

Z1 NISSAN Z HEAT EXCHANGER INSTALLATION MANUAL



This Installation Manual is intended for the following models:

2023+	Nissan Z
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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 Nissan Z Heat Exchanger, consult with a Professional Mechanic or contact Z1 Motorsports for more information.

PARTS INCLUDED:

Item	Quantity	Description
1	1	Heat Exchanger Core
2	1	Z1 Bleed Screw
3	2	Isolating Mount - Rubber
4	2	Isolating Mount – Metal 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.

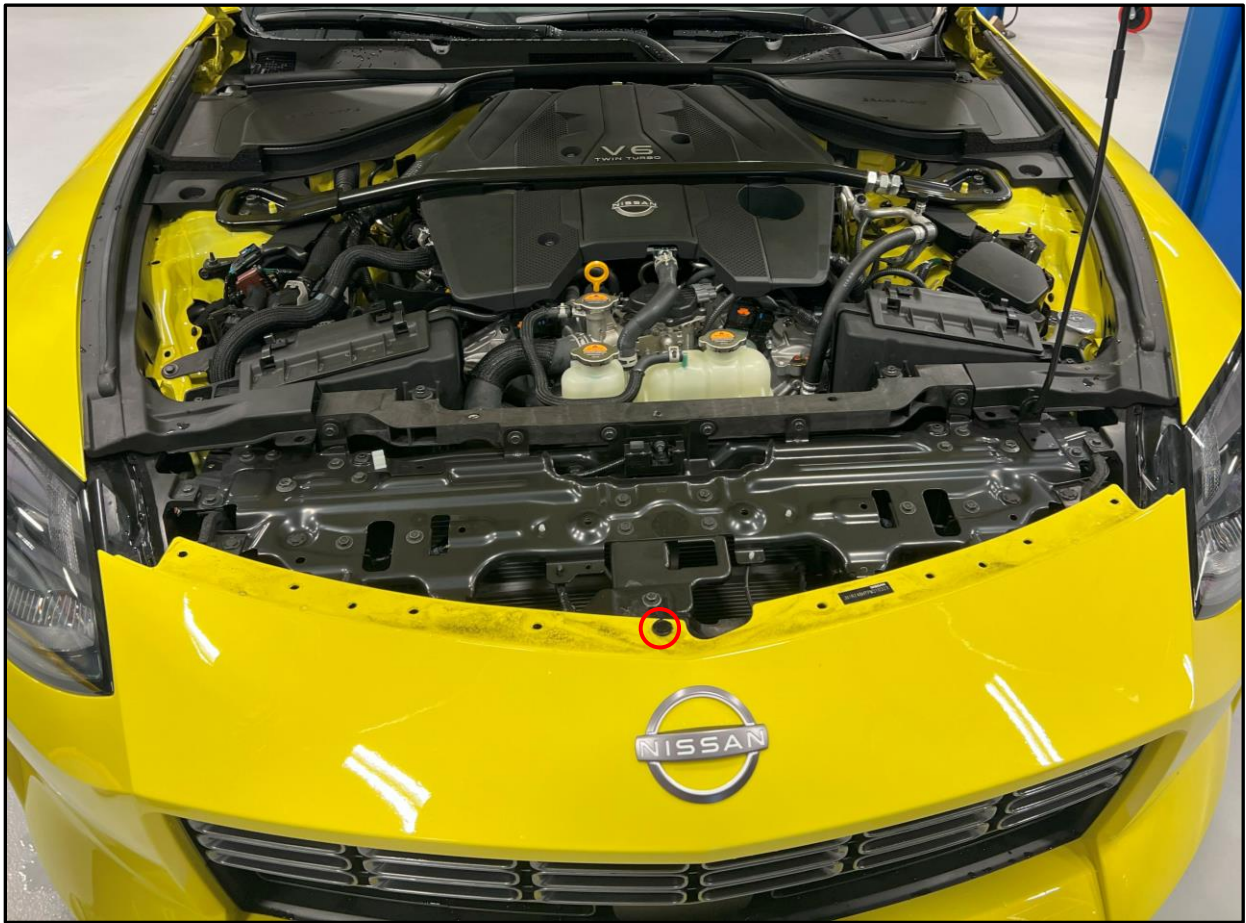
BEFORE YOU BEGIN:

Remove contents from the Z1 Motorsports Nissan Z Heat Exchanger and verify that ALL necessary hardware is present.

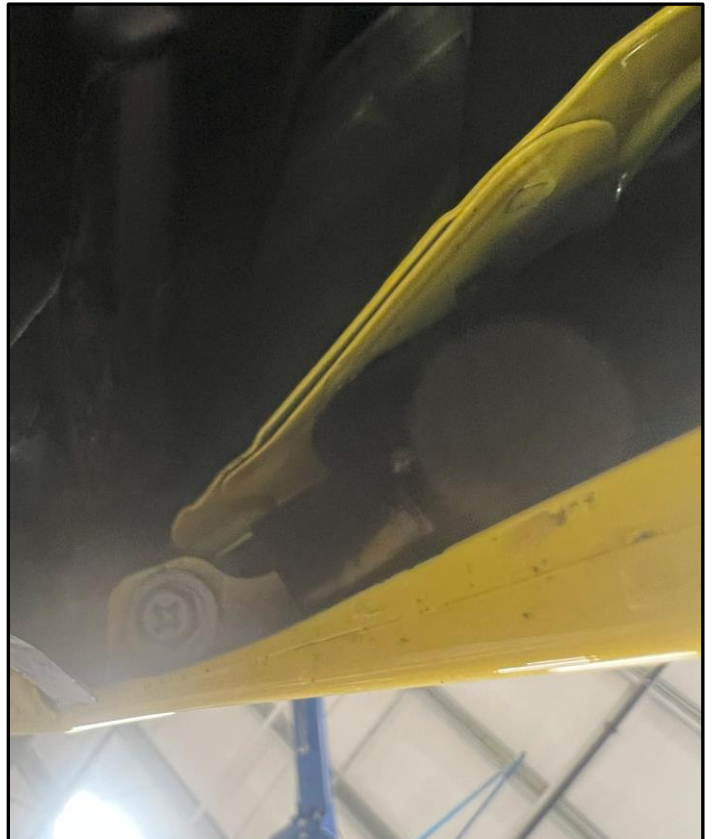
PROCEDURE:

1. Place the transmission in Park position (or in Reverse gear if equipped with a manual transmission). Apply the parking brake.
2. Unlatch and raise vehicle's hood. Apply hood prop.
3. Release tension to front wheel lug nuts but DO NOT remove them.
4. Locate proper jacking points on vehicle's chassis (refer to vehicle's Owner Manual). Raise and support vehicle using jack & jack stands.
5. Remove front lug nuts and wheels.
6. Remove the engine undershroud.
7. Remove the plastic pop clips and screws securing the passenger front fender liner, remove the front fender liner.
8. Remove the plastic pop clips securing the radiator air guide to the top of the core support and front bumper.

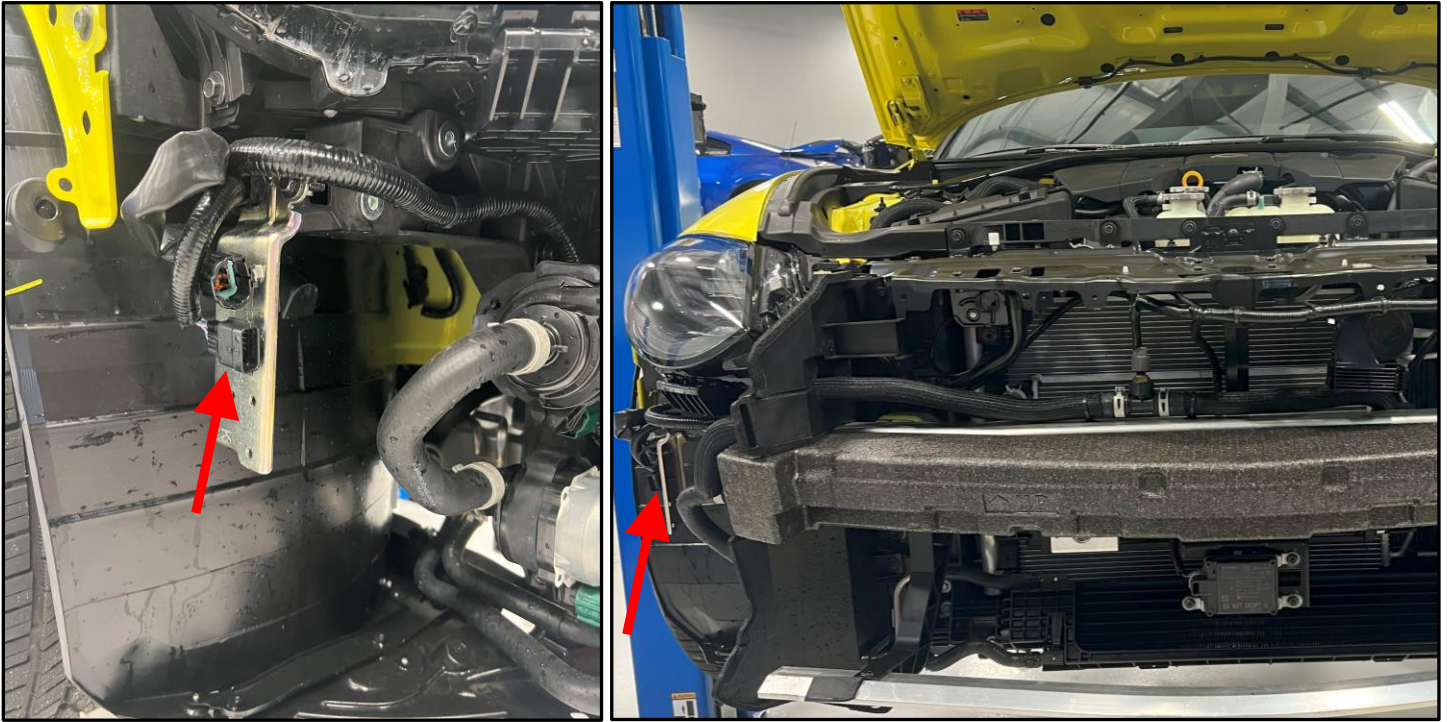
9. Remove the last remaining plastic pop clip securing the top of the front bumper to the top core support plate.



10. Remove the screw on each corner of the bumper securing it to the front of the fenders.



11. There are (2) electrical connectors on a bracket in the passenger side of the bumper (shown below). Disconnect both of them. The image below is shown with the bumper already removed.

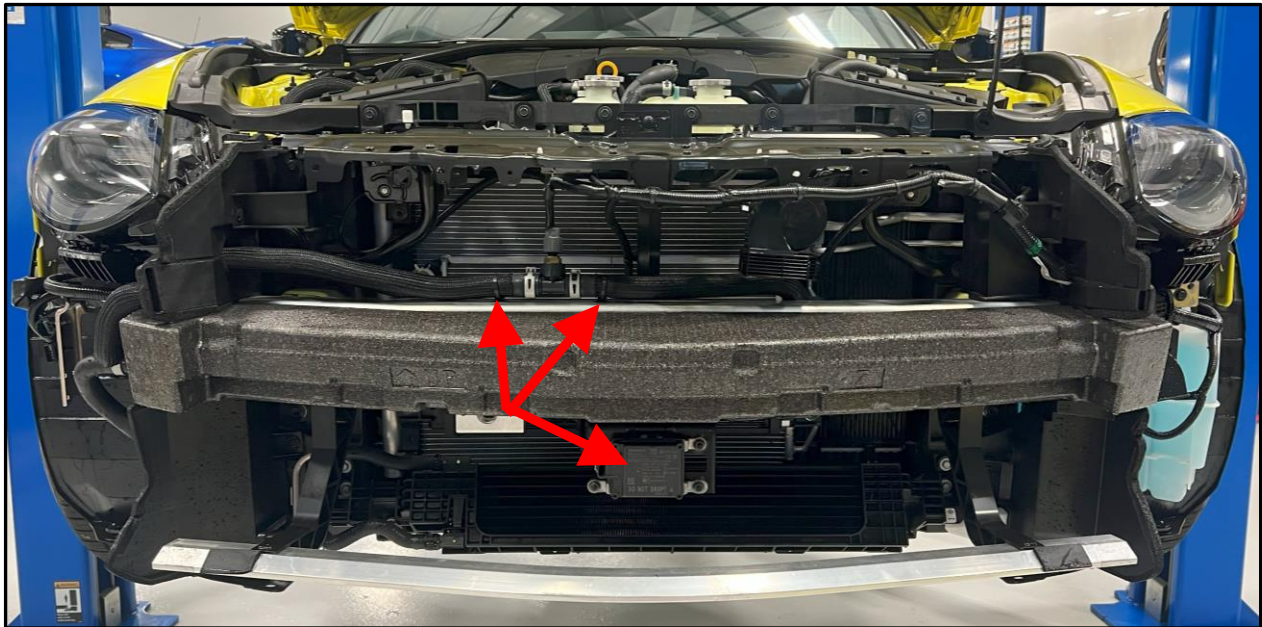


12. There are plastic tabs securing the bumper at the corners of the headlights and below the headlights. Carefully pry the bumper away to release it. Once released carefully remove bumper and set to the side.

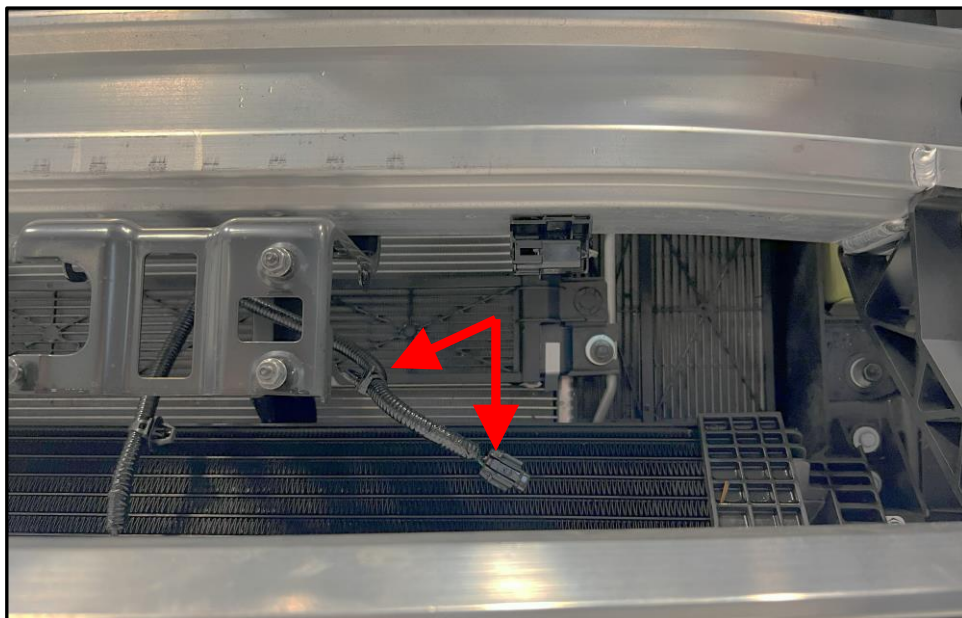
13. Remove foam impact absorber from crash beam.

14. Carefully unbolt the sonar sensor from the center of the crash beam.

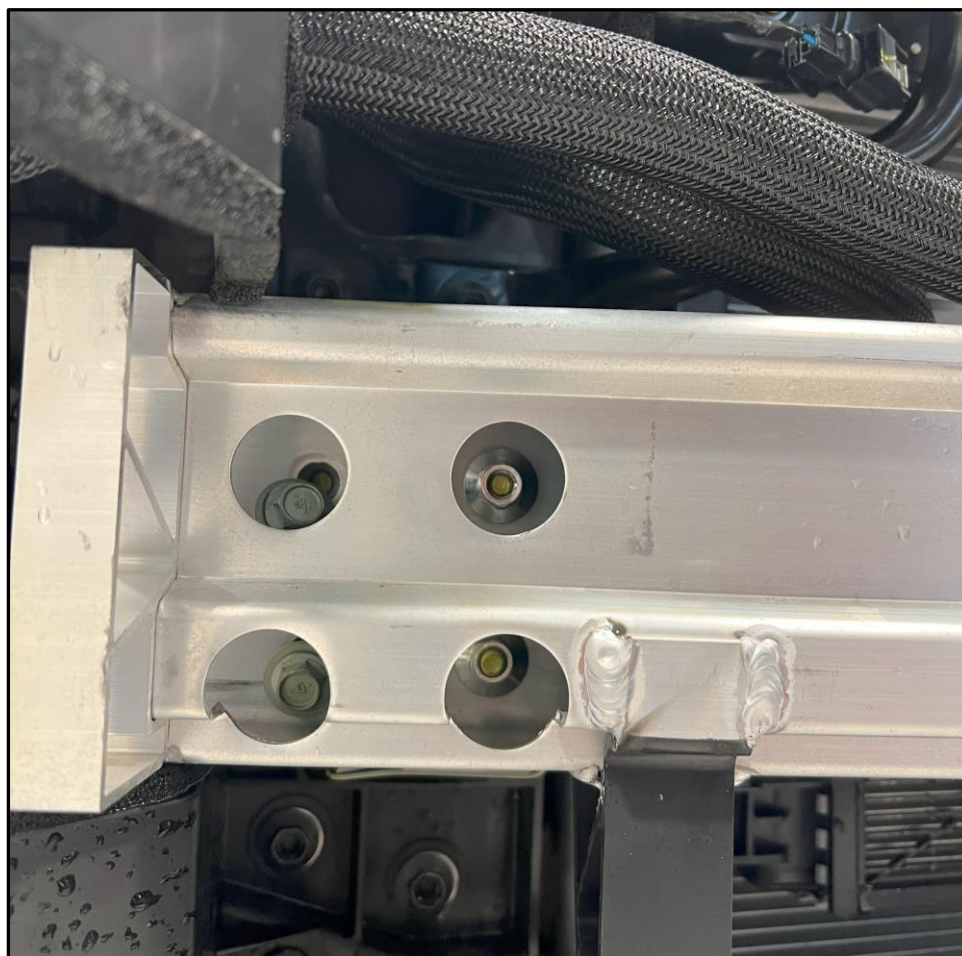
15. Remove the coolant line clips from the crash beam.



16. Disconnect the electrical connector on the underside of the crash beam and remove the wiring harness clip.



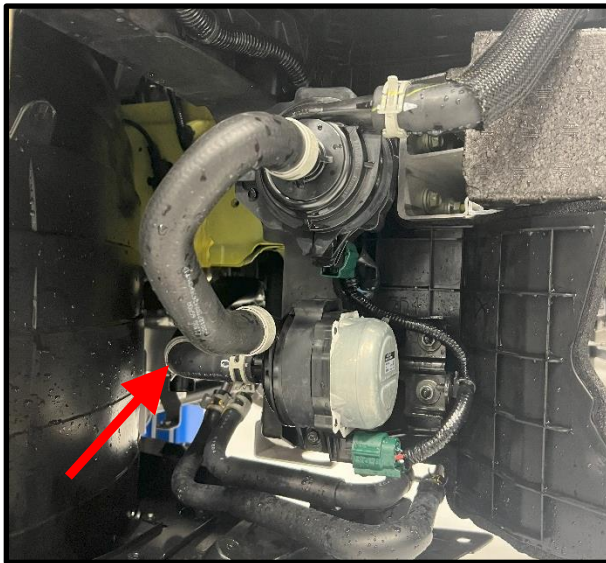
17. Remove the (2) bolts and (2) nuts securing the crash beam to the vehicle.



18. Remove the (3) bolts on each side, securing the engine oil cooler to the core support. The passenger side bolts are circled below. Once removed swing the oil cooler out of the way, you do not need to remove the lines.



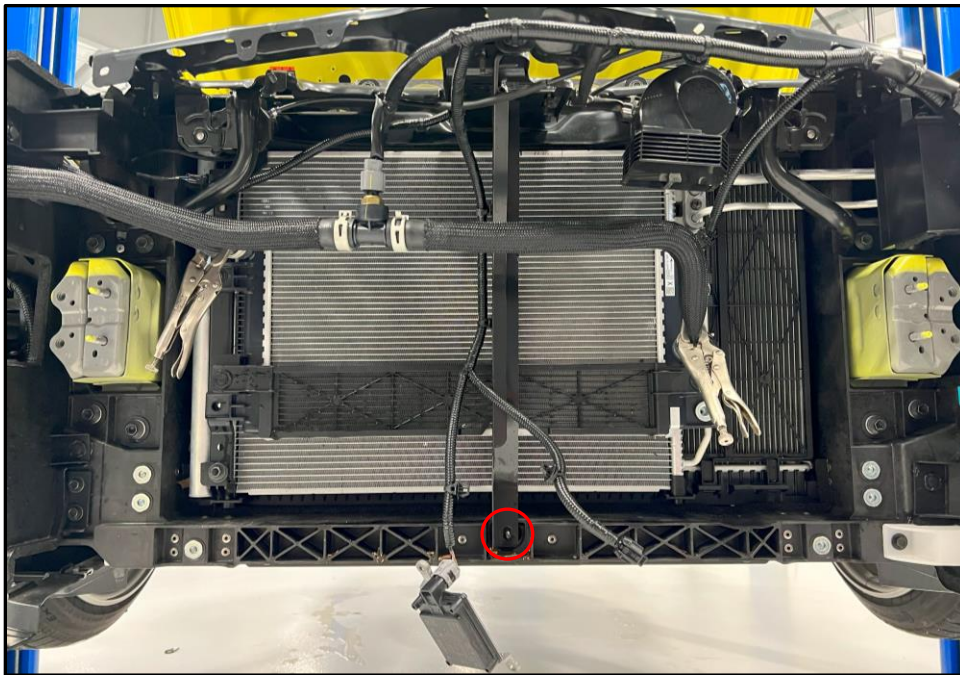
19. To prevent excessive coolant from spilling, you can either drain the charge air coolant, or use (2) pinch clamps to squeeze shut the hoses attached to the heat exchanger. Pinching the hoses shut will make the bleeding process later much easier.
- a. If you choose to drain the coolant, remove the drain plug located in the first water pump feed hose in front of the passenger front wheel well (shown below). Replace plug once coolant has drained. Then remove the hoses from the OE heat exchanger and drain excess coolant into bucket below.



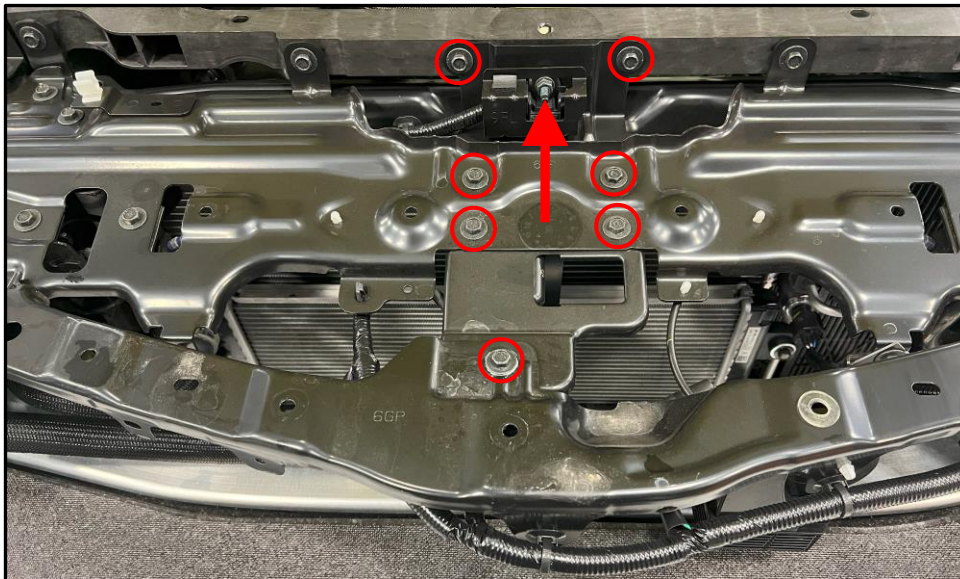
- b. If you choose to use pinch clamps, pinch both hoses connected to the heat exchanger. Remove both hoses and drain excess coolant into bucket below.



20. Remove nut at the bottom of the core support securing the center brace (circled below).

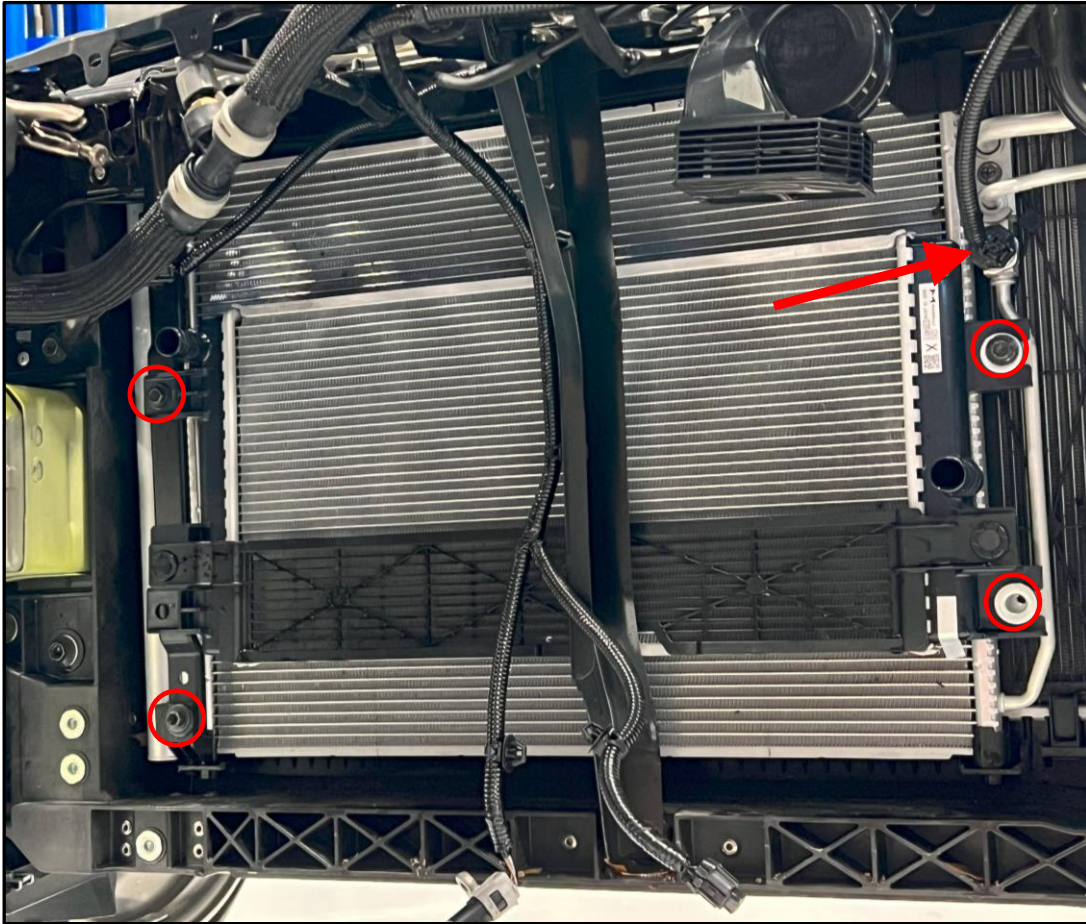


21. Remove the nut securing the sensor bracket and sensor to the top of the core support (shown with arrow below). Remove sensor and bracket and set aside.



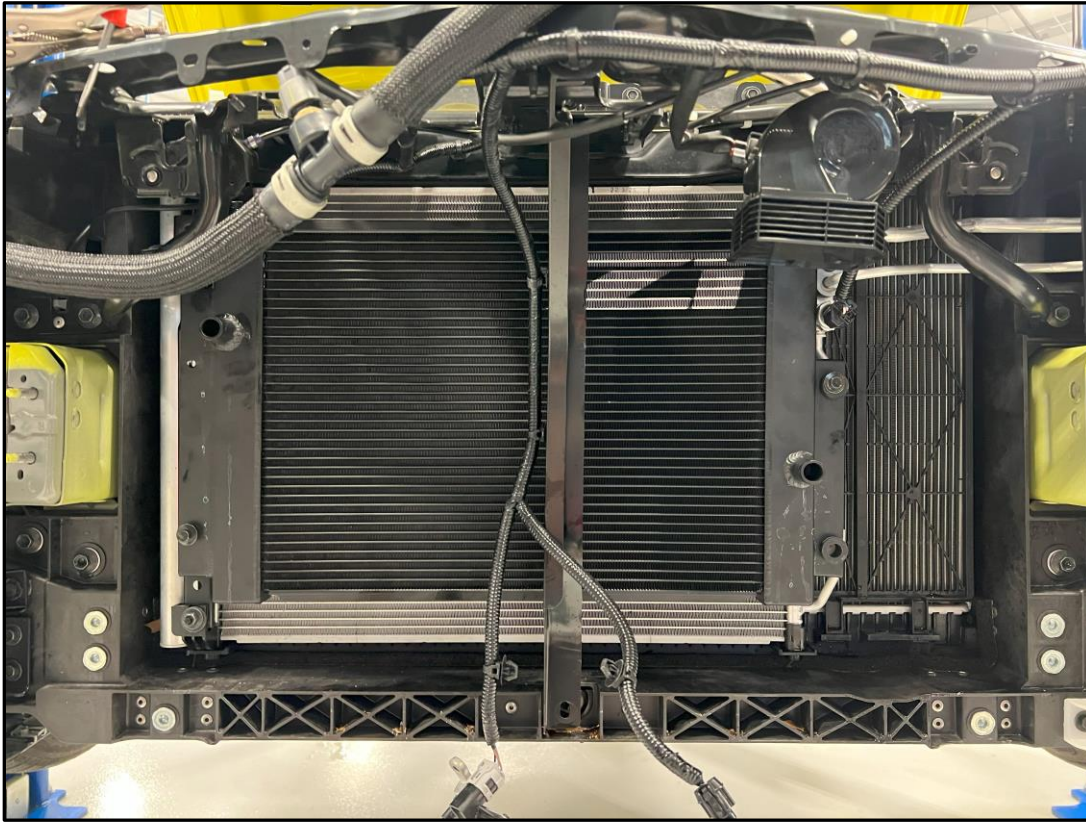
22. You can either loosen the (7) bolts securing the center brace to the top of the core support plate (circled above) and pull the bottom of the center brace forward, or for extra clearance you can fully remove the bolts and the brace. If you fully remove the brace, make sure to unclip the wiring harness running down the side.

23. Disconnect the electrical connector on the right side of the AC condenser (shown below with an arrow)
24. Remove the (4) bolts securing the OE heat exchanger to the condenser. Then slide the OE heat exchanger out. Be careful not to hit or damage the condenser.

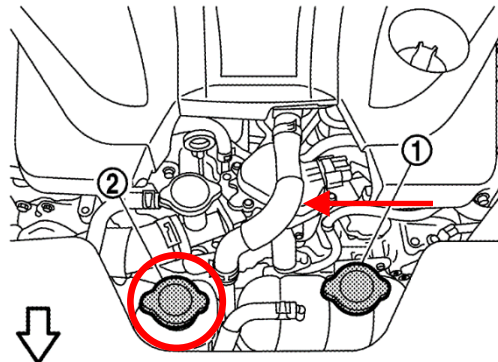


25. Locate the Z1 heat exchanger, (2) rubber isolating mounts, (2) isolating mount inserts, and the Z1 bleed screw.
26. Install the bleed screw into the top left corner of the Z1 heat exchanger.
27. Install the rubber isolating mounts into the slots on the right side of the Z1 heat exchanger, then install the metal inserts into the rubber mounts.
28. Position the Z1 heat exchanger in the vehicle. If you fully removed the center brace, rest the heat exchanger on the core support then loosely reinstall the center brace.

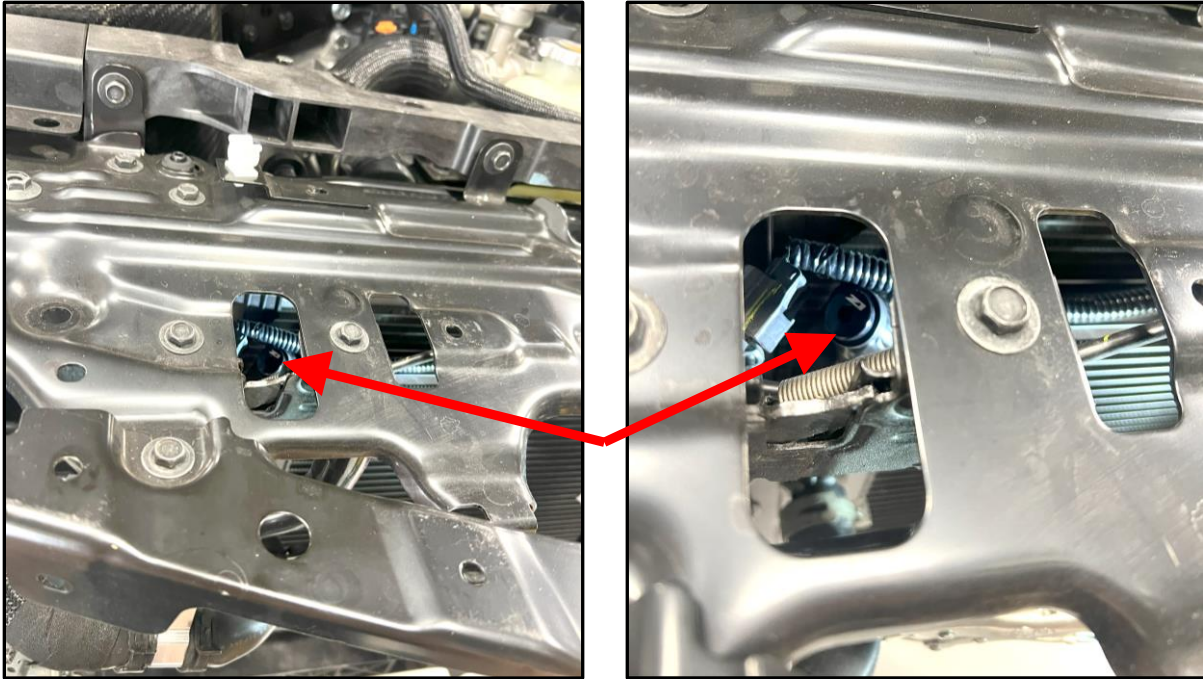
29. Secure the Z1 heat exchanger to the condenser using the OE bolts removed in step # 24.



30. Connect the coolant lines that were removed in step # 19 to the Z1 heat exchanger, secure with the OE clamp. If you used pinch clamps at step # 19, remove them after the hoses are attached to the Z1 Heat Exchanger.
31. Reconnect the electrical connector on the right side of the condenser.
32. Reinstall the center brace onto the bottom stud and secure with the OE nut. Tighten the center braces top bolts. Then reinstall the sensor and bracket that was removed in step # 21.
33. Follow steps # 5-18 in reverse order to reassemble all other components. Some plastic trim pieces may need to be trimmed to fit the larger heat exchanger if reused.
34. 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.
35. Open the charge air cooling system reservoir tank cap (2). Using a vacuum bleeder, suck out as much air as possible.



36. Using the vacuum bleeder, draw coolant back into the system. Make sure the feed hose of the vacuum bleeder is submerged in coolant/water.
37. 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. Depending on how much fluid drained out in the previous steps, refill the reservoir to the MAX level line.
38. 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. While the pumps are running crack open the bleeder on the top left side of the heat exchanger, the bleeder can be accessed from the top through a cutout of the radiator air guide.



39. Watch the reservoir tank, as the coolant level drops, fill it back up to the MAX line.
40. When coolant level stops dropping, tighten the bleeder screw and turn off water pump(s).
41. Once the system is bled, reinstall reservoir tank cap.
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