

SUBARU WRX FRONT MOUNT INTERCOOLER KIT

INSTALL INSTRUCTIONS

2015-2021 Subaru WRX w/ FA20 2.0L Turbo Engine

Introduction ///

The goal of AMS Performance is to provide the highest quality, best performing products available. By utilizing research and development, and rigorous testing programs AMS Performance will never compromise the quality or performance of our products. In addition, AMS Performance will only provide the finest customer service offering only parts and advice that are in the best interests of the customer. AMS 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 and tuning may not meet the legal requirements for use on public roads. AMS Performance makes no claims of compliance unless otherwise stated on a per-product basis. Use or installation of performance parts and tuning may adversely affect the drivability and reliability of your vehicle, and may also affect or eliminate your insurance coverage, factory warranty and new OEM part warranty. There is no stated or implied guarantee by AMS of continued OEM vehicle warranty, insurance coverage, or emissions compliance, due to the stress placed on your vehicle by performance parts and our inability to monitor its use, tuning or modification.

These instructions are not intended to be a comprehensive guide for installation as there are many variables that may affect your particular vehicle, including but not limited to model year differences, sub-model/trim/optional equipment differences, the presence of non-OEM parts, or other modifications that may have previously been completed. A basic understanding of automotive parts and systems and novice mechanical skills should be all that is necessary for installation, but certain circumstances may necessitate professional installation.

AMS Performance is committed to providing quality support for our products. If you are in need of technical support, installation help, or a replacement component, our Customer Service Team is available directly via telephone at 847-709-0530, or digitally via the contact form linked here: amsperformance.com/support

2. Disassembly

5. Installation

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To begin, remove the following components;

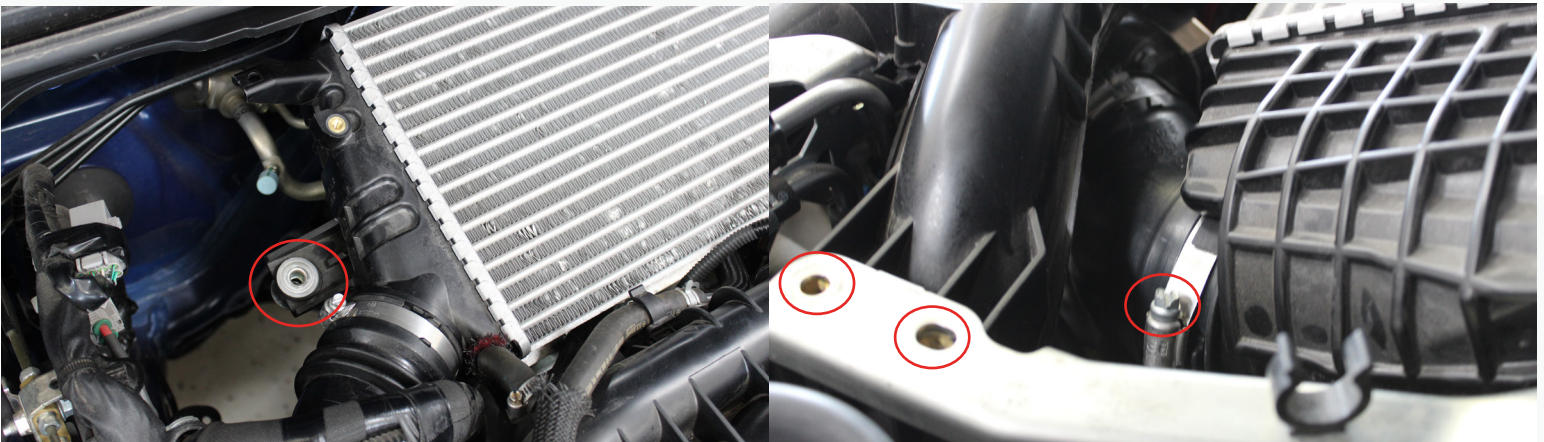
- Plastic undertray
- Front bumper
- Front fender liners
- Plastic lower core support bar

Once that is complete, proceed with the following steps.

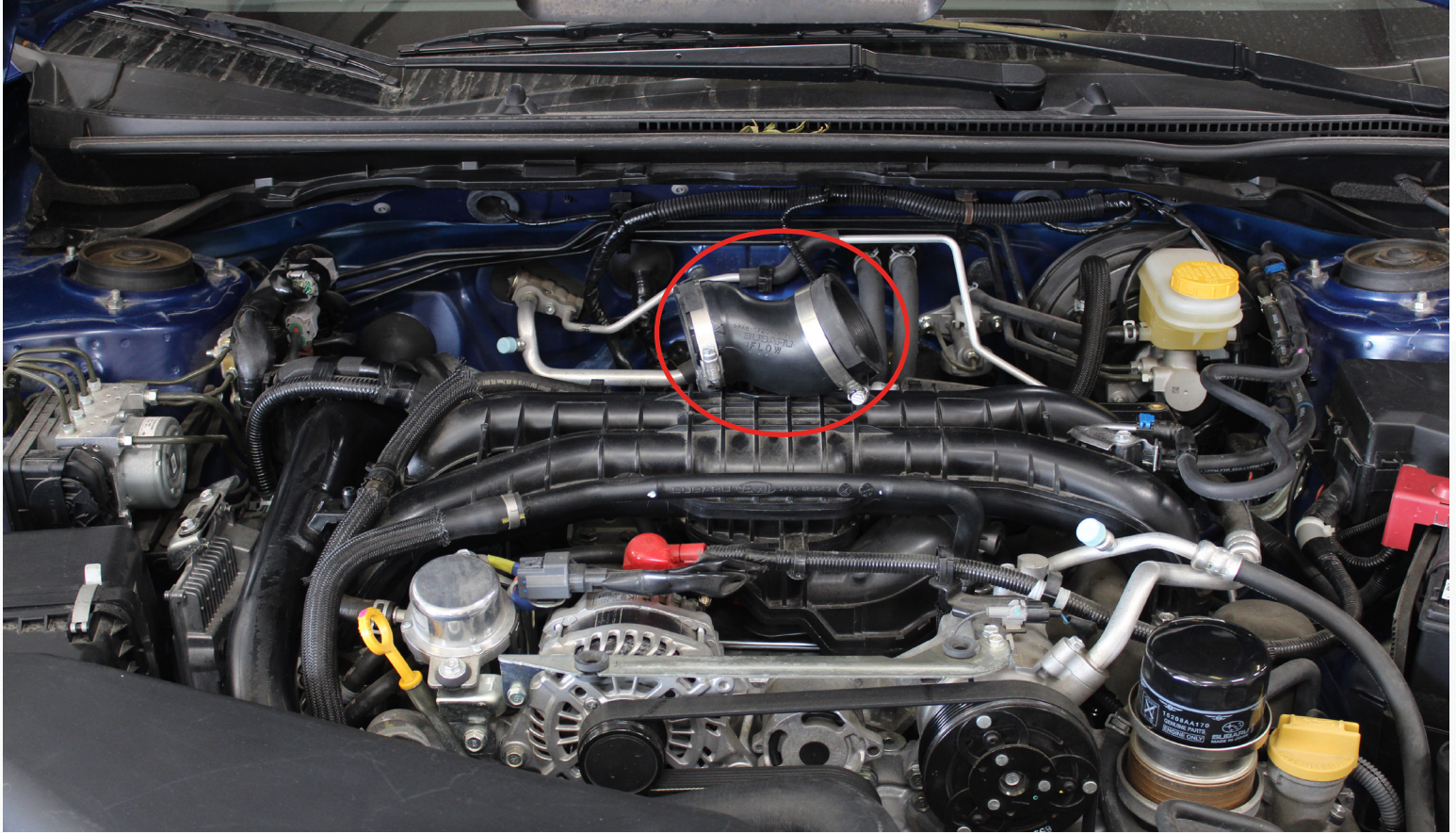
1. Remove the stock engine cover. There are two rubber grommets in front and two screws in the back holding it in place.



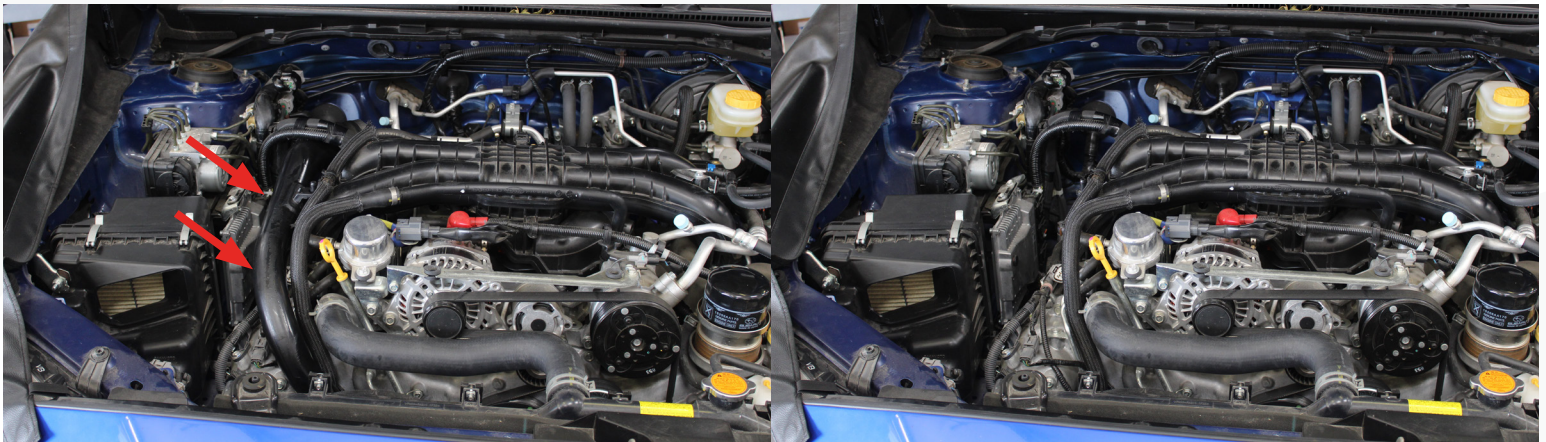
2. Remove the factory intercooler. Remove one nut on the passenger side and two on the drivers side as well as the couplers on either end and it will lift out.



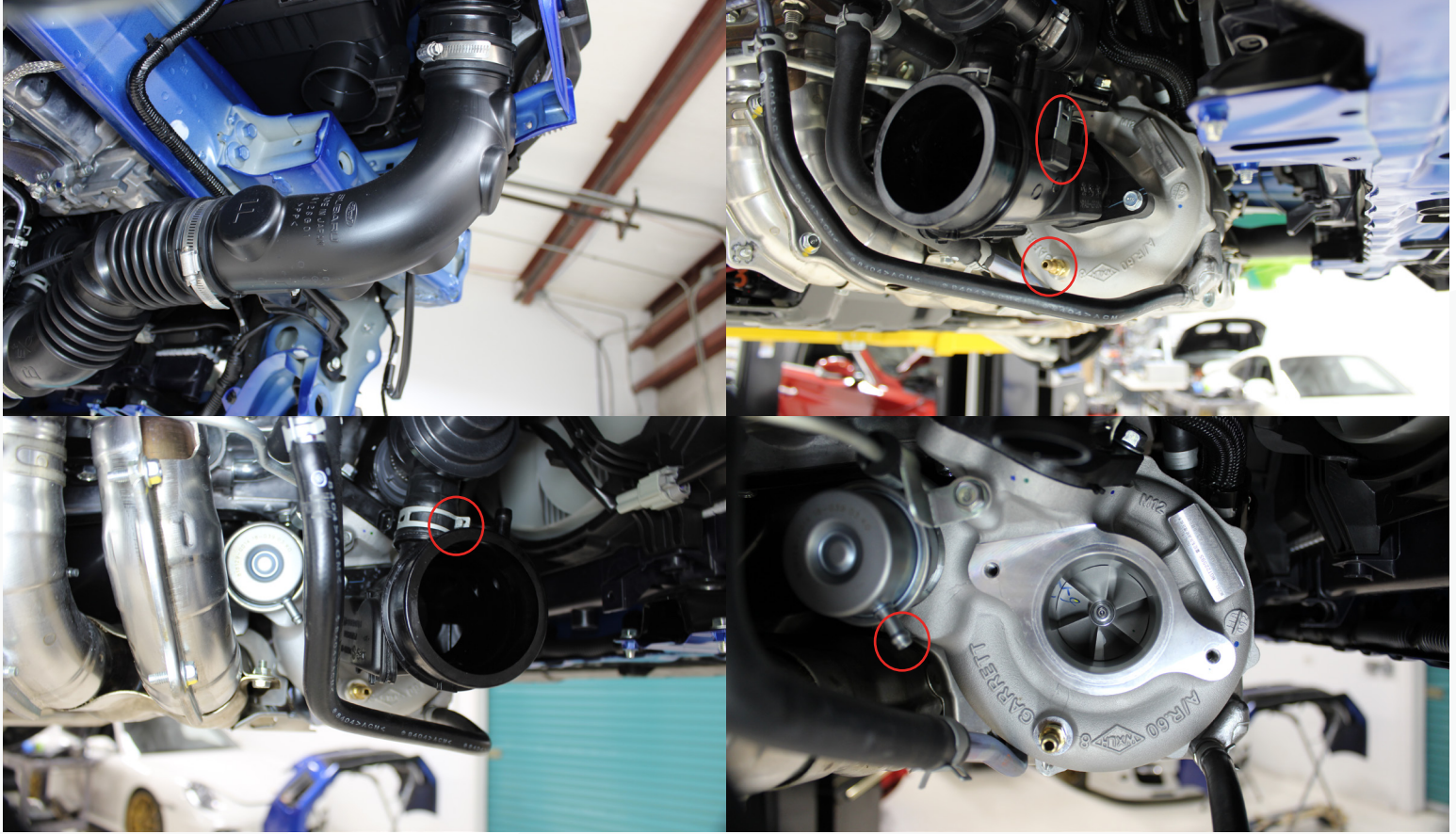
3. Remove the intake elbow. It will not be reused.



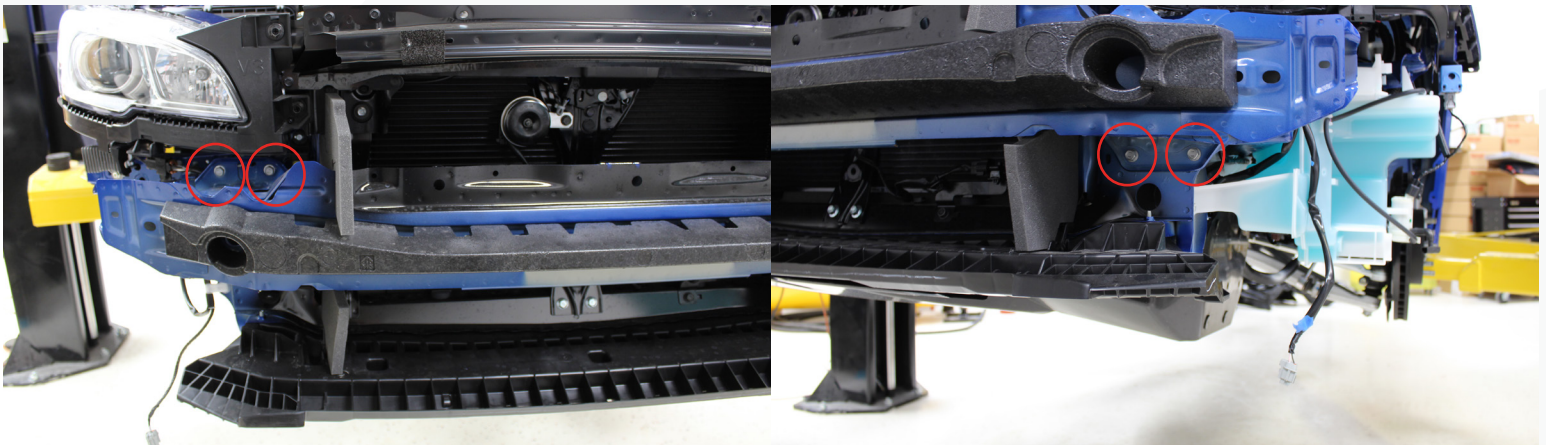
4. Remove the air inlet duct and the factory charge pipe. The charge pipe is bolted to the outlet of the turbo with two bolts that are accessed from the top.



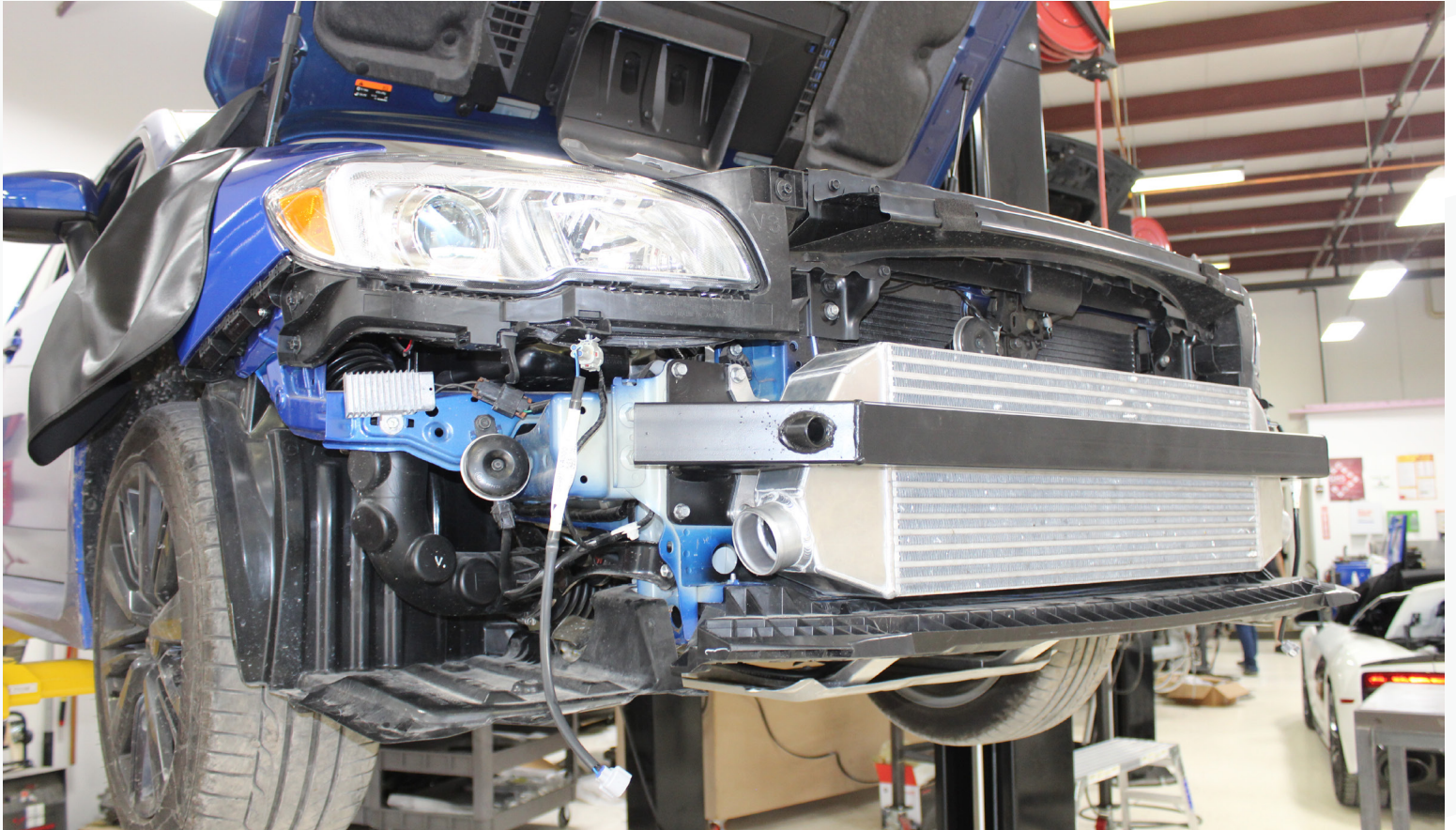
5. With the fender liner removed, you will have much better access to the inlet side of the turbo on the passenger side. There are multiple vacuum lines and a few connectors to remove, take care in making sure you know where each line goes when it comes time for re-installation.



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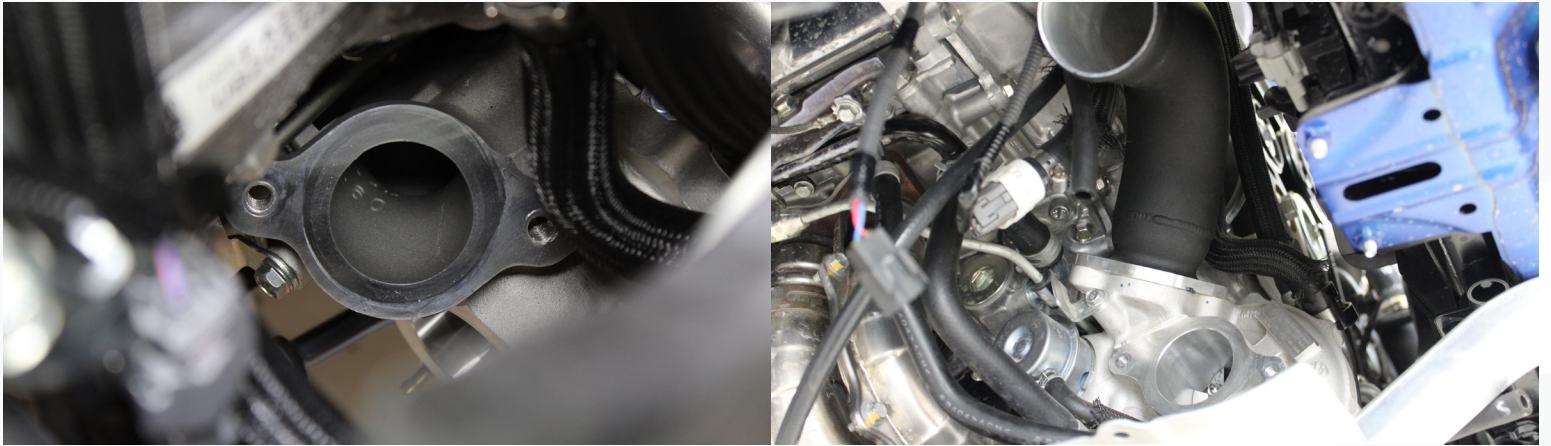
7. Remove the lower core support brace and set aside for the time being. While that is out of the way, you can fit the AMS support beam and intercooler. The support beam bolts in the factory location and the intercooler uses two of the mounting bolts on either side. Loosely mount the support beam first using the four shorter outside bolts only. Then, slide the intercooler into place from underneath. There are 4 bolts that are longer than the others, use these to mount the intercooler and support beam together. If you are mounting the intercooler without the support beam, use the 4 supplied washers.



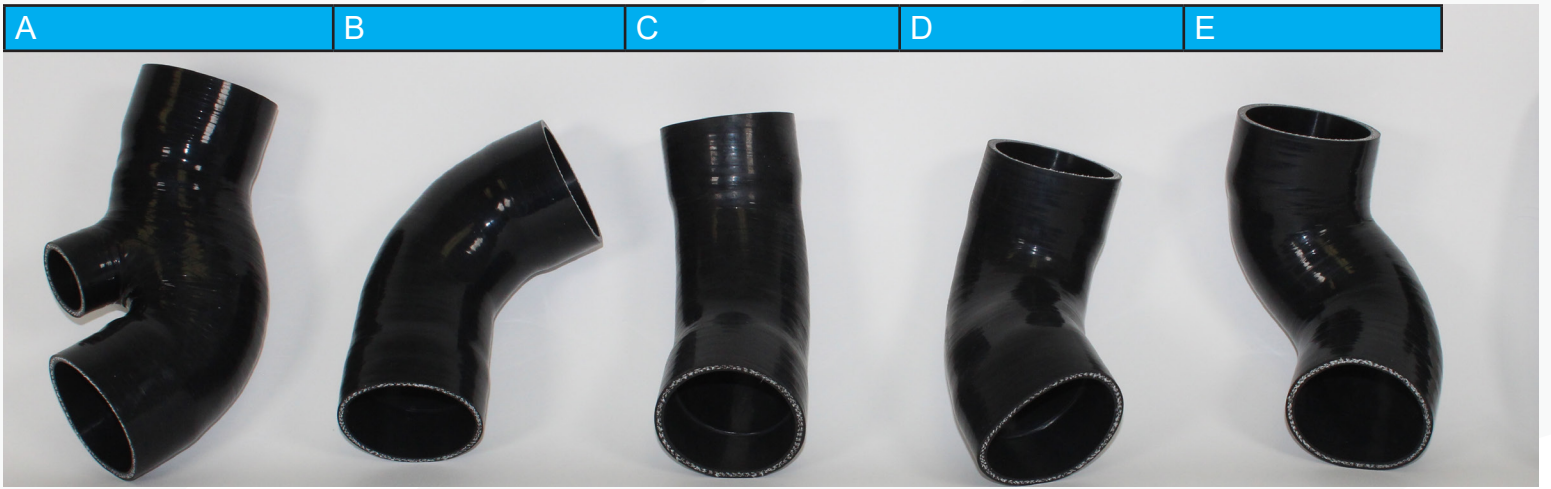
8. Now install the charge piping. The o-ring from the factory charge pipe will need to be transferred over to the new charge pipe.



9. With the o-ring swapped over, you can now install the compressor outlet pipe with the supplied hardware.

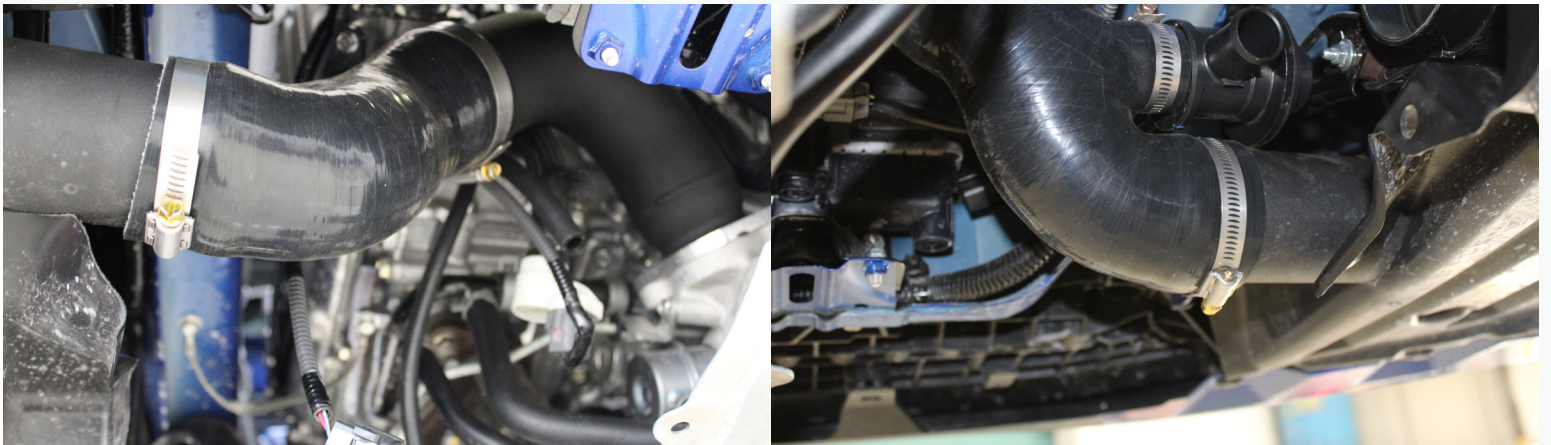


TECH NOTE: Use the picture below to ensure the correct silicone couplers are installed in the correct place and orientation. All hose clamps should be tightened to 8 ft lbs.



FRONT VIEW:

REAR VIEW W/ DIVERTER VALVE



11. The next silicone coupler (B) will join the first charge pipe to the inlet of the intercooler. Notice how one side of the coupler is slightly longer. This side will connect to the intercooler and the shorter side will connect to the outlet of the charge pipe. Again, loosely install the coupler and clamps. With everything from the compressor outlet to the intercooler inlet loosely installed, clock each connection and tighten the hose clamps, making sure the transitions are smooth and each section has room to account for engine movement without stressing the connections.



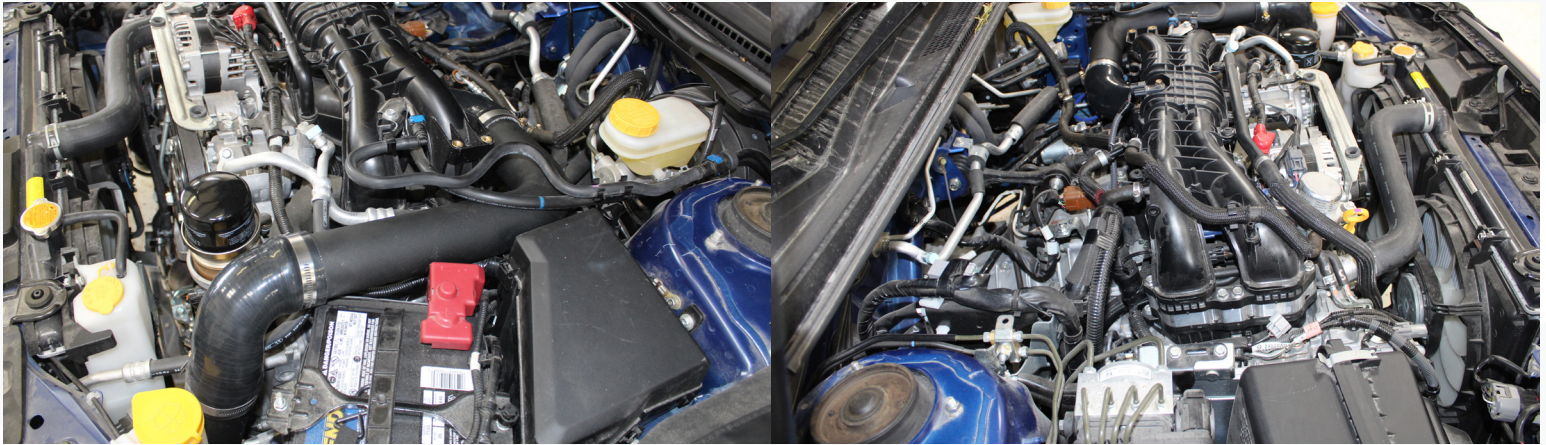
12. After the intercooler, install coupler "C". This coupler has a constant radius and can be installed either direction.



13. Next, install the longest of the three charge pipes. This will only route one way around the frame rail and into the engine bay. Once this is loosely installed, install the second to last silicone coupler (D). Just like coupler “B”, this coupler is longer on one side of the bend than the other. This longer side will connect to the charge pipe coming from the intercooler.



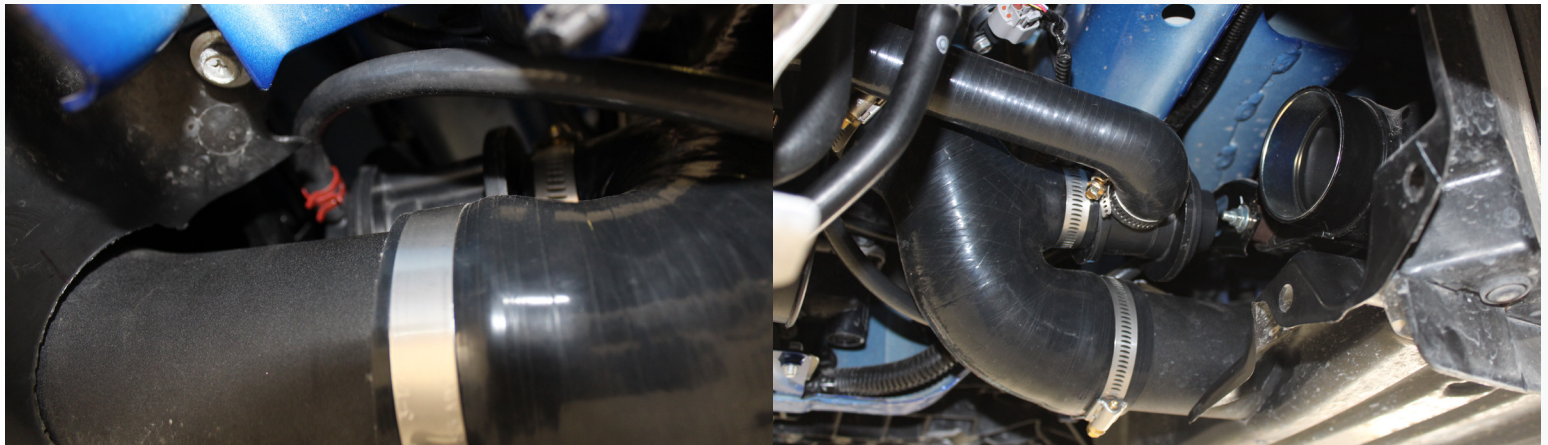
14. Finally, install the last charge pipe and coupler (E). The long end of the charge pipe will connect to coupler “D” and coupler “E” will connect to the throttle body. You will notice a lip on the inside of one end of this coupler, this is the side that will connect to the charge pipe. The side with no lip will connect to the throttle body. Just like before, make sure to leave the connections loose so they can be clocked and adjusted before final tightening.



*TECH NOTE- Use the pictures below for reference of the charge pipe layout.



15. With all the charge piping routed, ensure that all the vacuum lines and electrical connections are re-installed on the inlet side of the turbo. The diverter valve sits in a new location so we have provided a longer length of vacuum line to reach the vacuum port. The second picture below shows the orientation of the silicone coupler.



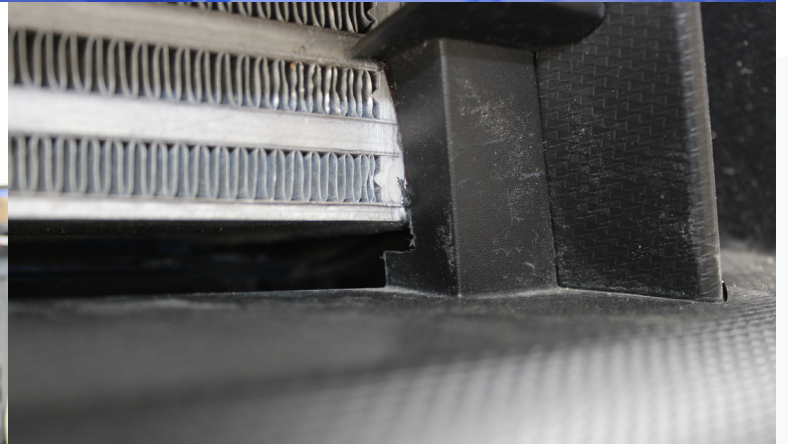
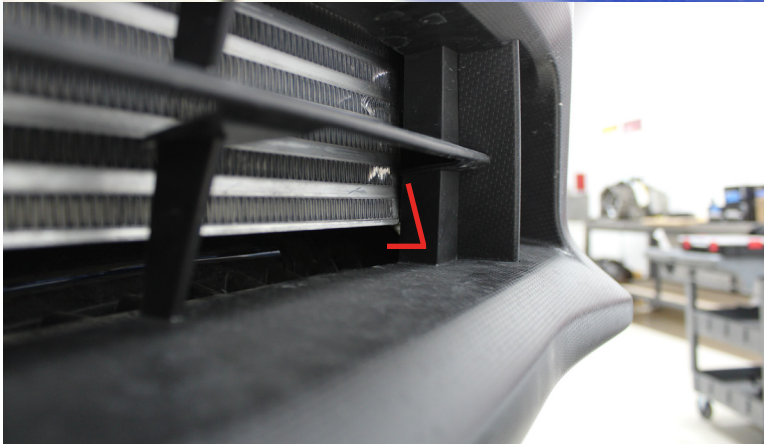
16. Reinstall the inlet pipe.



17. Next you will need to slightly modify the bumper and undertray before reinstalling them. Use the photos below as a guideline. Start with the front lower core support panel. The two circled tabs need to be removed.

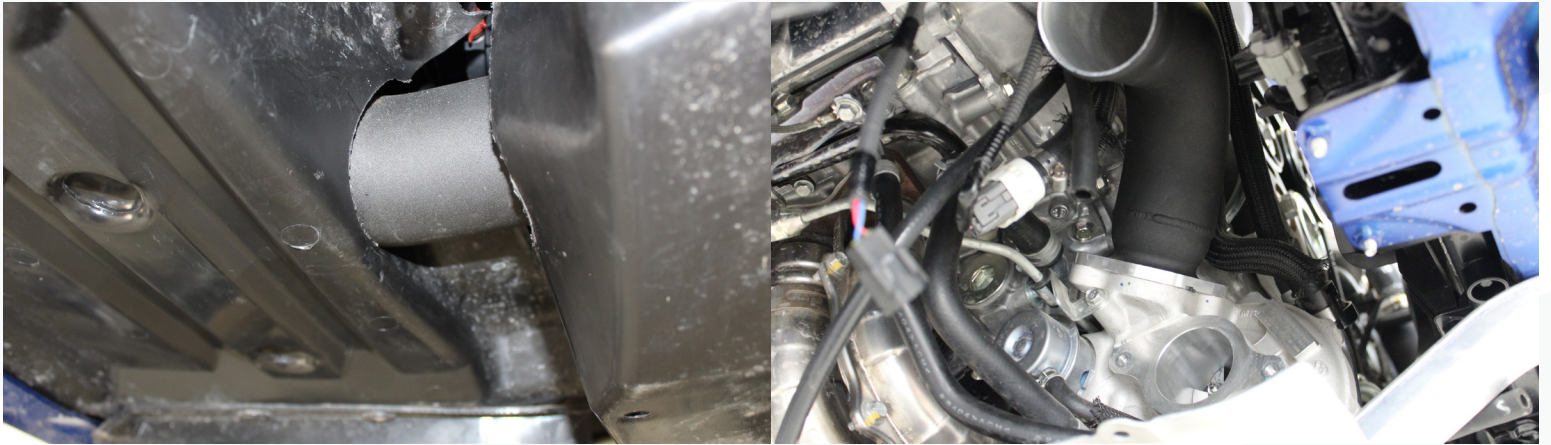


18. The following pictures show the locations that need to be modified on the front bumper. Every car might be slightly different, so take your time with this step. Measure twice and cut once, you may need to install and remove the bumper a few times before you get it right. You can always remove more material, but it will be hard to put it back if you cut too much. This job is best done with two people. Make sure areas like the fog light mount are not removed as this is not necessary.





19. The passenger side of the undertray and fender liner will need to be modified to make room for the new charge pipe.



20. Once the bumper and undertray can be installed easily and clear all the intercooler components, this job is complete. Enjoy your AMS Front Mount Intercooler!

