



Audi B8 S4/RS5 ECS Valved Exhaust System Installation Instructions - [Click HERE to Shop](#)



Skill Level
2 - Moderate
Some Experience
Recommended



* S4 Titanium resonated system shown



* S4 Stainless steel non-resonated system shown

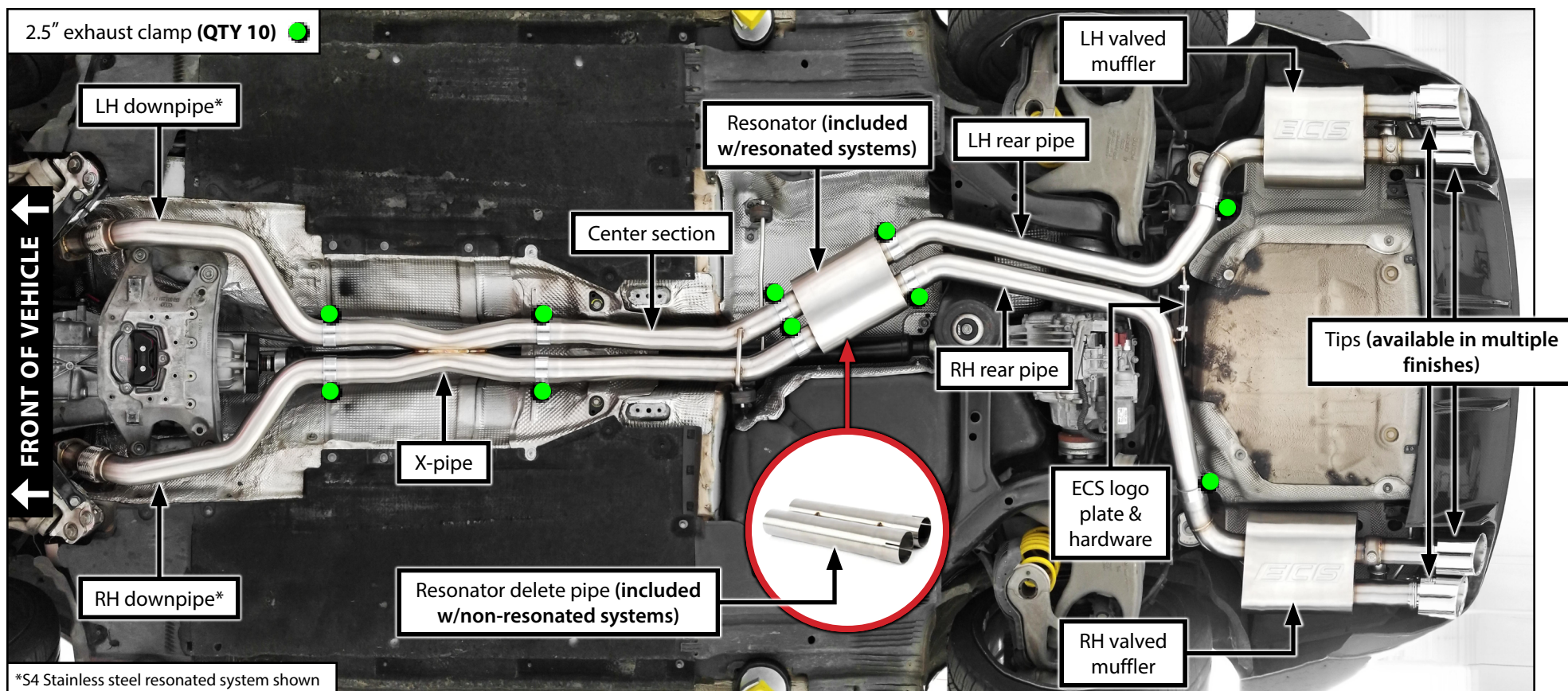


Proper service and repair procedures are vital to the safe, reliable operation of all motor vehicles as well as the personal safety of those performing the repairs. Standard safety procedures and precautions (including use of safety goggles and proper tools and equipment) should be followed at all times to eliminate the possibility of personal injury or improper service which could damage the vehicle or compromise its safety.

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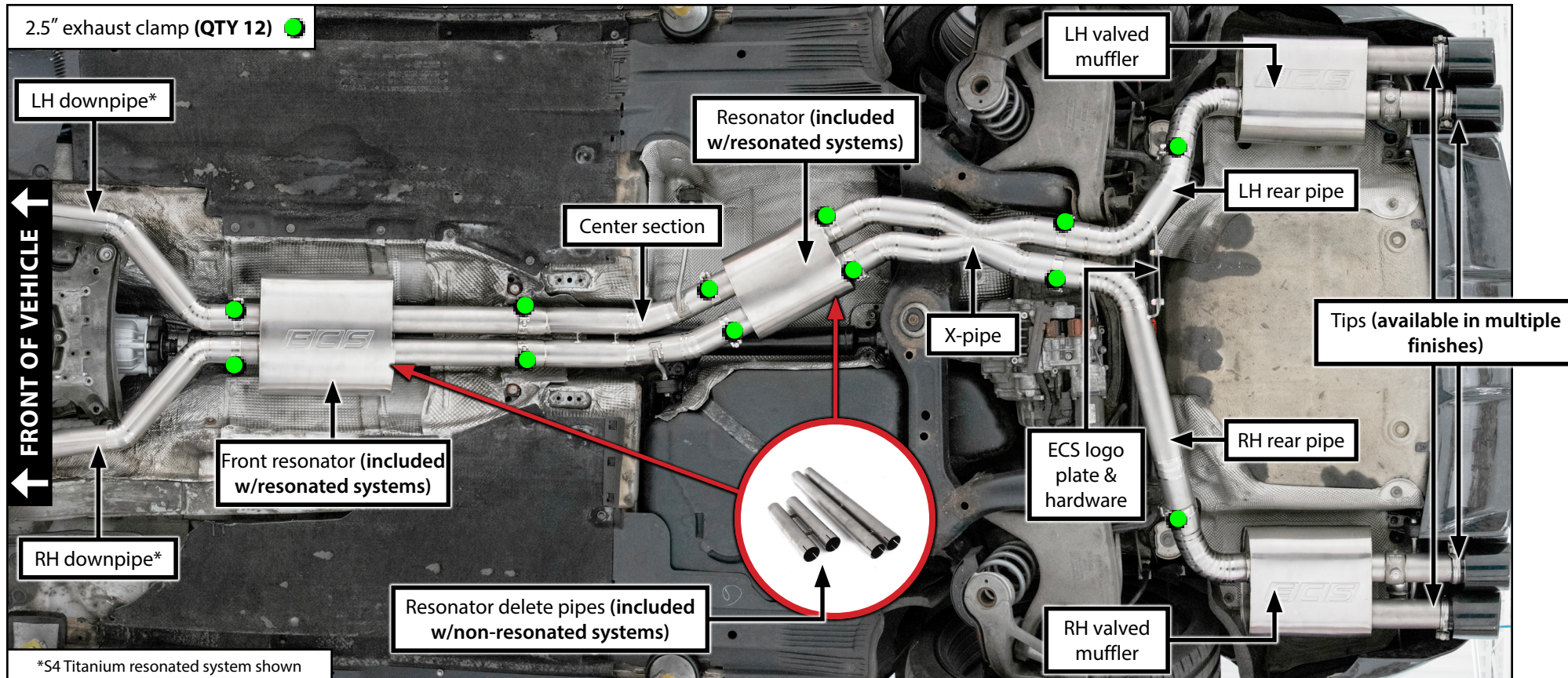
KIT CONTENTS - S4 STAINLESS STEEL SYSTEM



Kits are available resonated or non-resonated, with tips in your choice of finish. 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").

See [page 8](#) for the remote exhaust valve controller kit contents.

KIT CONTENTS - S4 TITANIUM/RS5 STAINLESS STEEL SYSTEM



Kits are available resonated or non-resonated, with tips in your choice of finish. 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").

See [page 8](#) for the remote exhaust valve controller kit contents.

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#2834951](#)
- **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

Available On Our Website

- **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](#)

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.

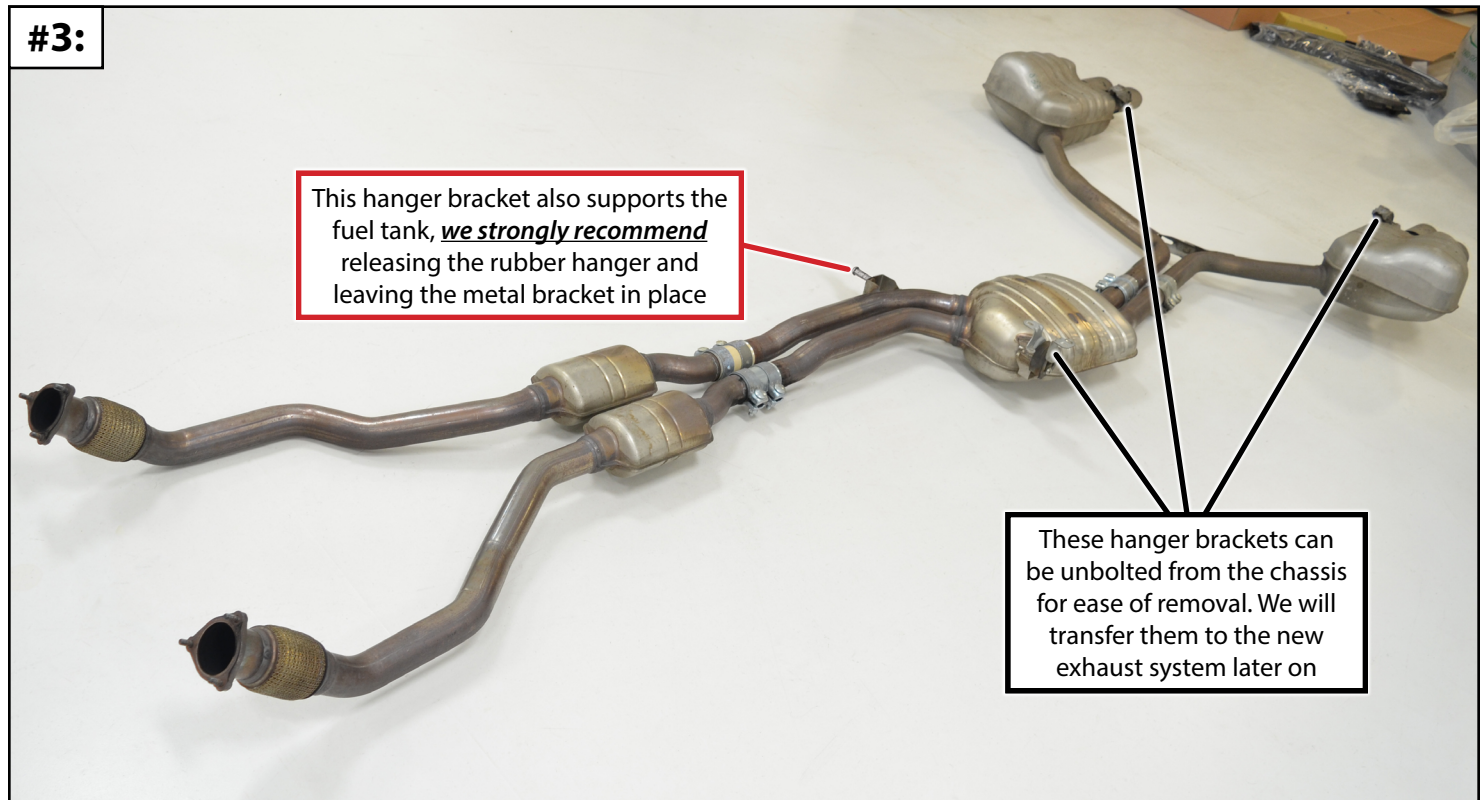
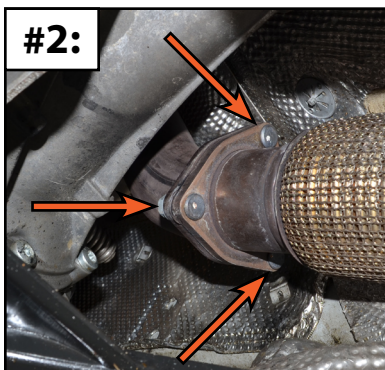
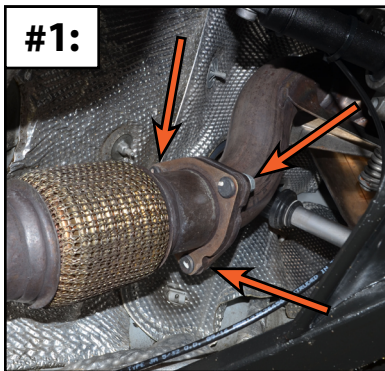
REMOVING THE STOCK EXHAUST SYSTEM

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

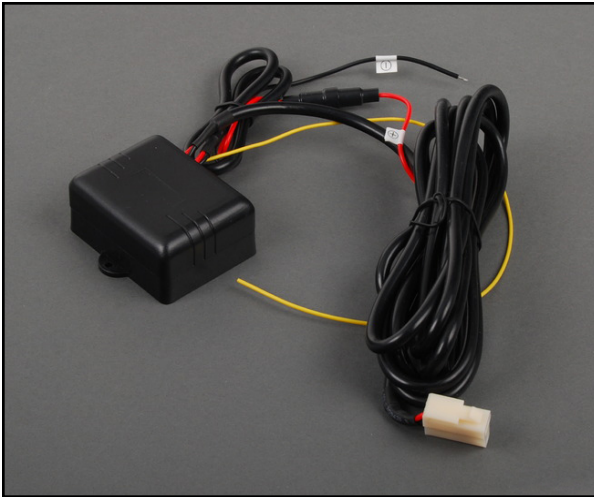
Safely lift and support the vehicle, remove the belly pans, remove the four bolts which secure the body cross brace to the chassis. Soak all of the fasteners on the exhaust system with penetrating oil, especially the downpipe nuts (arrows in **Photos #1 & #2**). Remove and discard the downpipe nuts. Some of these can be tough to reach, a stubby 13mm wrench or a 13mm torque adapter can really come in handy here.

Now it's time to release the exhaust hangers. The two rearmost muffler hangers can be unbolted from the chassis, and the LH center hanger can be pulled off of the exhaust system (**BLACK** notes in **Photo #3**). The RH center hanger (**RED** note in **Photo #3**) is also used to support the fuel tank so it's best to disconnect it from the exhaust **without** unbolting it.

Carefully lower the entire system to the ground, you will also need to pull it slightly rearward in order to clear the subframe.



REMOTE EXHAUST VALVE CONTROLLER KIT CONTENTS



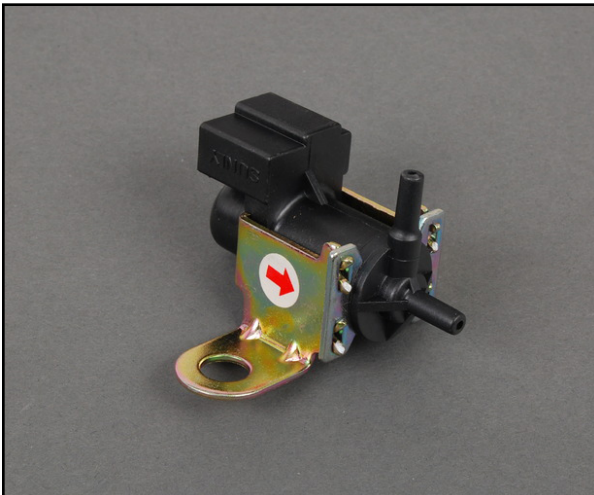
Control Module with Wiring Harness **(QTY 1)**



Vacuum Hose **(1x long, 1x short)**



Remote Controllers **(QTY 2)**



Solenoid Vacuum Valve **(QTY 1)**



Check Valve **(QTY 1)**



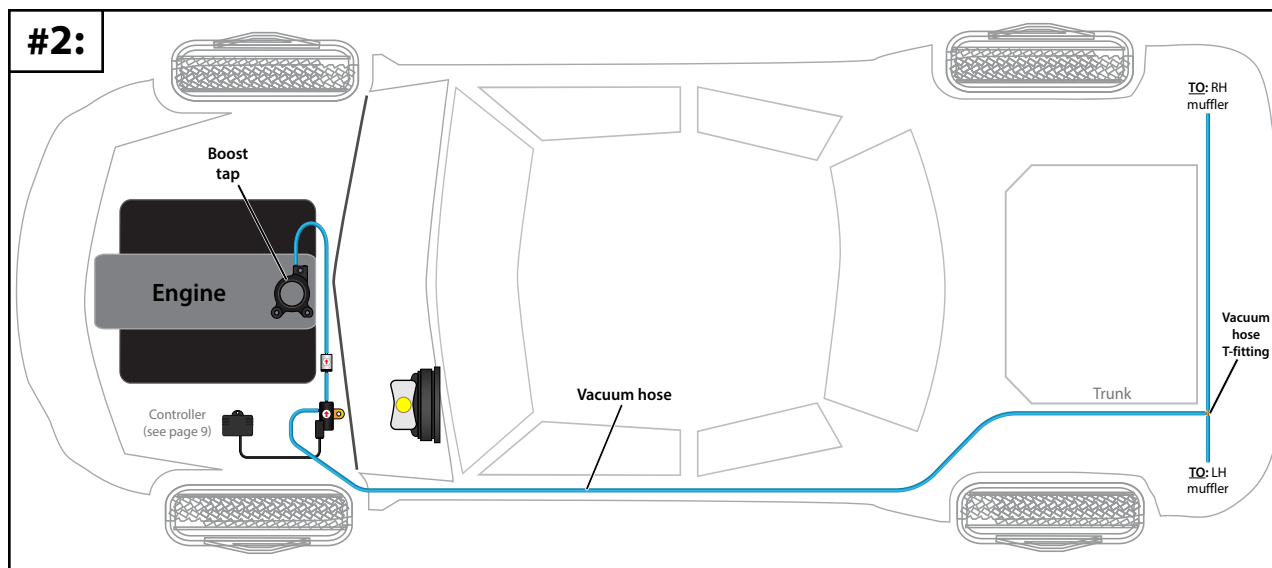
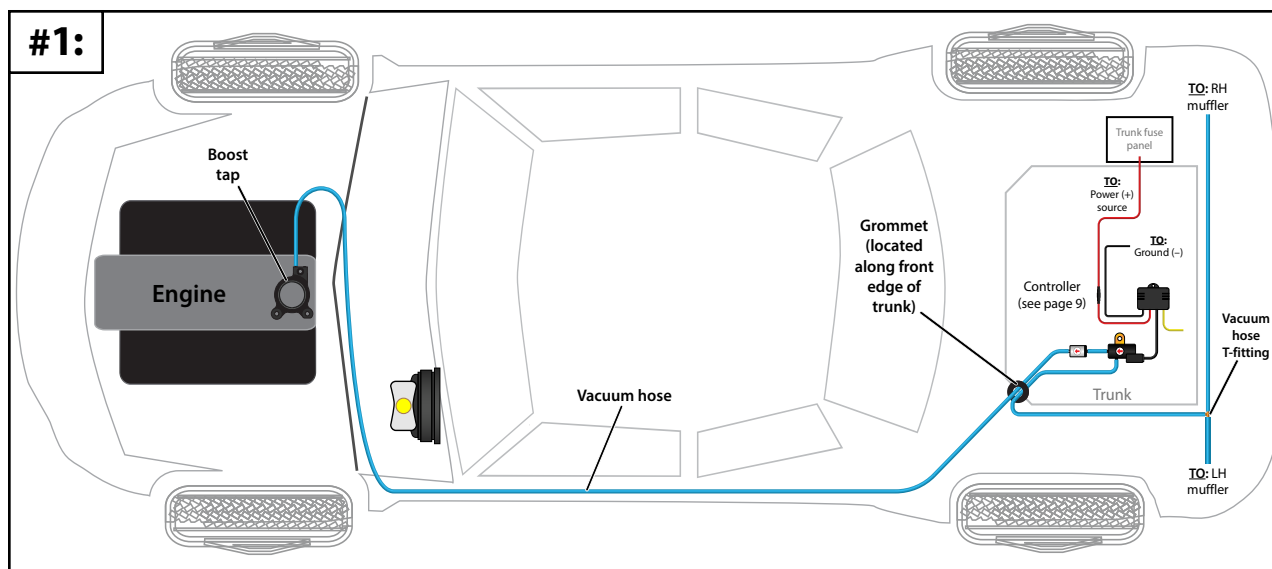
Vacuum Hose T-Fitting **(QTY 2)**

REMOTE EXHAUST VALVE CONTROLLER SYSTEM DIAGRAM - S4

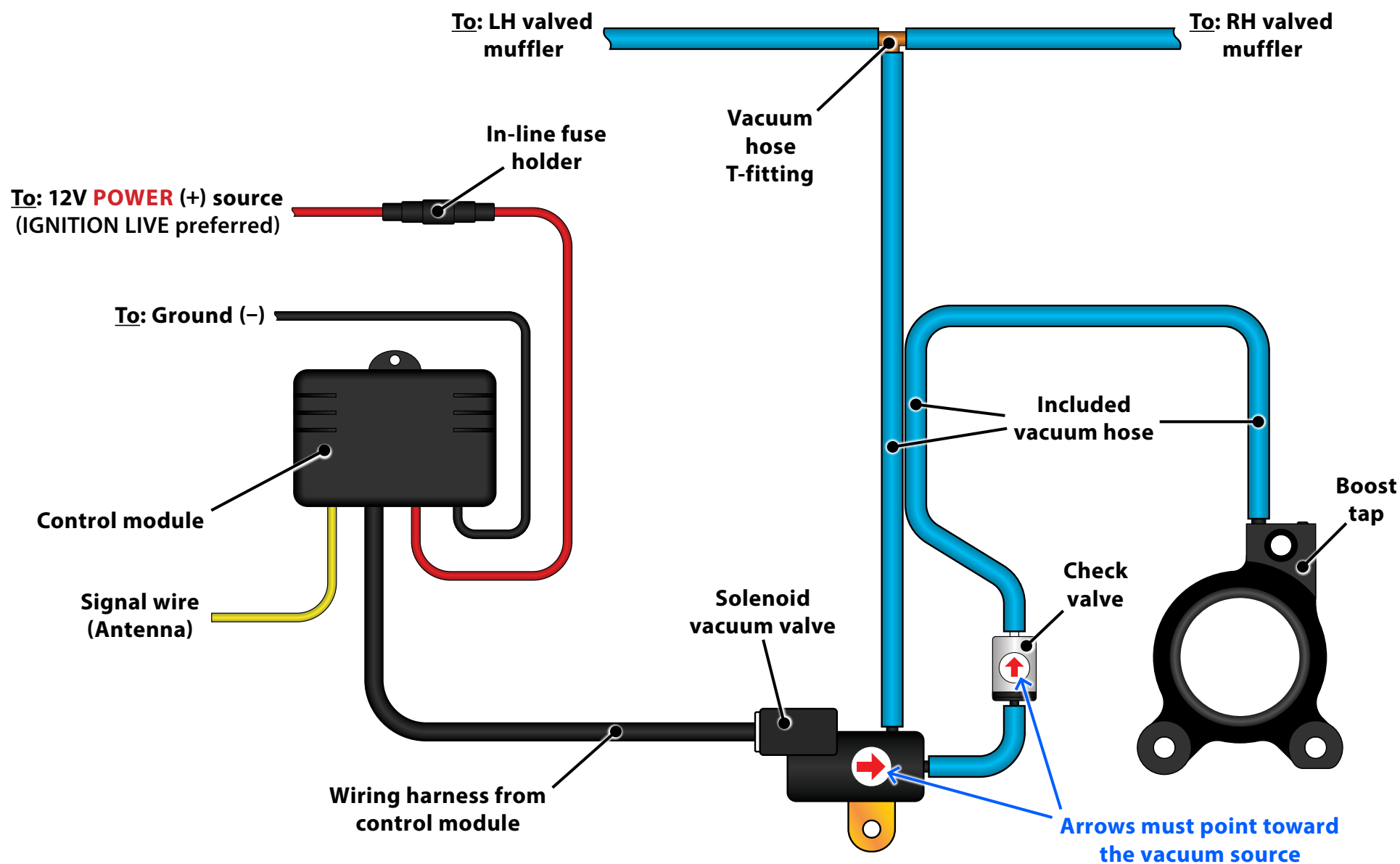
The control module and solenoid can be installed almost anywhere on the vehicle. You could install them in the trunk next to the battery (**Photo #1**), or under the hood (**Photo #2**). The grommet in the trunk floor is a good place to feed the hose inside (**Photo #1**). If you were to mount the control module under the hood you would need to find a suitable power source nearby (**Photo #2**).

We recommend using an [Add-A-Circuit Fuse Holder](#) to power the control module by tapping into an **IGNITION LIVE** fuse. This means that the control module will not be powered unless the key is turned **ON**. For more information on this please see the PDF which is located under the "Installation" tab on [ES#1906431](#) or [ES#3209653](#). Connect the ground wire to a nearby chassis ground.

Proceed to the next page for a detailed diagram of the entire valve controller system.



REMOTE EXHAUST VALVE CONTROLLER SYSTEM DIAGRAM - S4

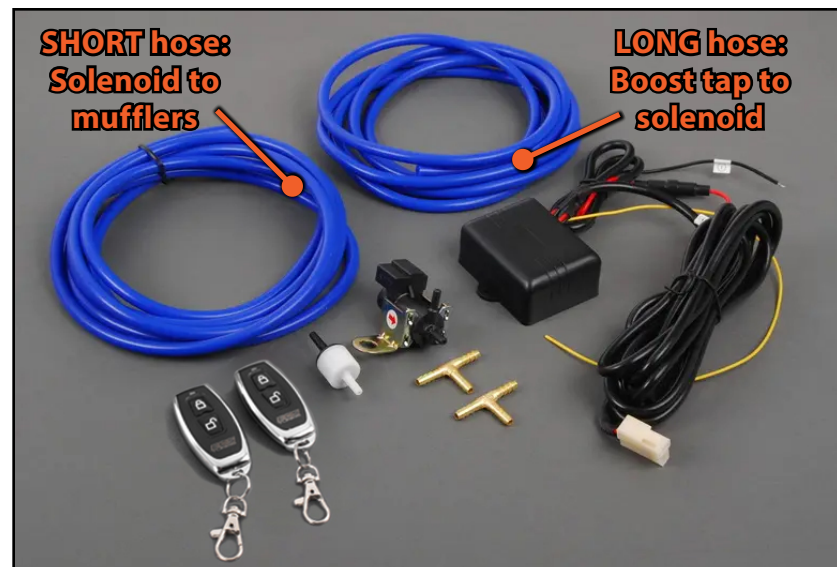


INSTALLING THE REMOTE EXHAUST VALVE CONTROLLER - S4

Step 1:

The Remote Exhaust Valve Controller allows the user to open and close the valves inside the mufflers with the push of a button.

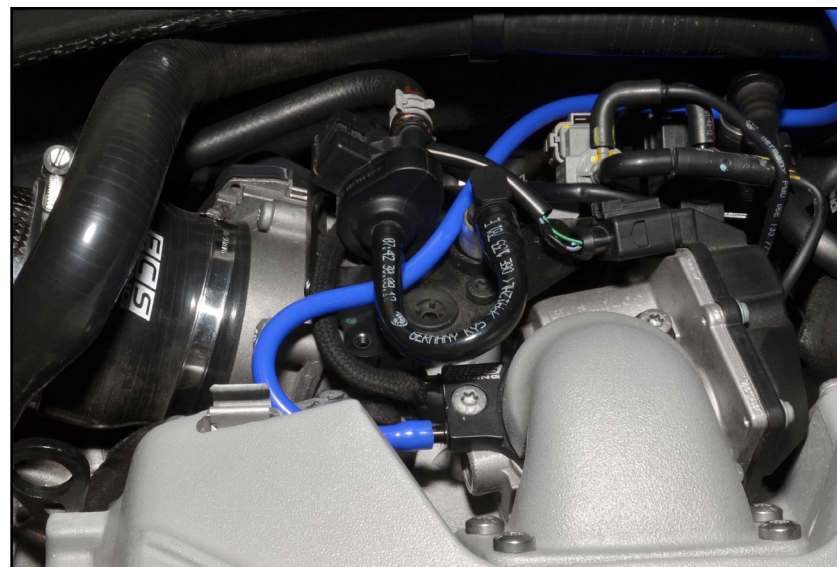
Please familiarize yourself with the Kit Contents on Page 8, and the System Diagrams on Page 9 & 10 before proceeding to the next step.



Step 2:

In order to install the remote exhaust valve controller you **MUST** already have a boost tap installed on the vehicle (or some other appropriate vacuum source). If you do not currently have a boost tap installed on your engine, the ECS Tuning 3.0T boost tap can be found on ecstuning.com: [ES#2710239](#).

If you already have a boost tap installed, connect the **LONG** vacuum hose to one of the vacuum ports. This hose needs to route all the way to the solenoid, so **DO NOT** cut it to length yet!



INSTALLING THE REMOTE EXHAUST VALVE CONTROLLER - S4

Step 3:

Route the **LONG** vacuum hose down away from any moving or hot components and out through the bottom of the vehicle (**Photo #1**).

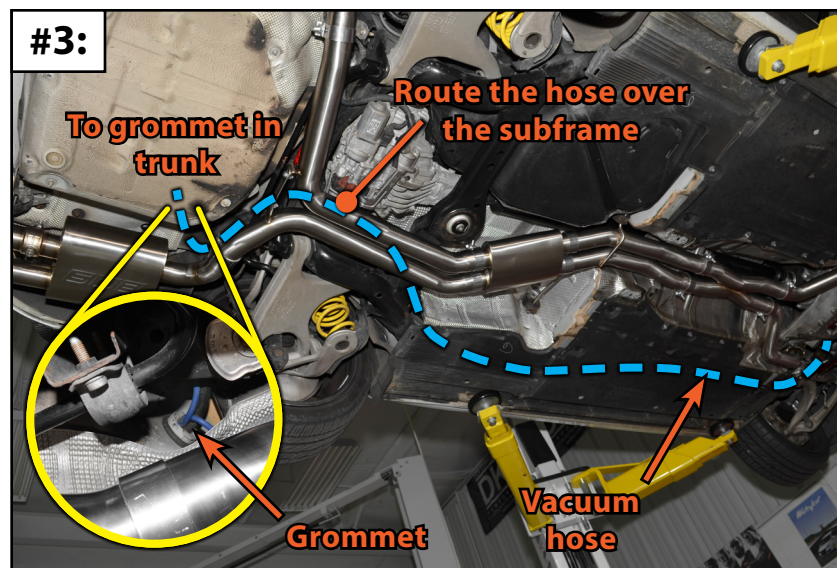
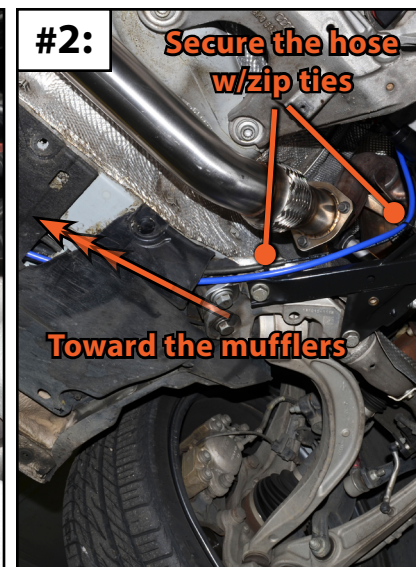
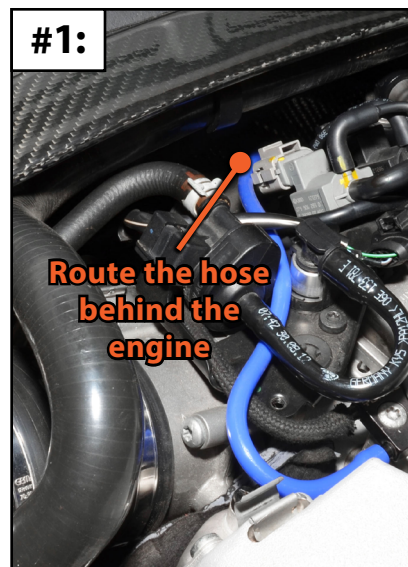
Pull the vacuum hose down past the subframe as shown in the photo, ensuring that the hose is clear of any moving or hot parts, including suspension, engine and exhaust components (**Photo #2**).



We secured the vacuum hose to the clutch slave cylinder, but you may select another routing method or location.

Remove the fasteners on the left underbody panels and swing them downward to gain access. Route the vacuum hose over the panels (shown with the **BLUE** dotted line in **Photo #3**) securing it with zip ties as required. Reinstall the panels after the hose has been routed.

If you've opted to install the solenoid and controller inside the trunk, locate and puncture the grommet on the front LH corner of the spare tire well (**YELLOW inset photo**).



INSTALLING THE REMOTE EXHAUST VALVE CONTROLLER - S4

Step 4:

Now it's time to mount the solenoid vacuum valve and the electronic control module. We opted to mount them self-tapping screws in the trunk next to the battery. Ensure that they are protected from the elements, as well as any nearby moving/hot components if you install them somewhere else.

Connect the control module wiring to suitable power (+) and ground (-) sources, then route the vacuum hose using the diagrams on page 9 and page 10 for reference. Secure any extra wiring with zip ties as needed (**Photo #1**).

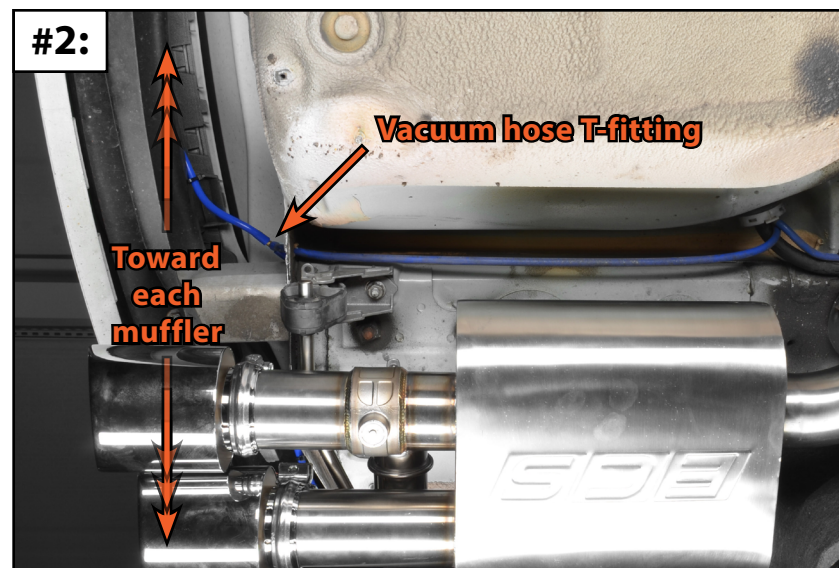
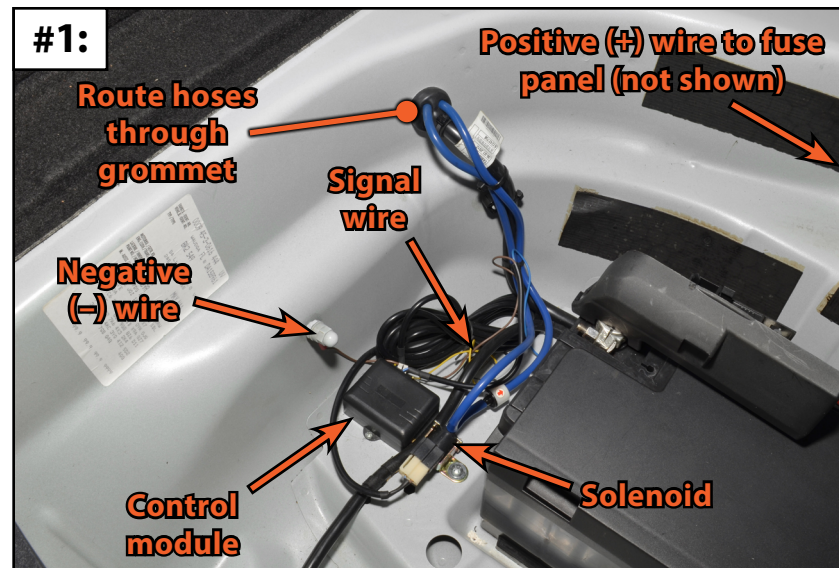


The loose wire acts as the antenna for the remote controller, do not cut or modify it.

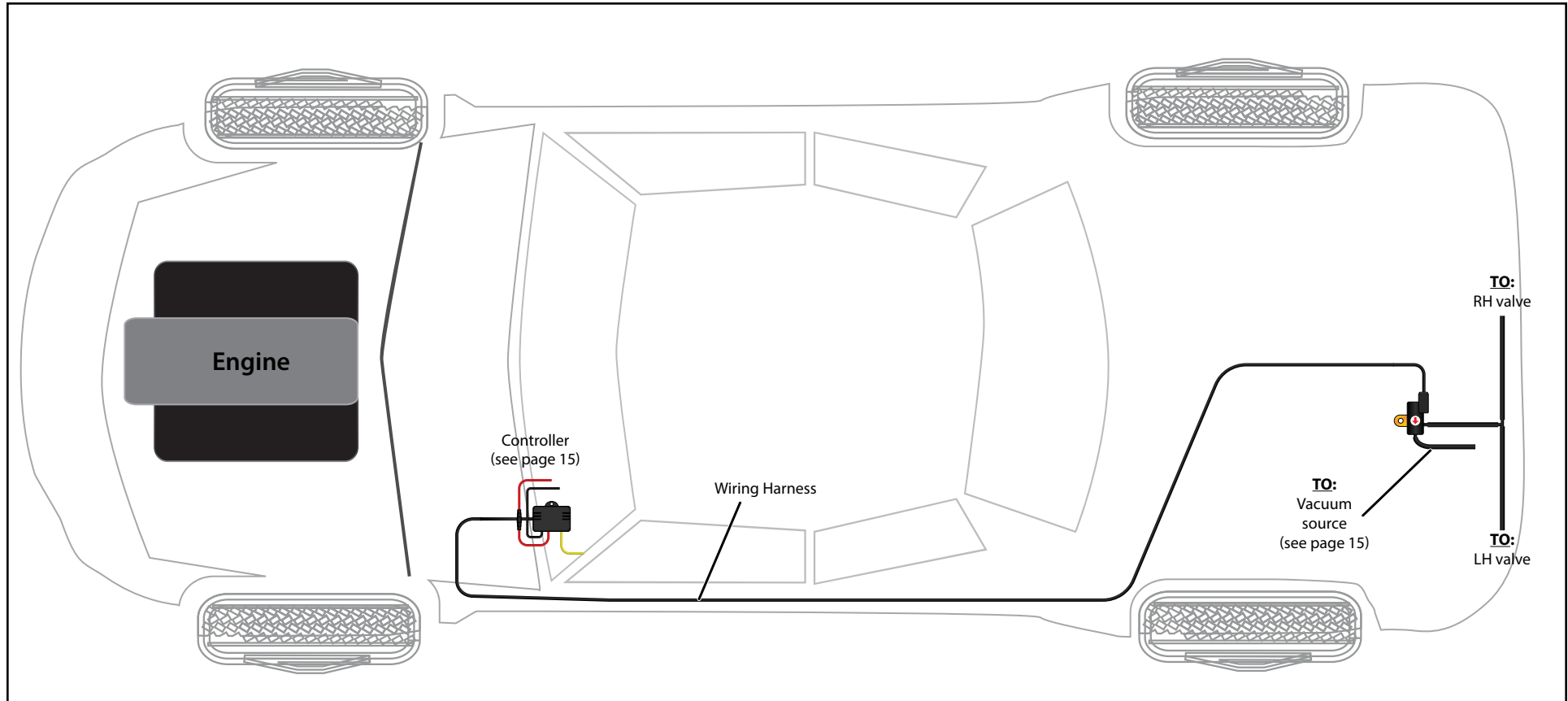
Connect the **SHORT** vacuum hose to the vacuum port on the solenoid, then route it back through the grommet in the trunk floor. Add the T-fitting to split the hose, then route the hoses to where the mufflers will be located (**Photo #2**).



This photo was taken with the heat shields removed for better visibility of hose routing.



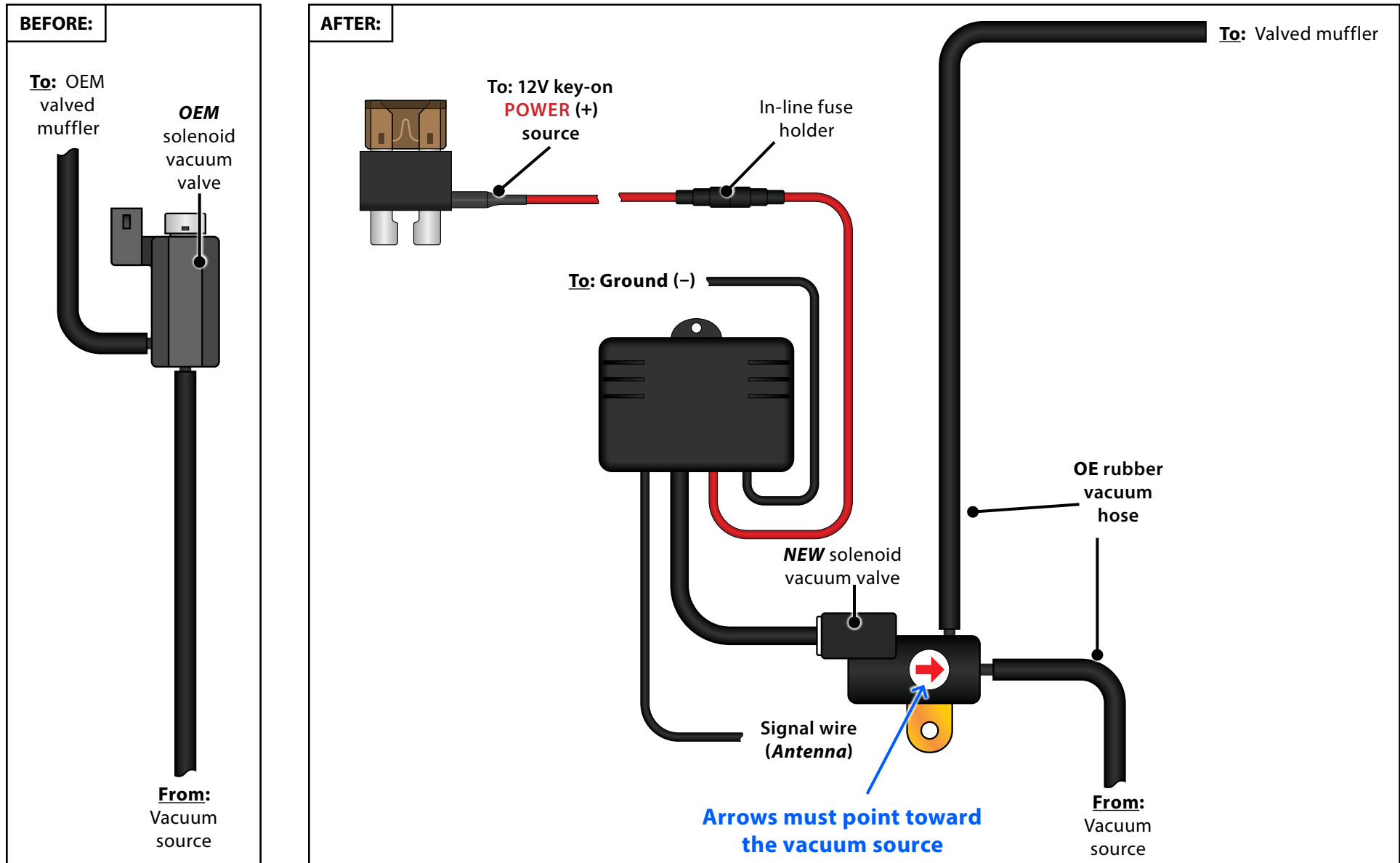
OPTIONAL: REMOTE EXHAUST VALVE CONTROLLER SYSTEM DIAGRAM - RS5



We opted to mount the control module in the fuse box on the LH side of the dash next to the steering column, then route the harness through the trunk into the cabin along the LH side. Use the provided [Add-A-Circuit Fuse Holder](#) to power the control module by tapping into an **IGNITION LIVE** fuse. This means that the control module will not be powered unless the key is turned **ON**. For more information on this please see the PDF which is located under the "Installation" tab on [ES#1906431](#) or [ES#3209653](#). Connect the ground wire to a nearby chassis ground.

We mounted the solenoid into the stock location and utilized the stock vacuum hoses. Please proceed to the next page for a detailed diagram of the entire valve controller system and information regarding locating a vacuum source.

OPTIONAL: REMOTE EXHAUST VALVE CONTROLLER SYSTEM DIAGRAM - RS5



OPTIONAL: INSTALLING THE REMOTE EXHAUST VALVE CONTROLLER - RS5

Step 1: 5mm Hex (Allen) Socket & Ratchet

Remove the screw (arrow), then disconnect the connector (highlighted in **RED**) and remove the stock solenoid vacuum valve controller.



Step 2: 5mm Hex (Allen) Socket & Ratchet

Install the new solenoid vacuum valve controller into the stock location using the OE screw (arrow), then connect the ECS wiring harness (highlighted in **GREEN**) to the solenoid as shown. Referencing the diagram on the previous page, connect the stock vacuum hoses to the new solenoid.

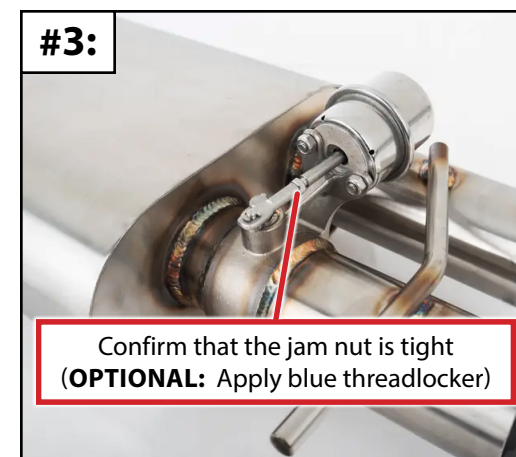
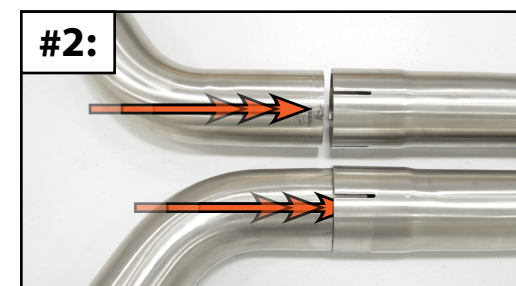
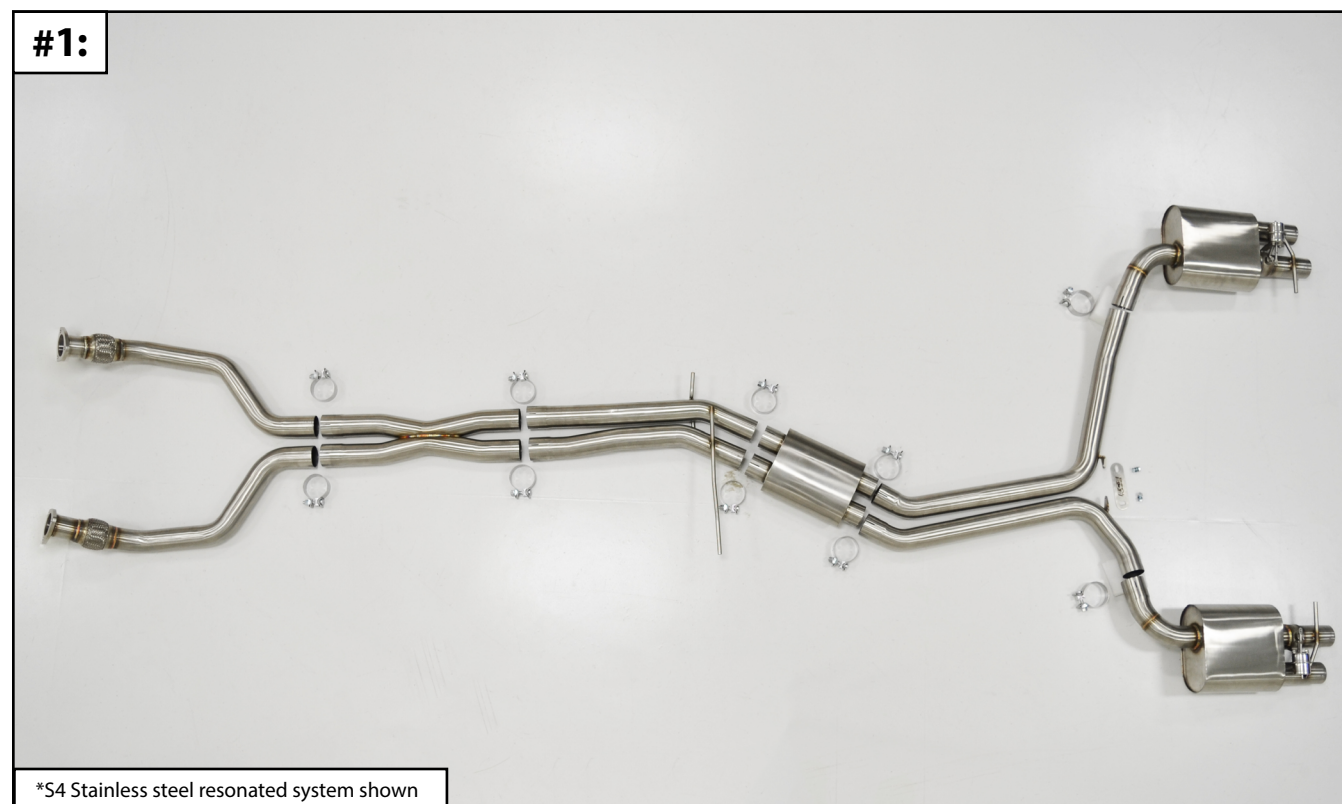


INSTALLING THE NEW EXHAUST SYSTEM

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. Confirm that the jam nut is tight on each muffler valve (**Photo #3**).

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.

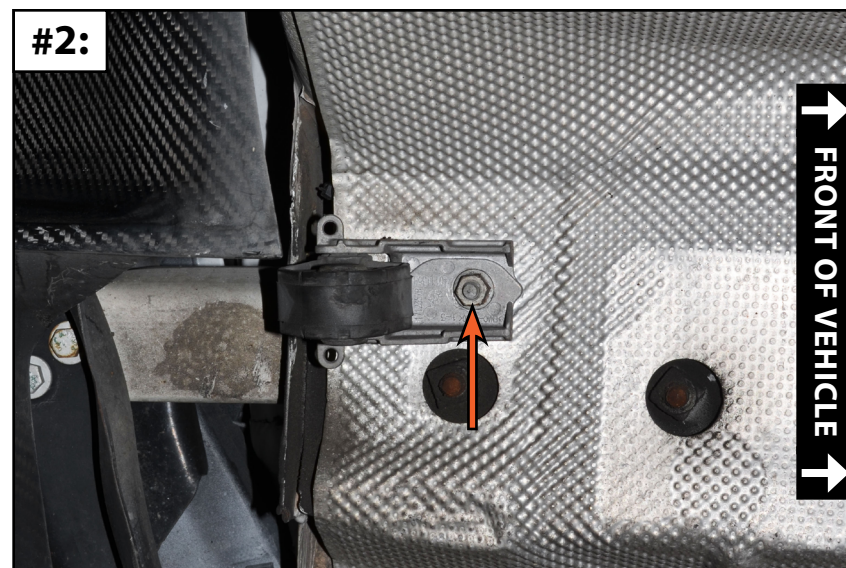
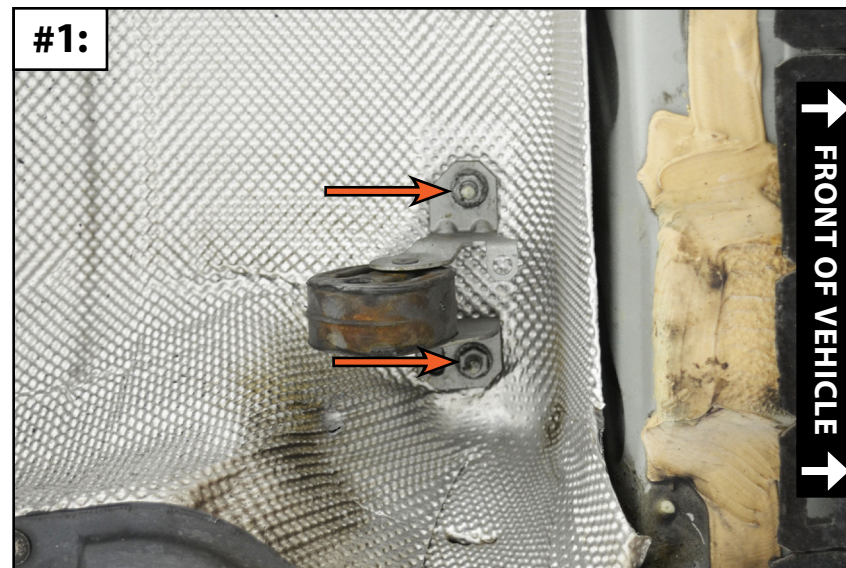


INSTALLING THE NEW EXHAUST SYSTEM

Step 2: Exhaust Hanger Removal Pliers, 13mm Socket & Ratchet

Remove the remaining exhaust hanger from the stock resonator (the other hanger should have been left on the vehicle earlier) and reinstall it back into the vehicle. Be sure to orient it exactly as it was before (**Photo #1**).

Remove the exhaust hangers from each of the stock mufflers, then reinstall them back into the vehicle. Be sure to orient them exactly as they were before (**Photo #2**).



INSTALLING THE NEW EXHAUST SYSTEM

Step 3:

Clean the ends of the catalytic converter flanges with a suitable degreaser or brake cleaner.



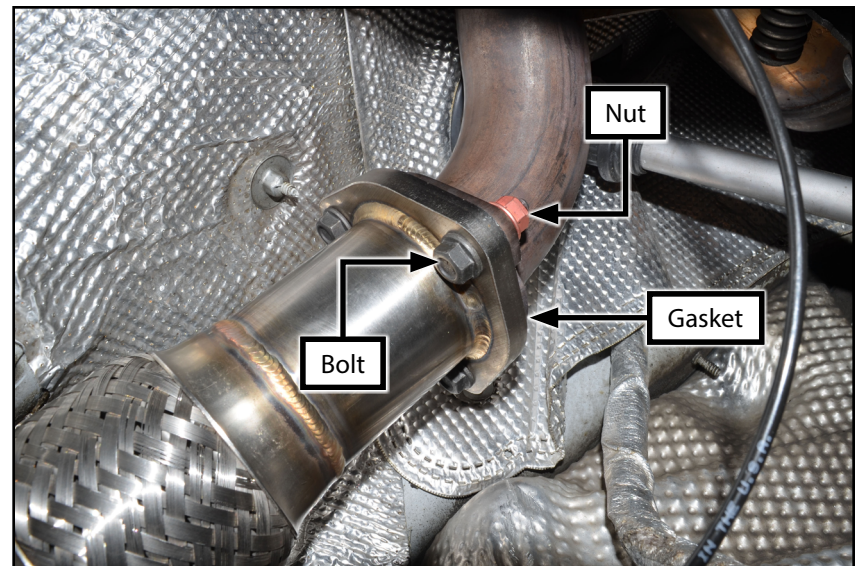
Step 4: 12mm Wrench, 13mm Socket & Ratchet

Install the new downpipes onto the catalytic converters with the supplied hardware and torque the bolts to 25 Nm (18 ft-lbs).



If you purchased a S4 stainless steel exhaust system: proceed to the next page.

If you purchased a S4 titanium/RS5 stainless steel exhaust system: skip ahead to page 21.



INSTALLING THE NEW EXHAUST SYSTEM - S4 STAINLESS STEEL

Step 5: 12mm Wrench, 13mm Socket & 15mm Sockets, Ratchet

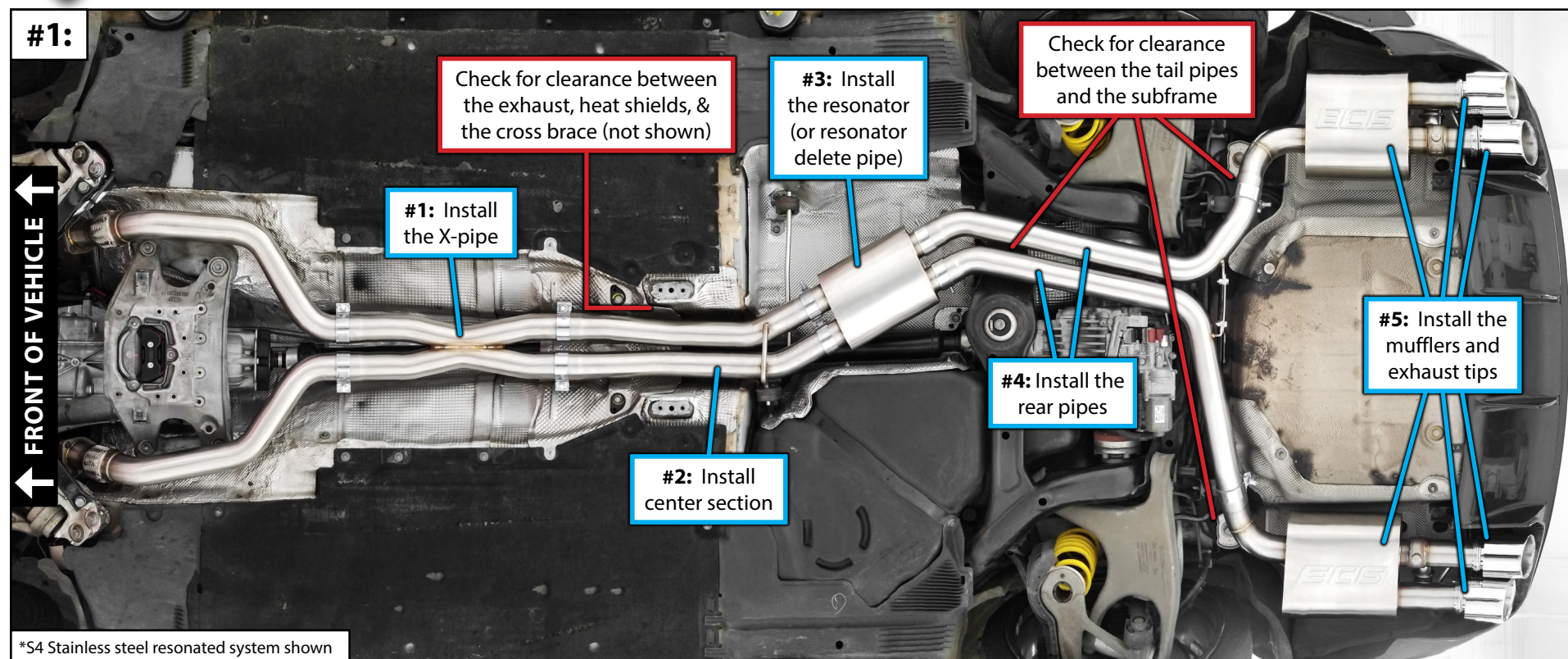
Loosely install the exhaust system in the order shown in **Photo #1** below.

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 24.

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



If you purchased a S4 stainless steel exhaust system skip ahead to [page 22](#).



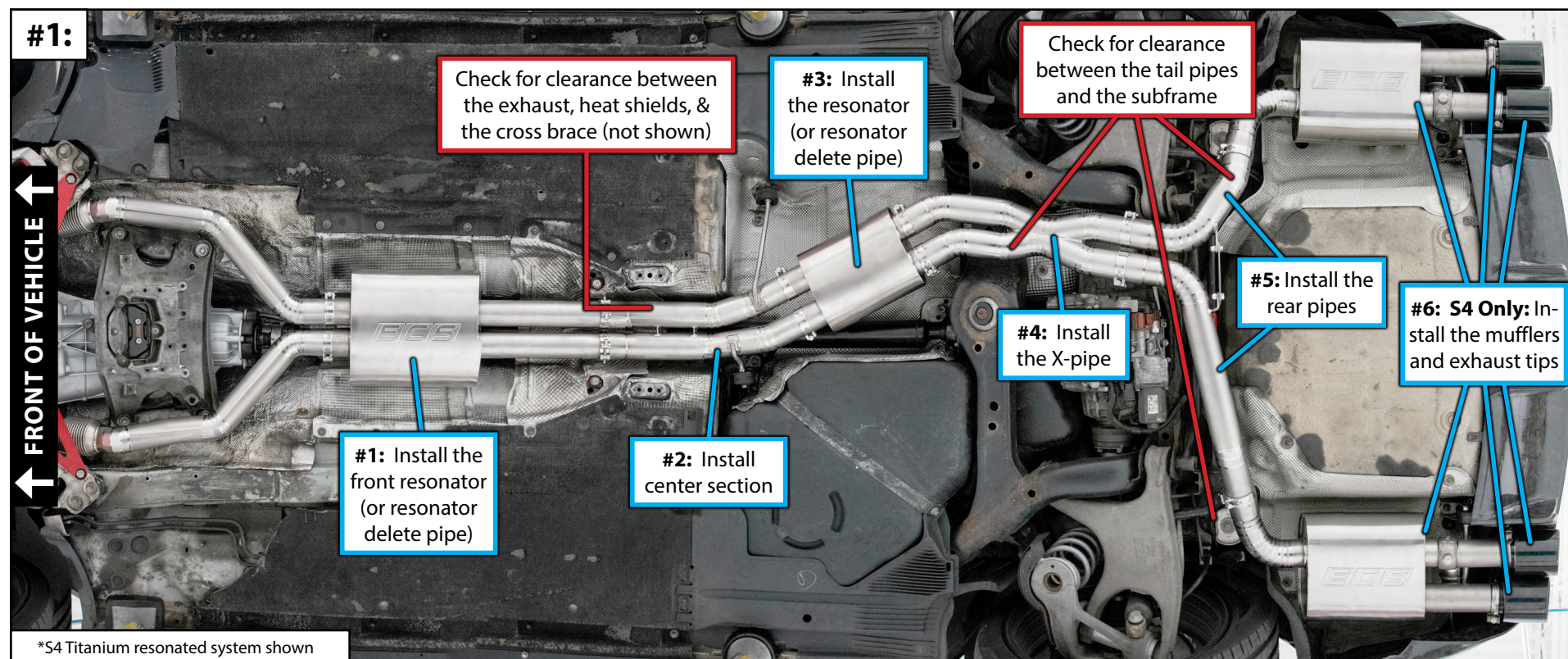
INSTALLING THE NEW EXHAUST SYSTEM - S4 TITANIUM/RS5 STAINLESS STEEL

Step 5: 12mm Wrench, 13mm Socket & 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 24.

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



INSTALLING THE NEW EXHAUST SYSTEM

Step 6: 13mm & 15mm Sockets, Ratchet

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

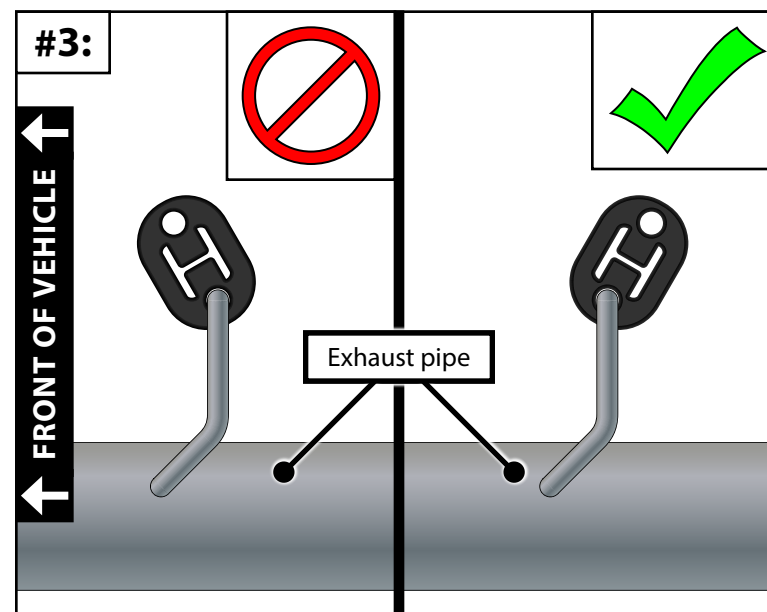
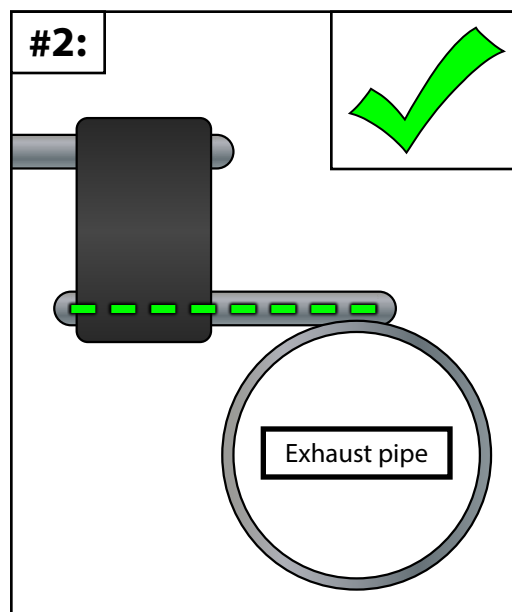
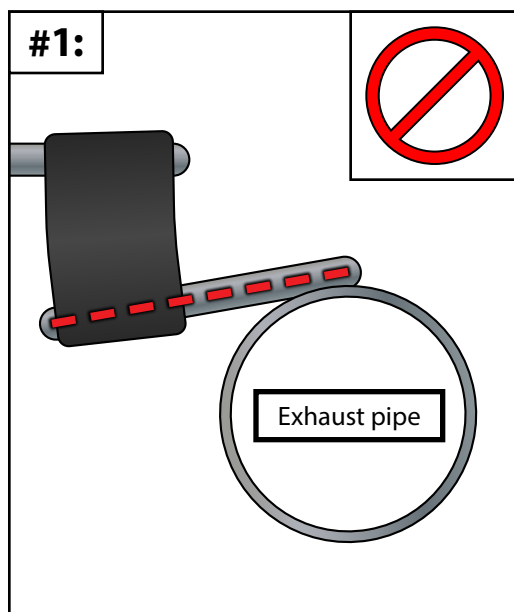
Finally, we want to ensure that the exhaust hangers are rotated at least slightly toward the front of the vehicle (**Photo #3 below**). The exhaust hangers should be inclined toward the front of the vehicle so that lower hole is approximately 10-15mm forward of the upper hole, this will allow the hangers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



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!



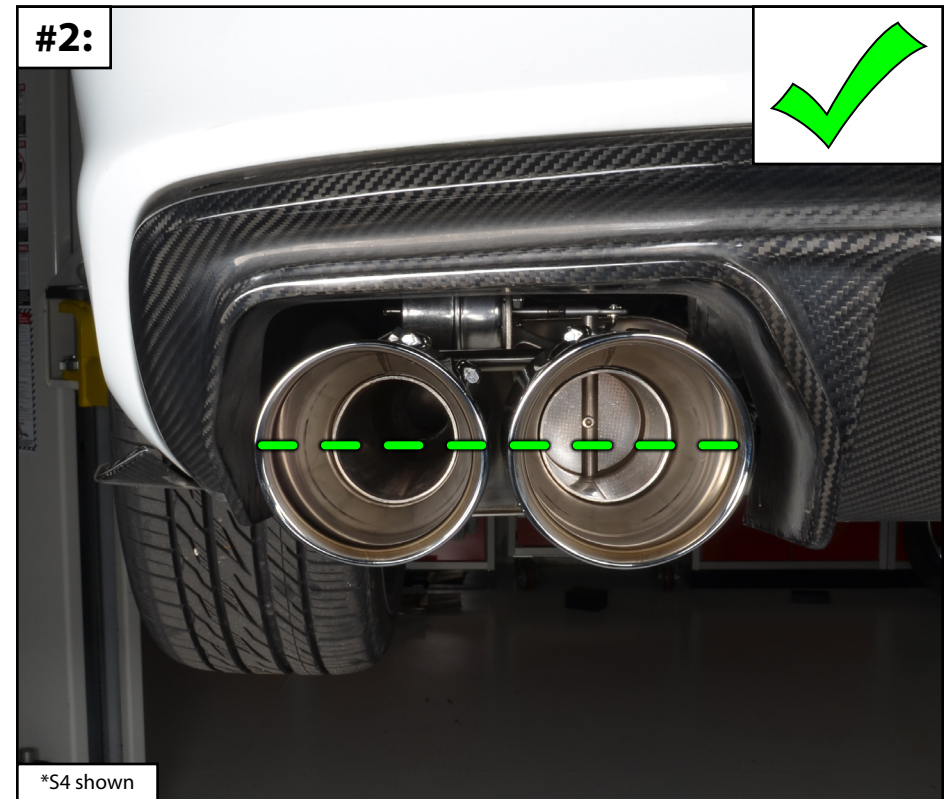
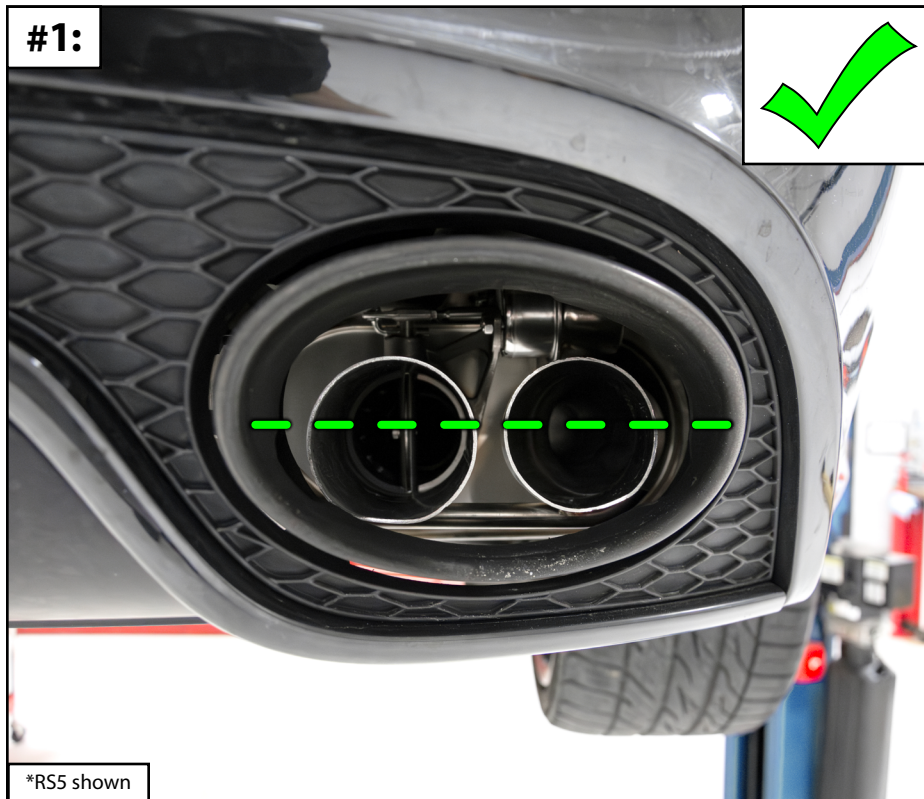
INSTALLING THE NEW EXHAUST SYSTEM

Step 7: 13mm & 15mm Sockets, Ratchet

Once the system is all adjusted, it's time to fully tighten down the clamps. Starting at the front and moving rearward, push upward on the exhaust system as you fully tighten each clamp, then let go and allow the exhaust to settle. Check again for clearance around all pipes then, if equipped, tighten the clamps on the exhaust tips to 19 Nm (14 Ft-lbs).

RS5 models: Center and level the tail pipes inside the exhaust tips in the rear bumper (**Photo#1**).

S4 models: Center and level the exhaust tips inside the bumper cut outs (**Photo #2**)



- ☐ Install the ECS logo plate, tighten the bolts until snug (**Photo #1**).
- ☐ Connect the vacuum hoses to the muffler valves (**Photos #2 & #3**).
- ☐ Wipe any oil, grease, or fingerprints from the exhaust system.
- ☐ Reinstall the belly pans and chassis cross brace.
- ☐ Perform a system check by performing the following steps:
 - Start the engine.
 - Press the “unlock” button on the remote to open the valves.
 - Press the “lock” button to close the valves.
 - You should be able to hear a difference in both exhaust tone and volume when the valves are opened or closed.
 - Looking under the vehicle you should be able to see the valve cycle back and forth (not shown).
- ☐ Recheck all fasteners after the vehicle has been driven 500 miles.



PROGRAMMING THE HOMELINK® BUTTONS

Step 1:

It is possible to program the Homelink® buttons inside your vehicle and use them to open and close the exhaust system valves. Since the valve in the muffler is **normally closed**, the **UNLOCK** button will **OPEN** the valve, and the **LOCK** button will **CLOSE** the valve.

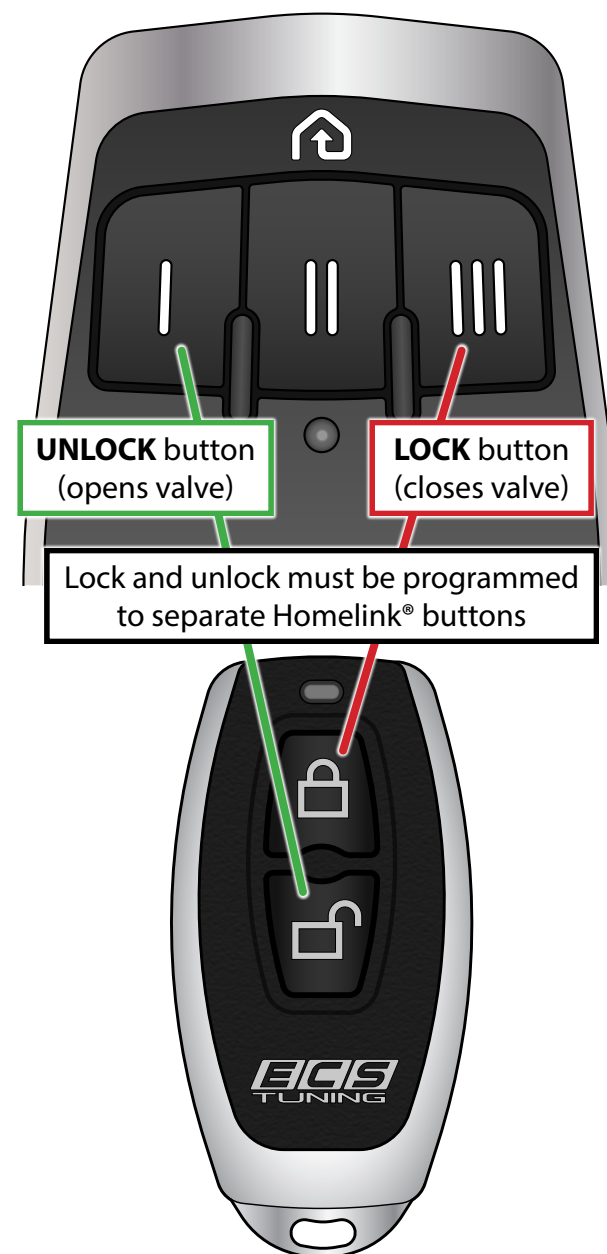
We recommend you check your owner's manual programming information, or you can visit the Homelink® website for their vehicle specific instructions:

- <https://homelink.com/program/watchvideo>

Here are a few notes to help you along the way:

1. You will need to program **ANY TWO** of your Homelink® buttons to control the exhaust system valves: one button will be used to open the valve, the second button will close it.
2. Pay close attention to where the manufacturer suggests pointing the remote during pairing. Some systems are very sensitive to location.
3. Depending on the method used to program the Homelink® system, it is possible that any previously programmed remotes will be deleted and will need to be reprogrammed.
4. If you have difficulty programming your Homelink® buttons, it might help to try the following:
 - Start the programming procedure over again.
 - Check your remote batteries.
 - Review the troubleshooting tips in your owner's manual.

Your ECS Exhaust System installation is complete!



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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