



SERVICE INSTRUCTION

SI-79-01
Revision 1

20 Tube Oil Cooler Retrofit

SUBJECT / REASON / DESCRIPTION:

This service instruction describes the replacement of the 18 tube oil cooler with a 20 tube oil cooler. This modification includes increasing the oil cooling air inlet ducting from 3.5" to 4". This modification will lower oil temperatures during hot weather operations.

Revision 1 has been released to clarify the issue #s of the kit parts.

COMPLIANCE:

Compliance is optional.

EFFECTIVITY:

Serial 28 onwards.

This service instruction will be incorporated into aircraft at manufacture starting S/N100.

APPROVAL:

This modification has been approved by FAC Engineering and TCCA where applicable.

MANPOWER REQUIREMENTS:

It is estimated that the modification will take approximately 8 hours. This excludes labor necessary to open and close the aircraft, and work is performed by experienced personnel.

SPECIAL TOOLS / EQUIPMENT:

N/A

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PARTS LIST (BILL OF MATERIALS):

Kit FAC-SI-79-01 Rev 1

Qty	P/N	Description
1	P319-Iss 1 or later	Nozzle
1	P321-Iss 1 or later	Diffuser
2	QS 200-60H	4" S.S. Clamps
15"	892-361	Seal
20"	892-373	Seal
6"	SCAT16	Hose
1	MS21919WCJ10	Adel Clamp
1	20662A	20 Tube Oil Radiator
1	F353-7-Iss 16 or later	Bracket
1	F353-27-Iss16 or later	Bracket
1	P323-Iss1 or later	Standoff

WEIGHT & BALANCE:

There is a negligible change in weight and balance.

DRAWINGS/MANUALS:

FAC2-M200 Maintenance Manual (MM)

IMPLEMENTATION INSTRUCTIONS:

1. Disconnect, drain and cap oil cooler lines at oil cooler.
2. Remove the components shown in Figures 1 and 2. Retain all hardware as indicated.
3. Remove oil line fittings from old oil cooler and retain for later installation.
4. Disconnect the upper ignition wires from cylinders 2, 4 and 6. Remove the wires and the associated 3 wire plastic grommet from the aft port baffle plate.
5. Relocate the plastic grommet to the port side of the aft center baffle plate as shown in Figure 3. The grommet should be located as far outboard as possible while not causing the ignition wires to abrade against the engine mount.
6. An additional requirement to relocating the ignition wires is to install an Adel clamp, (supplied in Kit), using the P323 Standoff as indicated in Figure 4. The ignition wires may now be reinstalled thru the plastic grommet, thru the newly installed Adel clamp and back thru the previously existing clamps to their respective spark plugs.

7. Locate P319 Nozzle on aft port baffle plate as indicated in Figure 5 and mark the exterior rim of the flange onto the baffle plate. Offset the resultant outline by approximately ½". Cutout the material interior to this outline to form an opening for the P319 Nozzle. Be certain to smooth and deburr this edge. Mark and drill off holes for mounting hardware in P319 and the baffle plate. Apply a generous bead of gasket maker as given in Figure 5. This gasket material should be used to smooth any abrupt transitions between the baffle plate and the P319 nozzle.
8. Install new F353-7 and F353-27 as supplied in kit per Figure 6
9. Install retained oil line fittings into new oil cooler. Lubricate threads using Loctite 565 Thread Sealant.
10. Install Oil Cooler, p/n 20662A per Figure 7.
11. Connect oil cooler lines.
12. Install P235 Clip per Figure 8.
13. Install gasket material per Figure 9.
14. Install P321 Diffuser per Figure 10.
15. Service engine oil level in accordance with MM Section 12-10-20.
16. Start engine and perform engine/oil cooler leak check.
17. Service engine oil level in accordance with MM Section 12-10-20.
18. Complete the enclosed letter of confirmation and return via Fax or mail to FAC after implementation of service instruction".

LOG BOOK CERTIFICATION:

The 20 tube oil cooler installation was accomplished per Service Instruction SI-79-01.

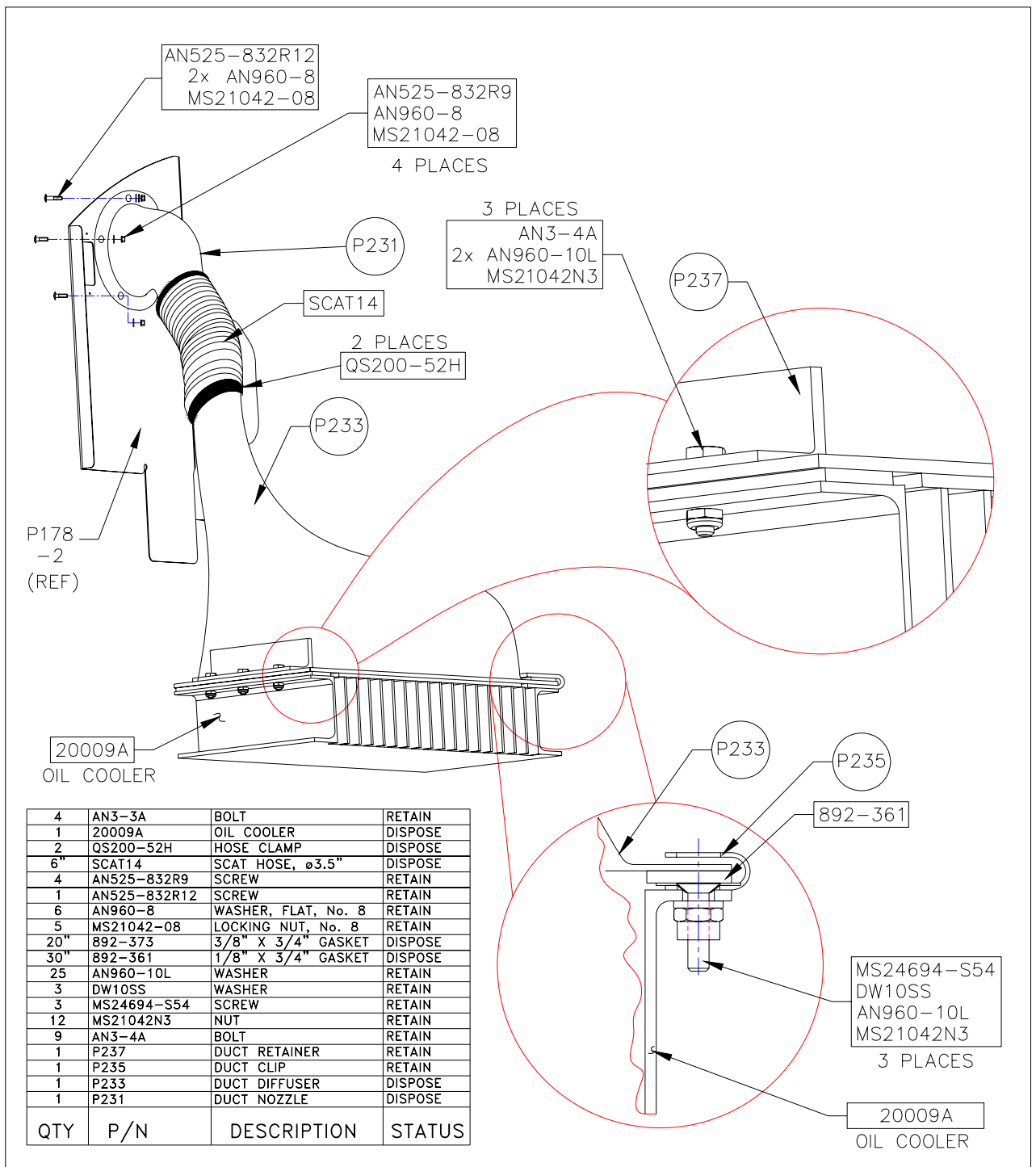


FIGURE 1 PARTS REMOVAL DETAILS

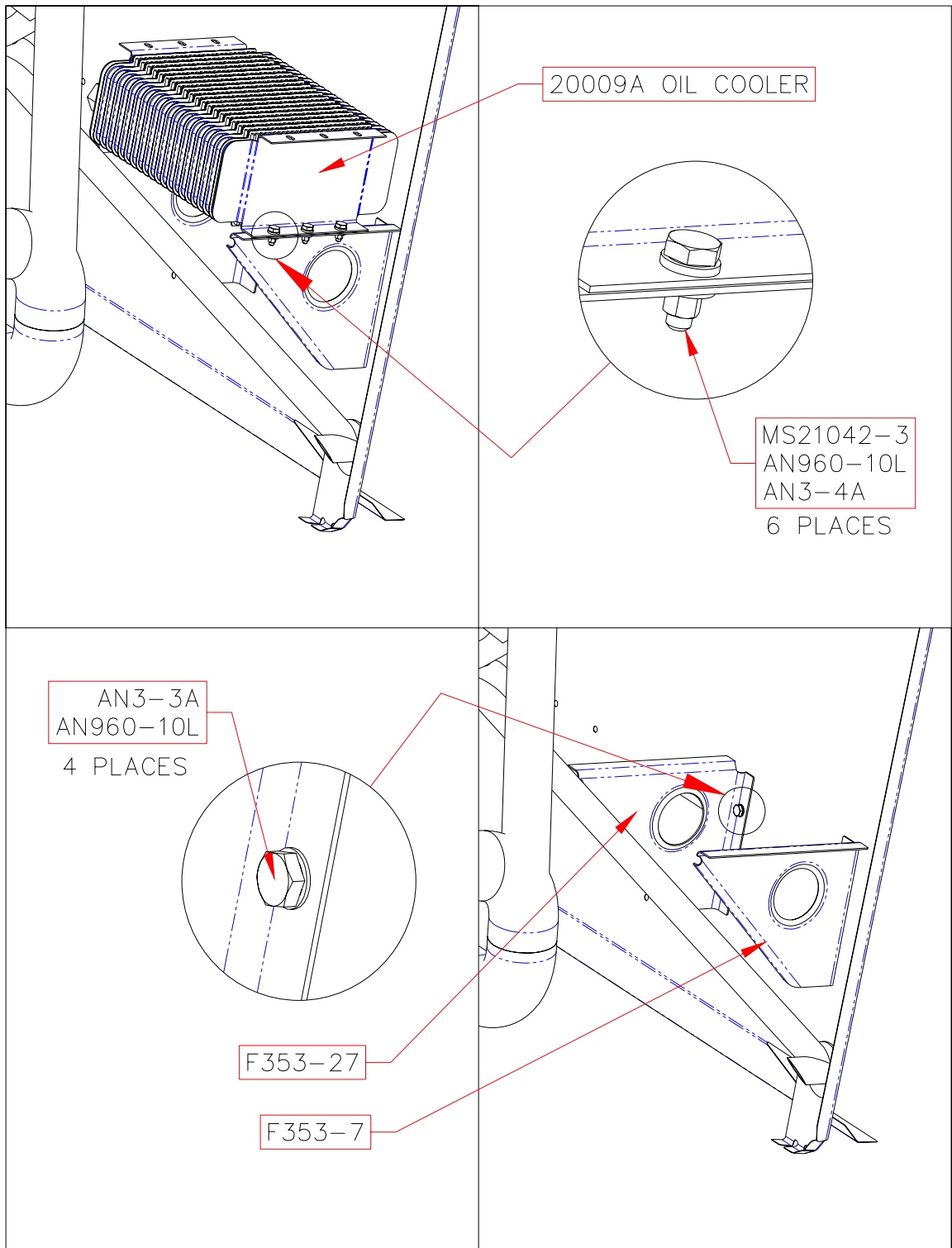


FIGURE 2 PARTS REMOVAL DETAILS

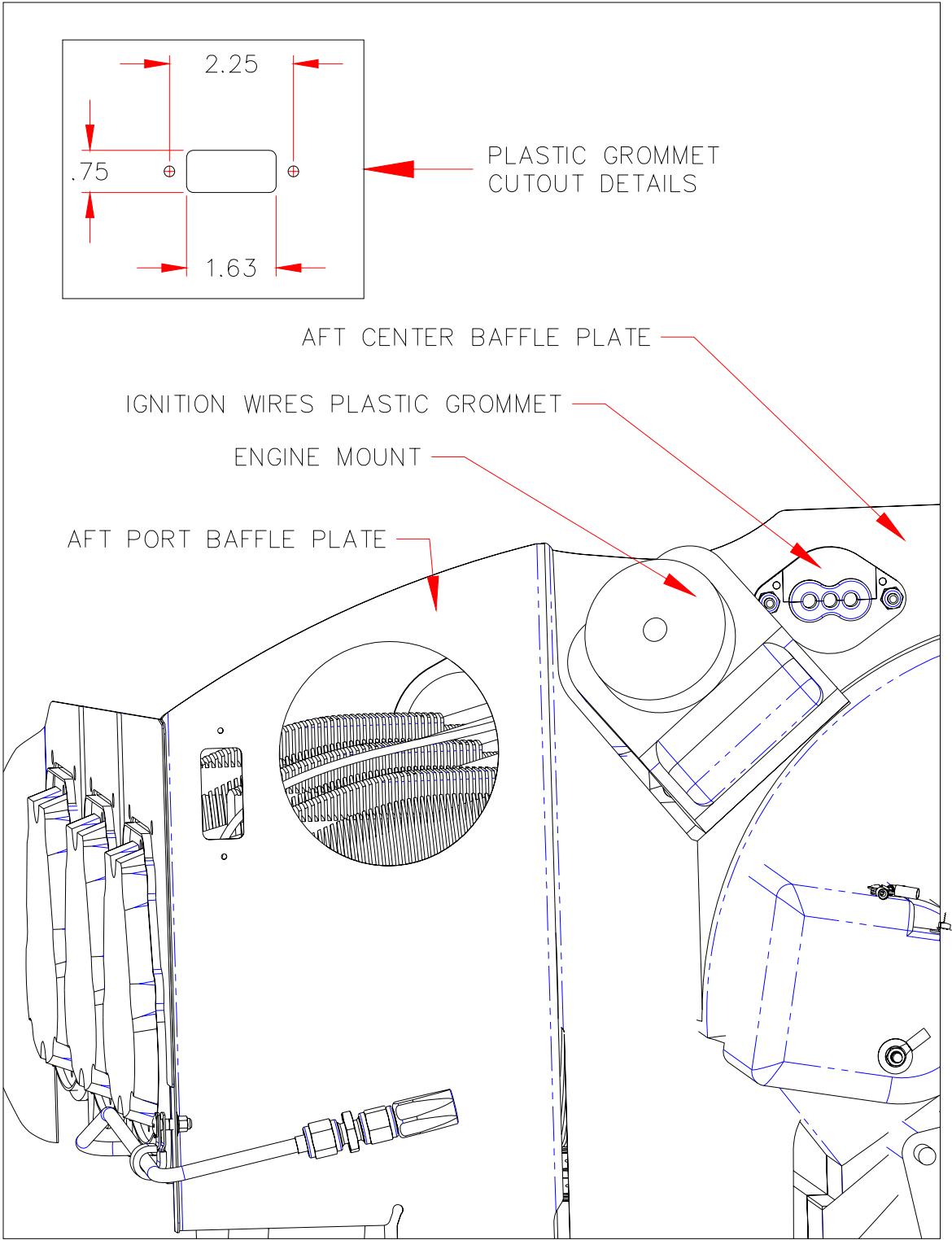


FIGURE 3 IGNITION WIRES GROMMET RELOCATION

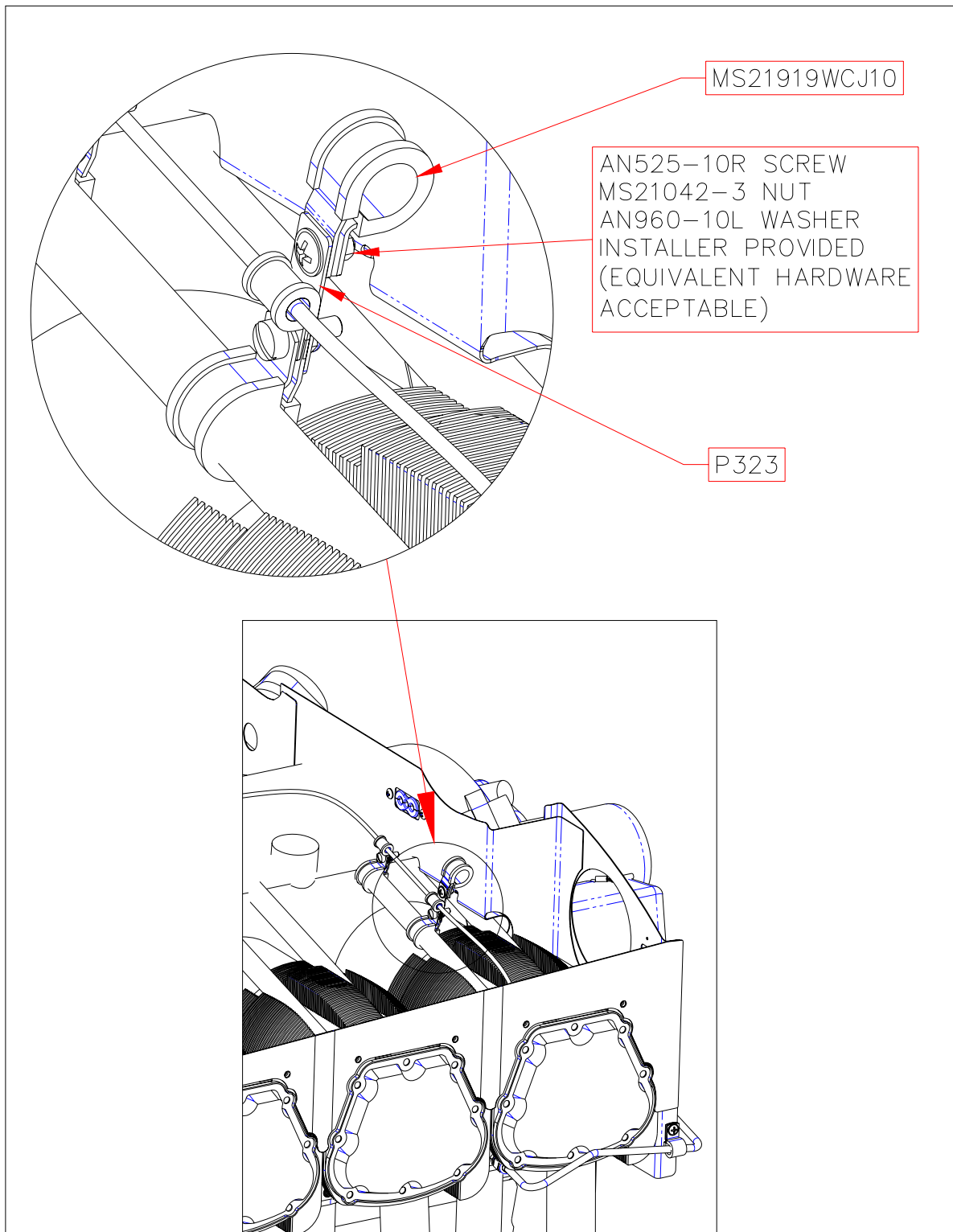


FIGURE 4 IGNITION WIRES ADEL CLAMP

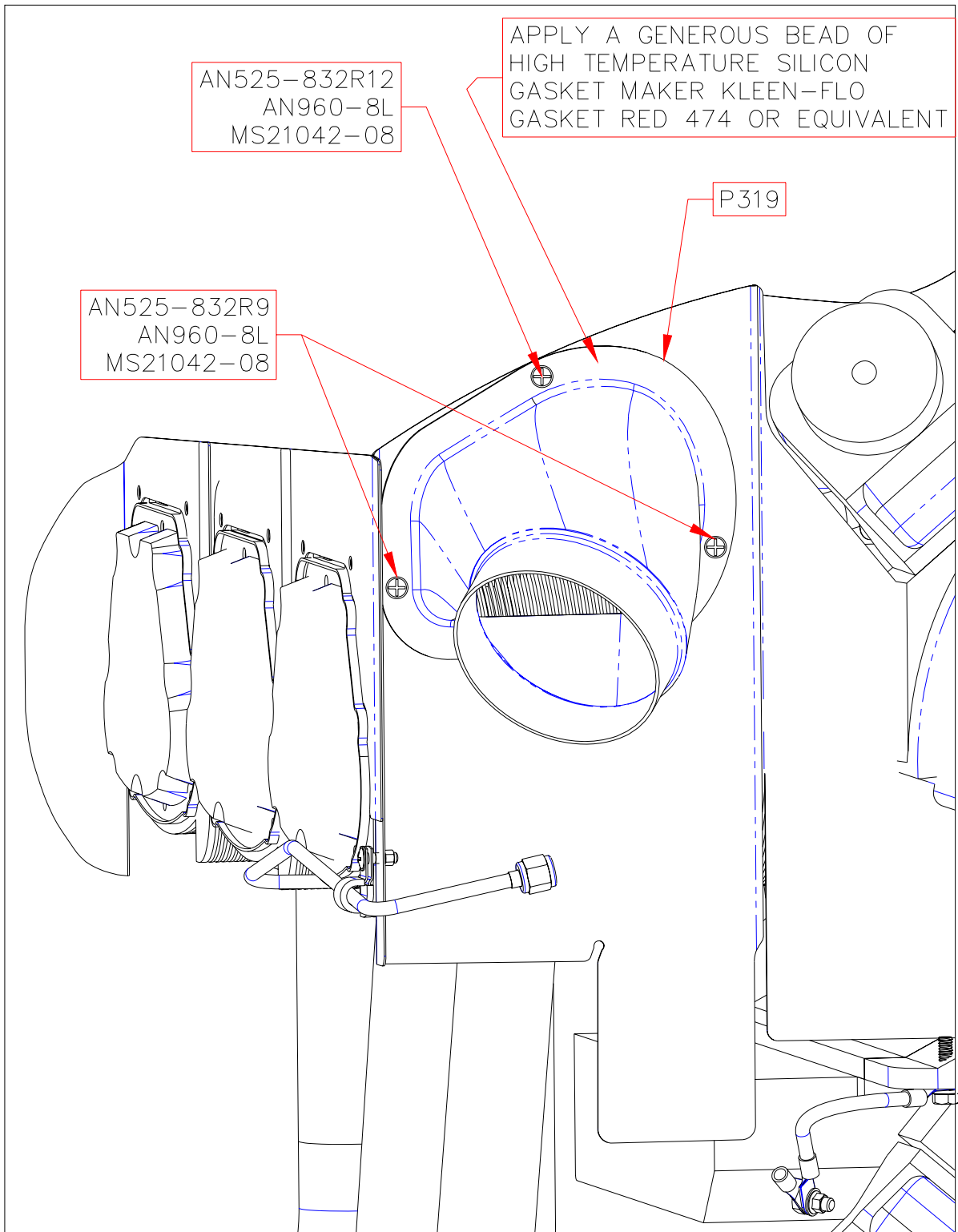


FIGURE 5 P319 LOCATION AND INSTALLATION DETAILS

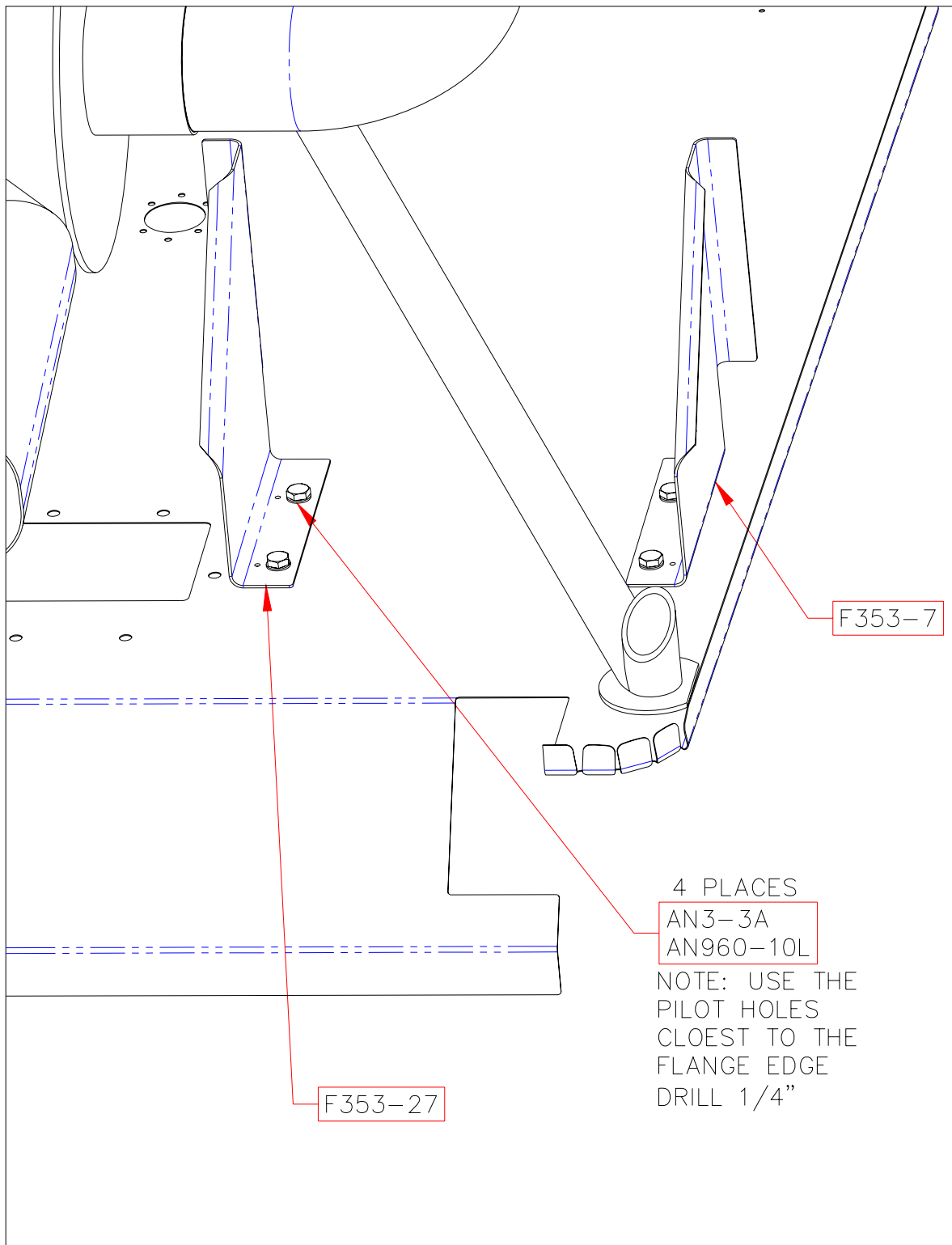


FIGURE 6 F353-7 & 27 MOUNTING

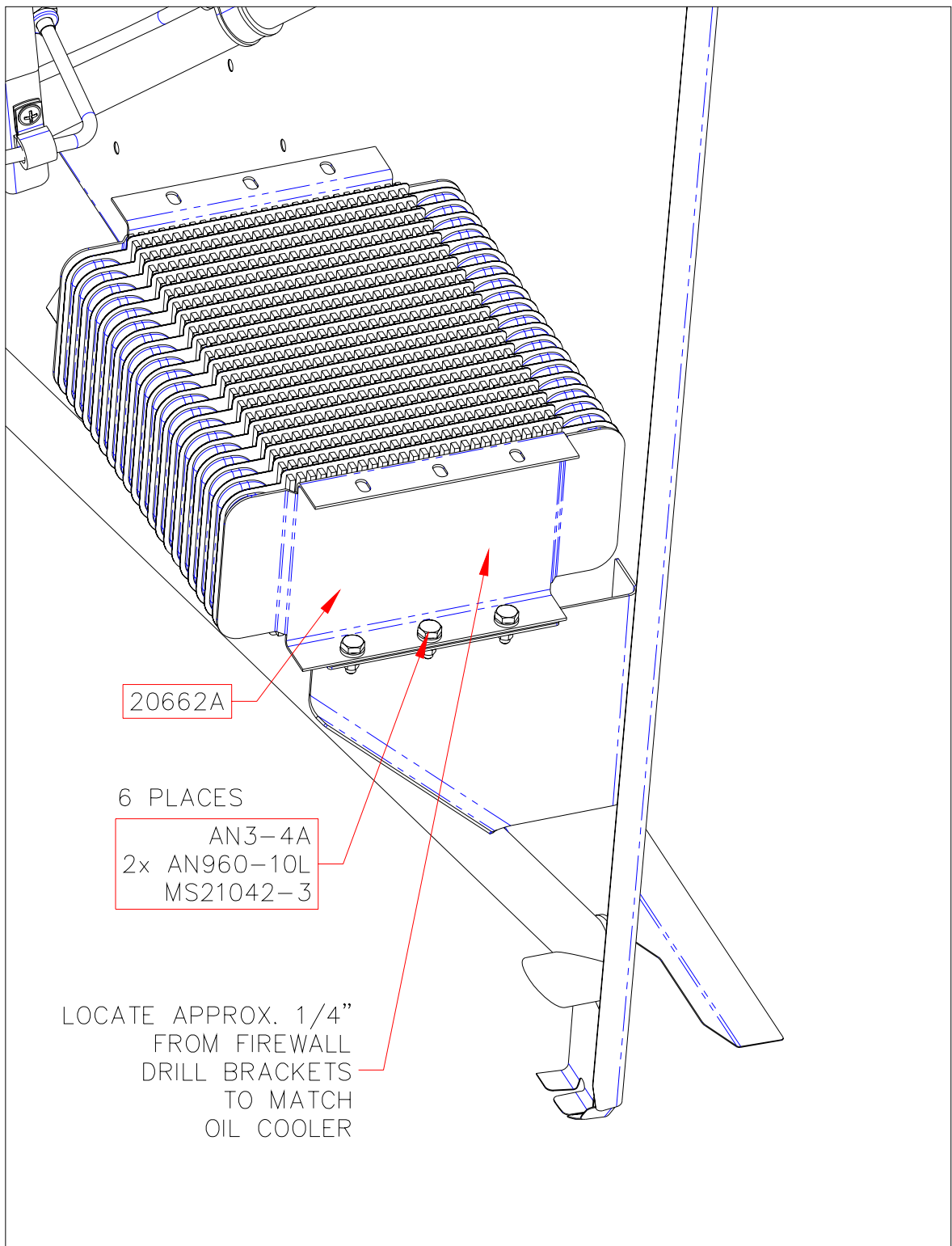


FIGURE 7 OIL COOLER INSTALL

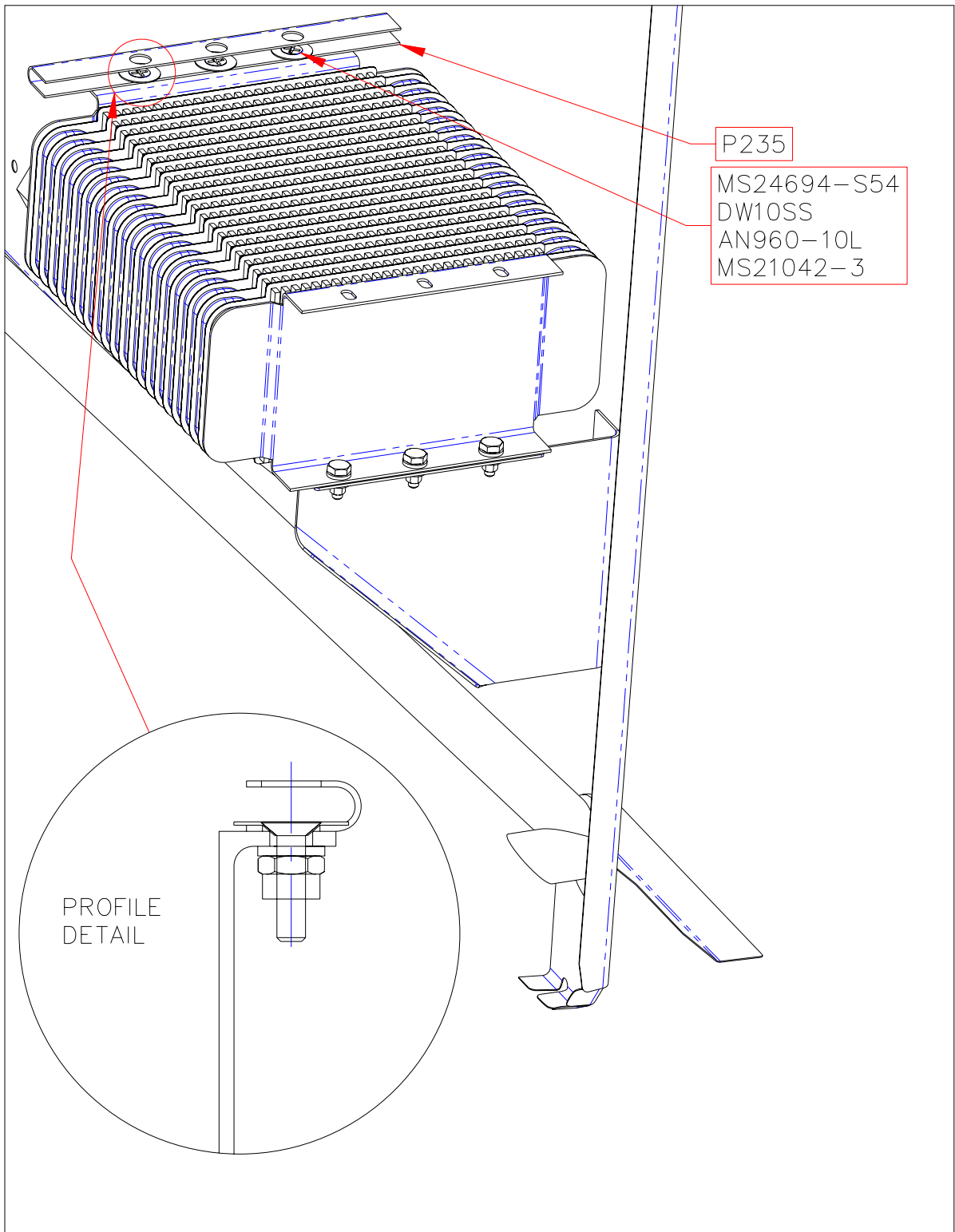


FIGURE 8 P235 INSTALLATION

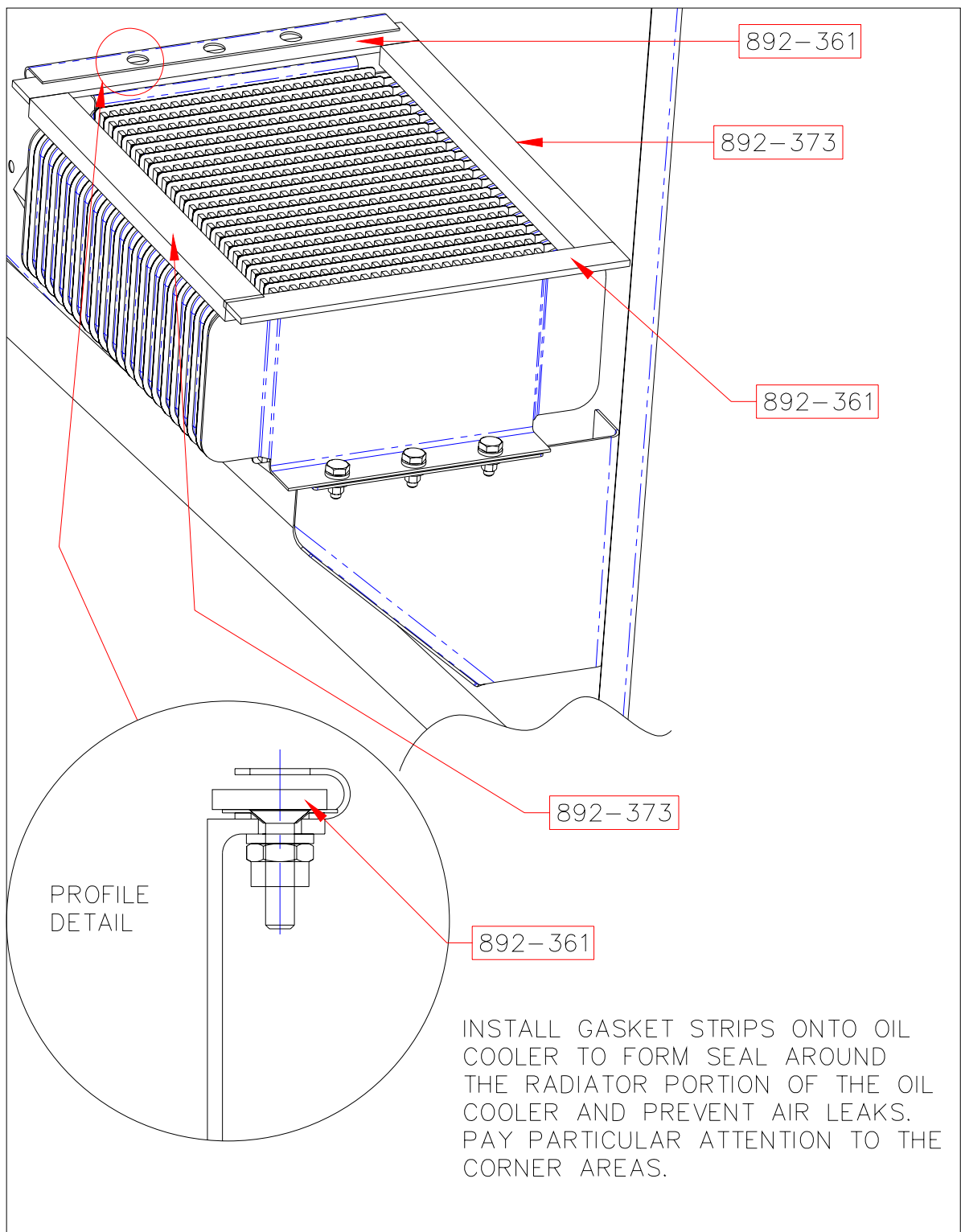


FIGURE 9 GASKET INSTALLATIONS

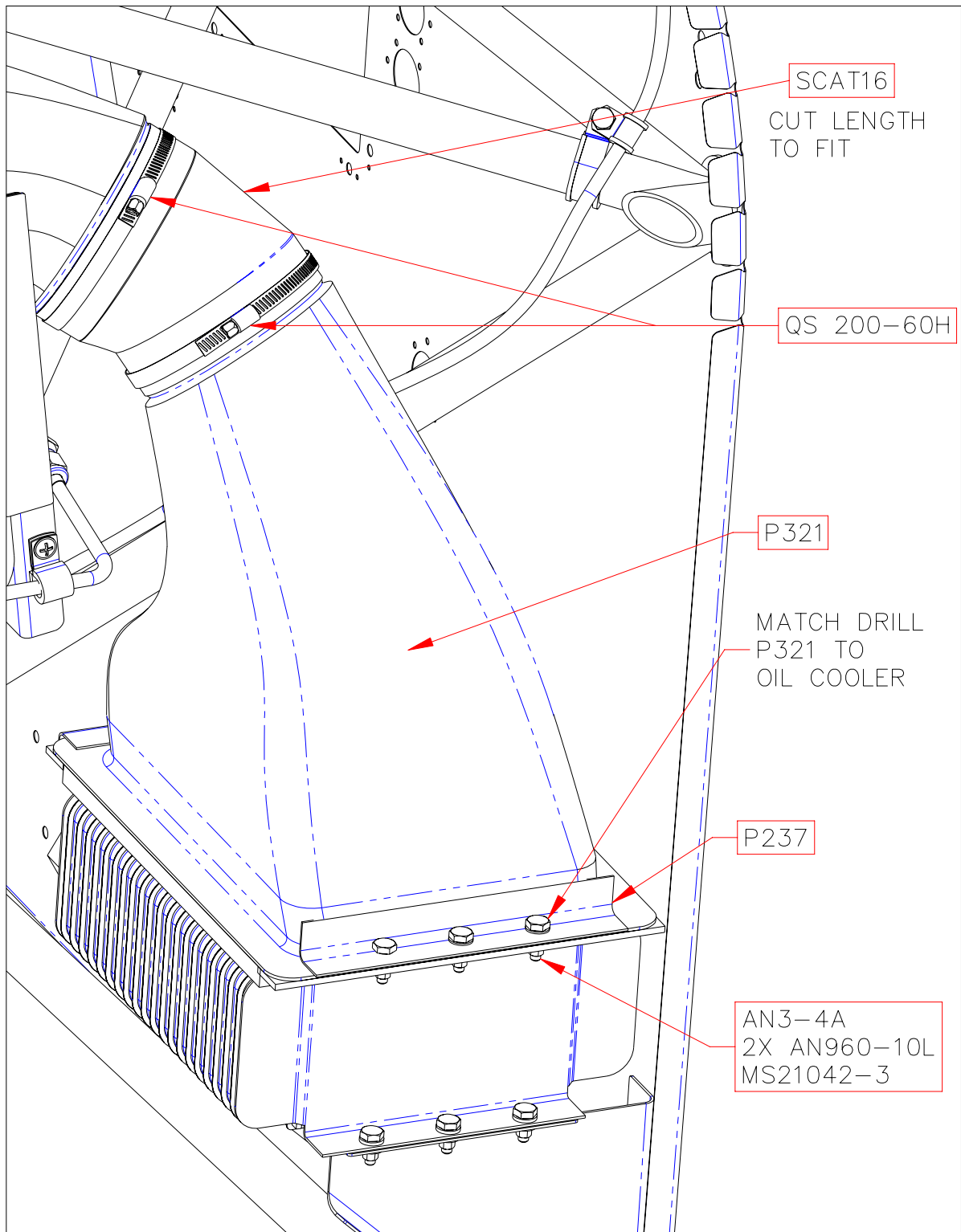


FIGURE 10 P321 INSTALLATION