

Volkswagen 2.0T FSI/TSI ECS Tuning High Flow Downpipe Installation Instructions

















INTRODUCTION

Volkswagen 2.0T FSI/TSI ECS Tuning High Flow Downpipe ES#2903346

The ECS Tuning High Flow Downpipe for your VW 2.0T FSI/TSI offers the following features:

- High quality T304 stainless steel
- 3.0" mandrel-bent tubing
- All installation hardware included

ECS Difficulty Gauge



2 - Moderate Advanced - 3

Upgrading the downpipe on your Volkswagen 2.0T FSI/TSI is a very rewarding project that an experienced technician will be able to complete in a weekend, plan accordingly based on your experience level. The ECS Tuning High Flow Downpipe will fit like the stock downpipe, but will completely change the character of your car. Before you begin, read and familiarize yourself with these instructions and make sure you have all the required tools on hand. Thank you for purchasing the ECS Tuning High Flow Downpipe, we appreciate your business!



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The ECS Tuning High Flow Downpipe has been designed to fit: Audi 8P A3, VW MK5 & MK6 Jetta, MK5 & MK6 Golf, & B6 Passat vehicles equipped with either an FSI or TSI 2.0T engine. The photos in this PDF may not represent your exact application, but they can be used as a general guide to assist in your installation.

Symbols:

The following symbols may be used throughout these instructions indicating special attention:



FORK IN THE ROAD: When there are different options within any given kit, we will direct you to the proper page and step to continue.



YIELD: Pause for a moment to double check component installation before you continue. Ignoring this can cost you time later during the installation.



CAUTION: Pay close attention to these warnings and instructions. Difficult installation, personal injury or component damage may occur if ignored.



STOP: The upcoming steps require specific preparation and/or assistance in the interest of safety. Please read ahead in the instructions and prepare before continuing.



TECH TIP: Tips and tricks to make the job go much easier.



NOTE: Additional information that may be useful to the installation depending on your application.



DOWNPIPE KIT CONTENTS

Available at www.ecstuning.com - ES#2903346



Downpipe with Integrated High Flow Catalytic Converter



Centerpipe Extension



Downpipe Gasket and Hardware



Adapter and Exhaust Sleeve



Exhaust Clamps



REQUIRED TOOLS

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

We recommend that you have a complete selection of tools and equipment necessary for automotive repair. Below is a list of the tools we used to install the ECS Tuning High Flow Downpipe. Additional tools may be required for any issues that arise during installation such as rust, corrosion, or broken and stripped fasteners.

• 3/8" Drive Ratchet	ES#2765902
• 3/8" Drive Torque Wrench	ES#2221245
• 3/8" Drive Sockets: 10mm, 13mm, 15mm,	
16mm, 18mm , 19mm	ES#2763772
• 3/8" Drive Extensions	
Torx Bit Sockets: T30	ES#11418
Torx Drivers: T25, T30	ES#11417
Triple Square Driver: M8	ES#9013
Open/Boxed End Wrenches: 16mm, 17mm	ES#2765907
• Exhaust Hanger Remover Pliers	ES#2784927
Oxygen Sensor Wrench	ES#240942
VAG Connector Tool	ES#2628676
Locking Hose Clamp Pliers	ES#2702616

SHOP SUPPLIES AND MATERIALS

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Hand Cleaner/Degreaser	Available at ecstuning.com <u>ES#2167336</u>
Aerosol Brake Cleaner	Available at your local auto parts store
• Shop Rags	Available at your local auto parts store
Aerosol Spray Lubricant/Penetrating Oil	Available at your local auto parts store



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. Always make sure that the vehicle is securely supported on jack stands.



Step 1:

Raise and safely support the vehicle.

NOTE

The photos in this PDF may not represent your exact application, but they can be used as a general guide to assist in your installation.



3/8" Drive Ratchet, 13mm Socket Step 2:

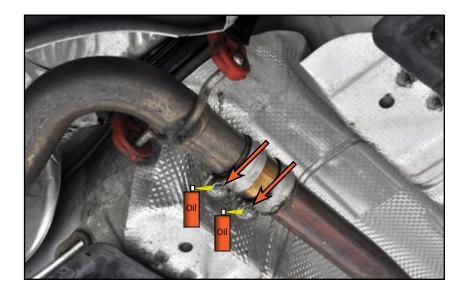
Remove the four nuts securing the rear chassis brace and remove the brace from the vehicle.





Step 3: 3/8" Drive Ratchet, 13mm Socket

Loosen the nuts (arrows) on the exhaust sleeve at the end of the downpipe/converter assembly. It is not necessary to remove the nuts completely, but loosen them enough that the sleeve is able to slide easily back and forth on the pipe.



Step 4:

Slide the exhaust sleeve forward or backward on the exhaust pipe to separate the joint.





Step 5:



If your vehicle is equipped with an FSI engine, please continue to Page 10.



Step 6:



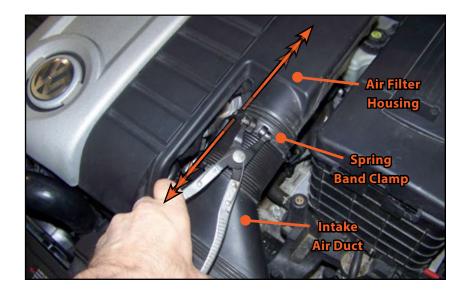
If your vehicle is equipped with a TSI engine, please continue to Page 12.





Hose Clamp Pliers Step 7:

Release the Spring Band Clamp for the Intake Air Duct and move it onto the end of the inlet for the Air Filter Housing, then pull the end of the Intake Air Duct forward to separate it from the Air Filter Housing.

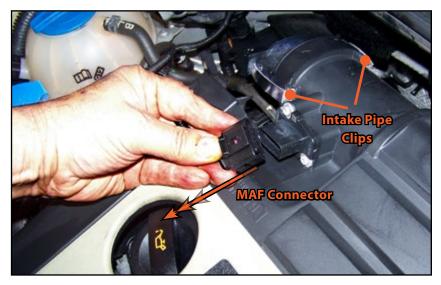


VAG Connector Removal Tool Step 8:

Disconnect the MAF electrical connector from the MAF sensor, then pop the two spring metal clips which hold the intake pipe to the Air Filter Housing, and pull the pipe away from the housing.

TECH TIP

For tips on using the VAG Connector Tool, please refer to Page 28 for detailed photos and procedures.





Step 9:

Grasp the Air Filter Housing and lift straight up one corner at a time to release the rubber mounting grommets from their mating pins on the engine. The photo to the right (showing the reverse side of the housing) is for reference, to demonstrate the location of the rubber mounting grommets.

CAUTION

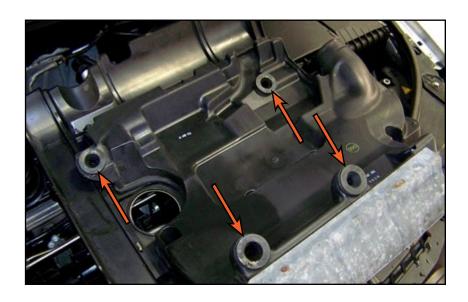
Be sure to pull on the housing as close to each grommet as possible during removal to prevent damage. We have found that it's best to start by pulling up on the driver's side front grommet, then the driver's side rear, then the passenger's side rear, and finally the passenger's side front.



Remove the fasteners which secure the cover plate to the engine, they are difficult to see so a mirror may need to be used. Move the cover plate down off of the studs on the inside of the upper section, and then pull it straight out.



Once the engine cover and exhaust cover plate have been removed from your FSI equipped vehicle, please continue to Page 16.







Step 11:

Remove the engine cover by carefully lifting upwards one corner at a time, then set the engine cover aside.



VAG Connector Tool Step 12:

Disconnect the Mass Air Flow sensor electrical connector.

TECH TIP

For tips on using the VAG Connector Tool, please refer to Page 28 for detailed photos and procedures.





Locking Hose Clamp Pliers Step 13:

Release the tension on the spring clamp that secures the flexible intake tube to the Mass Air Flow sensor.



Locking Hose Clamp Pliers Step 14:

Pull the flexible intake tube off of the Mass Air Flow sensor.





Step 15: 3/8" Drive Ratchet, T30 Torx Socket

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Remove the bolt securing the turbo inlet pipe to the heat shield, behind the rear of the cylinder head (shown here with the flexible intake tube removed for clarity).



Step 16:

Remove the crank vent hose from the turbo inlet pipe by pinching the retaining tabs together, then pulling it off of the pipe.





Step 17: **Locking Hose Clamp Pliers**

Next we need to remove the turbo inlet pipe, to do so we need to release the tension on one of the two spring clamps, which are very difficult to see. It is easiest loosen the lower clamp on the turbo inlet pipe coupler, then pull the turbo inlet pipe and coupler off and set them aside.



Step 18: 10mm Socket, 18mm Socket, M8 multi-point Bit

Remove the fasteners which secure the cover plate to the engine, they are difficult to see so a mirror may need to be used. Move the cover plate down off of the studs on the inside of the upper section, and then pull it straight out.



Once the engine cover and exhaust cover plate have been removed from your TSI equipped vehicle, please continue to the <u>next page</u>.



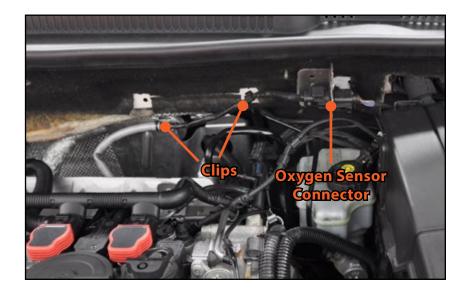


Step 19: **VAG Connector Tool**

Unplug the front oxygen sensor connector, then remove the wiring harness from the two clips.



From this point forward these instructions apply to both FSI and TSI equipped vehicles.

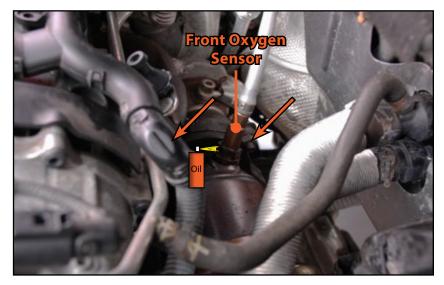


Step 20: Oxygen Sensor Wrench, 16mm Wrench

Loosen and remove the front oxygen sensor, then loosen and remove the two upper nuts on the turbo outlet flange.

TECH TIP

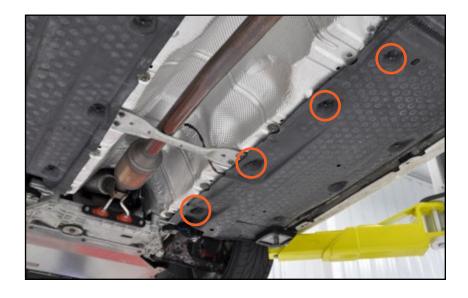
Spray the oxygen sensor and the downpipe nuts with penetrating oil and allow the oil to soak in before attempting to remove them.





Step 21: 3/8" Drive Ratchet, 10mm Socket

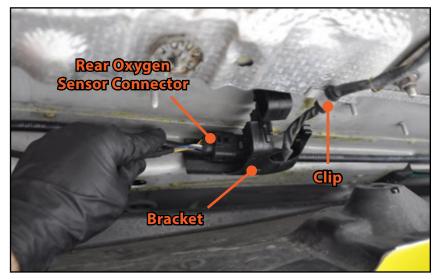
Working from below the vehicle, loosen the four plastic shouldered hex nuts on the inner side of the right underbody panel.



VAG Connector Tool Step 22:

Pull down the open side of the underbody panel to gain access to the rear oxygen sensor harness connection. Disconnect the connector, the easiest way to do this is to push in on the connector, release the locking tab, then pull the connector off.

Remove the plug end from the bracket and release the wire from the clip.





Step 23: Oxygen Sensor Wrench

Remove the rear oxygen sensor and set it aside.



Flat Blade Screwdriver, Torx Drivers: T25, T30 Step 24:

Remove the belly pan or skid plate from the vehicle, whichever you have installed. They are typically secured around the perimeter with 1/4 turn fasteners or Torx screws.

NOTE

If your vehicle is equipped with a CBFA engine you **MUST** remove the third oxygen sensor before continuing to the <u>next step</u>. The third oxygen sensor is located between the turbo outlet and the catalytic converter.





Step 25: 3/8" Drive Ratchet, 17mm Socket

Loosen and remove the two bolts which secure the CV axle shield to the engine, then remove the shield from the vehicle.

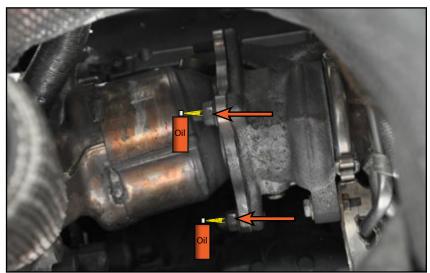


16mm Wrench Step 26:

Loosen and remove the two lower nuts on the turbo outlet flange.

TECH TIP

Spray the nuts with penetrating oil and allow the oil to soak in before attempting to remove them.





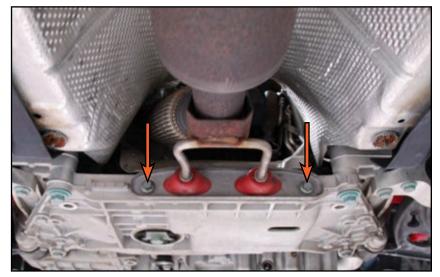
Step 27: 3/8" Drive Ratchet, 13mm Socket

Support the rear of the downpipe as shown in the photo, then remove the four nuts securing the front chassis brace and remove it from the vehicle.



3/8" Drive Ratchet, 13mm Socket Step 28:

Remove the two bolts which secure the downpipe bracket to the crossmember.





Step 29:

To remove the downpipe from the vehicle, first slide the converter off of the studs on the turbo outlet flange, then twist the downpipe counterclockwise approximately 90 degrees and pull the downpipe out of the vehicle.





Exhaust Pipe Hanger Remover Pliers Step 30:

Remove the mounting bracket from the stock downpipe.

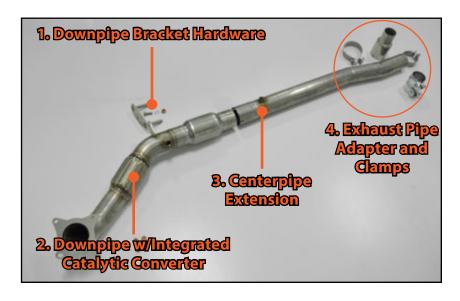




Step 1:

Please note that once the downpipe is installed and positioned properly, you must tighten the clamps, hangers, bolts, and nuts before continuing on.

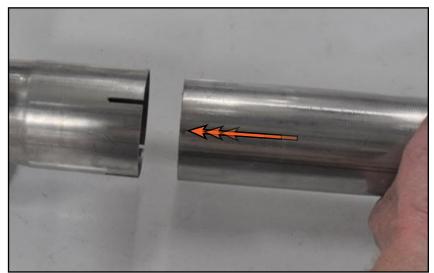
It is also **EXTREMELY** important that you support the downpipe components from below during this installation in order to eliminate the risk of damaging the flex connection. This can be easily achieved with jackstands, or you can have an assistant hold the system in place.



Step 2:

Carefully unpack your new downpipe and lay it out on the floor, locating everything in its installation position.

At each of the slip connections, fit the pipes together to make sure they slide together easily. If they do not slide together easily, inspect the ends of the pipes for any slight distortion or bending (this is sometimes impossible to avoid during shipping). Using a ball peen hammer, gently tap on the ends of the pipes to straighten them and recheck fit. Once all of the slip connections slide together easily, proceed with the next step.





Step 3:

Place the new gasket onto the turbo outlet flange with the tab aligned on the bottom and facing towards the turbo housing.

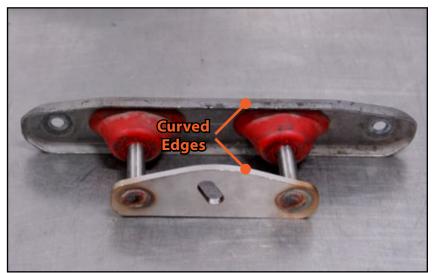


Step 4:

Press the new downpipe bracket into the rubber mounts as shown.

NOTE

Please note that brackets must be installed in such a way that the curved edges of both the OE bracket and the ECS bracket will be on the top when installed on the vehicle.





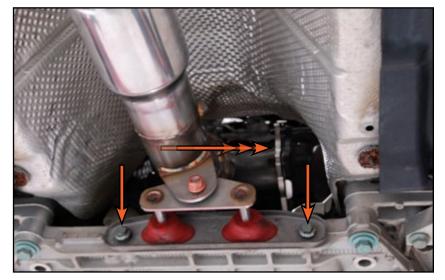
Step 5:

Apply a small amount of the included "never-seize" paste to the threads on the included bolt before inserting it through the bracket and into the hole on the downpipe, then secure it with the nut. Be sure to leave the fasteners loose at this time.



Torque Wrench, 13mm Socket Step 6:

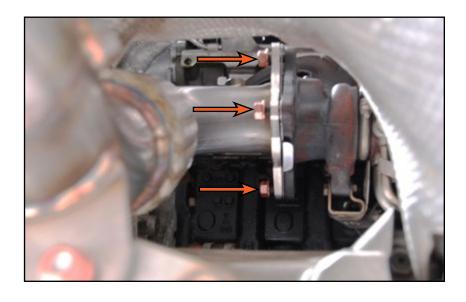
Install the downpipe onto the turbo outlet in the reverse order of removal. Install the two bolts into the downpipe mounting bracket, then torque them to 25 Nm (18.4 Ft-lbs).





Torque Wrench, 16mm Socket Step 7:

Install the four new nuts onto the turbo outlet flange studs, and torque them to 40 Nm (29.5 Ft-lbs).

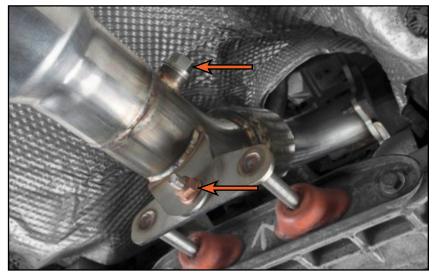


Torque Wrench, 16mm & 19mm Sockets, 17mm Wrench Step 8:

Apply a small amount of the included "never-seize" paste to the threads on the oxygen sensor sealing plug, then thread the plug and washer into the unused bung on the downpipe, and torque to 30 Nm (22.1 Ft-lbs). Tighten the bolt which secures the downpipe to the mounting bracket.

NOTE

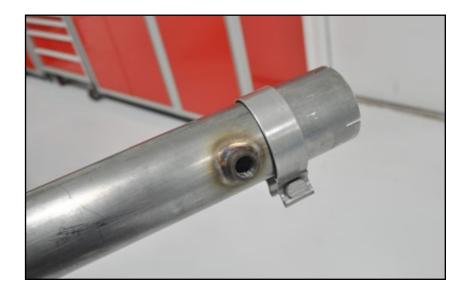
If your vehicle is equipped with a CBFA engine this plug will NOT be used, simply install the third oxygen sensor in its place.





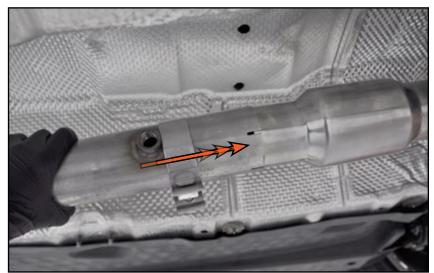
Step 9:

Slide the new exhaust clamp over the centerpipe extension, be sure to orient the clamp so that the clamp bolt head faces as shown in the photo.



Step 10:

Slide the centerpipe extension over the downpipe, twist the pipe if necessary to allow it to slide into place.





Step 11:

Tighten the clamp on the centerpipe extension.

Reinstall the rear oxygen sensor.

Reinstall the CV axle shield and the belly pan/skid plate.

Reinstall the belly pan or skid plate on the vehicle.

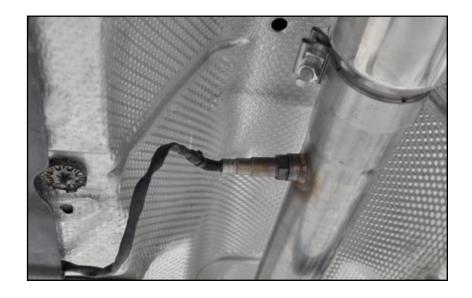
Reinstall the cover plate, front oxygen sensor, and MAF sensor.

Reinstall the intake duct and engine cover.

Step 12:

Reinstall both chassis braces and install the provided exhaust pipe adapter and clamps as shown in the photo.

> Your VW 2.0T ECS Tuning High Flow Downpipe installation is complete!







USING THE VAG CONNECTOR TOOL

Step 1:

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



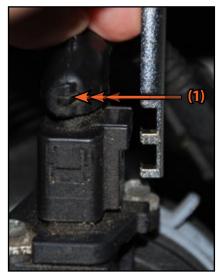
Step 2:

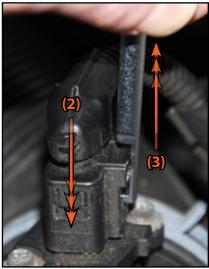
To disconnect one of these connectors, follow this procedure:

- 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 **Downpipe** removal instructions, simply click **HERE**.



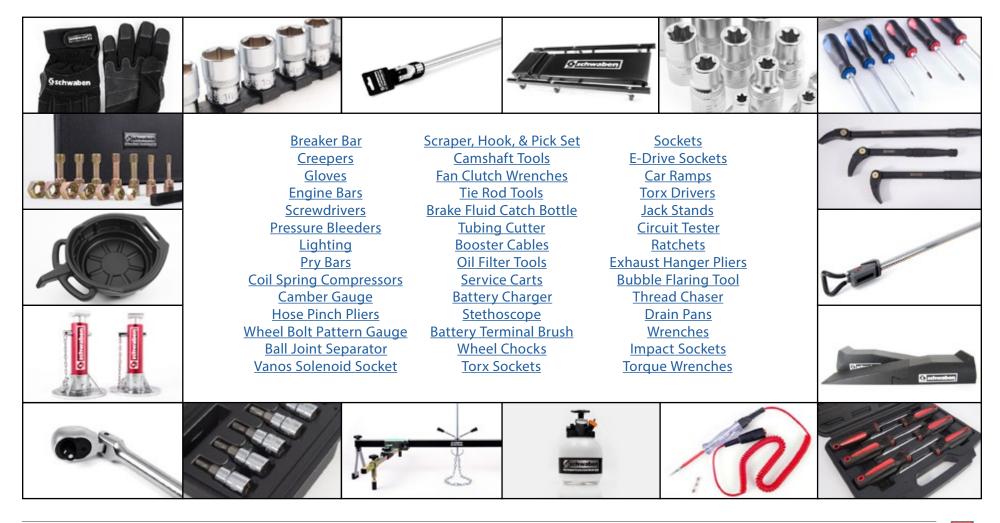




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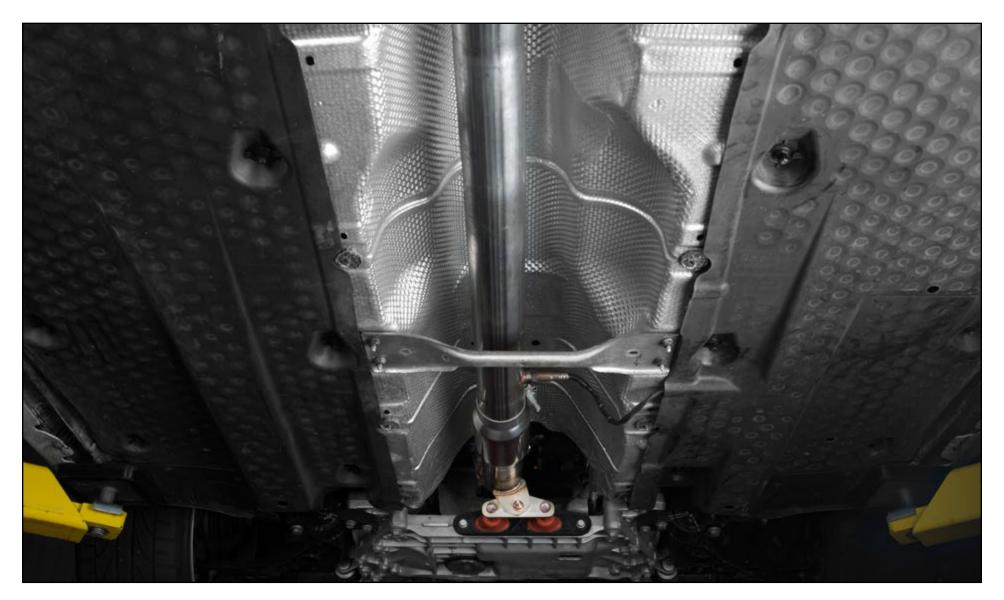
SCHWABEN - BUILD THE ULTIMATE TOOL COLLECTION

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.



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Your ECS Tuning Exhaust System 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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