



BMW E46 M3 Valved Cat-Back Exhaust System Installation Guide

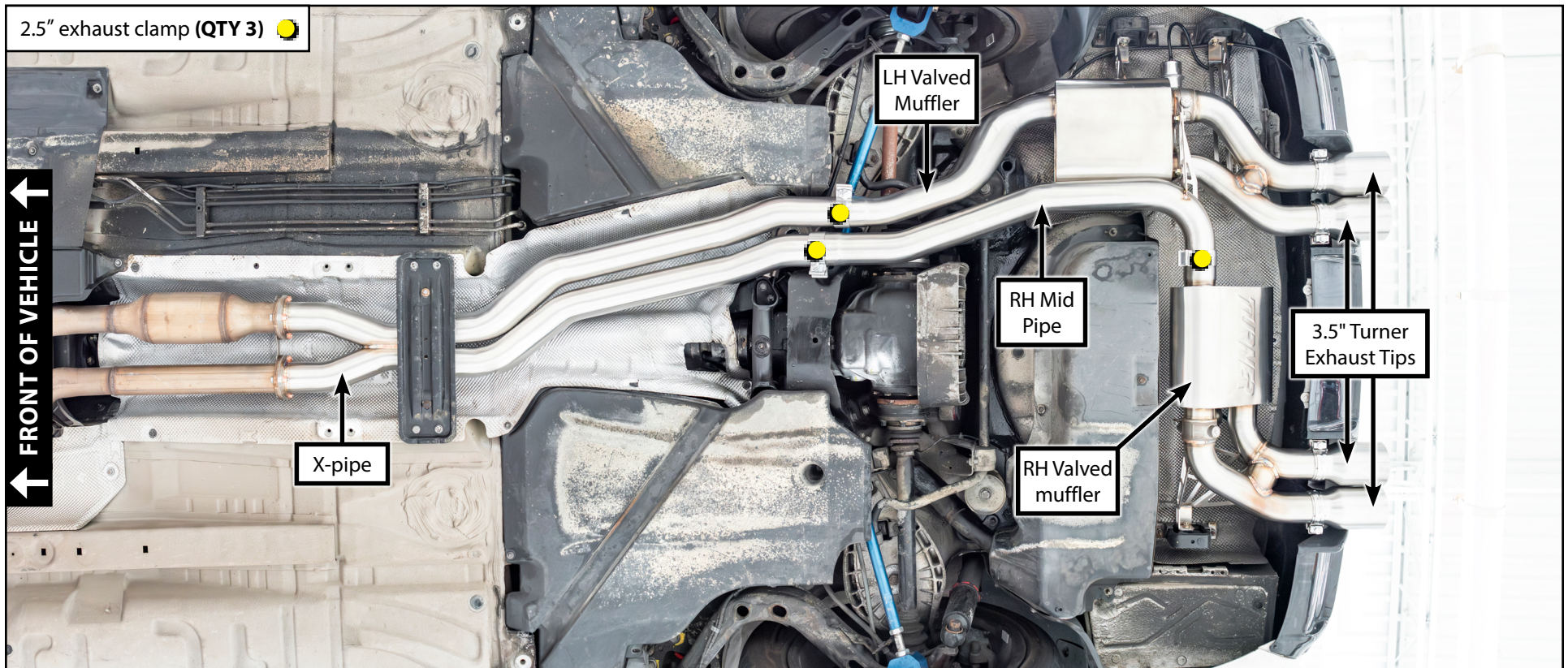


Proper service and repair procedures are vital to the safe, reliable operation of all motor vehicles as well as the personal safety of those performing the repairs. Standard safety procedures and precautions (including use of safety goggles and proper tools and equipment) should be followed at all times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

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CAT-BACK EXHAUST SYSTEM KIT CONTENTS



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

Turner Motorsport 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.

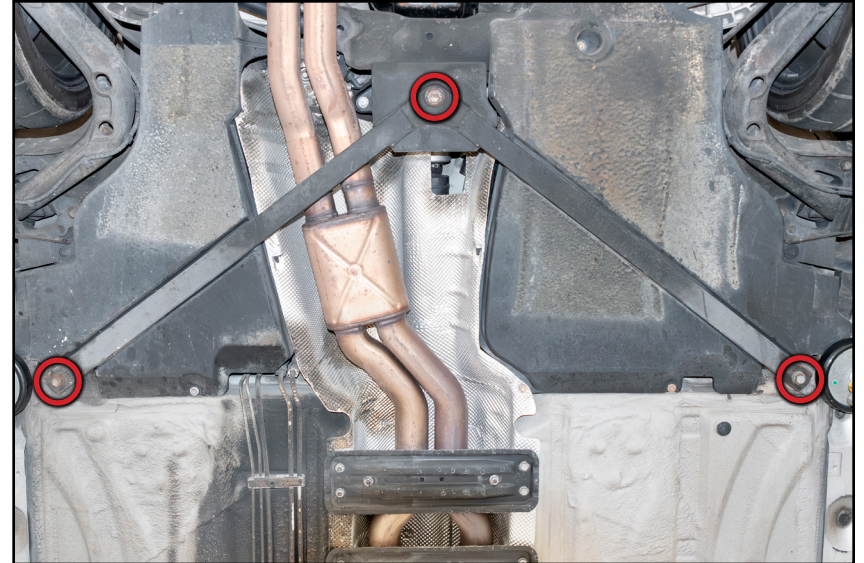


NEVER get underneath a vehicle that is supported only by a jack, and **ALWAYS** make sure that the vehicle is securely supported on jack stands.

REMOVING THE STOCK EXHAUST SYSTEM

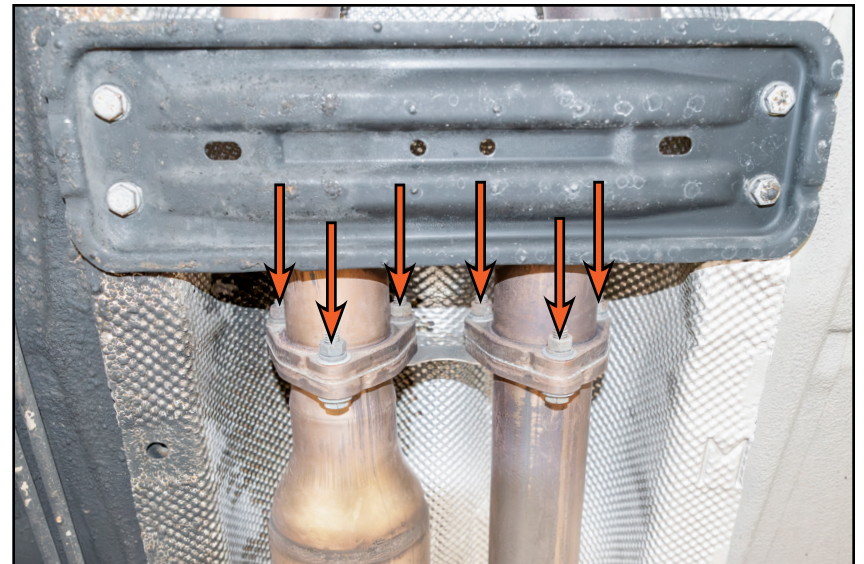
Step 1: 16mm Socket & Ratchet

Remove the three bolts (circled in **RED**) that secure the rear subframe brace, then remove it from the vehicle.



Step 2: 13mm Socket & Ratchet

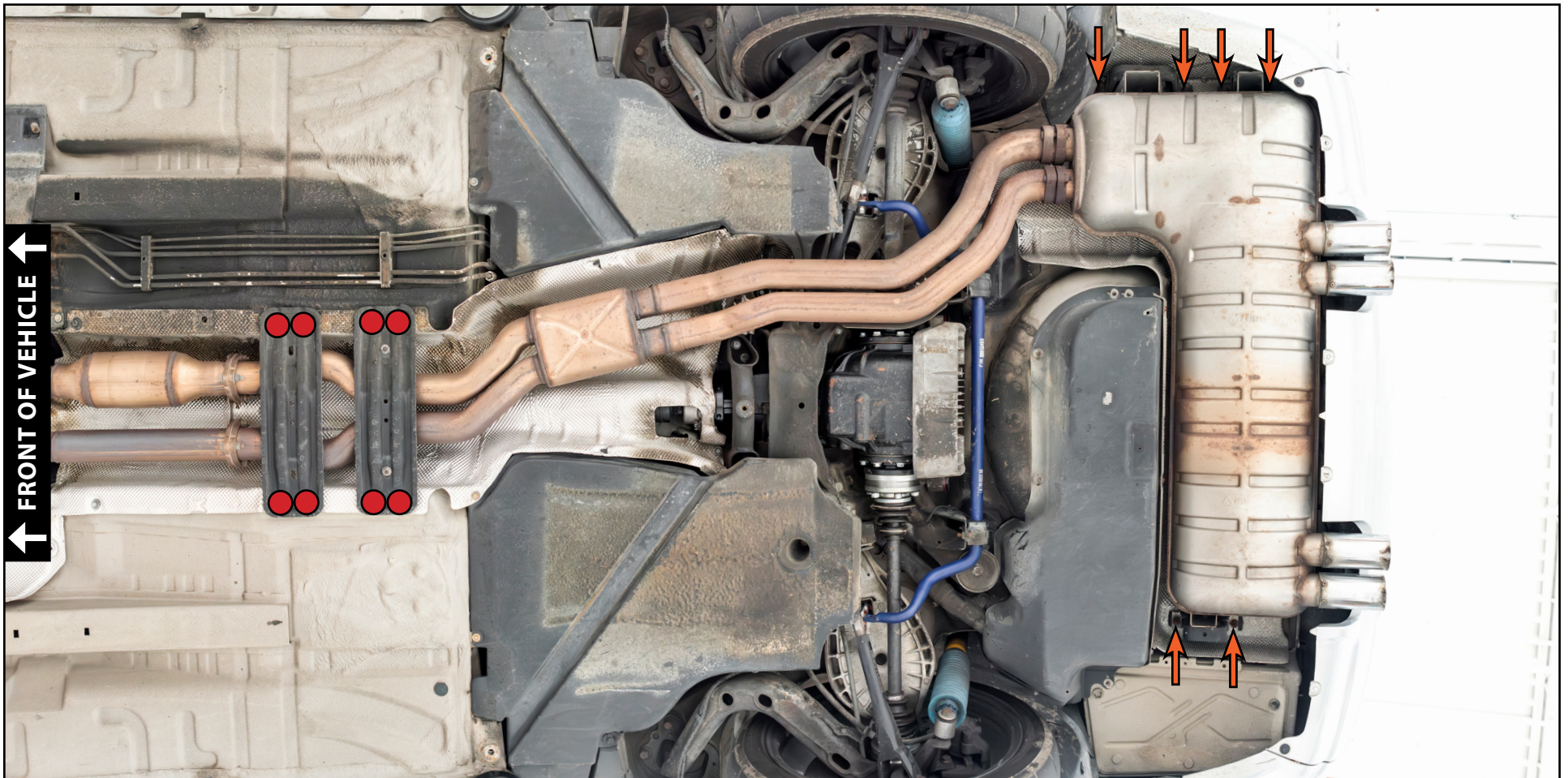
Remove the six nuts (arrows) which secure the exhaust system to the catalytic converter pipes.



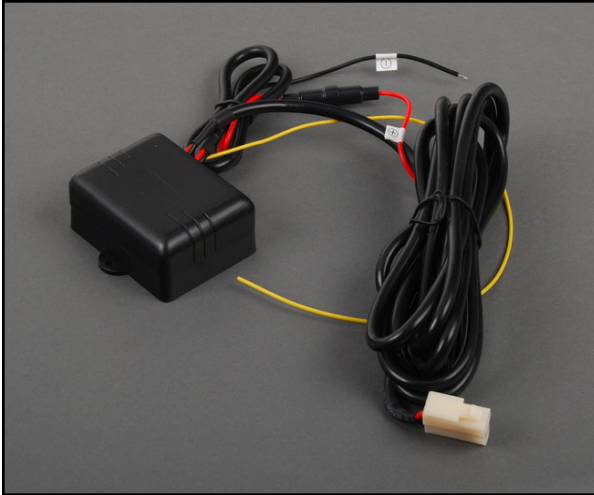
REMOVING THE STOCK EXHAUST SYSTEM

Step 3: 13mm Socket & Ratchet

Support both ends of the exhaust to prevent it from falling, remove the bolts (RED circles) that secure the cross braces and remove the front brace from the vehicle (the rear brace will remain attached to the exhaust). Remove the nuts (arrows) that secure the muffler hangers to the vehicle, then carefully remove the exhaust.



REMOTE EXHAUST VALVE CONTROLLER KIT CONTENTS



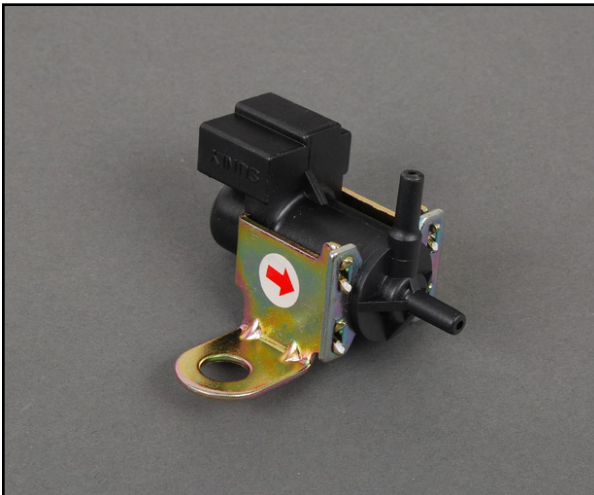
Control Module with Wiring Harness (QTY 1)



Vacuum Hose (1x long, 1x short)



Remote Controllers (QTY 2)



Solenoid Vacuum Valve (QTY 1)

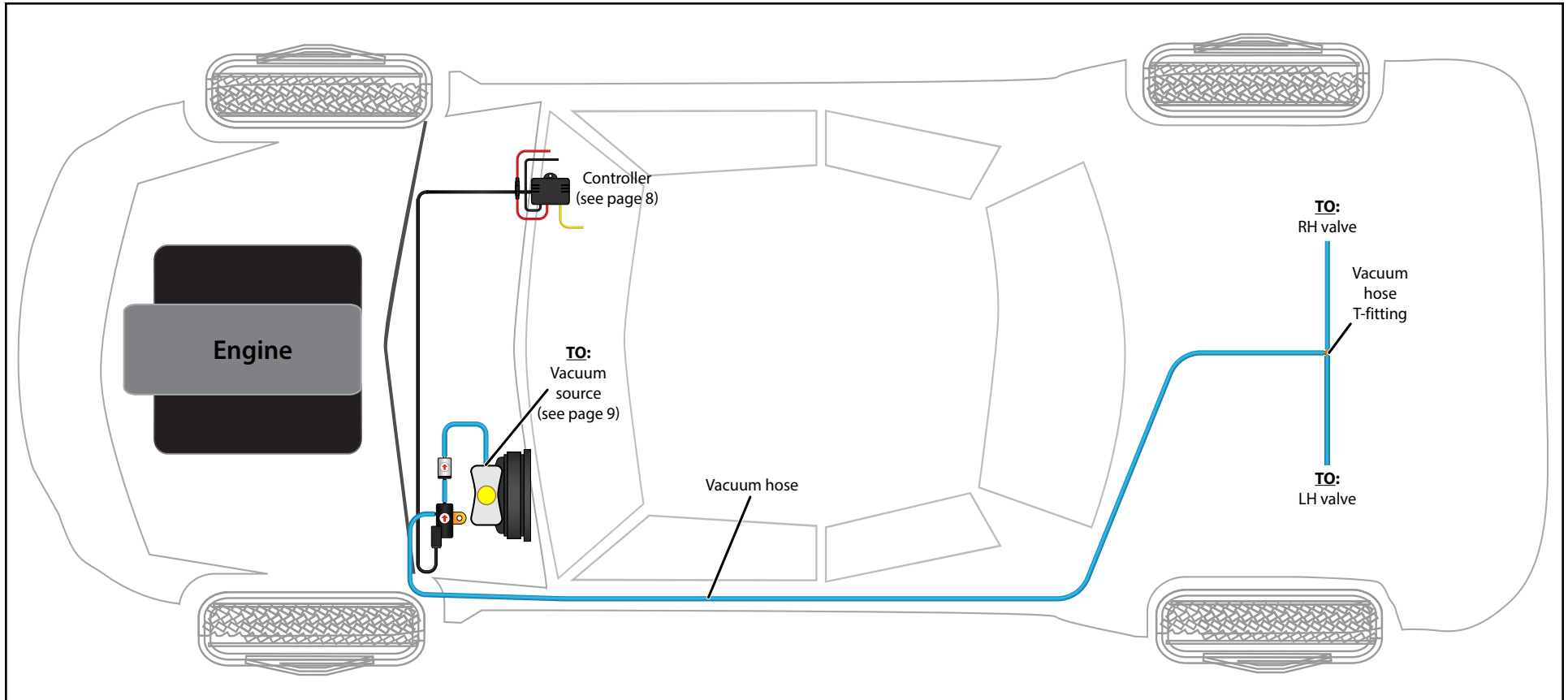


Check Valve (QTY 1)



Vacuum Hose T-Fitting (QTY 2)

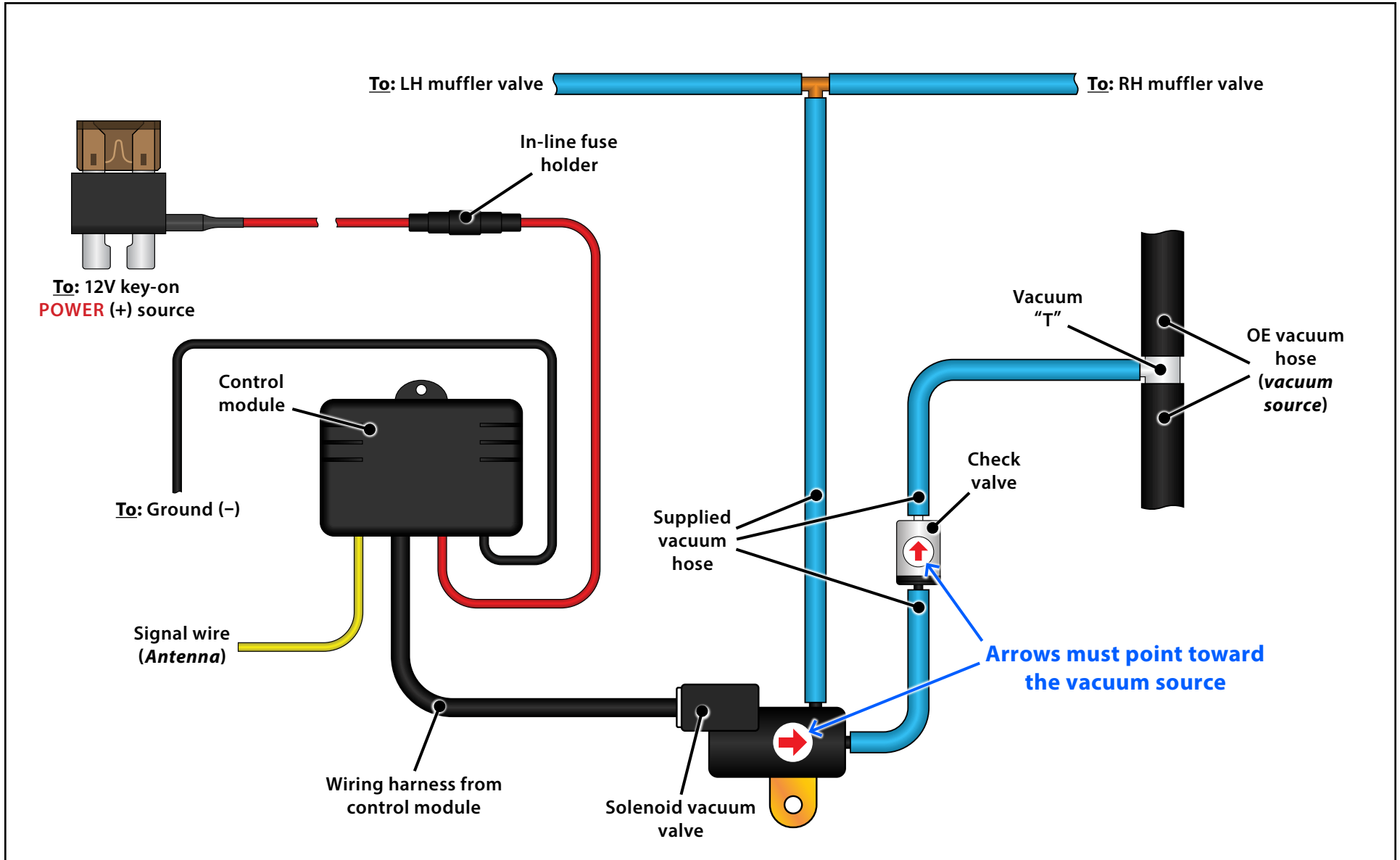
REMOTE EXHAUST VALVE CONTROLLER SYSTEM INSTALLATION



We opted to mount the control module in the fuse box behind the glove compartment, then route the harness through a grommet and into the engine bay. 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 under hood, then used a T-fitting to route vacuum hose from the OE vacuum source over to the solenoid, then down along the underbelly and over to where the valved muffler will be located. Please proceed to the next two pages for a detailed diagram of the entire valve controller system and information regarding locating a vacuum source.

REMOTE EXHAUST VALVE CONTROLLER SYSTEM INSTALLATION



REMOTE EXHAUST VALVE CONTROLLER SYSTEM INSTALLATION



Locate the OE vacuum hose (highlighted in **RED** in **photo #1**) next to the brake fluid reservoir, then cut the hose and install the T-fitting. Route the provided vacuum hose (highlighted in **GREEN** in **photo #2**) from the T-fitting over to the solenoid, being sure to install the check valve in line.

INSTALLING THE NEW EXHAUST SYSTEM

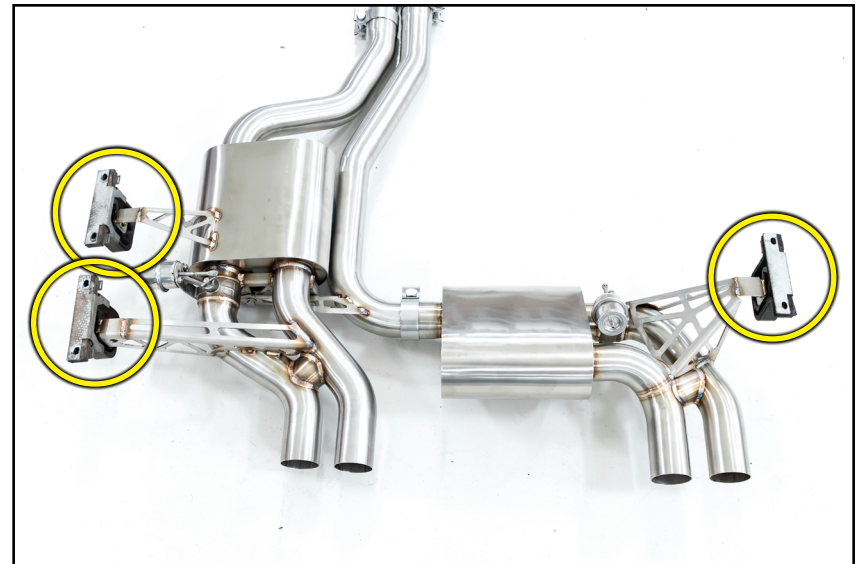
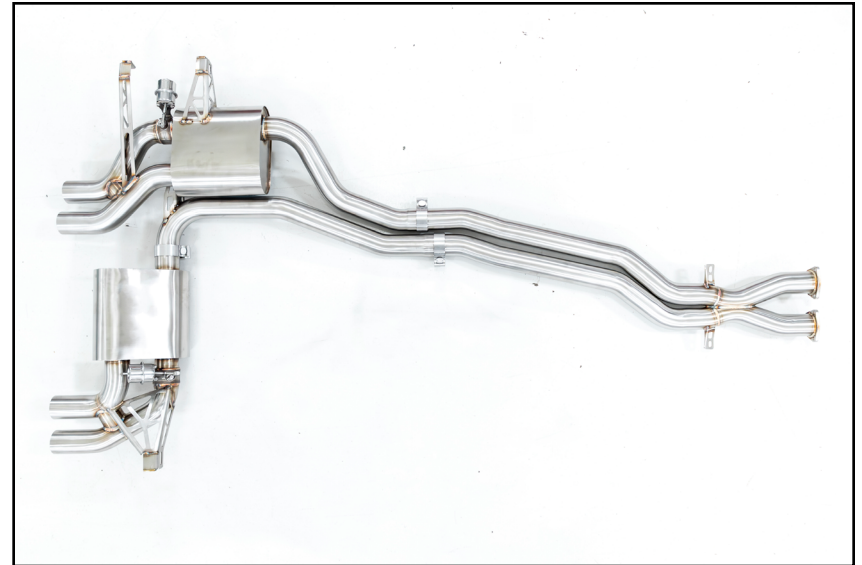
Step 1: Pipe Expander, Ball Pein Hammer

Before we begin, it's a good idea to unpack your new exhaust system and test fit the pipes together at every slip joint to make sure they slide together easily. If they do not slide together easily, use a pipe expander or 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 back-to-front without fully 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.

Step 2: 13mm Wrench, 13mm Socket & Ratchet

Transfer the hangers (circled in **YELLOW**) from the stock muffler over to the new mufflers as shown and secure them in place with the provided hardware.



INSTALLING THE NEW EXHAUST SYSTEM

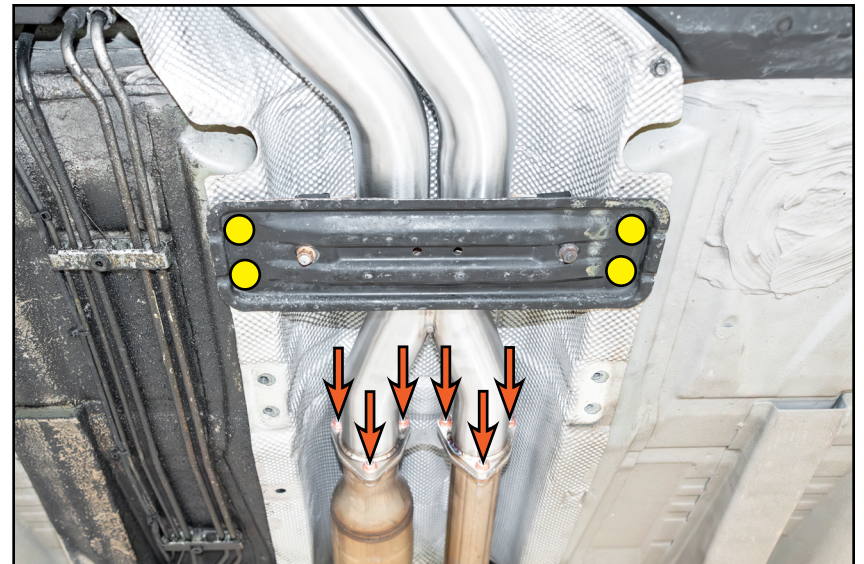
Step 3: 13mm Socket & Ratchet

Transfer the rear cross brace to the new X-pipe and secure it with the provided nuts (circled in **YELLOW**).



Step 4: 13mm Wrench, 13mm Socket & Torque Wrench

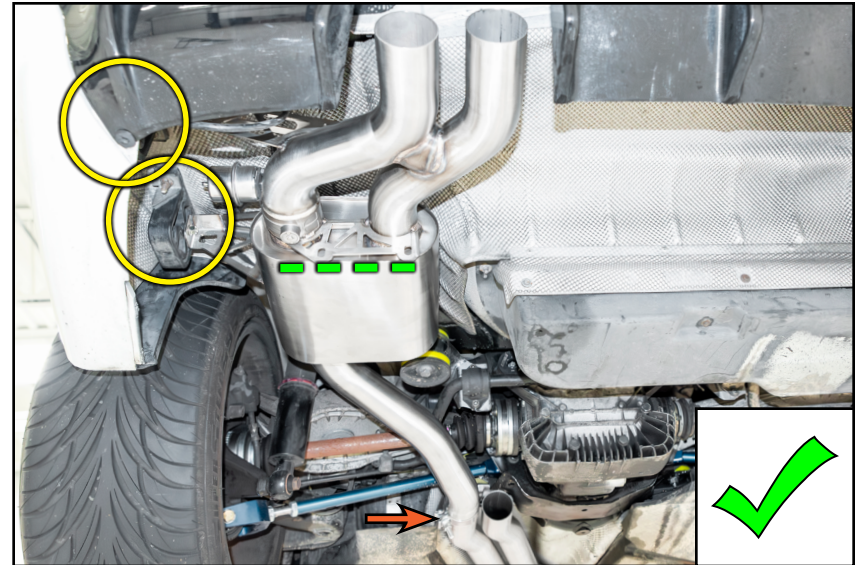
Install the X-pipe onto the catalytic converter pipes using the provided exhaust gaskets and secure it in place with the provided hardware. Reinstall the bolts (**YELLOW** circles) to secure the rear cross brace to the vehicle. Torque the nuts (arrows) to 24 Nm (18 Ft-lbs).



INSTALLING THE NEW EXHAUST SYSTEM

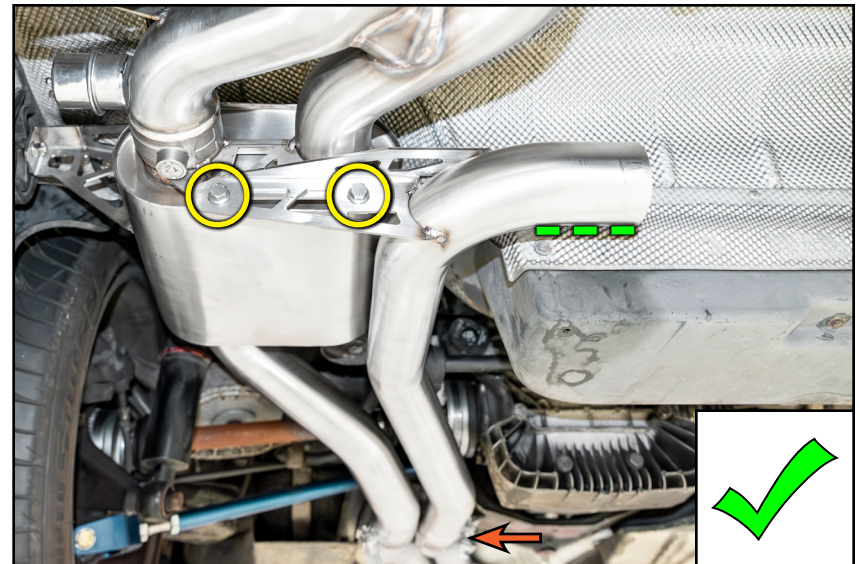
Step 5: 13mm, 15mm Socket & Ratchet

Slide the LH muffler onto the X-pipe, then reinstall the nuts to secure the muffler hangers (circled in **YELLOW**) to the vehicle. Adjust the muffler until it is perfectly level before fully tightening the clamp (arrow).



Step 6: 13mm Wrench, 13mm, 15mm Socket & Ratchet

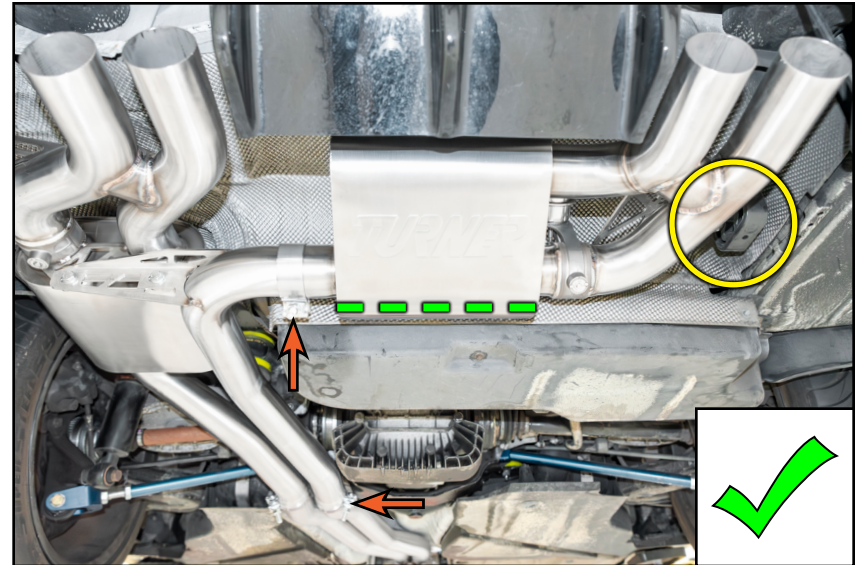
Slide the RH mid pipe onto the X-pipe, then loosely secure it to the LH muffler using the provided hardware (circled in **YELLOW**). Adjust the mid pipe until it is perfectly level then tighten the clamp (arrow) until snug, but leave it loose enough to allow for adjustment.



INSTALLING THE NEW EXHAUST SYSTEM

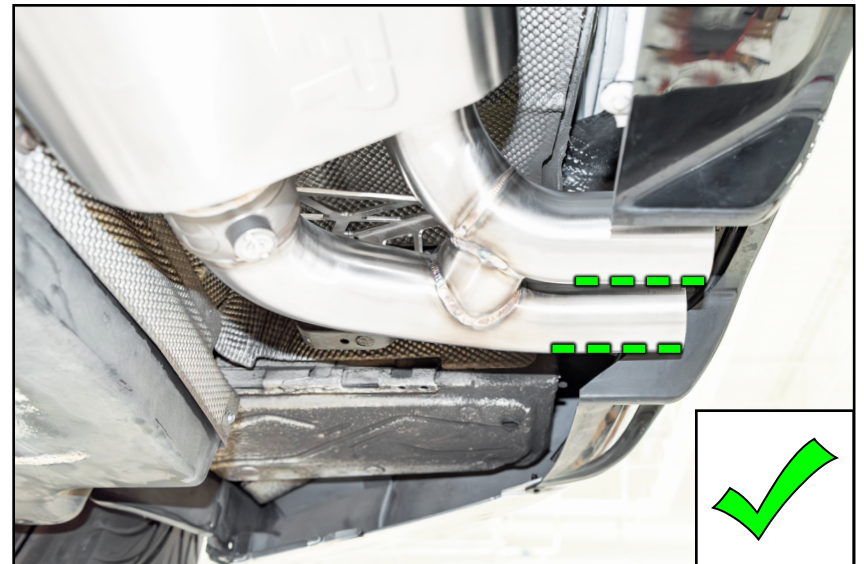
Step 7: 13mm Socket & Ratchet

Slide the RH muffler onto the mid pipe, then reinstall the nuts to secure the muffler hanger (circled in **YELLOW**) to the vehicle. Adjust the muffler until it is perfectly level before fully tightening the clamps (arrows). Go back and fully tighten the hardware that secures the mid pipe to the LH muffler.



Step 8: 15mm Socket & Ratchet

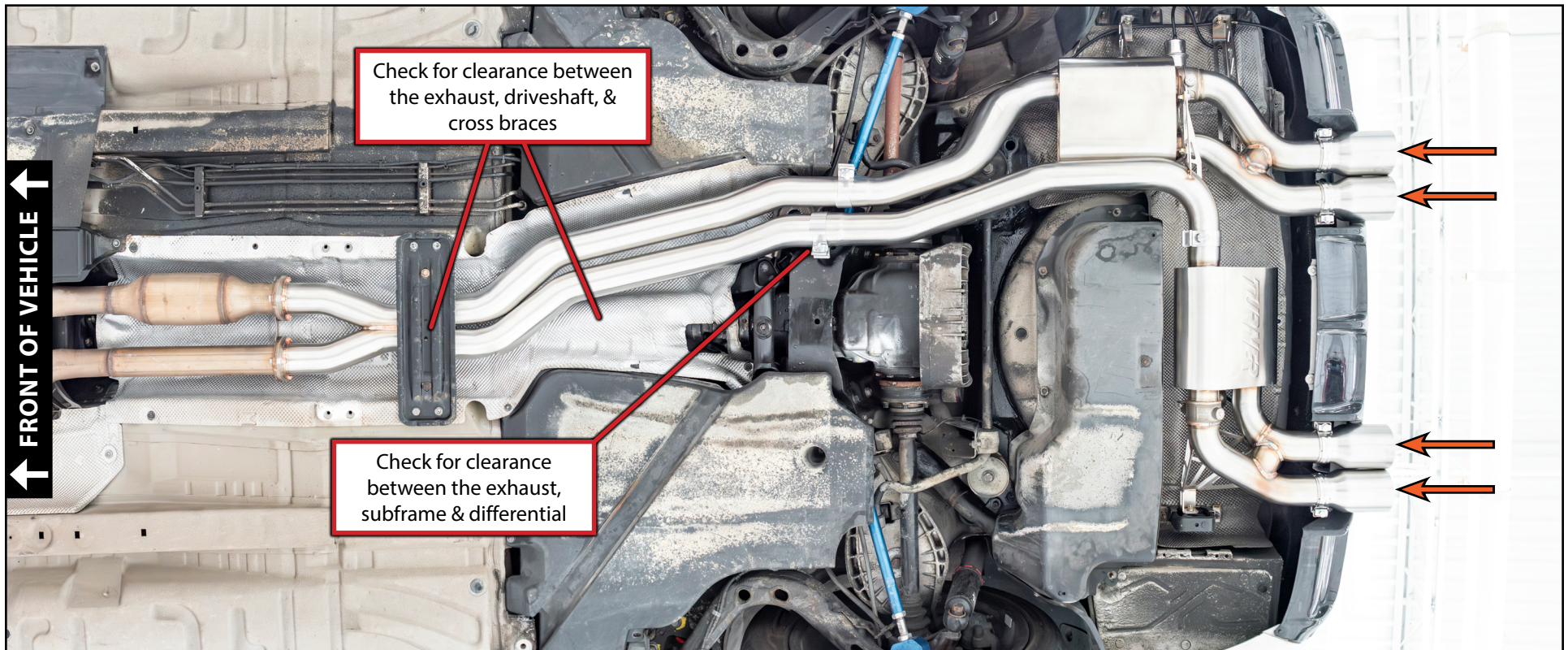
Inspect the tail pipes at each muffler and ensure that they are sitting level front-to-back as much as possible. If needed, loosen the clamps and adjust until proper fitment is achieved, then tighten the clamps back down.



INSTALLING THE NEW EXHAUST SYSTEM

Step 9: 13mm Socket & Ratchet

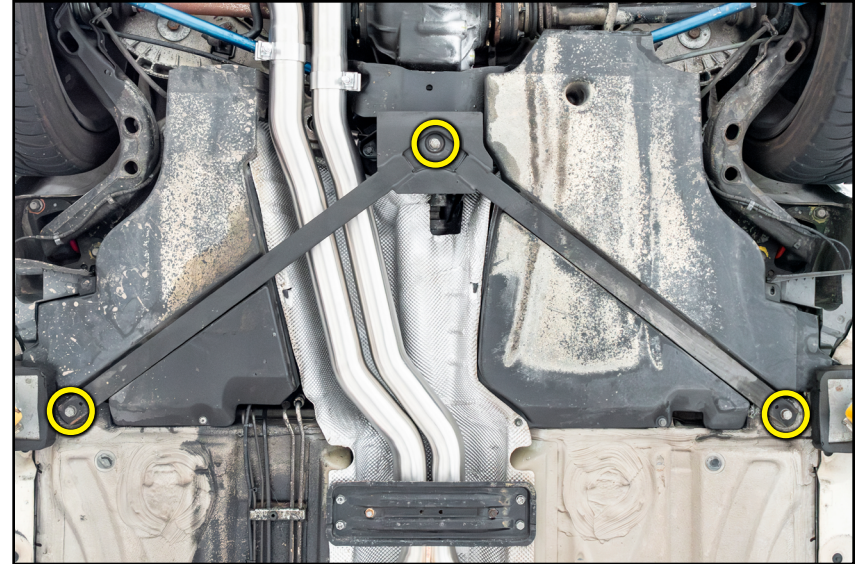
Closely inspect the exhaust system from front to back to check for clearance between the pipes and nearby chassis components. Slide the exhaust tips (arrows) onto the tail pipes as shown, but leave the clamps loose enough to allow for adjustment.



INSTALLING THE NEW EXHAUST SYSTEM

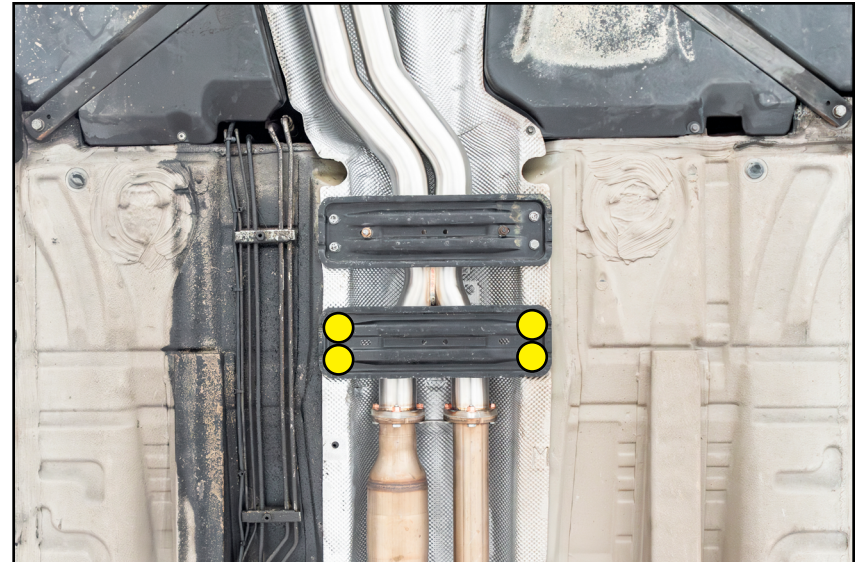
Step 10: 16mm Socket & Ratchet

Reinstall the bolts (circled in **YELLOW**) to secure the rear subframe brace to the vehicle.



Step 11: 13mm Socket & Ratchet

Reinstall the bolts (**YELLOW** circles) to secure the front cross brace to the vehicle.



INSTALLING THE NEW EXHAUST SYSTEM

Step 12:

Connect the new silicone vacuum hoses to the new exhaust valves as shown.



Step 13: 13mm Socket & Torque Wrench

Slide the exhaust tips in our out until your desired depth is achieved then center and level the exhaust tips inside the cutouts in the rear valance before tightening the clamps to 19 Nm (14 Ft-lbs).

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

Start the engine and check the exhaust system for leaks.

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

Congratulations, your installation is complete!



Your Valved Exhaust System installation is complete!



These instructions are provided as a courtesy by Turner Motorsport

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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