

VW/Audi 1.8T/2.0T Gen3 Throttle Body Boost Tap Installation Instructions - ES2984817/ES2992558



Skill Level
1 - Easy
Basic Skills

Basic Skills Required















### INTRODUCTION

# The Project:

Today we'll be installing our Throttle Body Boost Tap into our 2.0T Gen3 equipped Volkswagen MK7 GTI. This boost tap setup can supply vacuum/boost for one or two components such as boost gauges, vacuum operated valves, etc.

Some experience is recommended for this job, but we're going to lay it out for you step by step. Even if you don't have much "wrench" time under your belt these instructions will make it easy for you. The most difficult part of this job is removing the throttle body pipe. We previously suggested that you remove the intake manifold, but we've found that this is completely unnecessary. The throttle body boost tap can be installed from below the vehicle once the throttle body pipe has been removed.

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 hour or two, but if you have less experience it may be wise to plan an entire afternoon for the project just in case.

A couple of final points - you'll need to lift the car off of the ground for this install so be sure to safely support the vehicle in the air using jack stands. Thank you for looking to ECS Tuning for all your performance and repair needs, we appreciate your business!







# TABLE OF CONTENTS

Kit Contents	<u>pg.4</u>
Required Tools and Equipment	<u>pg.5</u>
Shop Supplies and Materials	<u>pg.6</u>
Installation and Safety Information	<u>pg.7</u>
Project Overview	<u>pg.8</u>
Removing the Stock Throttle Body Pipe	<u>pg.9</u>
Installing the Throttle Body Boost Tap	pg.13
Reassembly	<u>pg.18</u>
Using the VAG Connector Removal Tool	<u>pg.20</u>
Schwaben Tools	pg.21



# **KIT CONTENTS**



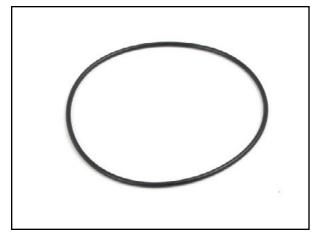
Throttle Body Boost Tap - QTY 1 (Mounts behind the throttle body)



Boost Tap Nipple - QTY 2 (Connects a vacuum hose to the boost tap)



Boost Tap Block-Off Screw - QTY 2 (Used to plug unused boost tap holes)



O-Ring Seal - QTY 1 (Seals the boost tap to the throttle body)



Thread Locking Compound - QTY 1 (Prevents the boost tap nipples/block-off screws from backing out)



Silicone Grease Packet - QTY 1 (Helps to retain the seal inside the boost tap during installation)



# **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) <u>ES#2221243</u>	• 1/4" Drive Ratchet
• 3/8" Drive Ratchet <u>ES#2765902</u>	• 1/4" Drive Deep and Shallow Sockets ES#2823235
• 3/8" Drive Torque Wrench ES#2221245	• 1/4" Drive Extensions <u>ES#2823235</u>
• 3/8" Drive Deep and Shallow Sockets ES#2763772	• Plier and Cutter Set <u>ES#2804496</u>
• 3/8" Drive Extensions <u>ES#2804822</u>	• Flat and Phillips Screwdrivers ES#2225921
Hydraulic Floor Jack <u>ES#2834951</u>	• Jack Stands <u>ES#2763355</u>
• Torx Drivers and Sockets ES#11417/8	Ball Pein Hammers
• ½" Drive Deep and Shallow Sockets <u>ES#2839106</u>	• Pry Bar Set <u>ES#1899378</u>
• ½" Drive Ratchet	<ul> <li>Electric/Cordless Drill</li> </ul>
• ½" Drive Extensions	<ul><li>Wire Strippers/Crimpers</li></ul>
• ½" Drive Torque Wrench	• Drill Bits
• ½" Drive Breaker Bar <u>ES#2776653</u>	<ul> <li>Punch and Chisel Set</li> </ul>
Bench Mounted Vise	<ul> <li>Hex Bit (Allen) Wrenches and Sockets</li> </ul>
Crows Foot Wrenches	• Thread Repair Tools <u>ES#1306824</u>
Hook and Pick Tool Set      ES#2778980	Open/Boxed End Wrench Set

### **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.

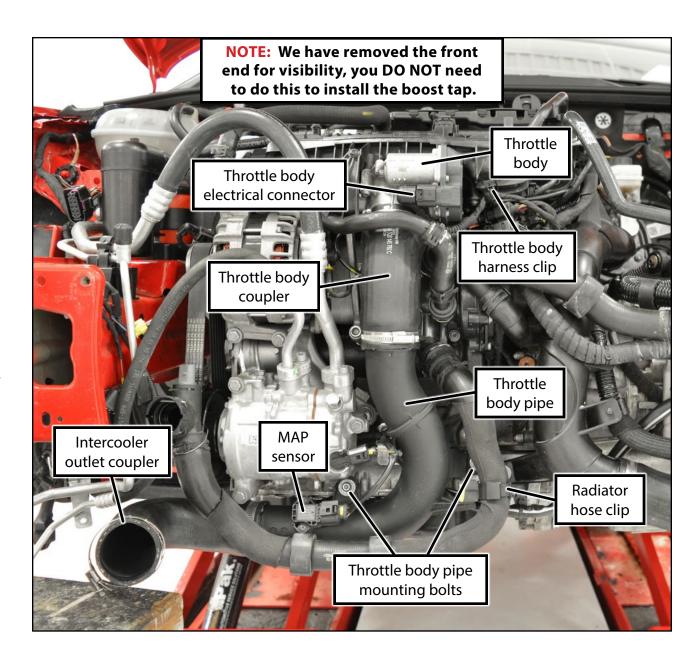


### **PROJECT OVERVIEW**

**Don't let the photo on the right scare you**, we removed the front end from our MK7 while we were documenting a different install, this gave us the chance to take photos with unobstructed views of what you will be working on. You **DO NOT** need to do remove the front end to install your new boost tap! We hope that these photos will help you to identify hard to see fasteners and clips, and make the entire install go smoother, easier, and faster.

To install this boost tap you will need to remove the belly pan underneath the vehicle to access the throttle body pipe from below. Next you'll remove the throttle body pipe and unbolt the throttle body itself from the intake manifold. After that it's just a matter of installing the boost tap between the throttle body and the intake manifold, then reassemble the vehicle.

Take a few moments and familiarize yourself with the component names and their locations. We will be referring to all of these components during these instructions.





#### Step 1:

10mm Socket & Ratchet

To begin this install we need to disconnect the negative battery terminal and remove the air inlet duct. We opted to remove the intake system and the engine cover for better visibility in our photos. These additional parts don't need to be removed for this job, but it only takes a few minutes and it is **WELL** worth it to gain a little extra space to work with.

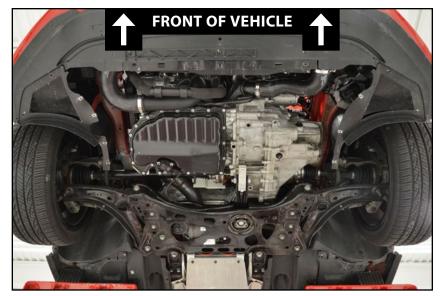


We needed to remove the battery due to additional service work we were performing on our vehicle. Rest assured that you WILL NOT need to remove the battery for this install.



#### Step 2:

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

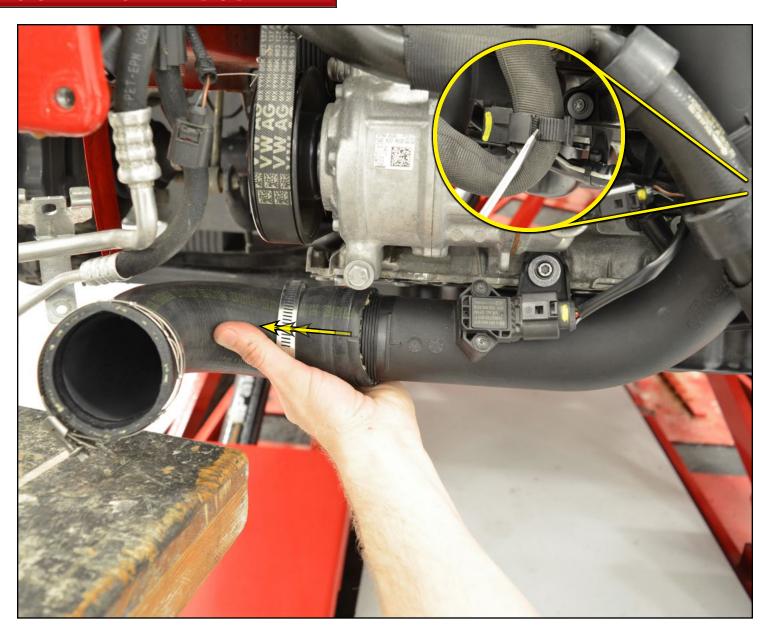




### Step 3:

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).

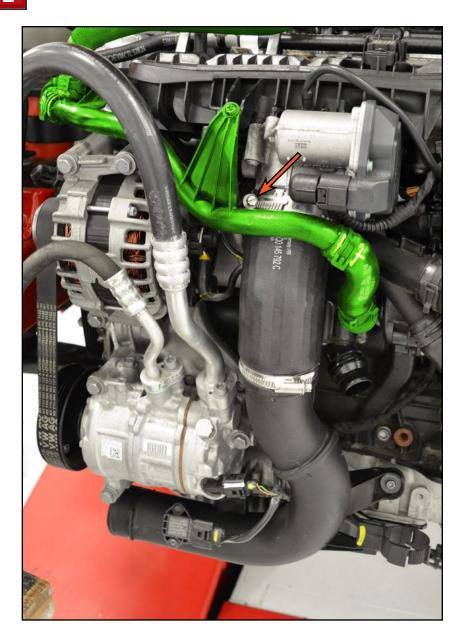




Step 4: Flat Blade Screwdriver, T30 Torx

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 T30 screws which hold the front coolant pipe (highlighted in GREEN in the photo) to the intake manifold, this way it can be moved aside and give you some extra clearance for when you remove the throttle body pipe 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.





Step 5:

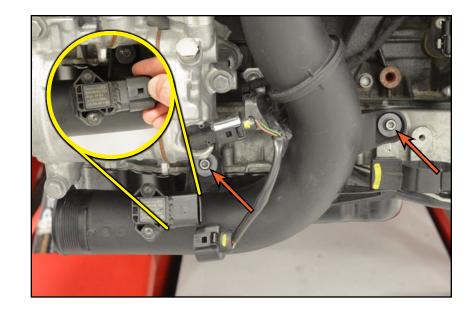
VAG Connector Tool, T30 Torx

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.



For detailed photos and tips on using the VAG Connector Removal Tool, please refer to Page 20.



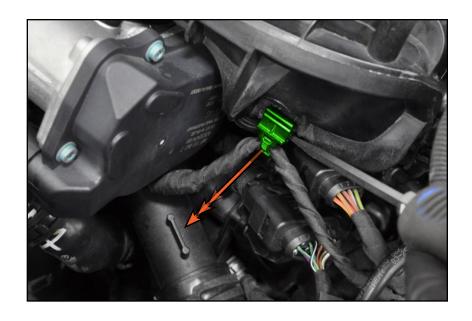
#### Step 6:

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.



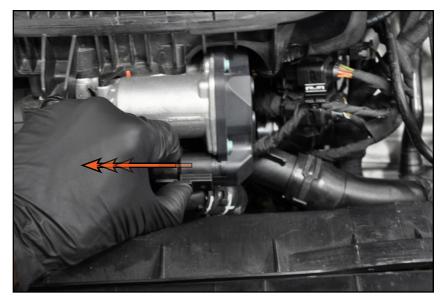
#### Step 1: Flat Blade Screwdriver

Gently pry downwards on the throttle body wiring harness clip (highlighted in GREEN) to release it from the intake manifold.



#### Step 2:

Disconnect the throttle body electrical connector by pushing the connector towards the throttle body, squeezing the release tab, then pulling the connector off of the throttle body.





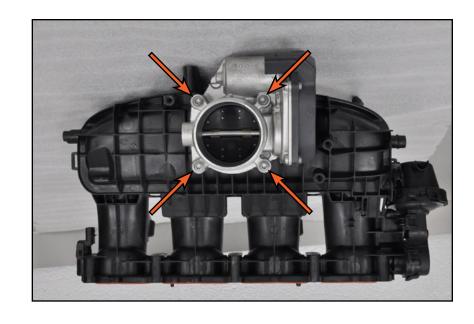
### Step 3:

T30 Torx

Working from below, remove the four screws which secure the throttle body to the intake manifold.



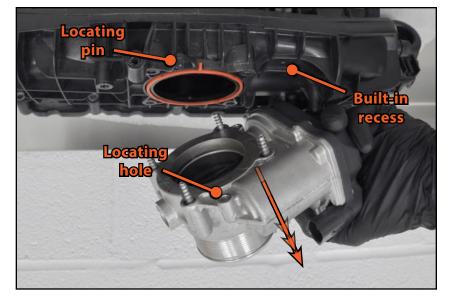
These photos were taken with the intake manifold removed for better visibility. Rest assured you can perform these steps with the intake manifold still installed on the engine.



#### Step 4:

Carefully lower the throttle body away from the intake manifold and remove it from the engine bay.

Take a moment to note the locations of the locating pin on the intake manifold, the corresponding locating hole on the throttle body, and the built-in recess in the manifold. All three of these features are used to orient the throttle body on the manifold.



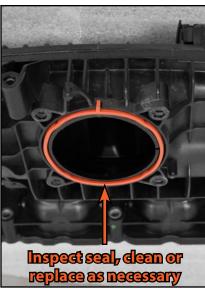


#### Step 5:

Inspect the gasket surface on the throttle body, make sure the surface is free of corrosion or pitting, then thoroughly clean the surface with Brake Clean or Carb Cleaner and a lint-free towel.

Inspect the throttle body seal for any signs of damage or wear, and replace it if necessary. If replacement is not necessary, wipe the seal clean with a clean, lint-free towel.



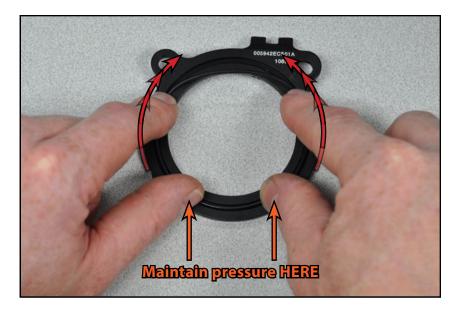


#### Step 6:

Apply a very thin coating of grease from the supplied pack to the o-ring groove inside the throttle body boost tap. With the grease applied, apply pressure with two fingers along the bottom side (ORANGE arrows), then apply pressure with your thumbs and work your way around the entire o-ring (RED arrows), ensuring that it is completely seated all the way around the groove.



The o-ring is slightly smaller in diameter than the groove in the boost tap, the grease is used to hold the o-ring in place during installation, and will also help the o-ring to obtain a proper seal.



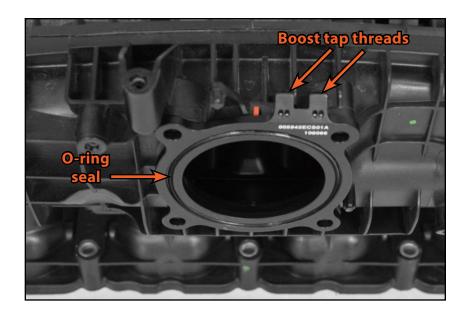


#### Step 7:

Place the throttle body boost tap onto the intake manifold as shown in the photo on the right. Ensure that the holes for the boost tap threads are on the side with the cut out in the manifold, and that the o-ring groove is facing towards the throttle body.



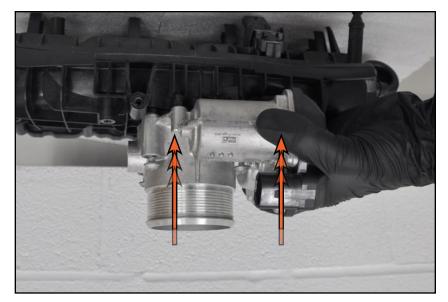
On Non-MQB models there is a small ridge on the manifold which will need to be filed down slightly for proper fitment.



#### Step 8:

T30 Torx Socket, Torque Wrench

Place the throttle body onto the boost tap, ensuring that it is properly oriented to the intake manifold. Install the throttle body screws and torque them in an "X" pattern to 7 Nm (5.16 Ft-lbs).





### Step 9:

Apply a single drop of the supplied thread locker compound to the threads of your choice of boost tap nipples or block-off screws (depending on your boost tap needs).



Your kit will include a small tube of thread locker, it will be either a paste or a liquid, but the application process is the same for both.



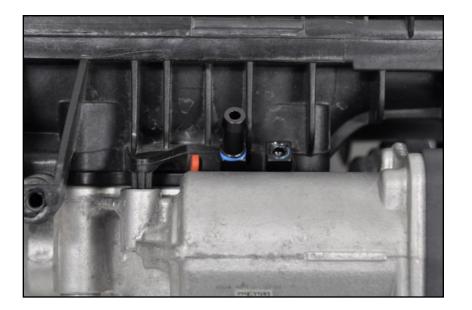


#### Step 10: 3mm Hex (Allen) Key

Install the boost tap nipples/block-off screws which you applied thread locker onto in step 9 into the boost tap threads, then tighten them until they are snug.



Block-off screws are installed with a 3mm Hex (Allen) Key, boost tap nipples can simply be installed by hand.



ES#2992558

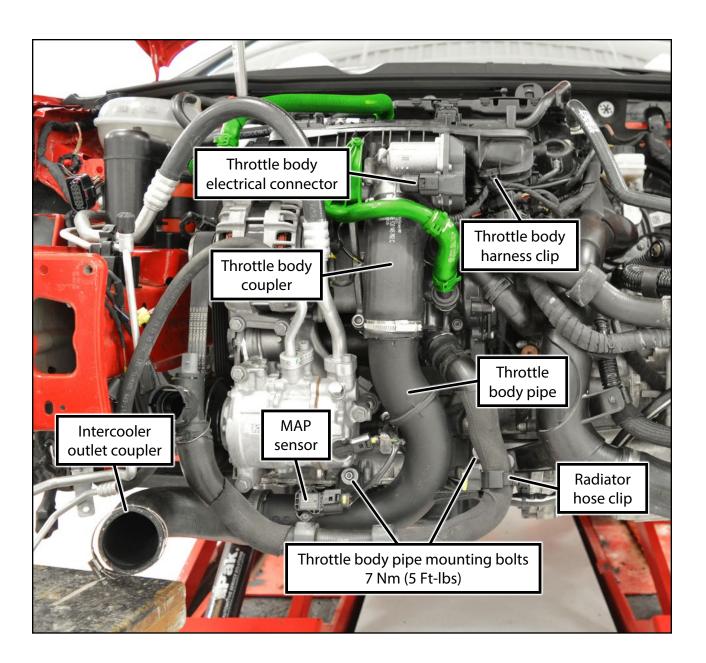


# REASSEMBLY

### Step 1:

Reconnect the throttle body electrical connector, then reattach the throttle body wiring harness clip to the intake manifold.

Reinstall the throttle body pipe, reconnect the MAP sensor, tighten the T30 throttle body pipe mounting screws to 7 Nm (5 ft-lbs), and tighten the hose clamps on the throttle body and intercooler outlet couplers.





### REASSEMBLY

### Step 2:

You can now run the new vacuum line (highlighted in GREEN) from the throttle body boost tap to your desired component. Note the hose routing shown in the photo, there are built in clips in the intake manifold which can be used to secure your new vacuum hose in place.



#### Step 3:

Reinstall all other components in the reverse order of removal. Reconnect the negative battery terminal, then turn the engine on and check for any vacuum leaks around the throttle body.



It may be necessary to perform a "Throttle Body Adaptation" with a VAG-COM scanner, though in MOST cases this will not be required. Our Schwaben Professional VAG Scan Tool is an easy choice for this task. It is available at www.ecstuning.com: ES#2827082.

### Congratulations, your installation is 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.



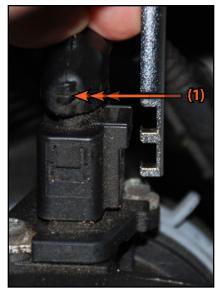
#### Step 2:

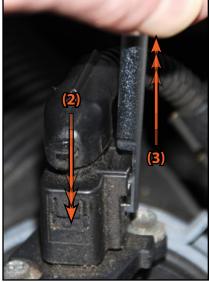
To disconnect one of these connectors, follow this procedure:

- 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 throttle body pipe removal instructions, simply click HERE.







### **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/Audi 1.8T/2.0T Gen3 Throttle Body Boost Tap 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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