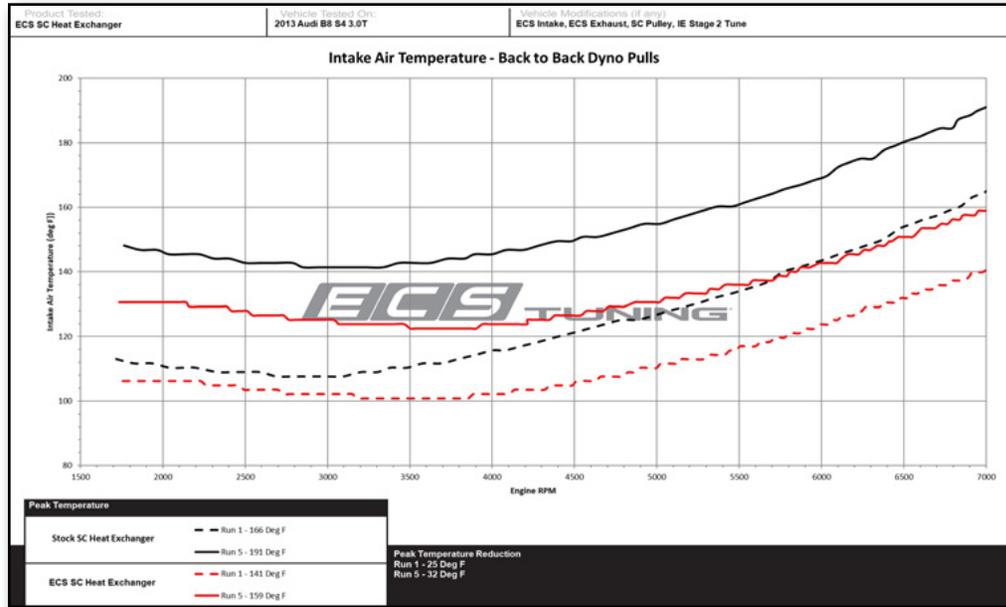




Audi B8 S4 3.0T Performance Supercharger Cooling Kit Installation Instructions - [Click HERE to Shop](#)



Skill Level
2 - Moderate
Some Experience
Recommended



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.

INTRODUCTION

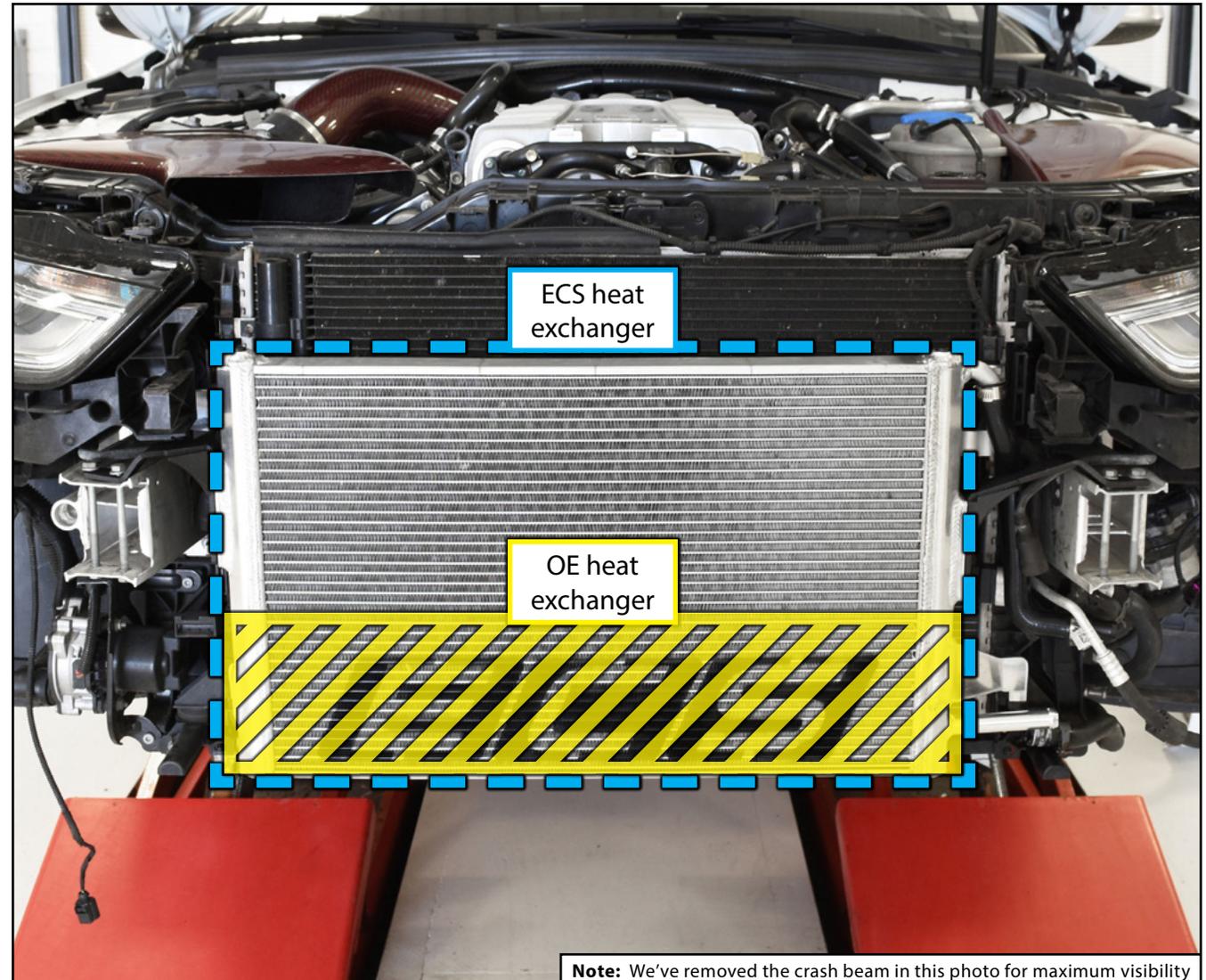
ECS Tuning 3.0T Performance Supercharger Cooling Kit

If you've been thinking about (or have already) upgrading the pulleys on your 3.0T, you need to upgrade the cooling system to keep your IAT's (Intake Air Temperature) under control.

The OE heat exchanger (highlighted in **YELLOW** in the photo on the right) is significantly smaller than our upgraded unit (represented with the **BLUE** dotted line). Our heat exchanger has been shown to reduce IAT's by as much as 32° F*. Cooler air is denser air, so you may literally be leaving horsepower on the table without upgrading the cooling system.

This upgrade is **STRONGLY** recommended for 3.0T dual pulley setups.

Thank you for looking to ECS Tuning for all your performance and repair needs, we appreciate your business!



*Testing performed by our R&D department. See the IAT graph in the photo reel of [ES#3569216](#), [ES#3569215](#), or [ES#4305066](#).

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RELATED UPGRADES/TOOLS



ECS 3.0T Supercharger Pulley
[Click HERE to Shop](#)

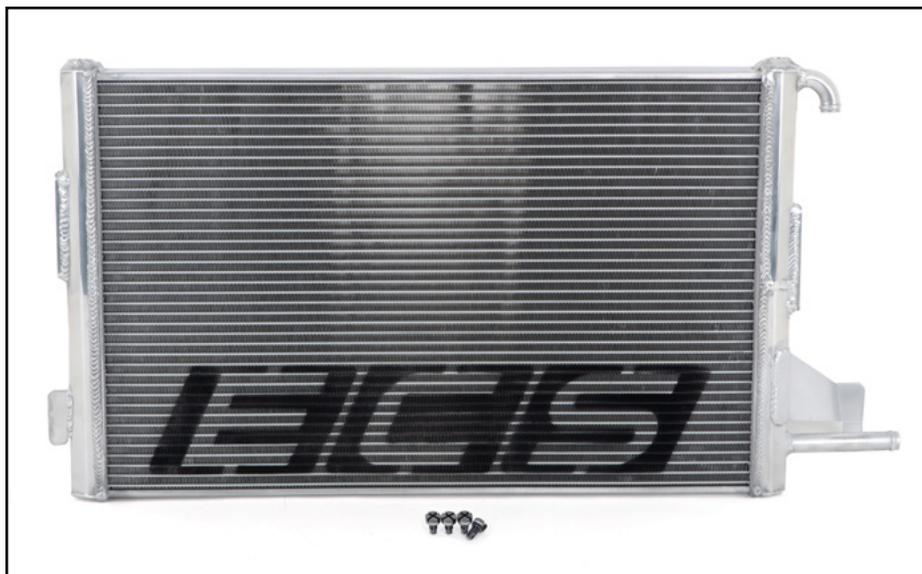


Schwaben 3.0T Supercharger Pulley Tool
[ES#3559093](#)

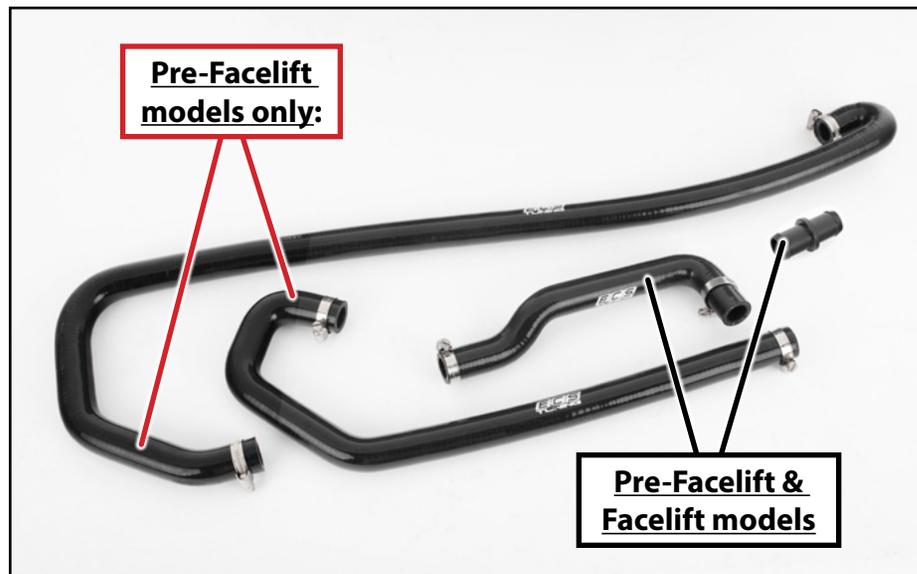


ECS 3.0T Overdrive Crank Pulley
[Click HERE to Shop](#)

KIT CONTENTS



Upgraded 3.0T Supercharger Heat Exchanger (QTY 1)
Billet Bleeder Screws for Supercharger & Heat Exchanger (QTY 4)



Silicone Coolant Hoses, Clamps, & Hose Union



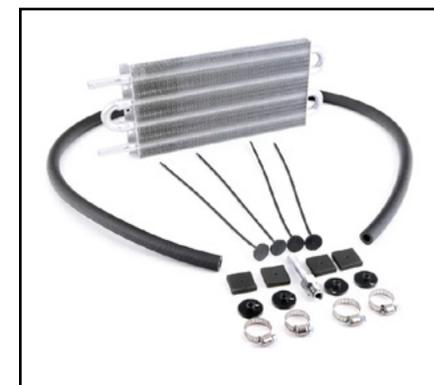
Heat Exchanger Mounting Brackets (QTY 2)



Mounting Hardware



Power Steering Hose Union* (QTY 2)



Power Steering Cooler Kit*

*For Pre-Facelift B8 3.0T w/ADS only. Details on [Page 11](#) & [Page 22](#).

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

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.

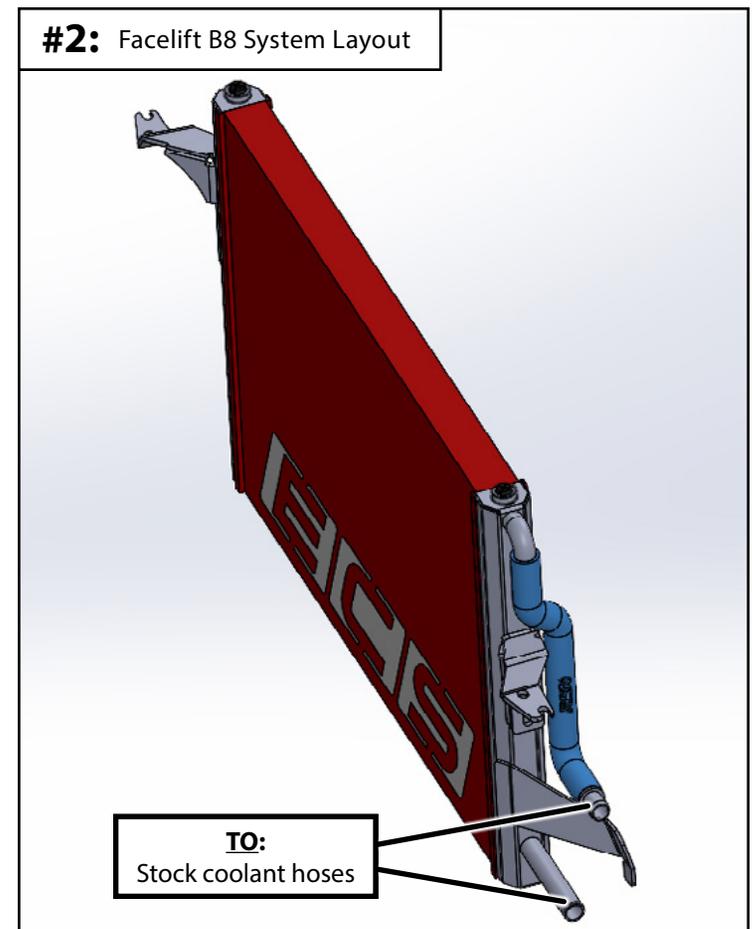
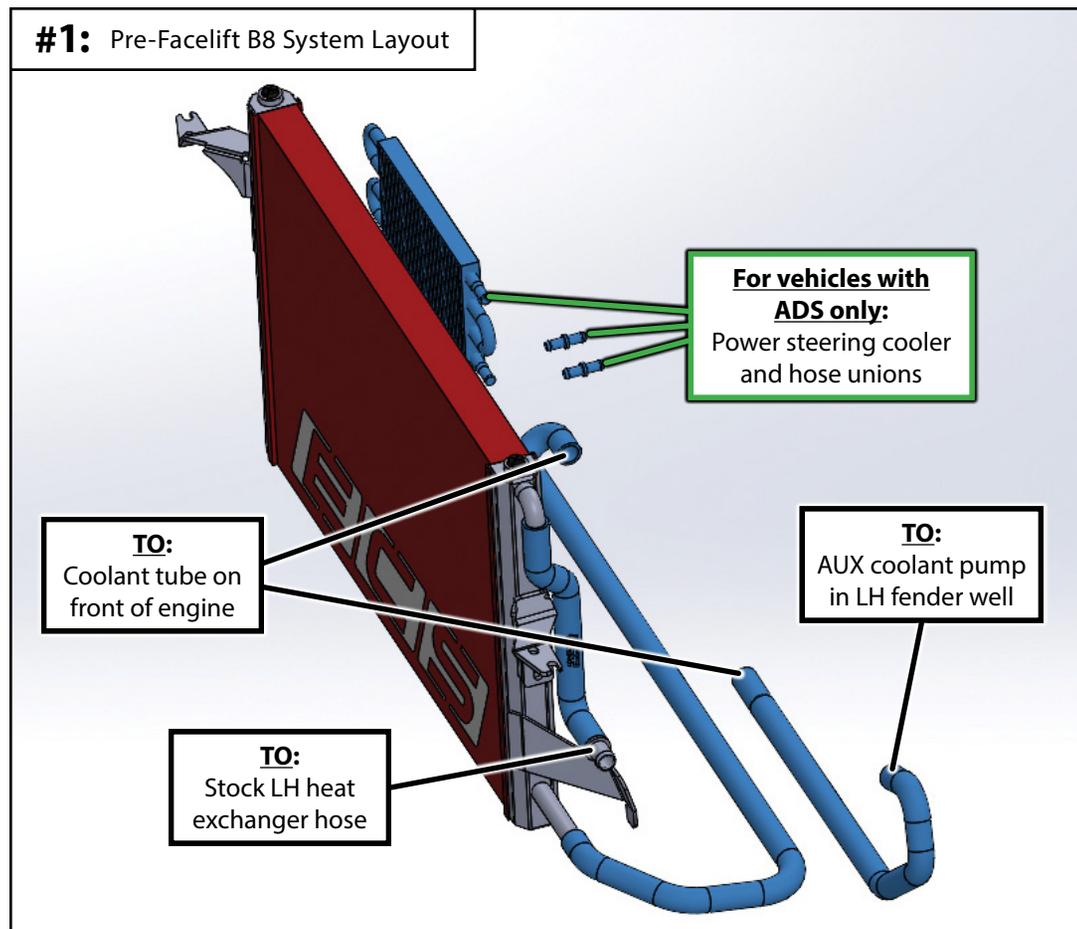


NEVER get underneath a vehicle that is supported only by a jack, and **ALWAYS** make sure that the vehicle is securely supported on jack stands.

PROJECT OVERVIEW

Before we begin, let's take a moment and compare the cooling system in a Pre-Facelift B8 S4 (**Photo #1**) vs. a Facelift B8 S4 (**Photo #1**, AKA: B8.5 S4). Please note that the power steering cooler and hose unions (highlighted in **GREEN**) are only applicable to Pre-Facelift vehicles with Audi Drive Select (ADS).

The photos below show the approximate hose routing for each system, as well as where the hoses will connect to once installed. Don't forget to refer back to these photos if you need clarity at any point during the install.





Please read this entire page before proceeding



REMOVING THE STOCK HEAT EXCHANGER

Step 1:

The front bumper cover will need to be removed for this install. Here's a quick list of what you'll need to do:

- Disconnect the negative battery terminal (**Photo #1**).
- Remove the air box and radiator shroud cover.
- Lift the vehicle, then remove the belly pans and front wheels.
- Remove the screws from the radiator support braces.
- Remove the screws from the front of the inner fender liners, peel the liners back slightly, then loosen the 10mm nuts which secure the bumper cover to the fenders.
- Unplug the fog lights.
- Release the front bumper cover from each fender.
- Slide the bumper cover off of the vehicle, disconnect any electrical connectors, then remove the bumper cover and set it aside (**Photo #2**).



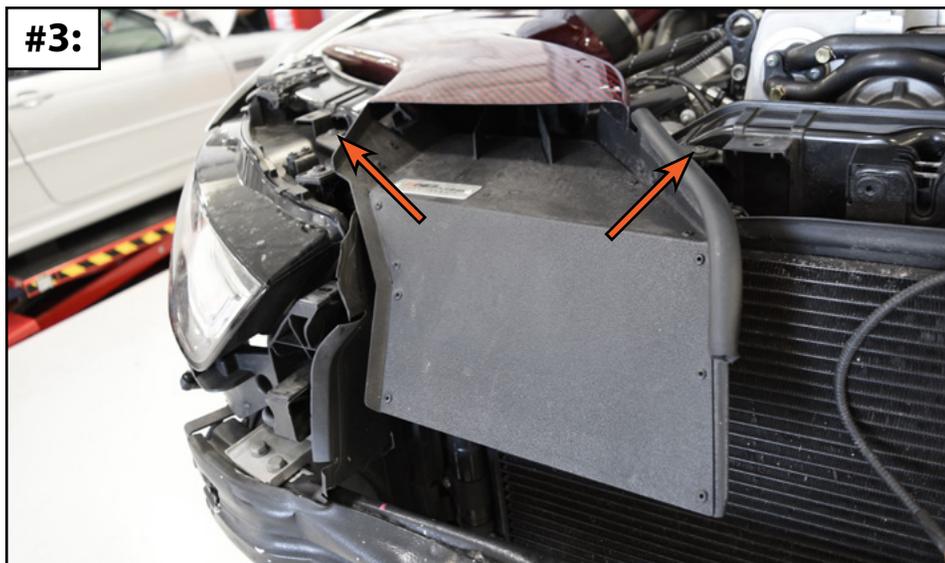
REMOVING THE STOCK HEAT EXCHANGER

Step 2:

Locate the coolant hoses on the LH side of the heat exchanger (**Photo #1**).

Disconnect both hoses and let them drain (**Photo #2**), this will make a mess so be sure to have a bucket or drain pan ready to go.

Remove the two screws which secure the front air scoop in place (if equipped, **Photo #3**).



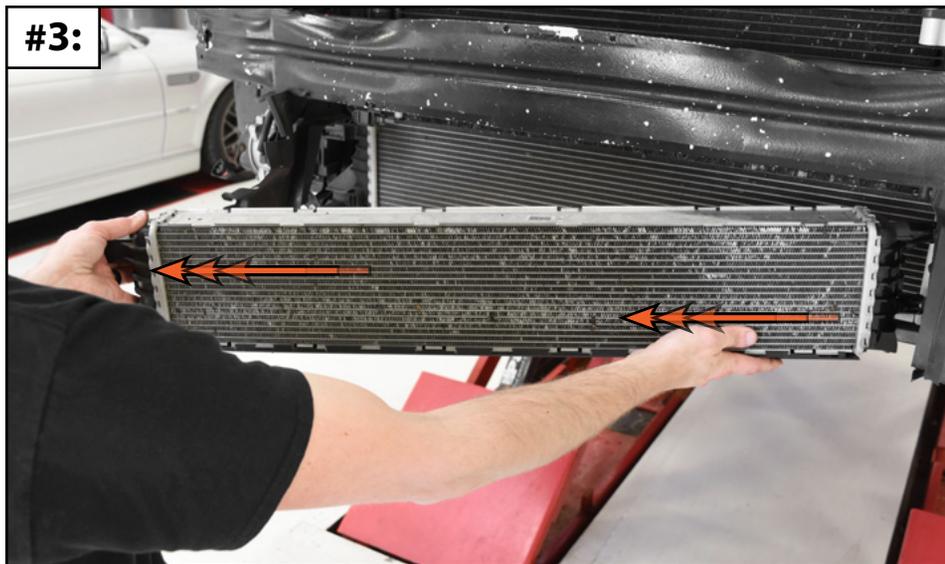
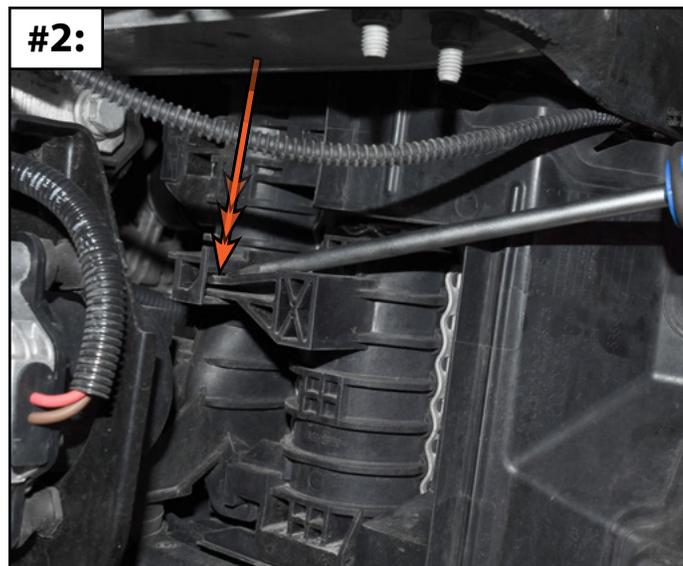
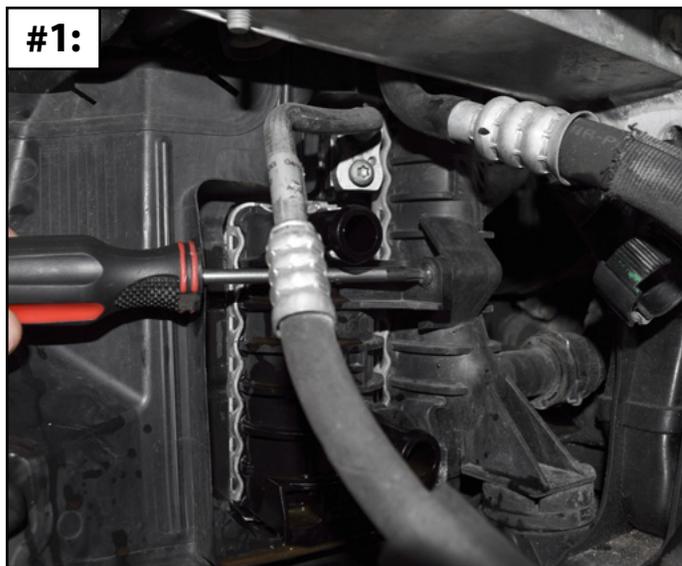
REMOVING THE STOCK HEAT EXCHANGER

Step 3:

Remove the T30 Torx screw which secures the heat exchanger on the LH side (**Photo #1**).

Gently pry downward on the mounting tab on the RH side of the heat exchanger to release it (**Photo #2**).

Remove the heat exchanger from the vehicle (**Photo #3**). Make sure it is clear of the air dams on either side before you pull it out of the lock carrier.



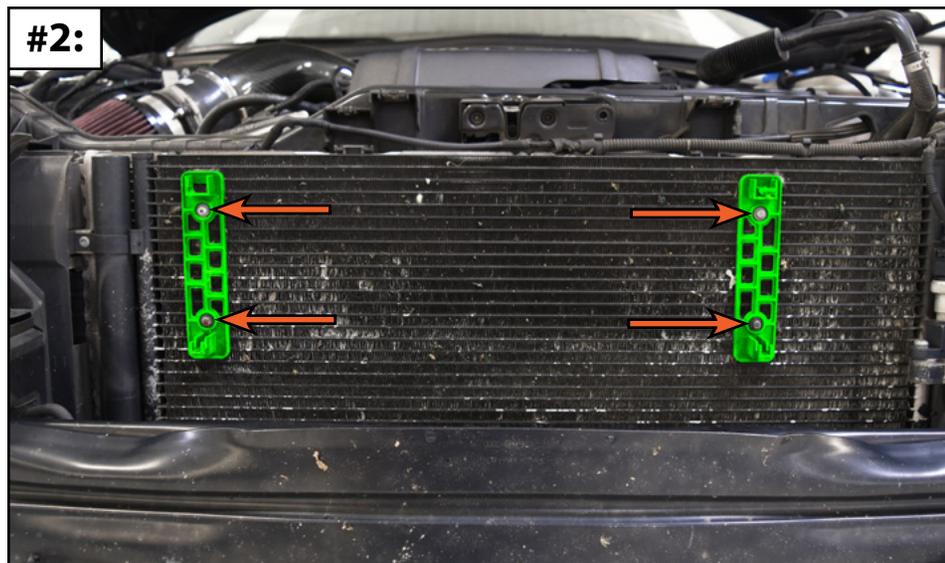
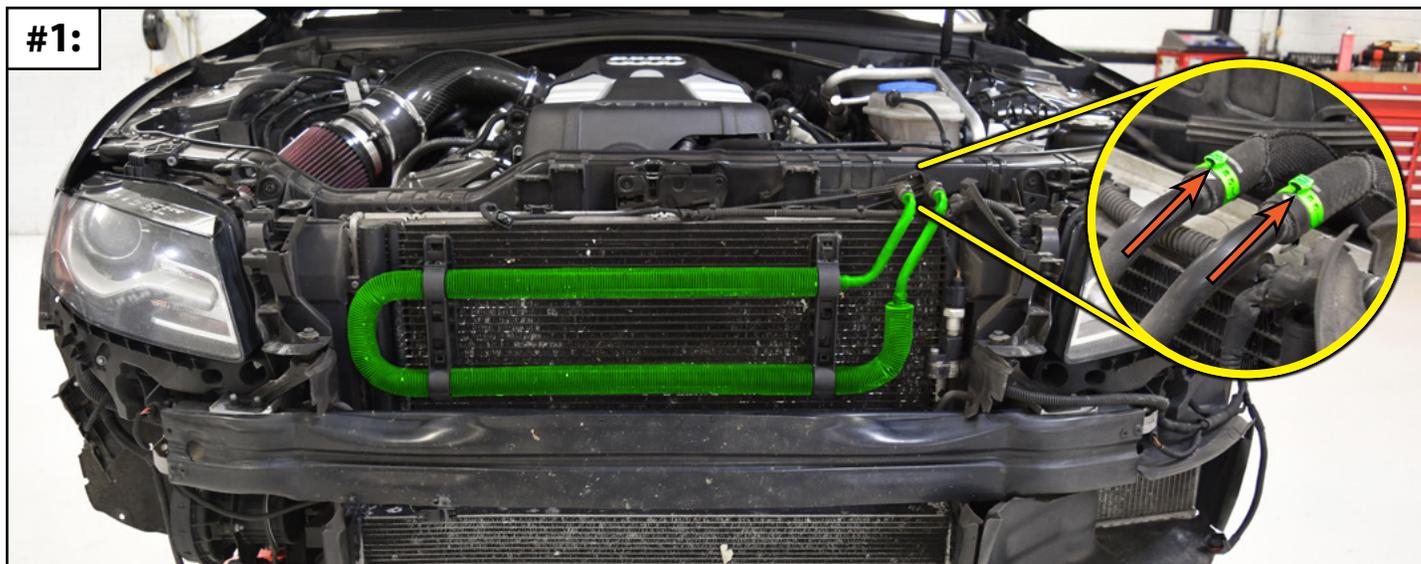
REMOVING THE STOCK POWER STEERING COOLER

Step 1:

Pre-Facelift B8 S4s w/Audi Drive Select (ADS) only:

If your S4 is equipped with hydraulic power steering you will need to remove the stock power steering cooler (highlighted in **GREEN** in **Photo #1**) and install the new one which is provided in the kit. To do this you will need to loosen or cut the hose clamps off of the two power steering hoses (highlighted in **GREEN** in the inset photo). We recommend using locking hose pinch-off pliers to help minimize the spilled power steering fluid.

Release the clips which secure the cooler onto the brackets on the A/C condenser (not shown). Remove the mounting brackets from the front of the condenser (highlighted in **GREEN** in **Photo #2**). You can either drill out the rivets (arrows) and completely remove the brackets, or you can cut the ears off to gain the clearance you need for the new heat exchanger and power steering cooler.



INSTALLING THE NEW UPGRADED HEAT EXCHANGER

Step 1: T20 Torx

If you have an auxiliary heat exchanger (highlighted in **GREEN** in **Photo #1**) on the LH side of the vehicle you can remove it, our new hose set will bypass this exchanger.

To remove the auxiliary heat exchanger you will need to:

- Drain the coolant.
- Disconnect the two hoses from the exchanger.
- Remove the two T20 Torx screws from below (highlighted in **GREEN** in **Photo #2**).
- Remove the heat exchanger from the vehicle.
- Remove the auxiliary heat exchanger hoses from the vehicle.

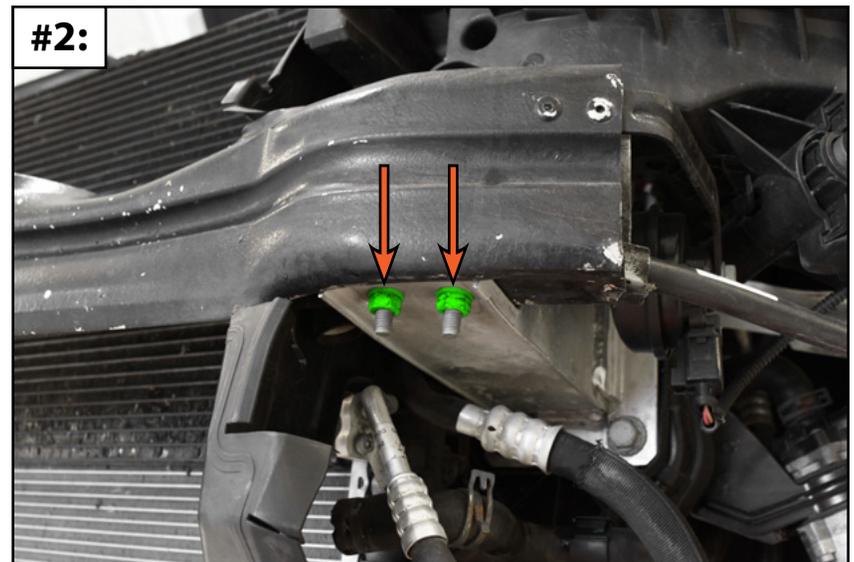
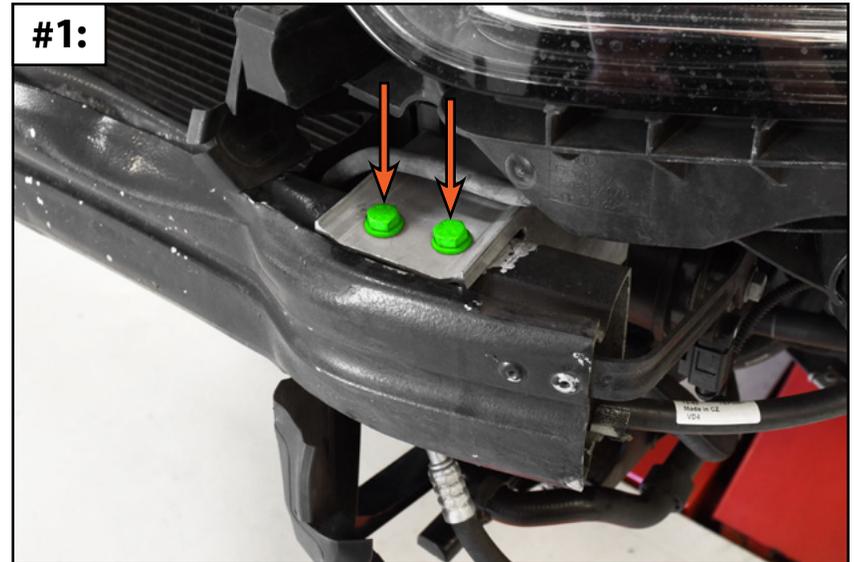


INSTALLING THE NEW UPGRADED HEAT EXCHANGER

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

Remove the four bolts which secure the front crash beam to the LH and RH support brackets (**Photos #1 & #2**).

You can leave the crash beam installed in the vehicle. The new heat exchanger mounting brackets will utilize these bolt locations.

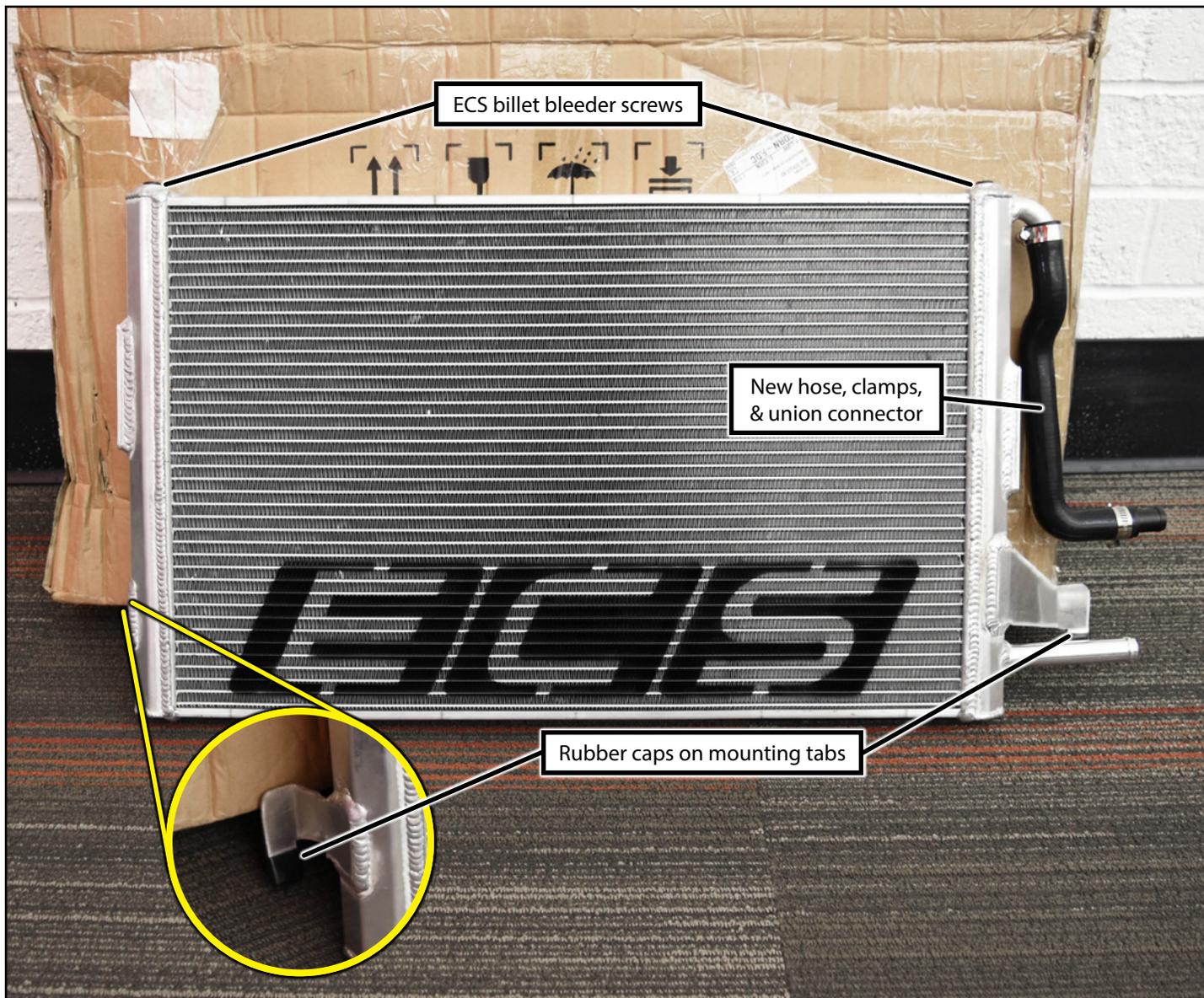


INSTALLING THE NEW UPGRADED HEAT EXCHANGER

Step 3:

Now let's prep the new heat exchanger for install.

Install the supplied billet bleeder screws into the heat exchanger side tanks. Install the new silicone hose and union connector onto the upper connection, and slip a rubber cap onto each mounting tab (reference the **YELLOW** inset photo).



INSTALLING THE NEW UPGRADED HEAT EXCHANGER

Step 4:

Working from below, carefully lift the new heat exchanger into place (**Photo #1**), then slide the two mounting tabs into place inside the lock carrier (**Photos #2 and #3**).

This will be enough to hold the exchanger in place while we move on to the mounting brackets on the next page.



If you have a Facelift B8 S4:

- Please proceed to the next page.

If you have a Pre-Facelift B8 S4 which is equipped with Audi Drive Select (ADS):

- Please skip ahead to [Page 22](#) for instructions on installing the provided power steering cooler.



INSTALLING THE NEW UPGRADED HEAT EXCHANGER

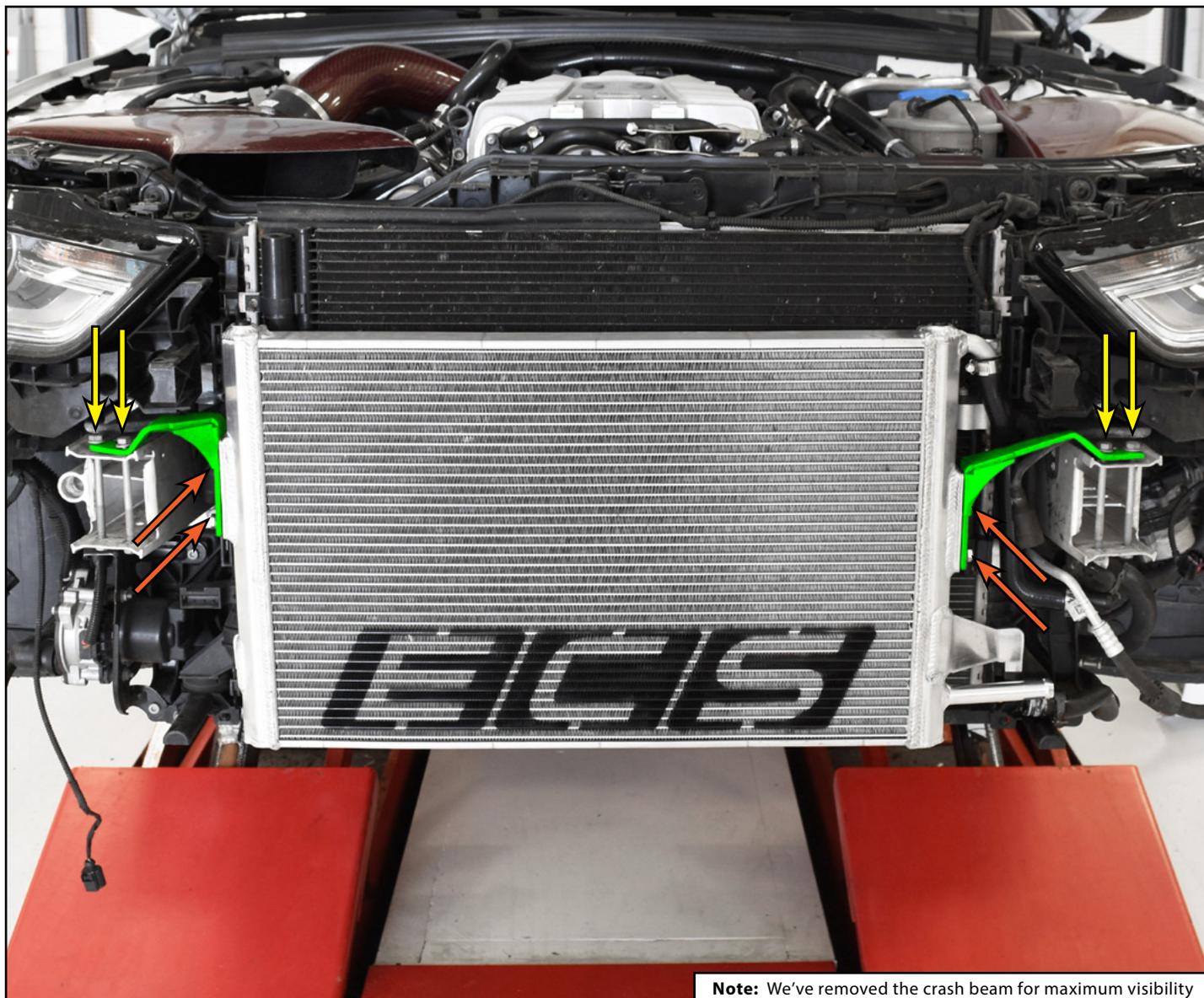
Step 5:

Loosely install the two heat exchanger mounting brackets (highlighted in **GREEN**). Thread in the included M8x12mm bolts and flat washers to secure the brackets to the side tanks (**ORANGE** arrows), and reuse the OE crash beam bolts to secure the other ends of the brackets (**YELLOW** arrows).

Due to differences in manufacturing tolerances, you may find it difficult to line up the crash beam bolts with the holes in the mounting brackets. It helps to have a second set of hands to help manipulate the exchanger and get the bolts started.



Please see the next page for Pre-Facelift specific mounting notes.



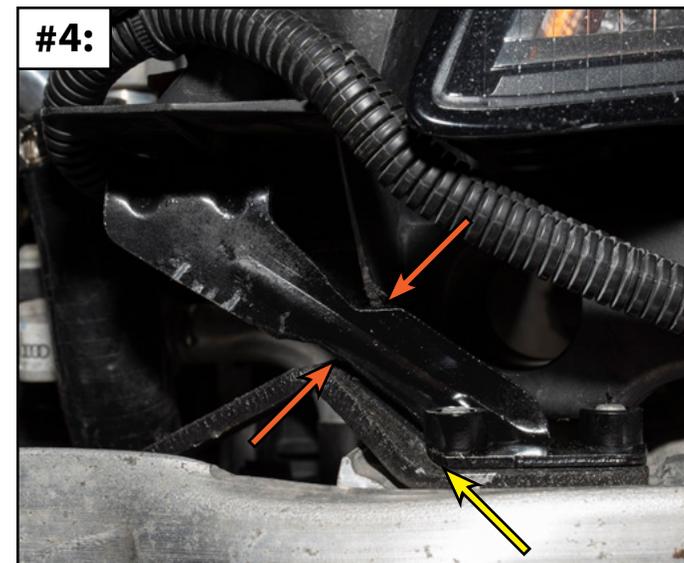
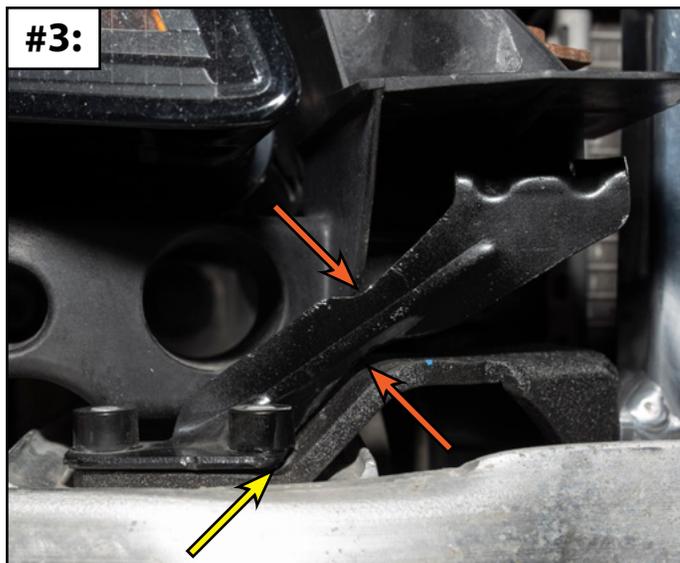
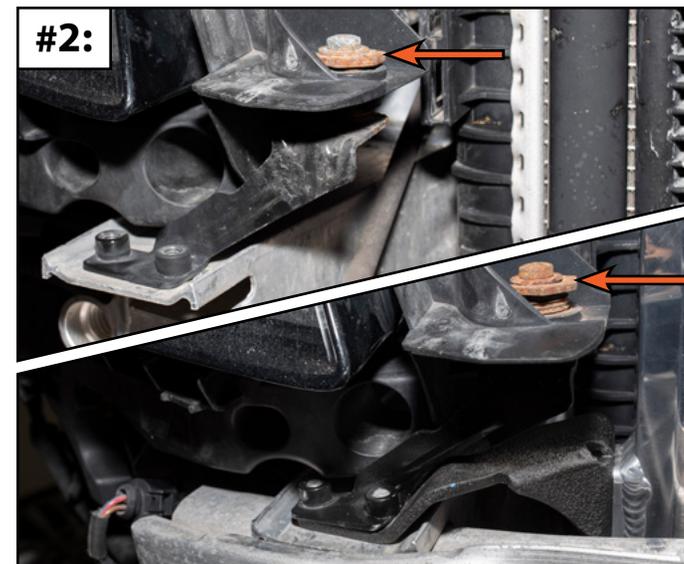
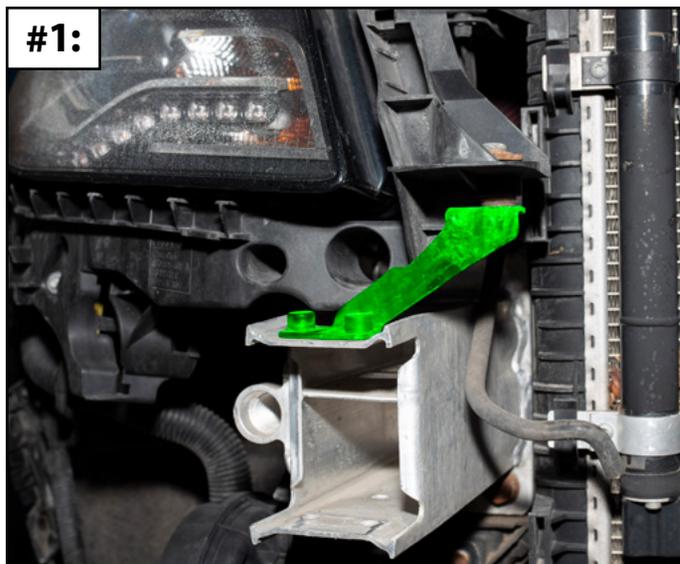
Note: We've removed the crash beam for maximum visibility

INSTALLING THE NEW UPGRADED HEAT EXCHANGER

Step 6:

Pre-Facelift models have a support bracket underneath the inside corner of each headlight (highlighted in **GREEN** in **Photo #1**). These brackets interfere with the heat exchanger mounting brackets, so they need to be slightly modified. You'll also need to loosen the T30 bolt, then thread out the 23mm adjuster (**ORANGE** arrows in **Photo #2**) to account for the thickness of the new heat exchanger mounting brackets.

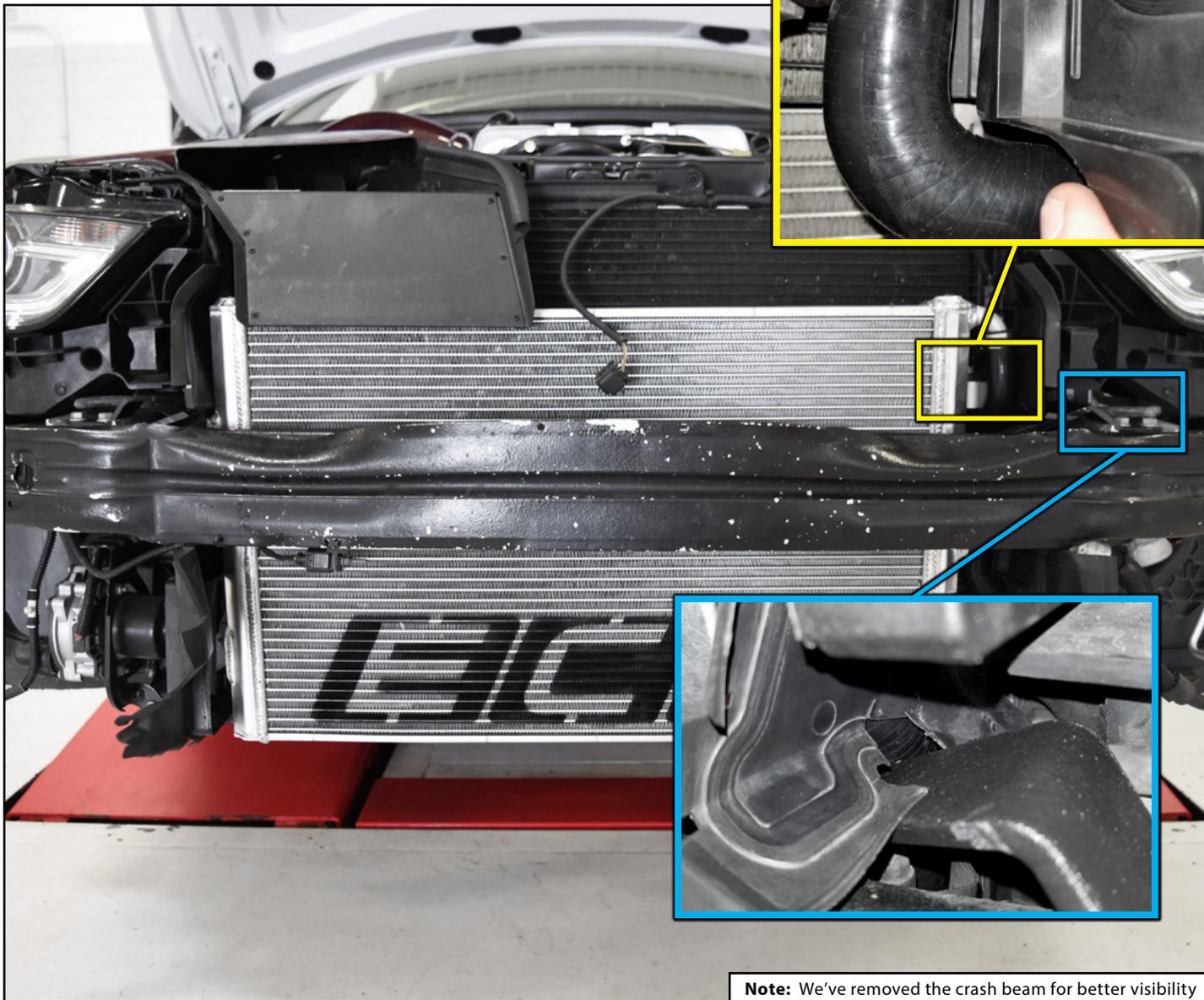
Using a Dremel or cut-off wheel, grind away material from the support bracket until it clears the heat exchanger bracket and the headlight bucket (**ORANGE** arrows in **Photo #3 & Photo #4**). We also found that putting a 45° chamfer along the inside lower edge (**YELLOW** arrows in **Photo #3 & Photo #4**) was especially helpful to get it to clear.



INSTALLING THE NEW UPGRADED HEAT EXCHANGER

Step 7:

You may find that you'll need to trim the air dam on the LH side of the heat exchanger for clearance around the silicone hose (**YELLOW** inset photo) and the mounting bracket (**BLUE** inset photo).



INSTALLING THE NEW UPGRADED HEAT EXCHANGER

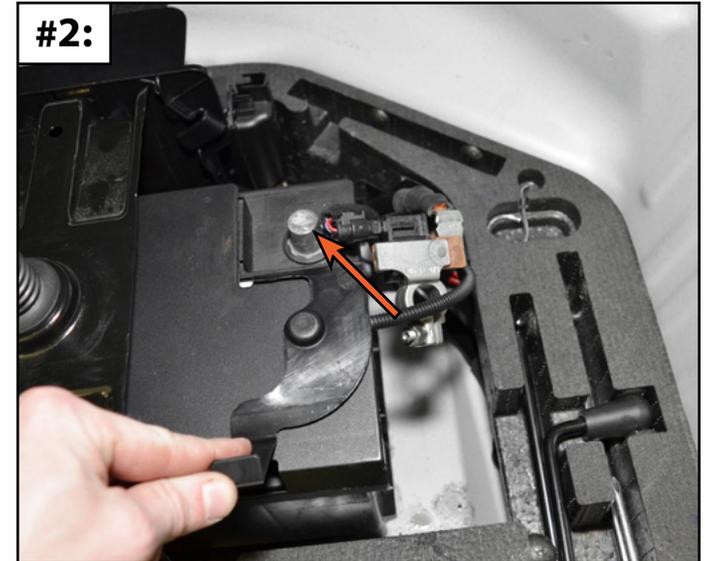
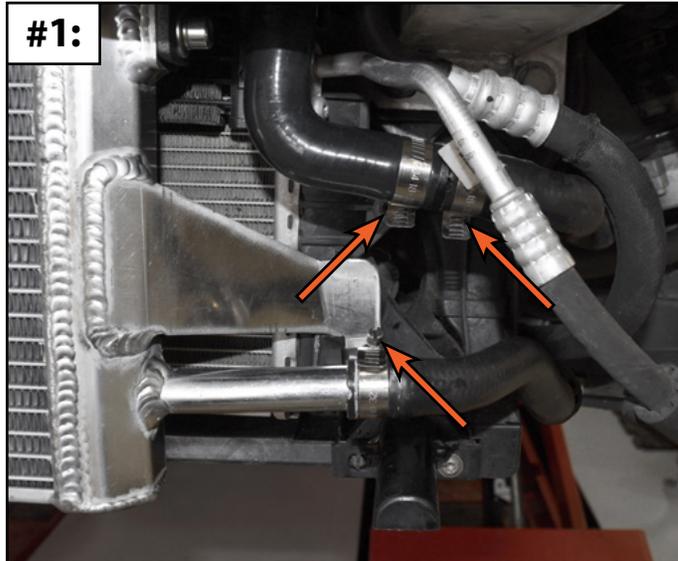
Step 8:

Connect the coolant hoses to the new heat exchanger (as outlined on [Page 7](#)), then tighten the clamps until snug (arrows in **Photo #1**).

Reconnect the negative battery terminal (arrow in **Photo #2**).

Remove the bleeder screws from the supercharger (highlighted in **GREEN** in **Photo #3**) and replace them with the supplied billet bleeder screws.

Proceed to the next page for instructions on bleeding the cooling system.

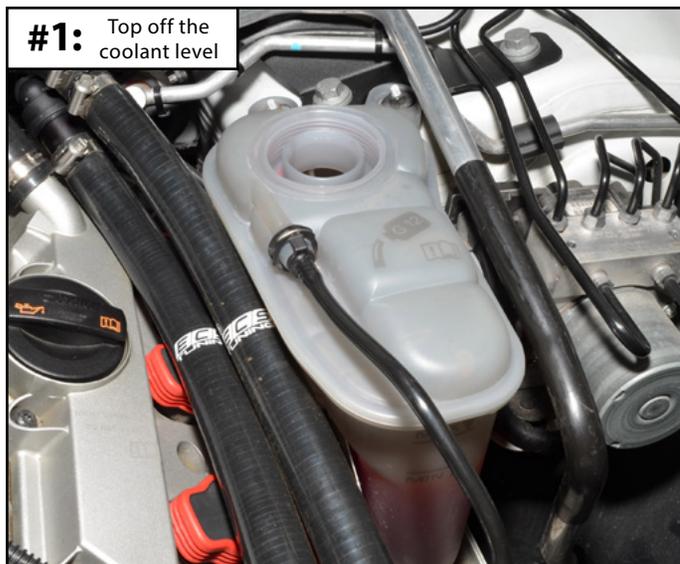


BLEEDING THE SUPERCHARGER COOLING SYSTEM

Step 1:

Double check all of your hose connections and make sure they're tight. Refill the cooling system (**Photo #1**), our Schwaben Coolant Refill/Air Purge Tool ([ES#2712734](#)) is perfect for this job! Next, place the key in the ignition and set it to **ON**, but do not start the engine (**Photo #2**). This will cycle the auxiliary coolant pump for approximately 10 minutes, circulating coolant through the supercharger cooling system.

Place a drain pan underneath the heat exchanger, then open the LH bleeder screw. Close the bleeder once air bubbles no longer appear in the flow (**Photo #3**). Repeat this process on the RH bleeder. Repeat this again on the two supercharger bleeder screws (**Photo #4**). We usually place a towel or rag behind the supercharger to help minimize the mess.



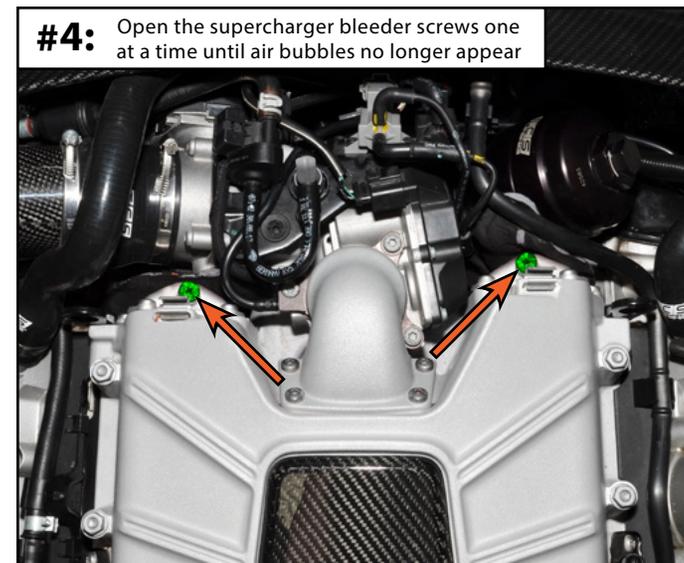
#1: Top off the coolant level



#2: Key ON, engine OFF



#3: Open the heat exchanger bleeder screws one at a time until air bubbles no longer appear



#4: Open the supercharger bleeder screws one at a time until air bubbles no longer appear

REASSEMBLY PROCEDURE

Step 1:

Reinstall the bumper cover, radiator support braces, belly pans, front wheels, air scoop (if equipped), radiator shroud, and the air box.

Reinstall any other components you may have removed, then road test the vehicle and inspect for leaks at all connection points.

Your installation is complete!



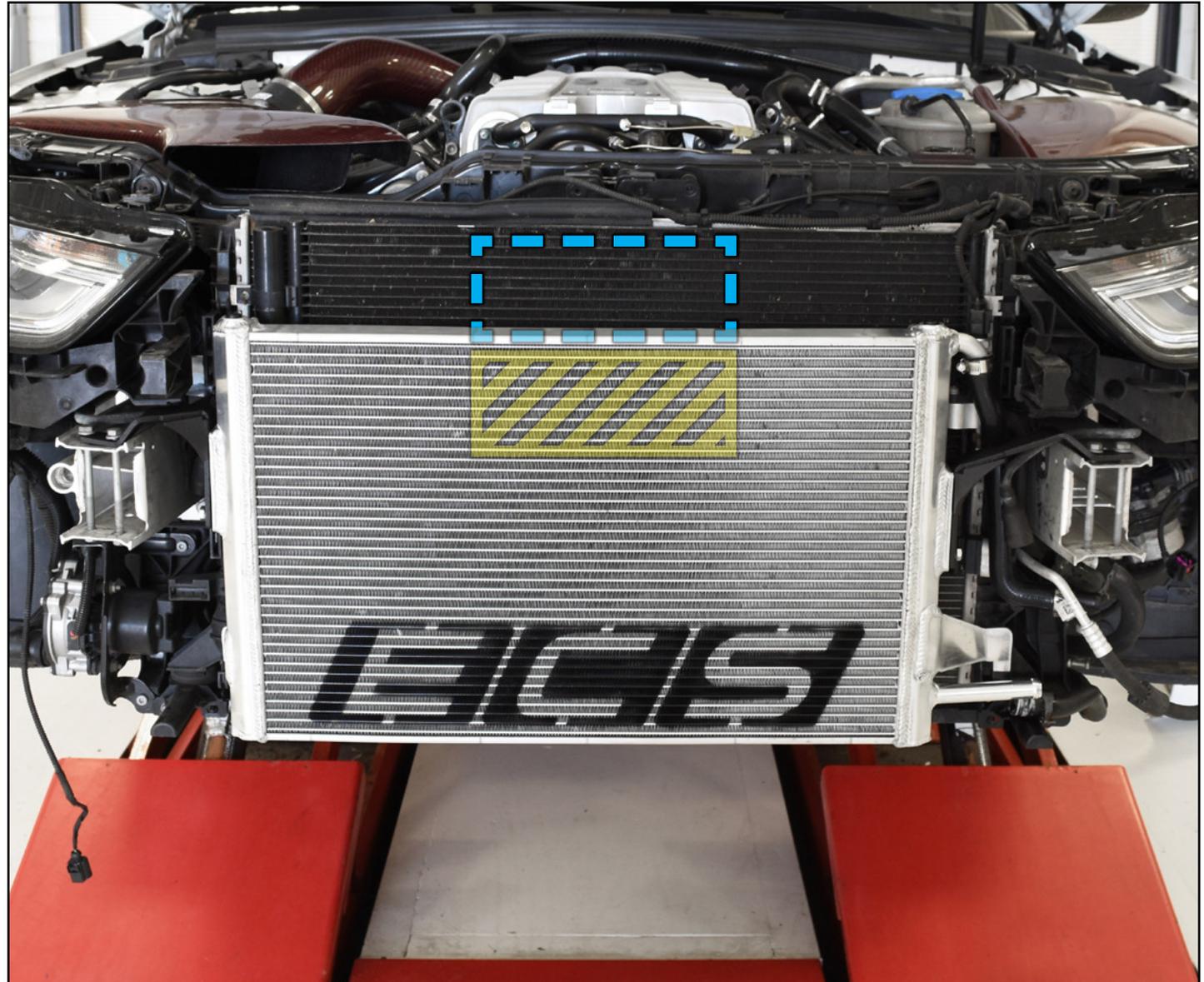
INSTALLING THE NEW POWER STEERING COOLER

Step 1:

Pre-Facelift B8 S4s w/Audi Drive Select (ADS) only:

The **BLUE** dotted line on the right represents the factory mounting position of the power steering cooler on Pre-Facelift B8 S4s. This cooler was attached to the front of the A/C condenser, we removed it back on [Page 11](#).

The **YELLOW** box represents the approximate mounting position of the included power steering cooler. We will be mounting this new cooler onto the back side of our upgraded heat exchanger, then we'll extend the hoses to reach.



INSTALLING THE NEW POWER STEERING COOLER

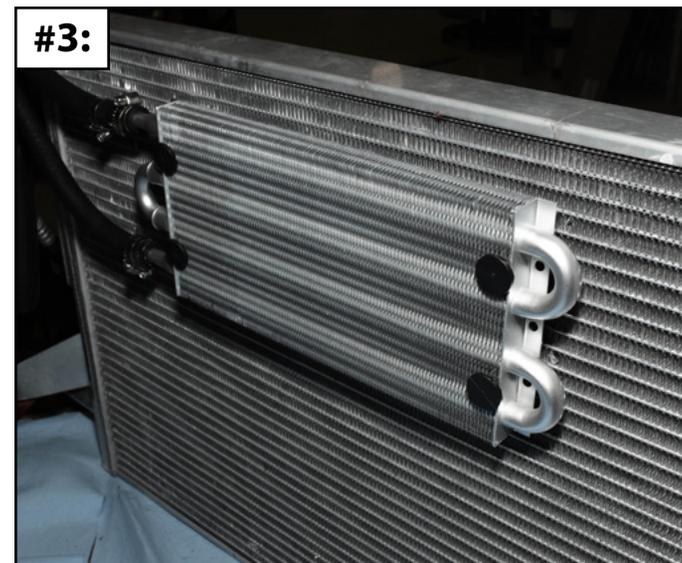
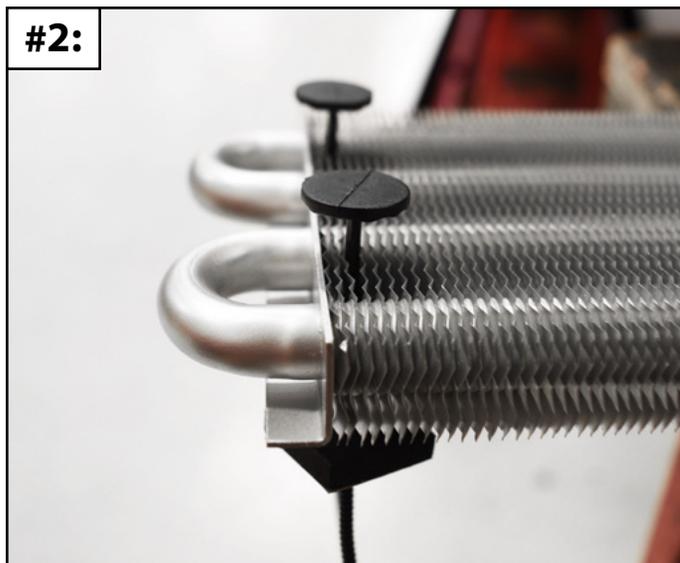
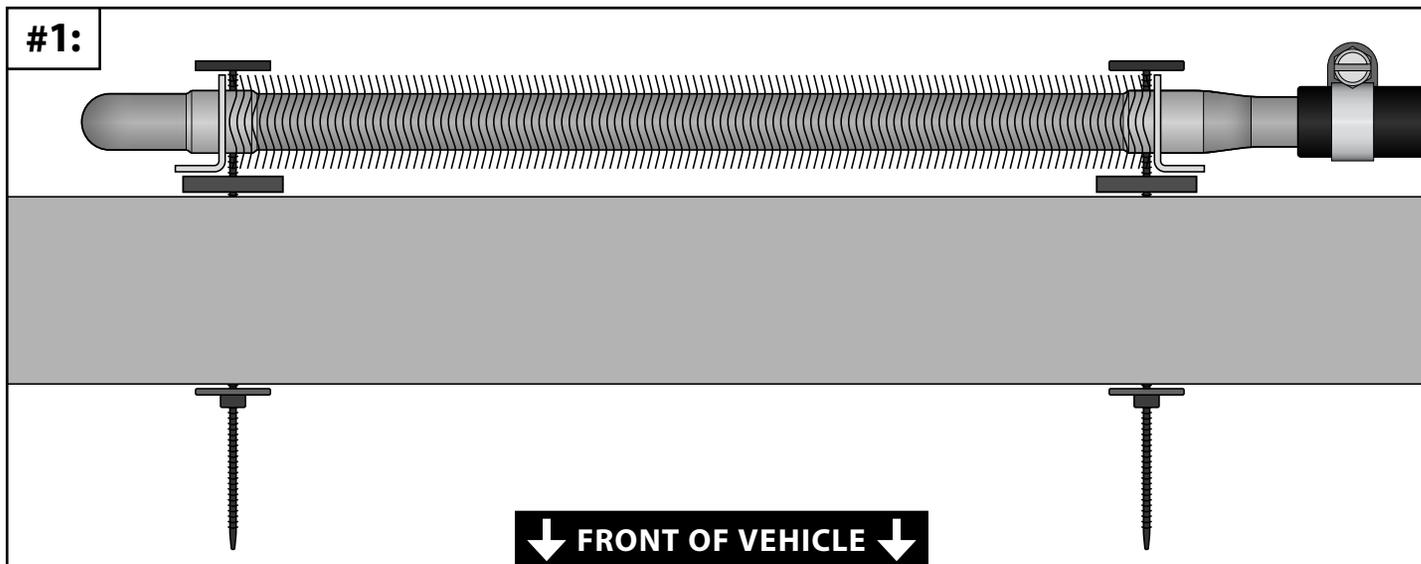
Step 2:

Pre-Facelift B8 S4s w/Audi Drive Select (ADS) only:

The illustration in **Photo #1** represents the new power steering cooler when mounted onto the back side of the heat exchanger with the provided plastic anchor ties. It's easiest to do this before the heat exchanger is installed into the vehicle. You want to ensure that the anchor ties are inserted from back to front, that way the tails are poking out from the front of the heat exchanger and can be trimmed off later.

It's extremely important to make sure that the plastic anchor ties are installed close enough to the edges of the cooler so that they make contact with the aluminum side flanges (see **Photo #2**).

Photo #3 shows the new power steering cooler mounted in place.



INSTALLING THE NEW POWER STEERING COOLER

Step 4:

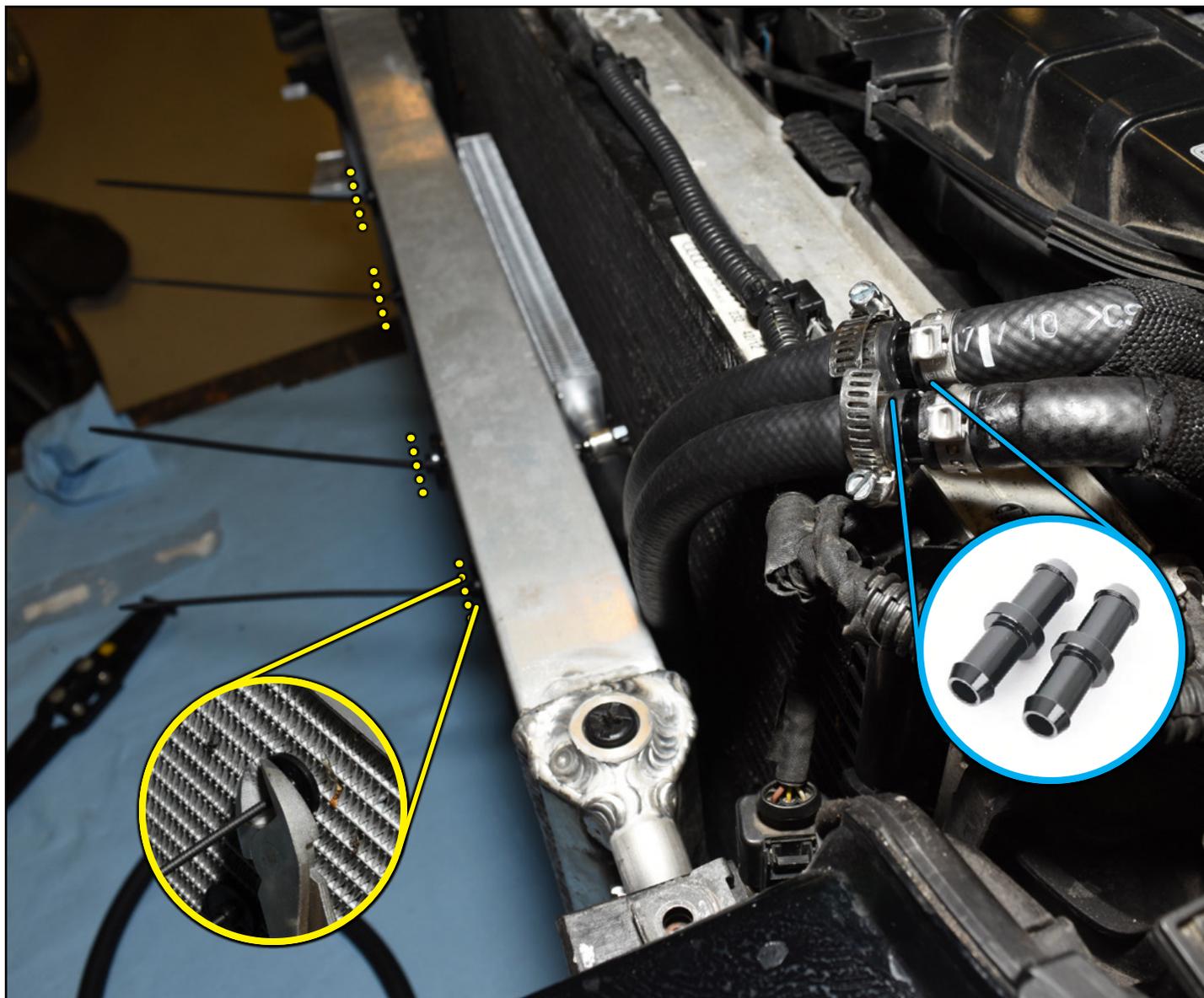
Pre-Facelift B8 S4s w/Audi Drive Select (ADS) only:

Once the new heat exchanger has been installed into position you can trim the tails from the anchor ties (**YELLOW** dotted lines and inset photo).

Use the supplied cooler hose and unions (**BLUE** inset photo) to connect the factory power steering cooler hoses to the new cooler.



Click [HERE](#) to jump back to the heat exchanger installation.



Your 3.0T Performance Supercharger Cooling Kit 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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