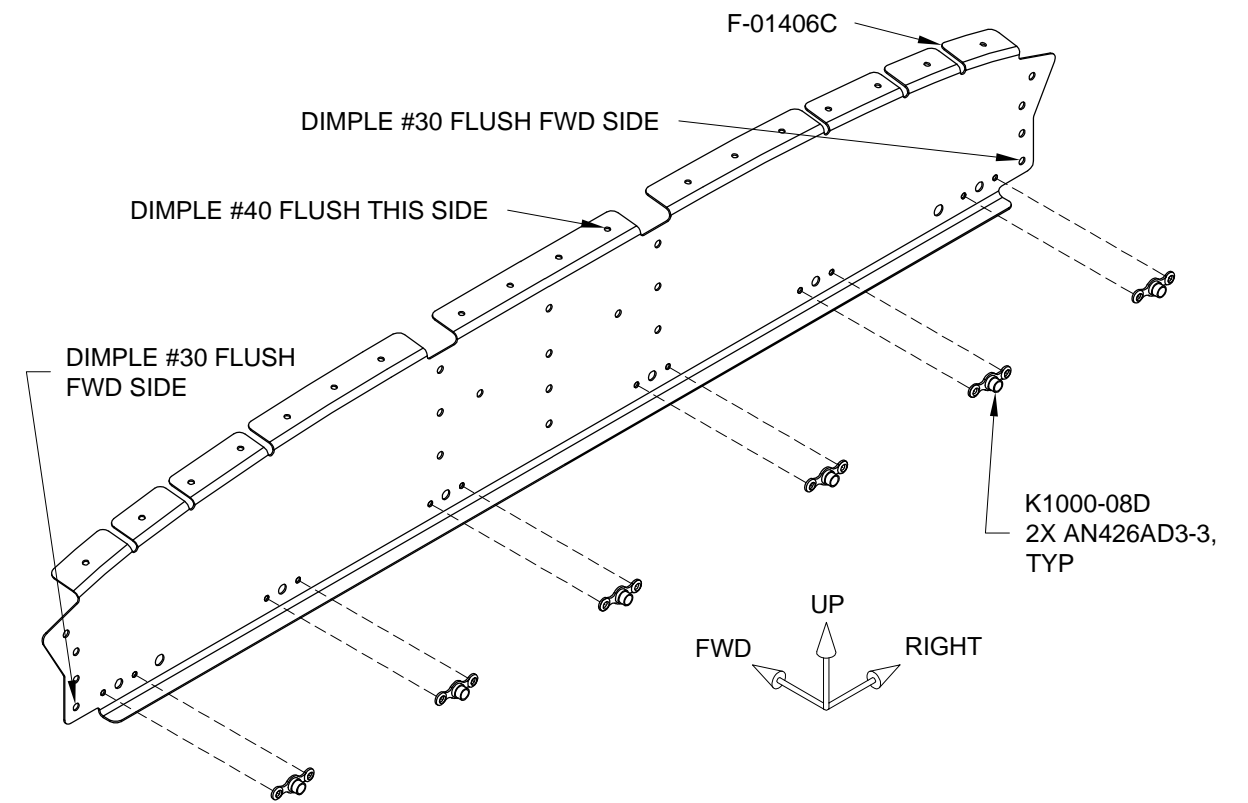


FIGURE 2: INSTALL NUTPLATES

Step 8: Bend the tab in the F-01473-L Aft Fuse Side Skin 3/32 [2.4 mm], outboard as shown in Figure 3.

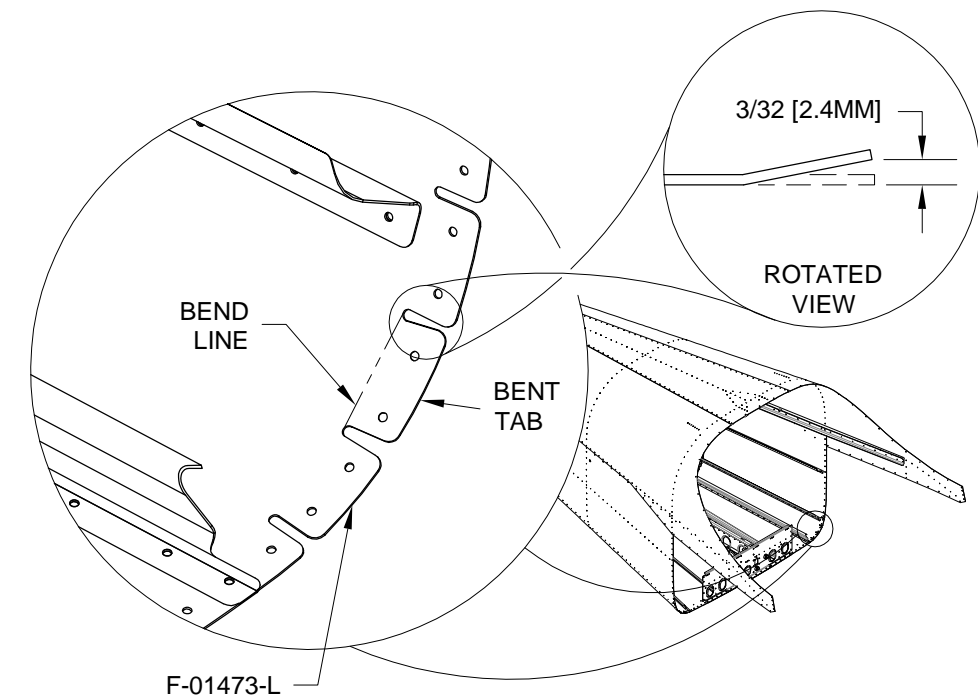
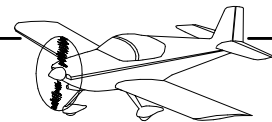


FIGURE 3: BEND AFT FUSE SIDE SKIN TAB



NOTE: Attaching the Aft Fuse can best be accomplished by at least two people.

Step 1: Place the Aft Fuse on sawhorses located about 10 in. [254 mm] from the Fwd Fuse. See Figures 1 and 2.

With the Aft Fuse in this position the F-01418B-L Aft Fuse Longerons should be outboard of the F-01470-L Fuselage Side Skin as shown in Figure 1.

Step 2: Reposition the Aft Fuse while adjusting the sawhorse height until the Aft Fuse is located approximately as shown in Figure 2.

Step 3: Secure the Fwd Fuse to minimize movement during assembly.

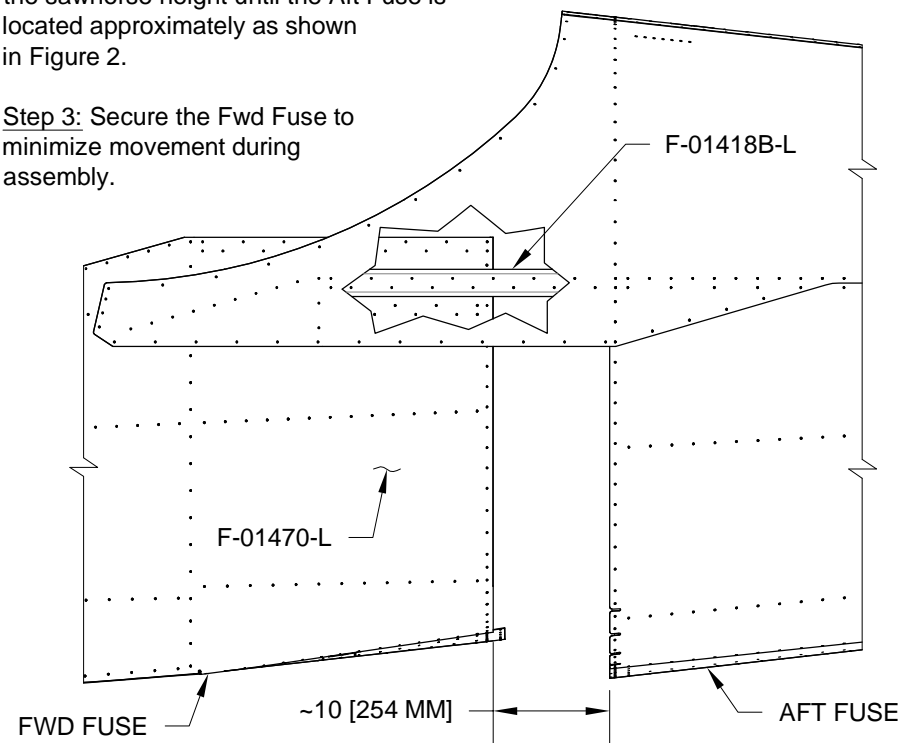


FIGURE 1: AFT FUSE STAGING

Step 4: Lift the Aft Fuse to a position slightly above and aft of the Fwd Fuse as shown in Figure 3.

The F-01418B-L Aft Fuse Longerons should be just above the F-01470-L Fuselage Side Skin as shown in Figure 3.

Allow the tail of the Aft Fuse to remain on the sawhorse.

NOTE: Refer to the F-01478 Fwd Bottom Skin as the F-01478 for the remainder of this page.

Step 5: Move the Aft Fuse fwd until the F-01478 contacts the flanges of the baggage ribs as shown in Figure 3.

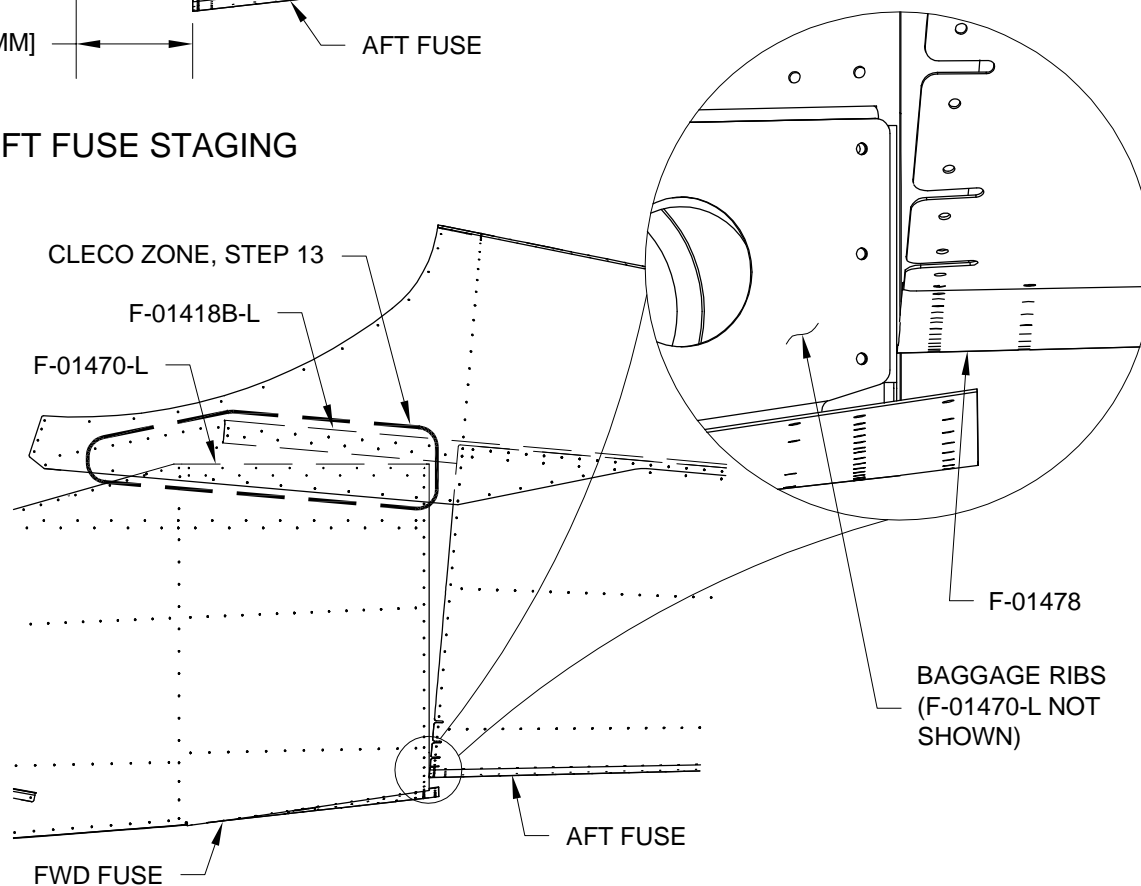


FIGURE 3: AFT FUSE TO BAGGAGE RIB CONTACT (SOME PARTS OMITTED FOR CLARITY)

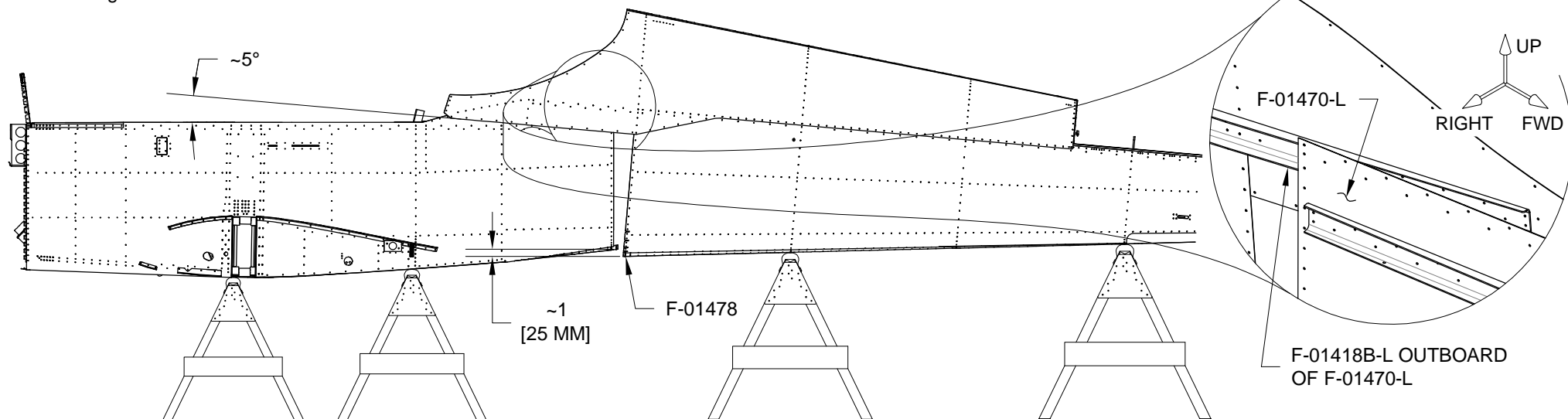


FIGURE 2: PRE-ASSEMBLY POSITION

Step 6: Lower the fwd end of the Aft Fuse as shown in Figure 4.

Guide the F-01418B-L Aft Fuse Longerons inboard of the F-01470-L Fuselage Side Skin as the longeron descends.

Continue lowering the Aft Fuse until the F-01478 rests on the F-01484 Center Bottom Skin as shown in the upper detail in Figure 4.

Step 7: Slide the Aft Fuse fwd while deflecting the Fwd Fuse side skins outboard to allow the F-01478 to pass beneath the baggage ribs as shown in the lower detail in Figure 4.

Continue to guide the lower forward-most edges of the Aft Fuse skins inside the Fwd Fuse skins until several holes in the F-01484 Center Bottom Skin and F-01478 align.

Step 8: Insert four clecos in the lap joint between the F-01484 Center Bottom Skin and the F-01478.

Step 9: Rotate the Aft Fuse upward into final position.

Step 10: Insert 2 clecos on each side of the fuselage at the vertical lap joint to hold the Fwd and Aft Fuse together.

Step 11: Shake the tail of the Aft Fuse up, down, left and right to aid hole alignment and to ensure that the clecos have completely clamped.

Step 12: Reposition the sawhorses as required to support the Aft Fuse.

Step 13: Add clecos to the longerons fwd of the vertical lap joint. See Figure 3 call-out.

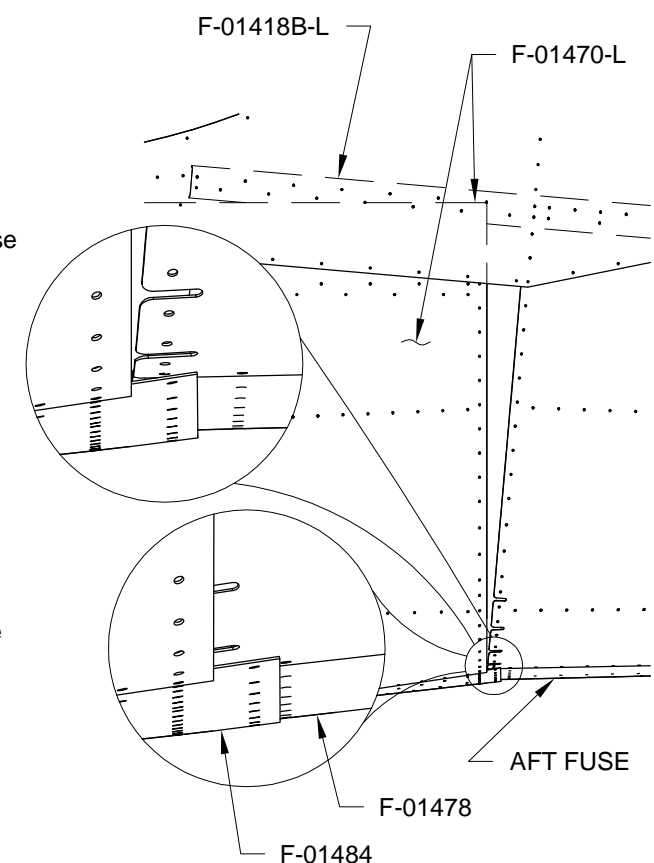


FIGURE 4: AFT FUSE INSERTION

Step 1: Remove clecos from the left side of the aircraft.

Step 2: Insert the F-01406A-L Bulkhead as shown in Figure 1.

Step 3: Cleco the F-01406A-L Bulkhead to the F-01491-L Fuselage Side Rib, F-01423B-L Outbd Baggage Rib, F-01425-L Baggage Rib, and F-01406B Bulkhead as shown in Figure 1.

Step 4: Insert clecos through the skins into all the F-01406A-L Bulkhead flanges.

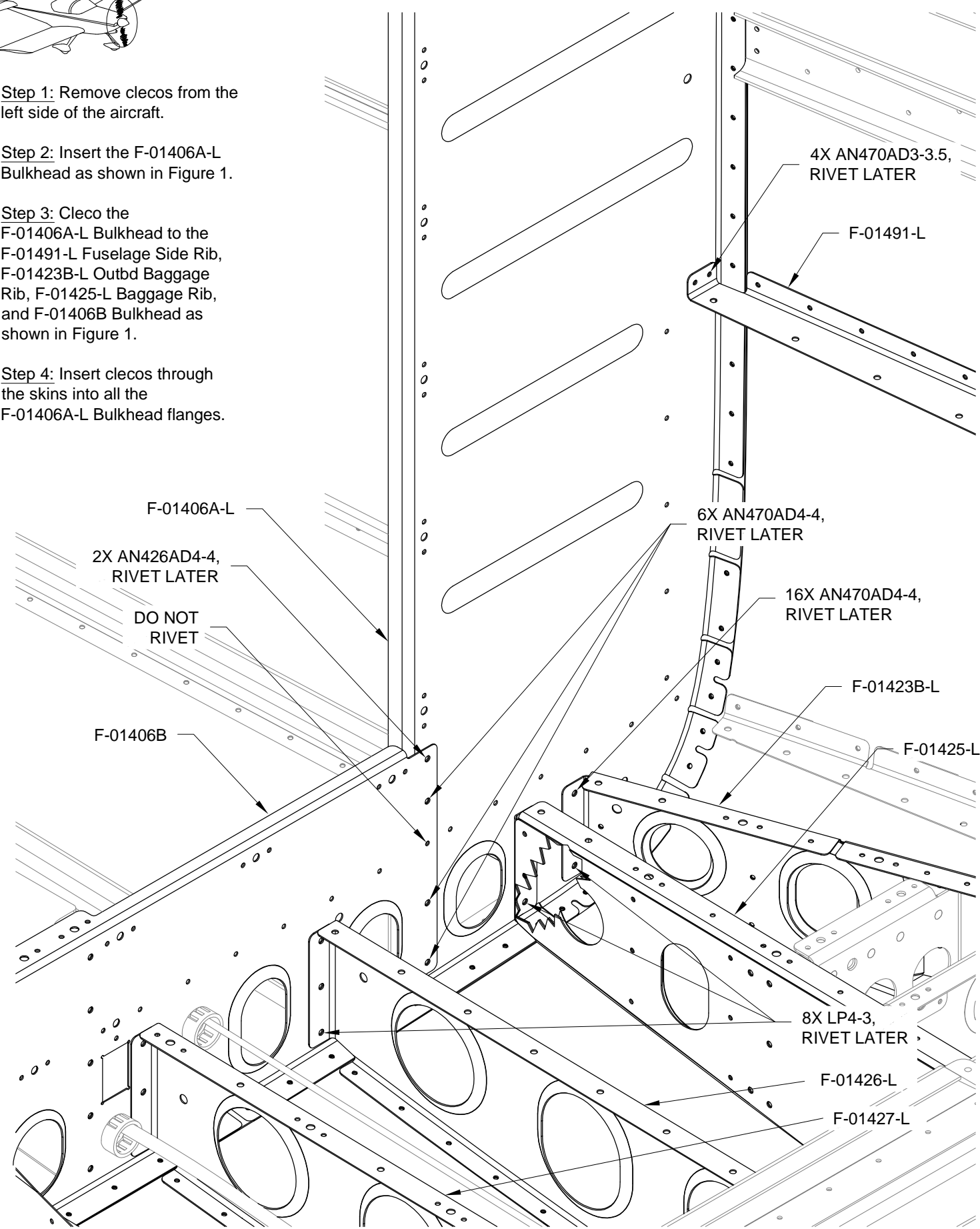


FIGURE 1: BULKHEAD INSTALLATION

Step 5: Cleco the F-01470-L Fuselage Side Skin and F-01484 Center Bottom Skin to the F-01423B-L Outbd Baggage Rib and F-01425-L Baggage Rib as shown in Figure 2.

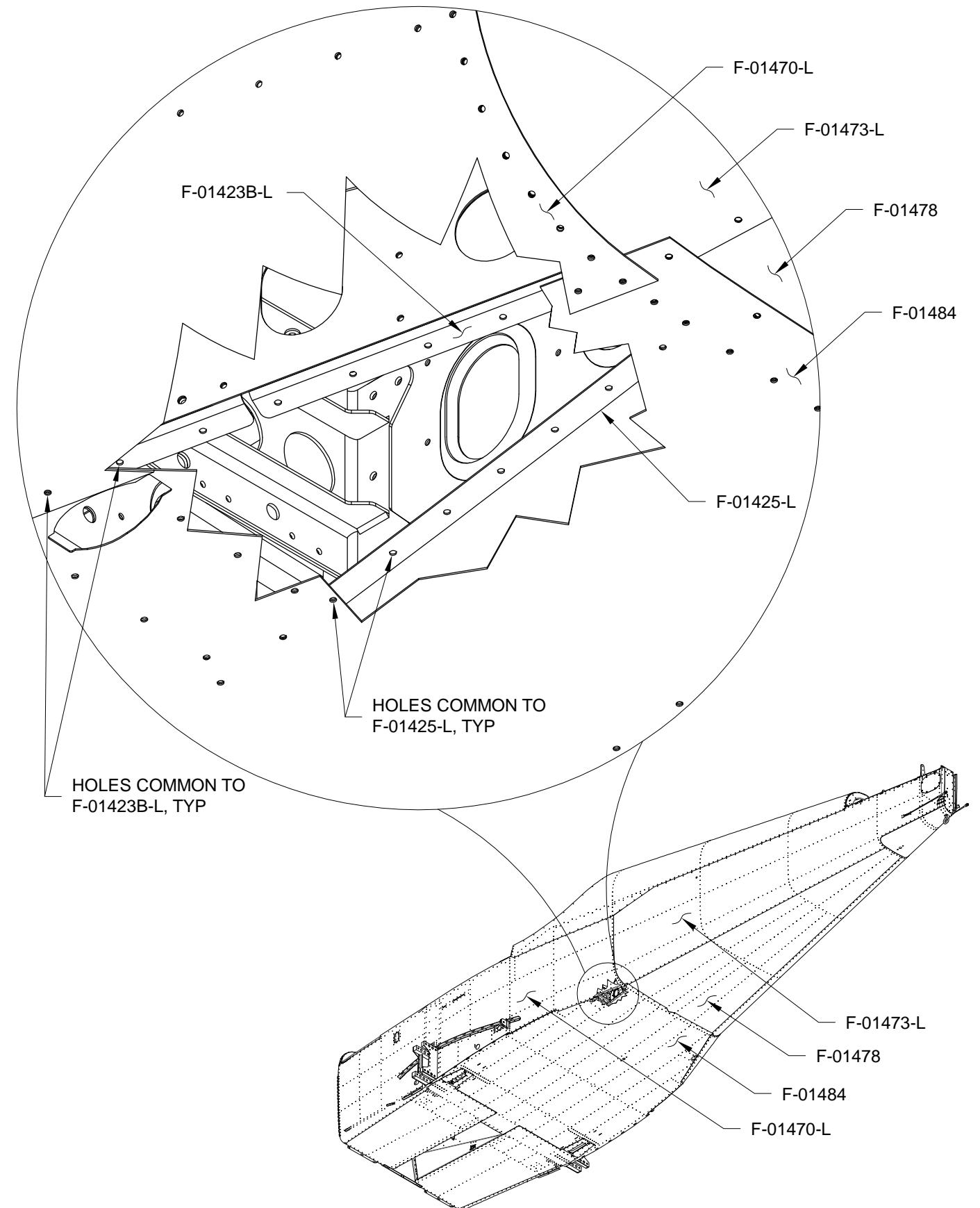


FIGURE 2: CLECO SKIN TO BAGGAGE RIBS



Step 1: Cleco the F-01406C Bulkhead to the F-01406A-L & -R Bulkheads and to the F-14131 Upper Aft Fuse Rib as shown in Figure 1.

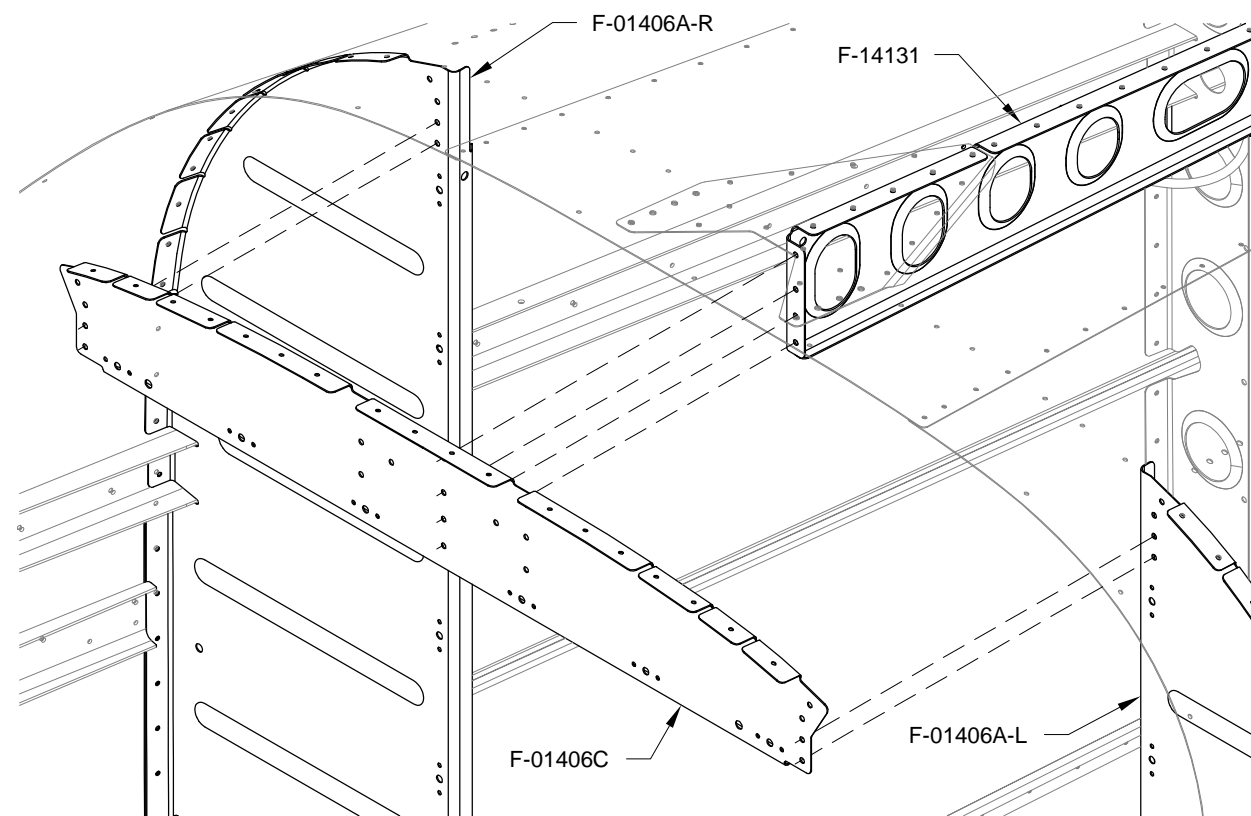


FIGURE 1: BULKHEAD INSTALLATION

Step 2: Cleco the F-14117 ELT Antenna Bracket to the web of the F-01418B-L Aft Fuse Longeron and the skins as shown in Figure 2. Left side only.

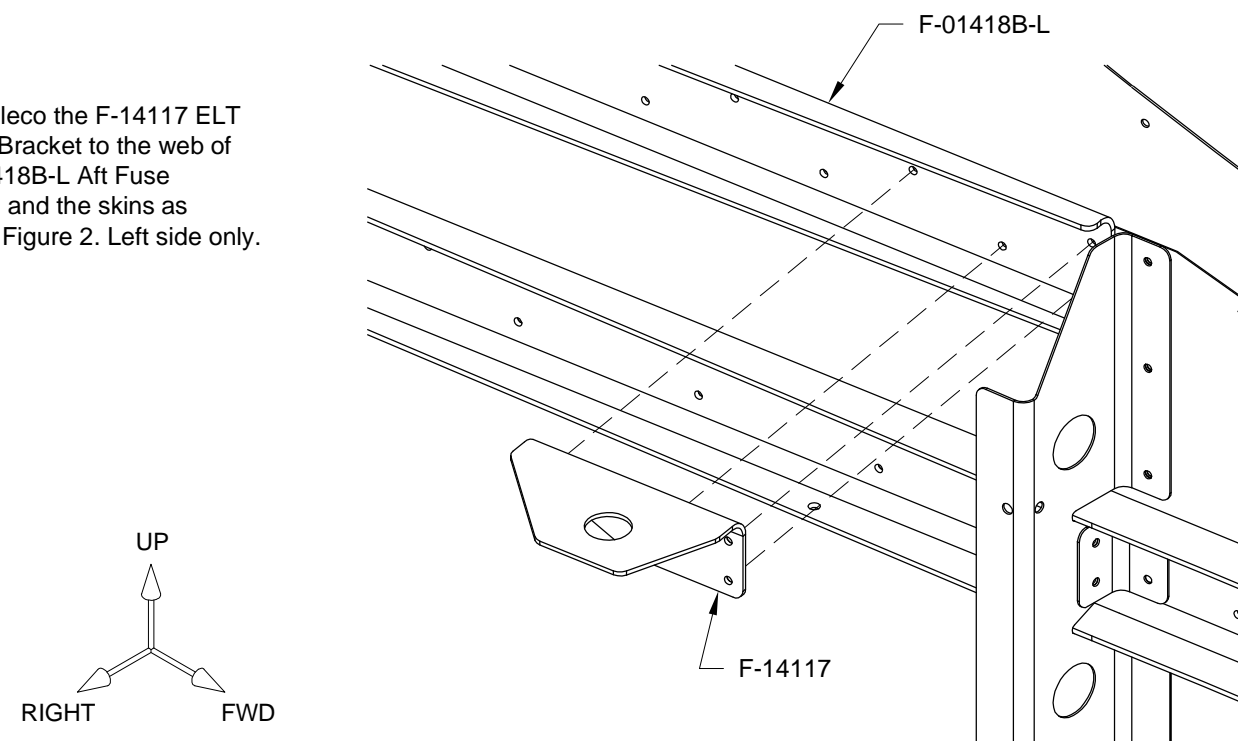


FIGURE 2: INSTALL ELT ANTENNA BRACKET

Step 3: Separate the F-01406D Shoulder Harness Lug Clip as shown in Figure 3.

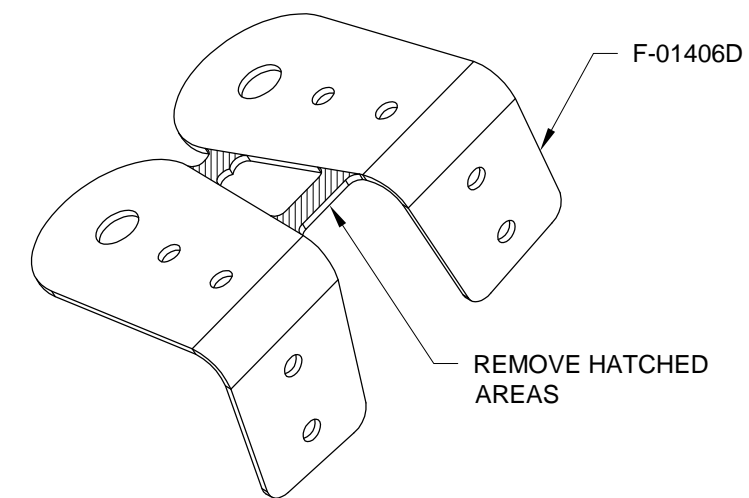


FIGURE 3: SEPARATE SHOULDER HARNESS LUG CLIPS

Step 4: Separate the F-01406E Shoulder Harness Lug as shown in Figure 4.

Step 5: Chamfer the F-01406E Shoulder Harness Lug upper edges aft of the bend as shown in Figure 4, Section A-A.

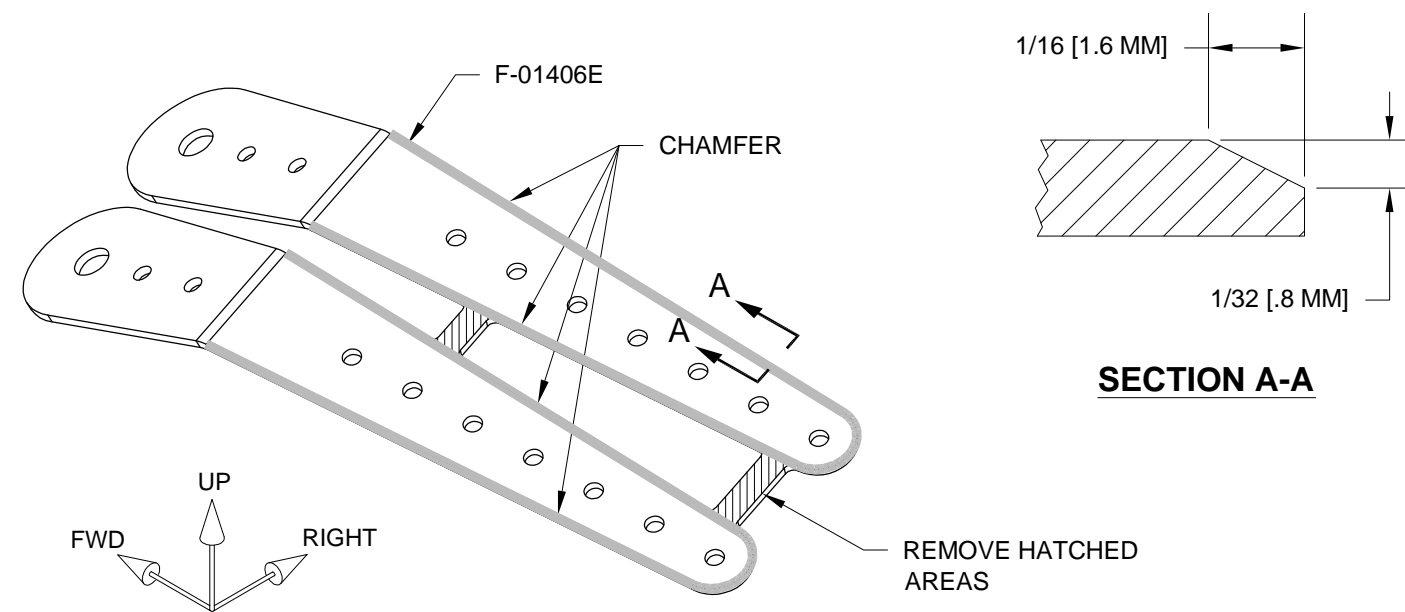


FIGURE 4: SEPARATE SHOULDER HARNESS LUGS



Step 1: Machine countersink the F-01406E Shoulder Harness Lug as indicated in Figure 1.

Step 2: Insert a bolt in the .250 [6.35mm] hole to align the F-01406D Shoulder Harness Lug Clip to the F-01406E Shoulder Harness Lug. See Figure 1.

Step 3: Rivet the F-01406D Shoulder Harness Lug Clip to the F-01406E Shoulder Harness Lug using the rivets called out in Figure 1.

Remove bolt inserted in Step 2.

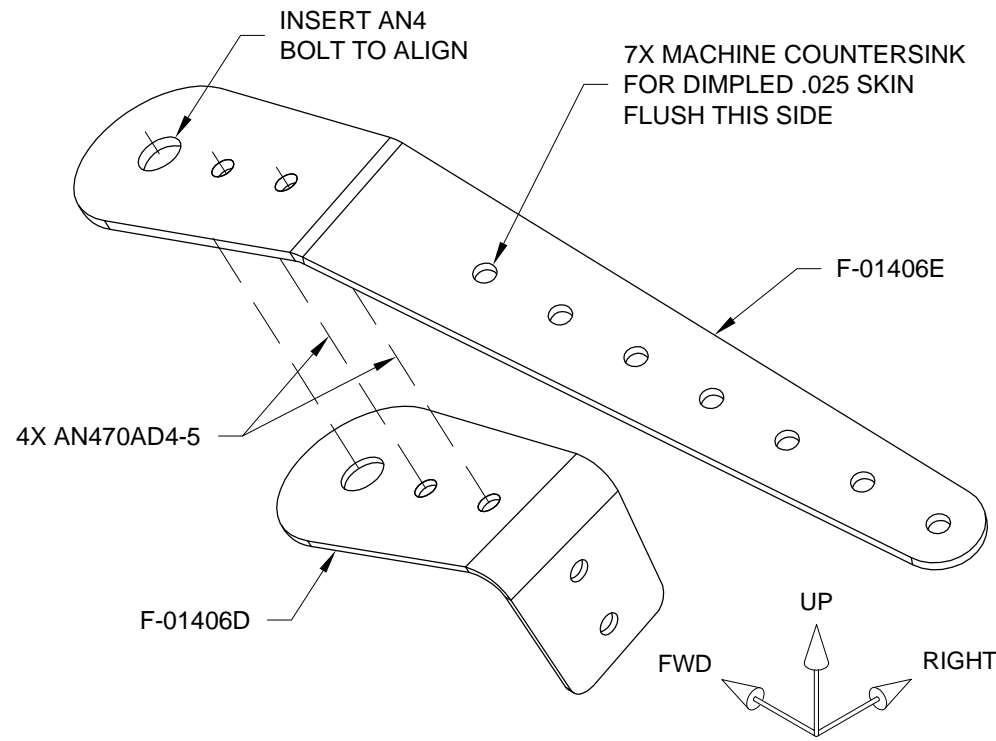


FIGURE 1: LUG ASSEMBLY

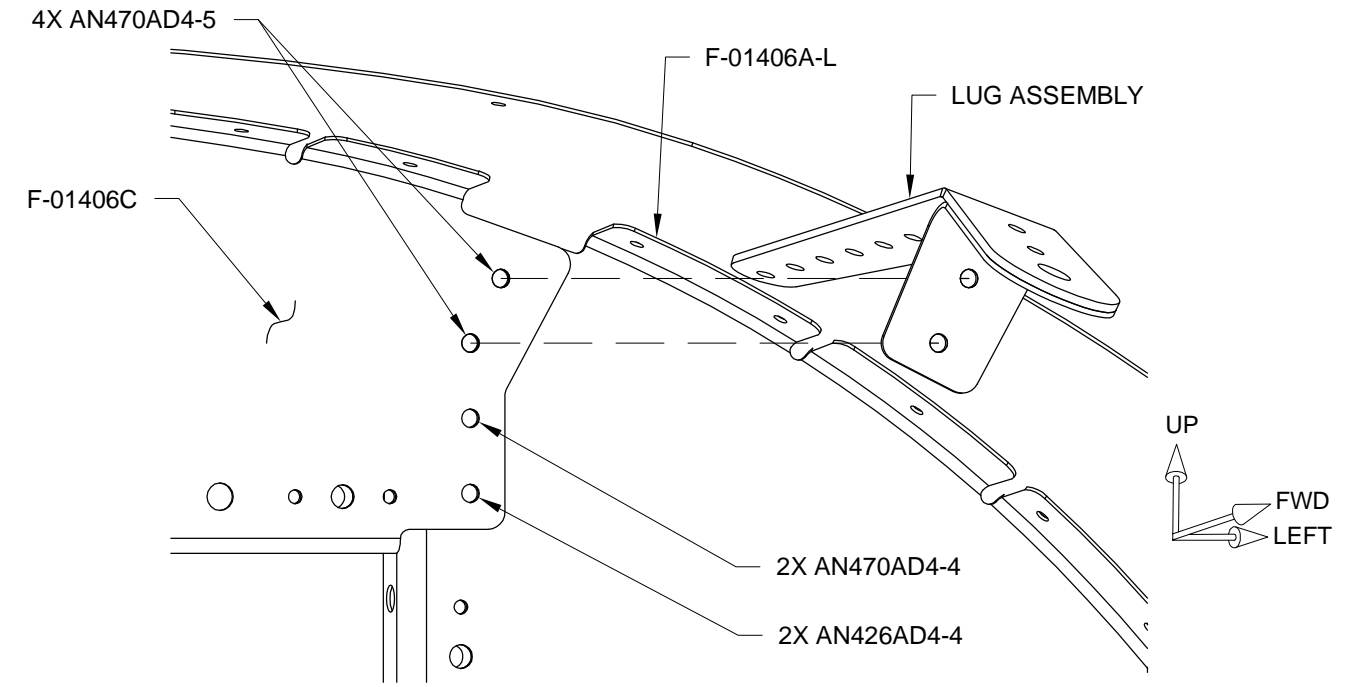


FIGURE 2: LUG ASSEMBLY INSTALLATION

Step 4: Tape over the holes marked "DO NOT RIVET" as shown in Figure 3.

Step 5: Cleco the F-01406C Bulkhead to the F-01474-L & -R Aft Fuse Top Side Skins, F-01475 Aft Fuse Top Skin and F-01475A Skin Doubler as shown in Figure 3.

Step 6: Rivet the Lug Assembly and the F-01406C Bulkhead to the F-01406A-L Bulkhead as shown in Figure 2.

Step 7: Rivet the F-01406C Bulkhead to the F-01474-L Aft Fuse Top Side Skin, F-01475 Aft Fuse Top Skin, F-01475A Skin Doubler and F-14131 Upper Aft Fuse Rib except where indicated in Figure 3.

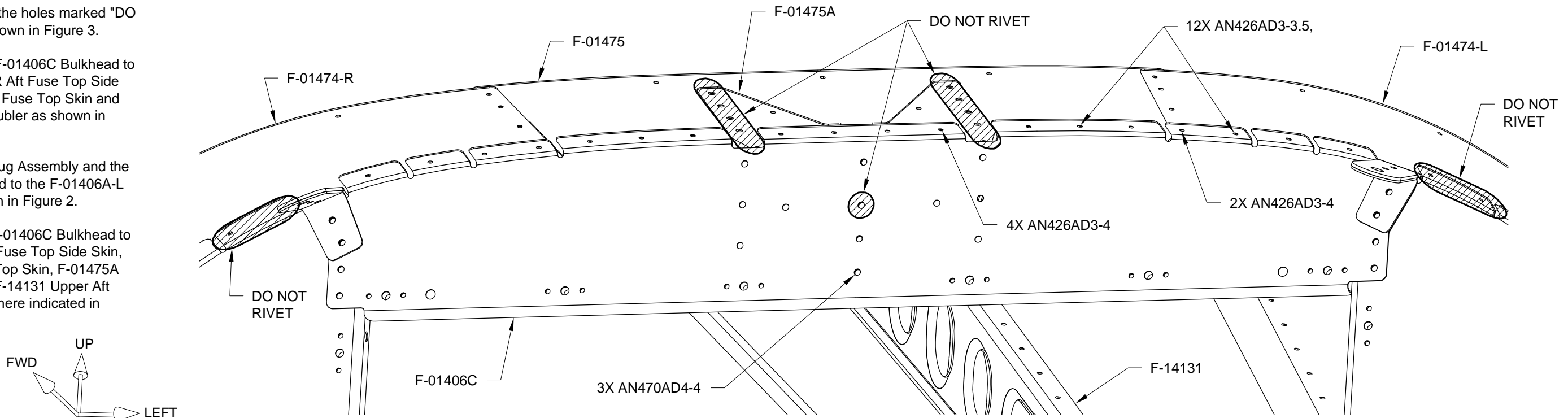
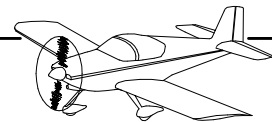


FIGURE 3: BULKHEAD INSTALLATION



Step 1: Rivet the Lug Assembly to the F-01474-L Aft Fuse Top Side Skin using rivets called out in Figure 1.

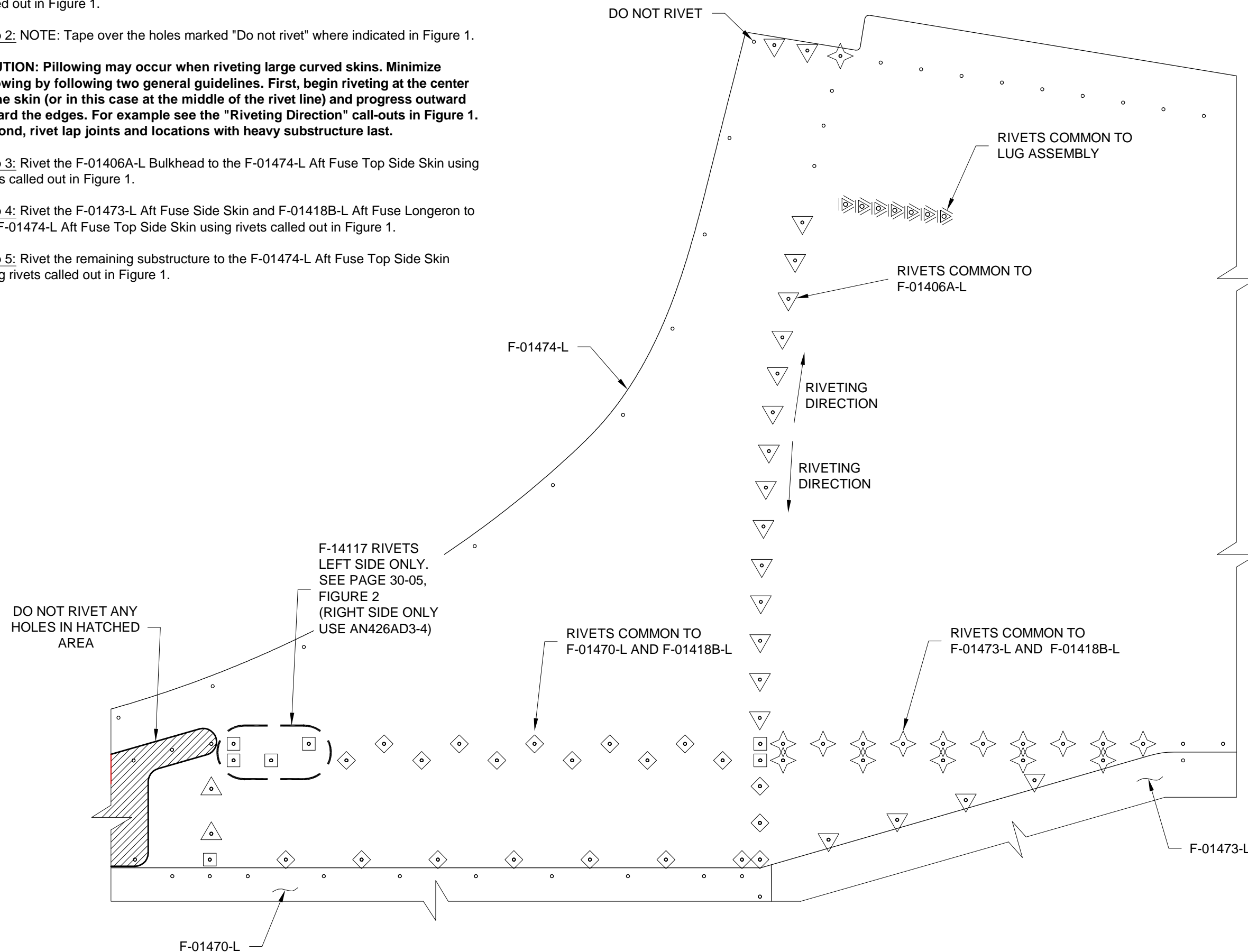
Step 2: NOTE: Tape over the holes marked "Do not rivet" where indicated in Figure 1.

CAUTION: Pillowing may occur when riveting large curved skins. Minimize pillowing by following two general guidelines. First, begin riveting at the center of the skin (or in this case at the middle of the rivet line) and progress outward toward the edges. For example see the "Riveting Direction" call-outs in Figure 1. Second, rivet lap joints and locations with heavy substructure last.

Step 3: Rivet the F-01406A-L Bulkhead to the F-01474-L Aft Fuse Top Side Skin using rivets called out in Figure 1.

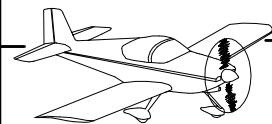
Step 4: Rivet the F-01473-L Aft Fuse Side Skin and F-01418B-L Aft Fuse Longeron to the F-01474-L Aft Fuse Top Side Skin using rivets called out in Figure 1.

Step 5: Rivet the remaining substructure to the F-01474-L Aft Fuse Top Side Skin using rivets called out in Figure 1.



- AN426AD3-3
- AN426AD3-3.5
- AN426AD3-4
- AN426AD3-4.5
- AN426AD3-5
- AN426AD4-4

FIGURE 1: AFT FUSE TOP SIDE RIVETS
(SHOWN FLAT)



Refer to Figures 1 and 2 for rivet call-outs when completing the following steps unless otherwise noted.

Step 1: (Tri-Gear Only) Install the rivets common to the F-14145-L Step Attach Angle and the F-01484 Center Bottom Skin.

Step 2: Rivet the F-01406A-L Bulkhead to the F-01406B Bulkhead. See Page 30-04, Figure 1.

NOTE: Do not rivet F-01423B-I & -R at this time.

Step 3: Rivet the F-01425-L, F-01426-L, and F-01427-L Baggage Ribs to the F-01406A-L and F-01406B Bulkheads as shown on Page 30-04, Figure 1.

Step 4: Rivet the F-01470-L Fuselage Side Skin and the F-01484 Center Bottom Skin to the substructure except at the lap joints.





NOTE: When riveting around the F-01470-L Fuselage Side Skin lower radius remove the aft five clecos from the F-01423B-L Outbd Baggage Rib to allow the aft end of the rib to bend out of the way for bucking bar access.

Step 5: Rivet the F-01470-L Fuselage Side Skin to the F-01473-L Aft Fuse Side Skin, and F-01406A-L Bulkhead along the vertical lap joint. Rivet the group of six rivets in the lower radius last.

Step 6: Rivet the F-01484 Center Bottom Skin to the F-01478 Aft Fuse Forward Bottom Skin and all corresponding substructure along the horizontal lap joint.

Step 7: Rivet the F-01423B-L Baggage Rib to the F-01406A-L Bulkhead as shown on Page 30-04, Figure 1.

Step 8: Rivet the F-01470-L Fuselage Side Skin to the F-01484 Center Bottom Skin and to the F-01423B-L Baggage Rib lower flange as shown on Page 30-04, Figure 2.

-  AN426AD3-3.5
-  AN426AD3-4
-  AN426AD3-4.5
-  MK-319-BS

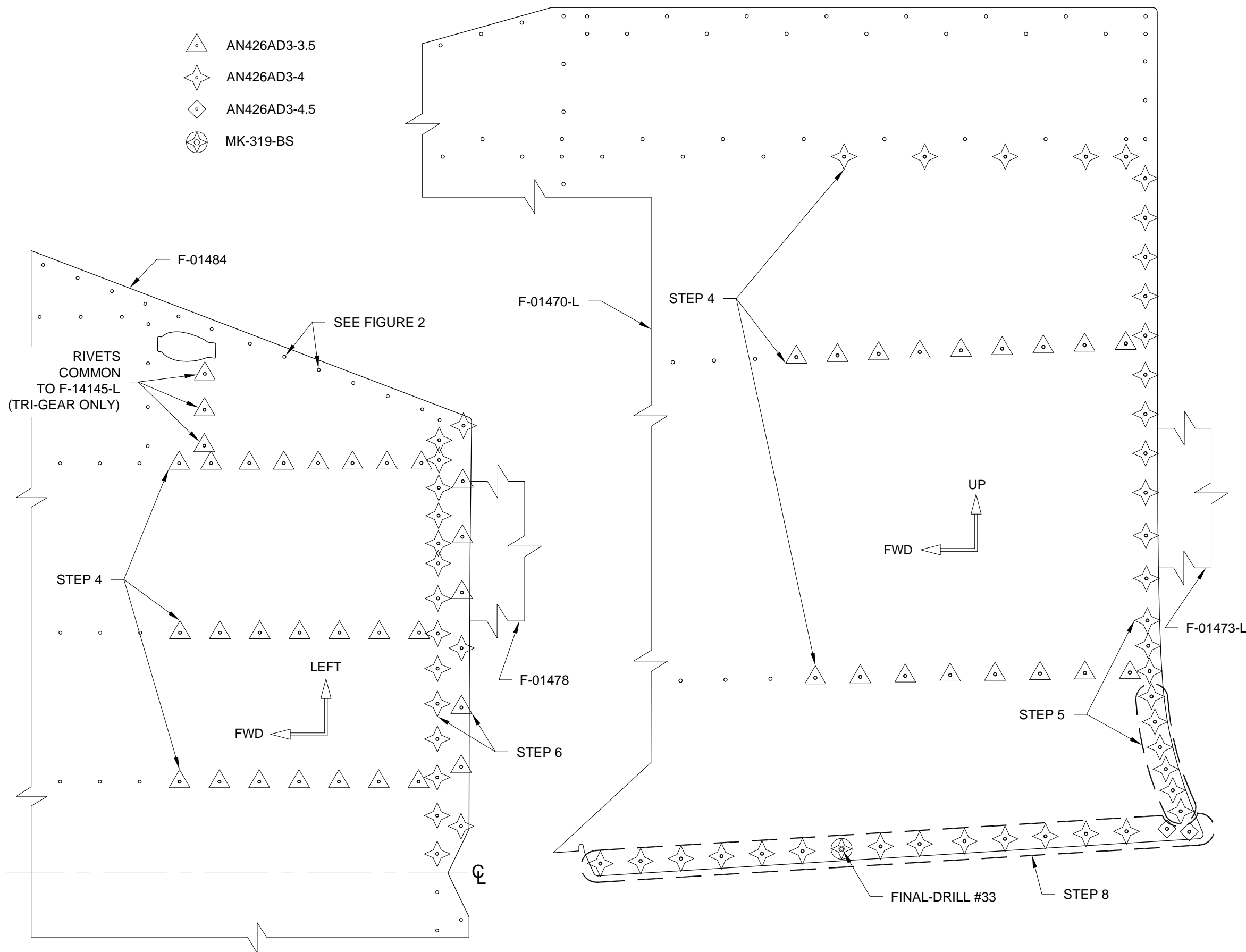


FIGURE 1: CENTER BOTTOM SKIN
(BOTTOM VIEW)

FIGURE 2: FUSE SIDE SKIN
(LEFT SIDE VIEW)