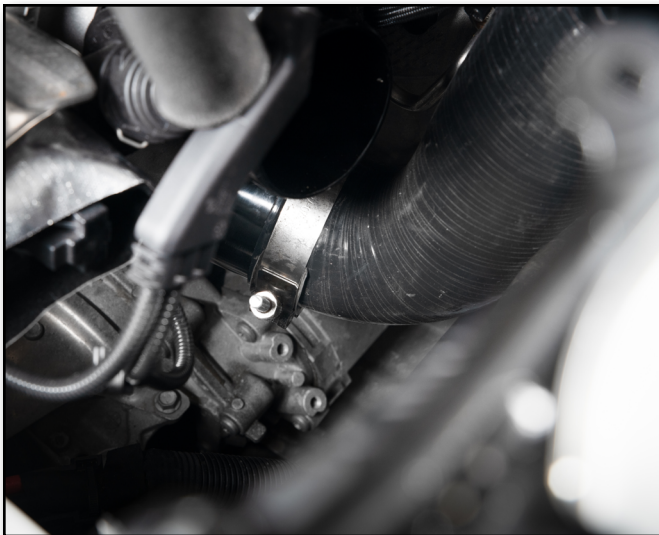
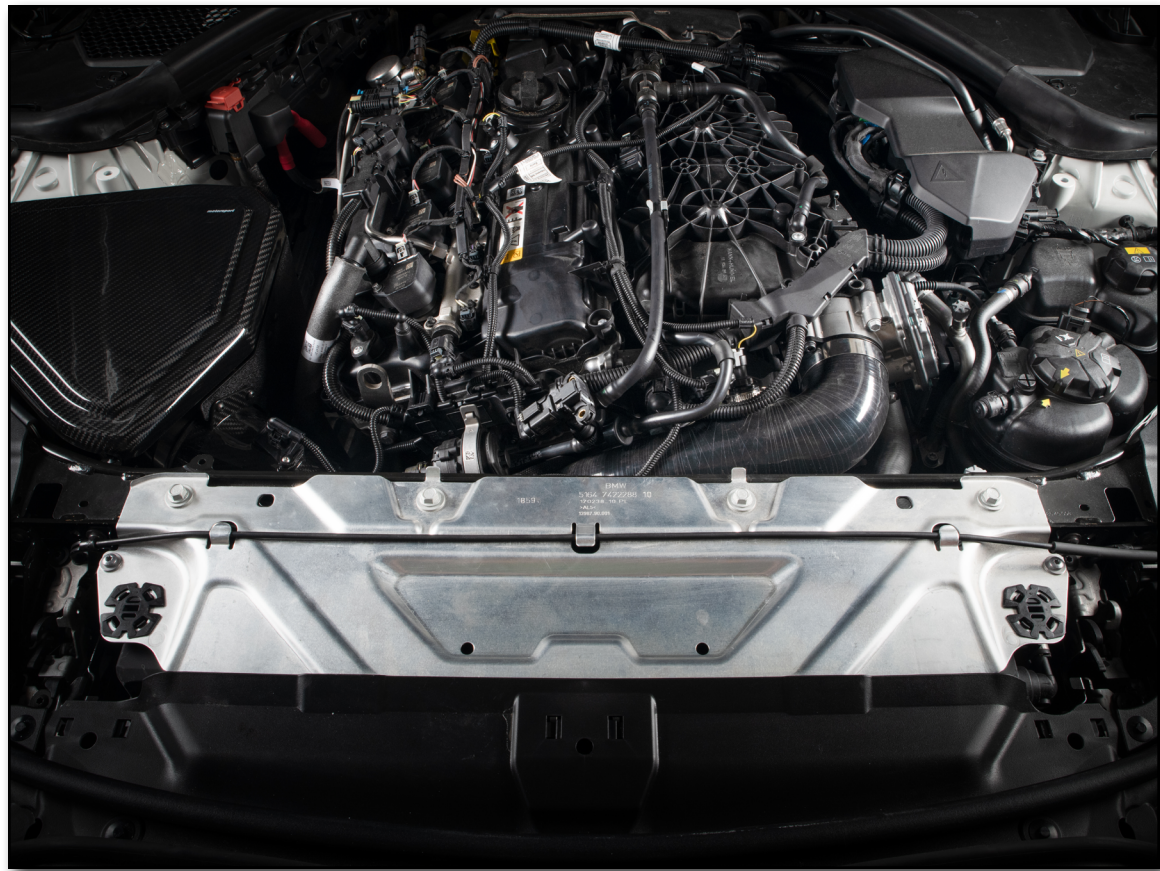




BMW G20 B58 Charge Pipe Installation Instructions



Proper service and repair procedures are vital to the safe, reliable operation of all motor vehicles as well as the personal safety of those performing the repairs. Standard safety procedures and precautions (including use of safety goggles and proper tools and equipment) should be followed at all times to eliminate the possibility of personal injury or improper service which could damage the vehicle or compromise its safety.

INSTALLATION NOTES

- **RH** refers to the *passenger side* of the vehicle.
- **LH** refers to the *driver side* of the vehicle.
- Always use the proper torque specifications.
- If applicable to this installation, torque specifications will be listed throughout the document and at the end as well.
- Please read all of these instructions and familiarize yourself with the complete process **BEFORE** you begin.

GENERAL PREPARATION AND SAFETY INFORMATION

Turner Motorsport cares about your health and safety, please read the following safety information. This information pertains to automotive service in general, and while it may not pertain to every job you do, please remember and share these important safety tips.

- Park your car in a safe, well lit, level area.
- Shut the engine off and remove the key from the ignition switch.
- Make sure any remote start devices are properly disabled.
- **ALWAYS** wear safety glasses.
- Make sure the parking brake is applied until the vehicle is safely lifted and supported.
- Whether lifting a vehicle using an automotive lift or a hydraulic jack, be sure and utilize the factory specified lift points.
- Lifting a vehicle in an incorrect location can cause damage to the suspension/running gear.
- **ALWAYS** support the vehicle with jack stands.
- **ALWAYS** read and follow all safety information and warnings for the equipment you are using.



NEVER get underneath a vehicle that is supported only by a jack, and **ALWAYS** make sure that the vehicle is securely supported on jack stands.

REMOVING THE STOCK CHARGE PIPE

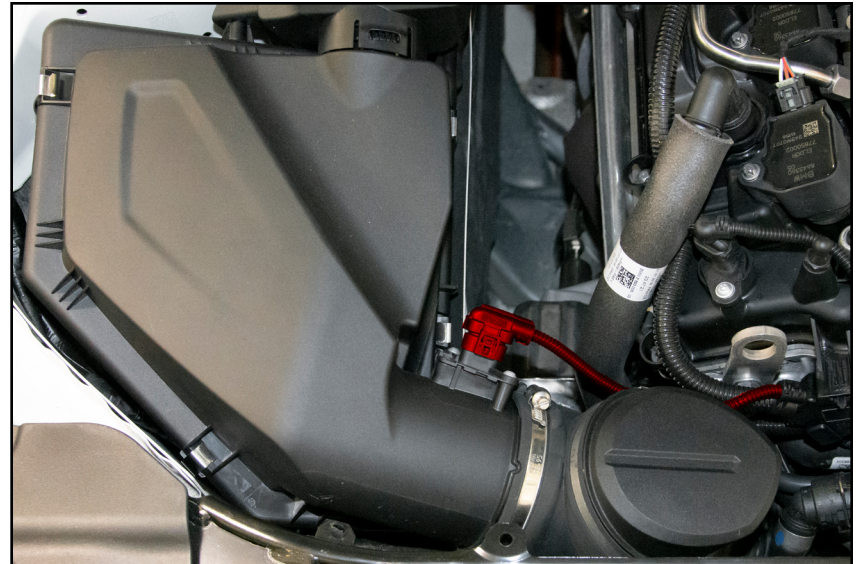
Step 1:

Lift up on the engine cover to pop it free from its mounting grommets.



Step 2:

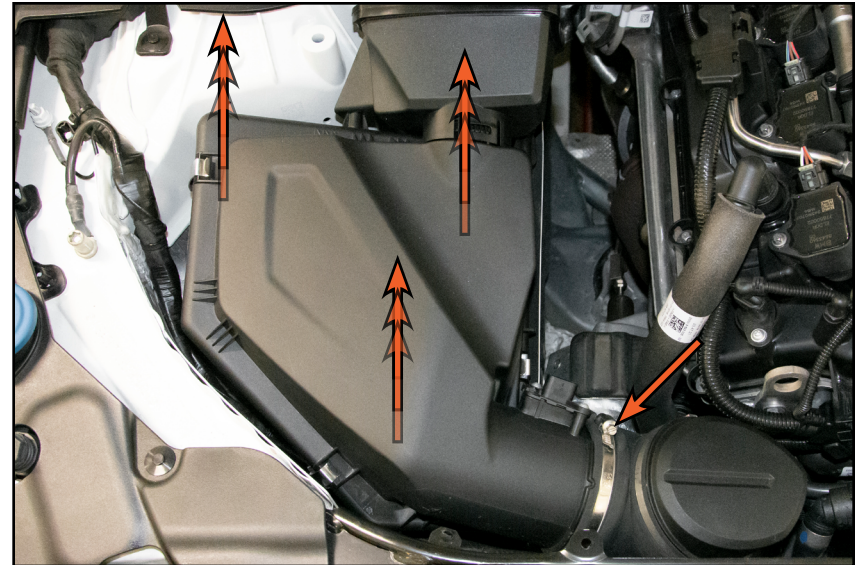
Disconnect the MAF sensor connector (highlighted in **RED**).



REMOVING THE STOCK CHARGE PIPE

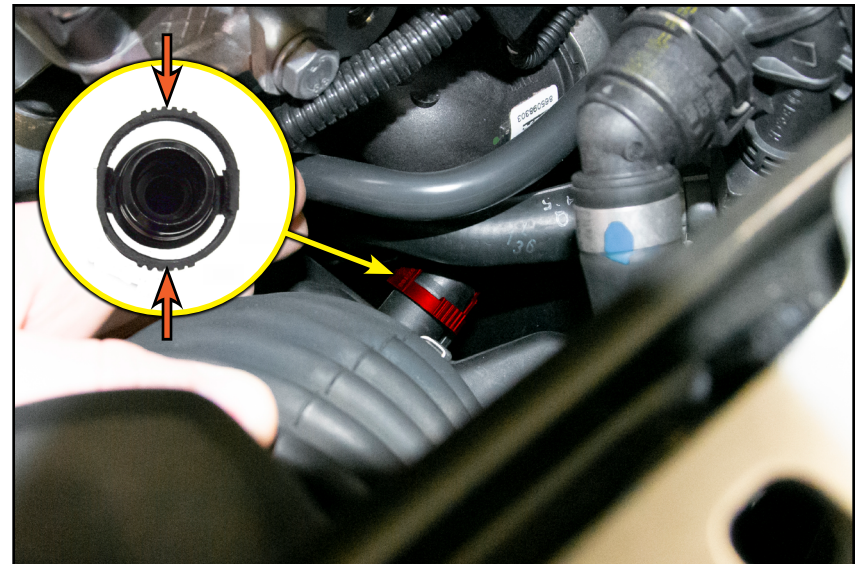
Step 3:

Loosen the clamp (arrow), then remove the intake system or air box from the turbo inlet and set it aside.



Step 4:

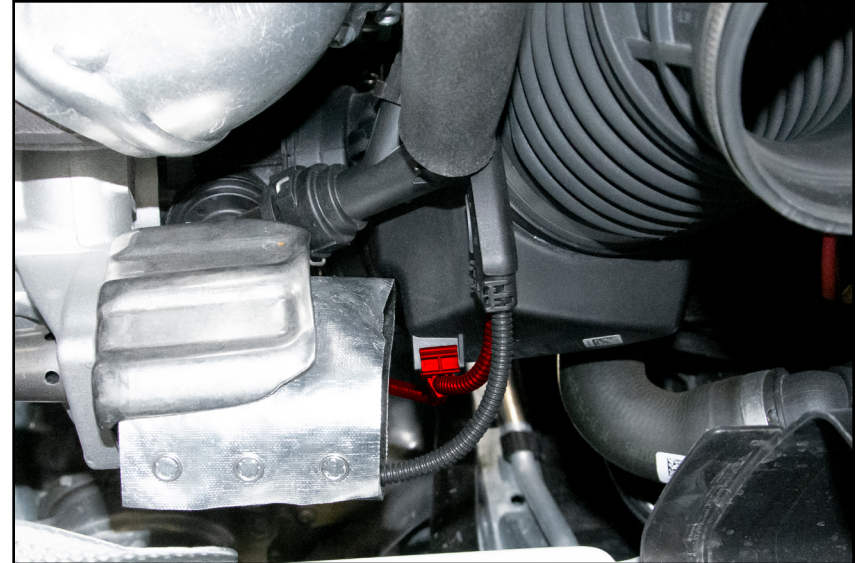
Depress the two locking tabs and pull the plastic vacuum line (highlighted in **RED**) off of the flange on the turbo inlet.



REMOVING THE STOCK CHARGE PIPE

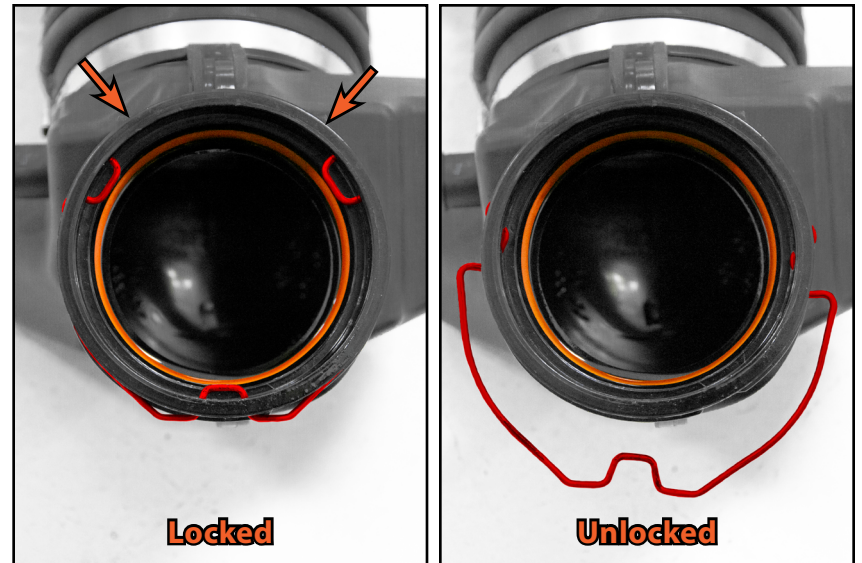
Step 5:

Free up the wiring harness (highlighted in **RED**) from the turbo inlet.



Step 6: Angled Pick Tool

The turbo inlet is secured to the turbo by a spring clip (highlighted in **RED**) which may be difficult to see. To remove the inlet you must first pry the two ends of the spring clip (arrows in the photo on the left) out of their notches, then pull the spring clip down until it clicks into the “unlocked” position (as shown in the photo on the right).



REMOVING THE STOCK CHARGE PIPE

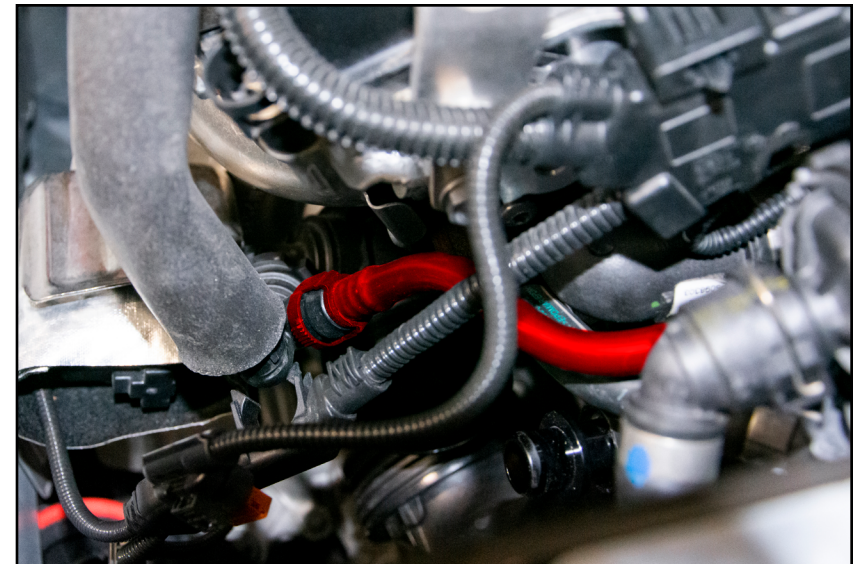
Step 7:

Carefully guide the turbo inlet out of the vehicle.



Step 8:

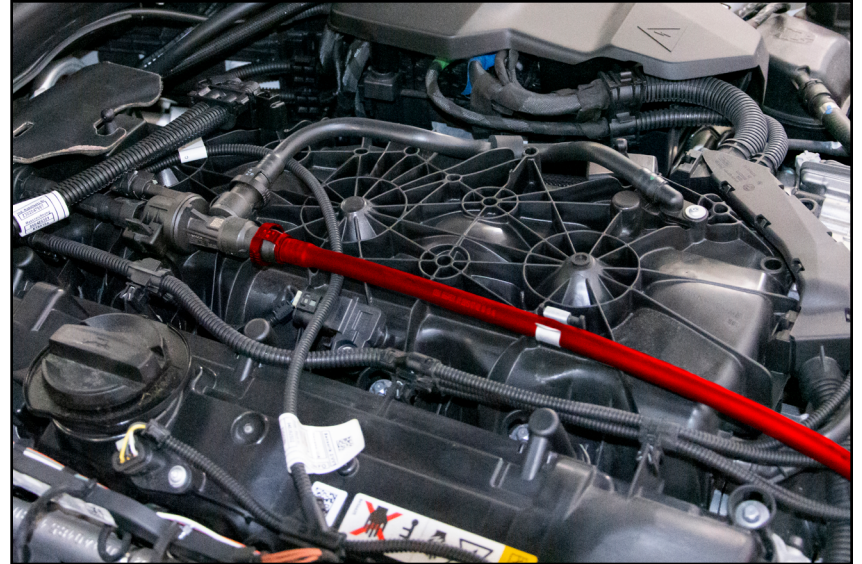
Depress the two locking tabs and pull the plastic vacuum line (highlighted in **RED**) off of the PCV hose near the turbo.



REMOVING THE STOCK CHARGE PIPE

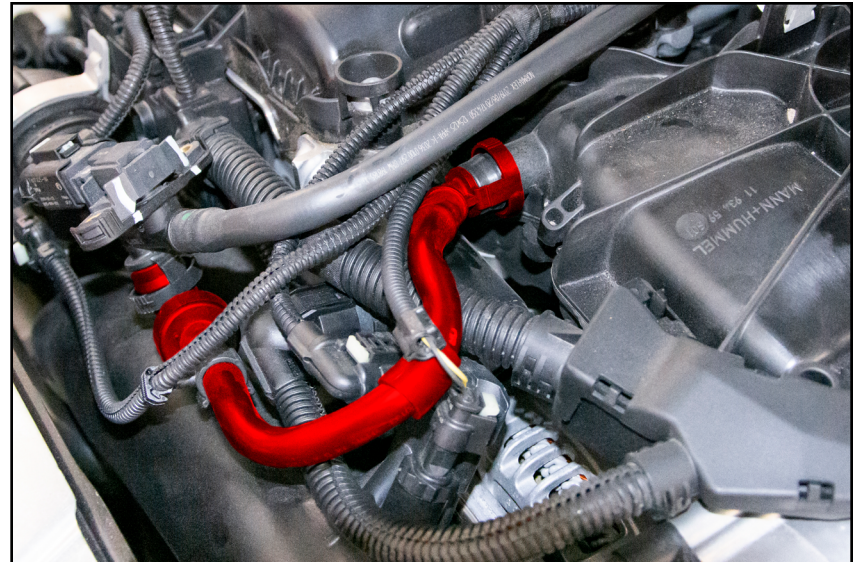
Step 9:

Depress the two locking tabs and pull the plastic vacuum line (highlighted in **RED**) off of the fitting on the top of the intake manifold



Step 10:

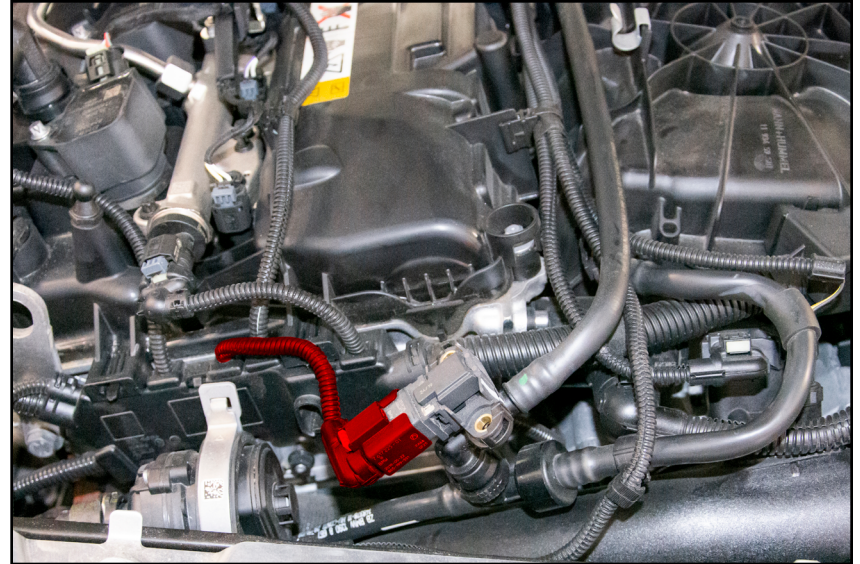
Depress the two locking tabs and pull the plastic vacuum line (highlighted in **RED**) off of the flange on the front of the intake manifold.



REMOVING THE STOCK CHARGE PIPE

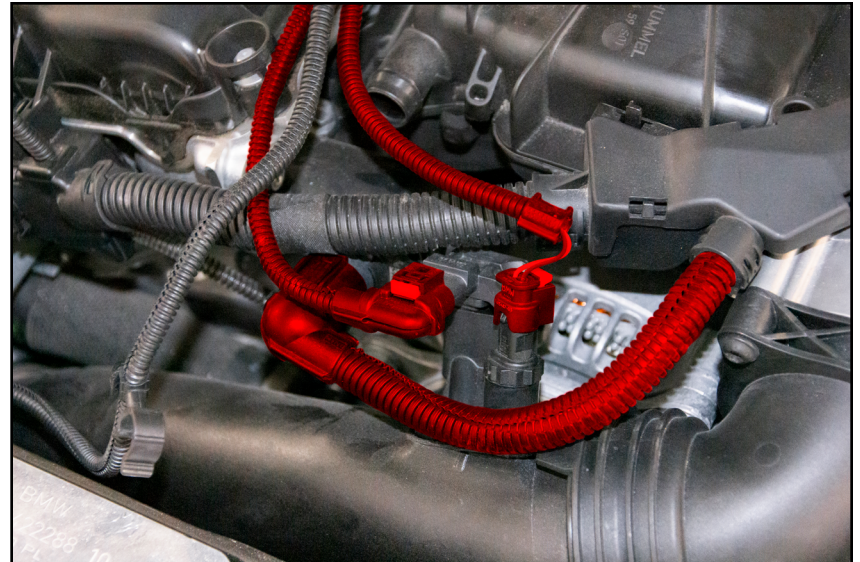
Step 11:

Disconnect the sensor connector (highlighted in **RED**) and carefully remove the whole vacuum line assembly from the vehicle.



Step 12:

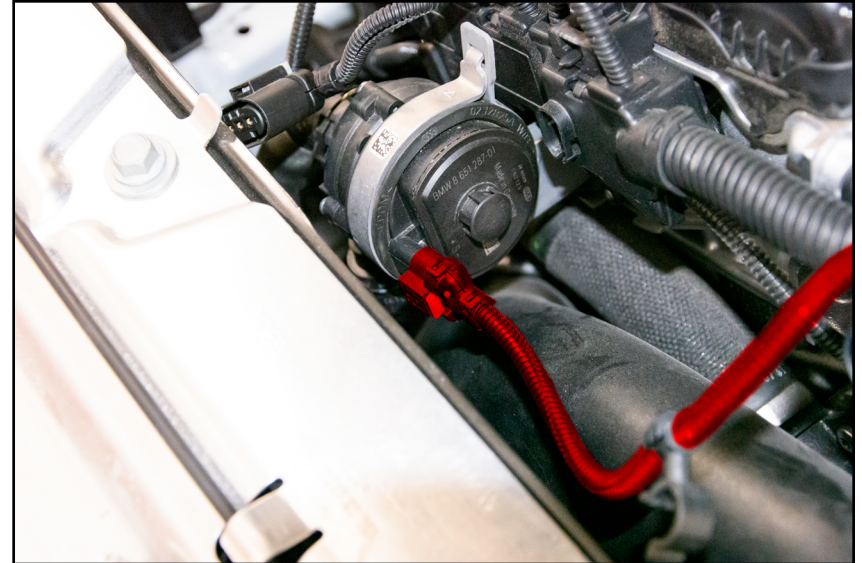
Disconnect the three connectors (highlighted in **RED**) from the charge pipe and front of the valve cover.



REMOVING THE STOCK CHARGE PIPE

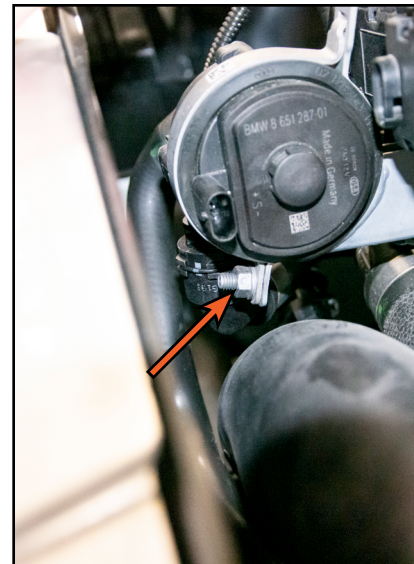
Step 13:

Disconnect the connector (highlighted in **RED**) from the auxiliary coolant pump.



Step 14: 10mm Socket & Ratchet

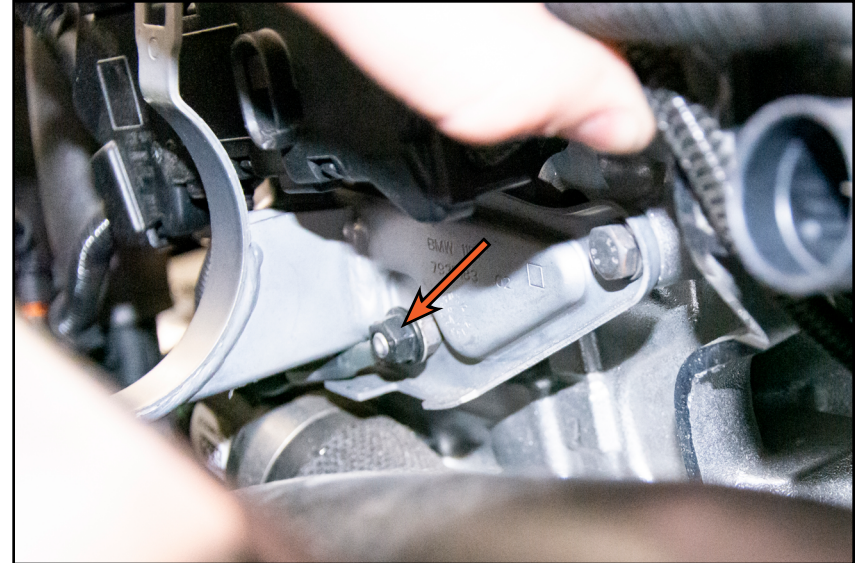
Remove the nut (arrow in photo on the left) which secures the auxiliary coolant pump bracket in place, then rotate the bracket up (as shown in photo on the right) and remove it.



REMOVING THE STOCK CHARGE PIPE

Step 15: 10mm Socket & Ratchet

Remove the nut (arrow) and slide the ground strap off of the stud. Remove the two bolts securing the coolant pump bracket to the engine, then set the bracket aside.



Step 16: T30 Torx

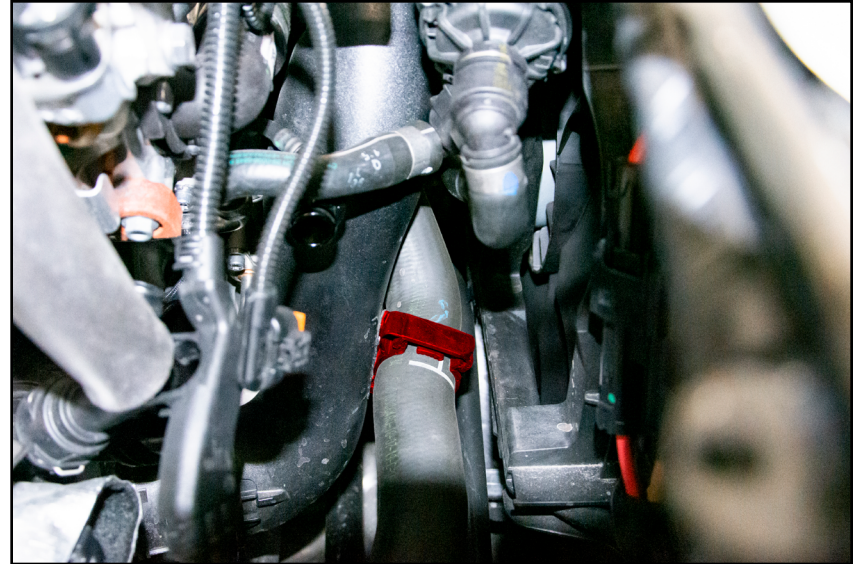
Remove the two screws (arrows) which secure the charge pipe to the throttle body and set them aside.



REMOVING THE STOCK CHARGE PIPE

Step 17:

There is a plastic clip (highlighted in **RED**) which secures a coolant hose to the lower portion of the charge pipe, this clip must be removed in order for the charge pipe to be removed.



Step 18: Angled Pick

Pry the spring clip (arrow) free from the lower end of the charge pipe.



REMOVING THE STOCK CHARGE PIPE

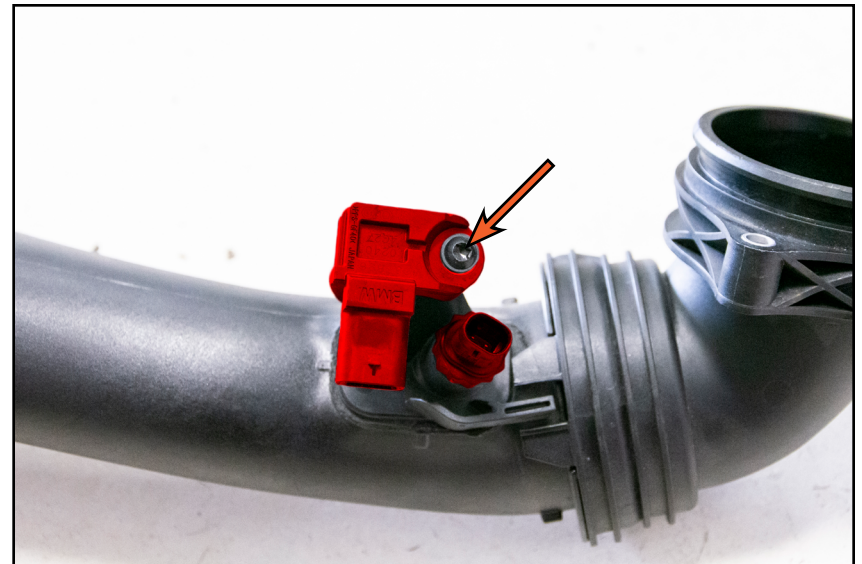
Step 19:

Carefully guide the charge pipe up and out of the engine bay as shown.



Step 20: T20 Torx, 19mm 12-Point Socket & Ratchet

Carefully remove the MAP and temperature sensors (highlighted in **RED**) from the stock charge pipe and set them aside. The MAP sensor is secured by a single screw (arrow) and the temperature sensor is simply threaded in.



INSTALLING THE NEW CHARGE PIPE

Step 1:

Install the supplied turbo outlet seal (arrow in photo on the left) into the groove in the turbo outlet adapter as shown, then transfer the charge pipe clip to the adapter (as shown in the photo on the right).



Step 2:

Install the supplied charge pipe seal (arrow) into the groove in the throttle body adapter as shown.



INSTALLING THE NEW CHARGE PIPE

Step 3:

Slide the turbo outlet adapter onto the turbo as far as it will go, then give it a light tug to ensure it is fully seated.



Step 4: 5mm Hex (Allen)

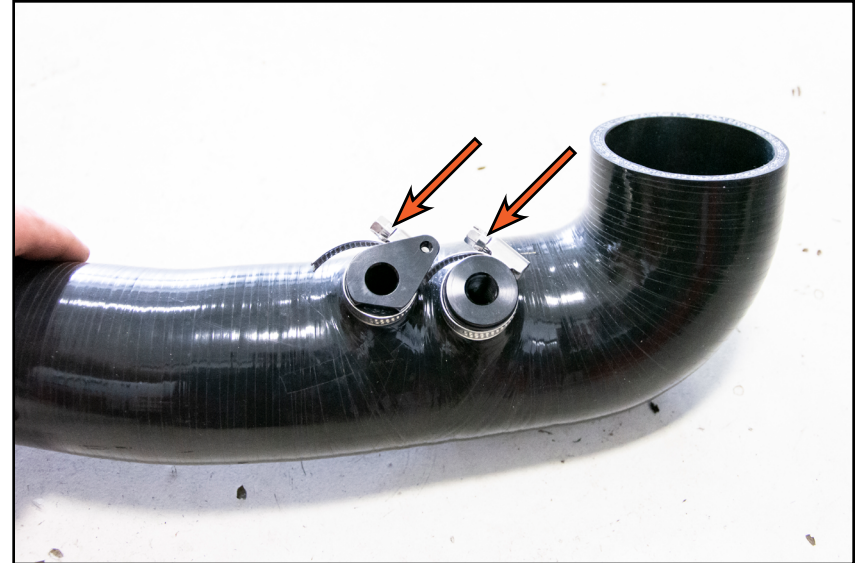
Install the throttle body adapter into the throttle body as shown then install the two screws (arrows) until snug.



INSTALLING THE NEW CHARGE PIPE

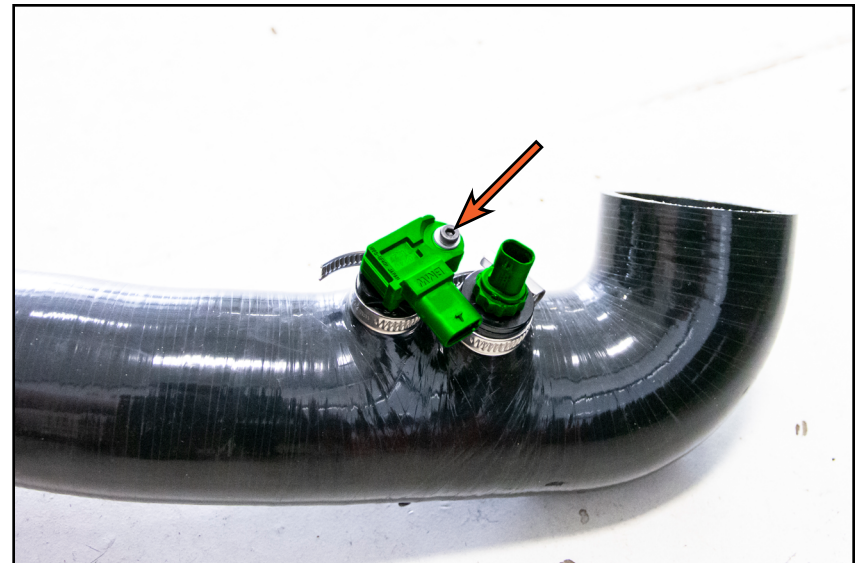
Step 5:

Install the provided sensor adapters into the bungs in the new charge pipe as shown, securing them in place with the two provided clamps (arrows).



Step 6: 3mm Hex (Allen), 19mm 12-Point Socket & Ratchet

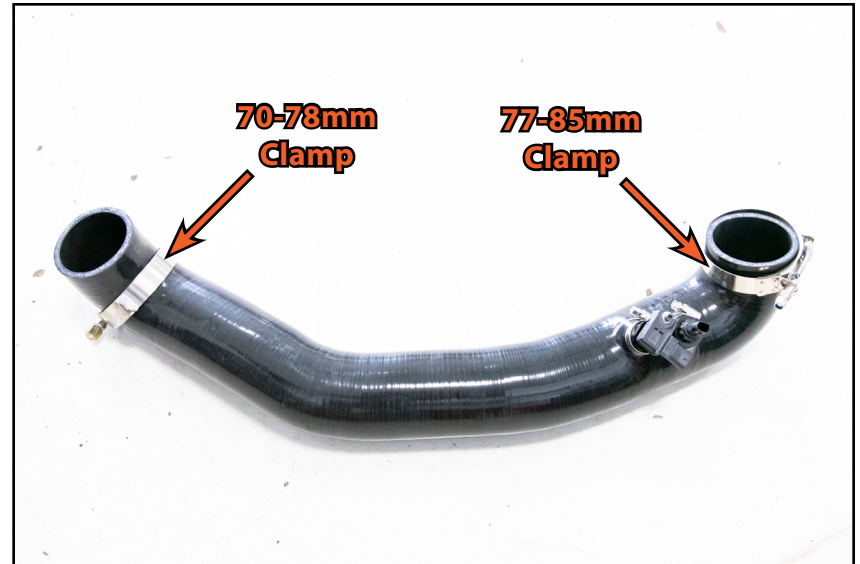
Transfer the temperature and MAP sensors (highlighted in **GREEN**) into the sensor adapters as shown. Tighten the temperature sensor till snug and secure the MAP sensor in place with the supplied M4 screw (arrow).



INSTALLING THE NEW CHARGE PIPE

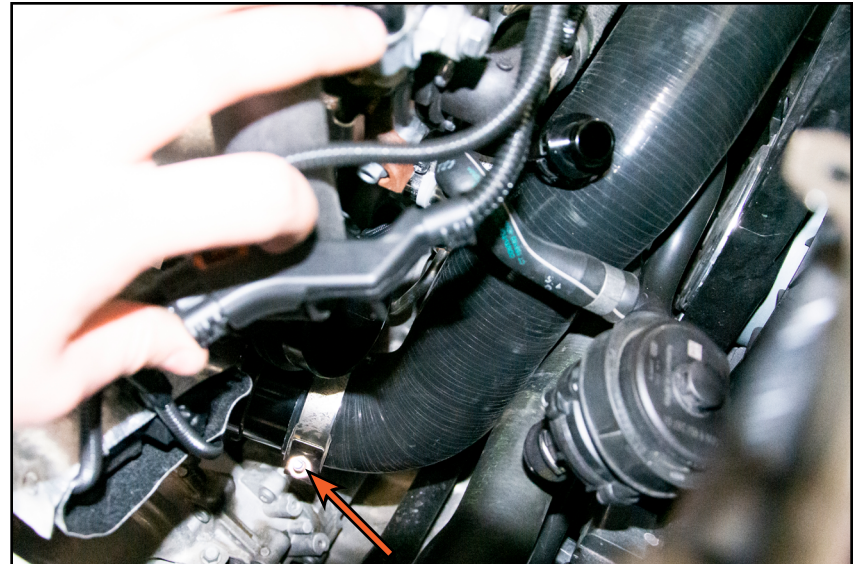
Step 7:

Ensure the clamps are properly installed on either end of the charge pipe as shown.



Step 8: 11mm Socket & Ratchet

Slide the lower end of the charge pipe onto the turbo outlet adapter as far as it will go, then tighten the clamp (arrow) until snug.



INSTALLING THE NEW CHARGE PIPE

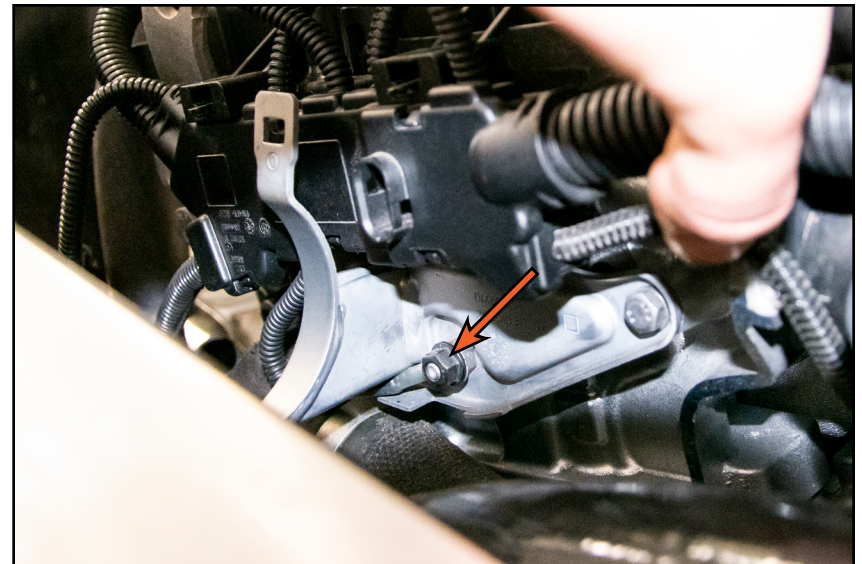
Step 9: 10mm Socket & Ratchet

Slide the upper end of the charge pipe onto the throttle body adapter as far as it will go, then tighten the clamp (arrow) until snug.



Step 10: 10mm Socket & Ratchet

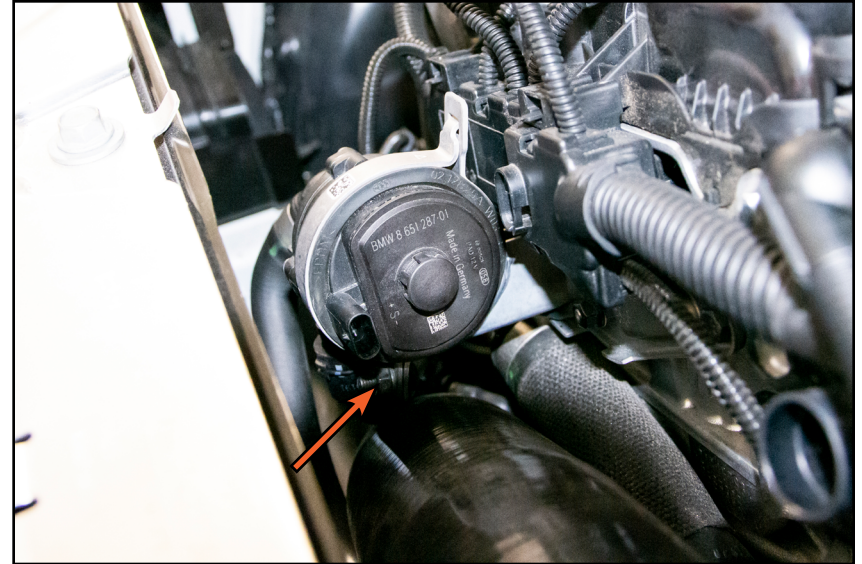
Reinstall the coolant pump bracket using the two bolts, then slide the ground strap back over the stud before installing the nut (arrow).



INSTALLING THE NEW CHARGE PIPE

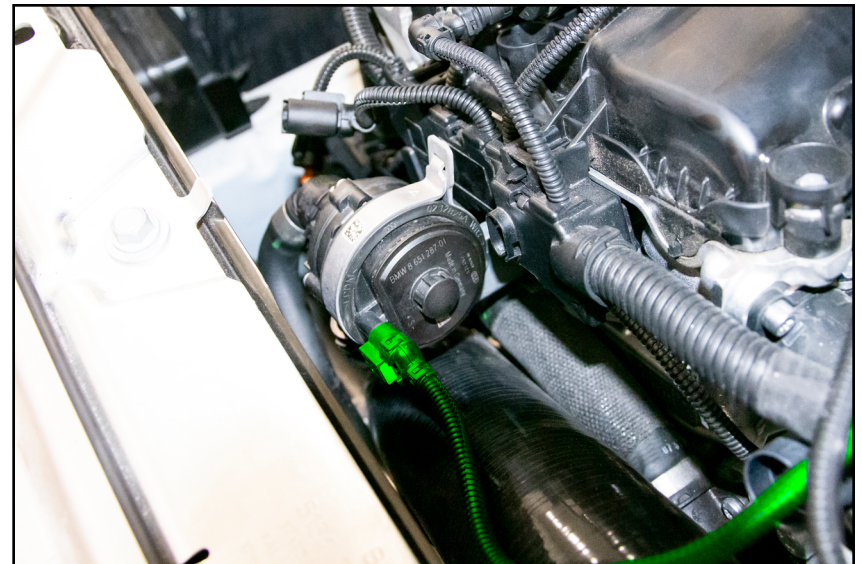
Step 11: 10mm Socket & Ratchet

Reinstall the coolant pump into the bracket, securing it with the nut (arrow).



Step 12:

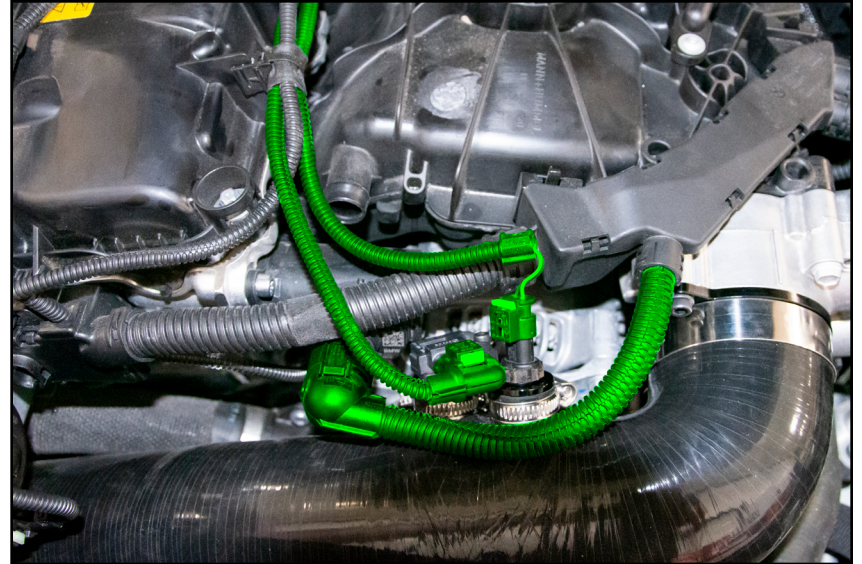
Reconnect the coolant pump connector (highlighted in **GREEN**).



INSTALLING THE NEW CHARGE PIPE

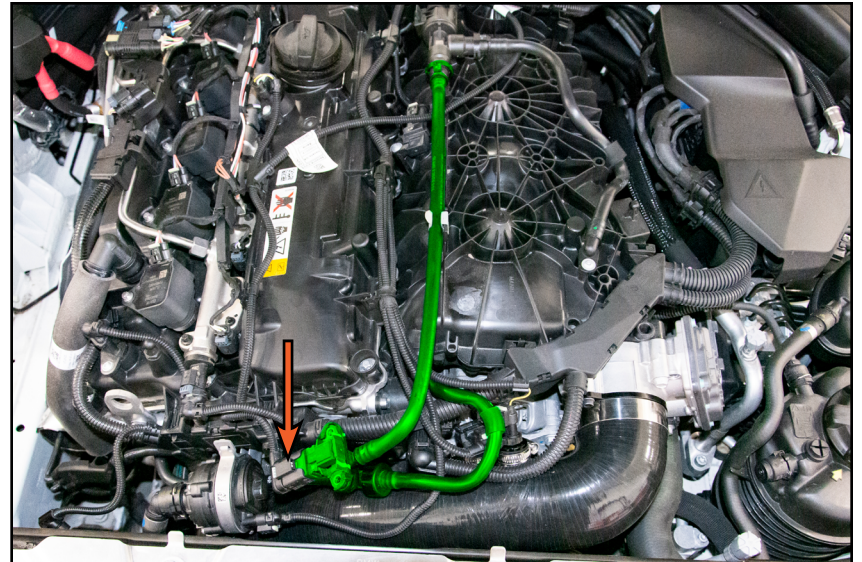
Step 13:

Reconnect the three connectors (highlighted in **GREEN**).



Step 14:

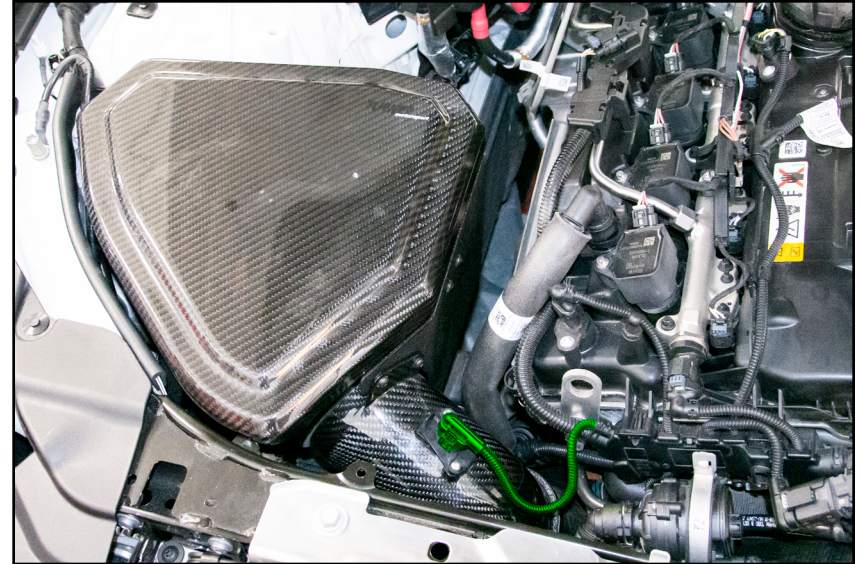
Reinstall the vacuum line assembly into the vehicle ensuring all the fittings “snap” into place. Reconnect the connector (arrow).



INSTALLING THE NEW CHARGE PIPE

Step 15:

Reinstall the turbo inlet and intake system, then reconnect the MAF sensor connector (highlighted in **GREEN**).



Step 16:

Reinstall the engine cover.

Congratulations, your installation is complete!



Your Charge Pipe installation is complete!



These instructions are provided as a courtesy by Turner Motorsport

Proper service and repair procedures are vital to the safe, reliable operation of all motor vehicles as well as the personal safety of those performing the repairs. Standard safety procedures and precautions (including use of safety goggles and proper tools and equipment) should be followed at all times to eliminate the possibility of personal injury or improper service which could damage the vehicle or compromise its safety.

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