

#TL100192

INSTALLATION MANUAL

CBK0012

APR B9 S4/S5 Catback Exhaust

APR



Notes:

These general instructions were written for a North American specification SQ5, but other models are similar.

When disassembling the car, be sure to keep all fasteners so they can be reused. It is recommend that you get some kind of compartmented tray to organize the fasteners, such as a fishing tackle box or several large ice cube trays. Fasteners that are not reused for reinstallation are noted in the instructions. All directions used in this manual (right, left, front, etc.) are based on if you were sitting in the drivers seat of the car.

These instructions assume that you have basic mechanical skills and several varieties of basic hand tools in order to install the kit. If you have any questions about the install, feel free to contact your APR representative.



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4800 US HWY 280 West Opelika Alabama 36801

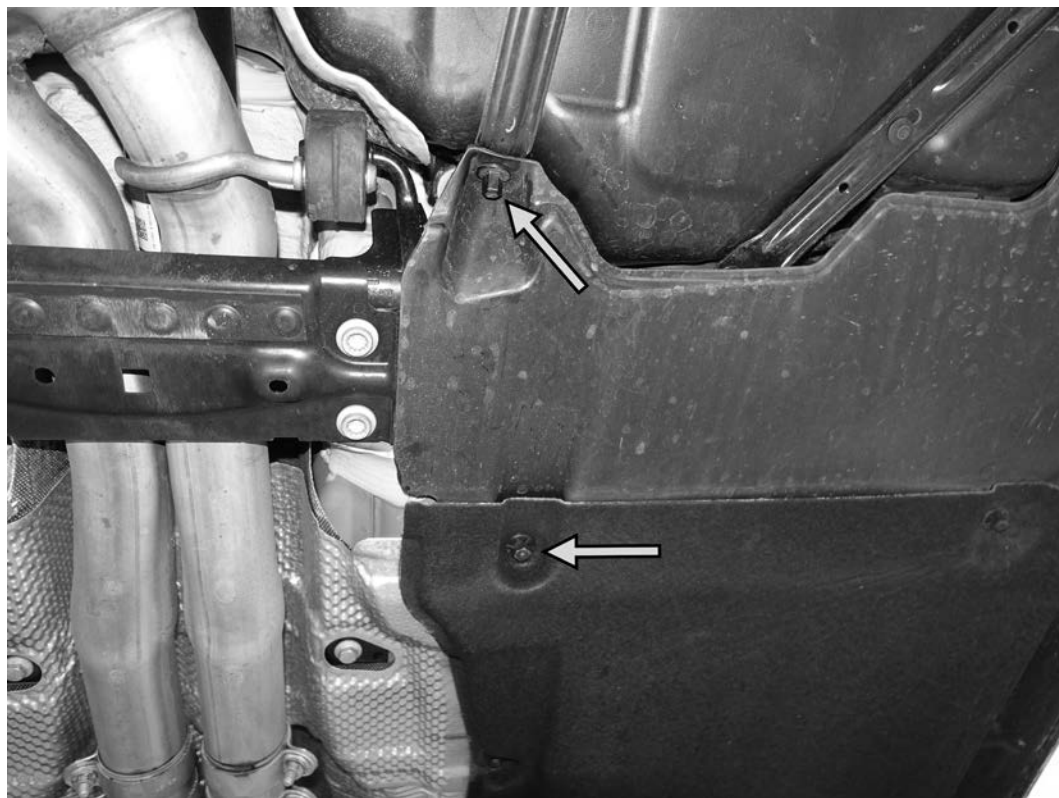
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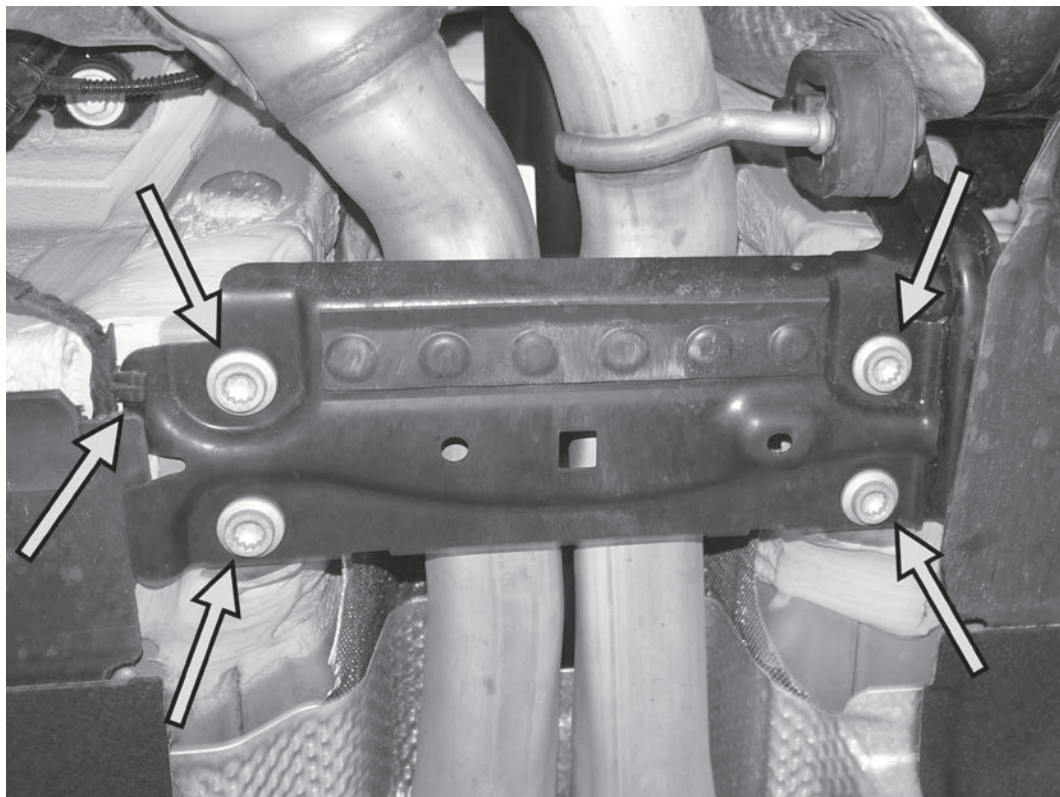


1) Place the vehicle on a lift or secure jackstands.

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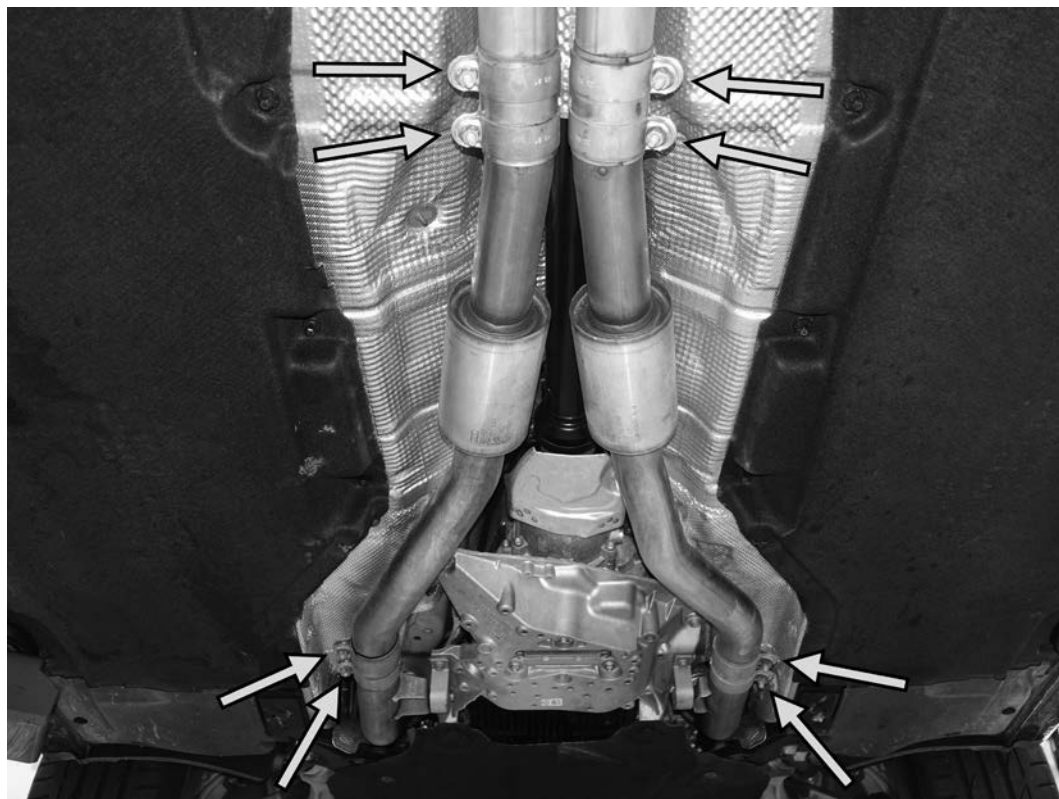
2) Remove the two 10mm plastic nuts from the right underbody panels around the rear crossbrace.

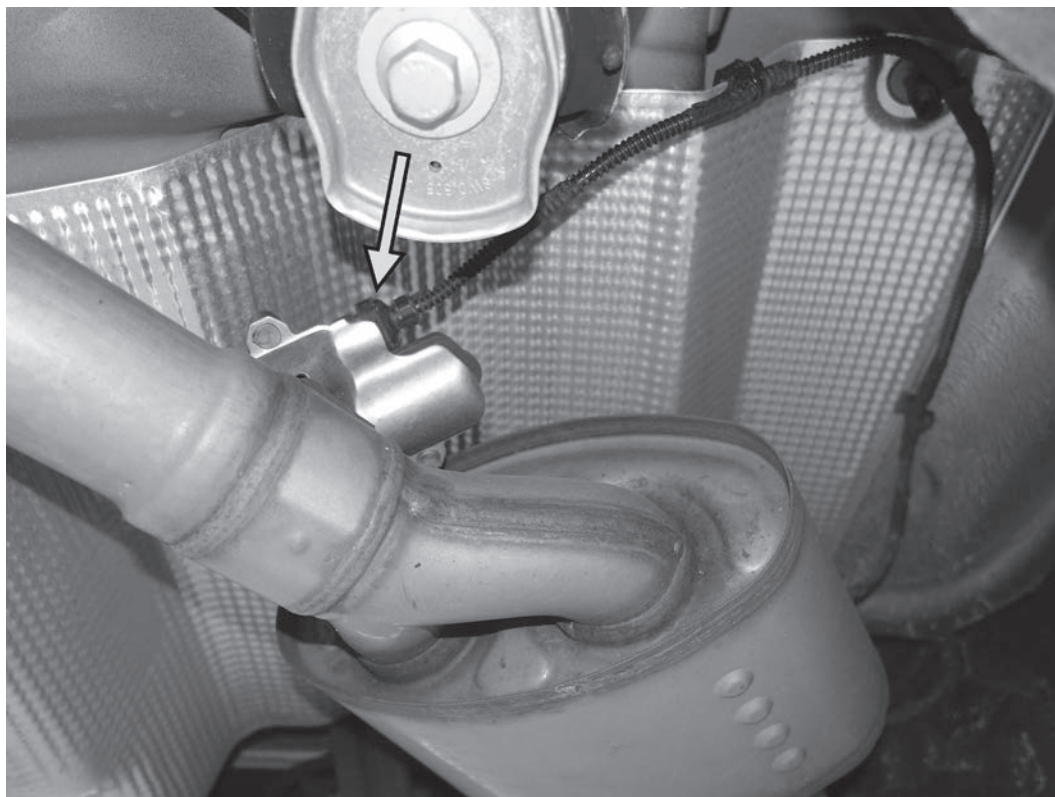




3) Separate the wiring harness clip from the left side of the factory cross-brace. Remove the four 12mm triple square screws from the crossbrace and remove the brace from the car.

4) Loosen the eight 13mm nuts from the four factory exhaust sleeve clamps to the factory resonator section. Remove the clamps and the two resonator sections from the car.

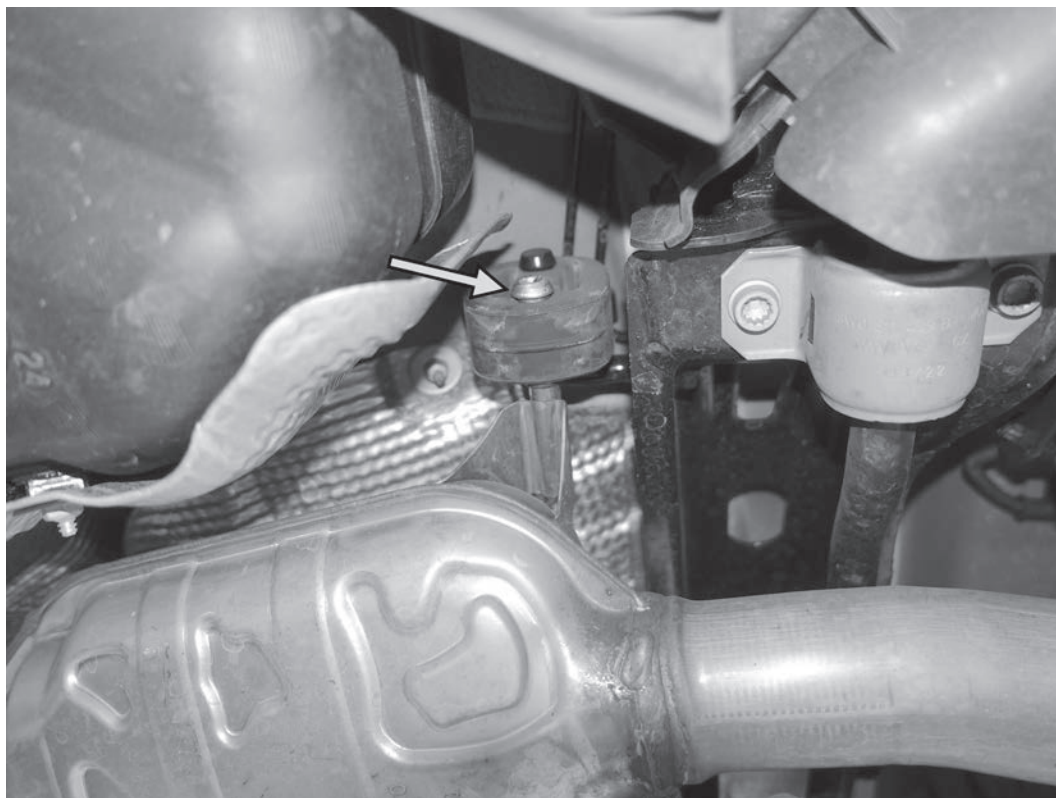




5) Disconnect the electrical connector from both rear valve motors. On the left side of the car, the motor is before the rear muffler, on the right side of the car, the motor is after the rear muffler. To disconnect the electrical connector, slide the grey tab away from the connection and then press down on the grey tab to unlock the connector from the motor.

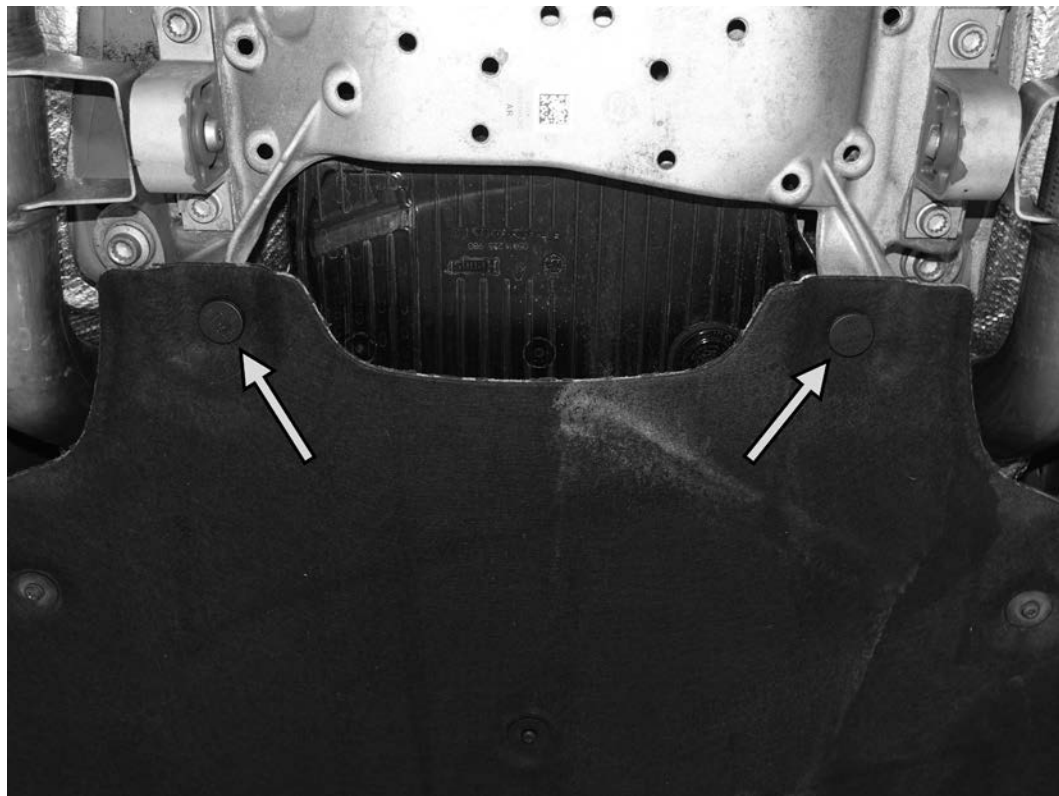
6) With an assistant holding the rear muffler section or a jack to support the rear muffler section, loosen the two 13mm screws holding the rear exhaust hangers to the bottom of the chassis.

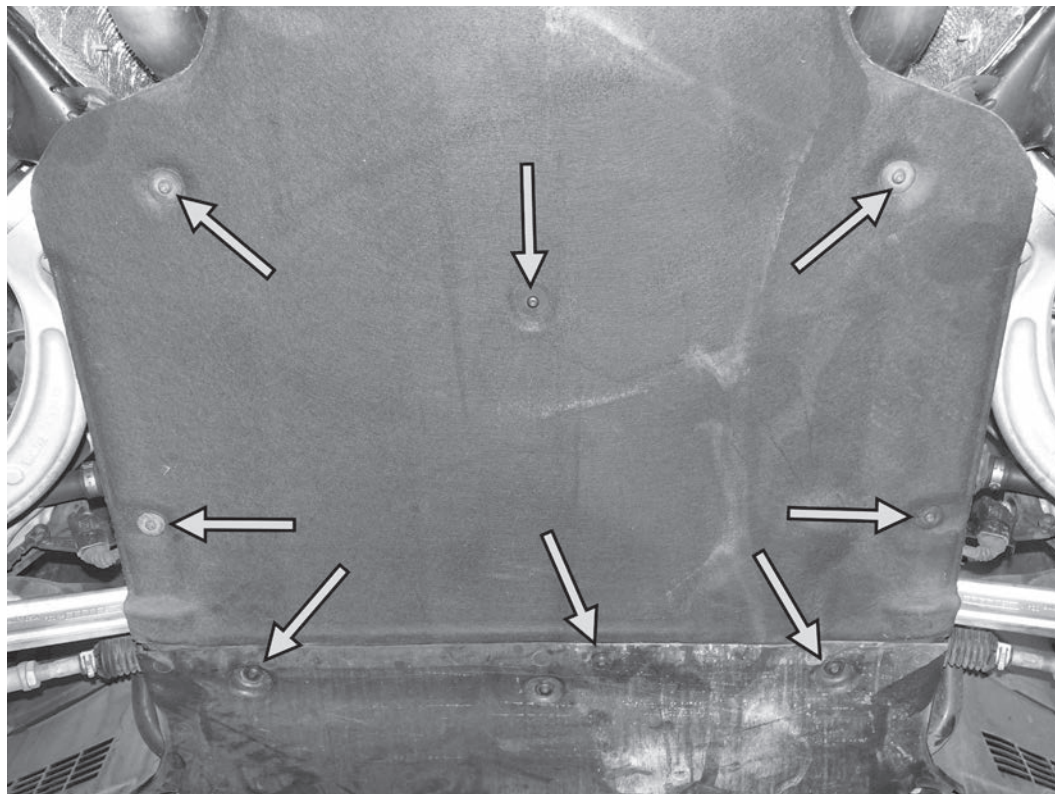




7) With a jack still supporting the exhaust or an assistant holding it, separate the hanger from the left middle side of the rear muffler section from the car, leaving the rubber hanger attached to the car. Lower the rear exhaust muffler section from the car and place it aside.

8) Remove the two push-pin connectors from the back of the front heat shield near the transmission.

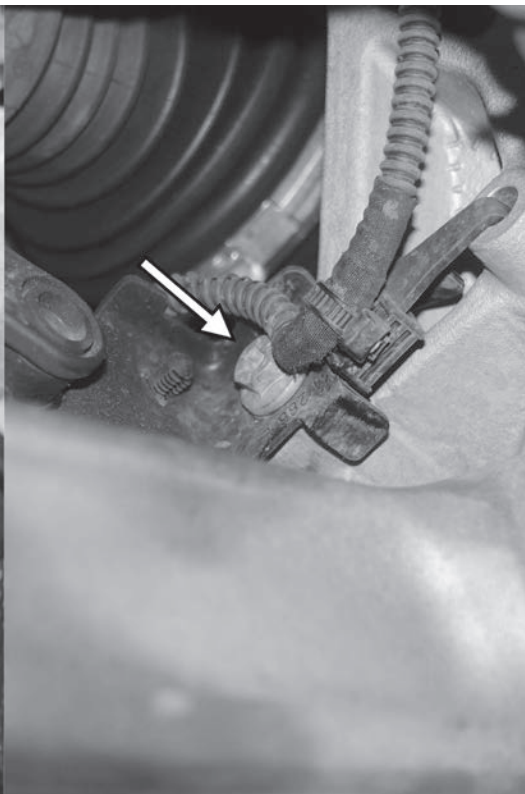
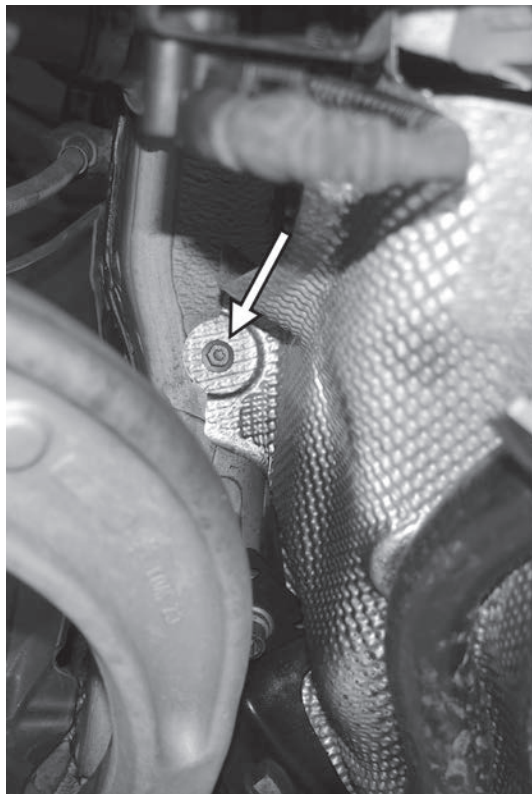




9) Remove the five T25 screws from the rear heat shield. Also remove the three T25 screws holding the rear heat shield to the middle heat shield, and then remove the rear heat shield from the car.

10) Remove the two 10mm nuts from the inside of the right heat shield.





11) From the outside of the right heat shield, remove the two other 10mm nuts, one up on the wheel arch and one holding the ride height sensor. Remove the right heat shield from the car.

12) On the left heat shield, unclip the wiring harness from the bottom side.

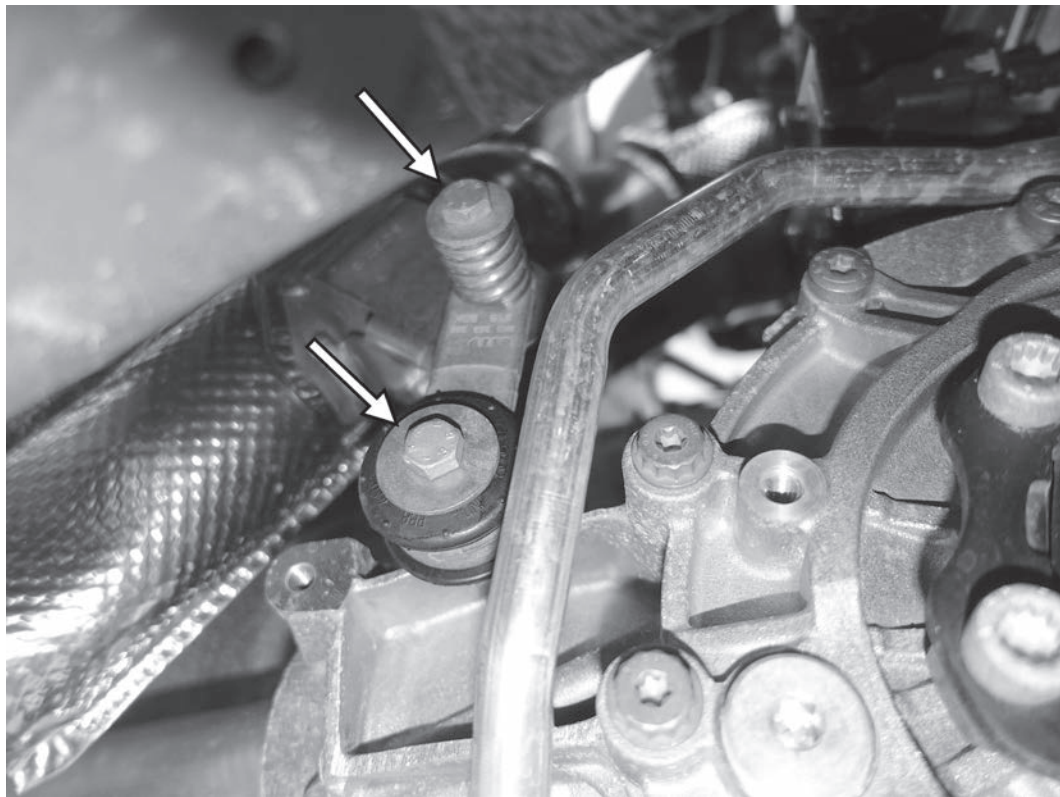




13) Remove the two 10mm nuts from the inside of the left heat shield.

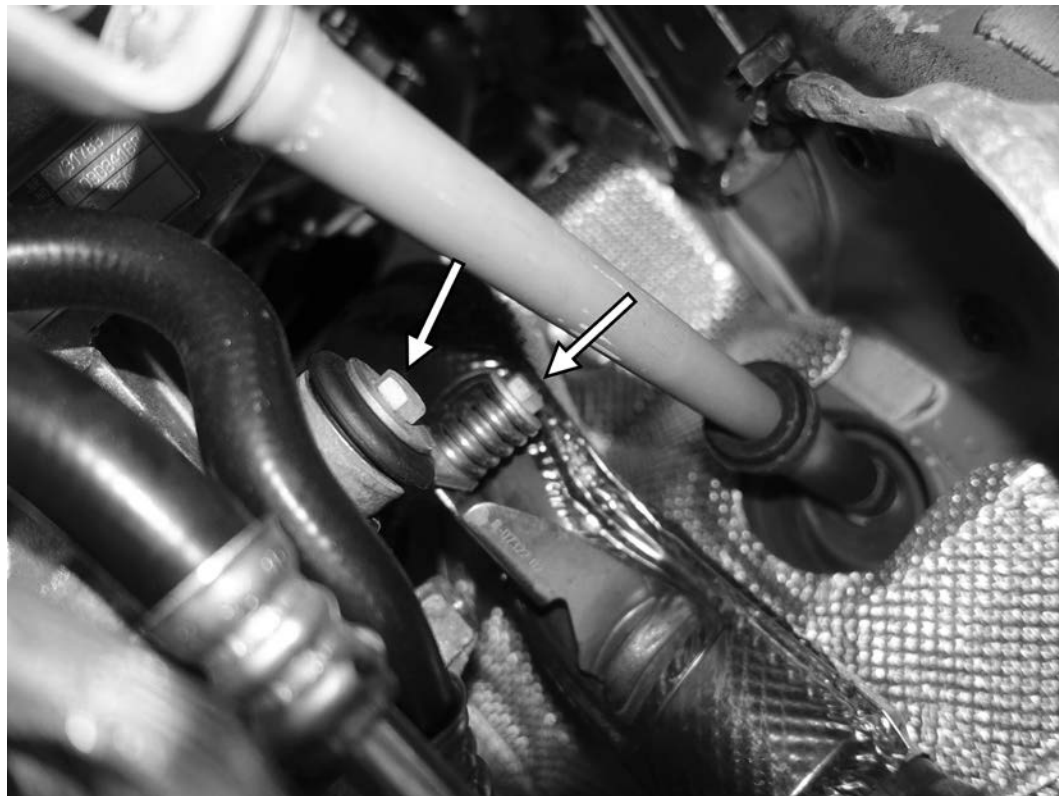
14) From the outside of the left heat shield, remove the two other 10mm nuts, one up on the wheel arch and one holding the ride height sensor. Remove the left heat shield from the car.

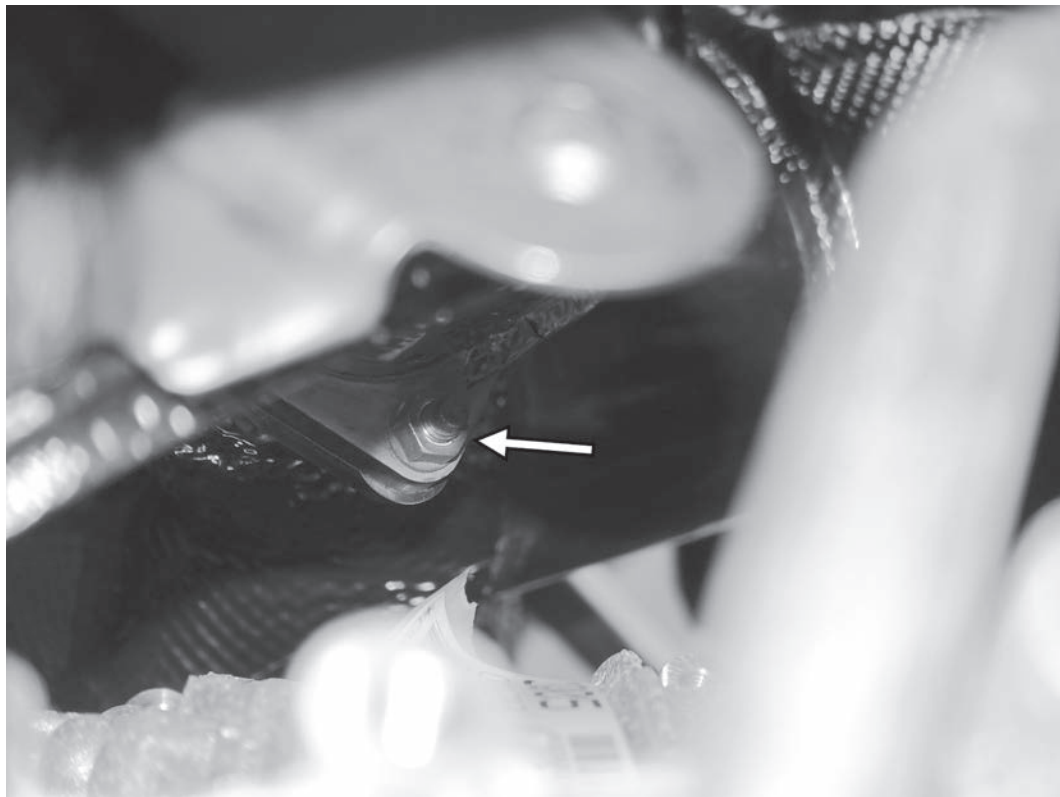




15) On the right midpipe, remove both 13mm screws holding the spring bracket to the transmission and the midpipe. Note the orientation and positioning of the spring bracket assembly.

16) On the left midpipe, remove both 13mm screws holding the spring bracket to the transmission and the midpipe. Note the orientation and positioning of the spring bracket assembly.

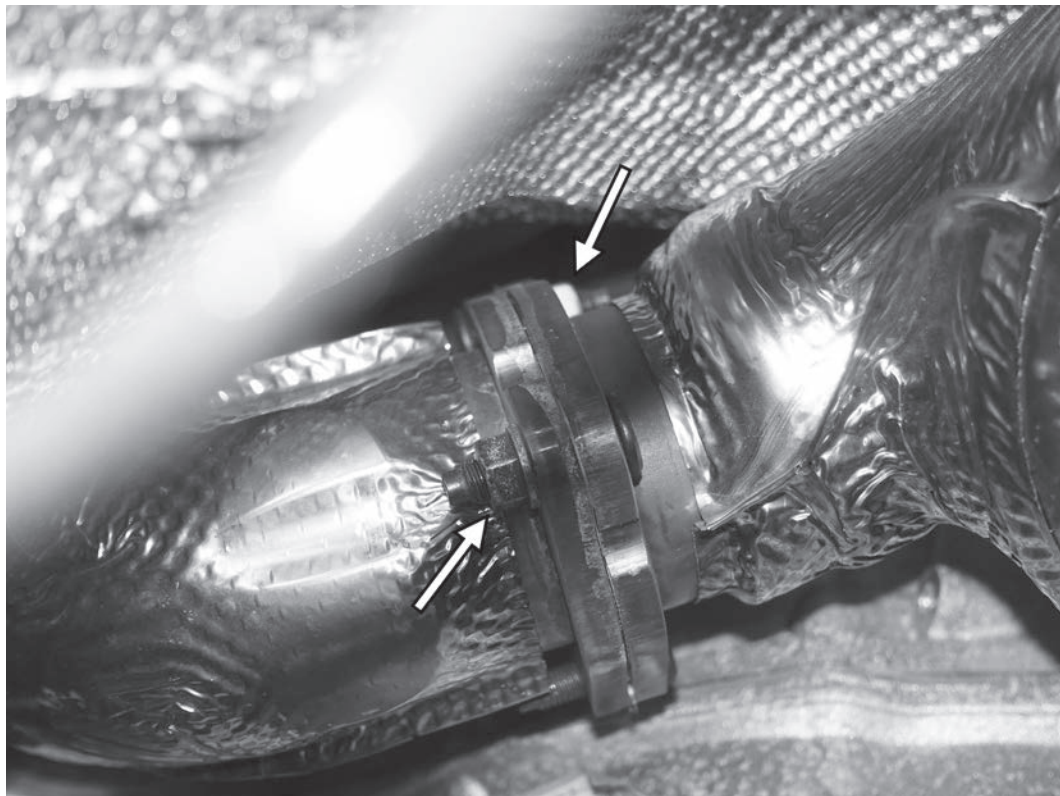




17) From underneath on the right midpipe, remove the lowest 12mm nut on the flange holding the midpipe to the catalyst.

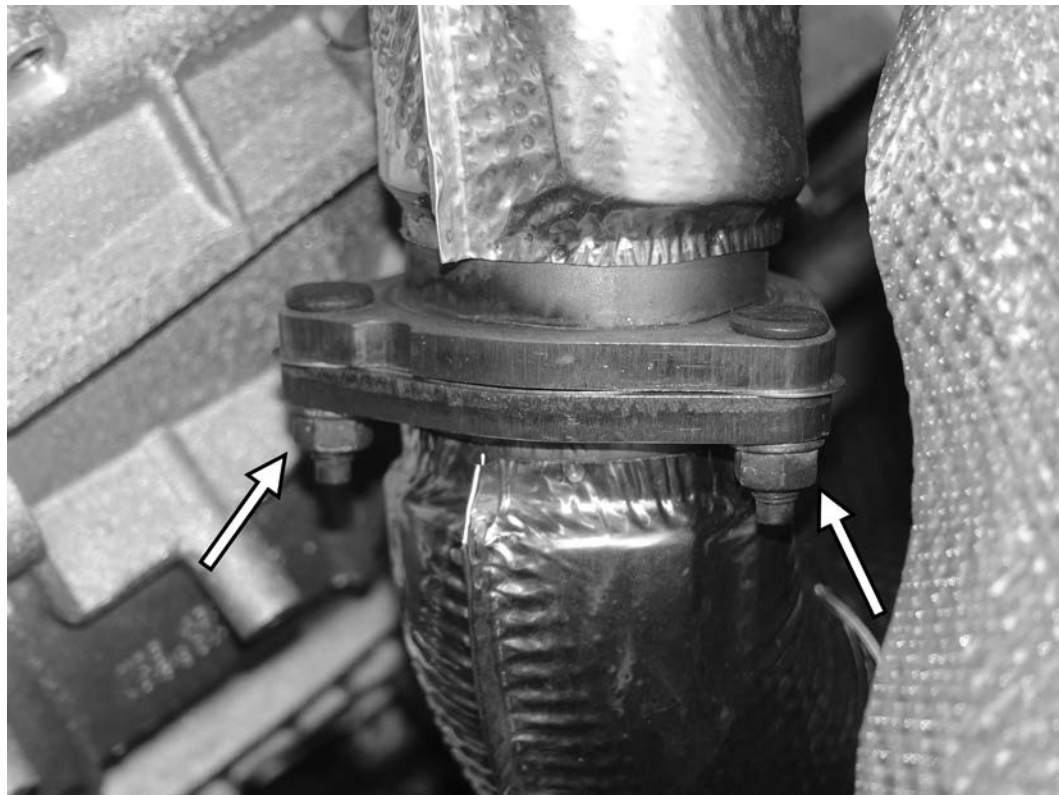
18) From underneath on the right midpipe, remove the lowest 12mm nut on the flange holding the midpipe to the catalyst.

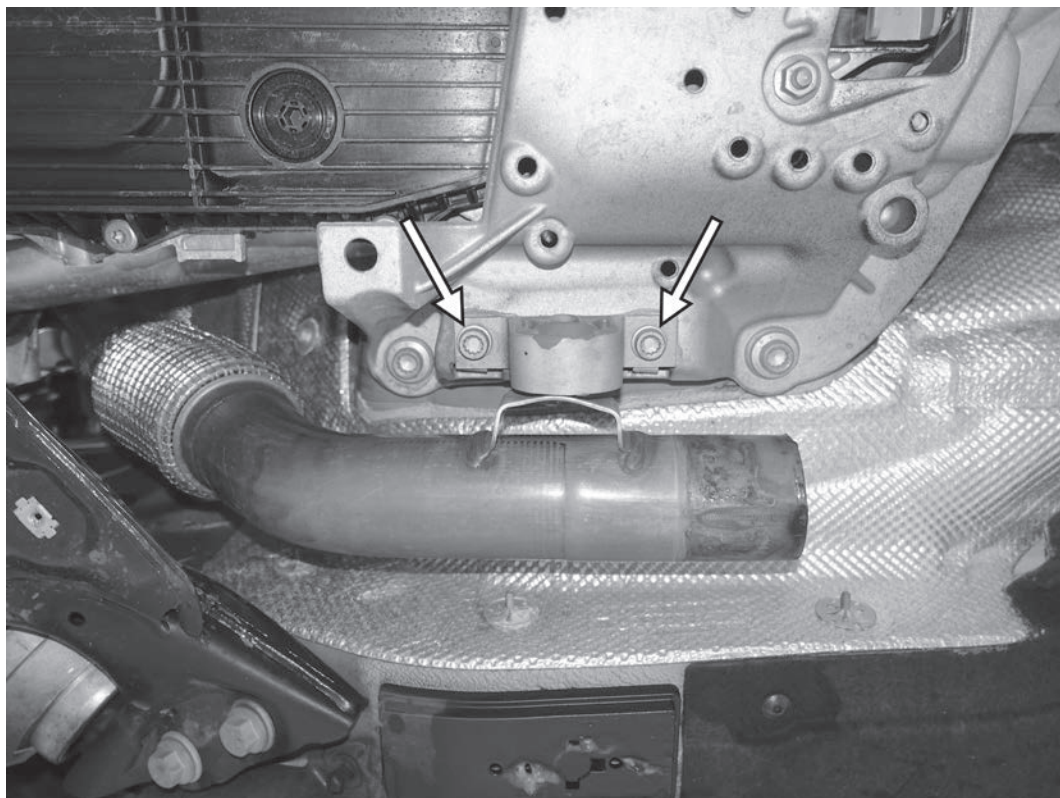




19) Raise the hood of the car and remove the engine cover. From above on the right midpipe, remove the two remaining 12mm nuts on the flange holding the midpipe to the catalyst.

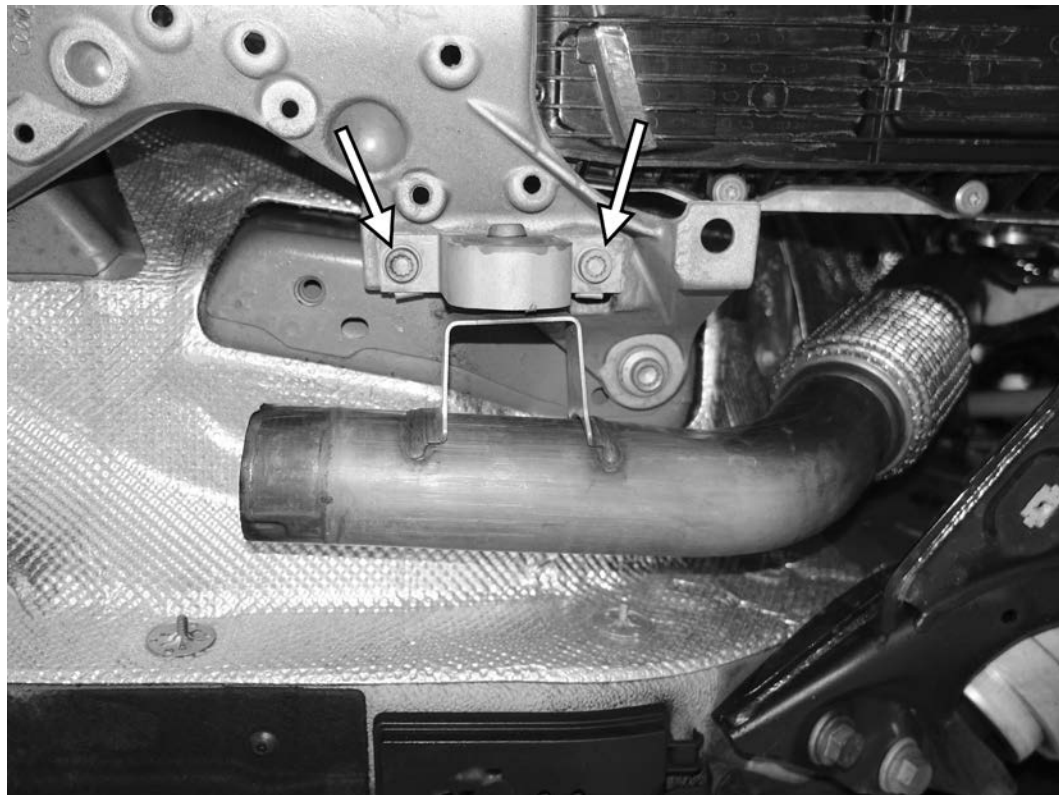
20) From above on the left midpipe, remove the two remaining 12mm nuts on the flange holding the midpipe to the catalyst.

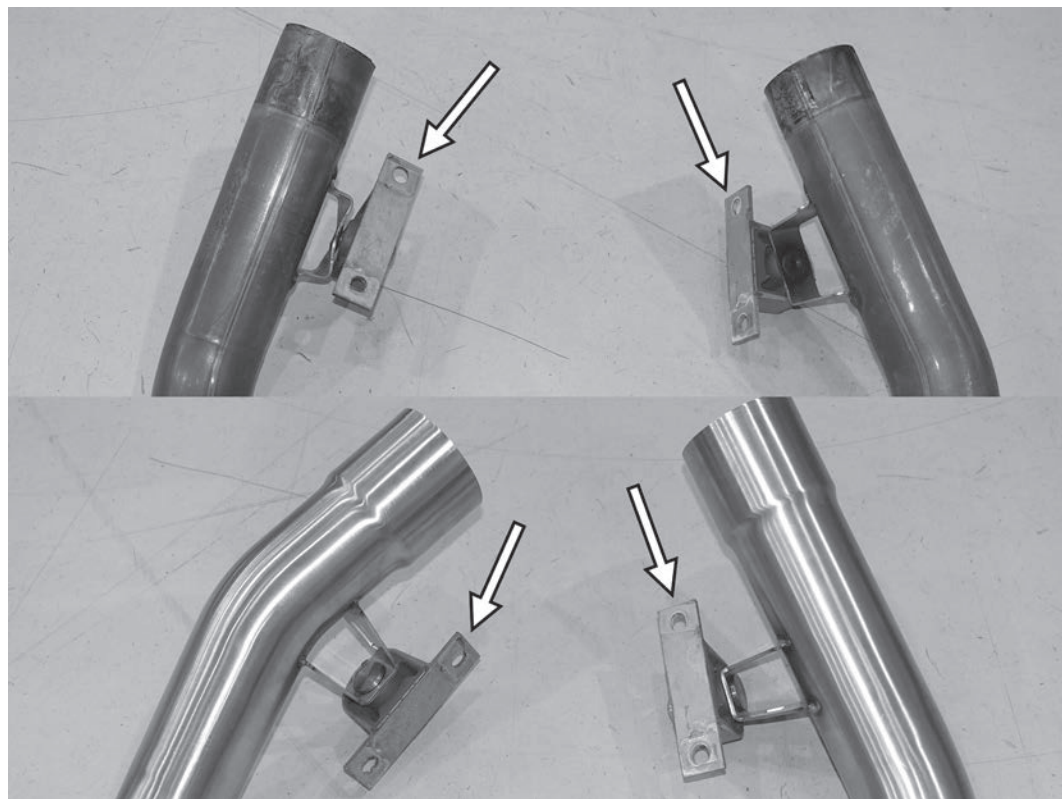




21) Remove the two 10mm triple square screws from the right midpipe hanger, and then remove the right midpipe from the car.

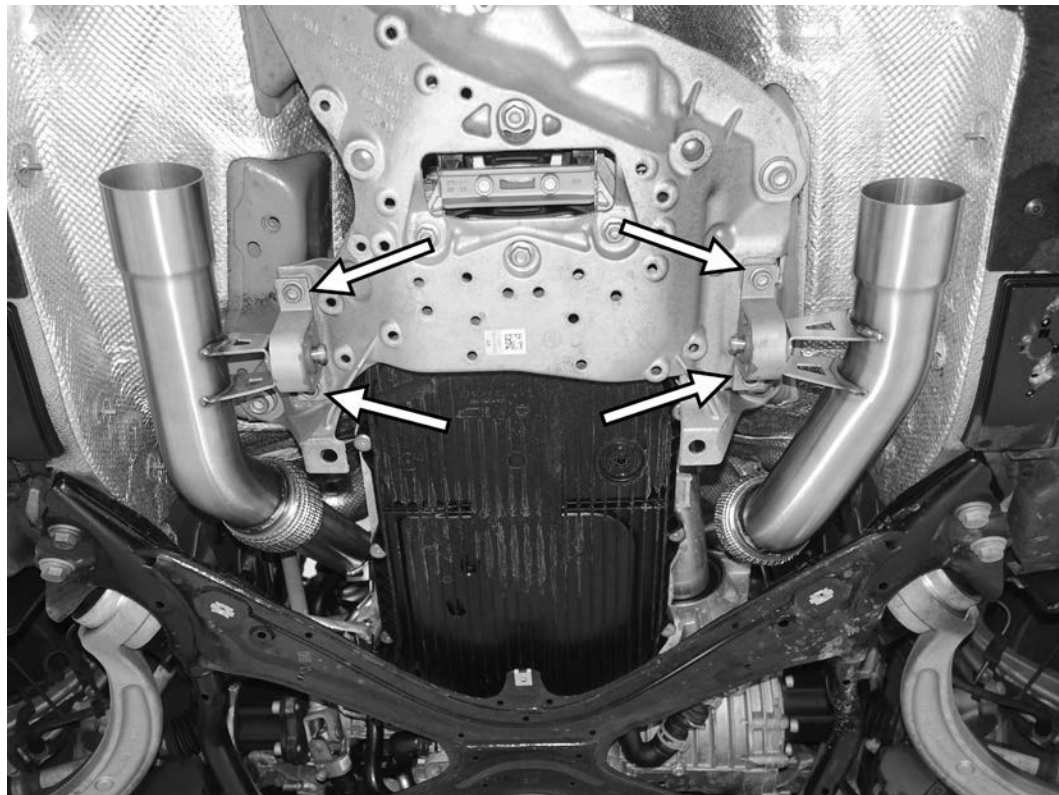
22) Remove the two 10mm triple square screws from the left midpipe hanger, and then remove the left midpipe from the car.

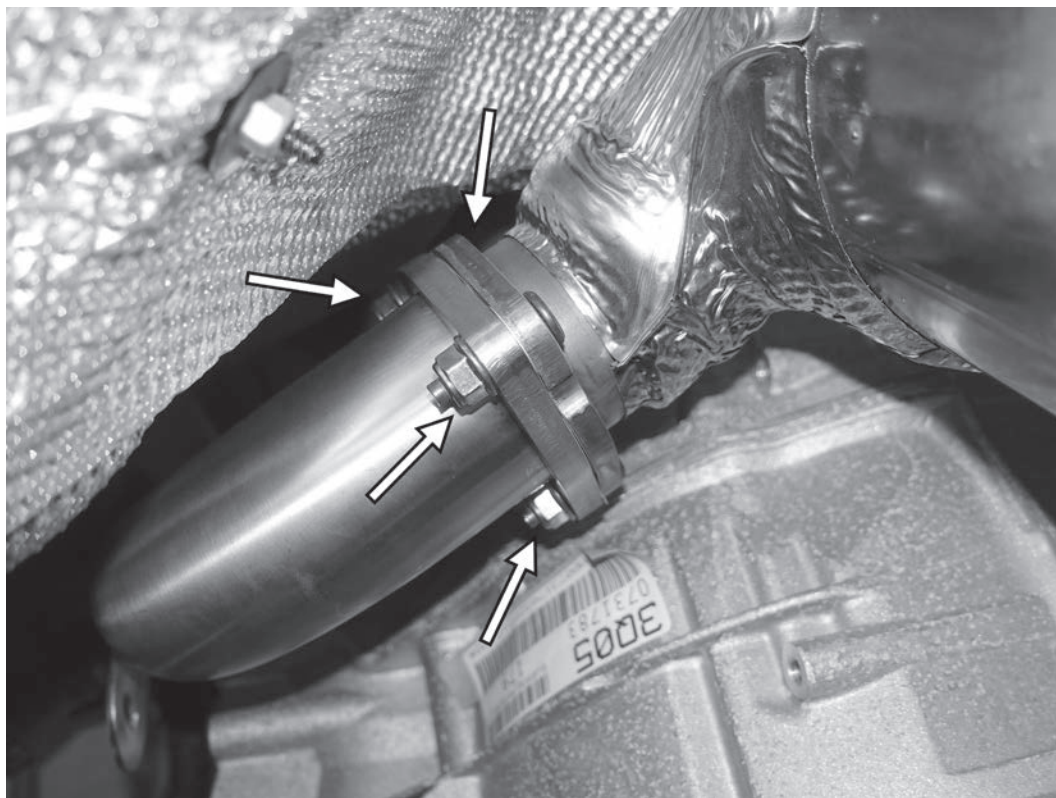




23) Remove the hangers from the stock midpipes, and place them on the APR midpipes in the same orientation.

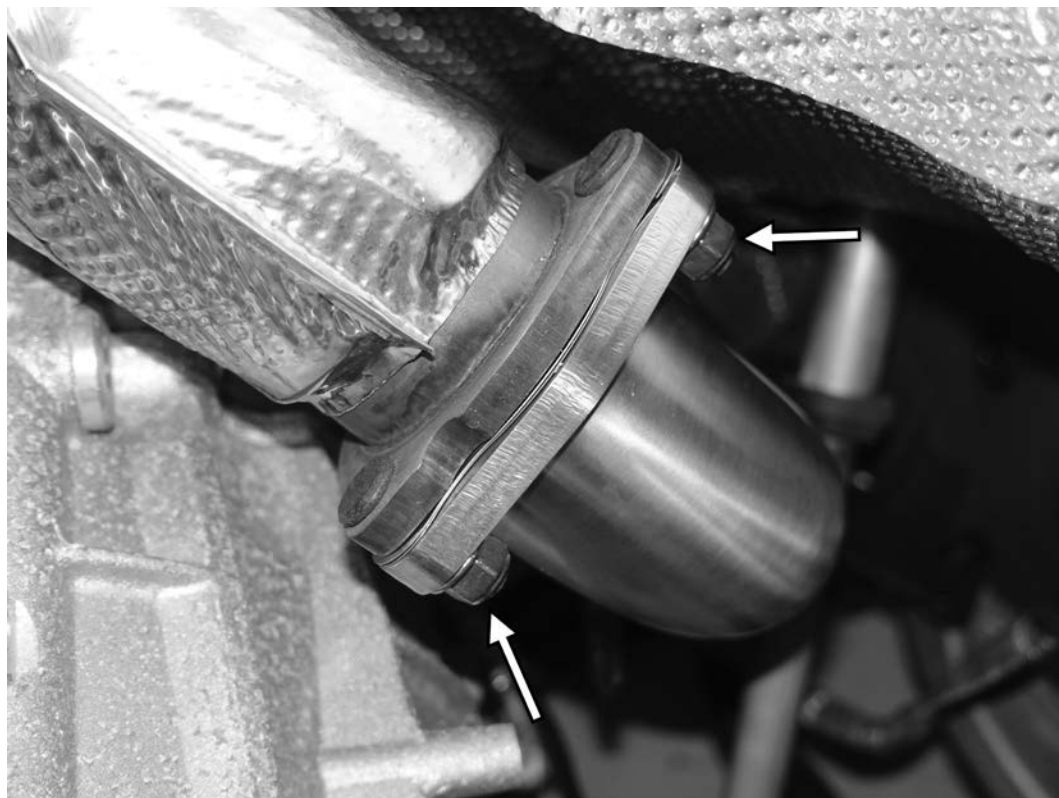
24) Remove both gaskets from the bottom of the left and right catalyst flanges, and install the new supplied gaskets. Place both left and right APR midpipes in the car. Make sure the flanges of the APR midpipes connect with the studs on the catalyst flanges, and then loosely reinstall the four 10mm triple square screws on the midpipe hangers to hold them in place.

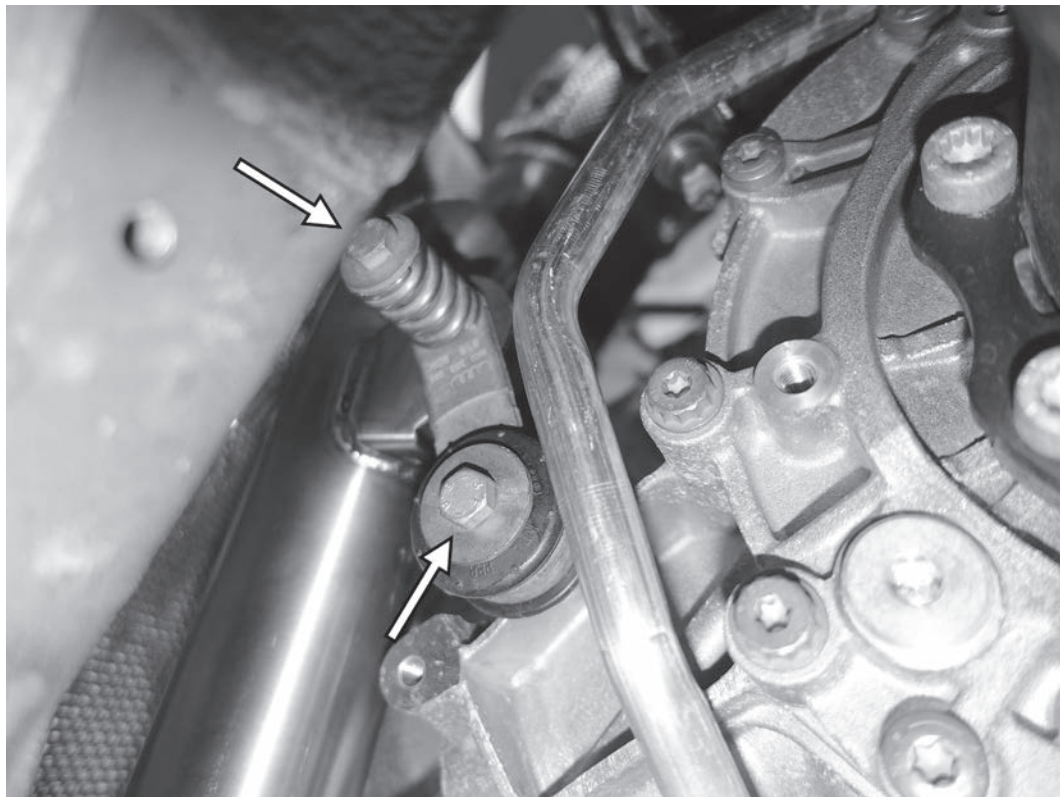




25) Secure the right midpipe to the catalyst with two of the supplied 13mm flanged nuts. On the third flange hole, use the supplied bolt and another flange nut to secure the midpipe. Secure the nuts to 23Nm (17 ft-lbs). You will have to counter-hold the the one 13mm bolt.

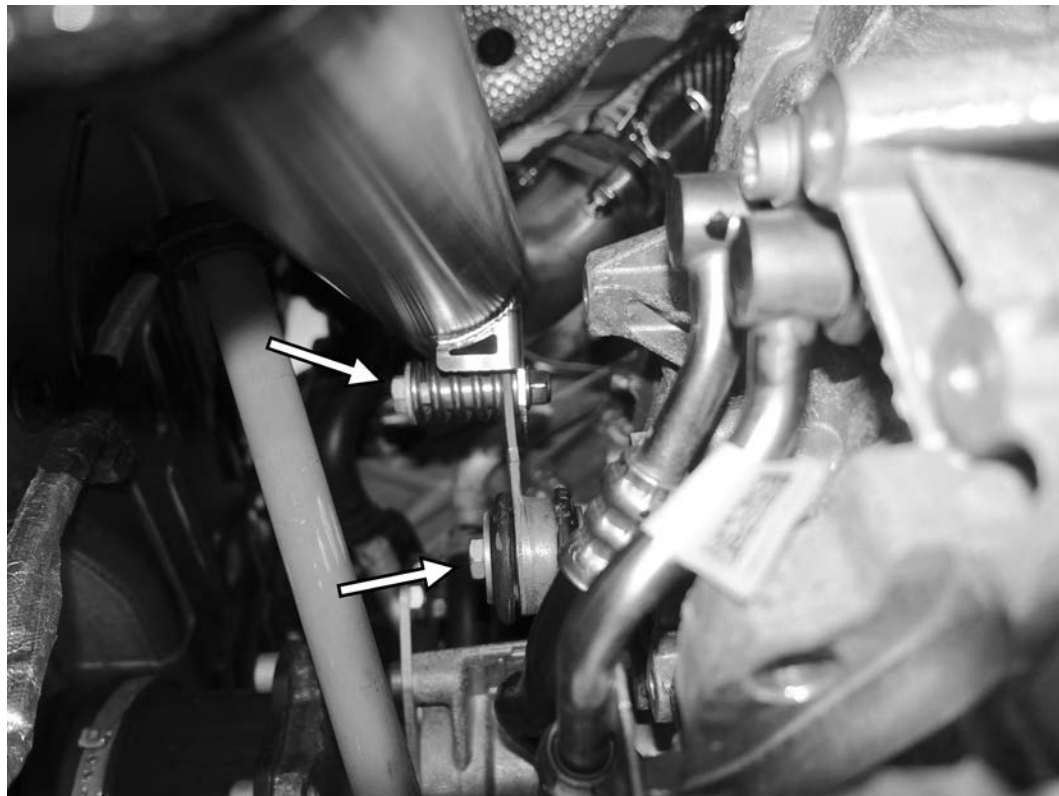
26) Secure the left midpipe to the catalyst with two of the supplied 13mm flanged nuts. On the third flange hole, use the supplied bolt and another flange nut to secure the midpipe. Secure the nuts to 23Nm (17 ft-lbs). You will have to counter-hold the the one 13mm bolt.

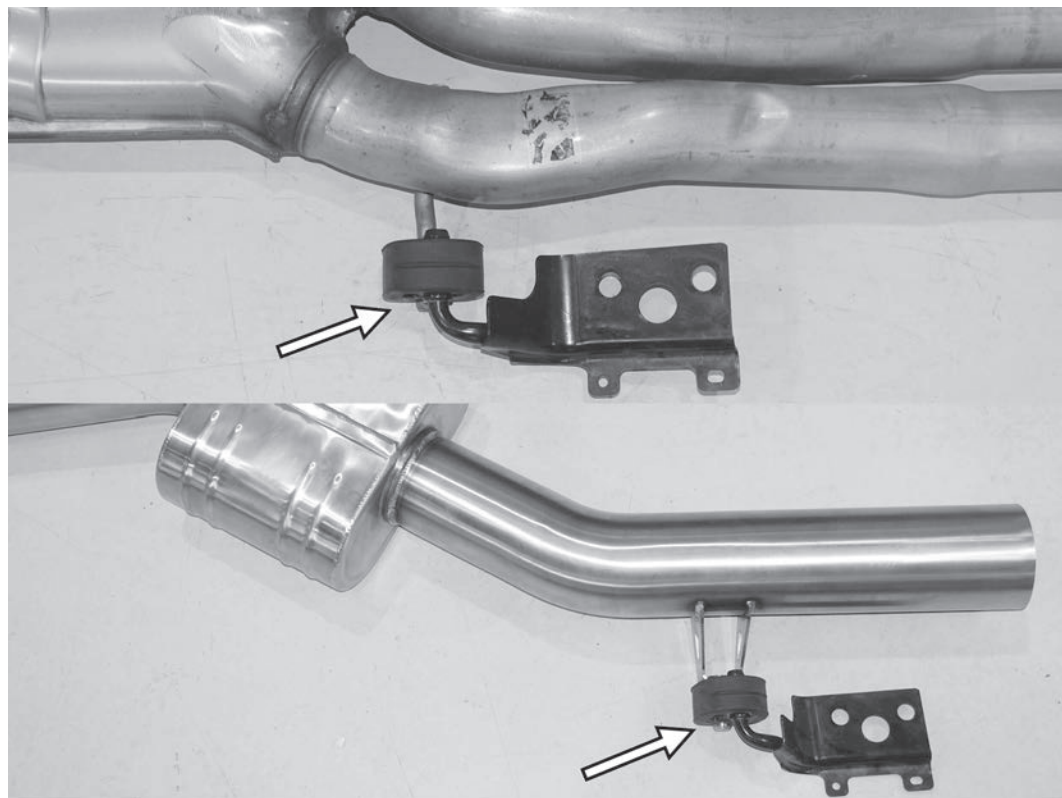




27) On the right midpipe, reinstall the factory spring hanger with the factory hardware. Secure the two 13mm screws to 23Nm (17 ft-lbs).

28) On the left midpipe, reinstall the factory spring hanger with the factory hardware. Secure the two 13mm screws to 23Nm (17 ft-lbs).

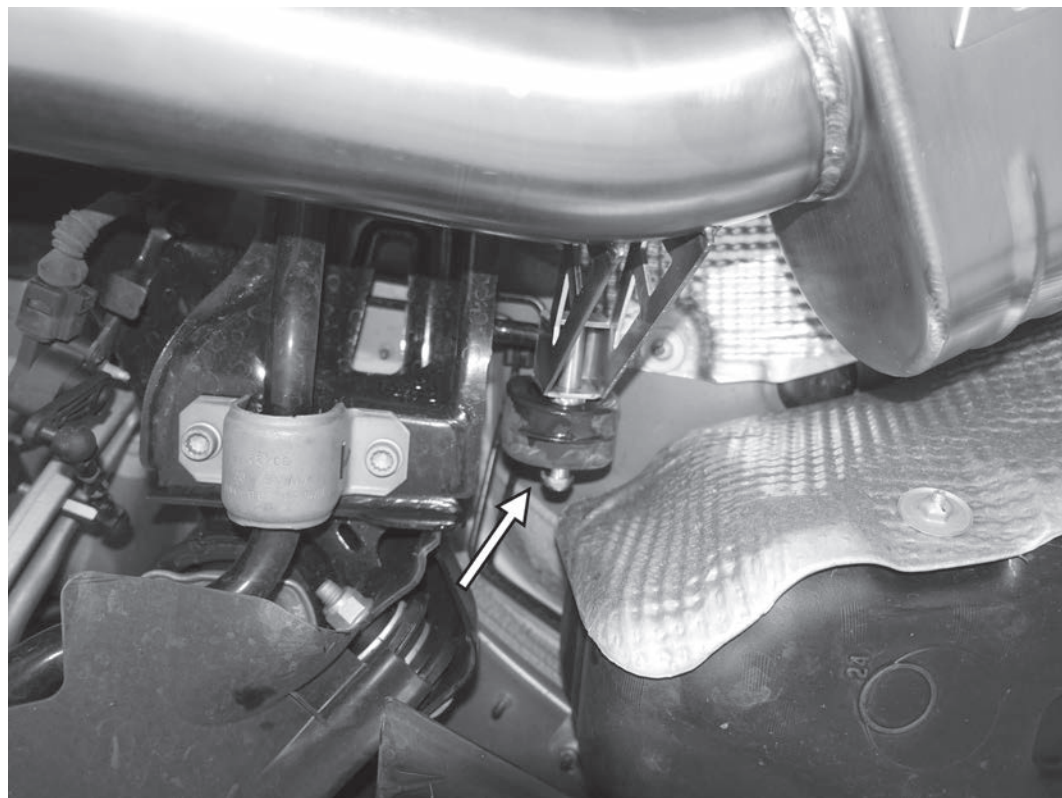




29) Remove the rubber hanger assembly from the front side of the factory muffler assembly, noting how it was oriented. Install the rubber hanger assembly onto the same position of the APR resonator assembly.

30) Pry to remove the rubber plug from the bottom of the chassis where the crossbrace mounts. Some cars may not have this plug.

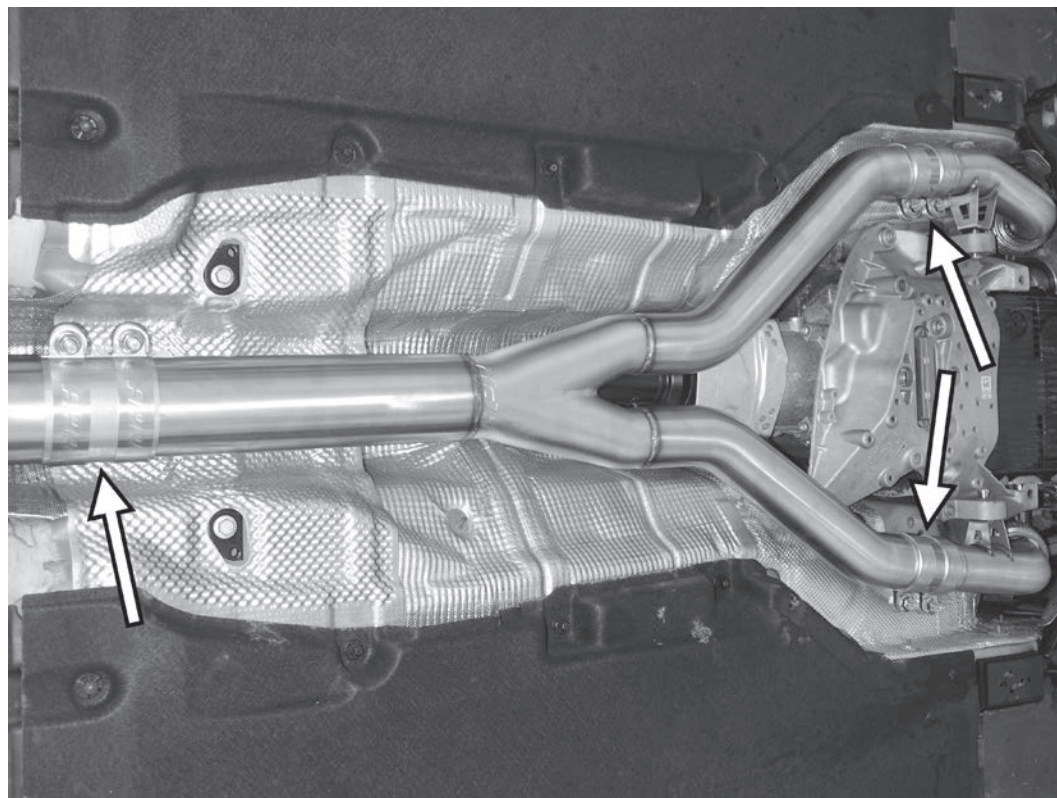




31) Lubricate the rubber hanger that was left in the car, just in front of the rear subframe. Place the APR resonator assembly in the car, pushing the hanger mounting post into the factory rubber hanger.

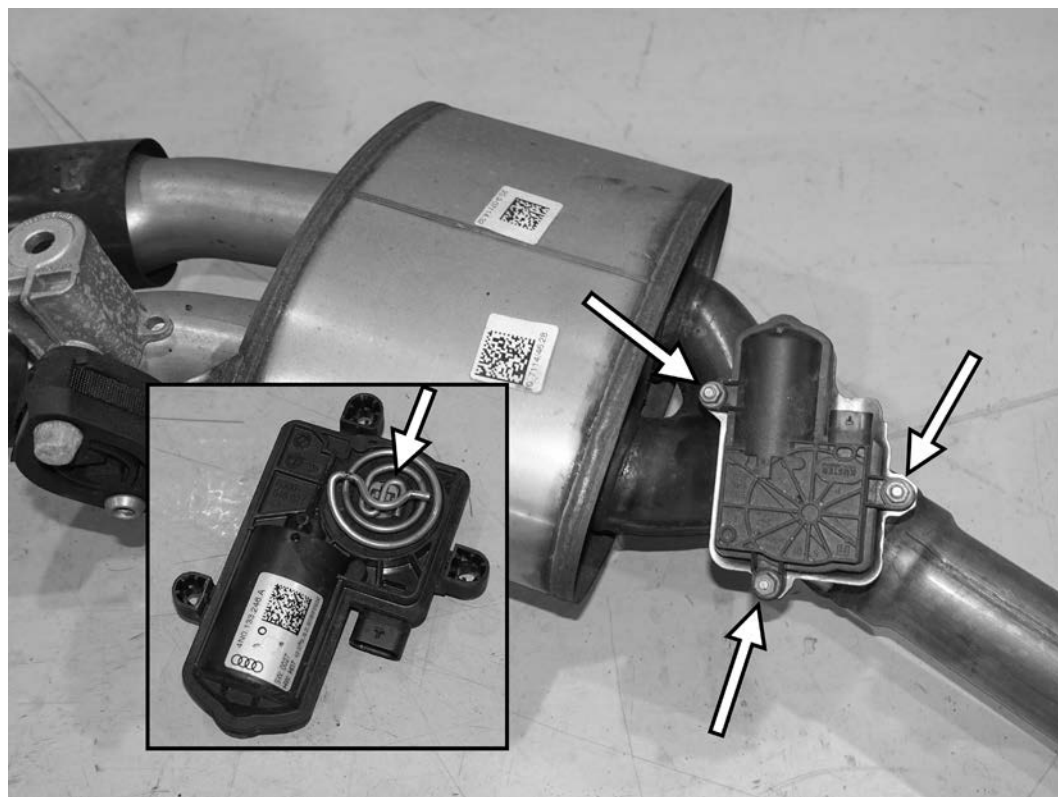
32) Place the factory hanger mounting bracket on the APR resonator assembly onto the car where it was originally installed. Install the APR crossbrace underneath the factory mounting bracket, and loosely secure the crossbrace and mounting bracket with the four factory 12mm triple square screws.

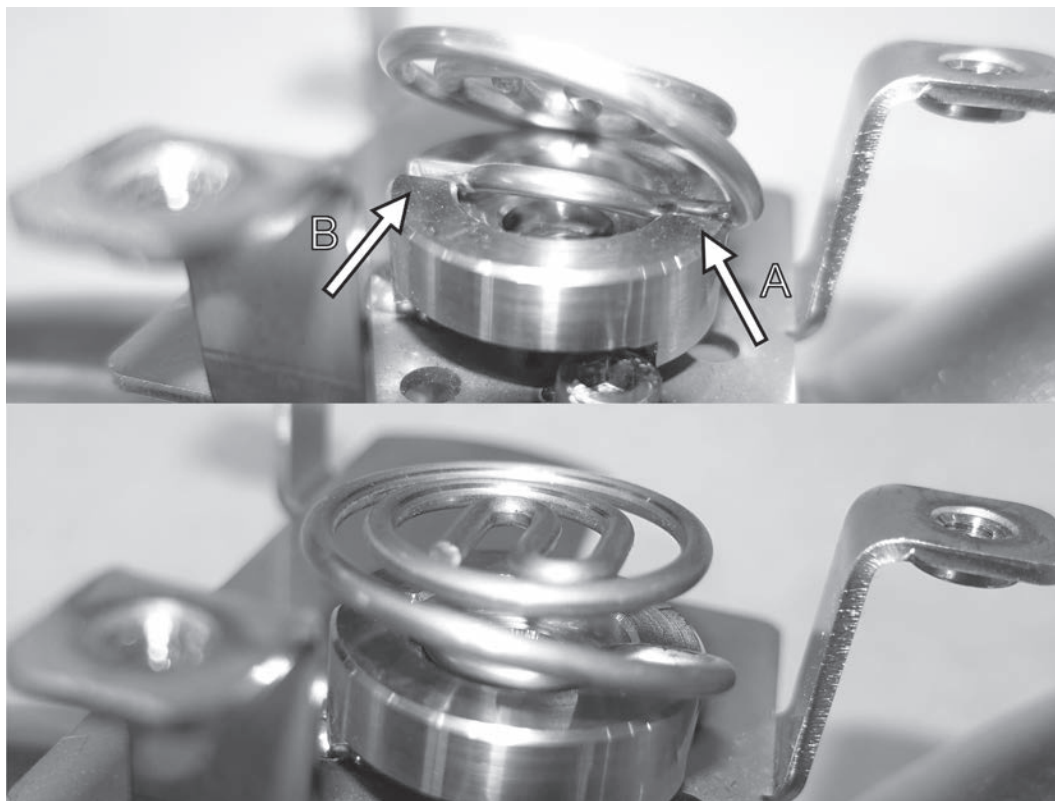




33) Loosely install two of the smaller exhaust sleeve clamps to the back of the APR midpipes. Loosely install the one large sleeve clamp to the front of the APR resonator assembly, and then place the front Y-portion into the car. Use the sleeve clamps to hold this section in place. They can be very slightly tightened in order to loosely hold the Y-section in place, but they will need to be adjusted later.

34) On the left factory muffler, remove the three 8mm nuts holding the exhaust valve motor. Carefully lift the motor and spring off its mounting bracket. Note how the spring is mounted to the slot in the bottom of the motor, and the orientation of the spring. Remove the spring from the motor.

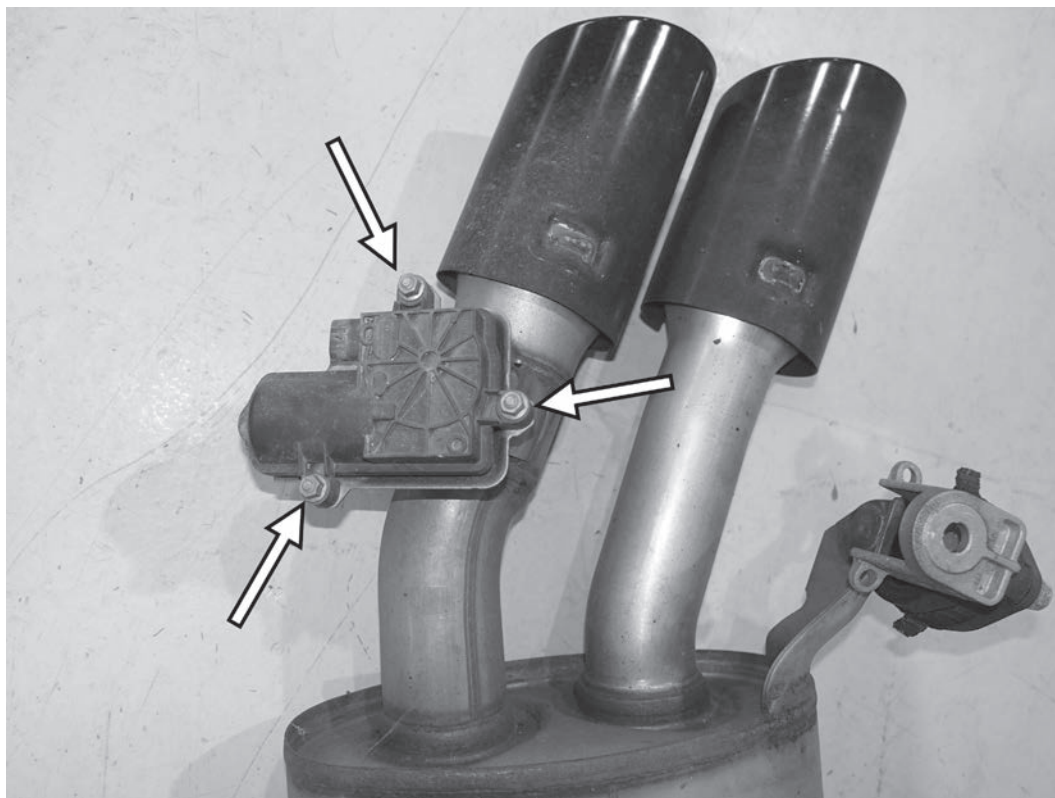




35) Place the spring into the slots on top of the APR valve assembly. It is usually easier to angle the spring into the right slot (labeled “A”) before pushing the other end of the spring into the left slot (“B”). Ensure the straight portion of the spring is fully down in the slot. Once the spring is correctly in the slots, push the spring down to keep tension and rotate the top of the spring until it is parallel with the base plate of the APR motor bracket.

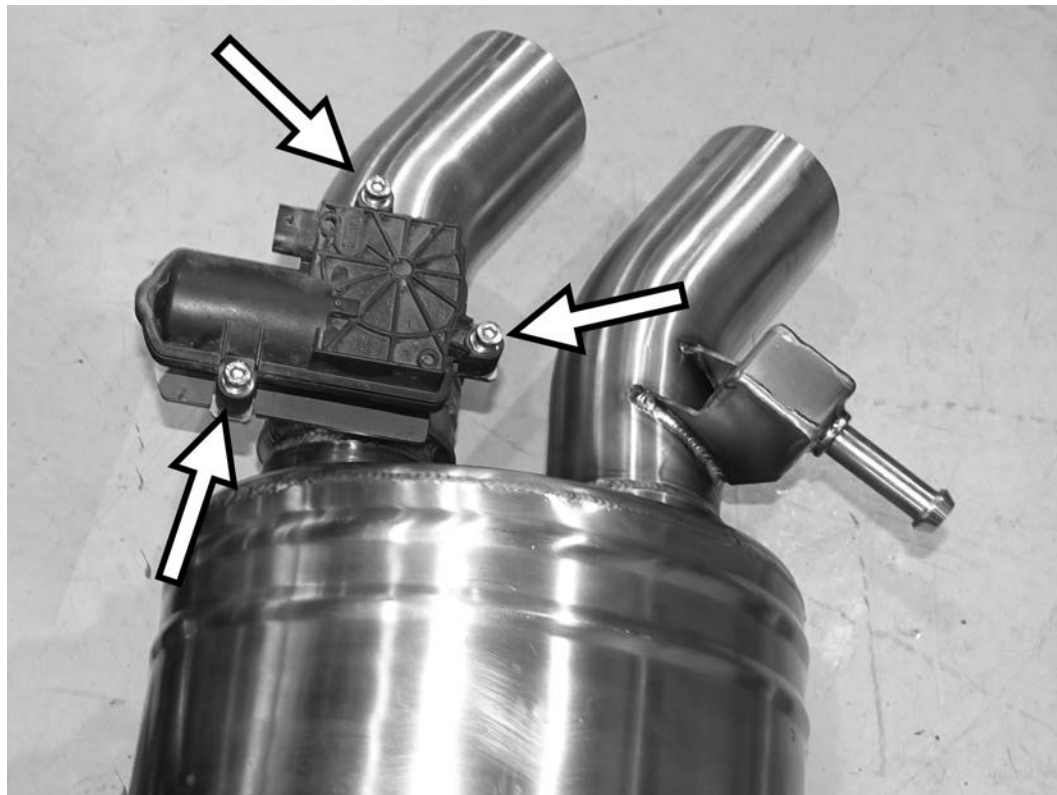
36) Place the factory exhaust valve motor over the installed spring. Ensure the tab on the top of the spring goes into the slot on the bottom of the motor. In order to align them, it may be necessary to put the motor on at a slight angle compared to the three mounting holes, and then rotate the motor slightly to align with the mounting holes. Install three of the supplied 4mm allen screws with three flat washers, and then tighten the screws to 9Nm (81 in-lbs) to secure the motor to the APR muffler assembly.

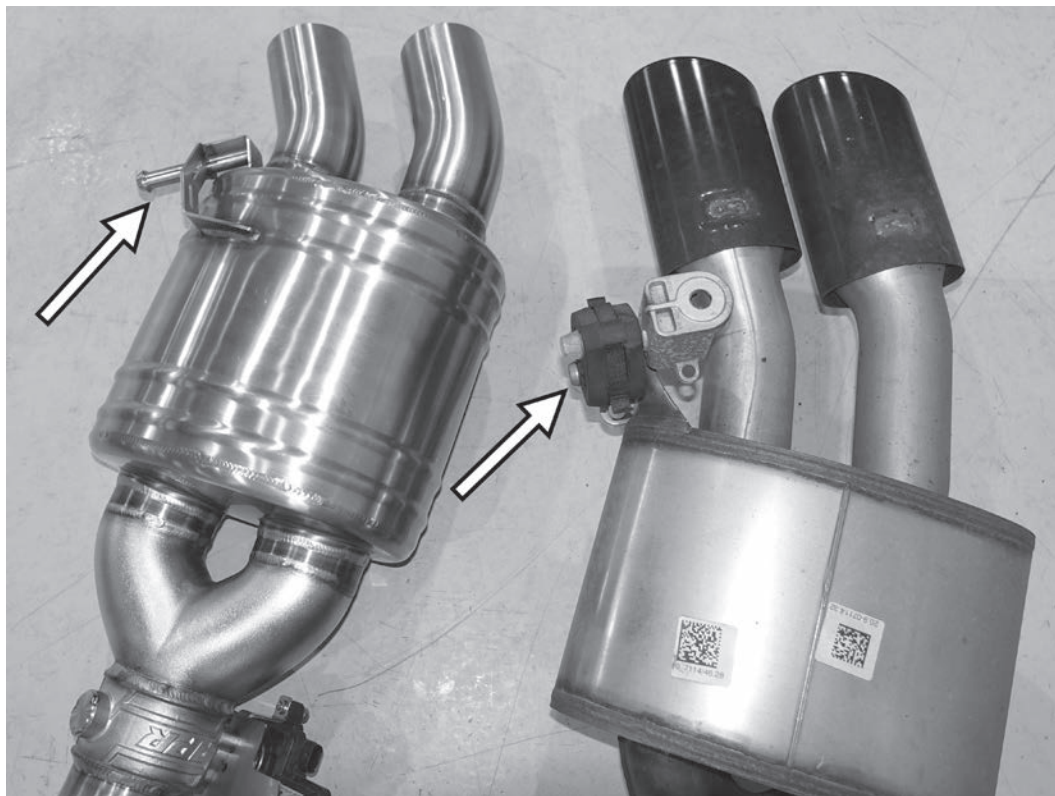




37) On the right factory muffler, remove the three 8mm nuts holding the exhaust valve motor. Carefully lift the motor and spring off its mounting bracket. Note how the spring is mounted to the slot in the bottom of the motor, and the orientation of the spring. Remove the spring from the motor.

38) Repeat the steps of moving the exhaust valve motor and spring over from the stock exhaust to the right APR muffler assembly. Once the spring and motor are in place, tighten the three 4mm allen screws to 9Nm (81 in-lbs).

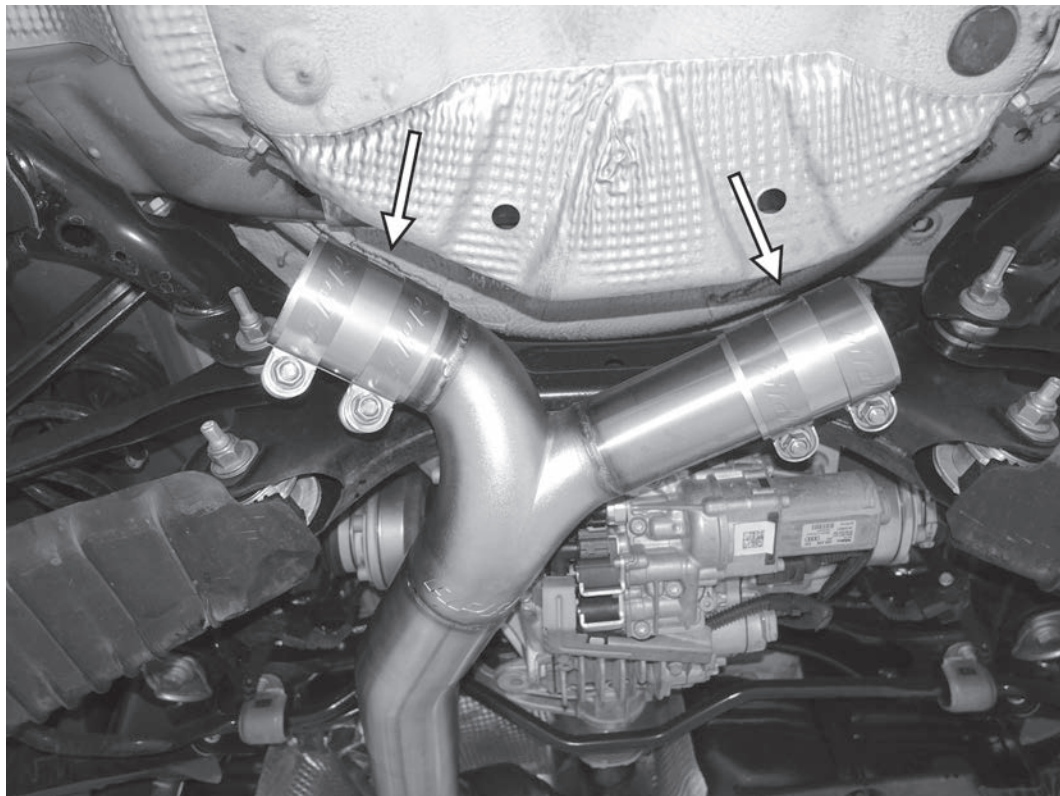




39) Remove the stock rubber hanger assembly from the left muffler. Install the hanger assembly onto the left APR muffler in the same orientation. It will be easier to remove and reinstall the hanger with some lubrication.

40) Remove the stock rubber hanger assembly from the right muffler. Install the hanger assembly onto the right APR muffler in the same orientation. It will be easier to remove and reinstall the hanger with some lubrication.

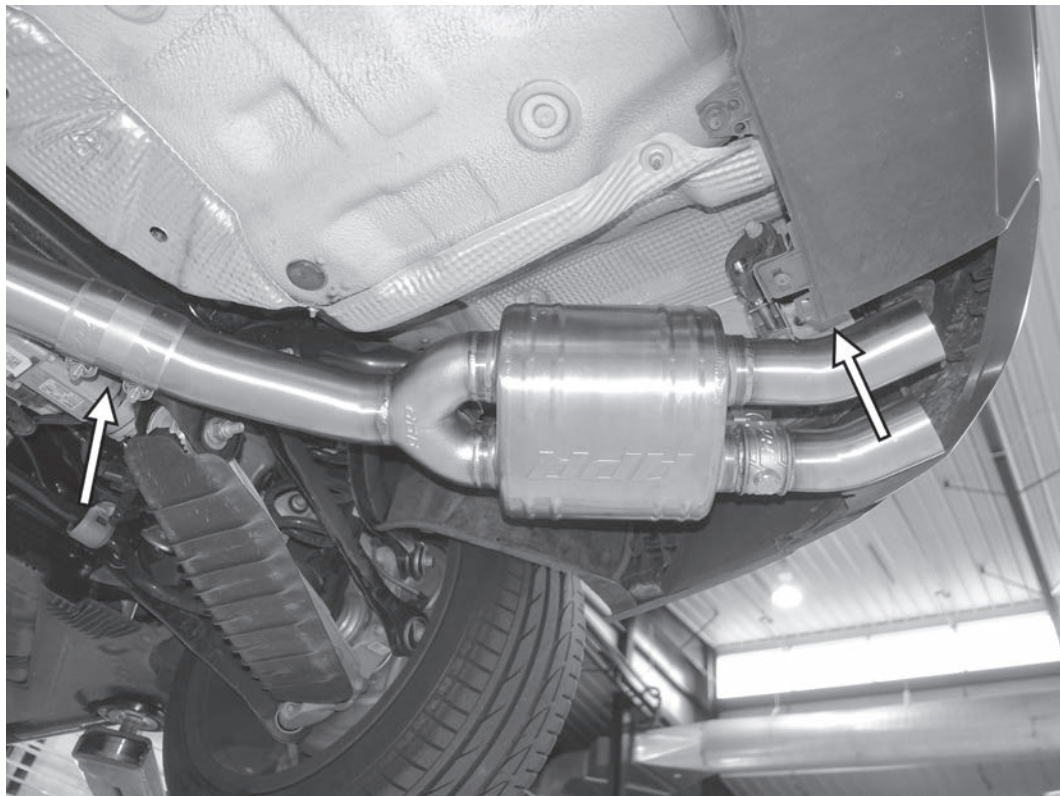




41) Loosely place the remaining two sleeve clamps on the back of the APR resonator section.

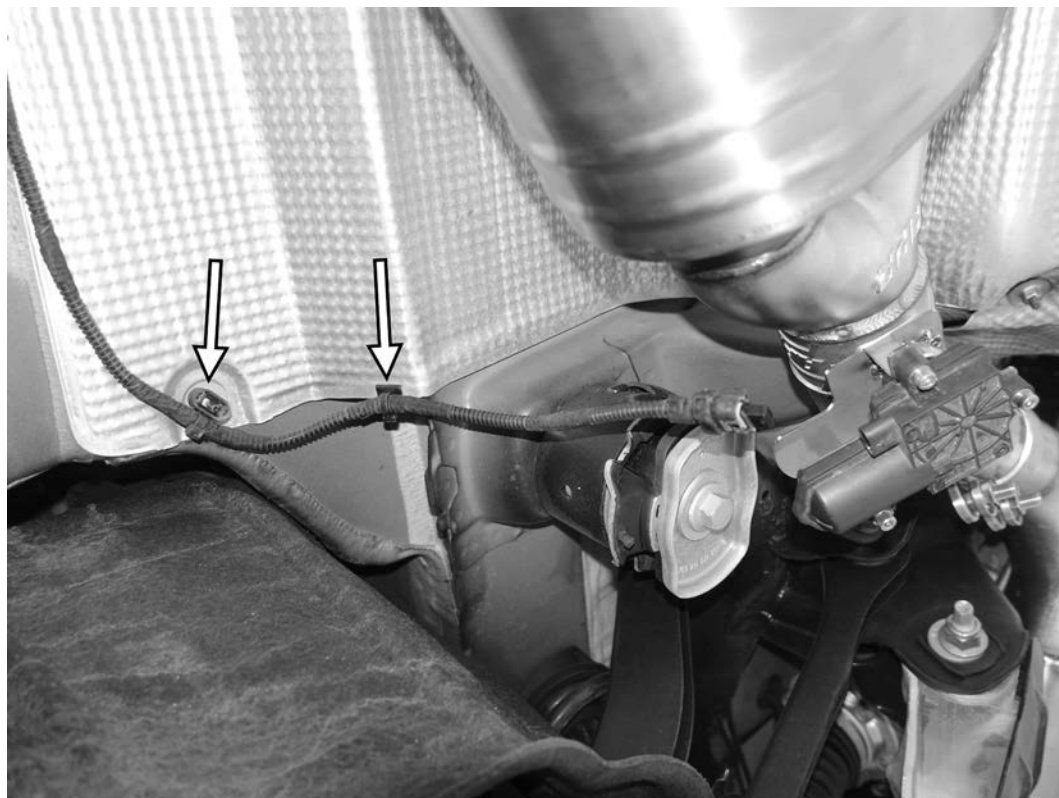
42) Place the left muffler onto the car. Loosely place the entrance of the muffler into the sleeve clamp and loosely install the original 13mm screw holding the factory hanger assembly to the bottom of the chassis.

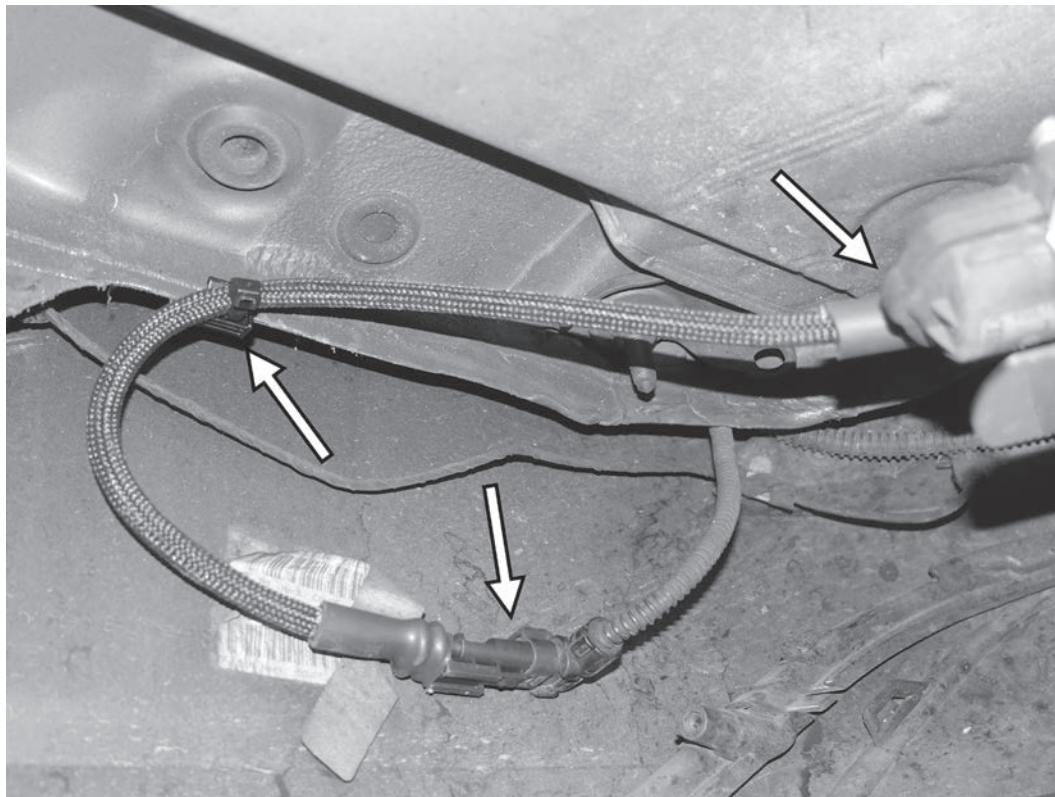




43) Place the right muffler onto the car. Loosely place the entrance of the muffler into the sleeve clamp and loosely install the original 13mm screw holding the factory hanger assembly to the bottom of the chassis.

44) By the left muffler, disconnect the clips holding the exhaust valve motor wiring harness to the heat shield above the muffler. Connect the harness to the exhaust valve. If necessary, the clips on the harness can be moved in order to reattach the harness to the heat shield.

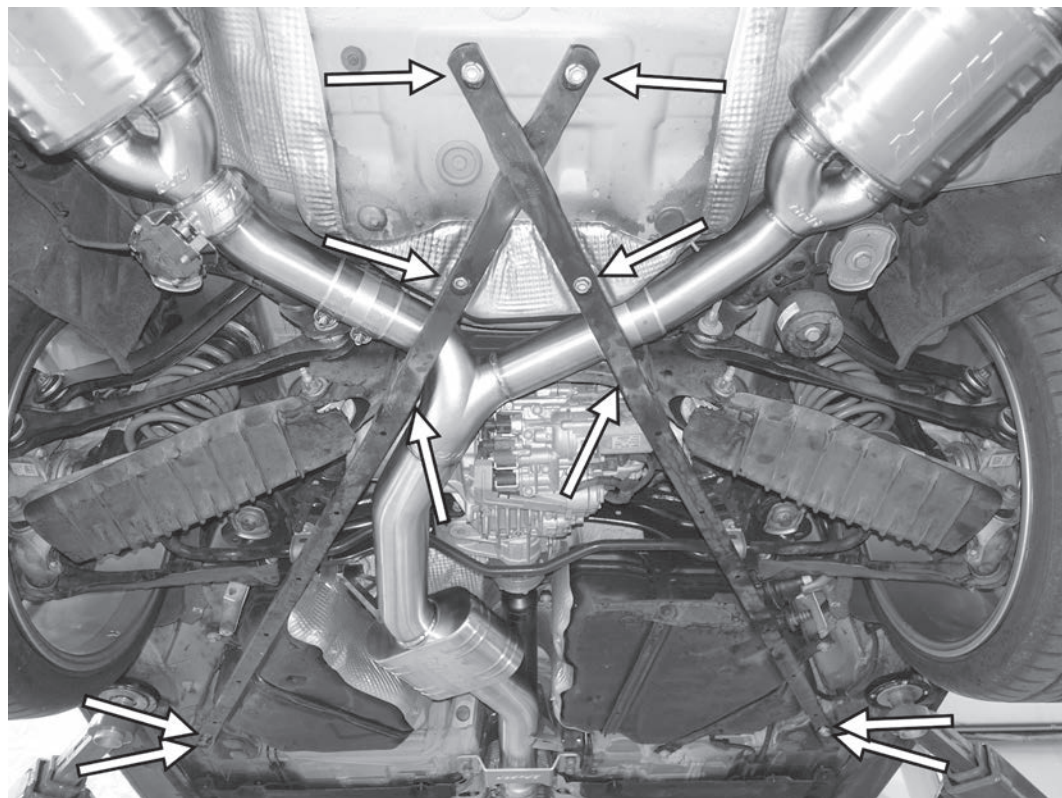




45) By the right muffler, install the supplied extension harness to the end of the factory wiring harness, and then connect the harness to the exhaust valve motor. Use the supplied cable tie to secure the extension harness to the chassis of the car.

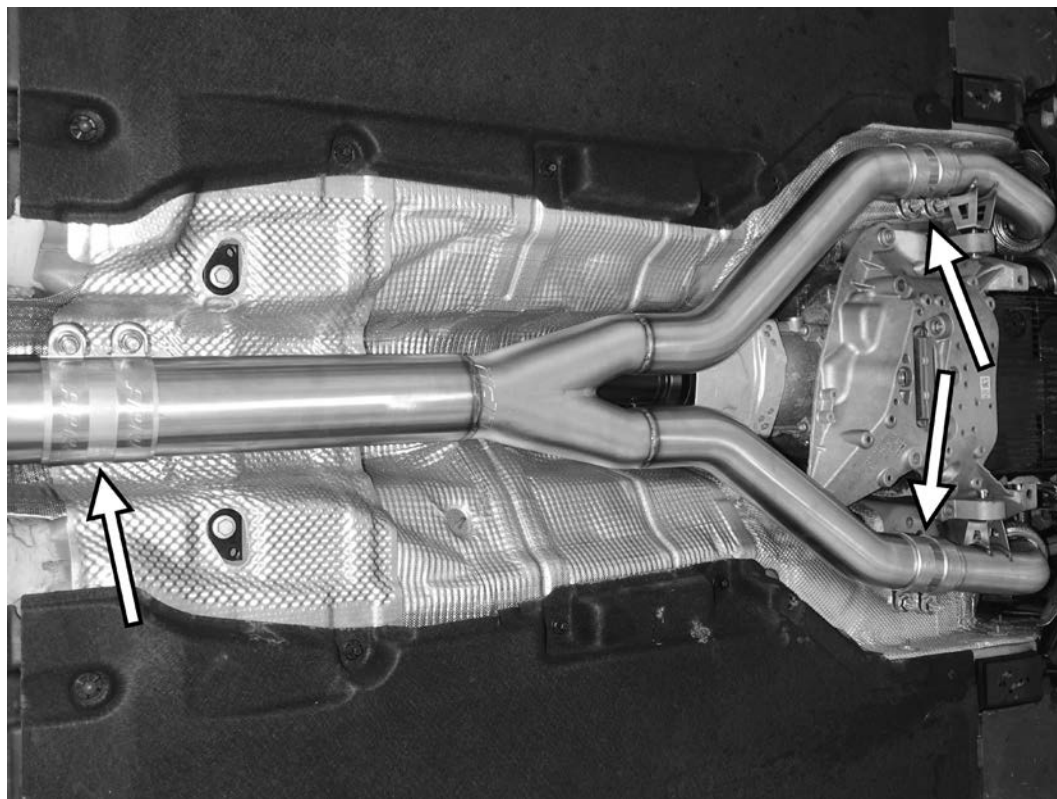
46) If installing this system on a coupe, you will need to cut ~59mm off from the front Y-section of the exhaust. It is recommended that you roughly fit the entire system in place before you cut the exhaust, just to ensure fitment on your vehicle.

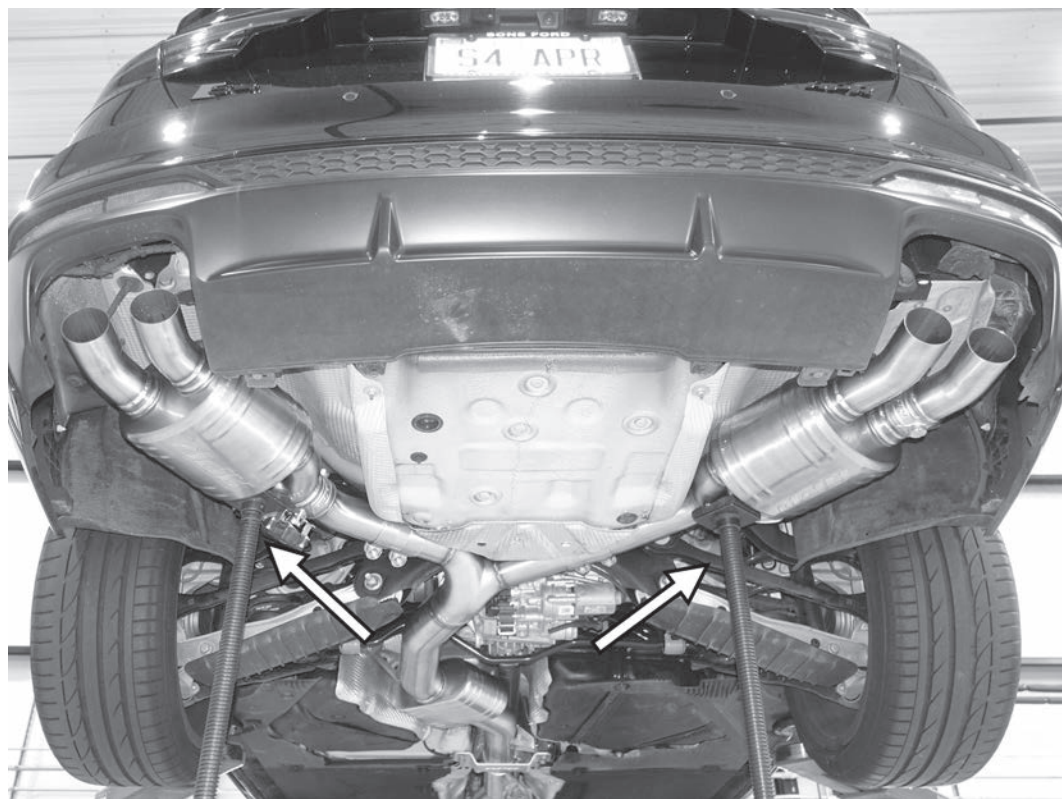




47) If equipped, reinstall the factory cross braces underneath the car. Tighten the braces to 50Nm (37 ft-lbs), and then tighten each bolt an additional 90°.

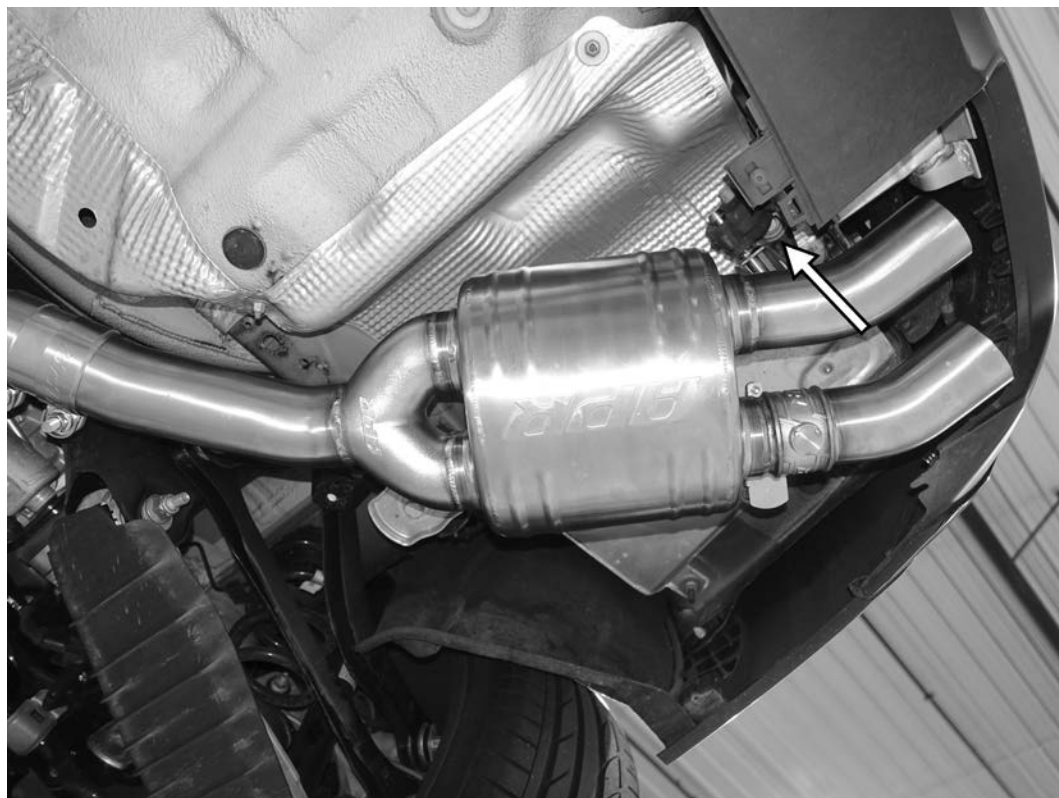
48) Begin to adjust the APR exhaust from the front of the car towards the back of the car. Tighten the clamps on the entire APR exhaust just enough so that each component can hold in the same position, but can still be manipulated and moved later. As this system has so many possible combination of adjustments, it will take a while to get each component correctly positioned.

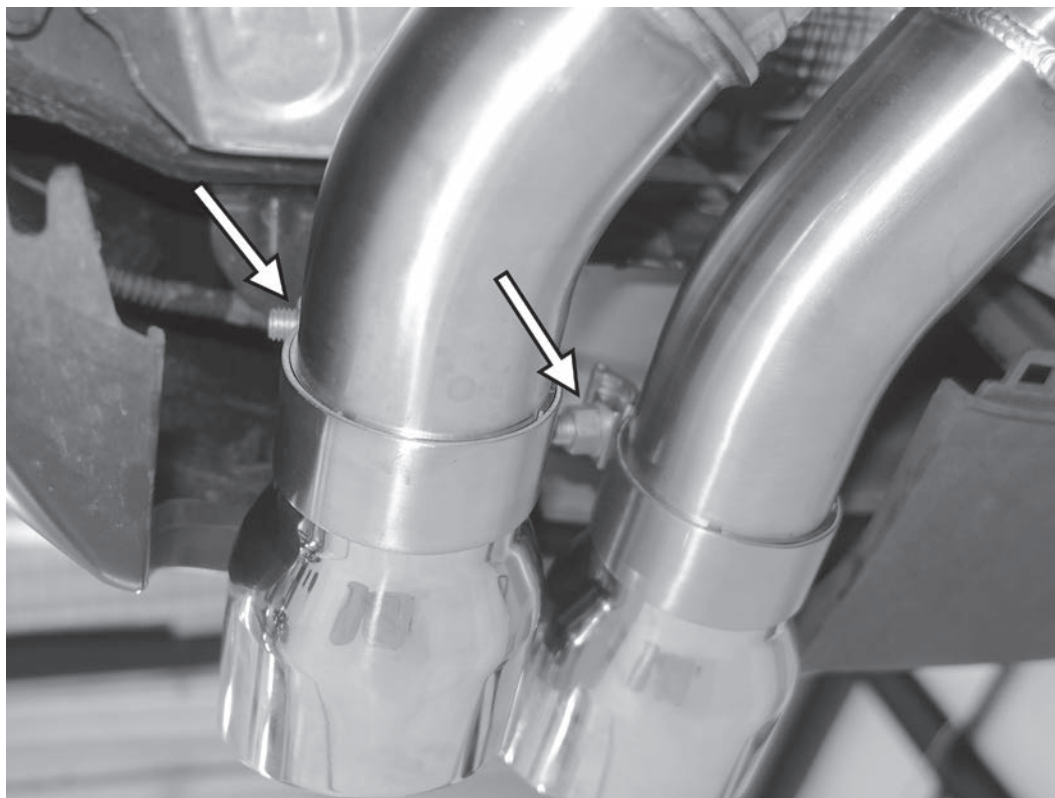




49) If you do not have assistants to help you adjust the exhaust, adjustable exhaust stands can be used to hold parts of the exhaust in place while you adjust other components.

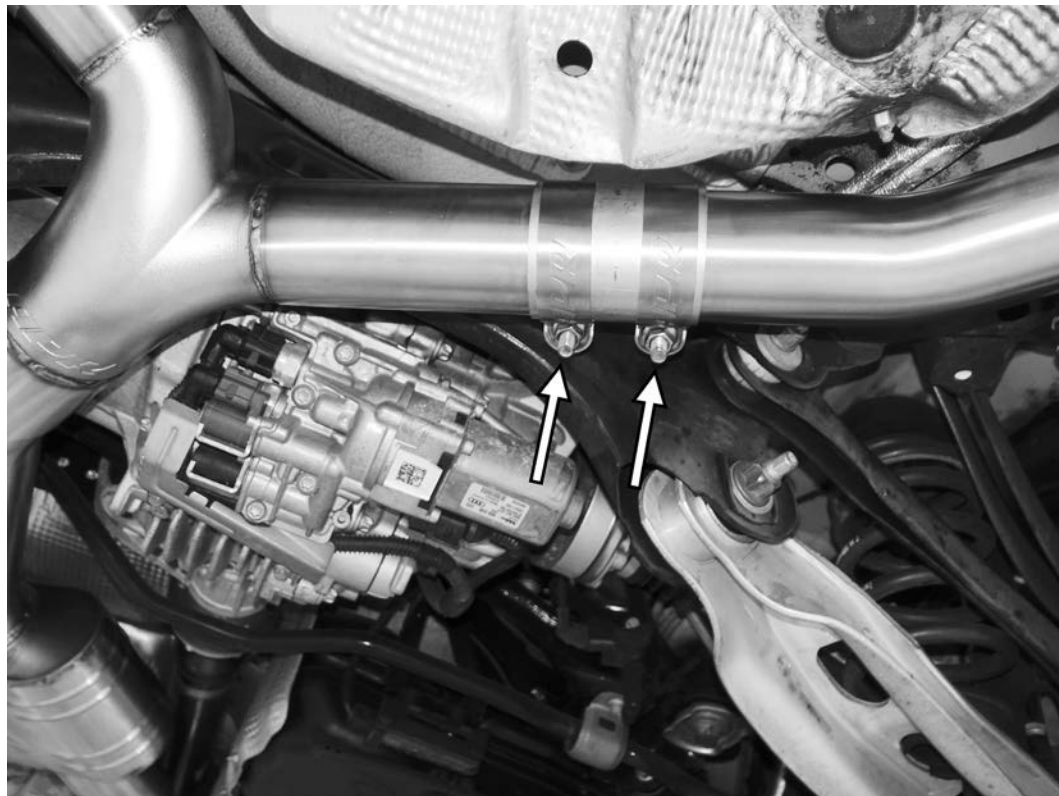
50) Position the rear muffler sections in the car, making sure the exhaust outlets are roughly centered in the rear valence, and that the bottom side of the rear rubber exhaust hangers are slightly tilted towards the front of the car. The exhaust will grow as it heats up, and move towards the back of the car. Once positioned, tighten the 13mm screws holding the rear hanger brackets to 20Nm (177 in-lbs).

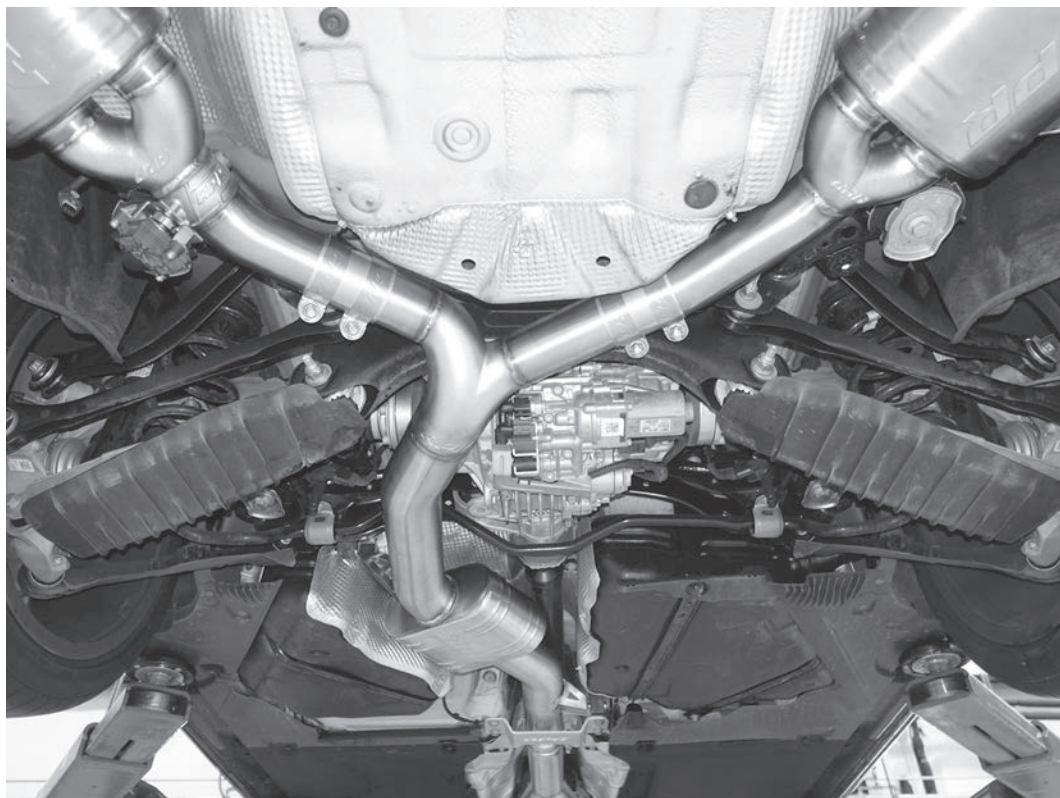




51) Loosely install all four exhaust tips with the supplied exhaust clamps. Position the clamps with the 15mm nuts of the clamps facing the outside of the car.

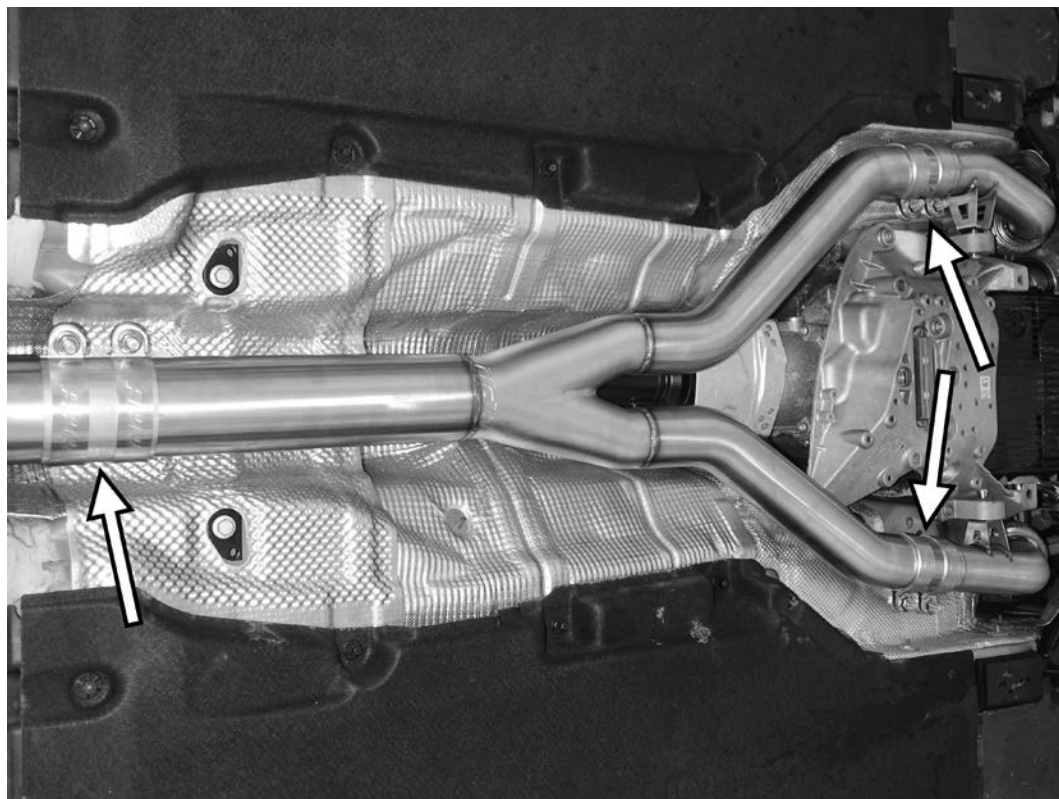
52) Working towards the back of the car from the front, adjust the position of the rear mufflers. Once they are positioned where you want, tighten the 16mm nuts on the sleeve clamps on both rear mufflers. They should be tight enough to hold the mufflers in place, but should not be the final torque.

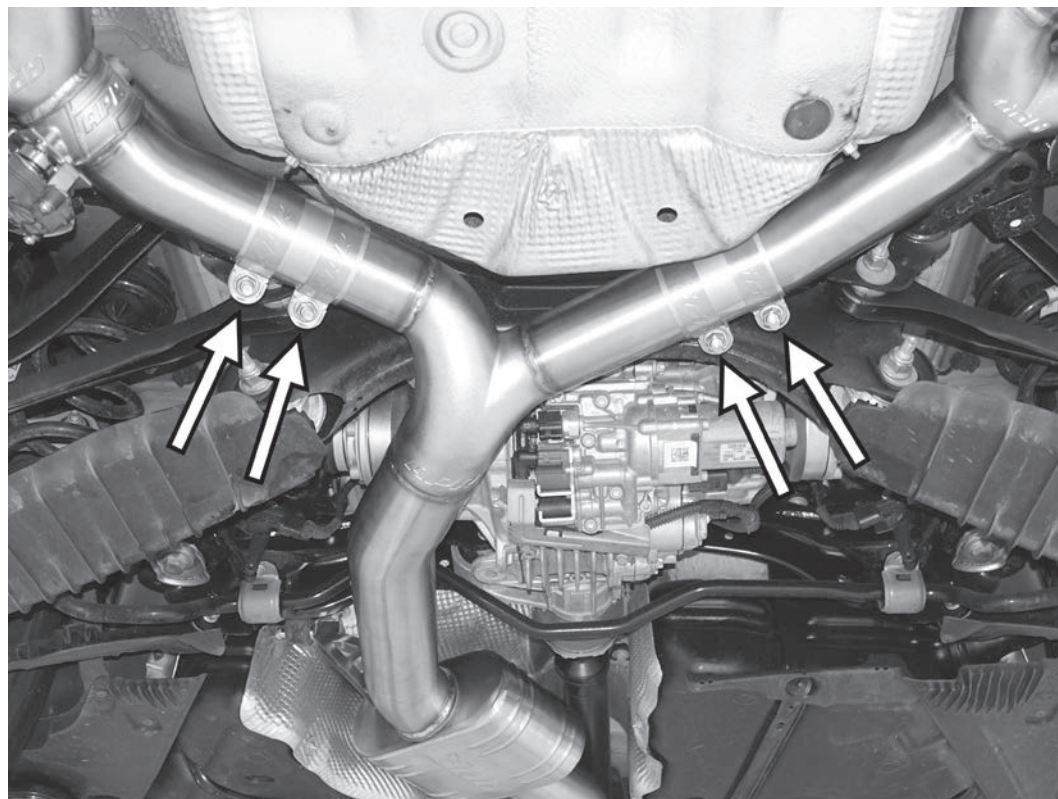




53) If the rear mufflers are not fitting to your liking, you might need to make more adjustments to the front side of the exhaust system to help the alignment. Again, work the system from the front of the car to the back of the car. Moving the center Y section forward or backwards, or up or down slightly can make a big difference at the back of the exhaust system by the rear mufflers. On the resonator section, make sure there is clearance to the center driveshaft and the rear differential. Rotating or moving these two sections even slightly can make a big difference in the fitment of the entire catback.

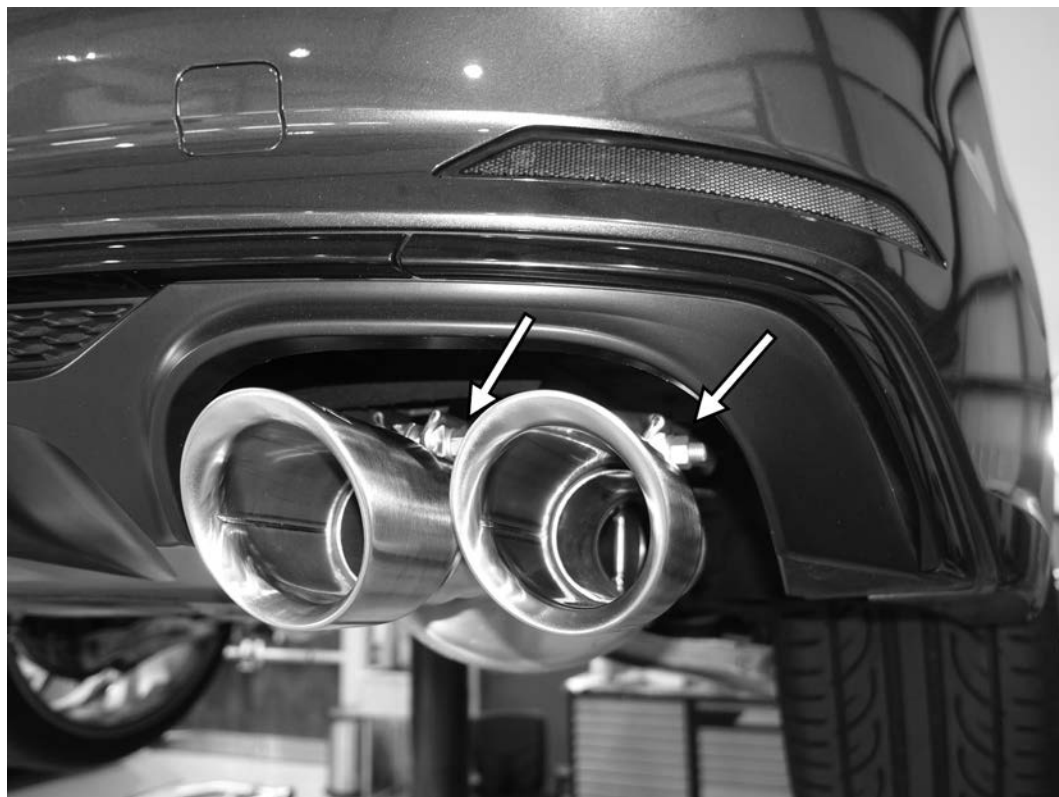
54) Once you are happy where the exhaust system is, tighten it from the front of the car back. Tighten the 16mm nuts on the front and middle sleeve clamps to 25Nm (18 ft-lbs).

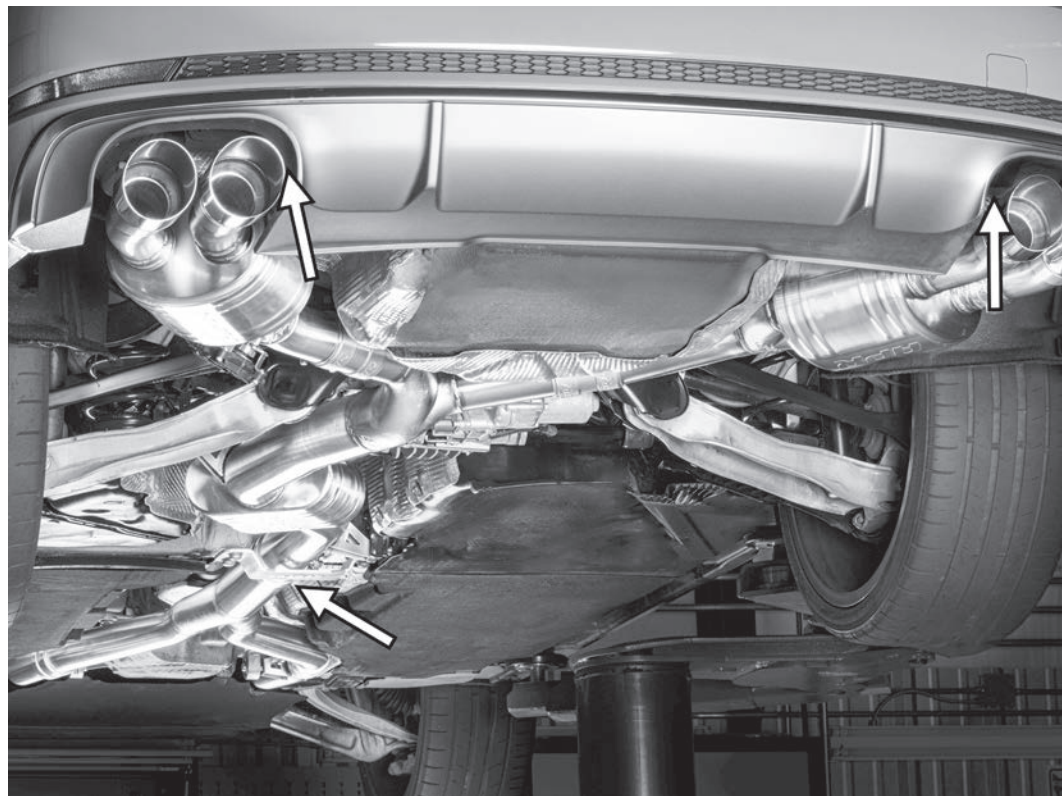




55) Tighten the 16mm nuts on the front and middle sleeve clamps to 25Nm (18 ft-lbs).

56) After a final adjustment of the exhaust tips, tighten the 15mm nuts on the rear clamps to 55Nm (40 in-lbs).





57) Before running the car, wipe down the entire exhaust system with a mild cleaning agent to remove any handprints created during the installation. Once heated, the handprints become more pronounced and are harder to remove.

Also, if you ever need to remove the exhaust system, remove it as a whole to avoid having to readjust the positioning. Simply unbolt the rear exhaust hanger brackets, separate the system from the middle rubber hangers, and disconnect at either the two forwardmost sleeve clamps or the one large sleeve clamp in the middle.

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