



NOTE: This section covers installation of an IO-540 parallel valve Lycoming Engine.

NOTE: Use lubricant when drilling or cutting stainless steel throughout this section.

Step 1: Remove the VA-186B-L and -R Gussets from the VA-186A Oil Cooler Box as shown in Figure 1. Deburr the edges of all three parts.

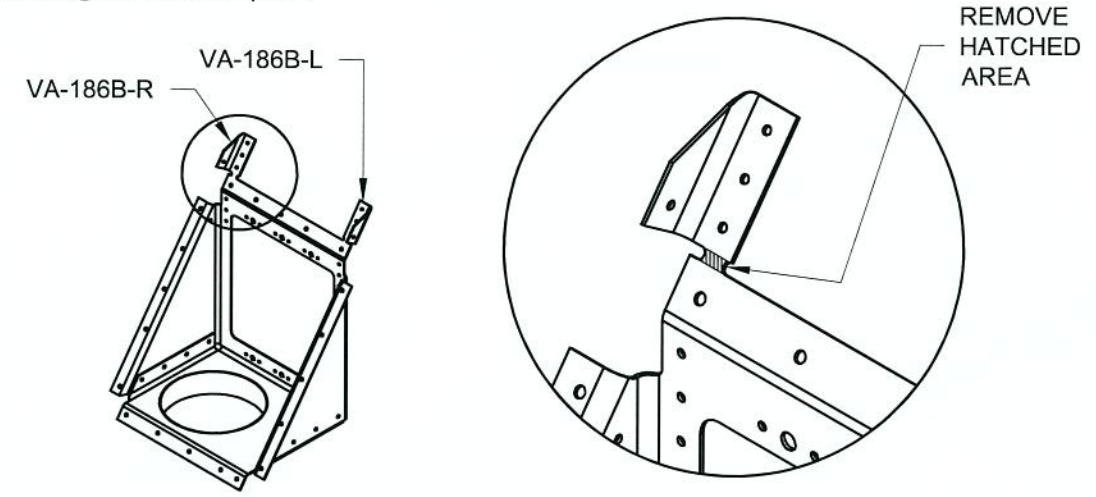


FIGURE 1: SEPARATING THE GUSSETS FROM THE OIL COOLER BOX

Step 2: Cleco the VA-186B-L and -R Gussets to the VA-186A Oil Cooler Box as shown in Figure 2. Cleco the oil cooler box to itself. This will create the VA-186 Oil Cooler Box Assembly.

Step 3: Final-Drill #40 the VA-186B-L and -R Gussets to the VA-186A Oil Cooler Box. Final-Drill #40 the nutplate attach holes in the oil cooler box. Final-Drill #30 the oil cooler box to itself.

Step 4: Disassemble the VA-186 Oil Cooler Box Assembly. Dimple the rivet holes in the VA-186A Oil Cooler Box and VA-186B-L and -R Gussets, flush head on the forward and outside faces.

Step 5: Rivet the VA-186B-L and -R Gussets and nutplates to the VA-186A Oil Cooler Box as shown in Figure 2. Rivet the oil cooler box to itself as shown in Figure 2.

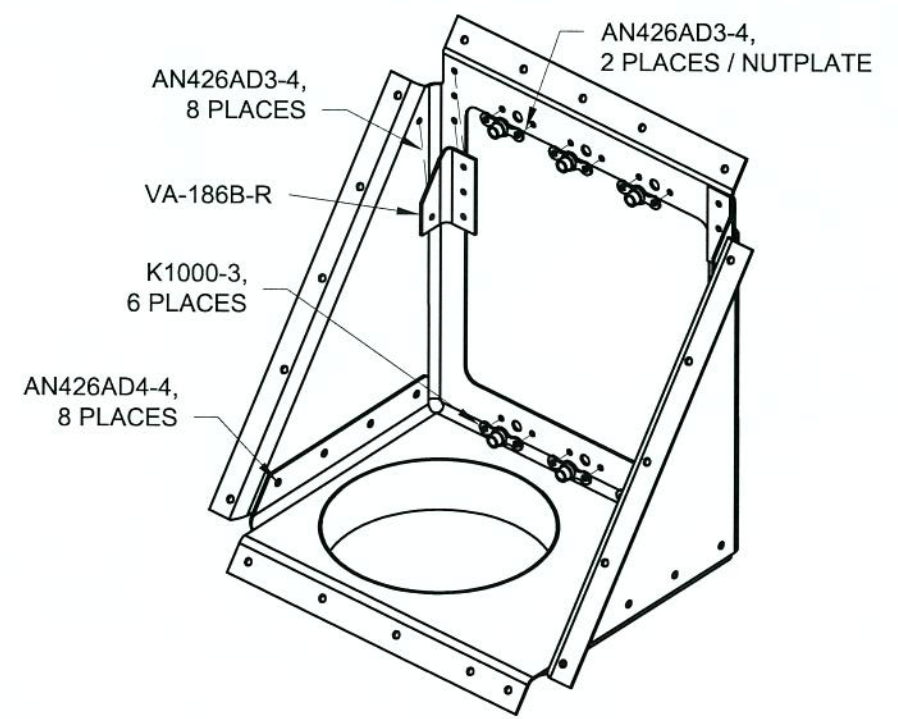


FIGURE 2: ASSEMBLING THE OIL COOLER BOX ASSEMBLY

Step 6: Rivet the VA-186 Oil Cooler Box Assembly to the Firewall Bulkhead Assembly using the callouts in Figure 3.

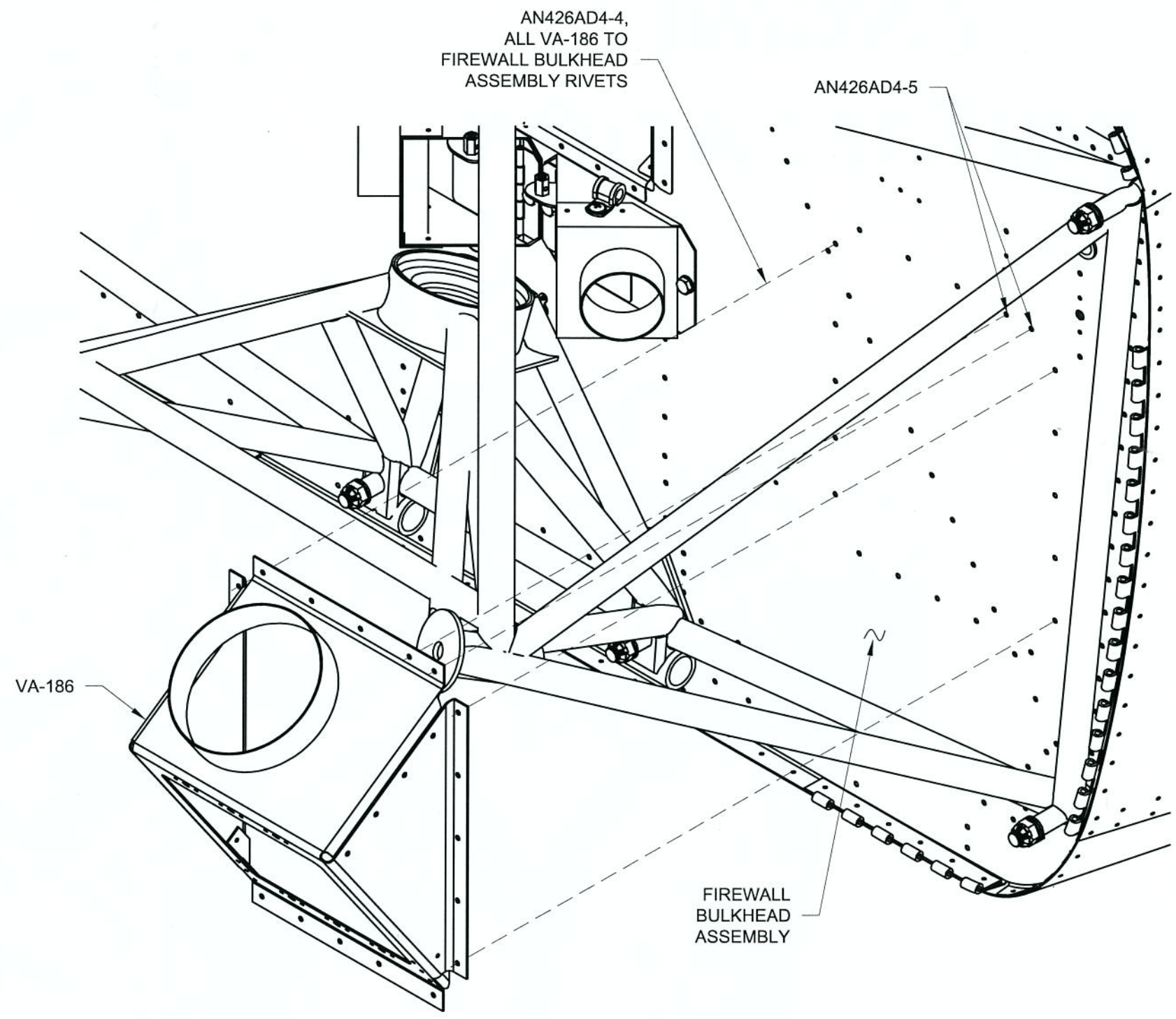


FIGURE 3: INSTALLING THE OIL COOLER BOX ASSEMBLY



Step 1: Install the hardware shown in Figure 1 to the VA-168 Sender Mount. Install the fuel and oil pressure transducers at this time as shown in Figure 1. The pressure senders are not included in the kit. If you plan on controlling the hobbs meter with oil pressure (the most common method), install a IE SPDT PRES-15 SW Oil Pressure Switch in place of the lower pipe plug fitting, see Figure 1. Pressure senders and the oil pressure switch are available through **VAN'S AIRCRAFT ACCESSORY CATALOG**.

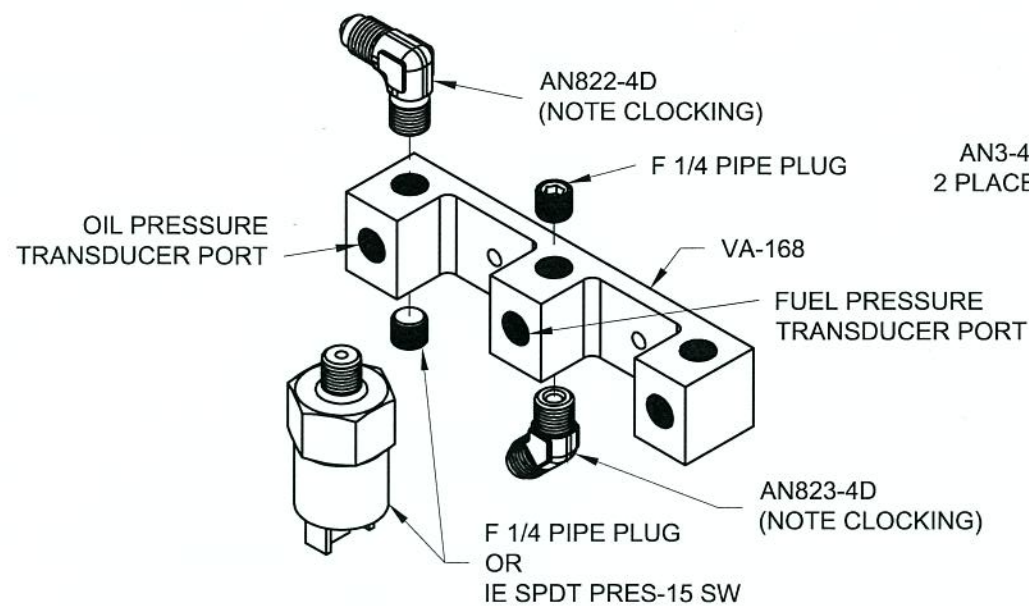


FIGURE 1: PREPARING THE SENDER MOUNT

Step 2: Bolt the VA-168 Sender Mount to the Firewall Bulkhead Assembly. See Figure 2.

Step 3: Connect the VA-133 Oil Pressure Hose to the AN822-4D elbow on VA-168 Sender Mount upper right port. Attach the oil pressure hose to the Firewall Bulkhead Assembly with cushioned clamps in two places. See Figure 2.

Step 4: Connect the CT A-740 BLACK Push Pull Cables to the TG-10-L and -R Heat Selector boxes. Clamp the cables to the Firewall Bulkhead Assembly with cushioned clamps. Route the cables to the instrument panel or other locations in the fuselage as desired. Safety wire the push pull cables to the cushioned clamps on top of the heat selector boxes. Fill the penetration hole for the push pull cables in the firewall bulkhead assembly with RTV. See Figure 2 and Figure 3.

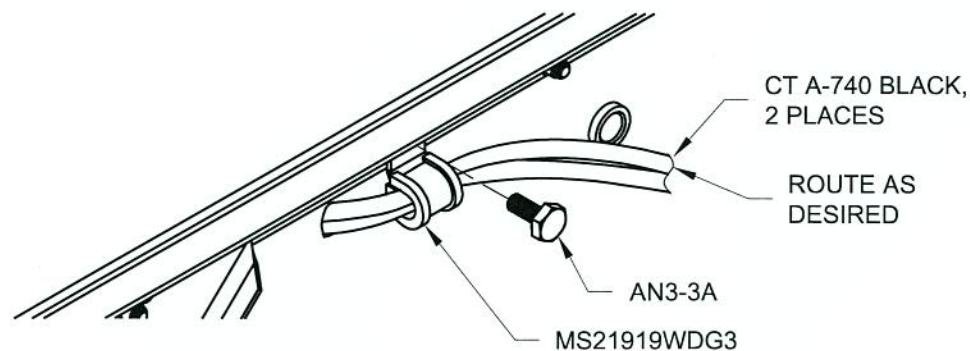


FIGURE 3: CLAMPING THE CABIN HEAT CABLES TO THE AFT SIDE OF THE FIREWALL

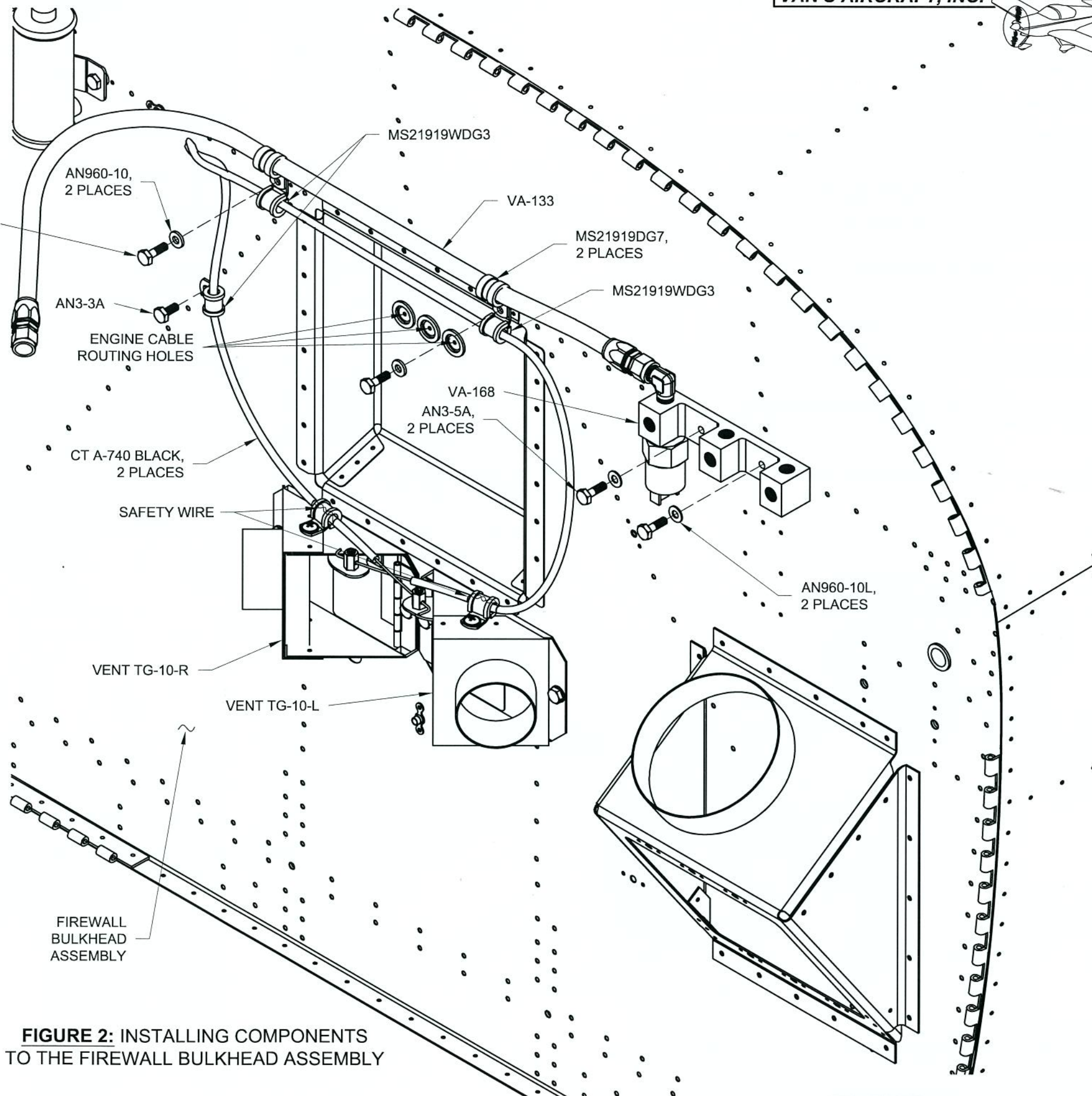


FIGURE 2: INSTALLING COMPONENTS TO THE FIREWALL BULKHEAD ASSEMBLY