



BMW F3X B48 Exhaust System
Installation Instructions - [Click HERE to Shop](#)



Skill Level
1 - Easy
Basic Skills
Required

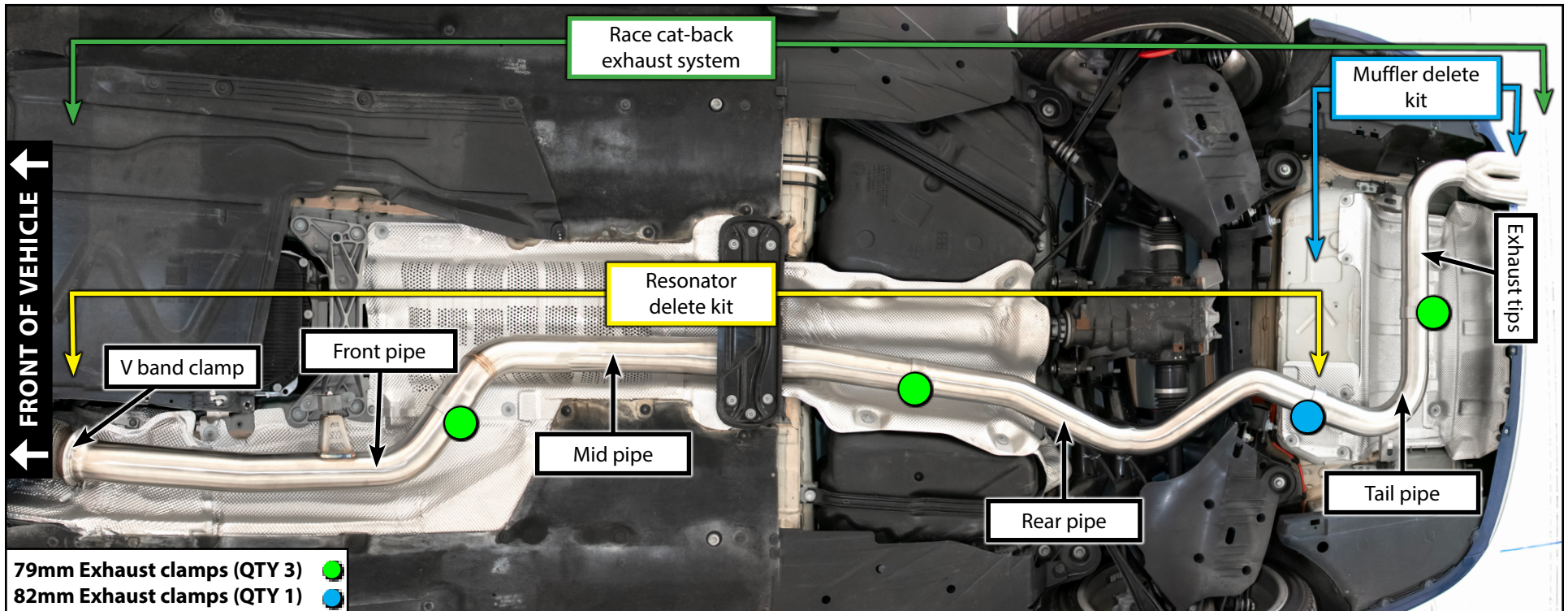


Proper service and repair procedures are vital to the safe, reliable operation of all motor vehicles as well as the personal safety of those performing the repairs. Standard safety procedures and precautions (including use of safety goggles and proper tools and equipment) should be followed at all times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

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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
- 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](#)
- **Exhaust Pipe Cutter Tool** [ES#3106581](#)

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.

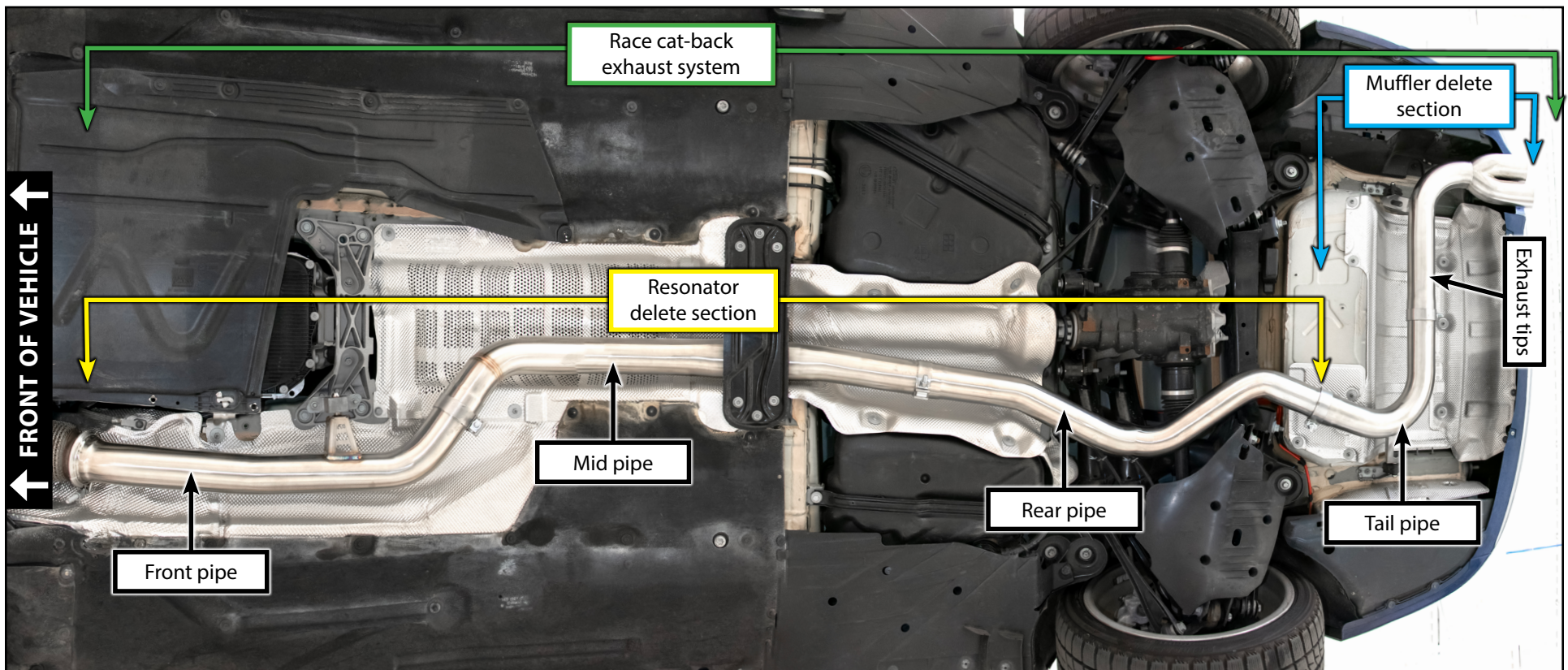


NEVER get underneath a vehicle that is supported only by a jack, and **ALWAYS** make sure that the vehicle is securely supported on jack stands.

PROJECT OVERVIEW

Our race cat-back exhaust system (**GREEN**), is the combination of our resonator delete kit and our muffler delete kit. The race cat-back exhaust system includes the front pipe, mid-pipe, rear pipe, tail pipe, and the exhaust tip. The stock exhaust will be removed in one piece when installing **race cat-back systems only**. For our resonator delete and muffler delete kits, the stock exhaust will need to be cut. The resonator delete section (**YELLOW**) includes the front pipe, mid pipe and rear pipe. The muffler delete section (**BLUE**) includes the tail pipe and exhaust tip.

Now let's get to it!



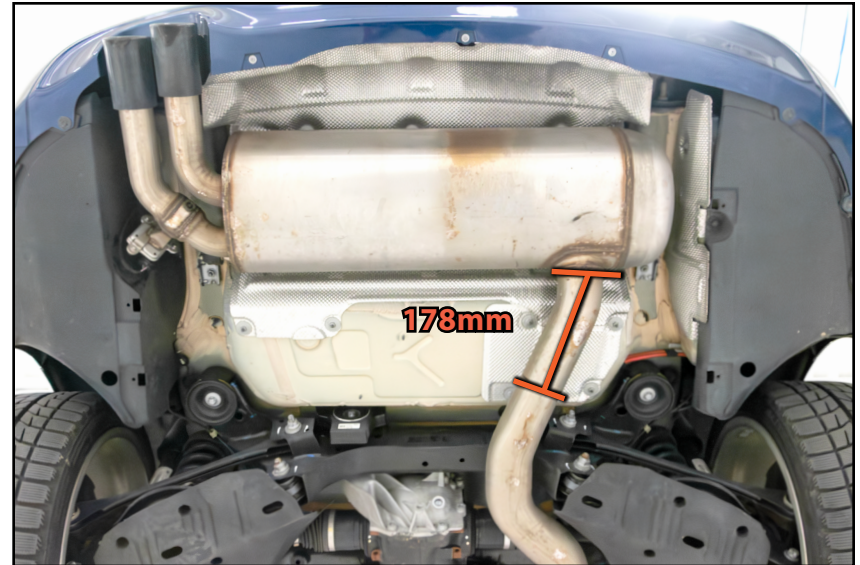
REMOVING THE STOCK EXHAUST SYSTEM

Step 1: Marker -OR- Masking Tape

Safely lift and support the vehicle, then measure 178mm upstream from the weld on the muffler and mark all the way around the pipe with a marker or masking tape at this location.



If you purchased the race cat-back system: Skip ahead to the next page.



Step 2: Exhaust Pipe Cutter & File - OR - Die Grinder

Cut along the line we made in the previous step, being sure to cut as straight as possible until you cut all the way through the pipe. Use a metal file or die grinder to remove any burrs from the exhaust pipes that we cut, this will ensure a proper fit and seal.



It is **absolutely imperative** that you take your time here and double or triple check your marks before you cut anything.



If you purchased the resonator delete kit: skip ahead to page 8.



REMOVING THE STOCK EXHAUST SYSTEM

Step 3:

Disconnect the connector (highlighted in **RED**) from the exhaust valve controller, and tuck it safely out of the way.

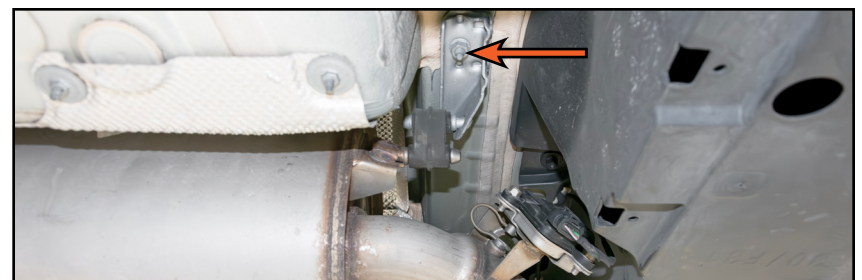
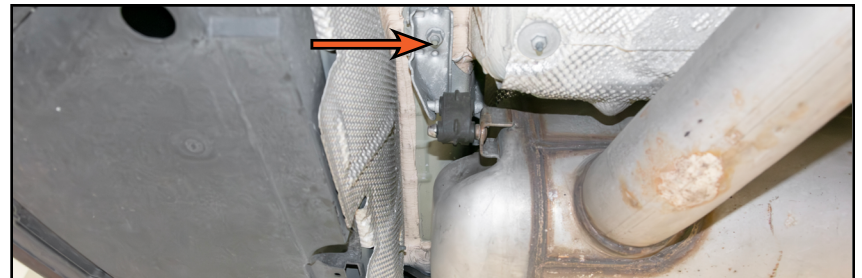


Step 4: Pole Jack, 13mm Socket & Ratchet

Support the muffler with a pole jack, then remove the nuts (arrows) that secure the muffler hangers to the vehicle.



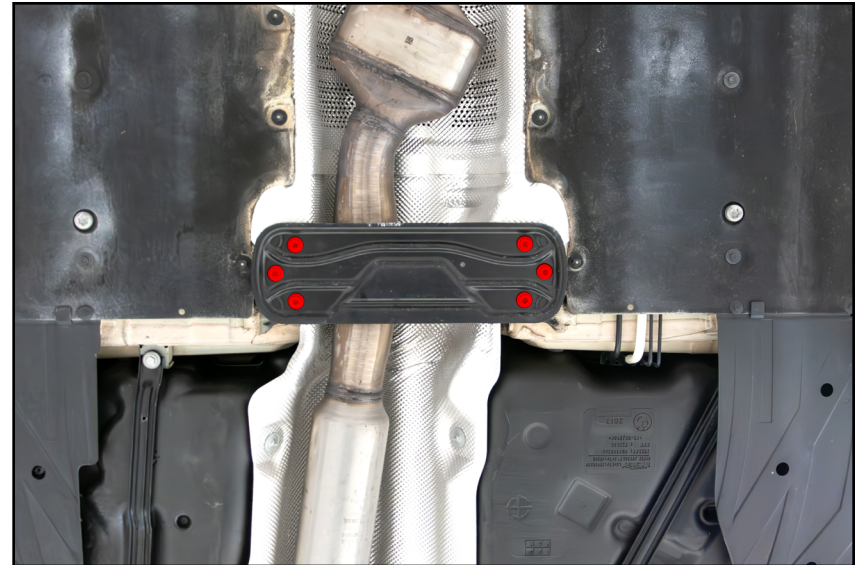
If you purchased the muffler delete kit: Carefully remove the muffler section from the vehicle, then skip ahead to page 13.



REMOVING THE STOCK EXHAUST SYSTEM

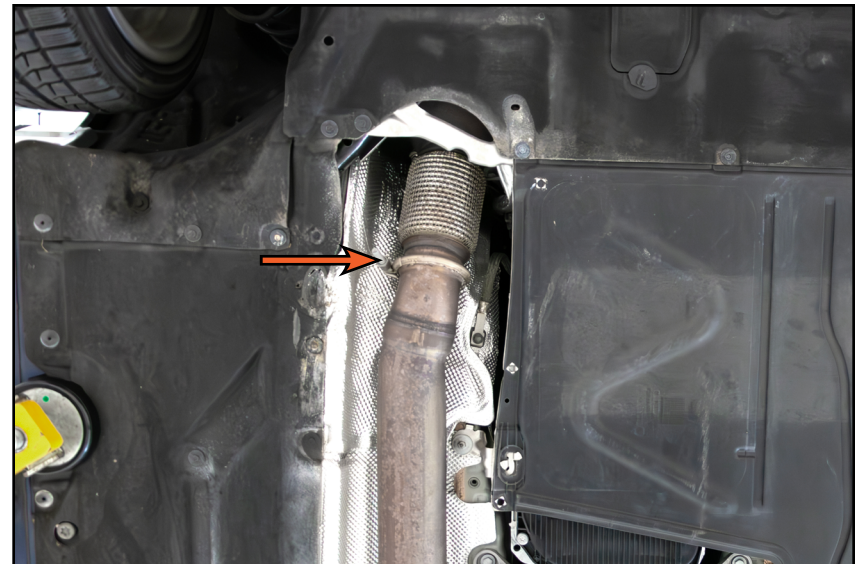
Step 5: T50 Torx & Ratchet

Remove the six bolts (highlighted in **RED**) that secure the cross-brace and remove the brace from the vehicle.



Step 6: 16mm Socket & Ratchet

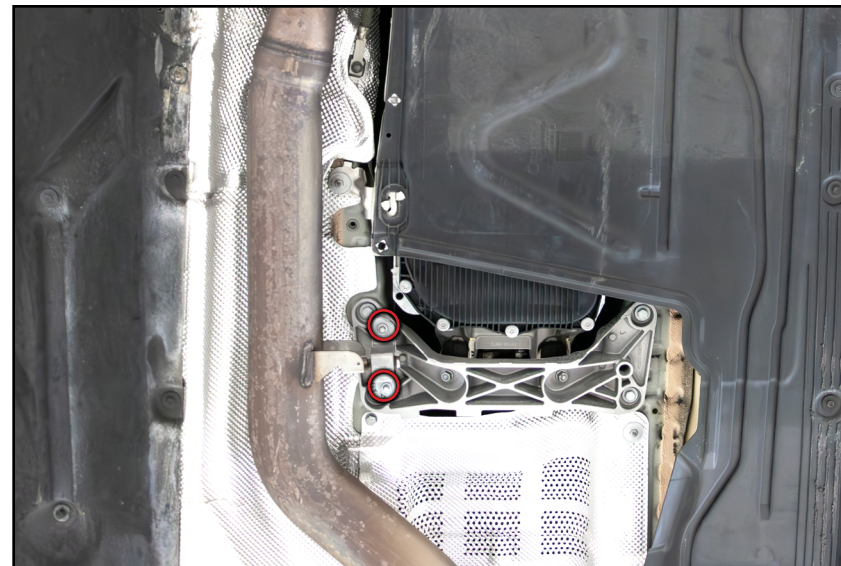
Loosen the v-band clamp (arrow) that secures the stock exhaust to the downpipe.



REMOVING THE STOCK EXHAUST SYSTEM

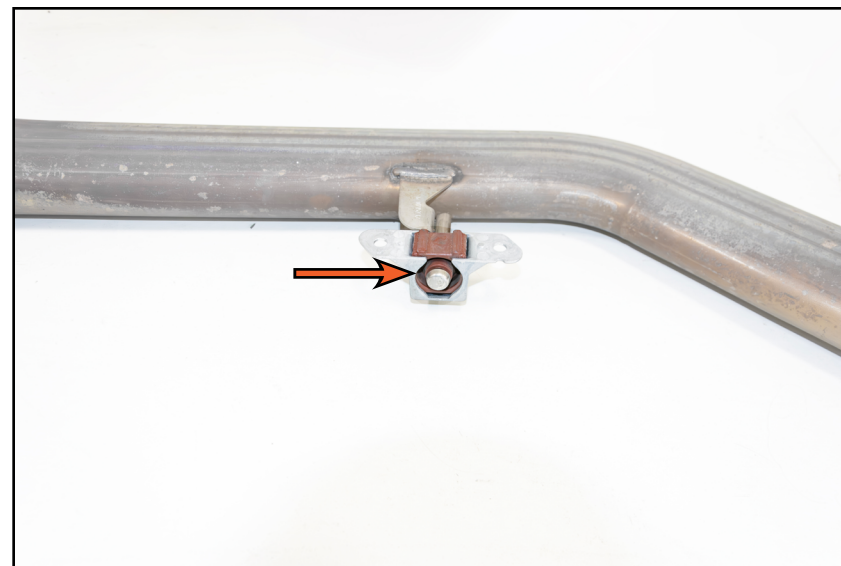
Step 7: E10 Torx & Ratchet

Remove the bolts (circled in **RED**) that secure the exhaust hanger to the transmission cross brace, then remove the resonated exhaust section from the vehicle and carefully set it aside.



Step 8: Exhaust Hanger Pliers

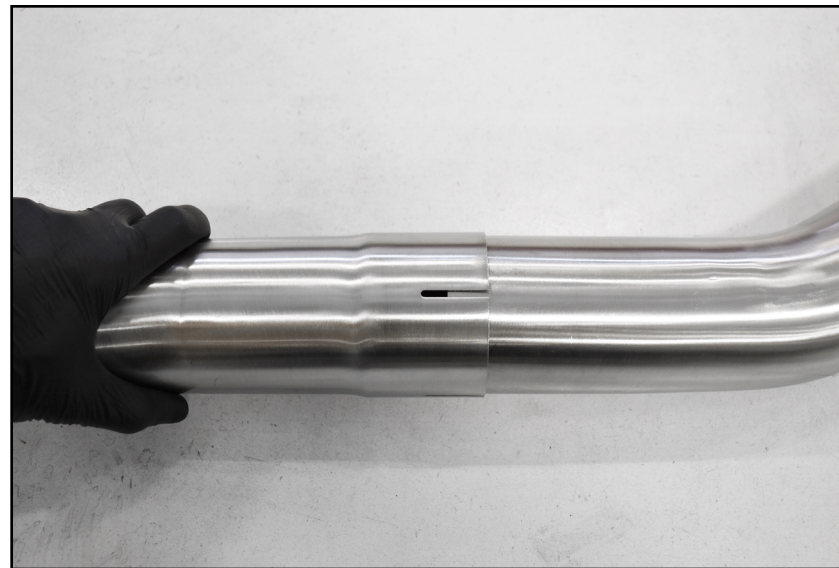
Remove the hanger (arrow) from the stock exhaust system.



INSTALLING THE RESONATOR DELETE KIT

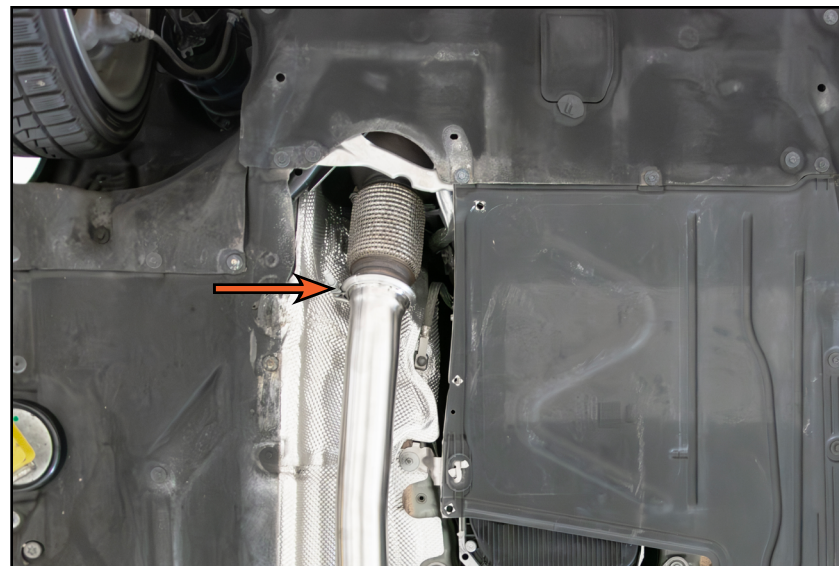
Step 1: Pipe Expander -OR- Ball Pein Hammer

Open the resonator delete kit and 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. 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.



Step 2: 16mm Socket & Ratchet

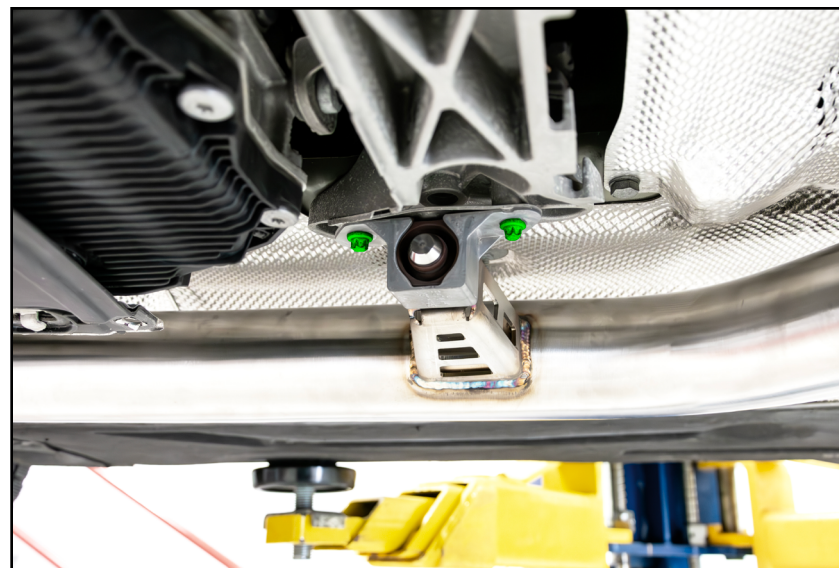
Install the front pipe onto the stock downpipe using the provided v-band clamp (arrow).



INSTALLING THE RESONATOR DELETE KIT

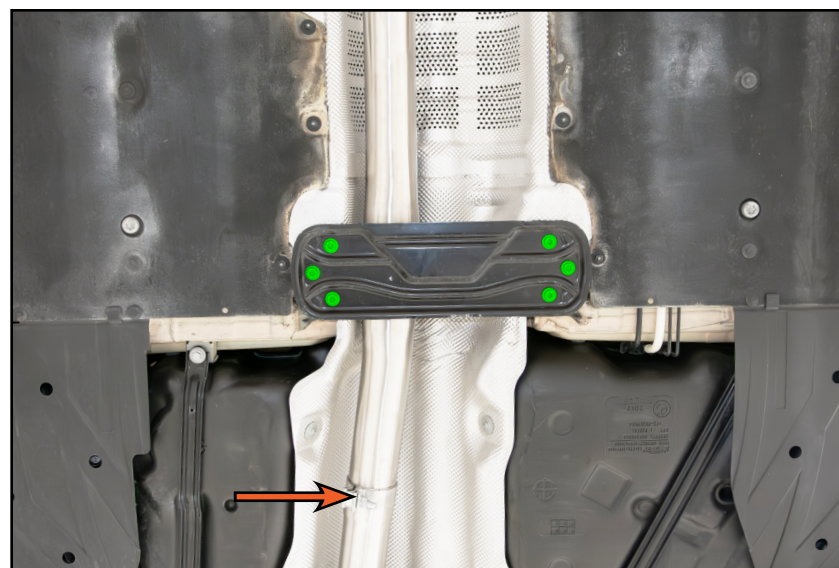
Step 3: E10 Torx & Ratchet

Transfer the exhaust hanger to the new front pipe, then reinstall the bolts (highlighted **GREEN**) to secure the exhaust hanger to the vehicle.



Step 4: 15mm Socket, T50 Torx & Ratchet

Slide the mid pipe onto the front pipe and lightly snug the clamp (arrow) to hold it in place. Reinstall the cross brace and tighten the bolts (highlighted in **GREEN**).



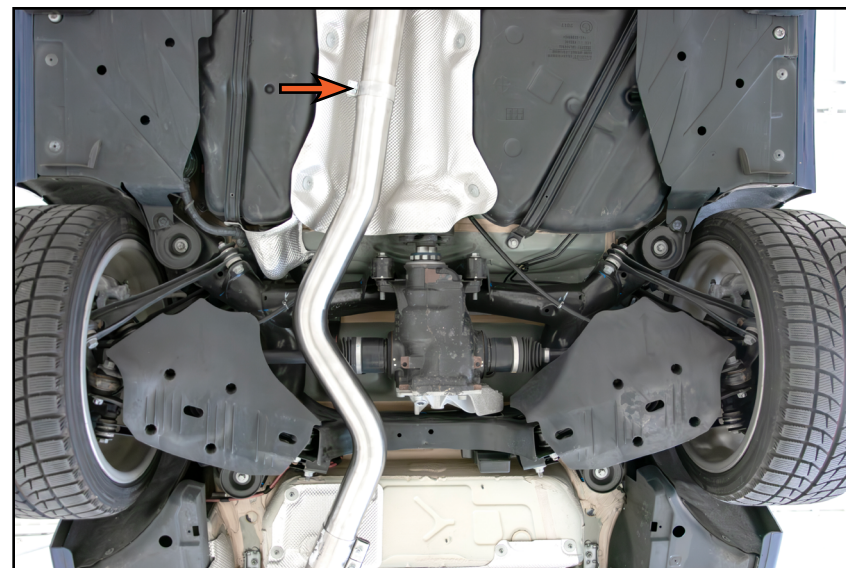
INSTALLING THE RESONATOR DELETE KIT

Step 5: 15mm Socket, 17mm Socket & Ratchet

Slide the rear pipe onto the mid pipe and lightly snug the clamp (arrow) to hold it in place.



If you purchased the race cat-back system: proceed to the next page.

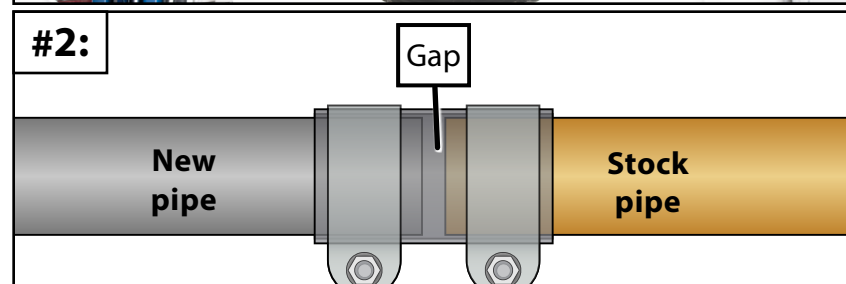


Step 6: 15mm, 16mm, 17mm Sockets & Ratchet

Install the provided sleeve clamp (arrow in **photo #1**) between the rear pipe and the muffler section, leaving a small gap (**photo #2**) between the pipes for heat expansion.



If you purchased the resonator delete kit: skip ahead to page 14.



INSTALLING THE MUFFLER DELETE KIT

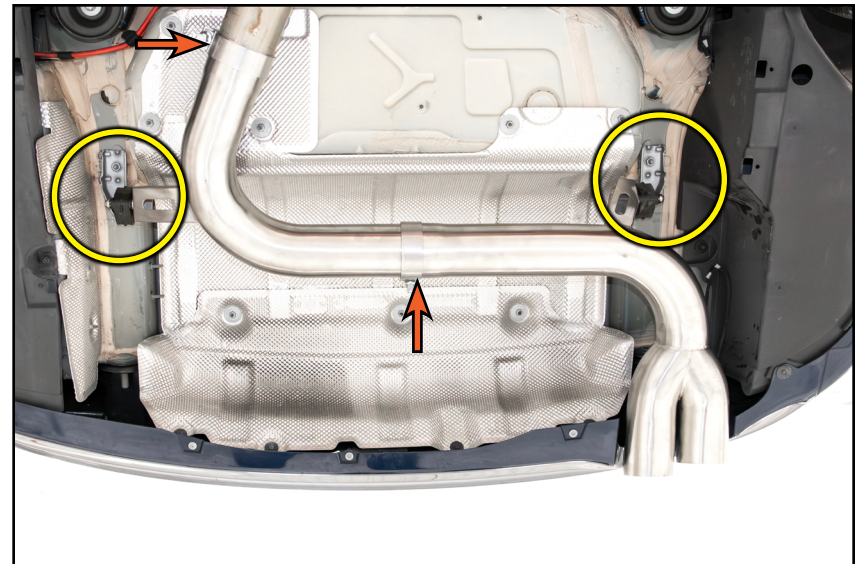
Step 1: 13mm Socket, 15mm Socket & Ratchet

Open the muffler delete kit and 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. If they do not slide together easily, use a pipe expander or gently tap on the ends of the pipes with a ball peen hammer to straighten them, then recheck fitment.



Step 2: 13mm Socket, 15mm Socket & Ratchet

Transfer the hangers (circled in **YELLOW**) from the stock exhaust system to the tail pipe and exhaust tip sections. Install the tail pipe onto the rear pipe, then install exhaust tip onto the tail pipe and tighten the clamps (arrows) until snug. Reinstall the nuts to secure the hangers to the vehicle.



FINAL INSTALLATION STEPS

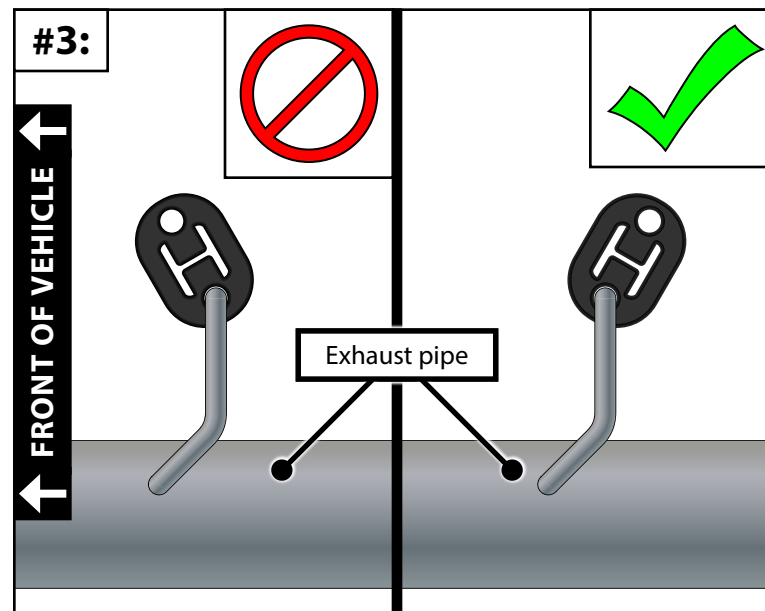
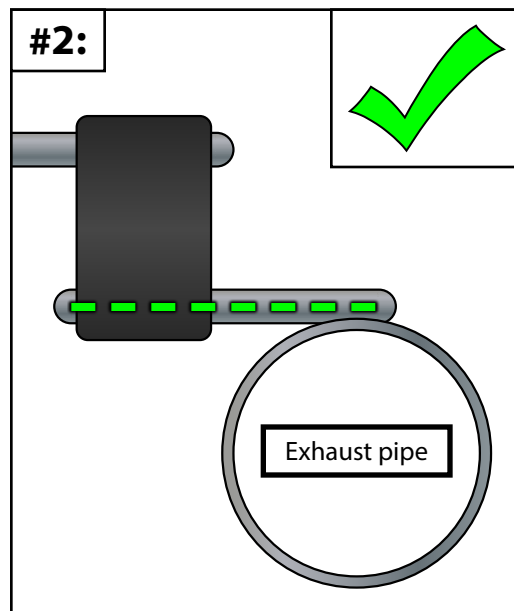
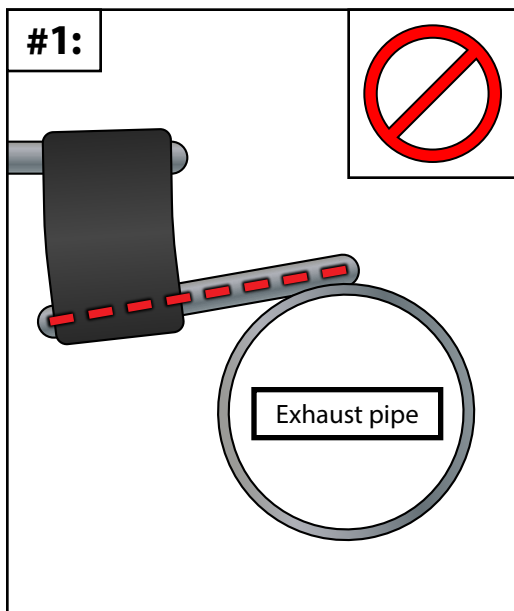
Step 1: 15mm Socket & Ratchet

Check the hangers on the muffler or muffler delete section 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.



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.



FINAL INSTALLATION STEPS

Step 2: 15mm ,16mm, 17mm Sockets & Ratchet

Inspect the muffler or muffler delete section and ensure that it is sitting level side-to-side as much as possible (**photo #1**). Ensure that the exhaust tip is centered in the bumper cut out (**photo #2**). There should be adequate clearance between the tip and the rear valance and between the exhaust pipes and any surrounding components. If needed, loosen the clamps and adjust until proper fitment is achieved, then tighten all the clamps until fully snug. Wipe any oil, grease, or fingerprints from the exhaust system, then start the engine and check the exhaust system for leaks.

Congratulations, your exhaust system installation is complete!



Your 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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