

#TL100120

INSTALLATION MANUAL

# IC100023

APR B9 S4/S5 Intercooler

**APR**





---

Notes:

These instructions were written for a North American specification B9 Audi S4, but other models, like the S5 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 fastners, 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.



WWW.GOAPR.COM

4800 US HWY 280 West Opelika Alabama 36801

**TL100120**

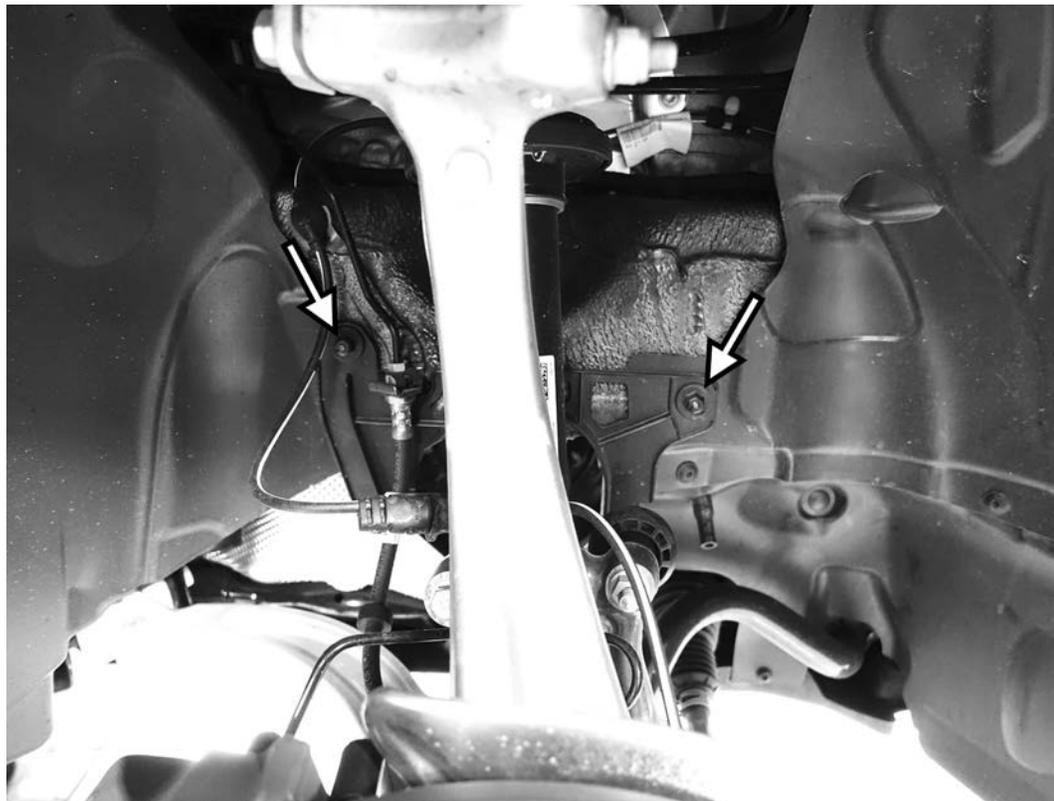
---



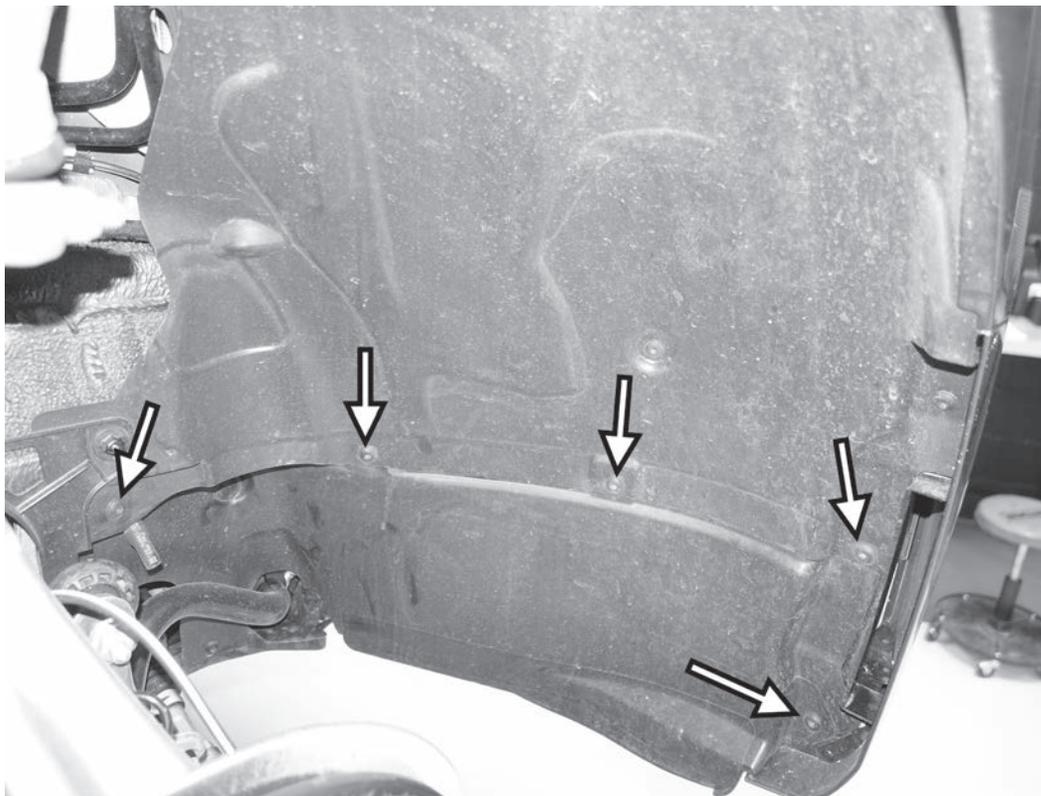
1) Place the vehicle securely on jack stands or on a lift, remove the front wheels, and raise the hood of the vehicle.

**APR**

2) Remove the two 10mm plastic nuts from the plastic axle shield inside the wheel well. Remove the plastic axle shield from the car. Repeat on both sides of the car.



**TL100120**

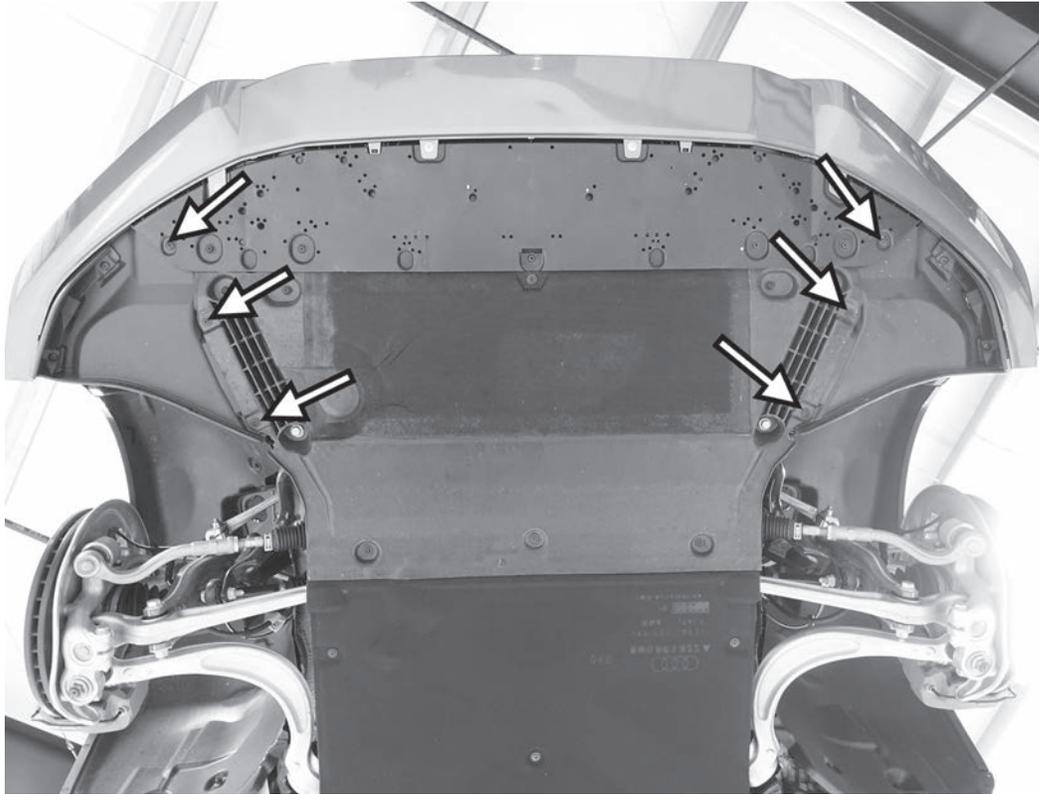


3) On both sides of the car, remove the five T25 screws from the lower section of the wheel well liner.

4) On both sides of the car, remove the T30 plastic screw from the bottom of the wheel well liner. After carefully separating the lower liner from the upper liner, pull the plastic push barb fitting from the upper, inner side of the wheel well liner.

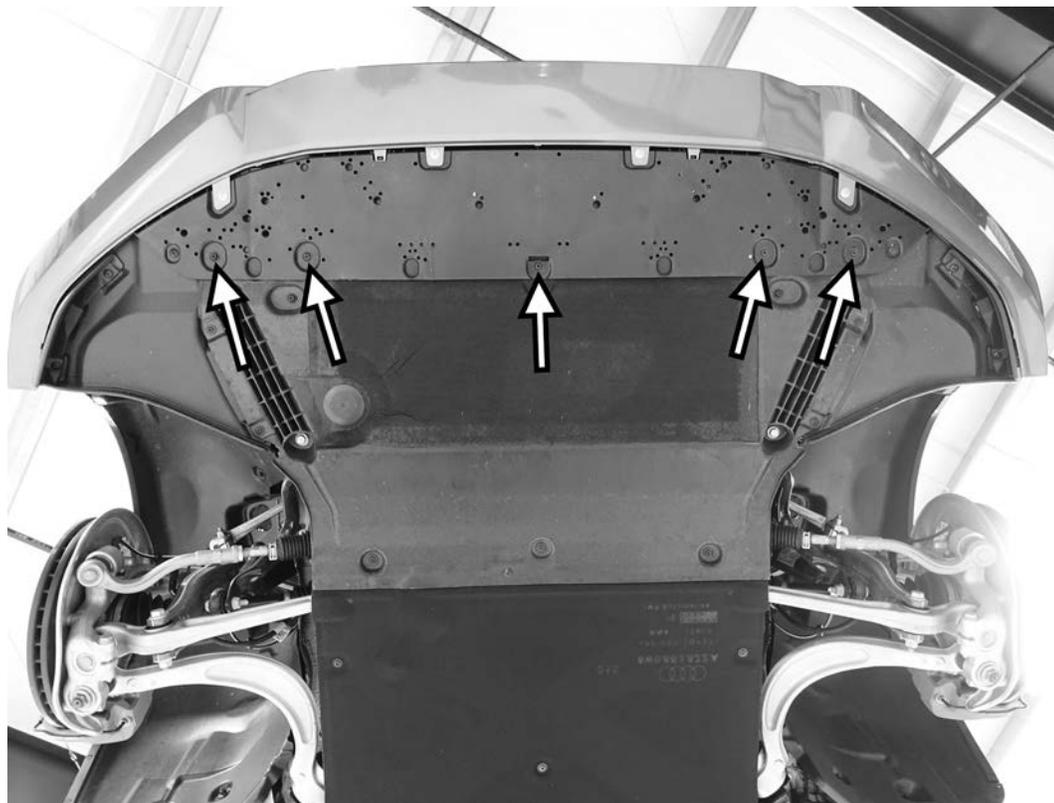


**TL100120**

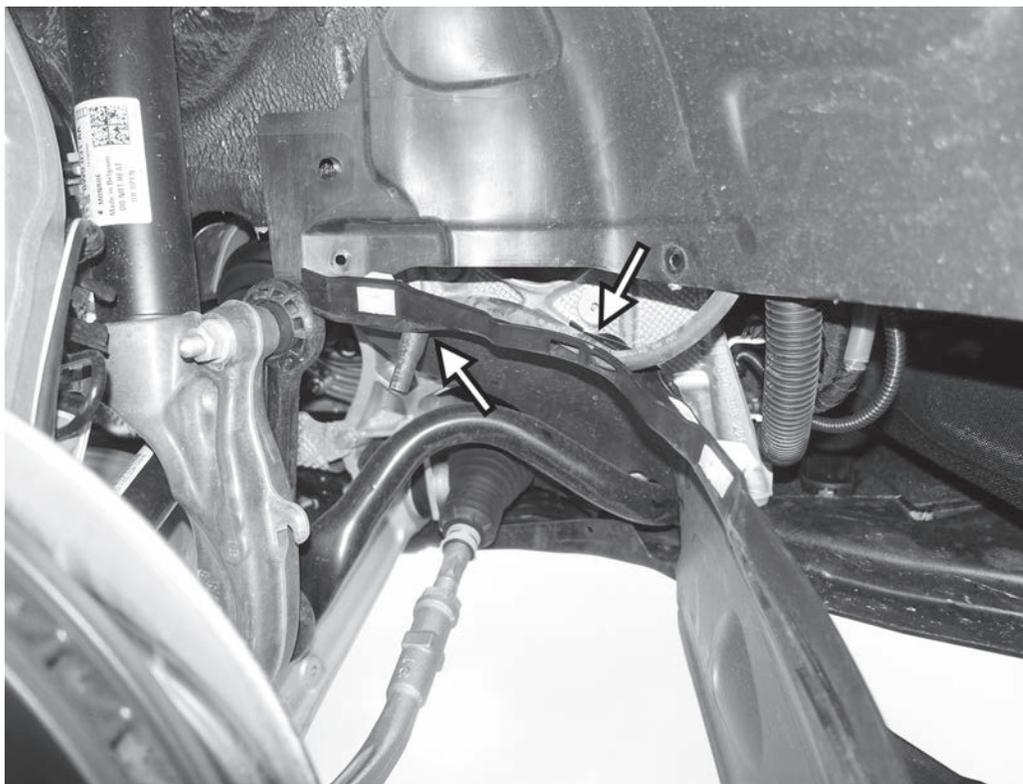


5) Disconnect the four quarter turn T25 screws and two T25 screws holding the lower wheel well liners to the engine belly pan.

6) Remove the five T30 screws that run between the bottom of the front bumper cover and the underbelly pan.

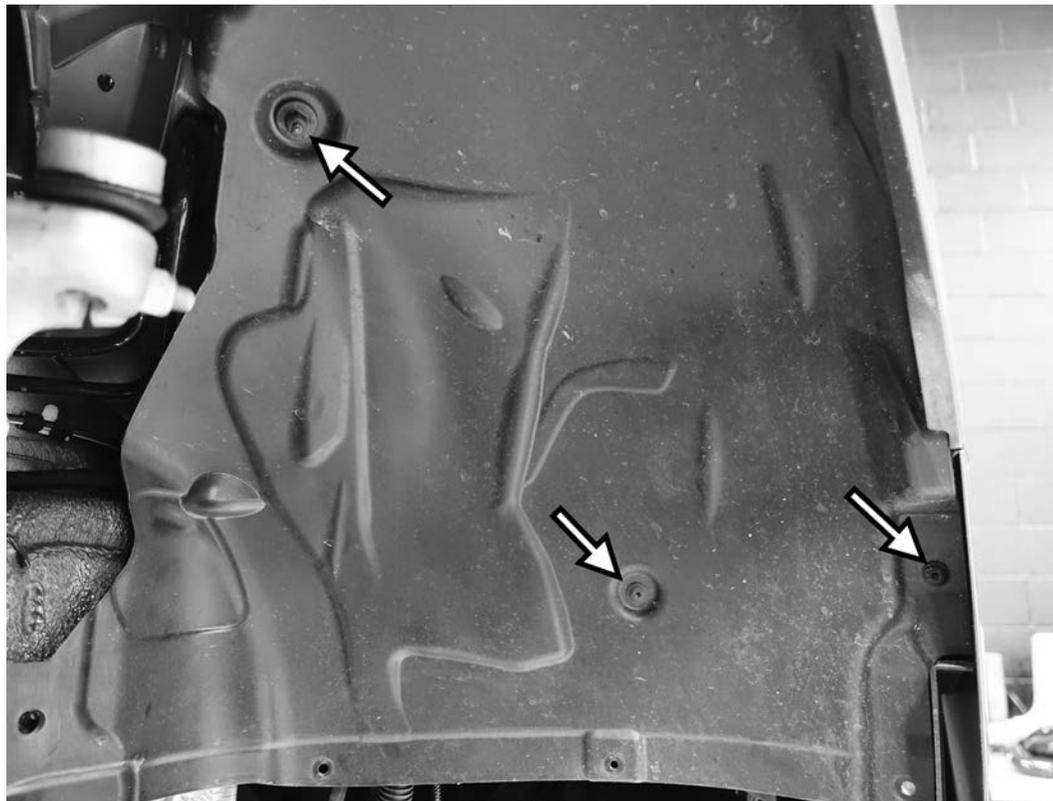


**TL100120**

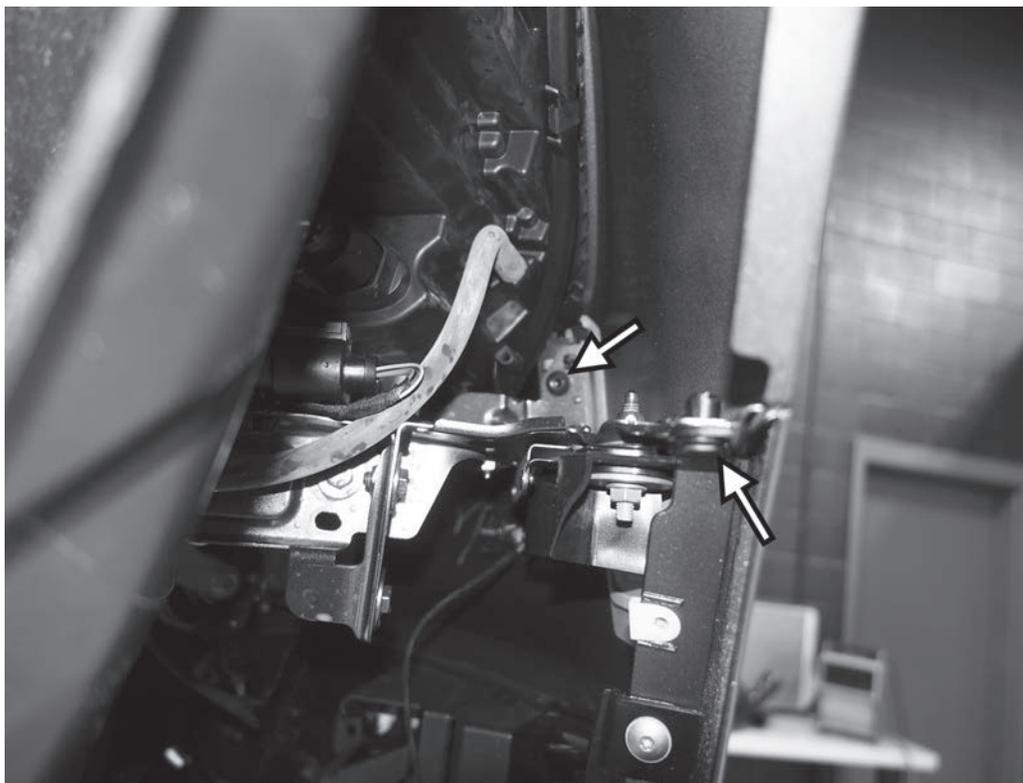


7) On both sides of the car, separate the drain line from the lower wheel well liner and remove the liner from the car.

8) On both sides of the car, remove the two T25 screws and the one 10mm nut from the front of the wheel well liner.



**TL100120**



9) After carefully folding back the front of the wheel well liner, remove the T30 screw holding the front of the fender to the back of the bumper cover. Also remove the plastic push-pin clip from between the fender and bumper cover. Repeat on both front wheel wells.

10) Push in the button on the back of the hood lever, and lift up on the lever to remove from the car.



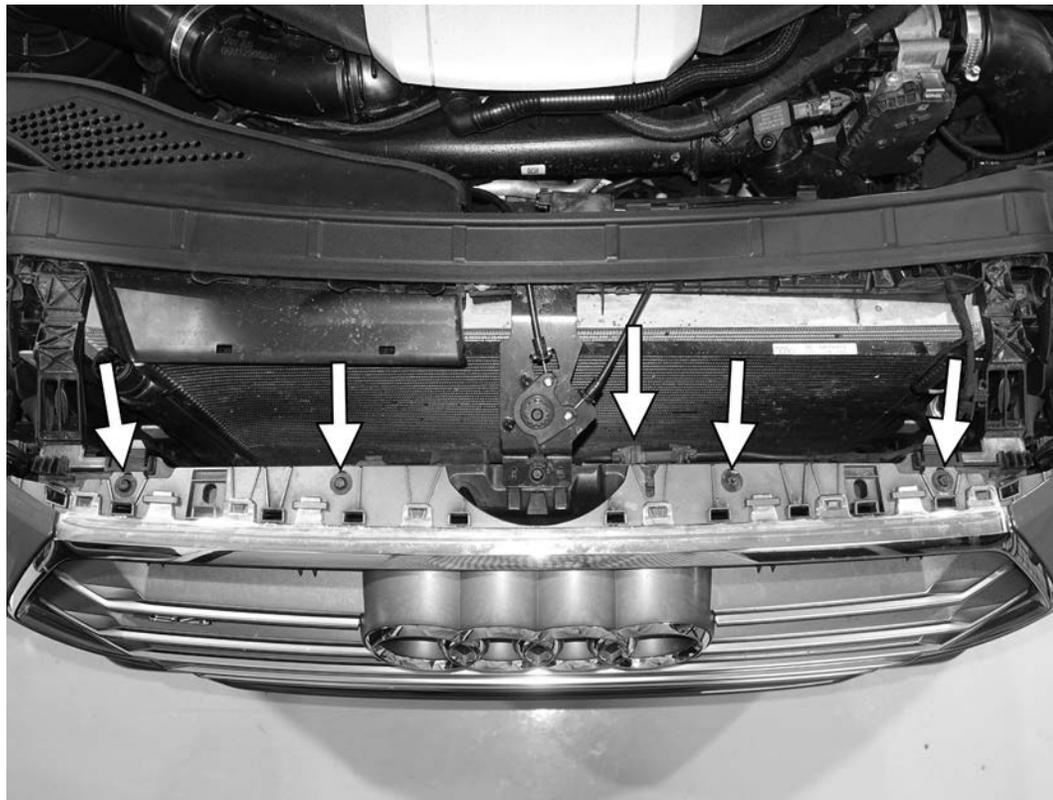
**TL100120**



11) Lift up on the front of the upper bumper cover to separate from the bumper, and then pull forward to remove from the car.

***APR***

12) Remove the four T30 screws holding the top of the front bumper cover to the bumper latch support. Also disconnect the electrical connector that connects to the front camera, if equipped.



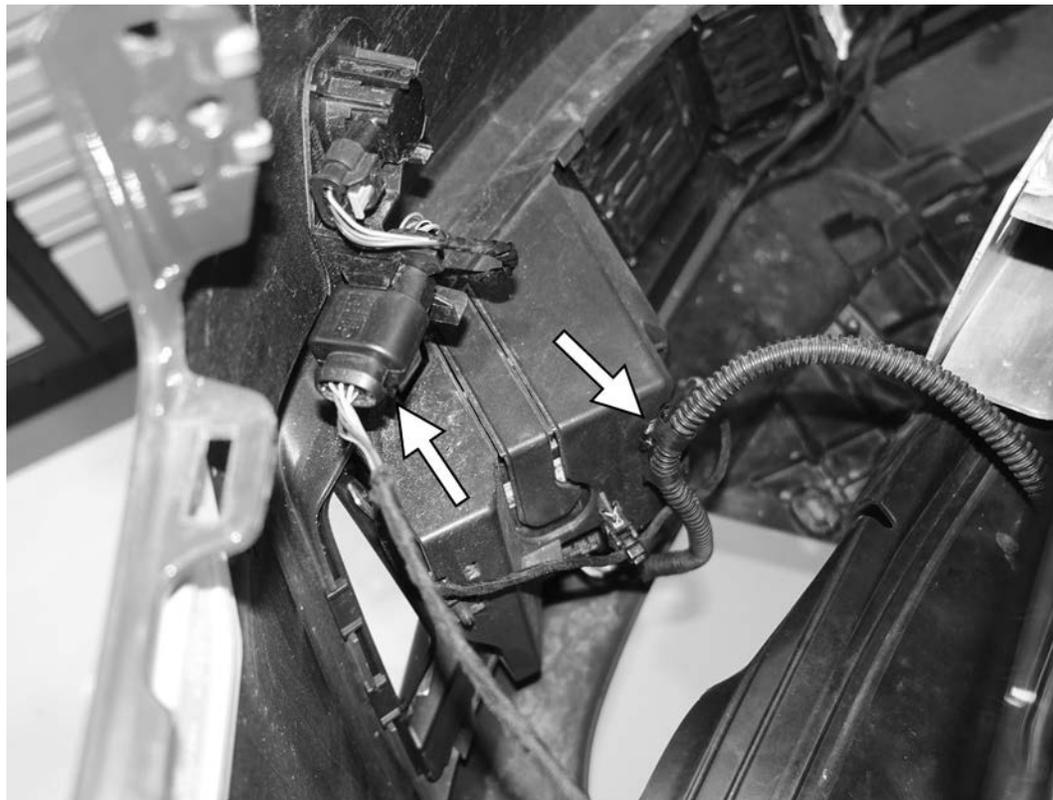
**TL100120**

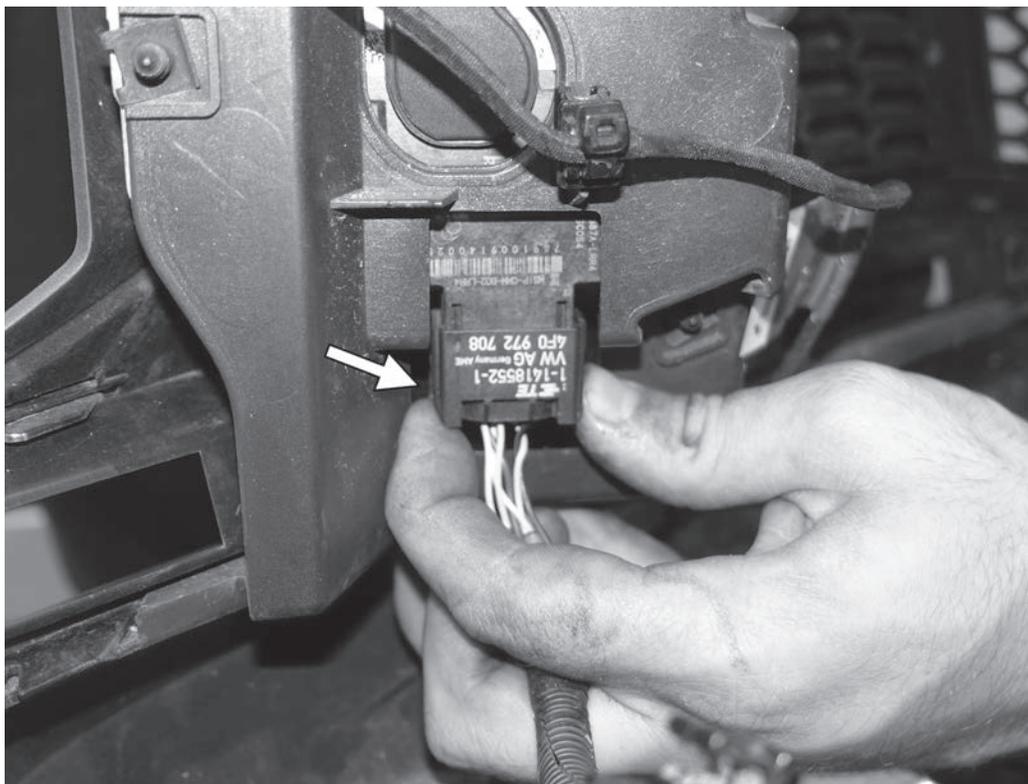


13) Pull both right and left edges of the bumper cover away from the sides of the front fenders.

**APR**

14) With an assistant, lift and pull the bumper cover away from the front of the car. When disconnecting any of the park distance or ACC radar sensors, do NOT turn the ignition on in the car with the sensors disconnected. Disconnect the electrical connectors from the park distance sensors and mounting tabs from the wiring harness to the front bumper.

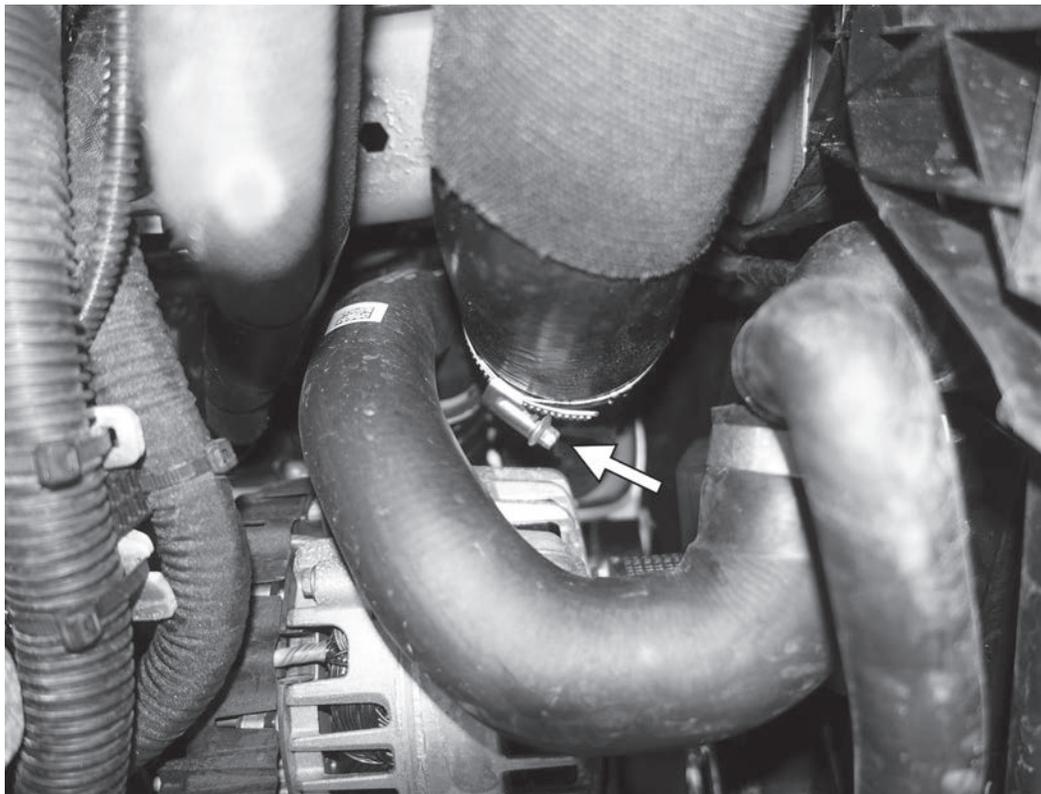




15) Disconnect the electrical connector from both ACC radar sensors. Again, do not turn the ignition on in the car with these sensors unplugged.

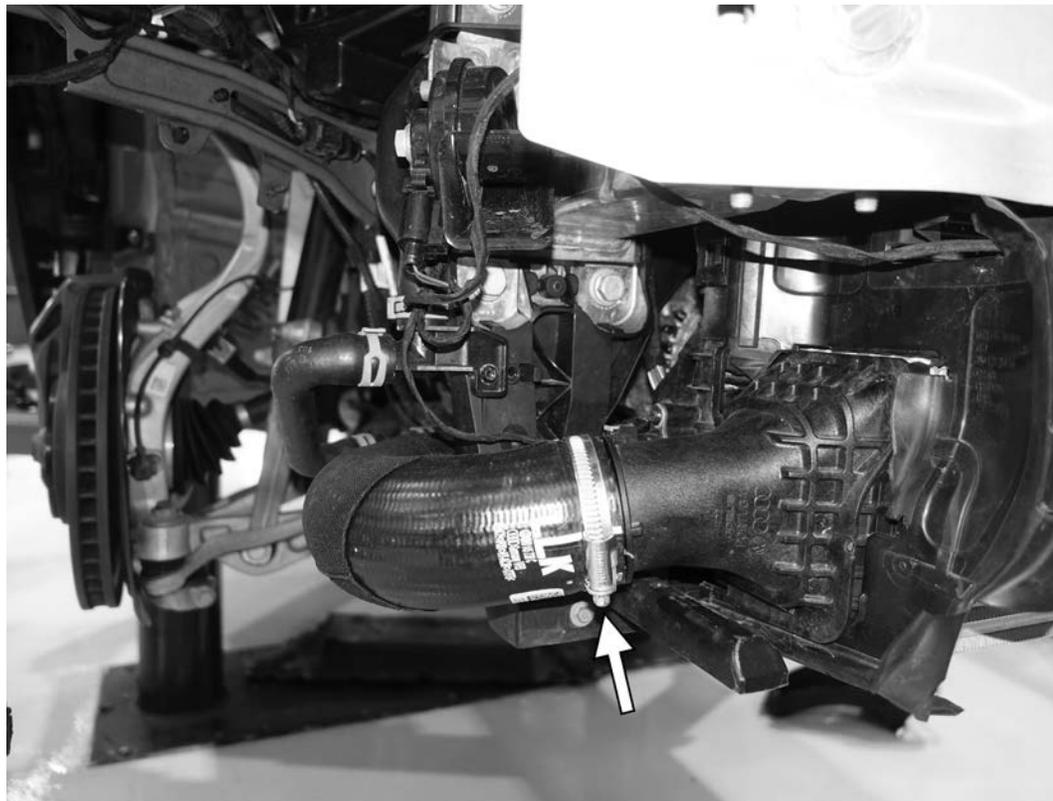
16) Remove the air duct to the left radiator by sliding the air duct slightly to the left, unclipping the shroud from its mounting points.



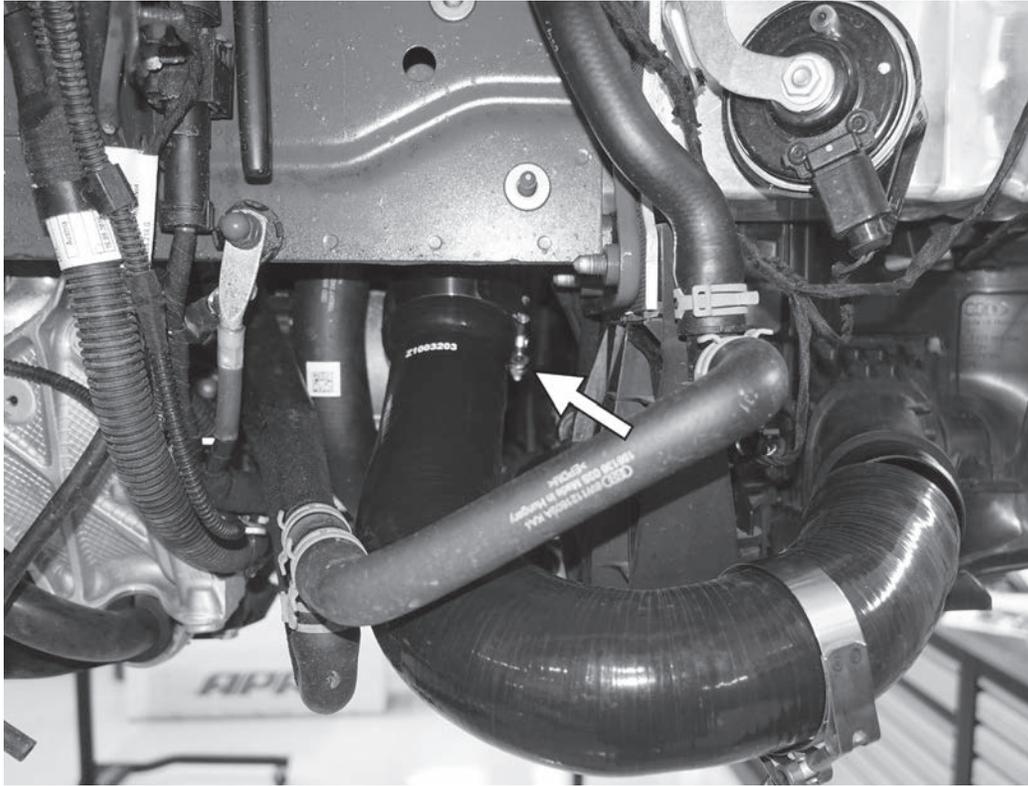


17) Loosen the hose clamp from the stock turbo outlet pipe to the inter-cooler inlet hose.

18) Loosen the hose clamp to the intercooler hose at the inlet of the intercooler, and remove the hose from the car.



**TL100120**



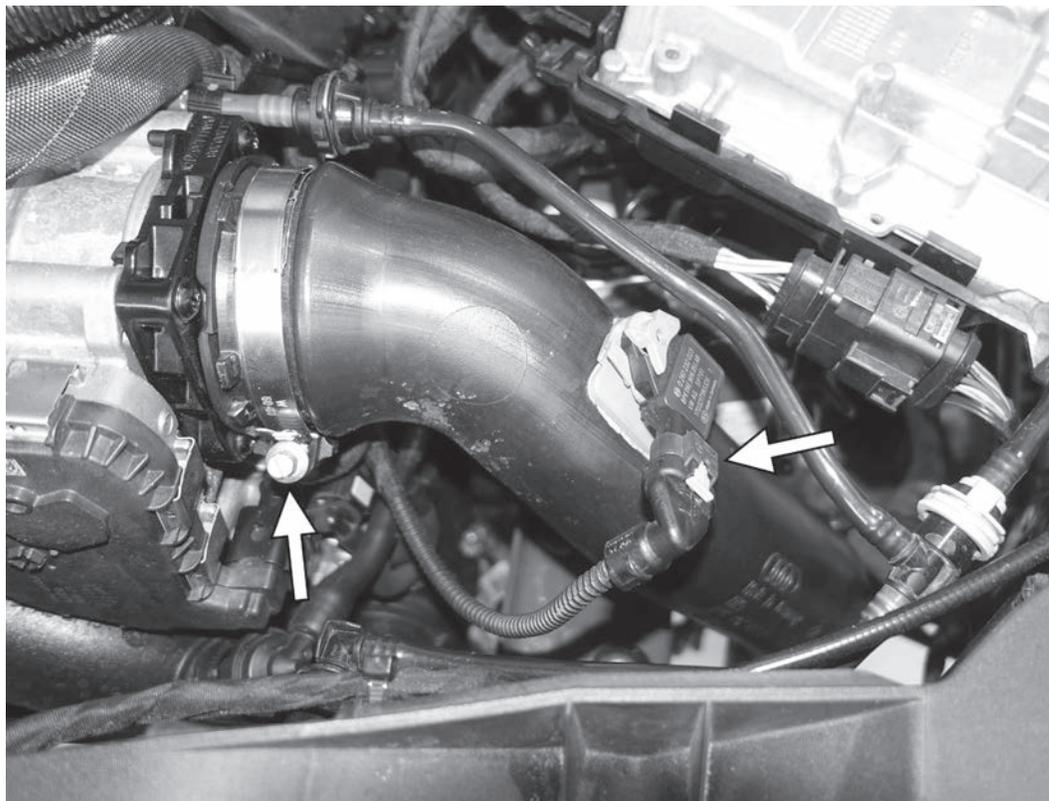
19) Loosely place one of the 3" (-0300) hose clamps on the end of the right APR intercooler hose (Z1003203) and install the hose onto the turbocharger outlet pipe. Do not tighten the clamp yet.

**APR**

20) Loosen the hose clamp from the outlet of the intercooler to the stock inlet pipe and separate the pipe from the intercooler.



**TL100120**



21) Loosen the hose clamp from the stock inlet pipe to the throttle body. Disconnect the electrical connector to the MAP sensor mounted in the stock inlet pipe. Remove the inter-cooler to throttle body hose from the car by carefully pulling the hose down and out from the bottom side of the car.

22) Remove the stock MAP sensor from the inlet pipe by rotating the sensor counterclockwise a quarter turn and then pulling the sensor out of the pipe.

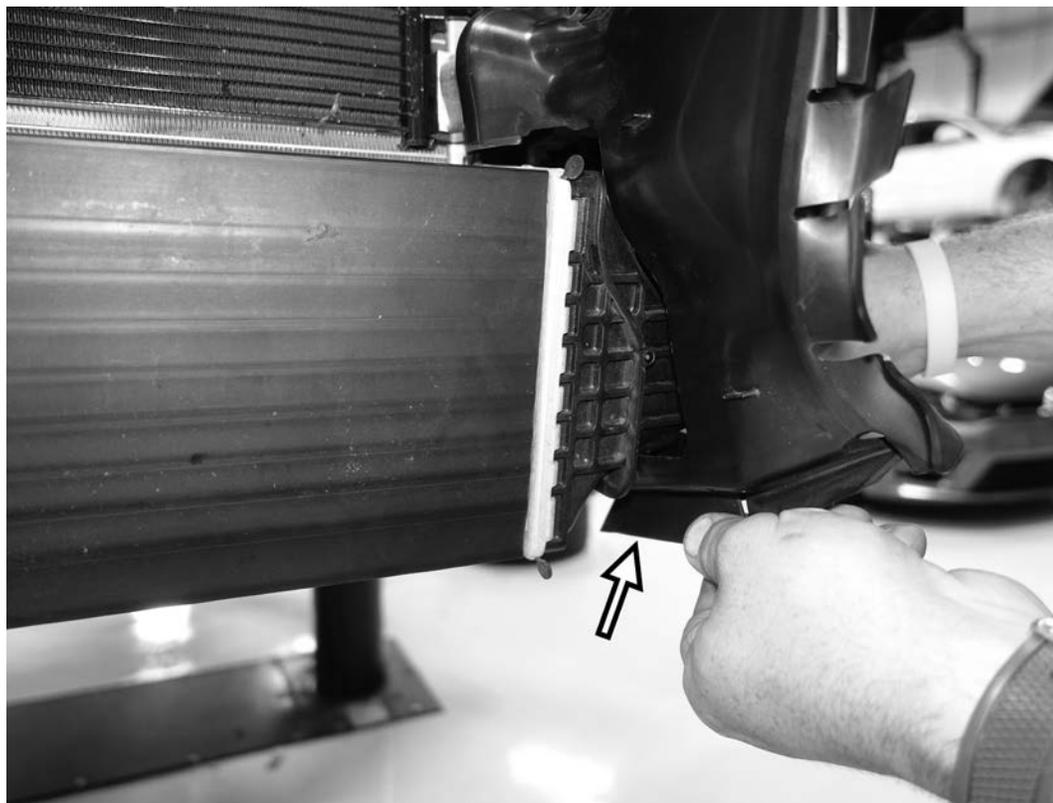




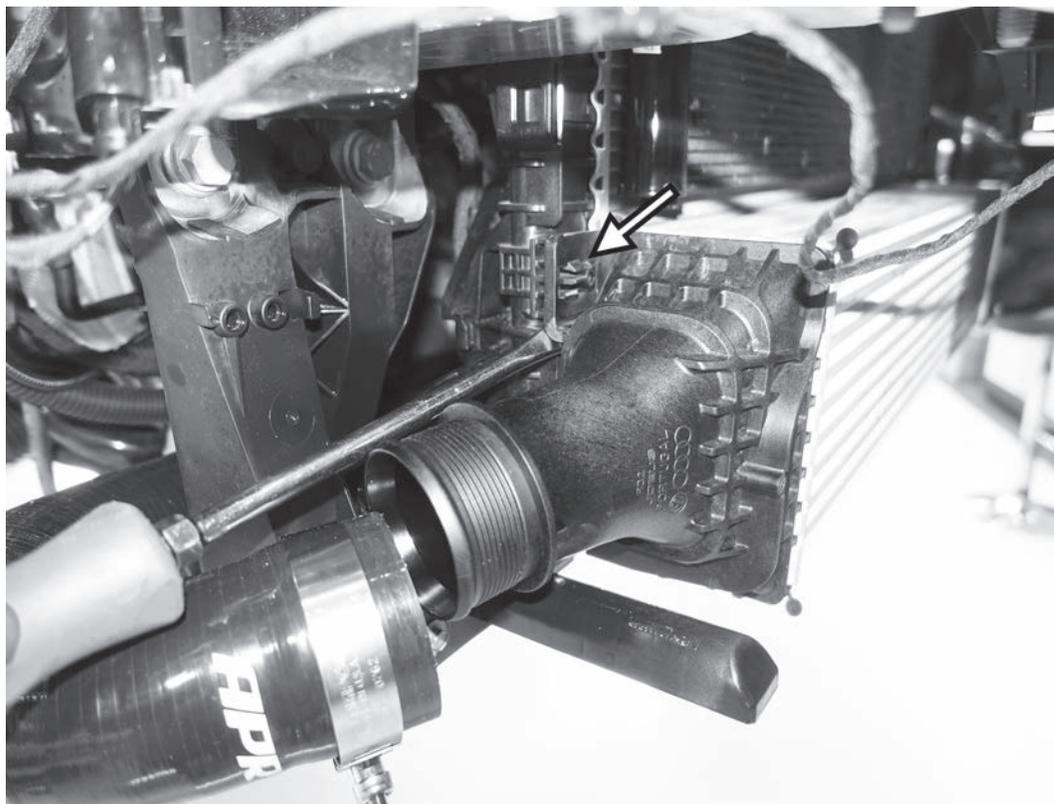
23) Remove the right plastic air guide that runs up and down the right, front side of the factory radiator and intercooler. Push in on the two tabs where the air guide connects to the radiator core support, pull the air guide forward, and then manipulate the air guide out of the car.

**APR**

24) Separate the lower portion of the left air guide from the bottom of the intercooler.



TL100120



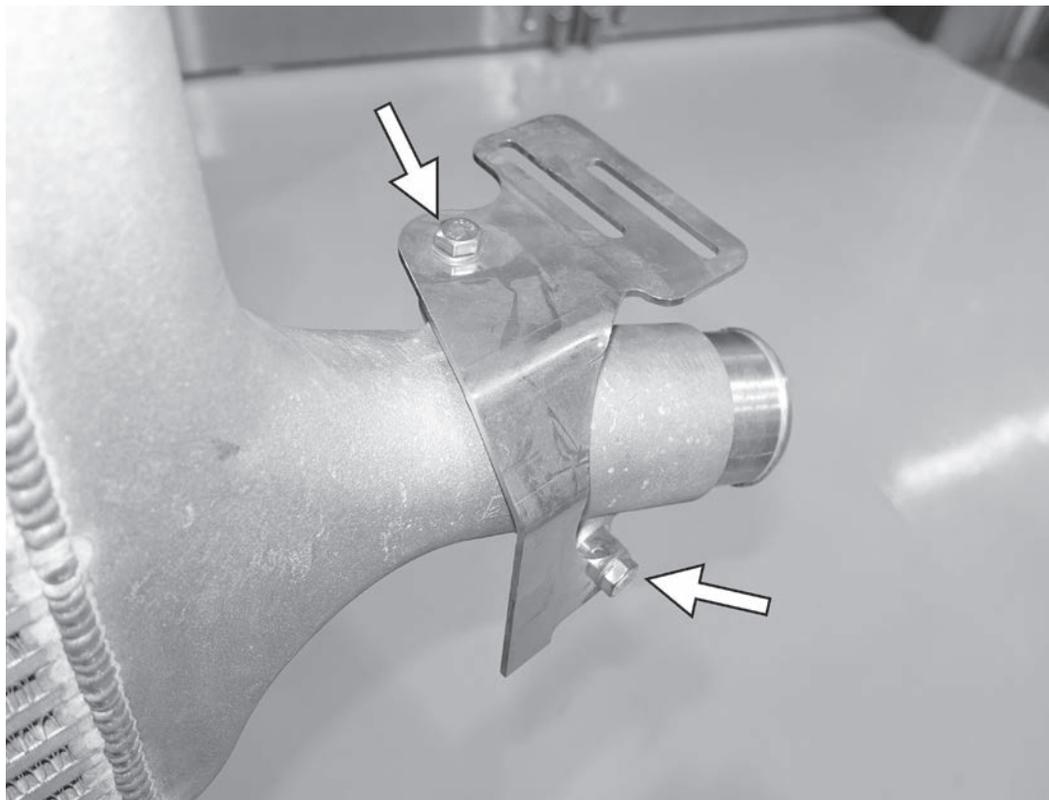
25) Squeeze the release clip holding the right side of the intercooler to the core support, and then carefully use a screwdriver to pry the top of the stock intercooler forward. Repeat on the left side of the intercooler.

**APR**

26) Carefully swing the top of the stock intercooler away from the core support. Lift up to separate the intercooler from the core support. Remove the stock intercooler from the car, maneuvering out of the left air guide.



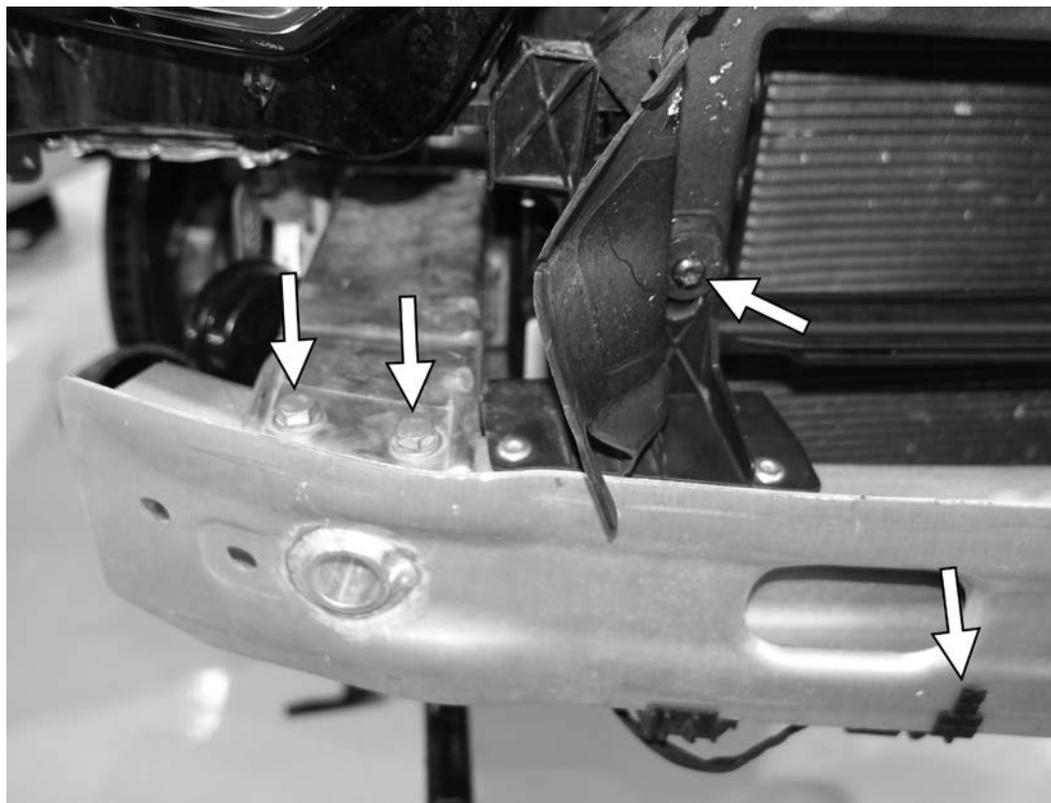
**TL100120**

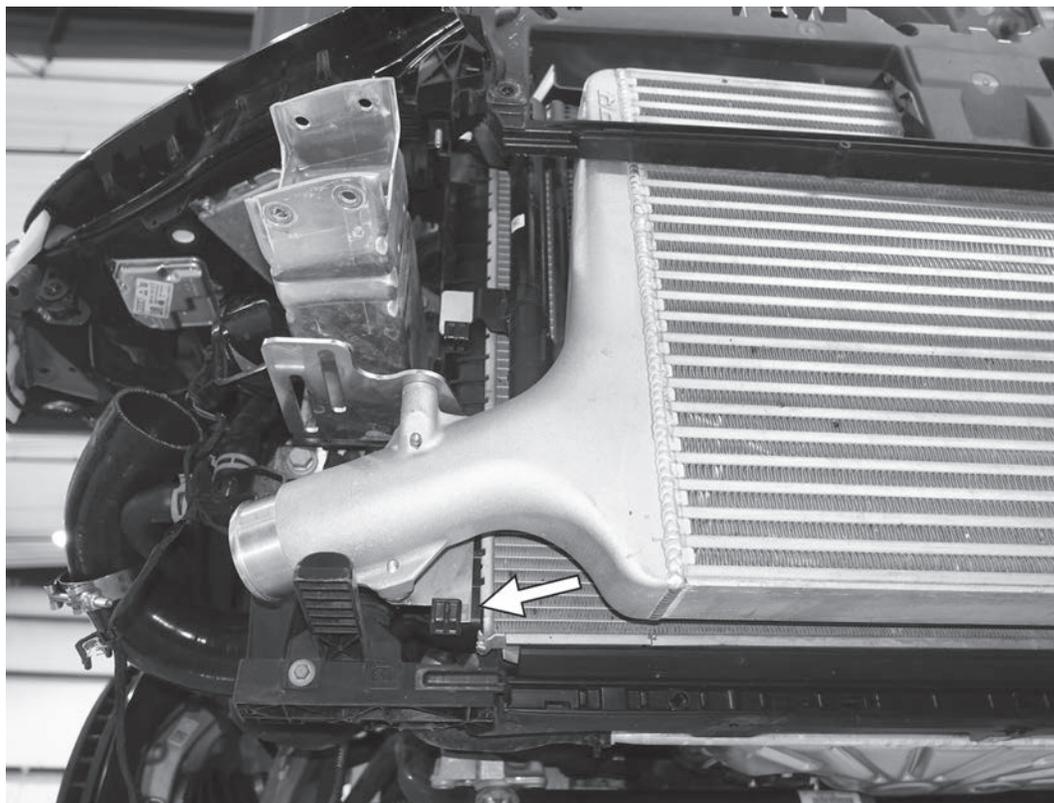


27) Install the two APR lower brackets to the APR intercooler as shown. Use the longer two of the four supplied 13mm screws with a washer in the two lower mounting holes, and use the two shorter 13mm screws in the upper holes. The other side is the mirror of the side shown.

***APR***

28) Unclip the outside air temperature (OAT) sensor from the right side of the front crash beam. Unclip the harness to the OAT from the bumper beam and lay aside. Remove the four 13mm nuts bolts holding the crash beam to the front frame rail extensions. Remove the two T30 screws holding the crash beam to the radiator core support. Remove the crash beam, noting how the plastic “accordian” section is attached to the radiator core support.

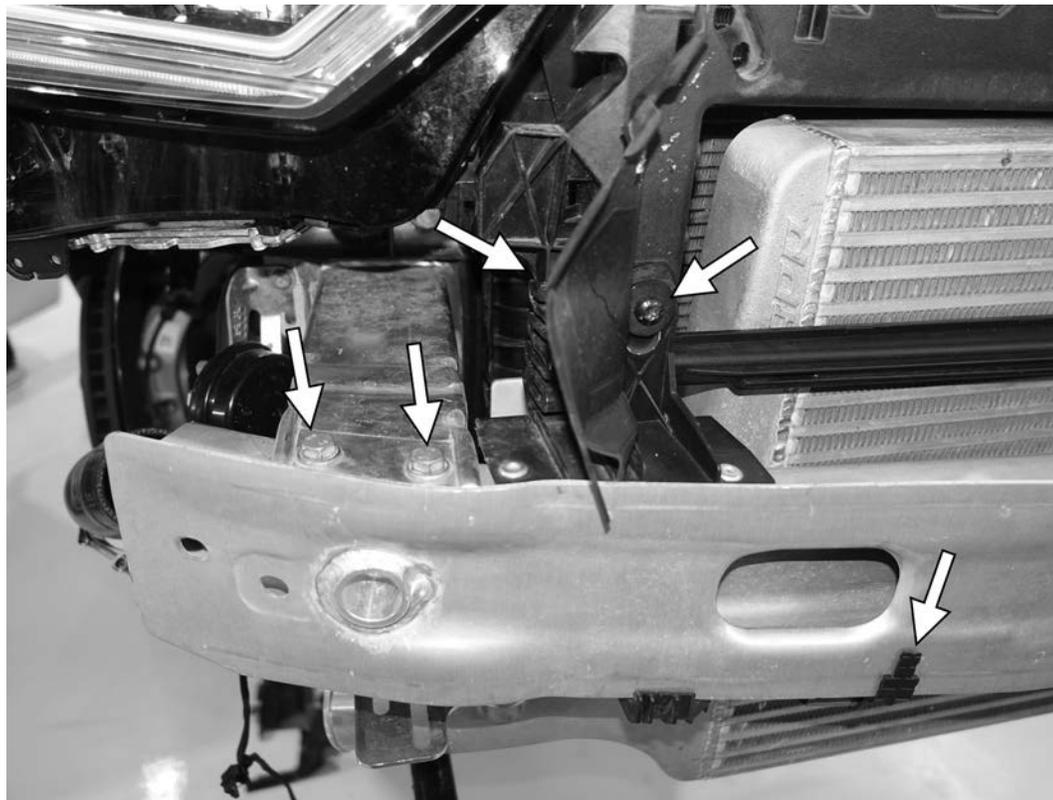


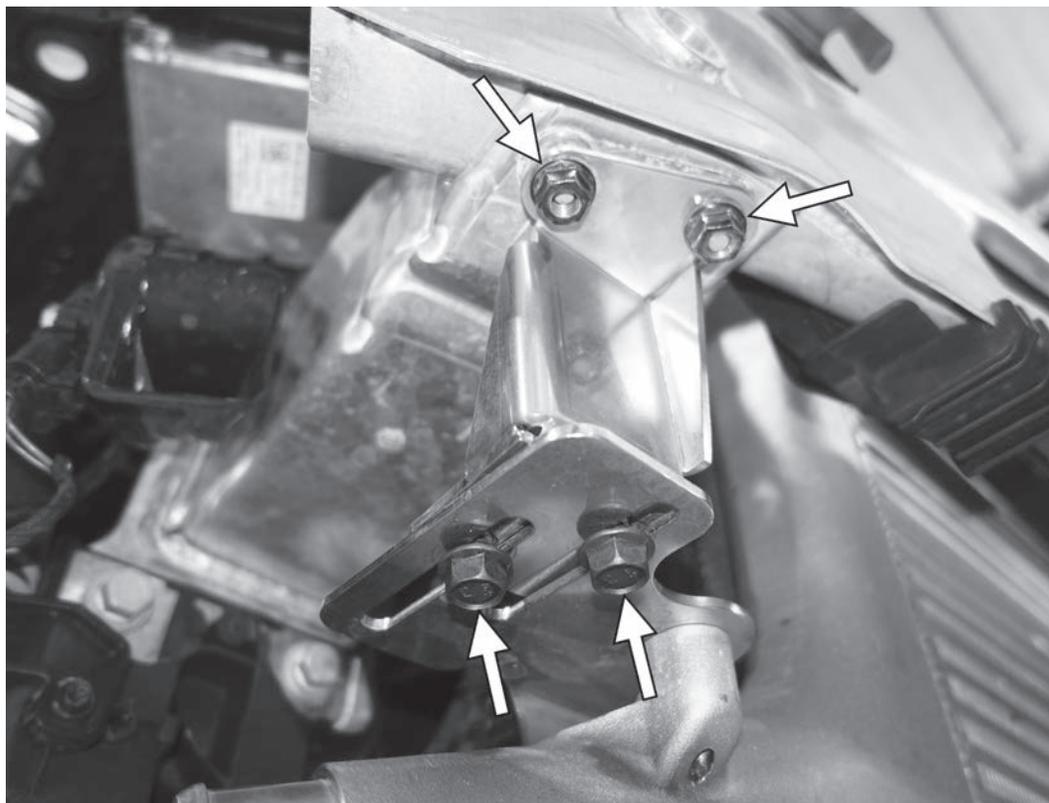


29) Slide the APR intercooler up and behind the upper bumper support of the radiator core support. Set the lower tabs from the APR intercooler brackets down in the tabs that were originally supporting the stock intercooler.

***APR***

30) Reinstall the front crash beam to the car, making sure the accordion plastic part reconnects correctly to the radiator core support. Reinstall the two T30 screws into the radiator core support. Drop in the four long 13mm bolts, but do not install the nuts holding the crash beam on. Finally, reconnect the OAT wiring harness clips back onto the right side of the crash beam.

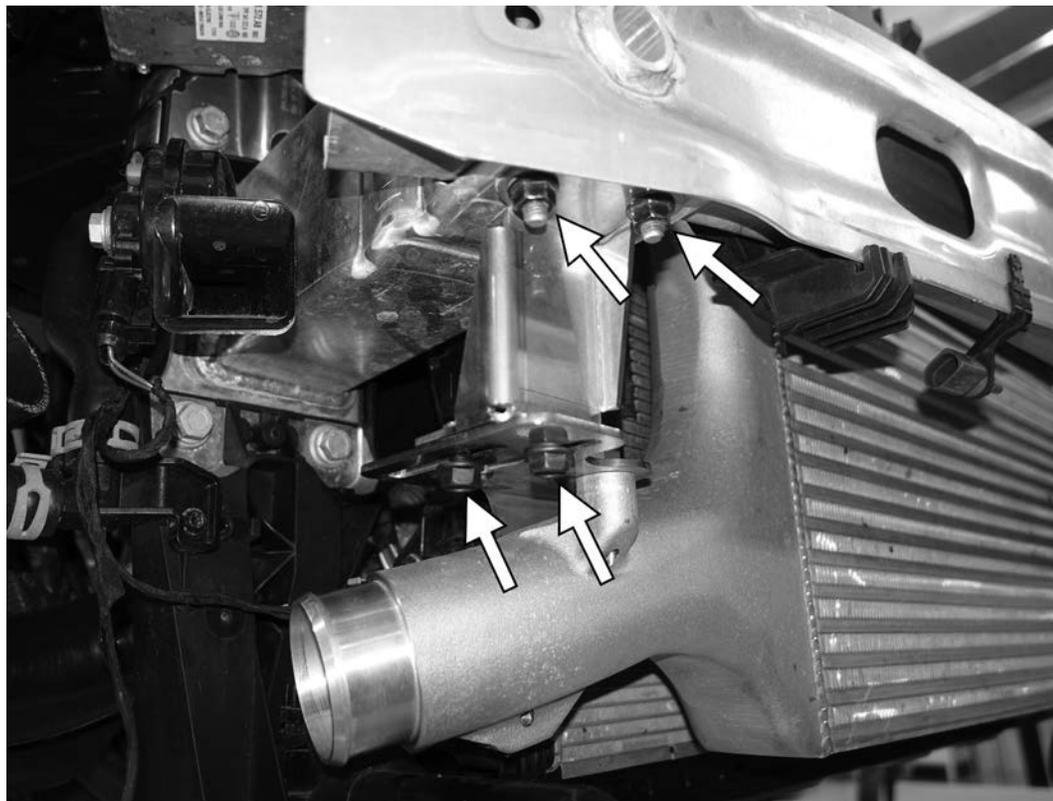


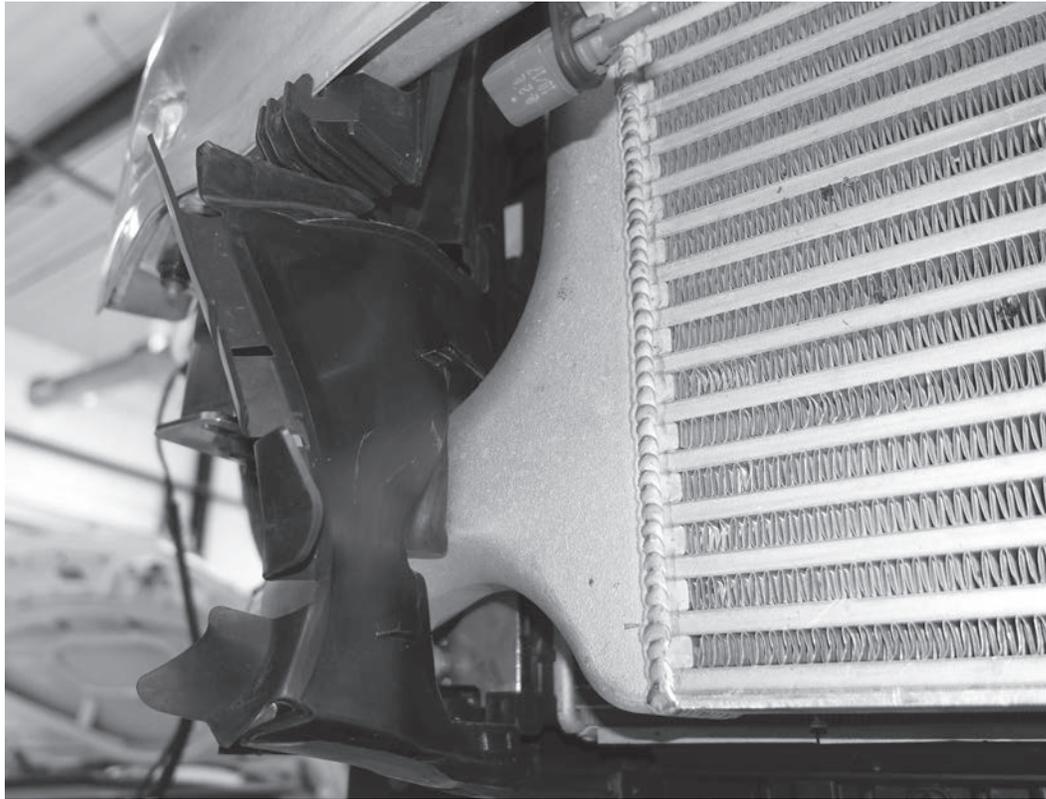


31) Install the upper portion of the APR brackets as shown. The stock 13mm bolts go through the upper portion of the APR bracket and are secured with the factory 13mm nuts. The lower APR bracket and upper APR bracket are connected with the supplied 13mm nuts.

***APR***

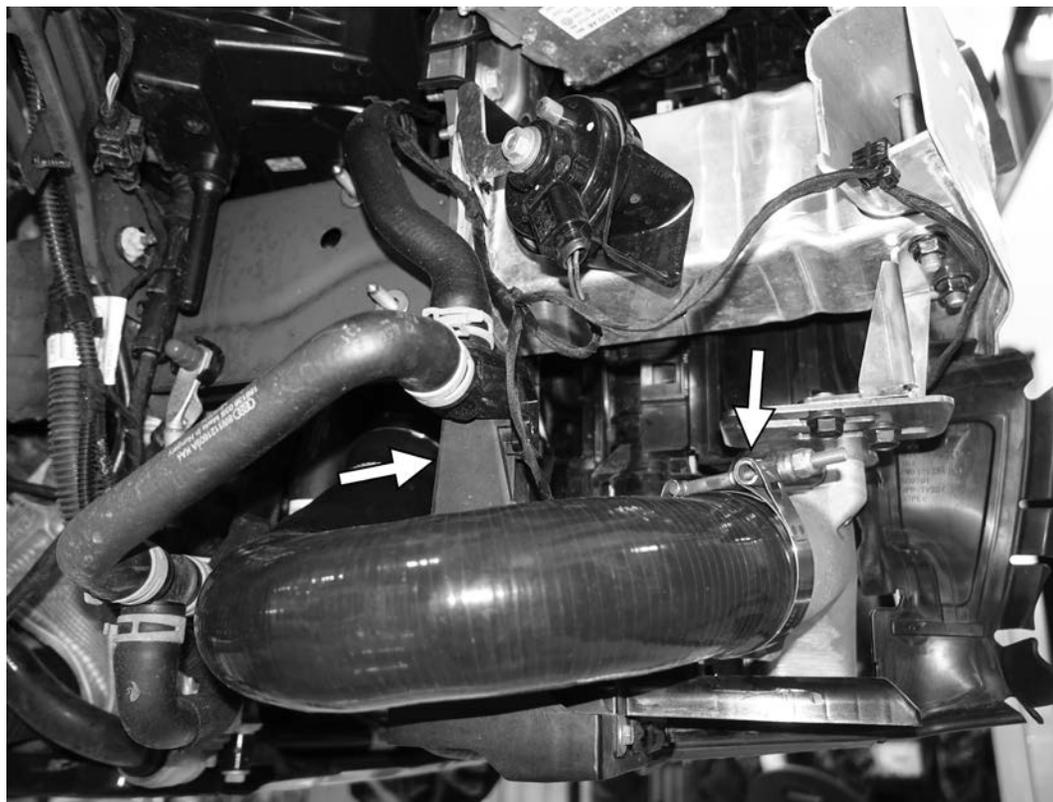
32) With an assistant, hold the top of the APR intercooler back until it is parallel to the stock AC condenser and radiator. Secure the four upper factory 13mm nuts to 17ft-lb (23Nm). Secure the four 13mm APR screws holding the upper and lower brackets together also to 17lb-ft (23Nm).





33) Reinstall the right plastic air guide that runs up and down the right, front side of the radiator and intercooler. The guide will snap back into the original mounting points from where it was removed. Also reconnect the lower portion of the left air guide that was disconnected.

34) 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. Tighten both hose clamps on the intercooler inlet hose to 50 in-lbs (5.7Nm). Do NOT overtighten the hose clamps.



**TL100120**

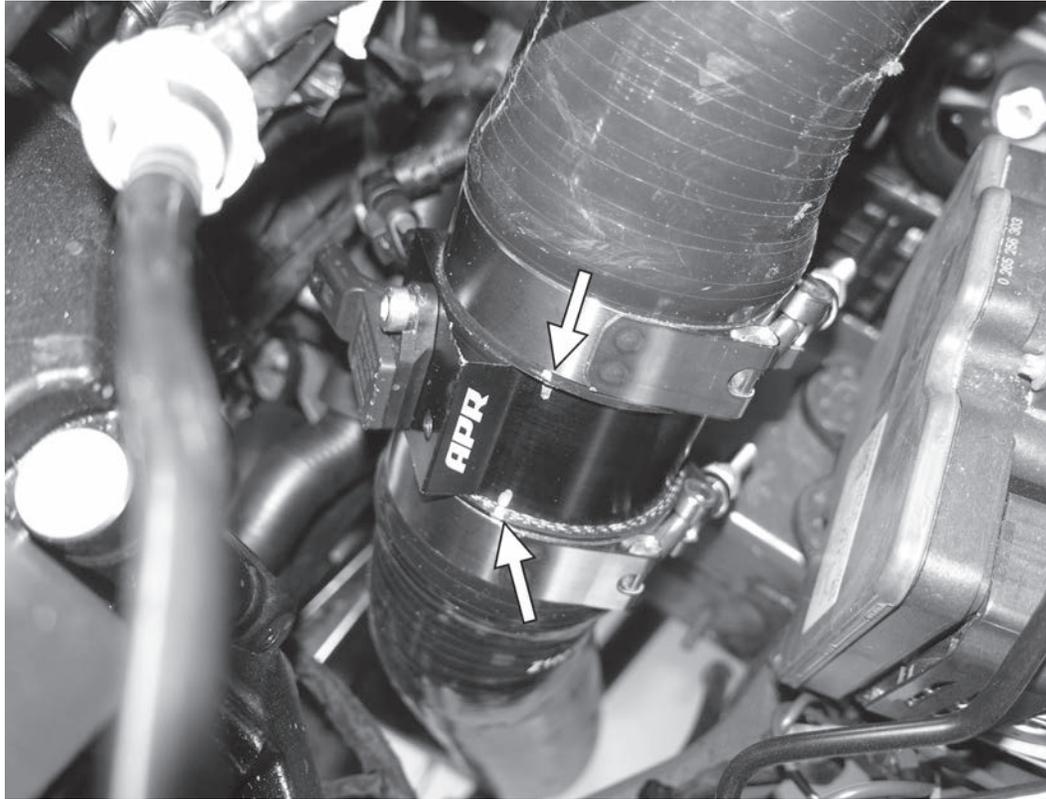


35) Loosely assemble the shown hose assembly using the APR MAP housing, APR hose Z1003201, APR hose Z1003202, and two 3" (-0300) hose clamps. The single small screw hole on the top of the APR MAP housing should face the shorter hose.

**APR**

36) Lubricate the o-ring on the MAP sensor, and install into the APR MAP sensor housing. Orient the sensor so the hole in the sensor aligns with the top screwhole on the APR MAP housing. Secure with the supplied 5mm allen screw.





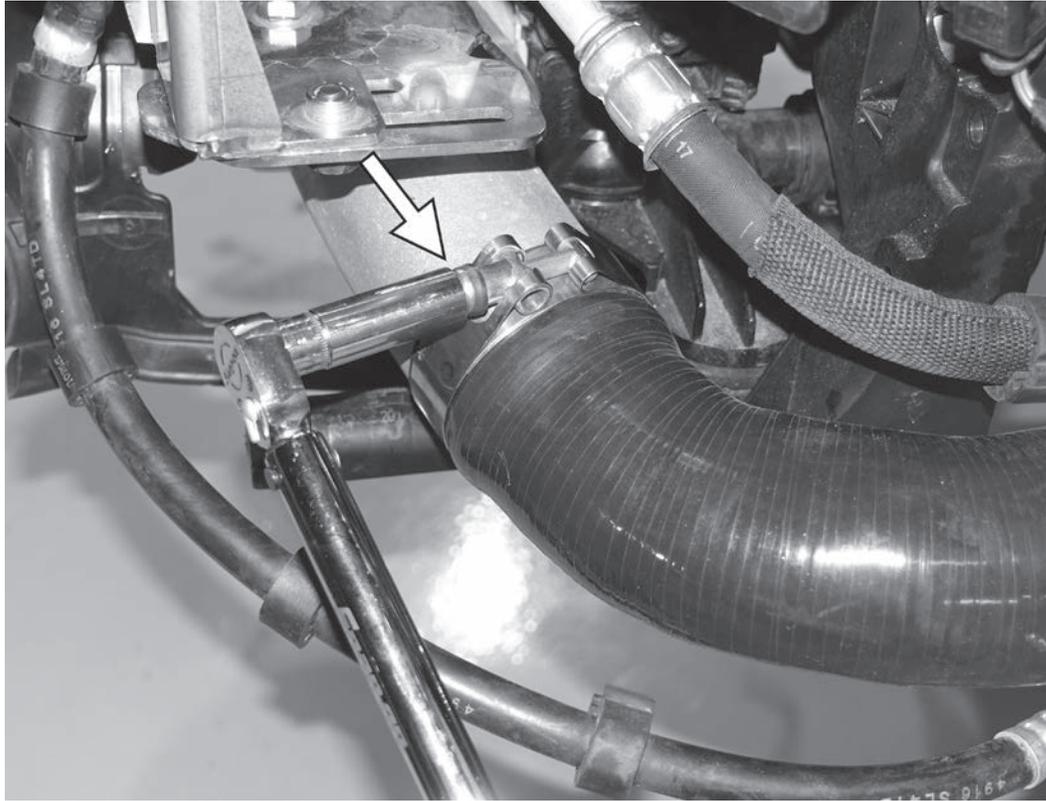
37) Install the APR hose assembly into the car, connecting to both the throttle body and APR intercooler outlet. Manipulate the hoses about the APR MAP housing until you get an ideal fitment. Make sure the MAP sensor can be connected to its harness without interference. Once the hoses are rotated correctly, mark the orientation of hoses and the MAP housing using a sharpie or paint marker.

**APR**

38) Remove the hose assembly from the car. Once making sure the assembly has not rotated on the MAP housing based on the alignment marks made, tighten both hose clamps to 50 in-lbs (5.7Nm). Do NOT overtighten the hose clamps.



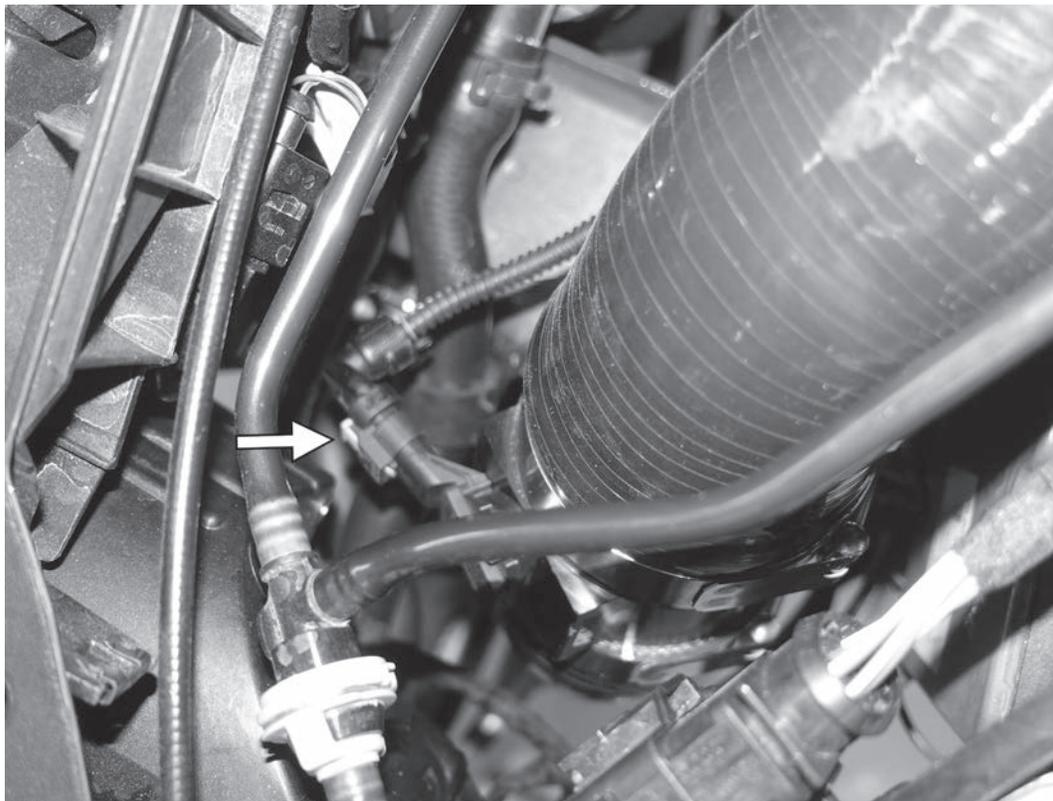
TL100120



39) Loosely place the remaining 2.75" (-0275) hose clamp on the bottom of the hose assembly, at the APR intercooler outlet. Reinstall the hose assembly in the car, attach the assembly to the intercooler outlet and secure the clamp. Tighten the hose clamp to 50 in-lbs (5.7Nm), but do NOT overtighten.

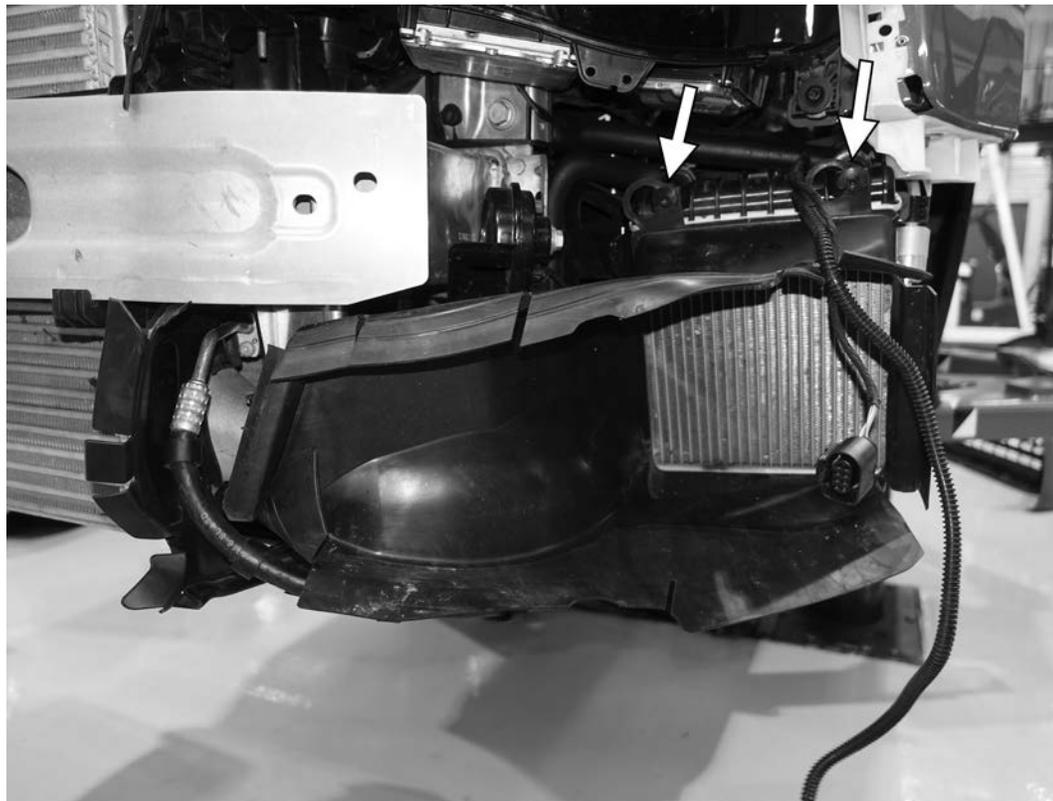
40) Install the remaining 3" (-0300) hose clamp where the APR hose assembly meets the throttle body. Secure the hose by tightening the clamp to 50 in-lbs (5.7Nm). Do NOT overtighten the clamp

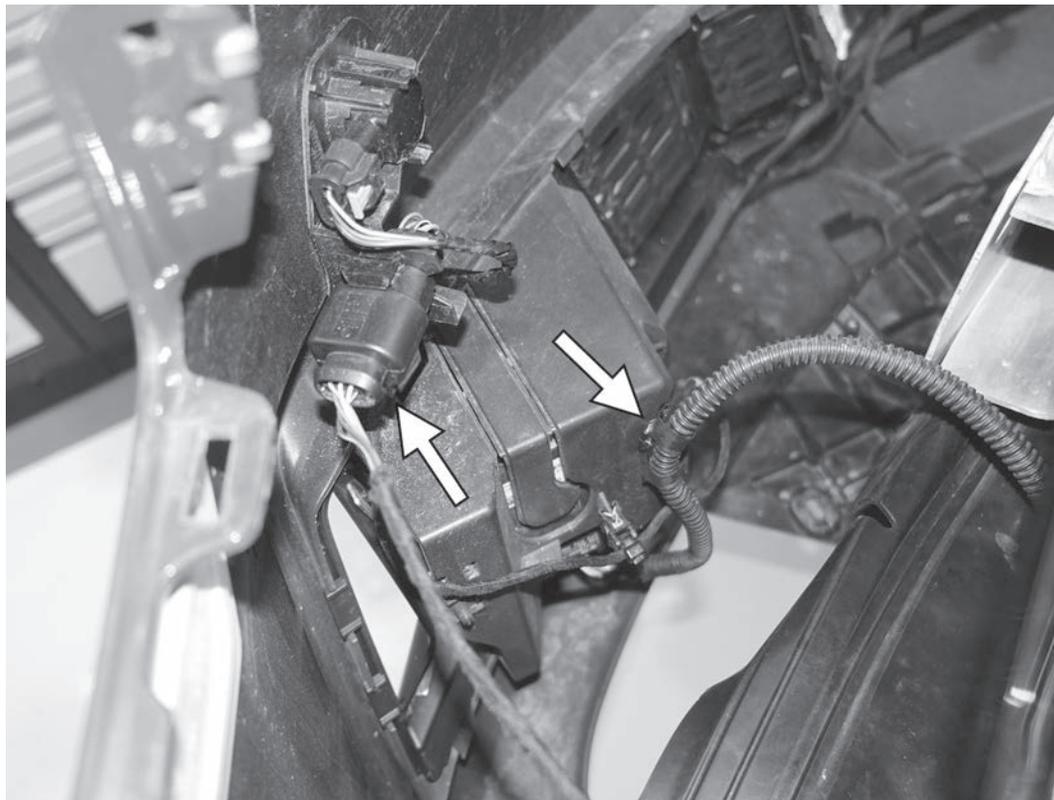




41) Reconnect the electrical connector to the factory MAP sensor, and lock the tab on the connector.

42) Reinstall the air duct to the left radiator by setting the duct on the mounting points and sliding the duct to the right side of the car.



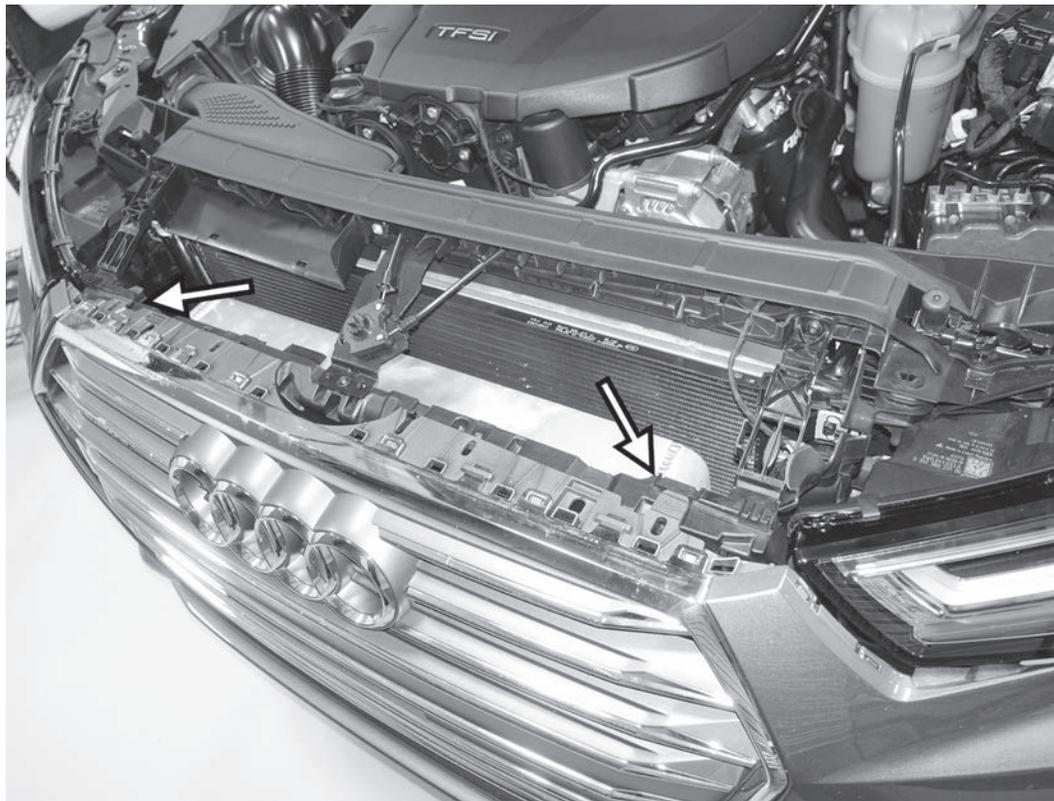


43) With an assistant, bring the front bumper cover back to the car. On both sides of the car, reconnect the wiring harnesses for the ACC radar sensors. Reattach the clips for the harness to the bumper cover, and reconnect the electrical connectors to the park distance sensors.

44) Slide the front bumper cover back further back towards the car. Reconnect the harness for the front camera.



**TL100120**

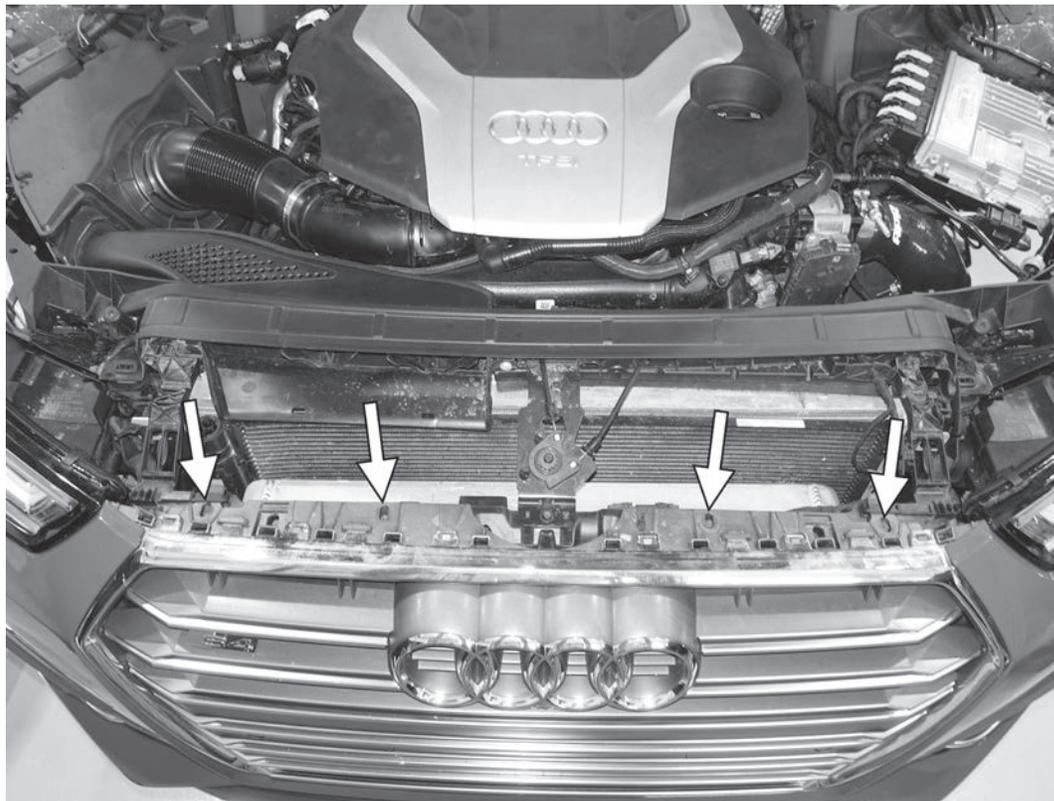


45) Place the bumper cover back on the car. Make sure the tabs on the top of the bumper go into the slots on the top of the bumper support.

46) Snap both sides of the bumper cover to the mounting brackets on the side of both front fenders.



**TL100120**



47) Install the four T30 screws holding the top of the bumper cover to the bumper latch support.

**APR**

48) Slide the upper bumper cover back into the slot on the front side of the radiator core support. Lower the upper bumper cover down, snapping into place along the top of the front bumper cover.

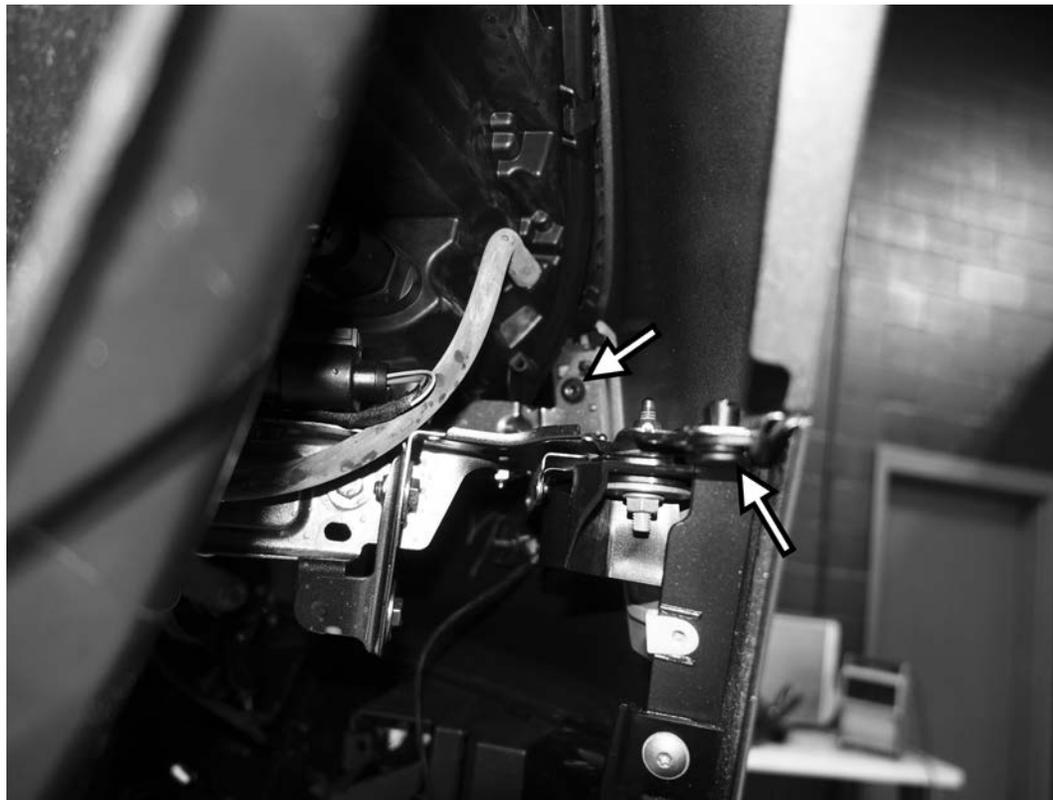


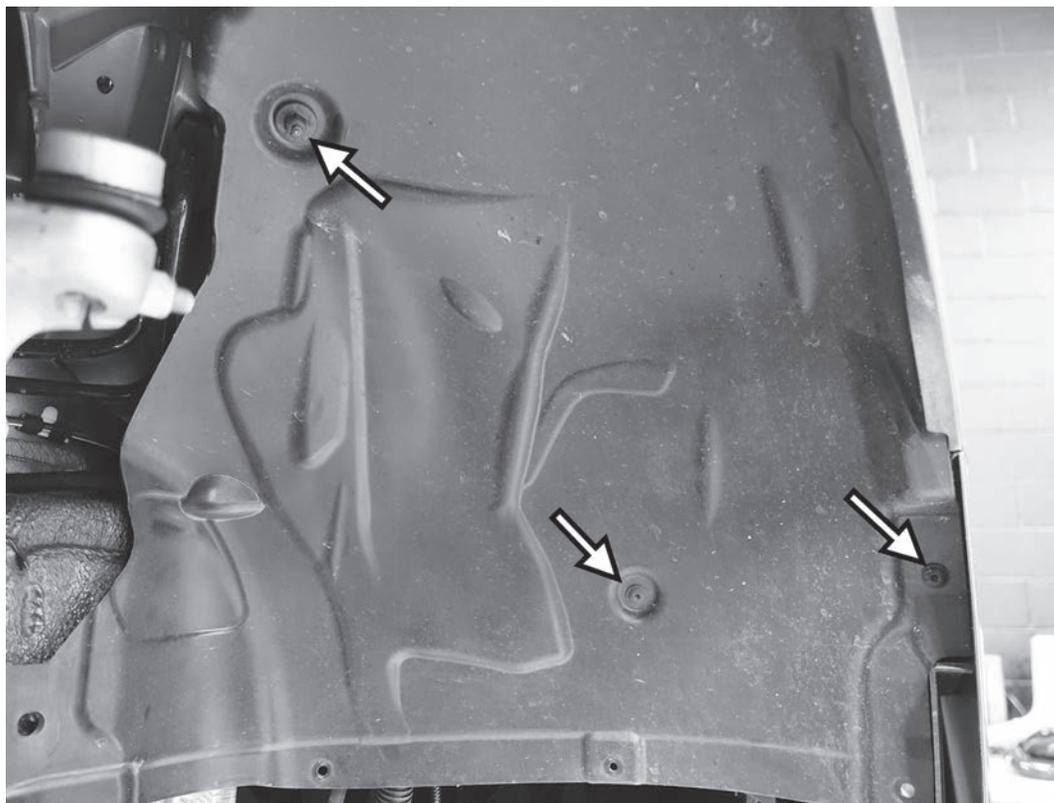
**TL100120**



49) Reinstall the hood latch by simply pushing the keyed latch down on the keyed post for the hood latch assembly.

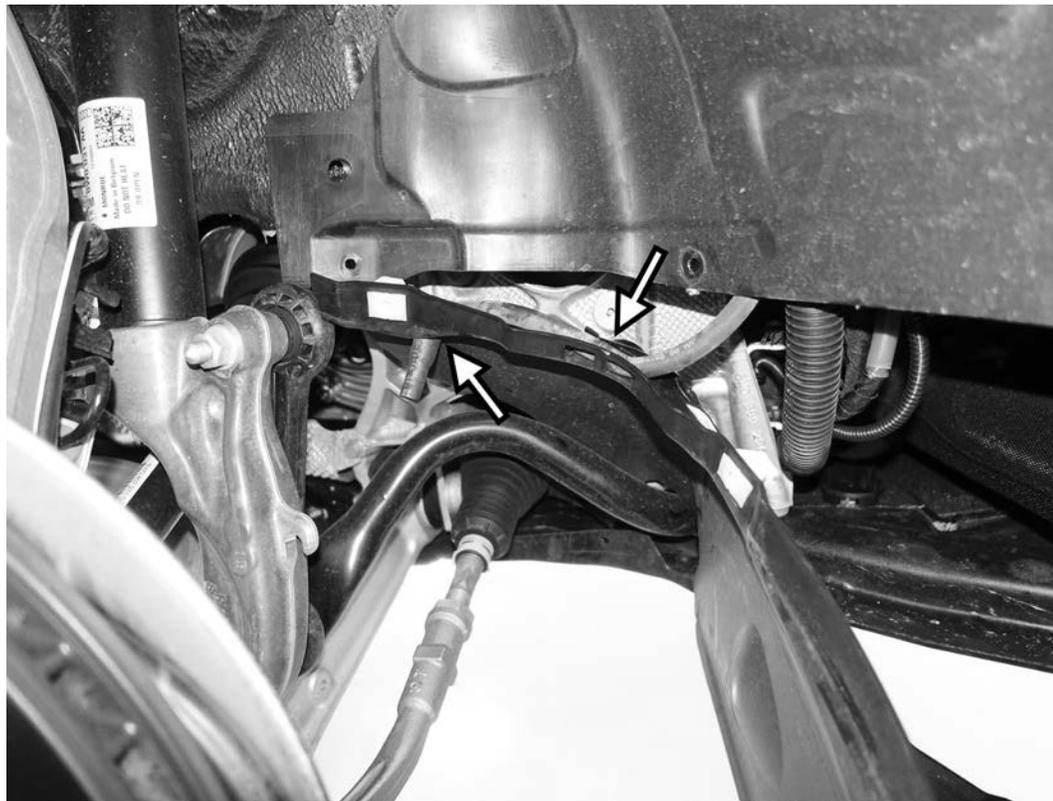
50) On both sides of the car, fold back the front wheel well liner again, and reinstall the one T30 screw holding the front of the fender to the back of the bumper cover. Install the one plastic push pin clip between the fender and bumper cover.



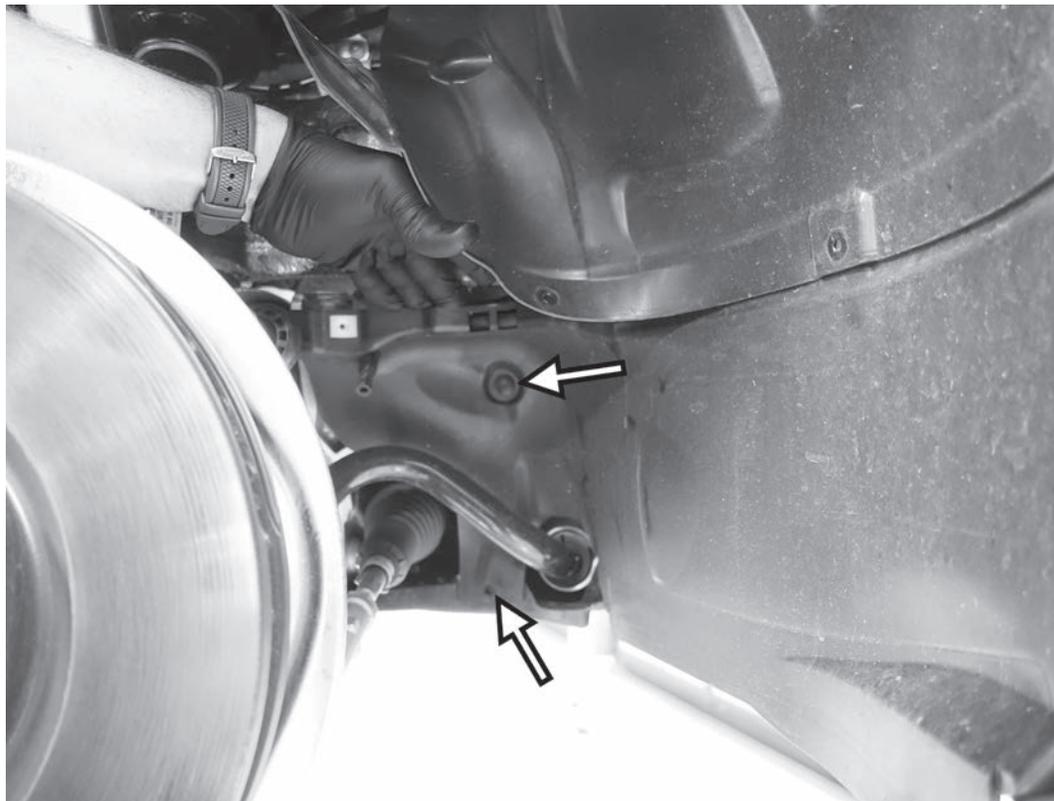


51) On both sides of the car, install the two T25 screws and one 10mm nut holding the front of the wheel well liner in place.

52) Reinstall the drain line to the lower wheel well liner on both sides of the car.



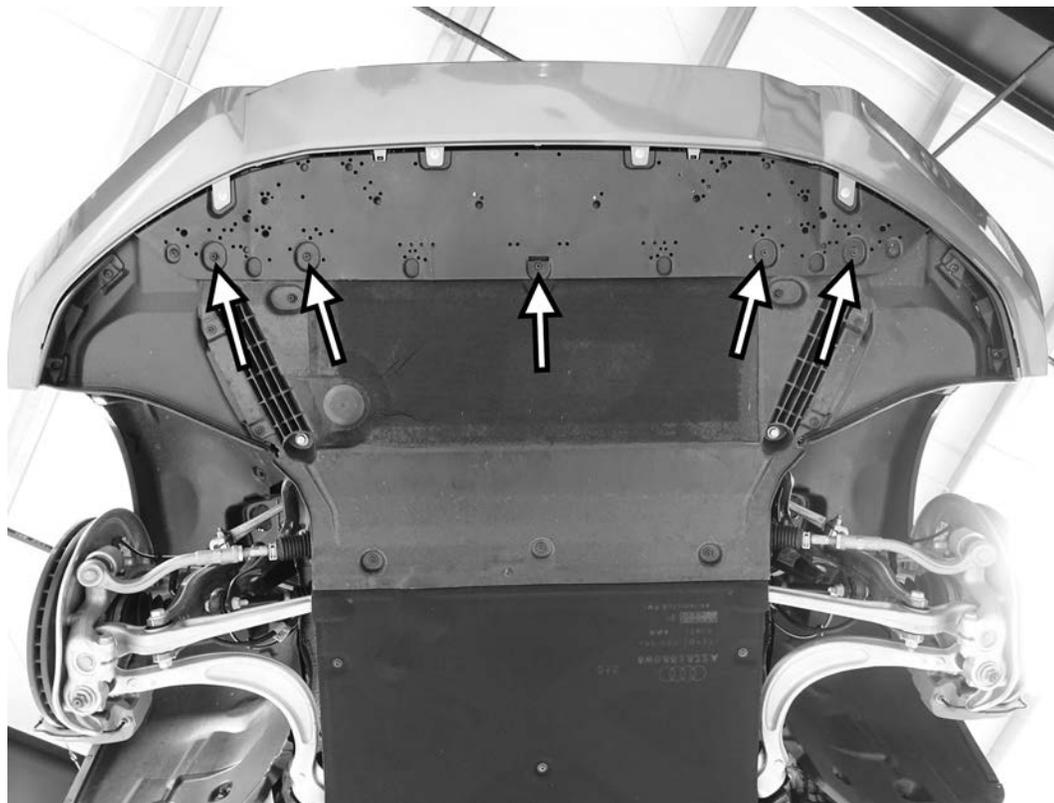
**TL100120**



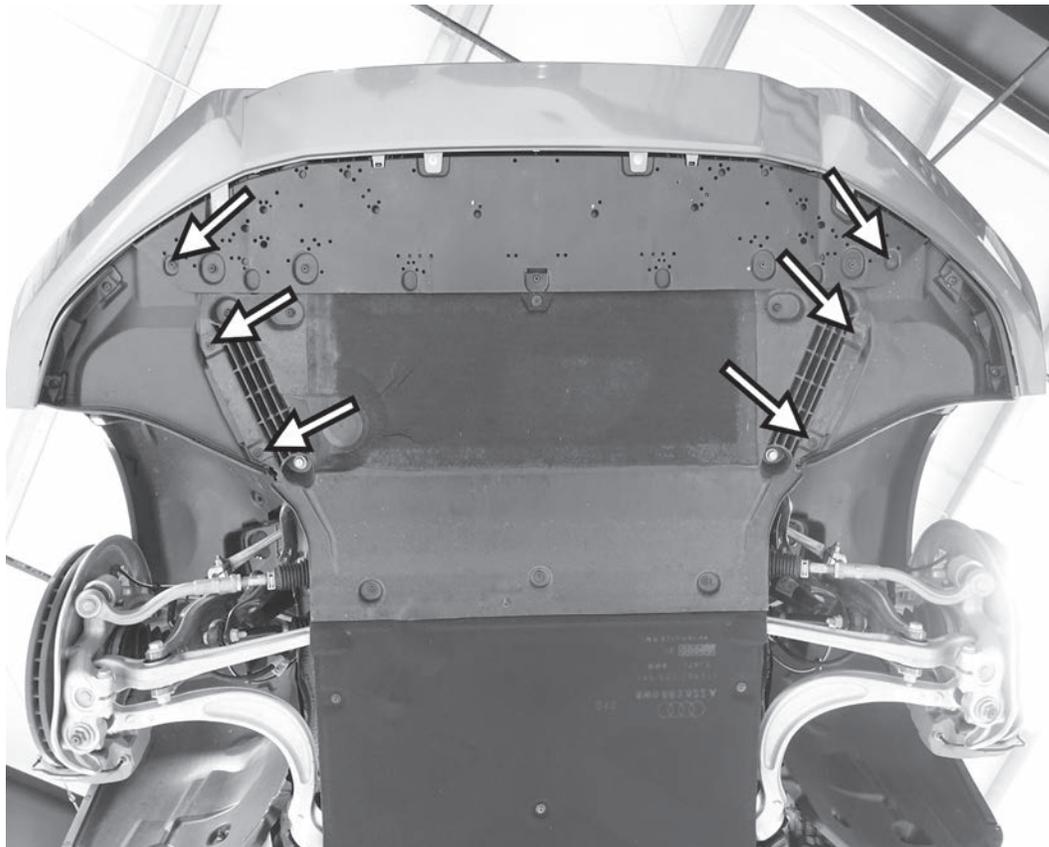
53) On both sides of the car, reinstall the plastic push pin barbed fitting from the upper, inner side of the wheel well liner. Also install the T30 plastic screw from the lower wheel well liner.

**APR**

54) Reinstal the five T30 screws that run between the bottom of the front bumper cover and the underbelly pan.



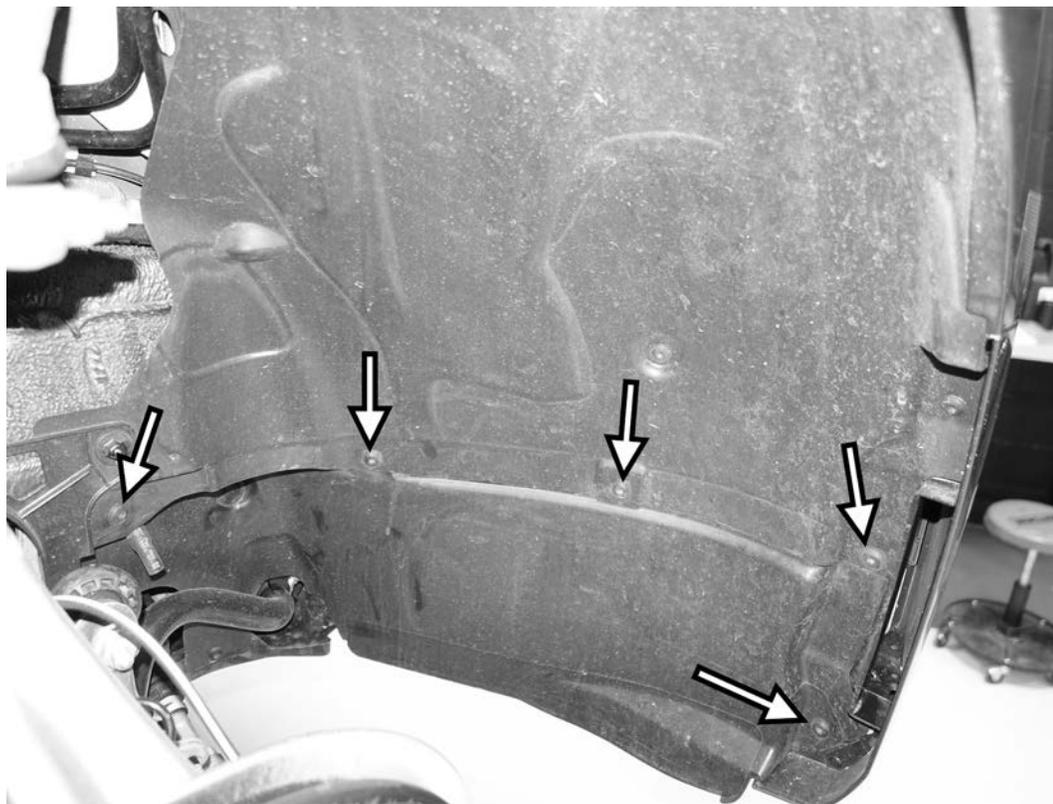
**TL100120**



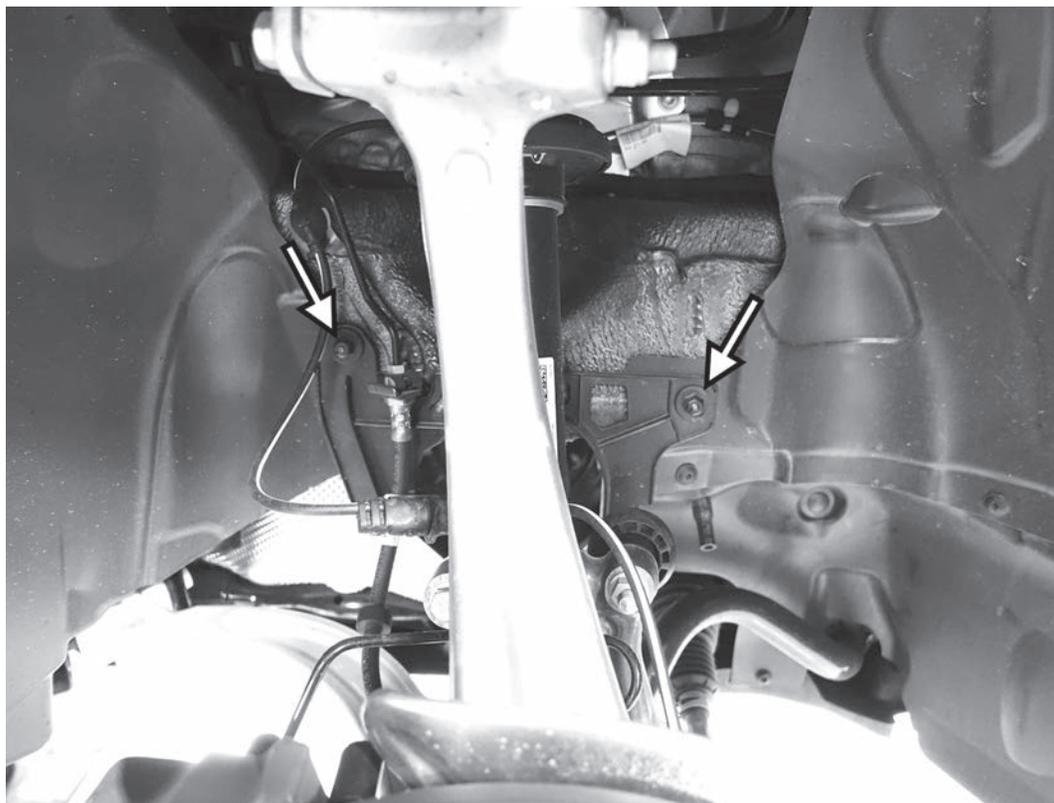
55) Reinstall the four quarter turn T25 screws and the two T25 screws holding the lower wheel well liners to the engine belly pan.

**APR**

56) On both sides of the car, install the five T25 screws holding the lower wheel well liners to the front wheel well liners.



**TL100120**



57) Reinstall the plastic axle shield to both sides of the car, and secure with the two 10mm plastic nuts.

58) Reinstall the front wheels and torque to 88 lb-ft (120Nm). Remove vehicle from lift or jackstands.



**TL100120**

---

---

***APR***

---



#TL100120

***GO APR.COM***