



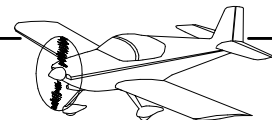
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REVISION DESCRIPTION:

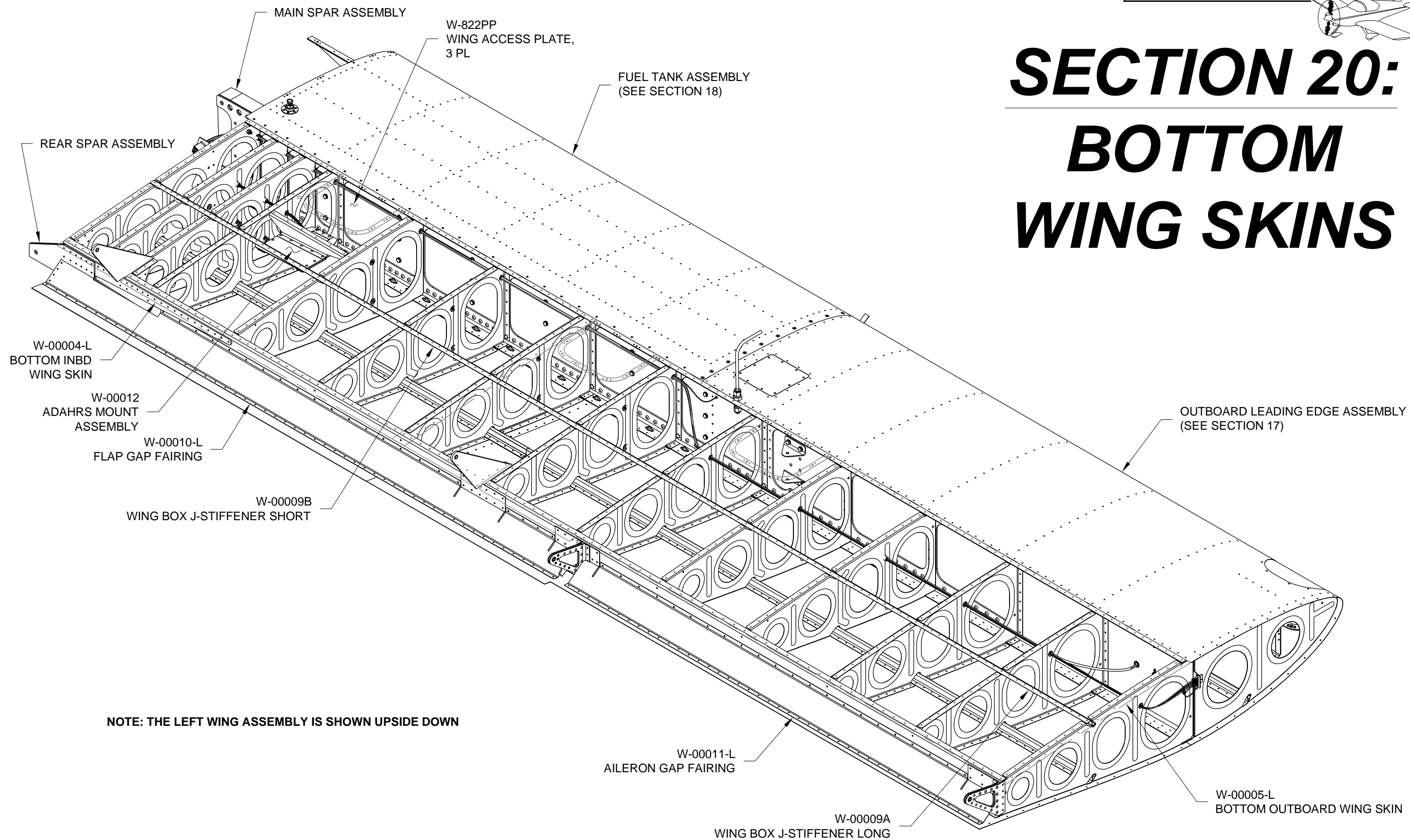
Page: 20-02 REV 1: In Figure 4, 2X AN426AD3-3.5 was AN426AD3-4. Removed AN426AD3-4 from Rivet Key.

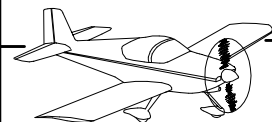


SECTION 20:

BOTTOM

WING SKINS





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.

It is much easier to install alternate pitot, AOA and electrical systems at this time.

It is the builder's choice as to 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.

Step 1: Mark, then cut apart the W-1021B Flap Gap Stiffener to create the W-1021B-L and W-1021B-R Flap Gap Stiffeners as shown in Figure 1.

Final-Drill #40 all .094 [2.4 mm] holes in the flap gap stiffeners.

Deburr the edges and holes of the flap gap stiffeners.

Dimple the holes in the flap gap stiffeners from the side shown in Figure 2.

Step 2: Dimple all .098 [2.5 mm] holes in the W-00011-L Aileron Gap Fairing. See Figure 3

Dimple all .098 [2.5 mm] holes in the W-00010-L Flap Gap Fairing. See Figure 4.

Dimple the six most inboard .128 [3.3 mm] holes in the flap gap fairing. See Figure 4.

Deburr the the edges and holes of the aileron gap fairings and flap gap fairing.

Step 3: Prime the parts if/as desired.

Step 4: Cleco then rivet the W-1021B-L Flap Gap Stiffener to the W-00010-L Flap Gap Fairing as shown in Figure 2 and Figure 4.

Step 5: Cleco the W-00010-L Flap Gap Fairing and W-00011-L Aileron Gap Fairing to the top skins and Rear Spar Assembly.

Rivet the gap fairings to the Rear Spar Assembly and the top skins as shown in Figure 3 and Figure 4.

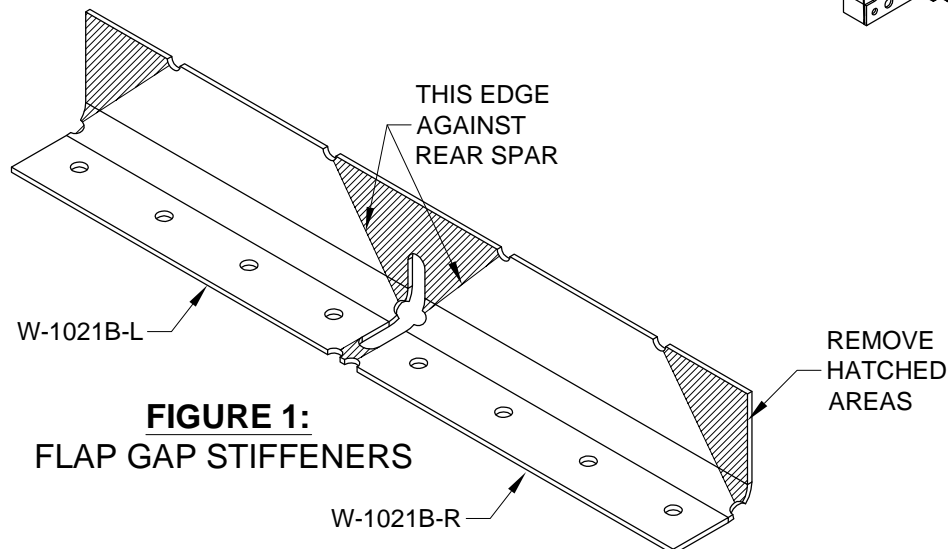


FIGURE 1:
FLAP GAP STIFFENERS

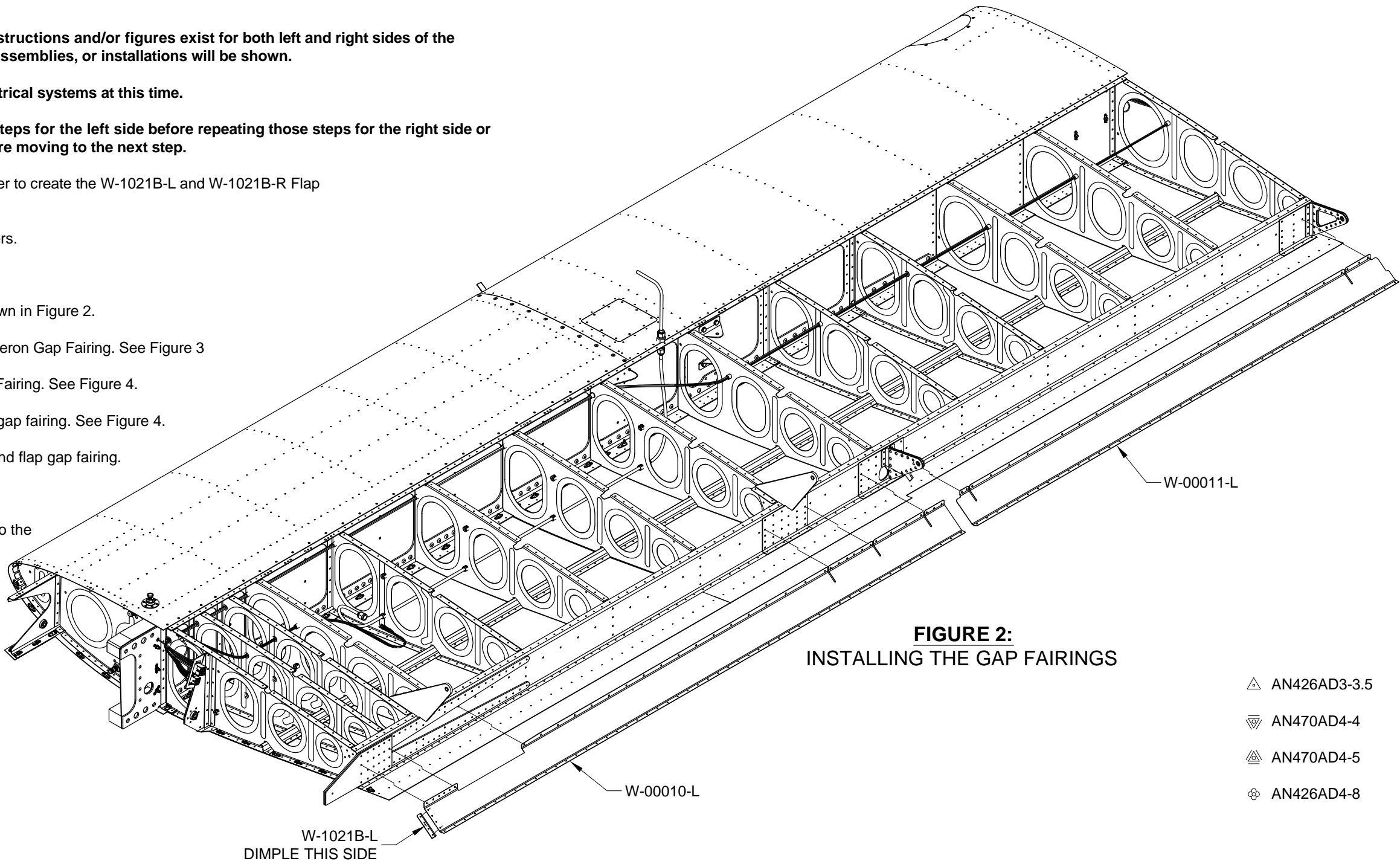


FIGURE 2:
INSTALLING THE GAP FAIRINGS

- △ AN426AD3-3.5
- ▽ AN470AD4-4
- △ AN470AD4-5
- ⊗ AN426AD4-8

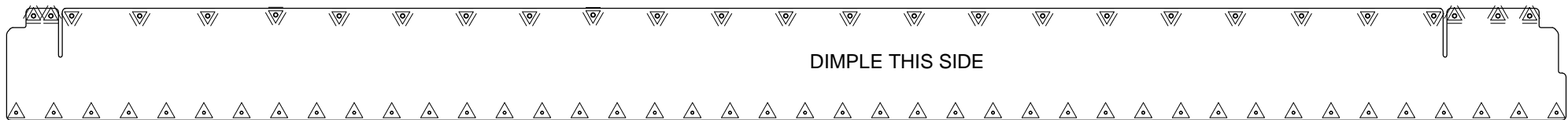


FIGURE 3: AILERON GAP FAIRING RIVET CALLOUTS

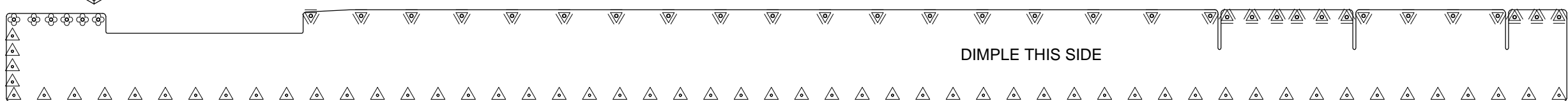
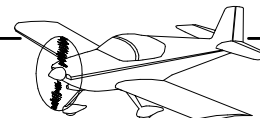


FIGURE 4: FLAP GAP FAIRING RIVET CALLOUTS



Step 1: Cleco the W-00009B Wing Box J-Stiffener - Short to the W-00004-L Bottom Inbd Wing Skin as shown in Figure 1.

Cleco the ADAHRS Mounting Zee to the W-00012A ADAHRS Mounting Plate as shown in Figure 3.

Cleco the ADAHRS mounting zee and ADAHRS mounting plate to the bottom inbd wing skin as shown in Figure 1.

Step 2: Match-Drill #30 the W-00012A ADAHRS Mounting Plate to the W-00009B Wing Box J-Stiffener - Short as shown in Figure 1. Insert a cleco in an adjacent hole before match-drilling the next hole.

Step 3: Remove the W-00012A ADAHRS Mounting Plate from the W-00012E ADAHRS Mounting Zee.

Remove the ADAHRS mounting zee and W-00009B Wing Box J-Stiffener - Short from the W-00004-L Bottom Inbd Wing Skin.

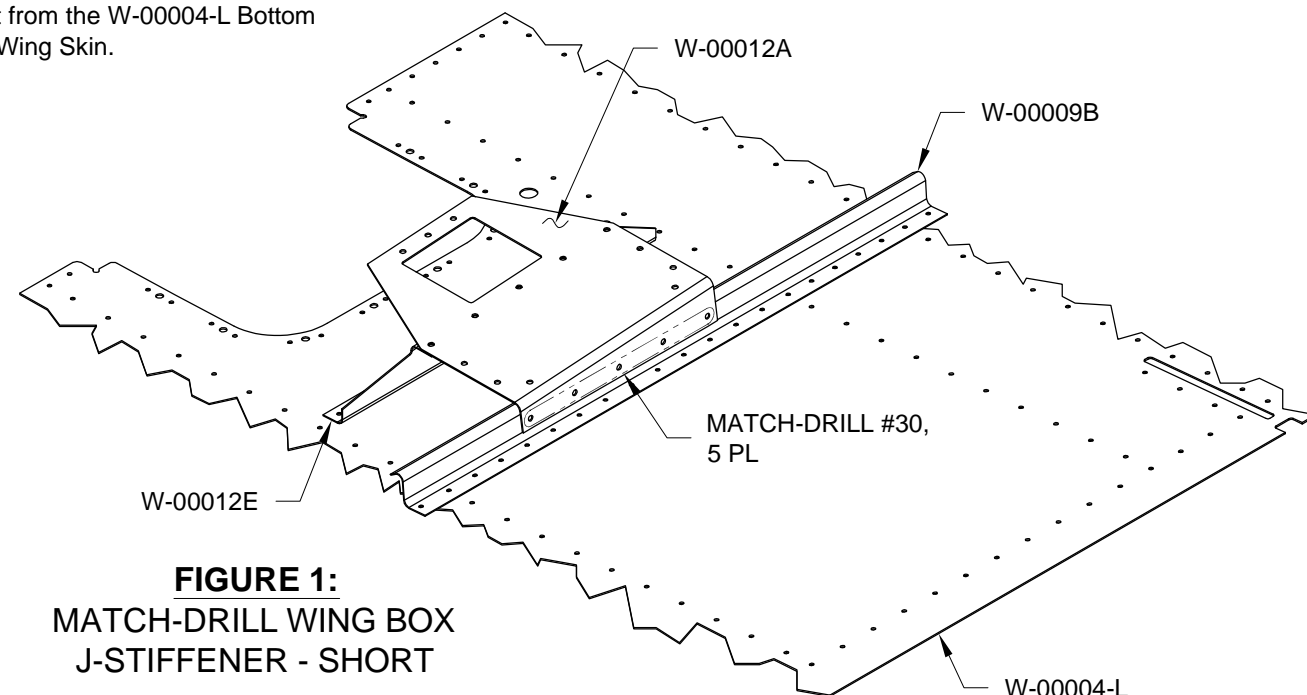


FIGURE 1:
MATCH-DRILL WING BOX
J-STIFFENER - SHORT

Step 4: Deburr all holes in the W-00012A ADAHRS Mounting Plate, W-00009A Wing Box J-Stiffener - Long and W-00009B Wing Box J-Stiffener - Short.

Dimple all #40 holes in all wing box J-stiffeners.

Step 5: Cleco the W-00004-L Bottom Inbd Wing Skin to the left wing. See Page 20-04, Figure 2.

Match-Drill #40 the W-1010-R Inbd Wing Rib at all nutplate rivet hole locations in the bottom inbd wing skin.

Final-Drill #19 the bottom inbd wing skin and inbd wing rib at all nutplate screw hole locations in the bottom inbd wing skin. See K1100-08D call-outs on Page 20-05, Figure 2.

Final-Drill #19 the aft most screw hole in the bottom inbd wing skin. See MS21053-L08 call-out on Page 20-05, Figure 2.

Final-Drill #19 the screw holes in the access plate attach locations. See Page 20-05, Figure 1.

Remove the bottom inbd wing skin from the left wing.

Step 6: Final-Drill #19 the screw holes in the access plate attach locations in the W-00005-L & -R Bottom Outbd Wing Skins. See Page 20-05, Figure 1.

Deburr all #40 and #19 holes in the bottom outbd wing skins and in the W-00004-L & -R Bottom Inbd Wing Skins.

Step 7: Modify the lap joint between the W-00004-L Bottom Inbd Wing Skins and W-00005-L Bottom Outbd Wing Skins in a similar way as described on Page 16-02, Step 6.

NOTE: Do not dimple the outboard most row of holes in the bottom outbd wing skins (used later for wing tip attachment). See Page 20-05, Figure 3.

Step 8: Dimple all the #19 and #40 holes in the W-00004-L & -R Bottom Inbd Wing Skins and W-1005-L & -R Bottom Outbd Wing Skins. Start with the #19 holes, then dimple the #40 holes. See Page 20-05, Figure 2 and Figure 3.

Step 9: Cut apart the W-00012B ADAHRS Mounting Spacer and W-00012C ADAHRS Retainer as shown in Figure 2.

Machine-countersink the ADAHRS retainer to fit the head of an AN426AD4-7 Rivet.

Flute the edges of the W-00012C ADAHRS Retainer as shown in Figure 2.

Flute in the same direction, bowing the ADAHRS retainer towards the W-00012A ADAHRS Mounting Plate as installed. See Figure 3.

Step 10: File the edges of the W-00012B ADAHRS Mounting Spacer as called-out in Figure 2. File until all shearing marks are removed.

Step 11: Dimple the holes in the W-00012A ADAHRS Mounting Plate and W-00012E ADAHRS Mounting Zee, See Figure 3 and Page 20-05, Figure 2.

Step 12: Prime all W-00012 ADAHRS Mount Assembly parts, W-00004-L & -R Bottom Inbd Wing Skins, W-00005-L & -R Bottom Outbd Wing Skins and W-00009A & W-00009B Wing Box J-Stiffeners if/as desired.

Step 13: Rivet the W-00012A ADAHRS Mounting Plate, W-00012B ADAHRS Mounting Spacer, W-00012C ADAHRS Retainer, W-00012D ADAHRS Latch, and W-00012E ADAHRS Mounting Zee as shown in Figure 3.

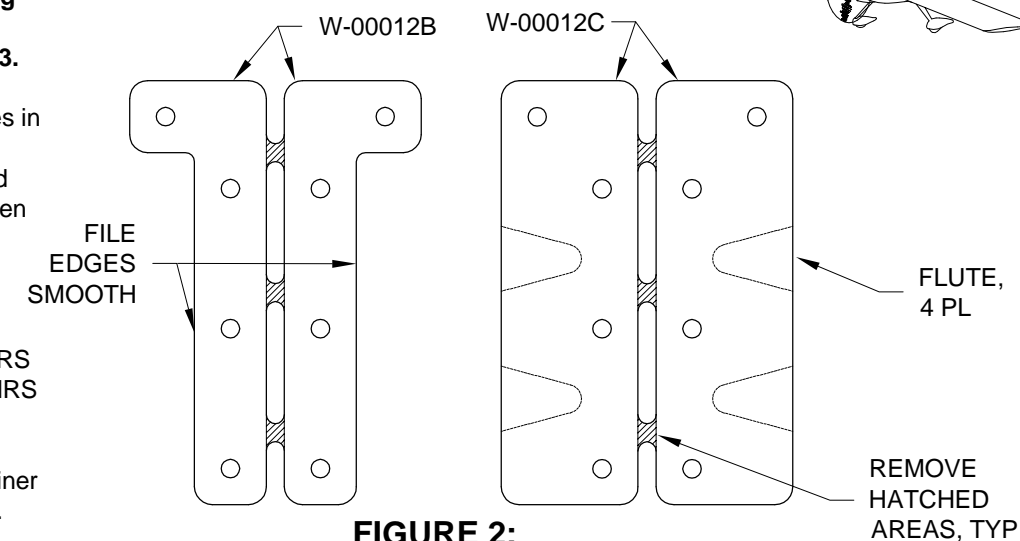


FIGURE 2:
ADAHRS MOUNTING SPACER
& ADAHRS RETAINER

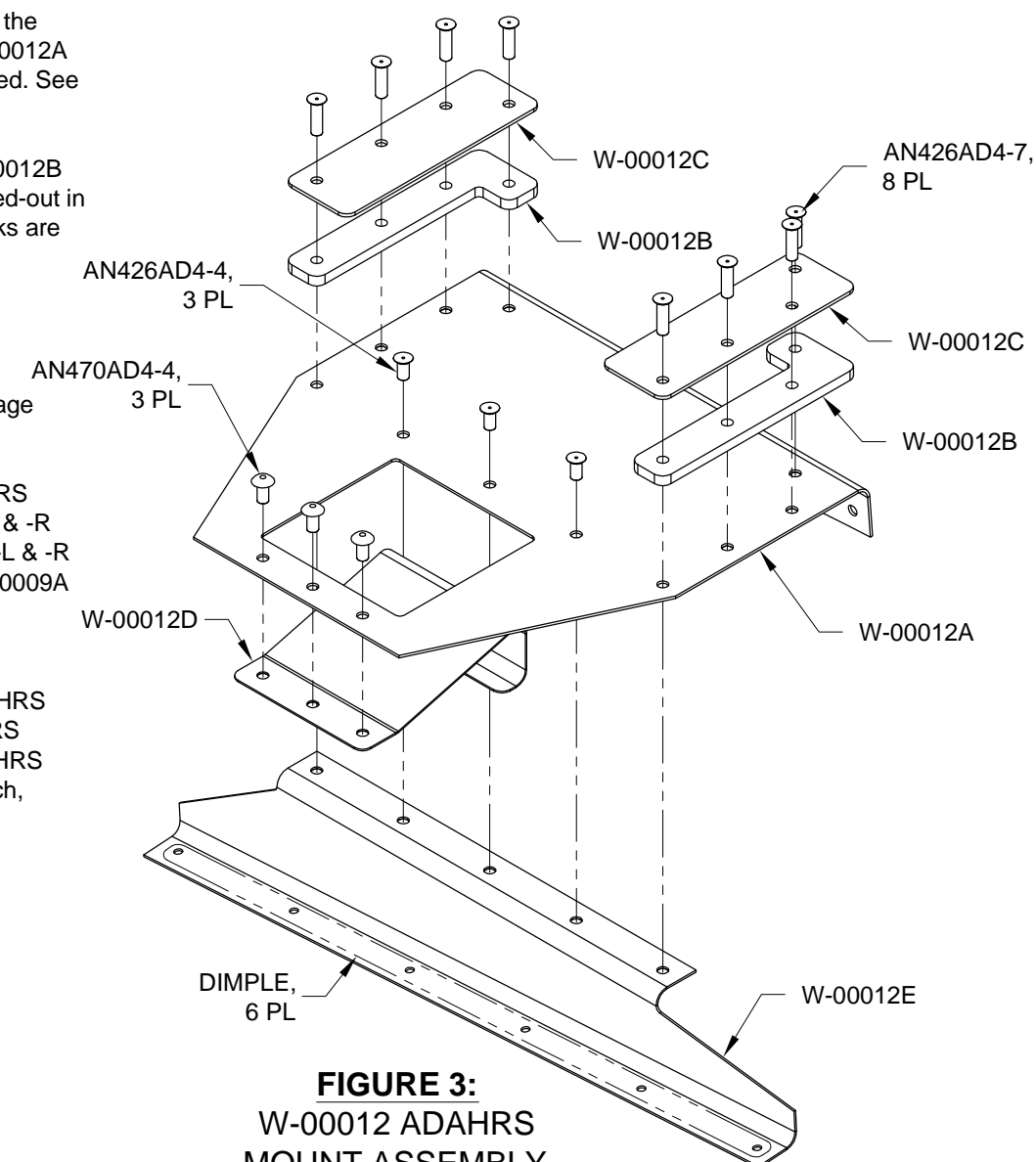
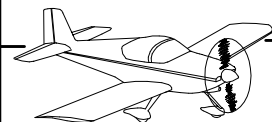


FIGURE 3:
W-00012 ADAHRS
MOUNT ASSEMBLY



Step 1: Deburr the #40 nutplate attach rivet holes and #19 screw holes in the flange of the W-1010-R Inbd Wing Rib.

Dimple the #40 holes and #19 holes in the inbd wing rib.

Repeat this step for the right wing.

Step 2: Rivet the W-00012 ADAHRS Mount Assembly to the W-00009B Wing Box J-Stiffener - Short as shown in Figure 1.

Step 3: Insert the W-00009B Wing Box J-Stiffener - Short (with ADAHRS mount bracket attached) into the cutout in the wing ribs.

Cleco the W-00004-L Bottom Inboard Wing Skin to the bottom flange of the rear spar, to the aft half of the wing ribs, and to the wing box J-stiffener - short. See Figure 2.

Check for clearance between the flap bracket and the aft edge of the bottom inboard wing skin. File away the bottom inboard wing skin until the skin just clears the flap bracket.

NOTE: Do not rivet the outboard double row of rivets that will adjoin the W-00005-L Bottom Outbd Wing Skin at this time.

Step 4: Carefully, so as not to form a kink, pull the unclecoed forward portion of the W-00004-L Bottom Inboard Wing Skin back to gain access to the rear spar with a bucking bar.

Begin riveting at the rear spar in the center of the skin and work forward and outward toward the forward corners. As riveting proceeds forward, gain access for bucking the rivets through the larger lightening holes in the wing ribs and the access hole in the skin. See Page 20-05, Figure 2 for rivet callouts.

NOTE: Rivet only as far forward as the row of rib flange holes indicated in Figure 2 at this time.

Step 5: Cleco the W-00005-L Bottom Outbd Wing Skin to the bottom flange of the rear spar and to the aft half of the wing ribs. See Figure 2.

Begin riveting per the callout in Figure 2 and work forward, inboard and outboard. See Page 20-05, Figure 3 for rivet callouts.

Step 6: Place the W-00009A Wing Box J-Stiffener - Long in the cut-out in the ribs and cleco to the W-00005-L Bottom Inbd Wing Skin.

Pay particular attention where the wing box J-stiffeners overlap. The inboard end of the wing box J-stiffener - long nests between the outboard end of the W-00009B Wing Box J-Stiffener - Short and the W-00005-L Bottom Outbd Wing Skin.

Rivet the wing box J-stiffener - long to the bottom outbd wing skin.

Rivet the bottom outbd wing skin first to the ribs forward of the J-stiffener, then to the spar flange.

Rivet the overlap joint between the bottom outbd wing skin and bottom inbd wing skin. See Page 20-05, Figure 3.

Step 7: Repeat steps 3, 4, 5, and 6 for the right wing.

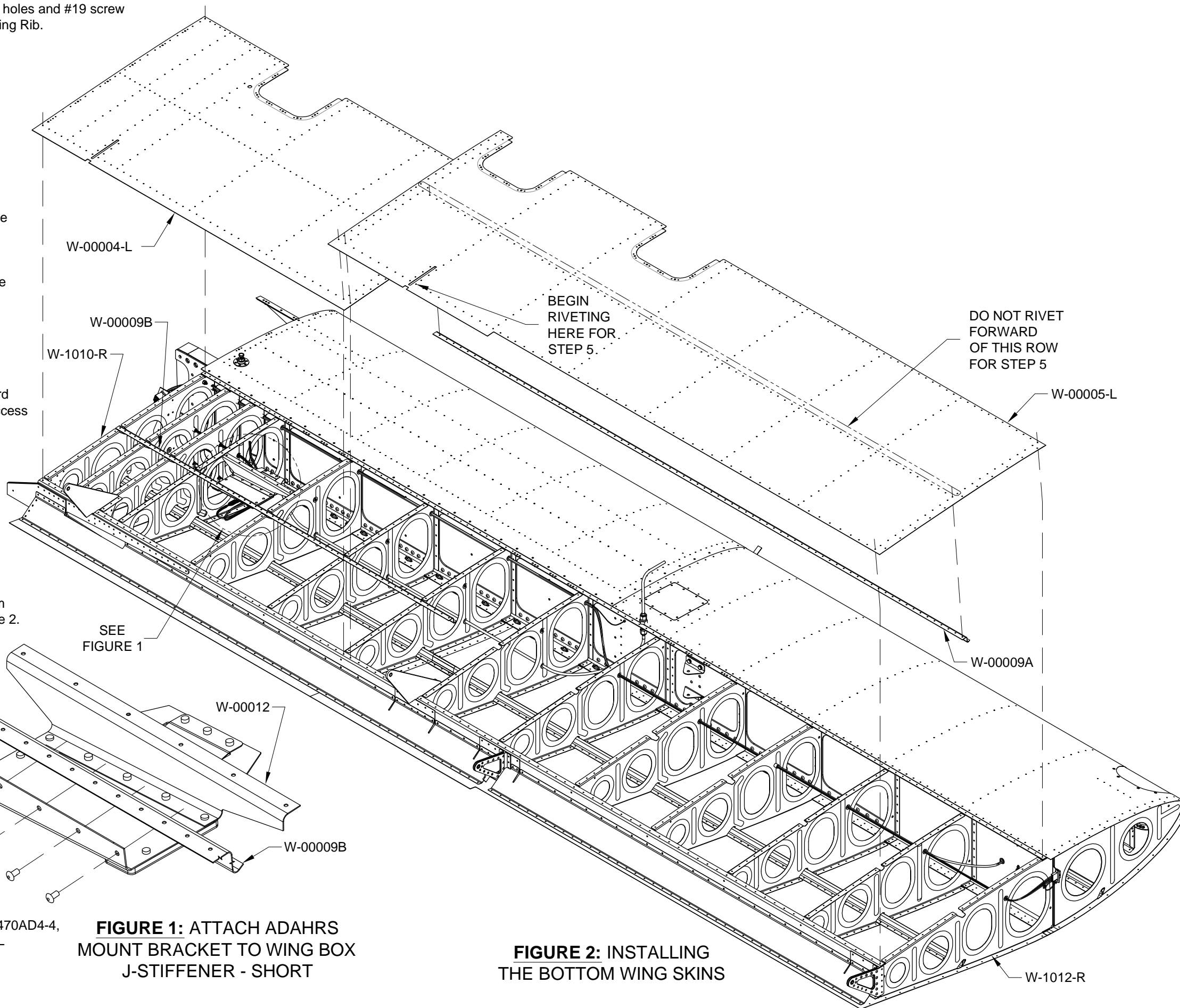


FIGURE 1: ATTACH ADAHRS MOUNT BRACKET TO WING BOX J-STIFFENER - SHORT

FIGURE 2: INSTALLING THE BOTTOM WING SKINS



Step 1: Final-Drill #28 the forward row of holes in the W-822PP Wing Access Plate that will be used to attach the plate to the Main Spar Assembly. See Figure 1.

Final-Drill #19 the remaining holes that will attach the wing access plate to the bottom skins.

Repeat for all six wing access plates.

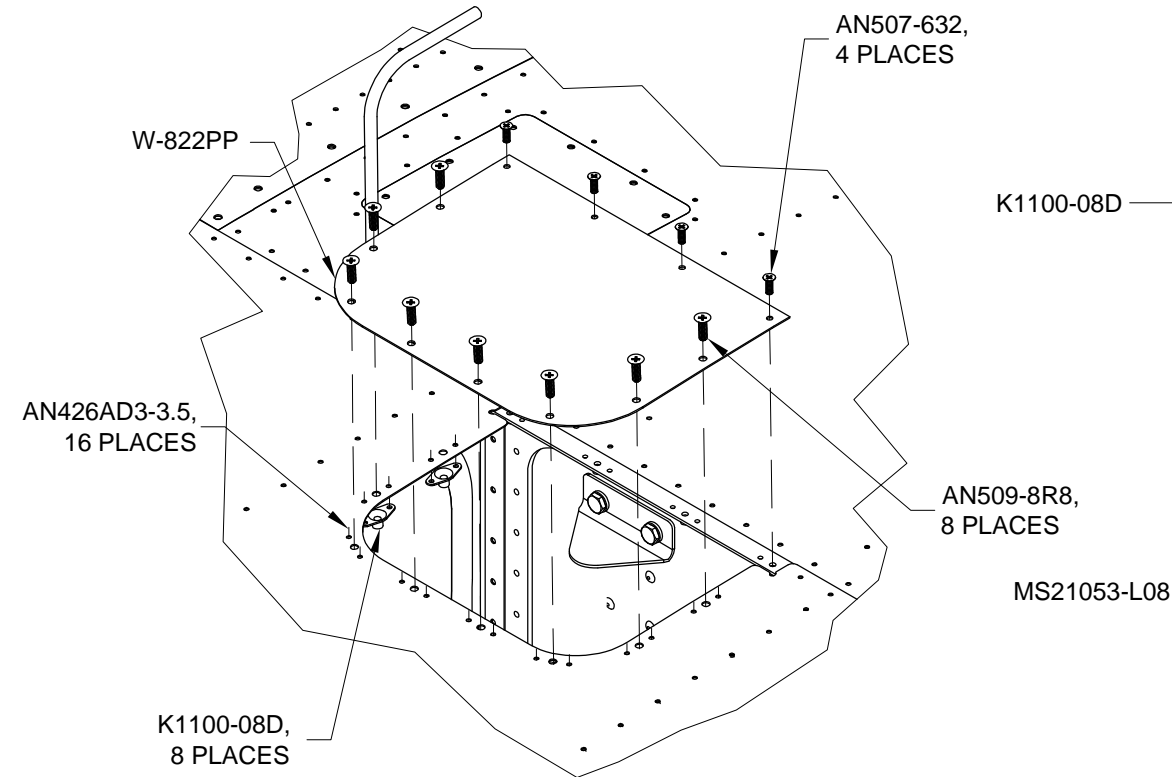


FIGURE 1: TYPICAL WING ACCESS PLATE ATTACH

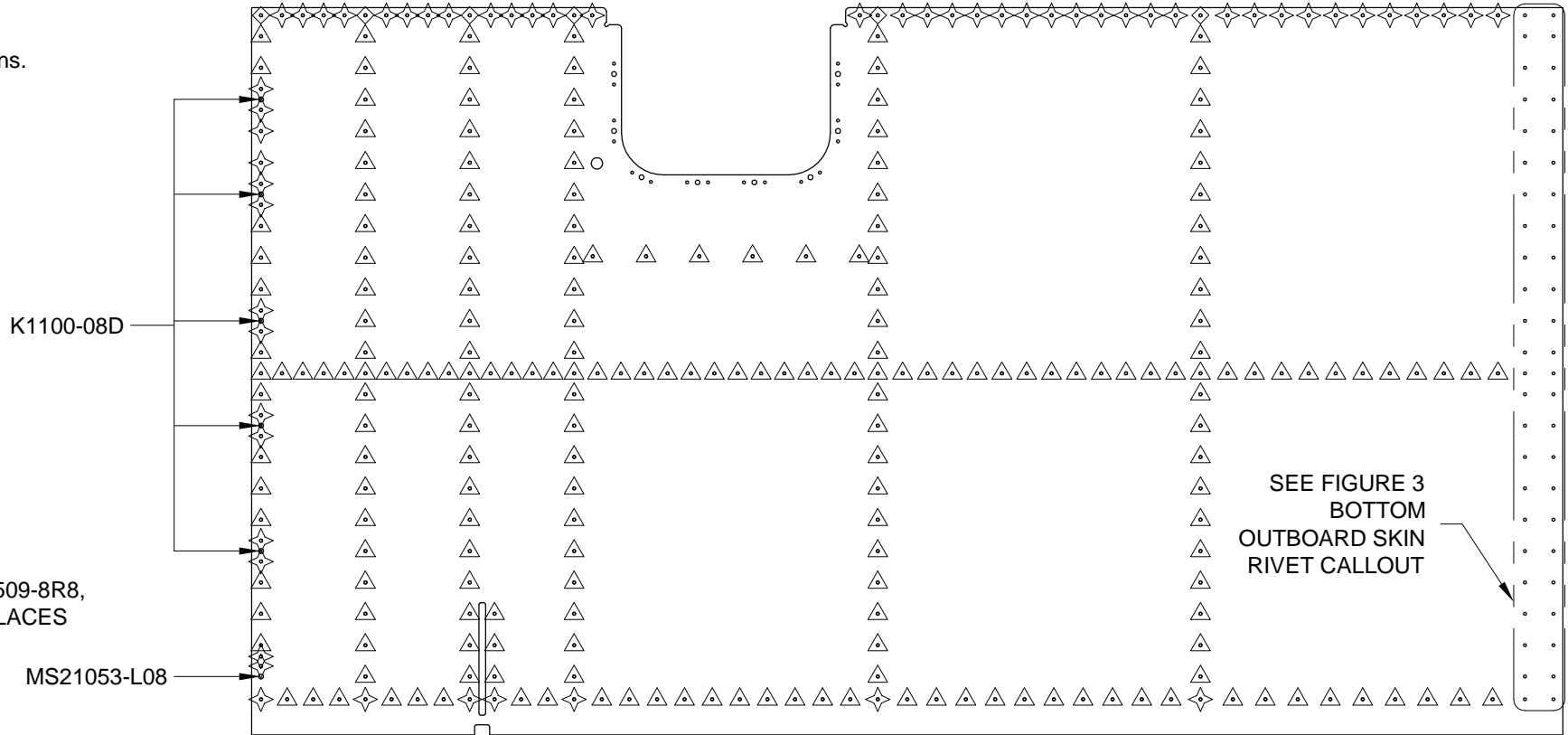


FIGURE 2: BOTTOM INBOARD SKIN RIVET CALLOUTS

- △ AN426AD3-3.5 ◇ AN426AD3-4.5 ☆ WING TIP ATTACH POINTS (SEE SECTION 22)
◆ AN426AD3-4 □ AN426AD3-5

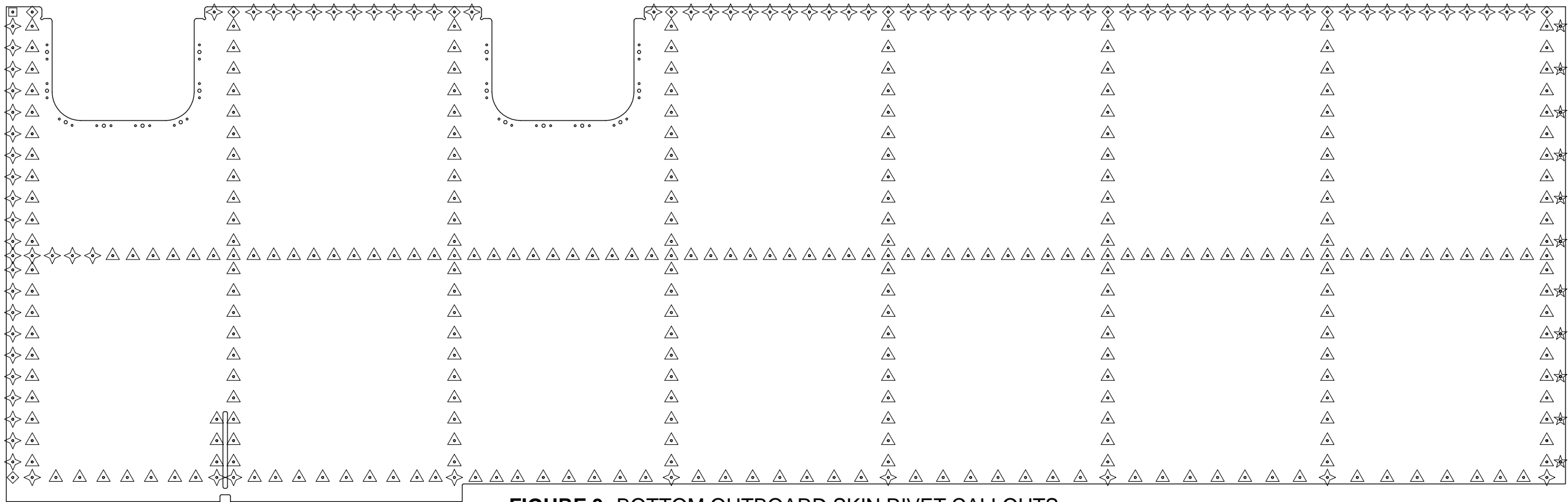
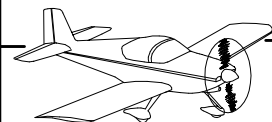


FIGURE 3: BOTTOM OUTBOARD SKIN RIVET CALLOUTS



Step 1: Deburr the holes and edges of all six W-822PP Wing Access Plates.

Dimple the forward row of attach holes in all six wing access plates for a #6 screw. See Page 20-05, Figure 1.

Dimple the remaining holes in all six wing access plates for a #8 screw.

Prime the access plates if/as desired.

Step 2: Rivet the nutplates that will attach the W-822PP Wing Access Plates to the W-00005-L & -R Bottom Outbd Wing Skins and W-00004-L & -R Bottom Inbd Wing Skins as shown on Page 20-05, Figure 1.

Step 3: Install the W-822PP Wing Access Plates to the two inboard locations on the bottom of each wing as shown on Page 20-05, Figure 1.

Install the outboard wing access plate temporarily with two or three fasteners, finger tight. These will be removed later to provide access for installing the aileron control system.

Step 4: Dimple the rivet holes on two (one for each wing) "MS" one-lug nutplates that are called-out on Page 20-05, Figure 2.

Attach the nutplates called-out on Page 20-05, Figure 2 to both left and right wings as shown in Figure 1.

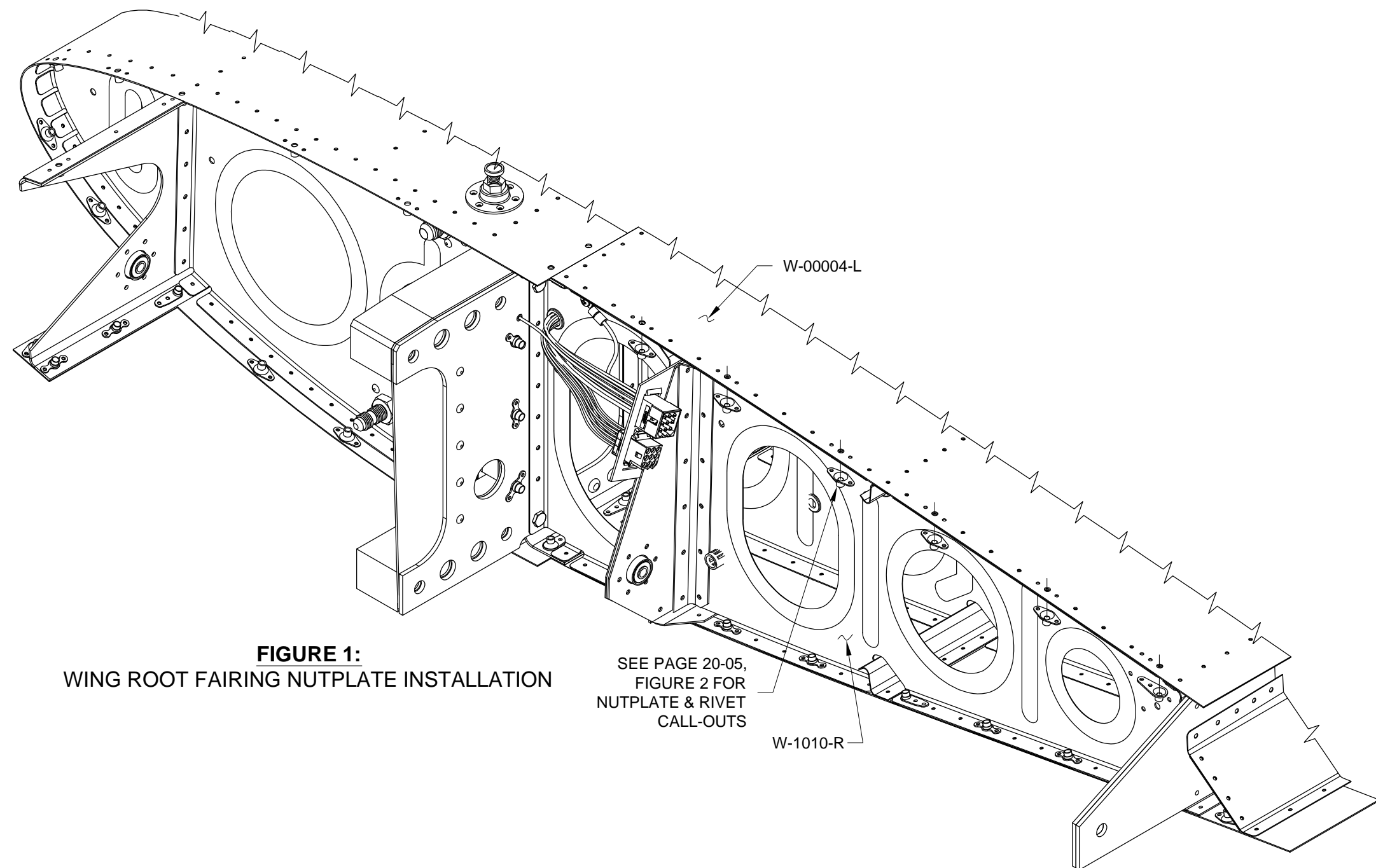


FIGURE 1:
WING ROOT FAIRING NUTPLATE INSTALLATION