Volkswagen 2.0T TSI
ECS Tuning Charge Pipe Kit
Installation Instructions

INTRODUCTION

The Project:

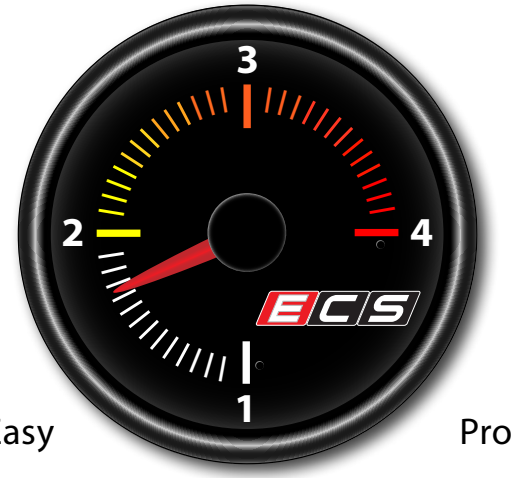
Today we'll be installing our High Flow Intercooler Charge Pipe Kit into our 2.0T equipped Volkswagen MK6 GTI, but keep in mind this kit fits MK5/MK6 Golf, Jetta, as well as the B6 Passat & EOS with the 2.0T engine.

This kit is capable of withstanding greater heat and higher boost pressure than the stock system, and you can expect better reliability, less turbulence and less restriction thanks to the larger diameter tubing and smooth silicone hose couplers. All of these components are installed with high quality clamps and hardware for peace of mind and ease of installation.

The ECS Difficulty gauge to the right shows this install is rated just under "2 - Moderate", this means that some experience is recommended for this job, but we're going to lay it out for you step by step, so even if you don't have much "wrench" time under your belt these instructions will make it easy for you. A basic set of tools is required, but don't forget to check out the tool list on Page 5, and make sure you have everything you need on hand before you begin. If you have any previous experience with a similar repair or install, you could probably knock this out in an afternoon, but if you have less experience, you should plan an entire day for the project just in case.

A couple of final points - you will need to lift the car off of the wheels for this install in order to access the charge pipes from underneath. Reading these instructions completely before you begin will help you plan out the job and manage your time better. Thanks for looking to ECS Tuning for all of your performance and repair needs, we appreciate your business!

ECS Difficulty Gauge



1 - Easy

Pro - 4

2 - Moderate

Advanced - 3

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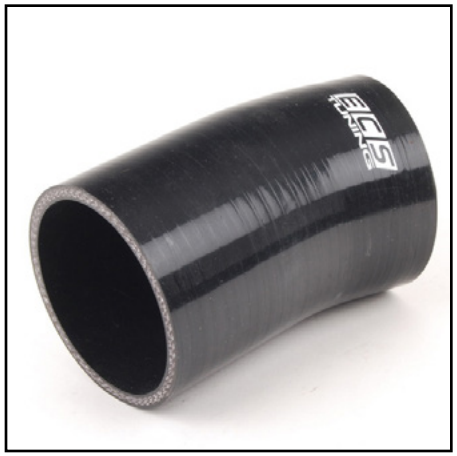
KIT CONTENTS


Throttle Body Coupler


Turbo Discharge Hose


Lower Left Intercooler Hose


Lower Right Intercooler Hose


Throttle Body Charge Pipe


Turbo Discharge Pipe


Charge Pipe Adapters & Seals
(if applicable)


Boost Hose Clamps

REQUIRED TOOLS

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

Standard Automotive Tools

Required For This Install

Available On Our Website

- **Protecta-Sockets (for lug nuts)** ..... ES#2221243
- **3/8" Drive Ratchet** ..... ES#2765902
- **3/8" Drive Torque Wrench** ..... ES#2221245
- **3/8" Drive Deep and Shallow Sockets** ..... ES#2763772
- **3/8" Drive Extensions** ..... ES#2804822
- **Torx Drivers and Sockets** ..... ES#11417/8
- 1/2" Drive Deep and Shallow Sockets ..... ES#2839106
- 1/2" Drive Ratchet
- 1/2" Drive Extensions
- **1/2" Drive Torque Wrench** ..... ES#2221244
- **1/2" Drive Breaker Bar** ..... ES#2776653
- **VAG Connector Tool** ..... ES#2628676
- Hook and Pick Tool Set ..... ES#2778980
- **Wheel Hanger** ..... ES#2636260
- **Padded Creeper w/Headrest** ..... ES#2763705
- **1/4" Drive Ratchet** ..... ES#2823235
- **1/4" Drive Deep and Shallow Sockets** ..... ES#2823235
- **1/4" Drive Extensions** ..... ES#2823235
- Plier and Cutter Set ..... ES#2804496
- **Flat and Phillips Screwdrivers** ..... ES#2225921
- **Hydraulic Floor Jack** ..... ES#240941
- **Jack Stands** ..... ES#2763355
- Ball Pein Hammers
- Pry Bar Set ..... ES#1899378
- Electric/Cordless Drill
- Wire Strippers/Crimpers
- Hex Bit (Allen) Wrenches and Sockets ..... ES#11420
- Thread Repair Tools ..... ES#1306824
- **Open/Boxed End Wrench Set** ..... ES#2765907

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.

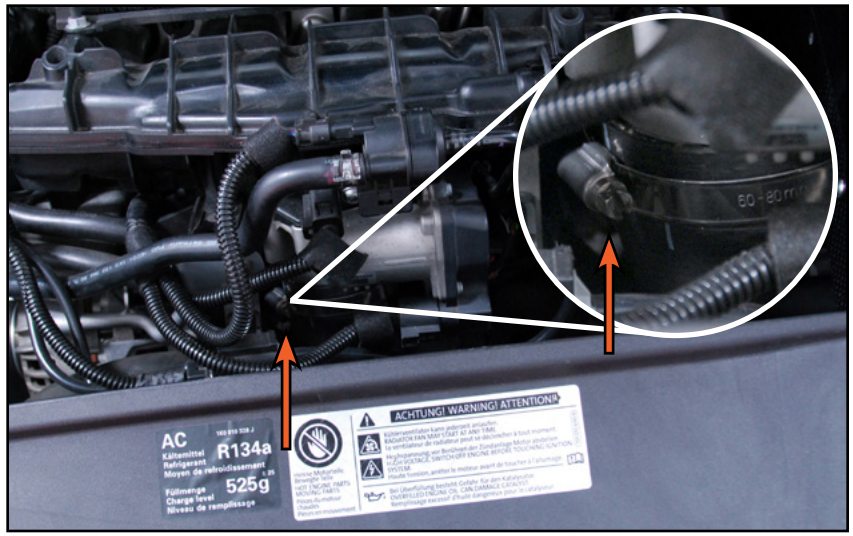
- Park your car in a safe, well lit, level area.
- Shut the engine off and remove the key from the ignition switch.
- Make sure any remote start devices are properly disabled.
- **ALWAYS** wear safety glasses.
- Make sure the parking brake is applied until the vehicle is safely lifted and supported.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

THROTTLE BODY CHARGE PIPE INSTALLATION

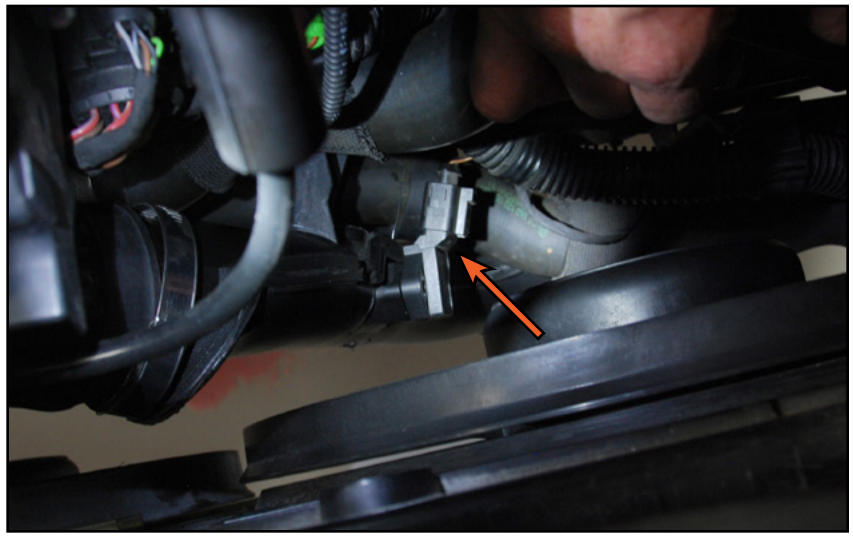
Step 1: Flat Blade Screwdriver

Working from the top, loosen both the upper and lower hose clamps on the throttle body coupler, leaving them loose enough to remove the coupler later on.



Step 2:

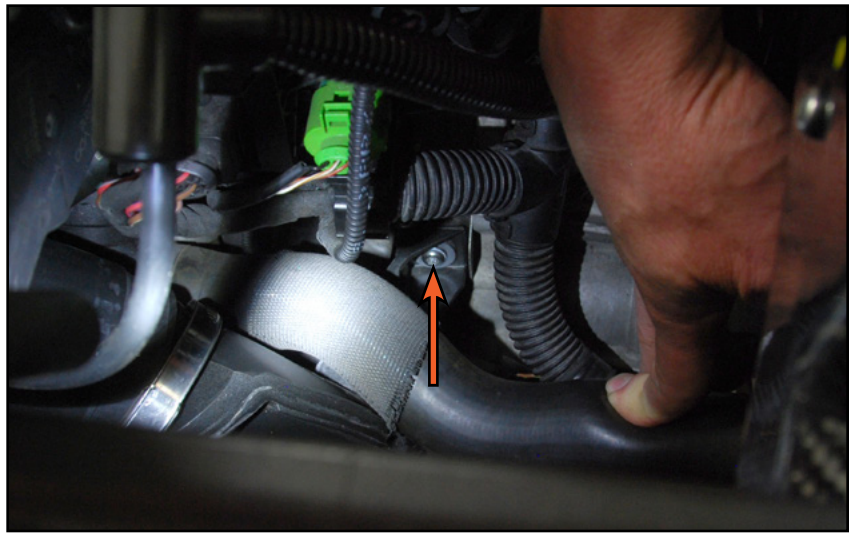
Disconnect the MAP sensor connector on the charge pipe, located in the front of the engine compartment between the radiator and the engine.



THROTTLE BODY CHARGE PIPE INSTALLATION

Step 3: T30 Torx Socket & Ratchet

Remove the top mounting bolt on the charge pipe, located near the MAP sensor on the front of the engine. Remember that this bolt is a trapped bolt, which means it will remain in the charge pipe even after it has been completely unthreaded from the engine.



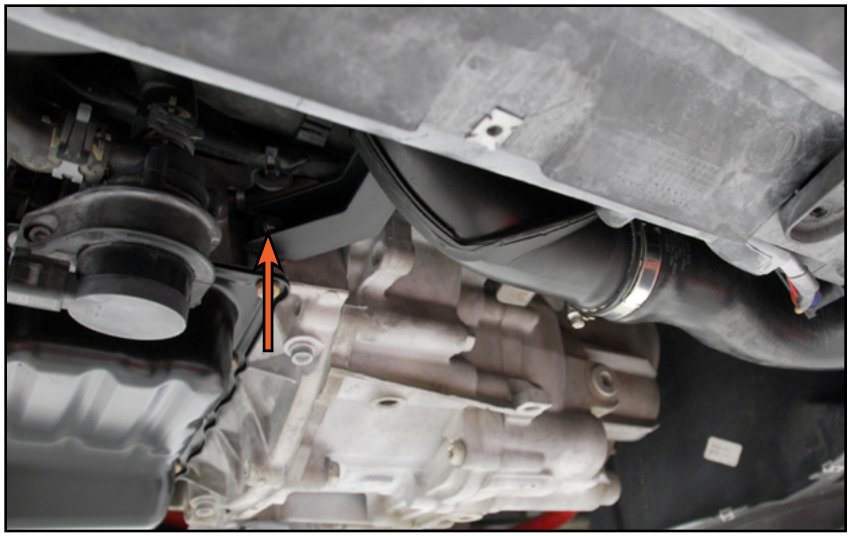
Step 4:

Safely lift and support the vehicle and remove the belly pan.

THROTTLE BODY CHARGE PIPE INSTALLATION

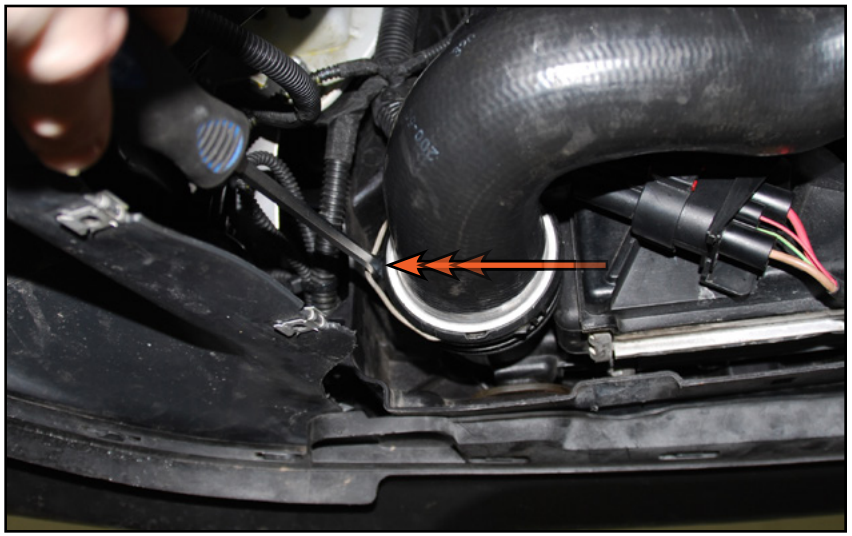
Step 5: T30 Torx Socket & Ratchet

Remove bottom mounting screw, remember that this bolt is also a trapped bolt and it will remain in the charge pipe even after it has been completely unthreaded from the engine.



Step 6: Flat Blade Screwdriver

Remove the clip from the lower left intercooler hose and set it aside, then pull the hose out of the intercooler.



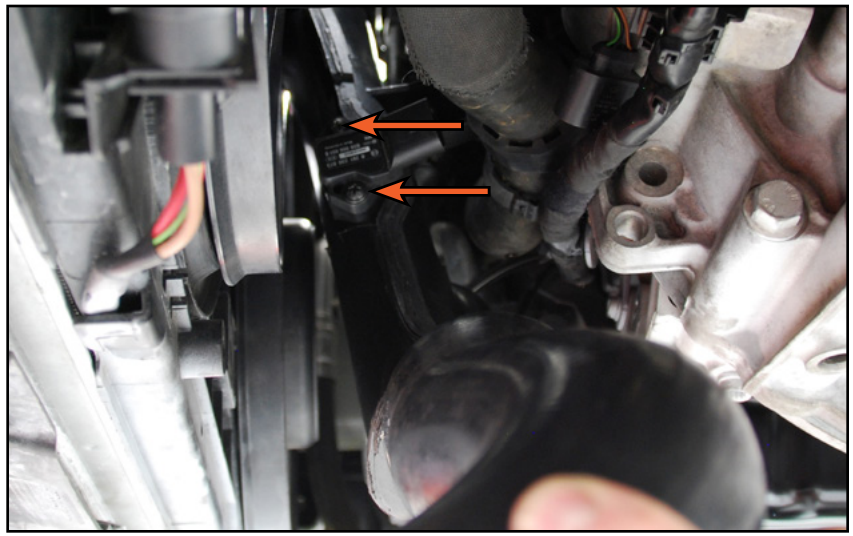
THROTTLE BODY CHARGE PIPE INSTALLATION

Step 7:

Working from the top, push the throttle body coupler downward to remove it from the throttle body. Once it has been removed from the throttle body, pull upwards to remove it from the throttle body charge pipe, then remove the coupler from the vehicle.

Step 8: Phillips Head Screwdriver

Working from the bottom, rotate the throttle body charge pipe slightly in order to gain access to the MAP sensor, then you can loosen the two mounting screws and remove the MAP sensor from the charge pipe. This step eliminates the risk of damaging the MAP sensor when removing the charge pipe from the vehicle due to the lack of clearance between the engine and the cooling fans.



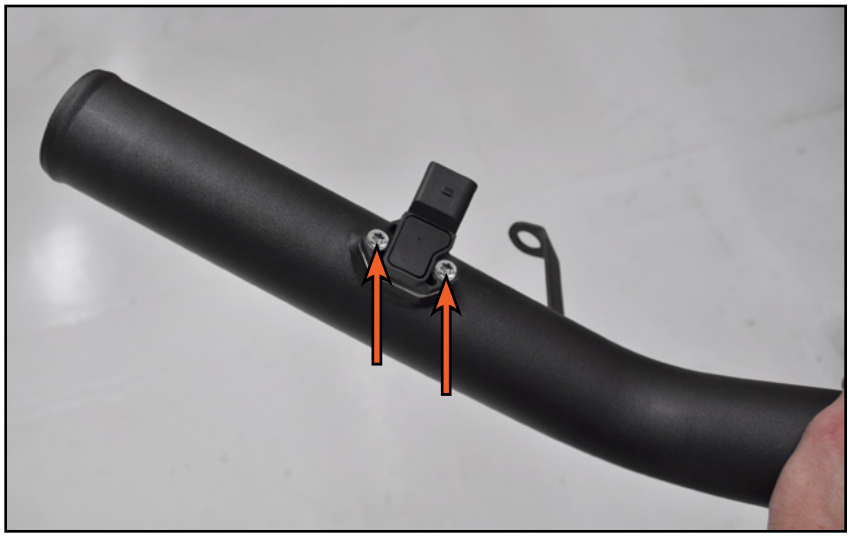
THROTTLE BODY CHARGE PIPE INSTALLATION

Step 9:

Working from the bottom, remove the throttle body charge pipe by twisting and rotating as shown in the photo. Be careful during this step as there is limited clearance between the engine and the cooling fans to remove the pipe.

Step 10: T30 Torx

Install the MAP sensor into the new charge pipe with the supplied hardware. Note the orientation of the sensor in the photo, this ensures the sensor faces towards the engine as it should.



NOTE

Install the lock washer first, then tighten the screw until it is snug.

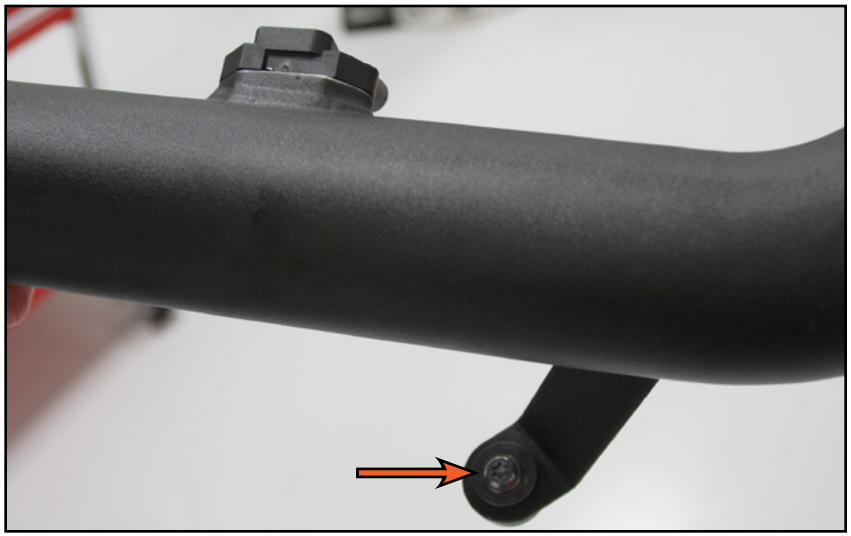
THROTTLE BODY CHARGE PIPE INSTALLATION

Step 11: Flat Blade Screwdriver

Remove the bolts from the factory throttle body charge pipe by pushing on them from behind, then remove the rubber grommets from the charge pipe and set the bolts and grommets aside as you will be reusing one of each in the next step.

Step 12:

Install one screw and grommet into the new throttle body charge pipe as shown in the photo, note that this new charge pipe only has one mounting point.



THROTTLE BODY CHARGE PIPE INSTALLATION

Step 13:

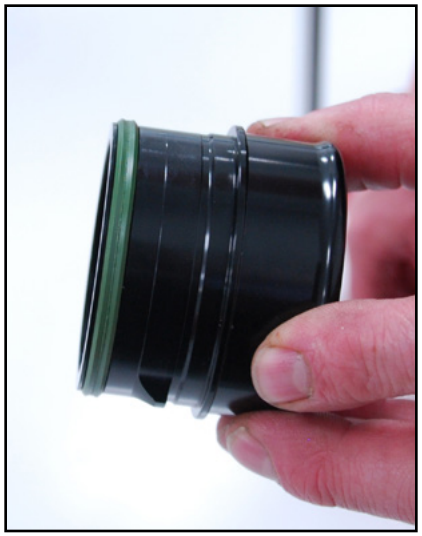
Install the new intercooler hose adapter seal onto the adapter, then install the adapter and the retaining clip into the intercooler. Give the adapter a quick tug to ensure that it is fully seated into place.

TECH TIP

Silicone lubricant can be sprayed on the outside of the adapter seal for ease of installation in the intercooler.

NOTE

Skip this step if your intercooler does not have clip style attachments.



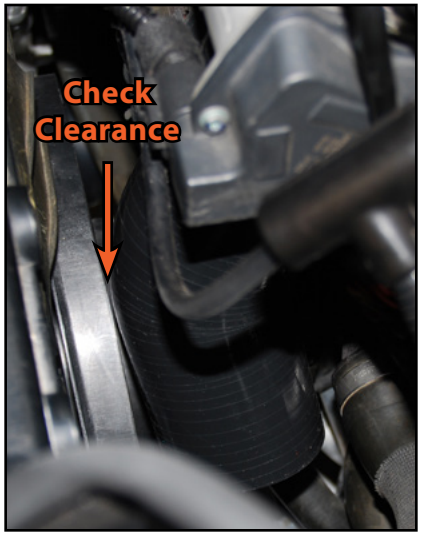
Step 14:

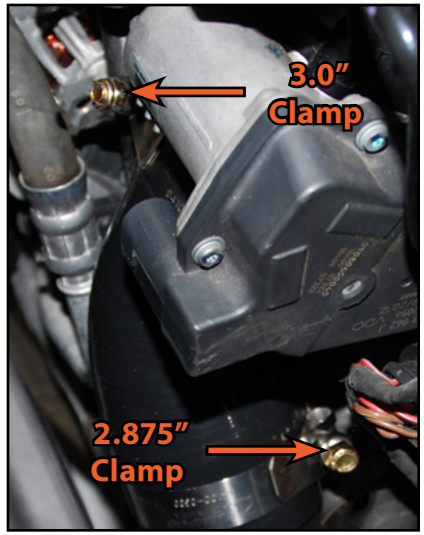
Working from the top, install the new throttle body coupler onto the throttle body. Next, slide the hose clamps onto the coupler as follows:

- The **3.0"** clamp is going to clamp the coupler to the throttle body
- The **2.875"** clamp is going to clamp the coupler to the charge pipe

** DO NOT tighten the clamps during this step **

Check for adequate clearance between the throttle body coupler and the engine cooling fans.





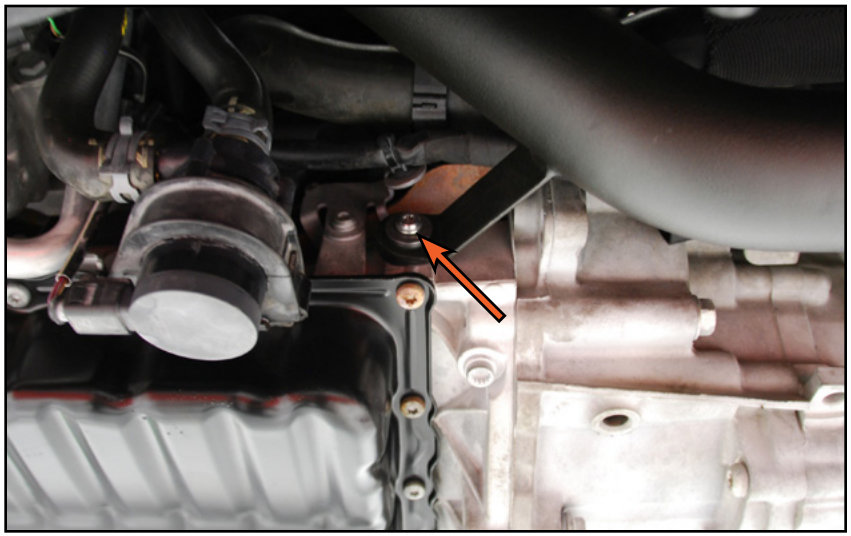
THROTTLE BODY CHARGE PIPE INSTALLATION

Step 15:

Working from the bottom, install the new throttle body charge pipe, inserting the pipe into the throttle body coupler. Twist the pipe as necessary to clear the engine and cooling fans.

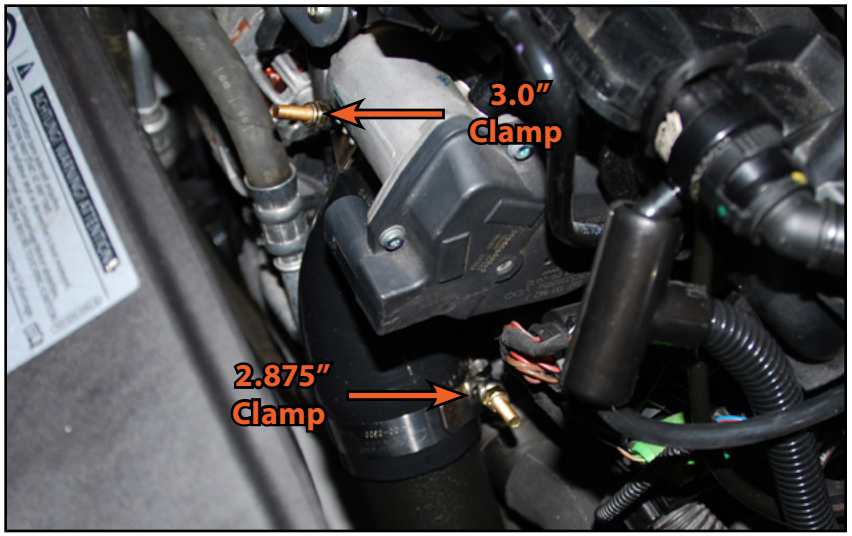
Step 16: T30 Torx Socket & Torque Wrench

Install and tighten the throttle body charge pipe mounting screw to 8 Nm (5.9 Ft-lbs).



11mm Socket & Ratchet

Tighten the hose clamps on the throttle body coupler until they are snug, note their exact orientation in the photo.

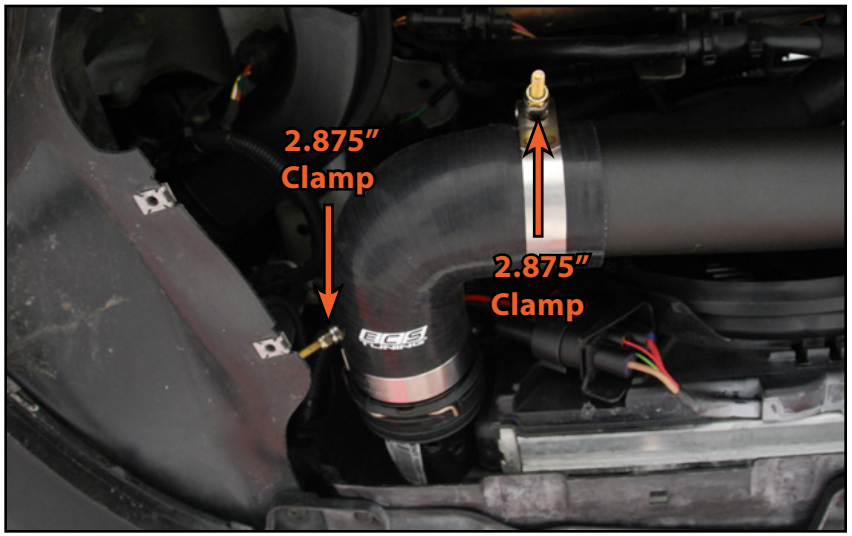


NOTE

We removed the purge valve and wiring harness to the throttle body for better visibility of the throttle body coupler during this step. Please ensure that there is enough clearance between the top hose clamp and the purge valve, hoses, and wiring harness during installation.

11mm Socket & Ratchet

Install the two remaining **2.875"** clamps onto new lower left intercooler hose, being sure that the clamps are loosened enough to allow the hose to be installed. Next, slide the hose onto the intercooler, then slide it onto the charge pipe and tighten the hose clamps, noting the orientation of the hose clamps in the photo. Finally, tighten the hose clamps until they are snug.



☐ Reconnect the MAP sensor

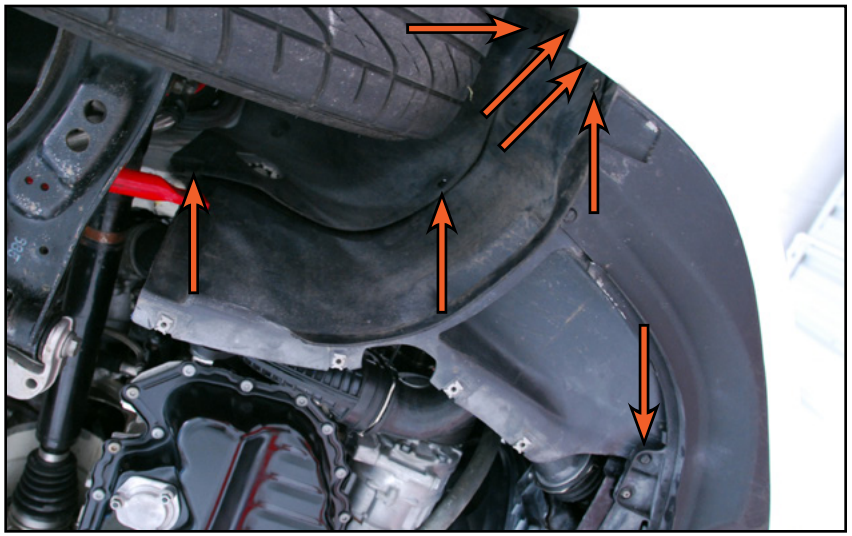
TURBO DISCHARGE PIPE INSTALLATION

Step 1: Wheel Hanger, 17mm Socket & Breaker Bar

During our installation, we removed the RF wheel. This is an optional step, however it does give much greater access to the turbo discharge pipe with the wheel removed.

Step 2: T25 Torx Socket & Ratchet

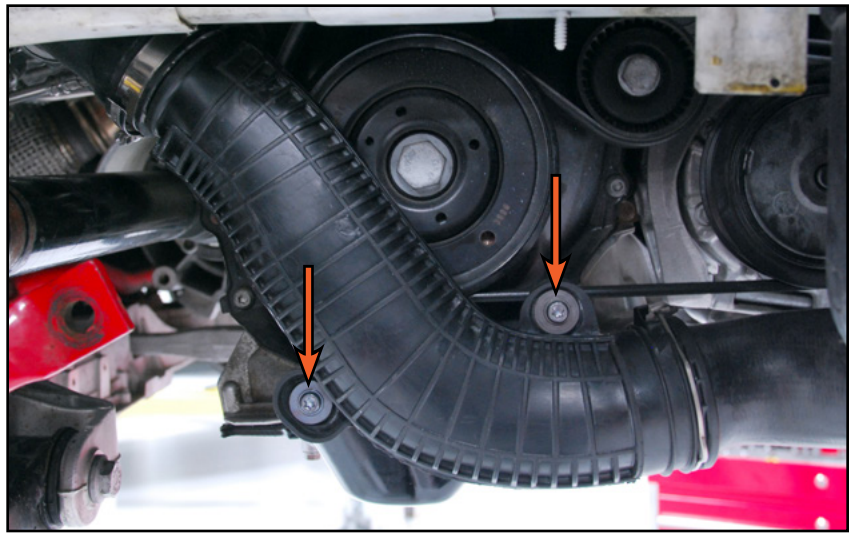
Remove the seven screws which secure the fender liner to the vehicle, remove the fender liner and set it aside.



TURBO DISCHARGE PIPE INSTALLATION

Step 3: T30 Torx Socket & Ratchet

Locate the turbo discharge pipe on the right side of the engine and loosen the two mounting bolts. Remember that these bolts are also trapped bolts and they will remain in the charge pipe even after they have been completely unthreaded from the engine.



Step 4: Flat Blade Screwdriver

Remove the retaining clip from the lower right intercooler hose and pull the hose out of the intercooler.

TURBO DISCHARGE PIPE INSTALLATION

Step 5: Flat Blade Screwdriver

Remove the retaining clip from the turbo discharge hose and pull the hose out of the turbo. The turbo discharge pipe can now be removed from the vehicle and set on a work surface.

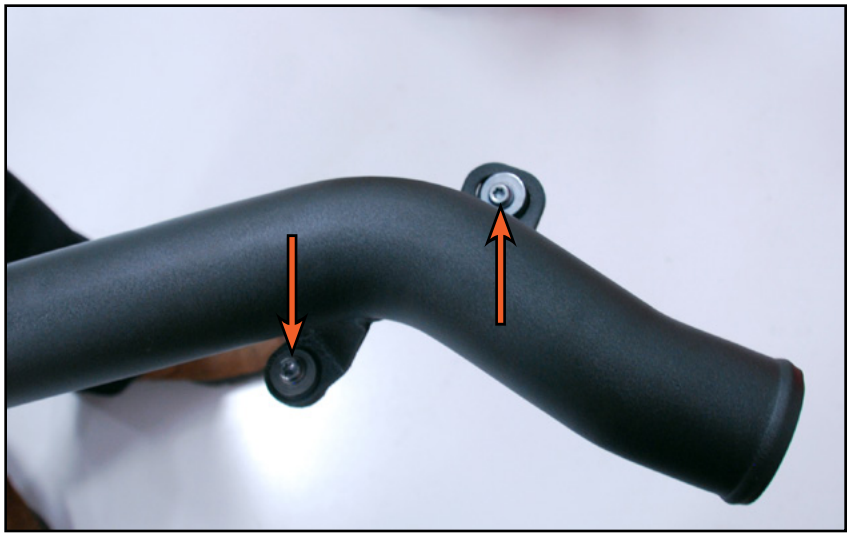
Step 6: Flat Blade Screwdriver

Remove the bolts from the turbo discharge pipe by pushing on them from behind, then remove the rubber grommets from the charge pipe and set the bolts and grommets aside as you will be reusing these parts in the next step.

TURBO DISCHARGE PIPE INSTALLATION

Step 7:

Install the grommets and bolts into the new turbo discharge pipe as shown in the photo.



Step 8:

Install the seals onto the turbo discharge adapter and the intercooler outlet adapter as shown in the photos.

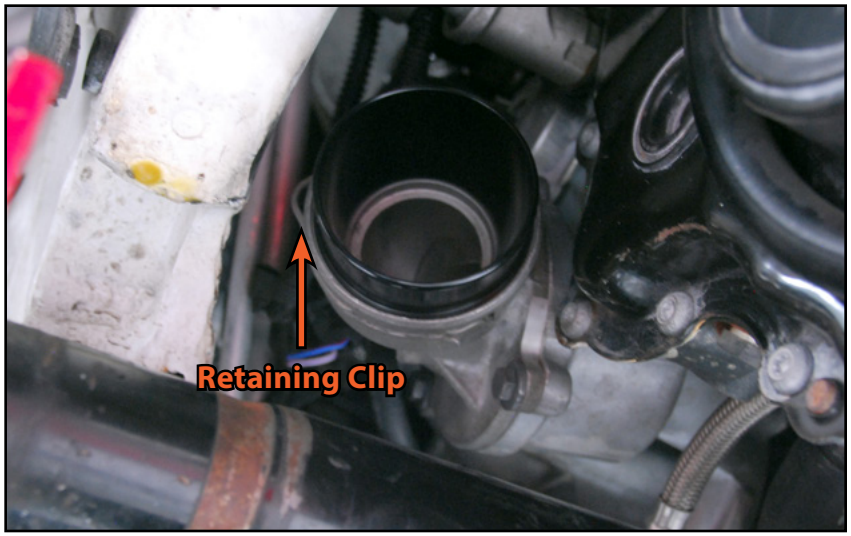
NOTE

Skip this step if your intercooler does not have clip style attachments.

TURBO DISCHARGE PIPE INSTALLATION

Step 9:

Install the turbo discharge adapter and the retaining clip into the compressor outlet, then give the adapter a quick tug to ensure that it is fully seated into place.



TECH TIP

Silicone lubricant can be sprayed on the outside of the adapter seal for ease of installation in the compressor outlet.

Step 10:

Install the intercooler outlet adapter and the retaining clip into the intercooler, then give the adapter a quick tug to ensure that it is fully seated into place.

TECH TIP

Silicone lubricant can be sprayed on the outside of the adapter seal for ease of installation in the intercooler.

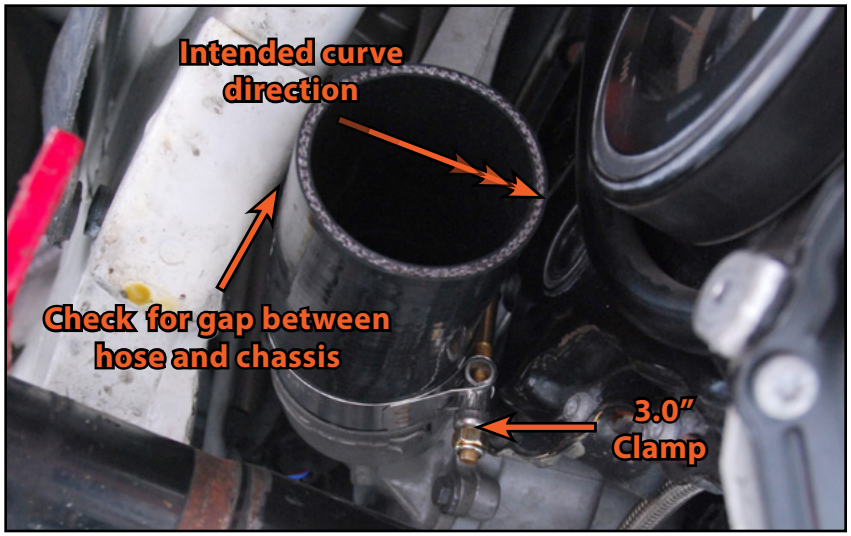
NOTE

Skip this step if your intercooler does not have clip style attachments.

TURBO DISCHARGE PIPE INSTALLATION

Step 11: 11mm Wrench

Install the turbo discharge hose onto the adapter as shown. It is extremely important that the slight curve in the hose is oriented as shown in the photo, this curve is designed to direct the hose away from the chassis to prevent any rubbing. Slide the **3.0"** hose clamp onto the coupler exactly as shown in the photo, this will ensure maximum clearance between the clamp and the engine.



NOTE

Do not tighten the hose clamp during this step.

Step 12:

Place the two **2.875"** hose clamps onto the turbo discharge pipe as shown in the large photo, then slide the lower right intercooler hose onto the turbo discharge pipe as shown in the smaller photo.

TECH TIP

Make sure the clamps are oriented as shown in the photo, this will ensure ease of access once the pipe is installed, and will provide adequate clearance from the chassis.

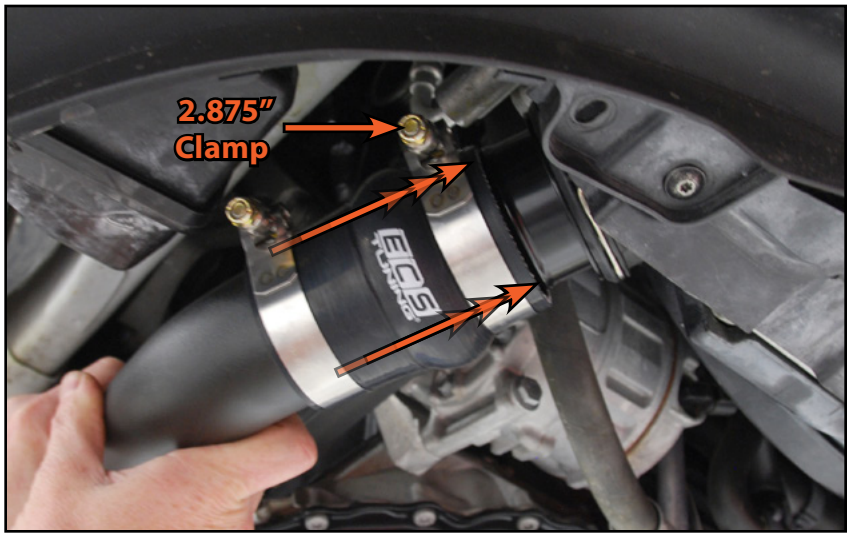
TURBO DISCHARGE PIPE INSTALLATION

Step 13:

Install the turbo discharge pipe into the turbo discharge hose by sliding the pipe into the hose as shown.

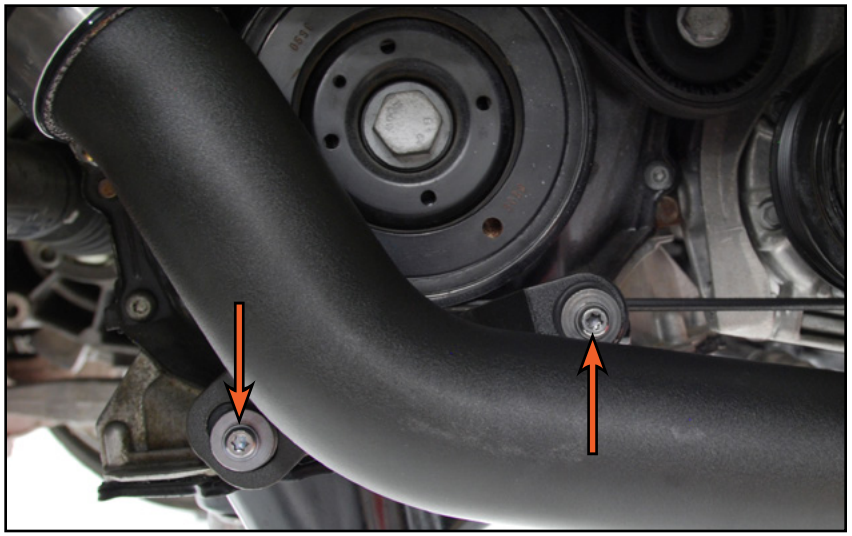
Step 14:

Slide the remaining **2.875"** clamp onto the lower right intercooler hose, then slide the hose onto the intercooler.



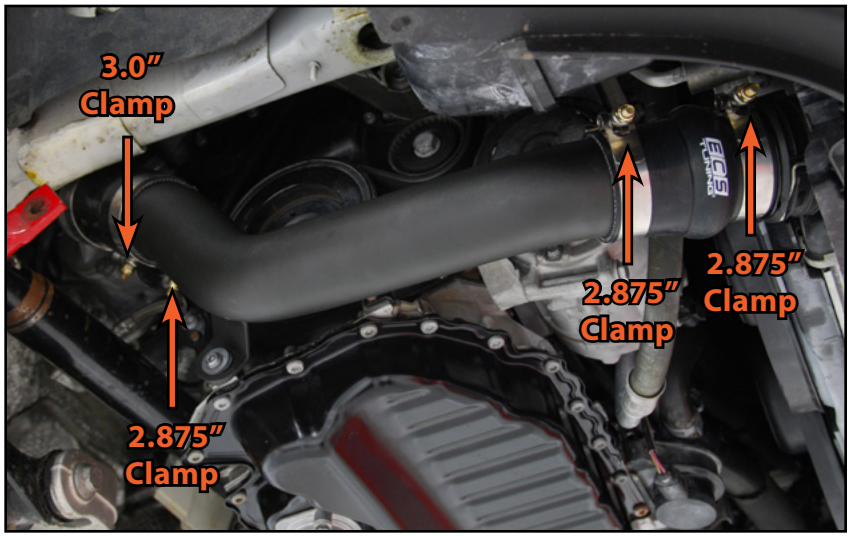
T30 Torx Socket & Torque Wrench

Tighten both turbo discharge mounting screws to 8 Nm (5.9 Ft-lbs).



11mm Socket & Ratchet

Tighten the four hose clamps on the turbo discharge pipe until they are snug. Please note the orientation of the clamps in the photo, this will ensure maximum clearance for the belly pan, fender liner, engine, axle, etc.



- [ ] Reinstall the right front lower fender liner
- [ ] Reinstall and torque the right front wheel (if removed) to 120 Nm (89 Ft-lbs)
- [ ] Reinstall the belly pan
- [ ] Reinstall the engine cover

SCHWABEN - BUILD THE ULTIMATE TOOL COLLECTION

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 VW 2.0T 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.

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