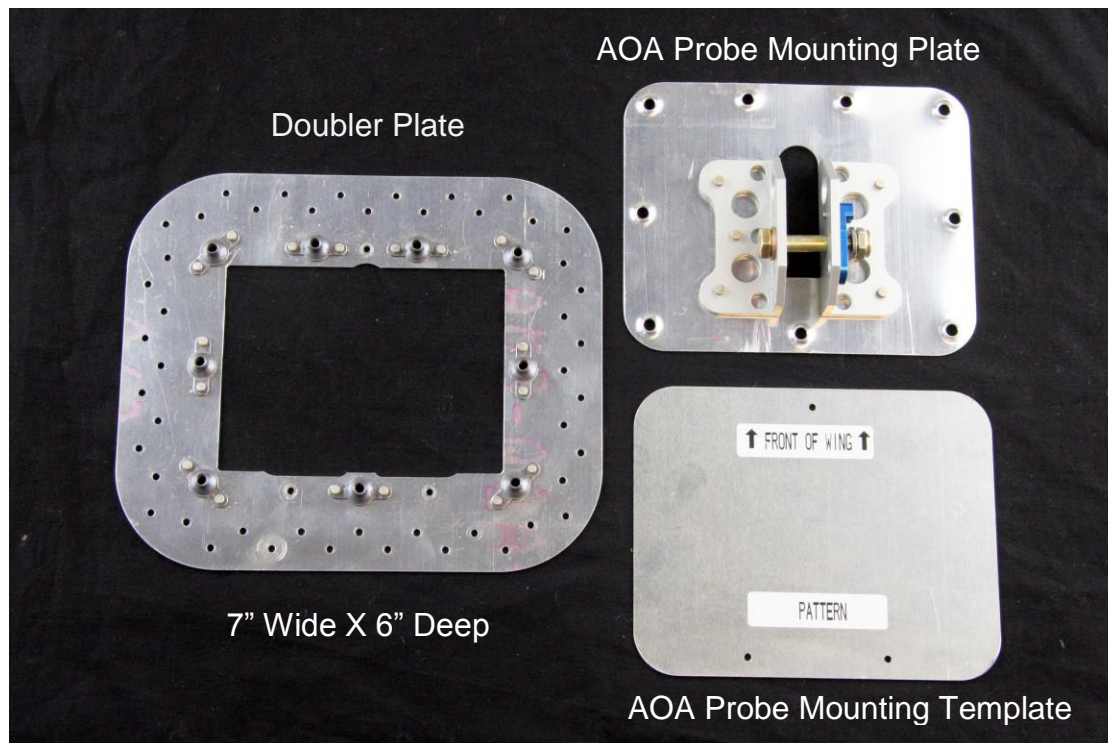


Doubler Plate Mounting Kit DSTR-AOA-4200

Overview:

Alpha Systems AOA has created a premade AOA probe installation kit part number **DSTR-AOA-4200** that was designed to allow solid mounting in a location when **NO** inspection cover or suitable mounting option exists. The kit contains three main parts: **1.) AOA Probe Mounting Template (AOA-4203), 2.) Doubler Plate (AOA-4202), 3.) CNC'd AOA Probe Mounting Plate (AOA-4201).** This kit will allow simple location, drilling, and accurate placement with minimum effort and time. The key to this installation is the 3 alignment holes that are in both the Doubler and the AOA probe mounting plate template.

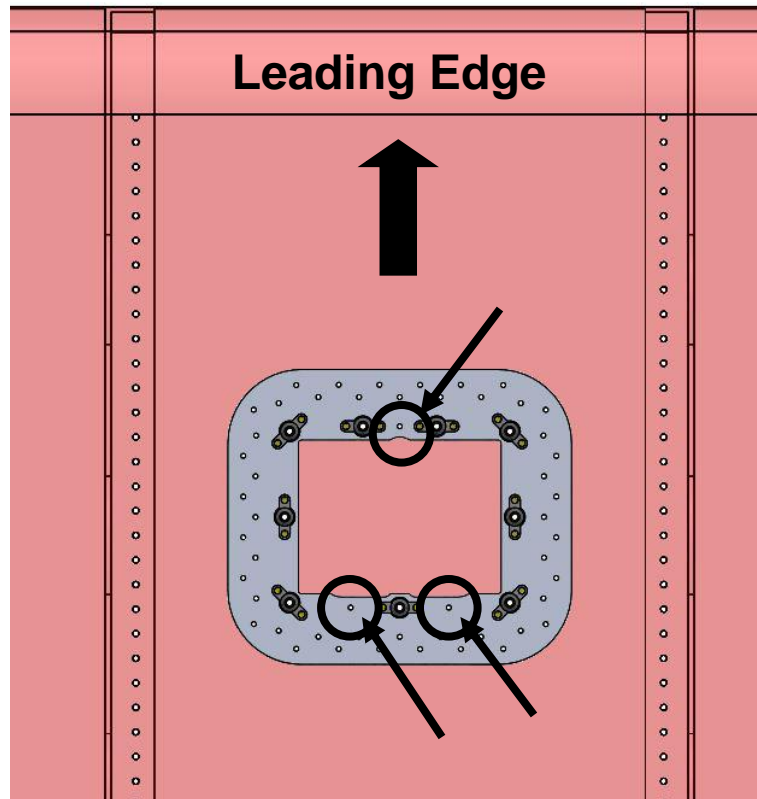


Mounting location specifications:

The objective to mounting the AOA sense probe is to be close to a **50 degree** angle of the CHORD of the wing (**center of the leading edge to the center of the trailing edge**). The probe can be adjusted after installation to accommodate various curvatures and positions under the wing. The optimal location for the Alpha Systems AOA sense probe would be: **1.) Centered between two ribs, 2.) Clearance inside the wing for the doubler; 7" Wide X 6" deep, 3.) A minimum of 2 feet outside the propeller arc, 4.) Location allowing for sensing undisturbed air at ALL attitudes, slips, skids, NOTHING blocks or creates disturbed air at the tip of the AOA probe, 5.) Typical location suggestion; minimum of 6 inches from the leading edge of the wing and 12 inches inboard from the back of the wing.**

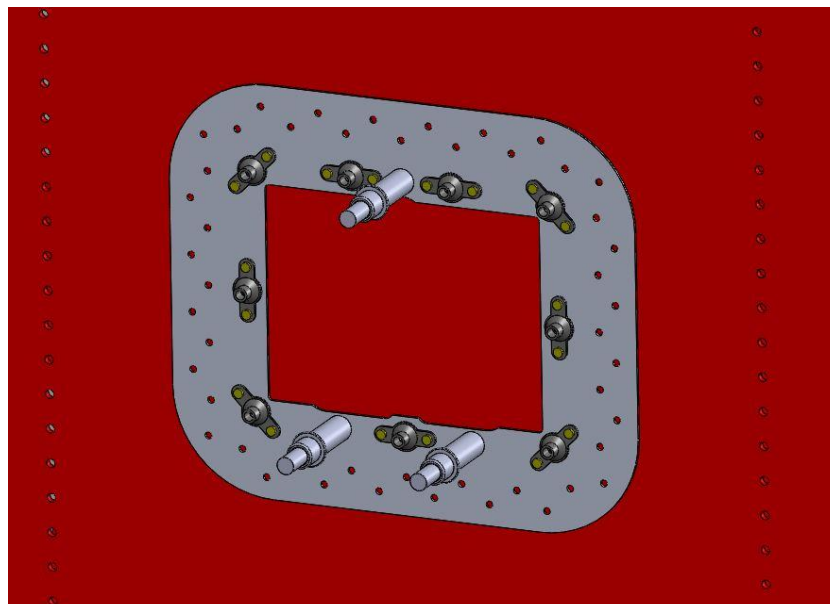
Optimal location; from the main spar forward (minimizes possibility of extreme curvatures from the Chord line) and closer wing inboard. However, it can be mounted anywhere that allows sensing of undisturbed air.

STEP 1: Identify a suitable location on the OUTSIDE of the wing using the Doubler Plate (AOA-4202) for size and clearance inside from any obstruction, structural member, and controls. Be sure it meets the operational criteria, clears all ribs or spars, is not in a fuel tank, or confined area inside the wing at the desired mounting location. Place the Doubler Plate against the bottom wing surface, temporarily tape in place, locate the 3 alignment holes, and drill with a number 40.

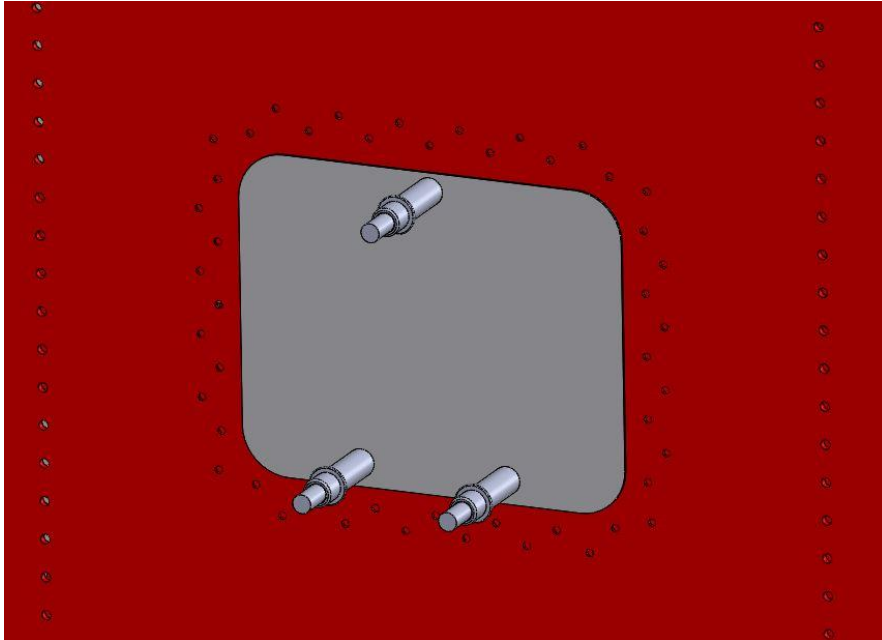


Drill out these 3 holes for reference and orientation for both the Doubler and Probe Mounting Template location.

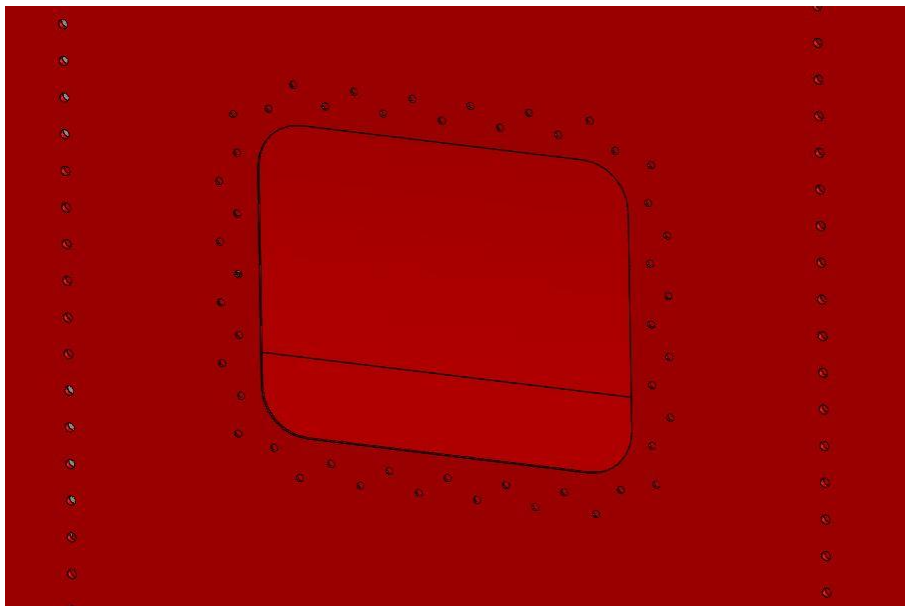
STEP 2: On the OUTSIDE of the wing, install Clecos in the three drilled holes to hold the Doubler Plate (AOA-4202) to the wing. Next, using the doubler as a drill guide, drill all doubler rivet holes with a #40 drill bit. Be careful to not let the drill wander and elongate the holes.



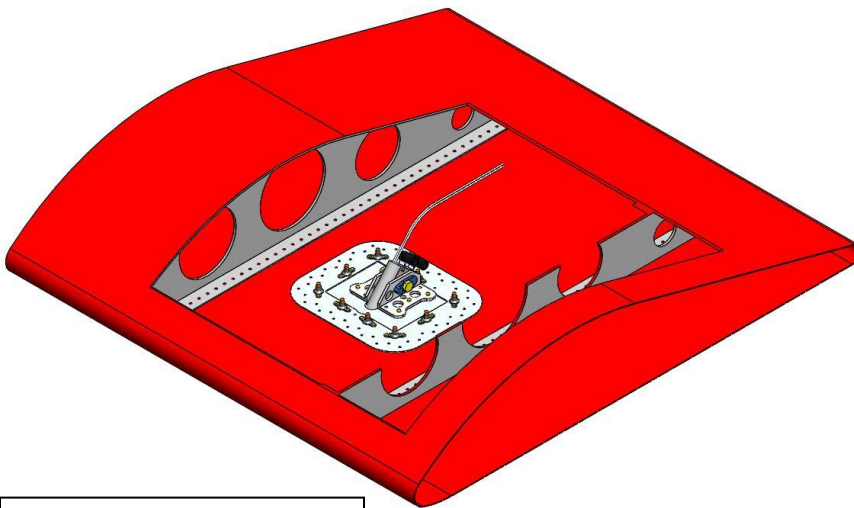
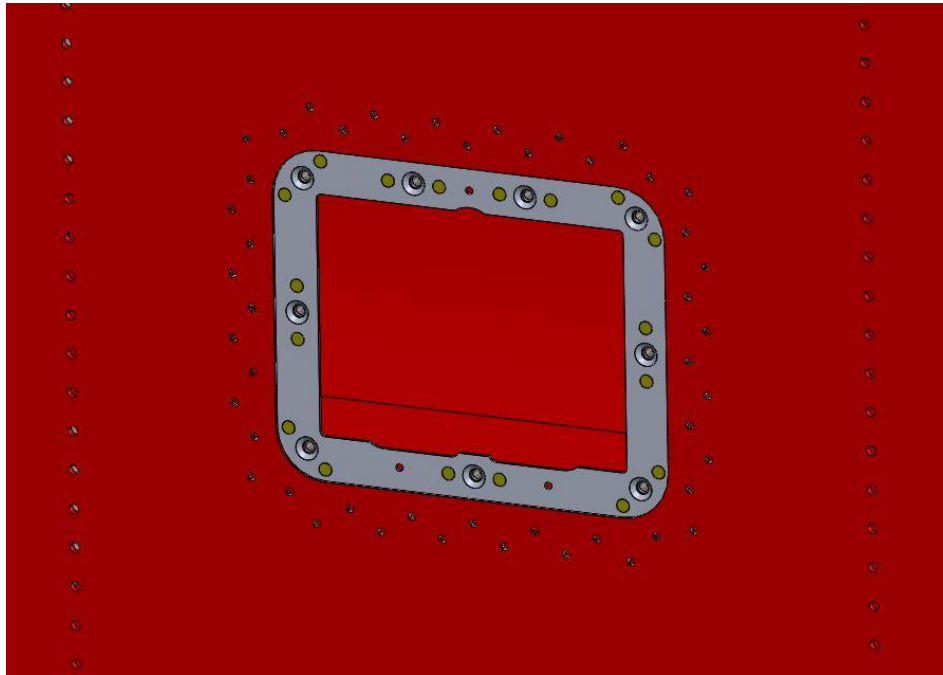
STEP 3: Remove doubler, debur drilled holes, and Cleco the AOA Probe Mounting Template (AOA-4203) using the 3 reference holes. Scribe/mark around the edge of the AOA mounting Template.



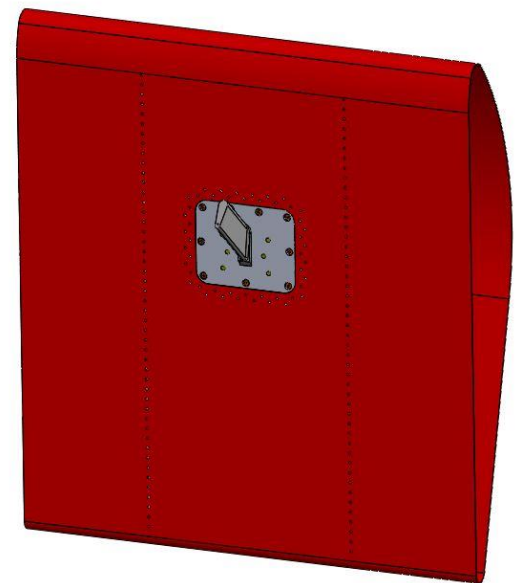
Step 4: Remove Template, discard, remove material inside scribe line, and make clearance so that the AOA probe mounting plate can be flush mounted when complete.



Step 5: The A&P, IA will determine best rivet size/type for final assembly of the doubler to the wing. After the opening in the wing is complete, slide the Doubler inside making sure that the doubler is oriented to allow the AOA probe plate, position the probe facing forward in the wing. Using a minimum of at least 4 Clecos, temporarily position the Doubler in place using the drilled riveting holes. Check for complete fit and clearance of the AOA Probe Mounting Plate when all 8 screws are installed. Remove screws and complete the riveting process and final assembly.



Inside final assembly



Bottom view of probe plate installed with AOA