



CZP Infiniti Q50/Q60 Red Sport OEM Oil Cooler Upgrade Installation Guide



Thank you for your purchase of the CZP Q50/Q60 Red Sport OEM Oil Cooler! Please make sure your kit arrived with all of the necessary hardware listed below:

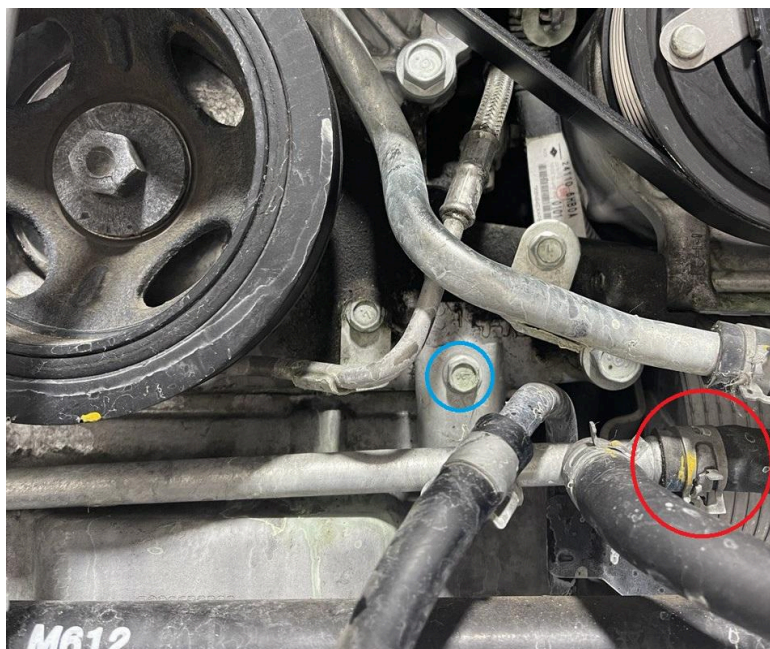
- 1x Oil Tree
- 1x Oil Tree Gasket
- 1x Oil Tree Filter Stud (2WD Only)
- 1x OEM Infiniti Hardline 1 (inner)
- 1x OEM Infiniti Hardline 2 (outer)
- 1x OEM Infiniti Hardline Bracket (2WD Only)
- 1x OEM Infiniti Red Sport Oil Cooler Core
- 1x OEM Lower Oil Pan Gasket
- 5ft 3/8" ID Gates Oil Hose
- 12x 15mm Spring Clamp
- 1x 10mm Silicone Cap
- 6x M6x1x30mm Hex Bolt
- 3x M6x1x30mm Hex Bolt
- 2x M6x1x16mm Hex Bolt (2WD Only)
- 7x M6x1 Rivnut for FRP
- 1x M6x1 Manual Rivnut Installation Tool

All mention of direction (left, right, front, back) will be oriented as if you were sitting in the driver's seat looking out of the front windshield.

1. Jack up and support the car, remove your engine splash shield from underneath the car using a 10mm socket and driver.
2. Remove your front bumper. We have a video on our YouTube channel (linked below), or if you prefer, here is the Infiniti FSM for front bumper removal:
https://www.youtube.com/watch?v=AM1ttis7K1o&ab_channel=ConceptZPerformance
<https://conceptzperformance.com/items/75610/docs/Front%20Bumper%20Removal%20FSM.pdf>
3. Remove the oil drain plug and oil filter and drain out the oil as if you were performing an oil change.
4. Drain your coolant using the small petcock on the lower right side of the radiator.
5. Remove the **front-most hose** connected to the water-to-oil cooler on the front right side of the upper oil pan, pictured below.



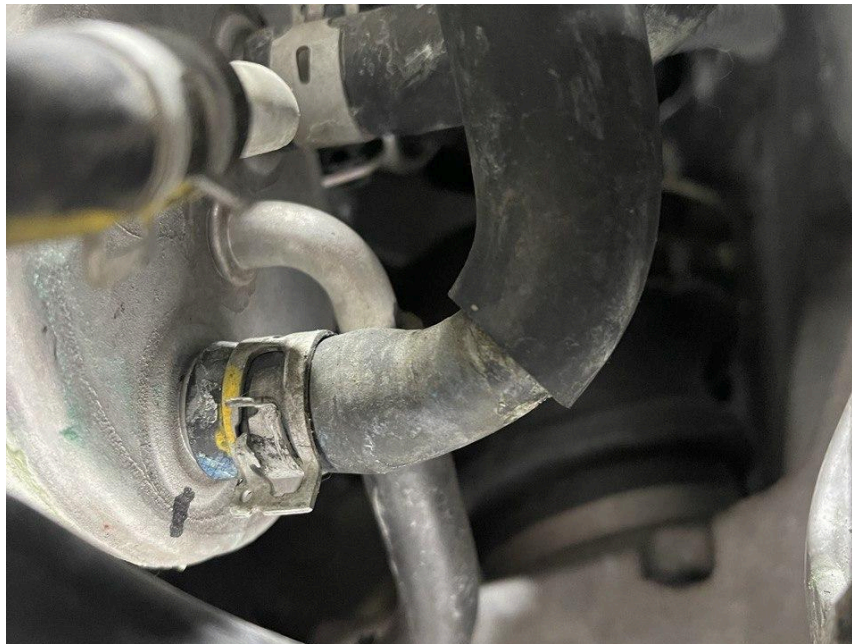
6. Move to the front left side of the upper oil pan and remove the coolant hose connected to the left side of the water pipe that runs underneath the crank pulley (**circled in red**). Take a moment to also remove the 10mm bolt holding that water pipe to the block (**circled in blue**).



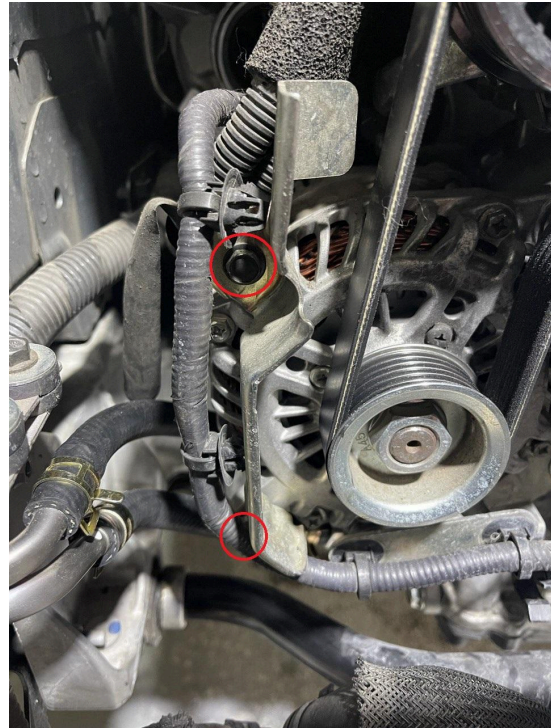
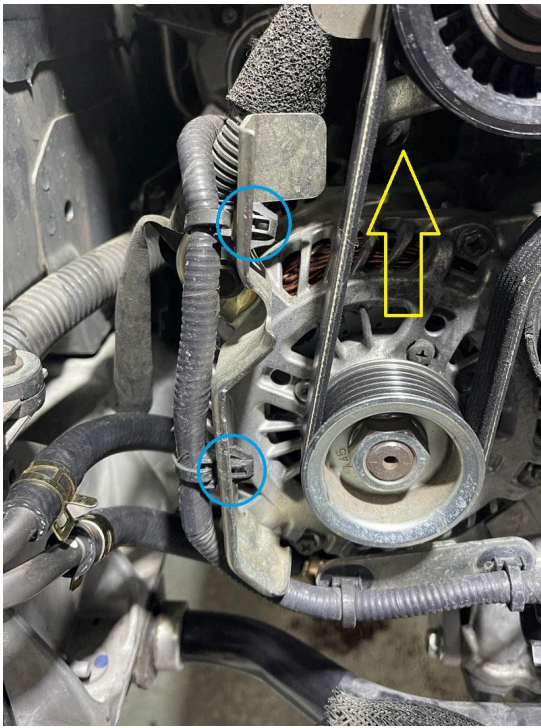
7. Now that the pipe is free, remove the single hose running to the bottom port on the transmission oil cooler at the cooler side. Remove the front water pipe from the car with the remaining hoses, you don't need to keep any of them.



8. The hose we removed from the left side of the water pipe in step 6 earlier is now our outlet for the transmission oil cooler, so slip it onto the open barb and secure it with the spring clamp.



9. The last part of the cooling system we need to modify is to remove the feed hose (Yellow arrow below) for the oil cooler, located above the alternator, and cap it with the provided 10mm silicone cap. This is easier said than done. The easiest way we have found is to unclip the harness (circled in blue) and remove the two 10mm head bolts (circled in red) holding the stamped steel belt guard to the alternator. This should give just enough room to sneak in next to the belt with some pliers and remove the spring clamp and hose. You can then slip the silicone cap onto the open barb and use the spring clamp you removed to secure it. Reinstall the 10mm bolts holding the belt guard and clip the harness back into place.



10. Now let's move onto the oil part of the system. We will start by draining the oil into a suitable pan as we need to remove both the oil pan and oil filter/oil filter tree. This is done by removing the 14mm oil drain bolt as well as the oil filter.
11. Now that the oil is drained, we will be dropping the lower oil pan in order to drill a blind hole that will later act as the oil return port for the oil cooler. There are ten 10mm head flanged hex bolts holding the lower oil pan in place, then gently prying or a soft tap with a rubber mallet will separate it. Our kit includes a new gasket so the old one can be discarded.
12. Go ahead and remove the water-to-oil cooler by unscrewing the four 12mm head bolts securing it to the upper oil pan. Be careful not to tip it as you remove it as coolant will spill out.
13. Take a small or right angle drill and 21/64 inch drill bit and drill through the top right hole (circled in red) that is a similar size, all you're doing is creating a passage for the oil to return to the pan from the cooler core. Clean any drill shavings (inside and out) and any residue from the mating surface on the upper oil pan in preparation for the new oil tree.



14. Clean up the lower oil pan and install the new rubber gasket in its groove. Lift the pan with fresh gasket in place and secure it using the original ten 10mm head bolts. (The Infiniti FSM procedure for installation with torque specs is shown below)

INSTALLATION

CAUTION:

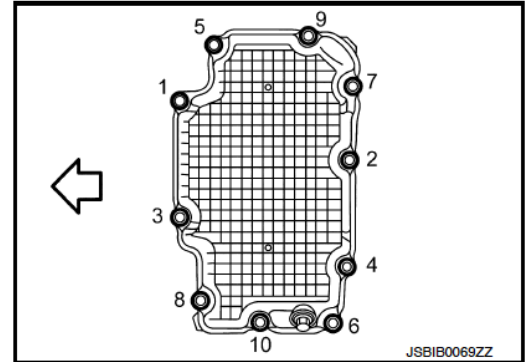
Do not reuse gasket for oil pan (lower).

1. Install oil pan (lower).
 - Tighten mounting bolts in two steps in the order from 1 to 10 as shown in the figure.

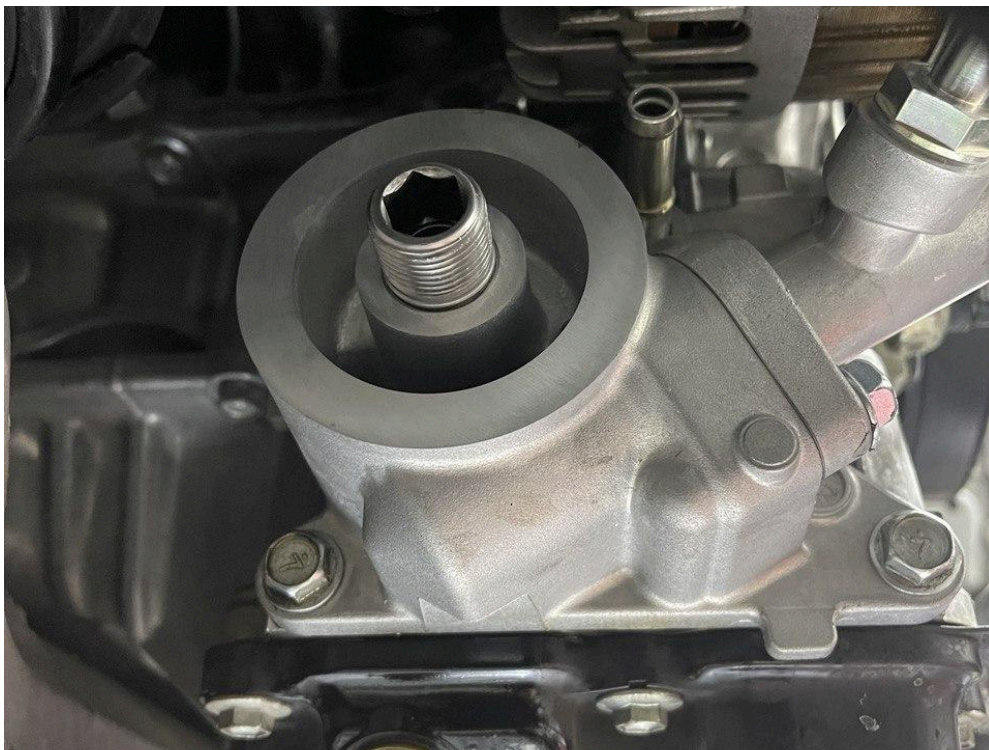
← : Engine front

 **1st step: 2.96 N·m (0.3 kg-m, 26 in-lb)**

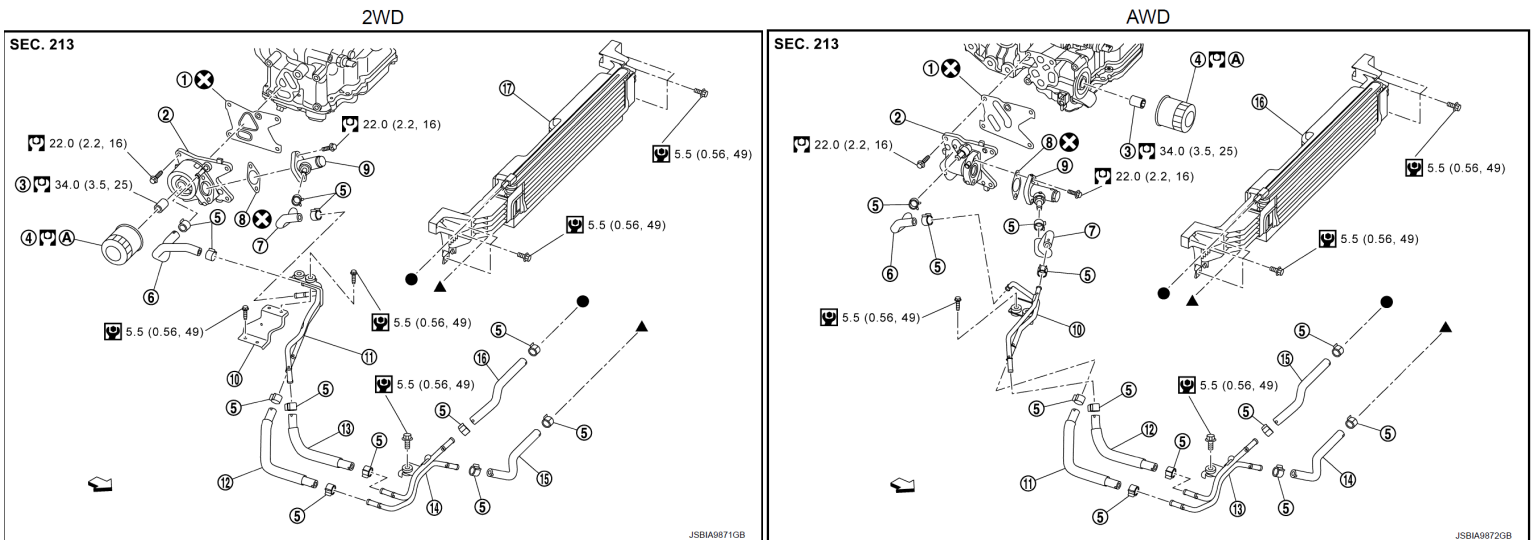
 **2nd step: 8.33 N·m (0.85 kg-m, 74 in-lb)**



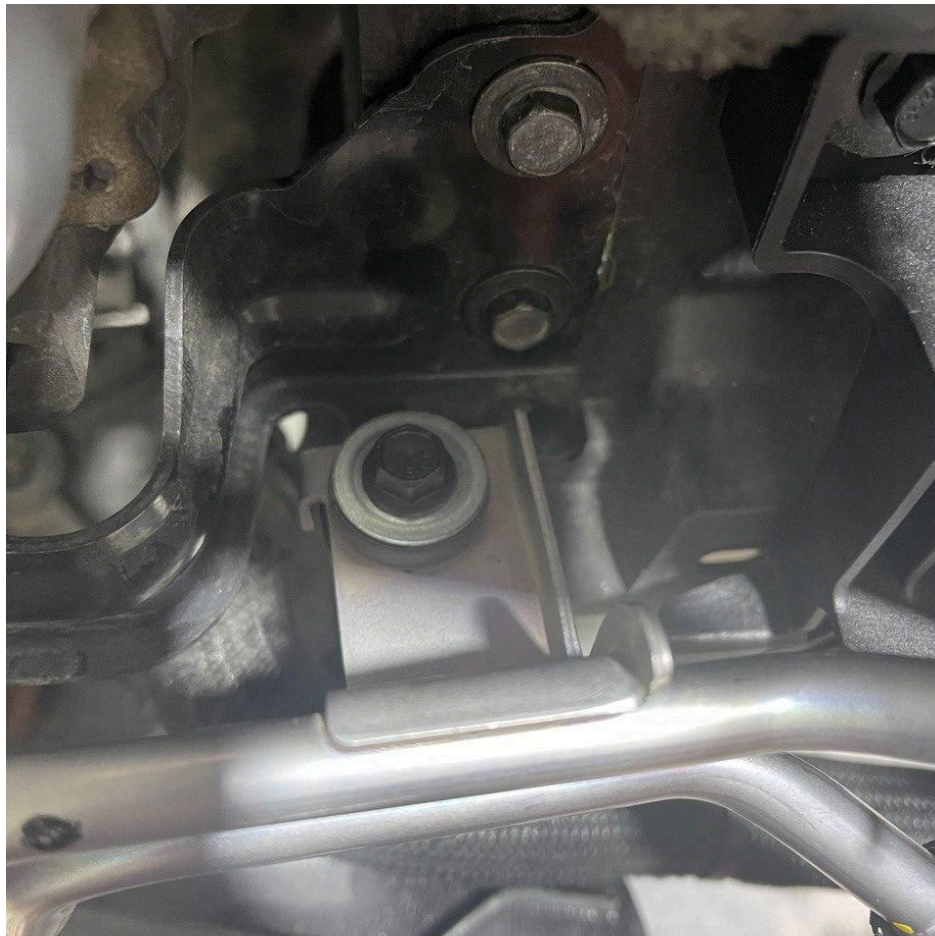
15. Grab the new oil tree and while holding the new gasket in place, making sure to align all of the oil passages, gently guide the new tree into place and secure it using the four 12mm head bolts we removed from the old cooler. **(Torque spec is 16 lb-ft or 22 N-m)**. On 2WD models take the new oil filter stud and secure it into place using a 12mm hex key. **(Torque spec is 25 lb-ft or 34 N-m)**
16. In some cases there may be a slight clearance issue between the pressure relief valve bolt and the alternator, if it is causing interference, carefully grind the casting at the bottom of the alternator till you have clearance, not much is needed since both parts are stationary relative to one another.



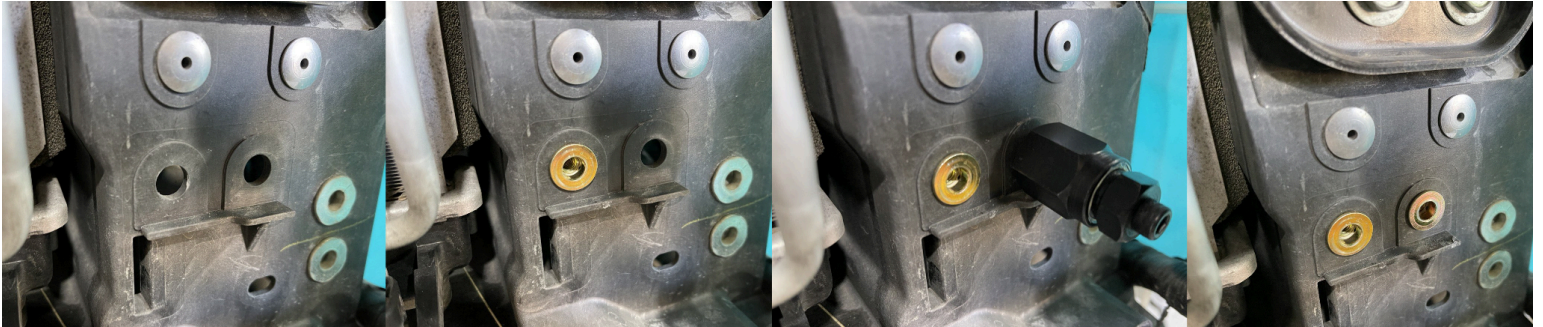
17. Once you have the new oil tree in place, we need to start installing the new oil hardlines and oil cooler to the chassis. We will start with the inner oil hardline. On AWD models, this bolts directly to the front subframe, but on 2WD models, there is a short bracket that spaces it up off of the subframe (see diagrams below). Use the M6x1x25mm flanged bolts to secure the hardline and the M6x1x16mm flanged bolts to bolt the additional bracket on 2WD models. **(Torque spec for all M6 bolts is 49 in-lb or 5.5 N-m)**



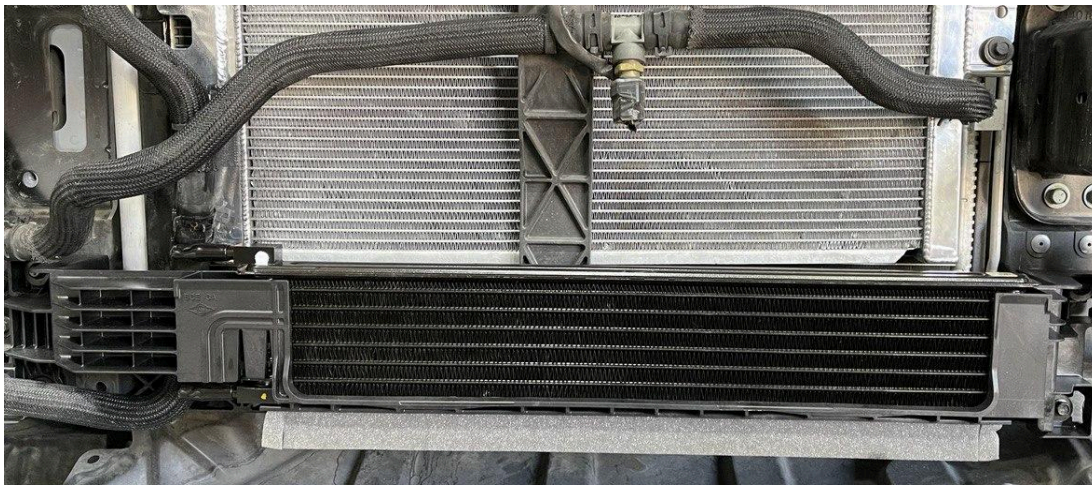
18. Next we will mount the outer oil hardline which bolts up to the water pump bracket on the front core support. Use the remaining M6x1x25mm flanged bolt to secure the hardline. **(Torque spec is 49 in-lb or 5.5 N-m)**



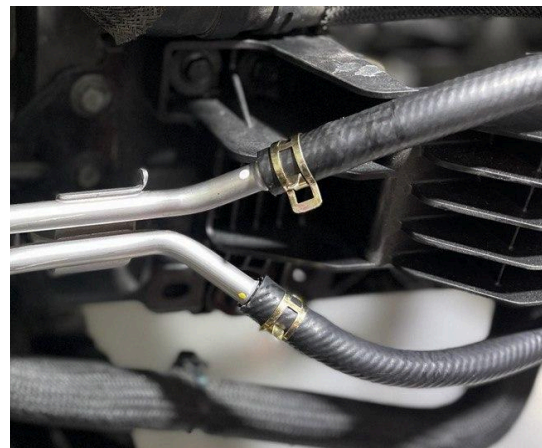
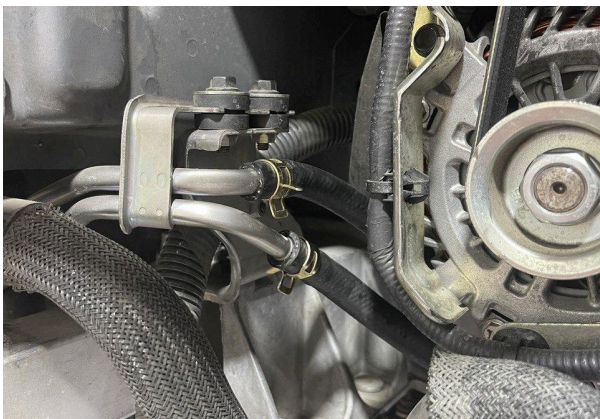
19. The final piece we need to mount is the oil cooler core. Infiniti was kind enough to pre-drill the holes in all of the factory mounting locations but we need to install rivnuts to be able to actually mount the core. We include a tool and one extra rivnut just in case you mess up the first one. In some locations you can look around the back side of the core support to see if you've fully spread the 'wings' of the rivnuts. If you've never used one of these tools before, just search YouTube for something along the lines of "manual rivnut installation tool." There are tons of example videos out there. Use the core itself as a guide to note which mounting holes get the rivnuts.



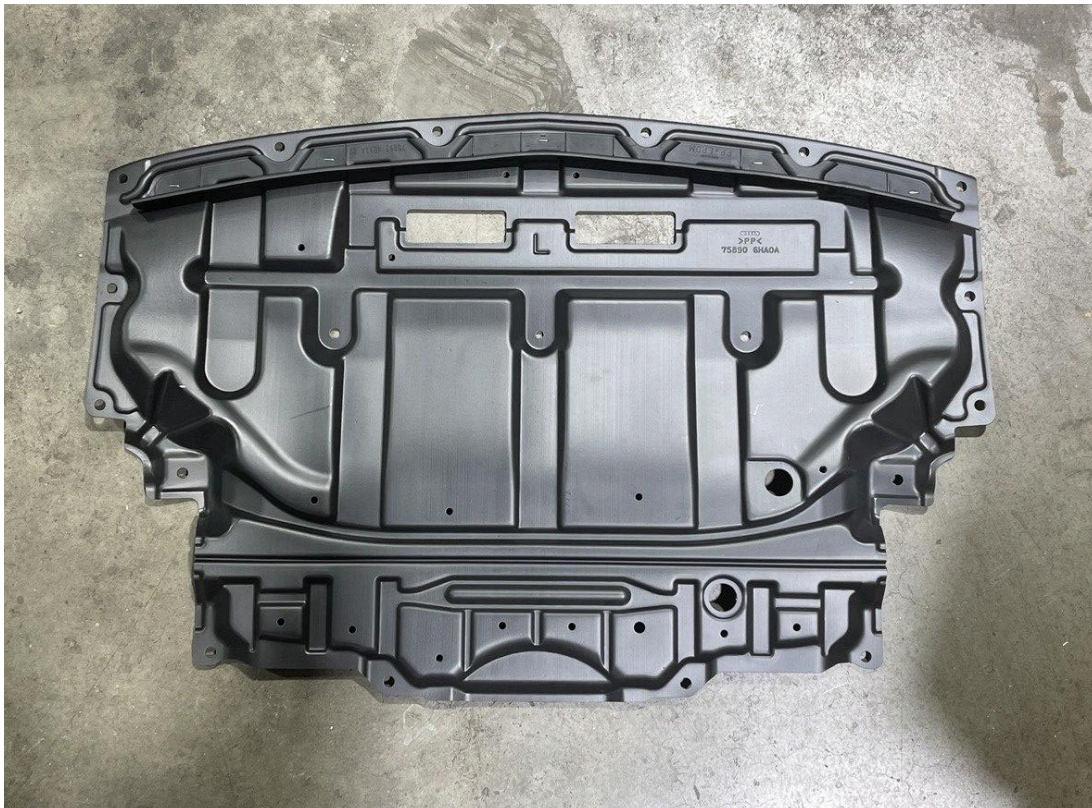
20. Mount your red sport oil cooler core using the six M6x1x35mm flanged bolts, threading them into the rivnuts we just installed in the previous step. You will have to unclip a plastic clamp from the intercooler heat exchanger feed hoses and transfer it to a slot on the integrated bracket for the oil cooler core. This same line should be tucked behind the cooler when the cooler gets mounted. (**Torque spec is 49 in-lb or 5.5 N-m**)



21. Now that all of the components are mounted we need to start cutting and installing the $\frac{3}{8}$ " oil line with the 15mm spring clamps. It can help to add a dab of oil to the inside of the hose or to the barbs in order to get the hose to slip on fully. It can also help to start with the longer sections, like the two that go to the cooler core, so if you end up cutting them a bit short, you can still use that section of line for one of the shorter runs.



22. With all of the oil lines now run and secured by clamps, take a moment to make sure all of the lines are clear from any moving parts or any surfaces that could move or vibrate, and cause wear into the hose.
23. In order to fully seal the oiling system and prepare for fresh fluids, we can install a new oil filter (**Screw oil filter manually until it touches the installation surface, then tighten it by 2/3 turn OR tighten to the specification 13 lb-ft or 17.7 N-m**) and also make sure the oil drain plug is tight. (**Torque spec for the drain plug is 22-27 lb-ft or 30-37 N-m**)
24. Fill up your oil with the OEM specified amount (listed below) **as well as an extra 0.4 quarts** to fill the oil cooler and lines (only on this initial fill up, the remainder of your oil changes will be at the stock capacity):
2WD: 5-1/8 Quarts or 4.8 Liters
AWD: 5-6/8 Quarts or 5.4 Liters
25. Now that the coolant system is fully sealed, we can refill the system with antifreeze. It is recommended to vacuum bleed the cooling system for the Q50 and Q60, as they are notoriously difficult to manually bleed all of the air pockets in the cooling system. We recommend using Genuine NISSAN Long Life Antifreeze/Coolant (BASF Glyscantin® G48®) or equivalent in its quality, mixed with water (distilled or demineralized).
26. Start the car and check for oil leaks from the lines or cooler, as well as coolant leaks from the lines. If any leaks are found, shut the car off immediately and resolve the leak. Repeat step #22 until no oil leaks are present.
27. Go ahead and reinstall the front bumper in the reverse order of installation.
<https://conceptzperformance.com/items/75610/docs/Front%20Bumper%20Removal%20FSM.pdf>
28. If you purchased the optional Red Sport under shield P/N 75890-6HA0A, install it now with the factory 10mm head mounting screws and plastic retaining clips and you are finished with your installation. If you are planning on cutting and trimming your factory splash shield to accept the outbound air flow from the oil cooler core, continue on for more instructions.



29. There are many ways to trim your factory undershroud. We will be going for a like-factory trim, but feel free to enlarge or add more cutouts if you feel it's necessary. First, we will mark out the plastic we will be removing from the splash shield. The images below can be used to get a rough size and location for each of the holes. It can also help to partially mount the splash shield and note where the foam seals against the under shroud.



30. Take a sharp blade and cut the sections you marked for removal, being careful to not go outside the marked areas and not to cut yourself. You should be left with a splash shield that has ample room for air to evacuate from the back/bottom of the oil cooler core. You can clean up the rough cut edges with some sandpaper or a file if you feel it's necessary.



31. Reinstall the modified splash shield with the factory 10mm head mounting screws and plastic retaining clips.

This completes the install of your Q50/Q60 Red Sport oil cooler upgrade! If you have any questions, please reach out to us at info@myczp.com, and we will assist you as best we can.

