

#TL100134

INSTALLATION MANUAL

# IC100026

APR B9 SQ5 Intercooler

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Notes:

These instructions were written for a North American specification B9 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.

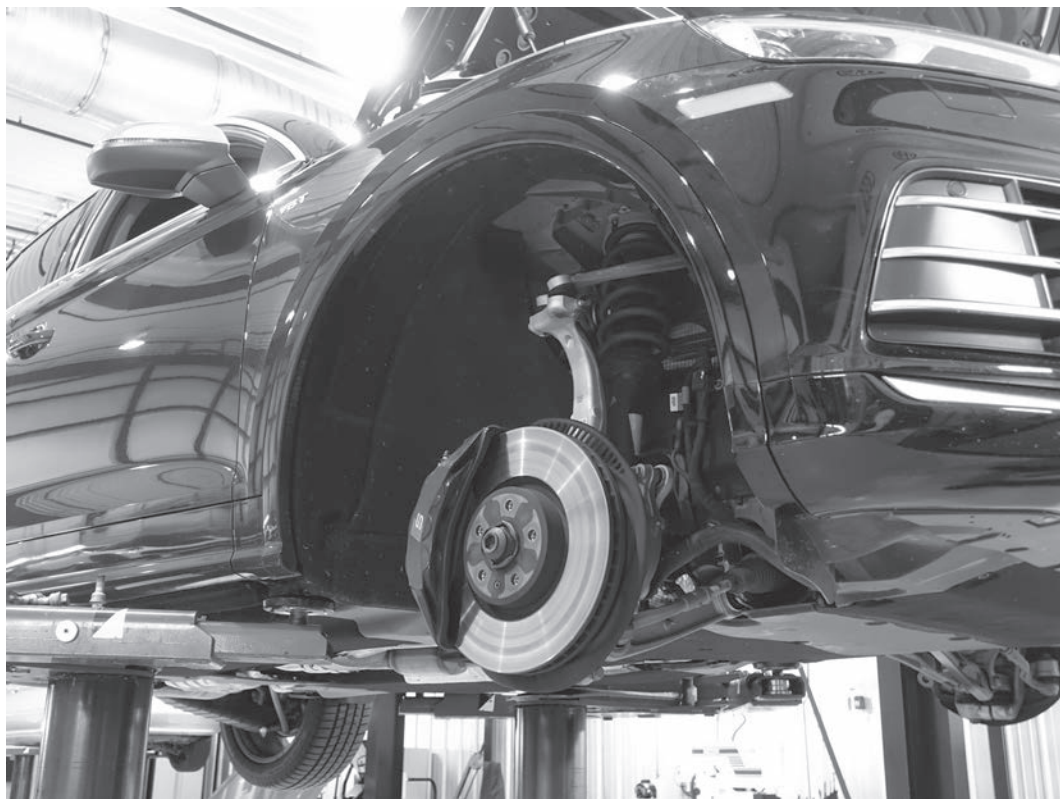


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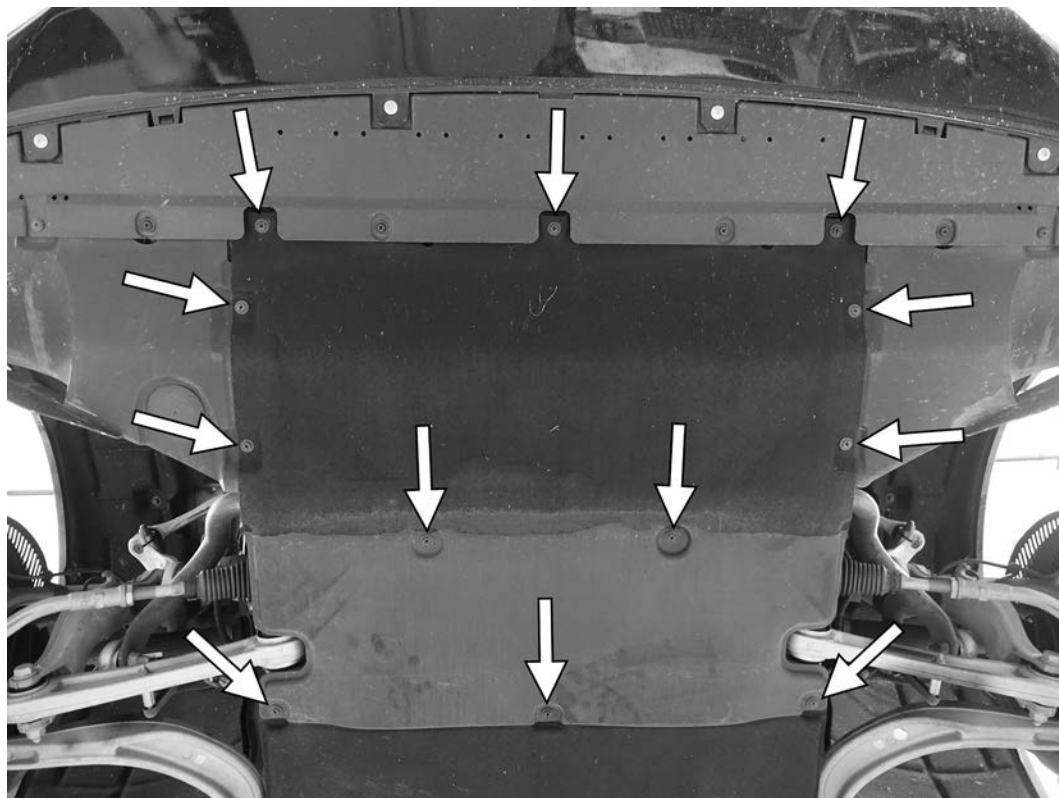
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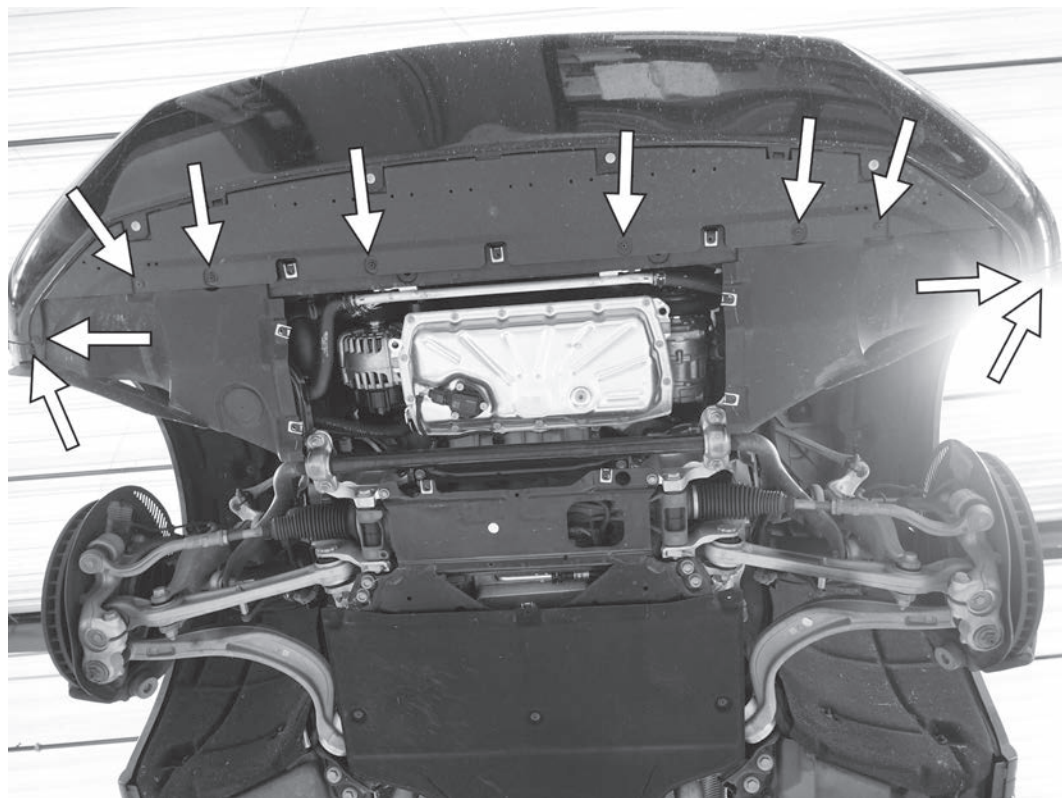
1) Securely place the vehicle on a lift or jack stands, and remove the front wheels.

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2) Remove the twelve T25 screws holding the center belly pan to the bottom of the car, and then remove the belly pan. Note the way the belly pan is attached to the other panels around it, including the bottom of the front bumper cover.



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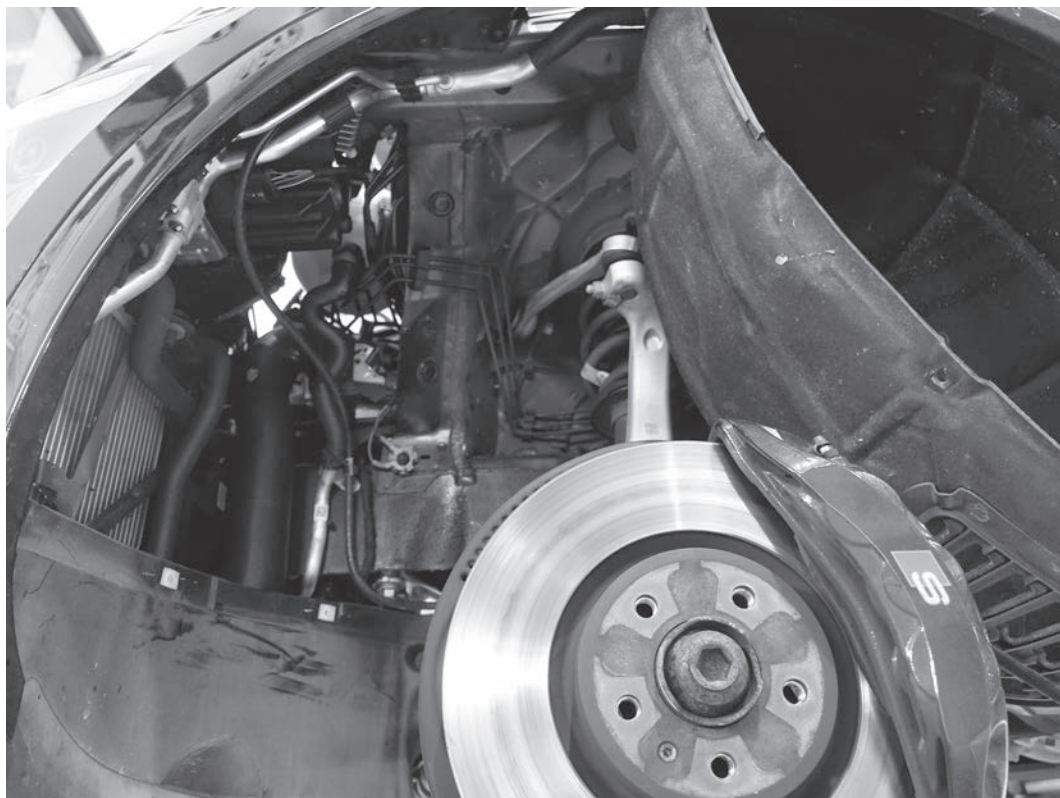
3) From the bottom of the front bumper cover, remove the four T30 screws along the front, the four T25 screws to the bottom of the wheel liners, and the two T20 screws on the bottom of the fender trim covers.

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4) Remove all the fasteners holding the front side of the wheel liner to the back of the front bumper cover. There are six T25 fasteners, four 10mm fasteners, and two push-pin style fasteners. Note how the wheel liner, especially inside of the front suspension, is attached. Repeat this process on the wheel liner on the other side of the car.



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5) Carefully fold the front portion of both wheel liners back, and tuck behind the front brakes so the back of the front bumper can be accessed.

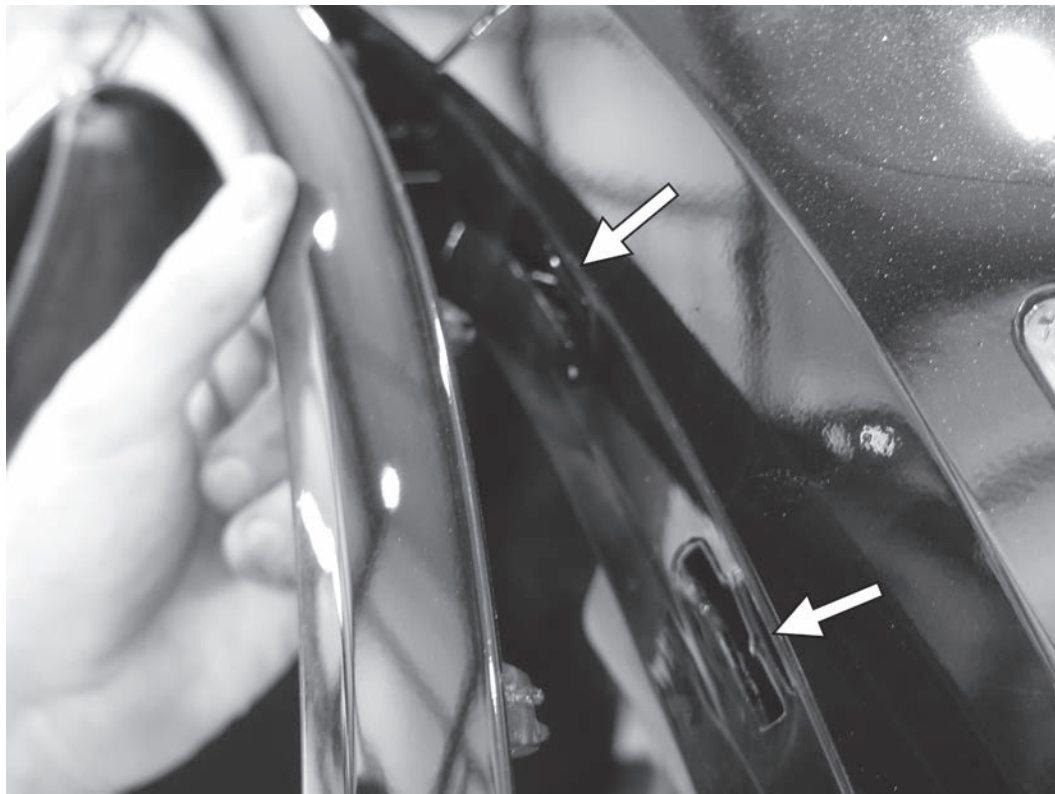
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6) Starting from the front side, pull the lower portion of the fender trim cover away from the front bumper cover.



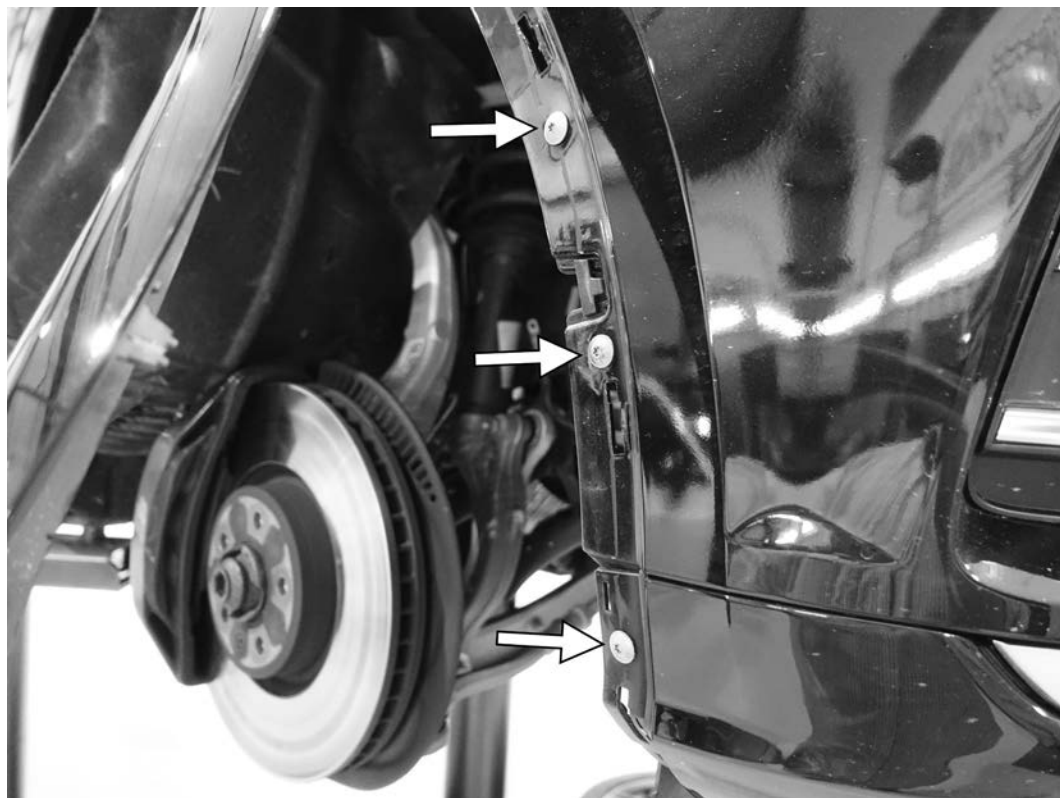
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7) Continue to separate the fender trim cover from the side of the front bumper cover and the front side of the front fender.

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8) Remove the three T25 screws from the side of the front bumper cover, revealed when the fender trim cover was removed.

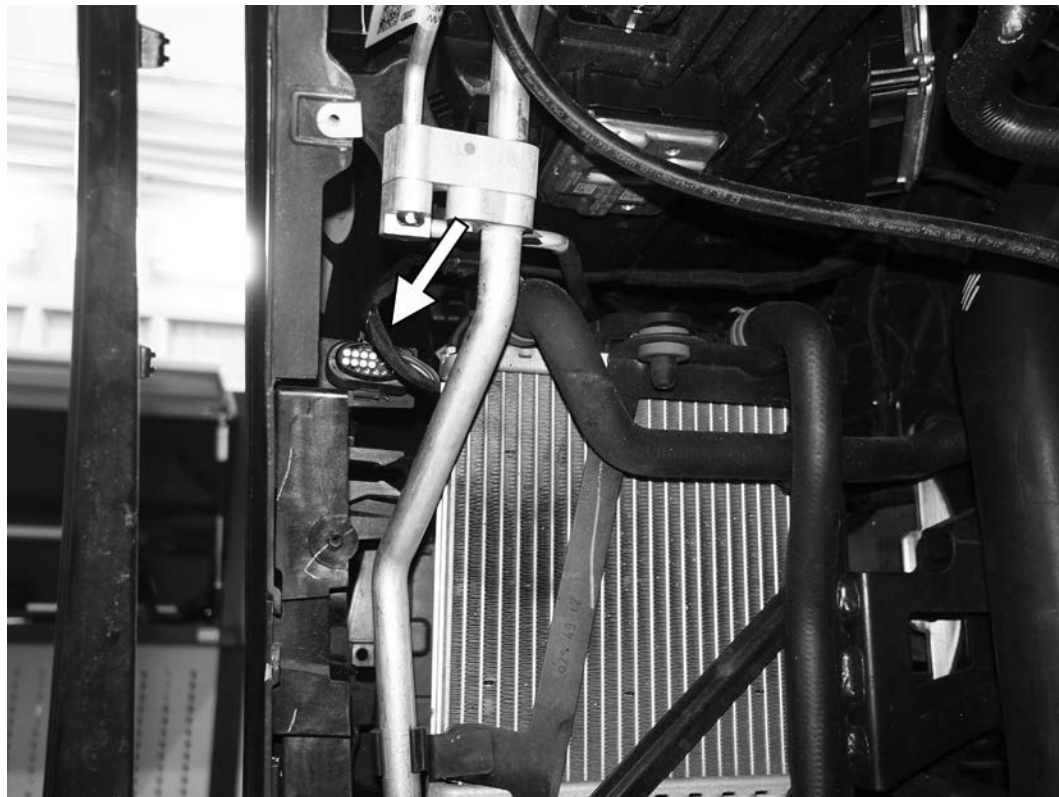


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9) Remove the one push pin style connector and the one T25 screw holding the inside of the front bumper cover to the front fender. Repeat the previous steps on both sides of the car.

10) On the front side of the left wheel well, locate and disconnect the electrical connector for the front bumper.



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11) Raise the hood. On the back side of the hood latch, press the button in and lift the hood latch to remove the latch from the car.

Do not close the hood until the latch has been replaced!

12) Remove the panel that connects the top of the front bumper cover to the radiator support. Begin to pry the front corner of the panel up, and then work to the other side to separate the panel from the front grille. Finally, pull the panel forward to separate it from the radiator support.



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13) Remove the two T25 screws that hold the top corners of the grille to the radiator support.

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14) With an assistant holding the bumper, pull the sides of the bumper cover away from the mounting brackets on both front fenders.



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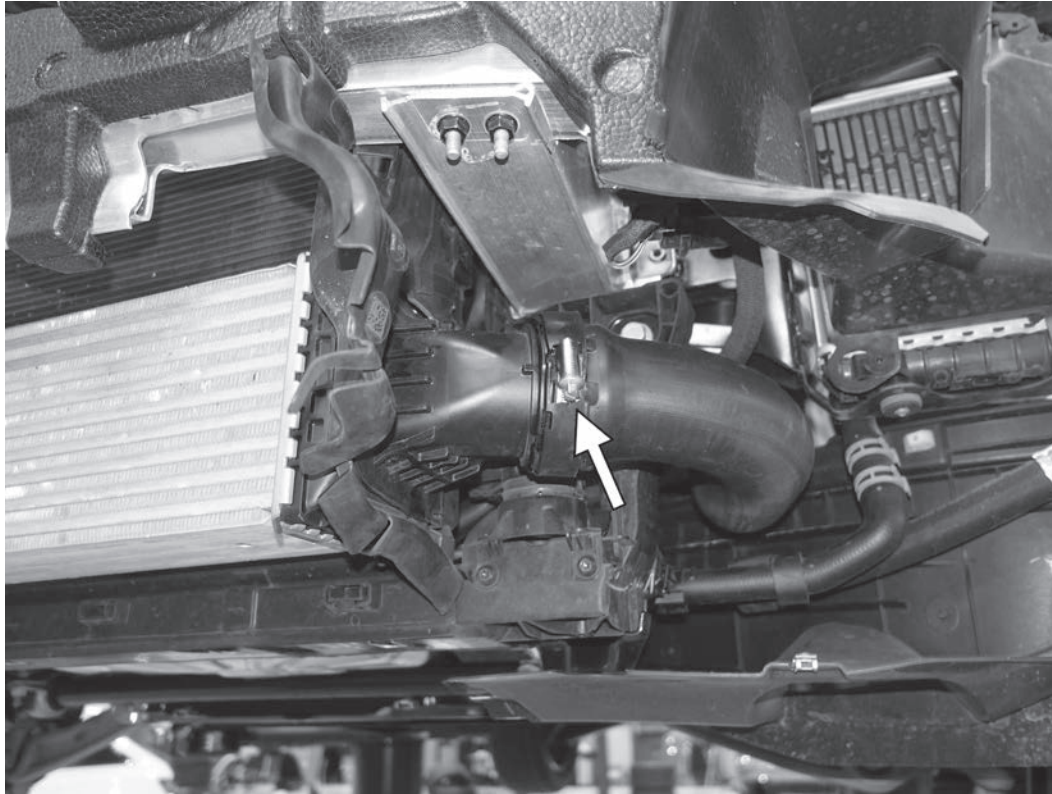


15) Lift the bumper cover and pull it forward to separate it from the car. Ensure there are no remaining connectors or lines holding the bumper cover to the car. Place the bumper cover aside, ensuring that the paint cannot get damaged.

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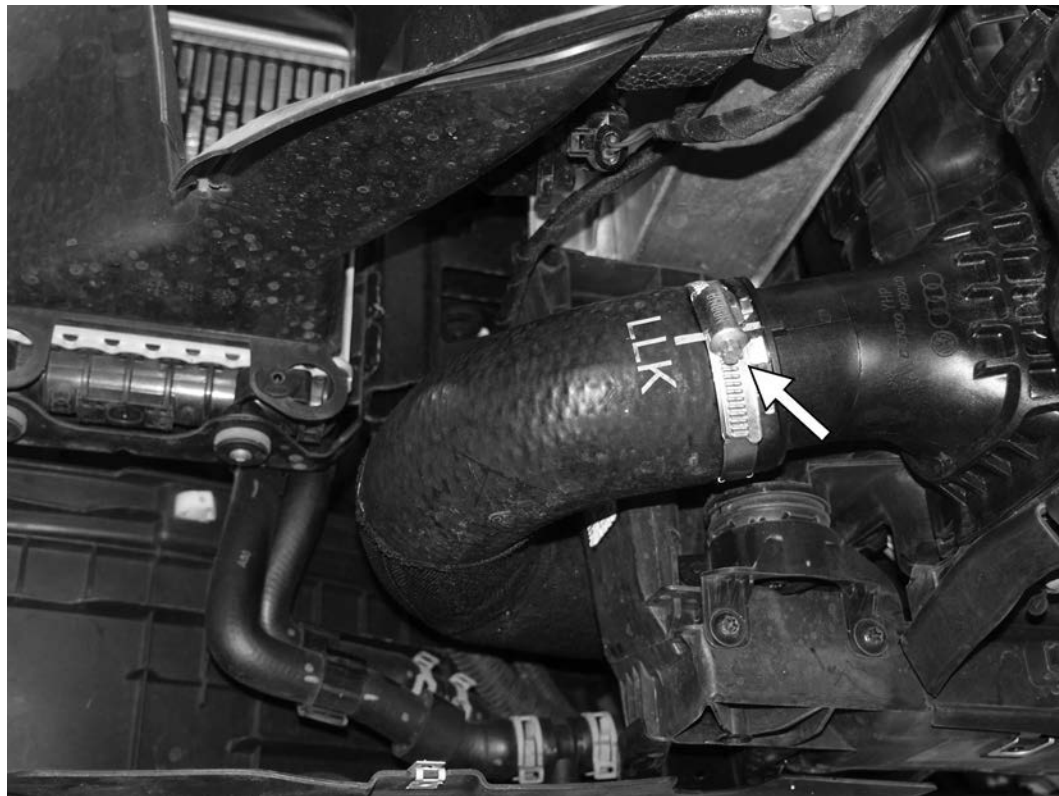
16) Loosen the 7mm hose clamp from the tube that is attached to the throttle body. Release the lock on the electrical connector to the MAP sensor, and then unplug the electrical connector. Separate the tube from the throttle body.



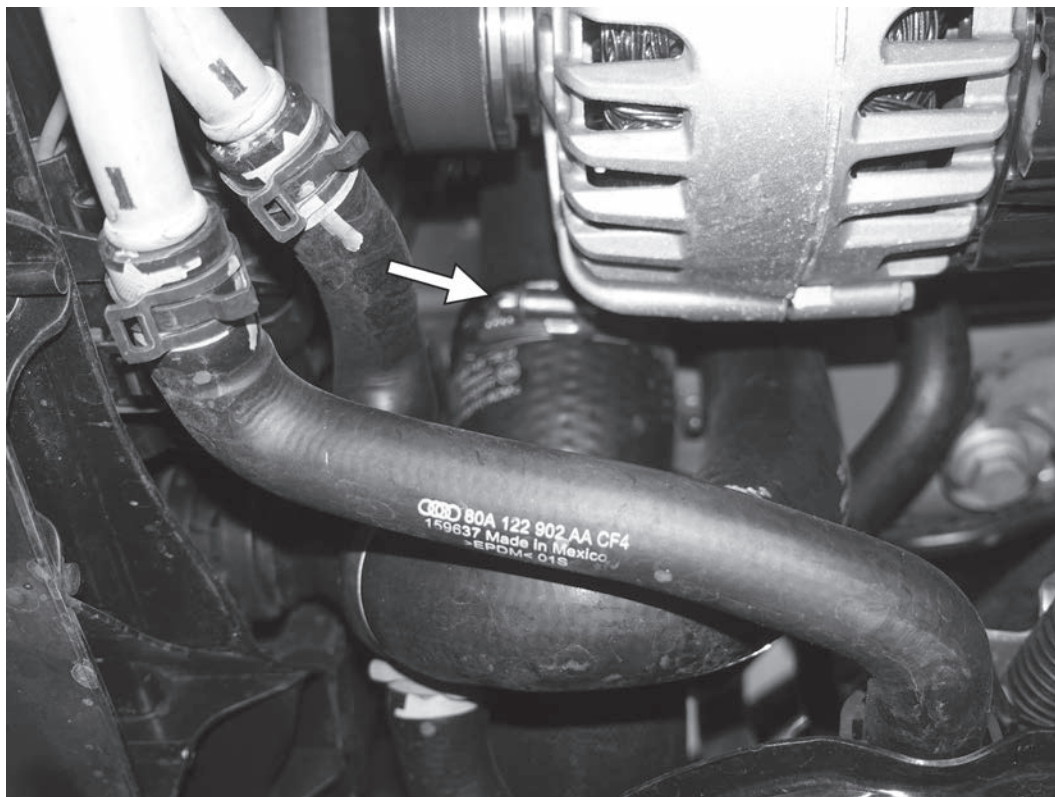


17) On the other end of the same tube, disconnect the 7mm hose clamp from the stock intercooler outlet and separate the tube from the intercooler. The tube can then be removed from the car by carefully manipulating it out from the bottom.

18) Loosen the 7mm hose clamp from the intercooler inlet hose, and then separate the hose from the intercooler.

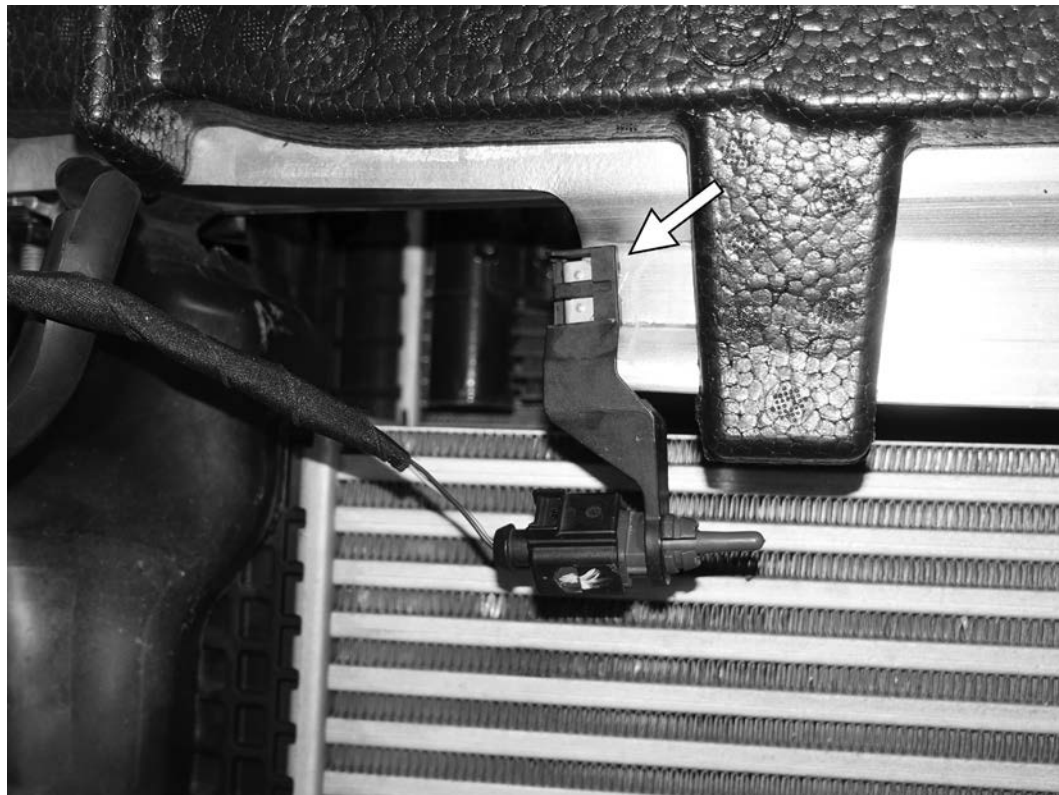


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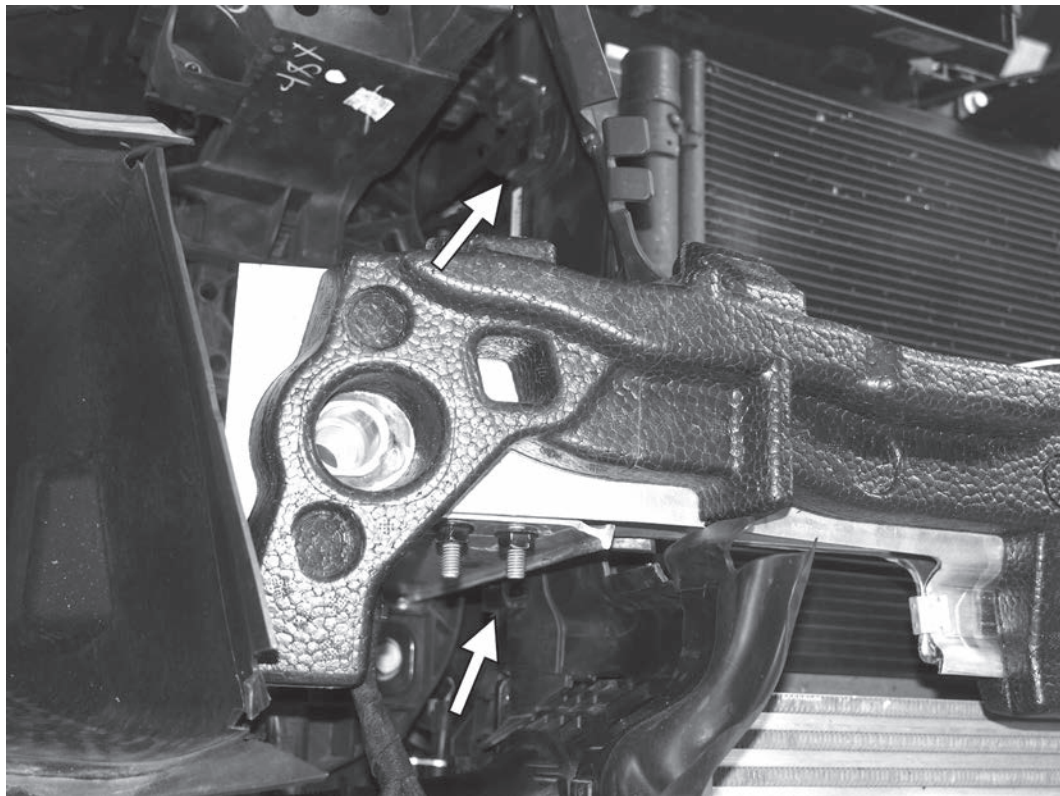


19) On the other end of the inter-cooler inlet hose, loosen the 7mm hose clamp from where the hose attaches to the engine. Separate the hose and remove it from the car.

20) In front of the right side of the intercooler, separate the bracket for the outside air temperature sensor from the front crash beam. Tuck the sensor with attached bracket up and out of the way for now.



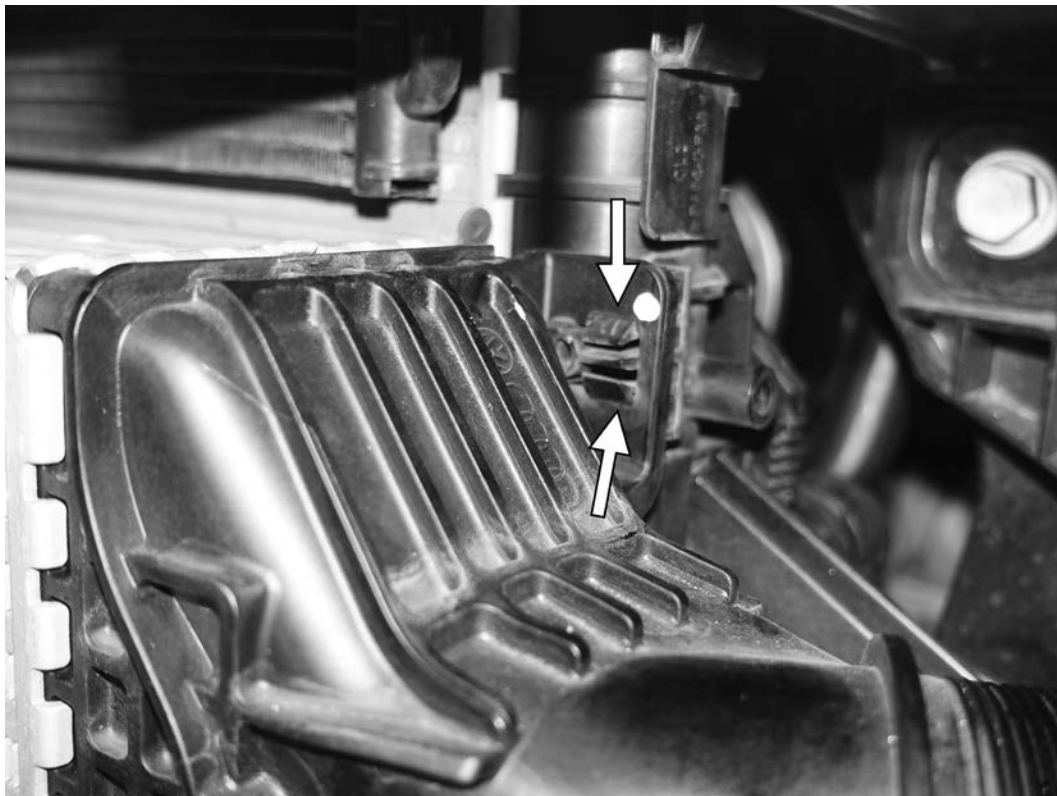
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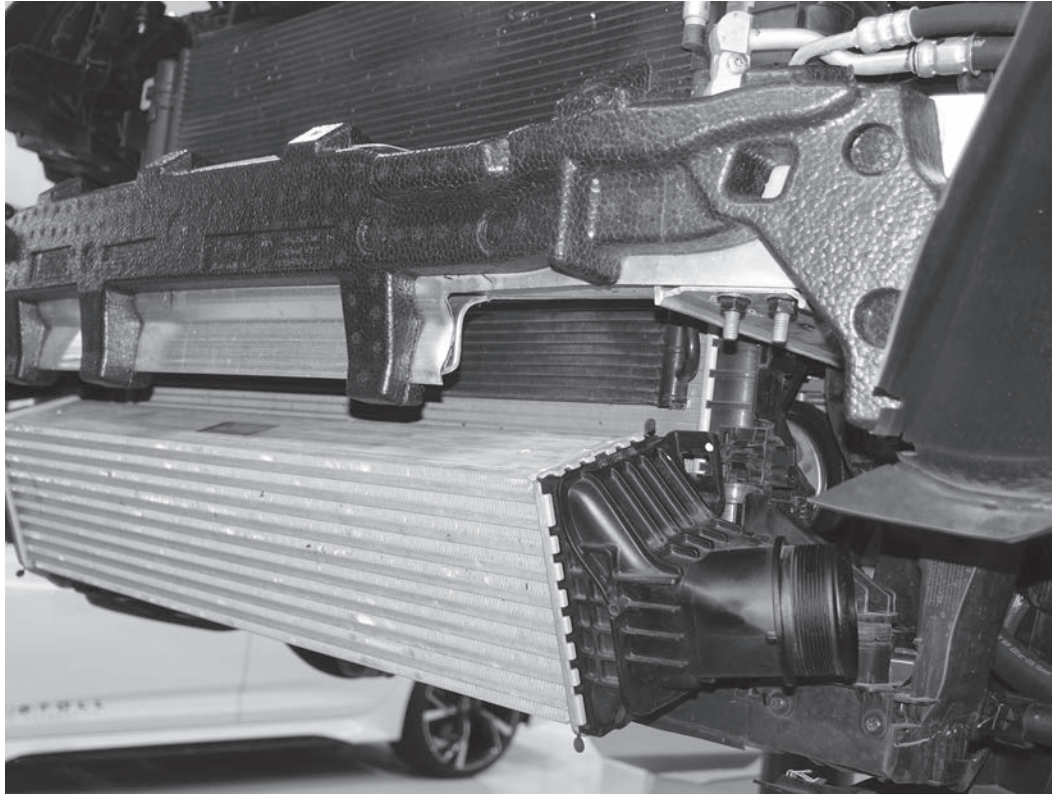


21) Locate where the plastic/rubber radiator air guides mount to the radiator support and unclip them from the radiator support. Remove both right and left air guides from the car.



22) On the top of both sides of the stock intercooler, pinch the retaining clips together to release the top of the intercooler from the radiator support.





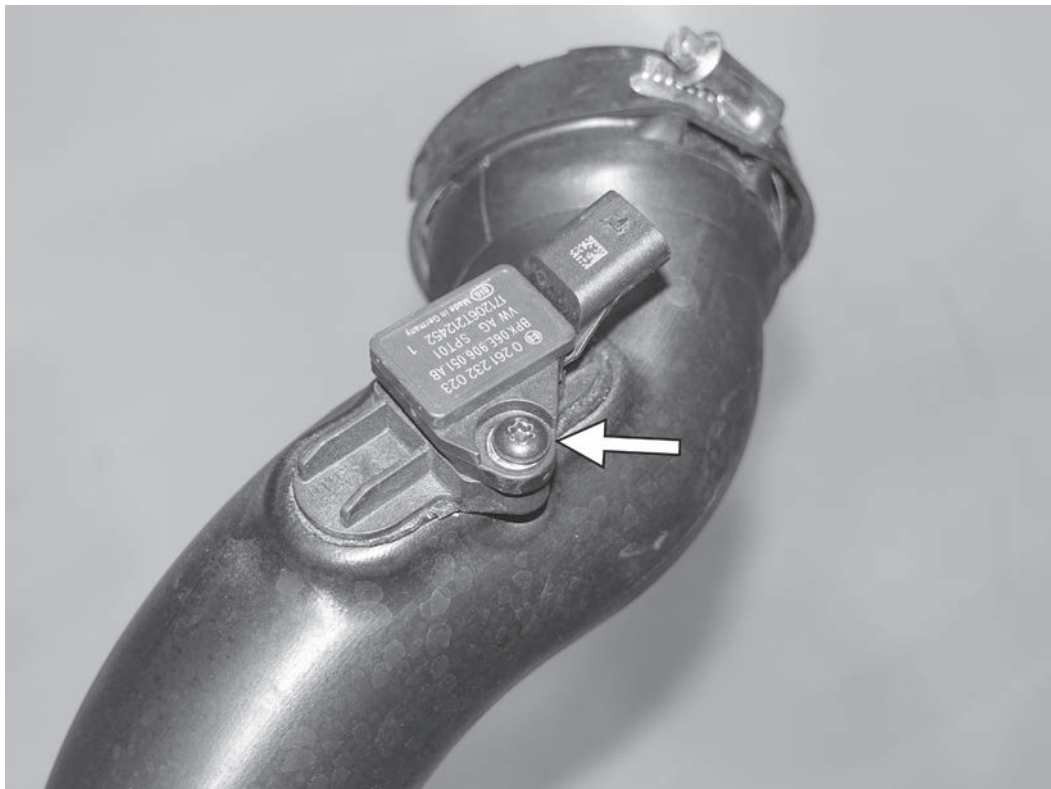
23) With the top of the stock intercooler tilted forward, lift up on both sides of the intercooler and remove the stock intercooler from the car.

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24) Loosely assemble the shown hose assembly using the APR MAP housing, APR hose Z1003201, APR hose Z1003202, and two 3" (-0300) hose clamps.



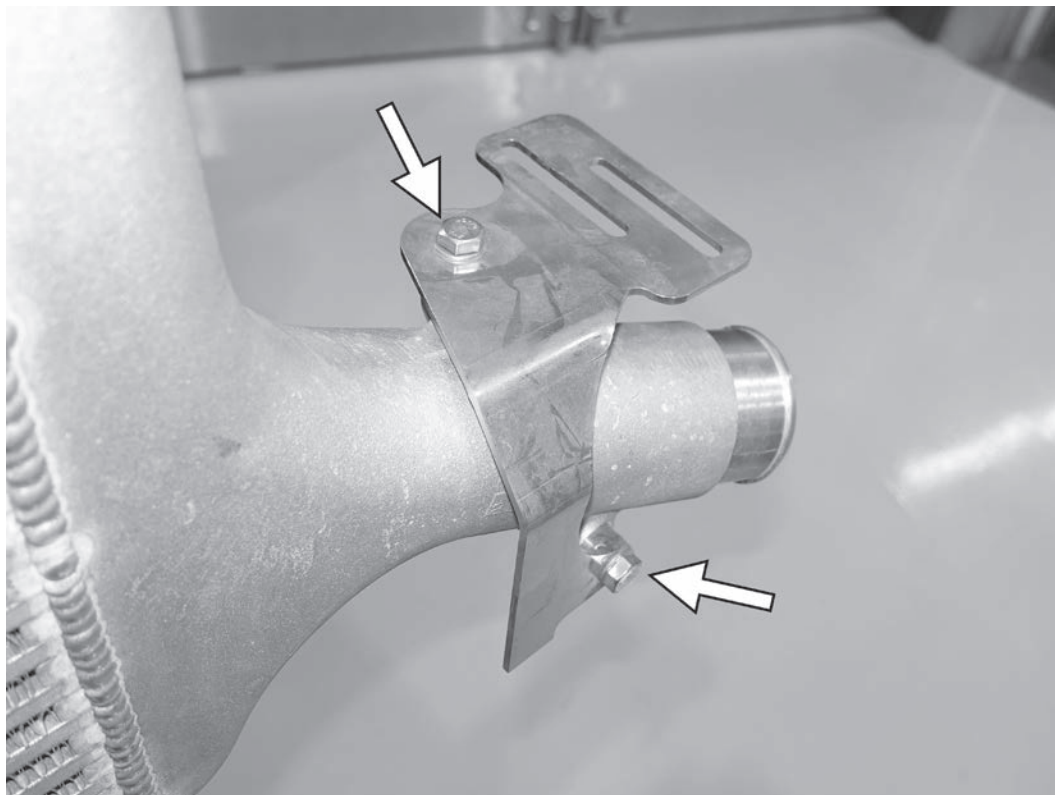
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25) From the previously removed tube that was connected to the throttle body, remove the T20 screw on the MAP sensor. Note the orientation of the sensor, and then remove the sensor from the tube. In this case, the electrical connector of the sensor is facing the throttle body.

26) Install the sensor into the APR MAP housing in the same orientation as it was on the factory tube, with the electrical connector of the sensor facing the throttle body. Secure with the supplied 4mm allen screw.

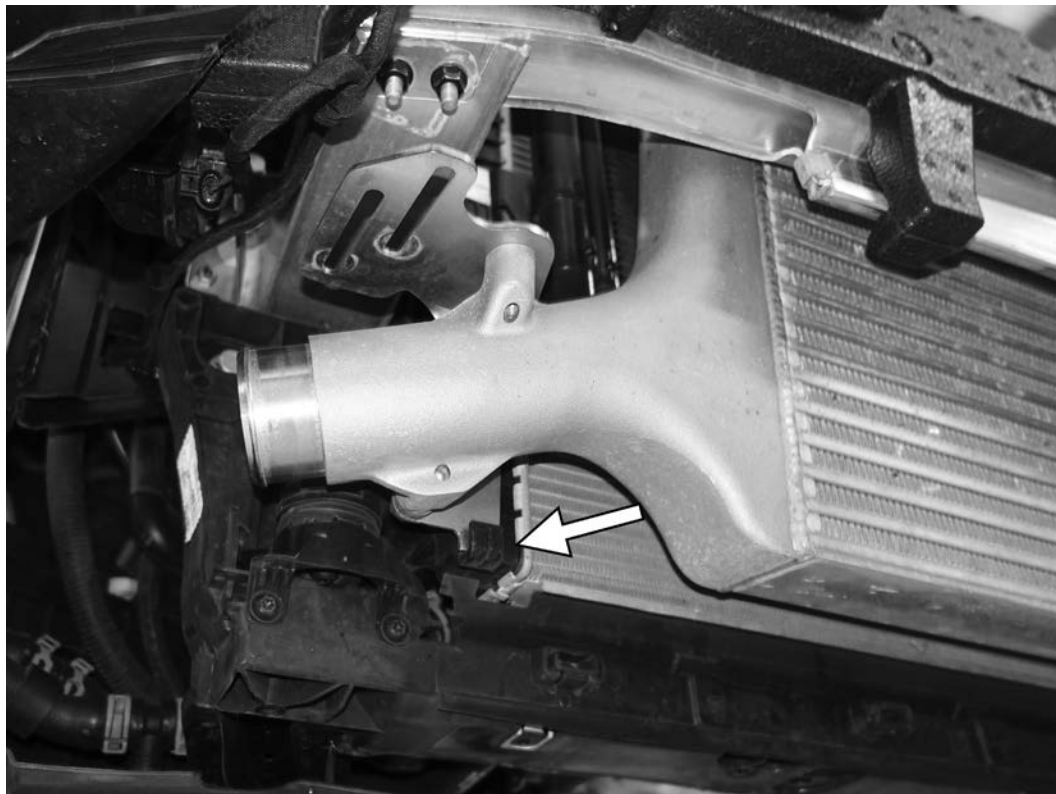


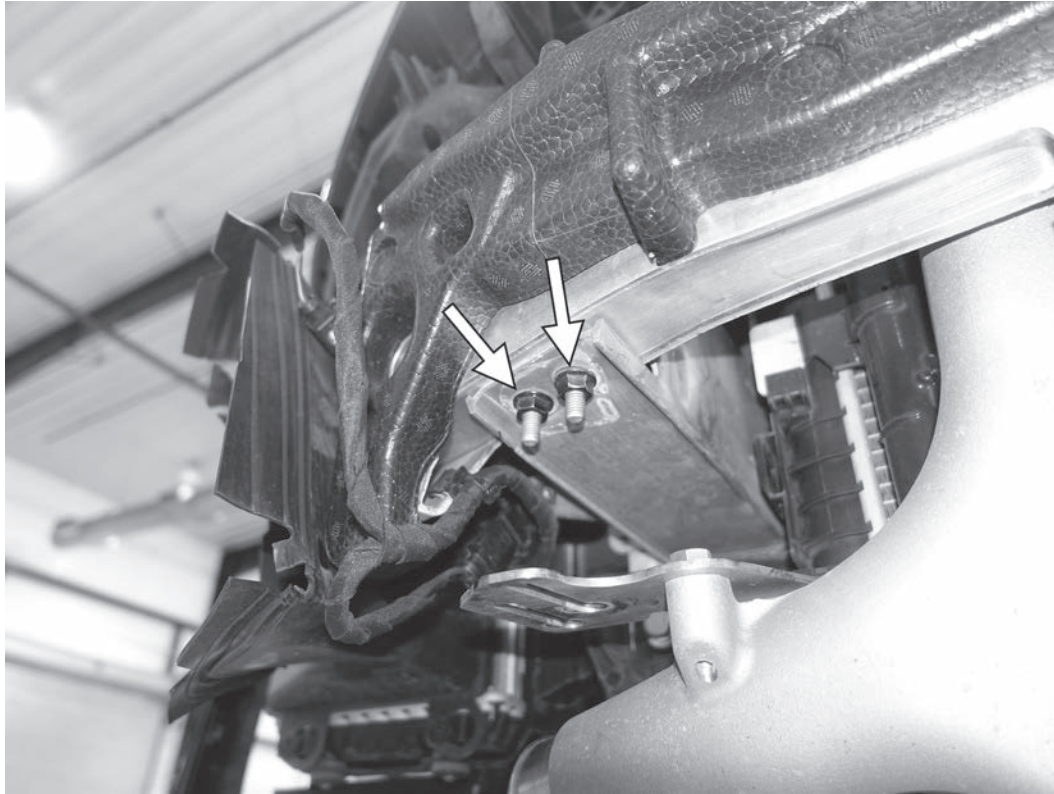


27) Install the two APR lower brackets to the APR intercooler as shown. Use the longer two of the four supplied 13mm screws with a washer in the two lower mounting holes, and use the two shorter 13mm screws in the upper holes. The other side is the mirror of the side shown.

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28) Place the intercooler in the car, sliding it up between the condenser and the front crash beam. Place the bottom of both APR brackets into the tabs that held the lower side of the stock intercooler.

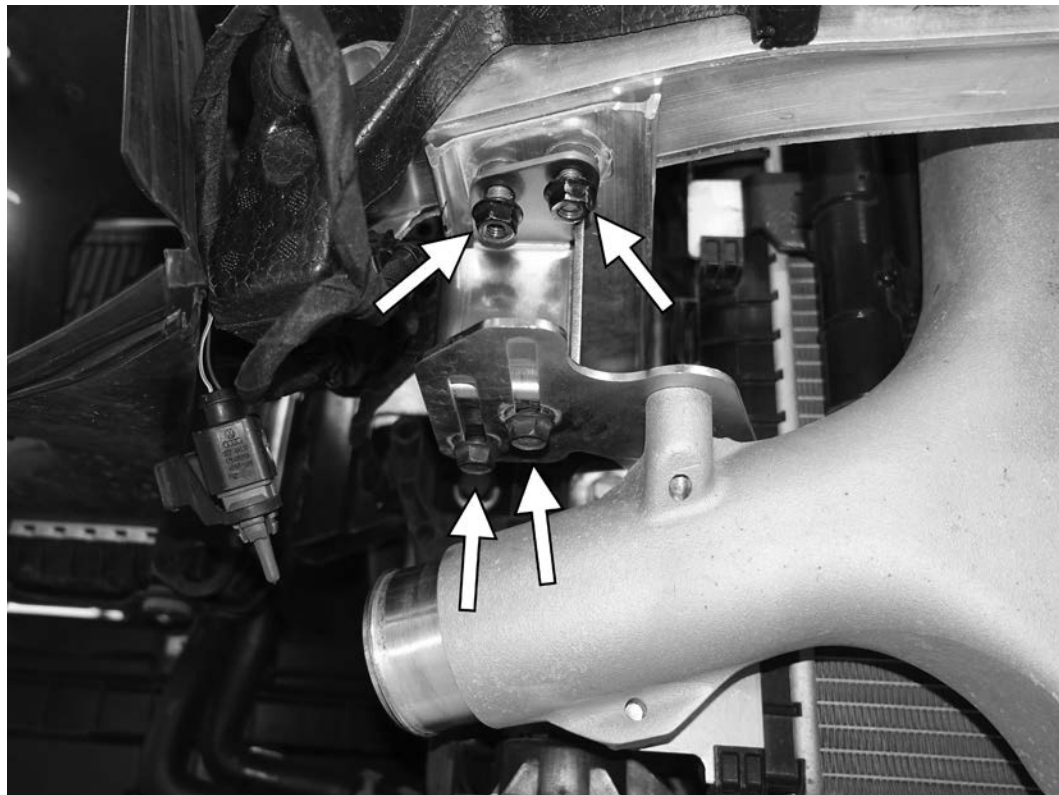


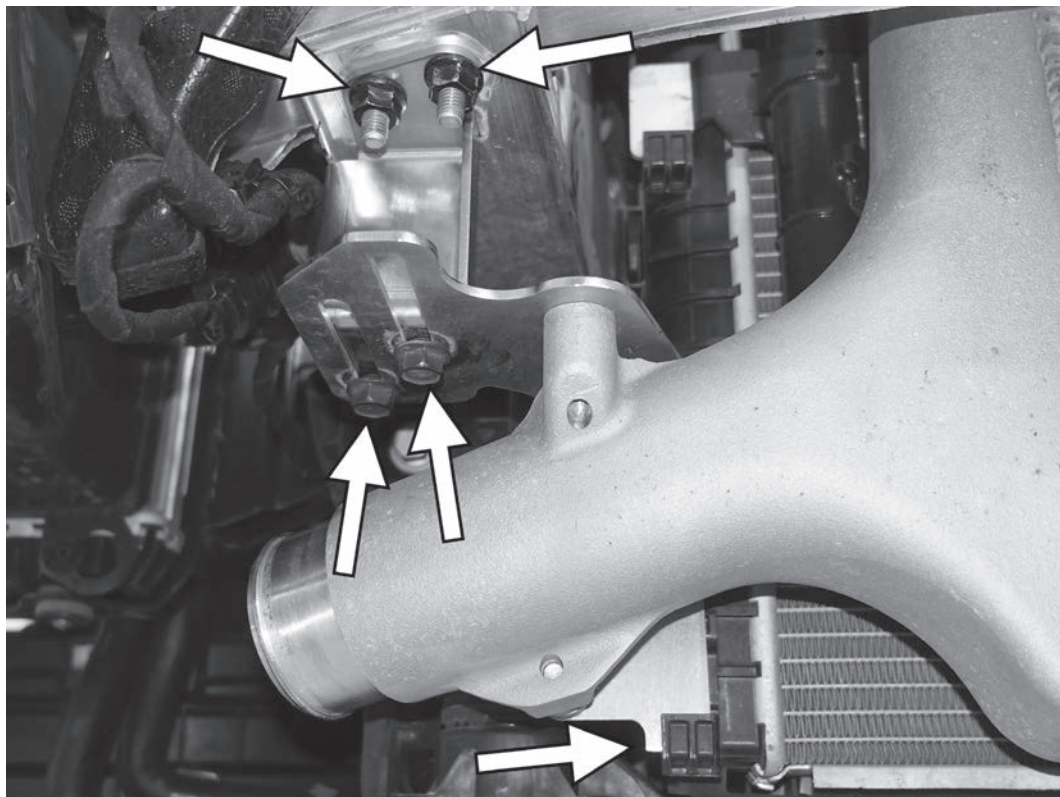


29) Remove the four (two on each side) 13mm nuts holding the crash beam bolts in place. It is not necessary to remove the bolts, but the bolts will have to be counterheld while removing the nuts.



30) Loosely install the APR upper intercooler brackets as shown. Use the original 13mm nuts to hold the top side of the bracket to the bottom of the crash bolts. Install the four supplied 13mm nuts to connect the lower intercooler brackets to the upper intercooler brackets.

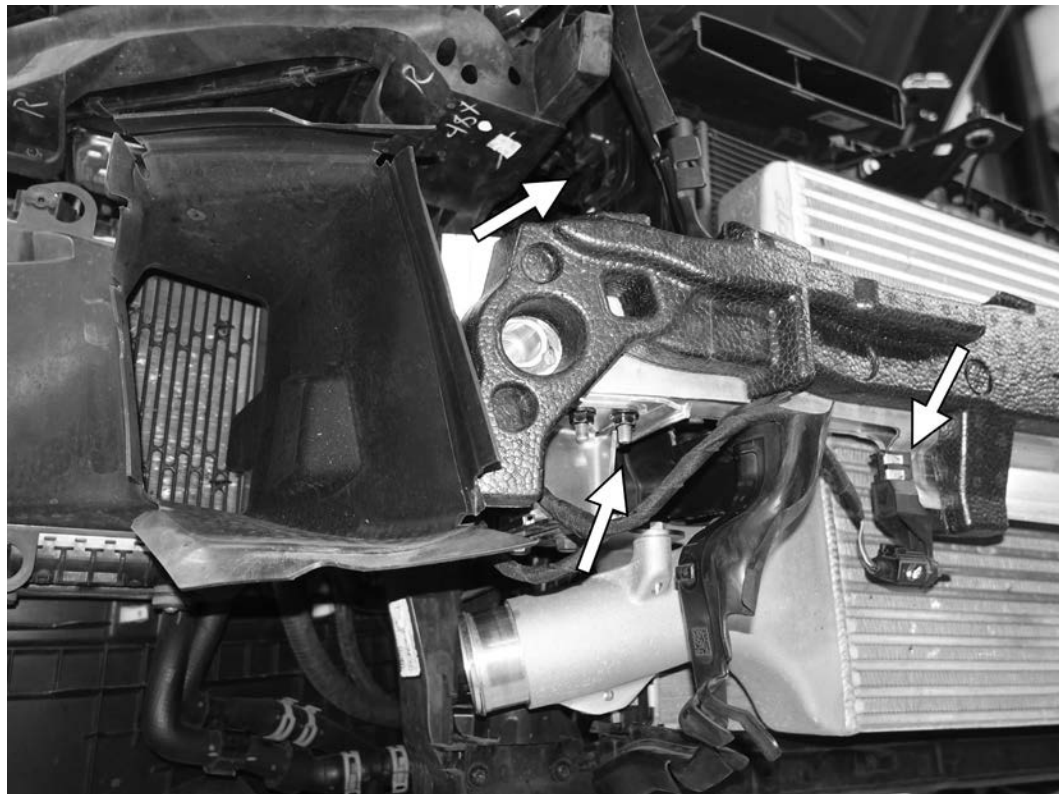


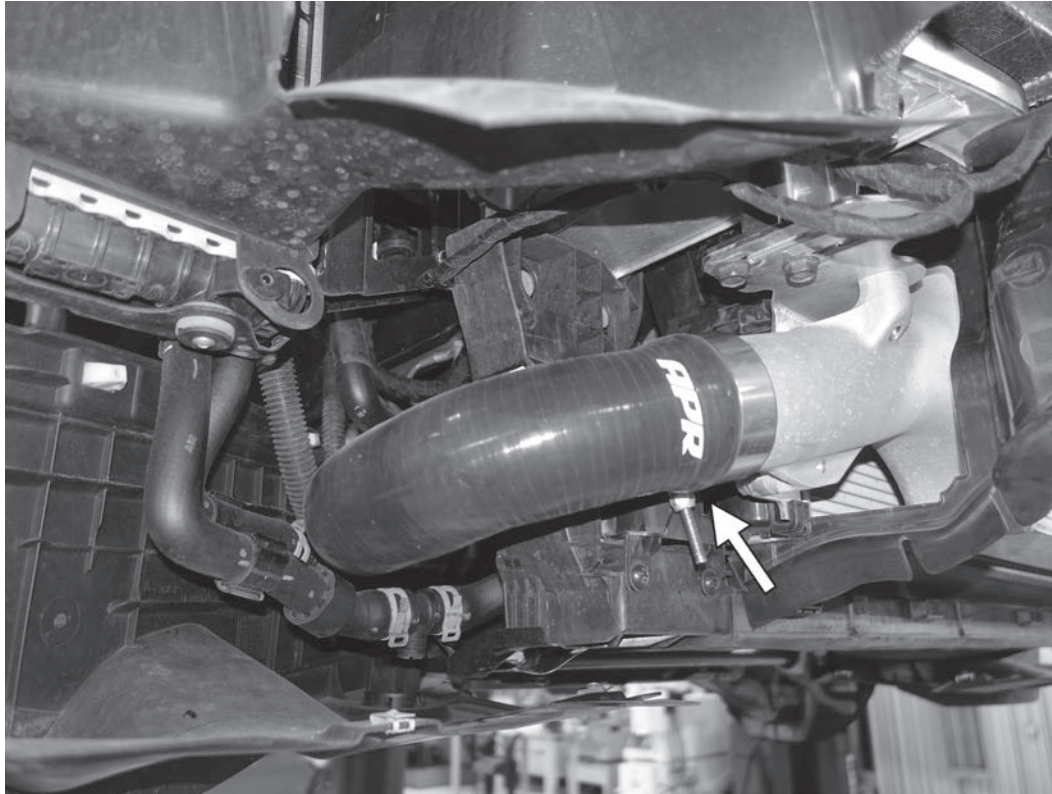


31) Ensure the APR intercooler is centered in the car by making sure the lower side of the intercooler brackets sit evenly in the stock lower intercooler mounting tabs. Tighten the lower 13mm bolts between the two APR brackets to 23Nm (17 ft-lbs). Once all four bolts between the APR brackets are tight, secure the factory nuts on the factory crash beam bolts. Tighten these to 23Nm (17 ft-lbs). It will be necessary to counterhold the crash beam bolts.

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32) Reinstall the factory radiator air guides in the car, clipping them back into their original factory mounting locations. Reinstall the bracket with the outside air temperature sensor into its original location on the factory crash beam.



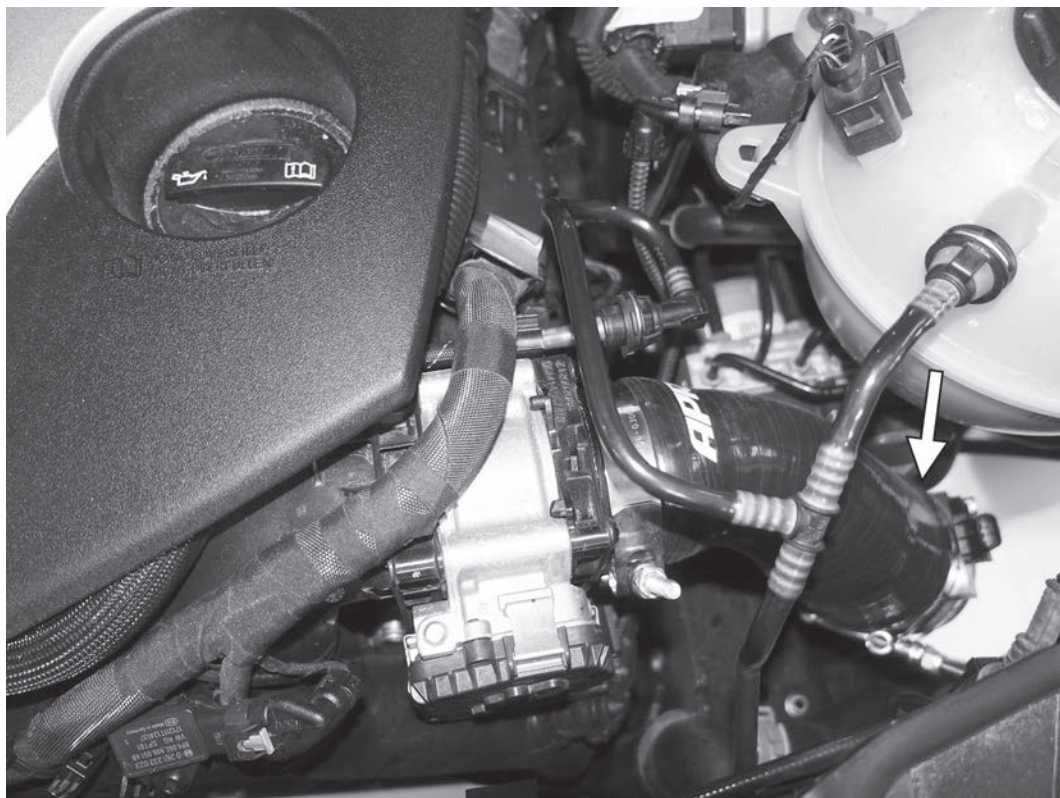


33) Loosely install one of the 2.75" (-0275) clamps to the APR hose where it enters the APR intercooler, and install the hose on the intercooler.

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34) Loosely install one of the 3" (-0300) clamps the other end of the APR intercooler inlet hose, and attach the hose to the front of the engine. Once the hose is fully fitted in the car, tighten both hose clamps on the intercooler inlet hose to 50 in-lbs (5.7Nm). Do NOT overtighten the hose clamps.

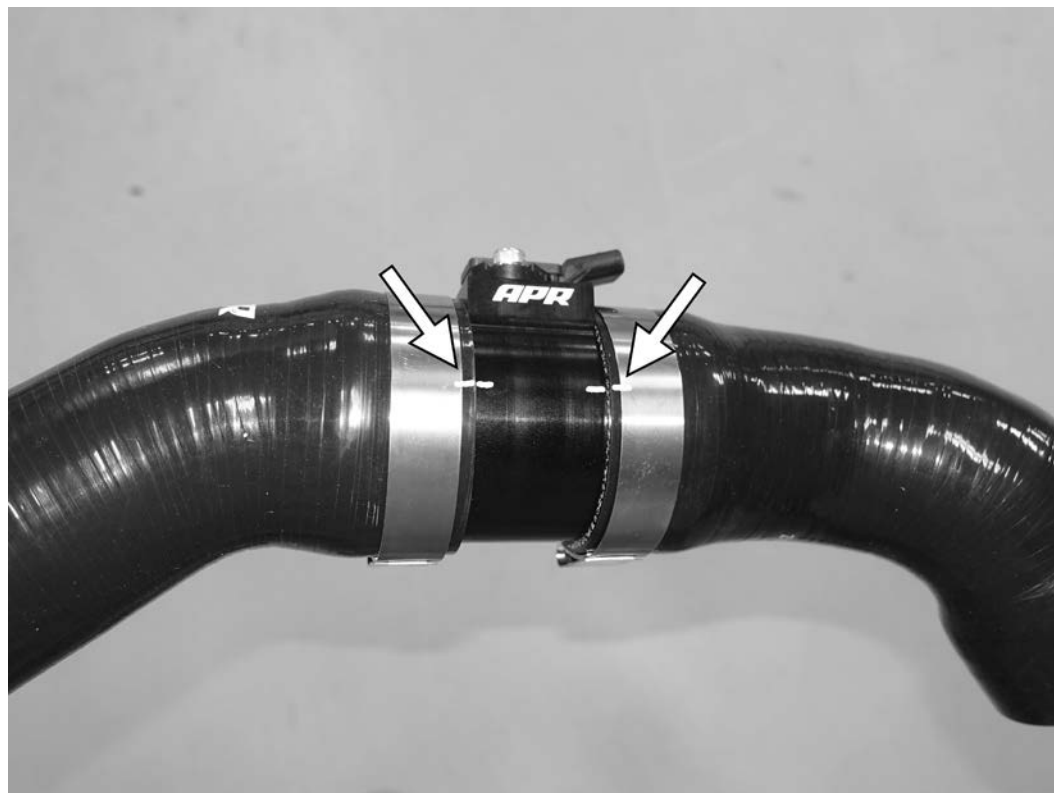




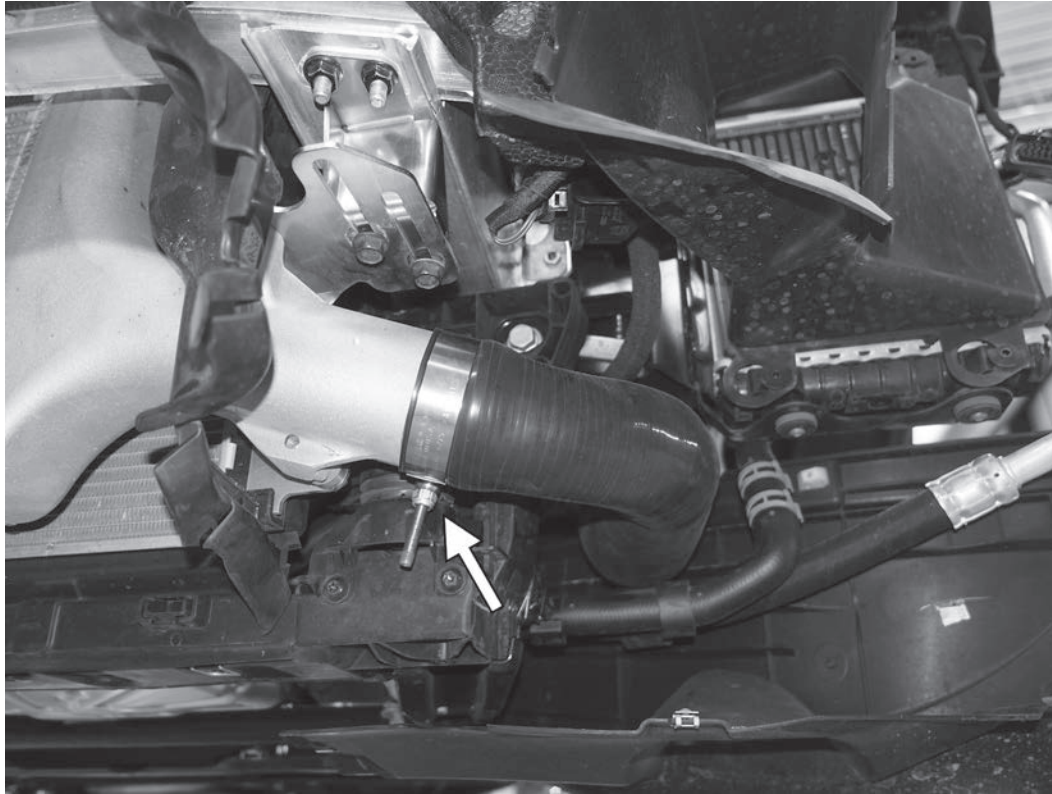
35) Install the previously made hose assembly with the APR MAP housing in the car where the factory inter-cooler outlet tube was. Be careful not to damage the MAP sensor when installing the hose assembly. Make sure both sides of the assembly are correctly attached to both the inter-cooler outlet and the throttle body. Rotate the APR MAP housing in the assemble so the MAP sensor is not hitting anything, and the wiring harness can reach the sensor. Once oriented correctly, mark on the MAP housing between both the upper and lower hoses to denote the orientation.

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36) Remove the MAP sensor hose assembly. With the MAP sensor marked as it was in the car tighten the two hose clamps on the MAP sensor housing to 50 in-lbs (5.7Nm).



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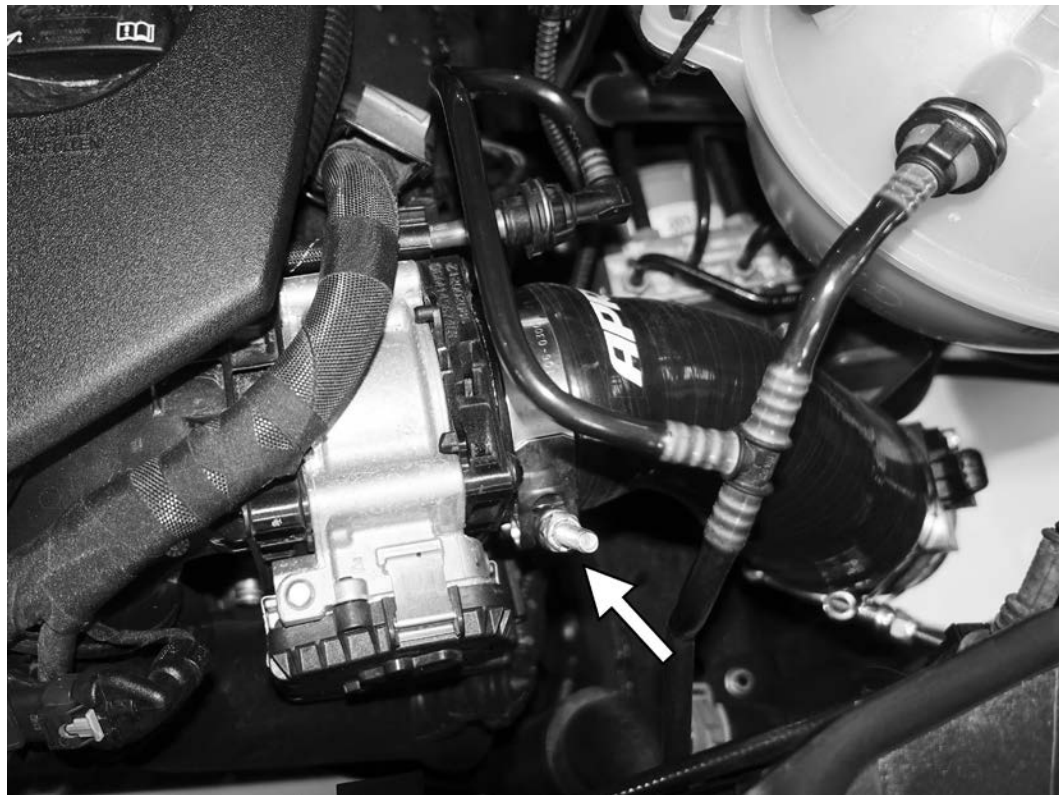


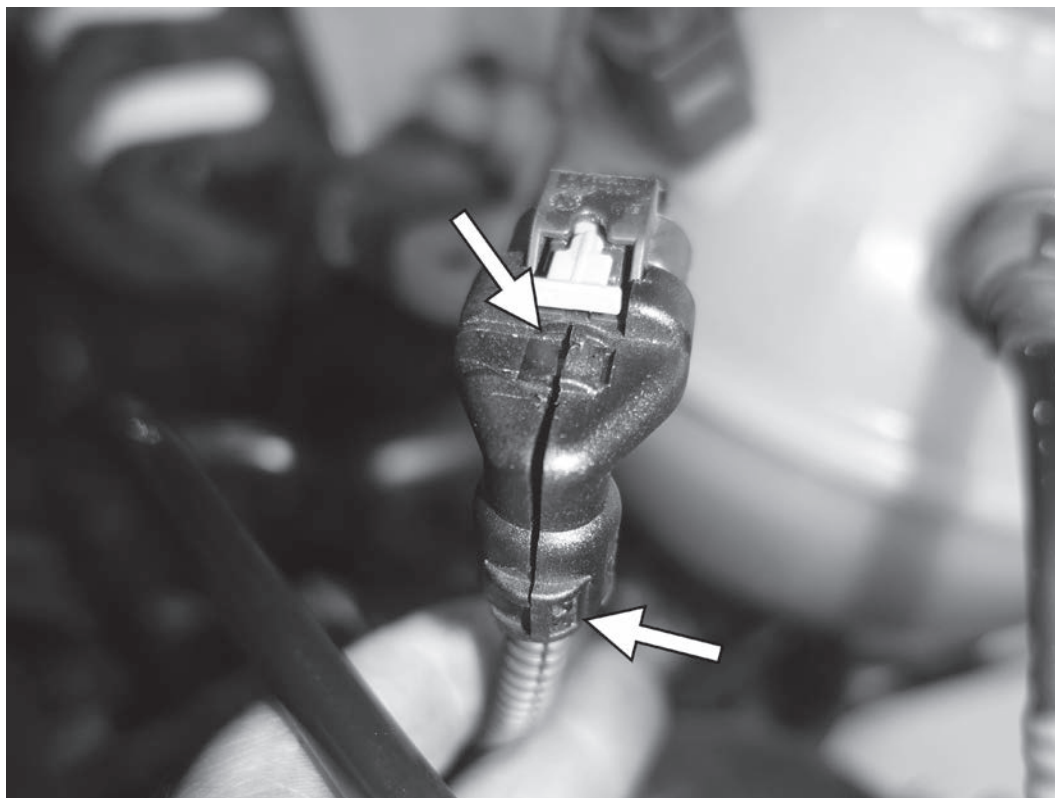
37) Place the APR hose assembly back into the car. Connect the lower side of the hose to the APR inter-cooler outlet and loosely secure with one of the 2.75" (-0275) clamps.

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38) With the remaining 3" (-0300) hose clamp, connect the upper side of the APR hose assembly to the throttle body. Ensure that the hose clamps on both ends of the assembly, as well as the ones on the MAP sensor housing are accessible and not contacting anything. Once the hose assembly is sitting correctly in the car, tighten the hose clamps on both ends of the intercooler outlet hose assembly to 50 in-lbs (5.7Nm). Do NOT overtighten the hose clamps.





39) On the wiring harness to the MAP sensor, use a small screwdriver to pry off the 90° connector housing at the two locations shown. This housing will not be reused. Reconnect the wiring harness to the MAP sensor, and push in the locking tab to secure the electrical connector.

40) Place the bumper cover back on the car the same way it was removed.



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41) Place the both sides of the bumper cover back onto the mounting brackets located on each of the front fenders. Secure the sides by pressing the bumper cover into the mounting brackets.

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42) Reinstall the two T25 screws that hold the top corners of the grille to the radiator support.



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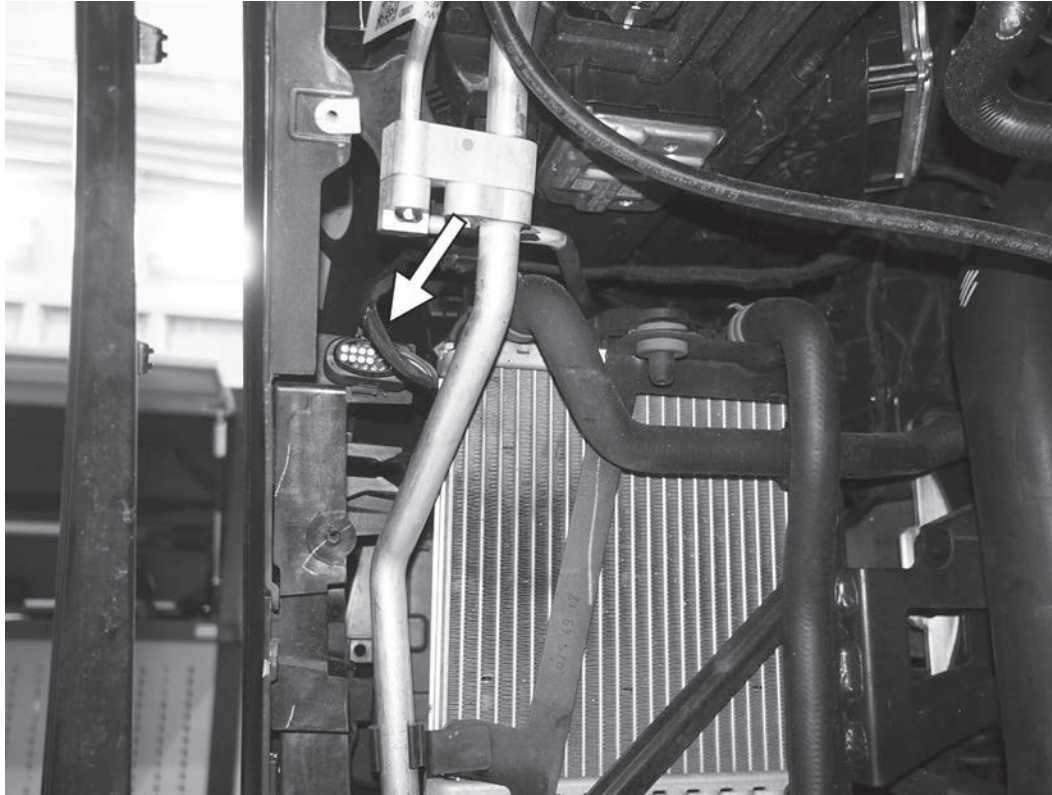


43) Replace the cover that connects the top of the bumper cover to the radiator support. Slide the back of the cover into the slot on the radiator support, and then press the front of the cover back into the tabs on the top of the bumper cover.

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44) Replace the handle for the hood latch. The latch is keyed on the ribbed post so it can only attach one way. Ensure the latch is secure to the post and will not come off, and also ensure the hood latch is properly working.





45) On the front side of the left wheel well, reconnect the electrical connector to the front bumper cover.

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46) Reinstall the push pin connector and the T25 screw that secure the front fender to the sides of the front bumper cover. Tighten the screw to 2Nm (18 in-lbs).

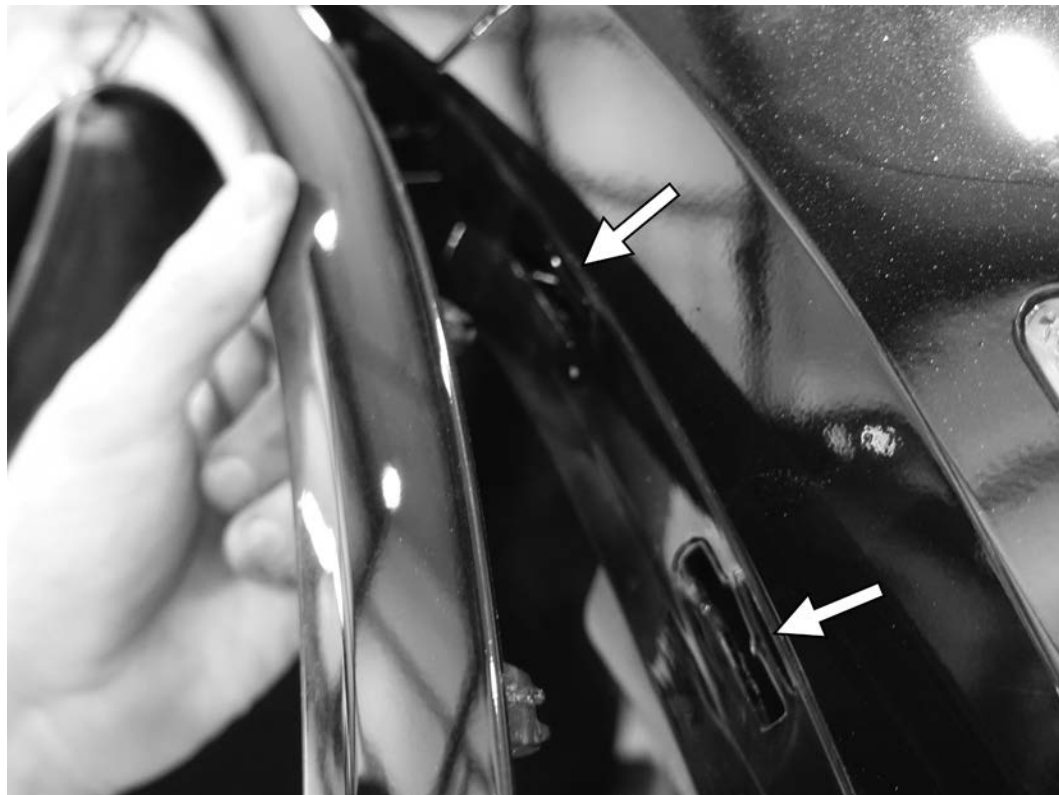


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47) Reinstall the three T25 screws that were under the fender trim cover. Tighten the screws to 2Nm (18 in-lbs).

48) Reattach the fender cover trim to the front fender and the front bumper cover by pressing the trim in place.



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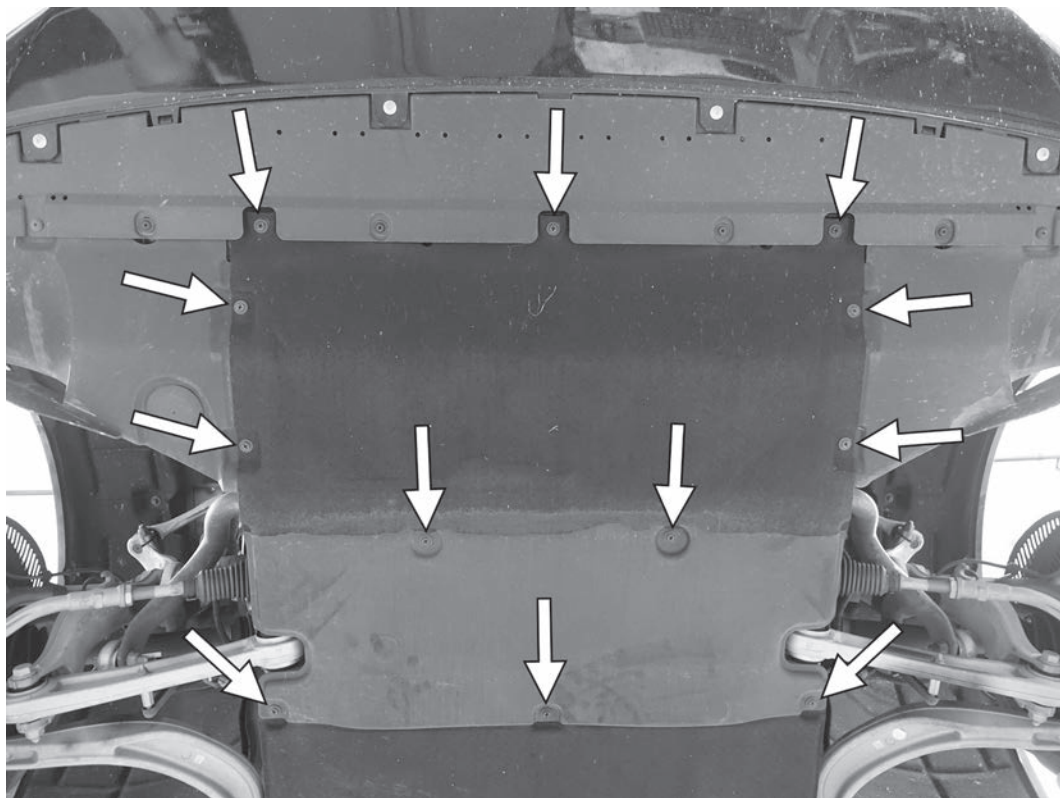
49) Place the wheel well liners back into their original locations. Reinstall the six T25 fasteners, four 10mm fasteners, and two push-pin style fasteners. Repeat the previous steps on the other side of the car.

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50) From the bottom of the front bumper cover, reinstall the four T30 screws along the front, the four T25 screws to the bottom of the wheel liners, and the two T20 screws on the bottom of the fender trim covers.



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51) Reinstall the center belly pan to the bottom of the car, attaching the front side to the bottom of the bumper cover as it was when it was removed. Secure it with the twelve original T25 screws.



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