



VW MK5/MK6 TSI Aluminum Radiator Installation Instructions - [ES3698283](#)



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

The Project:

Today we are going to install our ECS Tuning Volkswagen MK5/MK6 TSI Performance Aluminum Radiator Kit. This kit has been designed by the engineering team at ECS Tuning to improve the efficiency of the cooling system in your Volkswagen. Our radiator is a direct-fit replacement, meaning that all OE mounts, sensors and hoses can be re-used. Our radiator features a dual row, dual pass heat exchanger with an increase of over 20% volume over the OE unit.

The photo below shows the OE unit (left) laid next to our unit (right). Our unit is constructed of 5052 aluminum, tig welded, and polished to perfection for a replacement that will outperform and outlast the OE unit.



Installation requires removing the front bumper cover from the vehicle but don't worry, we will guide you through the process every step of the way.

In these instructions we will be showing installation on a MK6 GLI. Fastener quantities and locations may vary slightly from your vehicle, but the overall installation will be the same.

Be sure to read these instructions completely before you begin the project, and don't be afraid to refer back as needed. Thank you for choosing ECS Tuning for all your performance and repair needs, we appreciate your business!

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KIT CONTENTS



Aluminum Radiator



Hardware Pack



Blue Threadlocker

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

Available On Our Website

- **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](#)

Specialty Tools

- **Hose Clamp Pliers** [ES#2702616](#)

SHOP SUPPLIES AND MATERIALS

Standard Shop Supply Recommendations: We recommend that you have a standard inventory of automotive shop supplies before beginning this or any automotive repair procedure. The following list outlines the basic shop supplies that we like to keep on hand. Shop supplies with a hyperlink are available on our website.

- Hand Cleaner/Degreaser - [Click Here](#)
- Pig Mats - for protecting your garage floor and work area from spills and stains - [Click Here](#)
- Spray detailer - for rapid cleaning of anything that comes into contact with your paint such as brake fluid - [Click Here](#)
- Micro Fiber Towels - for cleaning the paint on your car - [Click Here](#)
- Latex Gloves - for the extra oily and dirty jobs - [Click Here](#)
- Medium and High Strength Loctite Thread lock compound - to prevent bolts from backing out - [Click Here](#)
- Anti-Seize Compound - to prevent seizing, galling, and corrosion of fasteners - [Click Here](#)
- Aerosol Brake/Parts Cleaner - for cleaning and degreasing parts
- Shop Rags - used for wiping hands, tools, and parts
- Penetrating oil - for helping to free rusted or stuck bolts and nuts
- Mechanics wire - for securing components out of the way
- Silicone spray lube - for rubber components such as exhaust hangers
- Paint Marker - for marking installation positions or bolts during a torquing sequence
- Plastic Wire Ties/Zip Ties - for routing and securing wiring harnesses or vacuum hoses
- Electrical tape - for wrapping wiring harnesses or temporary securing of small components

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.



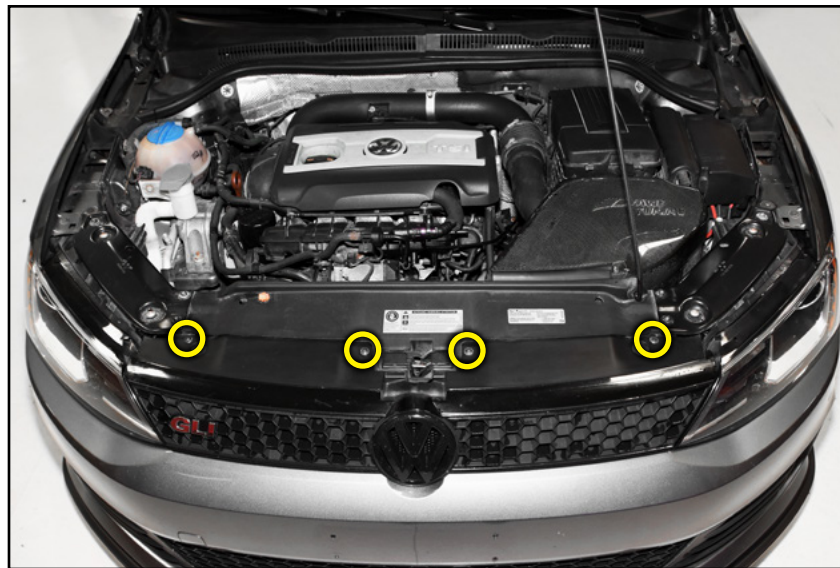
NEVER get underneath a vehicle that is supported only by a jack, and **ALWAYS** make sure that the vehicle is securely supported on jack stands.

REMOVING THE ORIGINAL RADIATOR

Step 1: T25 Torx, 10mm Socket & Ratchet

Before we begin, disconnect the negative (-) battery cable from the battery and remove the air box.

Remove the four screws (circled in **YELLOW**) which secure the grille to the core support.



Step 2:

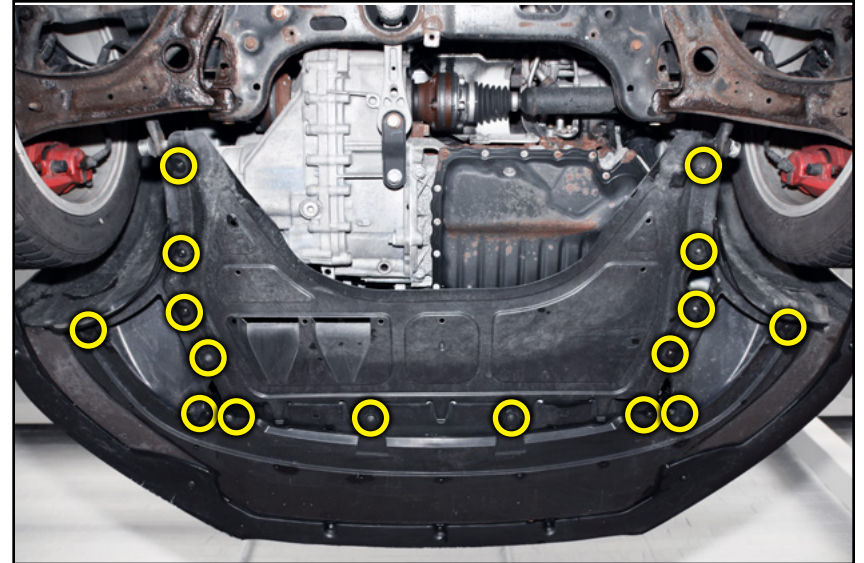
Remove the grille by pulling it towards the front of the vehicle and then lifting up to pop it free from the bumper.



REMOVING THE ORIGINAL RADIATOR

Step 3: T25 Torx

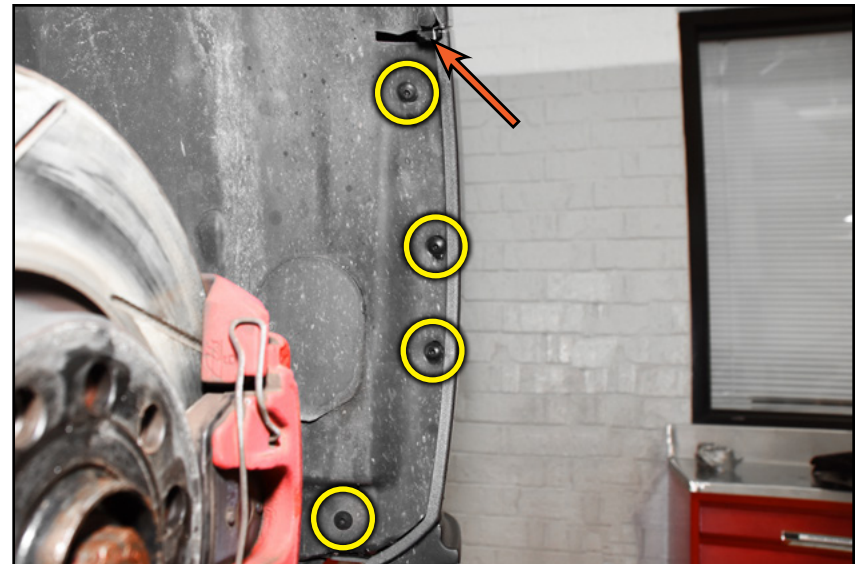
Remove the screws (circled in **YELLOW**) which secure the belly pan, fender liners, and bumper to the vehicle. Remove the belly pan from the vehicle.



Step 4: 17mm Protecta-Socket & Breaker Bar, T25 Torx

With the front wheels removed, remove the screws (circled in **YELLOW**) which secure the fender liner to the sides of the bumper.

Remove the vertical screw (arrow) which secures the corner of the bumper to the fender above.



REMOVING THE ORIGINAL RADIATOR

Step 5:

Before removing the bumper, disconnect the fog light connectors (arrows) if equipped.



Step 6:

Carefully (but firmly) pull the side of the bumper free from the fenders as shown.



REMOVING THE ORIGINAL RADIATOR

Step 7:

Carefully remove the bumper cover from the vehicle and set it aside.



Step 8: Flat Head Screwdriver -OR- 7mm Socket & Ratchet

Loosen the two clamps (arrows) and remove the intercooler outlet hose (highlighted in **RED**).



REMOVING THE ORIGINAL RADIATOR

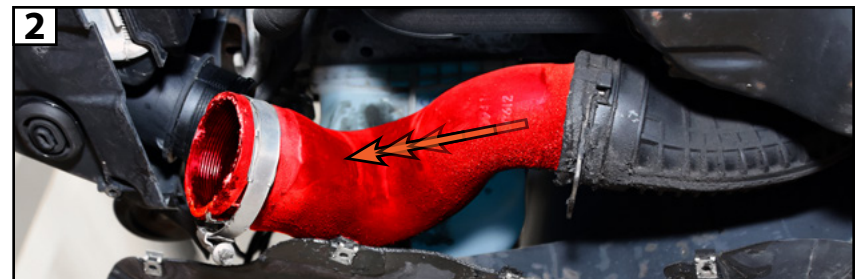
Step 9: Flat Head Screwdriver -OR- 7mm Socket & Ratchet, Pick Tool

Loosen the clamp (arrow) and pull the the intercooler inlet hose (highlighted in **RED**) off of the intercooler (photo 1).

Pry up on the retaining clip and pull the intercooler inlet hose (highlighted in **RED**) out of the turbo outlet pipe (photo 2).

Step 10:

Disconnect the coolant sensor connector (arrow).



REMOVING THE ORIGINAL RADIATOR

Step 11:

Pry up on the red fan connector tab, then depress it and pull the connector free.



Step 12: Pick Tool

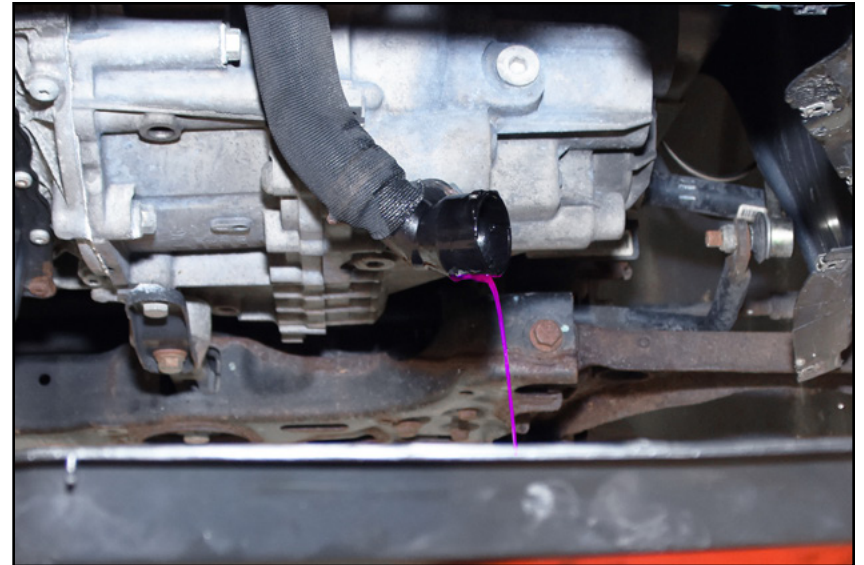
Place a drain pan below the vehicle, pry up on the retaining clip, then pull the lower radiator hose (highlighted in **RED**) off of the radiator.



REMOVING THE ORIGINAL RADIATOR

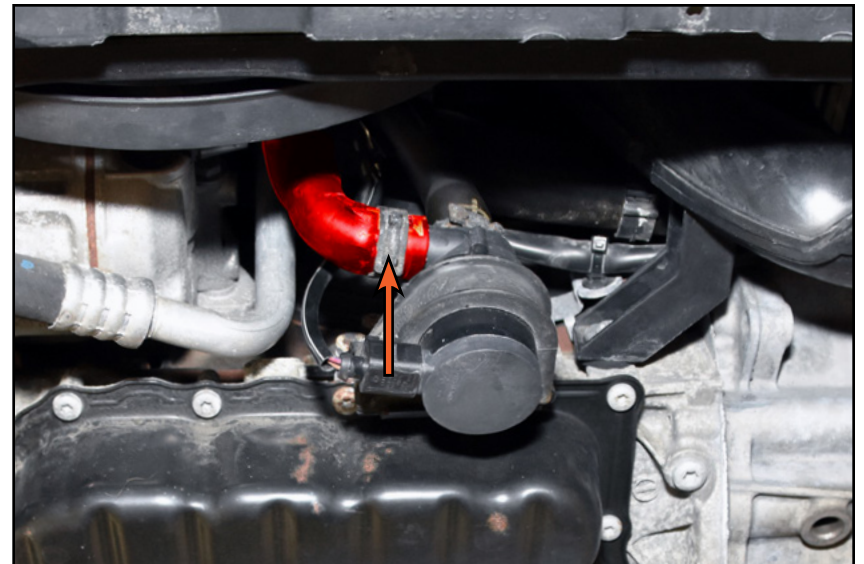
Step 13:

Pull the lower hose down and allow all the coolant to drain.



Step 14: Hose Clamp Pliers

Loosen the hose clamp (arrow) and pull the lower hose (highlighted in **RED**) off the coolant pump, allowing the remaining coolant to drain. Once the coolant has drained, slide the hose back on and reinstall the clamp to secure it in place.



REMOVING THE ORIGINAL RADIATOR

Step 15: Pick Tool

With the drip pan still in place, pry up on the retaining clip, then pull the upper radiator hose (highlighted in **RED**) off of the radiator and allow any remaining coolant to drain.



Step 16: T30 Torx

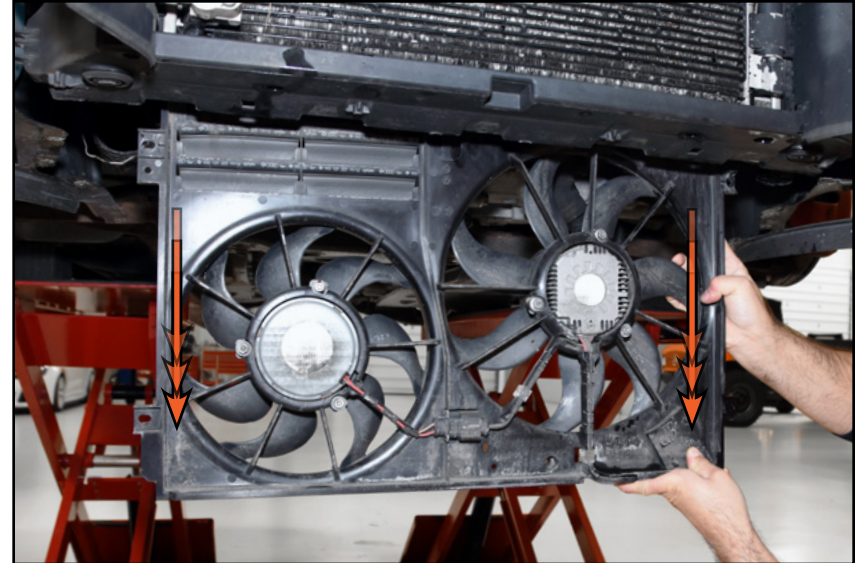
Remove the four screws (circled in **YELLOW**) which secure the fan shroud to the back of the radiator.



REMOVING THE ORIGINAL RADIATOR

Step 17:

Carefully guide the fan shroud down and out from the vehicle as shown.



Step 18: T30 Torx

Remove the four screws (circled in **YELLOW**) which secure the radiator to the back of the intercooler.



REMOVING THE ORIGINAL RADIATOR

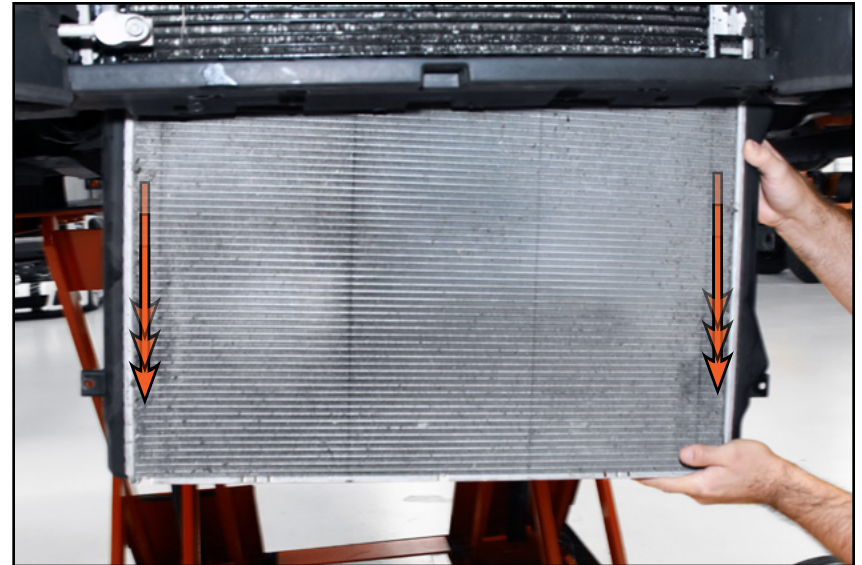
Step 19:



NOTE

If your vehicle has a CBFA engine, you must disconnect the radiator identification sensor connector before attempting to remove the radiator.

Carefully guide the radiator down and out from the vehicle as shown.



Step 20: Pick Tool

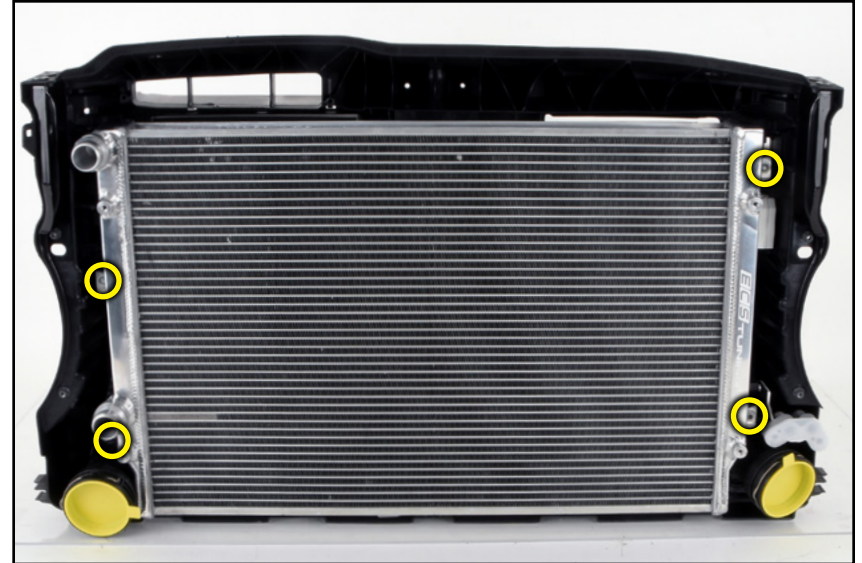
If equipped, CAREFULLY pry each arm outward to free the radiator identification sensor from the front of the OE radiator and transfer it to the new unit.



INSTALLING THE NEW RADIATOR

Step 1: T30 Torx

Lift the new radiator into place and reinstall the four screws (circled in **YELLOW**) to secure it to the back of the intercooler.



Step 2:

Apply a few drops of the provided blue threadlocker to the threads of the provided replacement fan shroud screws.



INSTALLING THE NEW RADIATOR

Step 3: T30 Torx

Lift the fan shroud back into place and secure it to the back of the radiator using the four provided screws and washers (circled in **YELLOW**).



Step 4:

Reconnect the coolant sensor connector (arrow).



INSTALLING THE NEW RADIATOR

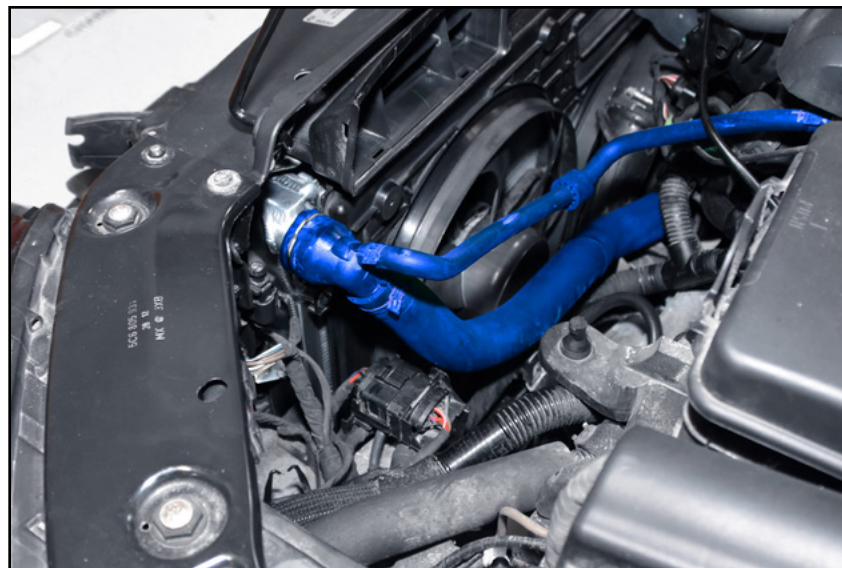
Step 5:

Slide the lower radiator hose (highlighted in **BLUE**) onto the radiator inlet as far as it will go and slide the retaining clip back into place. Give the hose a quick tug to ensure it is fully seated.



Step 6:

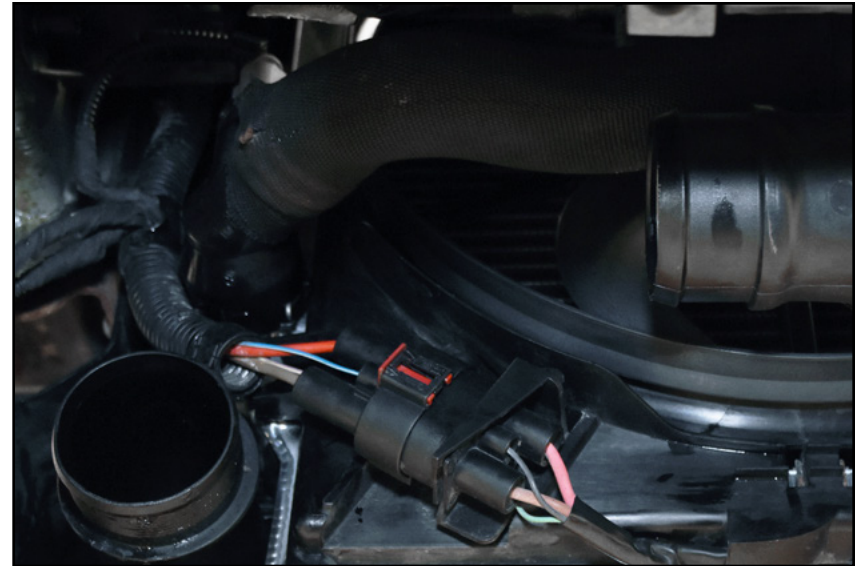
Slide the upper radiator hose (highlighted in **BLUE**) onto the radiator inlet as far as it will go and slide the retaining clip back into place. Give the hose a quick tug to ensure it is fully seated.



INSTALLING THE NEW RADIATOR

Step 7:

Slide the fan connector back into place and push the red tab back down to lock it in place.



Step 8 Flat Head Screwdriver -OR- 7mm Socket & Ratchet

Reinstall the intercooler outlet hose (highlighted in **BLUE**) and tighten the two clamps (arrows) until snug.



INSTALLING THE NEW RADIATOR

Step 9: Flat Head Screwdriver -OR- 7mm Socket & Ratchet

Reinstall the intercooler inlet hose (highlighted in **BLUE**) into the turbo outlet pipe and snap the retaining clip back into place, then tighten the clamp (arrow) until snug.



Step 10: T25 Torx

Reinstall the bumper, fog light connectors, belly pan and grille.



INSTALLING THE NEW RADIATOR

Step 11: 10mm Socket & Ratchet

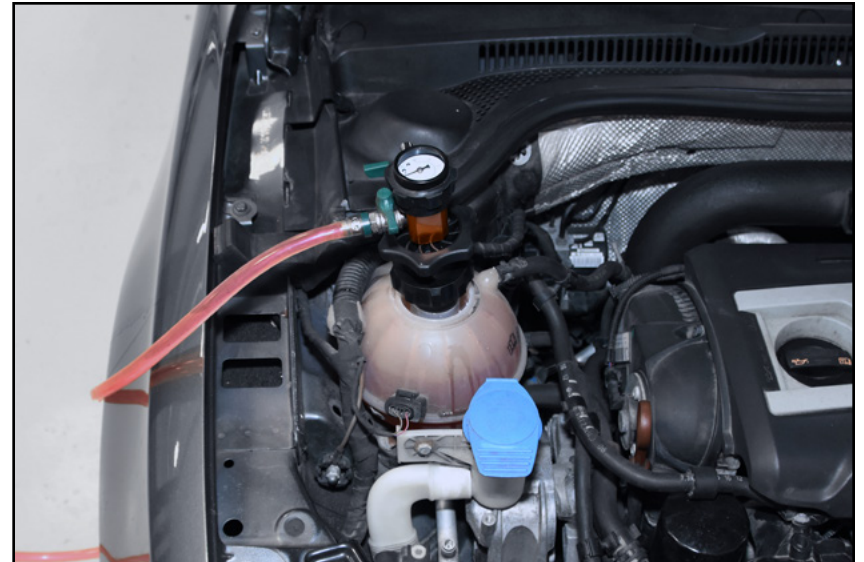
Reinstall the intake and reconnect the negative (-) battery cable.



Step 12:

We **HIGHLY** recommend using our Schwaben Coolant Refill/Air Purge Tool ([ES#2712734](#)) to properly fill the system and remove any air from the system.

Congratulations, your installation is complete!



SCHWABEN - BUILD THE ULTIMATE TOOL COLLECTION

At ECS Tuning, we carry a line of high quality Schwaben Tools and Equipment to help you build your ultimate tool collection. Never before has affordability and quality been so closely related. Our entire Schwaben line is subjected to strict in house testing for strength and durability. See what we have to offer and equip your garage without breaking the bank.

Your Aluminum Radiator installation is complete!



These instructions are provided as a courtesy by ECS Tuning

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