Audi B9 S4 ECS Valved Exhaust System Installation Instructions - Click HERE to Shop

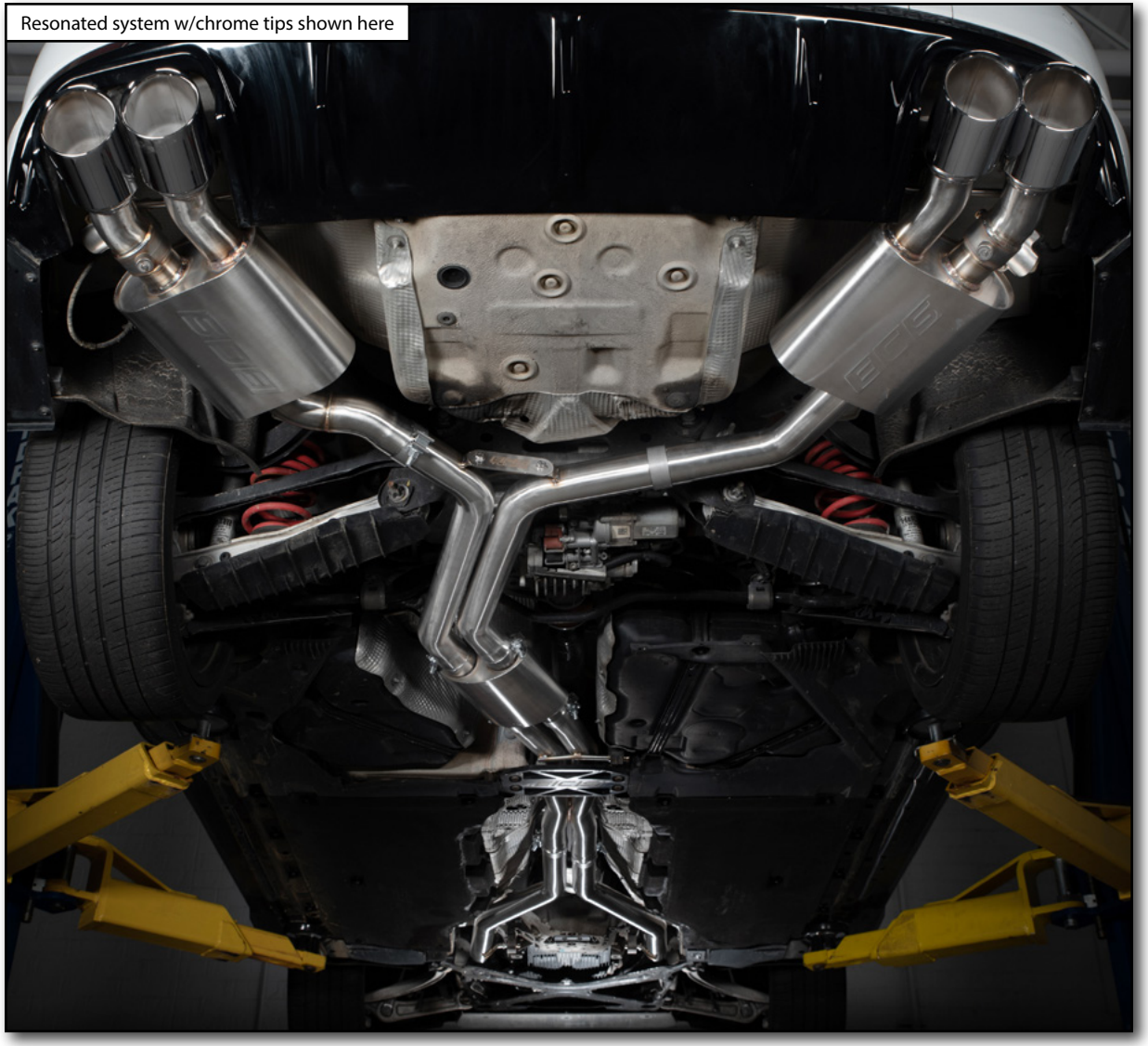
Skill Level
2 - Moderate

Some Experience Recommended

Resonated system w/black tips shown here

Non-resonated system w/chrome tips shown here

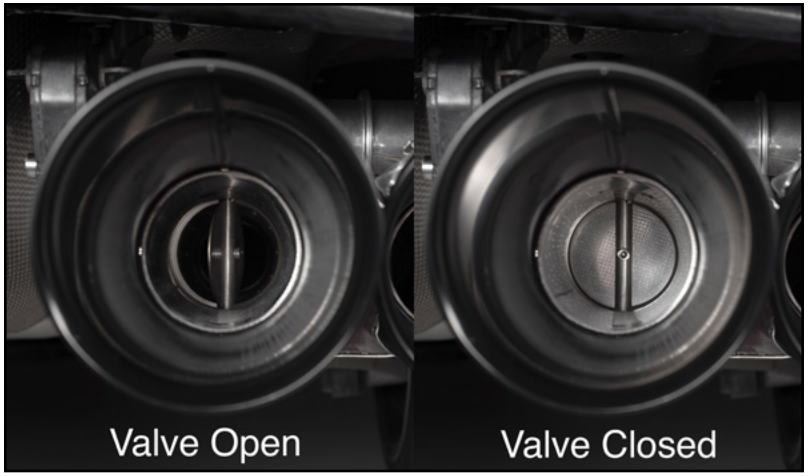
Resonated system w/chrome tips shown here



INTRODUCTION

Upgrading the exhaust on your Audi B9 S4 is a very rewarding project that an experienced technician will be able to complete in a single day, plan accordingly based on your experience level. The ECS valved cat-back exhaust system will fit like the stock system, but will completely change the character of your car. Our exhaust system utilizes the stock electronic valve servos for ease of install, meaning that they will operate just like they did with the stock system.

Before you begin, read and familiarize yourself with these instructions and make sure you have all the required tools on hand. Thank you for looking to ECS Tuning for all your performance and repair needs, we appreciate your business!



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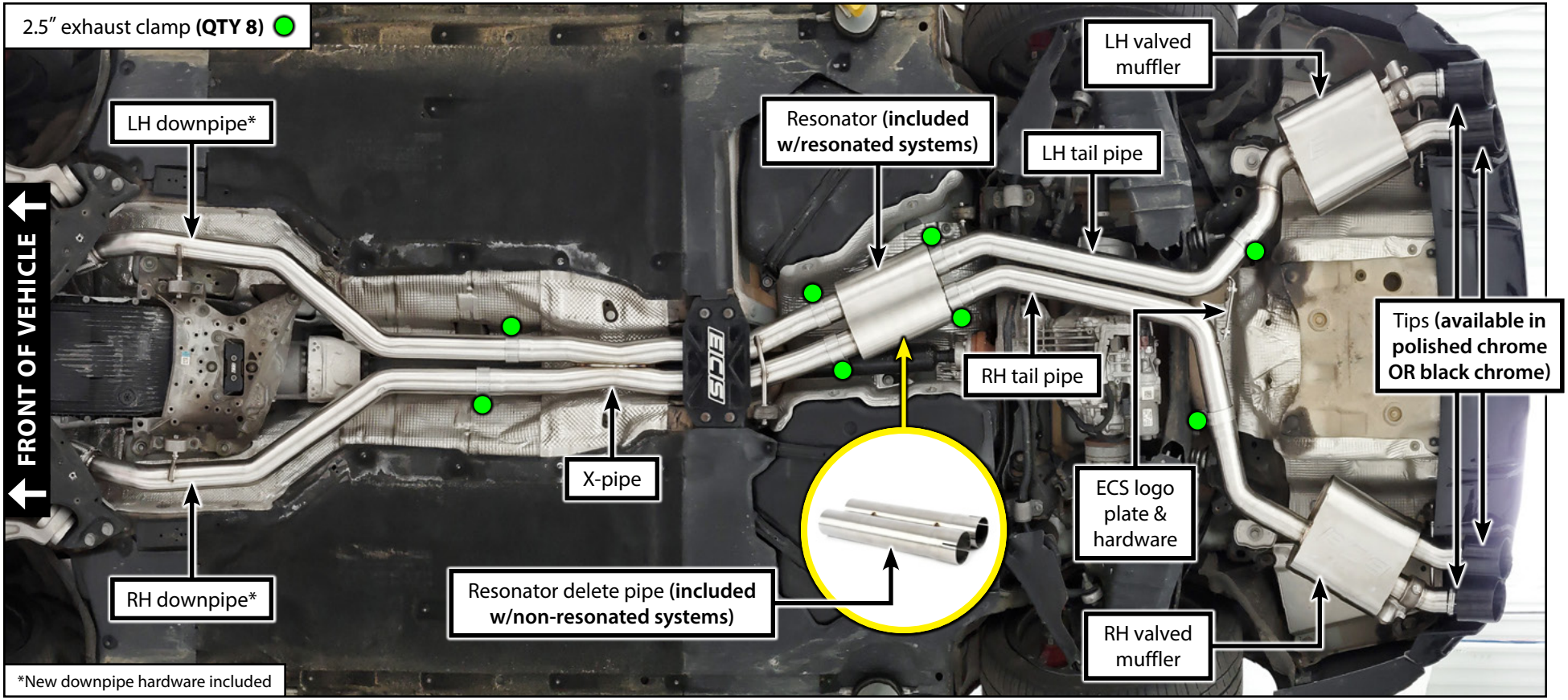
KIT CONTENTS



Kits are available resonated or non-resonated, with chrome or black tips. Resonated systems utilize a resonator mounted in the center of the center of the system to reduce resonant frequencies from entering the cabin (commonly referred to as "drone"). Our ECS exhaust tips feature swivel adjustment to fine tune their fit.

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

- **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 STOCK EXHAUST SYSTEM

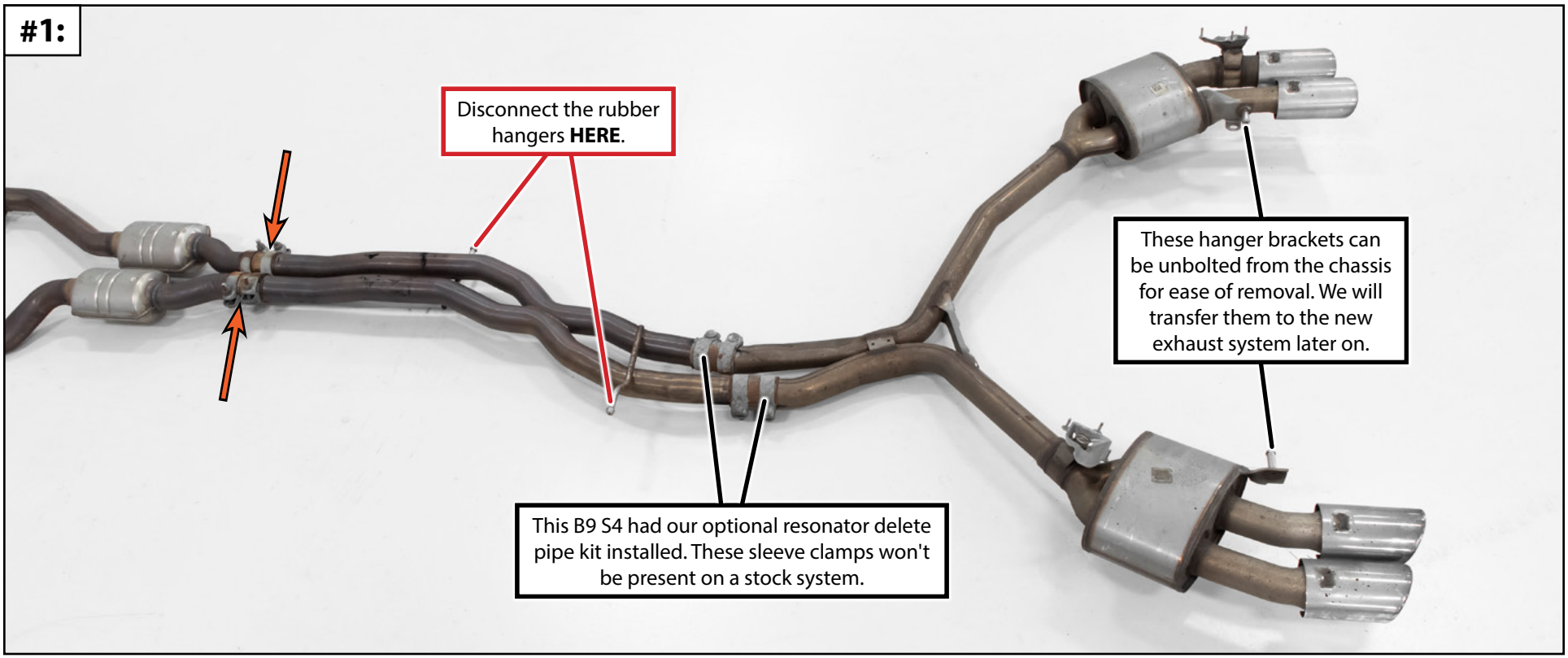
Step 1: 16mm Socket & Ratchet, 13mm Wrench, 13mm Socket & Ratchet, Exhaust Hanger Removal Pliers

Safely lift and support the vehicle, remove the belly pans, remove the four bolts which secure the body cross brace to the chassis. Soak all of the fasteners on the exhaust system with penetrating oil. Loosen the sleeve clamps (arrows in **Photo #1**) between the downpipes and the rest of the exhaust system.

Now it's time to release the exhaust hangers. The two rearmost hanger brackets can be unbolted from the chassis (**BLACK** note in **Photo #1**), but the rubber hangers should be removed from the forward hanger rods (**RED** note in **Photo #1**).

Carefully lower the entire system to the ground.

#1:



REMOVING THE STOCK EXHAUST SYSTEM

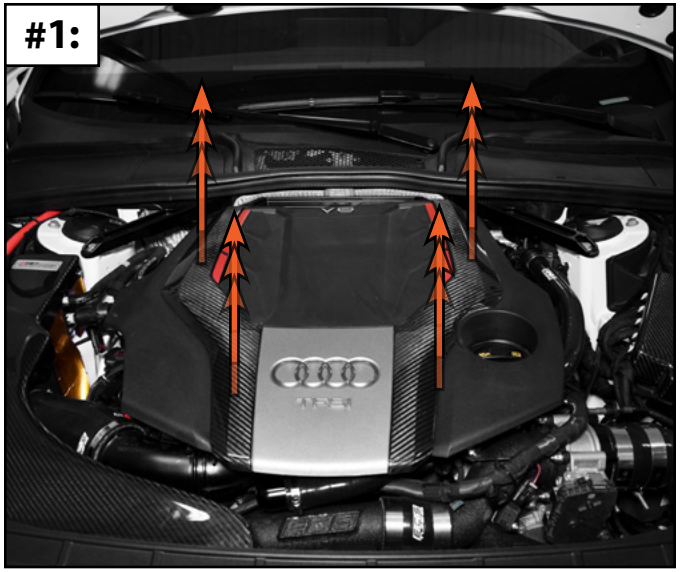
Step 2:

Lift up on the engine cover to pop it free from the mounting studs. Set the engine cover aside (**Photo #1**).

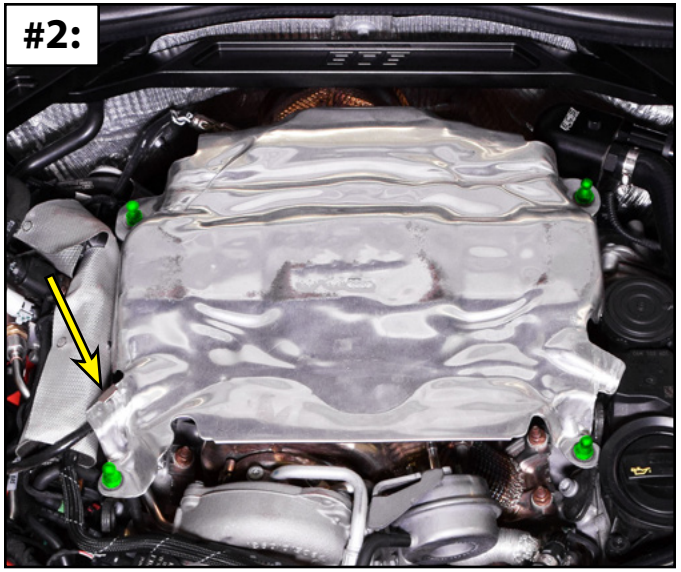
Remove the four mounting studs (highlighted in **GREEN** in **Photo #2**) which secure the heat shield to the engine. Be sure to pull the wiring harness free from the small clip near the front of the heat shield (**YELLOW** arrow in **Photo #2**), then remove the heat shield from the engine bay.

OPTIONAL: At this point we decided to remove the center section from our front strut brace (highlighted in **GREEN** in **Photo #3**). This gave us some extra room to work, but it's if you're not installing a high-flow catalytic converter you could leave the brace installed.

#1:



#2:



#3:

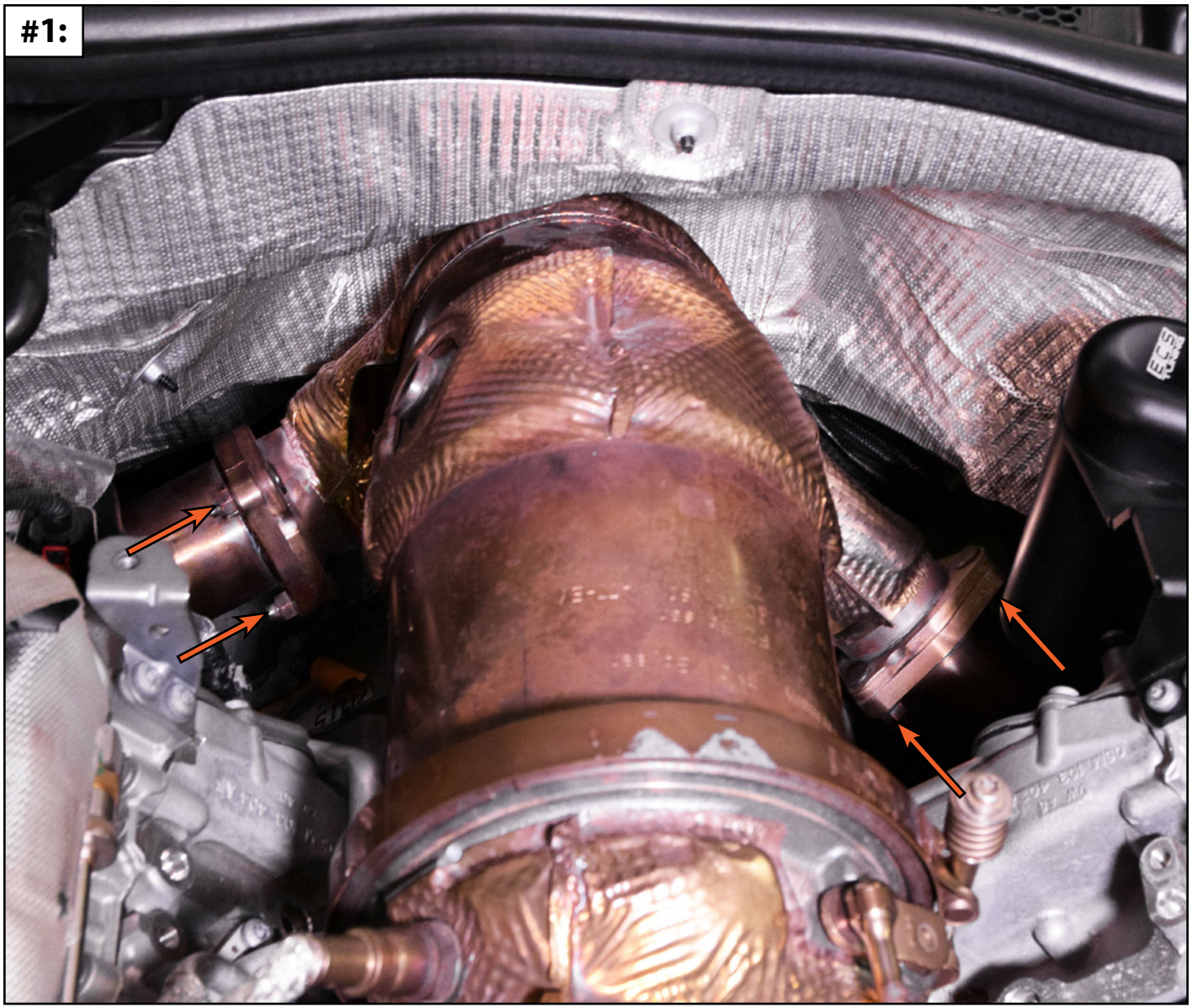
REMOVING THE STOCK EXHAUST SYSTEM

Step 3:

Soak all of the downpipe nuts with penetrating oil (arrows in **Photos #1**), then remove and discard them. Some of these can be tough to reach, a stubby 12mm wrench or a 12mm torque adapter can really come in handy here.

Remove four of the downpipe nuts from above (arrows in **Photo #1**). There are two nuts which are particularly tricky to reach, we'll work on those on the next page.

#1:



REMOVING THE STOCK EXHAUST SYSTEM

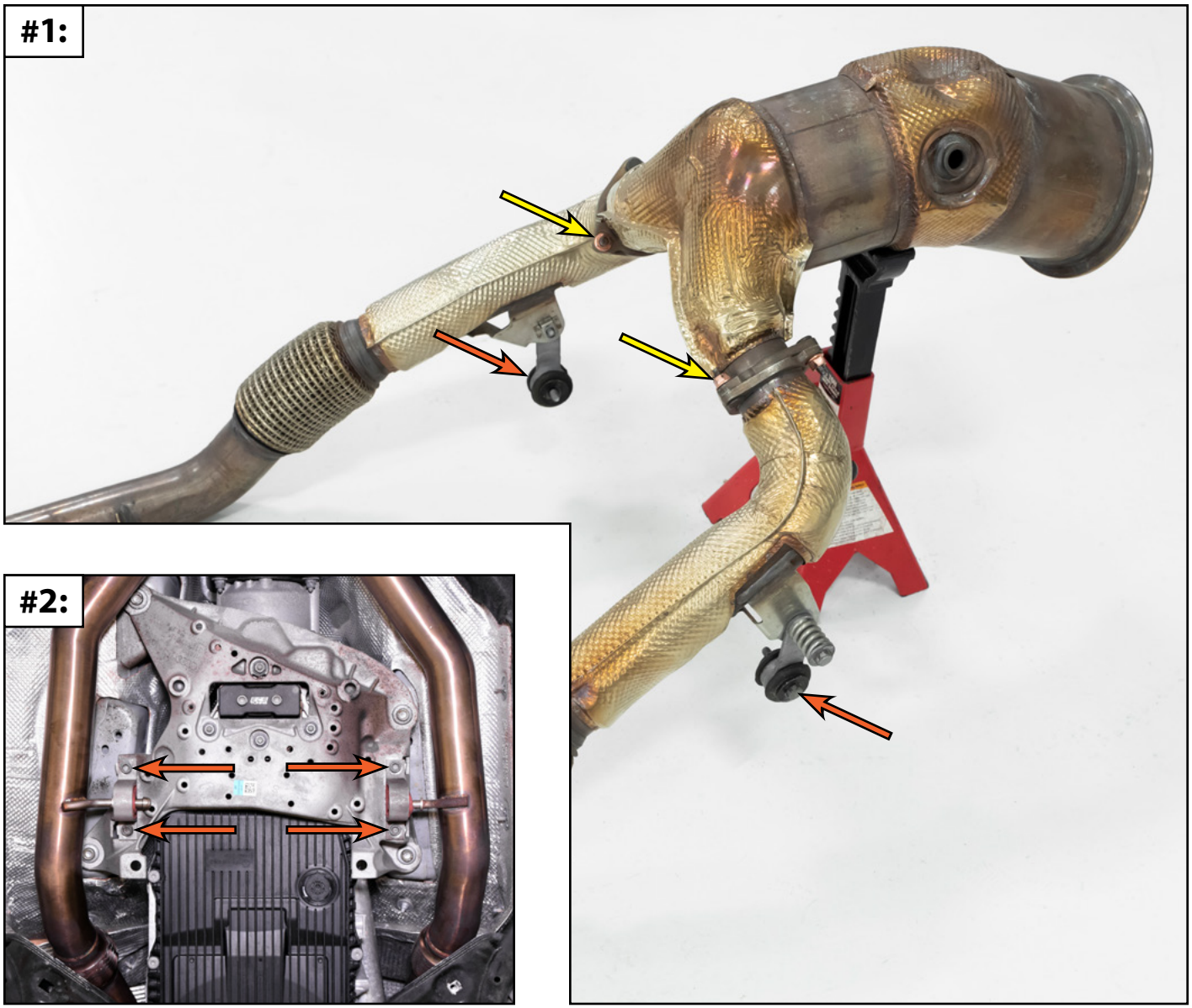
Step 4:

Remove the two downpipe nuts which are more difficult to access (**YELLOW** arrows in **Photo #1**). This can be done from below or above.

Remove the four bolts which secure the downpipe hangers to the crossmember (**ORANGE** arrows in **Photo #2**).

Looking up the downpipe, remove the bolt which secures the downpipe mount to the transmission case (**ORANGE** arrows in **Photo #1**).

#1:



#2:

REMOVING THE STOCK EXHAUST SYSTEM

If you purchased a kit WITH a new high flow catalytic converter:

- Please reference the instructions on ES#3979009 under the "Installation" tab.

If you purchased a kit WITHOUT a new high flow catalytic converter:

- Please proceed to the next page.

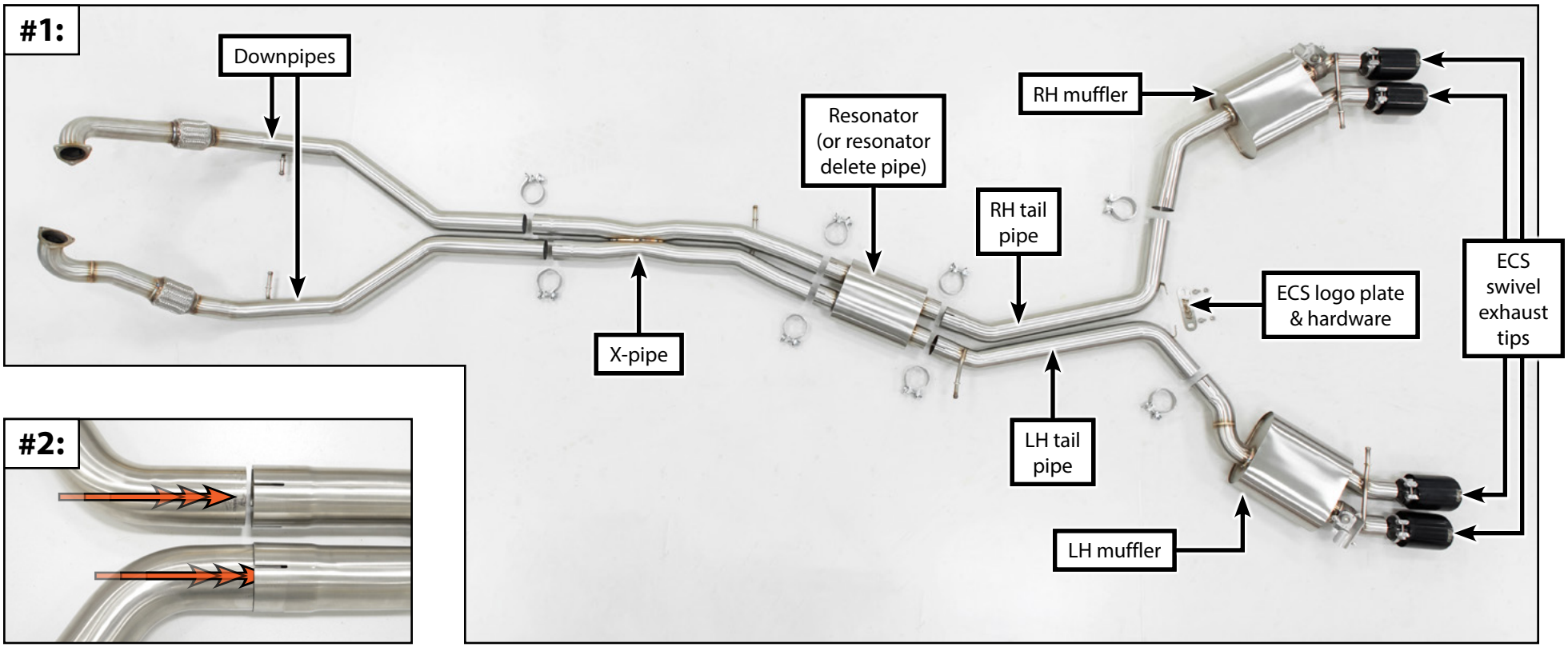
INSTALLING THE NEW VALVED EXHAUST SYSTEM

Step 1: Ball Pein Hammer

Before we begin it's a good idea to unpack your new exhaust system and carefully lay it out on the floor (**Photo #1**). Inspect all of the slip joints for any signs of damage during shipping. Test fit the pipes together at every slip joint to make sure they slide together easily (**Photo #2**). If they do not slide together easily, gently tap on the ends of the pipes with a ball pein hammer to straighten them, then recheck fitment.

Please note that during this installation, you will be installing the exhaust from front to back ***WITHOUT*** tightening any of the clamps. Once the system is installed, we will then show you how to position the system properly and you will tighten the clamps ***AFTER*** that is complete. Proceed to the next page once all of the slip joints slide together easily.

#1:



#2:

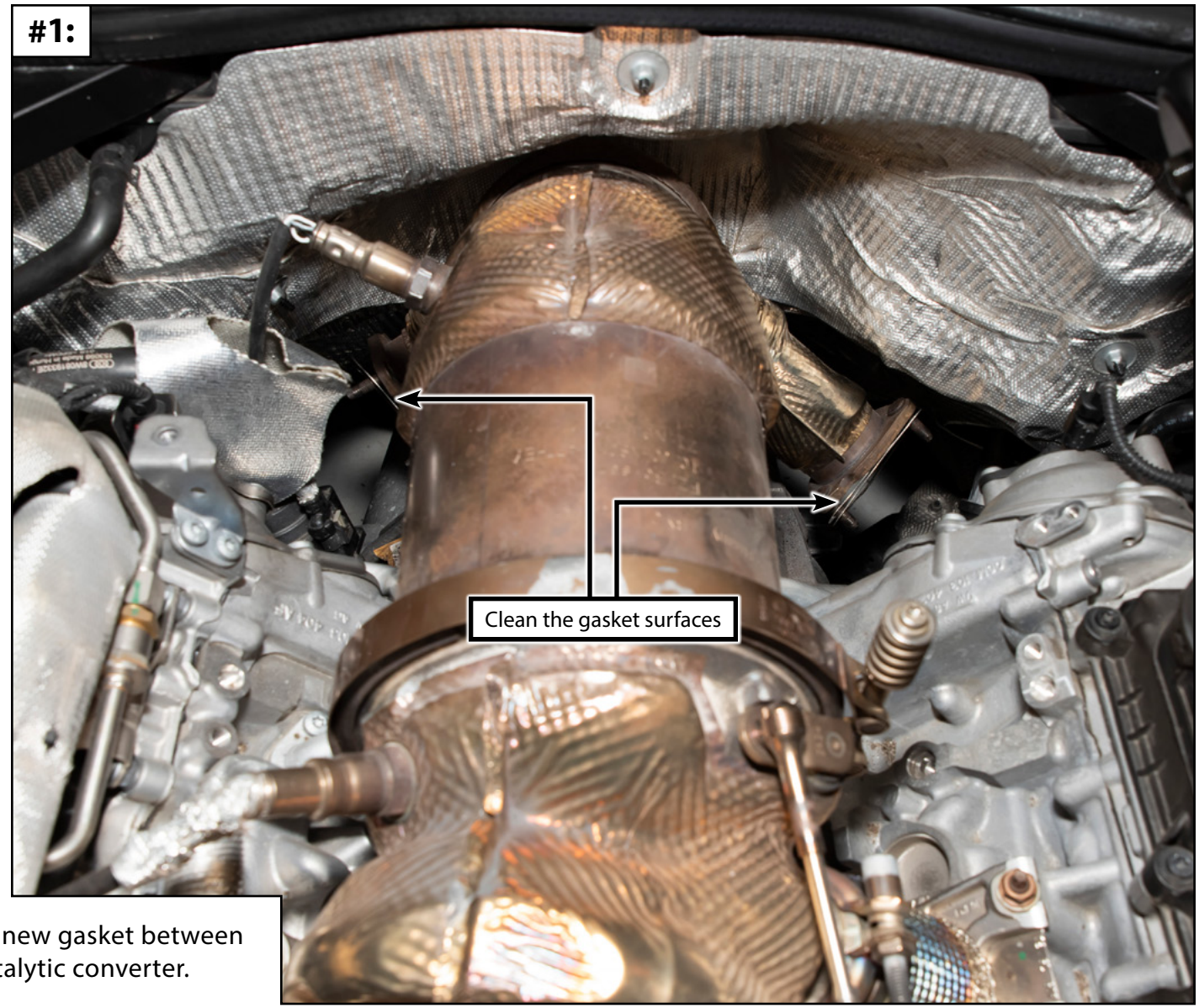
INSTALLING THE NEW VALVED EXHAUST SYSTEM

Step 2:

Clean the ends of the catalytic converter flanges with a suitable degreaser or brake cleaner (not shown).

Install the new downpipes onto the catalytic converters with the supplied hardware. You can tighten the bolts by hand until they are “snug”, but **DO NOT USE AN IMPACT WRENCH** and do not fully tighten them at this time.

#1:



NOTE

Don’t forget to install the new gasket between the downpipe and the catalytic converter.

INSTALLING THE NEW VALVED EXHAUST SYSTEM

Step 3:

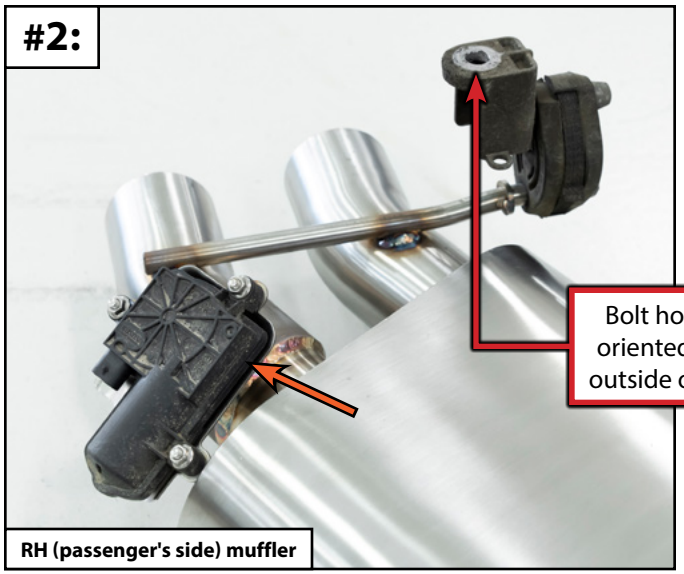
Remove the electronic valves from the stock mufflers and transfer them over to the new ones. It's important to note that the spring seat inside the muffler needs to be aligned with the spring underneath the electronic valve (**ORANGE** arrow in **Photo #1**). This can be a bit tricky, but a flashlight and a small screwdriver can really come in handy here.

Transfer the electronic valves (**ORANGE** arrows in **Photos #2 & #3**) from the stock mufflers over to the new ones using the provided hardware. Tighten the nuts until they make contact + ⅛ turn.

Remove the rubber hangers from the stock mufflers and transfer them onto the new ones. Be sure to install them so that the bolt holes are oriented toward the outside of the vehicle (**RED** notes in **Photos #2 & #3**).

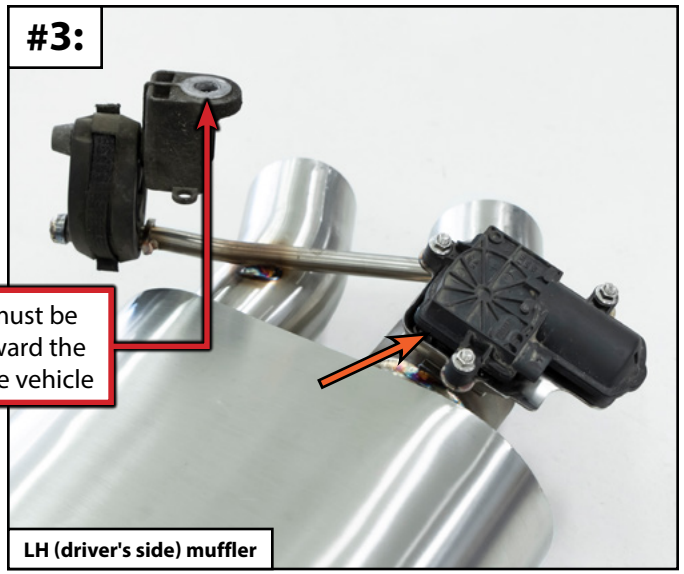
#1:

#2:



RH (passenger's side) muffler

#3:



LH (driver's side) muffler

INSTALLING THE NEW VALVED EXHAUST SYSTEM

Step 4: 13mm & 15mm Sockets, Ratchet

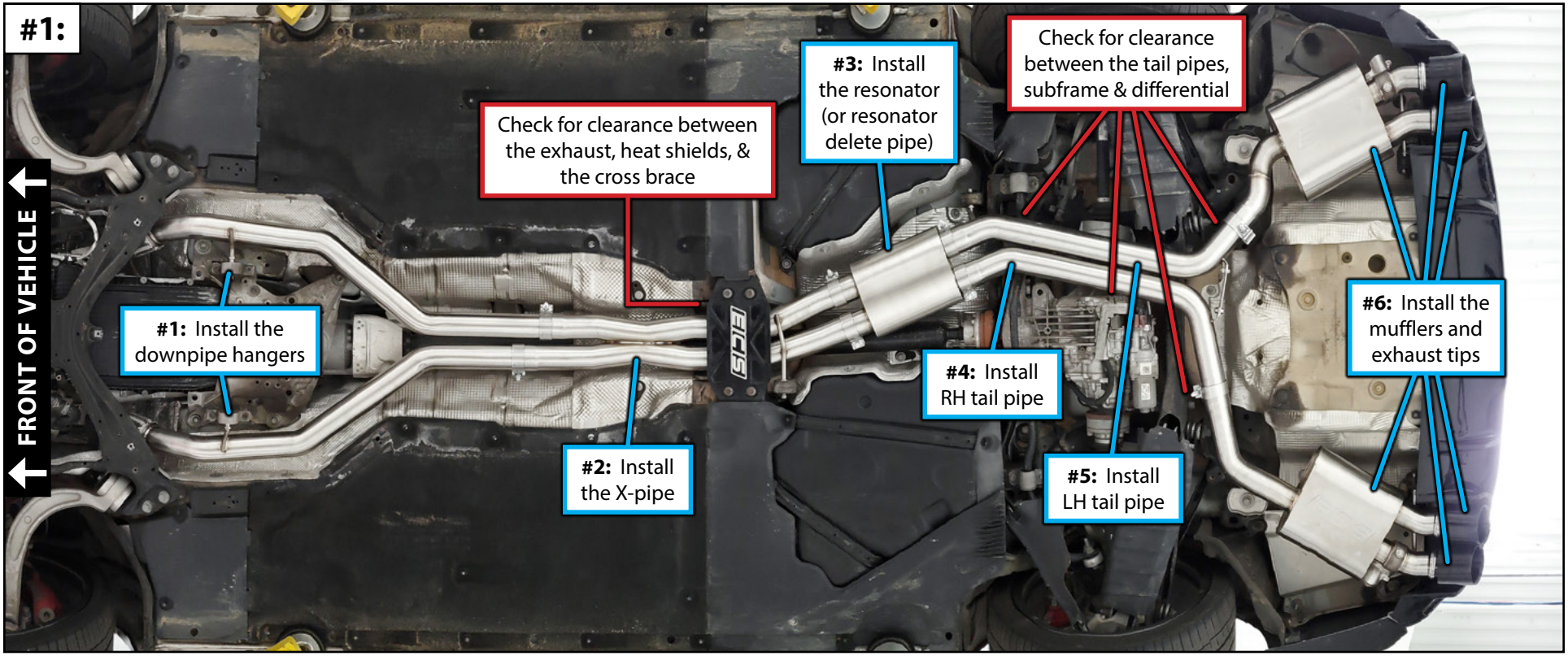
Loosely install the exhaust system in the order shown in **Photo #1** below.

Next, we'll need to adjust the exhaust system for proper fitment. The key to proper adjustment is patience, take your time and **DO NOT** fully tighten any of the clamps until **AFTER** you've performed all of the steps up through Page 16.

Closely inspect the exhaust system from front to back, we need to check for clearance between the pipes and nearby chassis components.

CAUTION: You can tighten the exhaust clamps until they are "snug", but **DO NOT USE AN IMPACT WRENCH** and do not fully tighten them yet!

#1:



INSTALLING THE NEW VALVED EXHAUST SYSTEM

Step 5: 13mm & 15mm Sockets, Ratchet

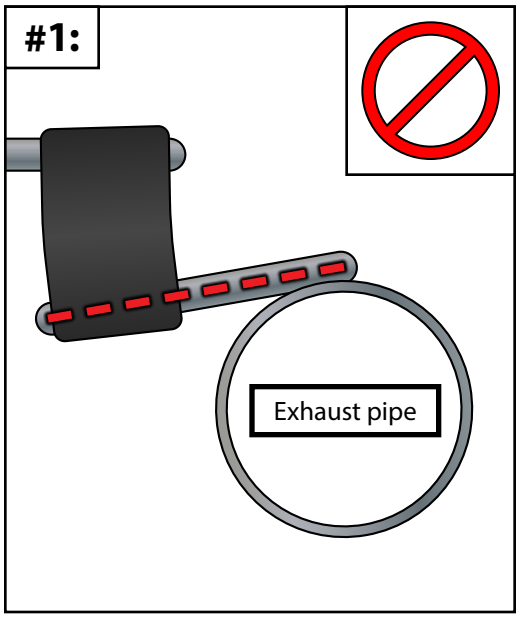
Check the hangers on the mufflers and exhaust pipes to ensure that they are sitting level side-to-side (**Photos #1 & #2 below**).

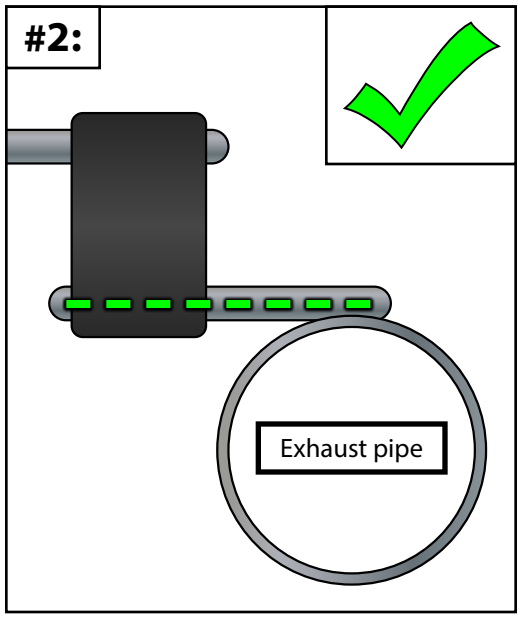
Finally, we want to ensure that the exhaust hangers are rotated at least slightly toward the front of the vehicle (**Photo #3 below**). The exhaust hangers should be inclined toward the front of the vehicle so that lower hole is approximately 10-15mm forward of the upper hole, this will allow the hangers to pivot backwards as the system heats up and expands.

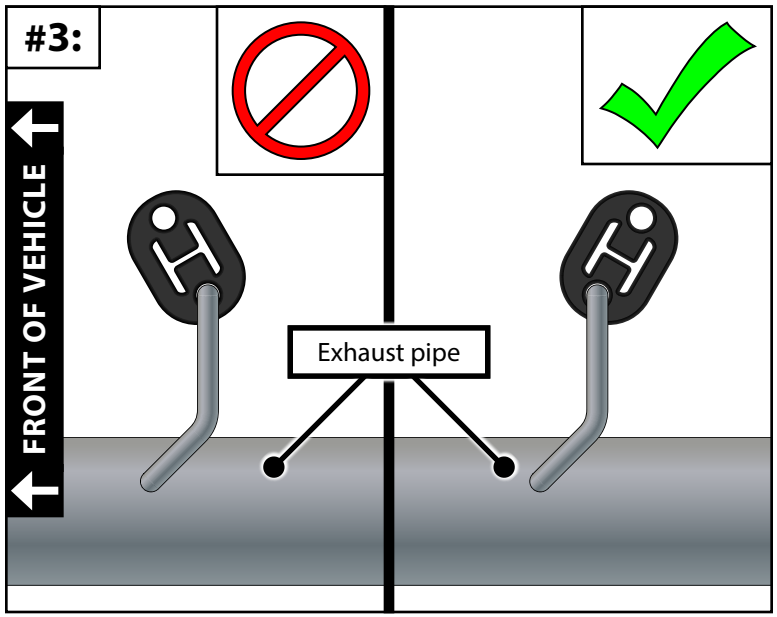
NOTE

Due to differences in manufacturing, as well as variations from one car to another, you might not be able to get all of your hangers to pitch forward. This is acceptable as long as they are at least close to vertical.

CAUTION: You can tighten the exhaust clamps until they are "snug", but **DO NOT USE AN IMPACT WRENCH** and do not fully tighten them yet!







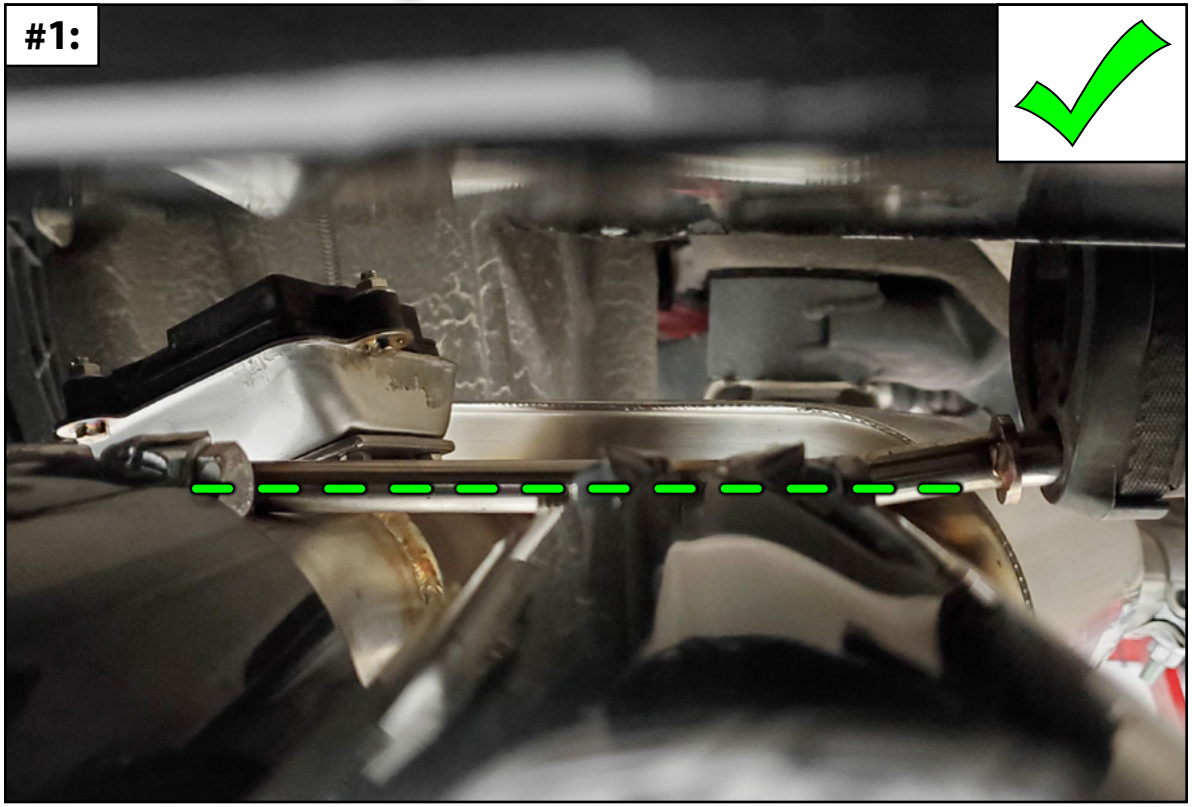
INSTALLING THE NEW VALVED EXHAUST SYSTEM

Step 6: 13mm & 15mm Sockets, Ratchet

Inspect the mufflers and ensure that they are sitting level side-to-side as much as possible. It may be helpful to look at the hanger rod to determine whether the muffler is sitting level or not (**Photo #1**). Center and level the mufflers and exhaust tips inside the bumper cut outs (**Photos #1 & #2 below**).

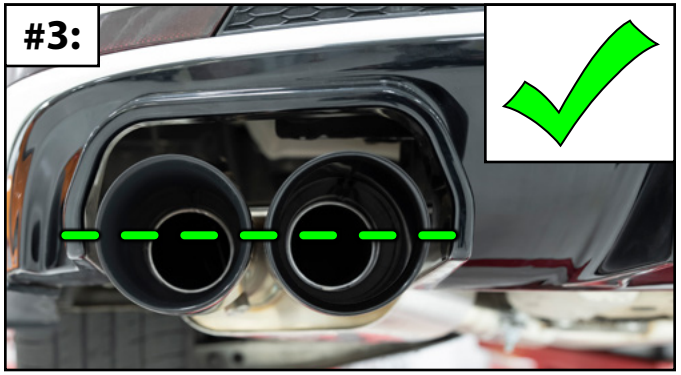
CAUTION: You can tighten the exhaust clamps until they are "snug", but **DO NOT USE AN IMPACT WRENCH** and do not fully tighten them yet!

#1:



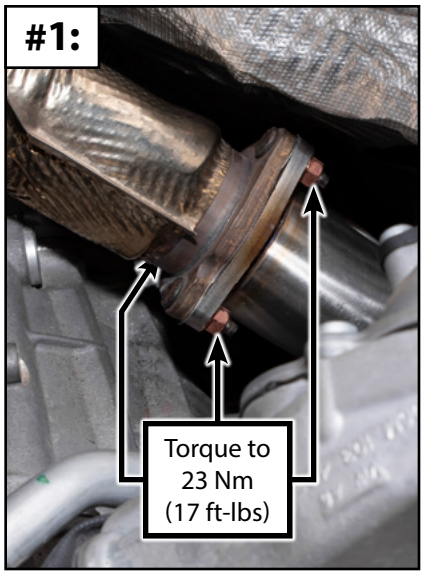
#2:

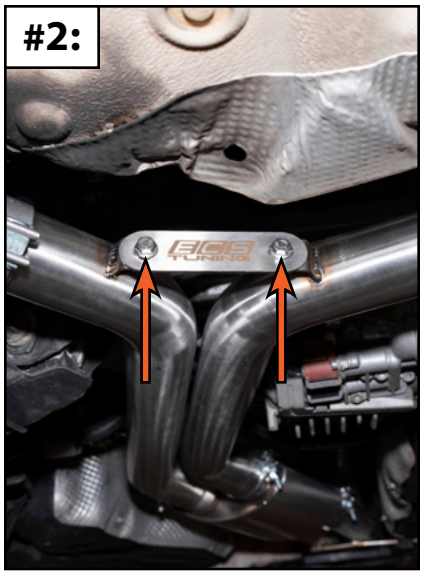
#3:



13mm & 15mm Sockets, Ratchet & Torque Wrench

- ☐ Torque the six downpipe nuts (**Photo #1**) to 23 Nm (17 Ft-lbs).
- ☐ Fully tighten each exhaust clamp, working from front to back & pushing upward on the pipes while you tighten them.
- ☐ Tighten the exhaust tip clamps (not shown) to 19 Nm (14 Ft-lbs).
- ☐ Install the ECS logo plate, tighten the bolts until snug (**Photo #2**).
- ☐ Connect the wiring harness to each muffler valve (not shown).
- ☐ Wipe any oil, grease, or fingerprints from the exhaust system.
- ☐ Reinstall the belly pans and chassis cross brace (not shown).
- ☐ Perform a system check by performing the following steps:
  - Start the engine, select "Comfort" mode from Drive Select.
    - The valves should be **CLOSED** in this mode (**Photo #3**).
  - Select "Dynamic" mode from Drive Select.
    - The valves should be **CLOSED** in this mode (**Photo #4**).
  - You should be able to hear a difference in both exhaust tone and volume when the valves are opened or closed.
- ☐ Recheck all fasteners after the vehicle has been driven 500 miles.





Your ECS Valved 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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