

REVISION DESCRIPTION:

1) OP40-1 REV 2: Removed depiction of air intake hole in the CB-707A Right Aft Case Baffle.

OP40-4 REV 1: Steps rewritten to describe the air intake hole on the CB-707A Right Aft Case Baffle as optional, depending on the exhaust system installed.

added NOTE: If installing a Vans O-360 Exhaust System, see OP-54, Page 4 for the location of the air intake hole and installation of the VENT DL-03 Scat Tube Flange."

Steps rewritten to describe the installation of the VENT SCREEN 3X3 as optional, depending on the exhaust system installed.

added "WARNING: Install a vent screen in this location if the vent hole is ONLY to provide cabin heat. A vent screen installed upstream of a carburetor heat system may obstruct airflow and drastically reduce engine performance."

2) OP40-1 REV 2: Deleted Bill of Materials.

OP40-7 REV 1: Revised Figure 1 to depict CB-1003C as installed on page OP40-5.

OP40-11 REV 1: Removed Step 1.

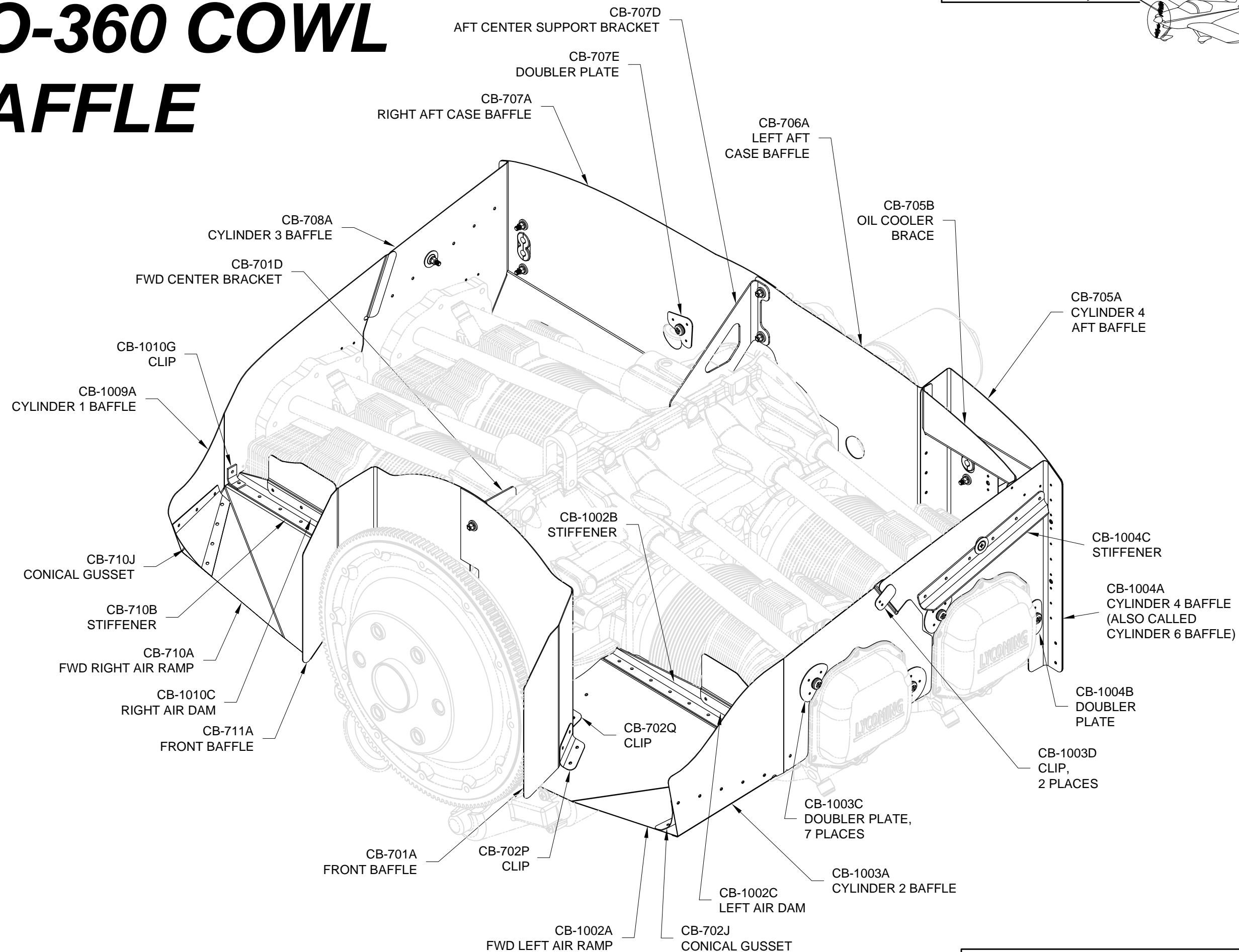
Repaginated remaining steps.

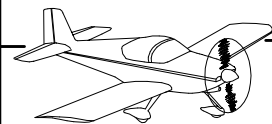
Removed Figure 1.

Figure 1 was Figure 2.

OP-40: O-360 COWL BAFFLE

VAN'S AIRCRAFT, INC.





Step 1: Mark the part numbers on all parts of both the CB-1000A and CB-700E Baffle Stiffeners per the callouts in Figure 1 and Figure 2.

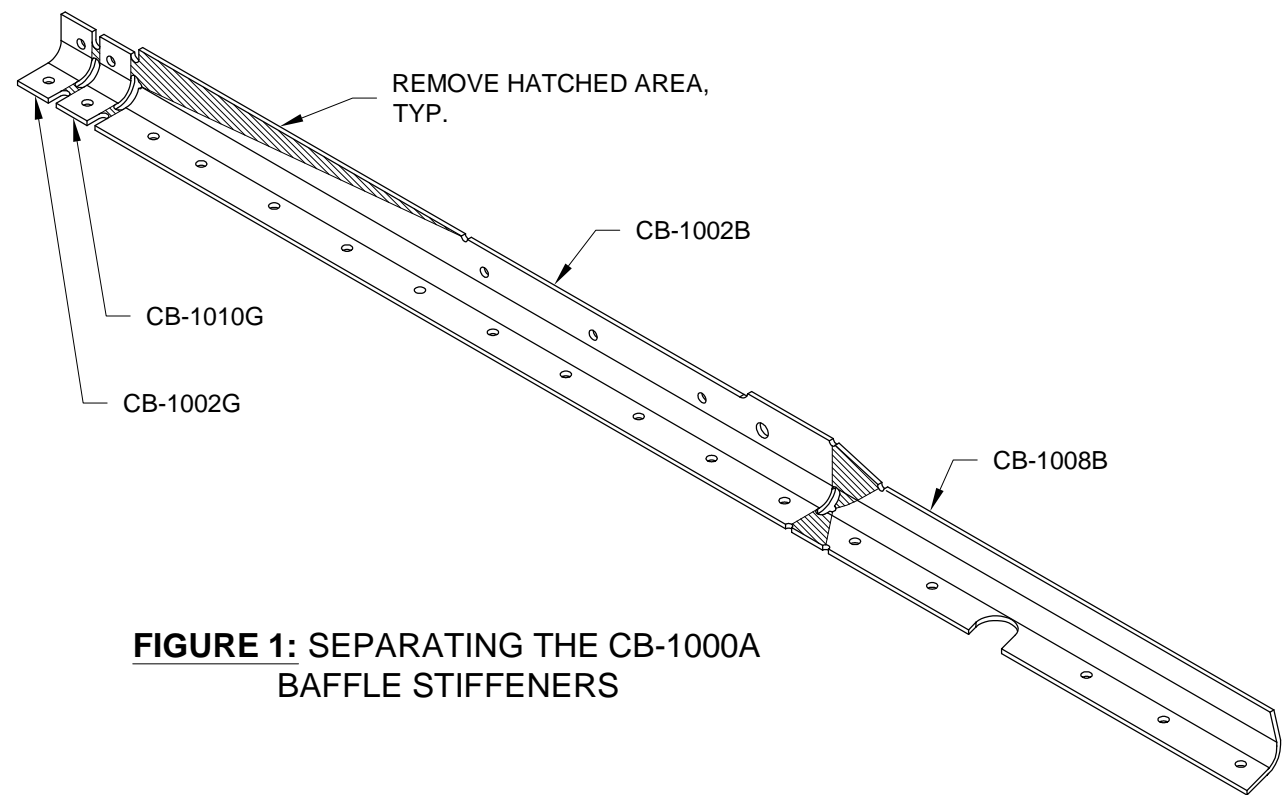


FIGURE 1: SEPARATING THE CB-1000A
BAFFLE STIFFENERS

Step 2: Remove the hatched areas from both the CB-1000A and CB-700E Baffle Stiffeners as shown in Figure 1 and Figure 2, then deburr the edges and round the corners (to remove the notches) on all individual parts.

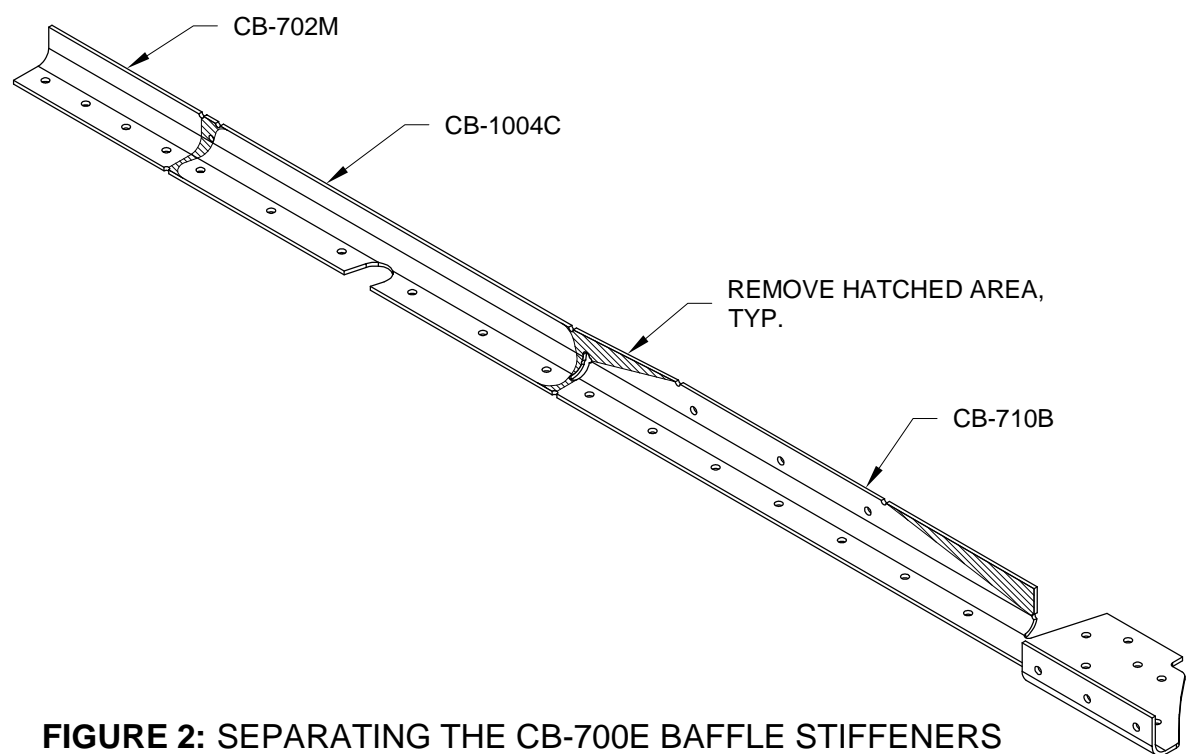


FIGURE 2: SEPARATING THE CB-700E BAFFLE STIFFENERS

Step 3: Break the CB-1000B Left & Right Air Dams shown in Figure 3 into a CB-1002C Left Air Dam and a CB-1010C Right Air Dam.

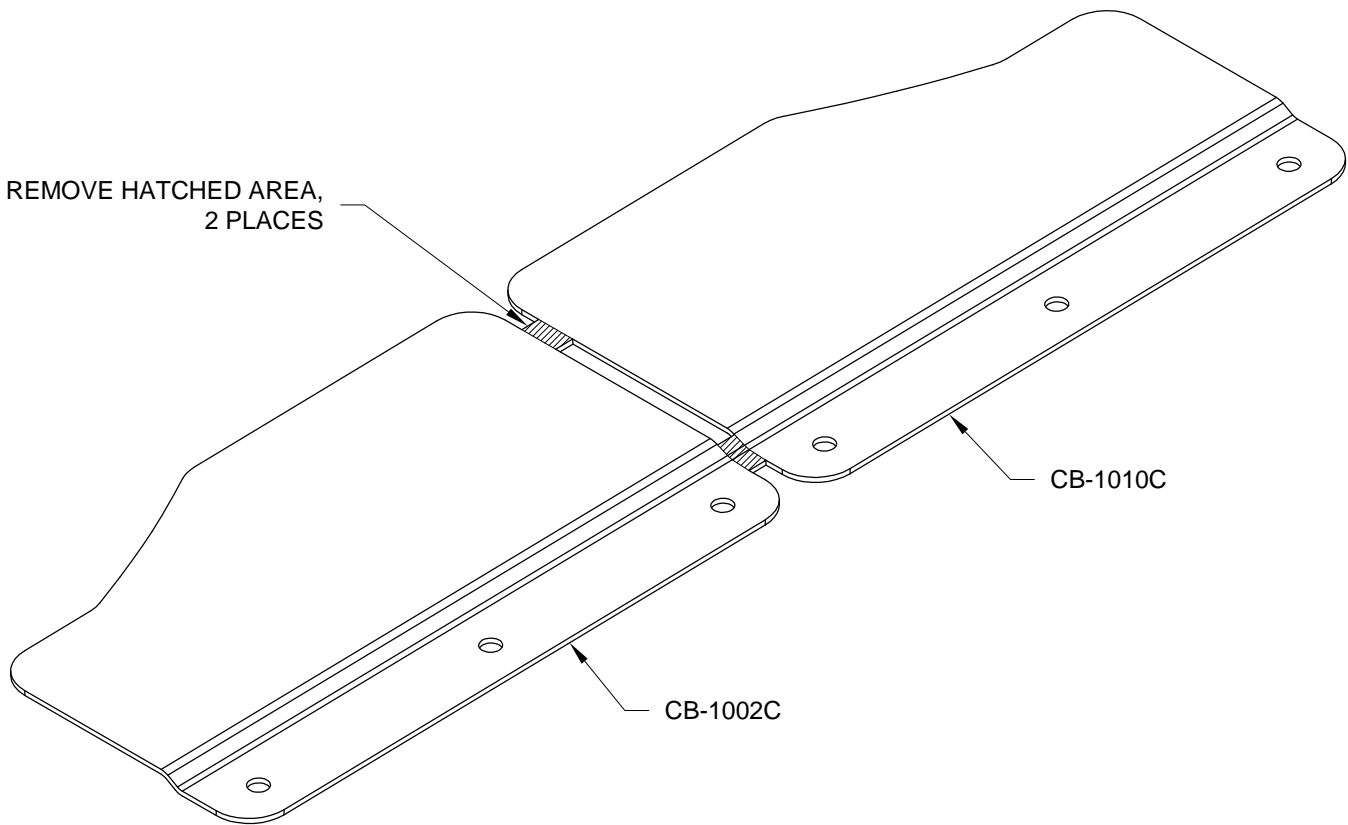
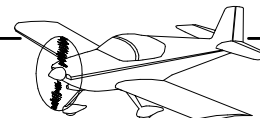


FIGURE 3: SEPARATING THE LEFT AND RIGHT AIR DAMS



NOTE: FF-709 and its associated attach hardware is available in an optional kit for those that wish to mount the oil cooler on the baffle. It may be obtained by ordering the EA OIL COOLER MOUNT KIT from Van's Aircraft.

Step 1: Cleco then final-drill #40 the CB-1003C and CB-1004B Doubler Plates to the CB-1004A Cylinder 4 Baffle. See Figure 1.

Step 2: Disassemble then deburr the CB-1003C and CB-1004B Doubler Plates and the CB-1004A Cylinder 4 Baffle. Dimple the rivet holes in the doubler plates and the corresponding holes in the cylinder 4 baffle. Rivet the CB-1003C and CB-1004B Doubler Plates to the CB-1004A Cylinder 4 Baffle (flush head on the inboard face). Rivet callouts are given in Figure 1.

Step 3: Position the CB-705B Oil Cooler Brace on the CB-705A Cylinder 4 Aft Baffle per plans page OP-27A. See Figure 2. Match-Drill #40 the holes in the aft flange of the oil cooler brace into the cylinder 4 aft baffle. Cleco then final-drill #40 the FF-709 Doubler to the holes just drilled. Match-Drill #40 and #12 the remaining holes in the doubler into the cylinder 4 aft baffle.

Step 5: Using the ignition hole as called out in Figure 2 as a starting point, create a cutout for the ignition wire harness seal (size and shape varies). Final-Drill #12 the two ignition wire seal attach holes.

Step 6: Create the FF-713 Spacer as shown on plans page OP-27A. Align the FF-713 Spacer with the edges of the CB-705A Cylinder 4 Aft Baffle. Match-Drill #30 the two lower holes into the spacer using the aft baffle as a drill guide. Using the two holes just match-drilled, cleco the CB-1004A Cylinder 4 Baffle to the spacer and aft baffle. Match-Drill #40 and #12 the remaining flange holes common to the FF-709 Doubler into the spacer and cylinder 4 baffle.

Step 7: Cleco the CB-706A Left Aft Case Baffle to the assembly from Step 6. Final-Drill #30 the five holes common between the left aft case baffle and the cylinder 4 aft baffle.

Step 8: Final-Drill #27 the hole in the lower flanges of the CB-705A Cylinder 4 Aft Baffle and CB-706A Left Aft Case Baffle. See Figure 2.

Step 9: Cleco the CB-1004C Stiffener to the CB-1004A Cylinder 4 Baffle. Final-Drill #30 the holes common between these two parts.

Step 10: Match-Drill #30 and #40 the holes common between the CB-705B Oil Cooler Brace, CB-1004A Cylinder 4 Baffle and the CB-706A Left Aft Case Baffle as shown in Figure 2.

Step 11: Disassemble and deburr then recleco all parts shown in Figure 1 and Figure 2.

Step 12: Rivet the CB-705B Oil Cooler Brace to the Cylinder 4 Baffle Assembly per the callouts in Figure 1. Note it may be easier to postpone this step until the baffles have been fitted to the Top Cowl on OP40-11.

Step 13: Rivet all the remaining parts together per the callouts in Figure 1 and plans page OP-27A. Note it may be easier to postpone this step until the baffle has been fitted to the cowl.

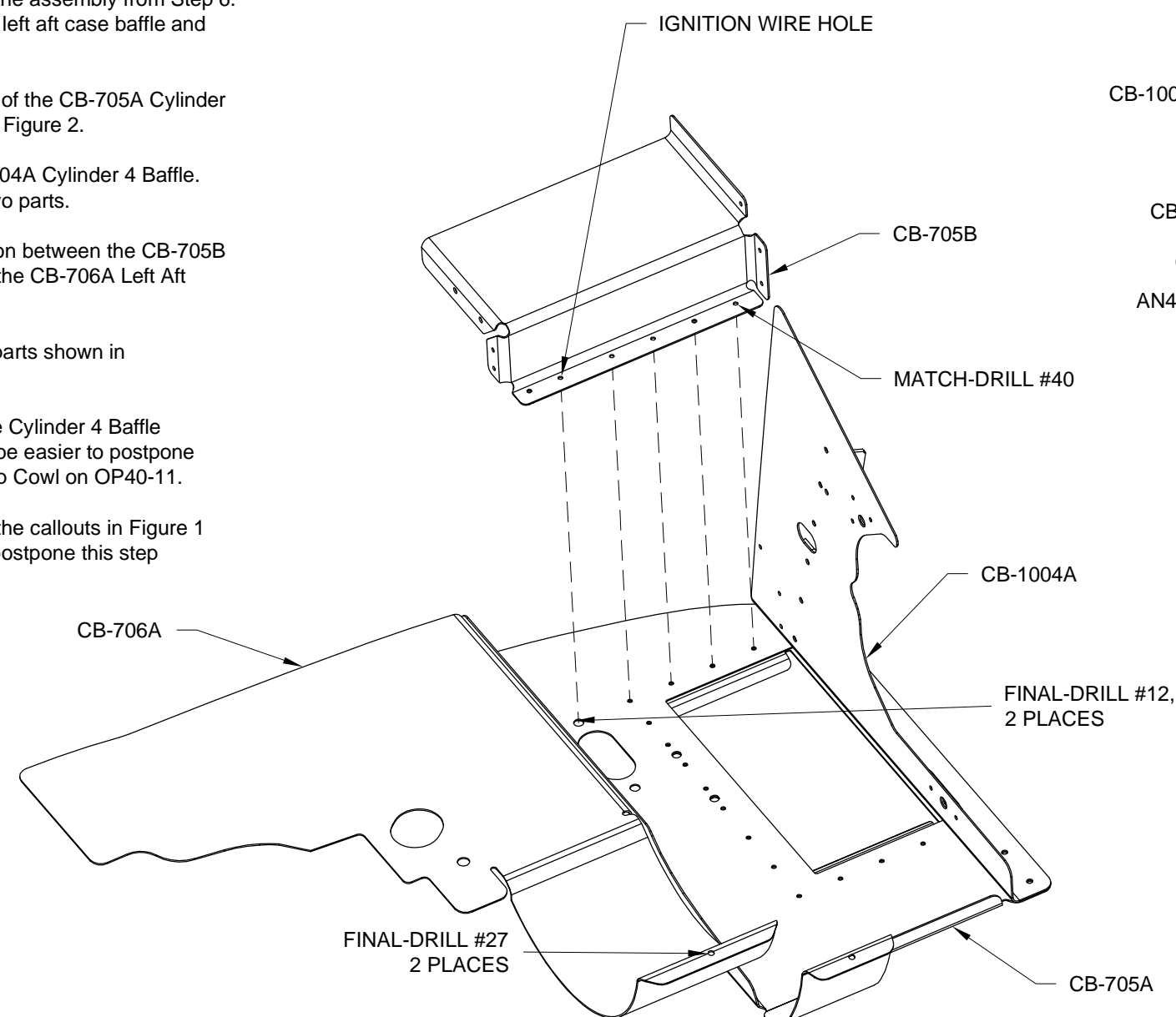


FIGURE 2: MATCH-DRILLING THE OIL COOLER BRACE

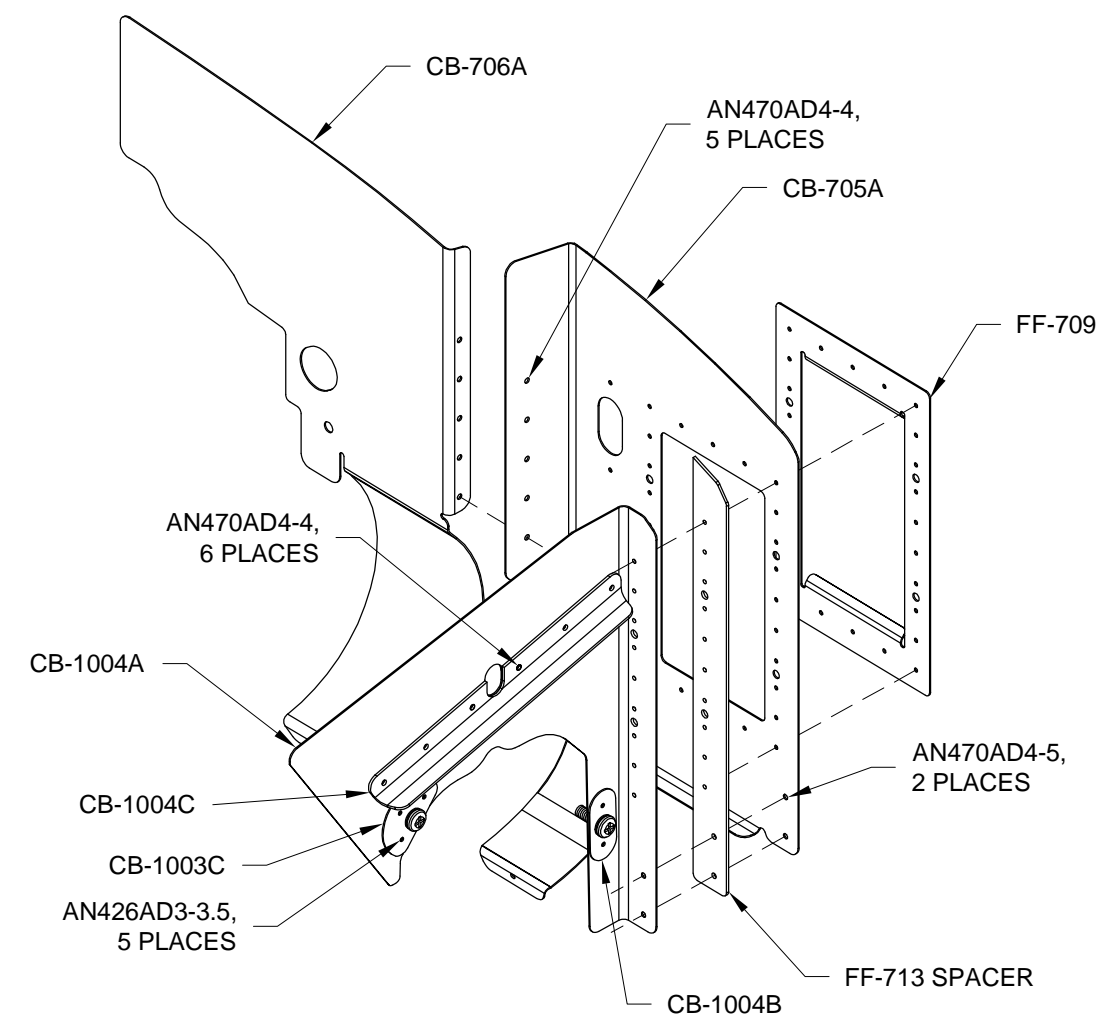
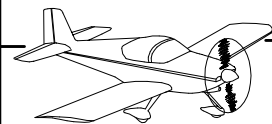


FIGURE 1: CYLINDER 4 ASSEMBLY



Step 1: Cleco the CB-1007B Aft Right Support Bracket to the CB-707A Right Aft Case Baffle. Final-Drill #30 the holes common between these parts. See Figure 1.

Step 2: Cleco the CB-708A Cylinder 3 Baffle to the CB-707A Right Aft Case Baffle. Final-Drill #30 the holes common between these parts. See Figure 1.

Step 3: Cleco the CB-1003C Doubler Plates and CB-1008B Stiffener to the CB-708A Cylinder 3 Baffle as shown in Figure 2. Cleco the CB-700E Doubler Plate to the CB-707A Right Aft Case Baffle.

Final-Drill #30 the holes common between the stiffener and the cylinder 3 baffle. Final-Drill #40 the rivet holes common between the doubler plate and the right aft case baffle. Final-Drill #40 the holes common between the remaining doubler plates and the cylinder 3 baffle.

Step 4: Create a cutout for the ignition wire harness seal (size and shape varies). Final-Drill #12 the two ignition wire seal attach holes. See the detail view in Figure 1.

NOTE: If installing a Vans O-360 Exhaust System, see OP-54, Page 4 for the location of the air intake hole and installation of the VENT DL-03 Scat Tube Flange.

Step 5: Create the cutout for the air intake. See detail view in Figure 1.

Step 6: Clamp, then final-drill #30 the VENT DL-03 Scat Tube Flange to the CB-707A Right Aft Case Baffle as shown in Figure 2.

Step 7: Rivet the VENT DL-03 Scat Tube Flange to the CB-707A Right Aft Case Baffle as shown in Figure 2.

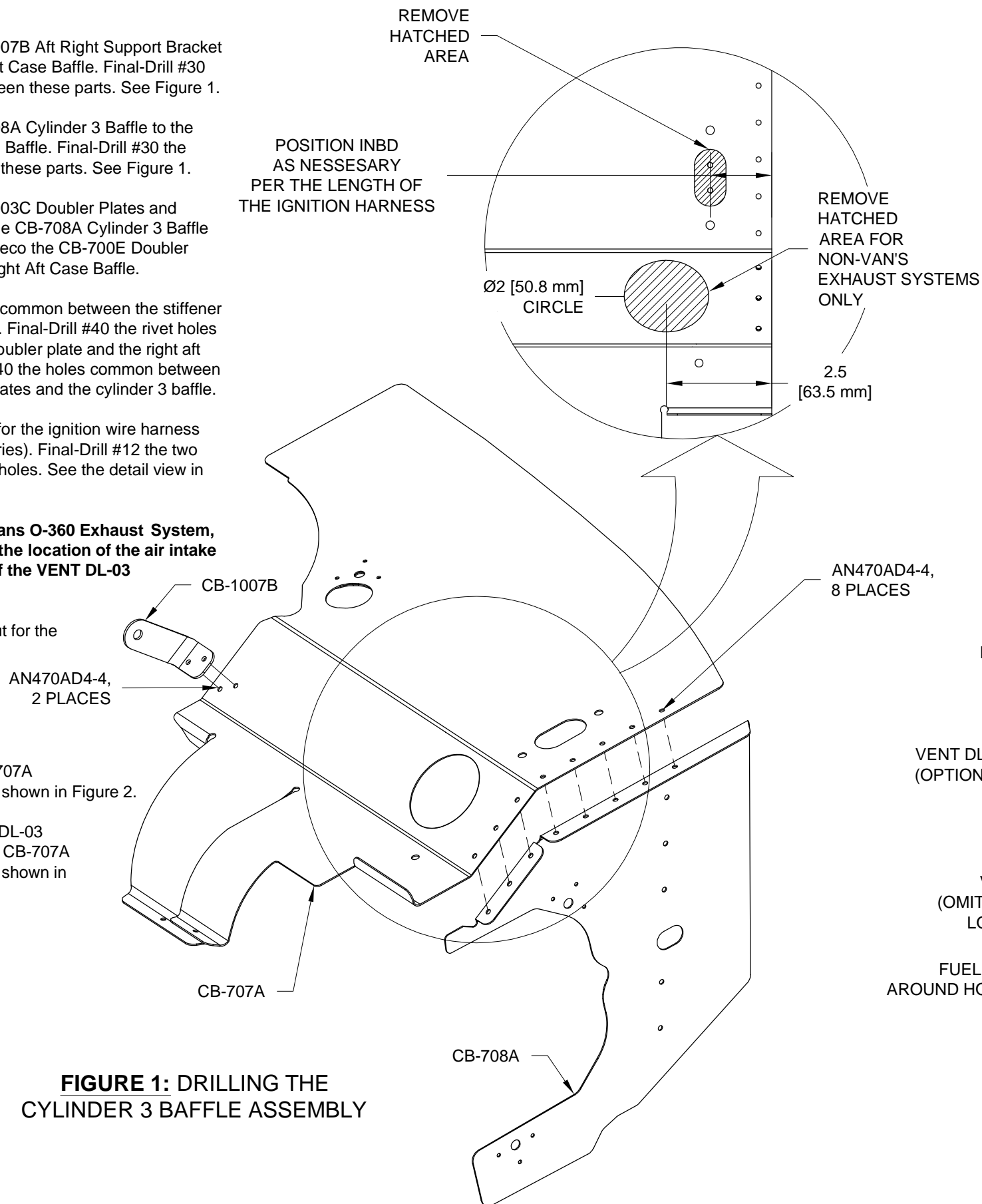


FIGURE 1: DRILLING THE CYLINDER 3 BAFFLE ASSEMBLY

Step 8: Disassemble then deburr the holes and edges in all the Cylinder 3 Baffle Assembly parts. Dimple the rivet holes in the CB-1003C Doubler Plates and CB-707E Doubler Plate and the corresponding holes in the CB-708A Cylinder 3 Baffle (flush head on the inboard side) and CB-707A Right Aft Case Baffle (flush head aft side).

NOTE: it may be easier to cleco some parts and postpone riveting until after fitting the baffles to the cowl.

Step 9: Rivet the CB-1007B Aft Right Support Bracket to the CB-707A Right Aft Case Baffle. See Figure 1.

Rivet the CB-1008B Stiffener to the CB-708A Cylinder 3 Baffle. See Figure 2.

Rivet the CB-1003C Doubler Plates to the CB-708A Cylinder 3 Baffle. See Figure 2.

Rivet the CB-707E Doubler Plate to the CB-707A Right Aft Case Baffle. See Figure 2.

Rivet the CB-708A Cylinder 3 Baffle to the CB-707A Right Aft Case Baffle. See Figure 1.

WARNING: Install a vent screen in this location if the vent hole is **ONLY** to provide cabin heat. A vent screen installed upstream of a carburetor heat system may obstruct airflow and drastically reduce engine performance.

Step 10: (Optional) Apply a bead of fuel tank sealant around the vent hole then rivet the VENT DL-03 Scat Tube Flange and VENT SCREEN 3X3 (screen is optional, see warning above) to the CB-707A Right Aft Case Baffle as shown in Figure 2.

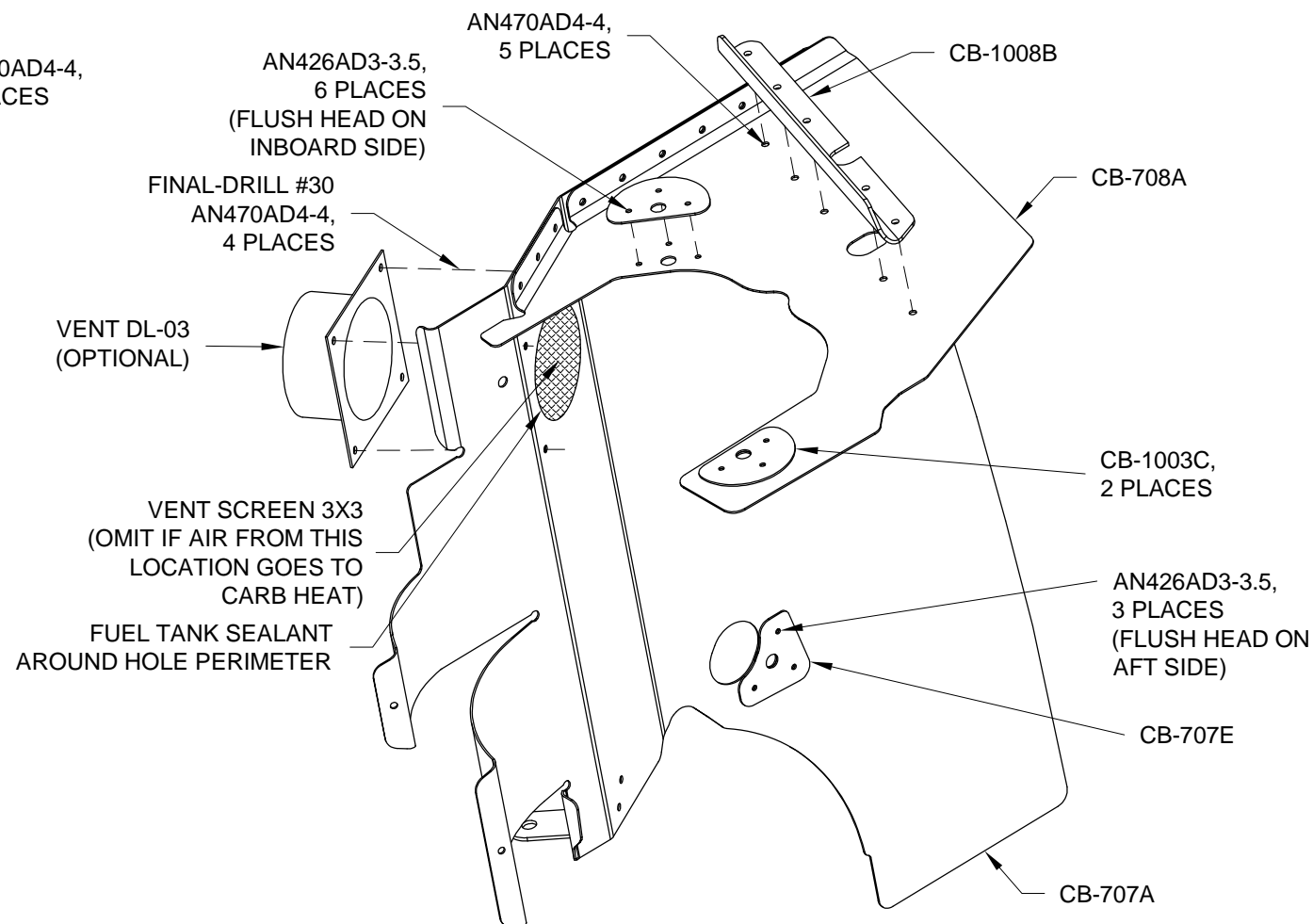


FIGURE 2: RIVETING THE CYLINDER 3 BAFFLE ASSEMBLY

Step 1: Cleco two CB-1003C Doubler Plates to the CB-1003A Cylinder 2 Baffle. Final-Drill #40 the rivet holes common between the doubler plates and the cylinder 2 baffle. See Figure 1.

Step 2: Deburr and dimple the rivet holes drilled in Step 1 (flush head on inbd side).

Step 3: Rivet the two CB-1003C Doubler Plates to the CB-1003A Cylinder 2 Baffle. See Figure 1.

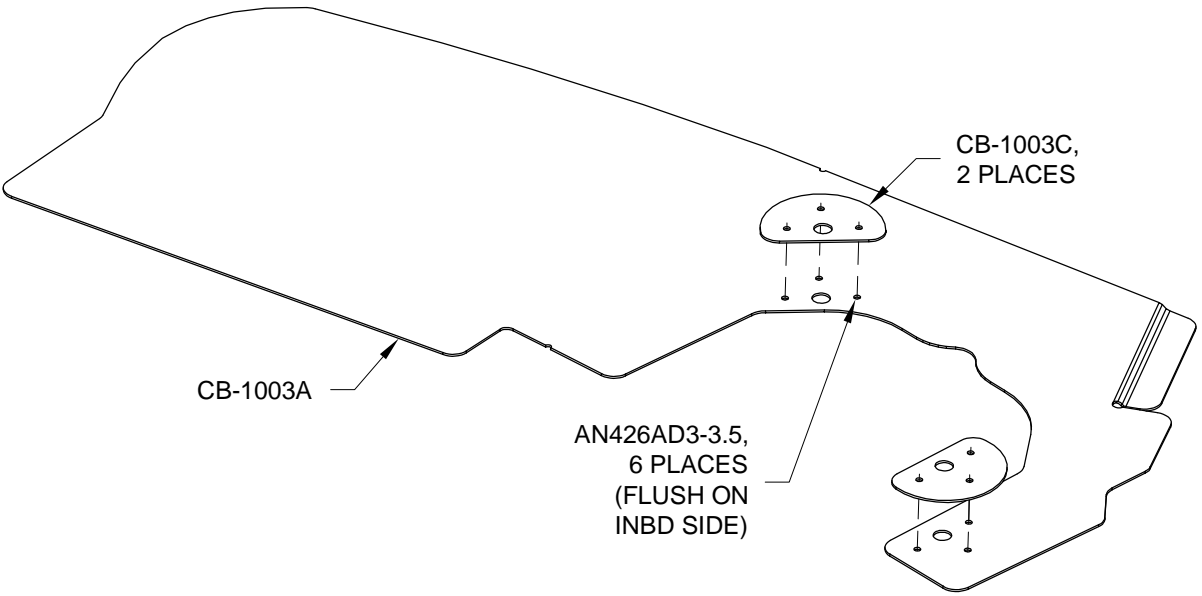


FIGURE 1: CYLINDER 2 BAFFLE ASSEMBLY

Step 4: Remove the hatched area from one CB-1003C Doubler Plate as shown in Figure 2 to make a CB-1009C Doubler Plate.

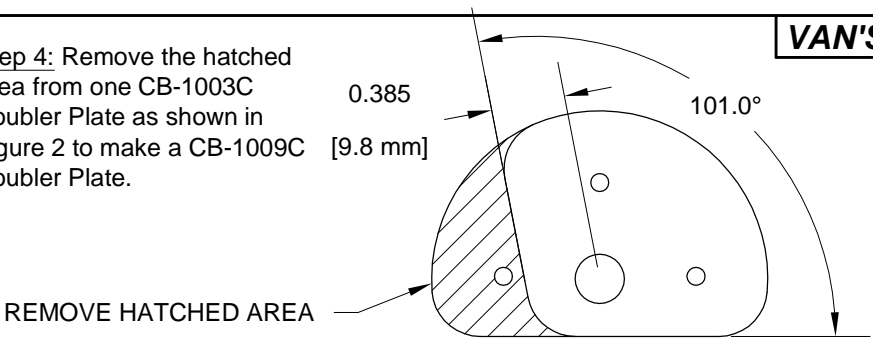


FIGURE 2: MAKING CB-1009C

Step 5: Cleco the CB-1003C and CB-1009C Doubler Plates to the CB-1009A Cylinder 1 Baffle. Final-Drill #40 the rivet holes common between the doubler plates and the cylinder 1 baffle. See Figure 3.

Step 6: Deburr and dimple the rivet holes drilled in Step 5 (flush head on inbd side).

Step 7: Rivet the the CB-1003C and CB-1009C Doubler Plates to the CB-1009A Cylinder 1 Baffle. See Figure 3.

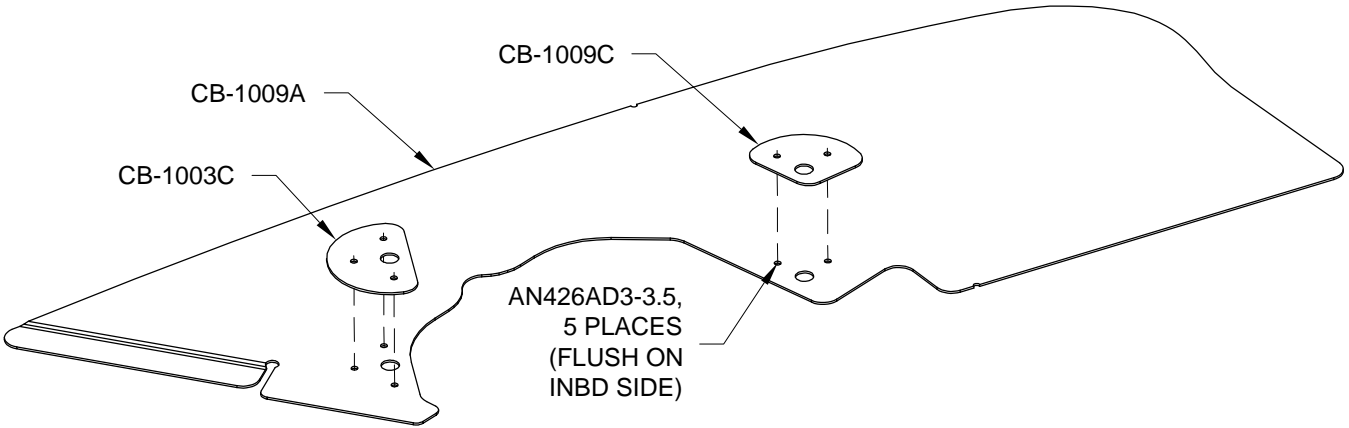
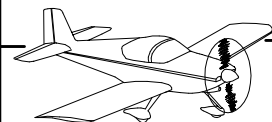


FIGURE 3: CYLINDER 1 BAFFLE ASSEMBLY



Step 1: Remove the three engine case bolts from the top of the engine as shown in Figure 1.

Step 2: Final-Drill 1/4 dia. then deburr all engine attach holes in the CB-707D Aft Center Support Bracket and CB-701D Fwd Center Bracket. See Figure 1.

NOTE: Lycoming torque for a 1/4 inch case bolt is 96 inch-lbf.

Step 3: Using the engine hardware (use new lockwashers) removed in Step 1, bolt the CB-707D Aft Center Support Bracket and CB-701D Fwd Center Bracket to the engine as shown in Figure 1. The forward face of the CB-701D Fwd Center Bracket needs to be parallel with the forward face of the starter ring gear.

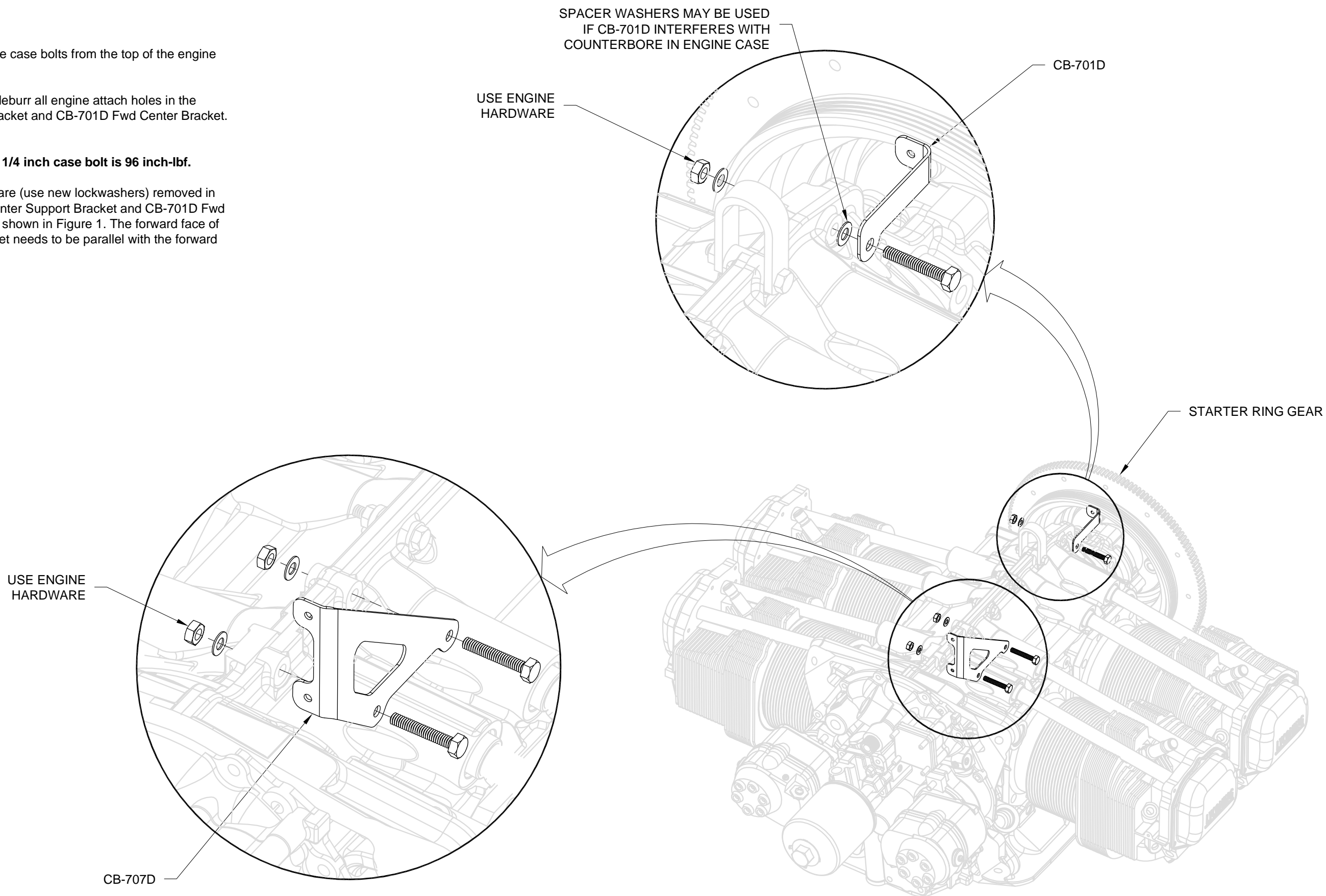
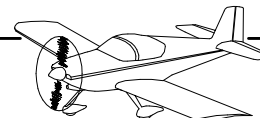


FIGURE 1: ATTACHING THE FWD AND AFT CENTER BRACKETS TO THE ENGINE



NOTE: Some of the baffles will need to be removed for trimming and fitting; it is not necessary to fully tighten the screws or torque the bolts at this time.

Step 1: Create a CB-706B Spacer from AT6-058X3/8 Tube 7/8 long.

Step 2: Use the hardware shown in Figure 1 and Figure 2 to attach the Cylinder 3 Baffle Assembly and Cylinder 4 Baffle Assembly to the engine.

Step 3: Match-Drill #12 the two holes in the aft flange of the CB-707D Aft Center Support Bracket into the CB-706A Left Aft Case Baffle and the CB-707A Right Aft Case Baffle. See Figures 1 and 2.

Step 4: Install the two bolts that attach the CB-707D Aft Center Support Bracket to the CB-706A Left Aft Case Baffle and the CB-707A Right Aft Case Baffle. See Figure 1.

Step 5: Use the hardware shown in Figure 1 and Figure 2 to attach the Cylinder 1 and 2 Baffle Assemblies to the engine.

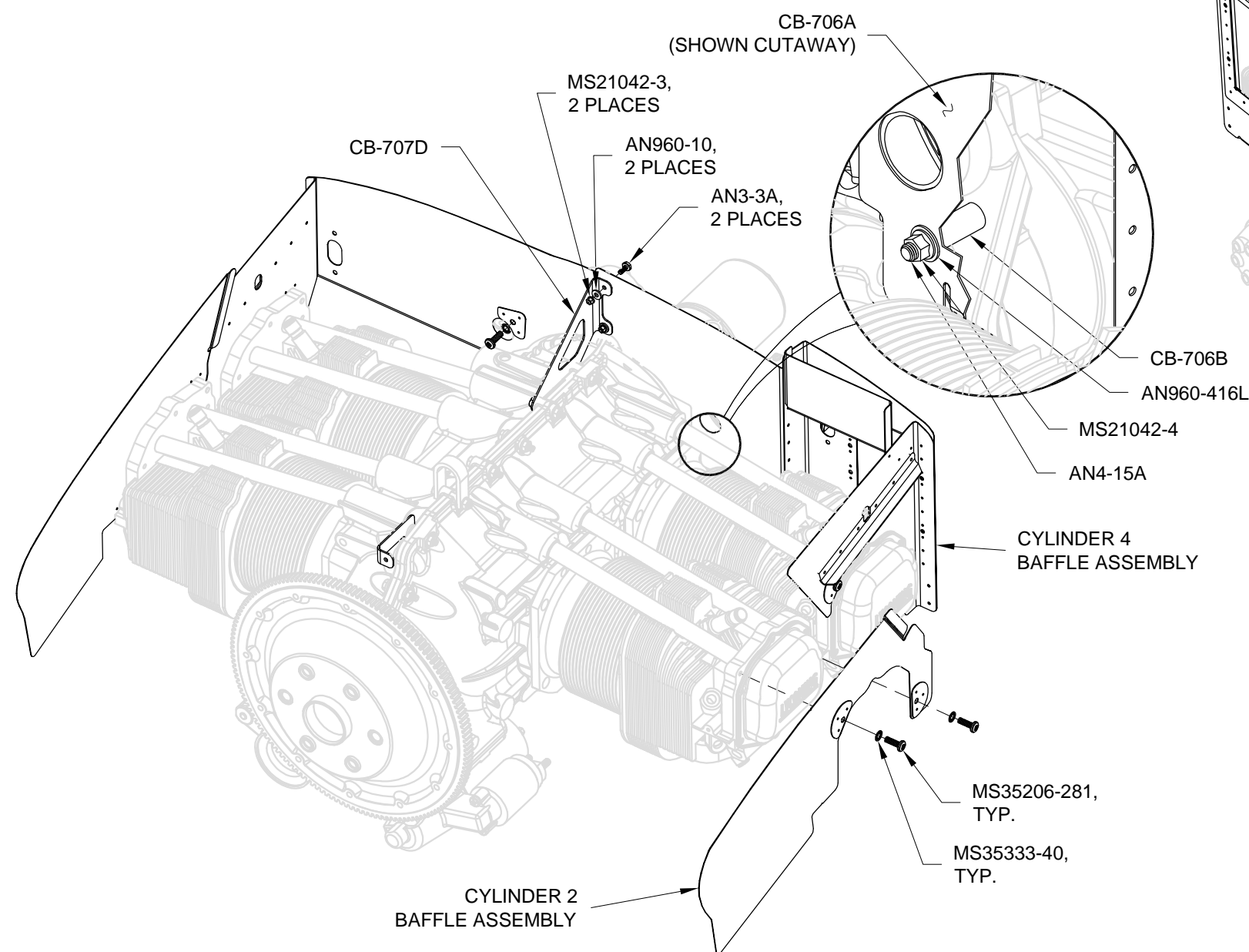


FIGURE 1: ATTACHING THE LEFT SIDE BAFFLES

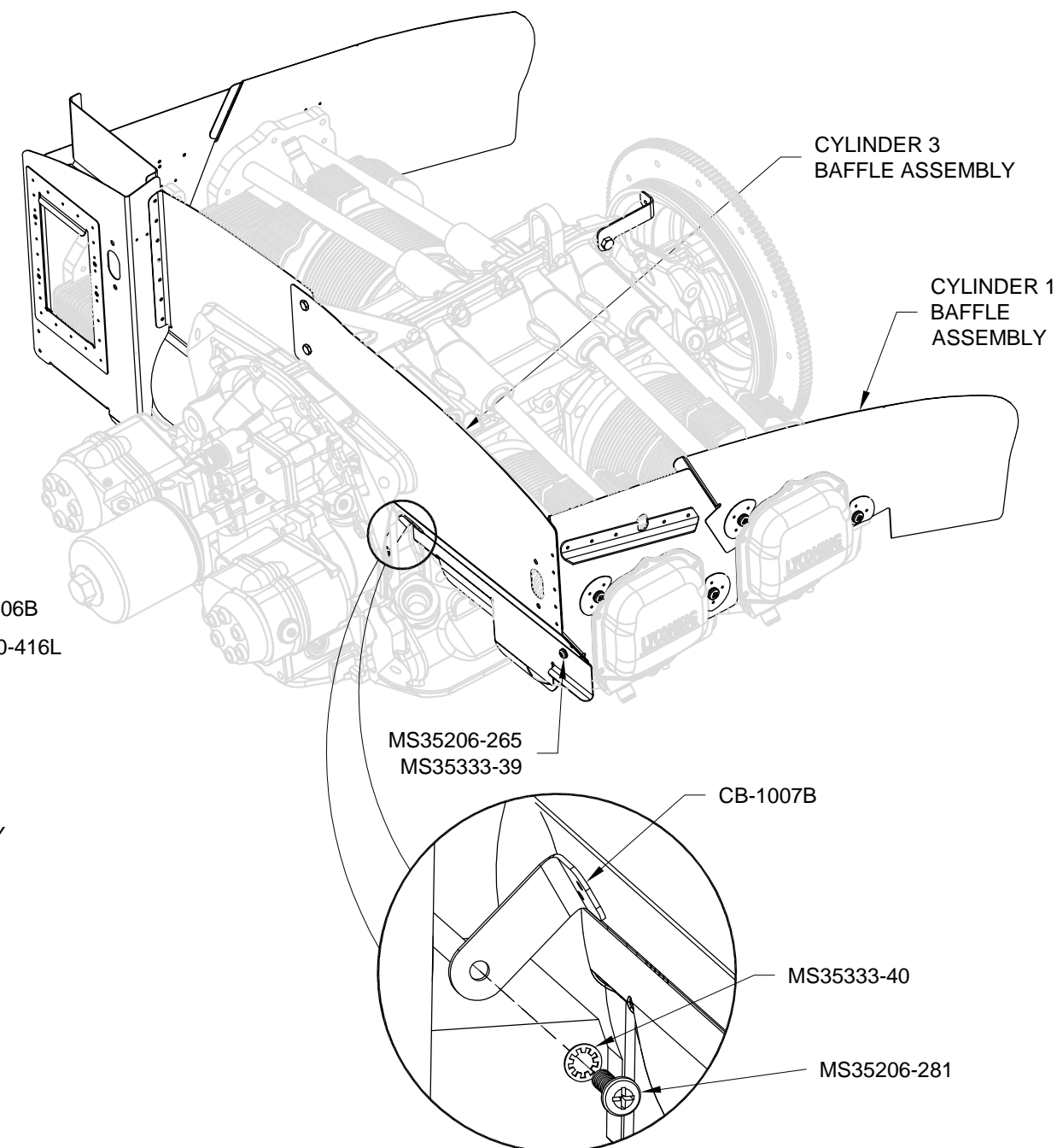
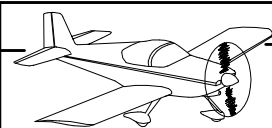


FIGURE 2: ATTACHING THE RIGHT SIDE BAFFLES



Step 1: Cleco then final-drill # 30 all the parts shown in Figure 1. Final-Drill 1/4 Dia. the baffle support hole in the CB-710D Fwd Right Support Bracket as called out in Figure 1.

Step 2: If using a constant speed propeller, check if the engine has an oil supply line as shown in Figure 2. If yes, then enlarge the prop oil line hole (called out in Figure 1) to 1 inch diameter to accept the rubber grommet called out in Figure 1. Temporarily disconnect the oil line from the engine for fitting the baffles (REMEMBER to reconnect the line when finished). Tape over the end of the open end of the line and the fitting to prevent contamination.

Step 3: Disassemble and deburr all the parts shown in Figure 1. Machine Countersink the aft side of the CB-710B Stiffener for the rivets that attach the CB-1010C Right Air Dam.

Step 4: Rivet the CB-1010C Right Air Dam to the CB-710B Stiffener per the callout in Figure 1.

Step 5: Cleco the remaining parts of the Cylinder 1 Baffle Ramp Assembly together as shown in Figure 1. Attach the assembly to the engine as shown in Figure 3.

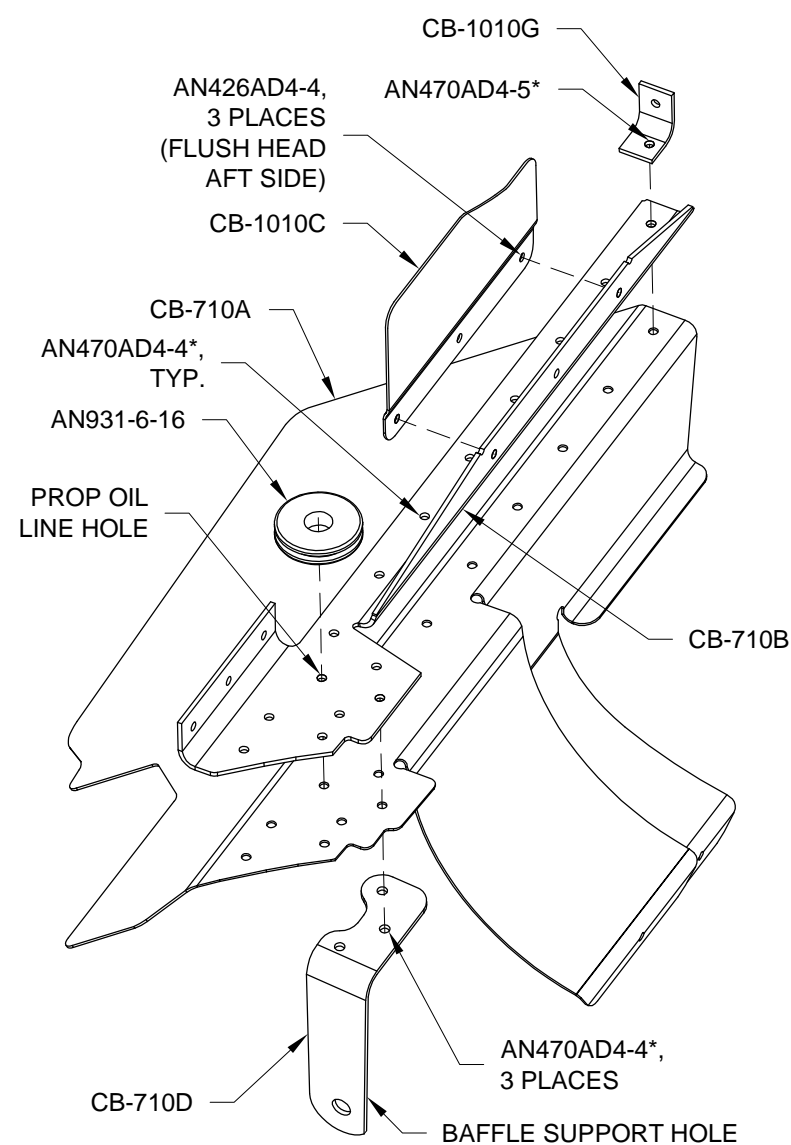


FIGURE 1: CYLINDER 1 BAFFLE RAMP ASSEMBLY
* DO NOT RIVET UNTIL OP40-9, STEP 9



FIGURE 2: PROP OIL LINE

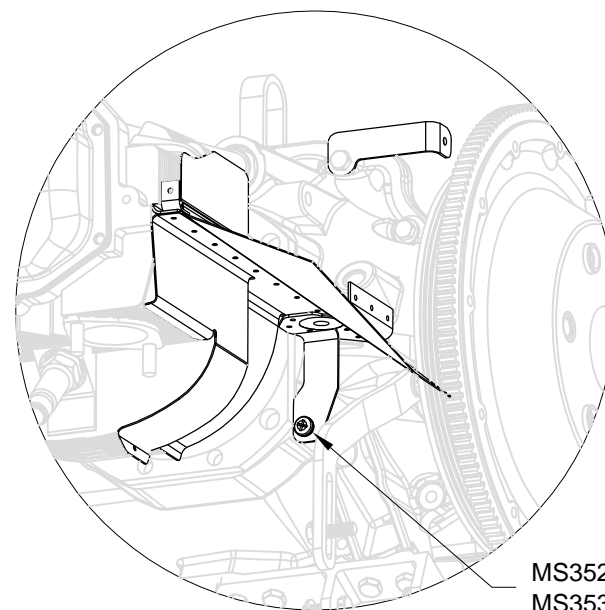


FIGURE 3: CYLINDER 1 BAFFLE RAMP ASSEMBLY INSTALL

Step 6: Cleco then final-drill # 30 all the parts shown in Figure 4. Final-Drill #12 the upper baffle support hole in the CB-1002B Stiffener and 1/4 dia. the lower support hole in the CB-1002D Fwd Left Support Bracket as called out in Figure 4.

Step 7: Disassemble and deburr all parts in the Cylinder 2 Baffle Ramp Assembly. Machine Countersink the aft side of the CB-1002B Stiffener for the rivets that attach the CB-1002C Left Air Dam.

Step 8: Rivet the CB-1002C Left Air Dam to the CB-1002B Stiffener per the callout in Figure 4.

Step 9: Cleco the Cylinder 2 Baffle Ramp Assembly together as shown in Figure 4. Attach the assembly to the engine as shown in Figure 5.

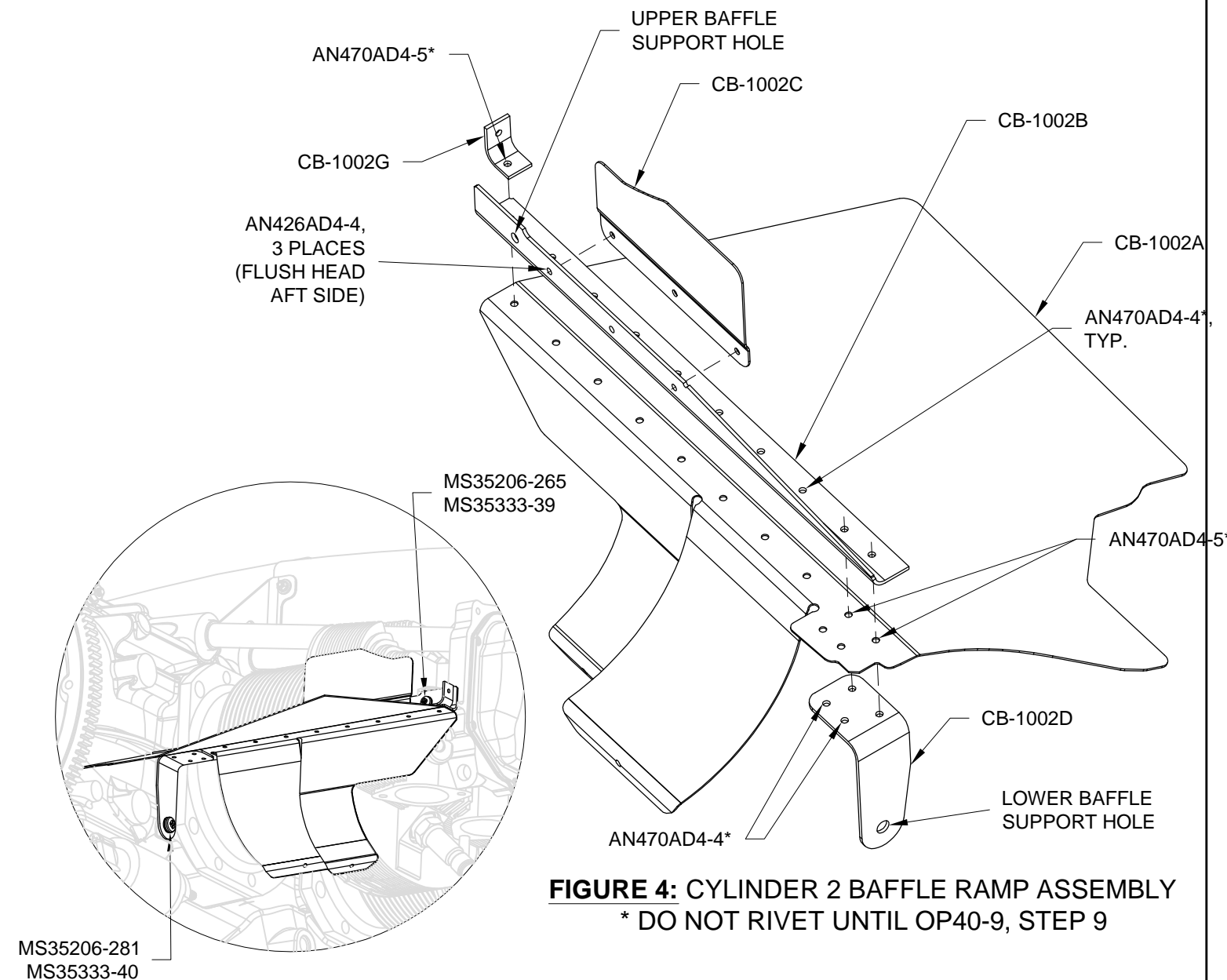


FIGURE 4: CYLINDER 2 BAFFLE RAMP ASSEMBLY
* DO NOT RIVET UNTIL OP40-9, STEP 9

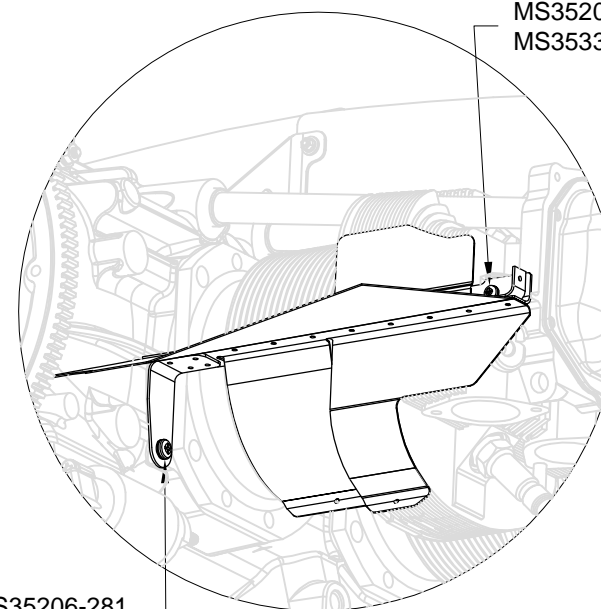


FIGURE 5: CYLINDER 2 BAFFLE RAMP ASSEMBLY INSTALL



Step 1: Match-Drill #30 the hole in the upper flange of the CB-1002G Clip into the CB-1003A Cylinder 2 Baffle. See Figure 1. Match-Drill #30 the hole in the upper flange of the CB-1010G Clip into the CB-1009A Cylinder 1 Baffle. See Figure 1 and the figures on Page OP40-8. Deburr all parts drilled in this step.

NOTE: The remaining steps may require iteration until the bottom cowl fits up to the baffles as shown in Figure 2. Proceed slowly. The order of the steps is not as important as the final result. The goal is to match the baffle sides and ramp to the cowl inlet aft edge as shown in Figure 2.

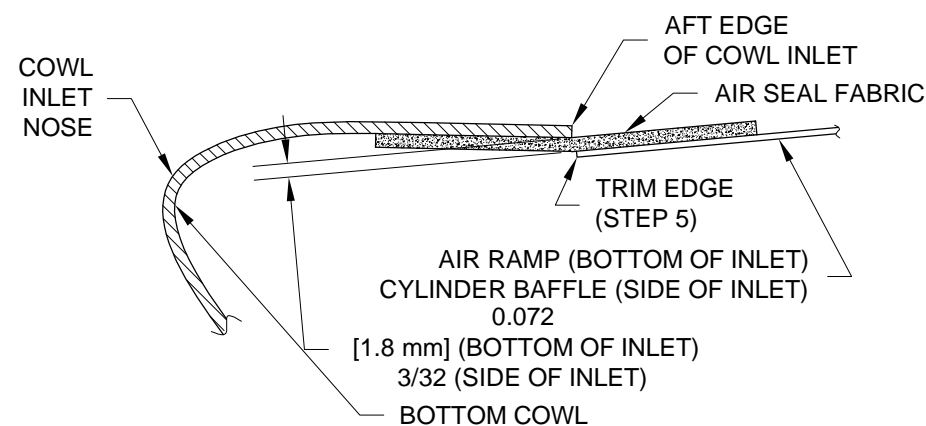


FIGURE 2: SECTION A-A

Step 2: Trim the forward and outboard edges of the CB-1002A and CB-710A Fwd Air Ramps allowing the CB-1003A and CB-1009A Cylinder 1 and 2 Baffles to angle inbd and to provide clearance with the cowl for initial fitting of the baffles. Make a vertical bend in the cylinder 1 and 2 baffles as shown in Figure 1 (see OP40-10, Figure 1 for an example of how to make the bend using a block and table edge).

Step 3: Adjust the main ramp angle bend until the CB-1002A and CB-710A Fwd Air Ramps match up to the inbd cowl inlet tangent point as shown in Figure 1 and Figure 2.

Step 4: Make a ramp crossing bend from the inbd cowl inlet tangent point to the outbd end of the main ramp angle bend. See Figure 1. Adjust the bend until the CB-1002A and CB-710A Fwd Air Ramps match up to the outbd cowl inlet tangent point as shown in Figure 1.

Step 5: Mark the outbd edge of the CB-1002A and CB-710A Fwd Air Ramps on the CB-1003A and CB-1009A Cylinder 1 and 2 Baffles. See Figure 1.

Step 6: Trim the upper edge of CB-702E Fwd Left Support Plate even with the lower face of the CB-1002A Fwd Left Air Ramp. Fasten the support plate to the engine. See Figure 3.

Step 7: Make a notch in the lower fwd edge of the CB-702M Support Angle for the screw head that attaches the CB-702E Fwd Left Support Plate. Position the support angle flush against the support plate and the lower face of the CB-1002A Fwd Left Air Ramp. Match-Drill #30 then cleco all holes in the support angle. Mark the aft edge of the support plate on the support angle then disassemble the support angle and plate, remove the excess material as shown in Figure 3. Deburr all parts.

Step 8: Except for the middle rivet common to the CB-1002A Fwd Left Air Ramp and CB-702M Support Angle (marked do not rivet in Figure 3), rivet the support angle to the CB-702E Fwd Left Support Plate and fwd left air ramp.

Step 9: Rivet the CB-1002G Clip, CB-1002B Stiffener and CB-1002D Fwd Left Support Bracket to the CB-1002A Fwd Left Air Ramp per the rivet callouts on Page OP40-8, Figure 4. Rivet the CB-1010G Clip, CB-710B Stiffener and CB-710D Fwd Right Support Bracket to the CB-710A Fwd Right Air Ramp per the rivet callouts on Page OP40-8, Figure 1.

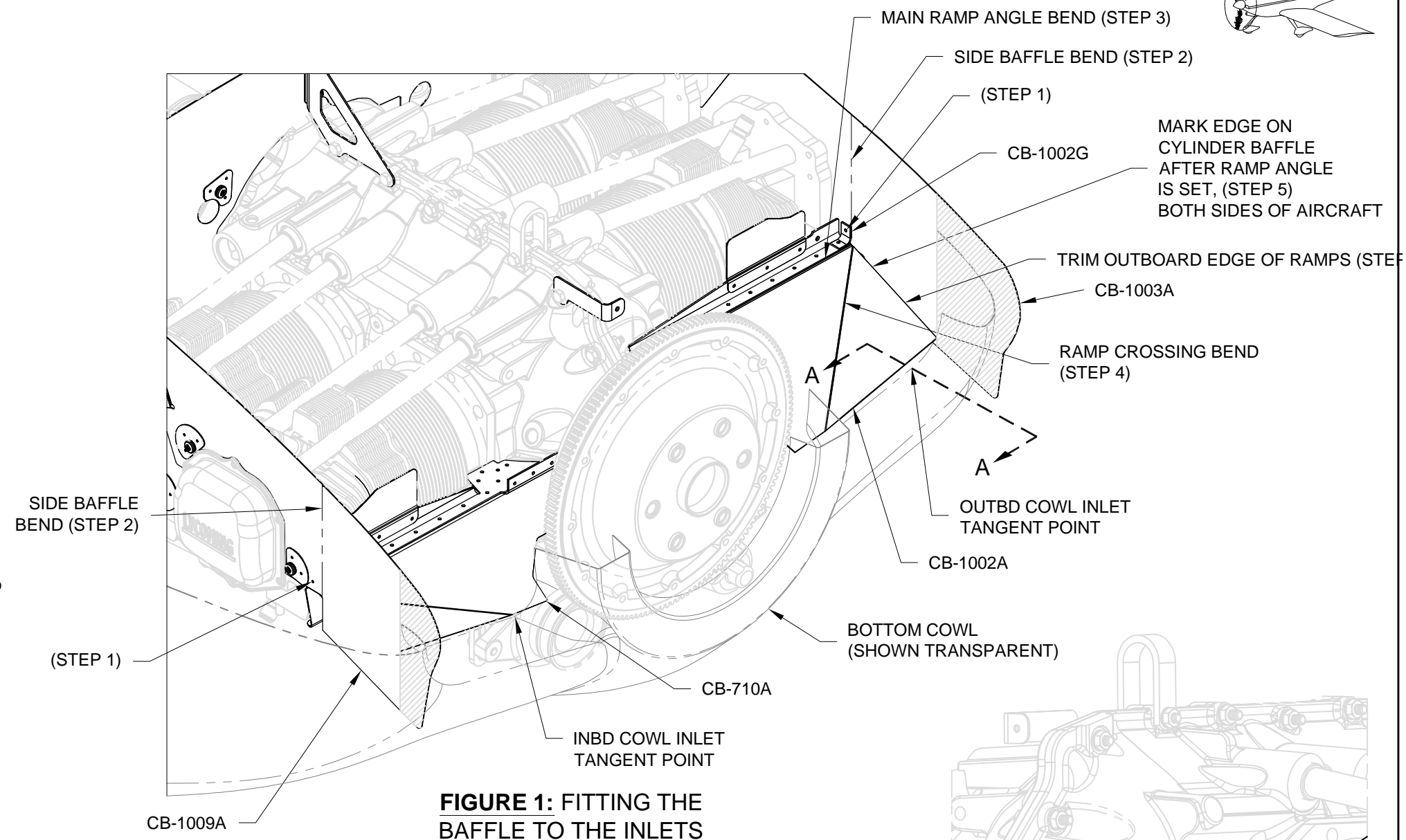


FIGURE 1: FITTING THE BAFFLE TO THE INLETS

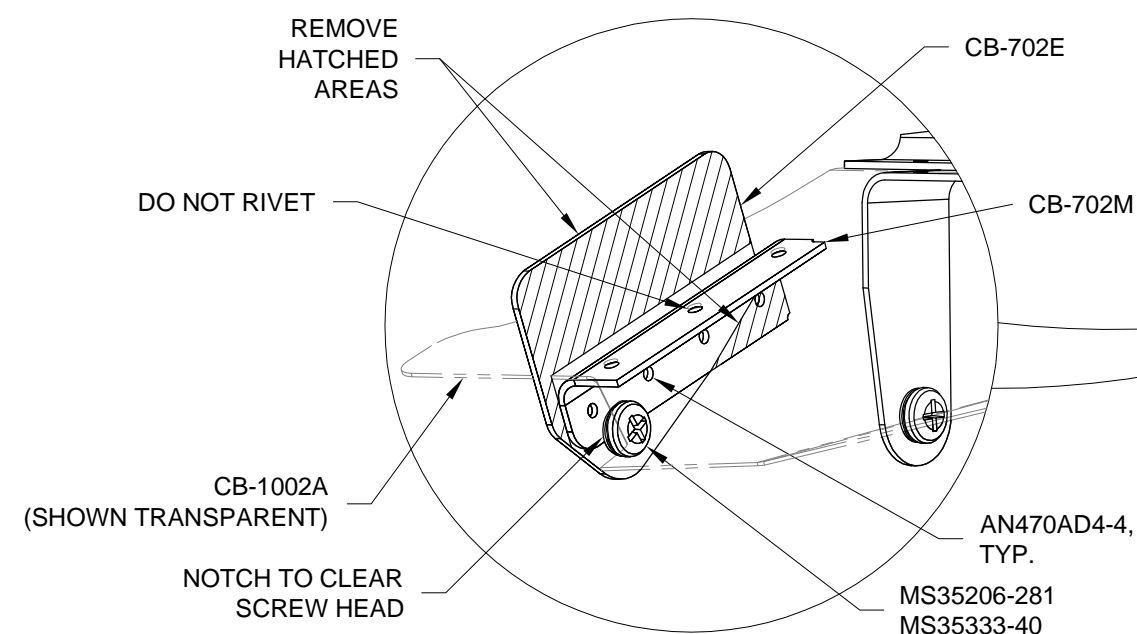
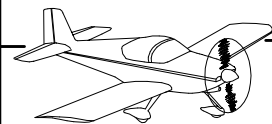


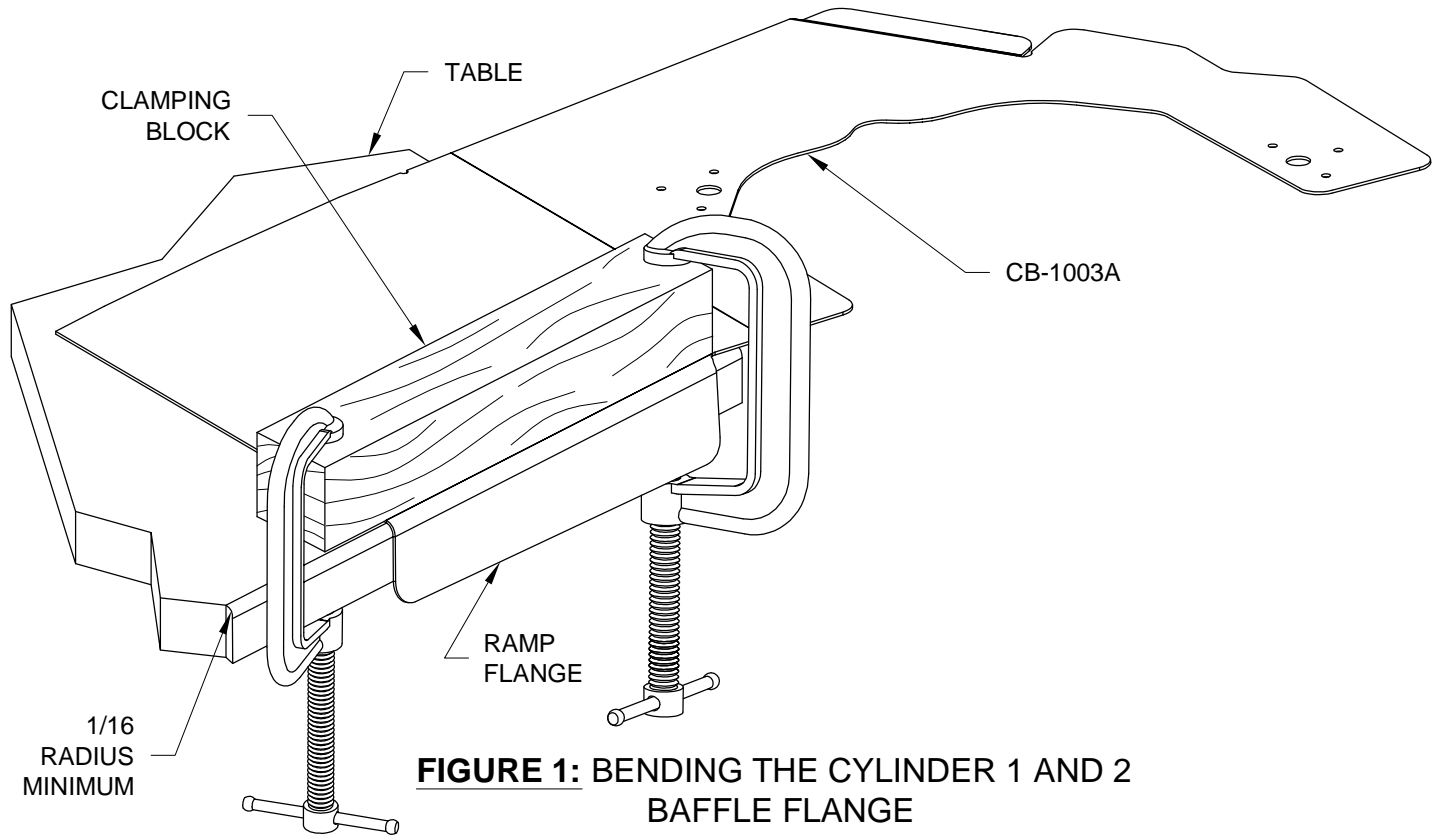
FIGURE 3: FWD RAMP SUPPORT



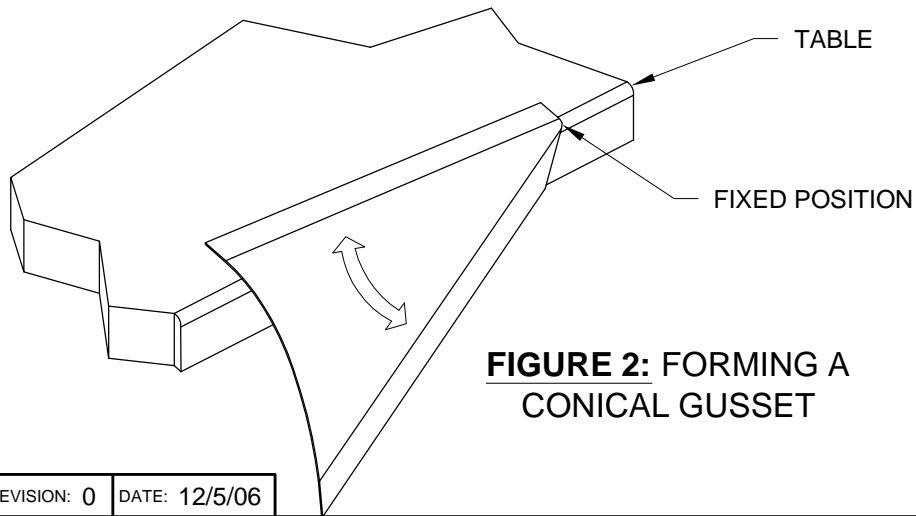
Step 1: Clamp the CB-1003A Cylinder 2 Baffle to a table as shown in Figure 1. Align the mark created on Page OP40-9, Step 5 with the edge of the table.

Step 2: Bend the CB-1003A Cylinder 2 Baffle using a wooden block (double check that you are creating the bend in the proper direction). Complete the bend by tapping along its length with a flush rivet set in a rivet gun turned down low. Adjust the final bend angle with a hand seamer to match the angle of the CB-1002A Fwd Left Air Ramp.

Step 3: Repeat Step 1 and Step 2 for the CB-1009A Cylinder 1 Baffle.



Step 4: Cut an oversize piece of AS3-032 to make the CB-702J Conical Gusset (See Figure 3 for an idea of how large the conical gusset needs to be. Use stiff paper to make a first pattern). Form the required cone shape in the conical gusset using the edge of a table as shown in Figure 2. Keep the tight end of the cone in a fixed position while sliding and rotating the large end of the cone over the table edge. The large end of the cone should match the curved portion of the bottom cowl inlet. Leave a 1/16 inch gap for the AIR SEAL FABRIC, see Page OP40-9, Figure 2. Trim the gusset to fit as shown in Figure 3.



Step 5: Trim the lower edges of the CB-701A and CB-711A Front Baffles to allow CB-711A to be clecoed to the CB-710B Stiffener and allow both front baffles to be bolted to the CB-701D Fwd Center Bracket. See Figure 3. Adjust bends in the front baffles so the forward edges of the baffles match the inbd cowl inlet as shown on Page OP40-9, Figure 2.

NOTE: Figure 3 does not show dimensioned rivet patterns. Layout the patterns keeping a typical edge distance of 5/16 inches.

Step 6: Create the CB-702P, CB-702Q and CB-710P Clips from AA3-032X1X1 as shown in Figure 3. Position then Drill #30 all holes in the clips as shown in Figure 3. Disassemble and deburr all parts from this step and Step 5.

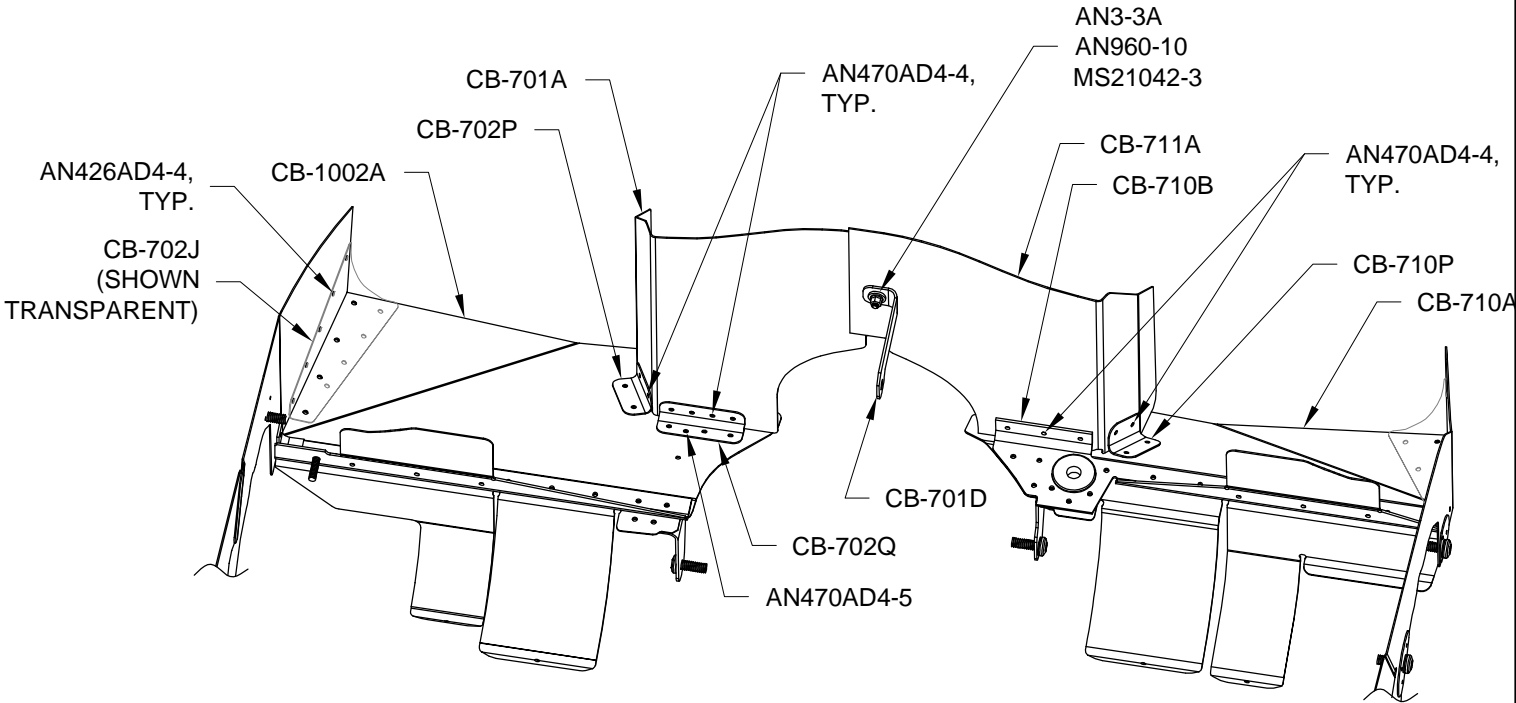
Step 7: Rivet both the CB-701A and CB-711A Front Baffles to the CB-702P, CB-702Q, and CB-710P Clips. Rivet CB-711A to the CB-710B Stiffener. Rivet the clips to the CB-1002A and CB-710A Fwd Air Ramps (one rivet will also rivet to the CB-702M Support Angle).

NOTE: that the aft most hole in the CB-1003A Cylinder 2 Baffle flange is common to both the CB-1002A Fwd Left Air Ramp and the CB-702J Conical Gusset; lay out this hole carefully.

Step 8: Drill #30 a rivet pattern similar to that shown in Figure 3 into the CB-1002A Fwd Left Air Ramp and the ramp flange of the CB-1003A Fwd Side Baffle. Drill #40 a rivet pattern similar to that shown in the iso view in Figure 3 into the fwd side baffle and the CB-702J Conical Gusset. Drill #40 a rivet pattern into the conical gusset and the fwd left air ramp (note the aft most hole will also be common to the side baffle ramp flange). Repeat this step for the right side of the aircraft. See Page OP40-1 for a reference view.

Step 9: Disassemble and deburr all parts drilled in Step 8. Dimple holes as required by the rivet callouts in Figure 3.

Step 10: Rivet the CB-1002G Clip to the CB-1003A Cylinder 2 Baffle. Rivet the three forward most holes common between the CB-1002A Fwd Left Air Ramp and the cylinder 2 baffle ramp flange. Rivet the CB-702J Conical Gusset to the cylinder 2 baffle and fwd left air ramp. Rivet callouts are found in Figure 3. Repeat this step for the right side of the aircraft.





Step 1: Install the Bottom Cowl. Lay the Top Cowl in place then mark and trim away the upper edges of the baffles to create a 3/8 inch minimum to 1/2 inch maximum clearance between the upper edge of the baffles and the inside surface of the top cowl. This will take several iterations, be patient! Deburr the upper edges of the baffles. See Figure 1.

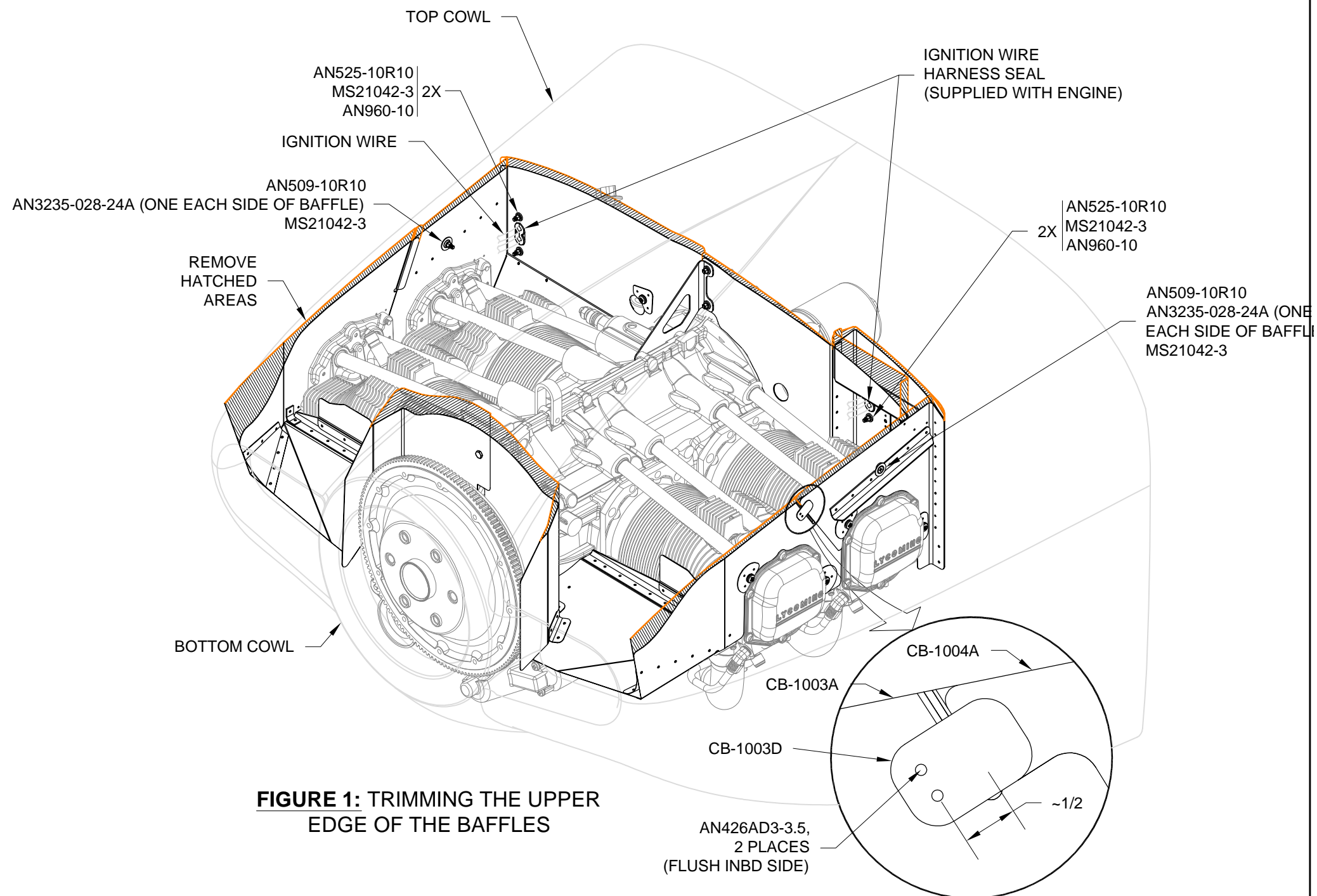
Step 2: Match-Drill #40 the holes in the CB-1003D Clips into the baffles as shown in the detail view in Figure 1.

Step 3: Remove the CB-1003D Clips and deburr the holes drilled in the baffles. Dimple the clip attach holes in the clips and baffles for a flush head on the inboard face of the baffles.

Step 4: Rivet the CB-1003D Clips to the baffles per the callouts in Figure 1.

Step 5: Fill the spark plug access holes in the CB-1004A Cylinder 4 Baffle and CB-708A Cylinder 3 Baffle with hardware as shown in Figure 1.

Step 6: Run the ignition wires through the holes in the CB-705A Cylinder 4 Aft Baffle and the ignition wire harness seal per the callouts in Figure 2. Repeat this step for the right ignition wires running through the CB-707A Right Aft Case Baffle as shown in Figure 1.

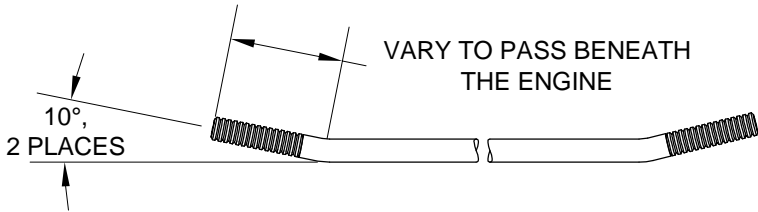




Step 1: Cut two lengths of SSP-120 Stainless Pin 9 inches long to create two CB-700D Inbd Tension Rods. Bend each inbd tension rod to fit around the engine. Figure 1 is full scale and can be used as a template for a starting point. Note the inbd tension rods may be different on the right and left sides of the engine.

Step 2: Thread 6-32 both ends of each CB-700D Inbd Tension Rod. Do not extend the threads into the bends in the inbd tension rods. See Figure 1.

Step 3: Install both CB-700D Inbd Tension Rods using the hardware shown in Figure 3.

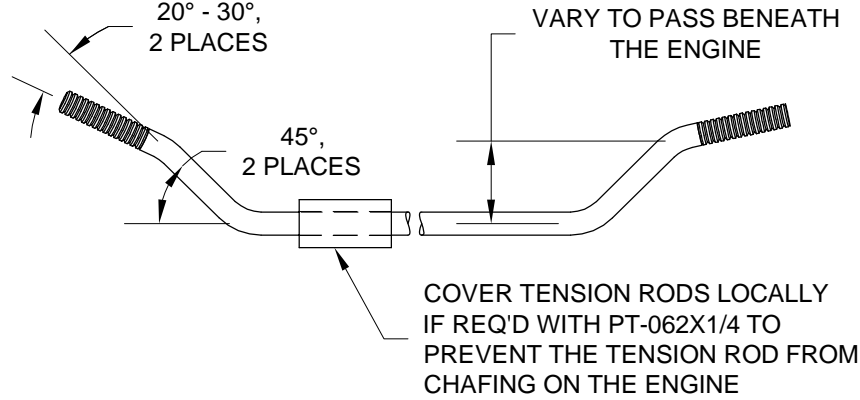


**FIGURE 1: FABRICATING THE INBD TENSION ROD
SCALE APPROXIMATELY 1:1**

Step 4: Cut two lengths of SSP-120 Stainless Pin 11 1/4 inches long to create two CB-700C Outbd Tension Rods. Bend each outbd tension rod to fit around the engine. Figure 2 is full scale and can be used as a template. Note the outbd tension rods may be different on the right and left sides of the engine.

Step 5: Thread 6-32 both ends of each CB-700C Outbd Tension Rod. Do not extend the threads into the bends in the outbd tension rods. See Figure 2.

Step 6: Install both CB-700C Outbd Tension Rods using the hardware shown in Figure 3.



**FIGURE 2: FABRICATING THE OUTBD TENSION ROD
SCALE APPROXIMATELY 1:1**

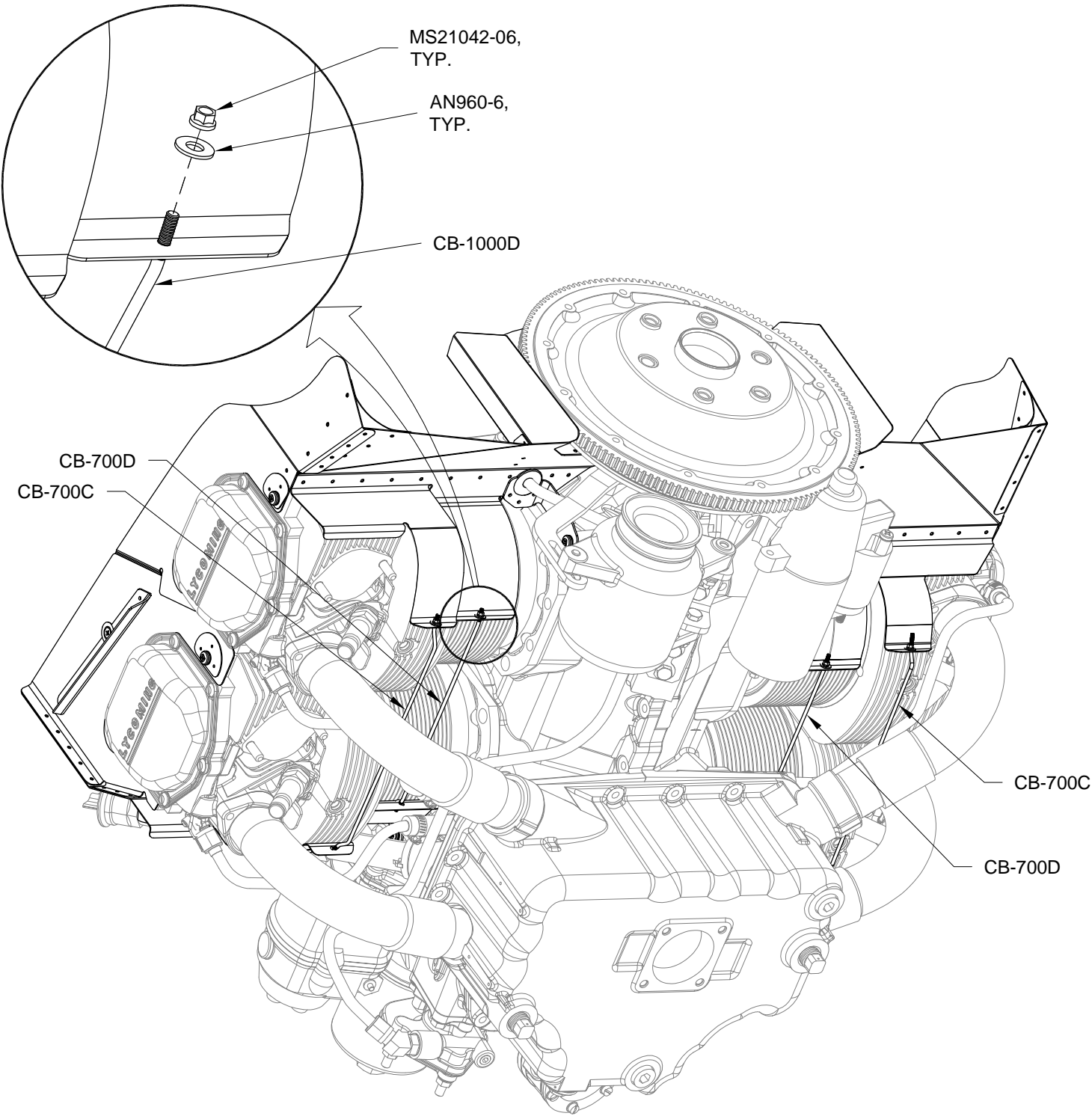


FIGURE 3: INSTALLING THE TENSION RODS



Step 1: Make Air Seal Fabric (approx. three inches wide) strips as shown in Figure 1 and Figure 2 to seal the baffle area. To conserve material, make paper patterns for the more complex strips. During installation the air seal fabric will be a bit stiff and unyielding, but after a few flights the heat from the engine will help it conform to the shape of the upper cowl. Note how the separate strips overlap one another. Create breaks to allow the baffle to be removed in sections common to each cylinder. Drill #30 holes in the air seal fabric and the baffles using a typical 1 1/2 inch to 2 inch spacing. Deburr the holes drilled in the baffles.

NOTE: Air Seal Fabric must curve inward to the high pressure side of the baffle. The high pressure of the baffle will hold the air seal fabric against the cowl. If the material is too short it will flip outwards and flap against the top of the cowl, causing a noticeable and potentially destructive vibration!

Step 2: Permanently install the Air Seal Fabric to the baffles using SD-42-BSLF Large Steel Blind Rivets.



FIGURE 1: AIR SEAL FABRIC - RV-8 VIEW

Step 3: Use RTV high temperature sealant (Permatex #26B Red) to seal all gaps that can spill air. Small openings can add up to a significant loss in the pressure differential and decrease the cooling potential of the baffle system.

Step 4: Add tie-wraps to the spark plug wires as required. See Figure 1 and Figure 2.

Step 5: Install a cooling blast tube for each magneto and the alternator per the instructions included with the optional DUCT CBT-5/8 Cooling Blast Tube Kit available from Van's Aircraft.

NOTE: Double check that all fasteners are fully installed, tight and torqued.



FIGURE 2: AIR SEAL FABRIC - RV-7 VIEW



NOTE: This page shows the installation of the Air Seal Fabric on the Bottom Cowl left air inlet. The methods used on the right air inlet are essentially a mirror of the left.

Step 1: Make the CB-1002K Clamping Strip by forming a piece of AS3-063X1/2X12 to the shape of the Bottom Cowl left air inlet. Over bend the clamping strip just enough so it will clamp the Air Seal Fabric firmly against the sides of the bottom cowl air inlet. Sand the inside (lower) face of the bottom cowl air inlet if required to create a flat area for the clamping strip. The aft edge of the clamping strip aligns with the aft edge of the bottom cowl air inlet, see Figure 2.

Step 2: Cut Air Seal Fabric as shown in Figure 1 and Figure 3. Slit the fabric if required to make it lay flat against the ramp and sides of the Cylinder 2 Baffle Assembly.

Step 3: Drill three evenly spaced #27 holes into the CB-1002K Clamping Strip, Air Seal Fabric and Bottom Cowl as shown in Figure 2.

Step 4: Deburr the CB-1002K Clamping Strip. Machine countersink the three holes in the Bottom Cowl air inlet (flush on the upper face) for the head of a #6 screw.

Step 5: Glue the Air Seal Fabric to the CB-1002K Clamping Strip as shown in Figure 1 and Figure 2 using PlyoBond © contact cement or an equivalent.

Step 6: Use the hardware shown in Figure 2 to attach the CB-1002K Clamping Strip and the Air Seal Fabric to the Bottom Cowl air inlet.

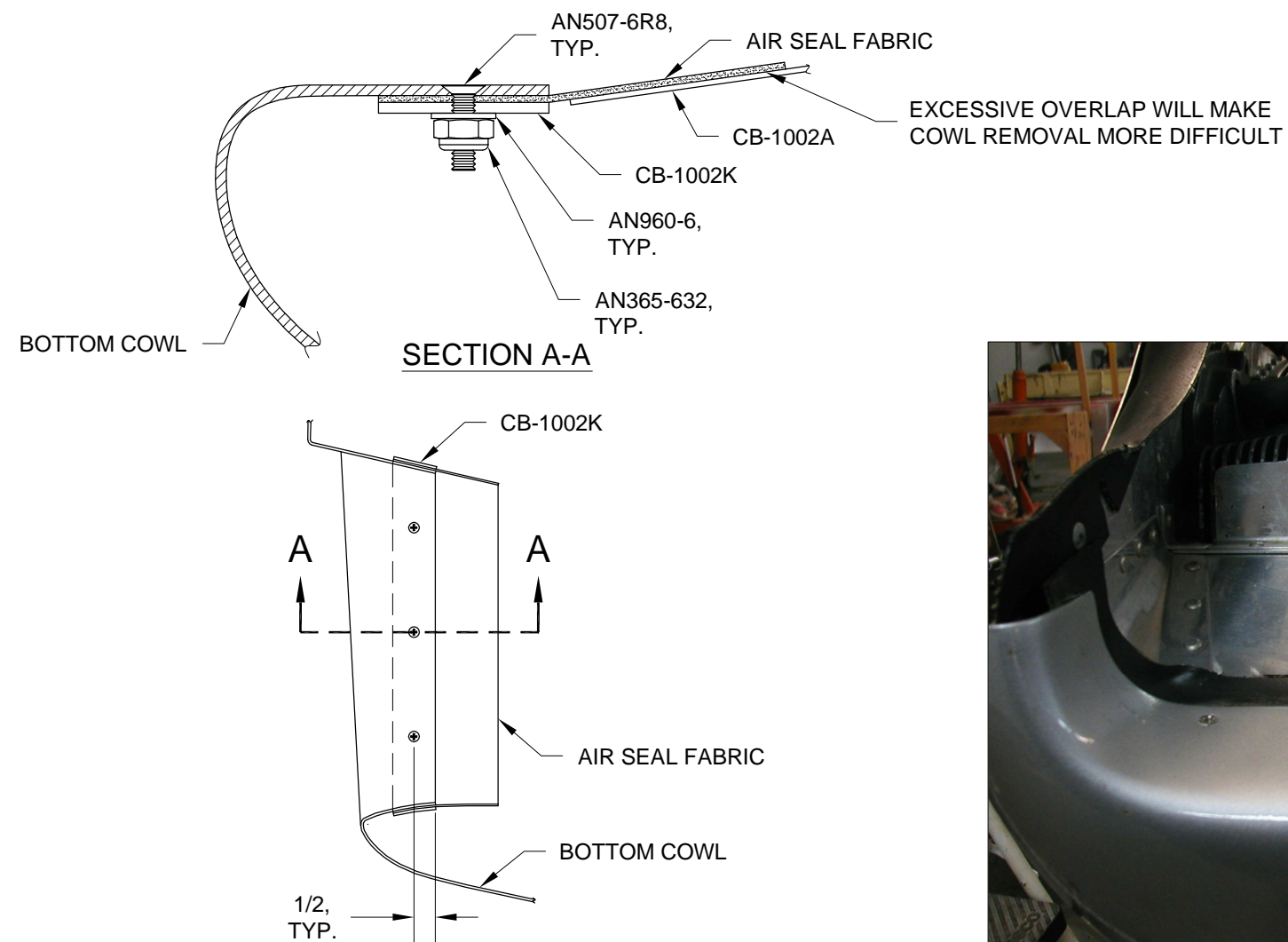


FIGURE 2: TOP VIEW AIR SEAL FABRIC INSTALLATION

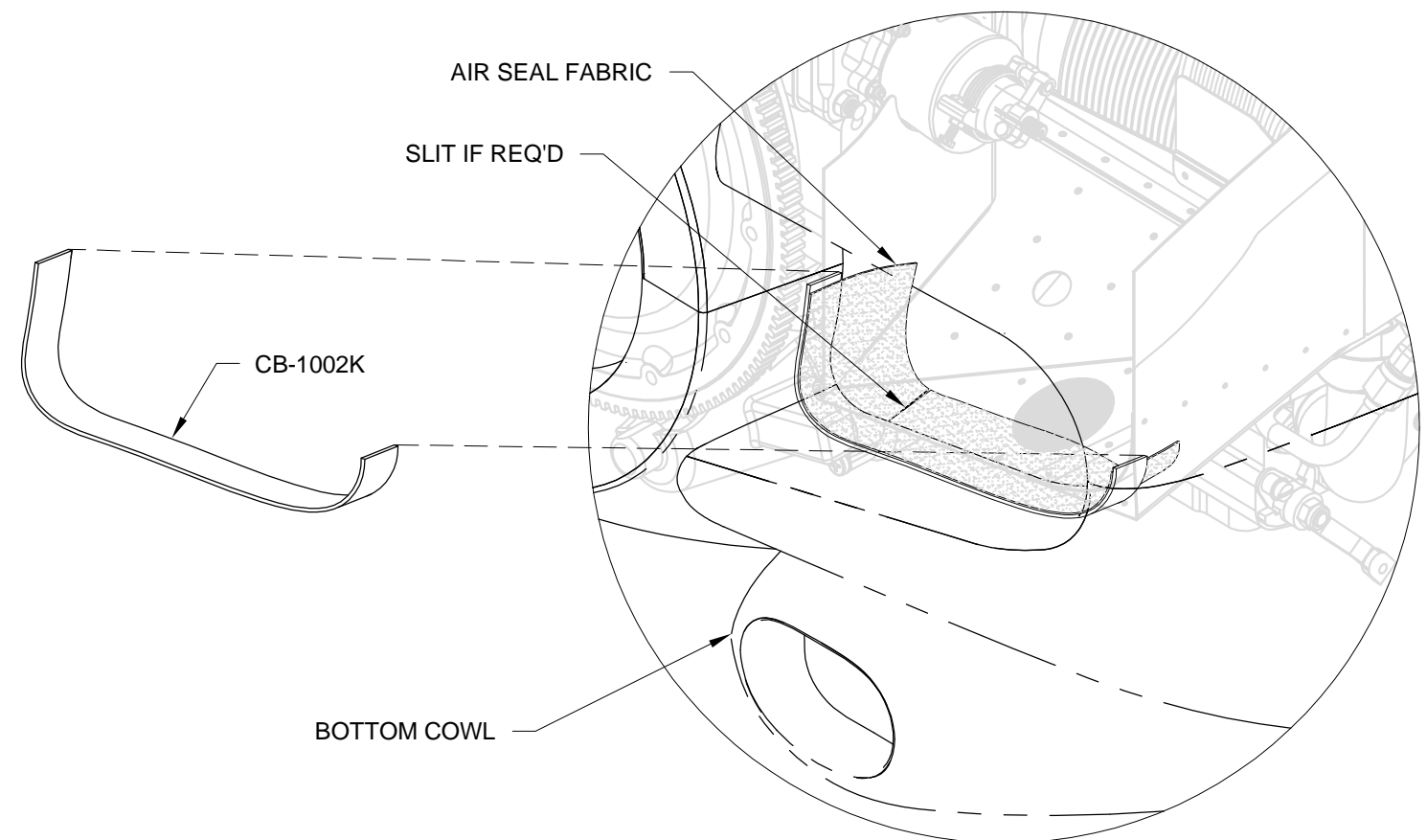


FIGURE 1: MAKING THE CLAMPING STRIP

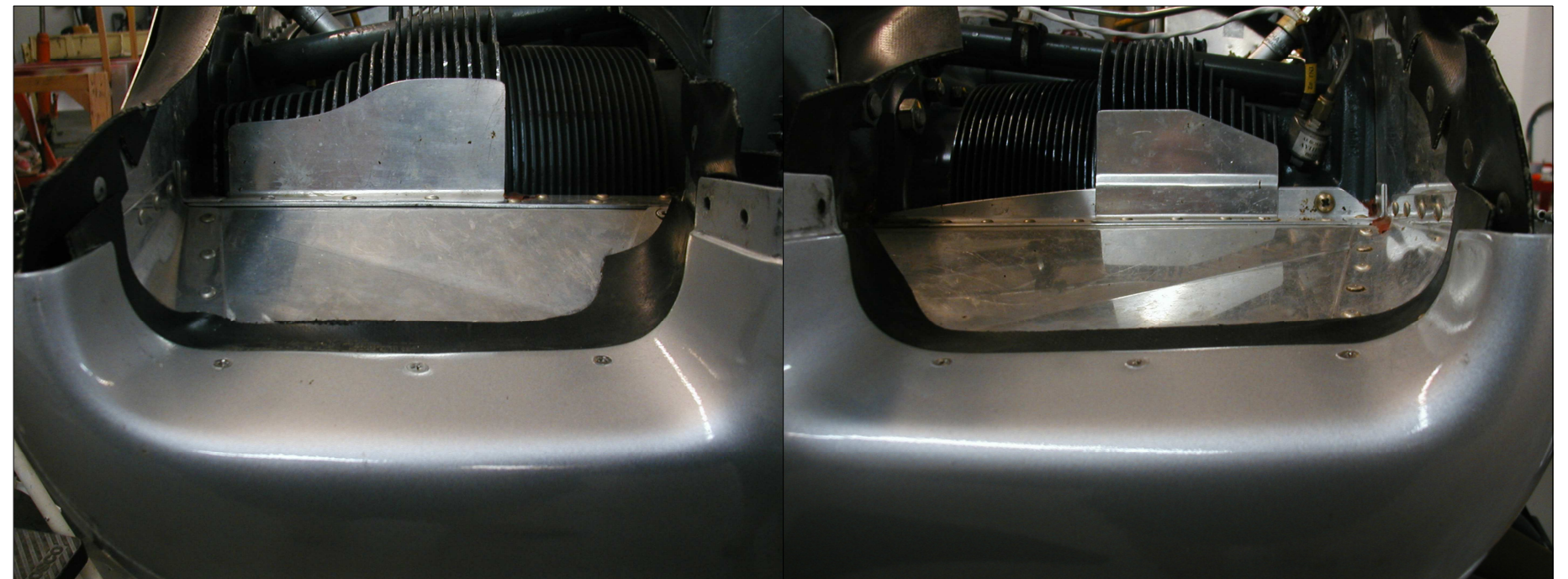


FIGURE 3: FINAL INSTALLATION