

Z1 Q50 VHR OIL COOLER INSTALLATION MANUAL



This Installation Manual is intended for the following models:

2014-2015

Infiniti Q50 (VHR)

PROLOGUE:

Study these instructions completely before proceeding to assembly. The installer must have a thorough knowledge of automotive systems operation. If unfamiliar with any of the concepts outlined in this instruction, we recommend the installation be completed by a qualified professional.

WARNING!

Extreme caution should be taken when performing maintenance or performance upgrades to your vehicle. Please observe and abide by any Warning or Caution labels placed on the various components and tools used when servicing your vehicle. If you have any questions regarding installation or the various components included with the Z1 Motorsports Q50 VHR Oil Cooler, consult with a Professional Mechanic, or contact Z1 Motorsports for more information.

PARTS INCLUDED:

Item	Quantity	Description
1	2	Oil Cooler Bracket, Part A
2	2	Oil Cooler Bracket, Part B
3	1	Oil Cooler Bracket, Part C
4	4	M6 x 1.0 Flanged Locknut
5	1	M6 Riv-Nut Tool
6	4	M6 Isolating Mount Insert
7	14	M6 x 1.0 Hex Head Bolt, 16mm
8	4	M6 Isolating Mount
9	6	M6 Riv-Nut
10	4	M6 x 1.0 Bolt, 35mm
11	5	8" Reusable Zip Tie
12	2	-10 AN Port Fitting – M22 x 1.5
13	1	Oil Cooler Delete Hose
14	1	Oil Sandwich Plate Supplement
15	1	Oil Sandwich Bolt
16	1	Procooler Supplement Kit
17	1	Oil Cooler Line Kit
18	1	Procooler
19	1	Sandwich Plate

TOOLS REQUIRED:

- Hydraulic Jack
- (2) 2-Ton (or greater) Jack Stands
- Ratchet
- Ratchet Extension(s)
- Assorted Metric Wrenches
- Assorted Metric Sockets
- Torque Wrench
- Channel Lock Pliers

SAFETY REQUIREMENTS:

- Always wear safety glasses and any necessary protective garments. If using any fluids, chemicals, or solvents, a respirator is recommended.
- Always turn the ignition to the OFF position and disconnect the NEGATIVE battery terminal.
- Always use properly rated jack stands when working under your vehicle.
- Always keep limbs and parts away from moving drivetrain parts.
- Only operate drivetrain in safe space and well-ventilated areas.

BEFORE YOU BEGIN:

Remove contents from the Z1 Motorsports Q50 VHR Oil Cooler and verify that ALL necessary hardware is present.

PROCEDURE:

1. Place the transmission in Park position (or in Reverse gear if equipped with a manual transmission). Apply the parking brake.
2. Locate proper jacking points on vehicle's chassis (refer to vehicle's Owner Manual). Raise and support the vehicle using jack and jack stands.
3. Raise and support the hood of the vehicle.
4. Remove the Lower Engine Splash Shield or Undershroud if equipped. The OE Splash Shield will be secured with a combination of plastic clips and bolts. *Figure 1.*

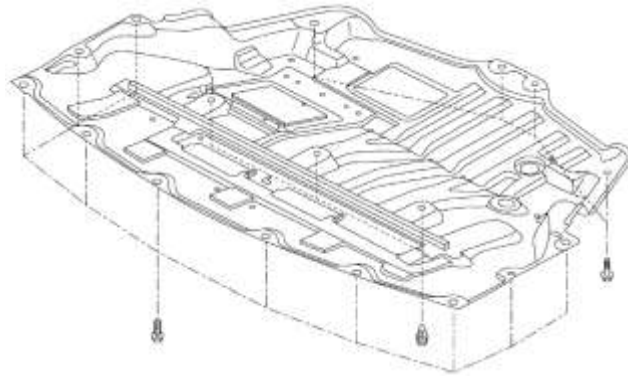


Figure 1

5. Remove the (8) eight plastic panel clips that secure the Radiator Air Guide on the top of the Front Bumper. Remove the Air Guide and set aside. *Figure 2.*

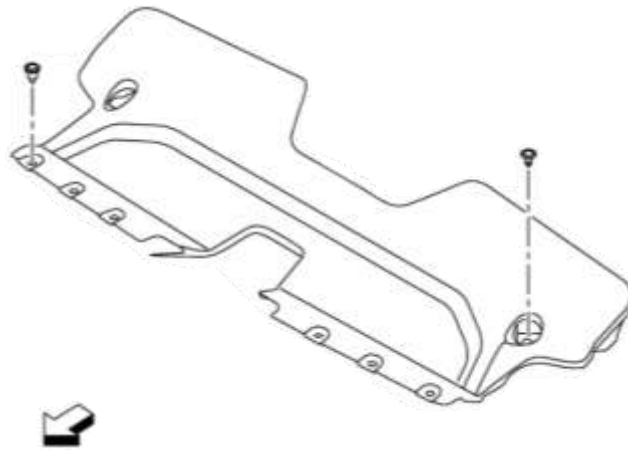


Figure 2

Use *Figure 3* below as a reference for the following Steps:

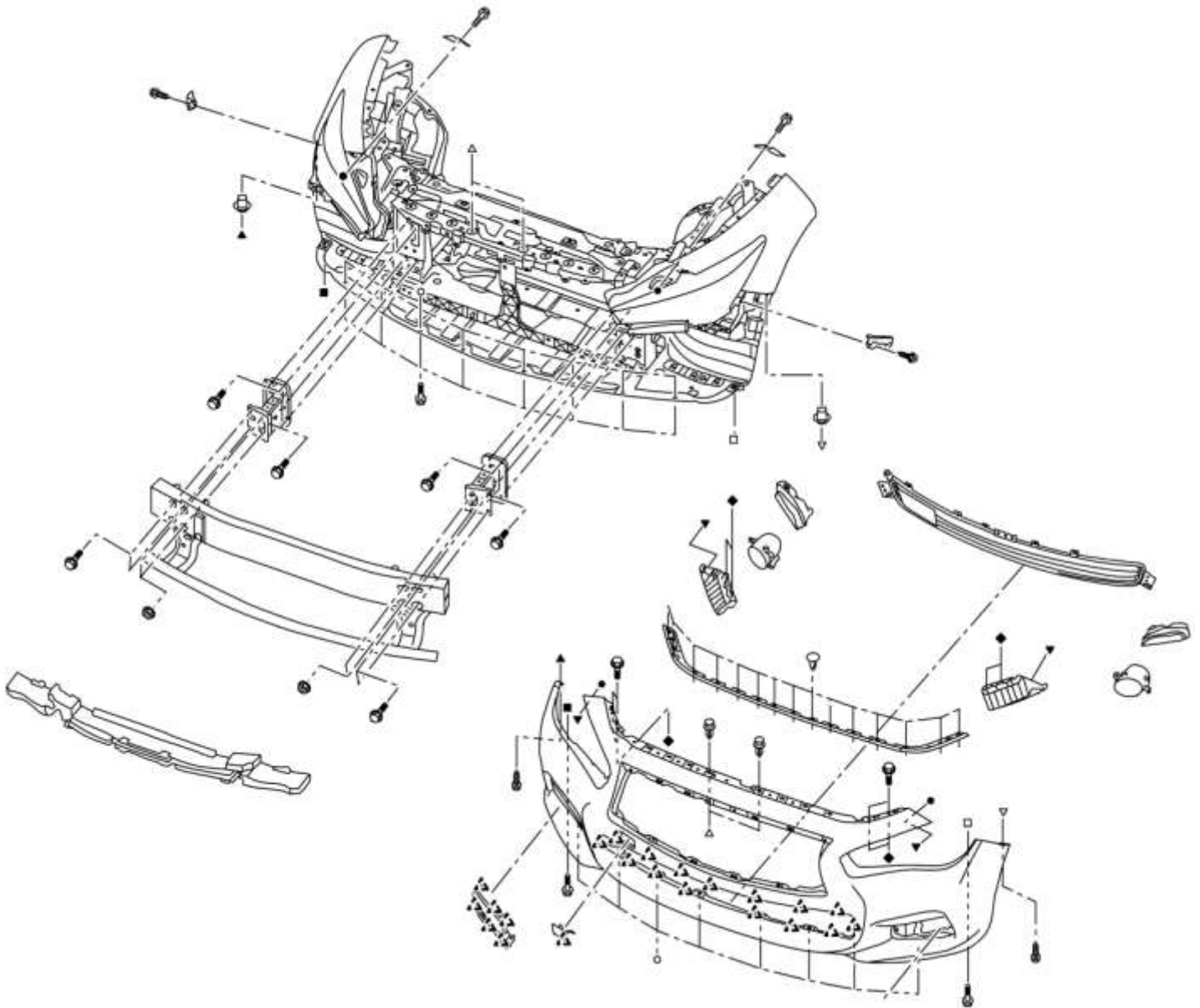


Figure 3

6. Remove the Front Bumper Side Bracket Bolt on each side of the vehicle under the Plastic Panels. Remove the Bumper Bracket. *Figure 4.*



Figure 4

7. Remove the bolts securing the Bumper Trim to the Front Bumper and set aside. *Figure 5.*



Figure 5

8. In each front Fender Well, remove the plastic clips securing the splash guard to the vehicle. Remove the Splash Guard from the Front Bumper. *Figure 6.*



Figure 6

9. Remove the Bumper Securing Bolt on each side of the vehicle in the Fender Well. *Figure 7.*



Figure 7

10. With the help of a partner, pull the Front Bumper towards the sides of the vehicle to disengage the Bumper from the vehicle.
11. With the Bumper removed, disconnect all of the Electrical Connectors and set the Front Bumper aside.
Figure 8.



Figure 8

12. Remove and set aside the Foam Impact Absorber.
13. Remove the (4) four nuts and (4) four bolts that secure the Crash Bar to the vehicle and remove the Crash Bar. *Figure 9.*



Figure 9

14. Remove the Radiator Side Air Guides from the vehicle and retain all hardware. *Figure 10.*



Figure 10

15. If you are performing an Oil Change during the installation, drain and collect the Engine Oil. If not, remove the Oil Filter and collect Oil.

16. Remove the Oil Cooler Bolt with a Hex/Allen Key from the vehicle. *Figure 11.*



Figure 11

17. Pinch the Lines from the Oil Cooler with pliers or clamps and remove the Oil Cooler from the vehicle. Be careful as some Coolant will leak out and may be hot if the Car was recently ran.
18. Remove the Rubber Coolant Lines that ran to the Oil Cooler and retain the Hose Clamps. Coolant will leak out so be prepared to catch fluid. *Figure 12.*

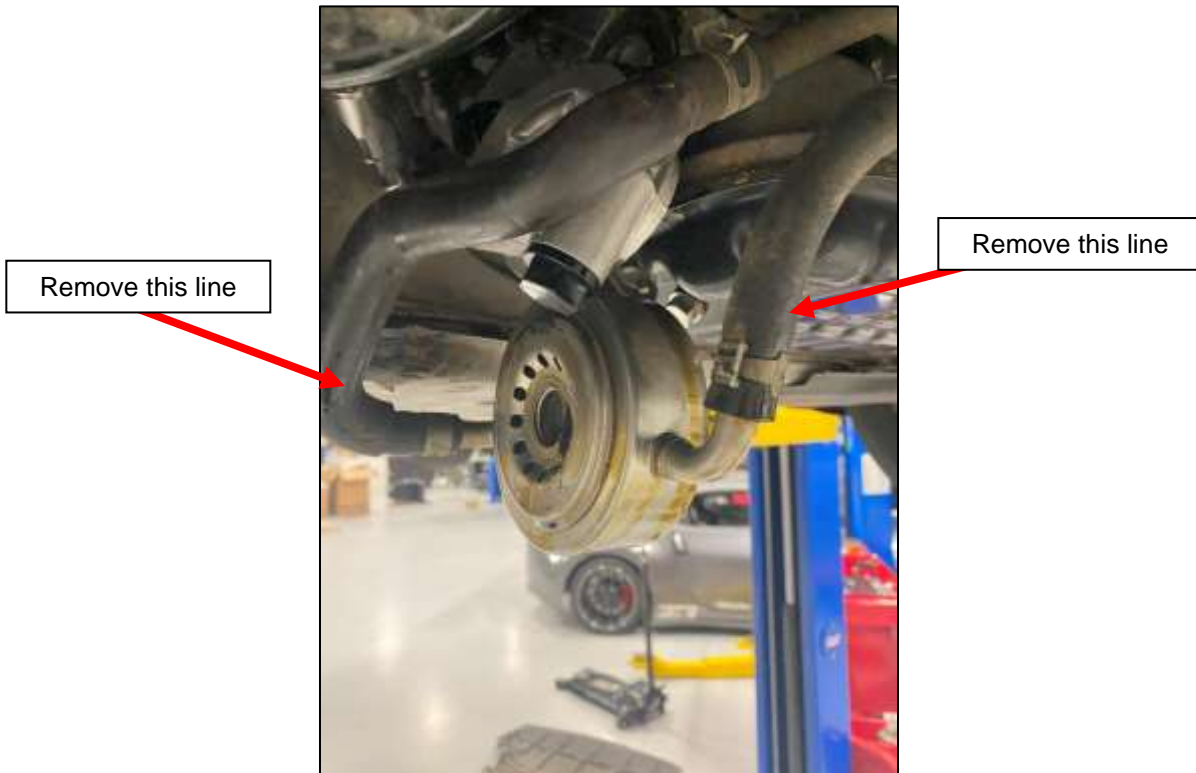


Figure 12

19. Locate the Oil Cooler Delete Hose and loop the two Oil Cooler Coolant Lines together and secure with an OE Hose Clamp. Clean up any spilled coolant. *Figure 13.*



Figure 13

20. Locate (6) six Riv-Nuts and the Riv-Nut installation tool. Install (3) three Riv-Nuts on each side of the bottom of the Core Support in the preexisting holes shown below. *Figure 14.*

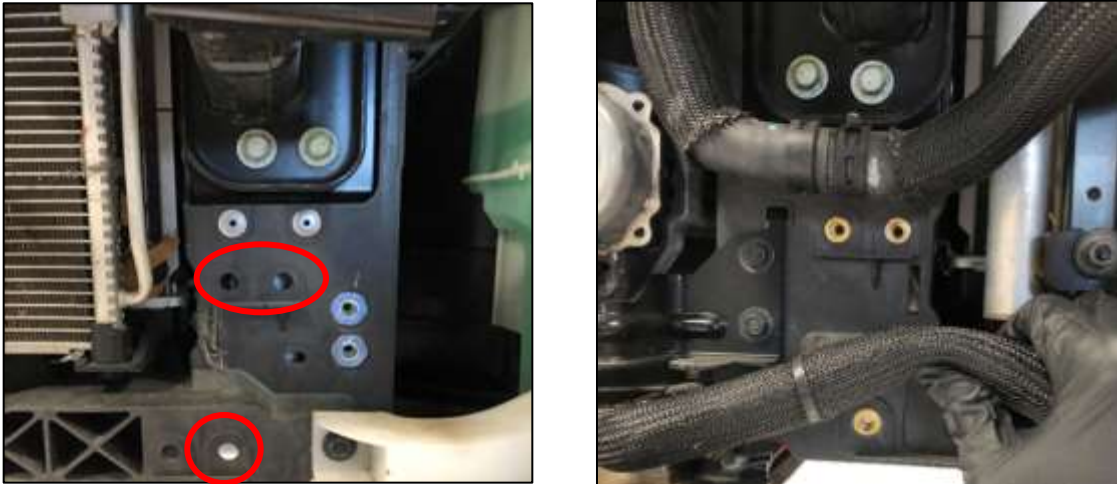


Figure 14

21. Locate the Part A Brackets and (6) six M6 x 1.0 Hex Head Bolts, 16mm. Place them over the Riv-Nuts installed in *Step 20* and secure with (3) three M6 x1.0 Bolts per bracket. *Figure 15.*

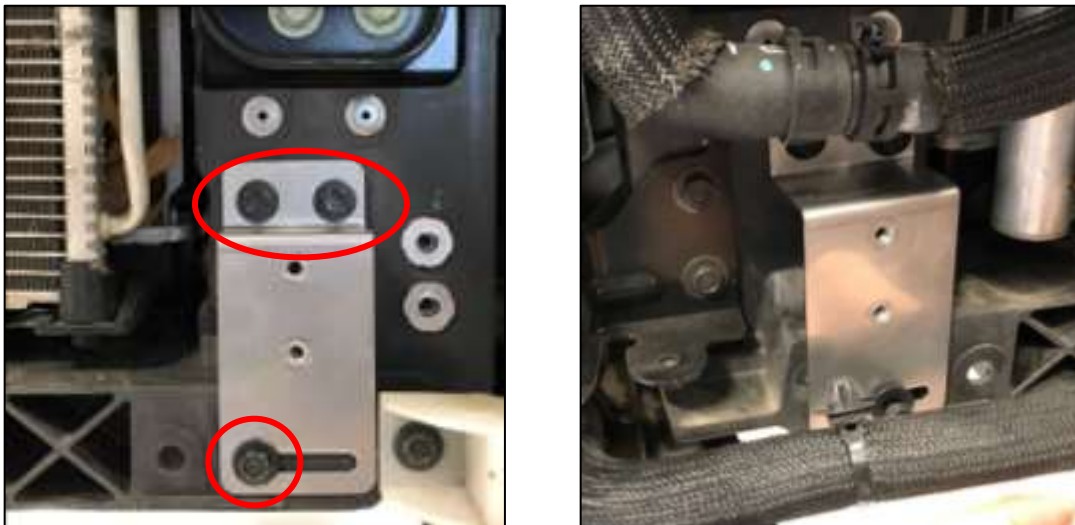


Figure 15

22. Locate both Part B Brackets. Install (2) two Rubber Isolating Mounts and (2) two Mount Inserts into each Bracket. *Figure 16.*
23. Position the Part B Brackets onto the Part A Brackets and secure with (2) two M6 x 1.0 Bolts, 35mm per Bracket. *Figure 16.*



Figure 16

24. Locate the Part C Bracket and (4) four M6 x 1.0 Hex Head Bolts, 16mm. Secure the Part C Bracket between the Part B Brackets with the M6 Bolts. *Figure 17.*

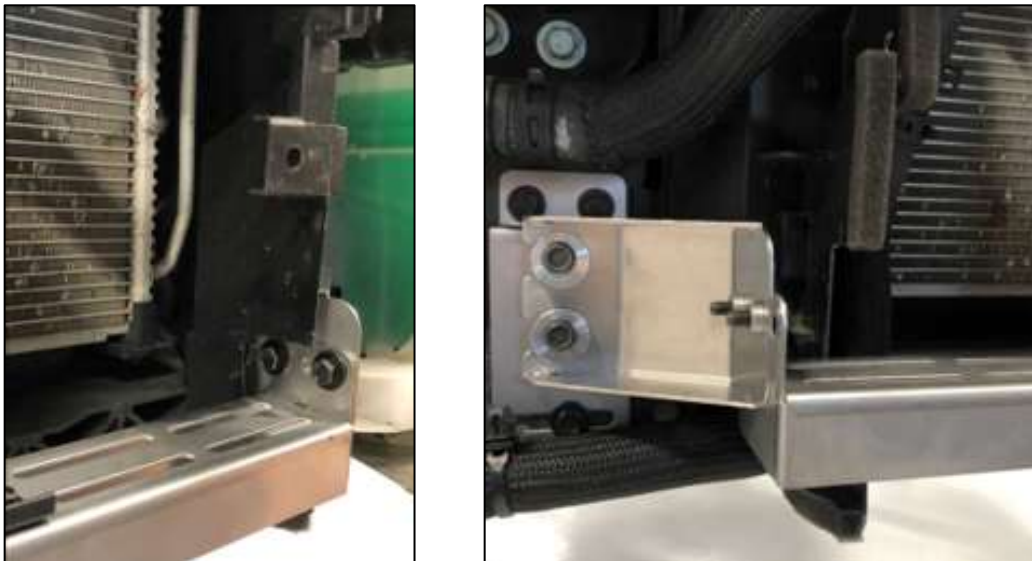


Figure 17

25. Locate the Radiator Air Guides removed in *Step 14*. Mark and trim the Air Guides to clear the Part C Bracket installed in *Step 24*. The Front Lower sections of each Air Guide will need to be removed. They are secured with (2) two plastic clips each. More may need to be trimmed for the Oil Cooler Lines in the coming steps. *Figure 18*.

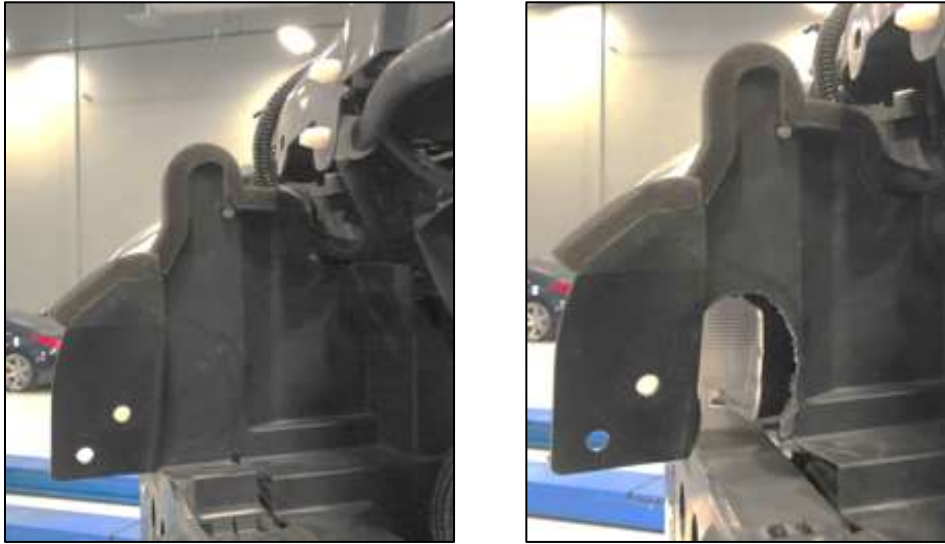


Figure 18

26. Mount the Procooler to the Driver Side of the Part C Bracket with (4) four M6 x 1.0 Hex Head Bolts, 16mm and (4) four M6 Locknuts. *Figure 19*.

NOTE: The Lines shown below will be installed in the upcoming steps.



Figure 19

27. Prefill the Oil Cooler with oil until full. This is a necessary step to prevent the engine from momentarily running with no oil flow.
28. Locate (2) two M22 to -10 AN Fittings. Lubricate the O-Rings on the Fittings with a Silicone Based Lubricant then install (1) one fitting into each port of the Procooler.
29. Locate both Oil Cooler Lines. Attach the Longer Line to the Driver Side of the Procooler and the Shorter Line to the Passenger Side of the Oil Cooler. Do not tighten the fittings yet. *Figure 20.*
30. Route the lines across the front of the vehicle to the passenger side, through the Radiator Air Guides, trim more as necessary. *Figure 20.*

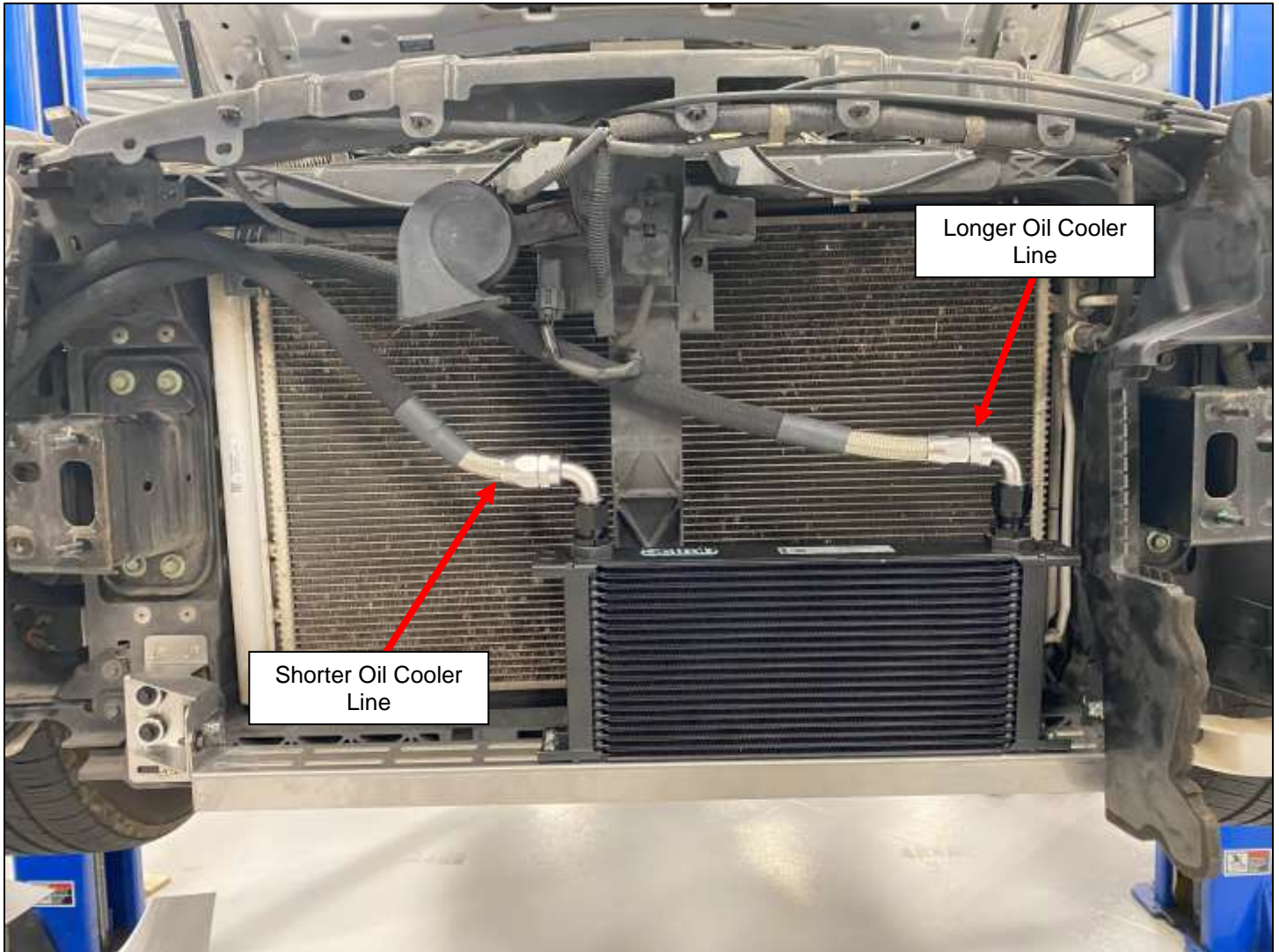


Figure 20

31. Locate the Oil Cooler Sandwich Plate. Remove the (2) two fittings and lubricate the Fitting O-Rings with a Silicone Based Lubricant, then reinstall the fittings. DO NOT overtighten the fittings as it can damage them.
32. Attach each end of the Oil Cooler Lines to the ports on the Sandwich plate. Do not tighten the fittings yet.
33. Clean the mounting surface for the new Oil Cooler Sandwich Plate.
34. Lubricate the Sandwich Plate Rubber Gasket with fresh Engine Oil.
35. Locate the Oil Sandwich Plate Bolt. Position the Sandwich Plate onto the Engine and loosely secure with the Sandwich Plate Bolt. Do not tighten the bolt all the way yet.
36. Rotate the Sandwich Plate towards the rear of the engine and make sure there is no contact or binding of the Oil Cooler Lines. Once positioned, tighten all of the Oil Cooler Line Fittings, do not overtighten as it can damage the seals. Torque the Oil Sandwich Plate Bolt to **36 ft-lbs**. *Figure 21.*



Figure 21

37. Secure the Oil Cooler Lines with Zip Ties to keep them together and prevent them from rubbing against anything.
38. Install a new Oil Filter onto the Sandwich Plate.
39. Refill the engine with oil and check level.
40. Start the engine and check the Oil Cooling System for any leaks. Tighten fittings as necessary.
41. Check oil level again.
42. Follow *Steps 4-13* in reverse to reinstall Crash Bar, Bumper and Exterior Trim.
43. Take vehicle for a test drive. Check Oil level after driving.

END

Additional Technical Support:
Contact Z1 Motorsports at info@z1motorsports.com
Or call 770-838-7777 between 9am and 6pm ET