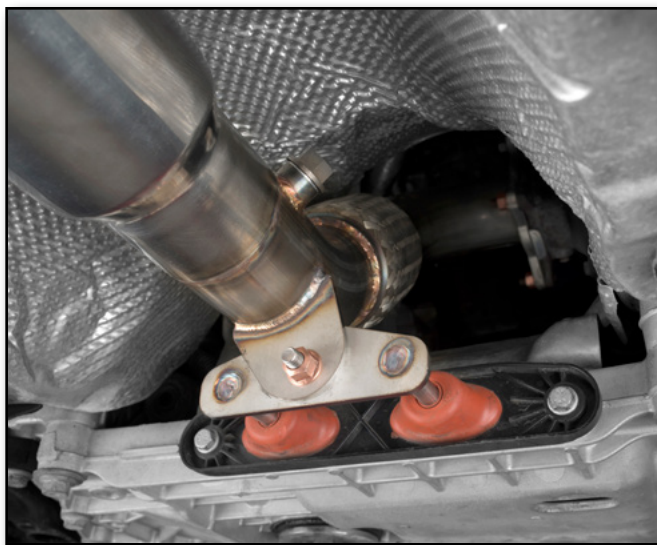




Volkswagen MK6 GTI ECS Exhaust System Installation Instructions - [ES4305484](#)



Skill Level
1 - Easy
Basic Skills
Required



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

Upgrading the exhaust system on your VW MK6 GTI 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.

Our exhaust system is available in two variants: Valved and non-valved. It's worth noting that if you are installing a valved system you will need to have a boost tap installed, or find another suitable vacuum source.

You can also choose to install an adapter pipe which will allow you to use the stock downpipe, or an extension pipe if you have an aftermarket downpipe (see [Page 3](#) for more information). Downpipe installation instructions can be found under the installation tab on [ES#2903346](#).

Please read and familiarize yourself with these instructions before you begin. Thank you for looking to ECS Tuning for all your performance and repair needs, we appreciate your business!

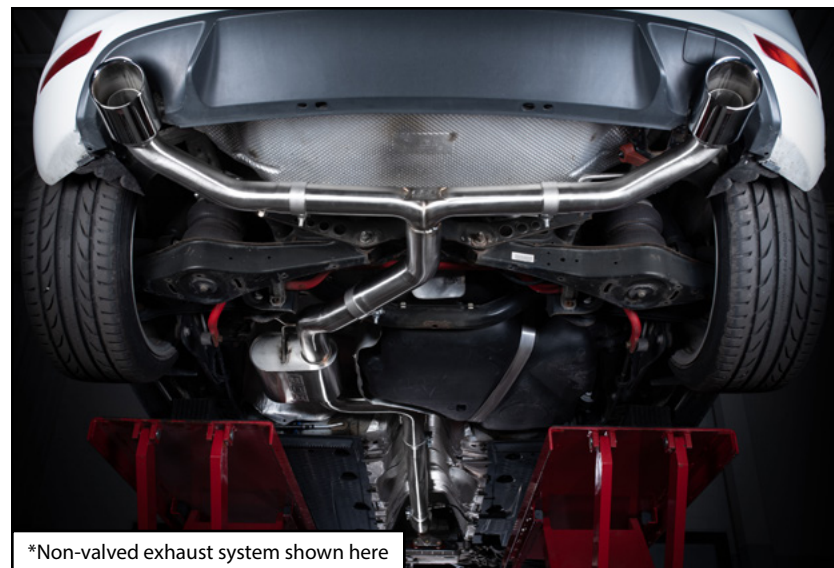
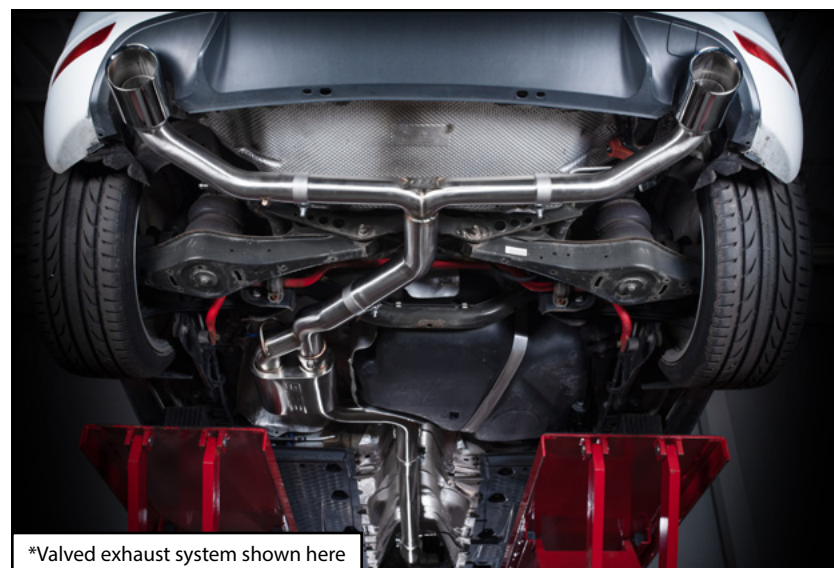
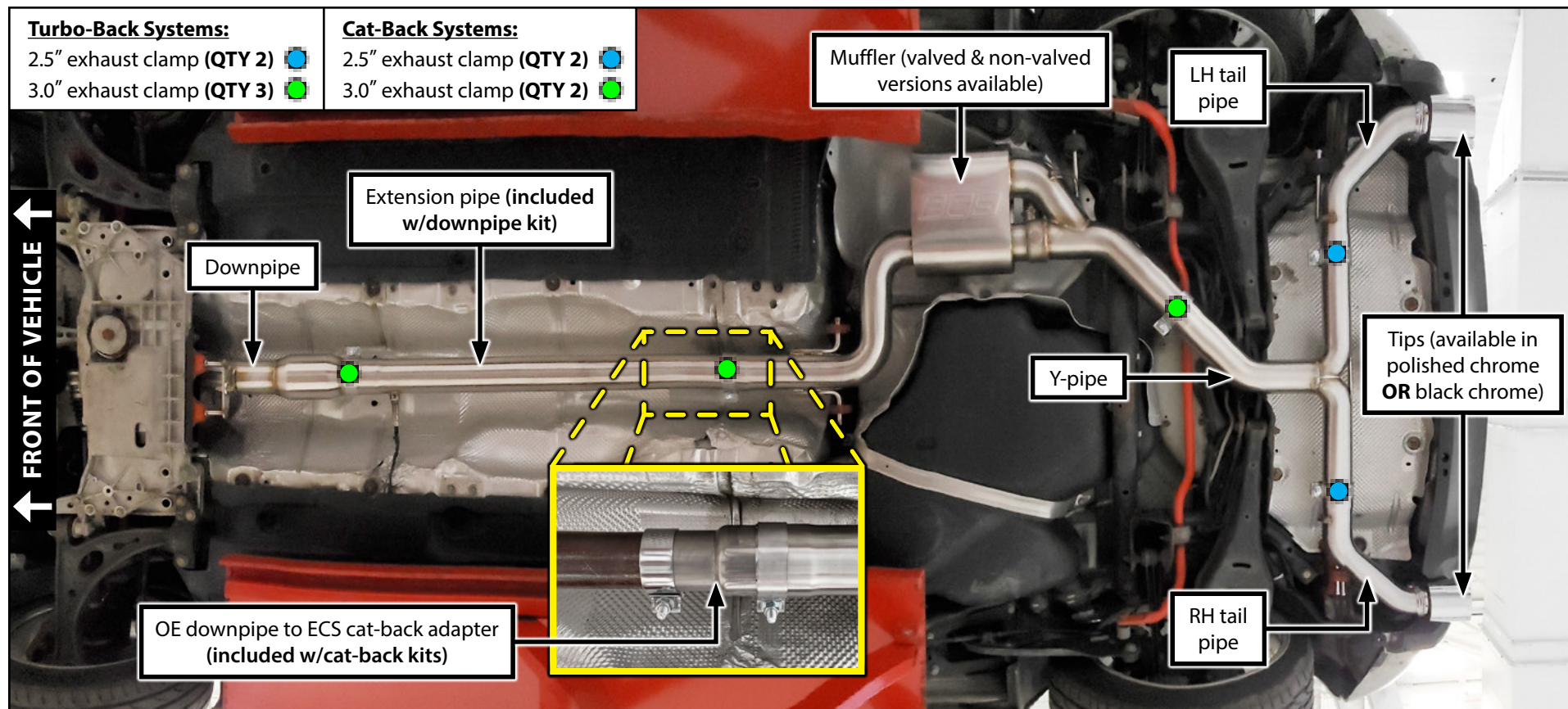


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KIT CONTENTS



Our MK6 GTI exhaust systems are available in cat-back or turbo-back variations, with a valved or non-valved muffler, and with chrome or black chrome tips. Cat-back systems will come with an adapter which must be used to connect the exhaust system to the stock downpipe (please reference the **YELLOW** inset photo and highlights above).

See [Page 11](#) 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

- 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
- Triple Square Drivers [ES#9013](#)
- 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](#)
- **Exhaust Hanger Removal Pliers** [ES#2784927](#)
- **VAG Connector Removal Tool** [ES#2628676](#)

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.



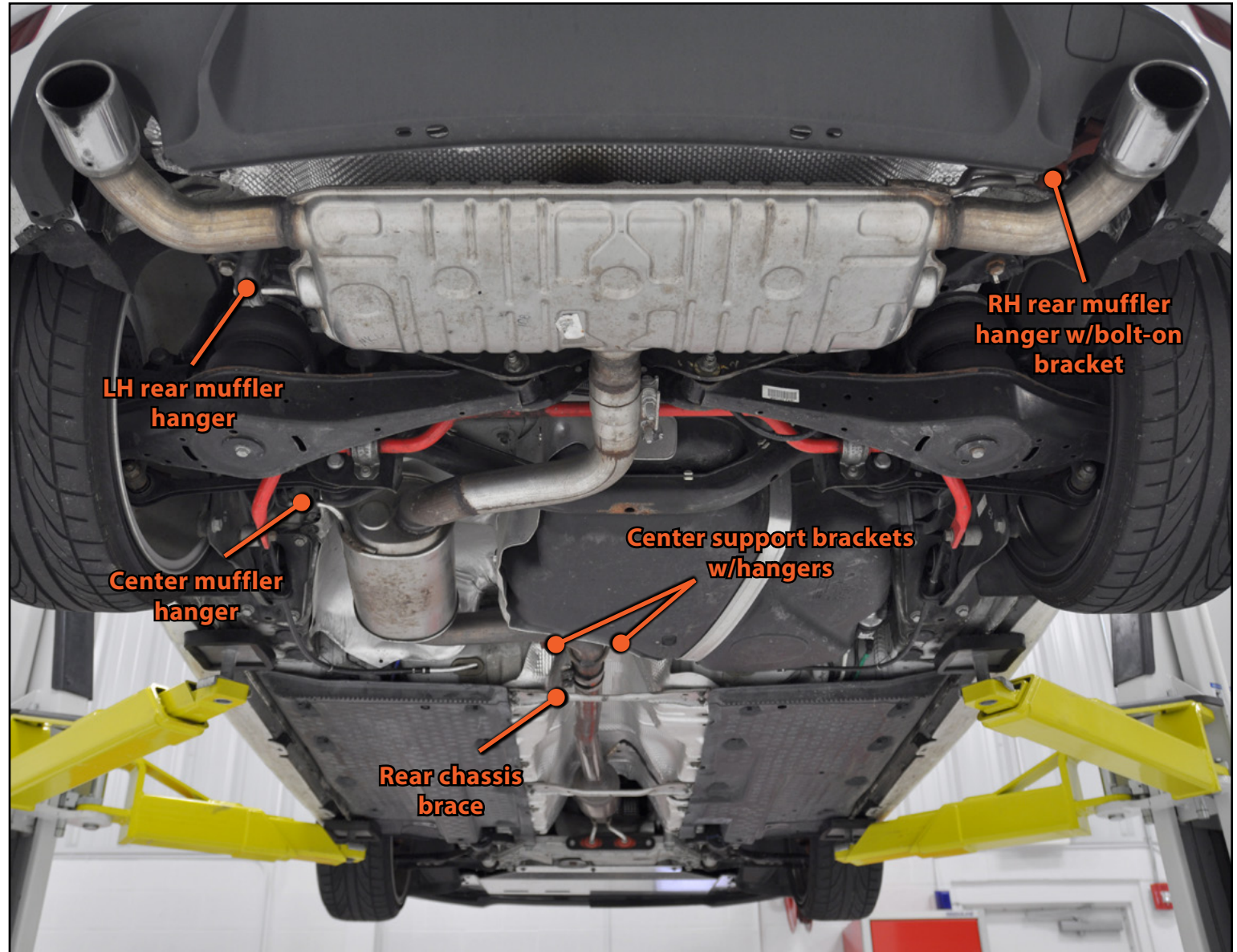
NEVER get underneath a vehicle that is supported only by a jack, and **ALWAYS** make sure that the vehicle is securely supported on jack stands.

REMOVING THE STOCK EXHAUST SYSTEM

Step 1:

Familiarize yourself with the components in the photo and their locations.

Safely lift and support the vehicle. Remove the belly pan and the rear chassis brace.



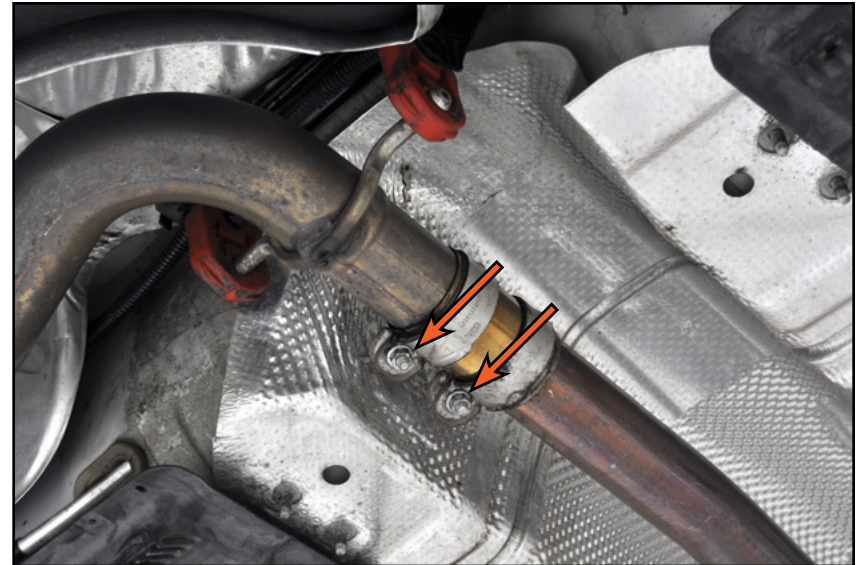
REMOVING THE STOCK EXHAUST SYSTEM

Step 2: $\frac{3}{8}$ " 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.



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



Step 3:

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



If you purchased a kit WITH a new downpipe:

- Please reference the instructions on [ES#2903346](#).

If you purchased a kit WITHOUT a new downpipe:

- Please proceed to the next step.



REMOVING THE STOCK EXHAUST SYSTEM

Step 4: Exhaust Pipe Hanger Removal Pliers

Support the exhaust from below, then release all of the exhaust pipe hangers **(except for the right rear muffler hanger)** from the system. Please refer to the photo on [Page 6](#) for all of the hanger locations.



Enlist the help of a couple friends before lowering the system. It is very heavy and will require at least two people to safely remove it.



Step 5: 13mm Socket & Ratchet

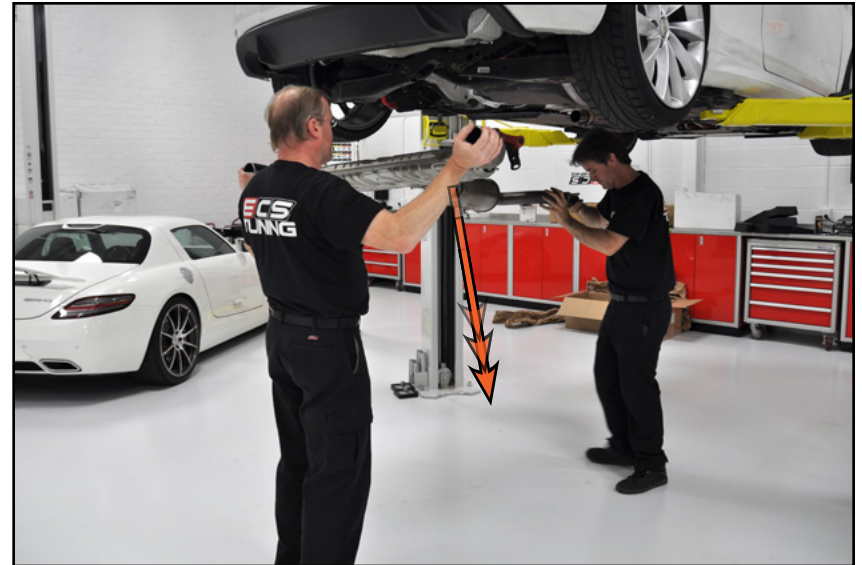
Loosen the two bolts for the RH rear muffler hanger bracket, remove one bolt and leave the other bolt in finger tight. Take note how the bracket is oriented on the vehicle, it will need to be rotated 180° when reinstalled.



REMOVING THE STOCK EXHAUST SYSTEM

Step 6:

While supporting each end of the exhaust, remove the finger tight bolt from the RH rear muffler hanger bracket. Ensure that the front joint is separated from the sleeve clamp, then lower the muffler assembly as one piece with the RH rear bracket attached.



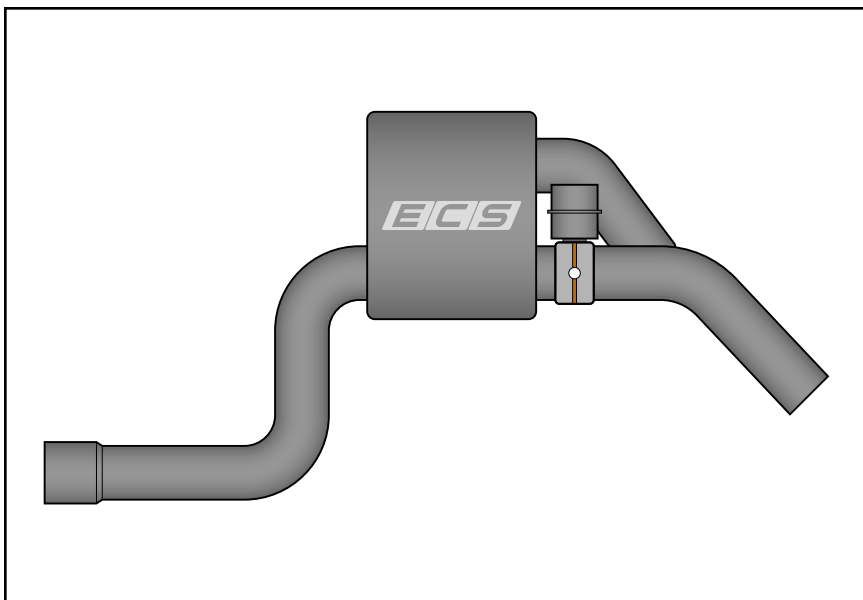
Step 7: 13mm Socket & Torque Wrench

Remove the RH rear muffler hanger from the stock exhaust system, then re-install the RH rear exhaust hanger bracket on the vehicle as shown in the second photo. Install the bracket rotated 180° as mentioned in step 5 on [Page 8](#).

Torque the bolts to 23 Nm (17 Ft-lbs).

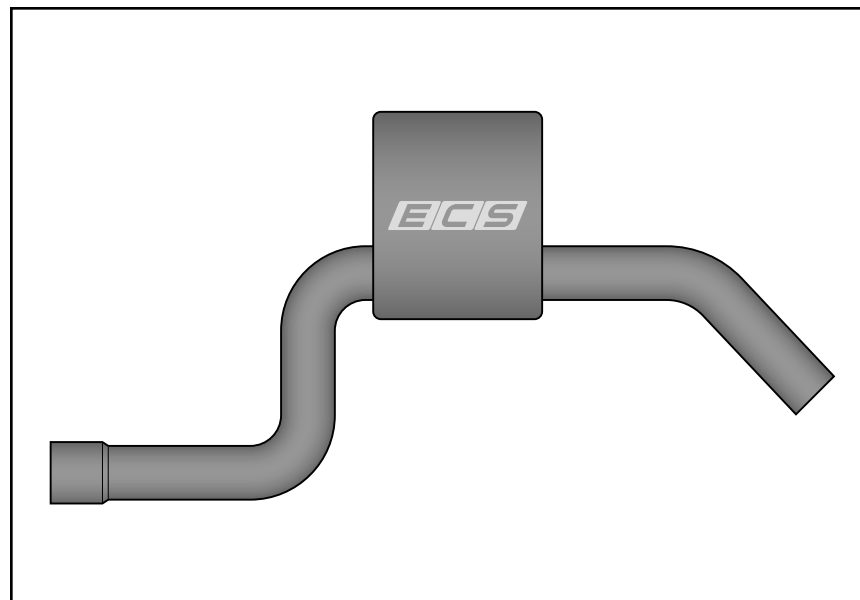


REMOVING THE STOCK EXHAUST SYSTEM



If you purchased a VALVED system:

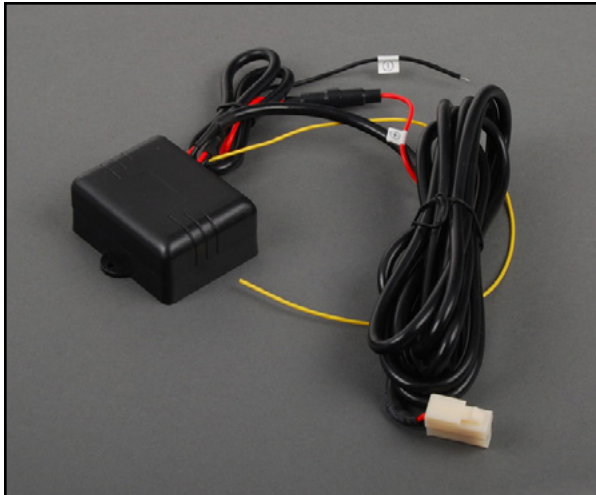
- Please proceed to the next page for the installation of the remote valve controller system. The best time to install this system is now with the exhaust system completely removed from the vehicle.



If you purchased a NON-VALVED system:

- Please skip ahead to [Page 17](#) for the installation of your new exhaust system.

REMOTE EXHAUST VALVE CONTROLLER KIT CONTENTS



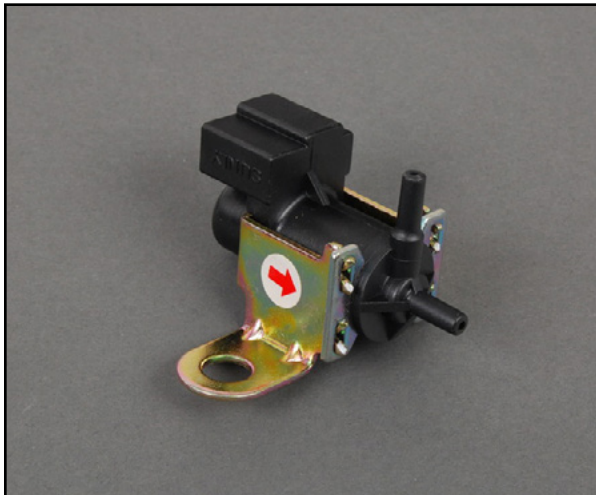
Control Module with Wiring Harness **(QTY 1)**



Vacuum Hose **(QTY 1)**



Remote Controllers **(QTY 2)**



Solenoid Vacuum Valve **(QTY 1)**



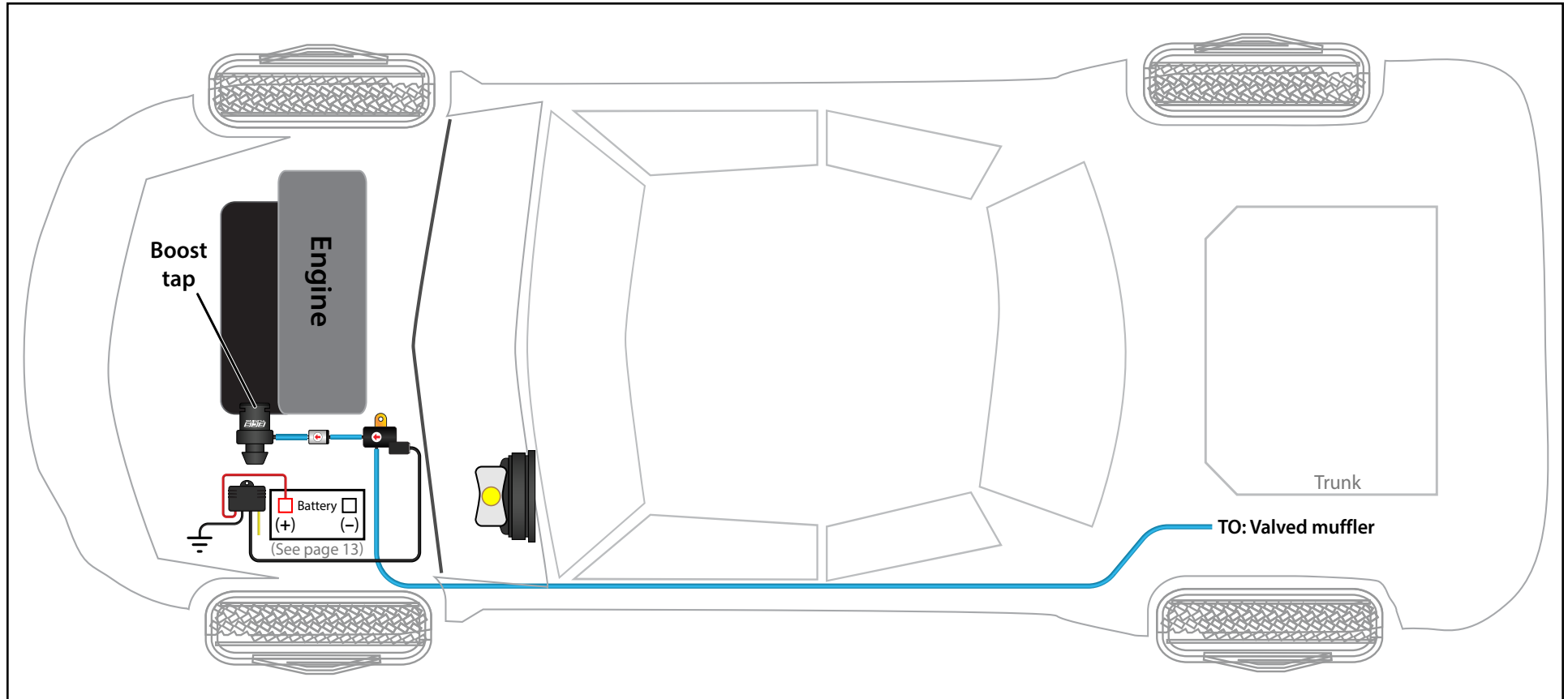
Check Valve **(QTY 1)**



Vacuum Hose T-Fitting* **(QTY 1)**

*This is included but may not be required for this installation

REMOTE EXHAUST VALVE CONTROLLER SYSTEM DIAGRAM

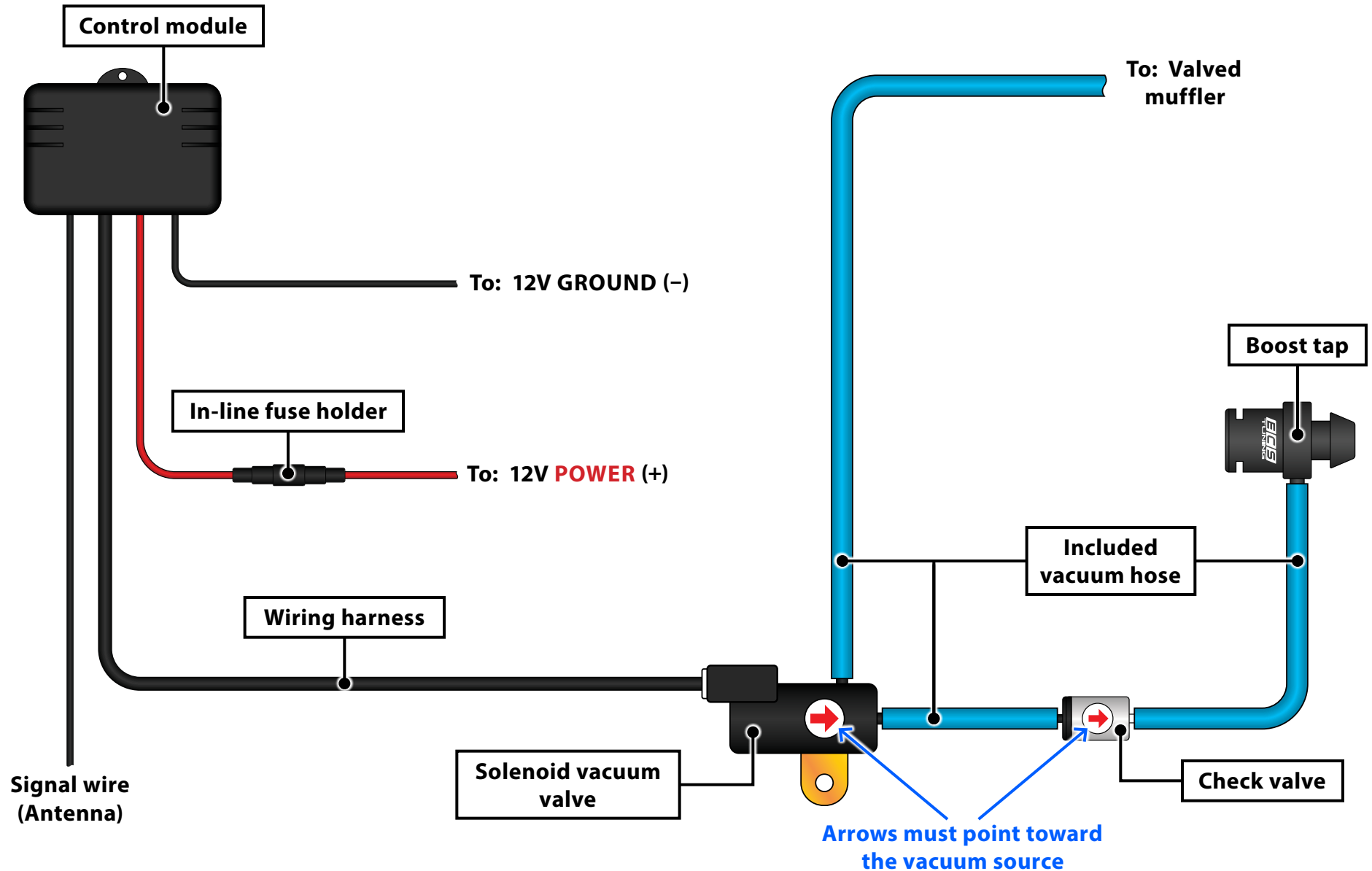


We decided to install our control module and solenoid under the hood next to the battery. The remote exhaust valve controller system can be installed almost anywhere on the vehicle, if you want to install the components somewhere else that is absolutely OK.

We wired the control module power and ground wires directly to the battery using ring terminals. We then routed the vacuum hose from the boost tap, down along the underbelly and over to where the valved muffler would be located just in front of the fuel tank.

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

REMOTE EXHAUST VALVE CONTROLLER SYSTEM DIAGRAM



INSTALLING THE REMOTE EXHAUST VALVE CONTROLLER

Step 1:

The Remote Exhaust Valve Controller allows the user to open and close the exhaust valve with the push of a button.

Please familiarize yourself with the Kit Contents on Page 11, and the System Diagrams on Page 12 & 13 before proceeding to the next step.



Step 2:

Our valved exhaust system requires either a boost tap to be installed (see small inset photo), or another suitable vacuum source must be found. Our ECS Tuning Boost Tap can be found by clicking [HERE](#):



INSTALLING THE REMOTE EXHAUST VALVE CONTROLLER

Step 3: T30 Torx Bit Socket & Ratchet

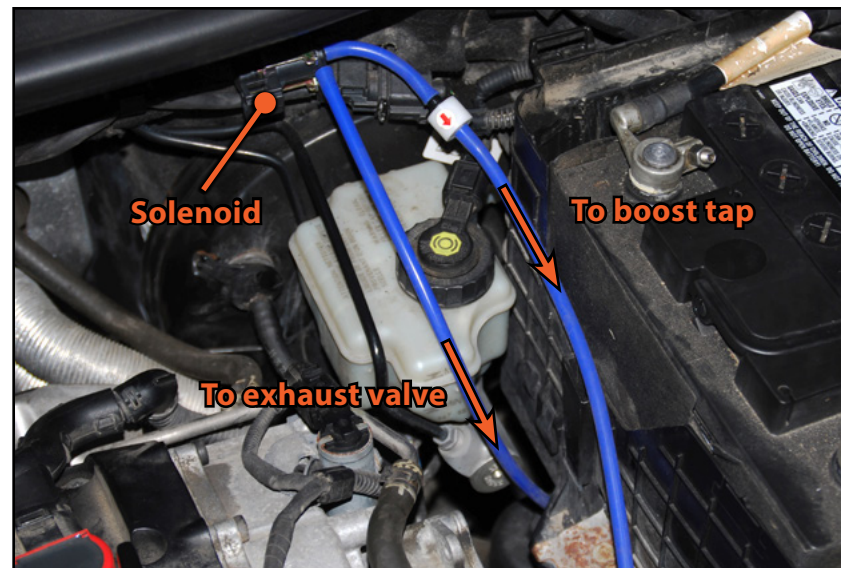
Now it's time to mount the solenoid vacuum valve and the electronic control module. For our install we bolted it behind the oxygen sensor wiring harness bracket on the firewall near the brake fluid reservoir.

Route the vacuum hose between the solenoid vacuum valve and the boost tap, using the diagram on [Page 13](#) for reference.



NOTE

The check valve can be installed anywhere between the solenoid vacuum valve and the vacuum source. Take into consideration the amount of hose needed between these components before cutting the hose to prevent excess waste.



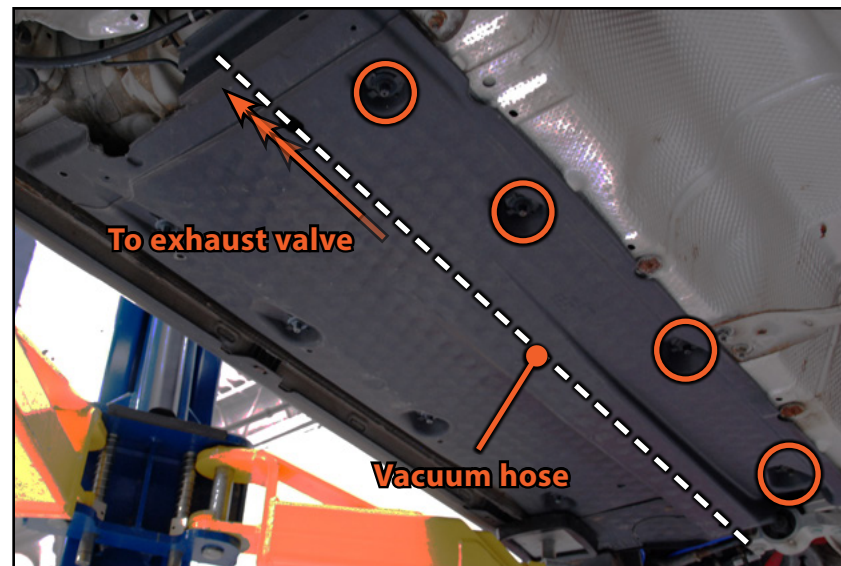
Step 4: 10mm Socket & Ratchet

Route the hose down away from any moving or hot components and out through the bottom of the vehicle. Pull the vacuum hose down past the front subframe and toward the rear of the vehicle.

Loosen the four plastic shouldered hex nuts on the inner side of the left underbody panel, then pull down on the open end of the panel and route the vacuum hose underneath as shown in the photo. Reinstall the four nuts after the line has been routed. Route the hose to where the muffler will be located, securing it in place with zip ties if necessary.



You're now ready to install the new exhaust system, please proceed to the next page.



INSTALLING THE REMOTE EXHAUST VALVE CONTROLLER

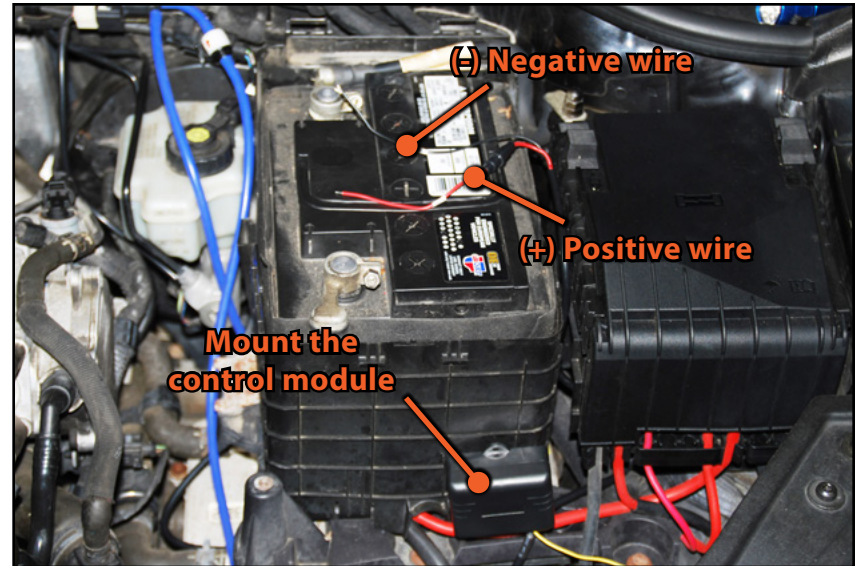
Step 5:

You have the choice of where to mount your control module, for this installation we chose to install it onto the battery cover. This can be achieved by drilling two 1/8" holes into the battery cover and attaching the control module with a zip tie.



DO NOT drill into the battery cover without first removing it from the vehicle, this will prevent accidentally drilling into the battery.

Connect the control module wiring to suitable power (+) and ground (-) sources. We also chose to wire our control module directly to the battery posts, but you may choose to use a switched power source such as the cigarette lighter.



Step 6:

Plug the end of the wiring harness from the control module into the solenoid vacuum valve. Finally, perform a system check by starting the engine, then press the "unlock" button on the remote to open the valve, and press the "lock" button to close the valve. You should be able to hear a difference in both exhaust tone and volume when the valve is opened or closed.

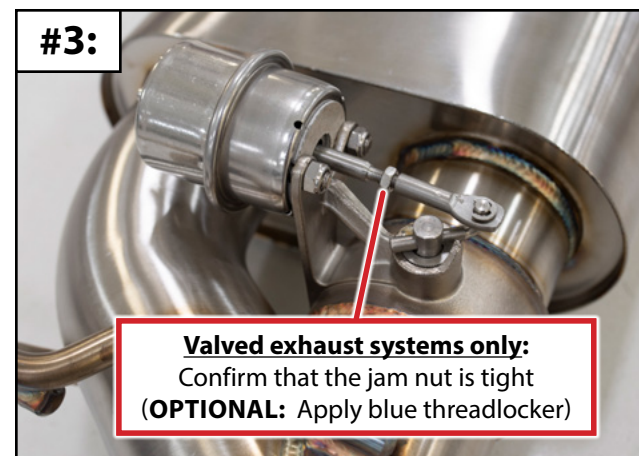
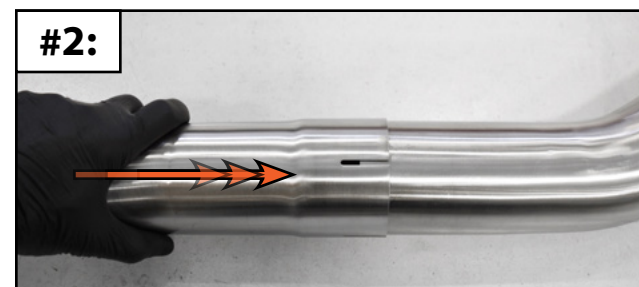
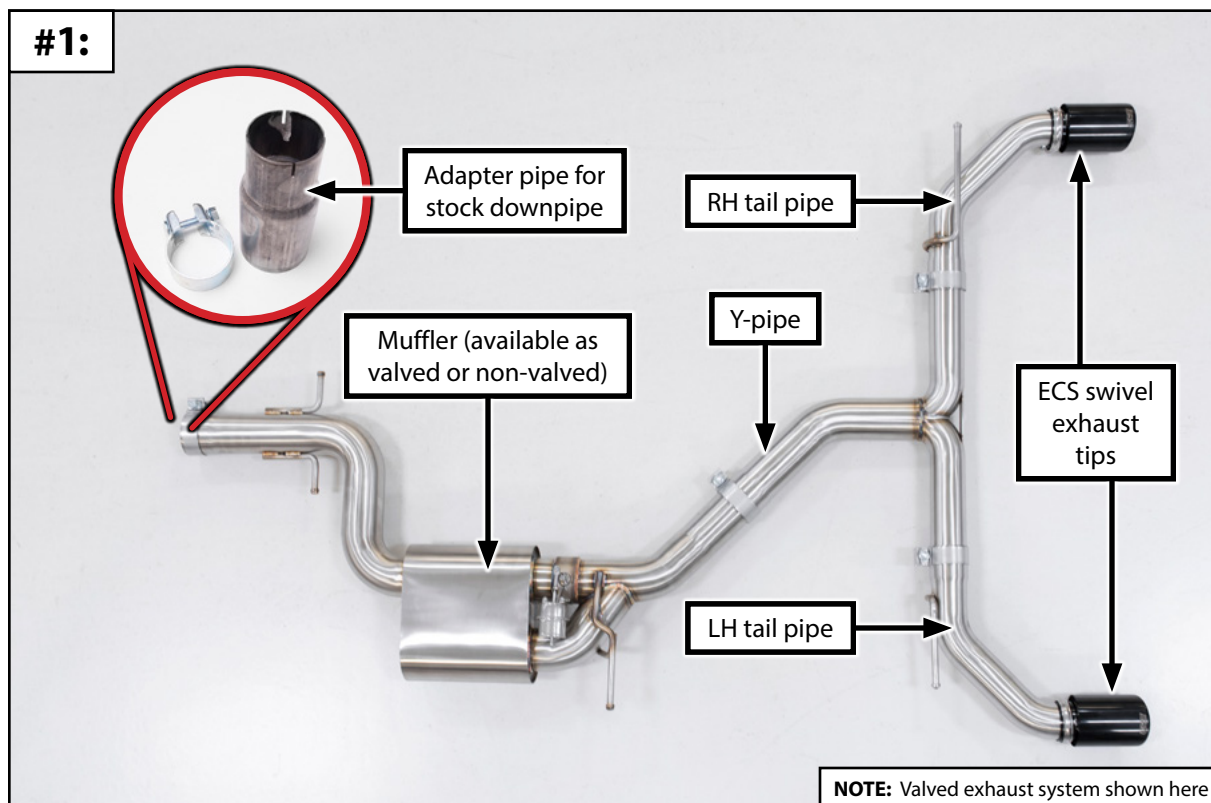


INSTALLING THE NEW EXHAUST SYSTEM

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. If you purchased a valved system, confirm that the jam nut is tight on the 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.



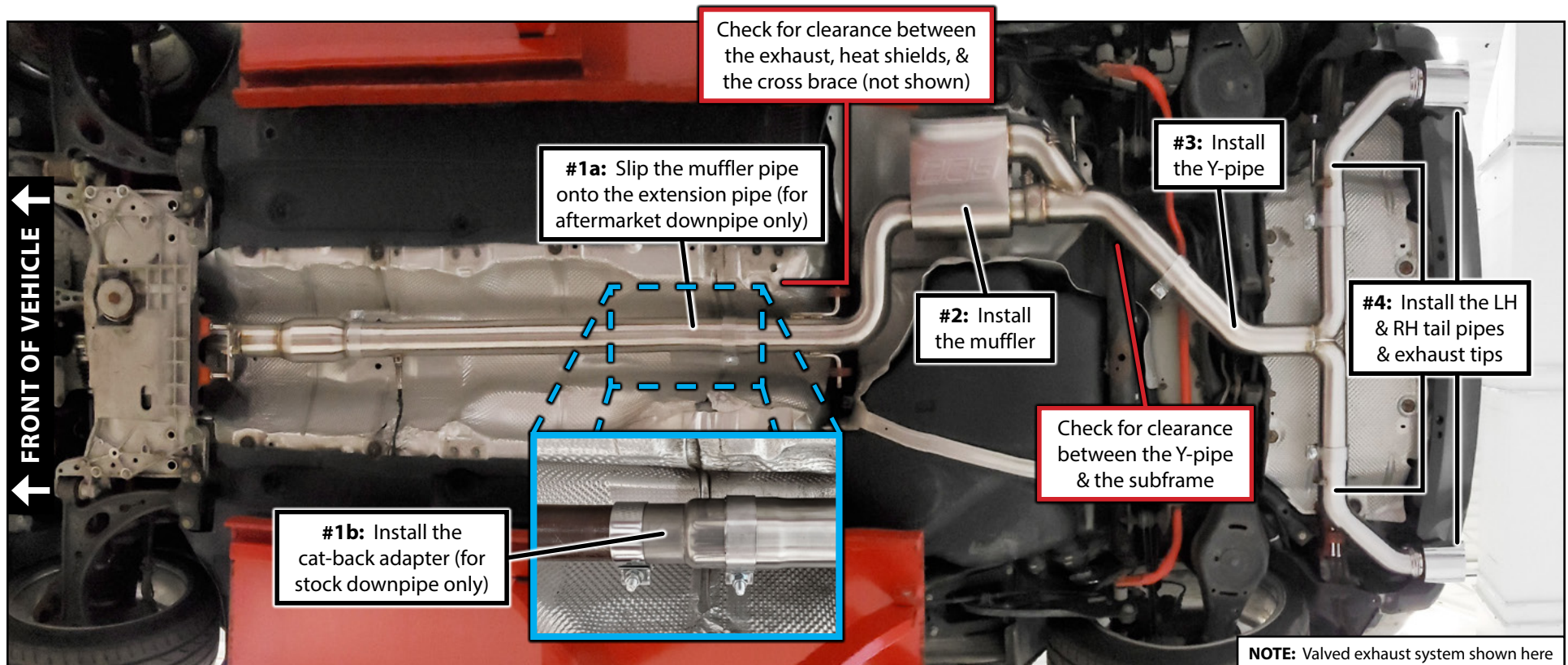
INSTALLING THE NEW EXHAUST SYSTEM

Step 2:

Loosely install the muffler onto the downpipe. If you have a stock downpipe you can use the adapter which is included w/the cat-back kit (see the **BLUE** inset photo). If you have an aftermarket downpipe you can simply slide the muffler onto the extension pipe (see the large photo below). Loosely install Y-pipe, LH tail pipe, RH tail pipe, and the two exhaust tips.

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 20.

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 3: 13mm & 15mm Sockets, Ratchet

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

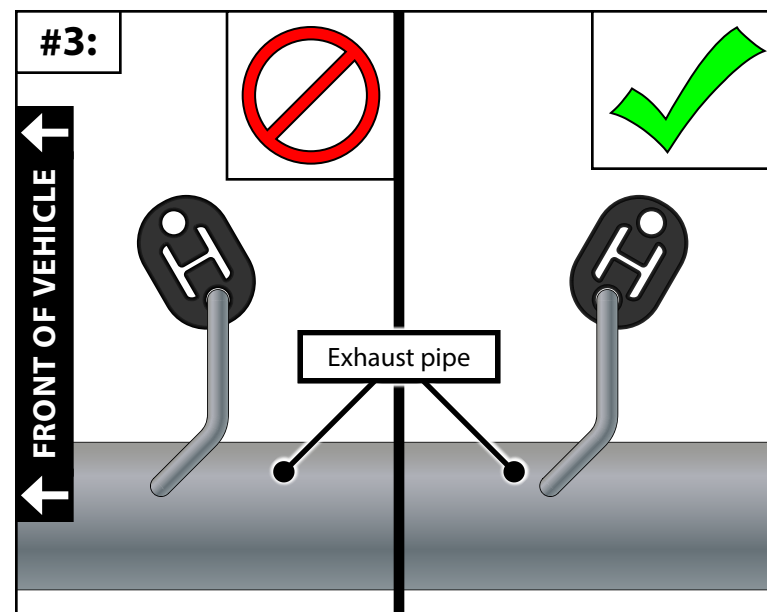
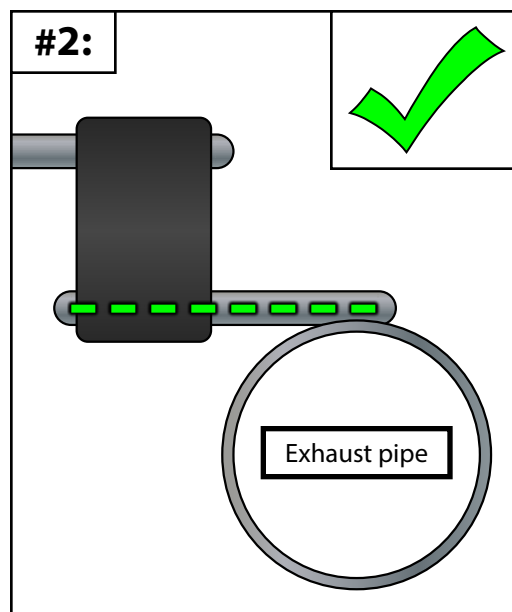
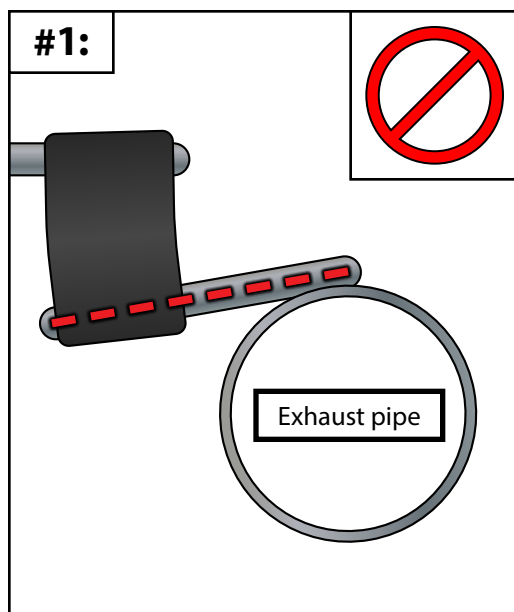
Finally, we want to ensure that the exhaust hangers are rotated at least slightly toward the front of the vehicle (**photo #3 below**). The exhaust hangers should be inclined toward the front of the vehicle so that lower hole is approximately 10-15mm forward of the upper hole, this will allow the hangers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



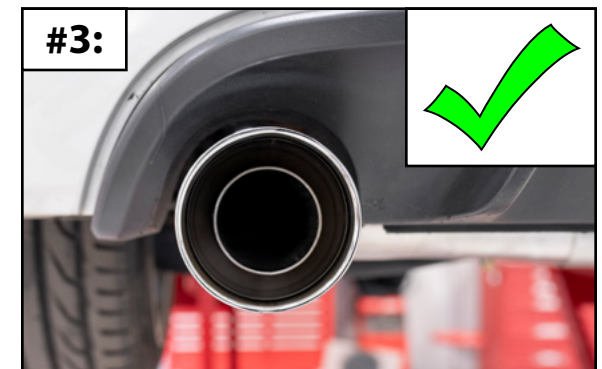
INSTALLING THE NEW EXHAUST SYSTEM

Step 4: 13mm & 15mm Sockets, Ratchet

Inspect the muffler and ensure that it is sitting level side-to-side as much as possible (**photo #1**). Center and level the exhaust tips inside the bumper cut outs (**photo #2 & photo #3**).



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 5: 13mm & 15mm Sockets, Ratchet & Torque Wrench

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 (**photo #1**), then let go and allow the exhaust to settle. Tighten the clamps on the exhaust tips to 19 Nm (14 Ft-lbs). Check again for clearance around all pipes.

Connect the vacuum hose to the muffler valve (**photo #2**).

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

Reinstall the belly pans and chassis cross braces.

FOR VALVED SYSTEMS ONLY:

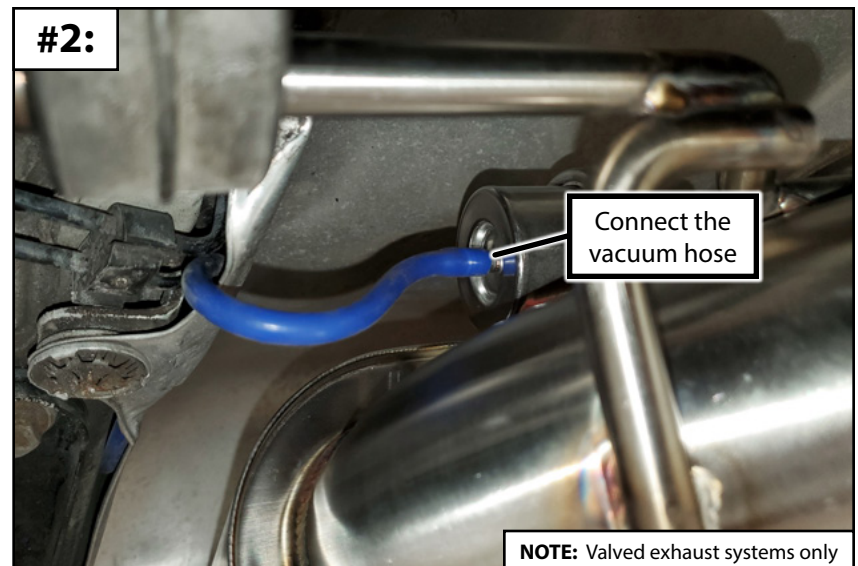
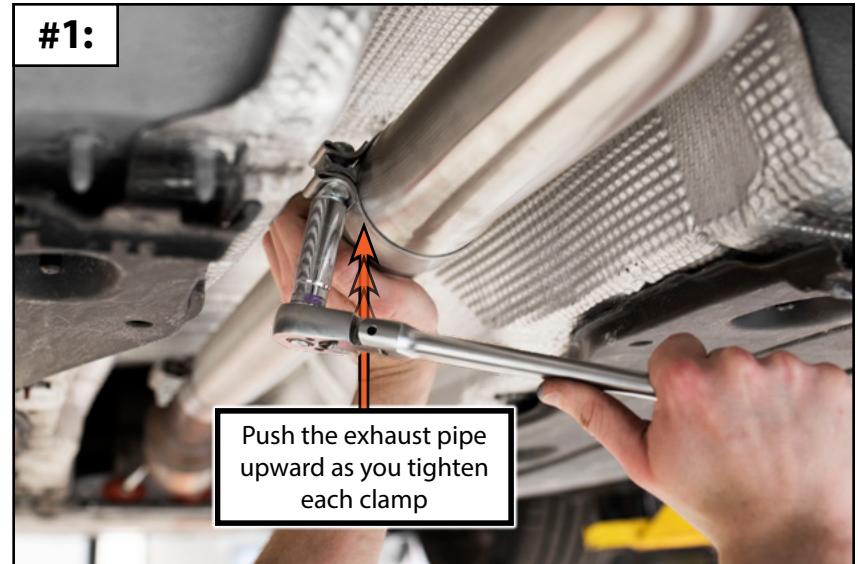
Perform a system check by performing the following steps:

- 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.



We have found that in some cases while the engine is making boost there won't be enough vacuum present in the system to operate the exhaust valves. This system will operate best when you are off throttle.



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.

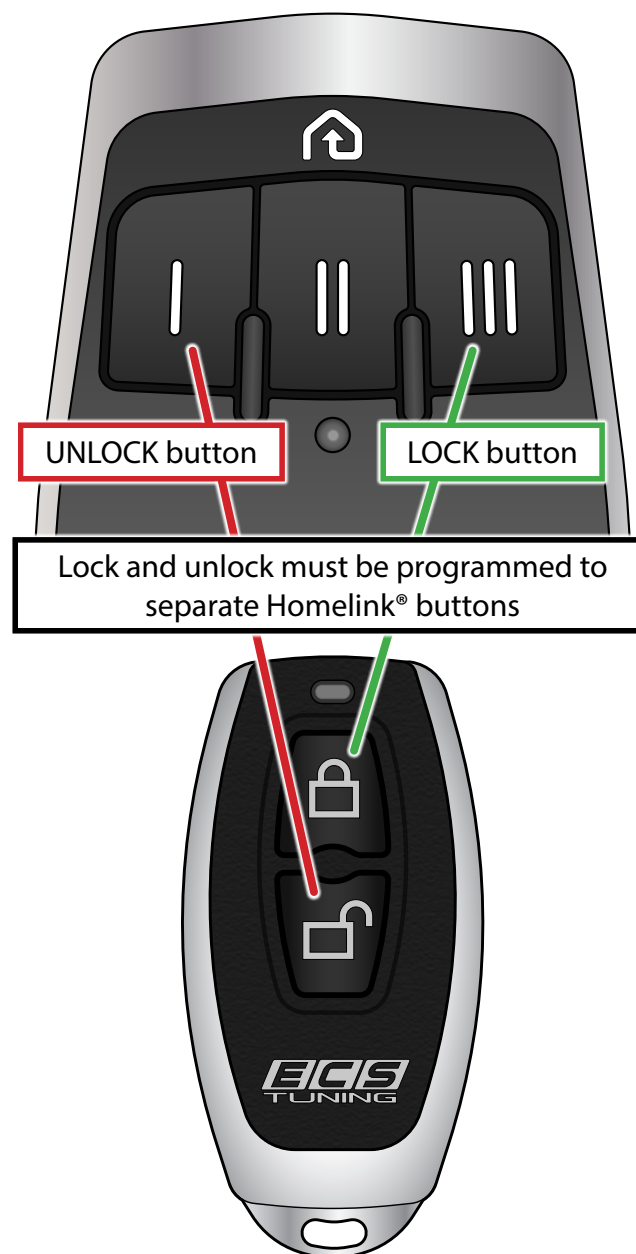
We recommend you check your owner's manual programming information, or you can visit the Homelink® website for their vehicle specific instructions:

- <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 MK6 GTI ECS Exhaust System
installation is complete!***



Your MK6 GTI ECS 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.

Although this material has been prepared with the intent to provide reliable information, no warranty (express or implied) is made as to its accuracy or completeness. Neither is any liability assumed for loss or damage resulting from reliance on this material. SPECIFICALLY, NO WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER WARRANTY IS MADE OR TO BE IMPLIED WITH RESPECT TO THIS MATERIAL. In no event will ECS Tuning, Incorporated or its affiliates be liable for any damages, direct or indirect, consequential or compensatory, arising out of the use of this material.