



BMW F3x 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

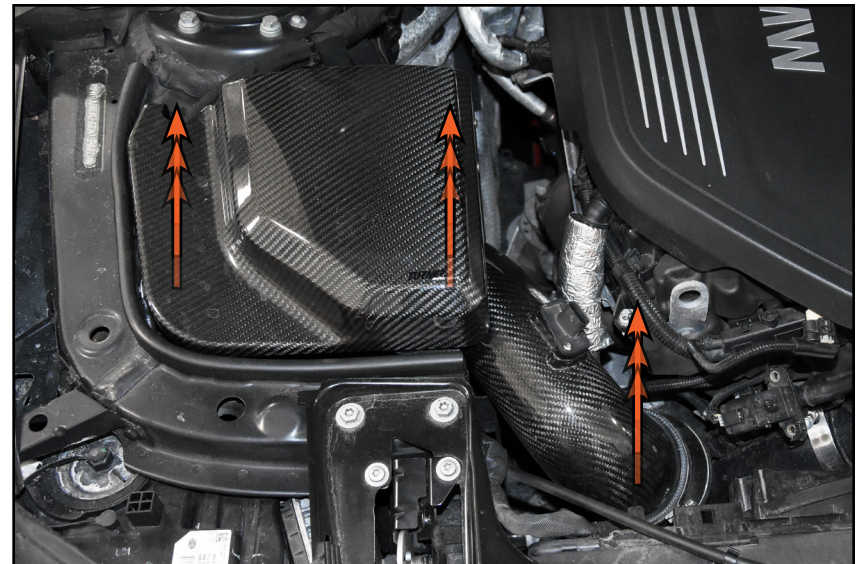
Step 1:

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



Step 2:

Remove the intake system or air box from the turbo inlet and set it aside.



REMOVING THE STOCK CHARGE PIPE

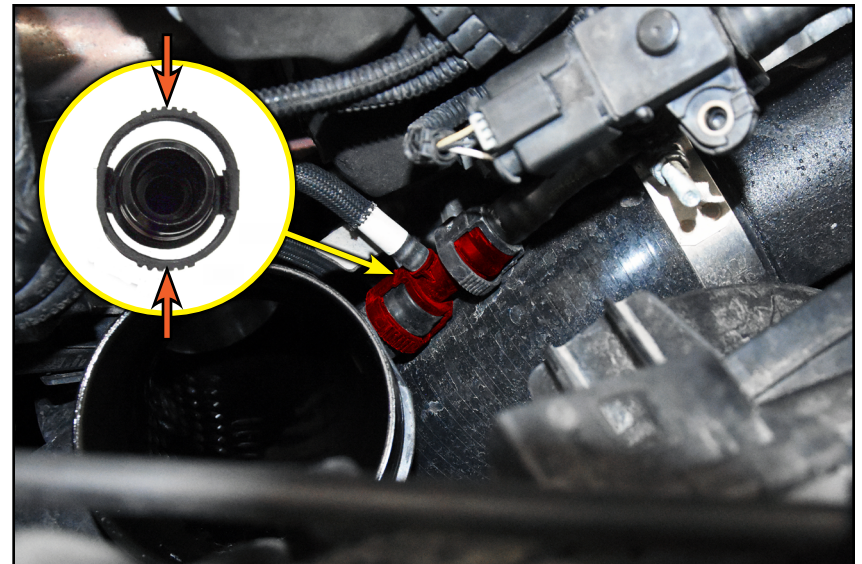
Step 3:

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



Step 4:

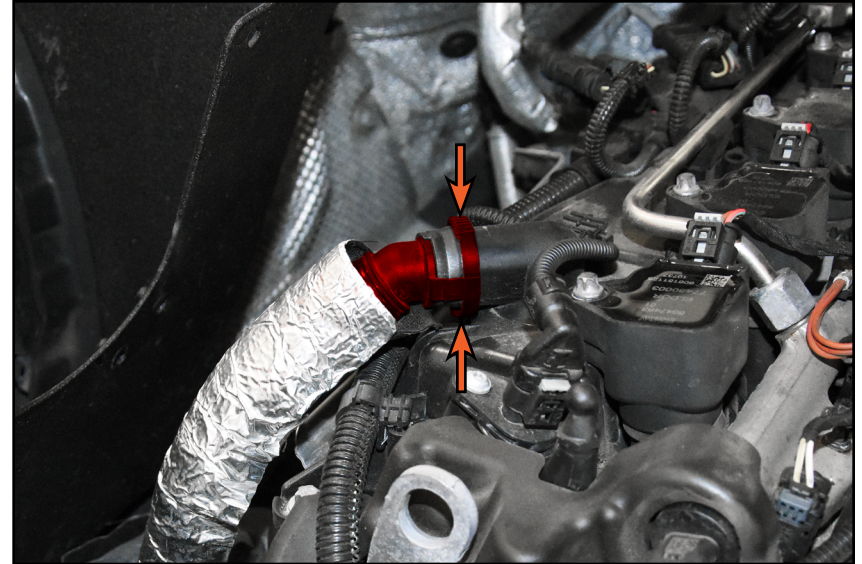
Depress the two locking tabs and pull the plastic vacuum line (highlighted in **RED**) off of the flange on the turbo inlet.



REMOVING THE STOCK CHARGE PIPE

Step 5:

Depress the two locking tabs and pull the PCV hose (highlighted in **RED**) off of the flange on the top of the valve cover.



Step 6:

Unsnap the small heat wrap from around the turbo wastegate actuator and carefully remove it as shown.



REMOVING THE STOCK CHARGE PIPE

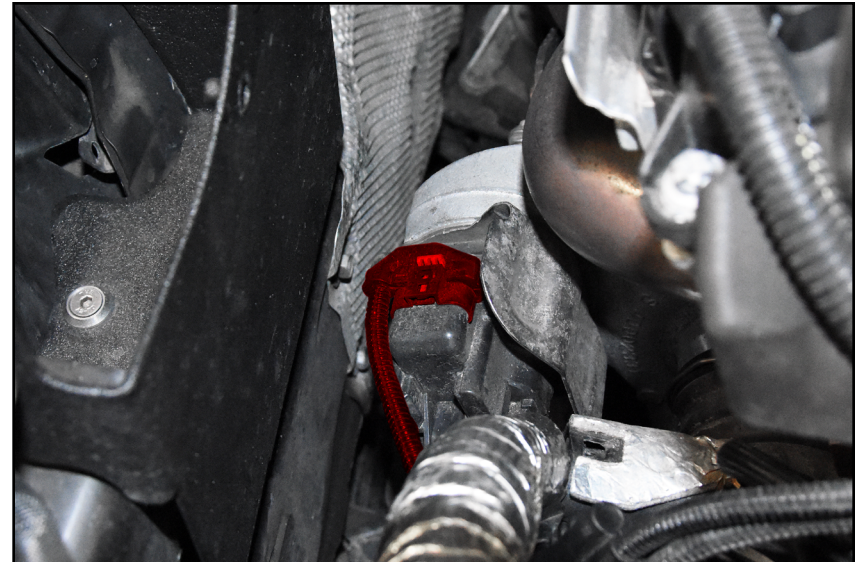
Step 7:

Disconnect the sensor connector (highlighted in **RED**) from the PCV hose attached to the side of the turbo inlet pipe.



Step 8:

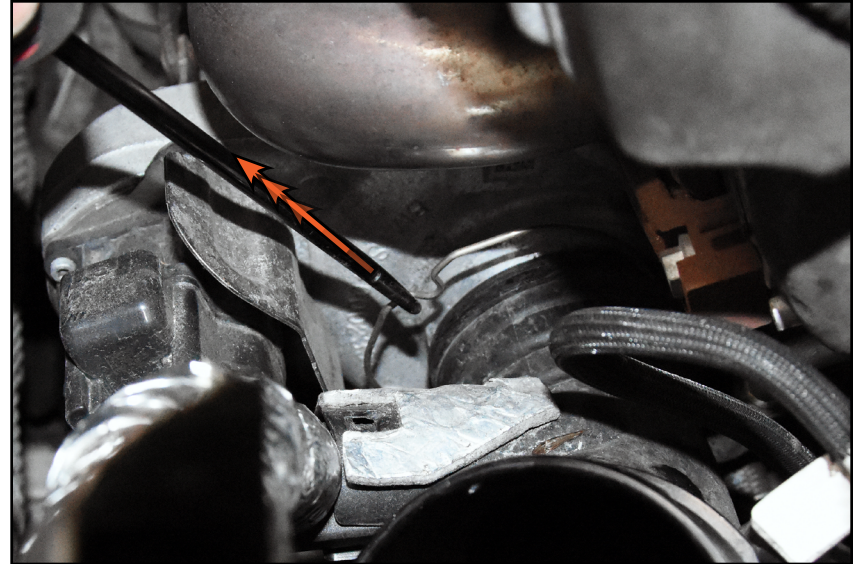
Disconnect the connector (highlighted in **RED**) from the wastegate actuator and move the wiring harness out of the way.



REMOVING THE STOCK CHARGE PIPE

Step 9: Angled Pick Tool

Pull up on the spring clip pull then the inlet off the turbo and carefully guide it out of the vehicle.



Step 10:

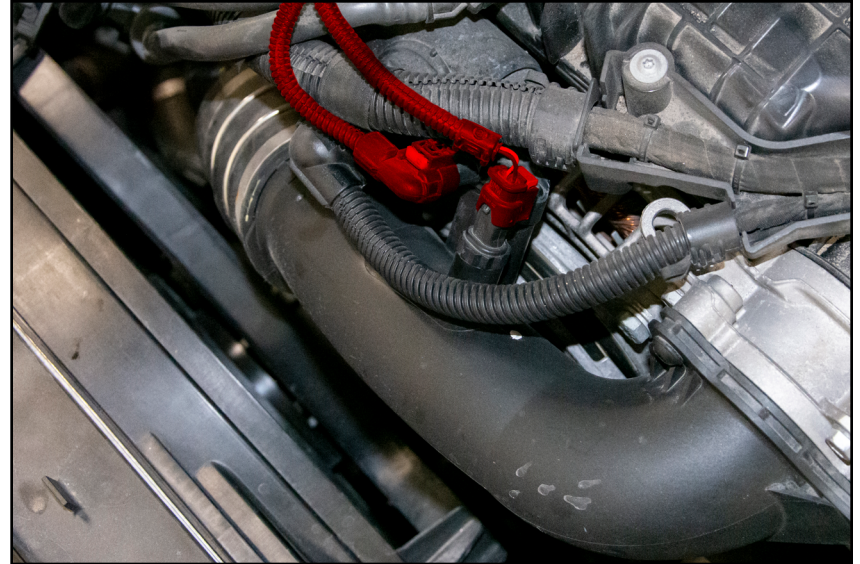
Pull the turbo inlet pipe and PCV hose free from the turbo and remove it from the engine bay.



REMOVING THE STOCK CHARGE PIPE

Step 11:

Disconnect the MAP and temperature sensor connectors (highlighted in **RED**).



Step 12: T30 Torx

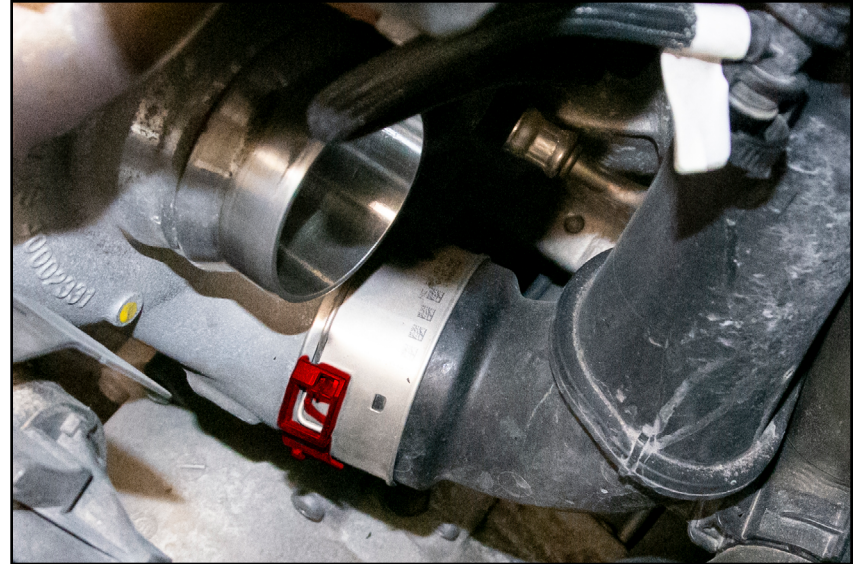
Remove the three screws (arrows) which secure the charge pipe to the throttle body and set them aside.



REMOVING THE STOCK CHARGE PIPE

Step 13: Angled Pick Tool

Pry the plastic charge pipe retainer (highlighted in **RED**) free from the lower end of the charge pipe (where it connects to the turbo).



Step 14: Angled Pick Tool

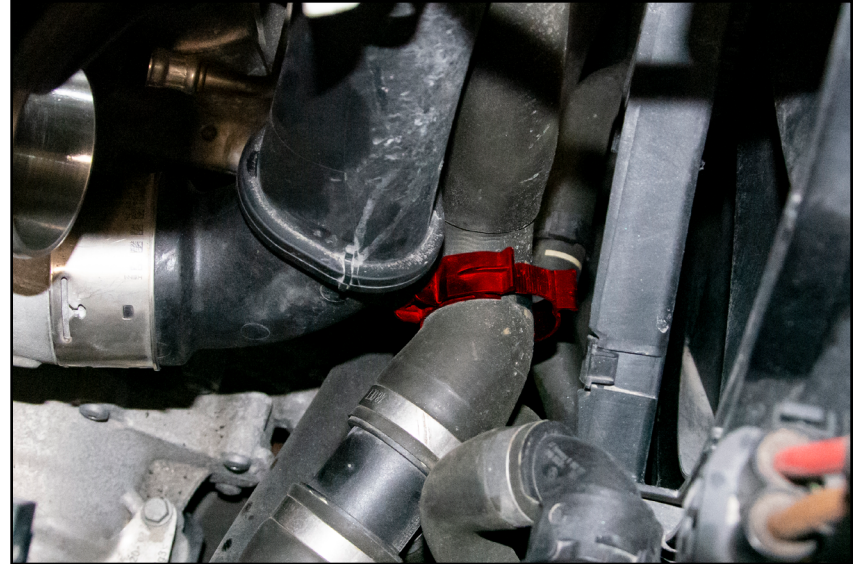
With the retainer out of the way, you can pry the spring clip (arrow) free from the charge pipe. As you can see, there is a portion in the center of the spring clip which dips down and “locks” the clip into the charge pipe. You must first pry the center of the clip out of the groove in the charge pipe, then you can remove the clip the same way as the turbo inlet clip.



REMOVING THE STOCK CHARGE PIPE

Step 15:

There is a plastic clamp (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 16:

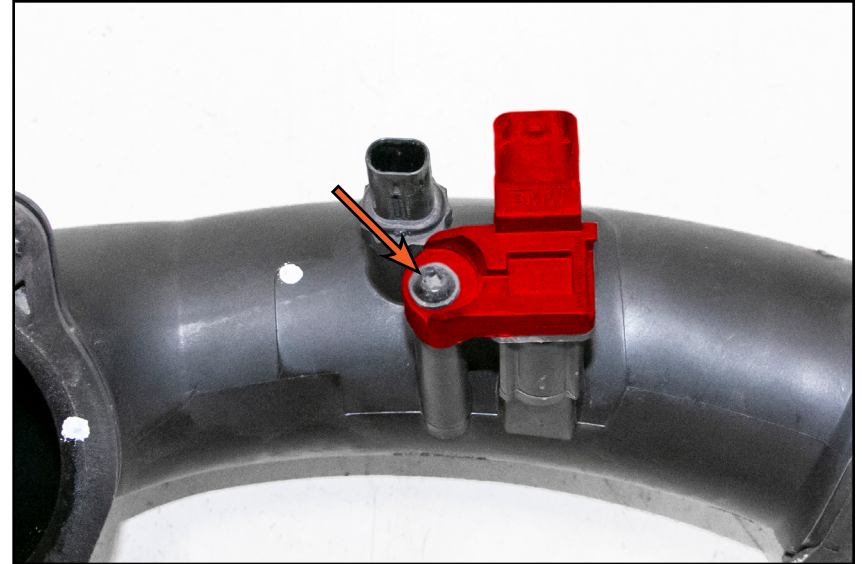
Carefully guide the charge pipe up and out of the engine bay as shown.



REMOVING THE STOCK CHARGE PIPE

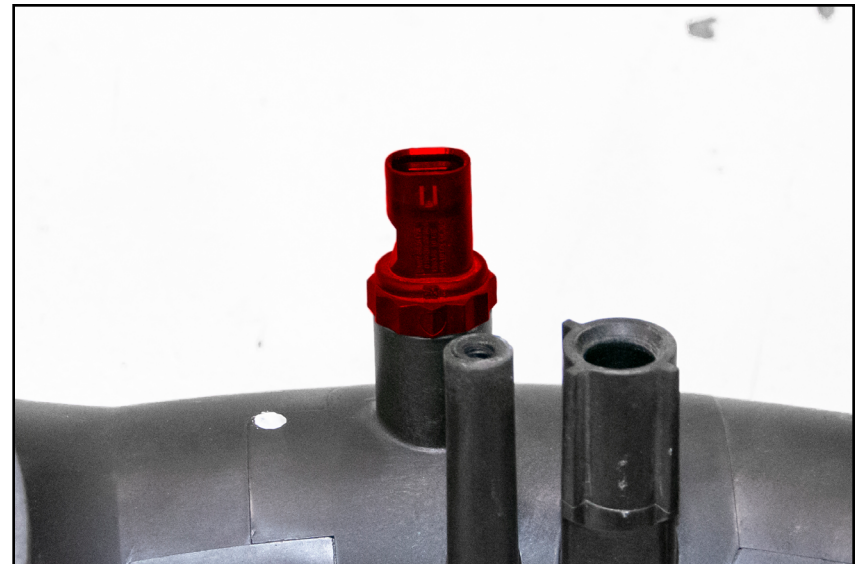
Step 17: T20 Torx

Remove the screw (arrow) and carefully wiggle the MAP sensor (highlighted in **RED**) free from the stock charge pipe and set it aside.



Step 18: 19mm 12-Point Socket & Ratchet

Unscrew the plastic temperature sensor (highlighted in **RED**) from the stock charge pipe and set it aside.



INSTALLING THE NEW CHARGE PIPE

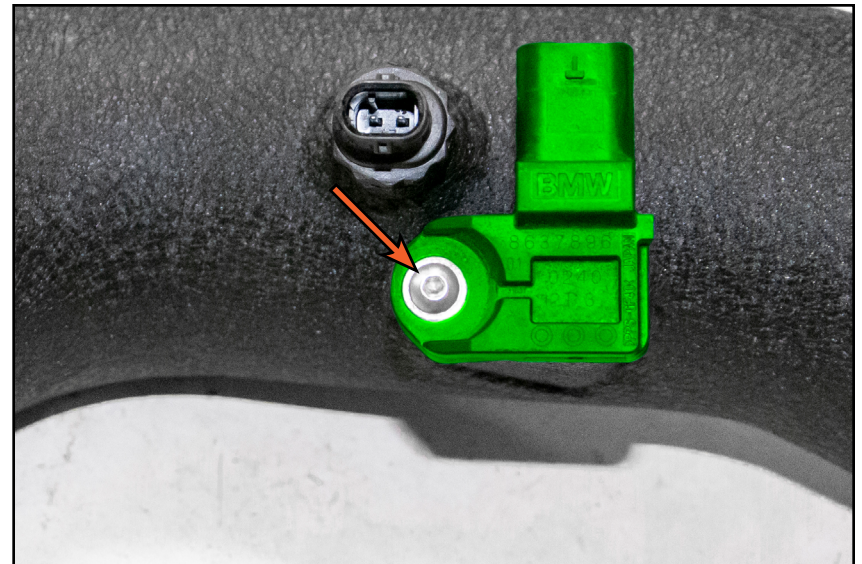
Step 1:

Transfer the temperature sensor (highlighted in **GREEN**) to the threaded hole in the new charge pipe as shown.



Step 2: 2.5mm Hex (Allen)

Install the MAP sensor (highlighted in **GREEN**) into the new charge pipe using the provided M4 screw and washer (arrow).



INSTALLING THE NEW CHARGE PIPE

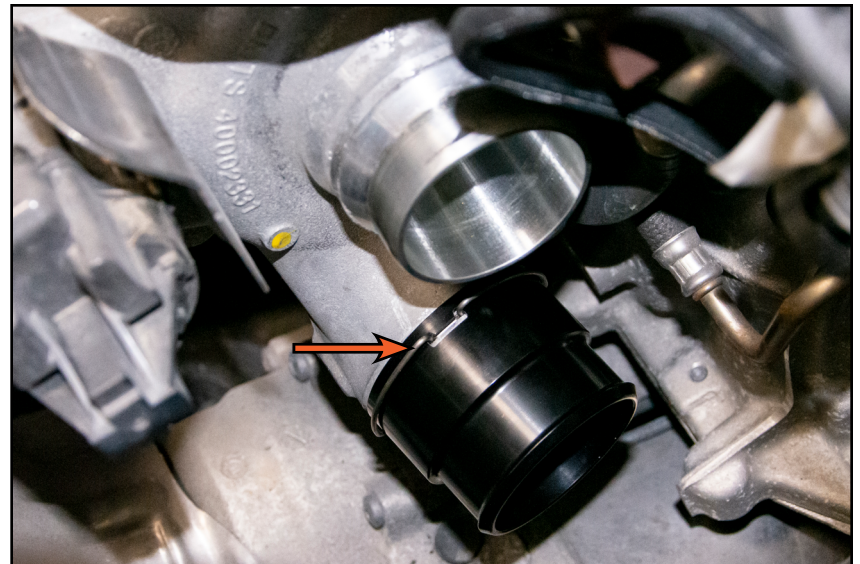
Step 3:

Install the supplied charge pipe seal (highlighted in **GREEN**) into the groove in the new turbo outlet adapter as shown.



Step 4:

Slide the adapter onto the turbo outlet as far as it will go, then reinstall the spring clip (arrow) to retain it in place.



INSTALLING THE NEW CHARGE PIPE

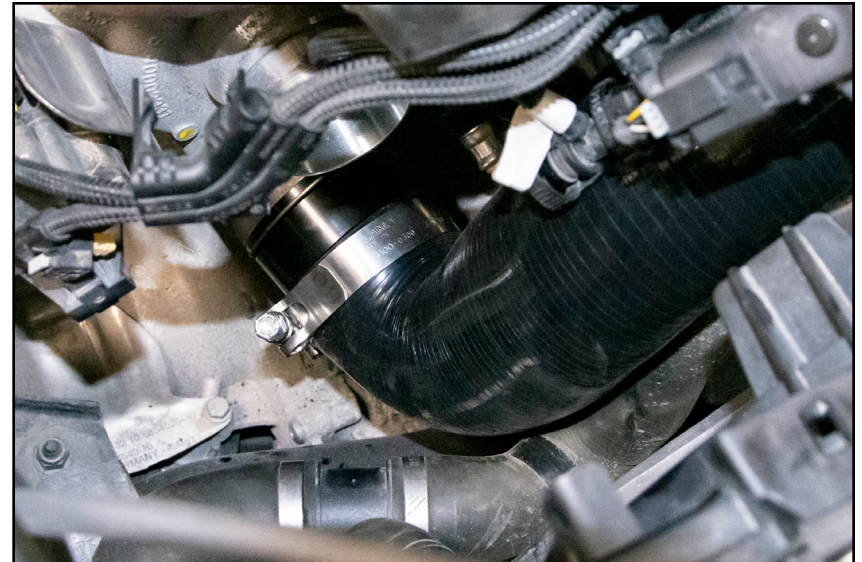
Step 5:

Slide the 70-78mm clamp onto the lower end of the charge pipe coupler as shown.



Step 6:

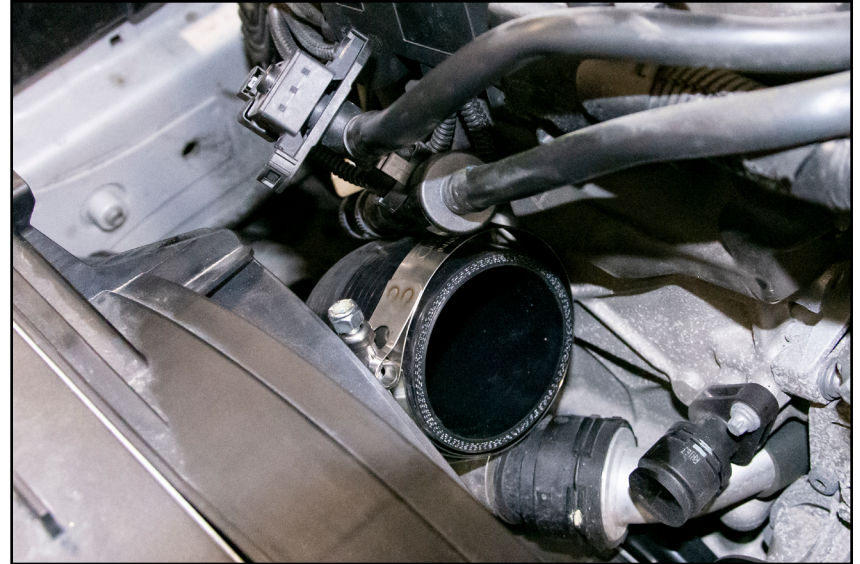
Slide the coupler onto the turbo outlet adapter as far as it will go, but leave the clamp loose for now.



INSTALLING THE NEW CHARGE PIPE

Step 7:

Slide the 76-84mm clamp onto the upper end of the coupler so that it has adequate clearance for surrounding components and can be easily tightened later. Leave the clamp loose for now.



Step 8:

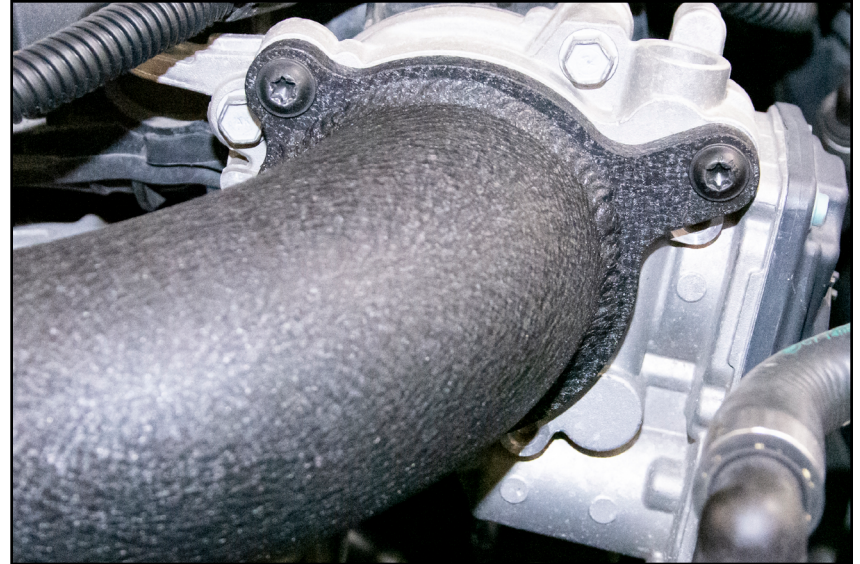
Slide the charge pipe into the silicone coupler a few inches, then adjust everything so that the charge pipe flange lines up with the throttle body.



INSTALLING THE NEW CHARGE PIPE

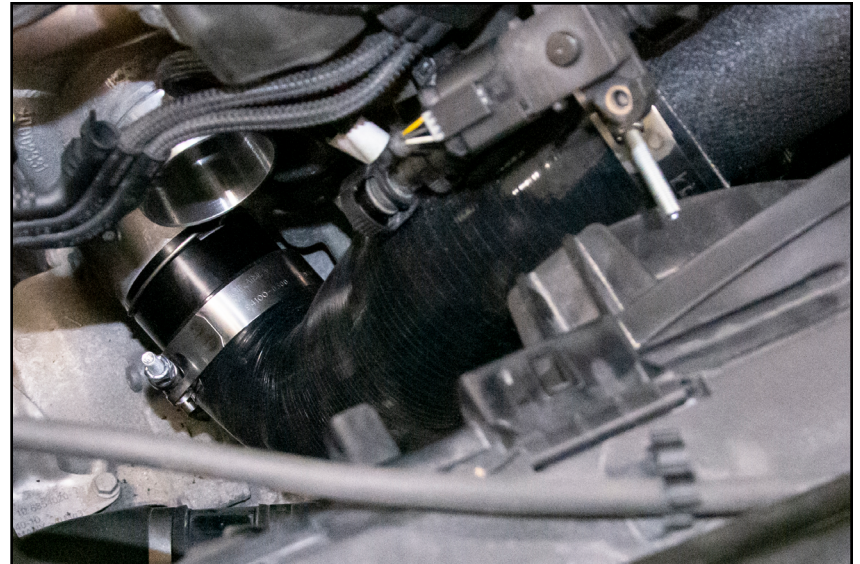
Step 9: T30 Torx, Torque Wrench

Reinstall the three charge pipe screws and tighten them to 8 Nm (6 Ft-lbs).



Step 10: 11mm Socket & Torque Wrench

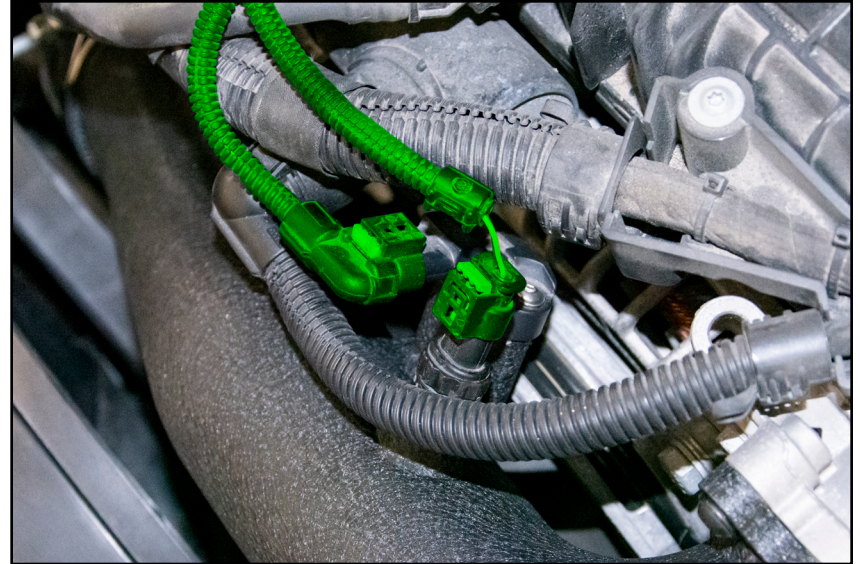
Rotate the coupler so that it is not compressed and has adequate clearance for surrounding components, then fully tighten the clamps until snug.



INSTALLING THE NEW CHARGE PIPE

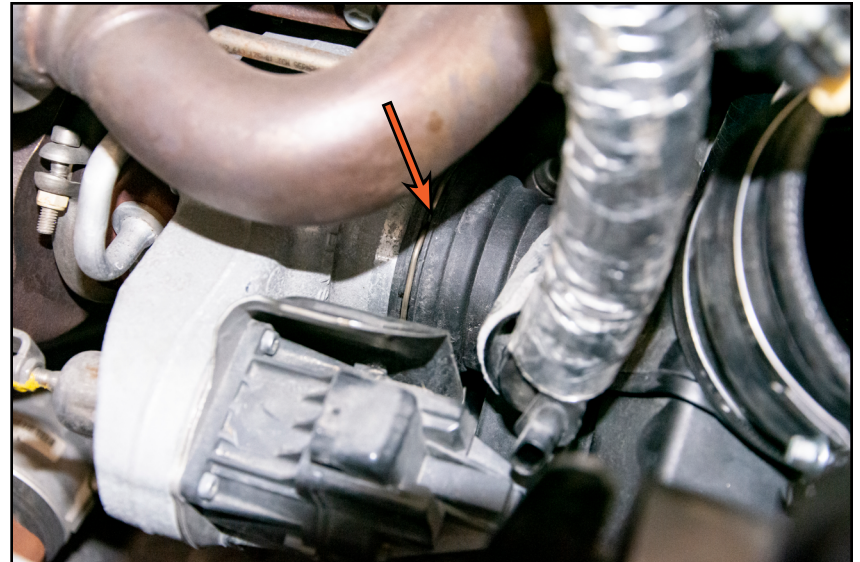
Step 11:

Reconnect the MAP and temperature sensor connectors (highlighted in **GREEN**).



Step 12:

Slide the new turbo inlet onto the turbo as far as it will go, then snap the spring clip (arrow) into place to secure it.



INSTALLING THE NEW CHARGE PIPE

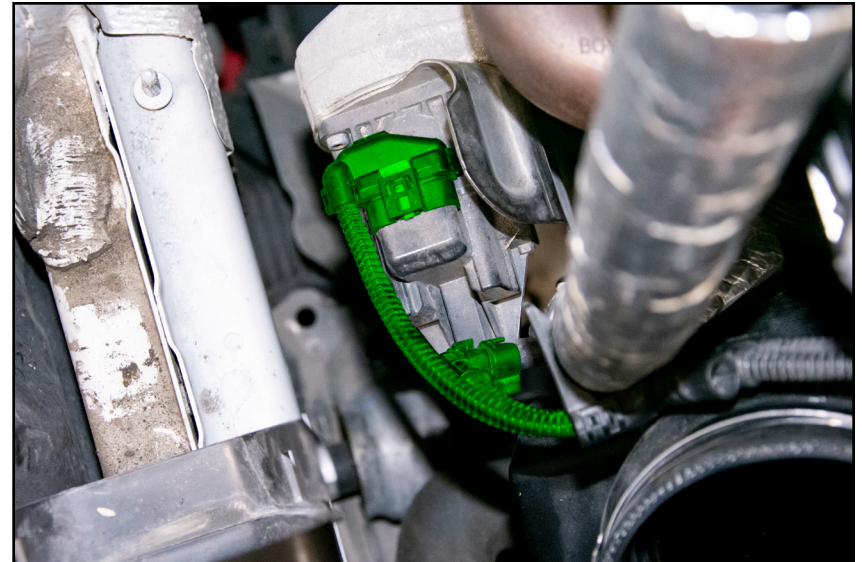
Step 13:

Slide the PCV hose (highlighted in **GREEN**) onto the flange on the valve cover until the two locking tabs “click” into place.



Step 14:

Reconnect the PCV hose sensor connector and the wastegate actuator connector (highlighted in **GREEN**).



INSTALLING THE NEW CHARGE PIPE

Step 15:

Reinstall the heat wrap around the wastegate actuator and snap it together.



Step 16:

Slide the plastic vacuum line (highlighted in **GREEN**) onto the flange on the inlet pipe until the two locking tabs “click” into place.



INSTALLING THE NEW CHARGE PIPE

Step 17:

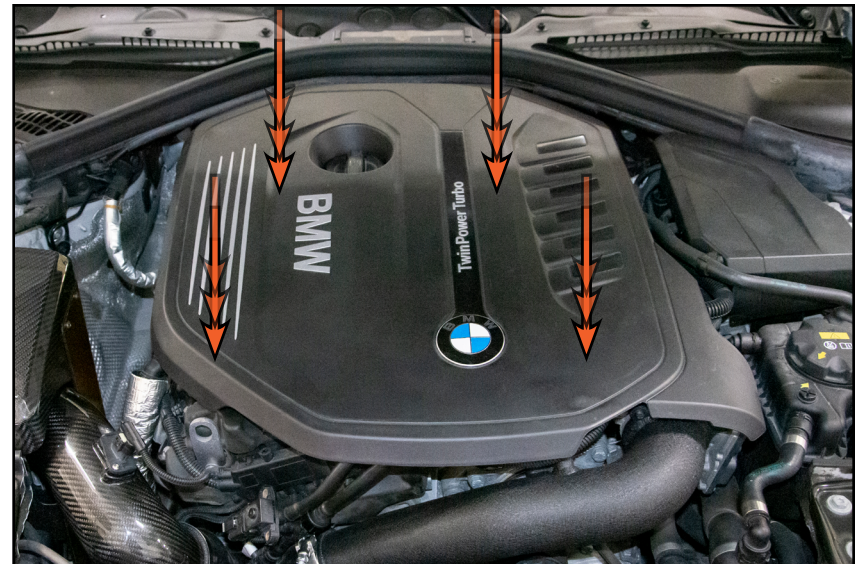
Reinstall the intake system or air box then reconnect the MAF sensor connector (highlighted in **GREEN**).



Step 18:

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

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