



INFINITI Q50 Q60 RED ALPHA AUXILIARY INTERCOOLER TANK

Beat the heat and make more power. This tank adds over 1.5 gallons of coolant into the intercooling system of your twin-turbo equipped INFINITI.

Introduction

The goal of Alpha Performance is to provide the highest quality, best performing products available. By utilizing research and development, and rigorous testing programs Alpha Performance will never compromise the quality or performance of our products. In addition, Alpha Performance will only provide the finest customer service offering only parts and advice that are in the best interests of the customer. Alpha Performance was built on a foundation of integrity. This is who we are; this is what you can count on.

A vehicle modified by the use of performance parts may not meet the legal requirements for use on public roads. Federal and state laws prohibit the removal, modification, or rendering inoperative of any part or element of design affecting emissions or safety on motor vehicles used for transporting persons or property on public streets or highways. Use or installation of performance parts may adversely affect the drivability and reliability of your vehicle, and may also affect or eliminate your insurance coverage, factory warranty, and/or new OEM part warranty. Performance parts are sold as-is without any warranty of any type. There is no warranty stated or implied due to the stresses placed on your vehicle by performance parts and our inability to monitor their use, tuning, or modification.

These instructions are provided as a guide only as there are many variables that cannot be accounted for concerning your particular vehicle, including but not limited to model year differences, model differences, the presence of non-OEM parts, and modifications that may already be or were previously installed. A basic knowledge of automotive parts and systems is helpful but a better understanding of the parts and systems on your particular vehicle may be required.

If you have any questions or issues at any time during the installation of your Alpha Performance product(s) please call us for technical assistance. The Alpha Performance tech line can be reached during business hours at 847-709-0530 for Alpha Performance products only.

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Removal

01. Raise the vehicle in a safe manner. It is recommended to do so in a way that allows the passenger door to be fully opened. Standard automotive 2-post lifts can make this a little challenging to do. If this is the case, step #8 will aid in a work around.
2. Install the supplied M8 and M10 studs into the water tank. Snug down the studs, as they do not need to be too tight, just enough where they cannot be removed by hand. Locate one M8 plastic washer and one M10 plastic washer. Install the washers on the studs, as shown, by screwing the washers on by hand. Note: The washers will fit tight on the studs.



3. Remove the right front / passenger side wheel. Remove both front and rear wheel well liners.



4. On the inside of the fender, there are several holes in the rear leading into the door jamb area. Two of these holes will be used to mount the tank. These holes are covered by a black textured round sticker that can be seen with the right / passenger door fully open. Locate the two holes shown in the pictures and carefully remove these stickers.

Tech Note: If you are unsure about the exact hole location shown in the photos below, install the tank with the mounting studs installed. Align the tank inside the fender and push through the stickers to know which ones are correct.



Install

5. Once the stickers are removed and the tank can be installed, align and set the tank in place. Locate the OEM hole that aligns with the front bracket as shown. Mark this hole. It will need to be enlarged in the next step for a rivet nut to be installed.



6. Use a 7/16" drill bit to open the hole up. Next, locate and install the supplied stainless steel M8 rivet nut. This rivet nut requires a special tool available online and at most tool retail suppliers. We have provided a link and information below for a tool we use here in house, but there are many types available to choose from..

<https://www.mcmaster.com/96349a815>

Wrench Driven Rivet Nut Installation Tool M8x1.25 McMaster Part # **96349A815**

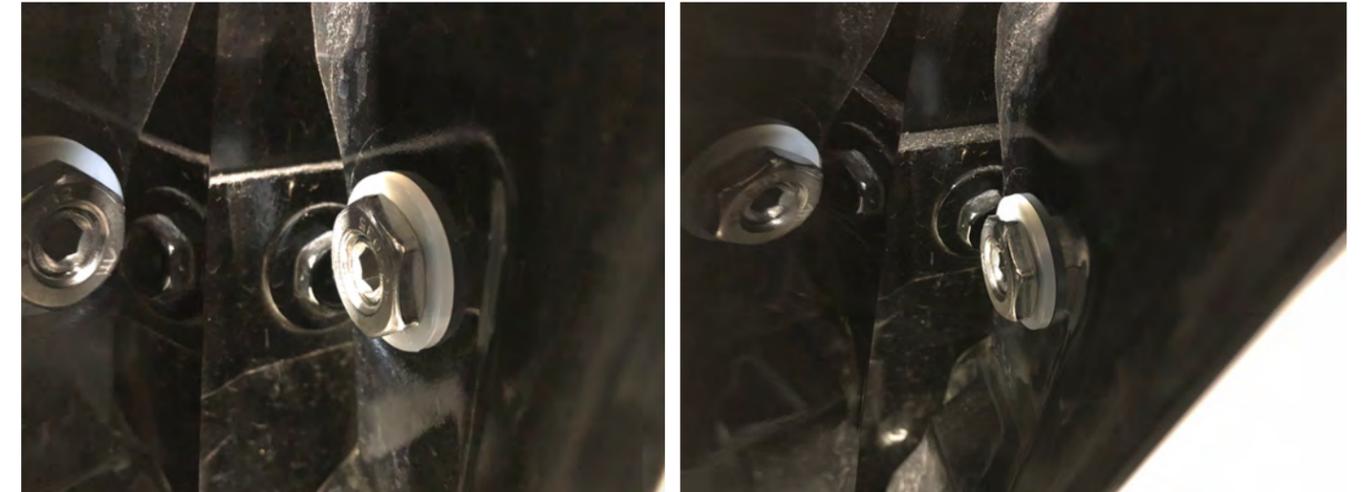


7. Once the rivet nut is installed, install the tank and secure the front bracket with the M8 stainless bolt as shown. contaminants into fuel tank..

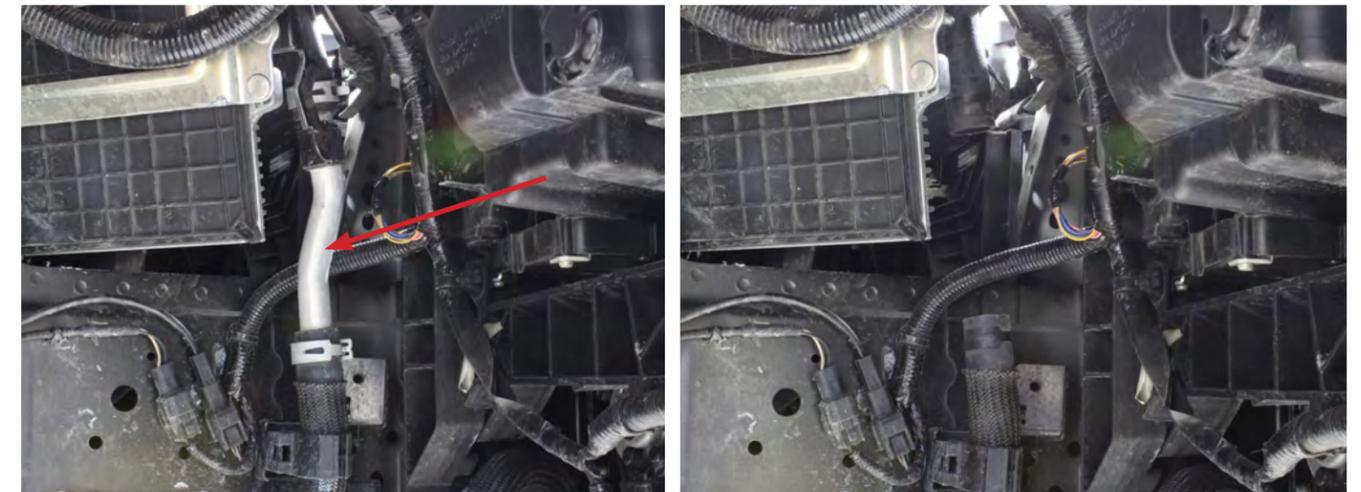


8. If you can open the right / passenger door all the way, install the rest of the tank hardware in step #9. If the tank is being installed on a 2-post lift, and you cannot open the door, proceed to step # 10.

9. Locate the remaining M8 and M10 plastic washers and low-profile nuts. Install the washers onto the studs from inside the door jam. Use a tiny bit of blue Loctite on the threads inside the nuts before installing. Install the nuts and tighten. Make sure not the overtighten the nuts, as you could cause the plastic washers to fail and crack.



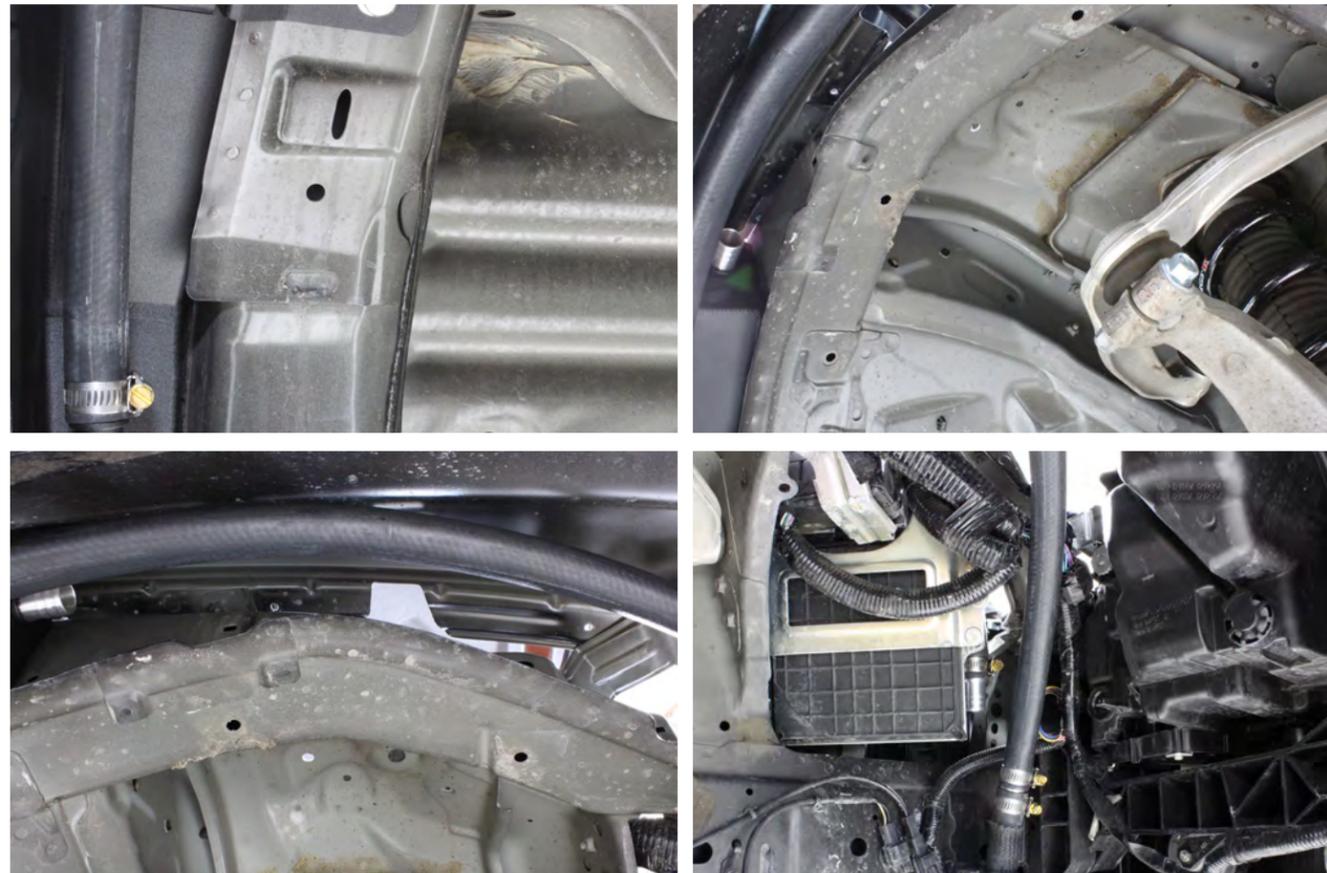
10. Drain the intercooler cooling system from the factory drain at the bottom of the right / passenger's front bumper area. Save the coolant if you wish to reuse. Once drained, remove the metal pipe and bracket shown. This pipe will not be reused.



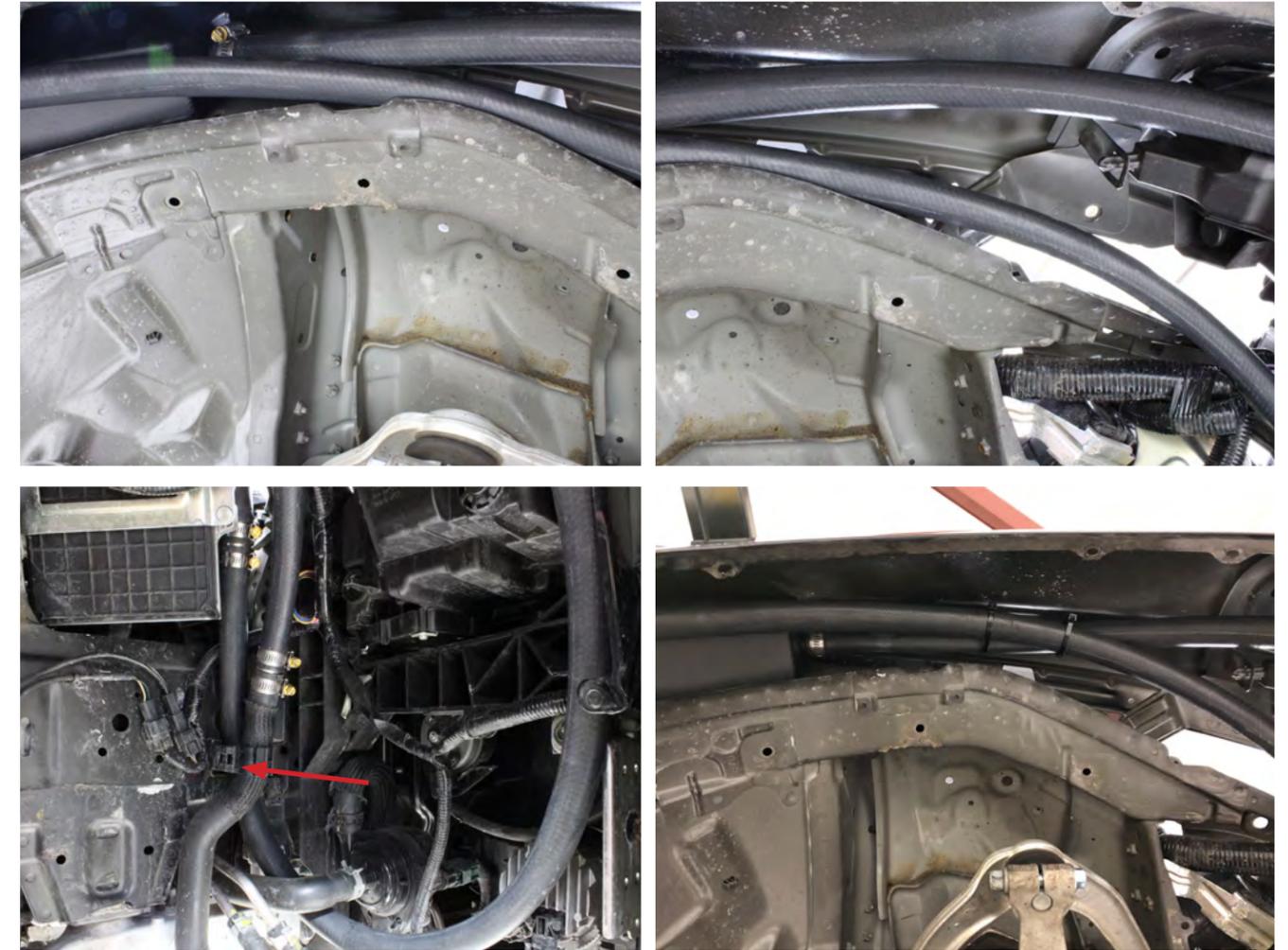
11. Locate the billet hose jumpers and #10 hose clamps. Install the jumpers and clamps as shown where the metal tube was removed. Make sure the hose clamps are orientated in a way where the worm gear will not rub on anything.



12. Next, route the water tank inlet hose as shown. Start by connecting the supplied hose and #10 hose clamp to the bottom inlet fitting on the water tank. Route the hose up the tank following the wheel well. The hose will run along the panel seam, then to the left of the head light and connect to the vertical hose you installed a billet fitting in step #11. Determine the hose length needed and cut it to length. Use a #10 hose clamp to finish the connection.



13. Next, route the water tank outlet hose as shown. Start by connecting the remaining hose to the top outlet of the water tank using a supplied #10 hose clamp. Route the hose along the wheel well, to the right rear side of the headlight, closest to the outside of the front bumper. Loop the hose down and over to the hose leading up to the intercoolers, where the fitting was installed in step #11. Trim the hose length, if necessary, and finish the connection using a #10 hose clamp. There is a secondary spot in the OEM hose clamp/holder that can be used as shown. Once the hoses are routed, use the two supplied zip ties to secure the hoses together.



14. Reinstall the wheel well liners and wheel.

15. If the right / passenger door could not be opened fully to finish installing the water tank hardware during installation, please go back to step #9

16. Once everything is fully installed, move on to bleeding the tank. Once everything is bled properly, check for leaks.

17. Enjoy!

Tech Note: In order to properly bleed the intercooler system on Infiniti VR30 based cars, an air lift system is required. This is more important now with the addition of nearly 1.75 gallons of fluid capacity. Failure to do so may result in CEL code and/or intercooler pump failure.

Intercooler Coolant Bleeding

System Specs

- OEM Intercooler System Capacity = .843 Gallons
- AMS Aux Tank adds 1.675 Gallons to the System Capacity
- Total System Capacity Using all 3 AMS Components (Aux Tank, Heat Exchanger, Expansion Tank) = 2.7 gallons

18. The intercooler system on these vehicles are difficult to bleed to avoid an "air lock" condition due to the intercoolers being the highest point. Since the intercooler pumps are not self-priming, they cannot move air. If one part of the system has an air pocket close to the pump, no coolant flow will occur. It is also important to know that damage may occur to the intercooler pumps if they are allowed to run dry with no coolant present in the system. Avoid this at all costs! Standard bleeding procedures will not work. Here are two options listed below with using the Air Lift Method as the preferred.

- The factory bleeding procedure requires the use of the OEM CONSULT tool to put the car into "Full Drive Mode" that will run the pumps at idle for bleeding. Coolant is added to an open system while the pumps run to start circulating coolant. This procedure can be performed by your local Infinity Dealer.

Recommended Method (Air Lift)

- The method we use for intercooler system bleeding uses a widely available system called an Air Lift or Vacuum Venturi Cooling System Refilling. These systems use compressed air to draw the coolant system under a vacuum, removing all the air. The vacuum then draws coolant into the entire system. Almost no bleeding is required after. This method is recommended with the added capacity of the tank.

<https://www.matcotools.com/catalog/product/MCR103A/COOLING-SYSTEM-FILLER/>



19. Follow your tools manufacturer instructions for bleeding.

20. After completion, test drive the vehicle and check the fluid level in the reservoir. Continue adding until the fluid level is stable.

21. If the AMS heat exchanger is installed, crack open the bleeder at the top of the Alpha heat exchanger with the engine off and reservoir cap removed. If properly bled, there should not be much, if any air in this area. The bleeder was added in the system due to the increased size of the core and the outlet being slightly lower than the top of the core. It is possible for some air to be trapped here. If this is the case, continue to drive the vehicle and check the bleeder screw for air until no more air comes out and the fluid level in the reservoir is stable and consistent.

22. Once the system is properly bled, enjoy!