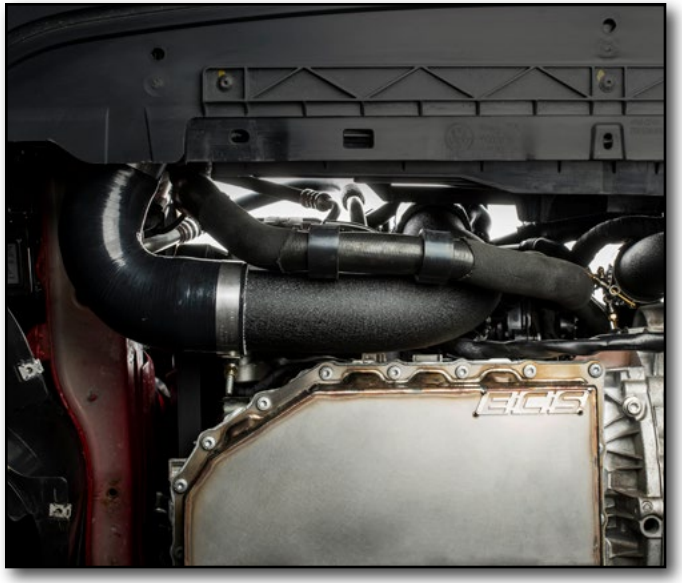
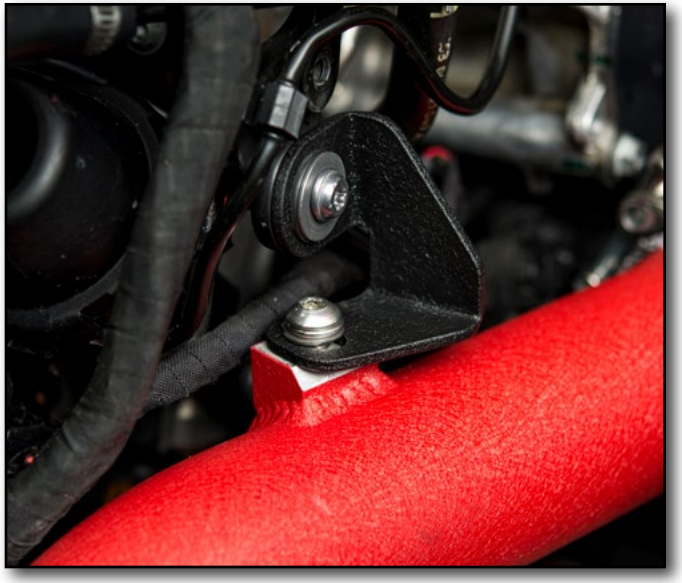
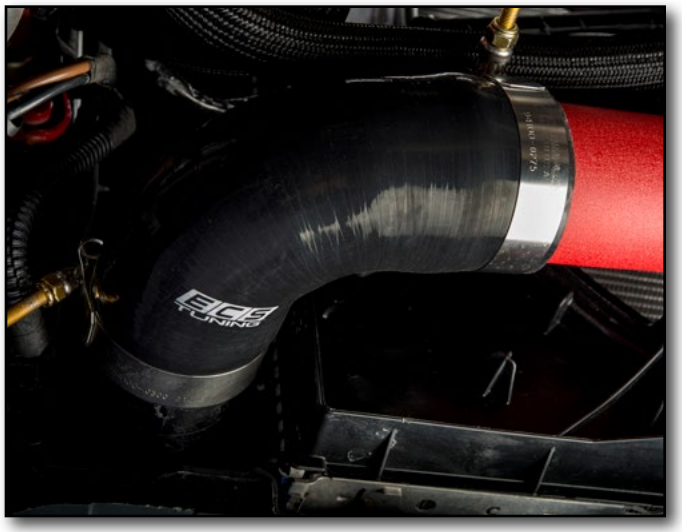
VW/Audi 1.8T/2.0T Gen3 TSI High Flow Charge Pipe Kit
Installation Instructions - Click HERE

Skill Level
2 - Moderate
Some Experience Recommended







INTRODUCTION

Today we are going to install our ECS Tuning High Flow Charge Pipe Kit into our MK7 GTI. The stock intercooler pipes leave room for improvement with their small diameter and irregular obstructions. Our pipe kits are available in **RED** or **BLACK**, and they can be purchased separately or together, depending on your budget and preference. All of the pipe kits feature:

- Mandrel bent, bead rolled, powdercoated aluminum pipes
- Smooth flowing silicone couplers
- MAP sensor hardware
- Stainless steel T-bolt clamps

ECS Turbo Outlet Pipe Kit (detailed Kit Contents on Page 4)

ECS Throttle Body Pipe Kit (detailed Kit Contents on Page 5)

Take your time and enjoy the project, it should take you a couple of hours or less. Read all of these instructions first and you should be able to breeze right through the install, and there's even a DIY video which can be found by clicking HERE. Be sure to reference the required tool list on Page 6 before you begin to make sure you have everything that you need to finish the job. Thank you for looking to ECS Tuning for all your performance and repair needs, we appreciate your business!

TABLE OF CONTENTS

KIT CONTENTS - TURBO OUTLET KITS (ES3134069 & ES3134074)

Upper Turbo Outlet Pipe (available in **RED** or **BLACK**)

Lower Turbo Outlet Pipe (available in **RED** or **BLACK**)

Intercooler Inlet Coupler

Straight Coupler

Upper Turbo Outlet Pipe Mounting Bracket

Turbo Outlet Pipe Installation Pack

KIT CONTENTS - THROTTLE PIPE KITS (ES3134081 & ES3134089)

Throttle Body Pipe (available in **RED** or **BLACK**)

Throttle Body Pipe Clamp Pack

Throttle Body Coupler

Intercooler Outlet Coupler

REQUIRED TOOLS

Note: The tools required for each step will be listed by the step number throughout these instructions.

Standard Automotive Tools

- Protecta-Sockets (for lug nuts) ES#2221243
- **⅜" Drive Ratchet** ES#2765902
- ⅜" Drive Torque Wrench ES#2221245
- **⅜" Drive Deep and Shallow Sockets** ES#2763772
- **⅜" Drive Extensions** ES#2804822
- **Hydraulic Floor Jack** ES#2834951
- **Torx Drivers and Sockets** ES#11417/8
- ½" Drive Deep and Shallow Sockets ES#2839106
- ½" Drive Ratchet
- ½" Drive Extensions
- ½" Drive Torque Wrench ES#2221244
- ½" Drive Breaker Bar ES#2776653
- Bench Mounted Vise
- Crows Foot Wrenches
- **Hook and Pick Tool Set** ES#2778980

Required For This Install

- **¼" Drive Ratchet** ES#2823235
- **¼" Drive Deep and Shallow Sockets** ES#2823235
- **¼" Drive Extensions** ES#2823235
- Plier and Cutter Set ES#2804496
- **Flat and Phillips Screwdrivers** ES#2225921
- **Jack Stands** ES#2763355
- Ball Pein Hammers
- Pry Bar Set ES#1899378
- Electric/Cordless Drill
- Wire Strippers/Crimpers
- Drill Bits
- Punch and Chisel Set
- **Hex Bit (Allen) Wrenches and Sockets** ES#11420
- Thread Repair Tools ES#1306824
- **Open/Boxed End Wrench Set** ES#2765907

Available On Our Website

Specialty Tools

- **VAG Connector Removal Tool** ES#2628676

SHOP SUPPLIES AND MATERIALS

Standard Shop Supply Recommendations: We recommend that you have a standard inventory of automotive shop supplies before beginning this or any automotive repair procedure. The following list outlines the basic shop supplies that we like to keep on hand. Shop supplies with a hyperlink are available on our website.

- Hand Cleaner/Degreaser - Click Here
- Pig Mats - for protecting your garage floor and work area from spills and stains - Click Here
- Spray detailer - for rapid cleaning of anything that comes into contact with your paint such as brake fluid - Click Here
- Micro Fiber Towels - for cleaning the paint on your car - Click Here
- Latex Gloves - for the extra oily and dirty jobs - Click Here
- Medium and High Strength Loctite Thread lock compound - to prevent bolts from backing out - Click Here
- Anti-Seize Compound - to prevent seizing, galling, and corrosion of fasteners - Click Here
- Aerosol Brake/Parts Cleaner - for cleaning and degreasing parts
- Shop Rags - used for wiping hands, tools, and parts
- Penetrating oil - for helping to free rusted or stuck bolts and nuts
- Mechanics wire - for securing components out of the way
- Silicone spray lube - for rubber components such as exhaust hangers
- Paint Marker - for marking installation positions or bolts during a torquing sequence
- Plastic Wire Ties/Zip Ties - for routing and securing wiring harnesses or vacuum hoses
- Electrical tape - for wrapping wiring harnesses or temporary securing of small components

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

ECS Tuning 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.

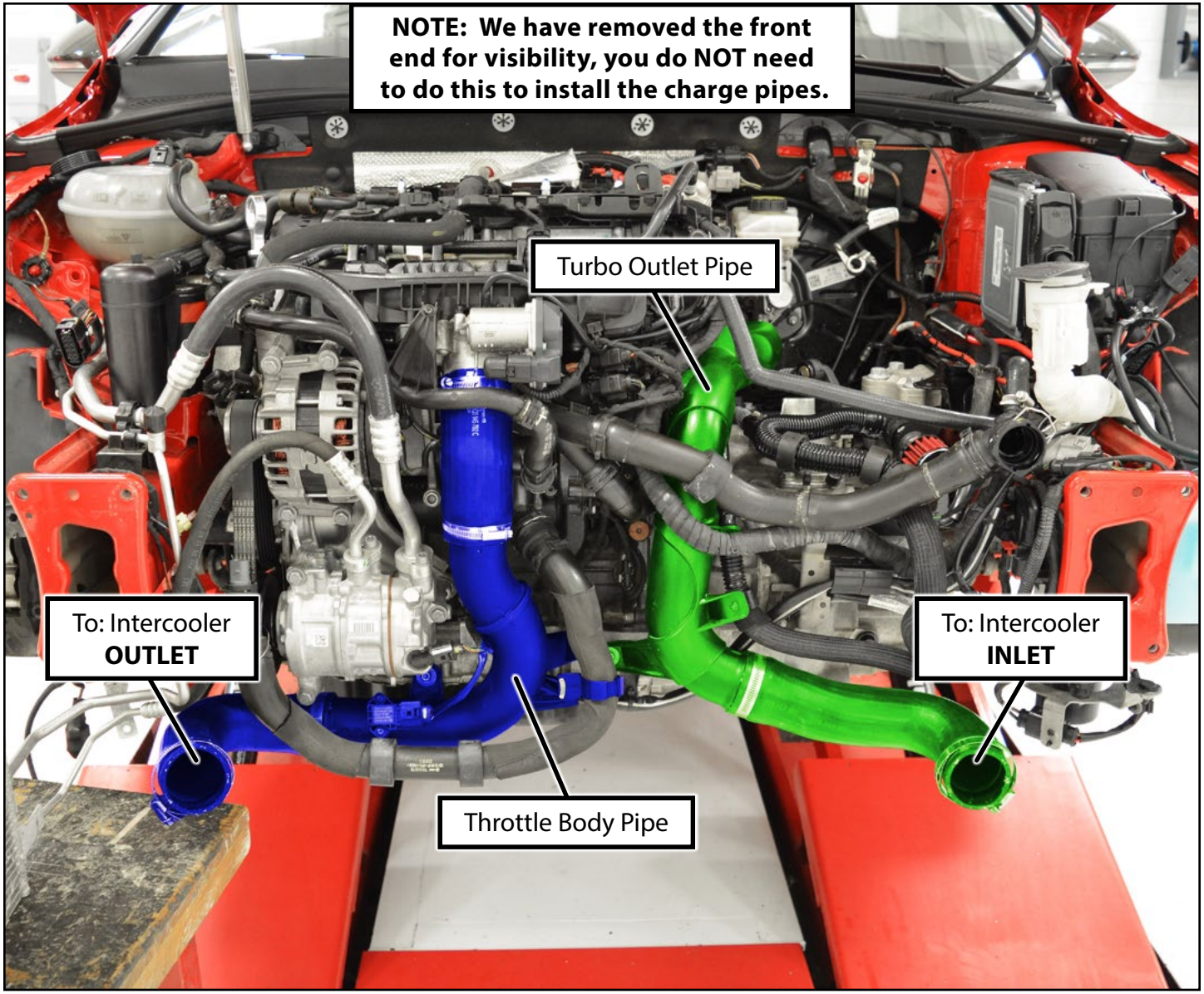
NEVER get underneath a vehicle that is supported only by a jack, and ALWAYS make sure that the vehicle is securely supported on jack stands.

PROJECT OVERVIEW

Let's look at the charge pipe system layout and what we will be replacing today. Charge air exits the turbocharger and travels through the turbo outlet pipe (highlighted in **GREEN**) and into the intercooler inlet. The charge air then exits the intercooler through the intercooler outlet and travels through the throttle body pipe (highlighted in **BLUE**) to the engine.

It's worth noting the locations where the wiring harnesses and coolant lines attach to the stock charge pipes, as well as where the charge pipes mount to the engine. We just happened to be installing a new intercooler while we were shooting these photos, so you get the benefit of 100% visibility!

Now let's look at a few related upgrades before we get started.



PROJECT OVERVIEW

There are a few upgrades which go hand in hand with our intercooler charge pipe kit.

We are excited to offer you two different intake systems for your MQB Gen3 2.0T TSI. Our Luft-Technik intake system features a CNC-bent aluminum dual air inlet duct with a wrinkle black powdercoat finish, whereas the Kohlefaser Luft-Technik intake system adds a Carbon Fiber Dual Air Inlet Lid on top of the duct. There are other differences, between these two systems, but they both look great while also helping to maximize the performance potential of your MQB Gen3 2.0T TSI.

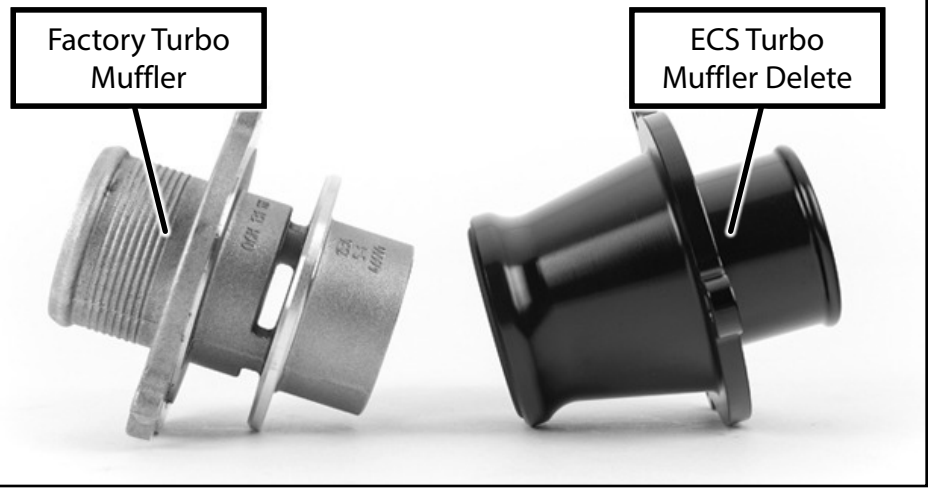
Last but not least, you can replace the restrictive factory turbo muffler with an ECS turbo muffler delete kit. This easy to install part offers boost response, more power, all while letting you hear the turbocharger "breathe" better than before.

Now let's get to it!

ECS Luft-Technik Intake System

ECS Kohlefaser Luft-Technik Intake System

ECS Turbo Muffler Delete:



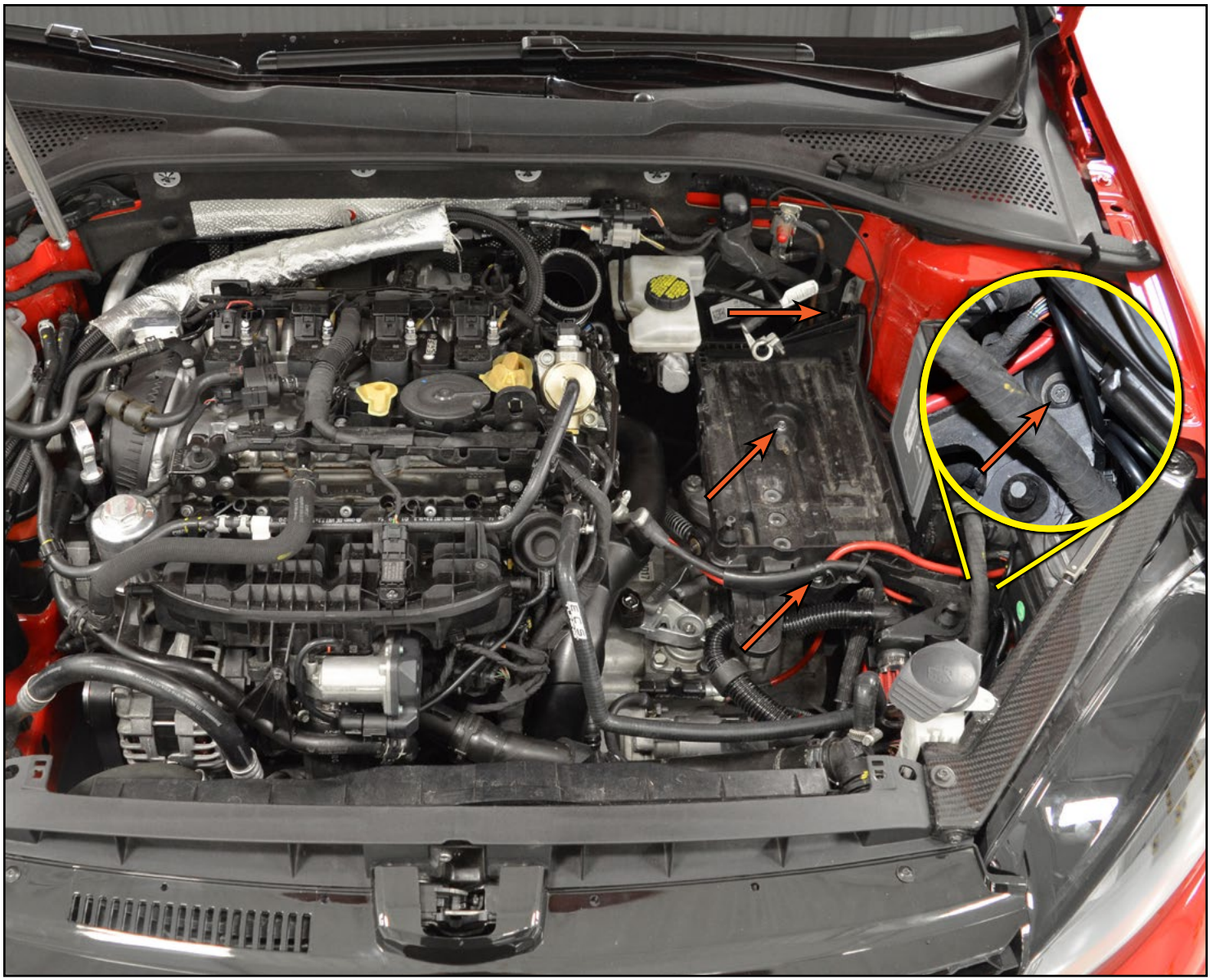
REMOVING THE STOCK TURBO OUTLET PIPE

Step 1:

If you purchased the throttle body charge pipe kit, please skip to Page 18.

To begin this install we need to disconnect the negative battery terminal, then remove the intake system and the engine cover.

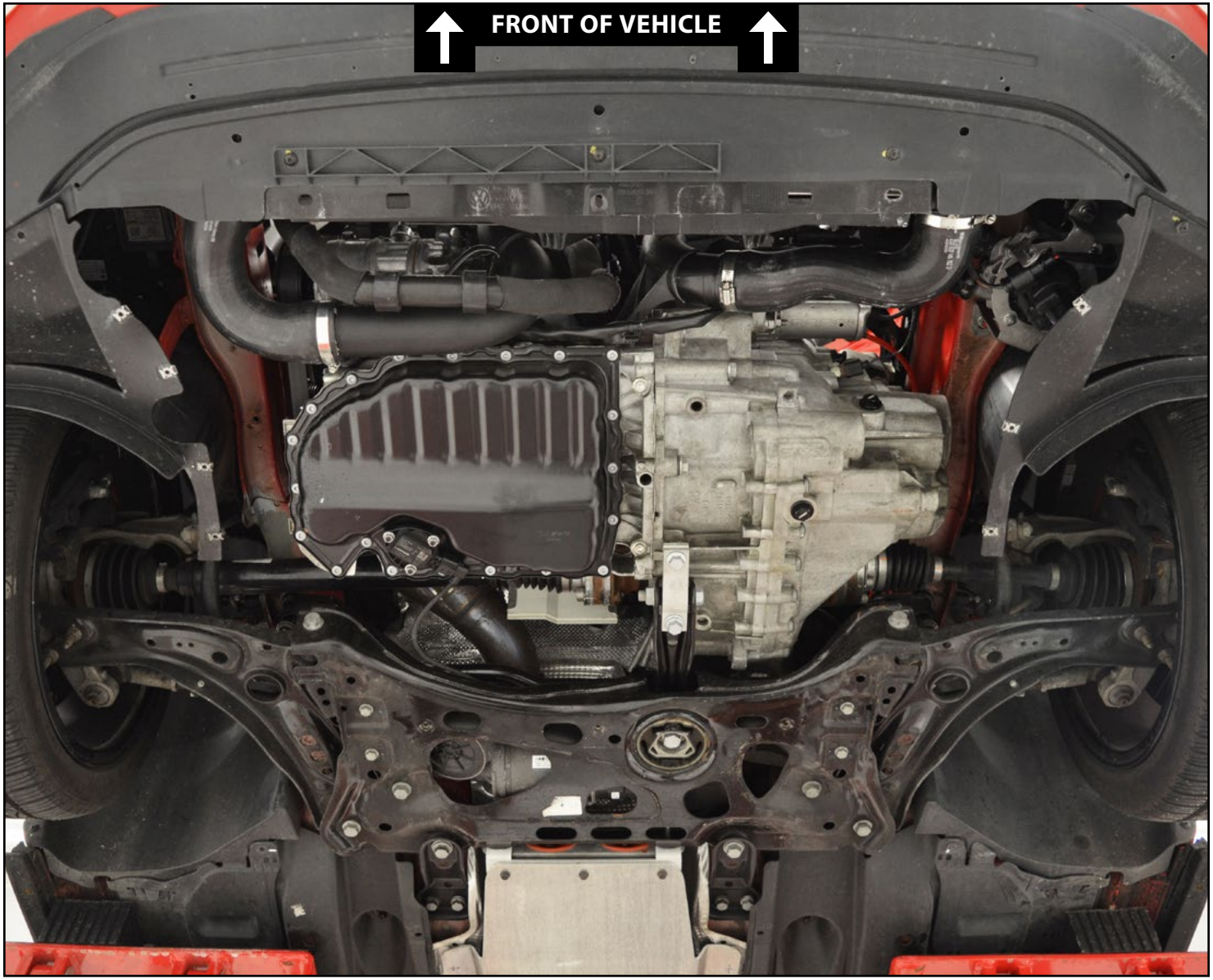
We opted to remove the battery entirely, and we also removed the battery tray. These two steps are completely optional, but it only takes a few minutes and it is ***WELL*** worth it to gain all of the extra working space. To remove the battery tray there are three 10mm bolts, and one 10mm nut, look for the arrows in the photo on the right.



REMOVING THE STOCK TURBO OUTLET PIPE

Step 2:

Safely lift and support the vehicle, then remove the lower insulation panel or belly pan.

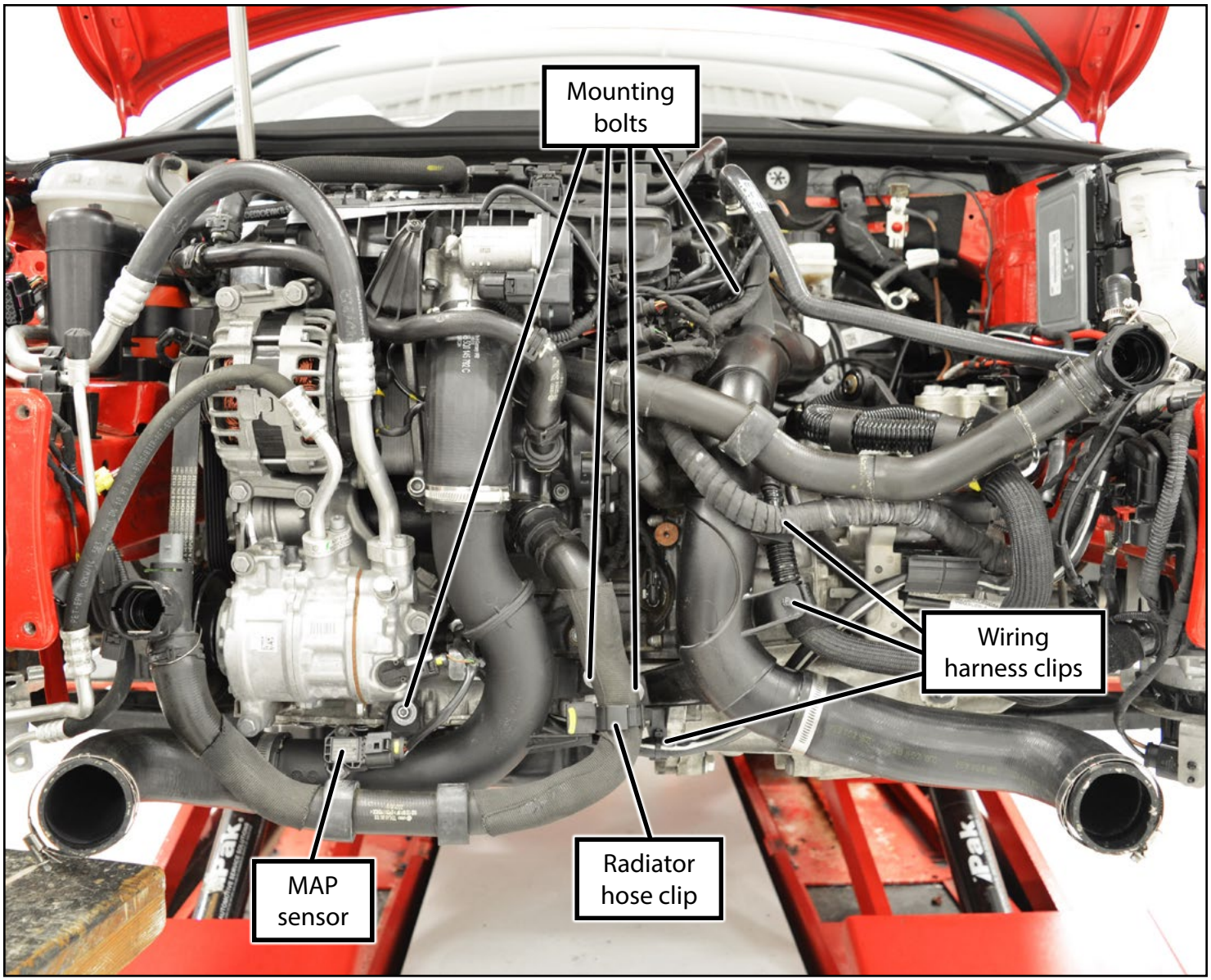


REMOVING THE STOCK TURBO OUTLET PIPE

Step 3:

At this point we've removed the front end from our MK7 for better visibility. As we stated earlier, you **DO NOT** need to do this in order to install the charge pipe kit. We were already removing the front end to test fit an intercooler, so we wanted to give you, our customer, the added benefit of 100% visibility in these instructions!

Take note of the important component locations shown in the photo on the right.

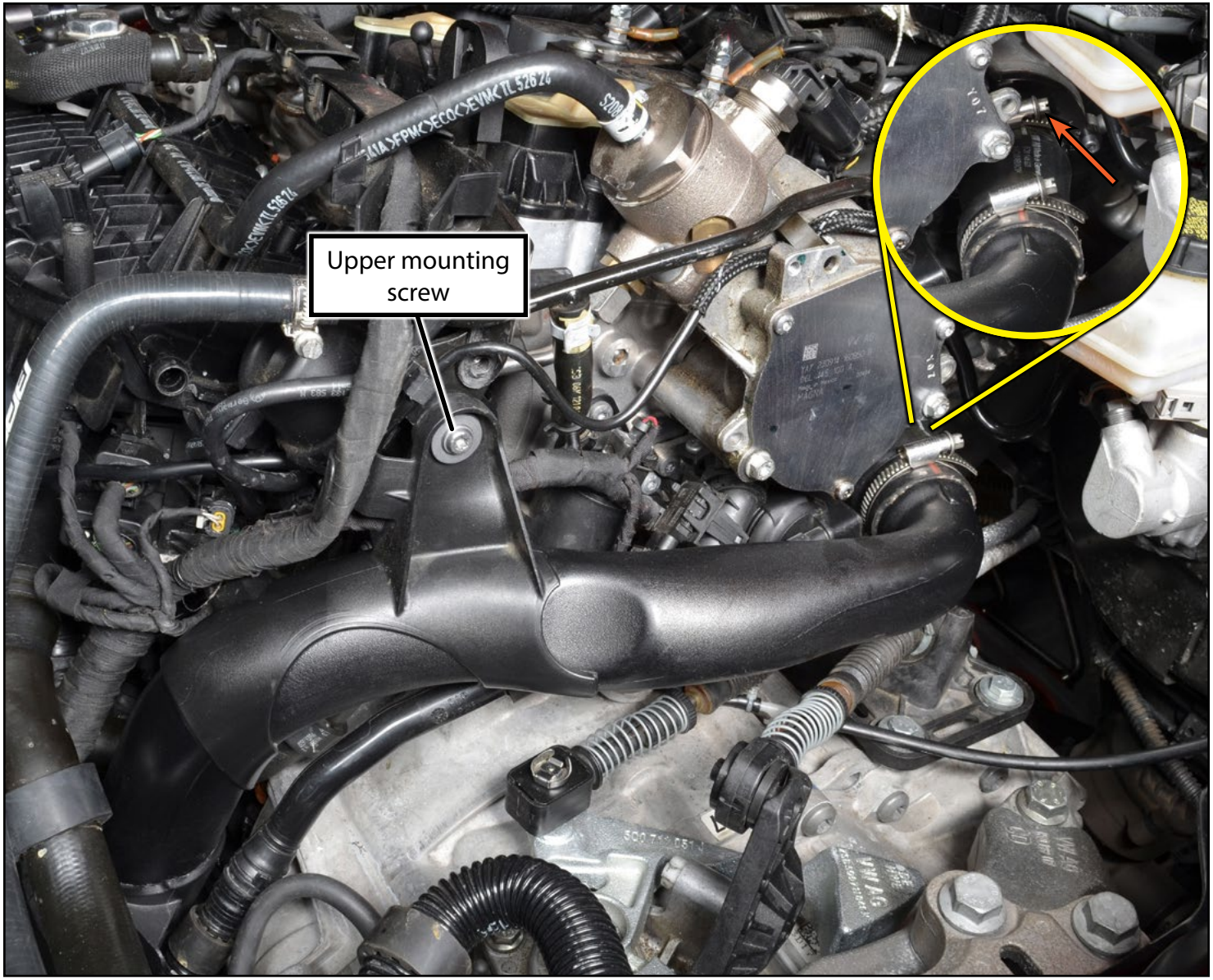


REMOVING THE STOCK TURBO OUTLET PIPE

Step 4:

Loosen the hose clamp which secures the turbo outlet coupler to the turbo muffler (arrow in the inset photo).

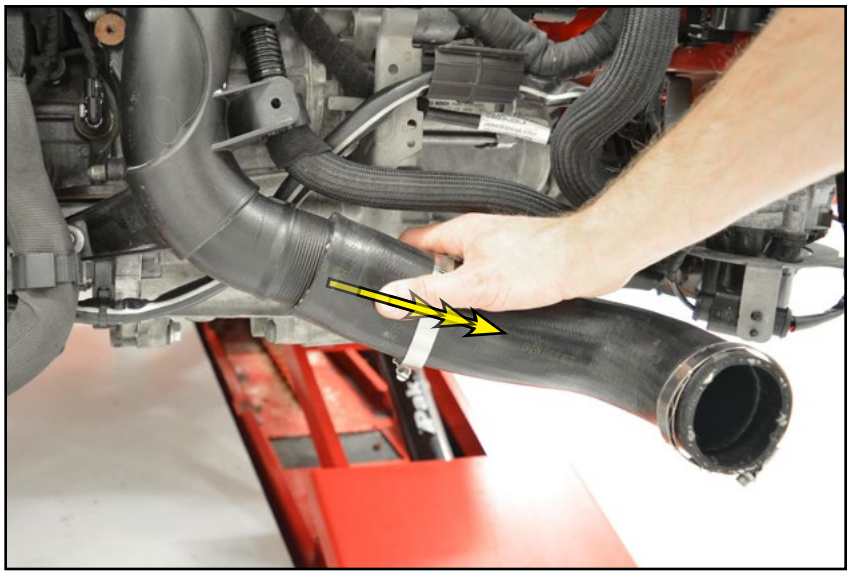
Loosen the turbo outlet pipe upper mounting screw (T30 Torx), but since this is a captured screw it will be retained inside the rubber bushing.



REMOVING THE STOCK TURBO OUTLET PIPE

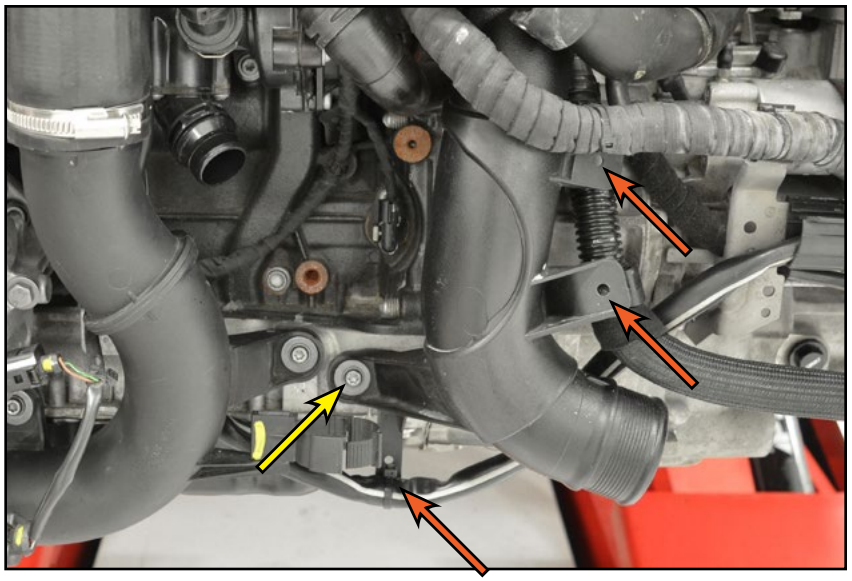
Step 5: Flat Blade Screwdriver

Loosen the hose clamps from the turbo outlet coupler, then remove it from the turbo outlet pipe and the intercooler.



Step 6: T30 Torx

Loosen the turbo outlet pipe lower mounting screw (**YELLOW** arrow in the photo on the right), but since this is a captured screw it will be retained inside the rubber bushing. Release the wiring harnesses from the turbo outlet pipe (**ORANGE** arrows in the photo).



REMOVING THE STOCK TURBO OUTLET PIPE

Step 7:

Pull the turbo outlet pipe off of the turbo muffler as shown in the photo.

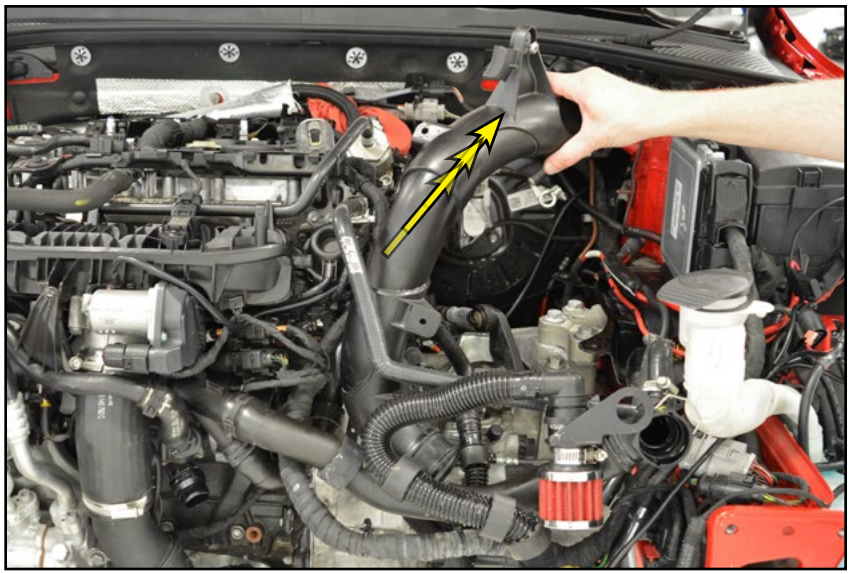
Step 8: Flat Blade Screwdriver

Loosen the other clamp on the turbo outlet coupler and remove the coupler from the pipe.

REMOVING THE STOCK TURBO OUTLET PIPE

Step 9:

Ensure that all of the wiring harnesses are out of the way as you guide the turbo outlet pipe upward and out of the engine bay.



Step 10:

If you purchased the turbo outlet pipe by itself, please skip ahead the installation steps on Page 22.

If you purchased the throttle body charge pipe kit, please continue to the next page for removal instructions.

REMOVING THE STOCK THROTTLE BODY PIPE

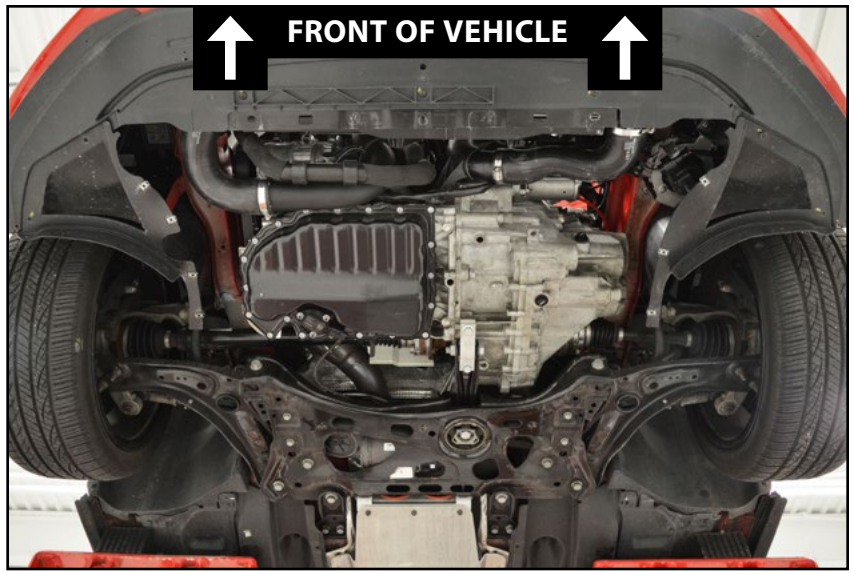
Step 1: 10mm Socket & Ratchet

You can skip this page if you are installing the ECS Turbo Outlet Pipe and the ECS Throttle Body Pipe kits.

Disconnect the negative battery terminal.

Step 2:

Safely lift and support the vehicle, then remove the lower insulation panel or belly pan.

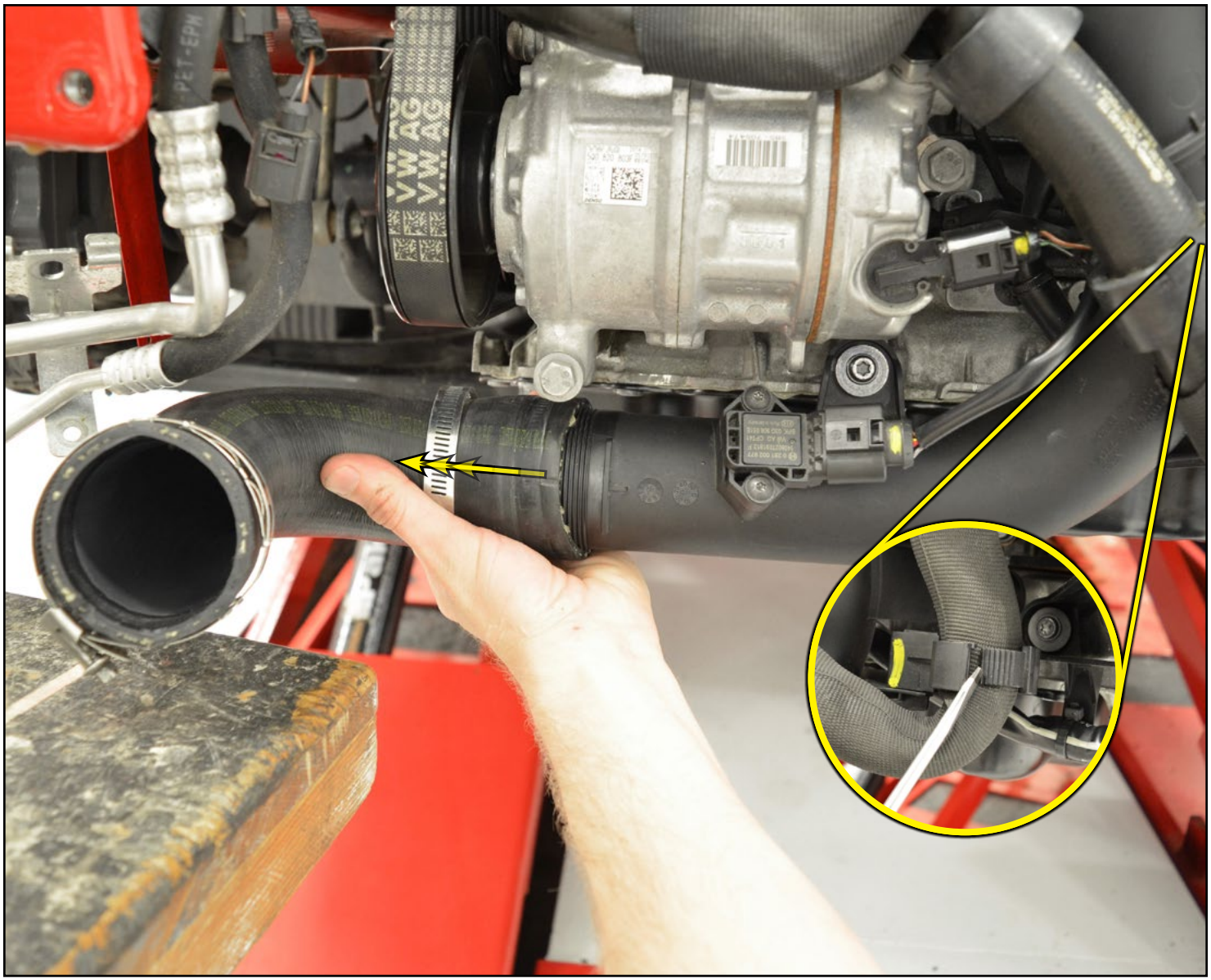


REMOVING THE STOCK THROTTLE BODY PIPE

Step 3:

Loosen the hose clamps from the intercooler outlet coupler, then remove it from the throttle body pipe and the intercooler.

Release the clip which secures the lower radiator hose to the throttle body pipe (shown in the inset photo on the right).

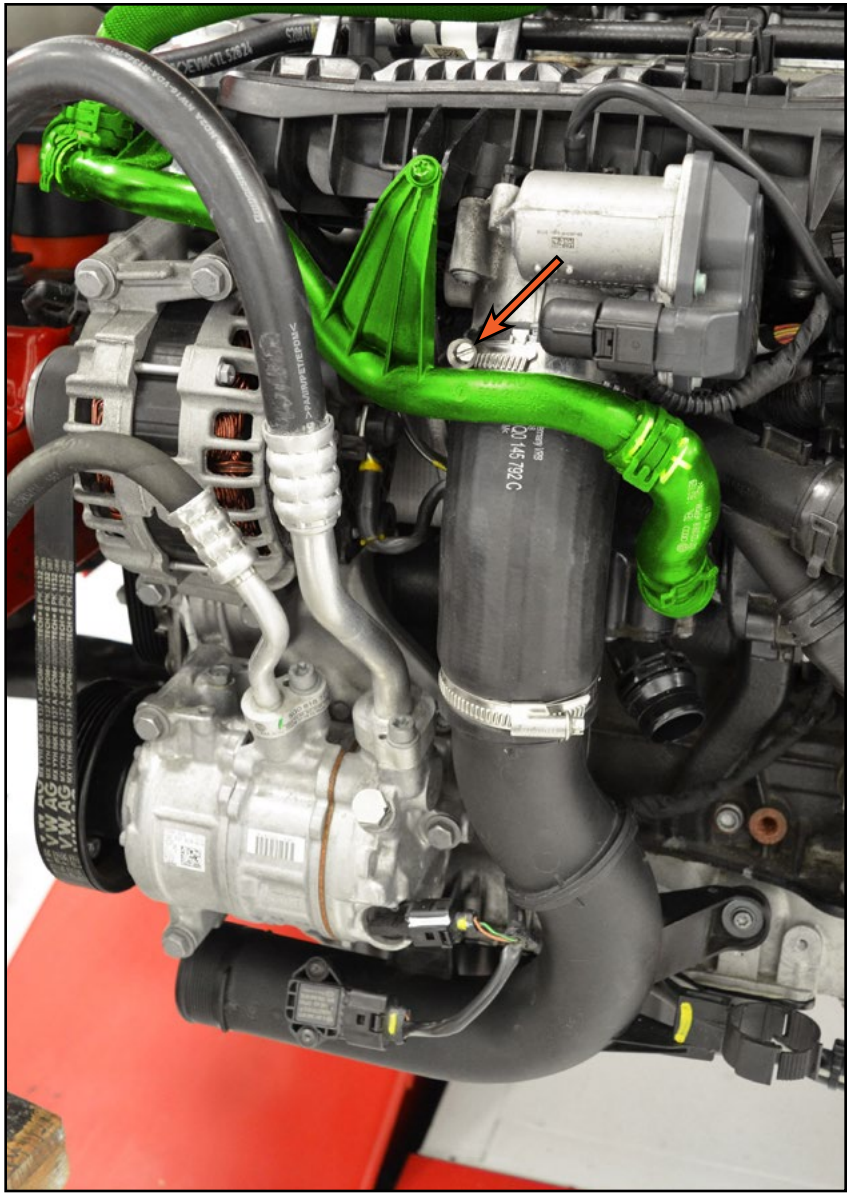


REMOVING THE STOCK THROTTLE BODY PIPE

Step 4: Flat Blade Screwdriver, T30 Torx

Next we need to loosen the hose clamp which secures the throttle body coupler to the throttle body (arrow in the photo on the right).

We've found that it's very helpful to remove the two screws which hold the front coolant pipe (highlighted in **GREEN** in the photo), this way it can be moved aside and give you some extra clearance for when you remove the hose later on. We don't recommend disconnecting the hose from the engine because it will make a huge mess and then you'll have to bleed the cooling system. The goal here is just to allow the pipe to move around.

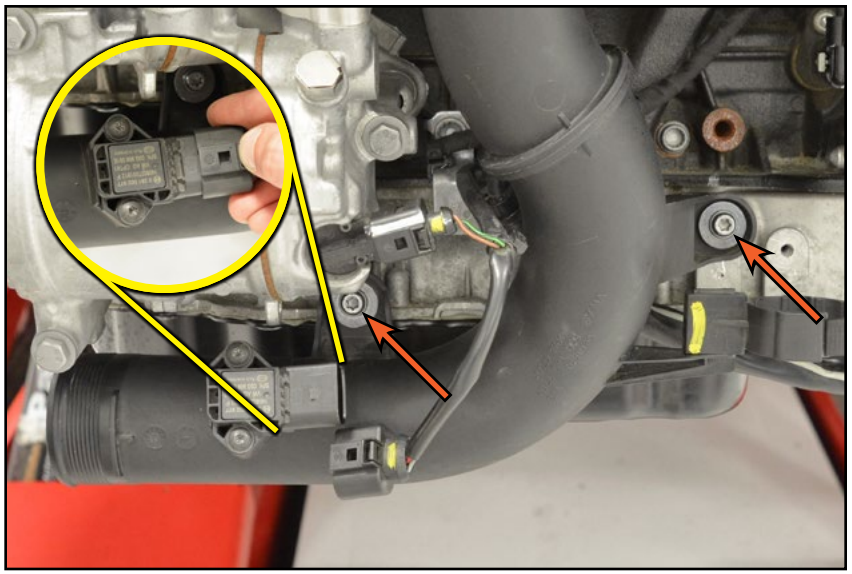


REMOVING THE STOCK THROTTLE BODY PIPE

Step 5: VAG Connector Tool, T30 Torx

Release the MAP sensor electrical connector.

Loosen the throttle body pipe mounting screws, but since these are captured screws they will be retained inside the rubber bushings.

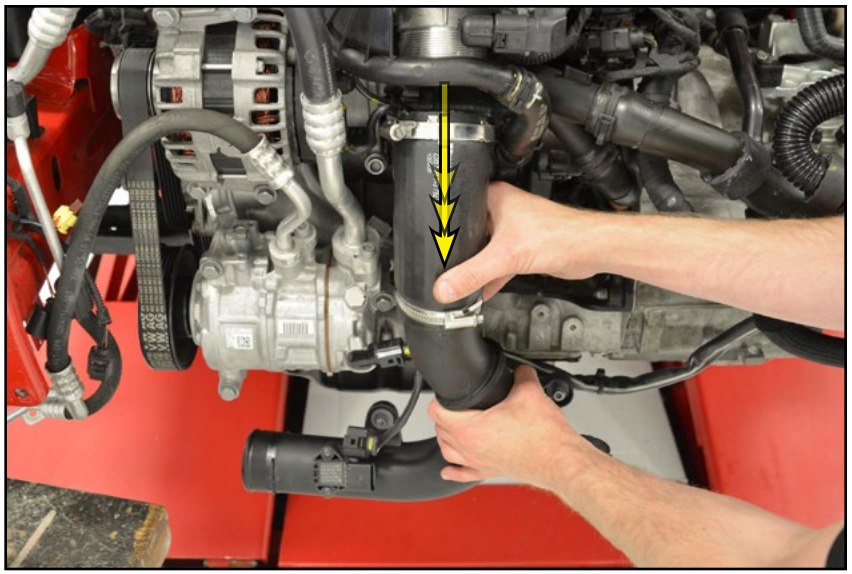


TECH TIP

For detailed photos and tips on using the VAG Connector Removal Tool, please refer to Page 33.

Step 6:

Ensure that all of the wiring harnesses are out of the way as you guide the throttle body pipe downward and out of the engine bay.

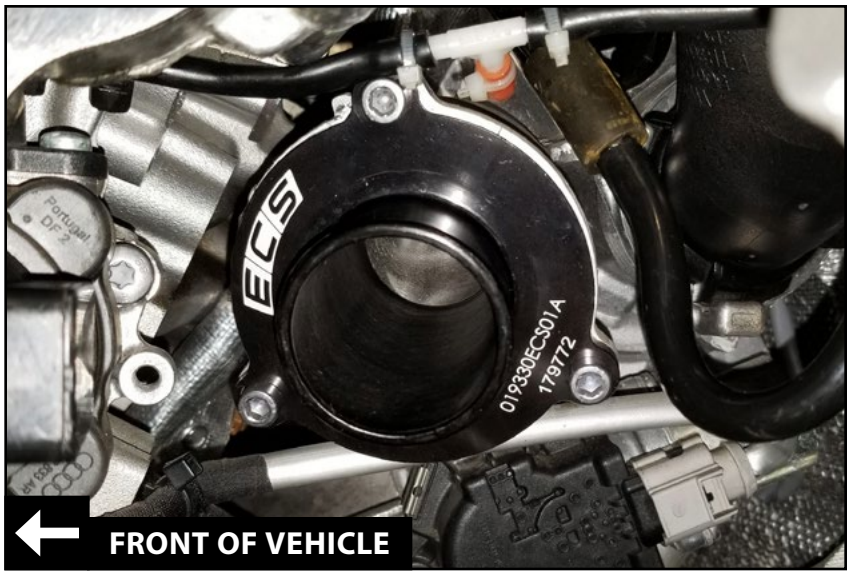


If you purchased the throttle body pipe by itself, please skip ahead the installation steps on Page 28.

INSTALLING THE NEW ECS TURBO OUTLET PIPE

Step 1: 5mm Hex (Allen)

This is a great time to install an ECS Tuning turbo muffler delete kit.
For more on this be sure to check out our DIY video by clicking HERE.



INSTALLING THE NEW ECS TURBO OUTLET PIPE

Step 2:

Slide the 2.5" clamp onto the small end of the silicone turbo outlet coupler. Be mindful of where the head of the clamp will be oriented once the coupler is installed.

Step 3:

Slide the silicone turbo outlet coupler onto the turbo muffler until it bottoms out. Ensure that the hose clamp is oriented so that it doesn't contact any surrounding components, but is still readily accessible.

Leave this hose clamp loose for now, we will come back and tighten down all of the clamps later on.

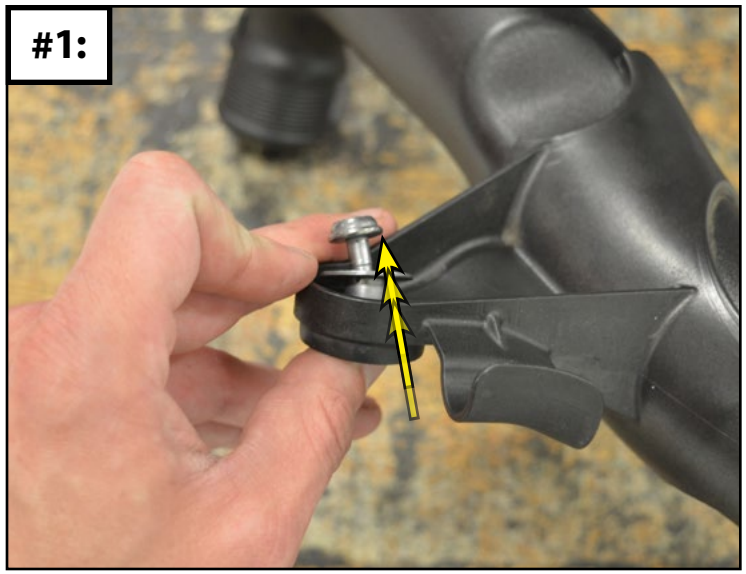
INSTALLING THE NEW ECS TURBO OUTLET PIPE

Step 4:

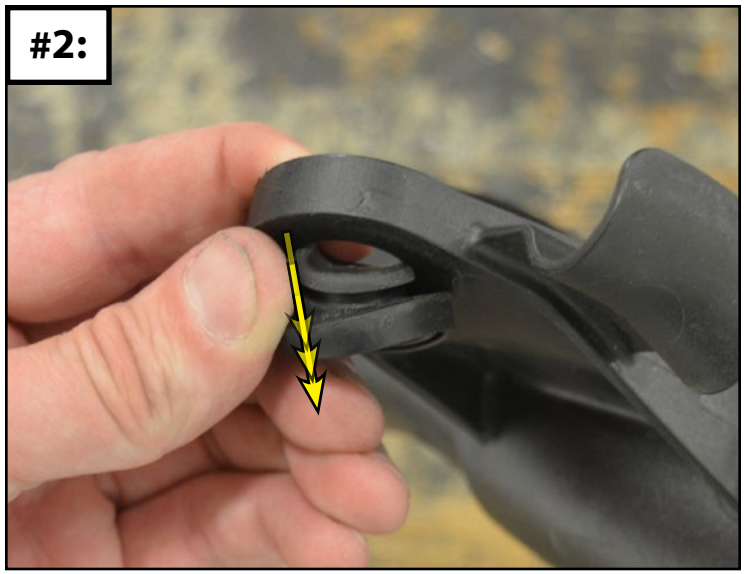
The new turbo outlet pipe utilizes the captured bolt and bushing from the OEM pipe, so we need to transfer this hardware to the new pipe.

Start by pulling the bolt out of the rubber bushing (shown in photo #1), then pull the bushing out of the OEM pipe (photo #2). Install the rubber bushing and bolt into the large hole in the ECS mounting bracket making sure that the bushing is inserted from the back side of the bracket (photo #3). Thread the bolt into the turbo outlet pipe upper mounting screw location (photo #4), we will come back and tighten up this bolt later on.

#1:

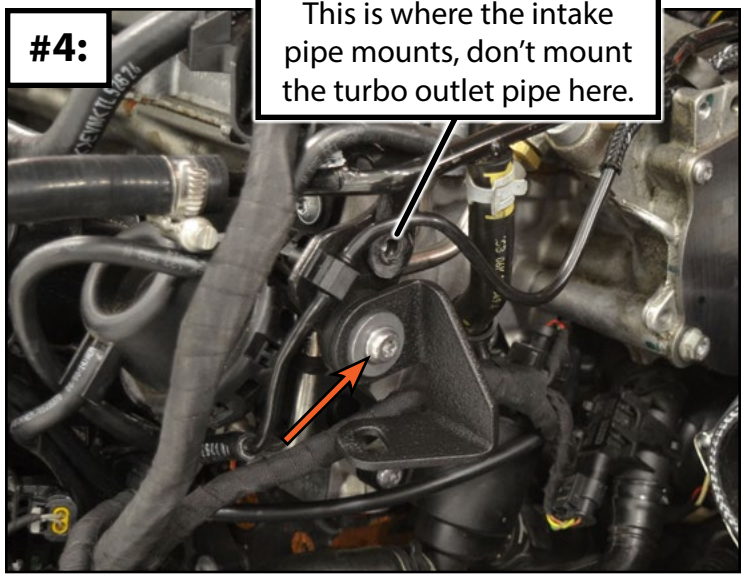


#2:



#3:

#4:

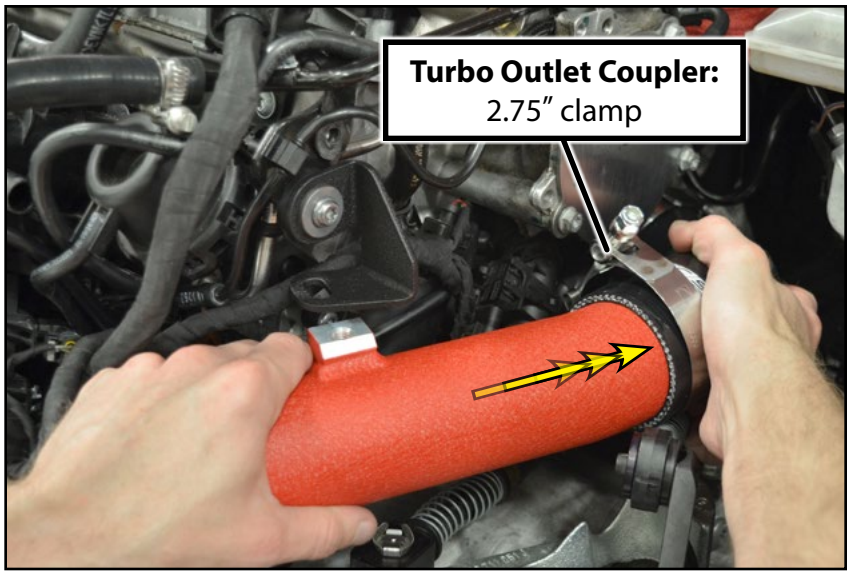


INSTALLING THE NEW ECS TURBO OUTLET PIPE

Step 5:

Slide the 2.75" clamp onto the large end of the silicone turbo outlet coupler. Be mindful of where the head of the clamp will be oriented once installed.

Next, slide the upper turbo outlet pipe into the coupler until the mounting hole lines up with the bracket we installed in step 6.

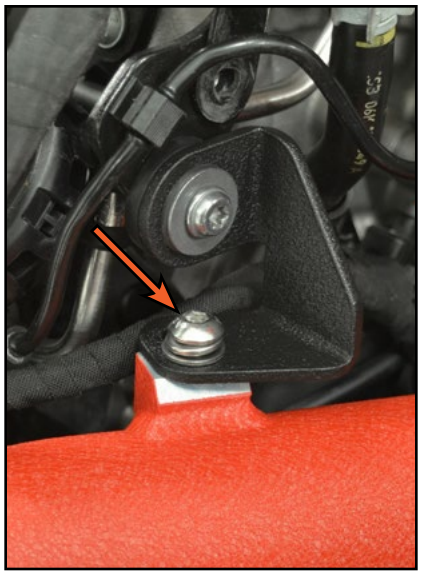


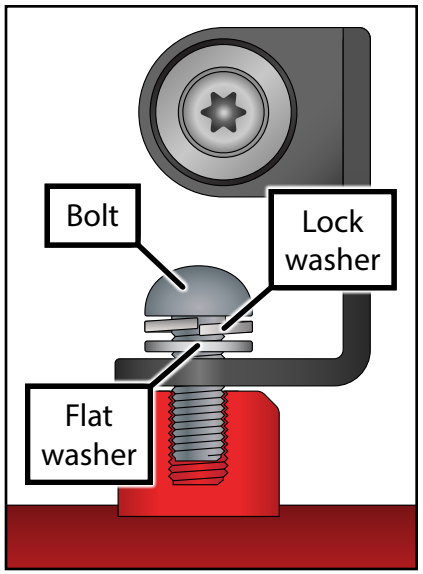
Step 6: 5mm Ball End Hex (Allen)

Thread the included bolt with washers through the mounting bracket and into the upper turbo inlet pipe. Leave the bolt loose at this time, we will go back and tighten everything up later.

TECH TIP

We specifically recommend a "Ball End Hex (Allen)" key or socket due to the tight quarters around this bolt.

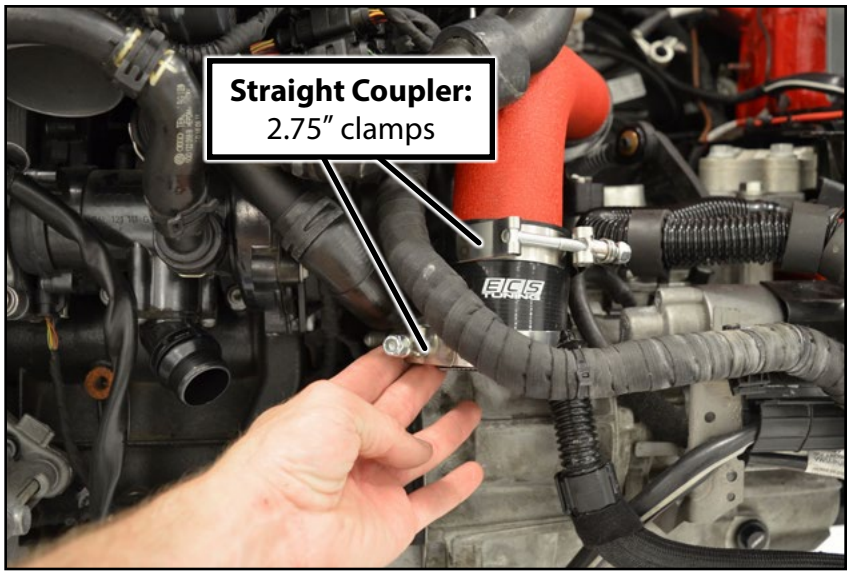




INSTALLING THE NEW ECS TURBO OUTLET PIPE

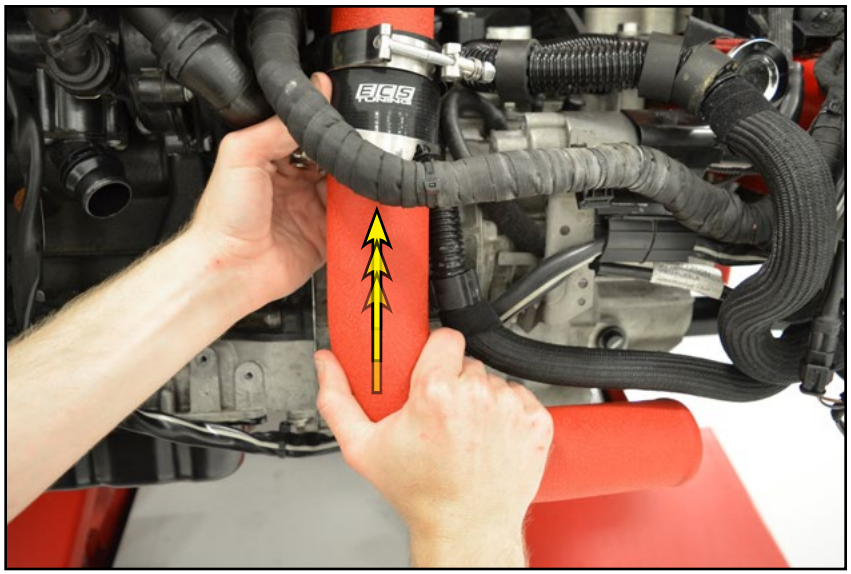
Step 7:

Slide the straight silicone coupler onto the upper turbo outlet pipe, then slide the 2.75" clamps onto the coupler as shown in the photo on the right. Be mindful of where the heads of the clamps will be oriented once installed.



Step 8:

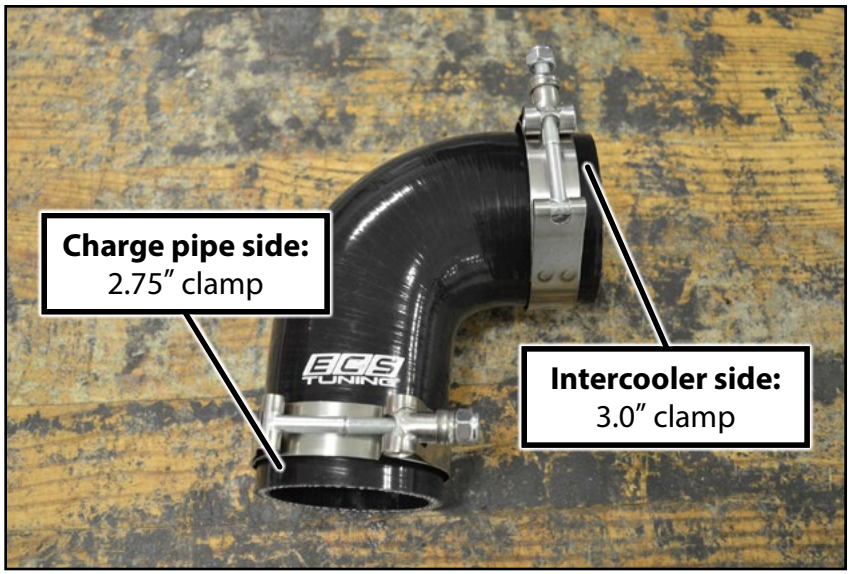
Slide the lower turbo outlet pipe into the straight coupler. Be sure to leave the clamps loose at this time, we will go back and tighten everything up later.



INSTALLING THE NEW ECS TURBO OUTLET PIPE

Step 9:

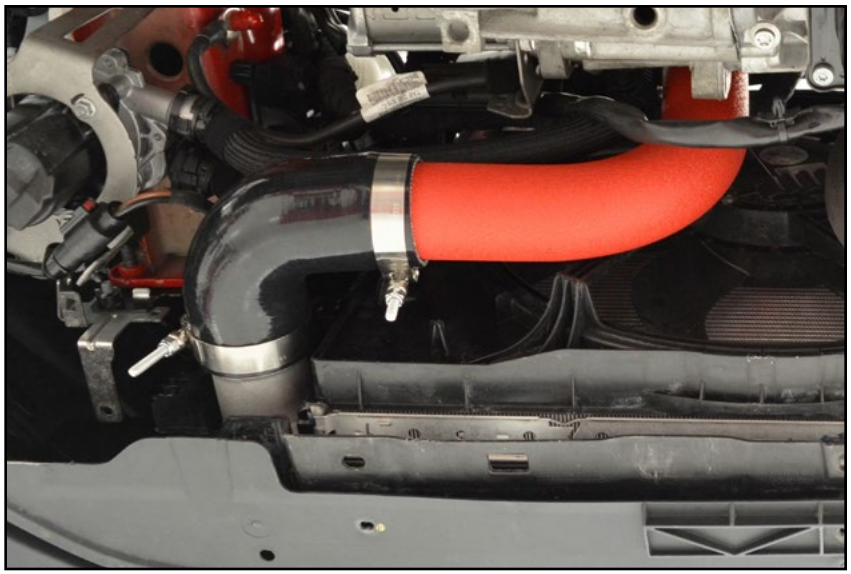
Slide the 3.0″ clamp onto the intercooler side of the new silicone intercooler inlet coupler, then slide the 2.75″ clamp onto the charge pipe side. Be mindful of where the heads of the clamps will be oriented once the coupler is installed.



Step 10:

Slide the silicone intercooler inlet coupler onto the intercooler until it bottoms out, then slide the other end onto the lower turbo outlet pipe. Ensure that the hose clamps are oriented so that they don't contact any surrounding components, but are still readily accessible.

Leave these hose clamps loose for now, we will go back and tighten everything up later.

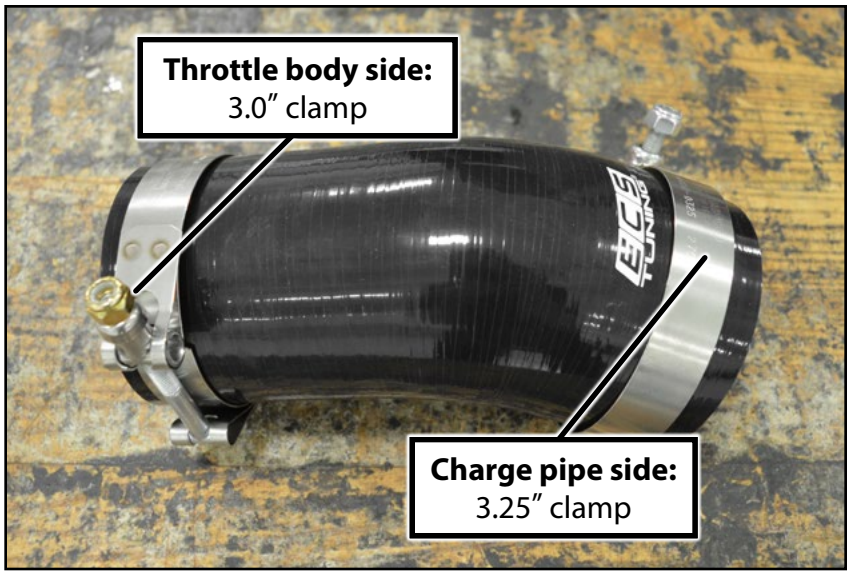


If you purchased the turbo outlet pipe by itself, please skip ahead the final installation steps on Page 32.

INSTALLING THE NEW ECS THROTTLE BODY PIPE

Step 1:

Slide the 3.0″ clamp onto the throttle body side of the new silicone throttle body coupler, then slide the 3.25″ clamp onto the charge pipe side. Be mindful of where the heads of the clamps will be oriented once the coupler is installed.



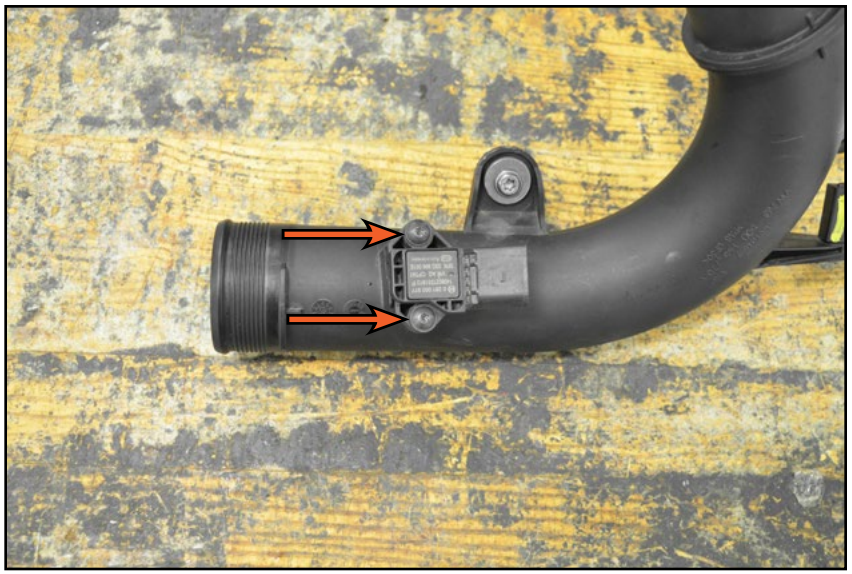
Step 2:

Slide the silicone throttle body coupler onto the throttle body until it bottoms out. Ensure that the hose clamps are oriented so that they don't contact any surrounding components, but are still readily accessible.

INSTALLING THE NEW ECS THROTTLE BODY PIPE

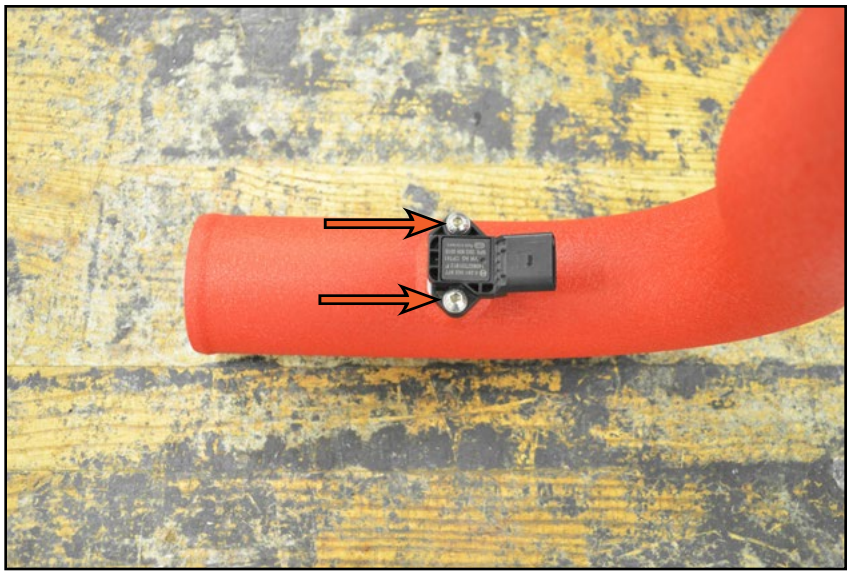
Step 3: T20 Torx

Remove the MAP sensor from the stock throttle body pipe.



Step 4: T30 Torx

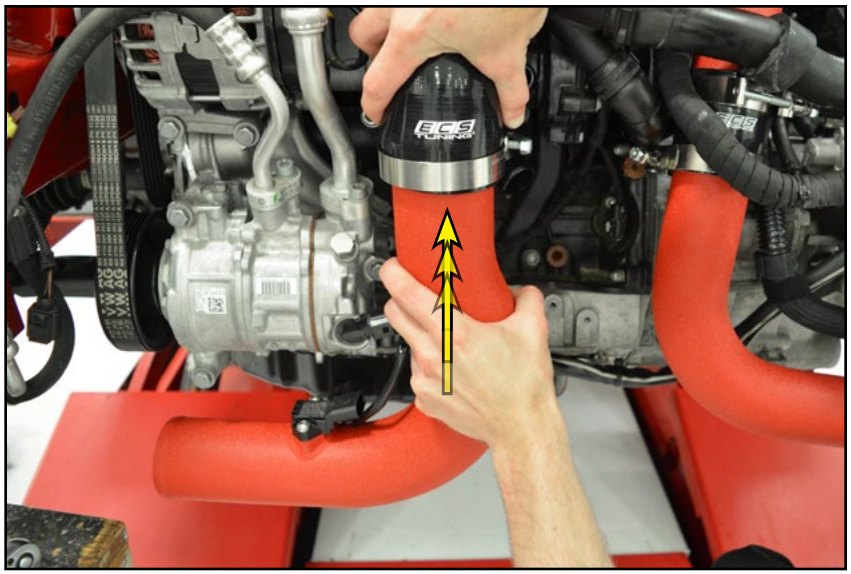
Install the MAP sensor into the new throttle body pipe, thread in the supplied bolts and lock washers, then tighten them until they make contact + ⅛ turn.



INSTALLING THE NEW ECS THROTTLE BODY PIPE

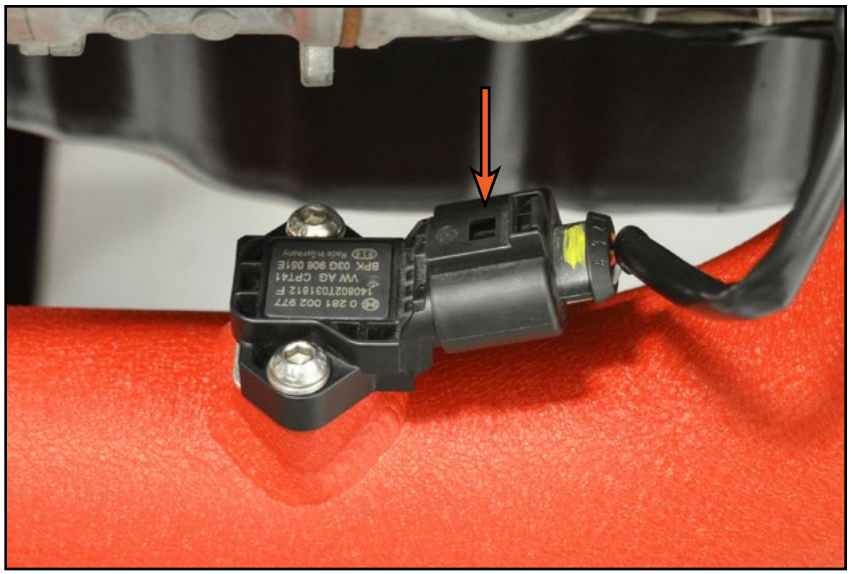
Step 5:

Slide the new throttle body pipe into the silicone throttle body coupler. Be sure to leave the clamps loose at this time, we will go back and tighten everything up later.



Step 6:

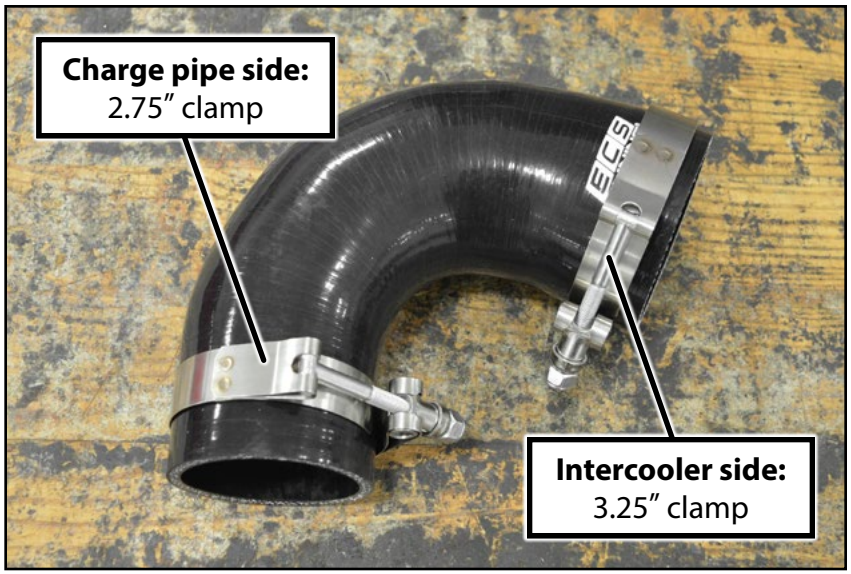
Reconnect the MAP sensor.



INSTALLING THE NEW ECS THROTTLE BODY PIPE

Step 7:

Slide the 3.25″ clamp onto the intercooler side of the new silicone intercooler outlet coupler, then slide the 2.75″ clamp onto the charge pipe side. Be mindful of where the heads of the clamps will be oriented once the coupler is installed.



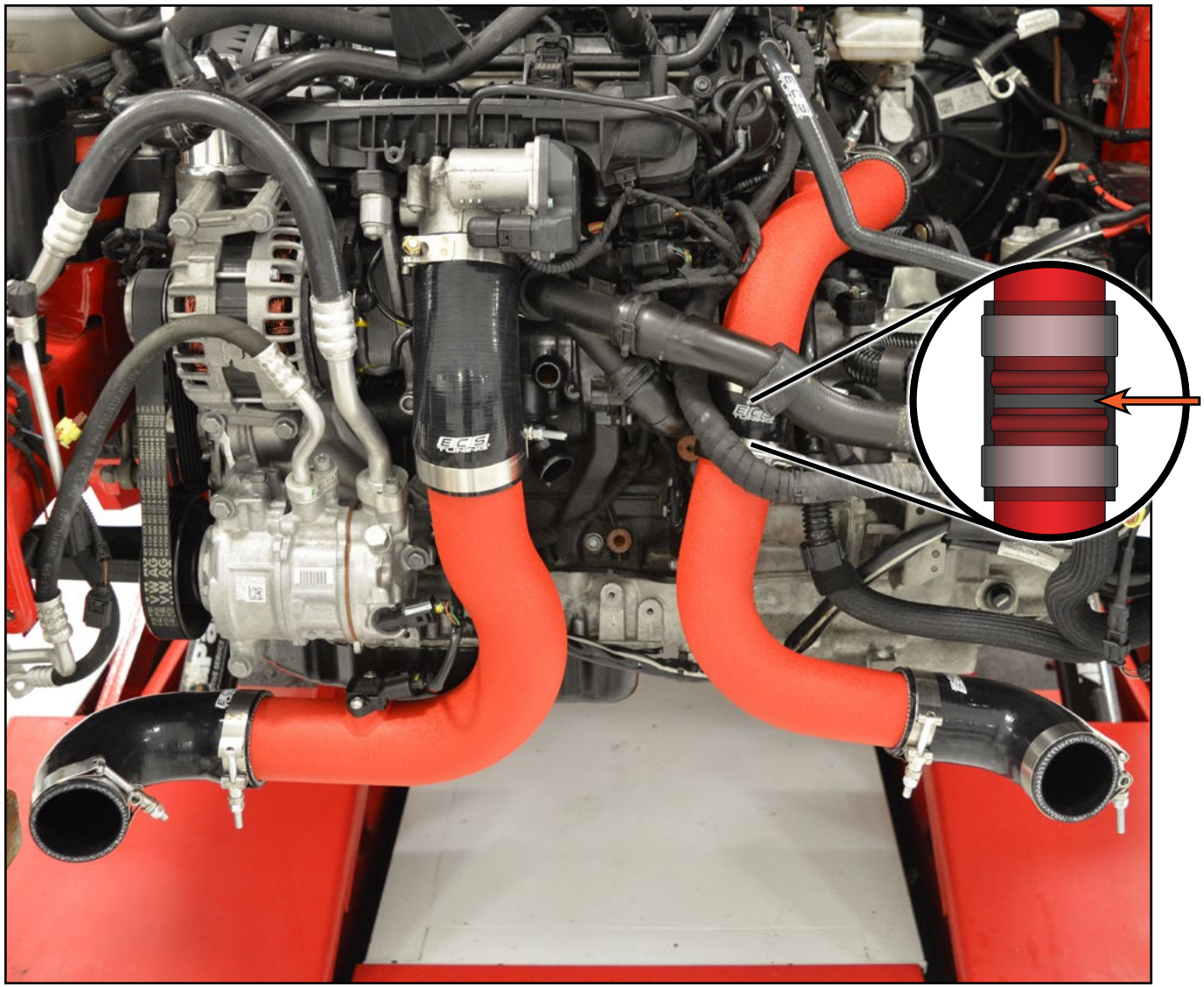
Step 8:

Slide the silicone intercooler outlet coupler onto the intercooler until it bottoms out, then slide the other end onto the throttle body pipe. Ensure that the hose clamps are oriented so that they don't contact any surrounding components, but are still readily accessible.

Leave these hose clamps loose for now, we will go back and tighten everything up later.

Please continue to the next page for final installation steps.

- ☐ Confirm that all of the clamps are oriented for maximum clearance and accessibility.
- ☐ Confirm that there is a small gap between the upper and lower turbo outlet pipes (inset photo).
- ☐ Snug up all of the clamps.
- ☐ Snug up the mounting bolts on the upper turbo outlet pipe.
- ☐ Reinstall all other parts in the reverse order of removal.
- ☐ If you develop any boost leaks double check all clamps and connections.

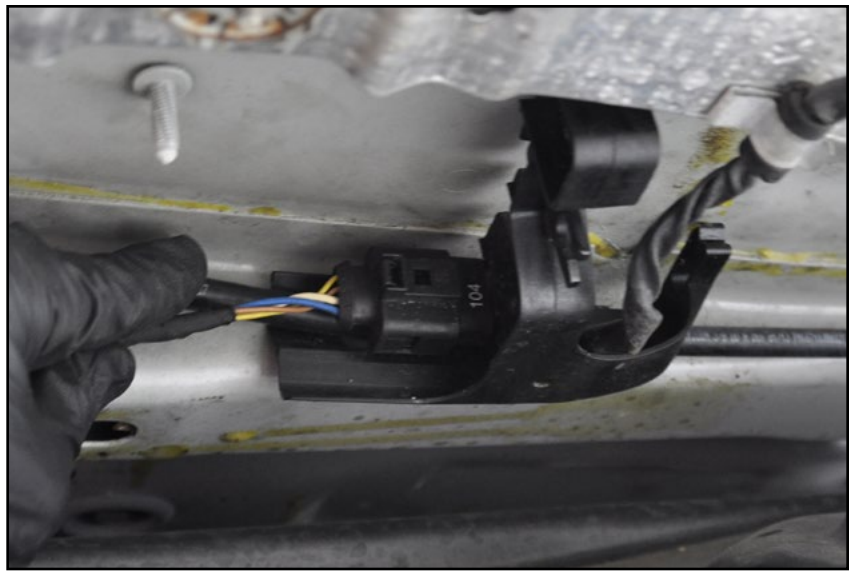


Congratulations, your high flow intercooler pipe kit installation is now complete!

USING THE VAG CONNECTOR REMOVAL TOOL

Step 1:

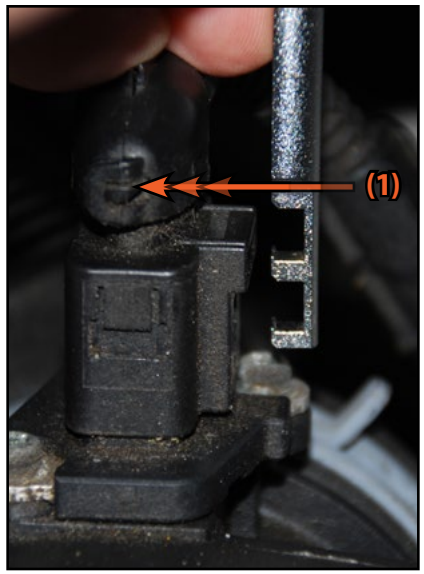
These connectors are commonly referred to as “Push and Pull” connectors, in reference to the method used to disconnect them.

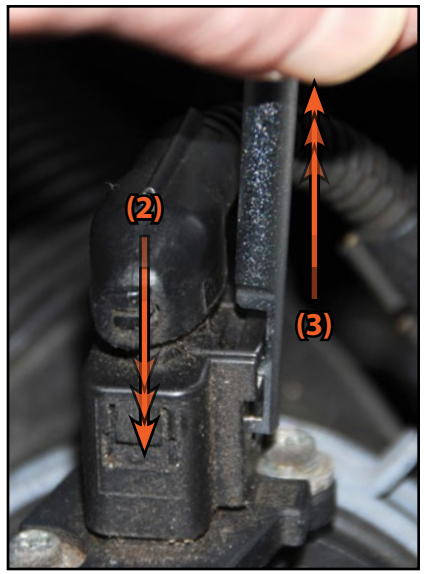


Step 2:

To disconnect one of these connectors, follow this procedure:

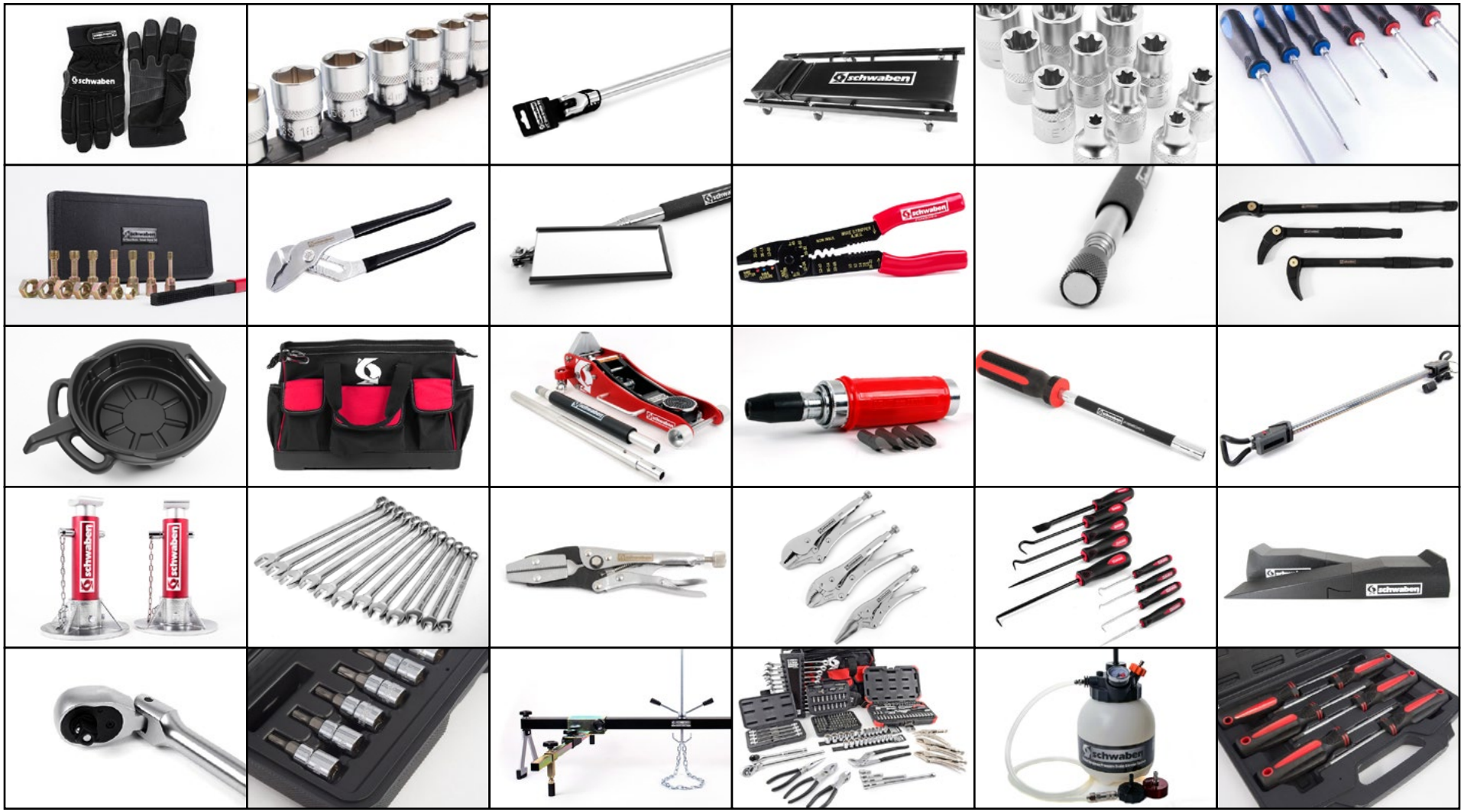
1. Engage the connector release tool into the connector housing.
2. Push inward gently on the connector.
3. While holding pressure inward on the connector, pull up on the handle of the release tool.
4. Pull the connector off of the component and move the harness out of the way.





To return to the charge pipe removal instructions, simply click HERE.

At ECS Tuning, we carry a line of high quality Schwaben Tools and Equipment to help you build your ultimate tool collection. Never before has affordability and quality been so closely related. Our entire Schwaben line is subjected to strict in house testing for strength and durability. See what we have to offer and equip your garage without breaking the bank.



Your Gen3 TSI Charge Pipe Kit installation is complete!

These instructions are provided as a courtesy by ECS Tuning

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.

Although this material has been prepared with the intent to provide reliable information, no warranty (express or implied) is made as to its accuracy or completeness. Neither is any liability assumed for loss or damage resulting from reliance on this material. SPECIFICALLY, NO WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER WARRANTY IS MADE OR TO BE IMPLIED WITH RESPECT TO THIS MATERIAL. In no event will ECS Tuning, Incorporated or its affiliates be liable for any damages, direct or indirect, consequential or compensatory, arising out of the use of this material.