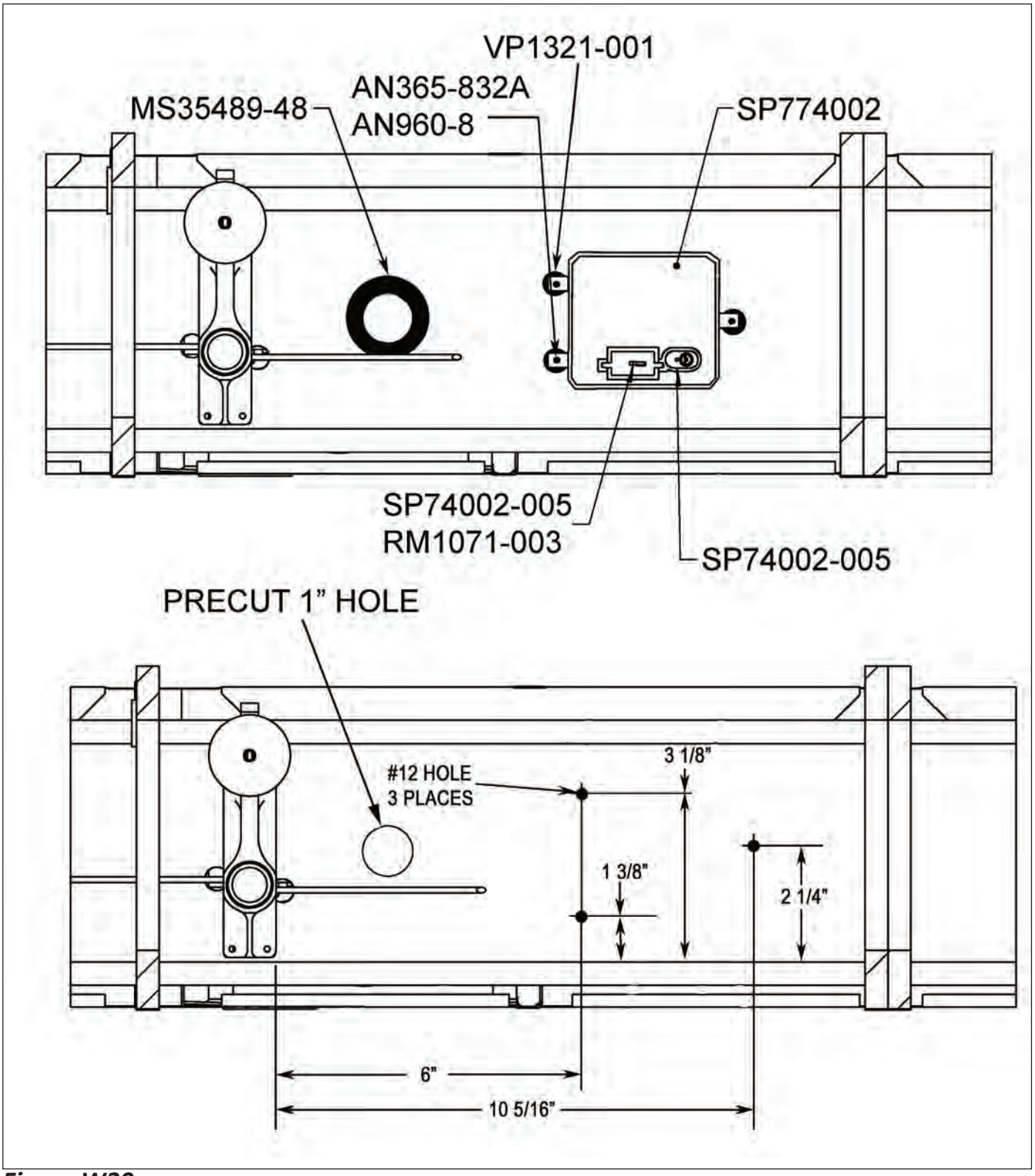

Figure W20

SECTION 13 Install Machined Tail Ribs

Install the two machined tail ribs (hangers) using the bolts that were inserted when installing center ribs #5 and #12. Refer to Figure W21 and W22 for hardware

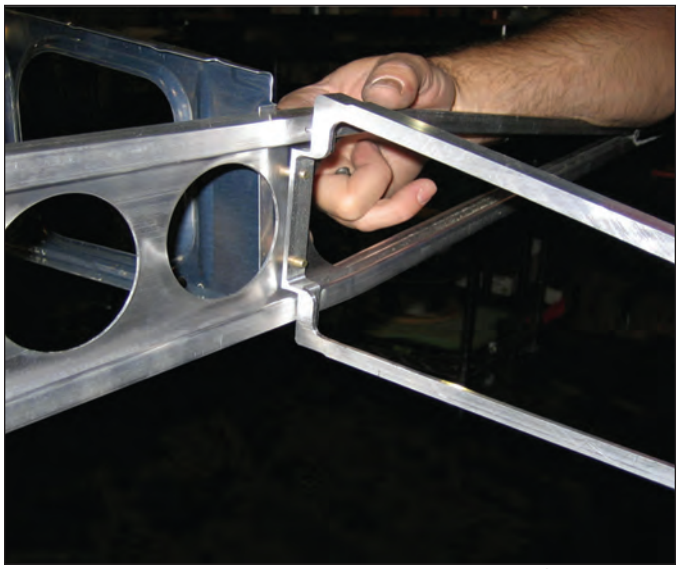

Photo 078

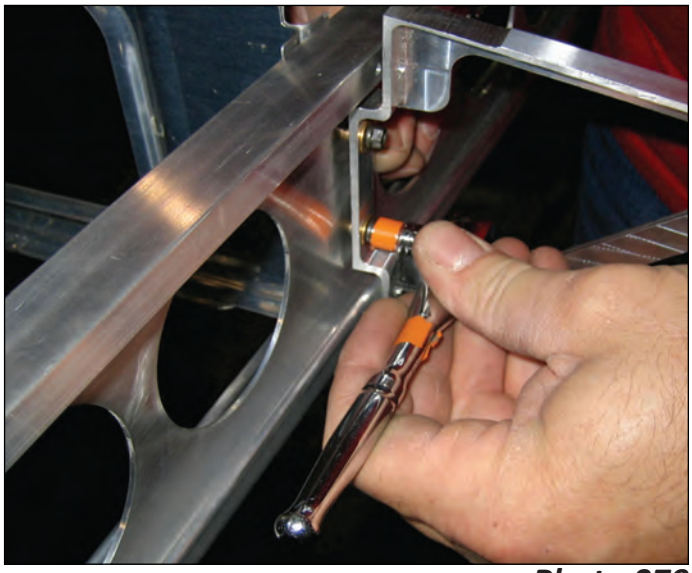

Photo 079

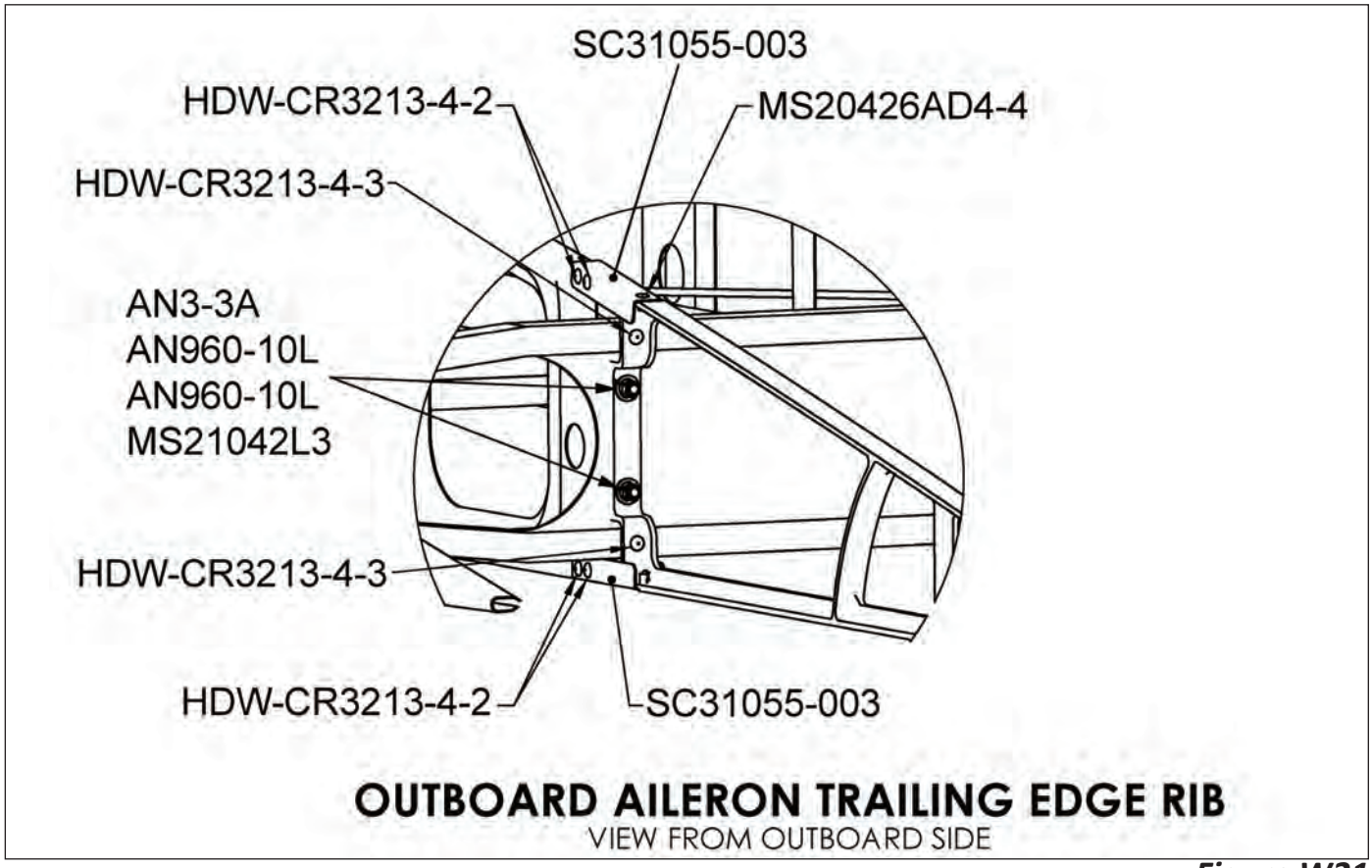

Figure W21

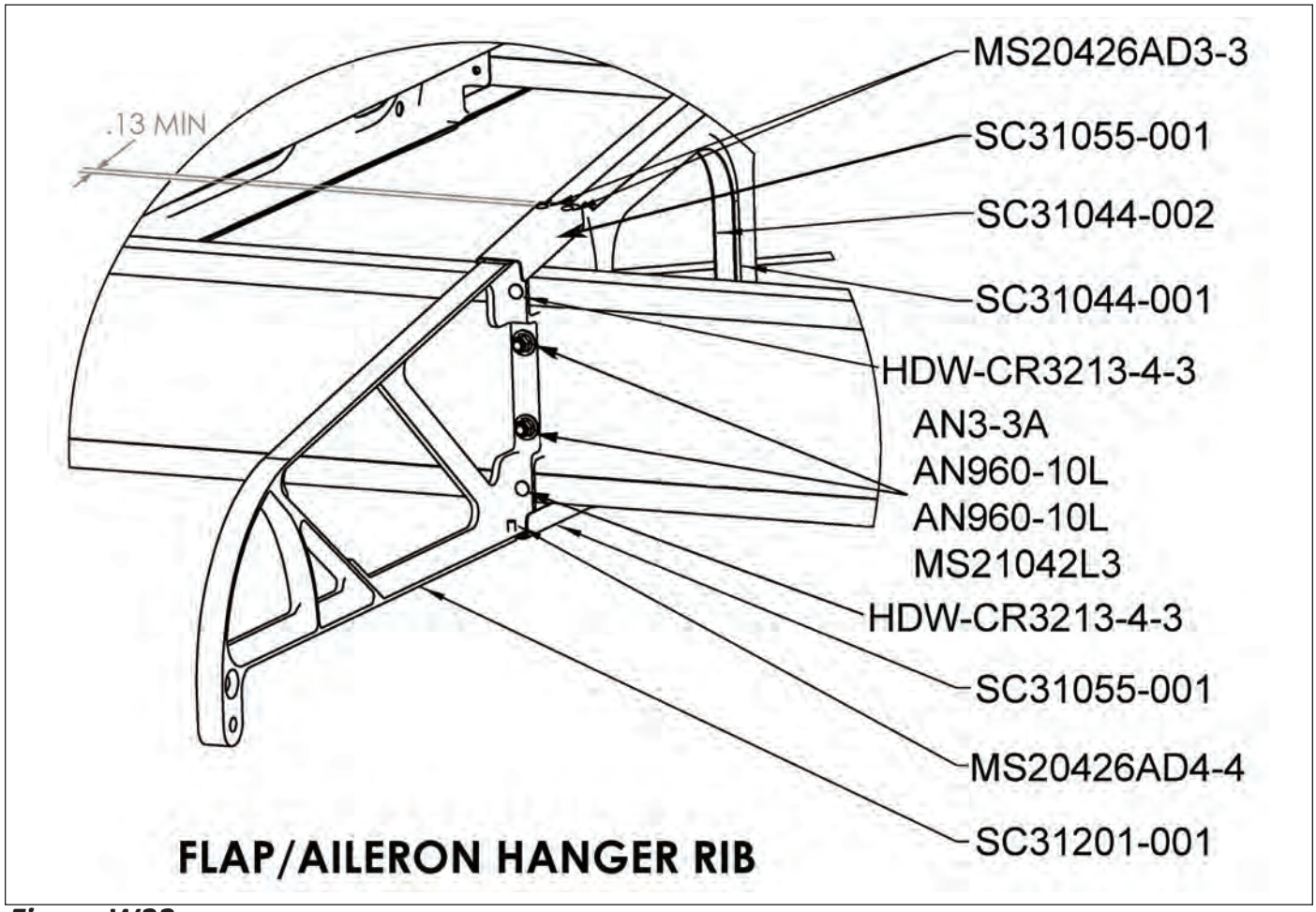

Figure W22

Install cherry max rivets to the #5 and #12 machined tail ribs per Figure W21 and FigureW22.
Drill a #30 hole and rivet top and bottom. Drill two holes for rivets.
Install cherry max rivets top and bottom.

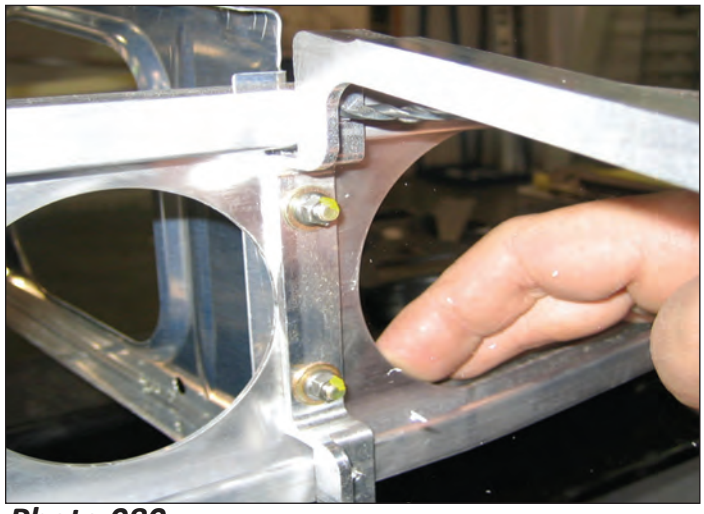

Photo 080

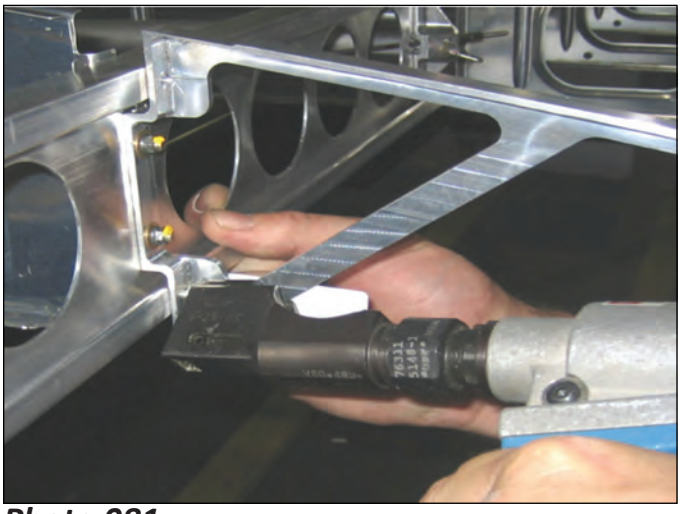

Photo 081

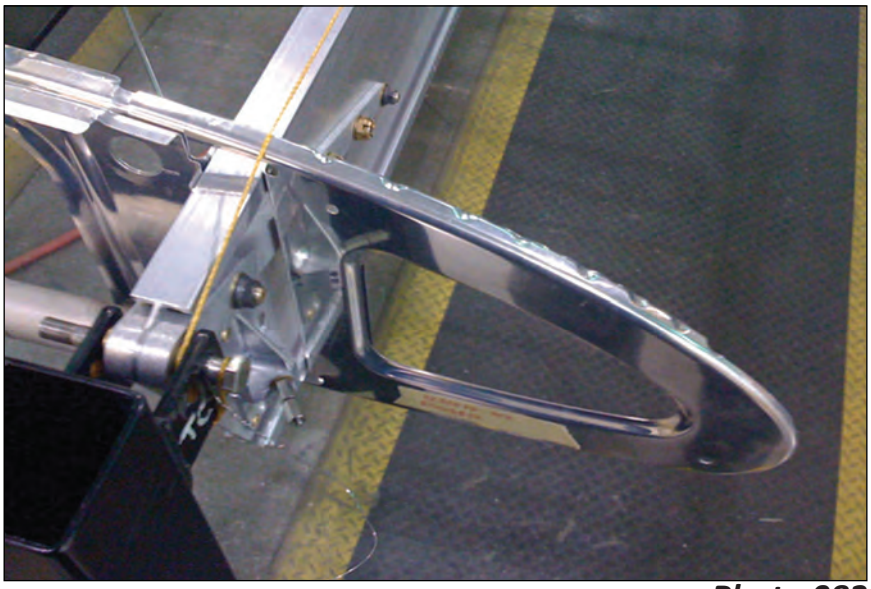

Photo 082

SECTION 14 Install Nose Ribs #1 and #12

In this step we will install 2 nose ribs per Figure W23 with rivets HDW-SS/SS42D.
Only two ribs are necessary at this time. They will be used to help hold the string for squaring the spars in the next step.

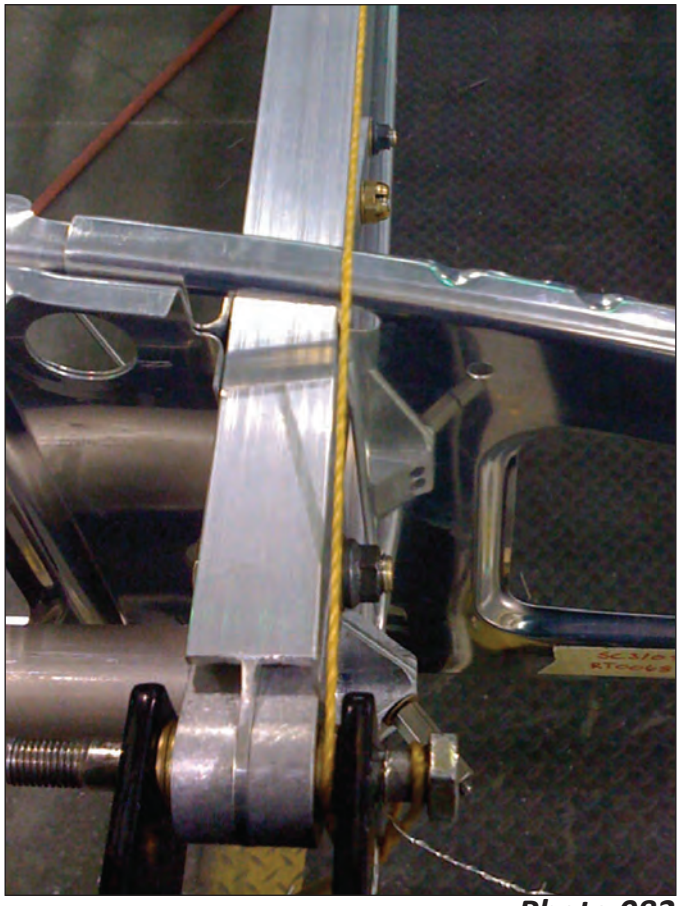

Photo 083

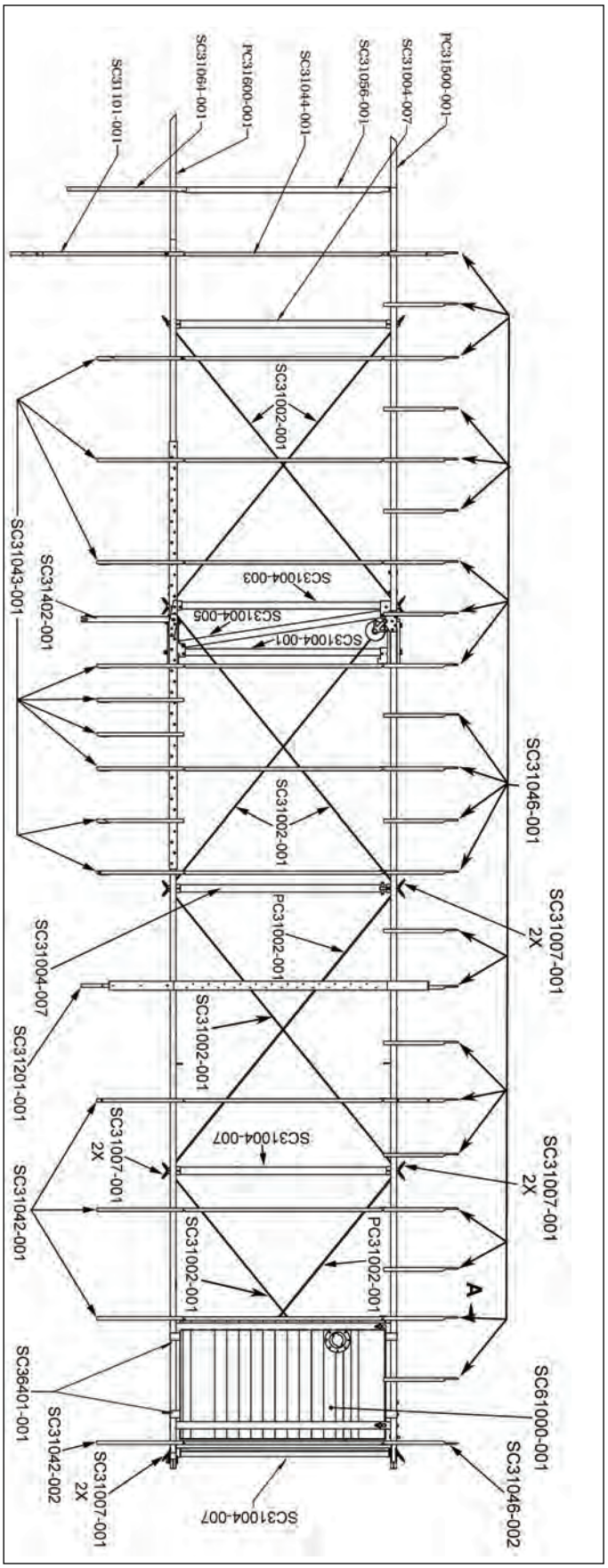

Figure W23

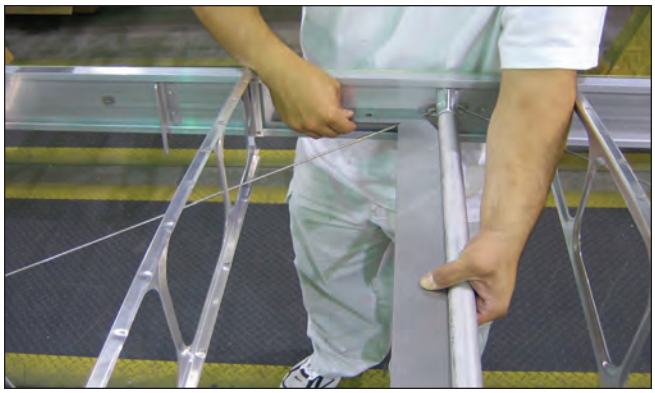

Photo 084

Photo 085

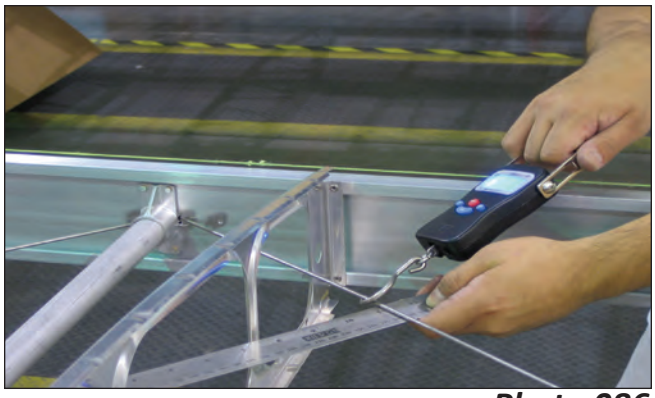

Photo 086

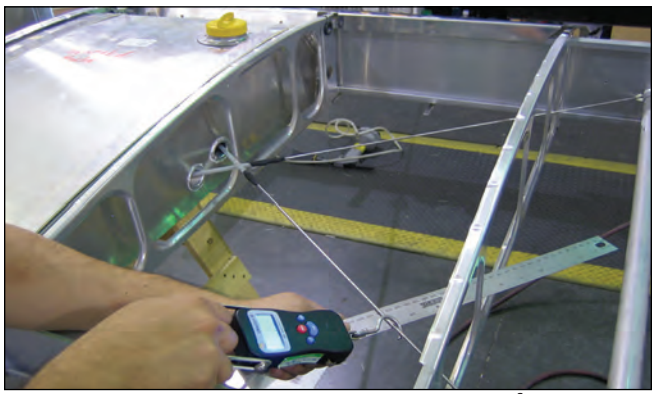

Photo 087

SECTION 15 Squaring the Wing

Ensure the 1” X 1” X 6” block is under the rear spar per sawhorse setup in prep section.

The block should be under the rear spar for the rest of the wing build. Trammeling (squaring and straightening) the wing is a critical part of the wing build.

Start by loosening all of the drag-anti drag wire nuts. Start at the #2 compression tube, and check using your modified carpenters square to assure that the compression tube is square with the rear spar. It is critical in this process to make sure that it is square. If necessary, move the rear spar in or out to achieve square.

After the wing is square, lightly tighten the nuts in the first compression bay (this bay will have the fuel tank in it, later). The wires at the #1 rib should protrude from the fitting 1”. Once you have 1” protrusion on the #1 rib wires, you will not move these nuts.

Recheck the wing for square. Continue if the wing is still square. If not, tighten one of the nuts at the second compression tube to achieve square. After checking square again, tighten both nuts at the second compression tube 1/2 turn and recheck square, then repeat this process (see next paragraph for goal)

After 2 full turns with the wing still square, check the tension. Find the center of the small wire, from the fuel tank to the fitting on the second compression strut. Proper tension will result in 1/4” deflection equaling 13 to 15 pounds. Keep repeating the previous step until tension is correct and the wing is square. Once you have finished and the tension is correct, verify the wing is still square.

Prepare to square and straighten the remainder of the wing by attaching a string to the inboard end of the rear spar. Pull string to the outboard end of spar. Align the string with the trailing edge of the rear spar. Clamp in place with spring clamps as shown in photos below. Align string with aft edge of spar. Use a straightedge against the spar face and then keep the gap between the straightedge and the string constant. Start with the inboard drag wires and work toward the outboard end of wing. Adjust the nuts at the end of the drag wires to apply tension to them. Measure tension by pulling on wire (SMALL WIRES ONLY) with a scale until 1/4" of wire movement equals a pull of 13 to 15 pounds on the scale.

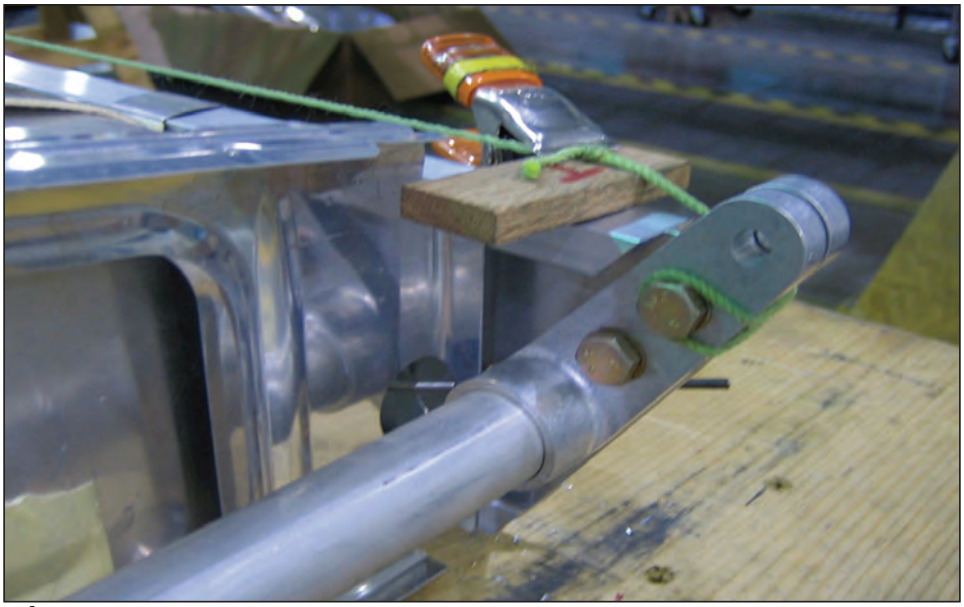

Photo 088

Photo 089

After all drag wires are properly adjusted apply LocTite #271 to the wire above the 1st nut. Tighten the 2nd nut against the 1st.

Photo 091

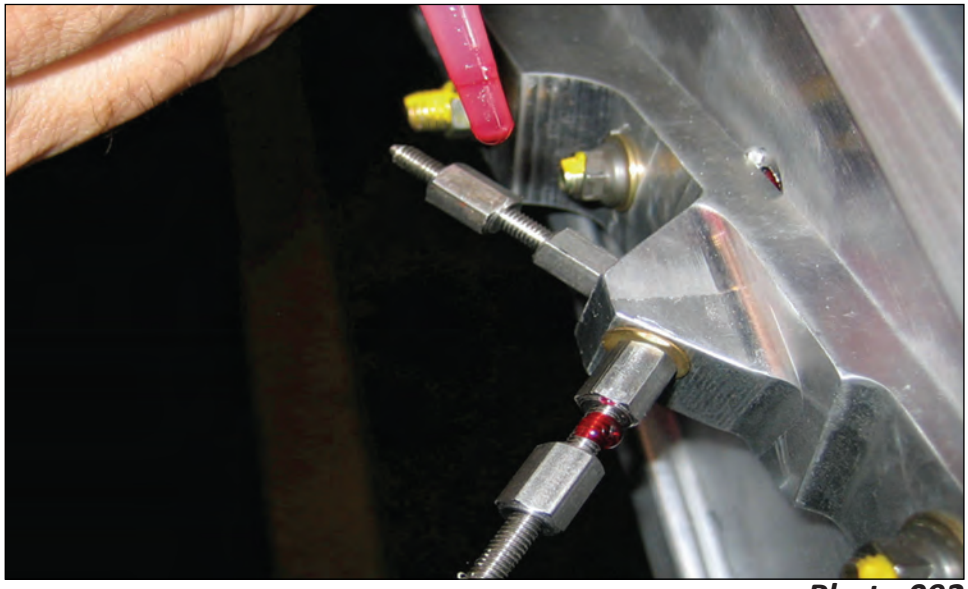

Photo 092

LOG AND INSPECTION SHEET WING #4

Log sheet

	FABRICATION AND ASSEMBLY TASKS	A	B	C	D
		Mfr Kit/Part/ Component	Commercial Assistance	Am-Builder Assembly	Am-Builder Fabrication
	Wings - 51 Listed Tasks				
	Task #				
W9	Fabricate Drag/Anti-drag Truss Members	.75			.25
W10	Assemble Drag/Anti-drag Truss Memebers to Wing			X	

Inspection point

	INSPECTION ITEMS	BUILDER	ALTERNATE
1.9	Ensure that fairleads are installed properly.		
1.10	Using a square, ensure #2 compression tube is square to the spars.		
1.11	Ensure that drag/anti drag wire tension is correct.		
1.12	Ensure that drag/anti drag wires are tight and saftied.		
1.13	Check for clearance between ribs and drag/anti drag wires.		