

Z1 Q50 / Q60 HEAT EXCHANGER INSTALLATION MANUAL



This Installation Manual is intended for the following models:

2016+	Infiniti Q50 (VR30)
2017+	Infiniti Q60 (VR30)

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 Heat Exchanger, consult with a Professional Mechanic or contact Z1 Motorsports for more information.

PARTS INCLUDED:

Item	Quantity	Description
1	1	Z1 Heat Exchanger
2	1	Z1 Bleed Screw
3	2	Isolating Mount - Rubber
4	2	Isolating Mount - Insert

TOOLS REQUIRED:

- Hydraulic Jack
- (2) 2-Ton (or greater) Jack Stands
- Ratchet
- Ratchet Extension(s)
- 10mm Socket/Wrench
- 15mm Socket/Wrench
- Channel Lock Pliers
- Flat-head Screwdriver
- [Z1 Elite Diagnostic Scan Tool](#)
- Vacuum Bleeder

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:

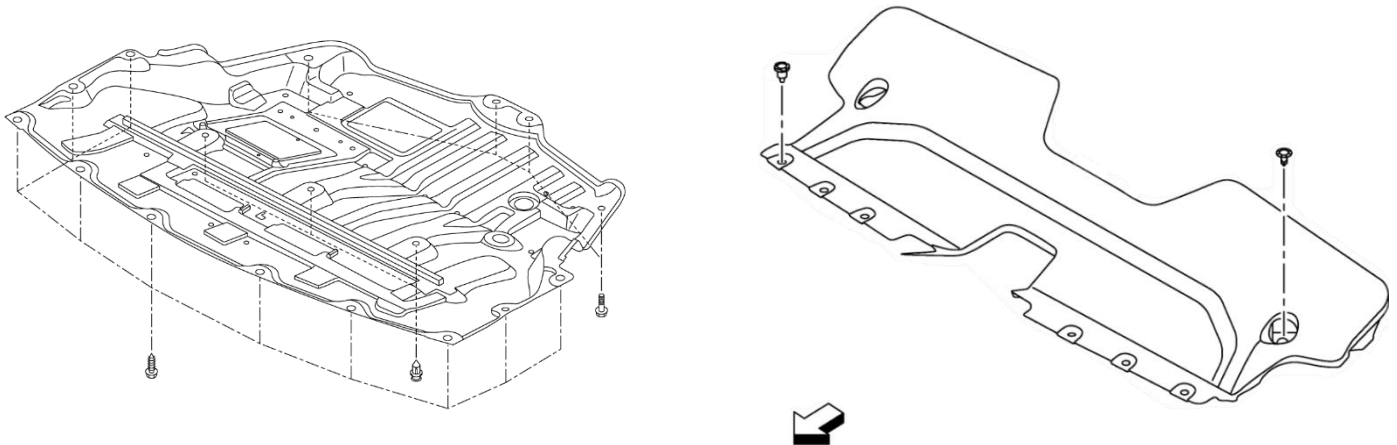
Remove contents from the Z1 Motorsports Q50 / Q60 Heat Exchanger and verify that ALL necessary hardware is present.

The pictures shown in this guide were taken using a prototype heat exchanger that has a different finish than the production parts.

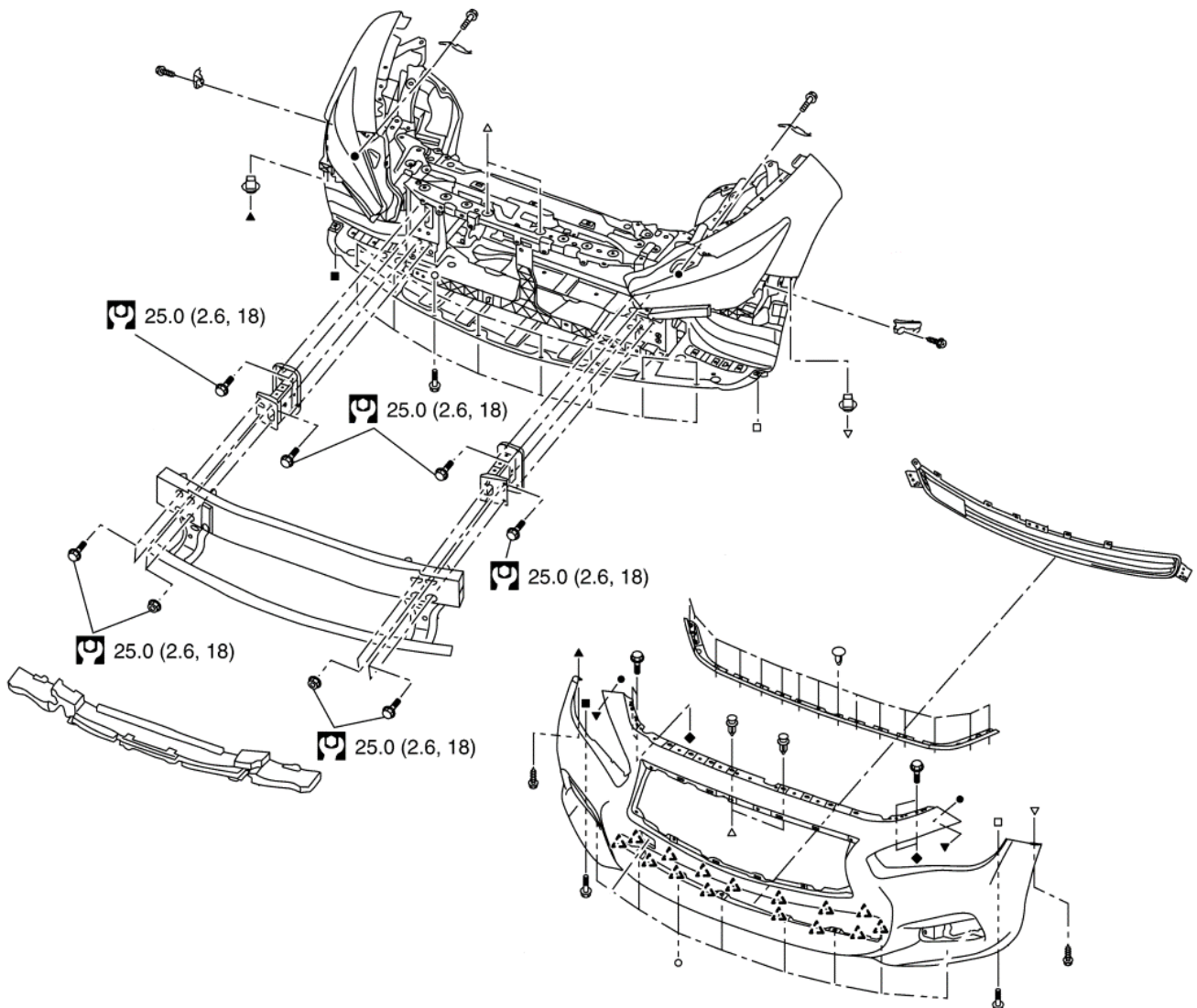
PROCEDURE:

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 vehicle using jack & jack stands.
3. Unlatch and raise vehicle's hood. Apply hood prop.

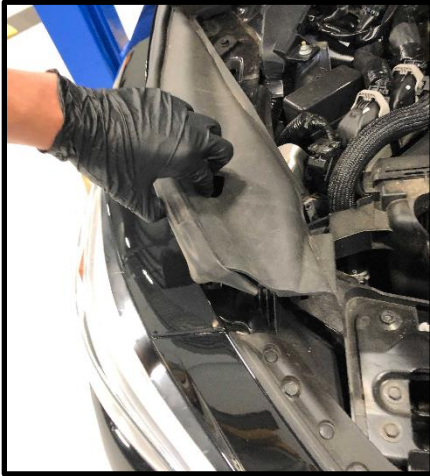
4. Remove the lower engine splash shield. Fasteners will be an assortment of 10mm screws and plastic panel pop clips. Use a flat head screwdriver to gently pry the pop clips up.
5. Remove the (8) plastic panel pop clips securing the air duct at the top of the front bumper fascia. Remove air duct and set aside.



Use the diagrams below as reference for the following steps:



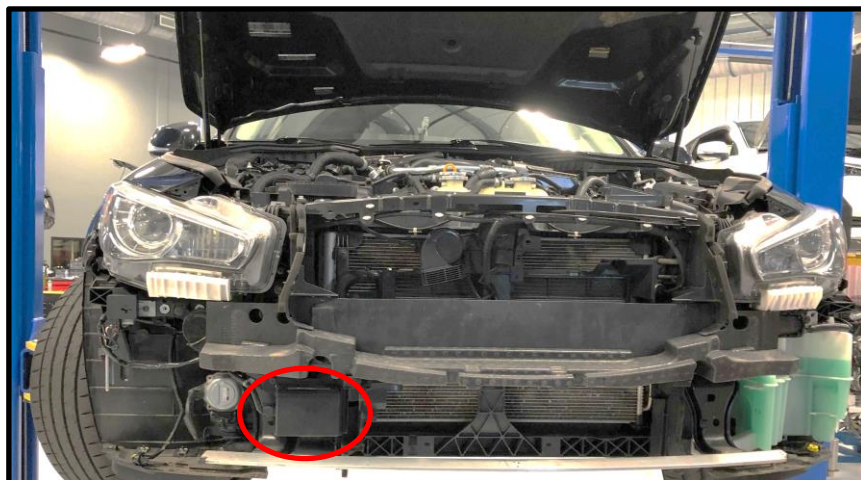
- Gently pry up the front of plastic panels on both sides of the engine bay to reveal (1) mounting screw at each side securing front bumper fascia to fender (as shown). Remove bolts and set aside.



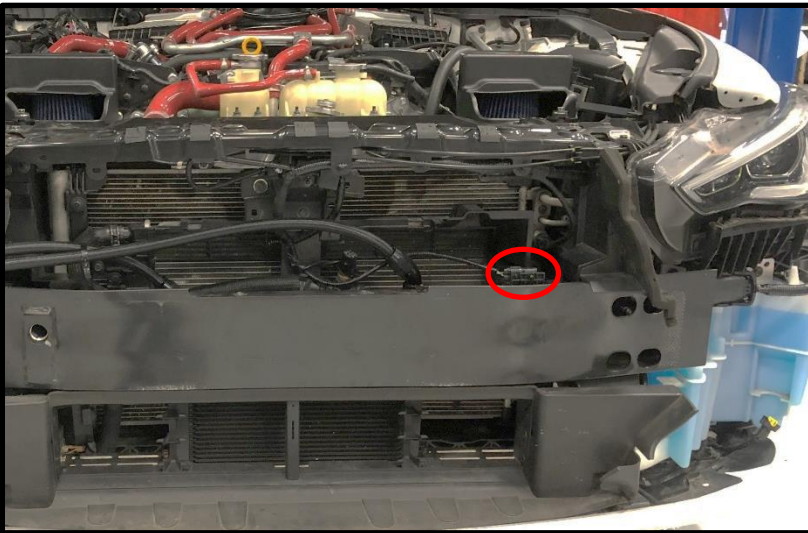
- Remove plastic clips and peel back front wheel liner to reveal (1) mounting screw at each side of vehicle which mounts bumper fascia to the vehicle (as shown). Remove mounting screws.

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

- 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.
- With a light pull motion, carefully disengage bumper fascia from clips on vehicle around each headlight.
- Once disengaged, disconnect any electrical connectors on bumper for both fog lights, camera, and any sonar/radar if equipped.
- Remove bumper fascia and set aside.
- Remove the foam impact absorber and set aside.
- 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.

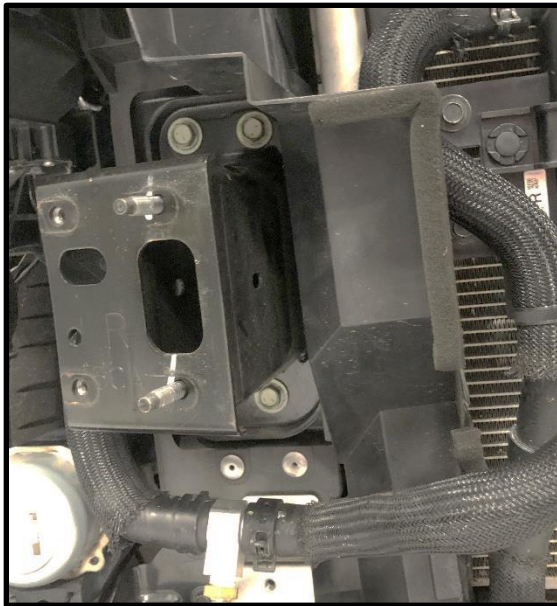


14. Disconnect any electrical connectors attached to the crash bar.



15. Remove the (4) nuts and (4) bolts securing the crash bar to the vehicle. Remove crash bar and any plastic trim pieces that are attached and set aside.

16. Remove the (4) bolts securing the passenger bumper support beam. These bolts look similar to the crash bar bolts but are different, keep them separate as to not mix them up.

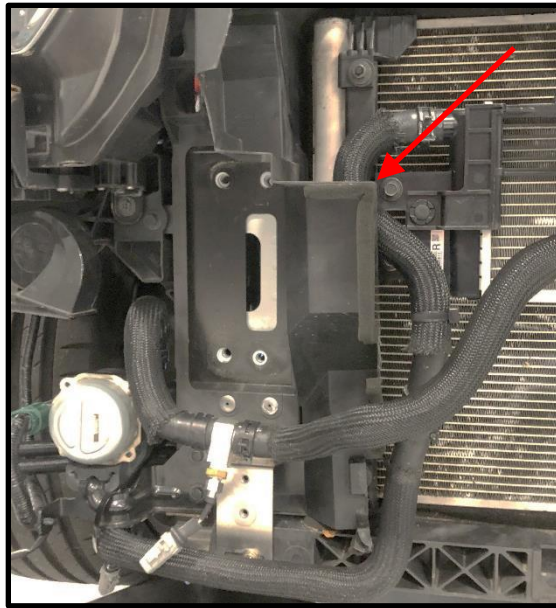


17. Remove the passenger headlight. It is secured with (4) bolts. Once the bolts are removed, disconnect the (3) electrical connectors at the rear of the headlight.

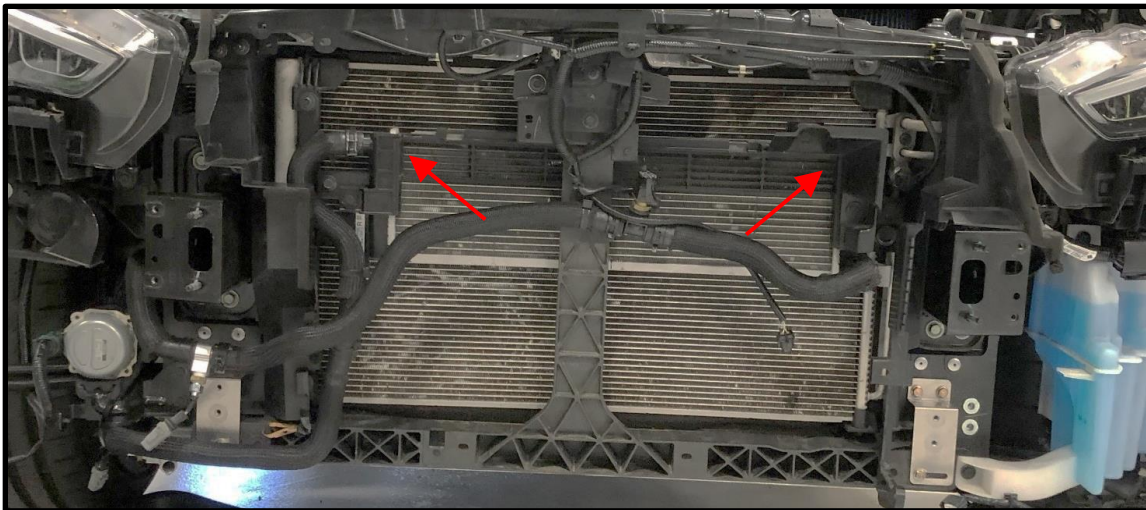
18. If equipped with an oil cooler (OEM or aftermarket), remove any plastic pieces attached to it and remove the bolts securing it to the vehicle. You will likely not need to disconnect the hoses and completely remove the cooler, just detach it and rotate out of the way.

19. If you have a Red Sport model, you will need to remove the secondary water pump. It is located by the top left corner of the radiator. Disconnect the electrical connect and remove the (2) upper bolts that secure the water pump bracket to the radiator core support. You will likely not need to disconnect the hoses and completely remove the pump, just detach it and rotate out of the way.

20. Remove the plastic trim piece on the passenger side of the vehicle.

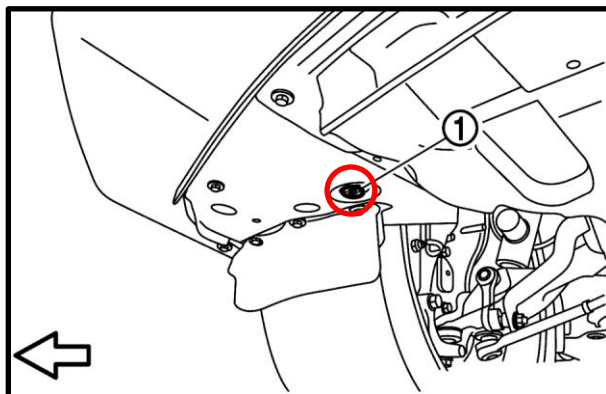


21. Remove the plastic trim piece in the upper corner of the factory heat exchanger as well as the plastic louvered air duct.



22. To prevent excessive coolant from spilling, you can either drain the charge air coolant, or use (2) pinch clamps to squeeze shut the hoses attached to the heat exchanger. Pinching the hoses shut will make the bleeding process later much easier.

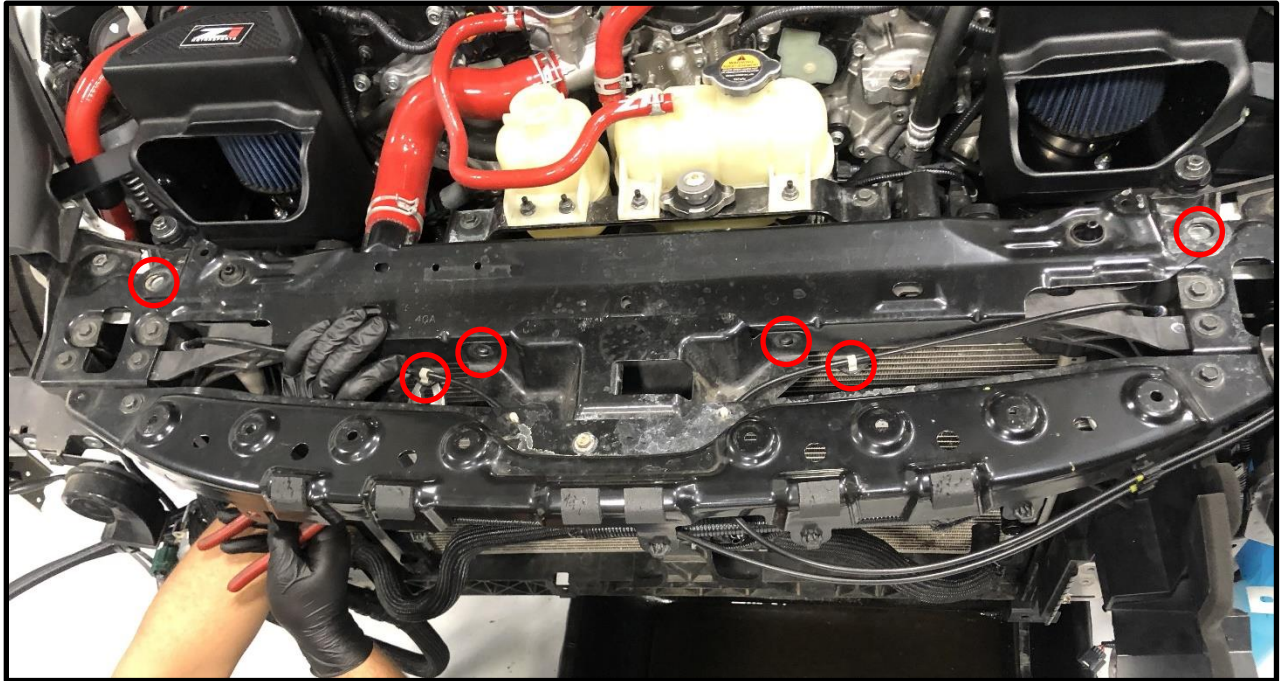
- a. If you choose to drain the coolant, remove the drain plug just in front of the passenger front wheel well (circled below). Replace plug once coolant has drained.



- b. If you choose to use pinch clamps, pinch both hoses connected to the heat exchanger. Remove both hoses and drain excess coolant into bucket below.

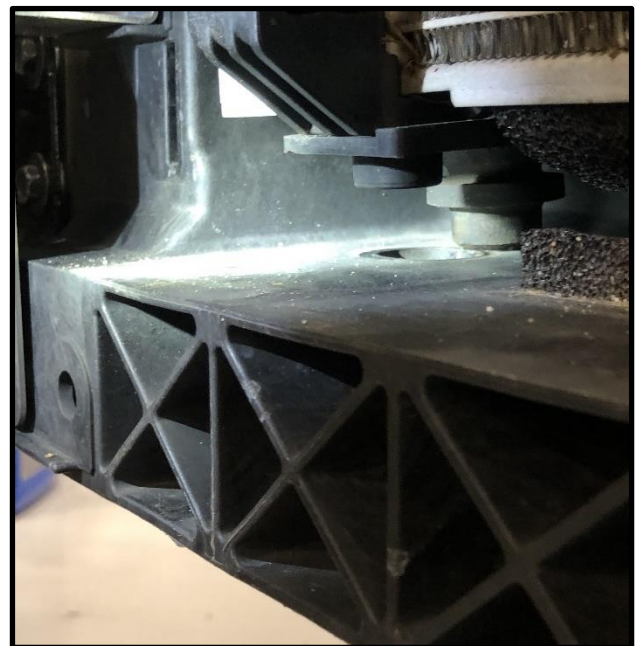
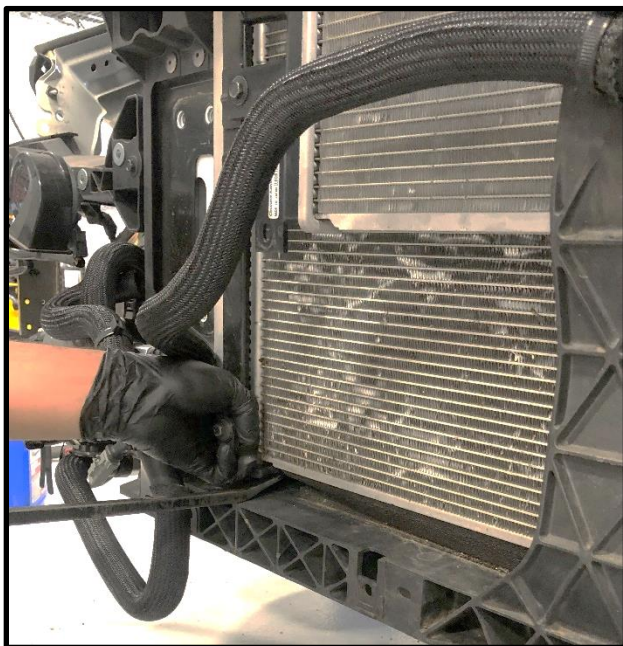


23. Using pliers, disengage the two clips securing the hood latch cable to the upper radiator support plate (circled below). Remove the (4) bolts securing the upper radiator support plate to the radiator core support (circled below). Remove the support plate and set aside.

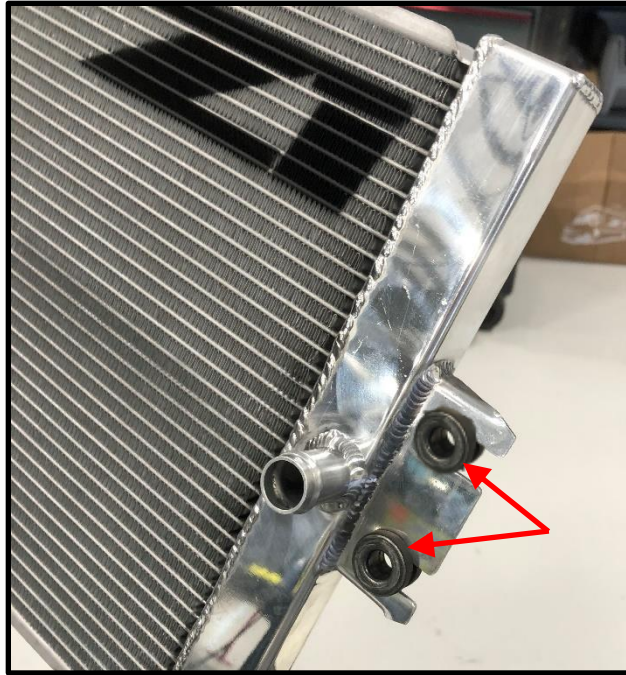


Note: The picture above shows the (4) bolts already removed.

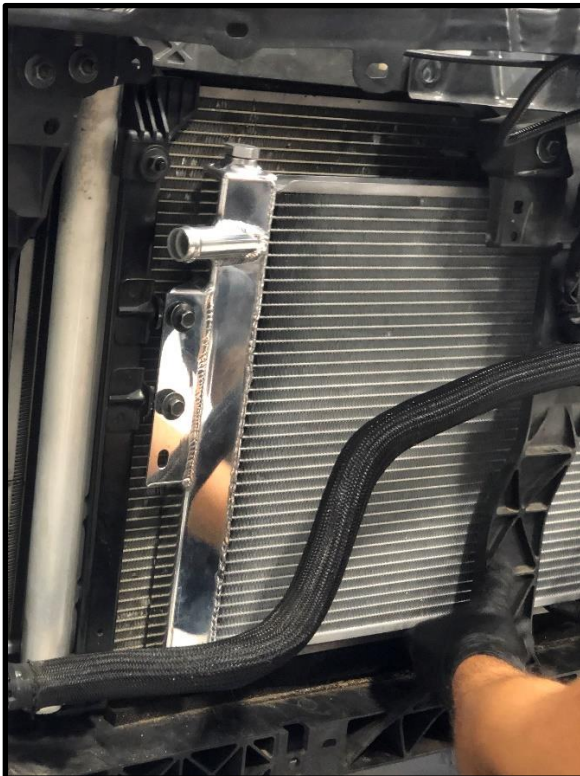
24. Using a pry bar, carefully lift the radiator/AC condenser up to unseat it from the bottom of the radiator core support. Once unseated push the radiator/AC condenser towards the rear of the car. **DO NOT** lift from the plastic end tanks.



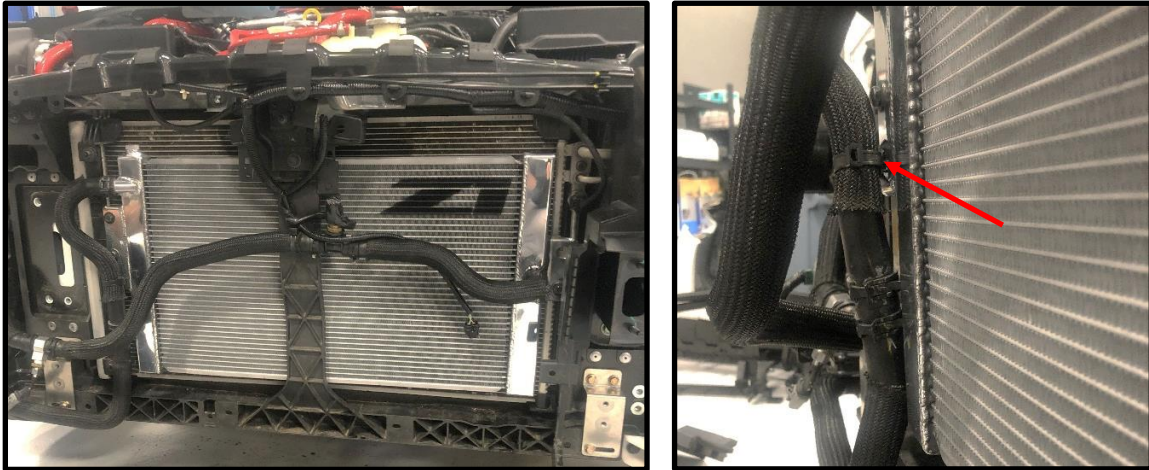
25. Remove the (3) bolts securing the factory heat exchanger to the vehicle. Carefully remove the heat exchanger by sliding it towards the passenger side of the vehicle. Retain the factory hardware as it will be reused.
26. Locate the new Z1 Heat Exchanger, (2) rubber isolating mounts, (2) isolating mount insert, and (1) supplied M6 25mm SEMS bolt.
27. Install the rubber isolating mounts in the slots on the right (driver's) side of the heat exchanger. Install an inserts into each rubber mount (as shown).



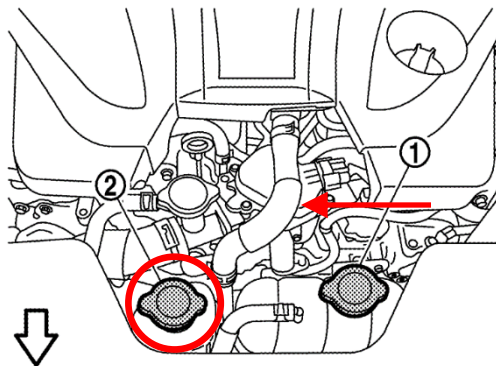
28. Carefully slide the Z1 Heat Exchanger in the vehicle from the passenger side. Secure the heat exchanger to the same mounting points the factory one used, reusing the hardware removed in step # 26 and (1) supplied M6 x 25mm bolt.



29. Re-seat the radiator back into the two holes on the bottom of the radiator core support.
30. Reattach the two hoses to the new Z1 Heat Exchanger, secure with OEM clamp. There is a zip tie clip attached to the passenger side line that can be secured to the lower hole on the passenger side of the heat exchanger. If you used pinch clamps at step # 22, remove them after the hoses are attached the the Z1 Heat Exchanger.



31. Reattach the upper radiator support plate that was removed in step # 24. Reattach the hood latch cable to the upper radiator support plate.
32. Follow steps # 13-20 in reverse order to reassemble everything besides the front bumper fascia. Some plastic trim pieces may need to be trimmed to fit the larger heat exchanger if reused.
33. It is now time to refill and bleed the system. Bleeding the intercooler and heat exchanger system on VR30 vehicles is difficult as the intercoolers on top of the engine are the highest point. It is highly recommended to use a vacuum bleeder and the Z1 Elite Diagnostic Scan tool. Follow the instructions from your vacuum bleeder manufacturer, general instructions are listed below in the following steps.
34. Open the charge air cooling system reservoir tank cap (2). Using a vacuum bleeder, suck out as much air as possible.



35. Using the vacuum bleeder, draw coolant back into the system. Make sure the feed hose of the vacuum bleeder is submerged in coolant/water.
36. If you do not have access to a vacuum bleeder, you may use the [Z1 Elite Diagnostic Scan Tool](#). Open the charge air cooling system reservoir tank cap (2) and crack open the bleeder on the top left side of the heat exchanger. Depending on how much fluid drained out in the previous steps, refill the reservoir to the MAX level line.
37. Using the Z1 scan tool, activate the water pump(s). There is a hose running to the backside of the reservoir tank (arrow above), squeeze this hose to feel if coolant is flowing.
38. Watch the reservoir tank, as the coolant level drops, fill it back up to the MAX line.

39. When coolant level stops dropping, turn off water pump(s).
40. Once the system is bled, reinstall reservoir tank cap and tighten the bleed screw on the heat exchanger.
41. Follow steps # 4-12 in reverse order to reinstall bumper and trim components.
42. Check vehicle for loose tools/items.
43. Properly lower vehicle from jack stands.
44. Perform a final test drive of vehicle.

END

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