



Volkswagen MK7 Golf R, Audi 8V S3 Downpipe w/High Flow Cat Installation - [ES4004495](#)



Skill Level
2 - Moderate
Some Experience
Recommended



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.

INTRODUCTION

Today we are going to install our ECS Tuning downpipe w/high flow catalytic converter onto an Audi 8V S3, but keep in mind that the installation is the same for the MK7 Golf R. This downpipe w/high flow cat has been designed by our engineers for better flow, less restriction, and a throatier exhaust note.

This downpipe is specifically made for the all wheel drive Golf R and 8V S3, so the installation is a bit different compared to the front wheel drive GTI & A3. Most of the challenge comes from getting the driveshaft out of your way. We would strongly recommend the use of an automotive lift for this job, but we'll give you some tips later on if you're attempting this install with the car up on jack stands.

As you can see in the photo on the right, the new ECS downpipe w/ high flow cat kit is designed to be a direct replacement for the stock downpipe and cat.

Be sure to read these instructions completely before you begin the project. Thank you for choosing ECS Tuning for all of your performance and repair needs, we appreciate your business!



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KIT CONTENTS



Downpipe w/High Flow Catalytic Converter



Extension Pipe



Downpipe Clamps
(Downpipe to extension pipe, extension pipe to stock exhaust system or reducer)



Downpipe Mounting Bracket & Hardware



Reducer
(Downpipe to stock exhaust system)



Sleeve Clamp
(Reducer to stock exhaust system)

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](#)
- **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](#)
- Hydraulic Floor Jack [ES#240941](#)
- **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](#)
- Bench Mounted Vise
- Crows Foot Wrenches
- Hook and Pick Tool Set [ES#2778980](#)

Required For This Install

- **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](#)
- **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

- **Oxygen Sensor Wrench** [ES#240942](#)
- **Stubby Socket Driver Set** [ES#3103367](#)
- **Exhaust Hanger Removal Pliers** [ES#2784927](#)

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.

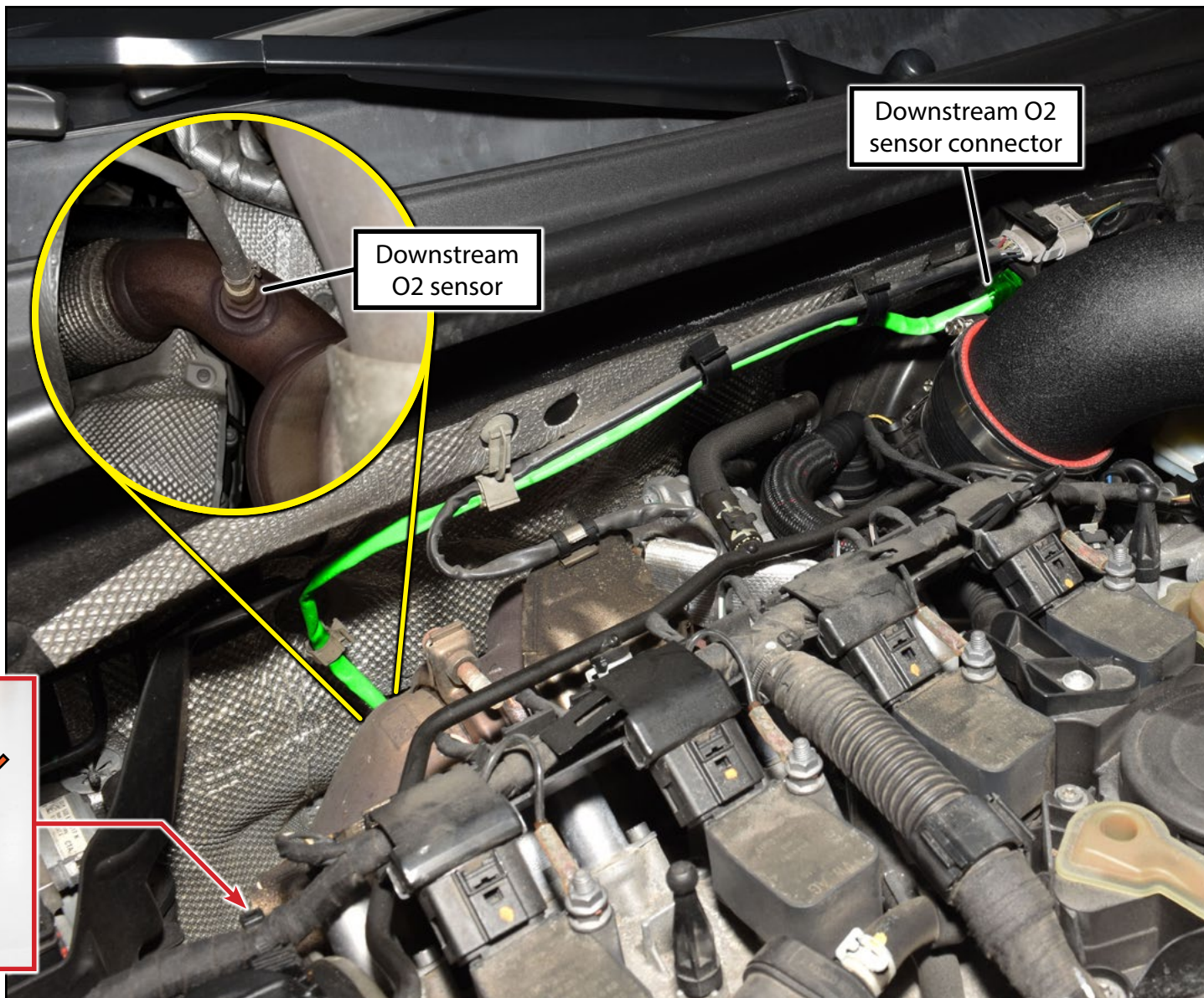
REMOVING THE ORIGINAL DOWNPIPE

Step 1:

Locate the downstream oxygen sensor and soak it with penetrating oil (shown in the **YELLOW** inset photo).

Release the wiring harness from all mounting points on the firewall and disconnect the connector (shown in the large photo). Remove the downstream oxygen sensor and set it aside.

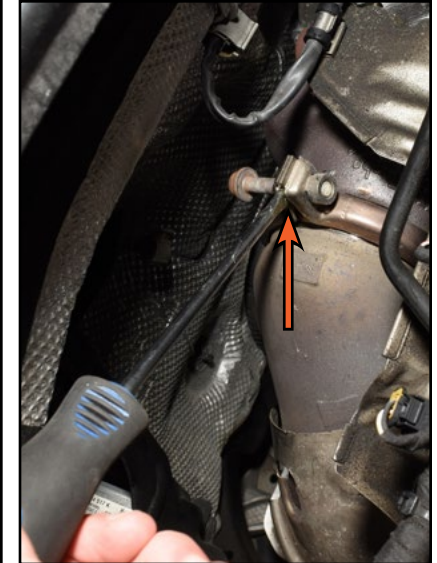
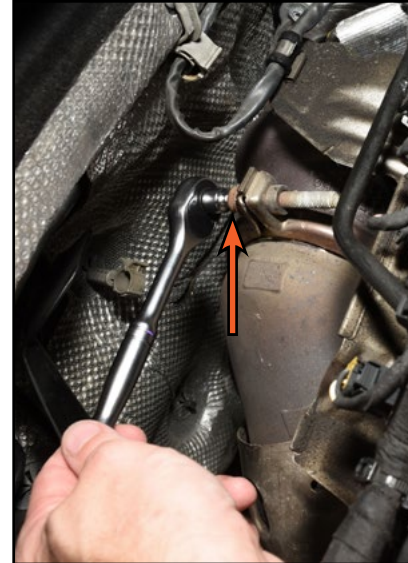
There are two 13mm nuts which secure the catalytic converter to the engine block, they're tough to see but they can be reached from above (shown in the **RED** inset photo).



REMOVING THE ORIGINAL DOWNPIPE

Step 2: 6mm Hex (Allen), Flat Blade Screwdriver

Loosen the bolt on the V-band clamp (LH photo). You will likely need to use a screwdriver to pop the clamp free from the pipe (RH photo).

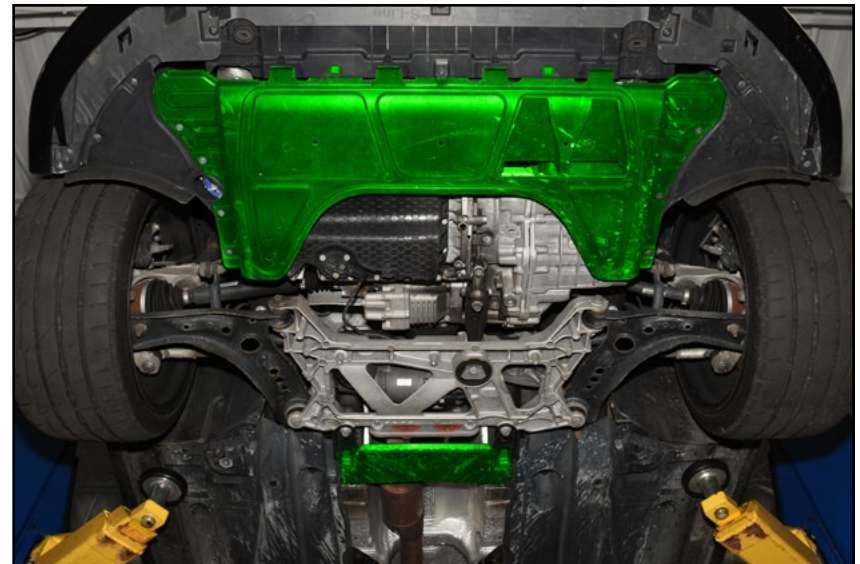


Step 3: T25 Torx

Safely lift and support the vehicle. Remove the insulation panel(s) from the underside of the vehicle, and remove the RF wheel.



The rear panel shown in this photo will only be found on the 8V S3.

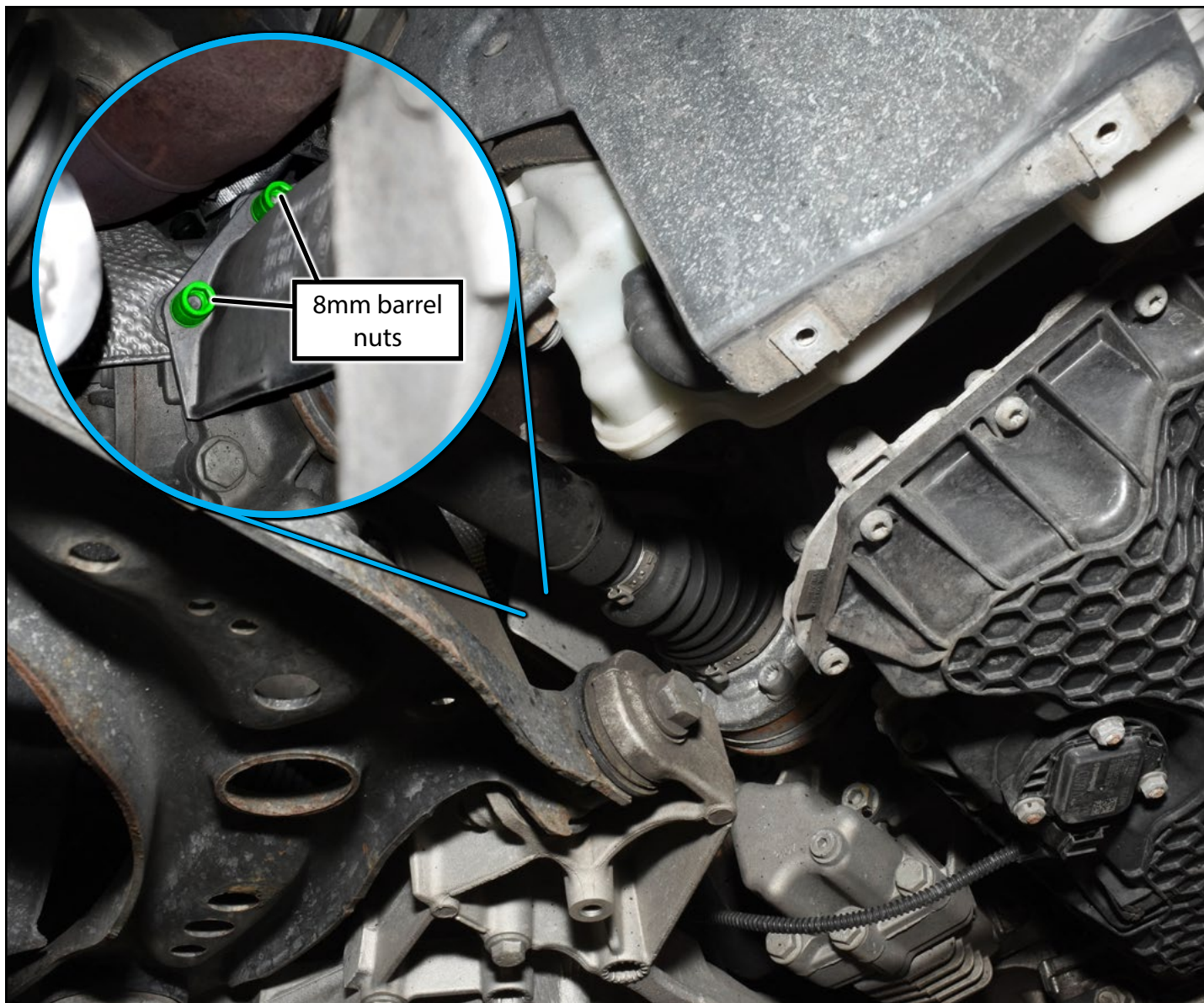


REMOVING THE ORIGINAL DOWNPIPE

Step 4:

Locate the heat shield which is mounted over the RF axle shaft. This heat shield is secured by two 8mm barrel nuts (shown in the **BLUE** inset photo).

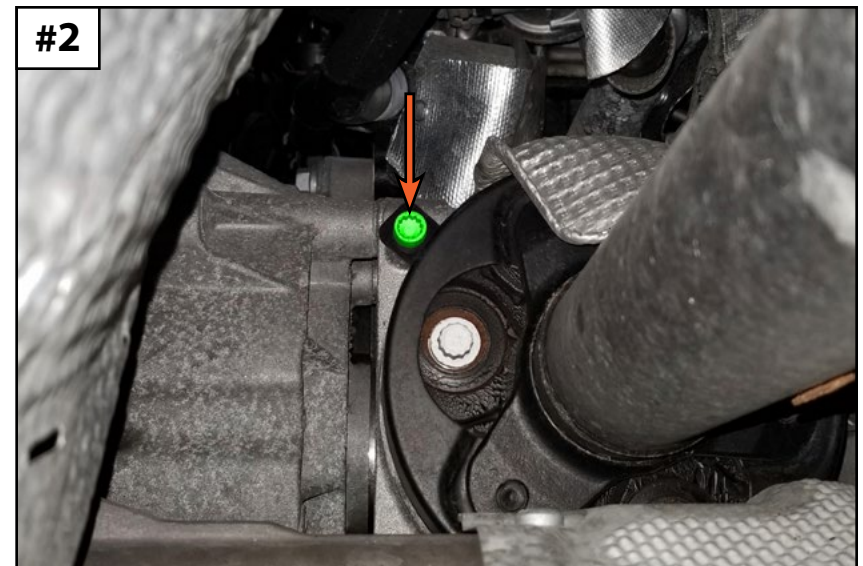
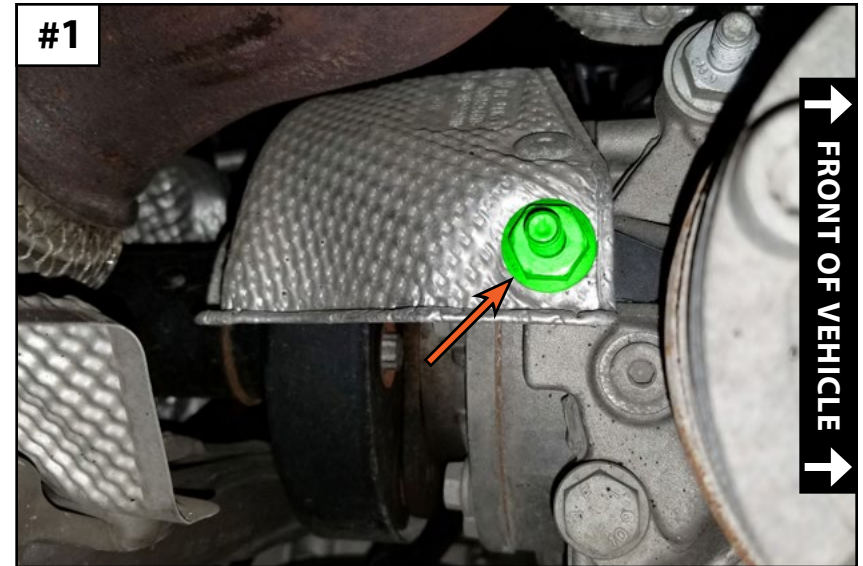
We would suggest using an 8mm Allen socket, a few extensions, and a ratchet to remove them while working from the RF wheel well.



REMOVING THE ORIGINAL DOWNPIPE

Step 5: 16mm Socket & Ratchet, M10 Triple Square

Now we need to remove the heat shield which protects the front flex disc on the driveshaft. There is a 16mm bolt with a stud on the end on the RH side (shown in **Photo #1**, the RF axle shaft heat shield was mounted on this stud), and an M10 Triple Square bolt on the rear just above the flex disc (shown in **Photo #2**).



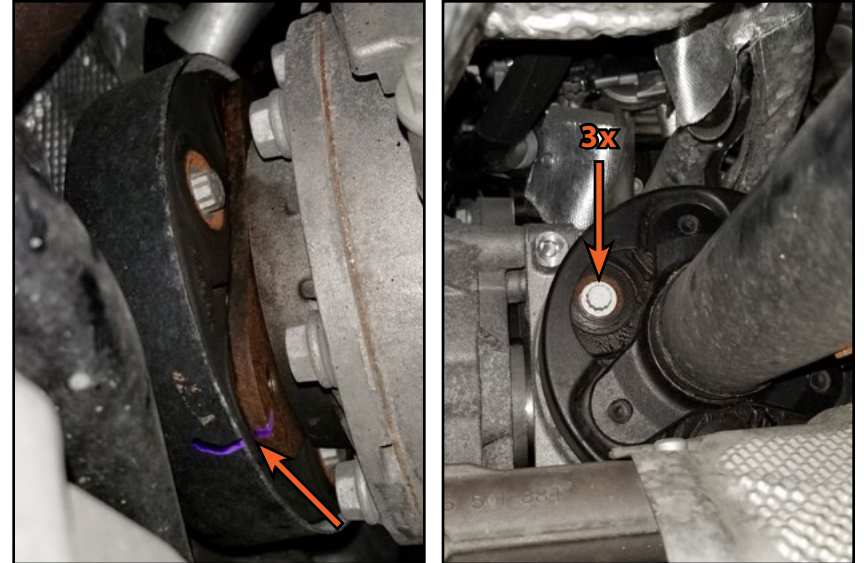
REMOVING THE ORIGINAL DOWNPIPE

Step 6: 10mm 12-Point Socket & Ratchet

Make a mark on the flex disc, driveshaft, and the output flange on the transmission for easy realignment later on (LH photo).

Remove the three bolts which secure the flex disc to the output flange on the transmission (RH photo). If you don't have a way to counter-hold the driveshaft during this step you can:

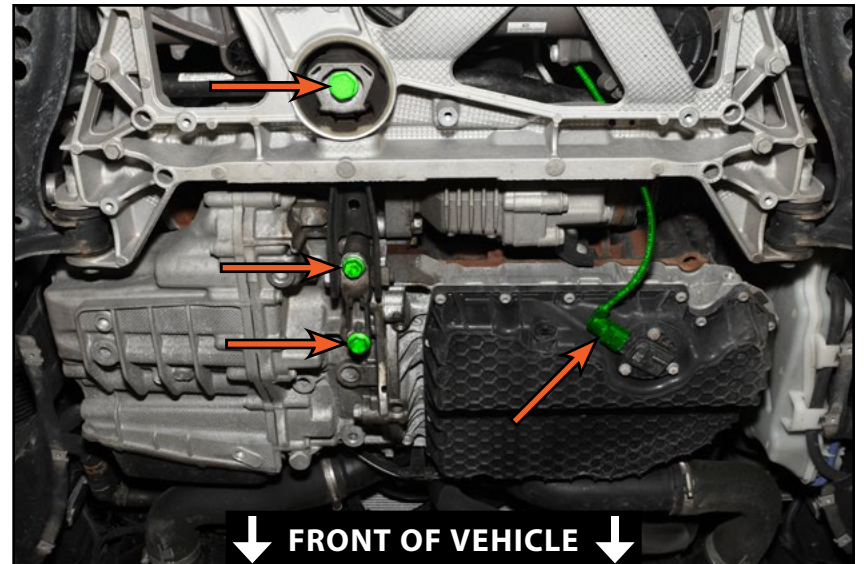
- Put the car into Neutral
- Rotate the driveshaft until you can access a flex disc bolt
- Put car into Park and apply the parking brake
- Loosen the bolt
- Put the car into Neutral and release the parking brake
- Rotate the driveshaft until you can access the next bolt
- Repeat until all three bolts have been removed



Step 7: 16mm Socket, 21mm Socket & Breaker Bar

We need to loosen or remove the pendulum mount in order to swing the engine forward and move the driveshaft off to the side. We completely removed the pendulum mount for our install, but you could release it from either the subframe or the transmission and still be able to swing the engine enough.

We also disconnected the oil level sensor just to be safe, it's not worth the risk of straining that wiring harness.



REMOVING THE ORIGINAL DOWNPIPE

Step 8:

Use a pry bar to swing the engine forward (**Photo #1**).

As the engine swings forward, you will be able to disengage the driveshaft from the output flange on the transmission. Be **VERY** careful to keep from damaging the centering sleeve/seal located on the end of the driveshaft (**Photo #2**).

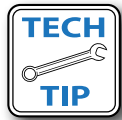
Once the driveshaft is free of the transmission output flange you can swing it off to the side (**Photo #3**).



REMOVING THE ORIGINAL DOWNPIPE

Step 9: 13mm Socket & Ratchet

Loosen the sleeve clamp which connects the downpipe to the rest of the exhaust system.



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

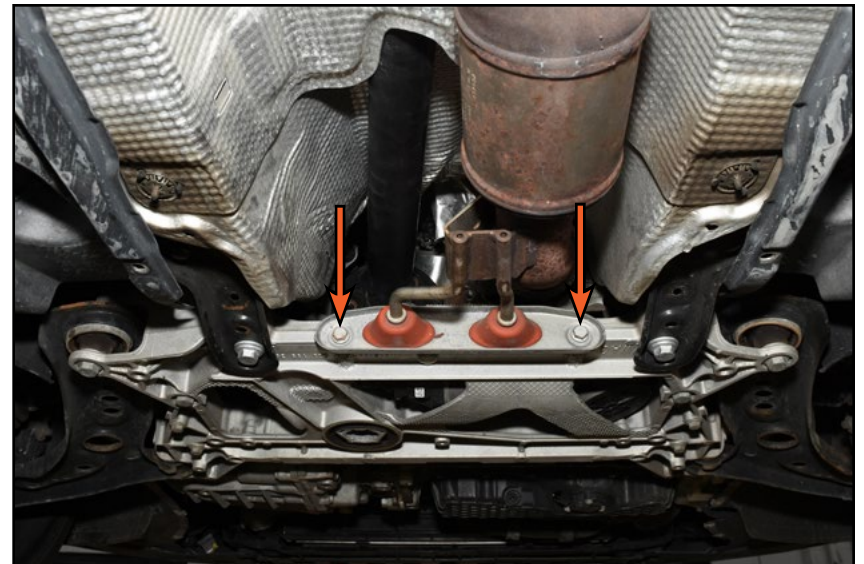


Step 10: 13mm Socket & Ratchet

Remove the two bolts which secure the downpipe mounting grommets to the subframe.



CAUTION: At this point there should be nothing else holding the downpipe in place.



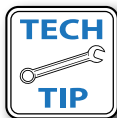
REMOVING THE ORIGINAL DOWNPIPE

Step 11:

Remove the downpipe from below as shown. You'll need to twist and manipulate it quite a bit to get it past all of the obstacles around it. This is where having an automotive lift is so important, there's no way to swing the downpipe downward like this if you're on jack stands (please see the Tech Tip below for more).



Look closely and you'll see the angle at which the downpipe needs to be removed, you won't be able to do this if you're on jack stands. If you are on jack stands we would very strongly suggest you either completely remove the driveshaft, or support the engine from above and remove the front subframe. It adds a lot of extra work onto this job, but the payoff is a huge amount of extra space to work and that is well worth the time!



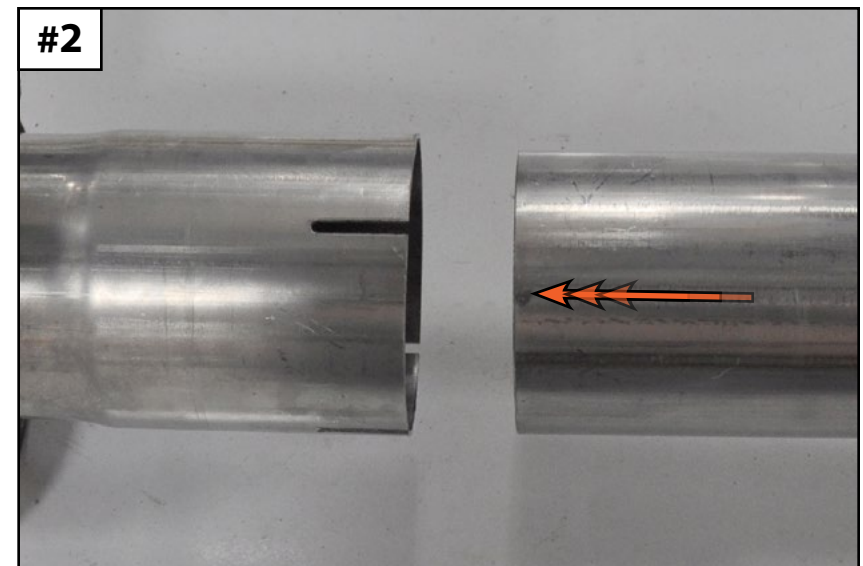
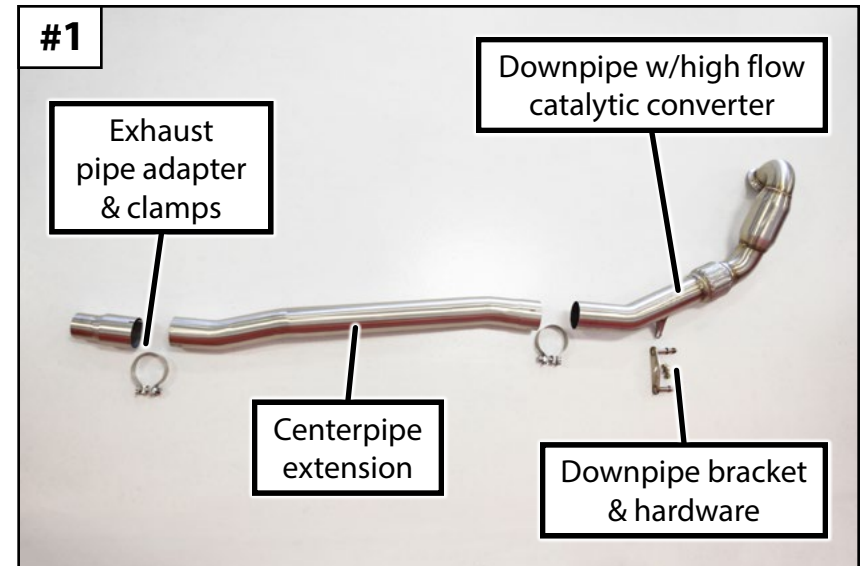
INSTALLING THE NEW DOWNPIPE

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.

Carefully unpack your new downpipe and lay it out on the floor, locating everything in its installation position (**photo #1**).

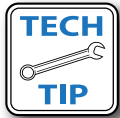
At each of the slip connections, fit the pipes together to make sure they slide together easily (**photo #2**). If they do not slide together easily, inspect the ends of the pipes for any slight distortion or bending (this is sometimes impossible to avoid during shipping). Using a ball peen hammer, gently 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.



INSTALLING THE NEW DOWNPIPE

Step 3: Exhaust Pipe Hanger Removal Pliers

Remove the mounting grommets from the stock downpipe.

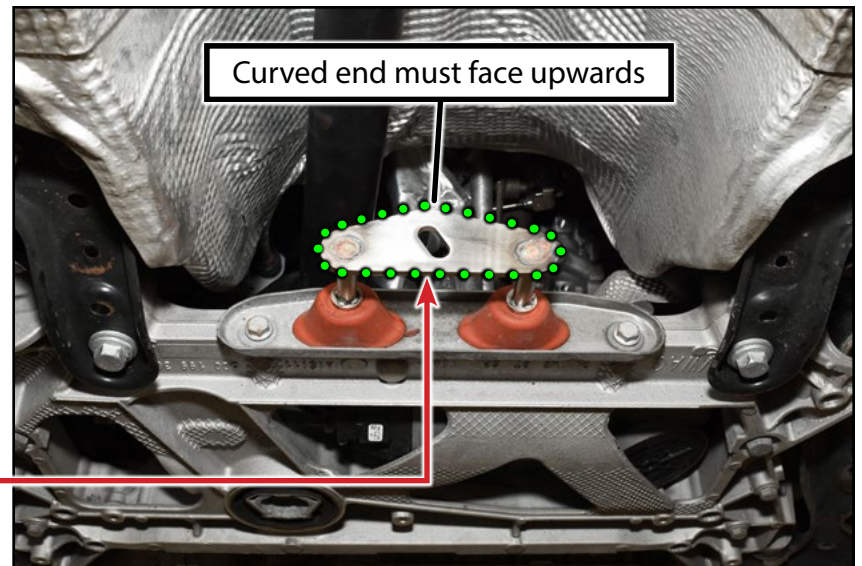


These very handy pliers can be found HERE: [ES#2784927](#).



Step 4: 13mm Socket & Torque Wrench

Reinstall the downpipe mounting grommets onto the subframe and torque the bolts to 20 Nm (15 ft-lbs), then install the ECS downpipe bracket into the grommets as shown.

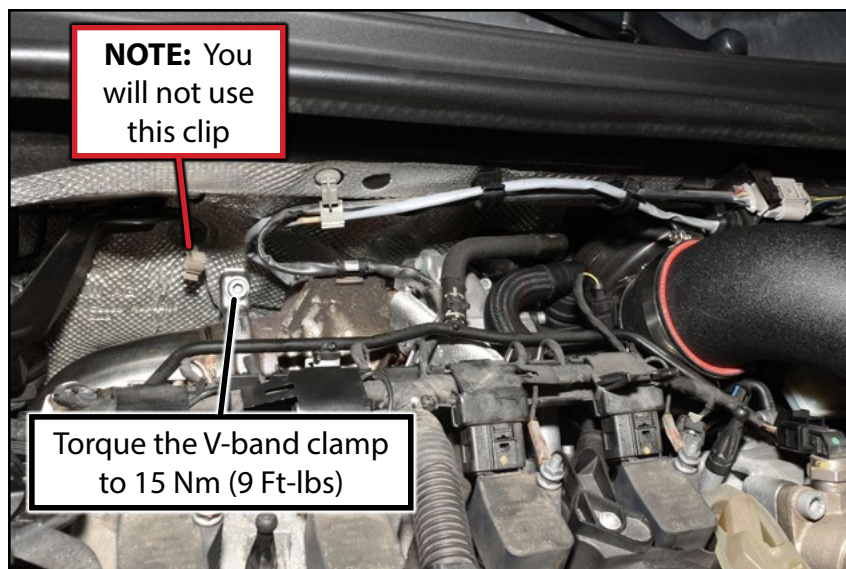
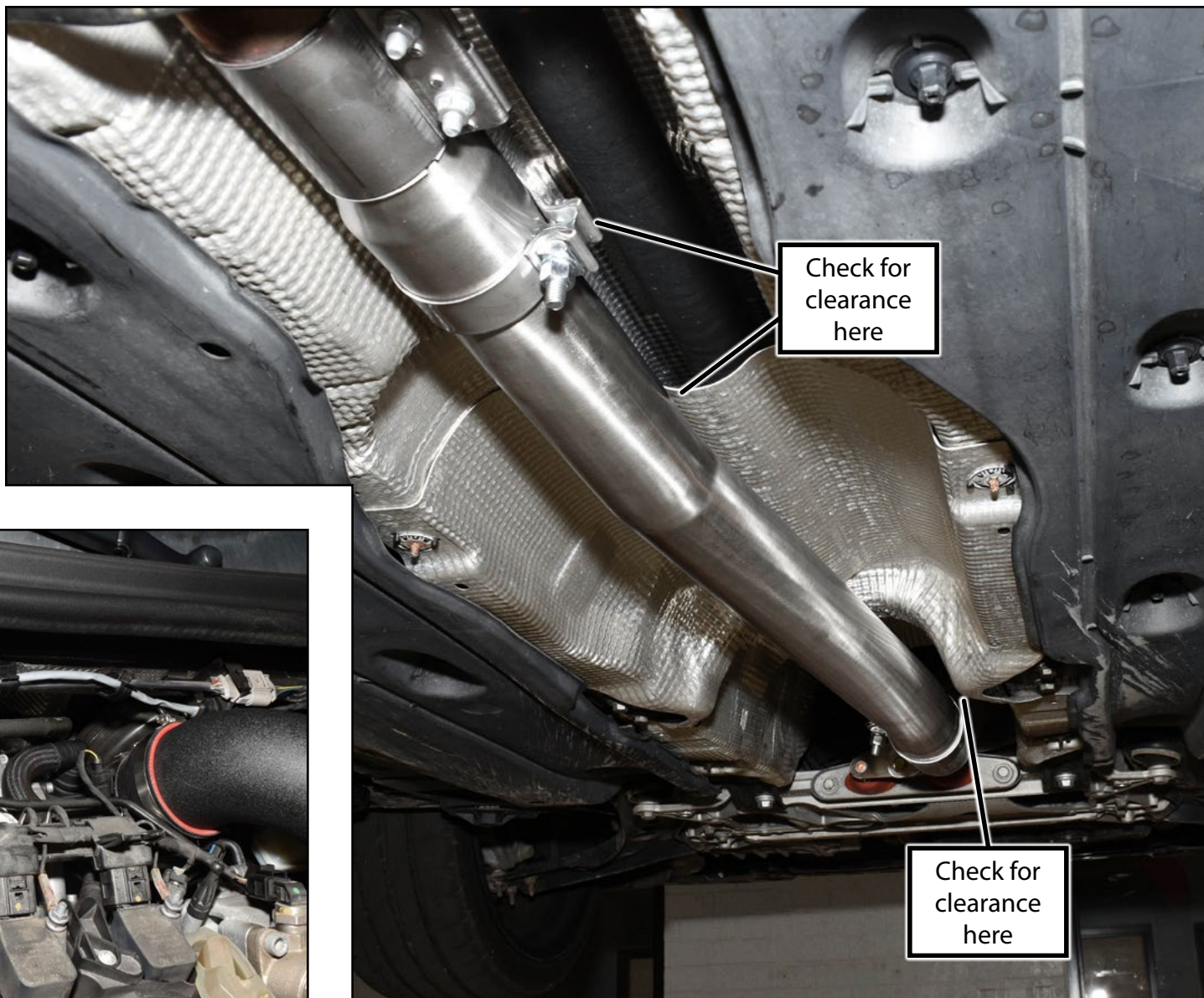


INSTALLING THE NEW DOWNPIPE

Step 5:

Loosely install the extension pipe onto the downpipe, then connect the extension pipe to the rest of the exhaust system. If you have a stock exhaust you can use our reducer and sleeve clamp for this. Leave all of the clamps loose for now.

Working from above, reinstall the V-band clamp and oxygen sensor. Note that you will not be using one of the harness clips (photo below).



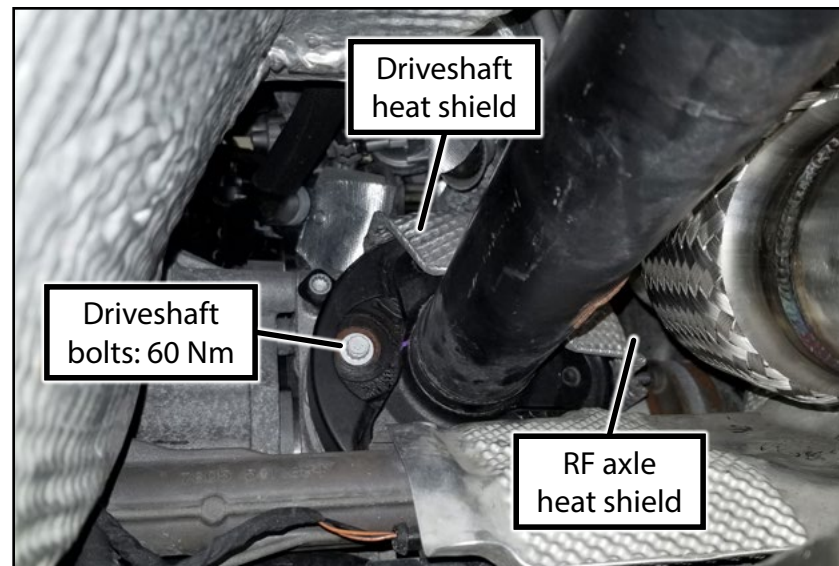
INSTALLING THE NEW DOWNPIPE

Step 6: 10mm 12-Point Socket & Torque Wrench

Reinstall the driveshaft onto the transmission output flange, then torque the bolts to 60 Nm (44 Ft-lbs). Reinstall the driveshaft and the RF axle shaft heat shields.



Please reference the counter-holding procedure for the driveshaft which we outlined on [Page 10](#).



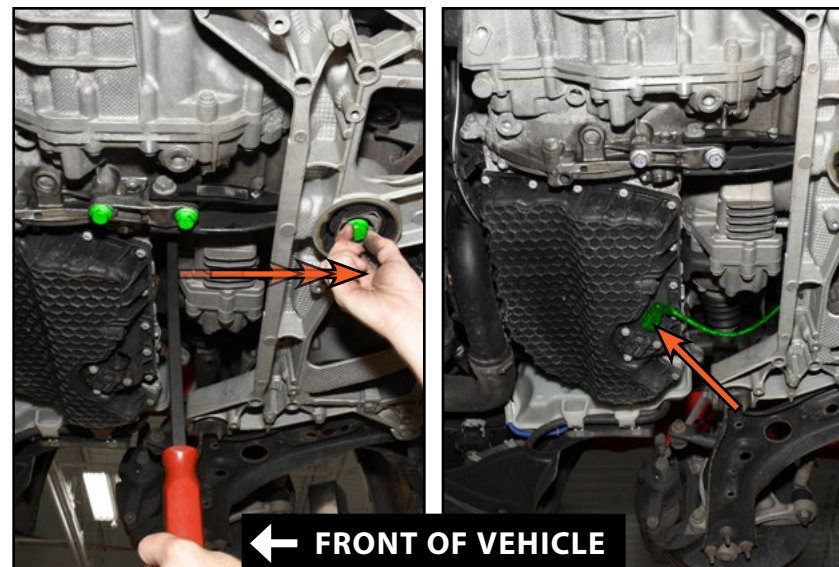
Step 7: 16mm Socket, 21mm Socket, Breaker Bar, Torque Wrench

Thread the two transmission bracket bolts into place by hand. Next, use a pry bar to pull the engine rearward, align the subframe bolt and thread it in by hand (LH photo).

Torque the bolts in the following order:

1. Torque the two 16mm bolts to 50 Nm (37 Ft-lbs)
2. Torque the 21mm bolt to 130 Nm (96 Ft-lbs)
3. Rotate all three bolts an additional 90°

Reconnect the oil level sensor.



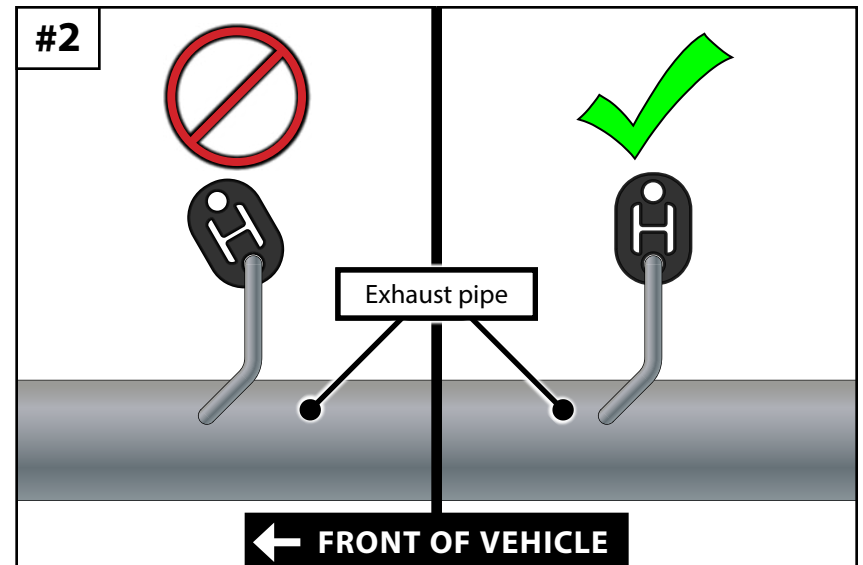
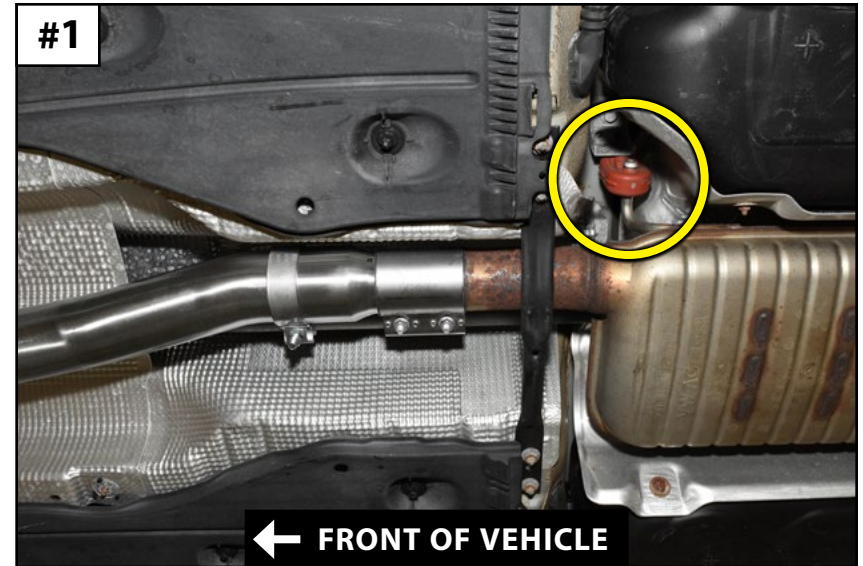
INSTALLING THE NEW DOWNPIPE

Step 8:

Let's take a moment to review how to properly adjust the exhaust system:

The exhaust hangers (one of which is circled in **YELLOW** in **photo #1**) should be inclined toward the front of the vehicle, or straight up and down (**photo #2**). This will allow the hangers to pivot rearward as the system heats up and expands.

Once you are satisfied with the way that the downpipe fits, be sure to go back and double check that all of the fasteners are torqued down.



INSTALLING THE NEW DOWNPIPE

Step 9:

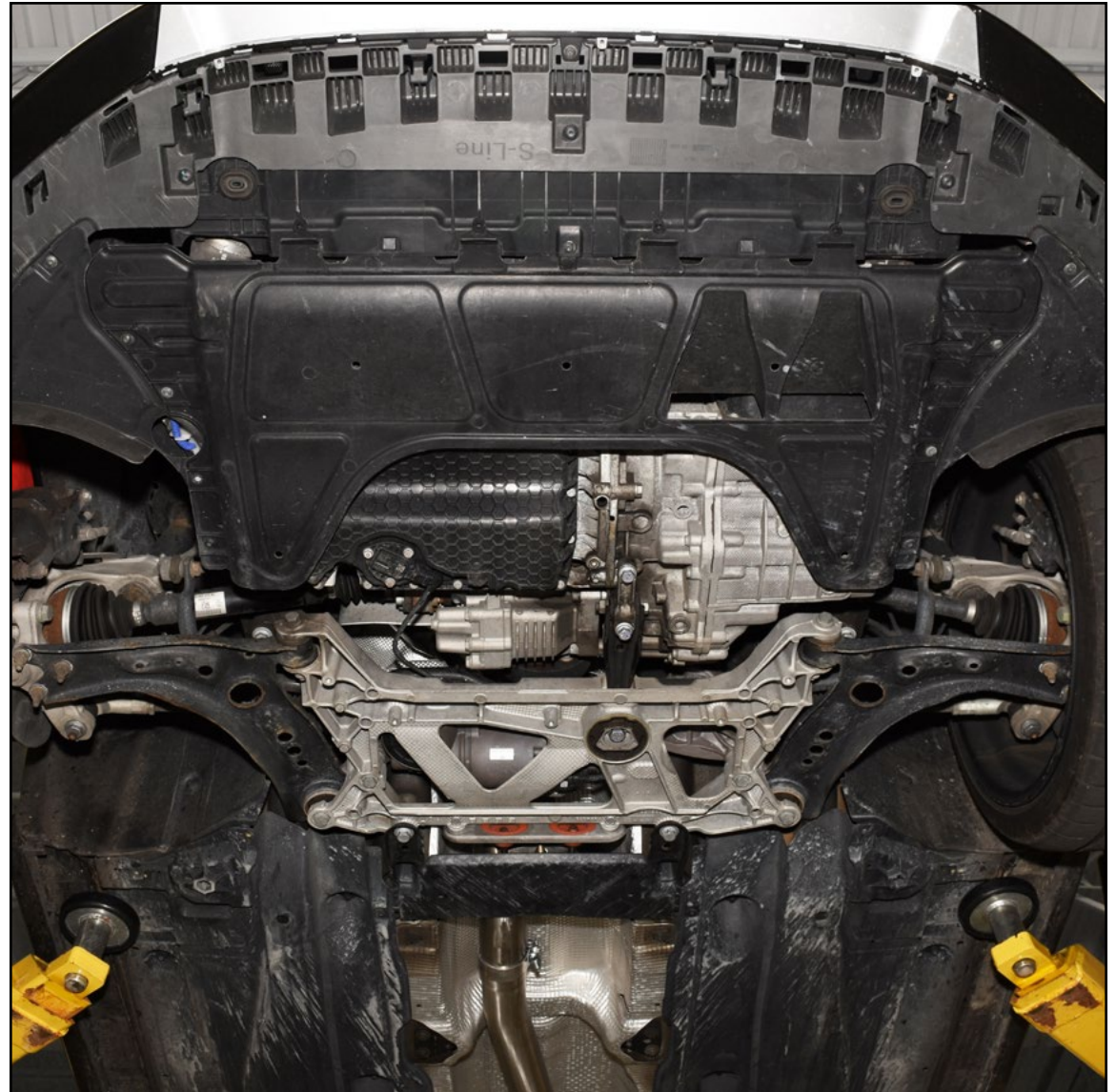
Double check that all of the exhaust clamps are fully tightened down.

Wipe any oil, grease, or fingerprints from the exhaust system.

Reinstall the insulation panel(s).

Reinstall the RF wheel.

Recheck all fasteners after the vehicle has been driven 500 miles.



Congratulations, your installation is complete!

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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 Downpipe w/High Flow Cat 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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