

Intercooler PN	Make	Model	Eng. Disp.	Notes	Transmission	MY
AMS21090001-1	VW	Golf R	2.0	TSI EA888 Gen 3	Manual	2015-2019
AMS21090001-1	VW	Golf R	2.0	TSI EA888 Gen 3	Auto	2015-2019
AMS21090001-1	VW	GTI	2.0	TSI EA888 Gen 3	Manual	2015-2020
AMS21090001-1	VW	GTI	2.0	TSI EA888 Gen 3	Auto	2015-2020
AMS21090001-1	VW	GLI	2.0	TSI EA888 Gen 3	Manual	2019-2020
AMS21090001-1	VW	GLI	2.0	TSI EA888 Gen 3	Auto	2019-2020
AMS21090001-1	Audi	A3	2.0	TSI EA888 Gen 3	Auto	2017-2020
AMS21090001-1	Audi	A3 Cabriolet	2.0	TSI EA888 Gen 3	Auto	2017-2020
AMS21090001-1	Audi	A3 Quattro	2.0	TSI EA888 Gen 3	Auto	2015-2020
AMS21090001-1	Audi	A3 Cabriolet Quattro	2.0	TSI EA888 Gen 3	Auto	2015-2020
AMS21090001-1	Audi	S3	2.0	TSI EA888 Gen 3	Auto	2015-2020
AMS21090001-1	Audi	S3	2.0	TSI EA888 Gen 3	Manual	2015

AMS PERFORMANCE VW GOLF R INTERCOOLER | AMS



AMS Performance VW / Audi 2.0T TSI EA888

FRONT MOUNT INTERCOOLER

AMS.21.09.0001-1

The goal of AMS Performance is to provide the highest quality, best performing products available. By utilizing research and development, and rigorous testing programs AMS Performance will never compromise the quality or performance of our products. In addition, AMS Performance will only provide the finest customer service offering only parts and advice that are in the best interests of the customer. AMS Performance was built on a foundation of integrity. This is who we are; this is what you can count on.

A vehicle modified by the use of performance parts may not meet the legal requirements for use on public roads. Federal and state laws prohibit the removal, modification, or rendering inoperative of any part or element of design affecting emissions or safety on motor vehicles used for transporting persons or property on public streets or highways. Use or installation of performance parts may adversely affect the drivability and reliability of your vehicle, and may also affect or eliminate your insurance coverage, factory warranty, and/or new OEM part warranty. Performance parts are sold as-is without any warranty of any type. There is no warranty stated or implied due to the stresses placed on your vehicle by performance parts and our inability to monitor their use, tuning, or modification.

These instructions are provided as a guide only as there are many variables that cannot be accounted for concerning your particular vehicle, including but not limited to model year differences, model differences, the presence of non-OEM parts, and modifications that may already be or were previously installed. A basic knowledge of automotive parts and systems is helpful but a better understanding of the parts and systems on your particular vehicle may be required.

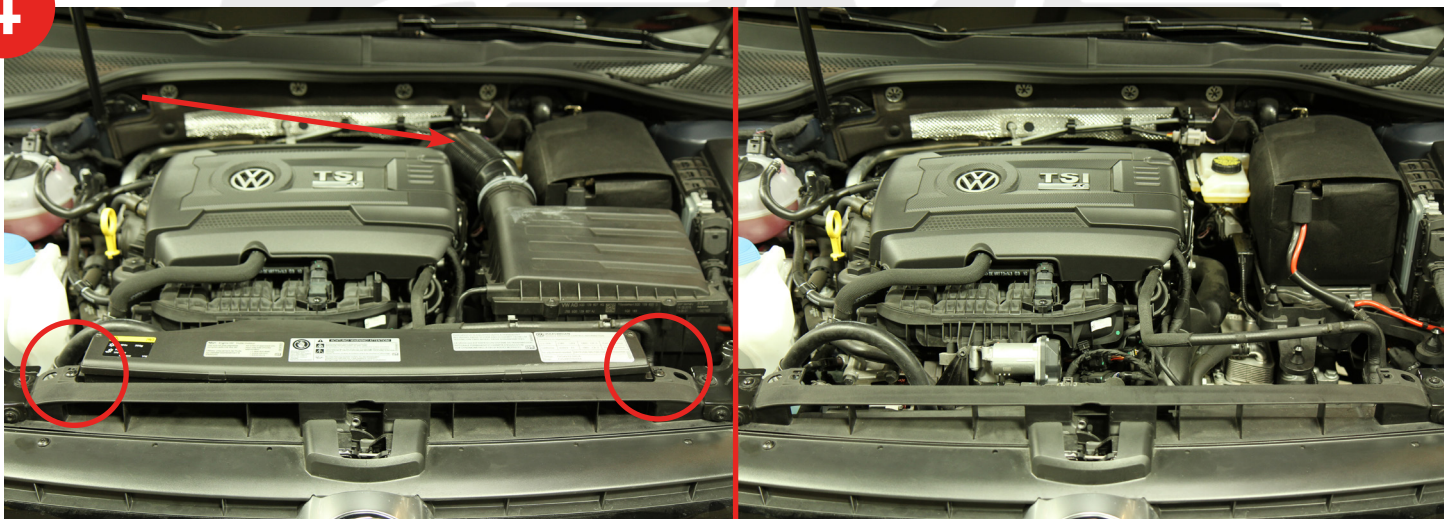
If you have any questions or issues at any time during the installation of your AMS Performance product(s) please call us for technical assistance. The AMS Performance tech line can be reached during business hours at 847-709-0530 for AMS and Alpha Performance products only.

Installation

Note: The A/C system will need to be drained and recharged after install. If doing this at home, make sure to have a Certified shop drain the A/C system for you before beginning.

1. Disconnect the battery. *Important! SRS system sensors will be disconnected during the intercooler installation process!*
2. If it has not been done yet, drain the A/C system
3. To install the intercooler, the front core support assembly will need to be removed from the car.
4. Remove the factory air box and front duct. Remove the two T25 Torx screws for the front duct located in the corners. Loosen the 7mm hose clamp on the turbo inlet. The air box is secured with three rubber grommets located on the bottom of the box. Pull straight up and wiggle the air box to release the air box from the grommets. If necessary, use silicone spray on the grommets to help them release. The air box can be difficult to remove due to the grommets.

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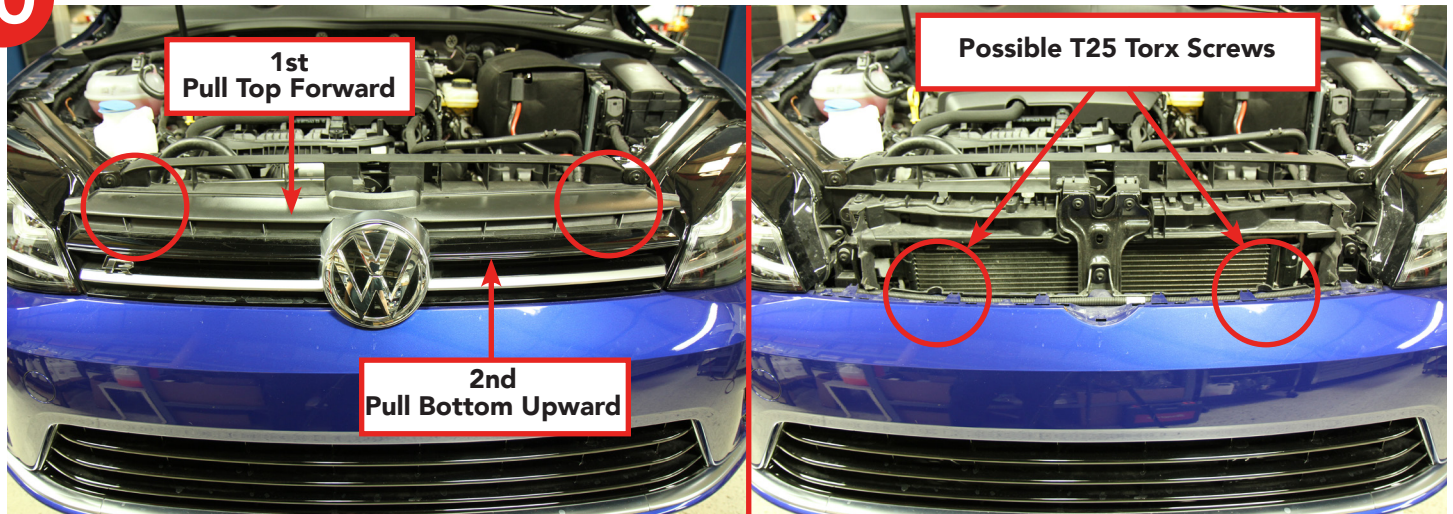
5. The next several steps will be to remove the bumper.
6. Raise the front of the vehicle in a safe manner.
7. Remove both front wheels
8. Remove the lower under tray (10 x T25 Torx Screws)
9. Remove both front wheel well liners (14 x T25 Torx Screw on each side)

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10. Remove the front upper grill. To do so, remove the two T25 Torx screw on the top. Pull the top straight out to the front of the car at the top. When the top is released, pull the grill straight upward to release the bottom.

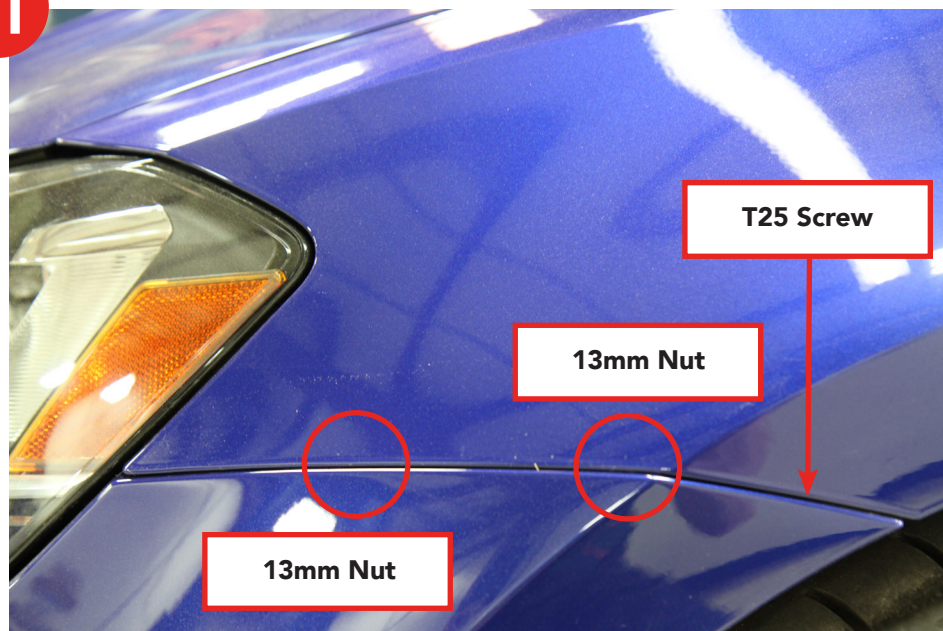
a. Depending on model and year, there may be two T25 Torx screws in the front bumper under grill. If these screws are present, remove them.

10



11. Inside where the corner of the front bumper meets the fenders, remove the one T25 screw and two 13mm stamped metal nuts on each side. The two stamped metal nuts are removed from the bracket to allow the front bumper to release easier. When the front bumper is removed, reinstall the two stamped metal 13mm nuts.

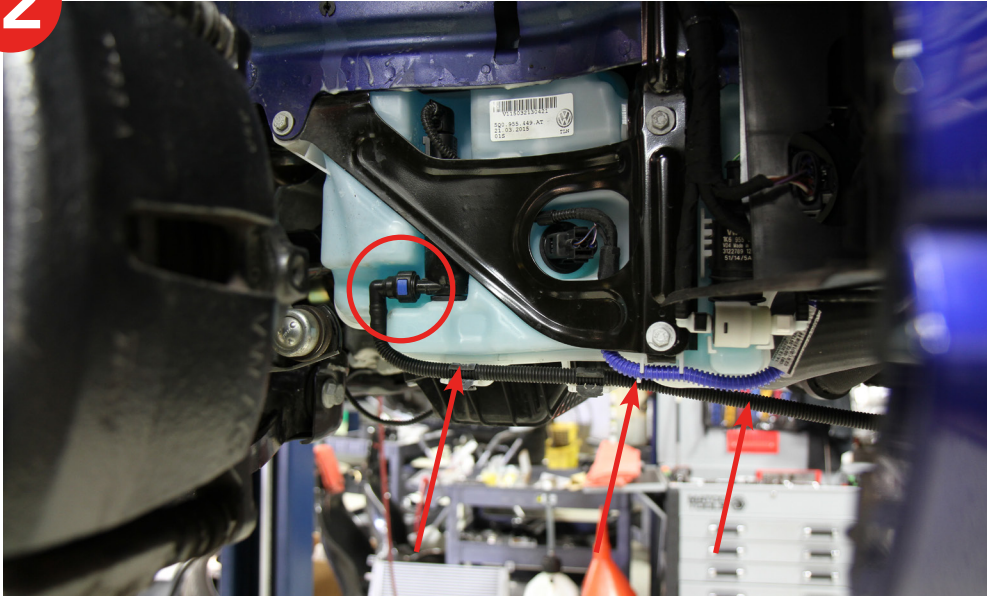
11



12. On the bottom of the front bumper, remove the three T25 Torx screws.

13. Disconnect the washer bottle pump outlet hose. This hose will stay with the bumper. Be sure to have a drain pan or something to collect the washer solvent still in the bottle as it will drain out of the pump when disconnected.

12



14. Carefully remove the front bumper. It is advised to apply masking tape to the fender where the front bumper meets the fender. Also, a second set of hands is also advised to remove the front bumper to prevent scratching or damaging anything.

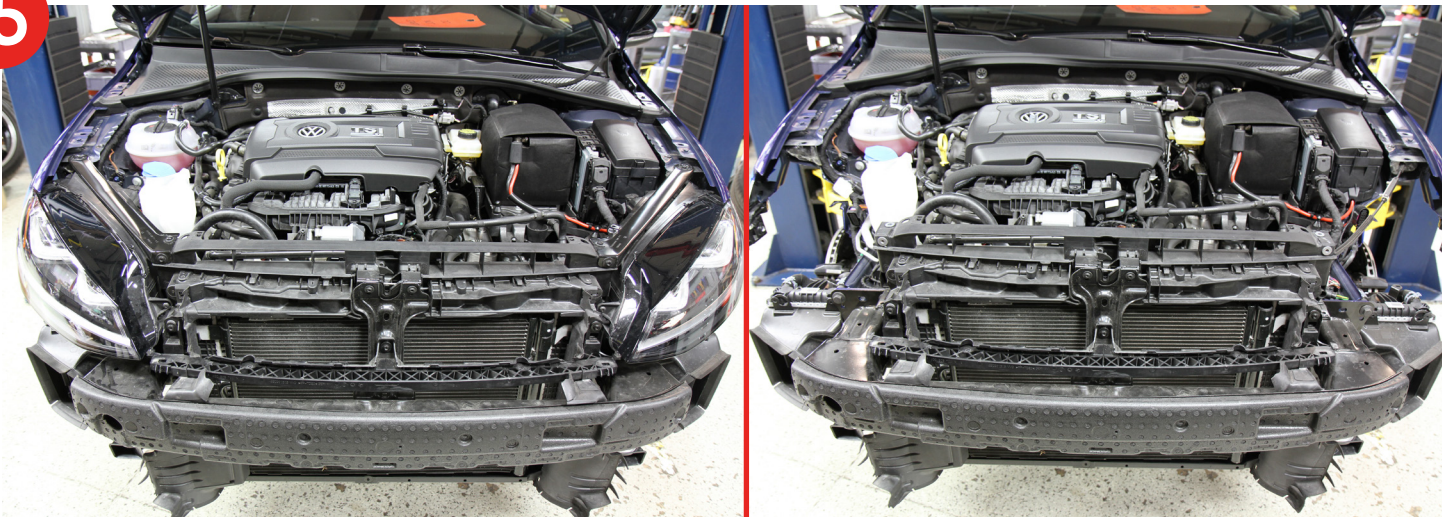
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15. Remove both front head lights. When removing the headlights, make notes of how everything is adjusted. Each bolt has adjustments and making notes here will aid in reassembly. Follow the next several steps.

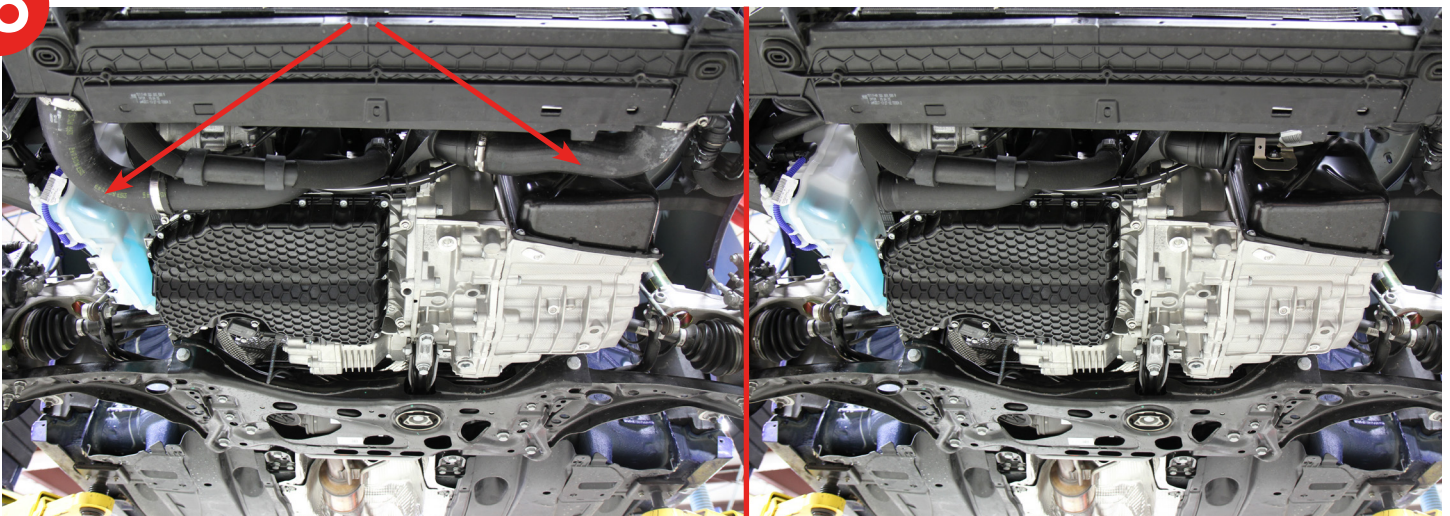
- a. Remove both upper core support braces. (Two T30 bolts, one 10mm bolt each side)
- b. Remove two T30 Torx bolts on the sides of each headlight
- c. Loosen only, the T30 Torx bolt on the rear of each headlight, do not remove
- d. Remove the 10mm bolt on the forward corner of the headlights to the core support.
- e. Carefully remove the headlight and disconnect the main connector.

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16. Remove both factory intercooler hoses. These will not be reused.

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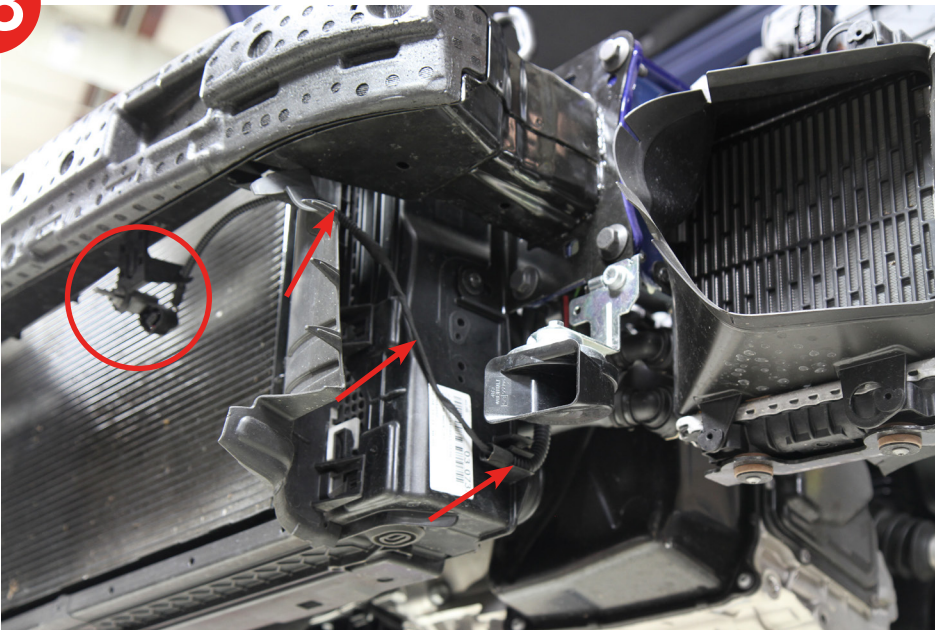
17. Disconnect the fan connector. The red secondary locking tab needs to be completely removed to disconnect the connector. It will be easier to disconnect it from the top.

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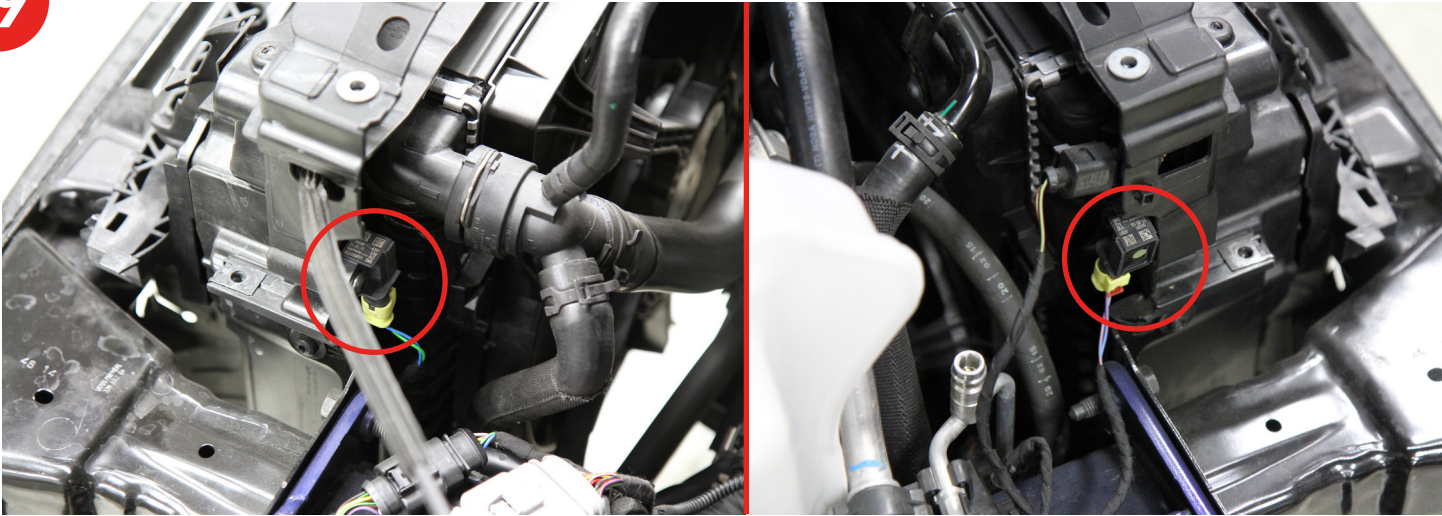
18. Disconnect the outside air temperature sensor. Pull the harness out of its holding clips and pull back to the side.

18



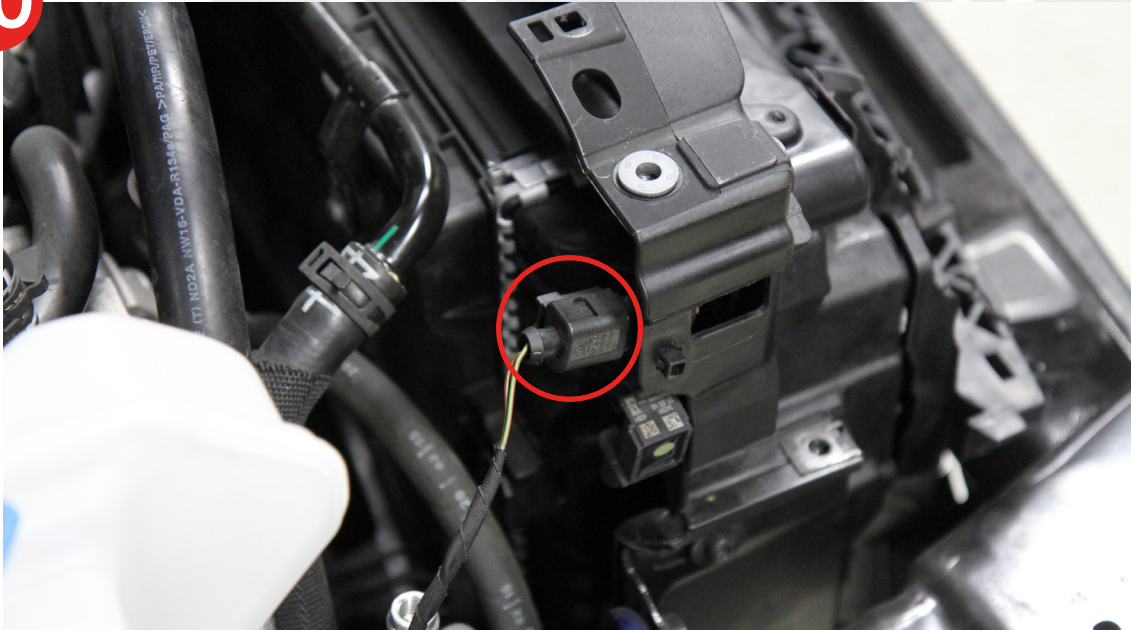
19. Disconnect both SRS impact sensors

19



20. Disconnect the hood latch connector

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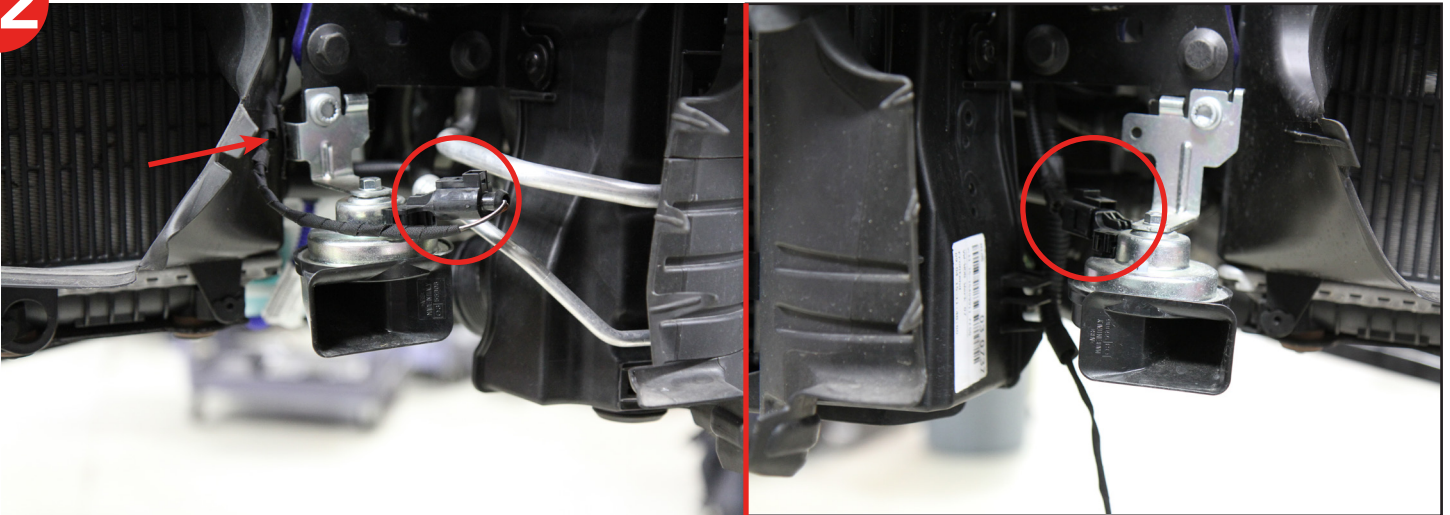
21. Disconnect the coolant pipe that runs across the top of the fan shroud. Remove the two T30 Torx screws. The coolant pipe does not have to be removed from the car, just disconnected from the fan shroud.

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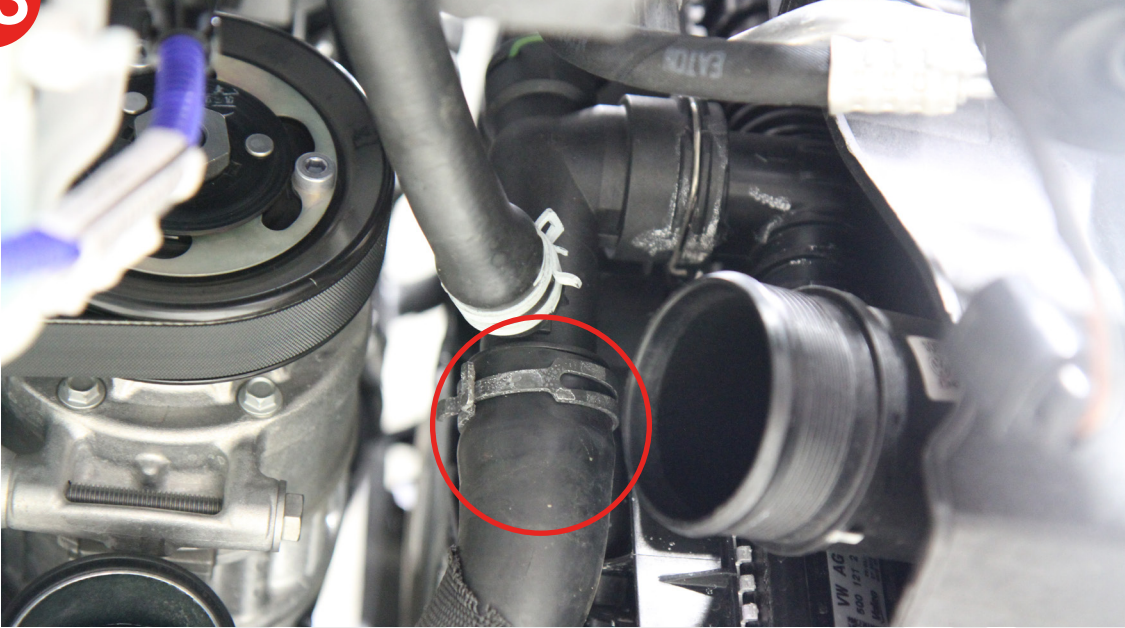
22. Disconnect both horn connectors and harnesses. The horns can remain bolted into place.

22



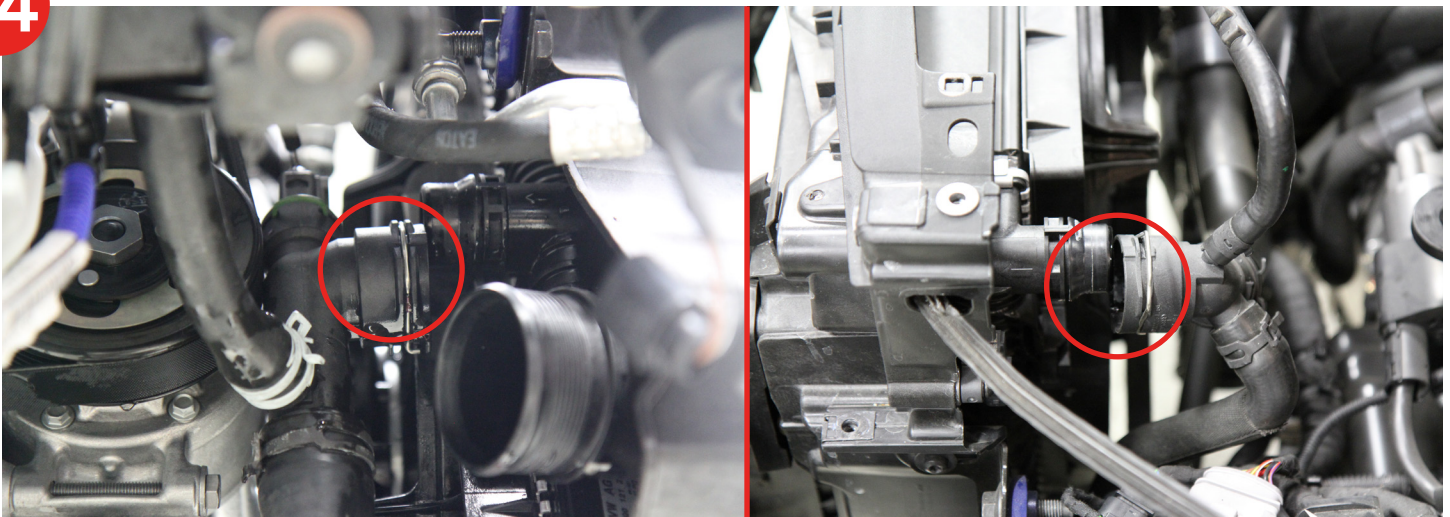
23. Drain the coolant. There is no drain plug so one of the radiator hoses will need to be removed. The lower hose shown in the picture below is best to remove. Remove the radiator cap to release any pressure then reinstall it. Reinstalling the radiator cap will make the coolant drain slower when the hose is pulled. There will be less of a mess.

23



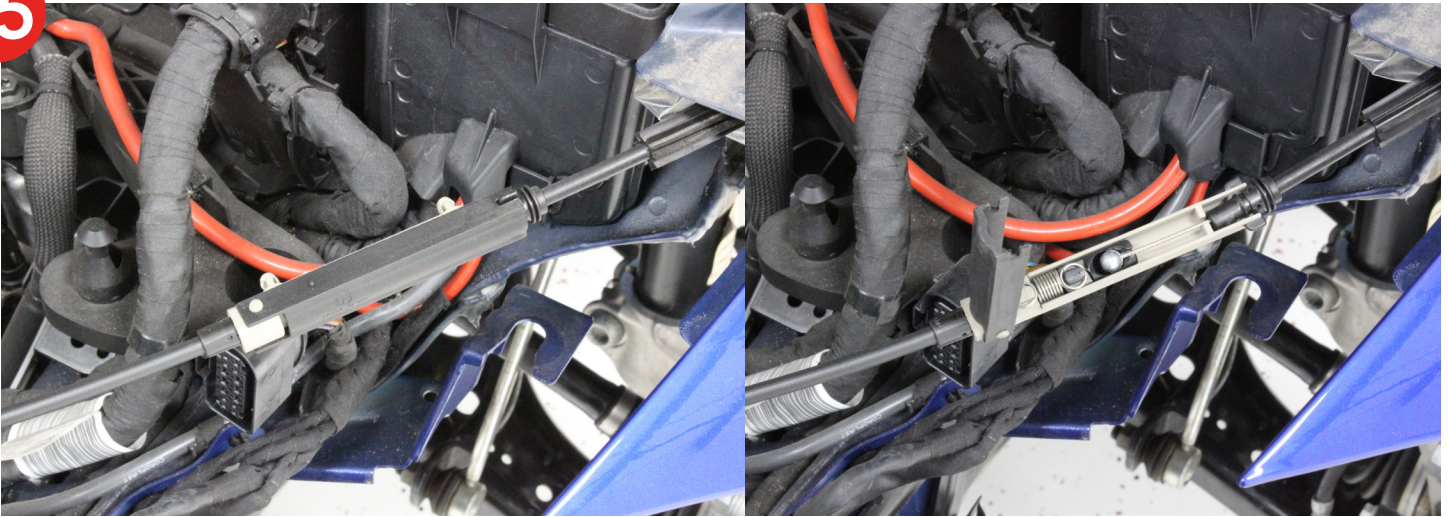
24. When the coolant is drained, reinstall the radiator hose. Disconnect both main radiator hose connections at the radiator quick connects by sliding out the metal retaining clip.

24



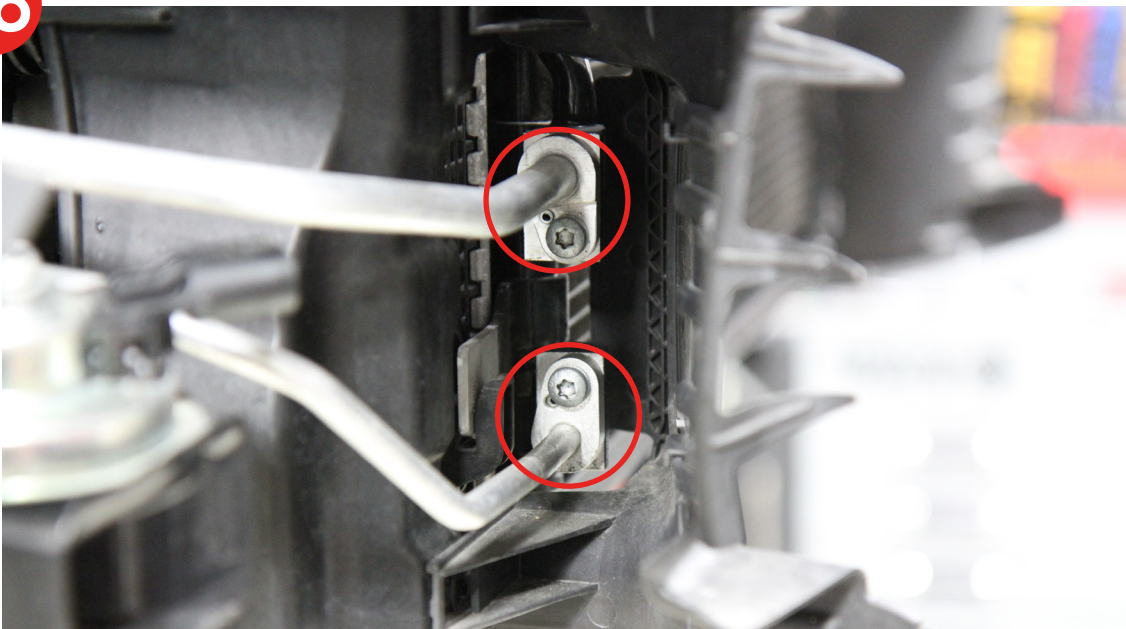
25. Disconnect the hood latch cable at the junction located on top of the left side headlight. There is a black half and a white half to the junction. Carefully pull the cable leading into the car out of the two halves. Pivot the black half upward to release the cable.

25



26. Make sure the A/C has been drained. Disconnect both A/C lines from the condenser from the right side by removing two T30 Torx bolts. Cap the lines and pull to the side. If any A/C oil was been lost, make a note so the correct amount of oil can be filled during charging.

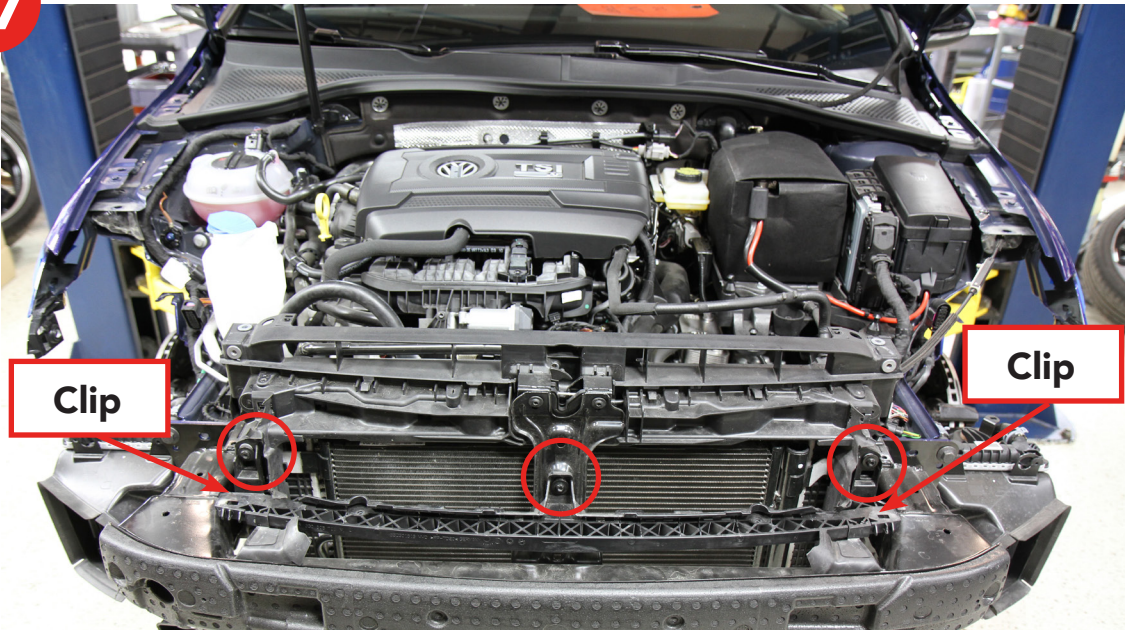
26



27. Remove the center bumper support from the core support. Remove the three T30 Torx bolts and release the two clips on each side under the outside bolts. Discard the center T30 Torx bolt. It will not be reused and a supplied bolt will be installed in its place during reassembly.

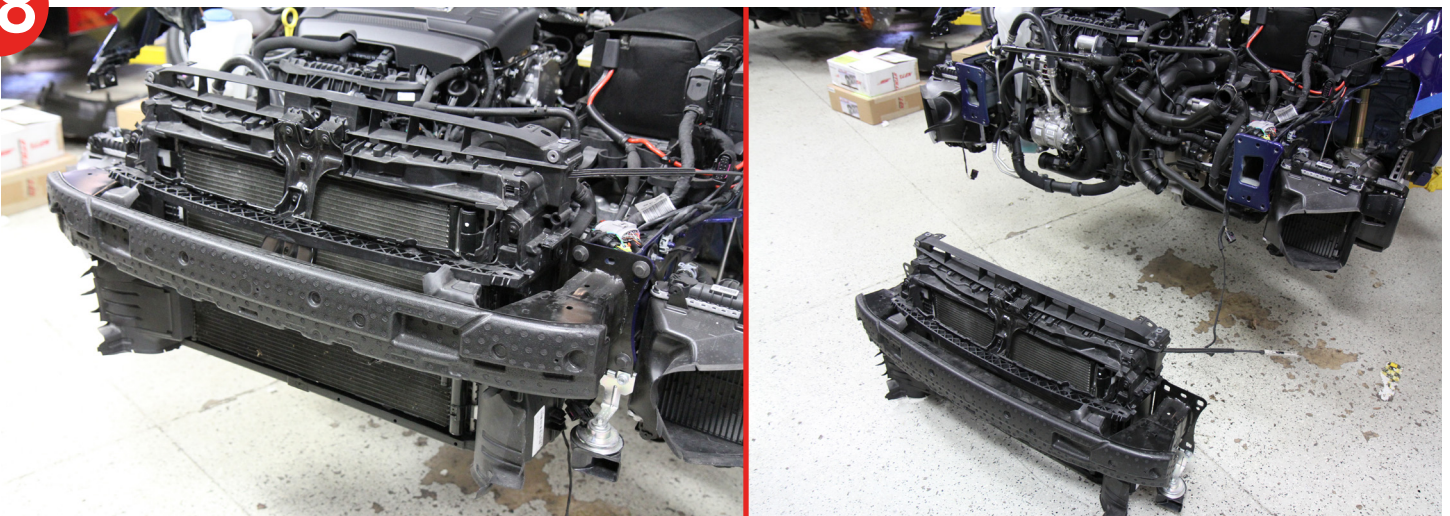
Note: If the center bolt is reused, it will make contact with you're A/C condenser and possibly cause a leak.

27



28. Double check to make sure everything is disconnected from the core support. The core support is heavy so make sure there is a second set of hands available. Remove the eight 16mm bolts from the crash beam. Make notes of bolt locations as there is a lot of adjustment in the core support here. Once unbolted, the entire core support and crash beam will be removed from the vehicle.

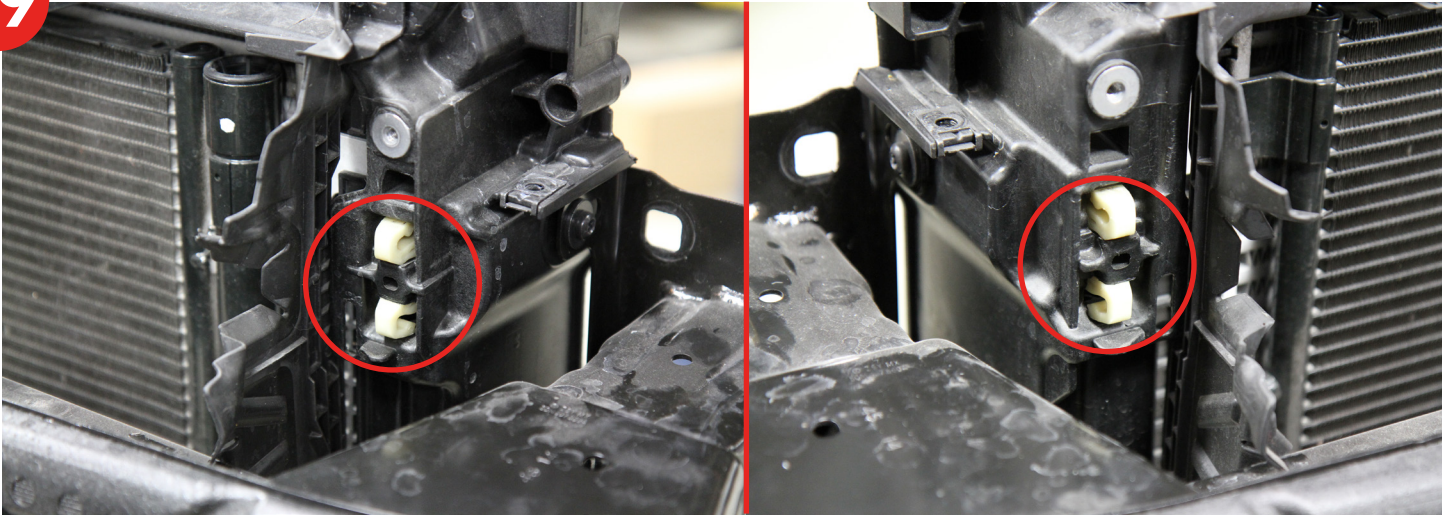
28



29. The condenser, intercooler, and radiator are all clipped together and will be removed from the core support as one assembly. From the front, carefully release the white clips with a flat head. Once released, tilt the assembly out of the core support and then lift upward off the lower rubber mounts.

a. It is common for the white clips crack or break. This is the VW part number for the replacement part, it is the same on both sides. **500 121 367 E**

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PERFORMANCE

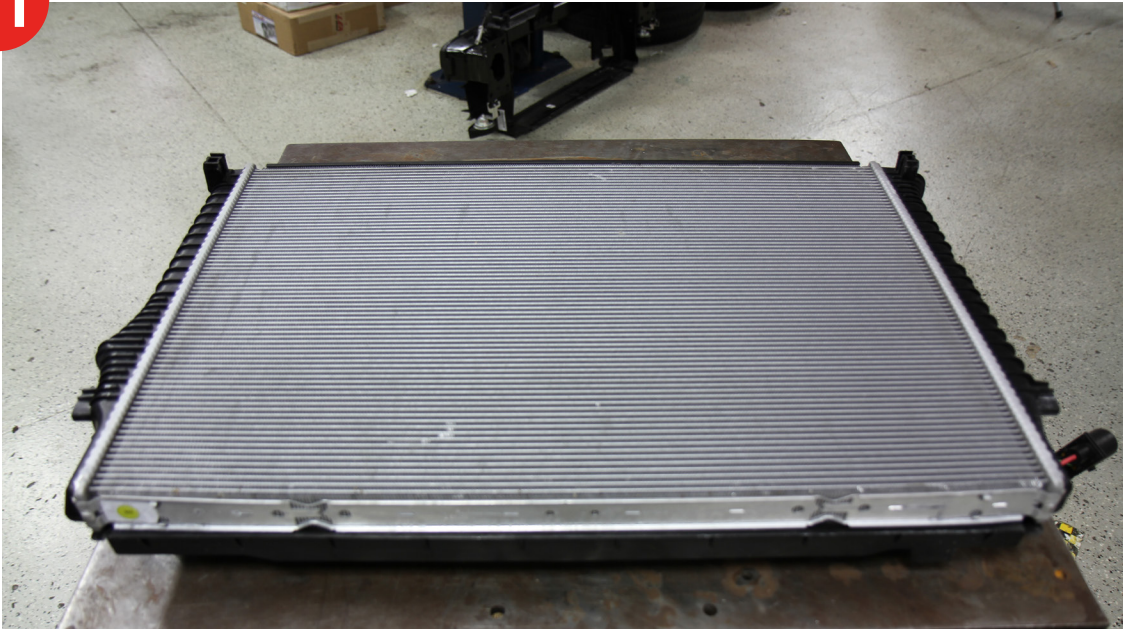
30. When the cooler assembly is removed from the core support, lie the assembly radiator fan side down on a table or floor. Start by removing the A/C condenser. Release the two clip at the top then slide the condenser upwards out of the intercooler brackets.

30



31. Next remove the intercooler from the radiator. Release the clips on the top and pull upward slightly away from the radiator. Next, slide the intercooler downwards off the radiator.

31



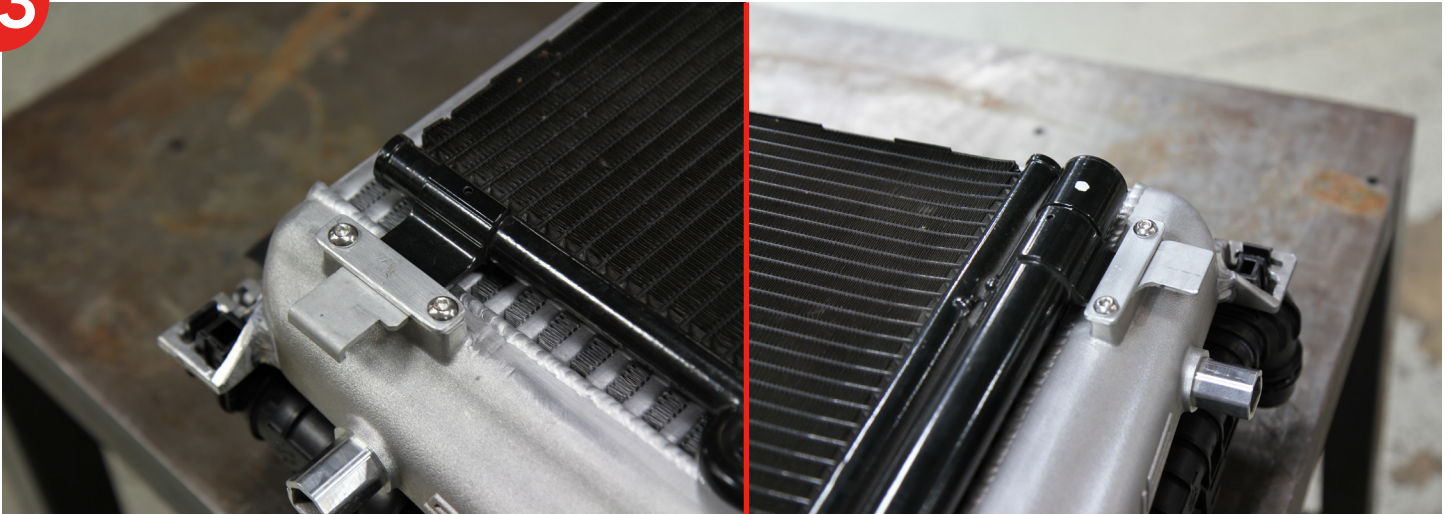
32. Install the AMS intercooler in the reverse order making sure the upper mounting clips are fully seated.

32



33. Reinstall the A/C condenser on to the intercooler. Locate the two retaining plates and four M5 button head bolts. Install the retaining plates and hardware to the upper A/C condenser mounts.

33



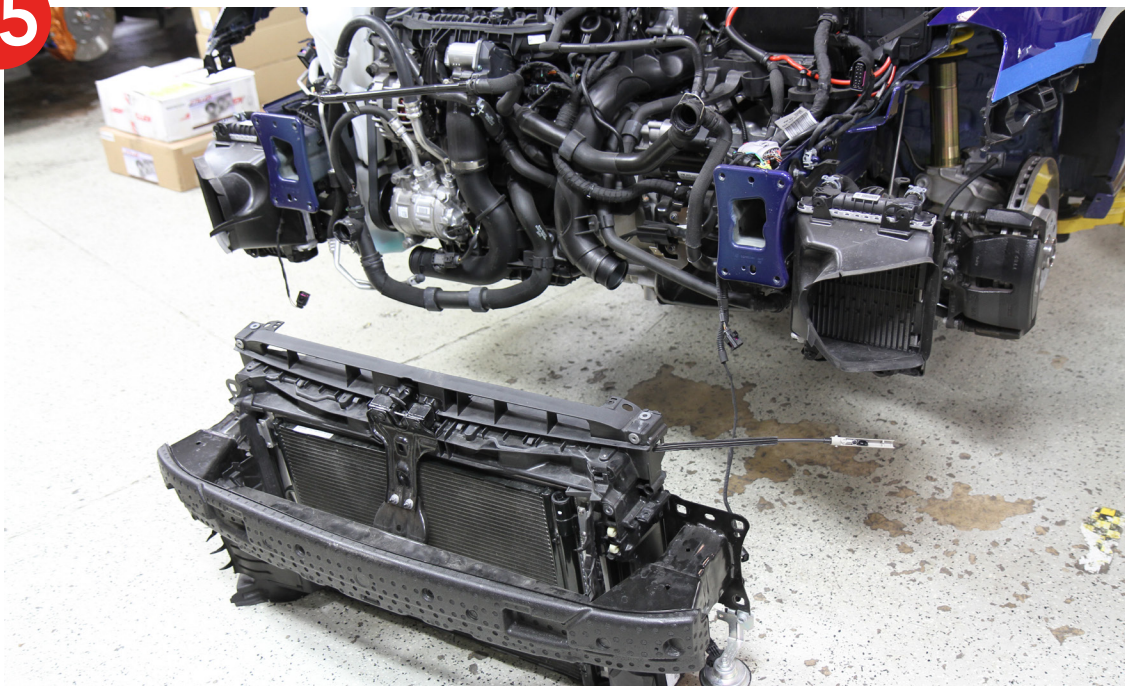
34. Reinstall the cooler assembly retaining clips. Replace is necessary.

34



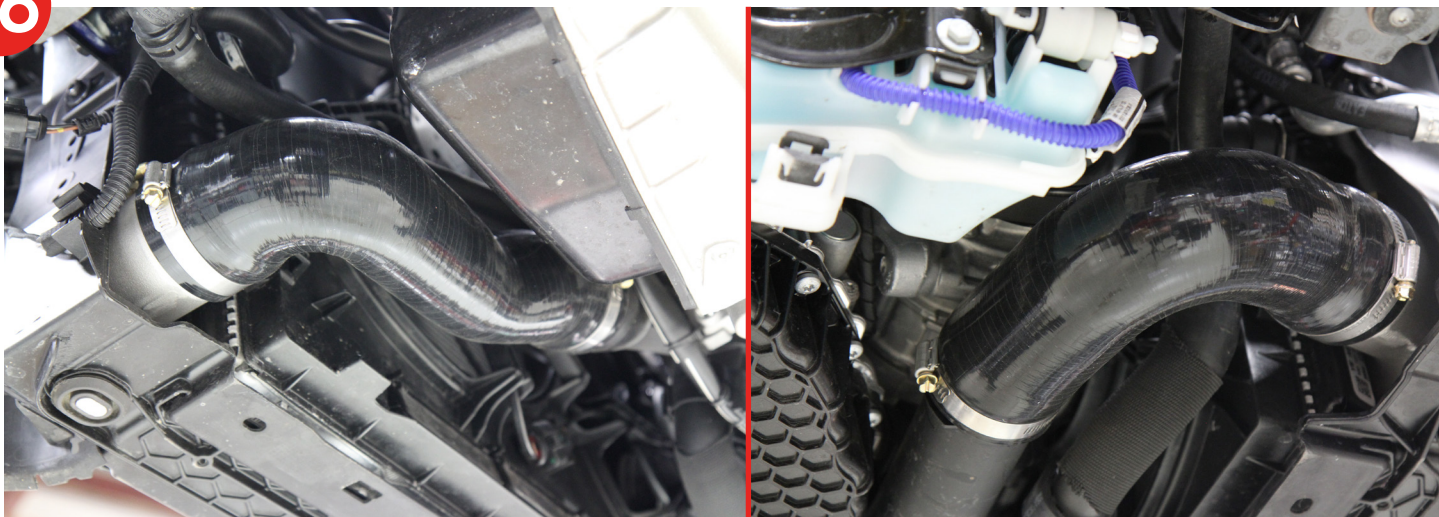
35. Reinstall the cooler assembly back into the core support making sure the retaining clips fully seat into place. Then reinstall the core support back into the car. Make sure to align the core support up with the original mounting bolt locations.

35

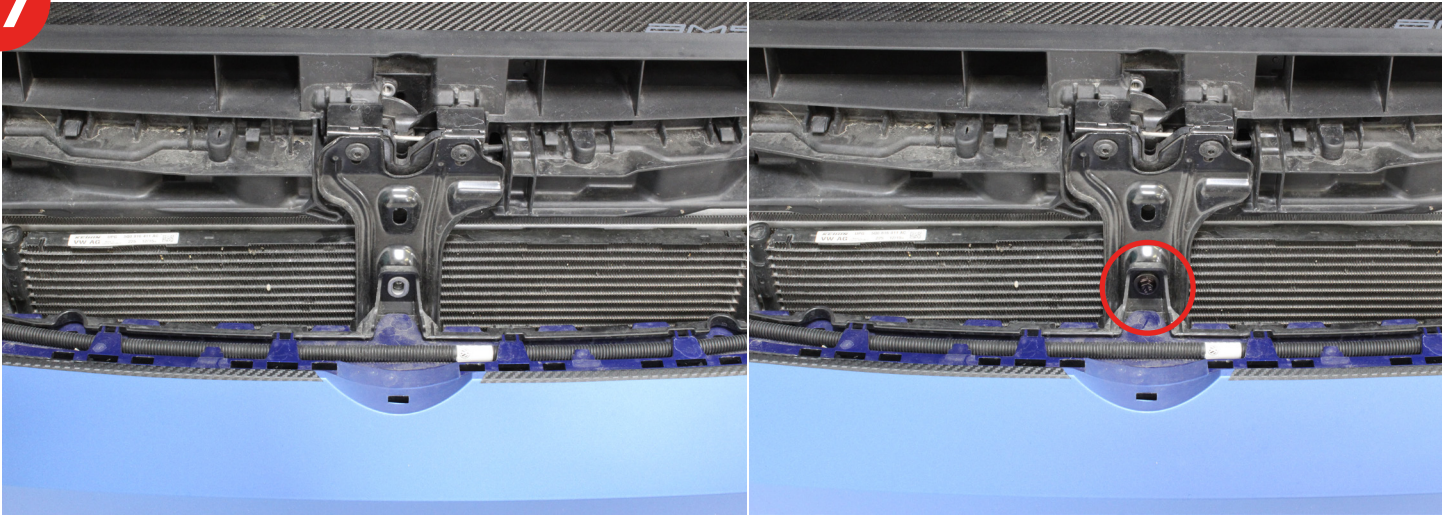


36. Locate both silicone couplers. Install the silicone couplers using the supplied hose clamps. Install the #44 clamps on the intercooler side and the #36 clamps on the vehicle side. The silicone couplers can only be installed one way. Torque the hose clamps to 40 lb-in or 4.5 N-m.

36



37



37. During reassembly, make sure to install the new supplied M6 black bolt and washer in the center bumper support. This was the bolt discarded in step # 27. This bolt is shorter and will not cause any potential issues with the A/C condenser.

38. At this point the intercooler installation is complete and everything may be reinstalled in the reverse order removed. The last step will be to reconnect the battery, charge the A/C, fill, and bleed the coolant system.

39. Double check the installation and all connections.

40. Enjoy your new AMS Performance parts.

