



Subaru WRX FMIC

# INSTALL INSTRUCTIONS

# 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 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 AMS Performance product(s) please call us for technical assistance. The AMS Performance tech line can be reached during business hours at 847-709-0530 for AMS Performance products only.

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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.



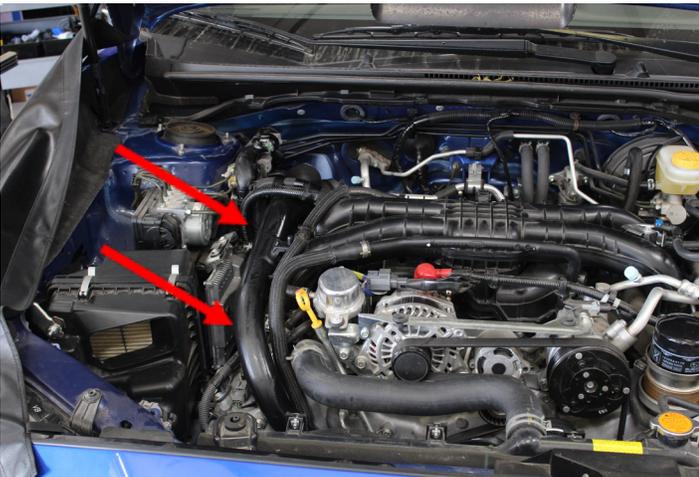
2. Remove the factory intercooler. Remove one nut on the passenger side and two on the drivers side as well as the couplers on either end and it will lift out.



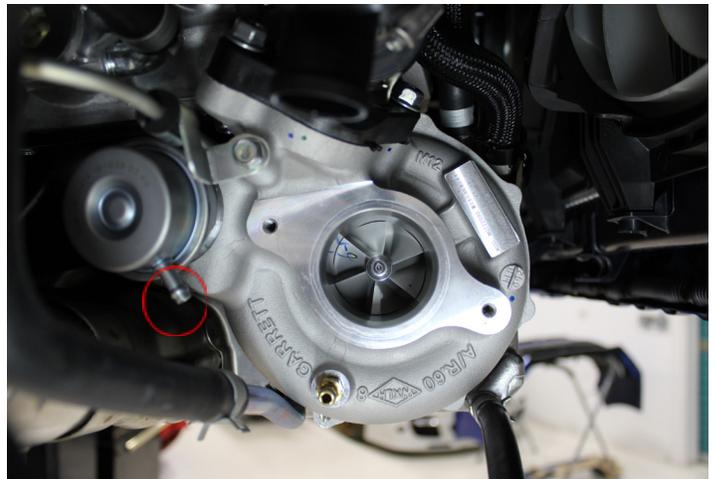
3. Remove the intake elbow. It will not be reused.



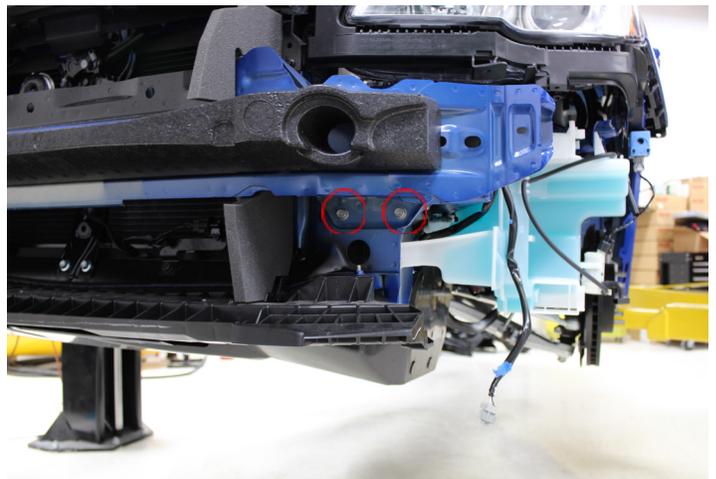
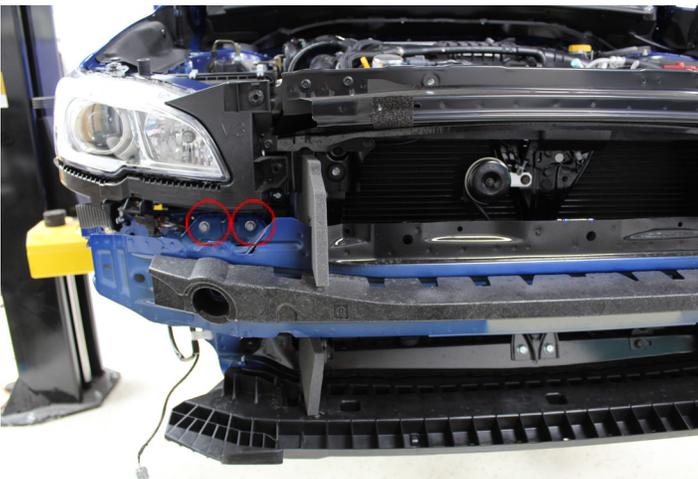
4. Remove the air inlet duct and the factory charge pipe. The charge pipe is bolted to the outlet of the turbo with two bolts that are accessed from the top.



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.



6. With the inlet side of the turbo removed, proceed with removing the factory front support beam, which is held in place with four 12mm bolts on either side.



7. Before the AMS Intercooler can be installed, you will need to make some space on the bottom of the core support. To do this, we have provided three button head bolts to replace the factory bolts. you will also need to cut or grind a small amount of material out of the center support bracket. See pictures below as a guideline. Lastly, you may need to slightly bend the mounting tab for the horn to clear the top of the intercooler.



8. The last thing to do before installation is to add the weatherstrip. This will help seal the space below the intercooler and direct airflow to the core. Simply peel the backing off of the adhesive and apply it to the front edge of the bottom side of the intercooler.



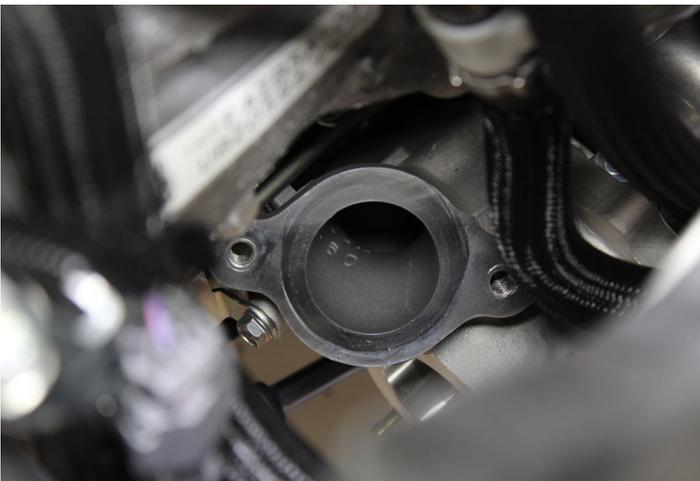
9. Remove the lower core support brace and set aside for the time being. While that is out of the way, you can fit the AMS support beam and intercooler. The support beam bolts in the factory location and the intercooler uses two of the mounting bolts on either side. Loosely mount the support beam first. Then, slide the intercooler into place from underneath. If you are mounting the intercooler without the support beam, use the 4 supplied washers.



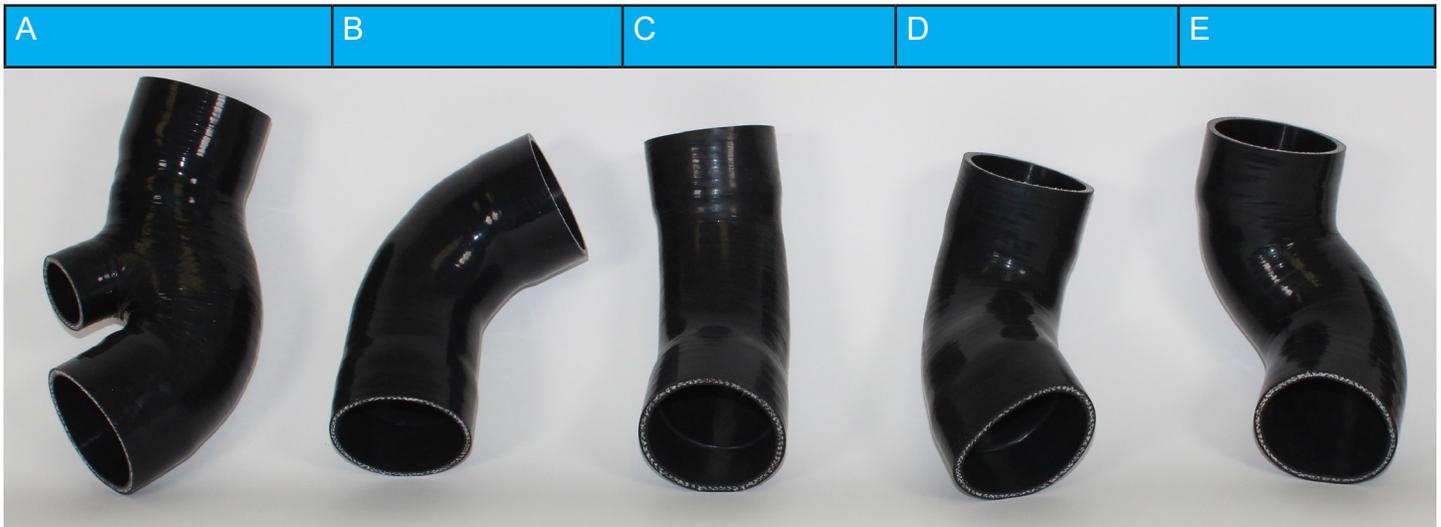
10. Now install the charge piping. The o-ring from the factory charge pipe will need to be transferred over to the new charge pipe.



11. 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.



12. Install the first silicone coupler (A) and charge pipe. This will be the coupler with the provision for the factory diverter valve and shorter ninety-degree charge pipe. For this charge pipe, you will notice that one side is slightly longer than the other. This longer side should be connected to the first silicone coupler. Loosely fit the silicone and clamps, final clocking and tightening will be done once you have all the charge piping up to the intercooler in place.

FRONT VIEW:



REAR VIEW W/ DIVERTER VALVE:



13. 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.



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



15. 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.



16. 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.



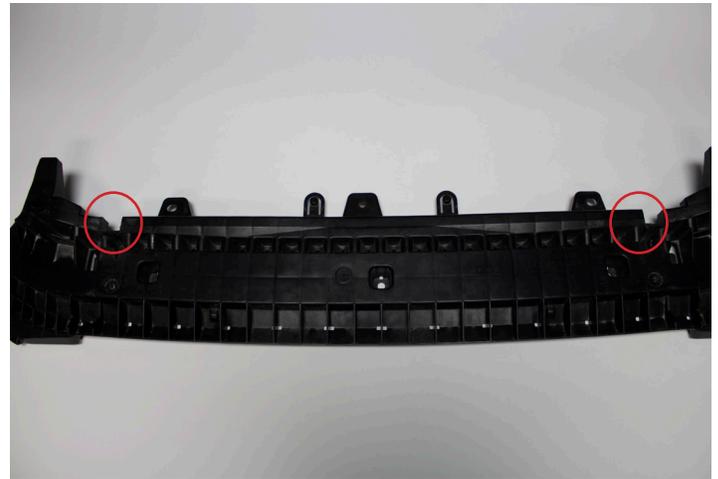
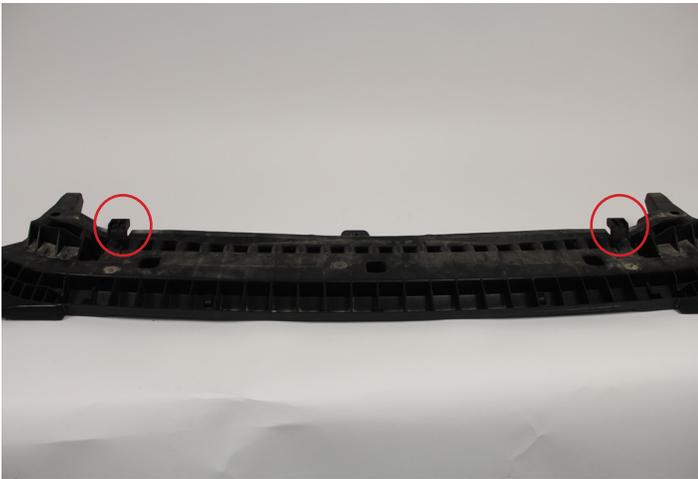
17. With all the charge piping routed, ensure that all the vacuum lines and electrical connections are re-installed on the inlet side of the turbo. The diverter valve sits in a new location so we have provided a longer length of vacuum line to reach the vacuum port. The second picture below shows the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



18. Reinstall the inlet pipe.

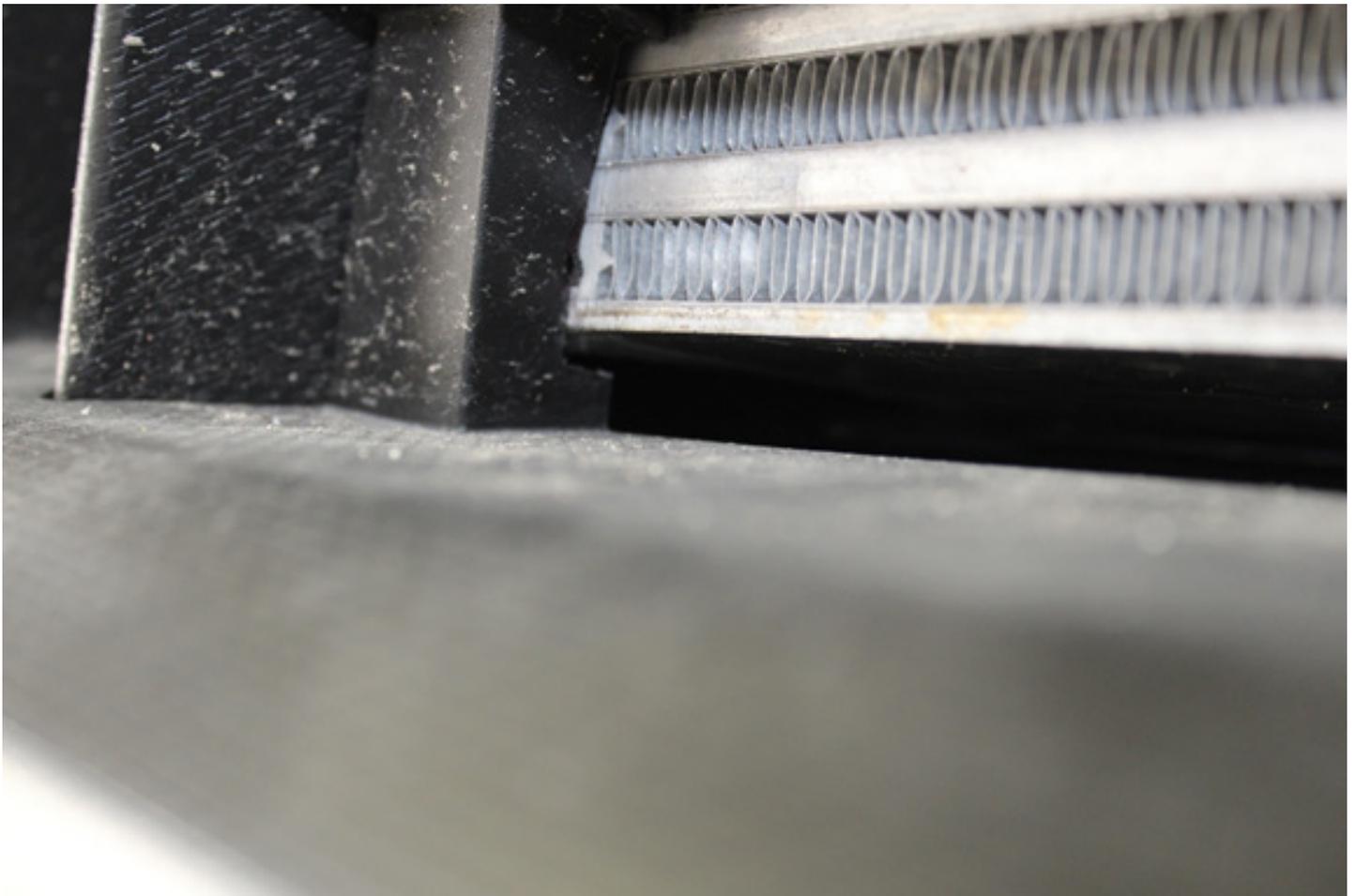
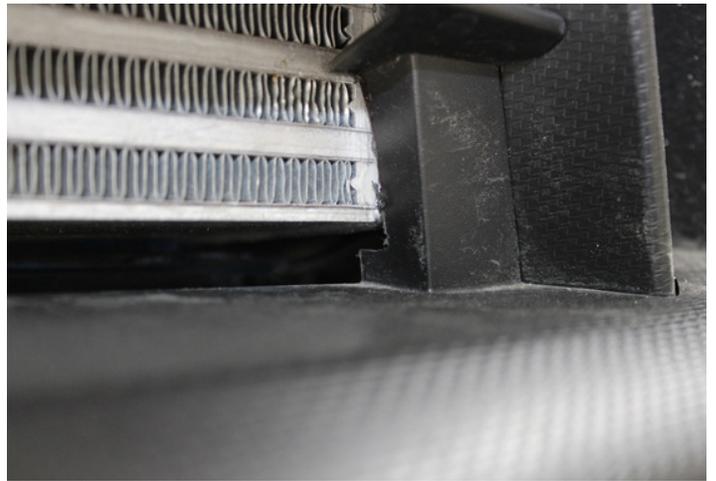
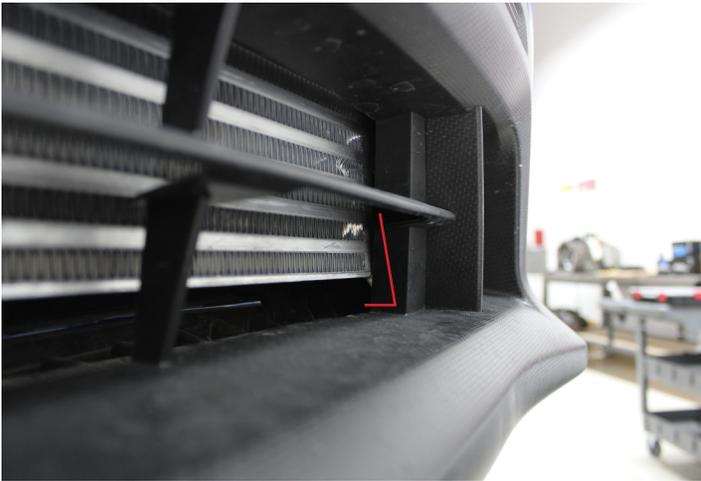


19. Next you will need to slightly modify the bumper and undertray before reinstalling them. Use the photos below as a guideline. Start with the front lower core support panel. The two circled tabs need to be removed.



20. 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.





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



22. 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!

