

Z1 Q50 / Q60 3.0T OIL COOLER KIT INSTALLATION MANUAL



This Installation Manual is intended for the following models:

2014+	Infiniti Q50
2017+	Infiniti Q60

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 / Q60 3.0t Oil Cooler Kit, 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	1	Oil Cooler Line - Short
5	1	Oil Cooler Line - Long
6	4	Universal Rubber Mount – Isolating Mount
7	4	Universal Rubber Mount – Isolating Insert
8	1	Oil Filter Adapter
9	1	-206 O-Ring
10	1	Oil Filter Housing Adapter O-Ring – Large (37mm)
11	1	Oil Filter Housing Adapter O-Ring – Small (30mm)
12	1	Oil Filter Stud
13	1	Nylon Straight Coupler – 1/2" Barb
14	14	SEMS Screw M6 x 16mm
15	4	SEMS Screw M6 x 35mm
16	4	M6 Locking Nut
17	1	Setrab Oil Cooler
18	3	M22 to -10 AN Straight Fitting
19	1	Mocal Sandwich Plate
20	6	Riv-Nut (non-Red Sport)
21	1	Riv-Nut Installation Tool
22	5	8" Reusable Zip Tie

TOOLS REQUIRED:

- Ratchet
- Ratchet Extension(s)
- Flat-head Screwdriver
- Pliers
- Funnel
- Hydraulic Jack
- (2) 2-Ton (or greater) Jack Stands
- Torque Wrench
- Assorted Metric Sockets (10mm-19mm)
- Assorted Metric Wrenches (10mm-19mm)
- Assorted Metric Allen Head Wrenches
- 12mm Allen Head Socket

SAFETY REQUIREMENTS:

- Always wear safety glasses and any necessary protective garments. If using any fluids, chemicals, or solvents, a respirator is recommended.
- 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 / Q60 3.0t Oil Cooler Kit and verify that ALL necessary hardware is present.

Installation Note #1:

It is recommended that you perform the Z1 Motorsports Q50 / Q60 3.0t Oil Cooler Kit installation at a scheduled interval when your vehicle requires an oil change. This is because the oil filter must be removed, and that some engine oil will be lost in order to properly install the kit.

Installation Note #2:

Installation of the Z1 Oil Cooler Kit on Red Sport models will require the removal of the factory Red Sport oil cooler. This includes removing:

- Oil Filter Housing
- Oil Cooler Lines
- Oil Cooler and attached shroud

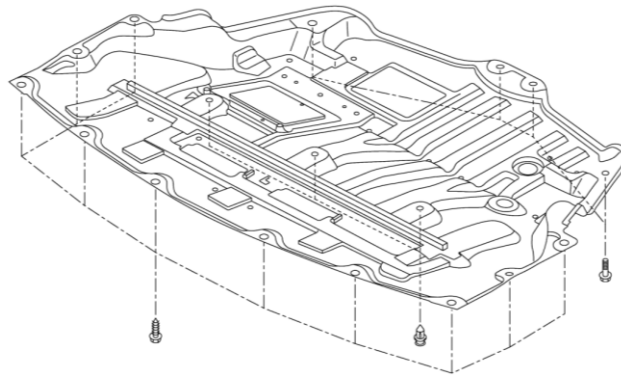
Please refer to the last page of this manual for reference.

Installation Note #3:

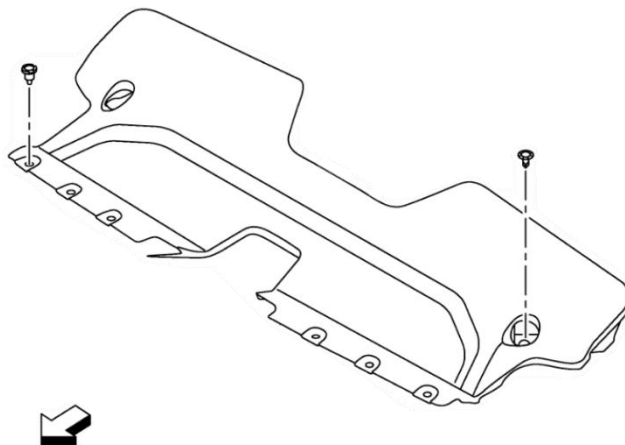
Models equipped with adaptive cruise control may require the removal of the adaptive cruise control module for installation. If this module is moved, dealership programming may be necessary. Installation of this kit may be possible without removing the adaptive cruise control module, but installation instructions are not provided.

PROCEDURE:

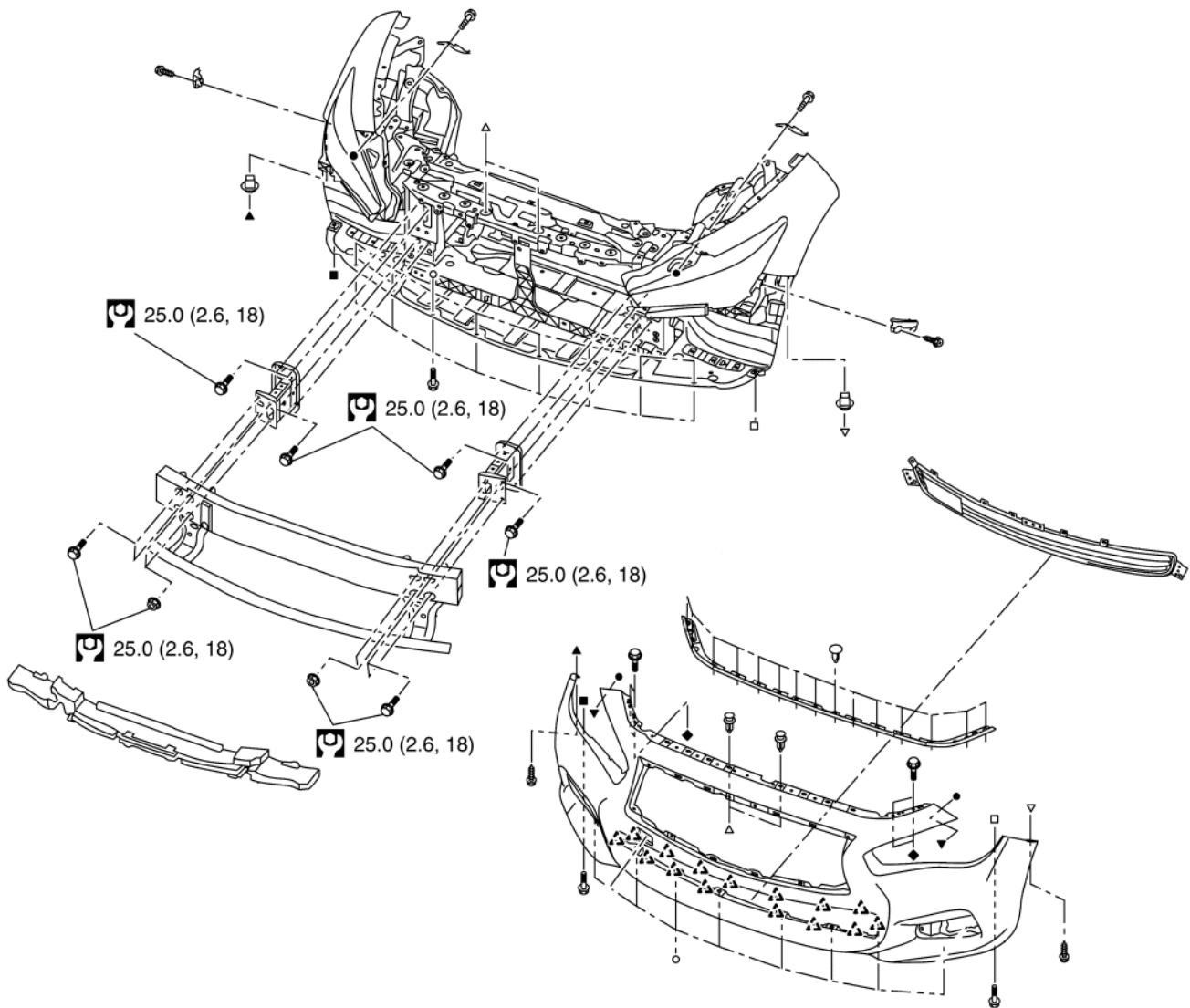
1. Assure the car's ignition is in the OFF position and the NEGATIVE (-) battery terminal is disconnected.
2. Place the transmission in Park position (or in Reverse gear if equipped with a manual transmission). Apply the parking brake.
3. Unlatch and raise vehicle's hood. Apply hood prop.
4. Locate proper jacking points on vehicle's chassis (refer to vehicle's Owner Manual). Raise and support front of vehicle using jack & jack stands.
5. Remove the lower engine splash shield. Fasteners will be an assortment of 10mm screws and plastic panel pop clips. Use a flat head screwdriver to gently pry the pop clips up.



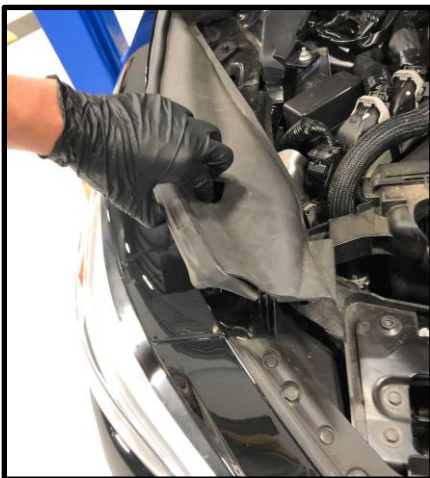
6. Remove the (8) plastic panel pop clips securing the air duct at the top of the front bumper fascia. Remove air duct and set aside.



Use the diagrams below as reference for the following steps:



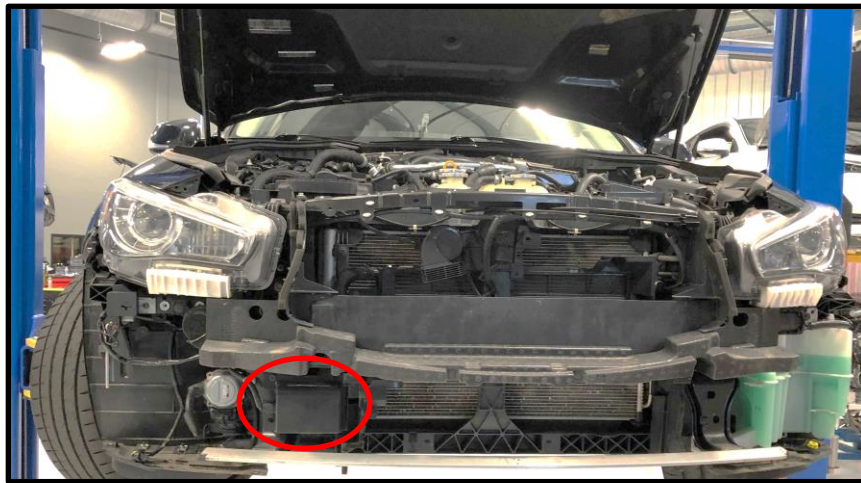
7. Gently pry up the front of plastic panels on both sides of the engine bay to reveal (1) mounting screw at each side securing front bumper fascia to fender (as shown). Remove bolts and set aside.



8. Remove plastic clips and peel back front wheel liner to reveal (1) mounting screw at each side of vehicle which mounts bumper fascia to the vehicle (as shown). Remove mounting screws.

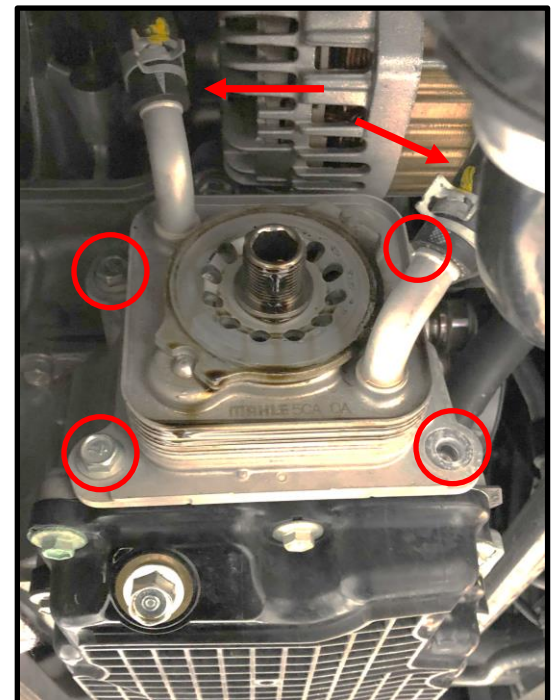
Note: Turn front wheels of vehicle to the inside of the side you are working on for increased accessibility.

9. Remove the (4) mounting screws on the underside of front bumper fascia, securing the corner of the bumper fascia to the bottom of the fender liners.
10. With a light pull motion, carefully disengage bumper fascia from clips on vehicle around each headlight. Remove bumper fascia and set aside.
11. Remove the foam impact absorber and set aside.
12. If equipped, remove the (2) mounting screws securing the adaptive cruise control box to the crash bar (circled below). Carefully place adaptive cruise control box up and out of the way, towards the engine bay.



13. Remove the (4) nuts and (4) bolts securing the crash bar to the vehicle. Remove crash bar and set aside.
14. If performing an oil change, place a drain bucket underneath engine. Remove drain plug on engine oil pan. Reinstall drain plug once oil is finished draining.
15. Remove oil filter.
16. **Non-Red Sport Models:** Loosen hose clamps and remove both coolant hoses from the OEM water to oil heat exchanger (oil filter housing).
17. Remove (4) bolts securing OEM water to oil heat exchanger to engine (circled at right). Remove heat exchanger. Retain the (4) bolts as they will be reused.

Note: Red Sport model's oil filter housing looks different than picture at right, but will still be removed.
Refer to the last page of this manual for reference.



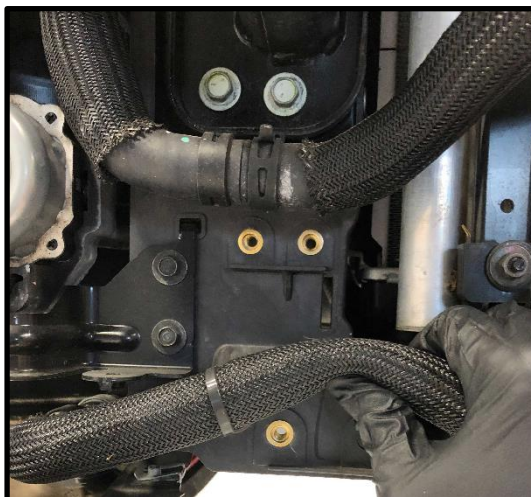
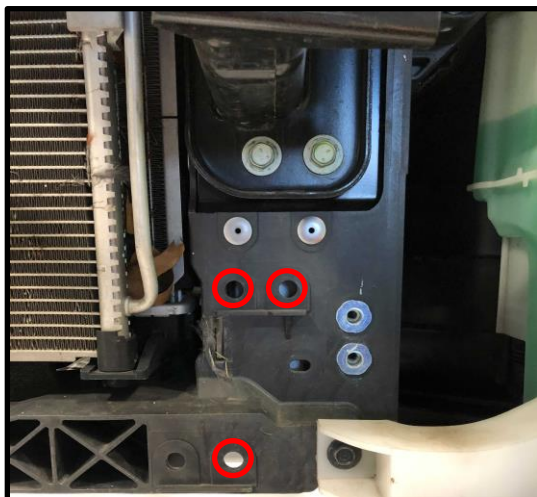
18. **Non-Red Sport Models:** Locate the nylon straight coupler – 1/2" barb. Connect the (2) hoses removed in step #16 to the coupler. Secure with OEM hose clamps.
19. Locate Z1 Oil Filter Adapter Plate, -206 O-ring, 37mm O-ring, and 30mm O-ring. Install O-rings on backside of Z1 Oil Filter Adapter Plate (as shown).
20. Attach Z1 Oil Filter Adapter Plate to engine using OEM hardware removed in step #17. Torque to 16ft-lbs.



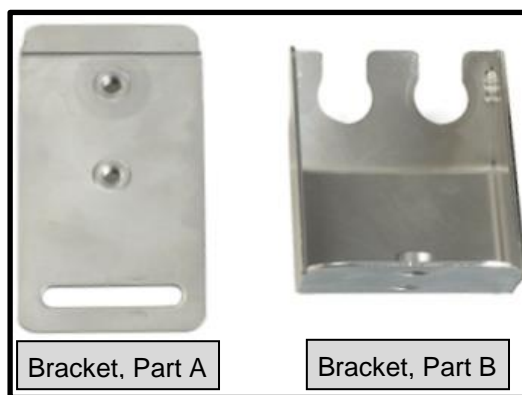
Steps #21 & #22 only apply to Non-Red Sport models. Red Sport vehicles can skip to step #23

21. Locate (6) riv-nuts and the riv-nut installation tool.
22. Install (3) riv-nuts on each side of the bottom of the radiator core support in the holes circled below.

Note: The passenger side has a coolant line secured with a zip-tie clip to the radiator core support. Cut or unlatch the clip and hold hose up to install riv-nut (as shown).



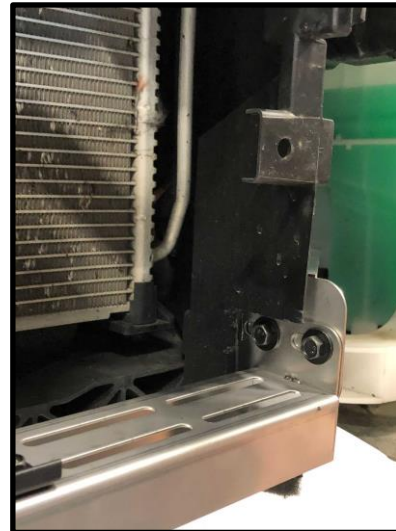
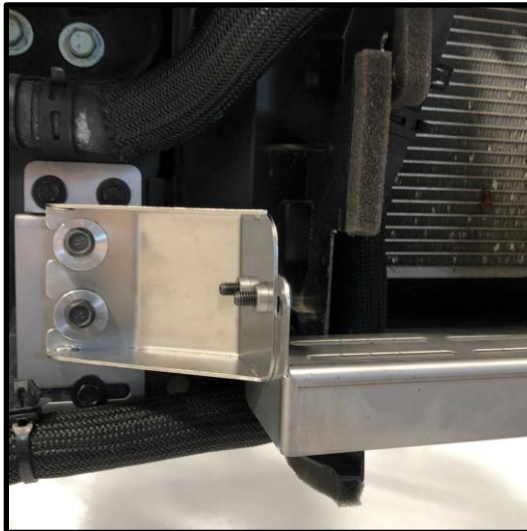
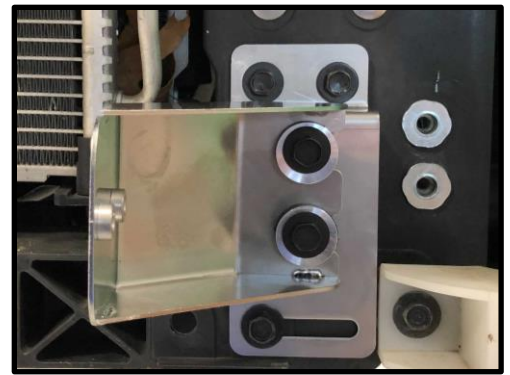
23. Locate (2) part A brackets. Position brackets over riv-nuts. Secure with (3) 16mm SEMS screws on each side (as shown).



24. Locate both part B brackets. Install (2) rubber isolating mounts in each bracket. Install an aluminum mount insert in each rubber isolating mount.
25. Secure part B brackets to part A brackets using (2) 35mm SEMS screws on each side (as shown).
26. Locate part C bracket. Position between part B brackets.
27. Mark and trim plastic side radiator air guides to fit part C bracket (as shown below).

Note: The front lower sections of each side air guide (pictured at right) will need to be removed. They are each secured with (2) plastic panel pop clips.

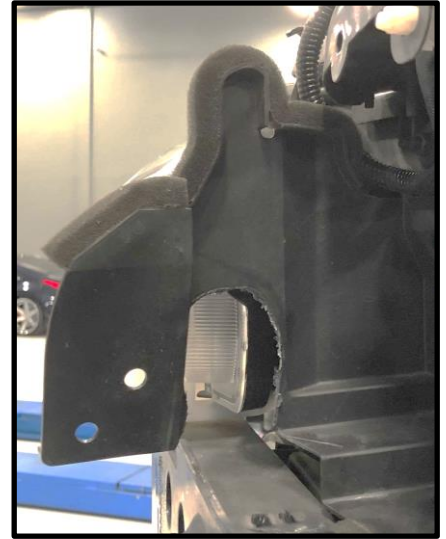
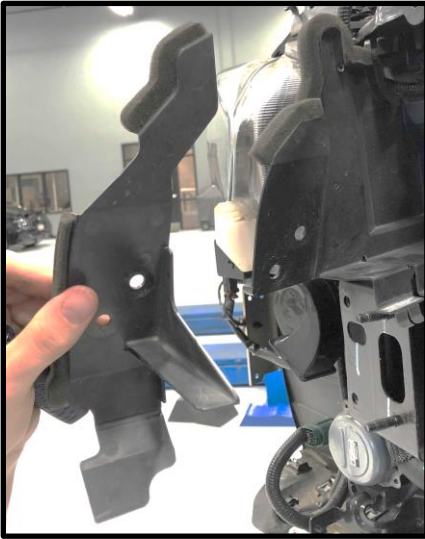
28. Attach part C bracket to part B bracket using (4) 16mm SEMS screws in the same orientation as pictured below.



29. Locate Setrab Oil Cooler core and (2) M22 to -10 AN straight fittings. Install (1) straight fitting onto oil cooler.
30. Mount Setrab Oil Cooler core to part C bracket using (4) 16mm SEMS screws and (4) nylon locking nuts.



31. Prefill oil cooler core using port on cooler without fitting. Once prefilled, install (1) straight fitting onto remaining empty port on oil cooler core.
32. Remove the front upper section of the passenger side air guide (as shown). It is secured with (2) plastic panel pop clips. Trim the remaining upper section to fit the oil cooler lines (as shown).



33. Locate both oil cooler lines. Install longer line on driver side fitting and shorter line on passenger side fitting.
34. Route the lines through the trimmed side air guide, under passenger side horn, and towards the engine bay.

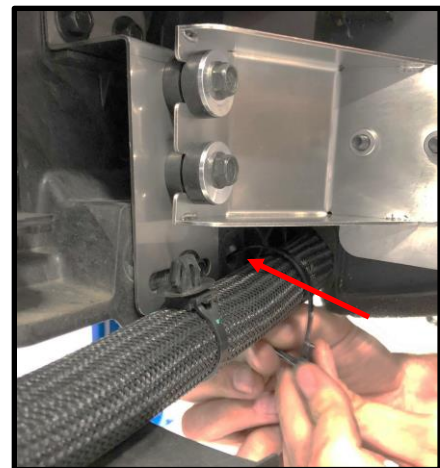
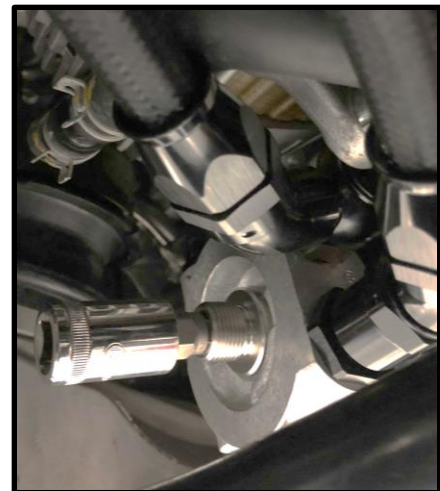


35. Pull lines through and position them underneath the alternator.
36. Locate Mocal Sandwich Plate and (1) M22 to -10 AN straight fitting. Attach the fitting to the sandwich plate at the threaded hole circled in picture at right.
37. Attach oil line fitting with female threads to -10 AN fitting installed in previous step (as shown).
38. Attach oil line fitting with male threads to the other threaded hole in sandwich plate (as shown).

Note: Do not fully tighten fittings yet.



39. Locate Z1 Oil Filter Stud. Place stud through the Mocal Sandwich Plate and thread into Z1 Oil Filter Adapter on engine.
40. With the sandwich plate in place and oriented properly, angle the fittings so that they clear any and all brackets. Also, be sure to aim the oil cooler lines in a direction so that the smoothest possible bends are created without a fold or break in the lines. Tighten the fittings as best as possible (you will be removing the sandwich plate again in the next step so that the fittings can be properly torqued. This step is for “mock-up” and fitment purposes). Use zip ties to secure the lines together and to keep them away from suspension components.
41. Remove the sandwich plate assembly carefully. Be careful not to disturb the angle of the fittings. Tighten down the fittings.
42. Reinstall the sandwich plate and oil filter stud. Tighten down the stud using a 12mm Allen socket, torque to 25ft-lbs.
43. Install engine oil filter (new preferably).
44. Zip tie the coolant line that was unclipped in step #22 to the hole in the bottom of radiator core support next to part A bracket (as shown).
45. Refill engine with oil.
46. Crank the engine and inspect for any leaks.
47. Reinstall the previously removed hardware, crash bar, and fascia. Repeat steps #5-13 in reverse order.
48. Inspect vehicle for loose tools/items.
49. Properly lower vehicle from jack stands.
50. Perform a final test drive of vehicle.

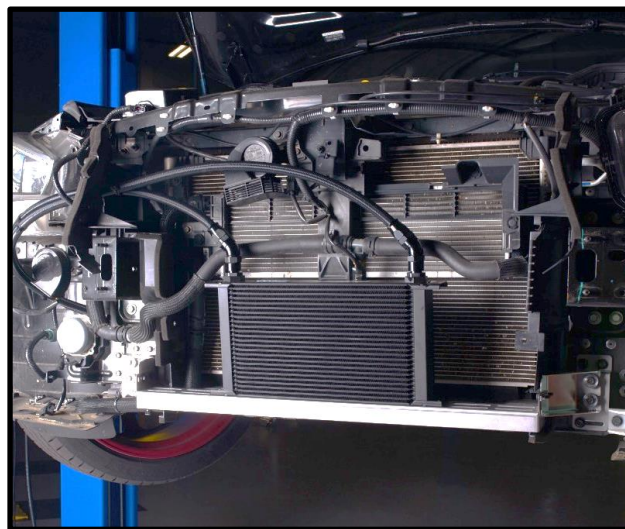


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Additional Technical Support:
Contact Z1 Motorsports at info@z1motorsports.com
Or call 770-838-7777 between 9am and 6pm ET

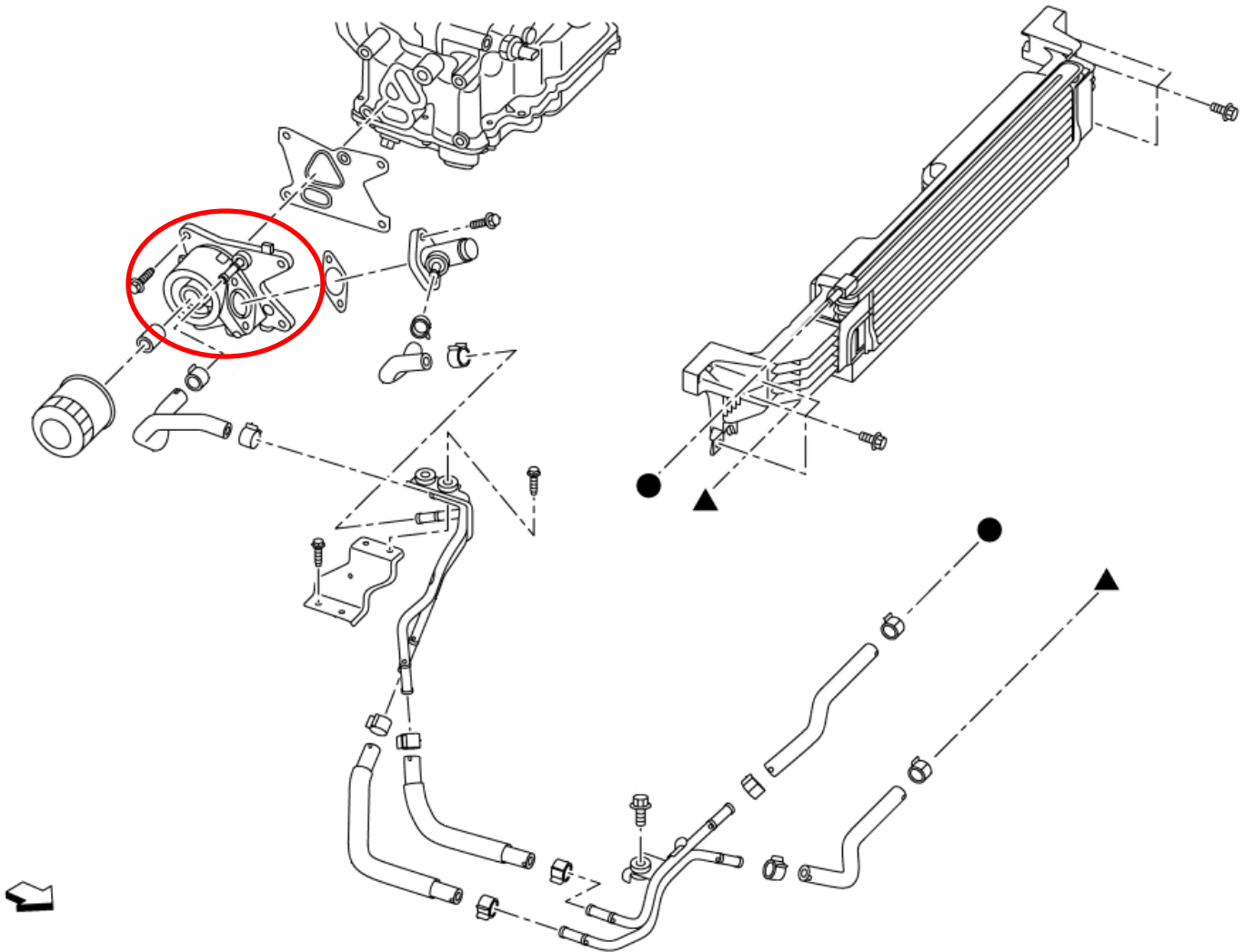
BE SURE TO CHECK ENGINE OIL LEVEL AFTER TEST DRIVING!

Completed assembly of Q50 / Q60 Oil Cooler Kit should look as shown:



Red Sport models ONLY

Use the following diagram as reference when removing the OEM Red Sport oil cooler:



- This entire system will be removed and replaced when installing the Z1 Q50 / Q60 Oil Cooler Kit.
- The oil filter housing (circled in red) is removed in step #17.
 - Refer to the Factory Service Manual (FSM) to remove the rest of the system.