BMW S55 AIR INTAKE

INSTALL INSTRUCTIONS

BMW F80 M3 2014-2018
BMW F82 M4 2014-2018

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.

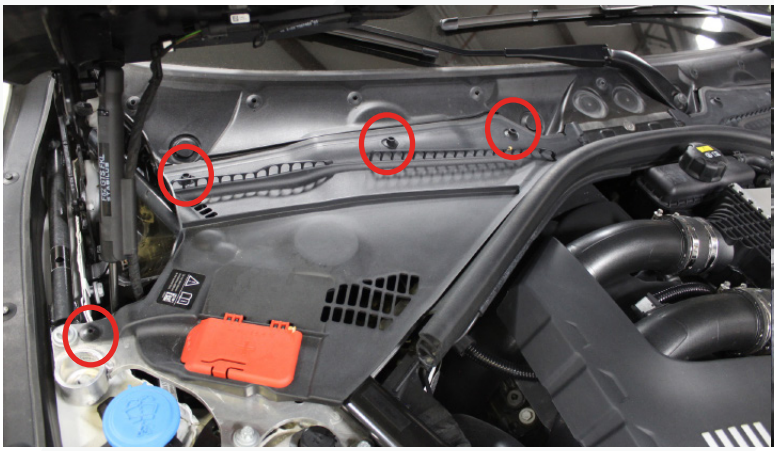
These instructions are not intended to be a comprehensive guide for installation as there are many variables that may affect your particular vehicle, including but not limited to model year differences, sub-model/trim/optional equipment differences, the presence of non-OEM parts, or other modifications 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.

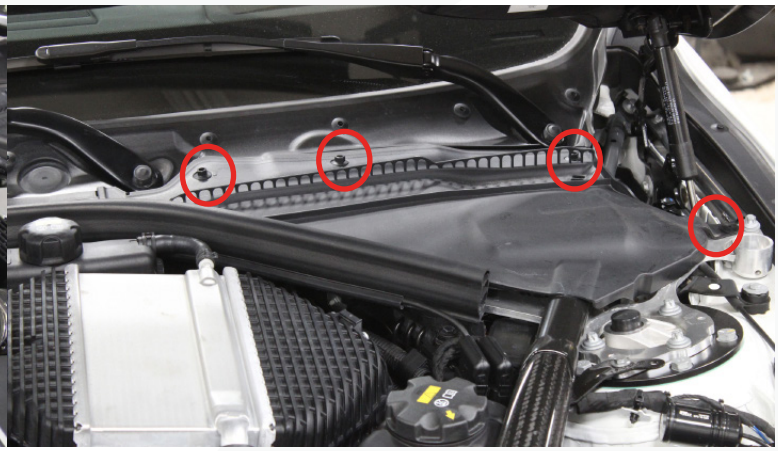
AMS Performance is committed to providing quality support for our products. If you are in need of technical support, installation help, or a replacement component, our Customer Service Team is available directly via telephone at 847-709-0530, or digitally via the contact form linked here: amsperformance.com/support

Table of contents ///

1. Begin by removing the 2 plastic cowls that cover the positive battery terminal and brake master cylinder

1a. Begin by removing the 2 plastic cowls that cover the positive battery terminal and brake master cylinder

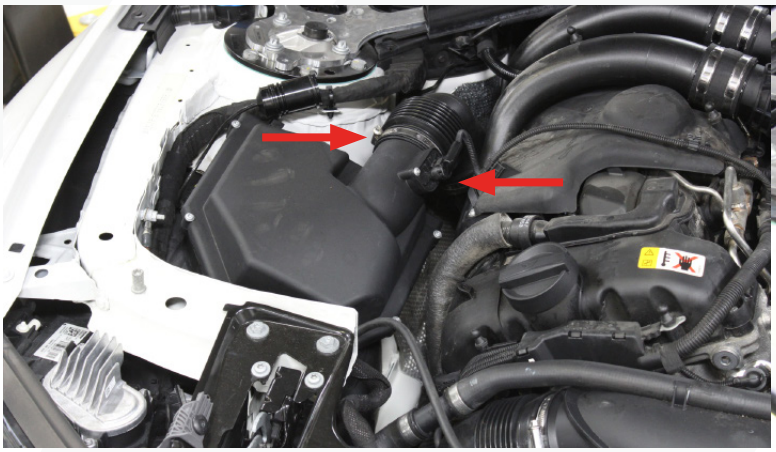




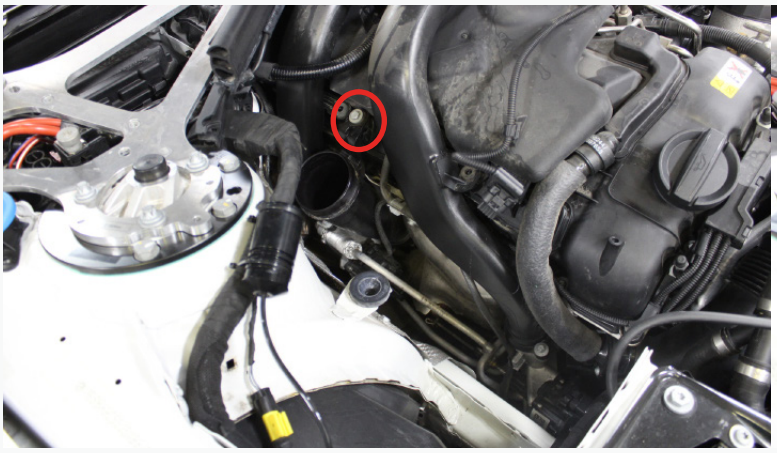
2. Remove the carbon fiber strut brace. The brace is held on by six 13mm bolts at the rear and three 10mm bolts, two at the front of the brace and one on the coolant expansion tank. Remove the brace.

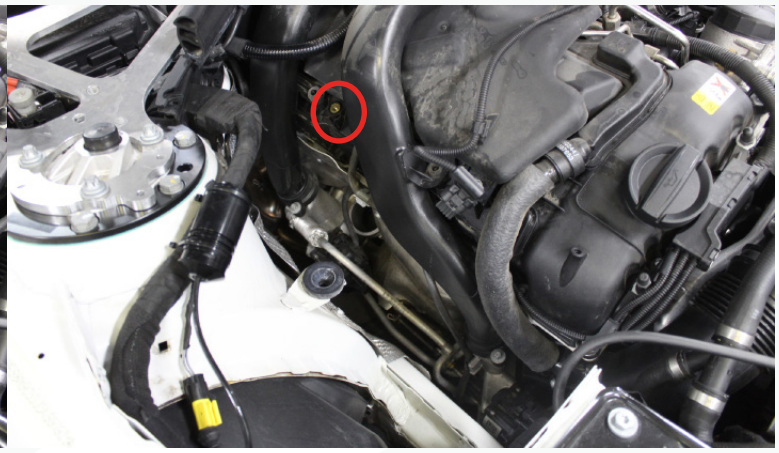
OEM AIRBOX REMOVAL ///

3. Begin with the right airbox (passenger side), disconnect the MAF sensor from the airbox and loosen the worm clamp using a 6mm socket. Remove the coupler attached to the airbox and push out of the way. Remove airbox by pulling up on the box to release it from the three mounting grommets. Set air box aside.

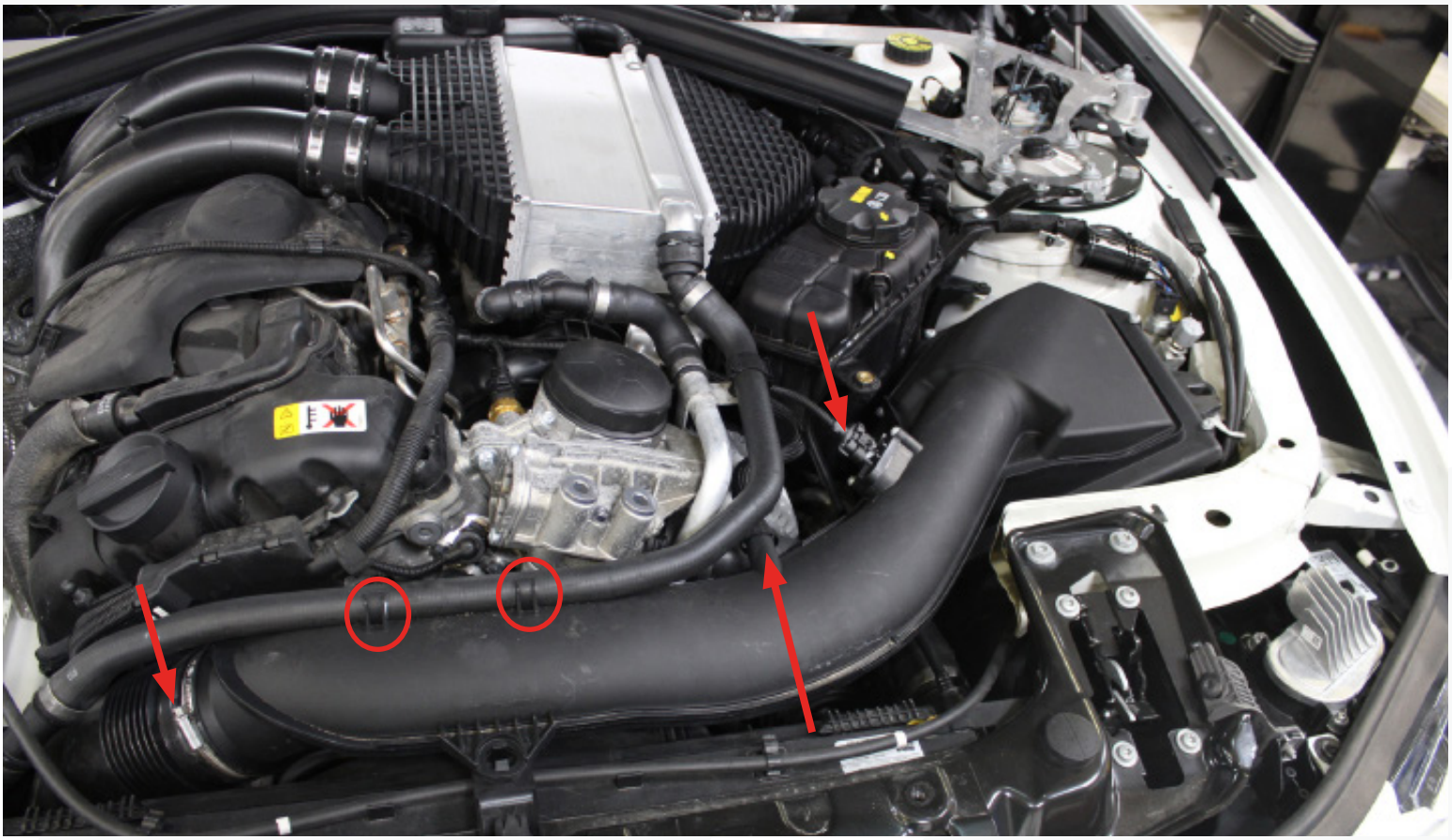


3a. To remove the plastic turbo inlet tube, remove 10mm bolt and pull out the tube. Remove the bolt and rubber grommet and set it aside, it will be reused in a later step. There is a rubber O-ring on the inlet. Make sure this remains in place, as it will be reused



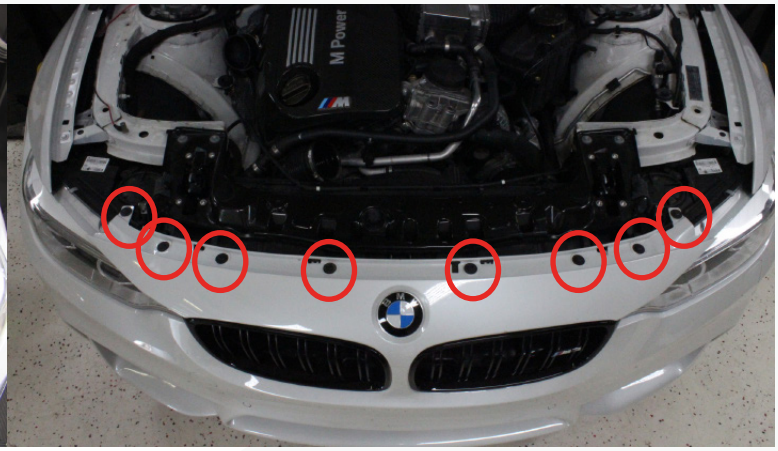


4. Moving onto the left (drivers' side), disconnect MAF sensor, PCV hose, and loosen the worm clamp on the inlet tube using a 6mm socket. Also, unclip the coolant line from the intake pipe. Slide the coupler off the tube and pull up on the airbox to release it from the two mounting grommets, set aside.



FRONT BUMPER REMOVAL ///

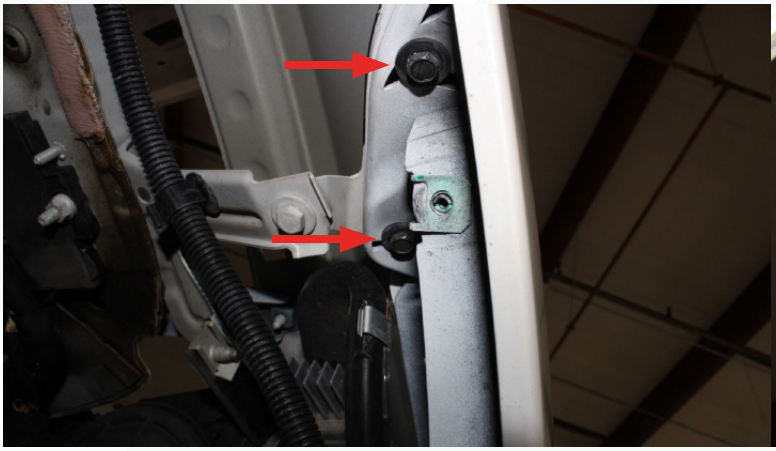
5. Begin by pulling off the weather strip at the front of the bumper to expose the top mounting bolts. Remove six T30 bolts and two T25 bolts

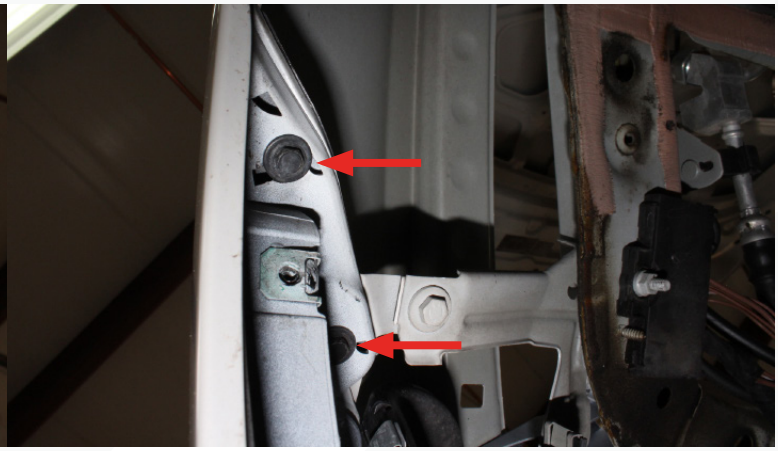


5a. Remove right (passenger side) fender liner by removing the nine 8mm screws. Repeat for the left (driver side) fender liner.

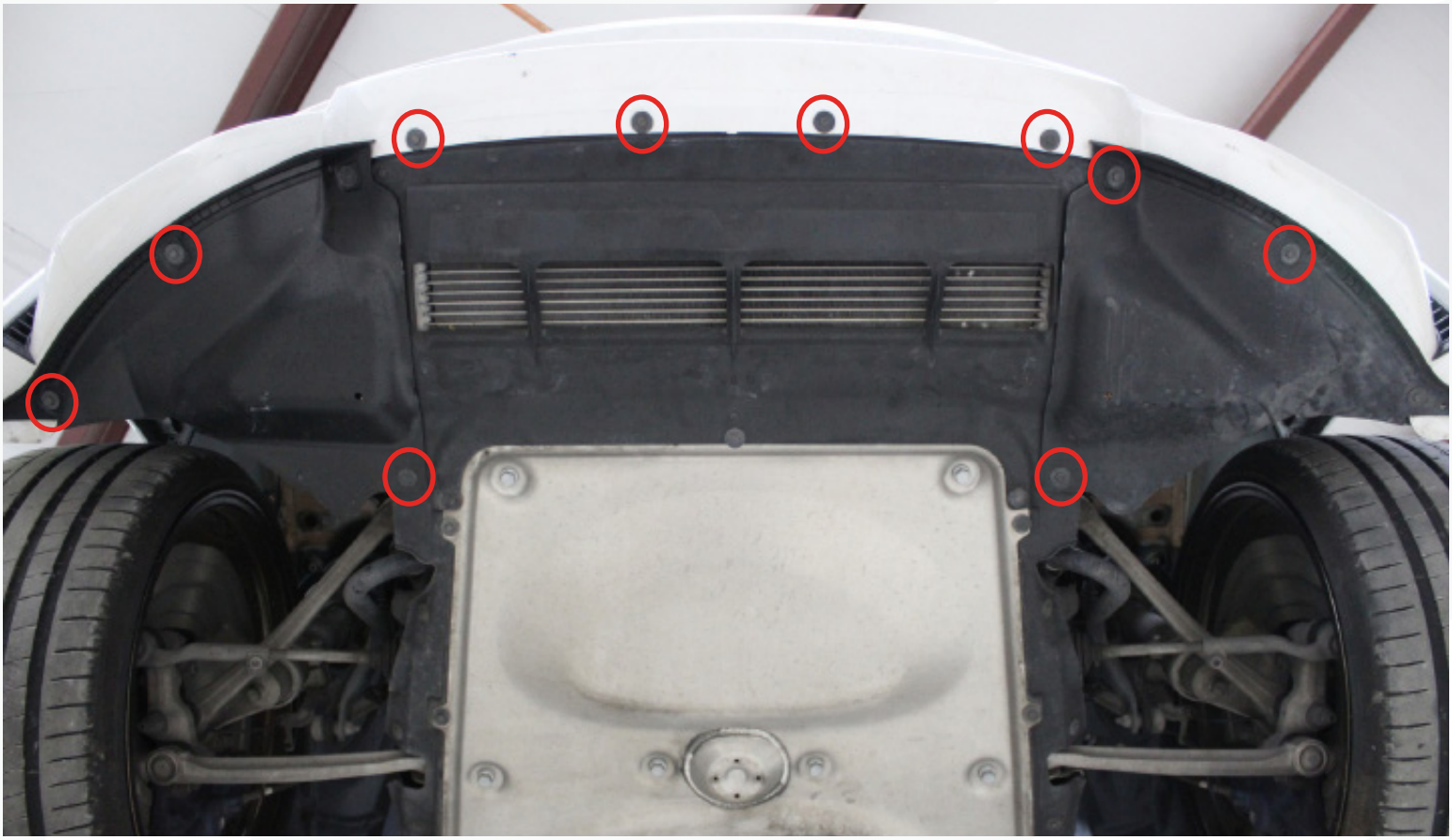
5a. Continued

5b. Remove four 8 mm screws, two per side holding the bumper corners to the fender.





5c. Remove side under trays by removing the four (per side) 8mm screws. Also remove the four 8mm screws holding the center of the bumper.



5d. Disconnect the parking sensor connector and headlight washer line on the right side (passenger side) of the bumper. Have a shop rag or plug handy to prevent washer fluid spillage. Also unclip washer line from the headlight assembly.

NOTE If your vehicle is also equipped with sideview cameras there will be an extra connector you will need to disconnect.

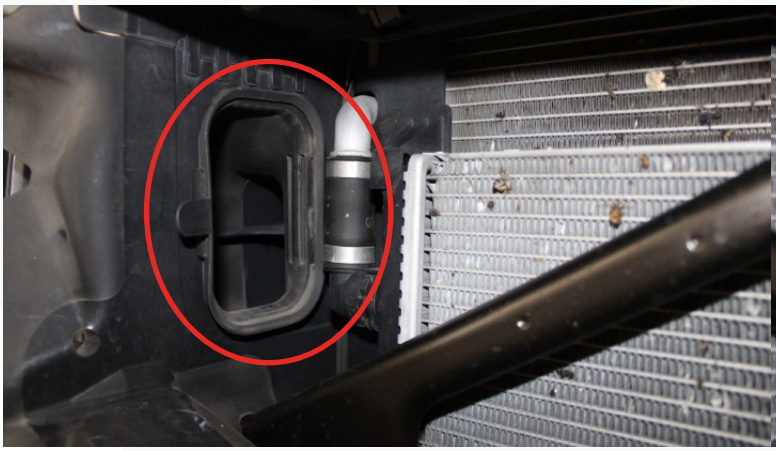



5e. With all screws and connectors removed, now remove the front bumper

RADIATOR SHROUD REMOVAL ///

6. Disconnect temp sensor

6a. Push factory rubber ducts out of center shroud.

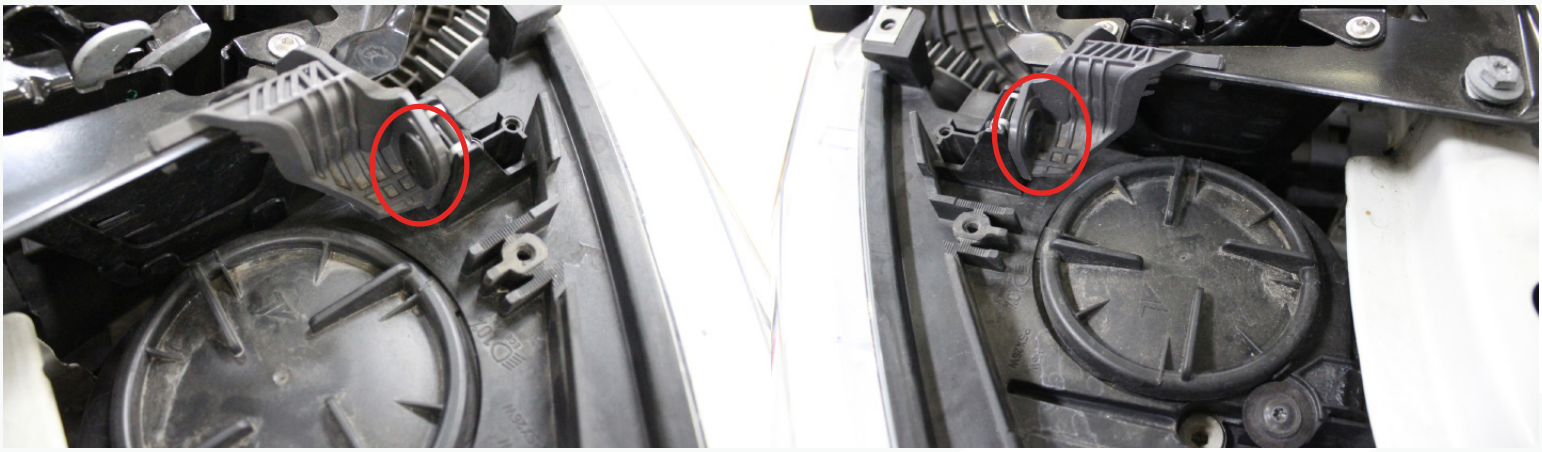


6b. Remove four T40/13mm bolts holding upper radiator support to the chassis

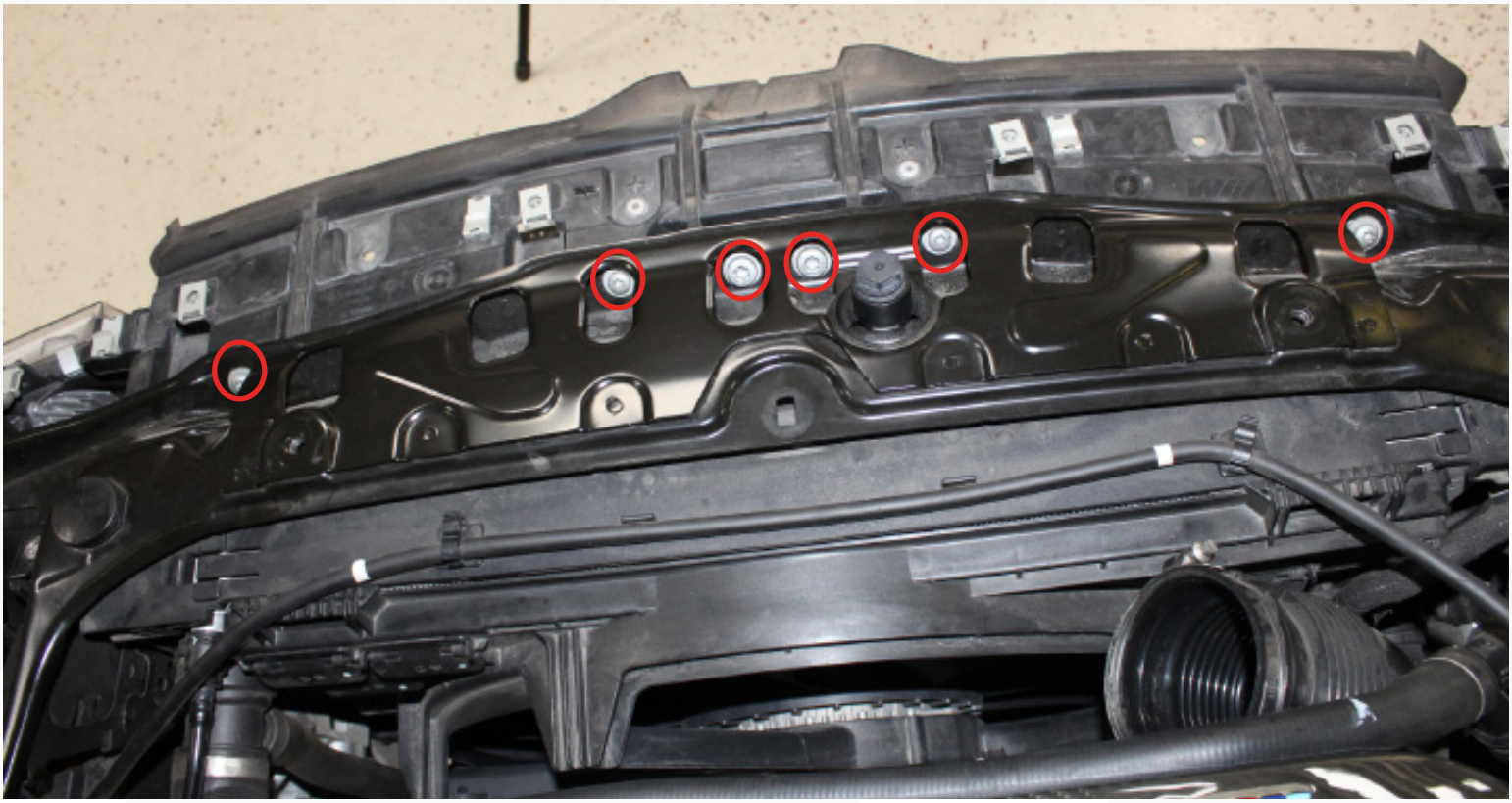
6c. Remove eight bolts, four per side holding hood latches to radiator support.

NOTE The bolts pictured below on the hood latch assembly are not stock bolts, stock bolts are T30.

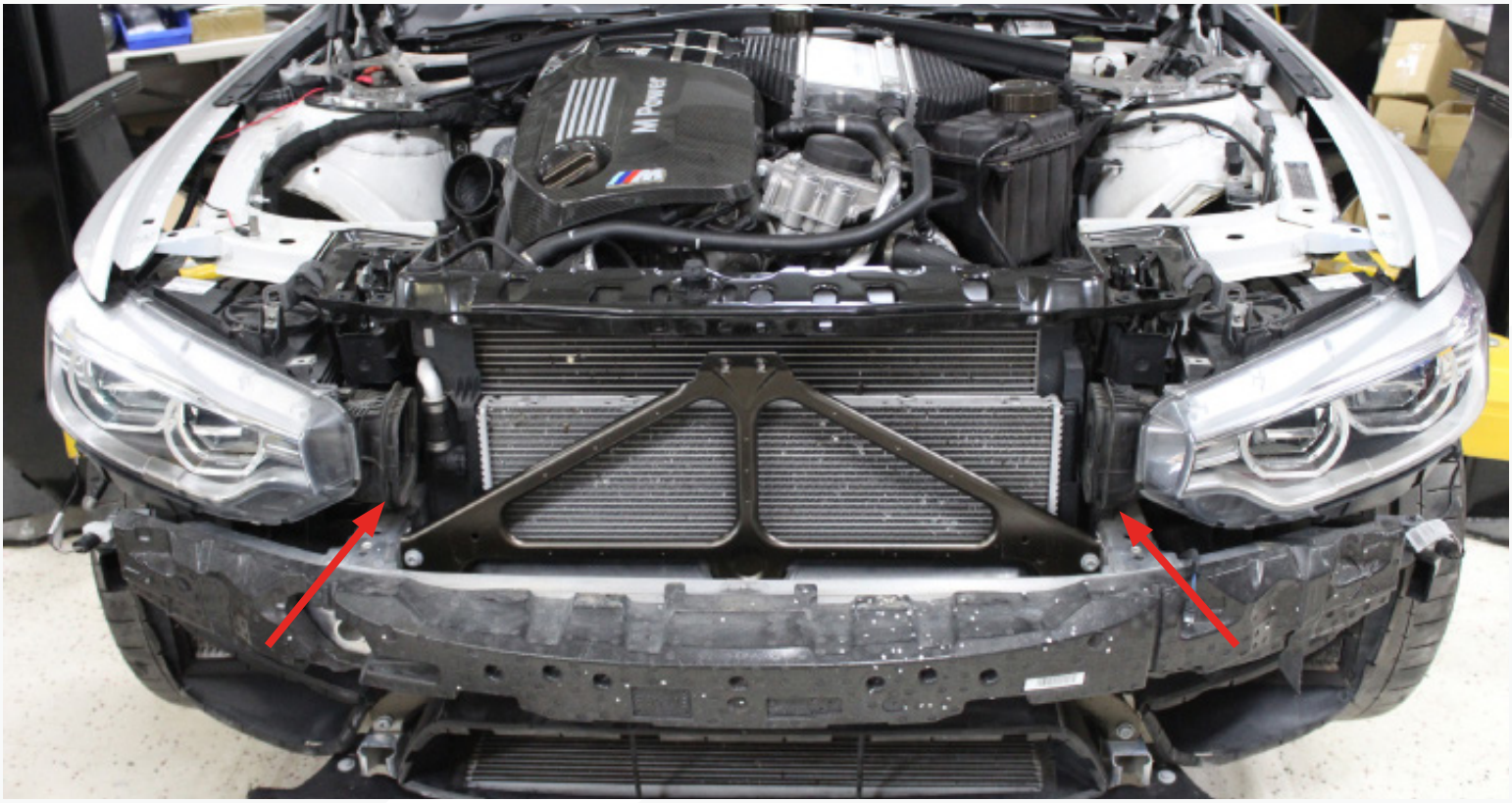
6d. Remove two T30 bolts holding the support to the headlights, one per side.



6e. Remove 6 bolts at the front of the radiator support. Four T30 and two T45.



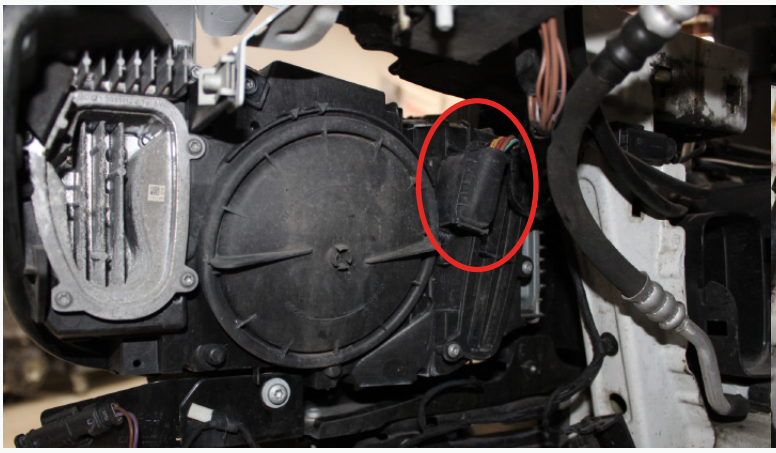
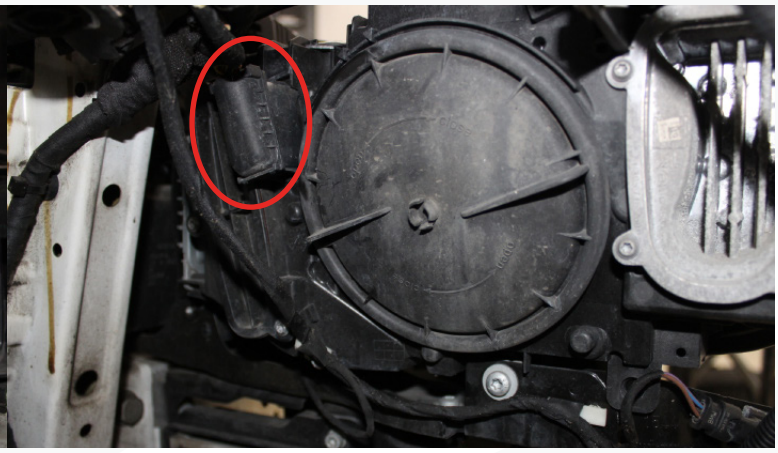
6f. With all bolts removed, lift on the radiator support, and remove the shroud by unclipping it from the crash beam supports.



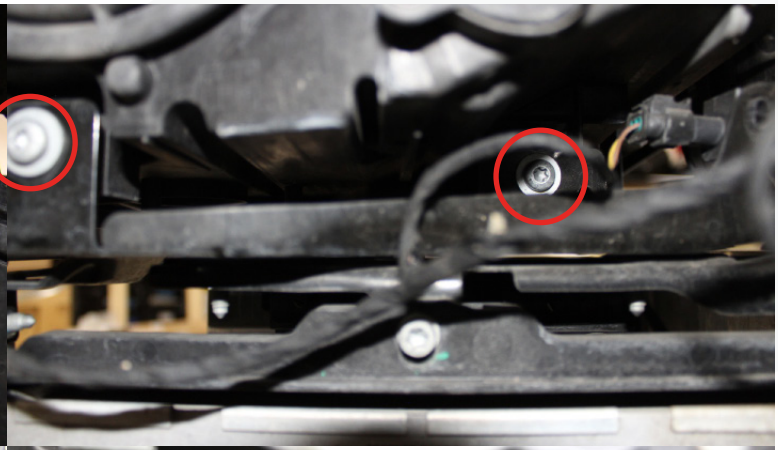
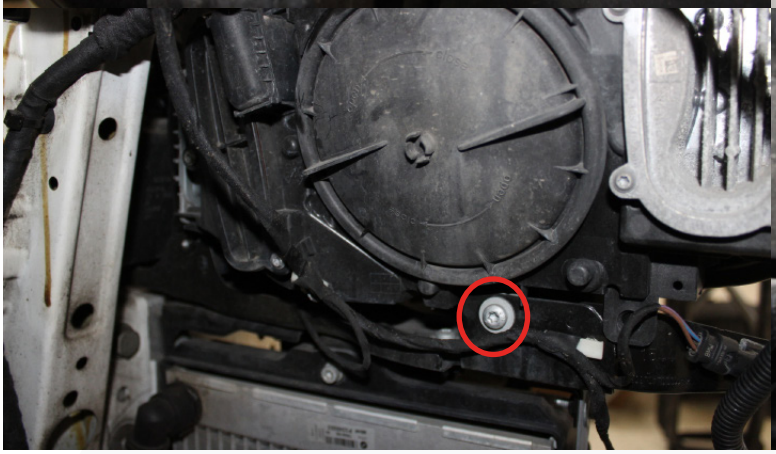
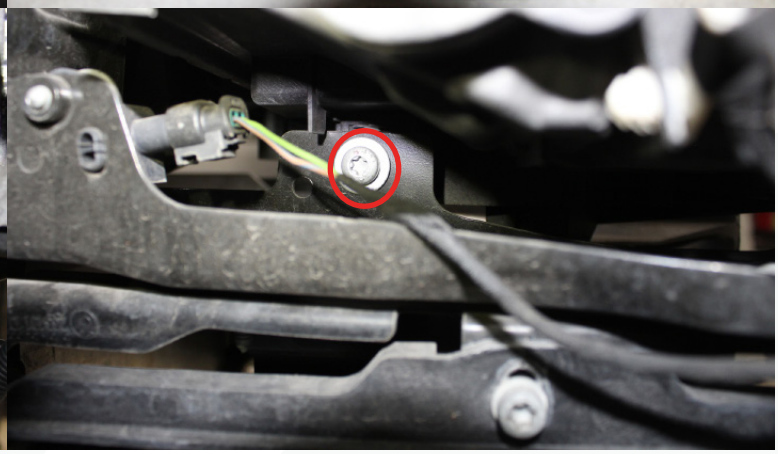
HEAD LIGHT REMOVAL ///

7. Loosen but do not remove headlight connector bracket, one per headlight.

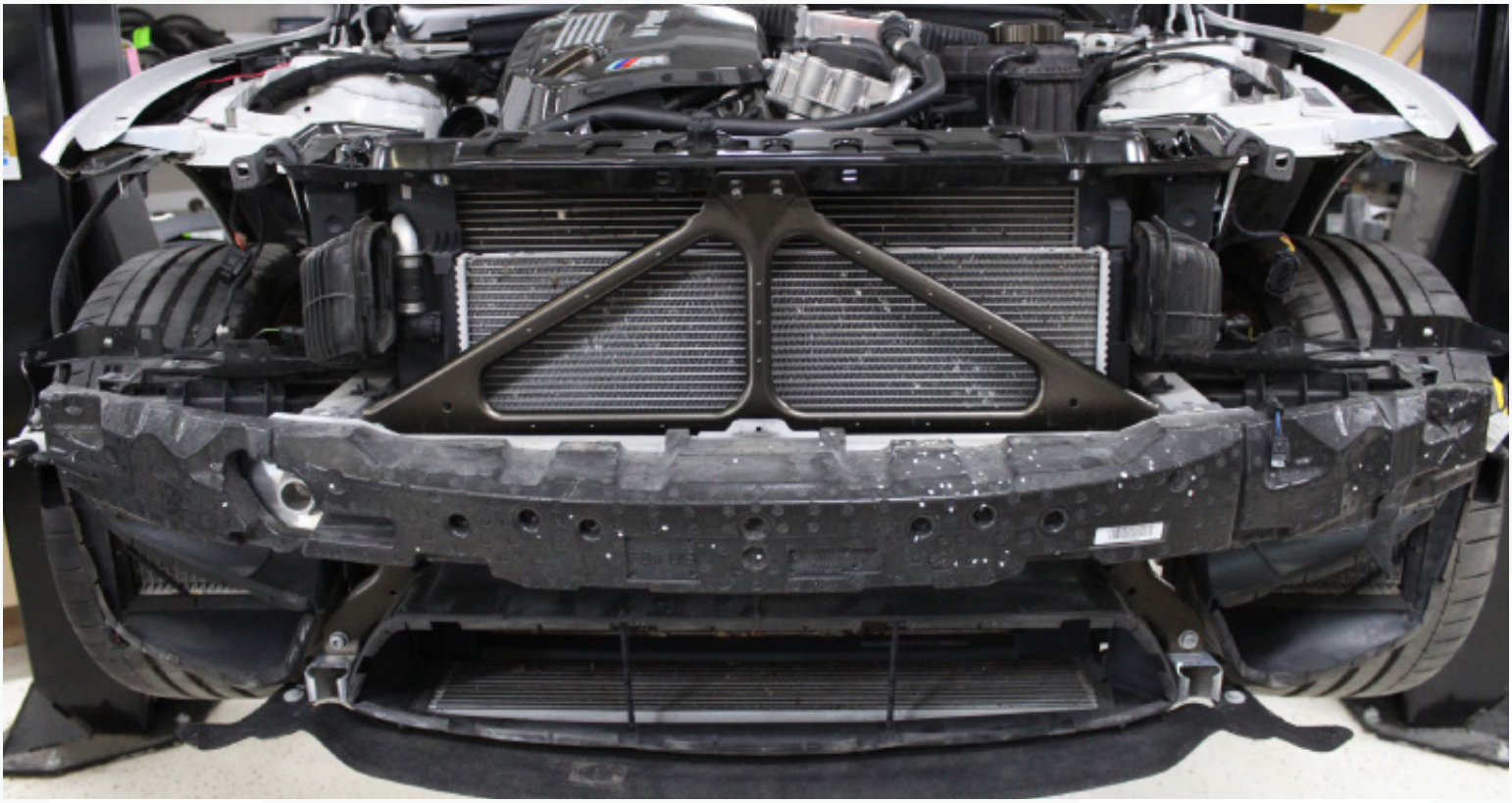
7a. Disconnect headlight connectors

7b. Remove headlight mounting bolts, four per headlight. Three T30, and one 10mm bolt. The fourth top T30 bolt was already removed in a previous step.

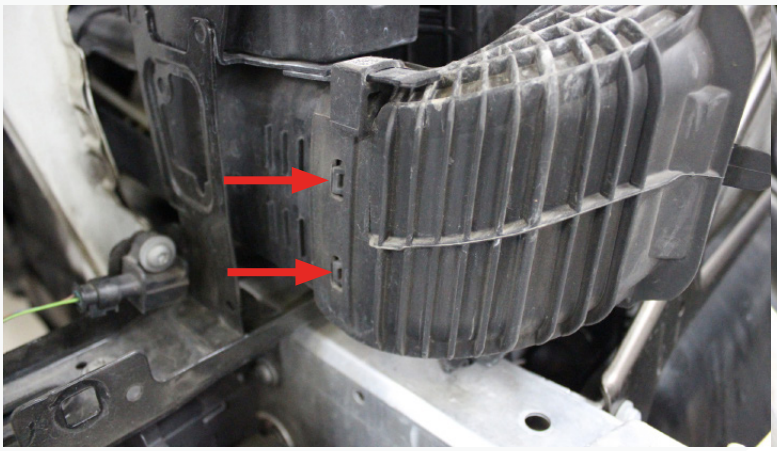





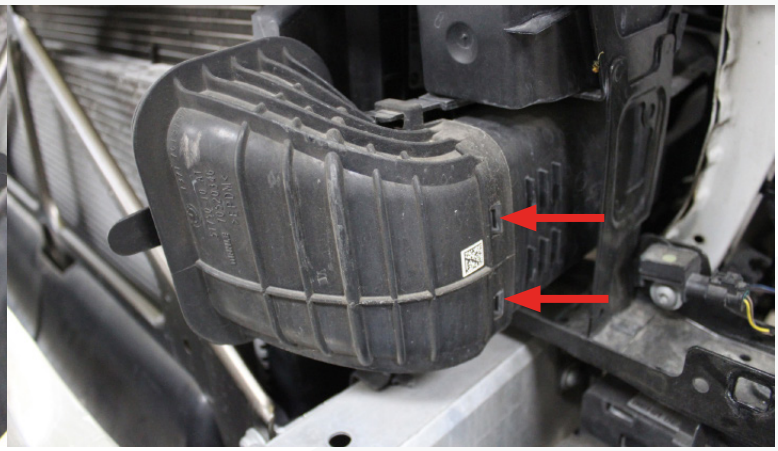
7c. Remove the headlights



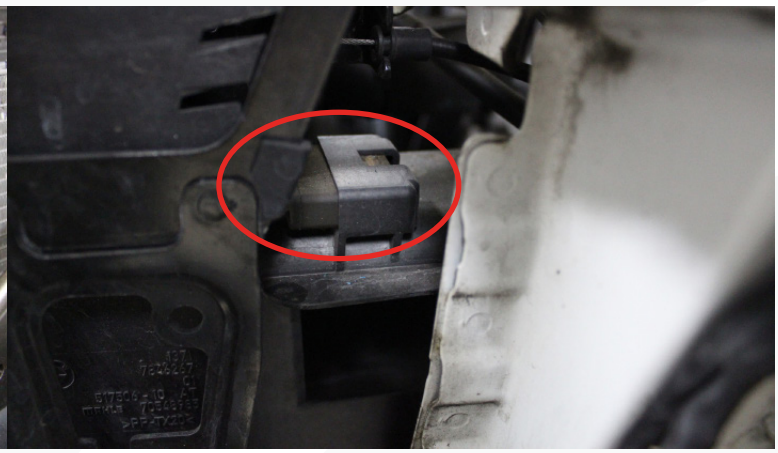
FACTORY DUCT REMOVAL///

8. Unclip right and left outer duct sections and pull out from rear sections.



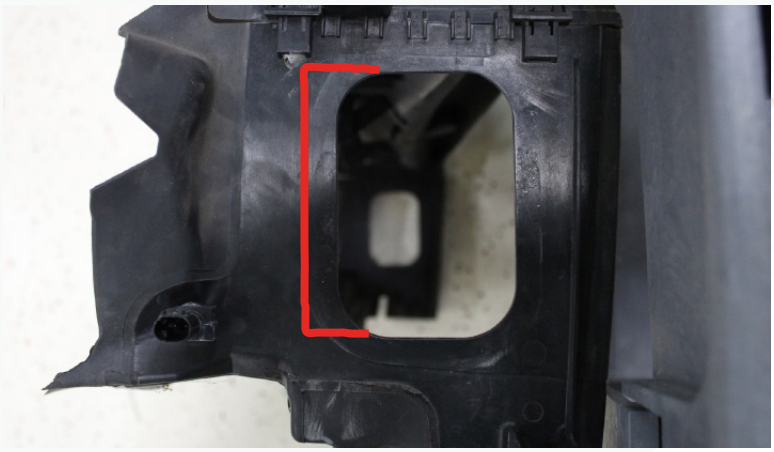


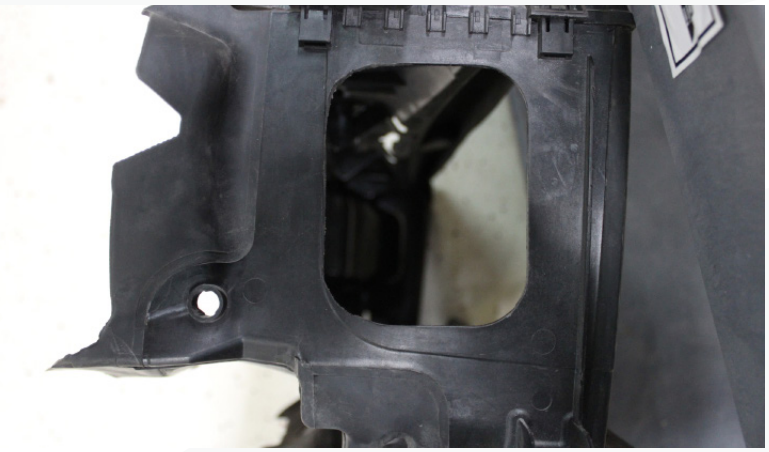
8a. Remove rear duct section, push duct in toward the engine bay to unhook it from the mount and remove through airbox area. Repeat for the second duct. This completes the disassembly process.



SHROUD MODIFICATION///

9. Trim shroud using a rotary tool like a Dremel, alternatively you could use something like tin snips since the shroud material is soft plastic. The shroud needs to be trimmed to accommodate the larger area of the AMS front duct. Extend the opening to the molding line closest to the front of the shroud, using the below images as a guide. Repeat for the other side of the shroud.





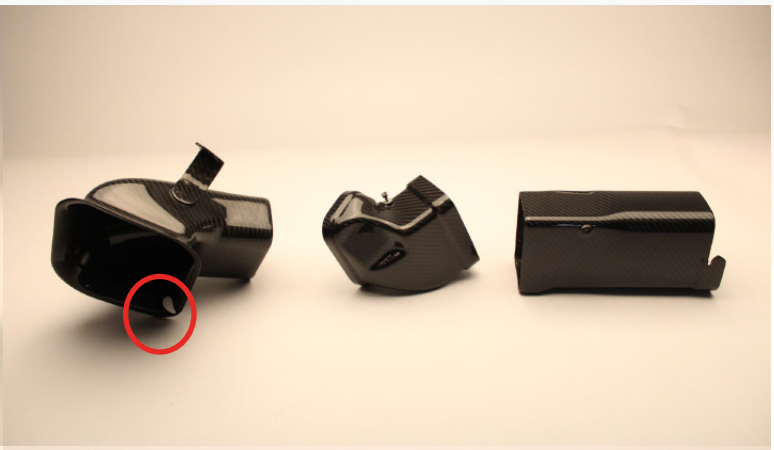
Below is a side by side comparison of a modified shroud vs an unmodified shroud

9a. Remove two of the factory speed nut clips circled in the pictures from the top of the shroud. These will not be reused.

INSTALLING THE AMS CARBON INTAKE DUCT///

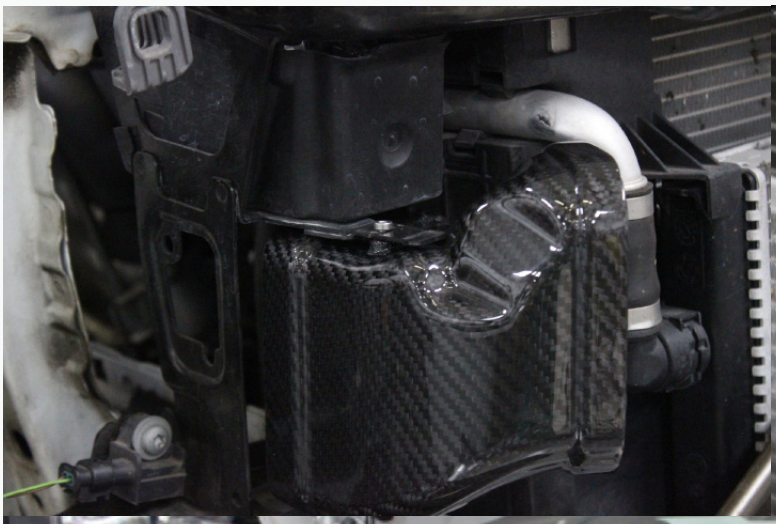
10. Lay out the carbon intake ducts, and separate them into right and left assemblies. This consists of the right and left front, center, and rear sections of ducting, two M4 bolts, two M6 nyloc nuts and two push clips. (Nyloc nuts and push clips not pictured)

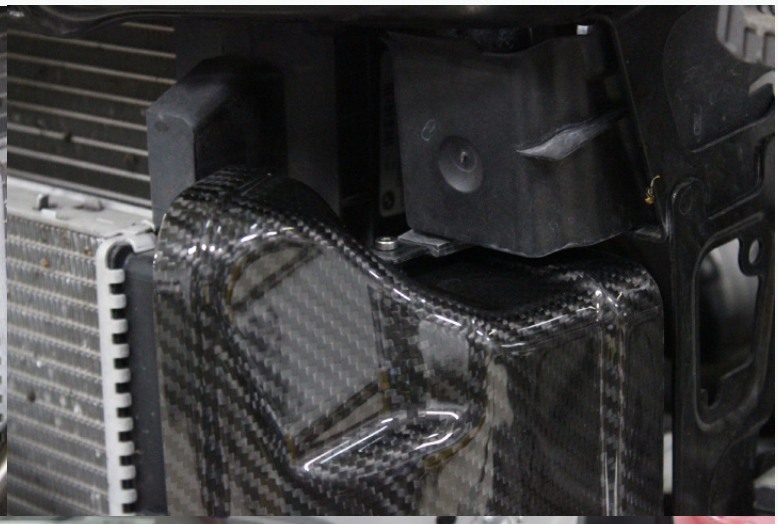
Right (passenger side)



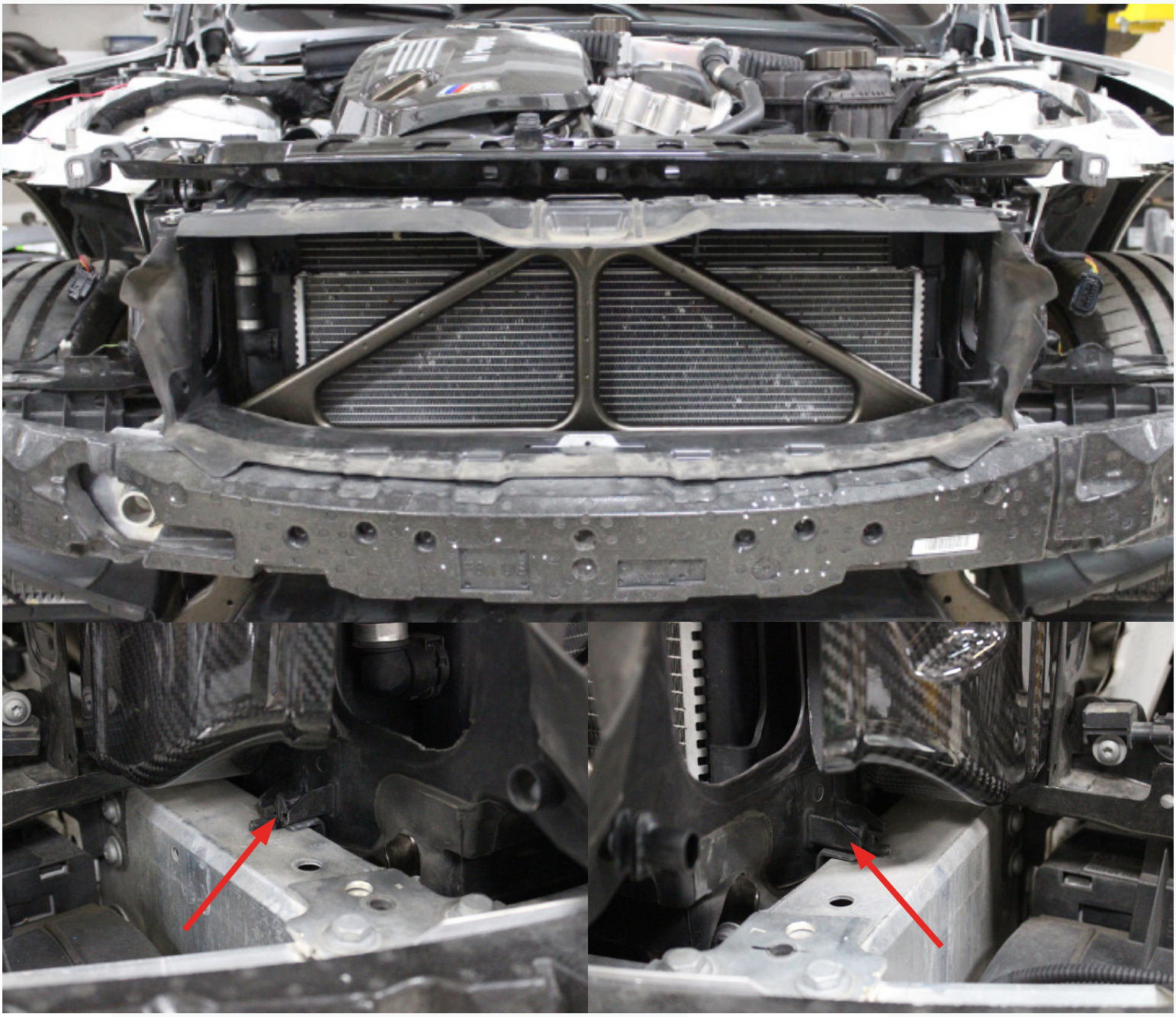
Left (Driver's side) w/ cut out for Temp sensor

10a. First bolt in both sides of the center section first using the supplied M4 bolt. Loosely bolt in as the extra movement will allow for an easier install of the remaining sections.

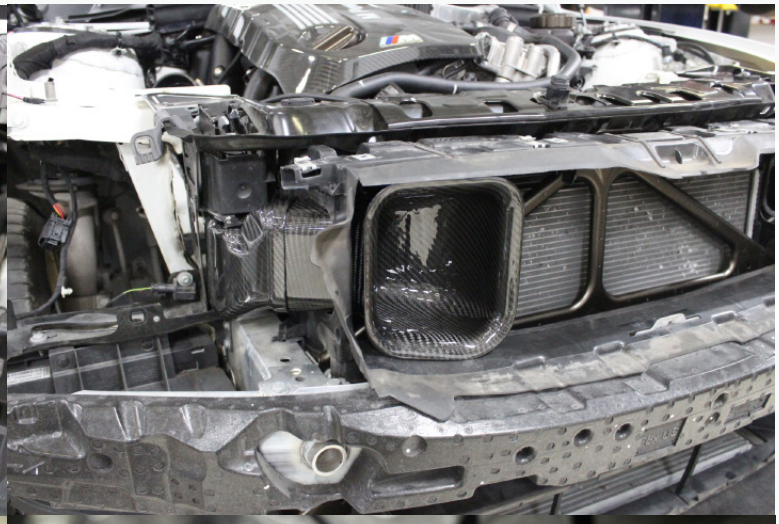




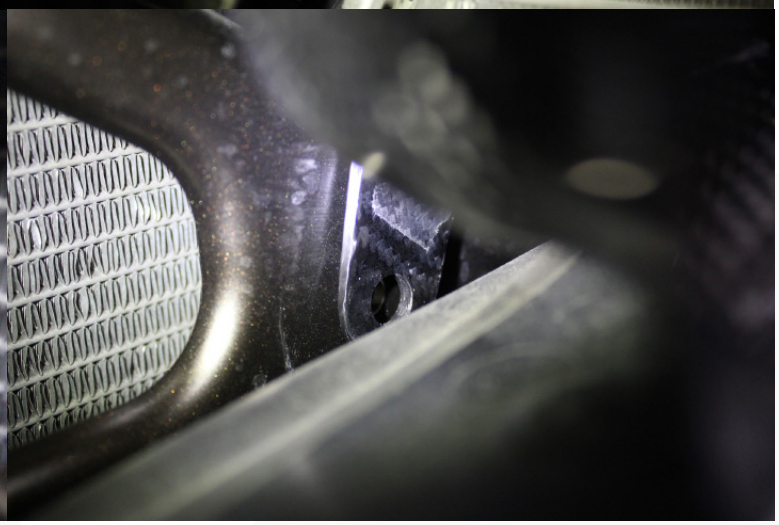
10b. Reinstall the modified shroud. Be sure the shroud is fully seated into the opening and clips back on to the crash beam on both sides.



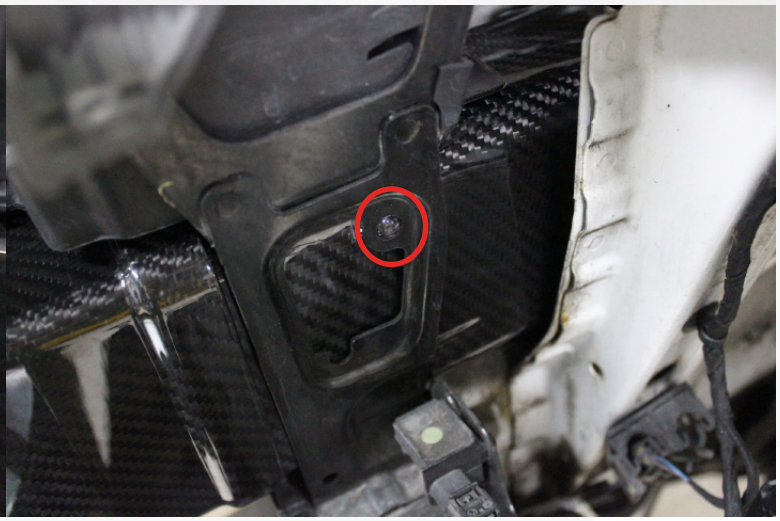
10c. Install front duct section into the shroud aligning the top bolt hole to the top of the shroud where we removed the speed nut and the bottom bolt hole to the hole on the support brace, mate up the front and center sections.



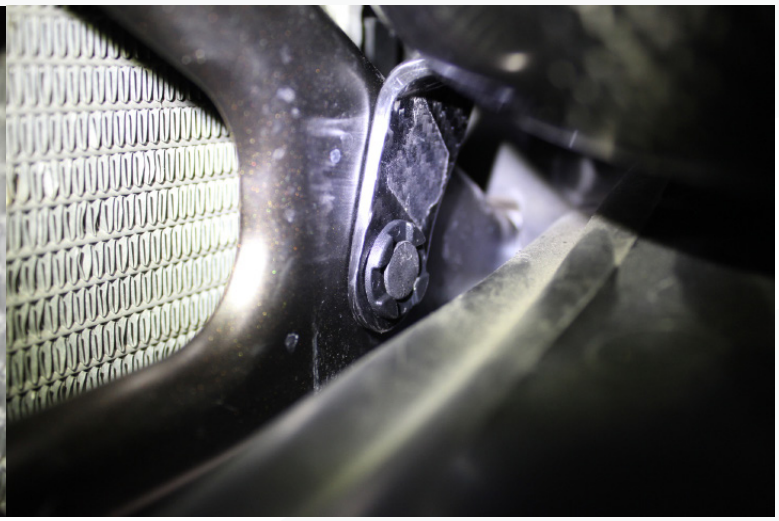


10d. Install rear duct sections through the air box area, line up the locating nub with the opening on the bracket. Mate up with center section. With all sections installed now tighten the M4 bolt on both center sections (see step 10a).



10e. Reinstall upper radiator support, see step 6. Using the two supplied M6 nyloc nuts and the factory T30 bolts attach the top on the front duct to the shroud.

10f. Using the supplied push clips attach the bottom of the front duct to the support beam.



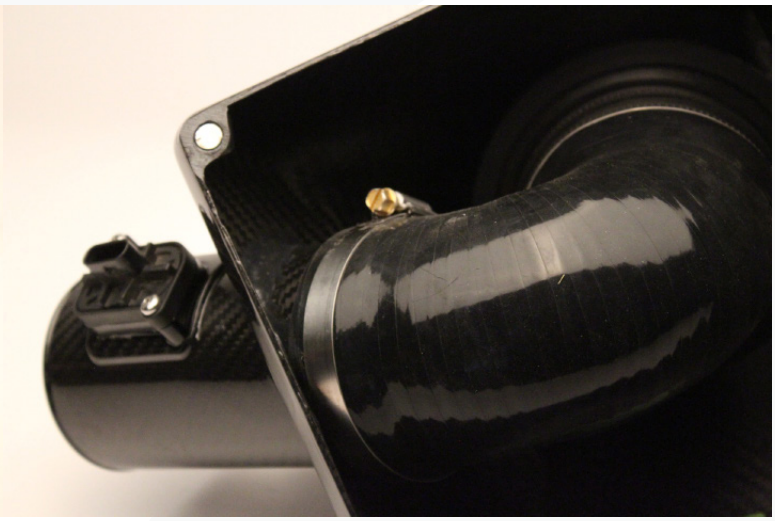
11. This completes the carbon intake duct installation. Reinstall headlights and bumper in the reverse order of installation.

ASSEMBLING THE AMS CARBON INTAKE///

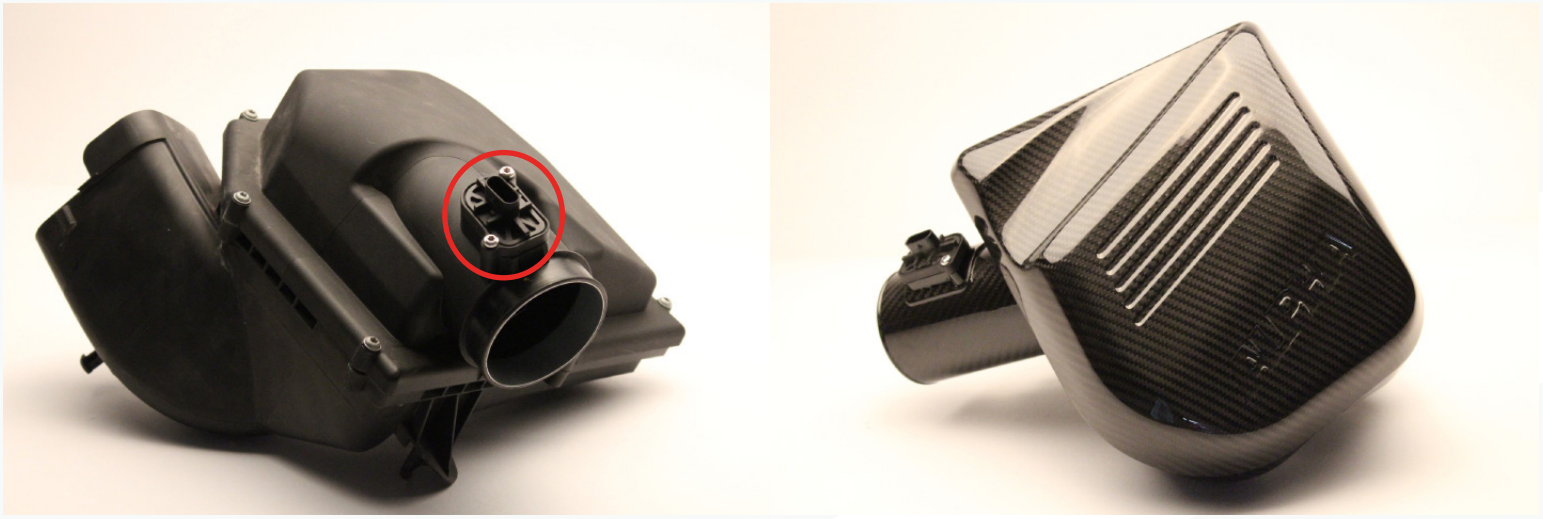
12. Lay out the carbon intake system, separate them into right and left assemblies. Right (passenger side) airbox with air filter, carbon jumper, silicone coupler, carbon inlet tube, silicone coupler and four clamps. Left (drivers' side) airbox with air filter, silicone coupler, carbon crossover tube, two clamps, one PCV fitting and one oetiker clamp.

12a. Begin with the right (passenger side) airbox. Take the right airbox silicone coupler and push on the carbon coupler until it bottoms out, on the other end of the carbon coupler push on the air filter. You should not be able to see the carbon coupler when it assembled correctly. Tighten the silicone onto coupler using a clamp, also tighten down the filter as well.

12b. Install filter and coupler into airbox. Be sure to slide a clamp over the silicone in the orientation shown below before installing onto the airbox, this will make it easier to tighten the clamp after it is installed.



12c. Remove MAF sensor from stock airbox and install onto the carbon airbox using the supplied hardware.



12d. Take the left airbox and air filter and install into the airbox and tighten the clamp.

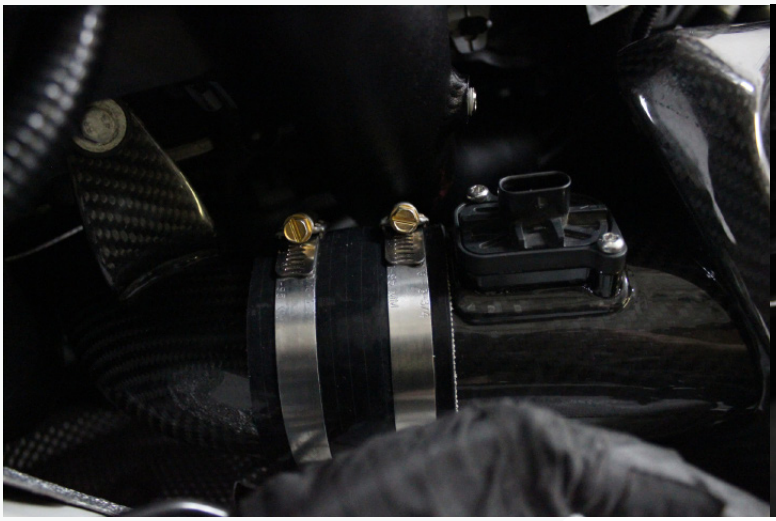
12e. Take stock left (driver side) airbox and remove the MAF sensor, install onto left airbox crossover tube using the supplied hardware.

INSTALLING THE AMS CARBON INTAKE///

13. Begin with the right side (passenger side). Install the carbon inlet tube onto the turbo inlet, be sure the factory inlet O-ring is still present before installing. Reuse the factory grommet and 10mm bolt removed from step 3a to attach to the valve cover.

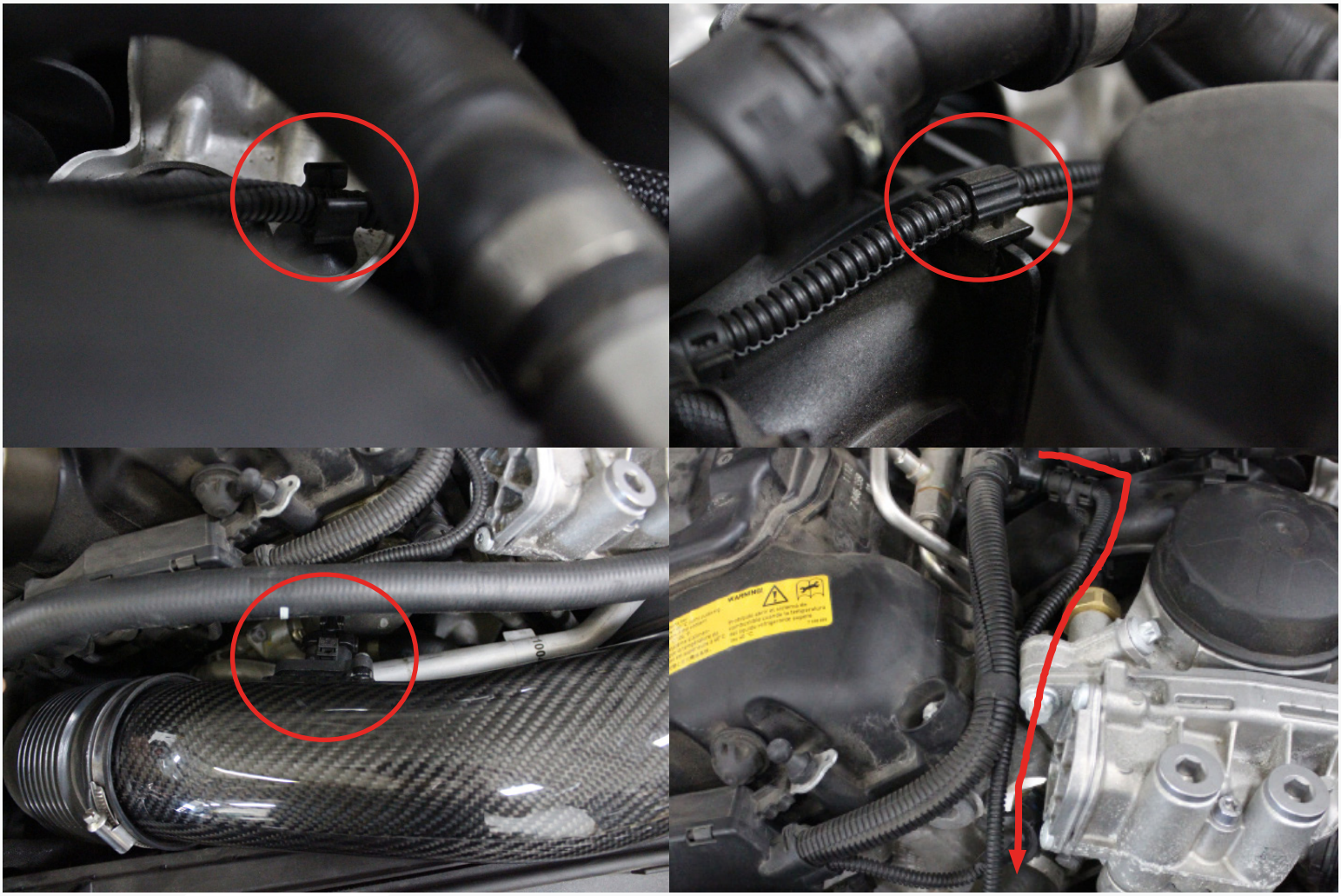
13a. Install silicone jumper onto the carbon inlet. Push the jumper as far as it will go until it is touching the mounting tab that attaches to the valve cover. This will help with installing the airbox. Slide two clamps onto the jumper as shown below.

13b. Install the airbox into the three mounting-grommets, and into the jumper silicone. Some silicone spray on the grommets and silicone jumper will make installation easier. Once the airbox is in place slide the jumper silicone further up the airbox until it is close to the MAF adapter as shown below. Now tighten the two clamps and reinstall the MAF connector.

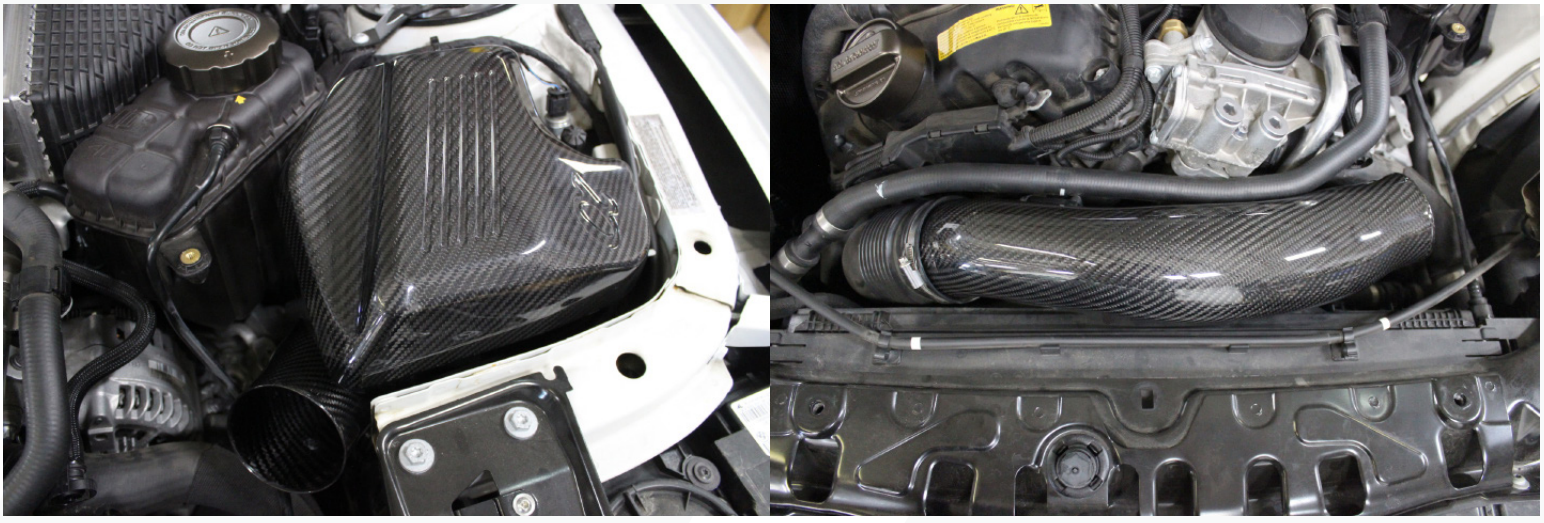



13c. Install the left (driver side) airbox into the two mounting grommets, now install the crossover tube into the stock inlet. Make sure the tube is pushed far enough into the inlet.


13d. Next disconnect the MAF harness from two of its hold downs using a pick or small screwdriver to reach the new MAF adapter location (new routing shown in the final picture below). Reconnect the MAF.



13e. Slide two clamps on either end of the silicone coupler and install onto the crossover tube. Next push on the other end onto the airbox, push the silicone as far up as it will go. Tighten the clamps and reconnect the PCV hose. This completes the intake install.



13f. Reinstall the carbon strut brace and cowl covers in the reverse order of installation.

Please give your tuner the Mass Airflow Sensor Scaling sheet found on our website if your car will be tuned.

Enjoy your new AMS Carbon Fiber Intake System, thank you for your purchase!