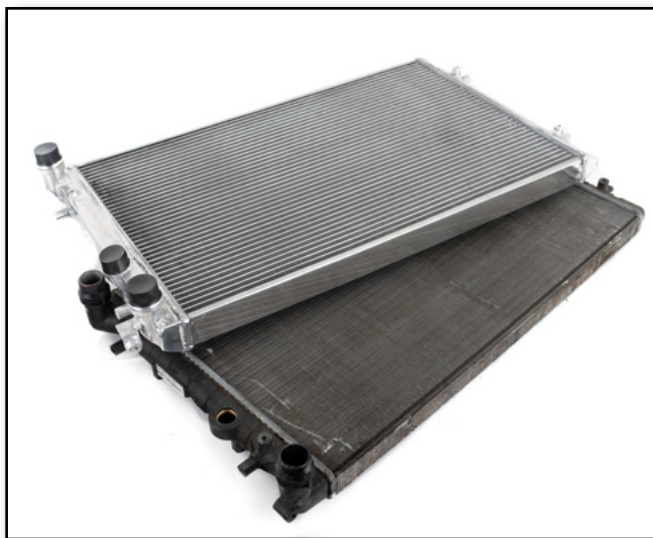
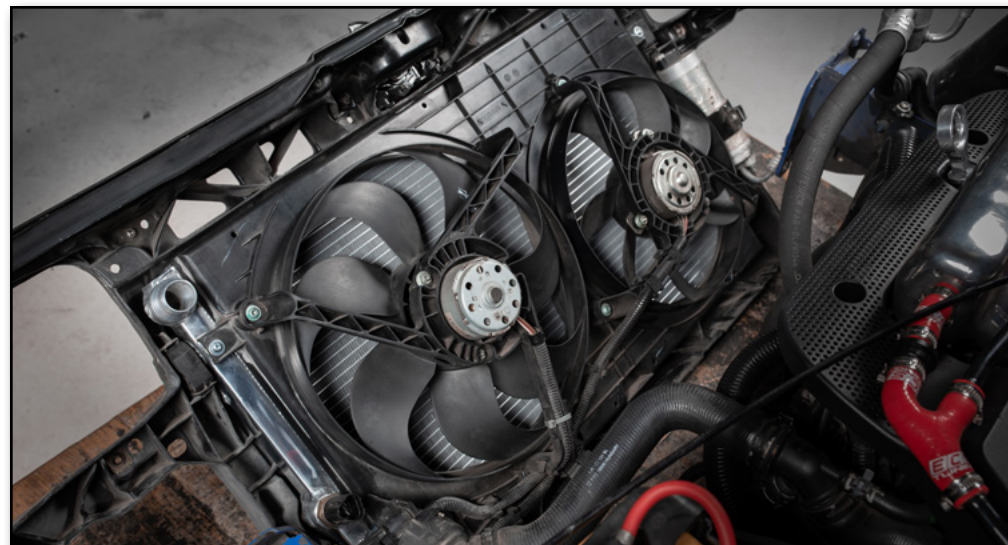




## VW MK4 Performance Aluminum Radiator Installation Instructions - [ES4001222](#)



**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 MK4 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 MK4 Volkswagen. Our radiator fits identically to the OE unit, 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 35% volume over the OE unit.

The photo below shows the OE unit (top) laid next to our unit (bottom). 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 of our unit requires pulling the front bumper and core support from the vehicle but don't worry, we will guide you through the process every step of the way.

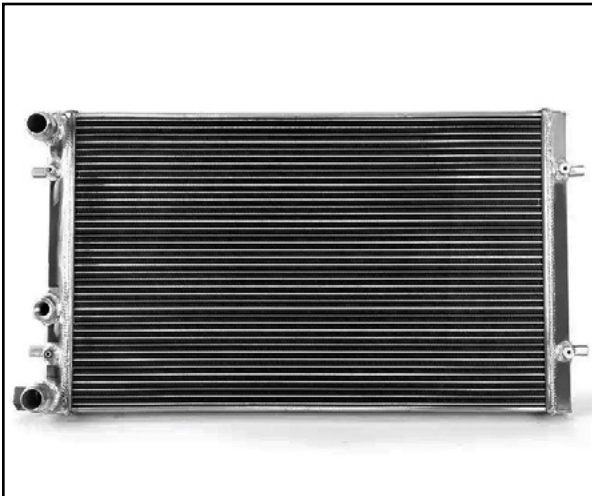


Be sure to read these instructions completely before you begin the project, and don't be afraid to refer back as needed. Thank you for choosing ECS Tuning for all your performance and repair needs, we appreciate your business!

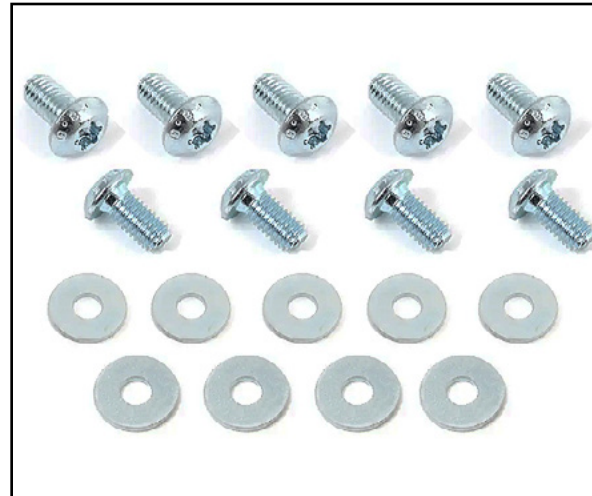
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## KIT CONTENTS



Performance Aluminum Radiator



Hardware Pack



## 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

- **Protecta-Sockets (for lug nuts)** ..... [ES#2221243](#)

## 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.

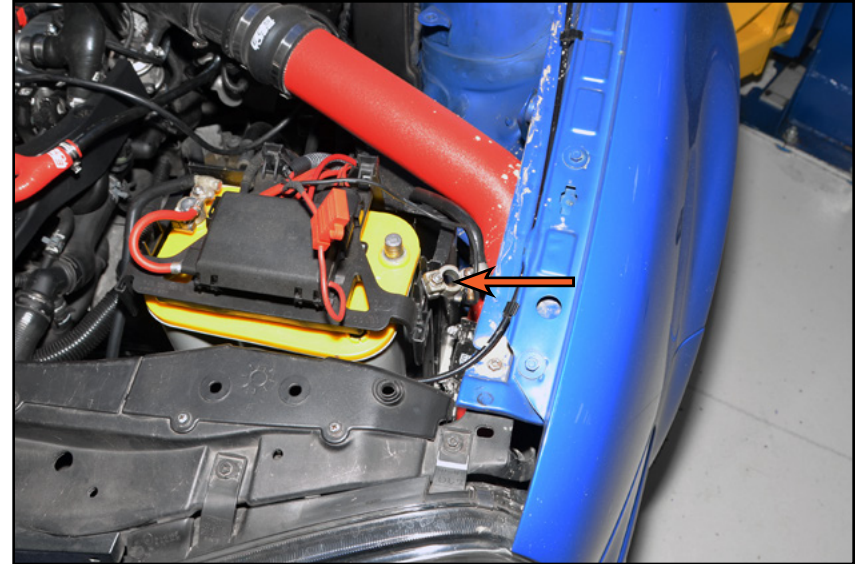


**NEVER** get underneath a vehicle that is supported only by a jack, and **ALWAYS** make sure that the vehicle is securely supported on jack stands.

## REMOVING THE STOCK RADIATOR

### Step 1: 10mm Socket & Ratchet

Disconnect the negative (-) battery cable (arrow) from the battery and hang it out of the way as shown.



### Step 2:

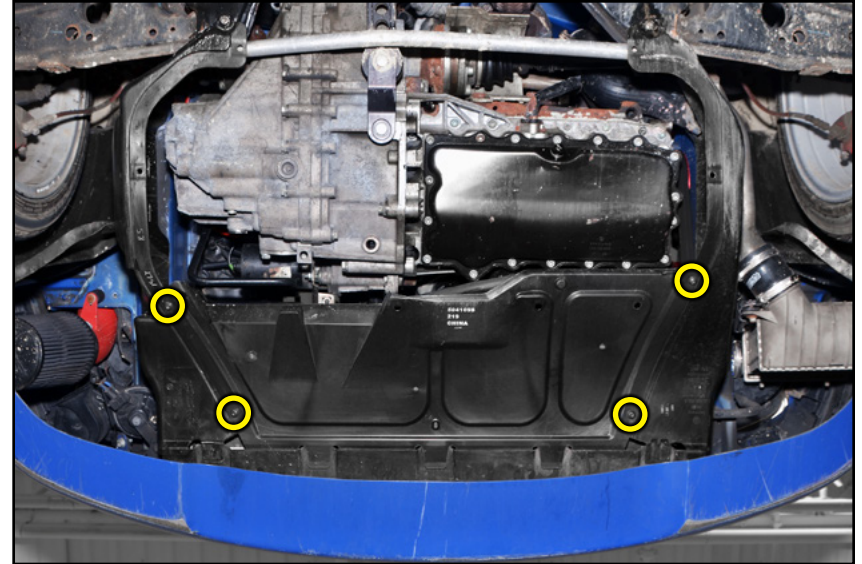
Safely raise and support the vehicle and remove the front wheels.



## REMOVING THE STOCK RADIATOR

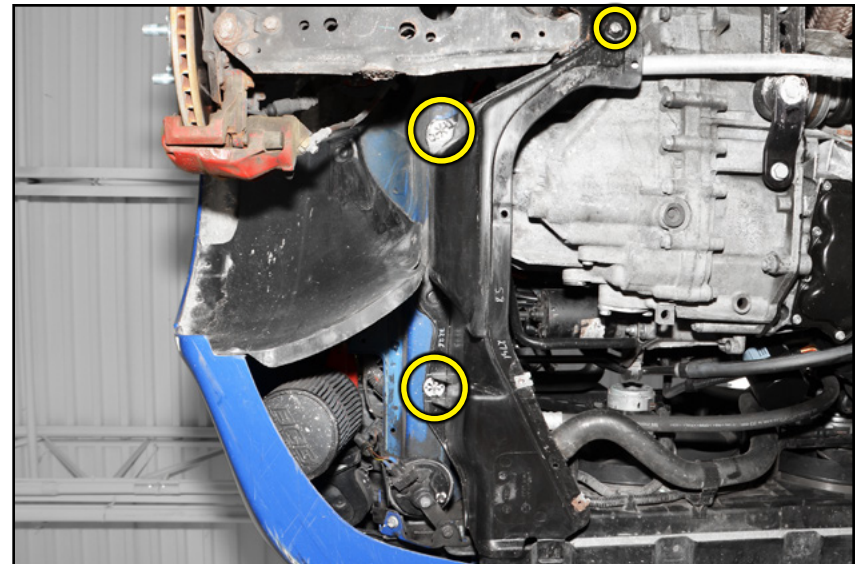
### Step 3: T25 Torx

Remove the four belly pan fasteners (circled in **YELLOW**) and slide the belly pan rearward to remove it.



### Step 4: T25 Torx

Remove the three fasteners (circled in **YELLOW**) which secure each side cover to the vehicle, then pull forward and down to remove the side covers.





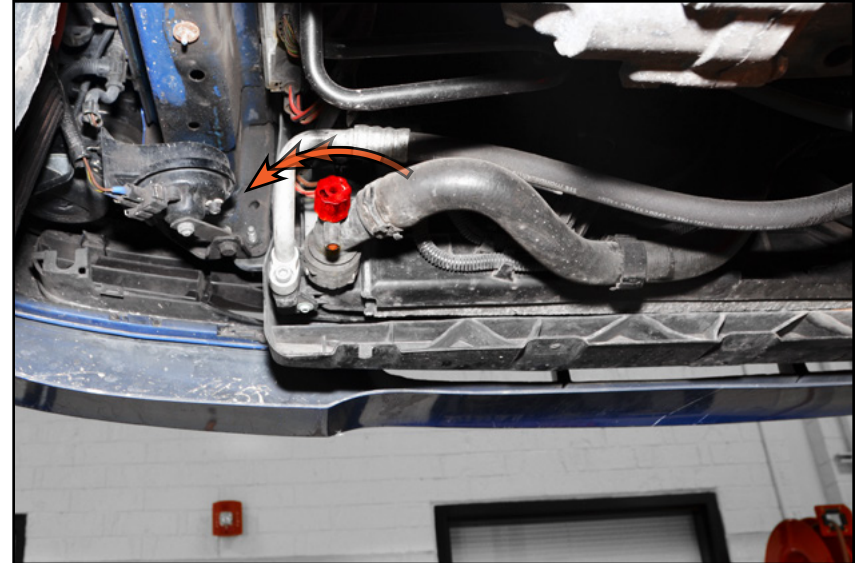
## REMOVING THE STOCK RADIATOR

### Step 5:



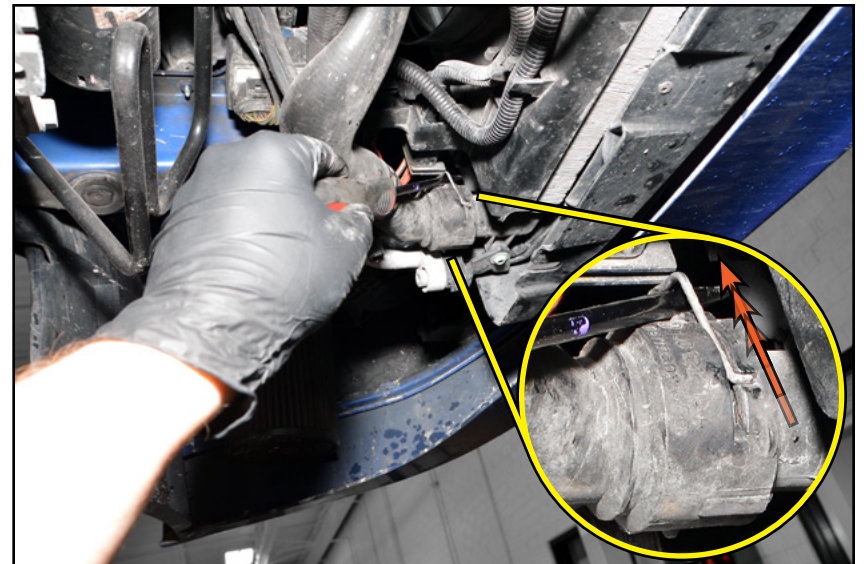
Before you open the drain, be sure to place a drip pan beneath the vehicle to collect the draining coolant.

Wait for the engine to cool down, then turn the knob (highlighted in **RED**) counter-clockwise to open the drain and drain the coolant from the radiator.



### Step 6: Angled Pick

Pry up on the retaining wire which secures the lower radiator hose onto the radiator as shown.



## REMOVING THE STOCK RADIATOR

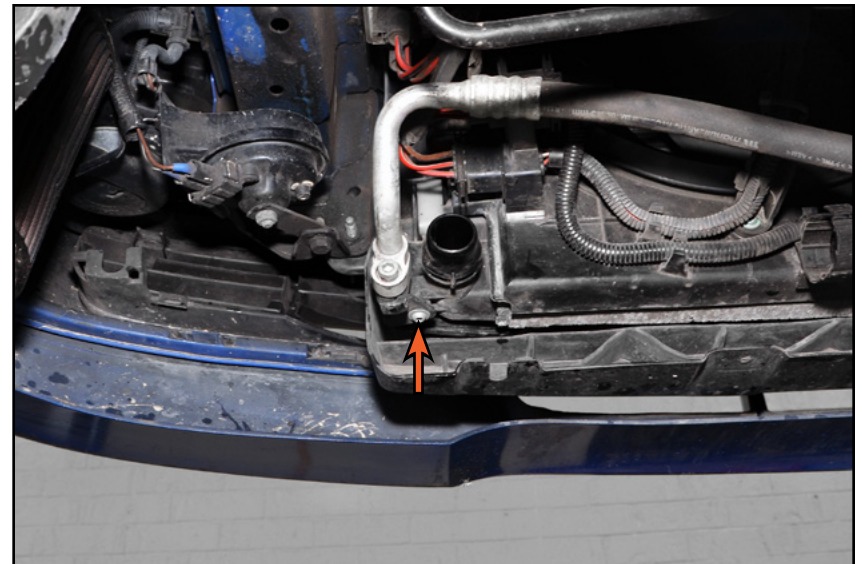
### Step 7:

With your drip pan still in place, pull the lower radiator hose off of the stock radiator and let any remaining coolant drain from the system.



### Step 8: T30 Torx

Remove the screw (arrow) which secures the A/C line to the radiator.



## REMOVING THE STOCK RADIATOR

### Step 9:

Disconnect the two fan connectors and the fan switch connector (highlighted in **RED**).



### Step 10: Phillips Screwdriver

Remove the four screws (arrows) which secure the headlight access cover in place.





## REMOVING THE STOCK RADIATOR

### Step 11: Angled Pick

Pry down on the retaining wire and pull the upper radiator hose off of the radiator as shown.



### Step 12:

Disconnect the hood release cable (highlighted in **RED**) from the hood latch as shown.





## REMOVING THE STOCK RADIATOR

### Step 13:

Remove the hood release handle from the grille.



### Step 14:

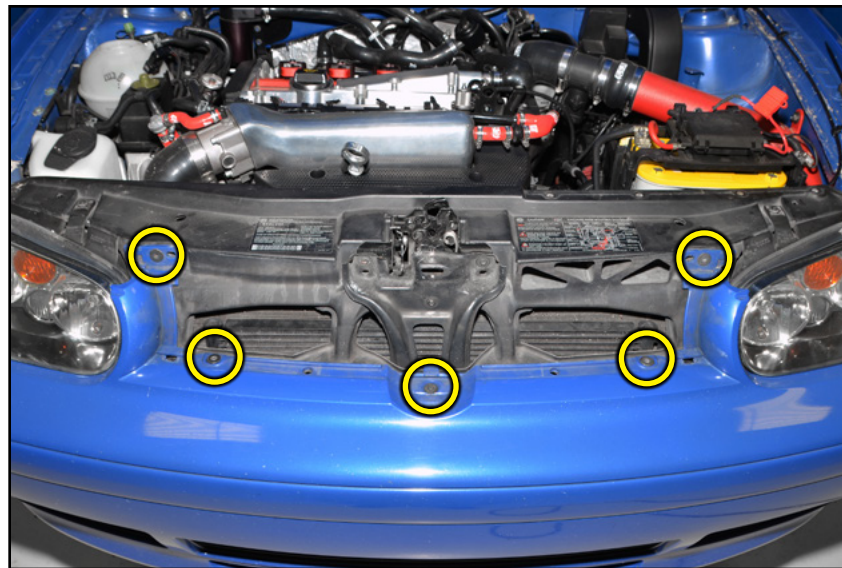
Remove the grille from the bumper by popping the two push-rivets free (circled in **YELLOW**) and releasing the locking tab from the top (arrow).



## REMOVING THE STOCK RADIATOR

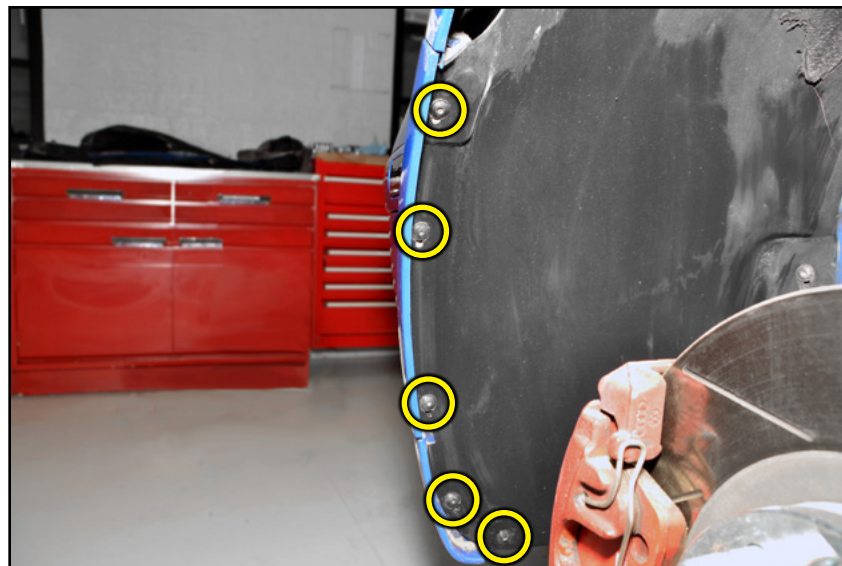
### Step 15: T30 Torx

Remove the five fasteners (circled in **YELLOW**) which secure the bumper to the top of the core support.



### Step 16: T25 Torx

Remove the five fasteners (circled in **YELLOW**) which secure the bumper to the fender liner on either side.



## REMOVING THE STOCK RADIATOR

### Step 17: T30 Torx

Pop the lower grille free and remove the last bumper screw (arrow) from both sides.



### Step 18:

Slide the bumper forward slightly and disconnect the side marker bulb harness from either side (highlighted in **RED**), then carefully set the bumper aside.

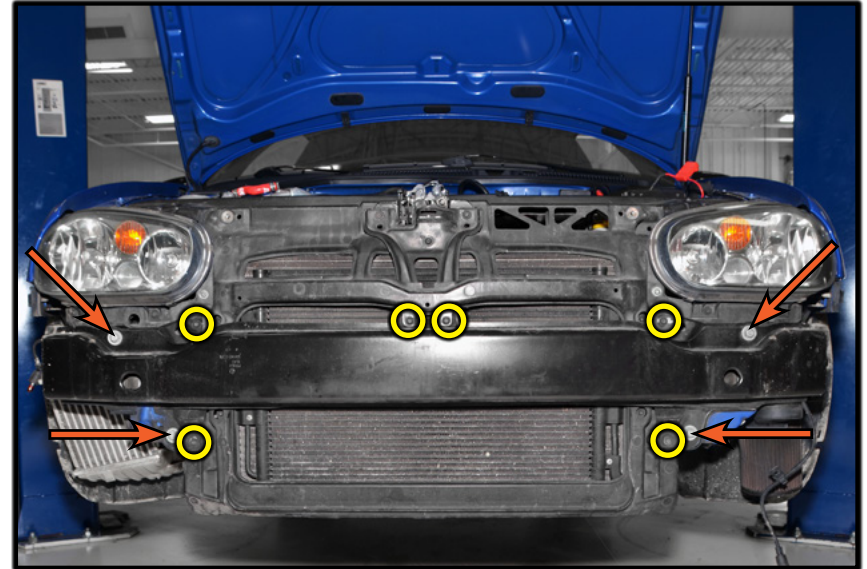




## REMOVING THE STOCK RADIATOR

### Step 19: T30 Torx

Remove the impact foam from the crash beam and remove the six fasteners (circled in **YELLOW**) and four bolts (arrows) which secure the crash beam to the radiator support.



### Step 20:

Disconnect the hood latch sensor connector (highlighted in **RED**).





## REMOVING THE STOCK RADIATOR

### Step 21:

Disconnect the headlight connector (highlighted in **RED**) from the back of each headlight as shown.



### Step 22: T30 Torx

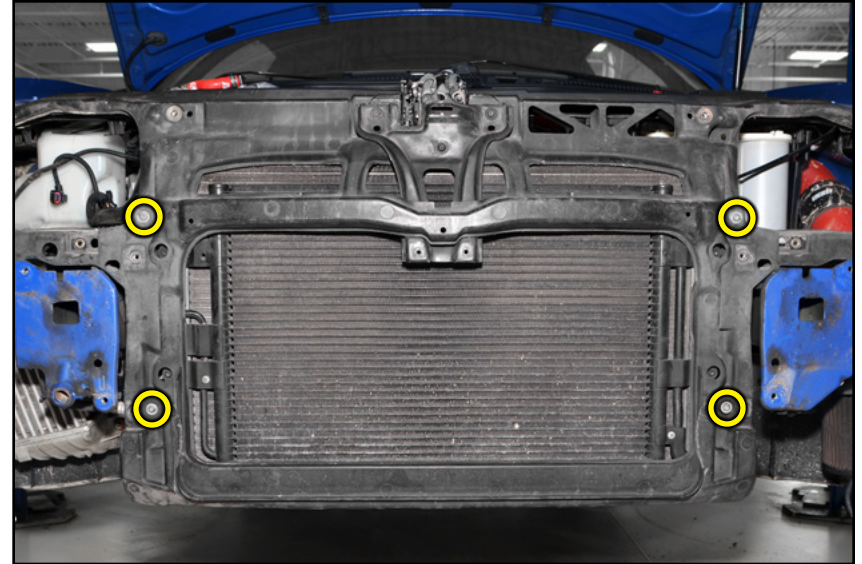
Remove the four fasteners (arrows) which secure each headlight to the radiator support and carefully set the headlights aside.



## REMOVING THE STOCK RADIATOR

### Step 23: T30 Torx

Remove the four fasteners (circled in **YELLOW**) which secure the radiator to the core support.



### Step 24: T30 Torx



Before you remove the core support, make sure to place a cart beneath the vehicle to support the A/C condenser and radiator.

Remove the last two core support screws (circled in **YELLOW**) and slide the core support forward and out of the car.





## REMOVING THE STOCK RADIATOR

### Step 25: T30 Torx

Remove the four screws which secures the A/C condenser to the front of the radiator, then slide the radiator out from behind the A/C condenser.



### Step 26: T30 Torx

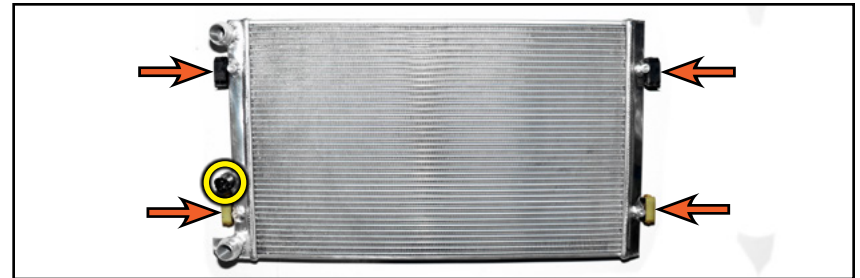
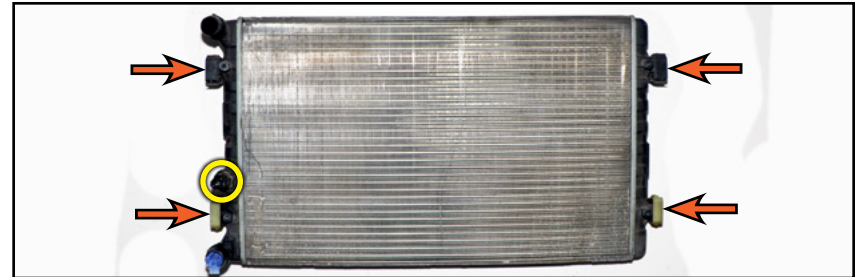
Remove the four screws (circled in **YELLOW**) which secure the fan shroud to the back of the radiator and pull the fan shroud off of the radiator.



## INSTALLING THE NEW RADIATOR

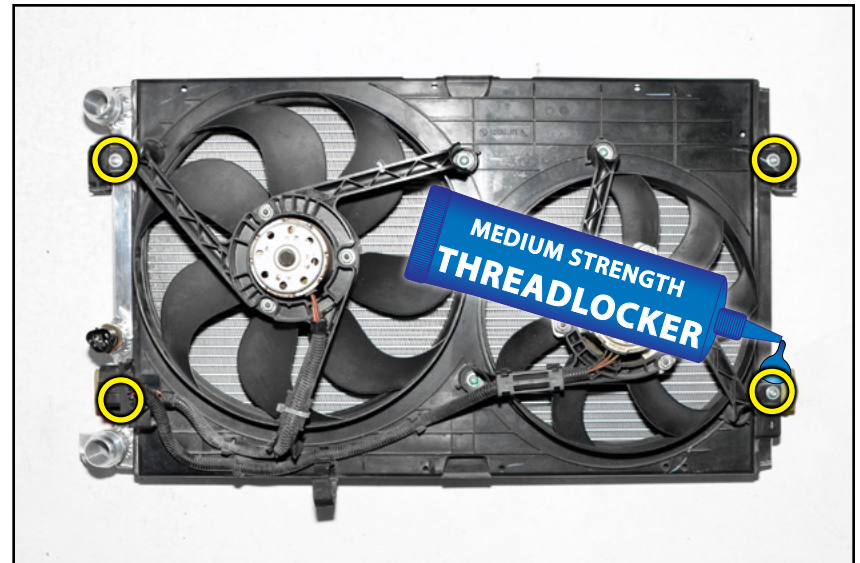
### Step 1:

Transfer the four rubber mounts (arrows) and the fan switch (circled in **YELLOW**) from the old radiator to the new radiator as shown. Tighten the fan switch to 35 Nm (26 Ft-lbs).



### Step 2: T20 Torx

Apply several drops of the provided medium strength threadlocker to the threads of each screw, then secure the fan shroud onto the new radiator with the four screws and washers (circled in **YELLOW**).





## INSTALLING THE NEW RADIATOR

### Step 3: T20 Torx

Slide the new radiator behind the A/C condenser and use four of the provided screws and washers (circled in **YELLOW**) to secure it in place.



### Step 4: T30 Torx

Slide the radiator and A/C condenser back into the core support, then reinstall the four screws (circled in **YELLOW**) to secure it in place. Slide the core support back into place and reinstall the two upper screws (arrows).



## INSTALLING THE NEW RADIATOR

### Step 5: T30 Torx

Reinstall the headlights and reconnect the connectors.



### Step 6: T30 Torx

Reinstall the crash beam and impact foam.



## INSTALLING THE NEW RADIATOR

### Step 7: T25 & T30 Torx

Reinstall the bumper and grille, being sure to reconnect the side markers, hood release cable, handle and sensor.



### Step 8:

Slide the upper radiator hose (highlighted in **GREEN**) all the way onto the new radiator then snap the retaining wire back into place.





## INSTALLING THE NEW RADIATOR

### Step 9: T20 Torx

Reinstall the fan connectors and fan switch connector as shown, then install the last screw and washer which secures the A/C line to the radiator (arrow).

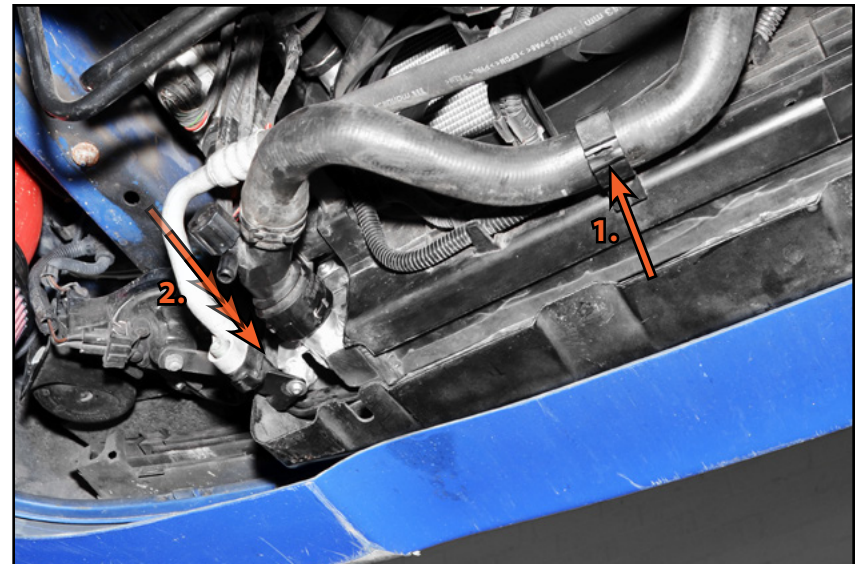


### Step 10:

Reinstall the lower radiator hose into the clip (arrow) then slide it all the way onto the radiator and snap the retaining wire back in place.



Turn the knob clockwise to ensure that the drain is fully closed before attempting to fill the system with coolant.

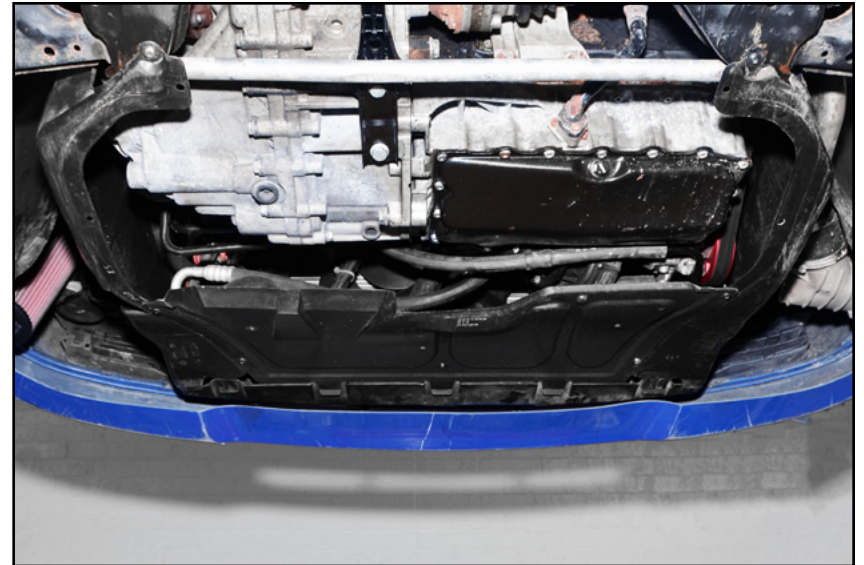




## INSTALLING THE NEW RADIATOR

### Step 11: T25 Torx

Reinstall the plastic side covers and the belly pan as shown.



### 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 Performance Aluminum Radiator 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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