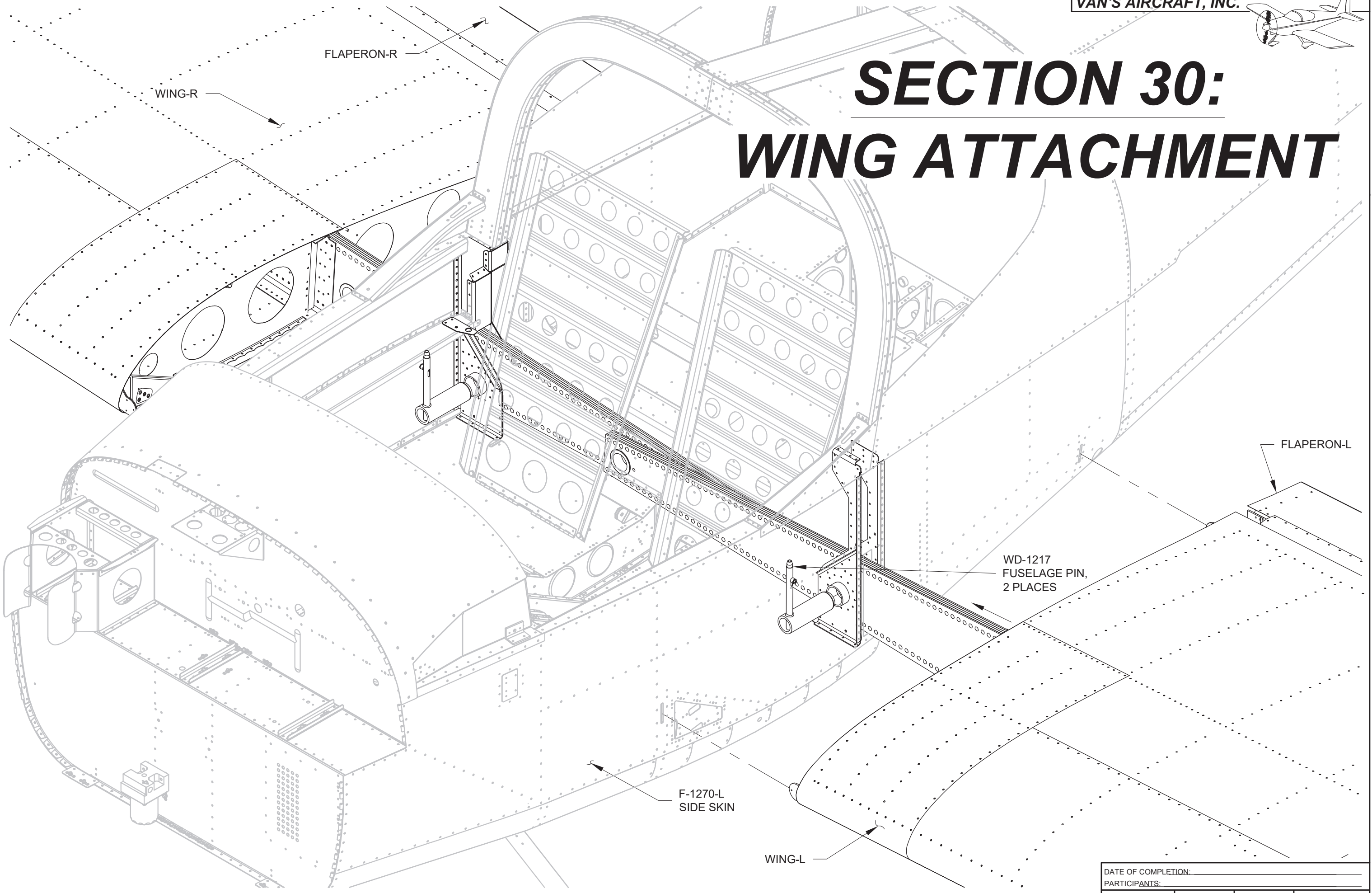


# SECTION 30: WING ATTACHMENT



WING-R

FLAPERON-R

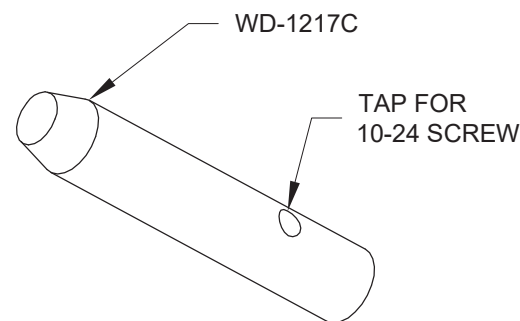
FLAPERON-L

WD-1217  
FUSELAGE PIN,  
2 PLACES

F-1270-L  
SIDE SKIN

WING-L

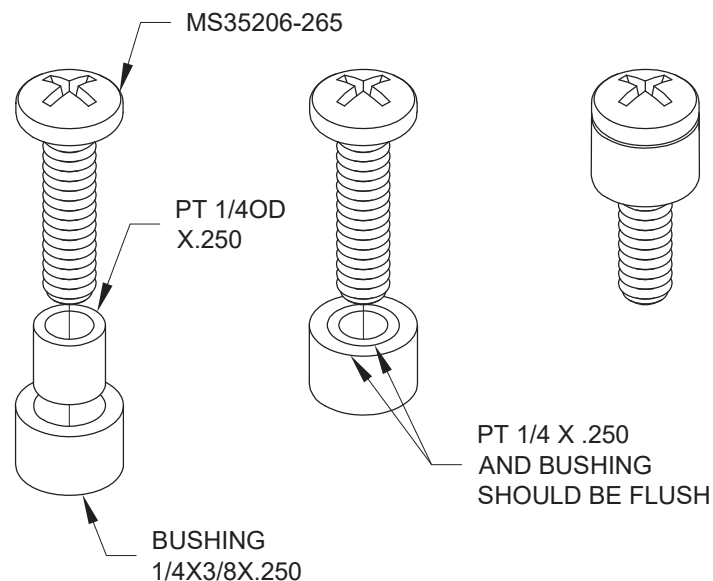
Step 1: Tap the hole in each of the WD-1217C Fuselage Pin Stoppers as shown in Figure 1.



**FIGURE 1: FUSELAGE PIN STOPPER ASSEMBLY**

Step 2: Cut two 1/4 inch pieces from the PT 1/4OD X 2 clear tube and slip one piece inside each bushing as shown in Figure 2.

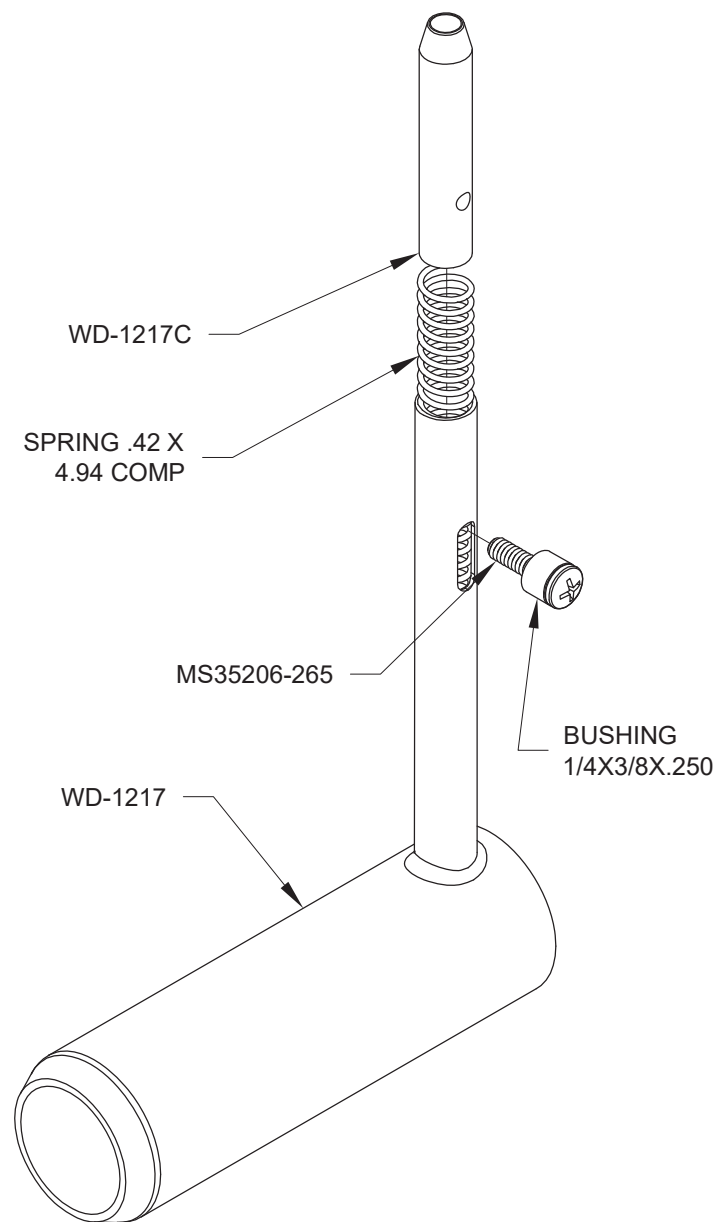
Step 3: Insert the screw into the plastic tube and bushing as shown in Figure 2. Take care that the plastic tube remains inside the bushing by setting the bushing and tubing on a flat surface and screwing the screw into place. Once the screw is well started the bushing may be held with a pair of pliers or a vise while completing the assembly. When finished the bushing and plastic insert will be in contact with the head of the screw as shown in Figure 2. Repeat for second screw and bushing.



**FIGURE 2: BUSHING AND SCREW ASSEMBLY**

Step 4: Install the SPRING .42 X 4.94 COMP and WD-1217C Fuselage Pin Stopper into the WD-1217 Fuselage Pin. Apply a small amount of Loctite #242 (or equivalent non-permanent thread lock) to the screw threads and insert the screw as shown in Figure 3. When properly installed the fuselage pin stopper can be moved up and down by applying pressure to the screw on the side of the fuselage pin assembly.

Repeat the process for the second fuselage pin, but insert the screw on the opposite side of the fuselage pin assembly.



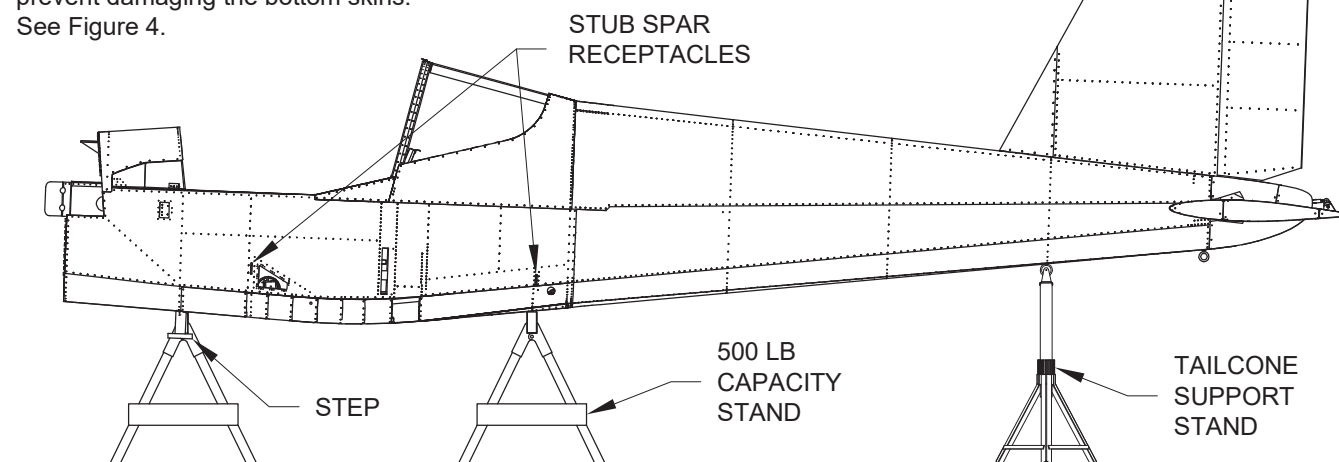
**FIGURE 3: FUSELAGE PIN ASSEMBLY (RIGHT SHOWN)**

**NOTE: Two people are needed to install and remove the wings. One person should stand forward of the wing spar at the fuselage to guide the spar into position and set the fuselage pins. The second person should be at the wing tip to lift and slide the wing into position. The person at the fuselage side will watch that the spar is properly aligned, that the stub spars are lined up with their receptacles, and direct the person at the wing tip as needed. Make sure that the fuselage is well secured/stabilized before fitting the wings.**

Step 5: Obtain two padded stands approximately 28 inches wide and 25 inches tall and capable of supporting 500 pounds each. The padded surface must be at least 1 1/2 inches thick. A sturdy table or workbench may be used for this procedure, but stands may be easier to work around and can be used for future aircraft maintenance. See Figure 4.

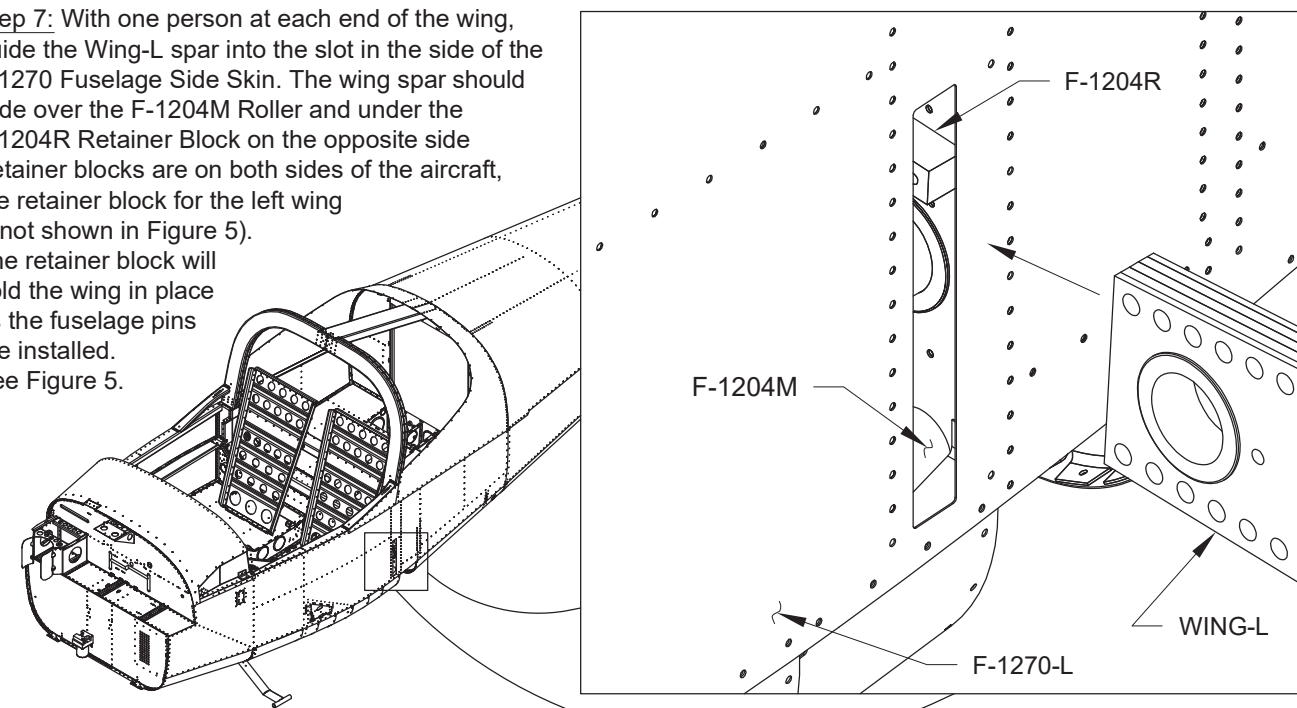
Obtain two additional stands (preferably adjustable) to support the wing and tail section during installation and removal. The additional supports are required to prevent the fuselage from rolling or tipping during wing installation and removal and should be taller than the fuselage supports. See Figure 4 and Page 30-03 Figure 1.

Step 6: Position the fuselage on the padded supports so that the supports line up with the lateral rivet patterns on the bottom of the fuselage and check to make sure that the fuselage is stable on its supports. If using a table or workbench, add support and padding at the locations where the stands are positioned to stabilize the fuselage and prevent damaging the bottom skins. See Figure 4.



**FIGURE 4: SUPPORTING THE FUSELAGE**

Step 7: With one person at each end of the wing, guide the Wing-L spar into the slot in the side of the F-1270 Fuselage Side Skin. The wing spar should slide over the F-1204M Roller and under the F-1204R Retainer Block on the opposite side (retainer blocks are on both sides of the aircraft, the retainer block for the left wing is not shown in Figure 5). The retainer block will hold the wing in place as the fuselage pins are installed. See Figure 5.



**FIGURE 5: WING SPAR RECEPTACLE**



**NOTE:** If the wing skins interfere with sliding the wings into place, they may be carefully filed/trimmed until the fuselage pins will engage the wing spar. If the stub spar interferes with installation of the wing the stub spar may require local dressing with a file. The stub spars are to be coated with a multipurpose anti-seize paste to prevent fretting/wear (delay until after painting).

**Step 1:** Align the stub spars in the forward and aft stub spar receptacles as shown in Figure 1. Apply a light coating of general purpose wheel bearing grease to the WD-1217 Fuselage Pins then insert through the bushings in the F-1204 Bulkhead Assembly and into the bushings in the left wing spar, but not protruding aft of the aft surface of the left spar. The fit will be snug. Turning the fuselage pin from side to side while applying pressure will make installation easier.

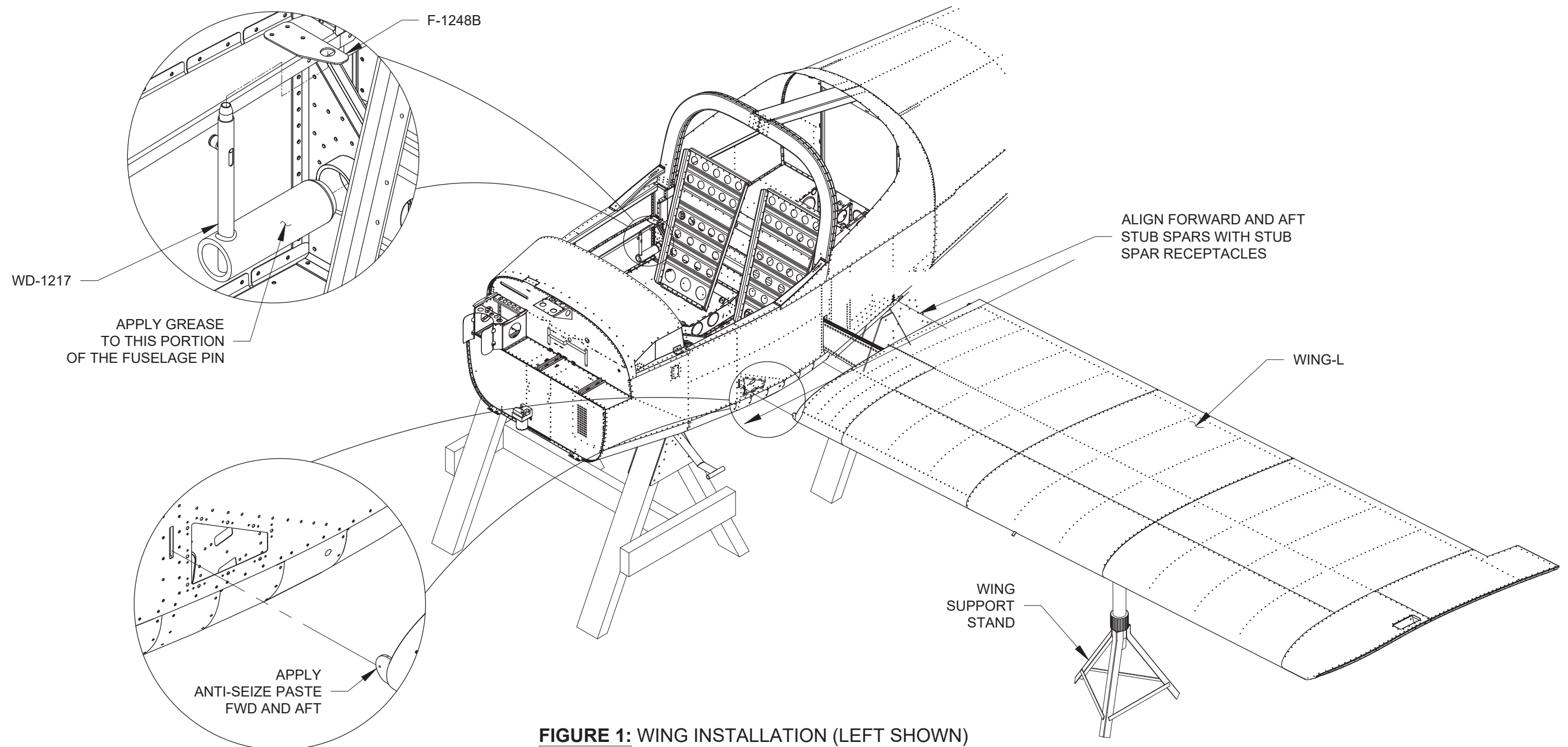
**Step 2:** Place the remaining support under the left wing as shown in Figure 1. Take care that the support is aligned with the wing ribs (not between them) to avoid denting the wing skins. The support may alternately be positioned under the optional eye bolt tie-down ring (eye bolts are not included in the kit, but are available from our accessories catalog and other sources).

**Step 3:** With one person on each end of the right wing, slide the right wing spar over the F-1204M Roller and under the F-1204R Retainer Block on the opposite side. See Page 30-02 Figure 5. Slide the WD-1217 Fuselage Pins through the bushings in both wing spars and latch to the F-1248B Fuselage Pin Latch with the retaining screws facing outboard. The retaining screws should be positioned outboard to prevent them from being depressed accidentally. See Figure 1.

**Step 4:** Check the gap between the wing skins and the fuselage. A minimum gap of 5/32 inch is required to allow for the VA-204-1 Seal Strips (installed in Section 33 page 04). Use a file to remove additional material from the wing skins to achieve the 5/32 inch gap.

**Step 5:** Check the gap between the flaperons and fuselage skin. A minimum gap of 3/16 inch is required to allow smooth flap deployment. Use sharp metal snips or a file to remove material from the inboard edges of the Flaperon skins to achieve the 3/16 inch gap at full up deflection.

**Step 6:** With the support stand positioned under the left wing, and a helper holding the right wing tip, slip the WD-1217 Fuselage Pins out (the F-1204R-L and -R Retainer Blocks will hold the wings in place while removing the fuselage pins) and remove the right wing. Remove the left wing.



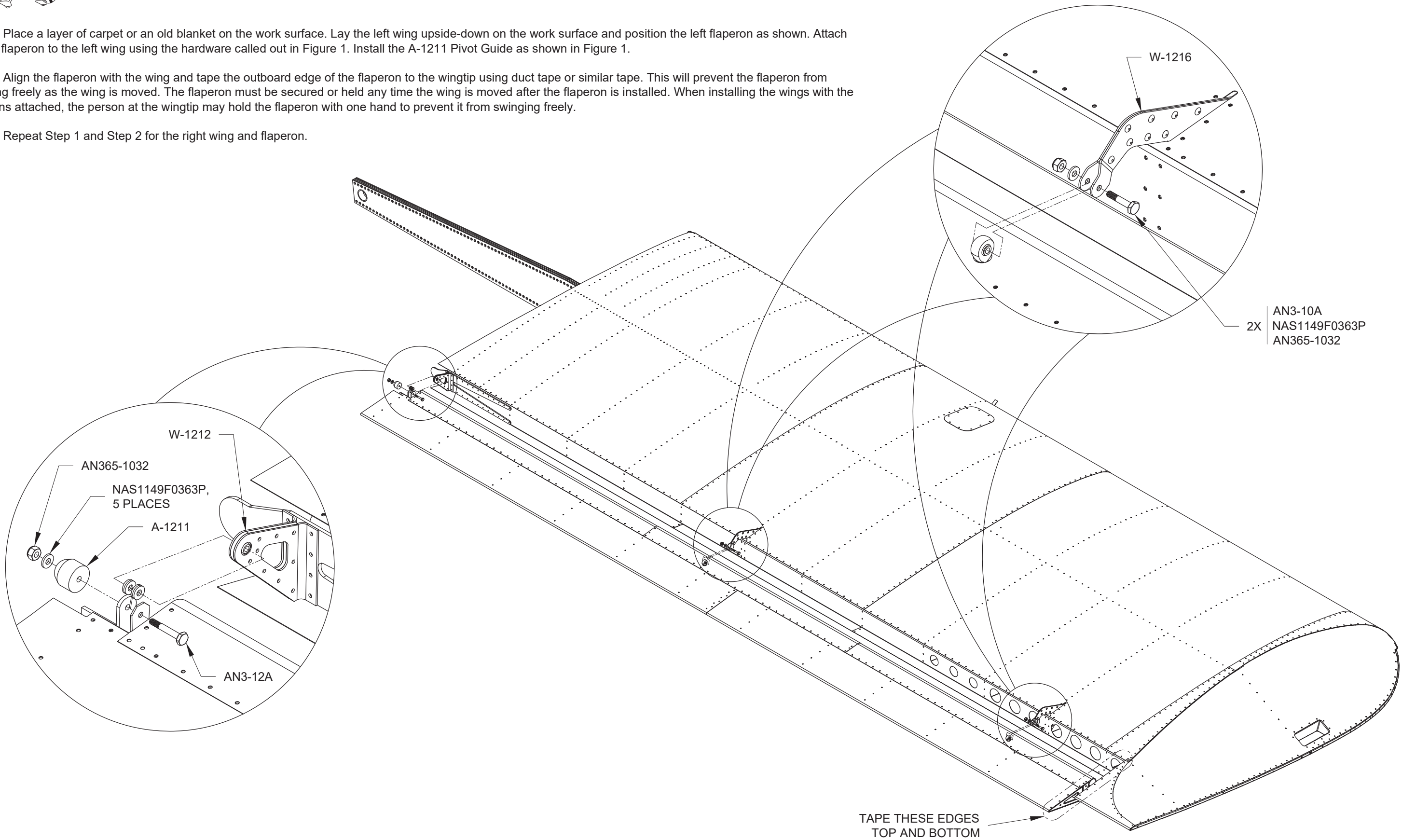
**FIGURE 1: WING INSTALLATION (LEFT SHOWN)**



**Step 1:** Place a layer of carpet or an old blanket on the work surface. Lay the left wing upside-down on the work surface and position the left flaperon as shown. Attach the left flaperon to the left wing using the hardware called out in Figure 1. Install the A-1211 Pivot Guide as shown in Figure 1.

**Step 2:** Align the flaperon with the wing and tape the outboard edge of the flaperon to the wingtip using duct tape or similar tape. This will prevent the flaperon from swinging freely as the wing is moved. The flaperon must be secured or held any time the wing is moved after the flaperon is installed. When installing the wings with the flaperons attached, the person at the wingtip may hold the flaperon with one hand to prevent it from swinging freely.

**Step 3:** Repeat Step 1 and Step 2 for the right wing and flaperon.



**FIGURE 1: FLAPERON INSTALLATION**