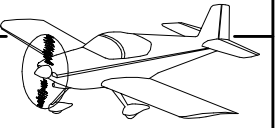


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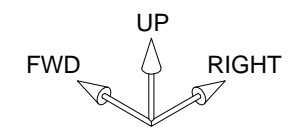
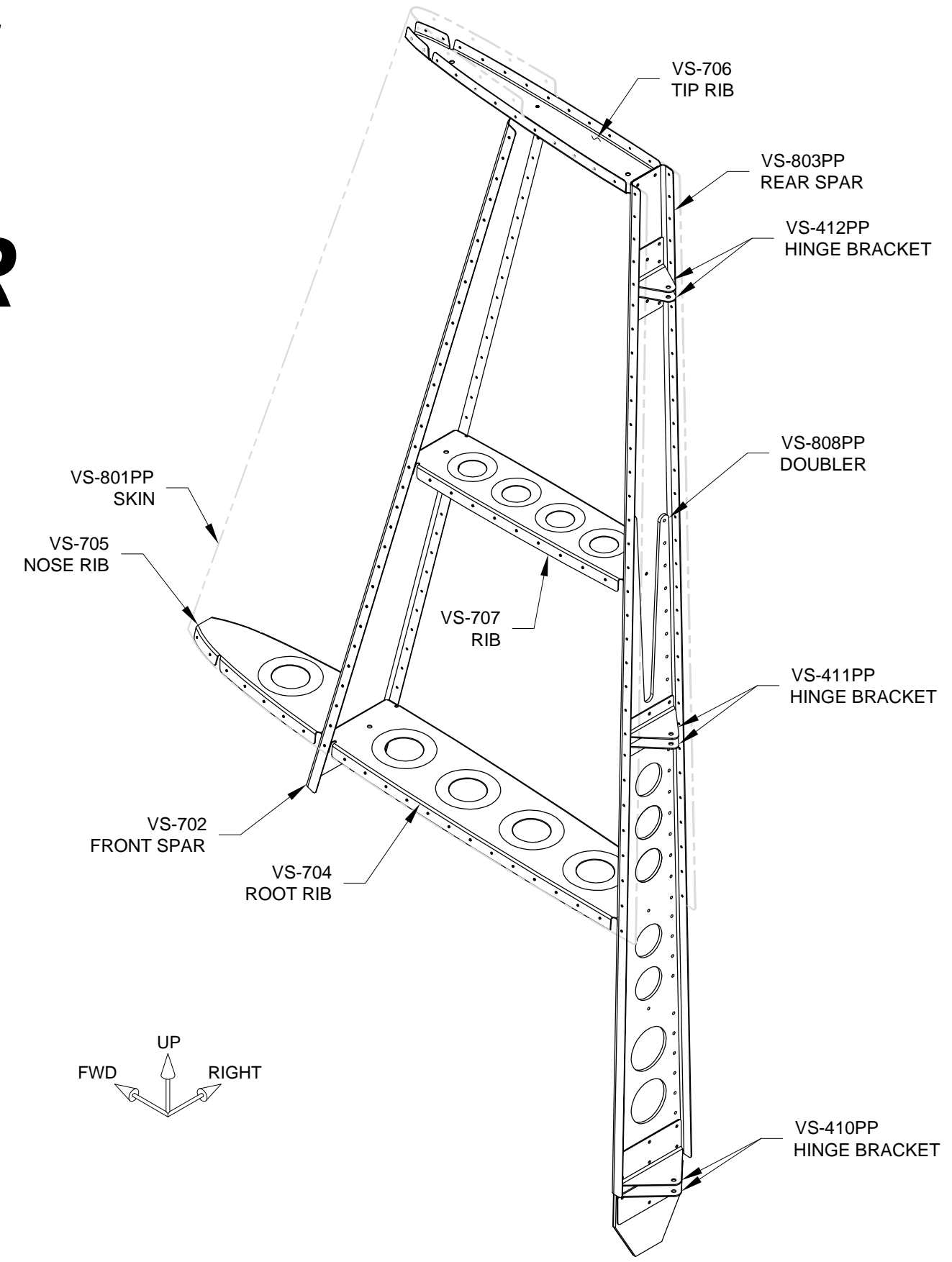
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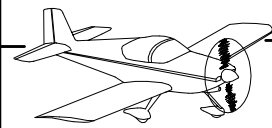
06-04 REV 2: "NOTE: Tape over holes that do not receive rivets at this time to avoid accidentally dimpling or riveting these hole locations." was "NOTE: Tape over holes that do not receive rivets at this time to avoid accidentally riveting these hole locations"

In Figure 2, added "LEAVE OPEN" call-outs.



SECTION 6: VERTICAL STABILIZER





Step 1: Cleco the VS-01401 Front Spar Doubler to the VS-702 Front Spar as shown in Figure 1.

Step 2: Use the VS-01401 Front Spar Doubler as a guide to Match-Drill #40 the 3/32 [2.38mm] holes in the VS-702 Front Spar as shown in Figure 1.

Match-Drill 1/4 the 1/8 [3.175mm] hole in the front spar doubler to the front spar as shown in Figure 1.

Step 3: Use a marker to trace a line along the bottom edge of the VS-01401 Front Spar Doubler onto the VS-702 Front Spar. See Figure 2.

Step 4: Remove the VS-01401 Front Spar Doubler and trim the bottom of the VS-702 Front Spar to the line.

Radius the corners of the flanges as shown in Figure 2.

Step 5: Remove the hatched area from the VS-01401 Front Spar Doubler as shown in Figure 3.

Step 6: Dimple the rivet holes on the aft face of the VS-702 Front Spar and VS-01401 Front Spar Doubler as shown in Figure 4.

Step 7: Rivet the VS-01401 Front Spar Doubler to the VS-702 Front Spar using the hardware called out in Figure 4.

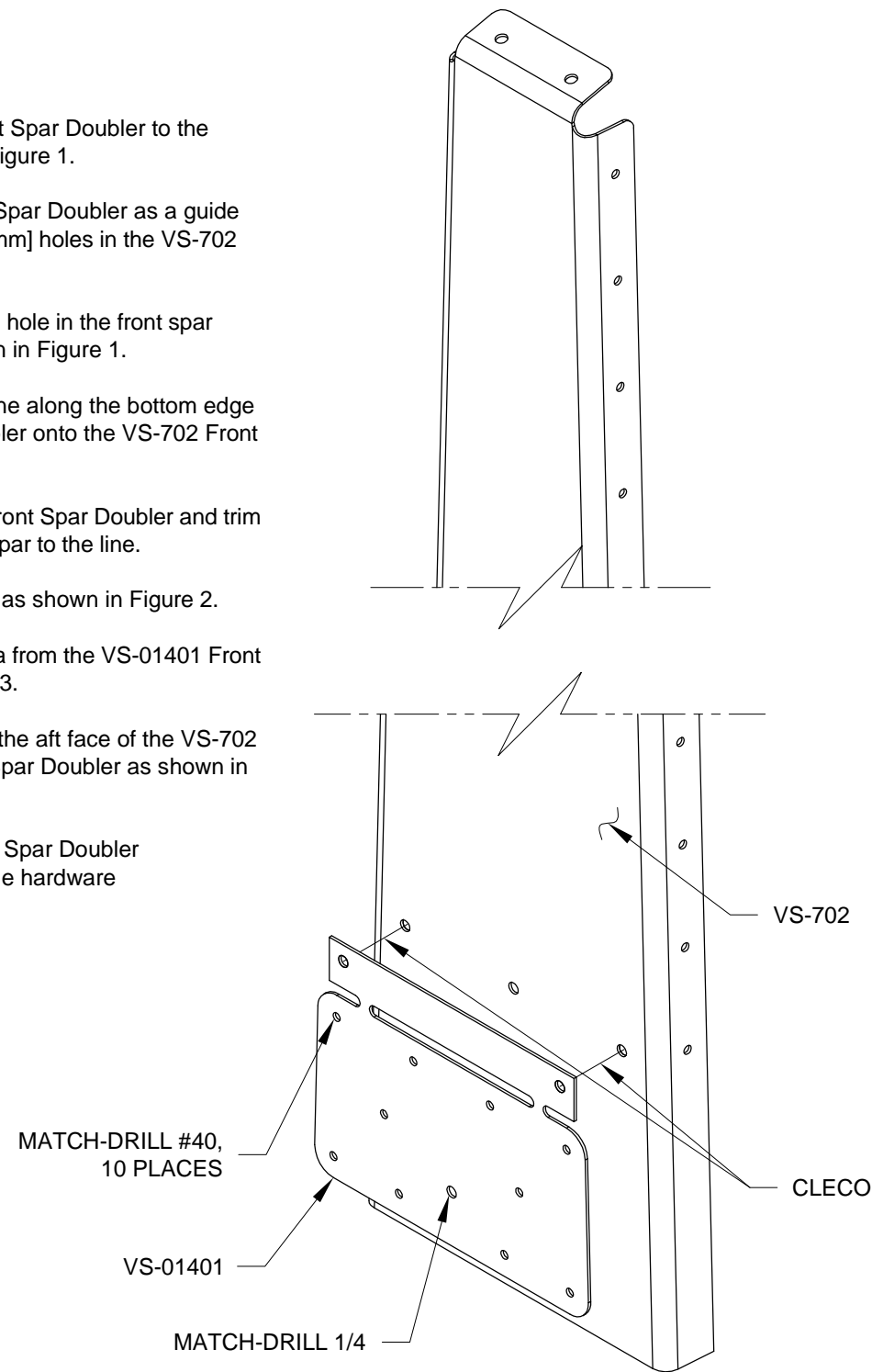


FIGURE 1: FORWARD SPAR MODIFICATION

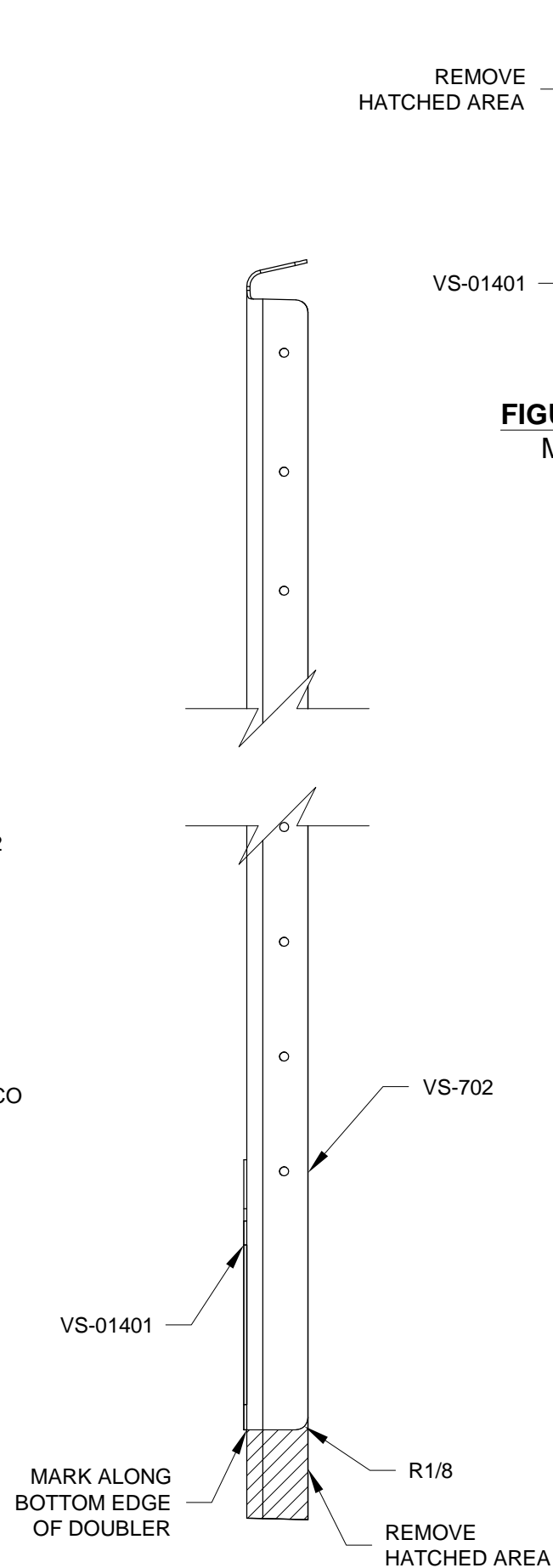


FIGURE 2: TRIMMING FRONT SPAR

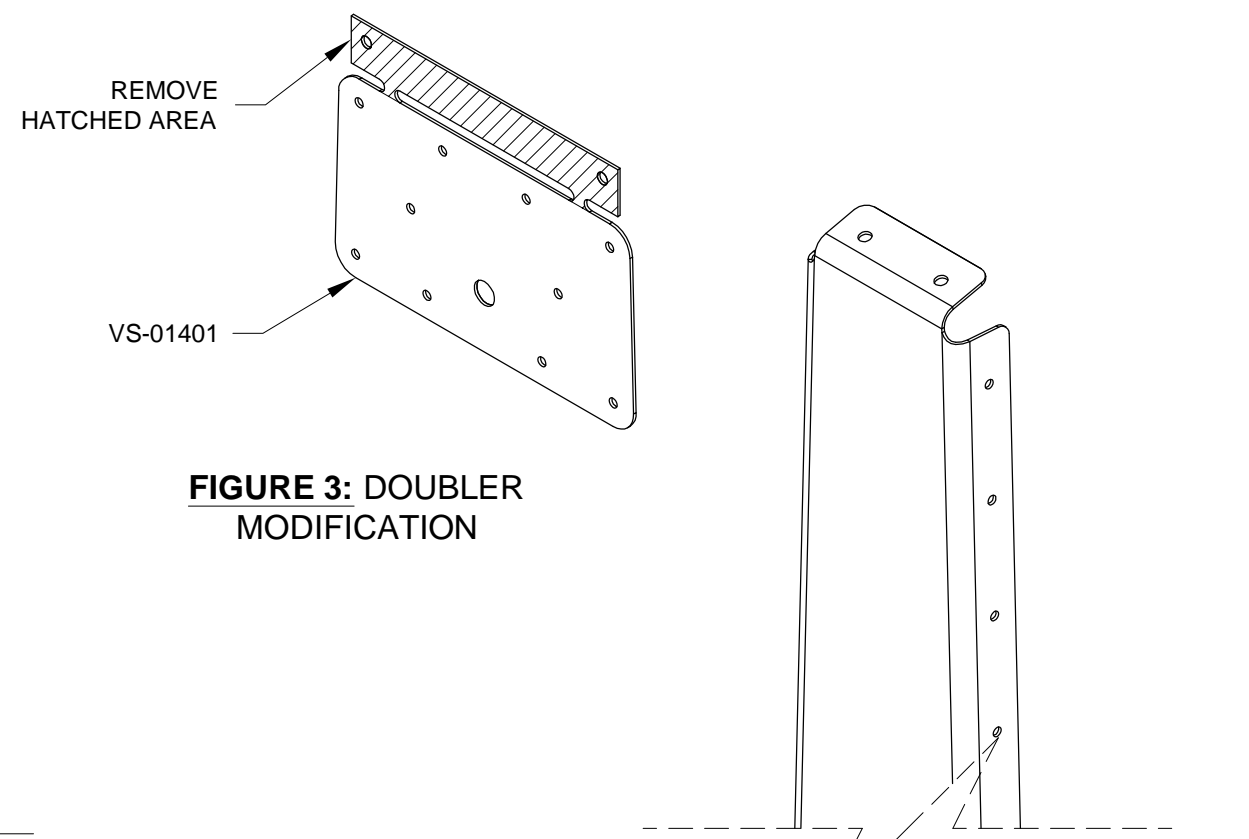


FIGURE 3: DOUBLER MODIFICATION

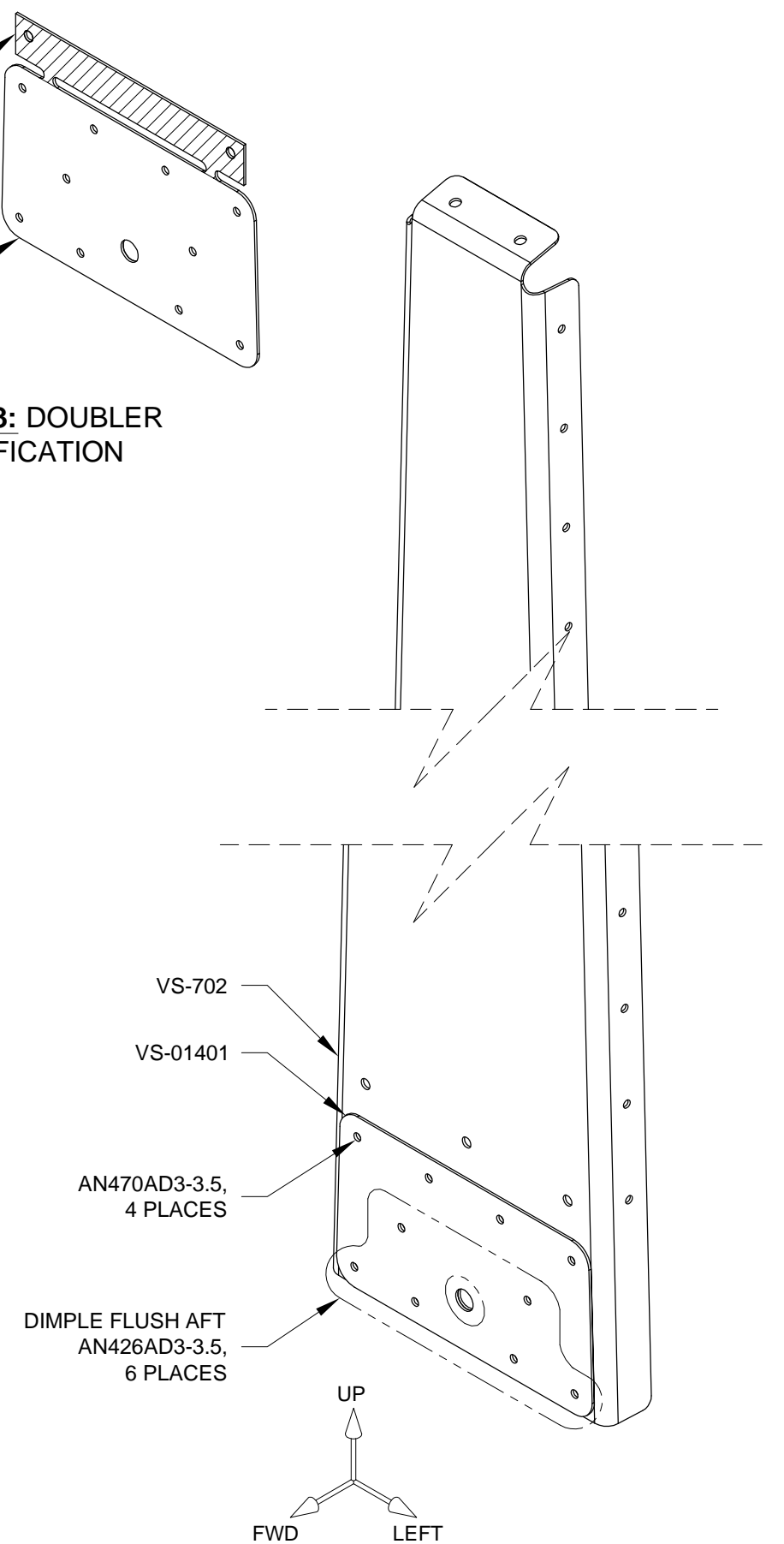
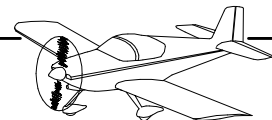


FIGURE 4: DOUBLER ATTACH



Step 1: Final-Drill #12 The rudder attach holes in the VS-410PP, VS-411PP, and VS-412PP Hinge Brackets as shown in Figure 1.

Step 2: Cleco the VS-808PP Doubler to the VS-803PP Rear Spar. Cleco the VS-410PP, VS-411PP and VS-412PP Hinge Brackets to the rear spar and spar doubler. See Figure 1.

Step 3: Final-Drill #30 the hole pattern through the VS-411PP and VS-412PP Hinge Brackets.

Final-Drill #30 all the VS-803PP Rear Spar to VS-808PP Rear Spar Doubler holes.

NOTE: The corner holes in the lower of the two VS-410PP Hinge Brackets will be drilled for bolts later, in assembly with the fuselage. Match-Drill the corners in the upper hinge bracket only.

Step 4: The VS-410PP Hinge Brackets have two holes missing from the pattern. Use the holes in the VS-803PP Rear Spar and VS-808PP Doubler as drill guides to match-drill #30 the missing holes in the upper hinge bracket. See Figure 1.

Final-Drill #30 the pre-punched holes in both VS-410PP Hinge Brackets as shown in Figure 1.

Step 5: Adjust the flange angles of the VS-706 Tip Rib to match the taper of the spars and skin.

Step 5: Radius the corners at the forward end of the VS-705 Nose Rib and VS-706 Tip Rib flanges to ease fit when the skins are installed. See Figure 2 and Section 5.2.

Step 6: Flute the VS-704, VS-705, VS-706 and VS-707 Ribs as required to straighten the web of the rib. See Section 5.13 for more information about fluting flanges.

Step 7: Cleco the VS-704, VS-705, VS-706 and VS-707 Ribs to the VS-702 Front Spar and VS-803PP Rear Spar as shown in Figure 3.

Final-Drill #30 all rib to spar attach holes.

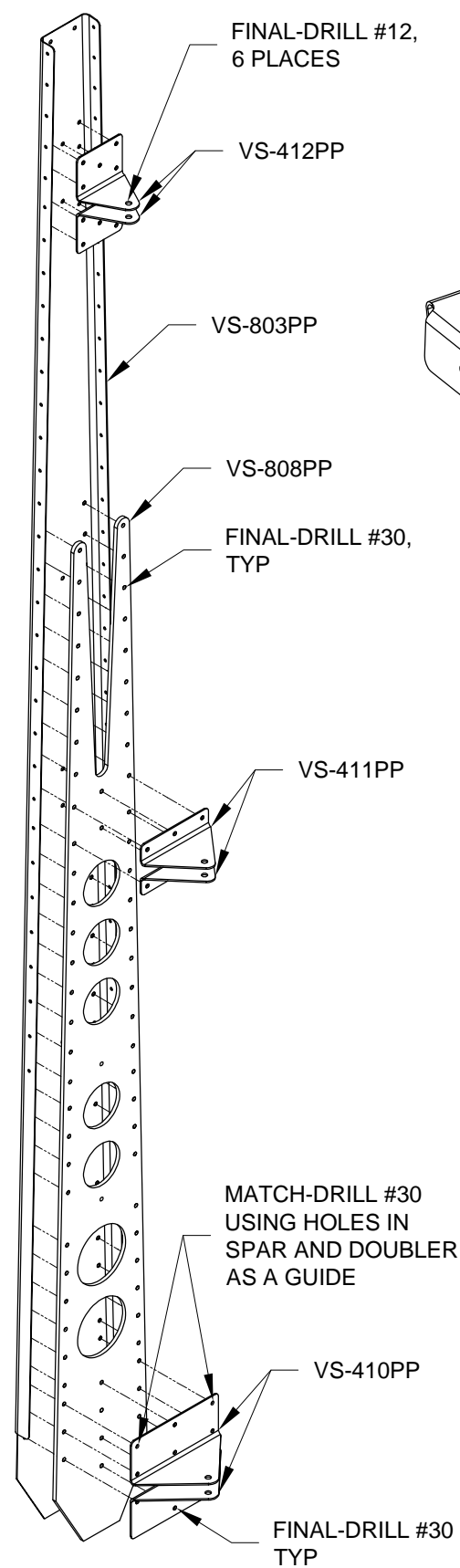
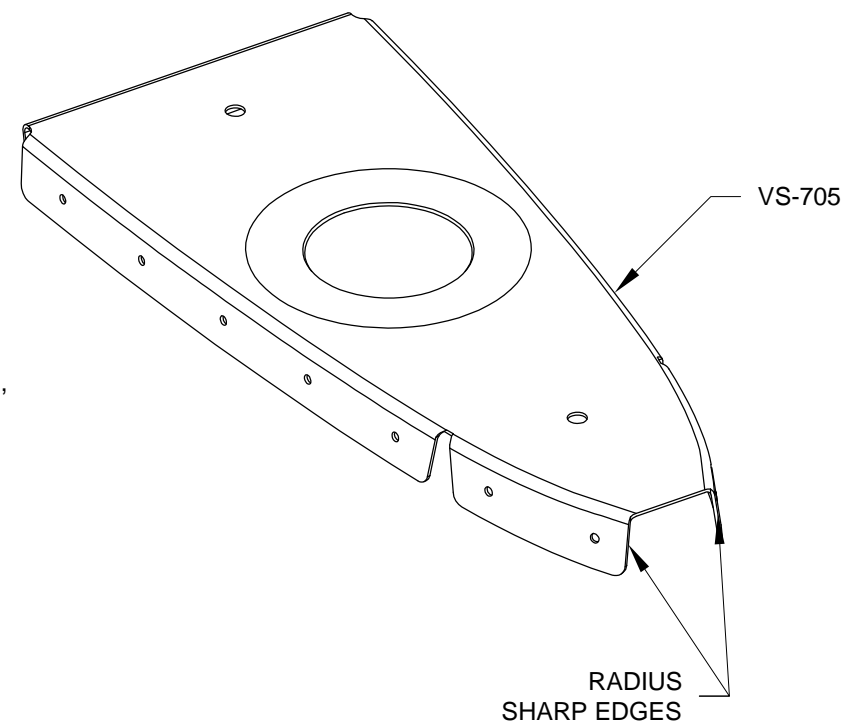
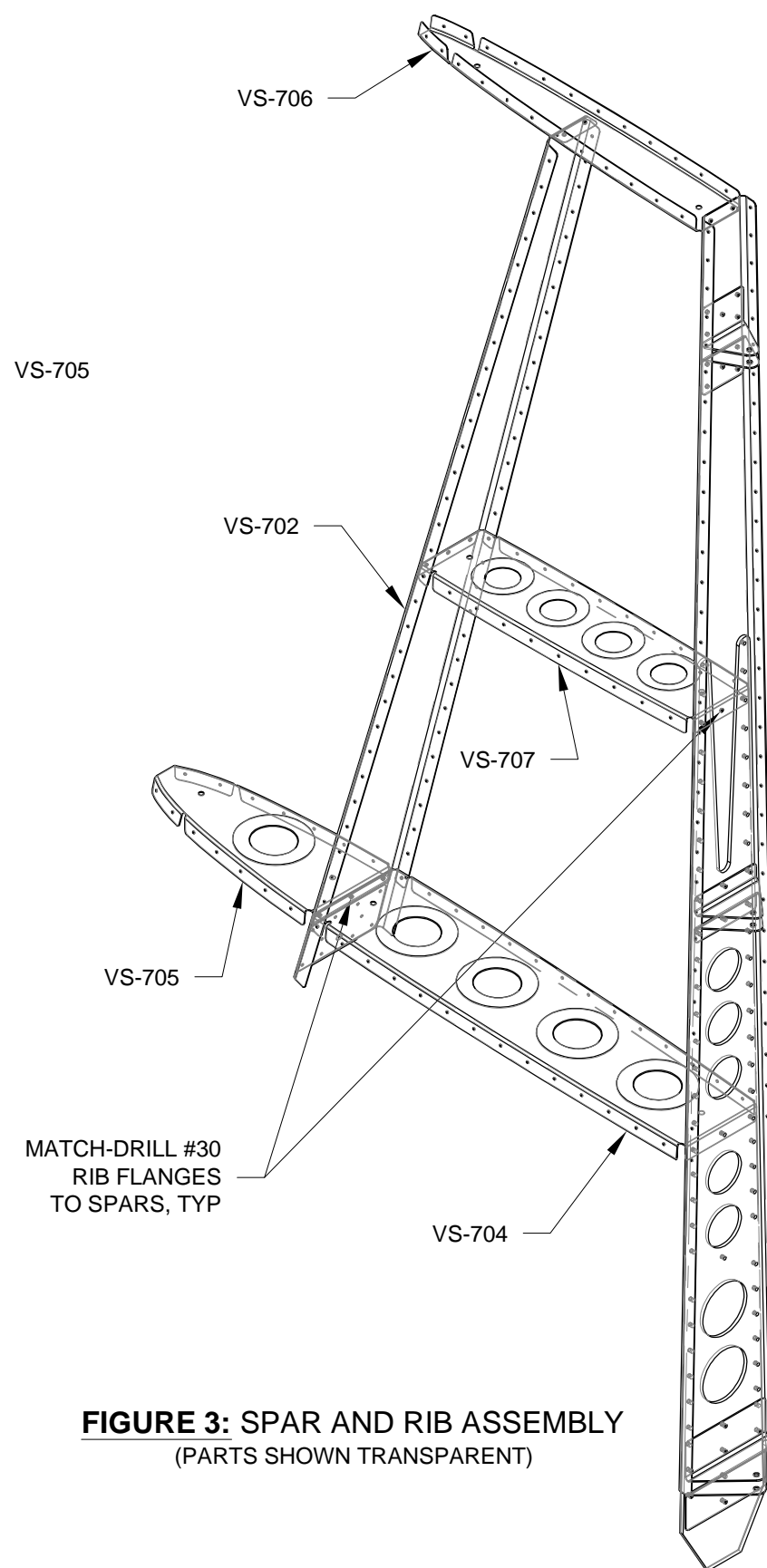


FIGURE 1: REAR SPAR ASSEMBLY



**FIGURE 2: RADIUS RIBS
(NOSE RIB SHOWN)**



**FIGURE 3: SPAR AND RIB ASSEMBLY
(PARTS SHOWN TRANSPARENT)**



NOTE: Do not force fit the VS-801PP Skin. Make additional adjustments to the ribs as required to achieve a good fit with the skin. See Page 06-03 Steps 5 and 6 for details.

Step 1: Cleco the VS-801PP Skin to the vertical stabilizer assembly. Final-Drill #40 all 3/32 [2.38mm] holes in the skin to the Vertical Stabilizer Assembly. See Figure 1.

Step 2: Match-Drill #40 the VS-801PP Skin to the VS-705 Nose Rib and the VS-706 Tip Rib as shown in Figure 1.

Step 3: Mark the location and orientation of the VS-808PP Doubler, VS-411PP Hinge Brackets, and VS-412PP Hinge Brackets so that they can be reinstalled in the same position.

Disassemble all parts and deburr.

Prime parts as applicable if desired. See Section 5.1.

NOTE: Tape over holes that do not receive rivets at this time to avoid accidentally dimpling or riveting these hole locations. See Figures 1 and 2 for locations.

Step 4: Dimple the #40 holes in the VS-801PP Skin (which were final-drilled in Step 1 and Step 2) for the head of AN426AD3 rivets.

Dimple the corresponding #40 holes in the flanges of the VS-702 Front Spar, VS-803PP Rear Spar, VS-704 Root Rib, VS-705 Nose Rib, VS-706 Tip Rib and VS-707 Rib for AN426AD3 flush mount rivets (use a reduced diameter female die).

Step 5: Machine countersink the #30 holes in the VS-808PP doubler that attach the doubler to the VS-803PP Rear Spar for the dimple of an AN426AD4 rivet. See Figure 2 for locations.

Dimple the corresponding #30 holes in the rear spar for AN426AD4 rivets.

NOTE: Install AN470 rivets with manufactured heads on aft surface for easier access to the skin-to-spar rivets.

Step 6: Cleco then rivet the VS-410PP, VS-411PP and VS-412PP Hinge Brackets, VS-808PP Rear Spar Doubler and VS-803PP Rear Spar together using the rivets called out in Figure 2.

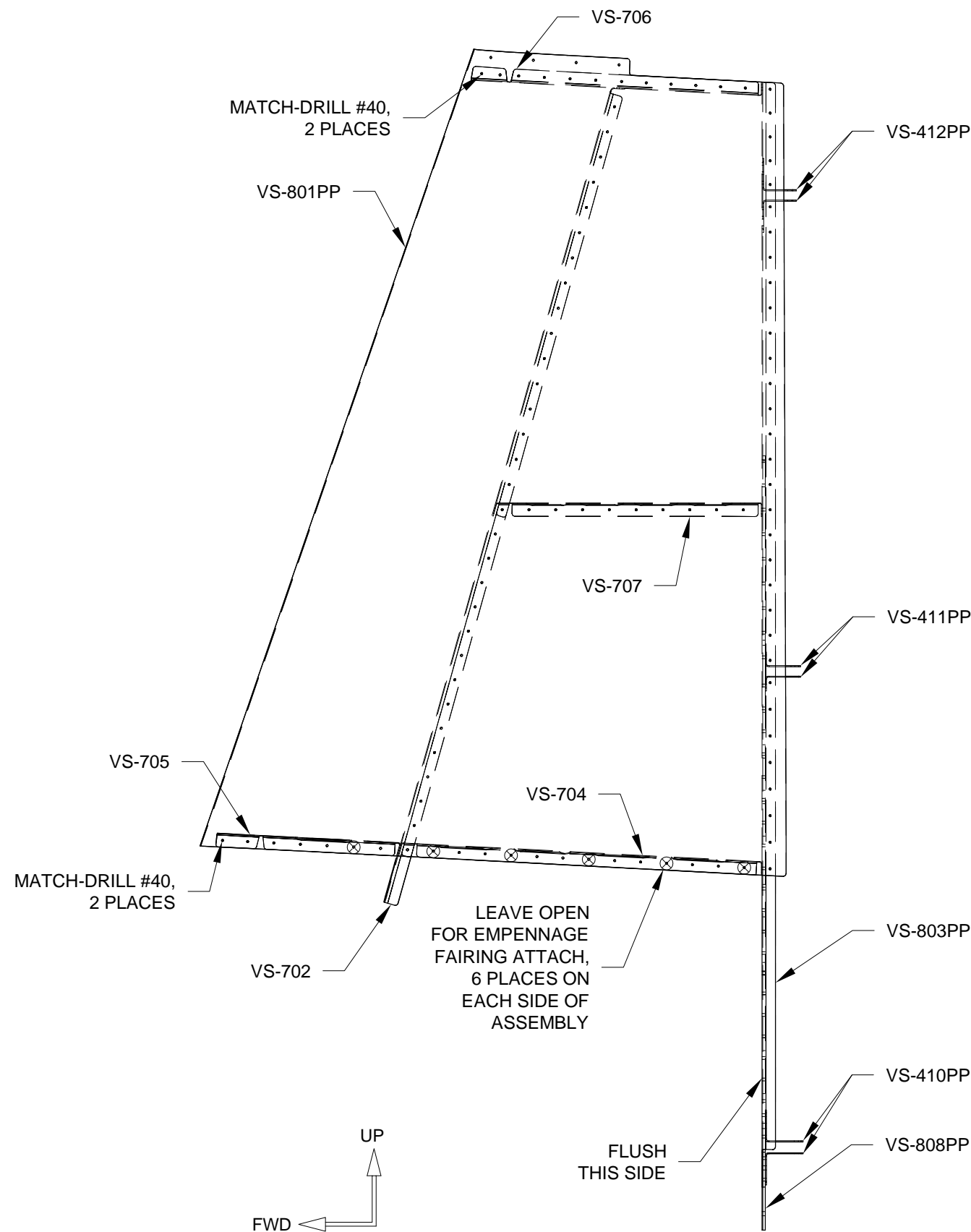


FIGURE 1: RIVET LOCATIONS

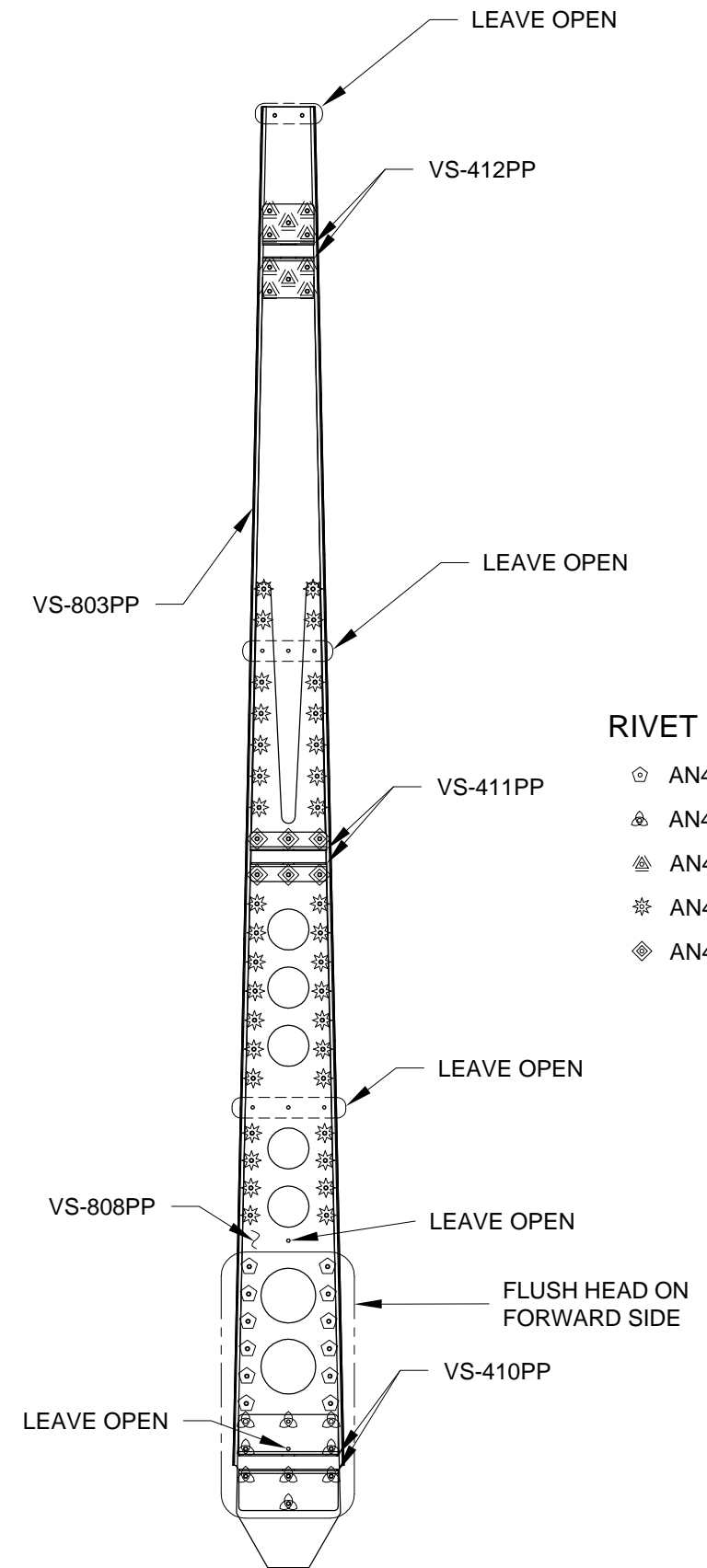
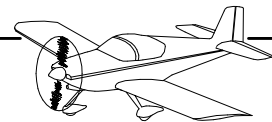


FIGURE 2: REAR SPAR ASSEMBLY RIVET LOCATIONS (AFT VIEW)

RIVET LEGEND

- ⊠ AN426AD4-6
- ⊡ AN426AD4-7
- ⊢ AN470AD4-5
- ⊣ AN470AD4-6
- ⊤ AN470AD4-7



NOTE: Take care to assemble the parts in the order given in the step by step instructions. Figures show the full assembly.

Step 1: Cleco the VS-704 Root Rib, VS-705 Nose Rib, VS-706 Tip Rib and VS-707 Rib to the VS-702 Front Spar.

Rivet all of the ribs to the front spar using the rivets called out in Figure 1.

Step 2: Cleco the VS-801PP Skin to the VS-704 Root Rib, VS-705 Nose Rib, VS-706 Tip Rib, VS-707 Rib and to the VS-702 Front Spar.

Step 3: Begin riveting the VS-801PP Skin to the VS-702 Front Spar at the intersection of VS-707 Rib and front spar. Start working towards the tip, then start at the same place and rivet along the front spar toward the root.

Rivet along the VS-707 Rib starting at the front and riveting toward the rear. Rivet the VS-704 Root Rib, VS-705 Nose Rib, and the VS-706 Tip Rib to the skin using the rivets called out in Figure 2.

Step 4: Cleco the Rear Spar Assembly to the vertical stabilizer assembly. Rivet the rear spar assembly to the VS-801PP Skin, VS-704 Root Rib, and VS-706 Tip Rib as shown in Figures 1 and 2.

Blind rivet the rear spar assembly to VS-707 Rib using the hardware called out in Figure 1.

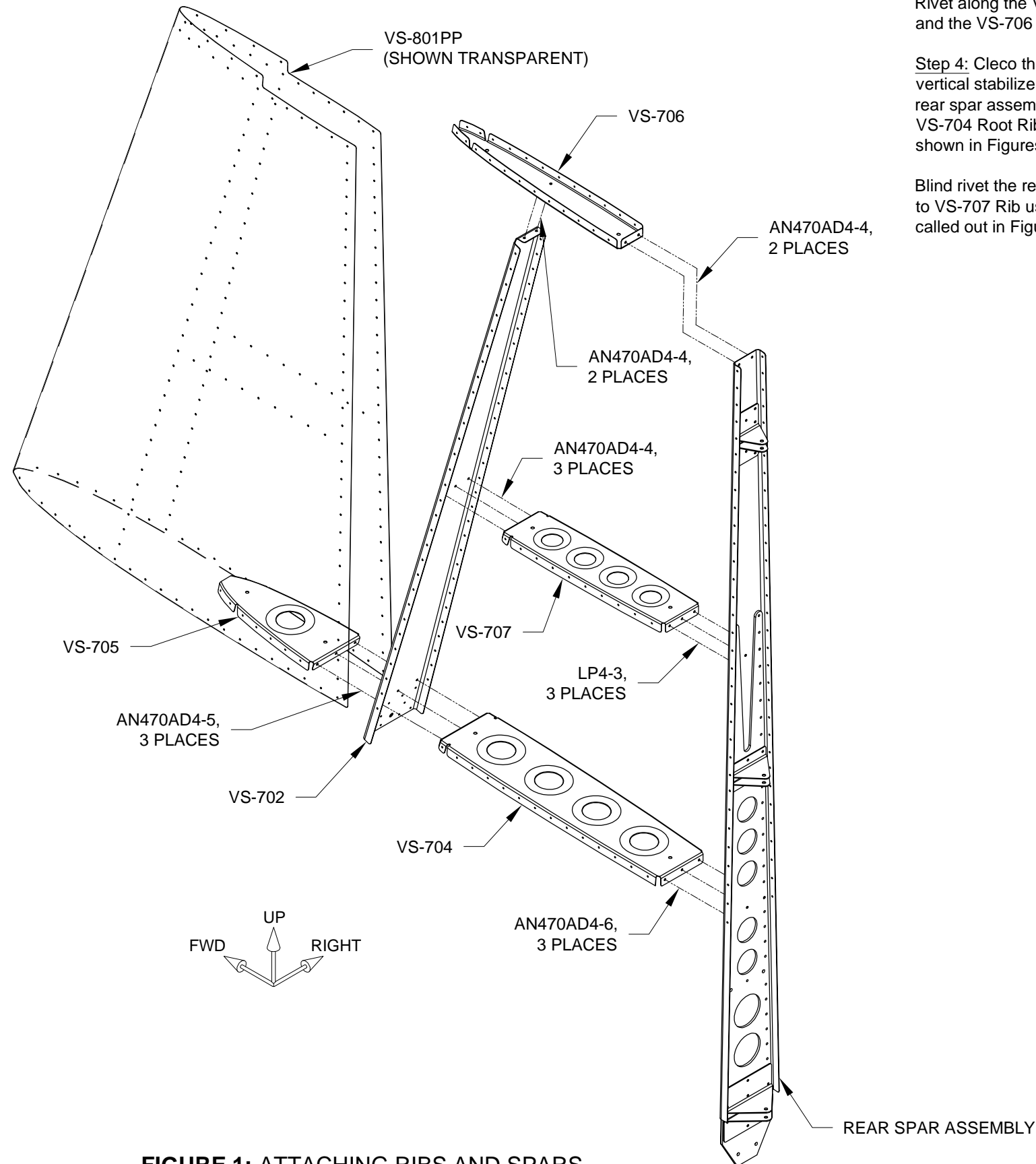


FIGURE 1: ATTACHING RIBS AND SPARS

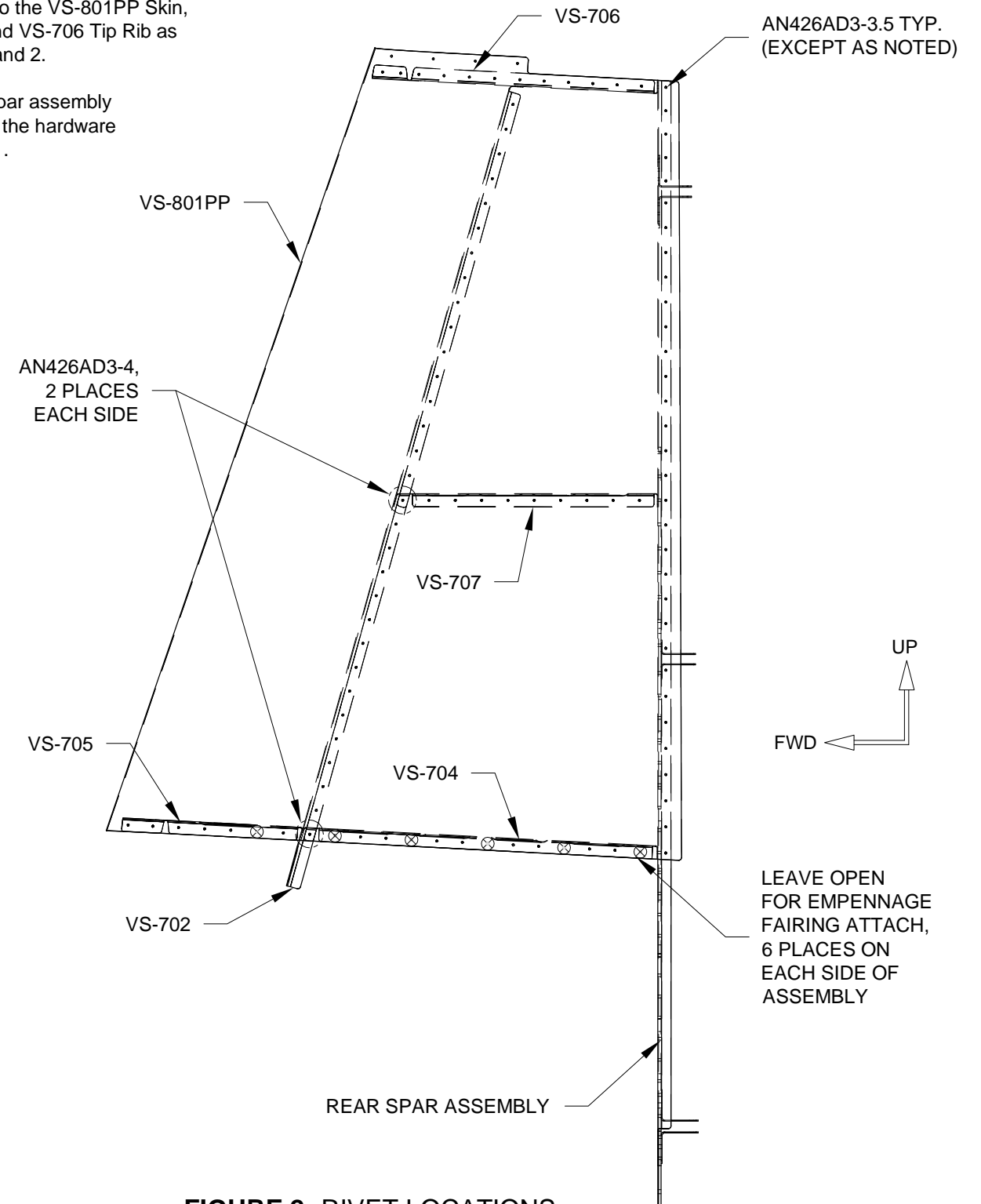


FIGURE 2: RIVET LOCATIONS



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