



VW MK5/MK6 Engine, Trans and Pendulum Mount Installation Instructions - [Click HERE to Shop](#)



Skill Level 1
- Easy -
Basic Skills
Required



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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KIT CONTENTS



Engine Mount



Transmission Mount



Pendulum Mount

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](#)

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

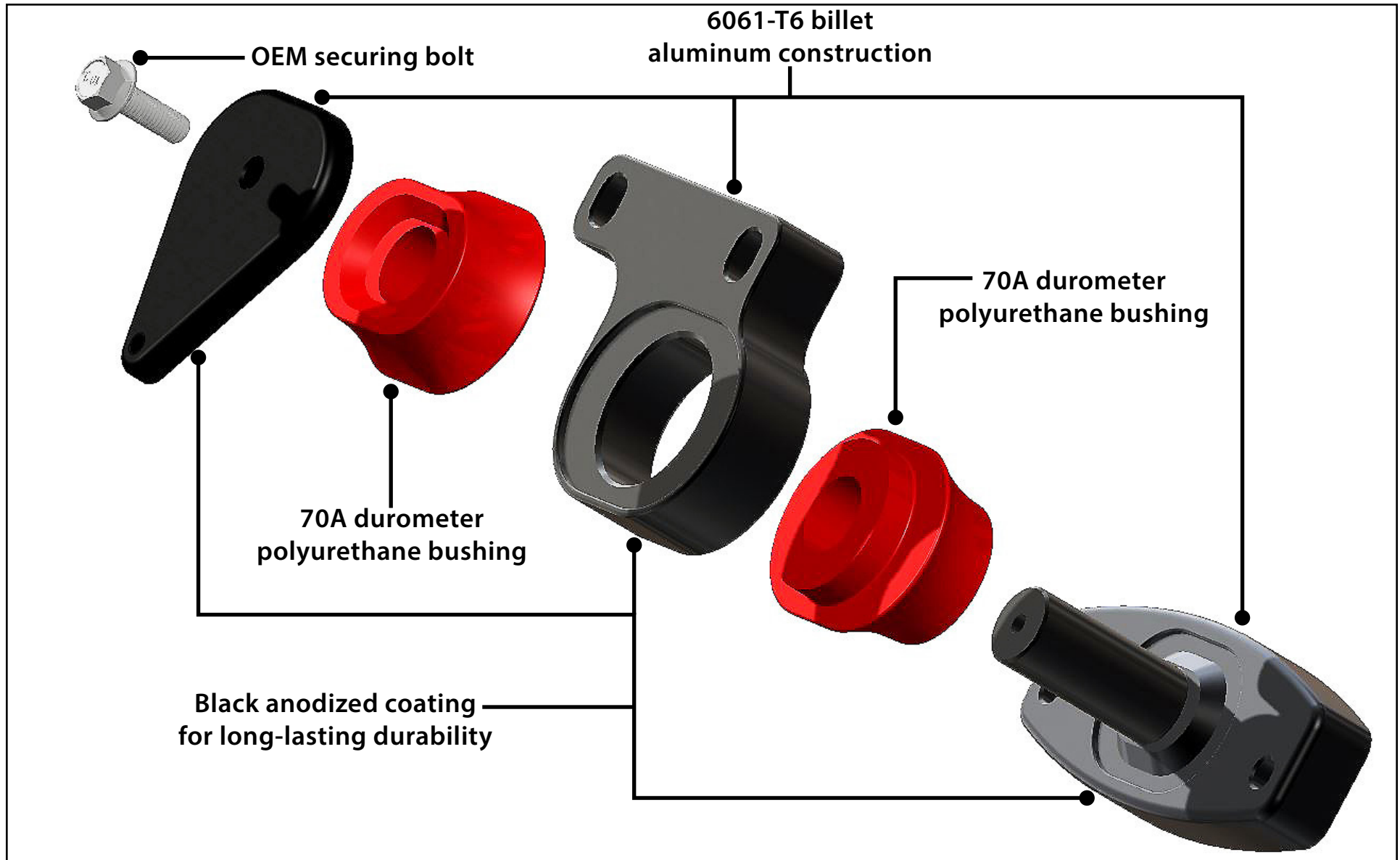
ECS Tuning cares about your health and safety, please read the following safety information. This information pertains to automotive service in general, and while it may not pertain to every job you do, please remember and share these important safety tips.

- 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.

ENGINE MOUNT - EXPLODED VIEW

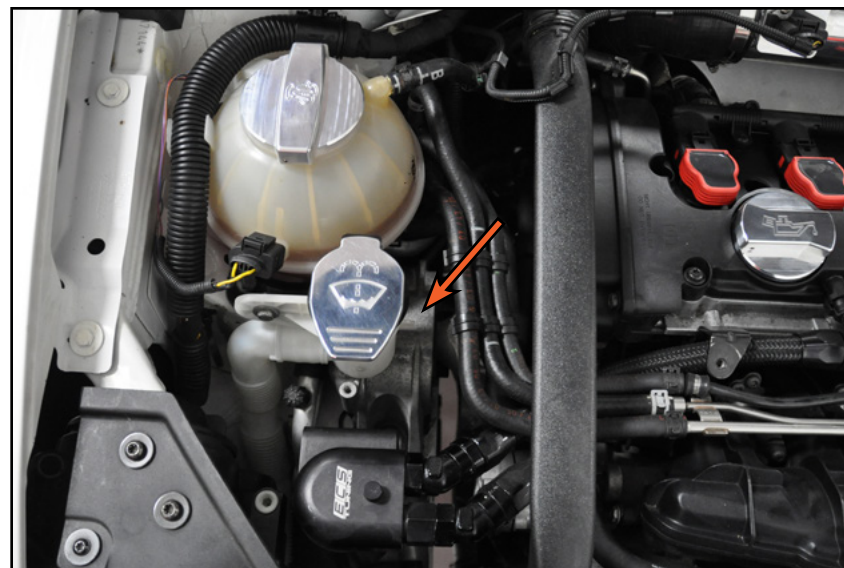


REMOVING THE ORIGINAL ENGINE MOUNT

Step 1:

We'll start with a quick overview:

The engine mount (arrow) is located on the RH (Passenger) side between the front of the engine and the body frame rail. In order to remove it, we have to move the coolant reservoir and washer fluid fill spout off to the side. If you have our catch can system installed as we do here on our MK5, you'll have to move it off to the side as well since we utilize the stud on one of the engine mount to body bolts for its mounting bracket.



Step 2: 10mm Socket & Ratchet

If you have one installed, unbolt our catch can bracket and move it off to the side. Now you'll need to remove the washer fluid fill spout mounting bolt (arrow).



REMOVING THE ORIGINAL ENGINE MOUNT

Step 3:

Pull the washer fluid fill spout forward so it clears the engine mount.



Step 4:

Unplug the coolant reservoir level sensor.



REMOVING THE ORIGINAL ENGINE MOUNT

Step 5:

Pull the wiring harness up off the back side of the coolant reservoir to access the two reservoir hold down screws.



Step 6: T25 Torx -or- Phillips Screwdriver

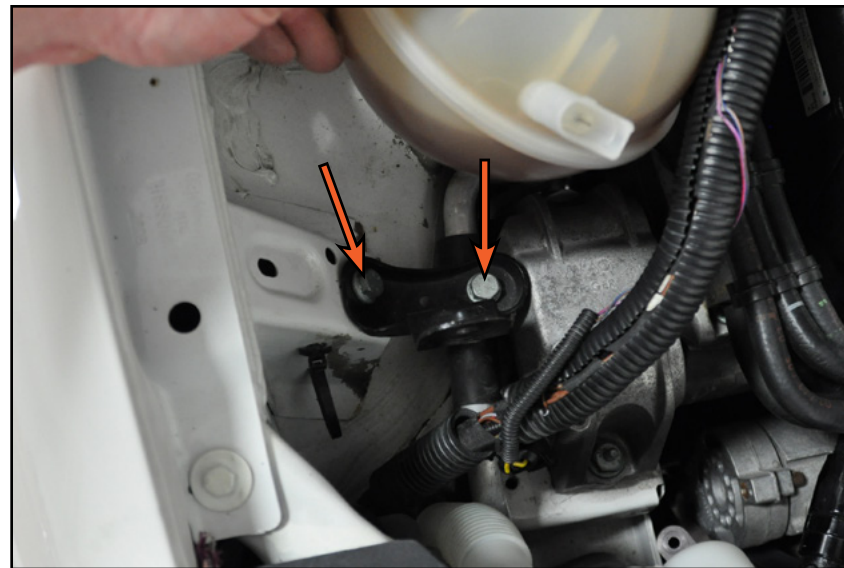
Remove the two screws (arrows) holding the coolant reservoir in place.



REMOVING THE ORIGINAL ENGINE MOUNT

Step 7: 13mm Socket, Extension & Ratchet

Hold the coolant reservoir off to the side and remove the two engine mount side brace bolts (arrows), then lift off the side brace.



Step 8: T25 Torx, T30 Torx

Safely raise and support the vehicle and remove the lower insulation panel or skid plate, depending on how your vehicle is equipped.



REMOVING THE ORIGINAL ENGINE MOUNT

Step 9: Floor Jack

With the skid plate removed, use a floor jack to support the engine underneath, on the **end** of the oil pan as shown. **DO NOT** place the jack in the middle of the oil pan.

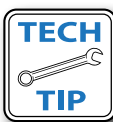


Make sure your jack has a very good rubber pad installed, or use a piece of 2 x 4 between the jack pad and oil pan. **DO NOT** jack up the engine, only raise the jack just until it contacts the oil pan in order to support the engine and keep it from dropping when you remove the mount.

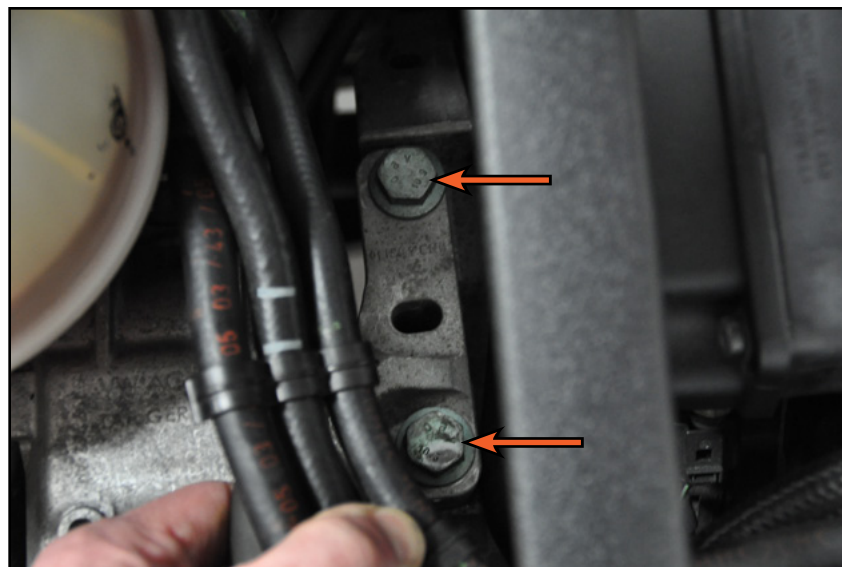


Step 10: 18mm Socket, Extension & Breaker Bar

Gently move the fuel lines off to the side and remove the two engine mount to engine bracket bolts (arrows).



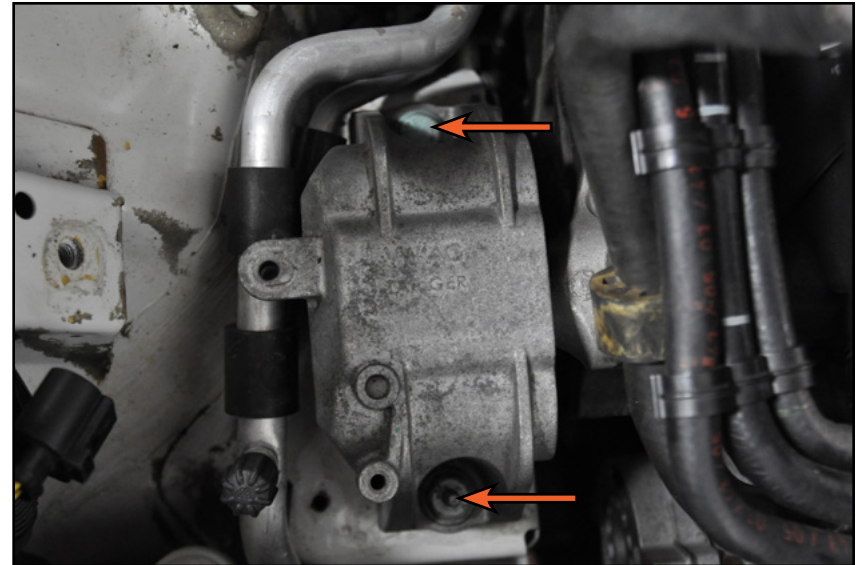
If the engine drops down as you begin to loosen the bolts, raise the jack slightly. When the jack is properly supporting the weight of the engine, the bolts should unthread easily.



REMOVING THE ORIGINAL ENGINE MOUNT

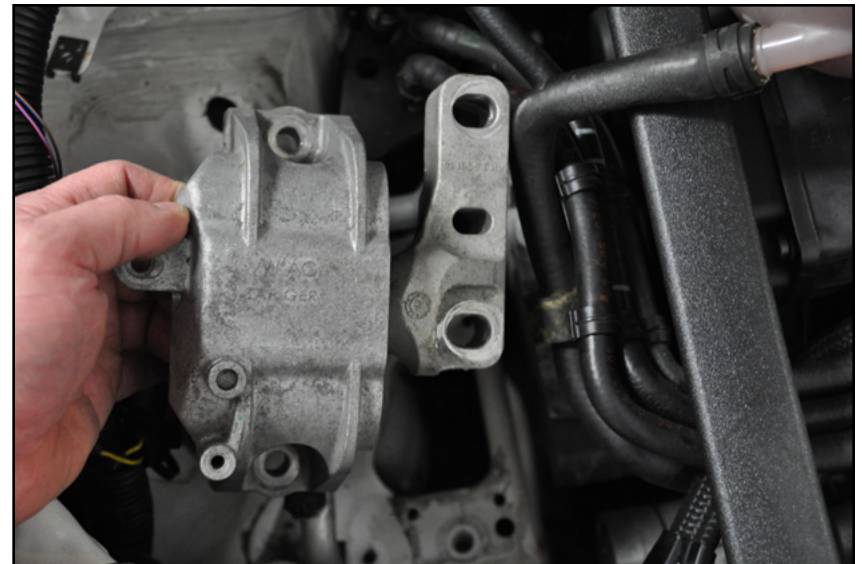
Step 11: 16mm Socket, Extension & Ratchet

Remove the two engine mount to body bolts (arrows).



Step 12:

Remove the original mount from the vehicle.



INSTALLING THE NEW ENGINE MOUNT

Step 1:

Before you install the new mount, take a look down into the frame channel (arrow). There's a good chance it's full of dirt and debris. It's a good idea to clean this out while you have the chance.



Step 2:

Set the new ECS Tuning engine mount into place.



INSTALLING THE NEW ENGINE MOUNT

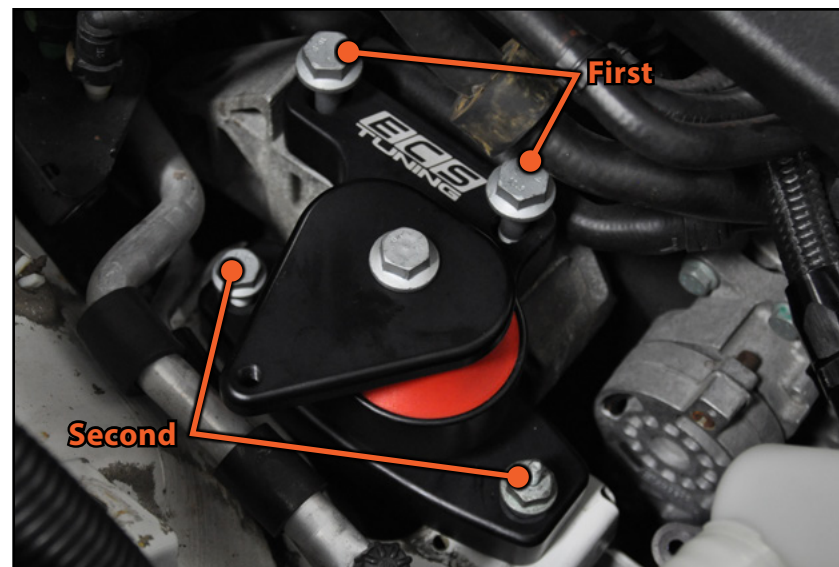
Step 3:

FIRST, start the two new engine mount to engine bracket bolts by threading them in by hand a few turns.

SECOND, start the two new engine mount to body bolts by threading them in a few turns.



It may be necessary to raise or lower the jack slightly in order for each bolt to be properly threaded in. If you begin to feel resistance, stop and adjust the jack up or down until the bolts thread in easily.

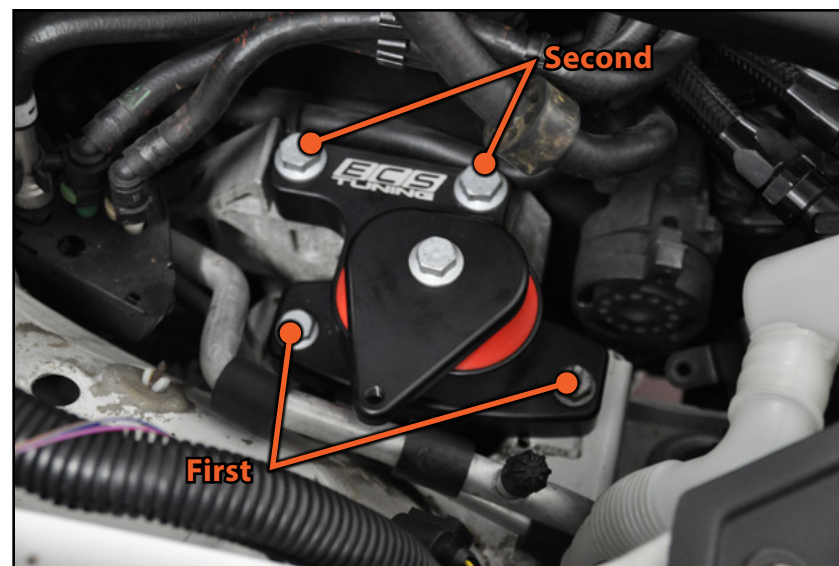


Step 4:

18mm Socket, Extension & Ratchet

FIRST, completely thread in the engine mount to body bolts until they are hand tight.

SECOND, completely thread in the engine mount to engine bracket bolts until they are hand tight.



INSTALLING THE NEW ENGINE MOUNT

Step 5: 16mm Socket, 18mm Socket, Extension & Torque Wrench

Torque the engine mount to engine bracket bolts to 60 Nm (44 Ft-lbs) + 90 degrees.

Torque the engine mount to body bolts to 40 Nm (29 Ft-lbs) + 90 degrees.



Step 6: 13mm Socket & Torque Wrench

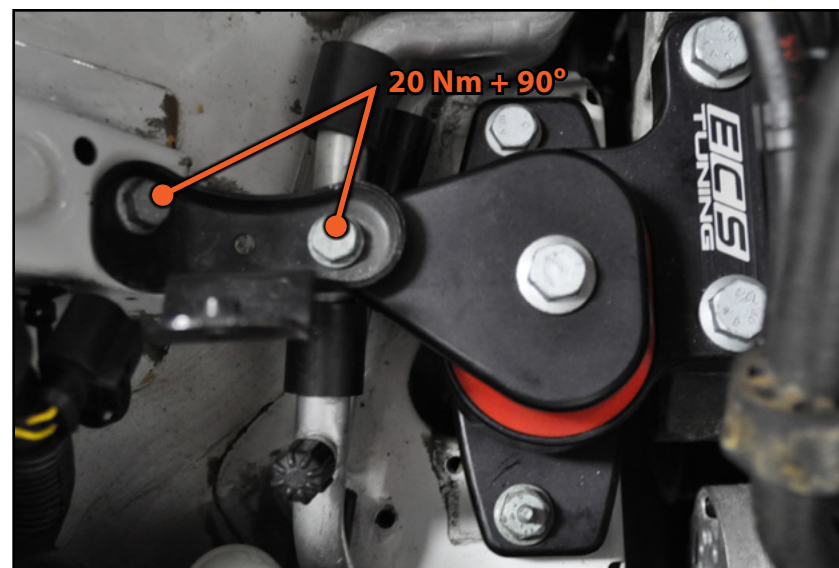
Install the engine mount side brace and torque the bolts to 20 Nm (15 Ft-lbs) + 90 degrees.

Reinstall the coolant reservoir and wiring harness.

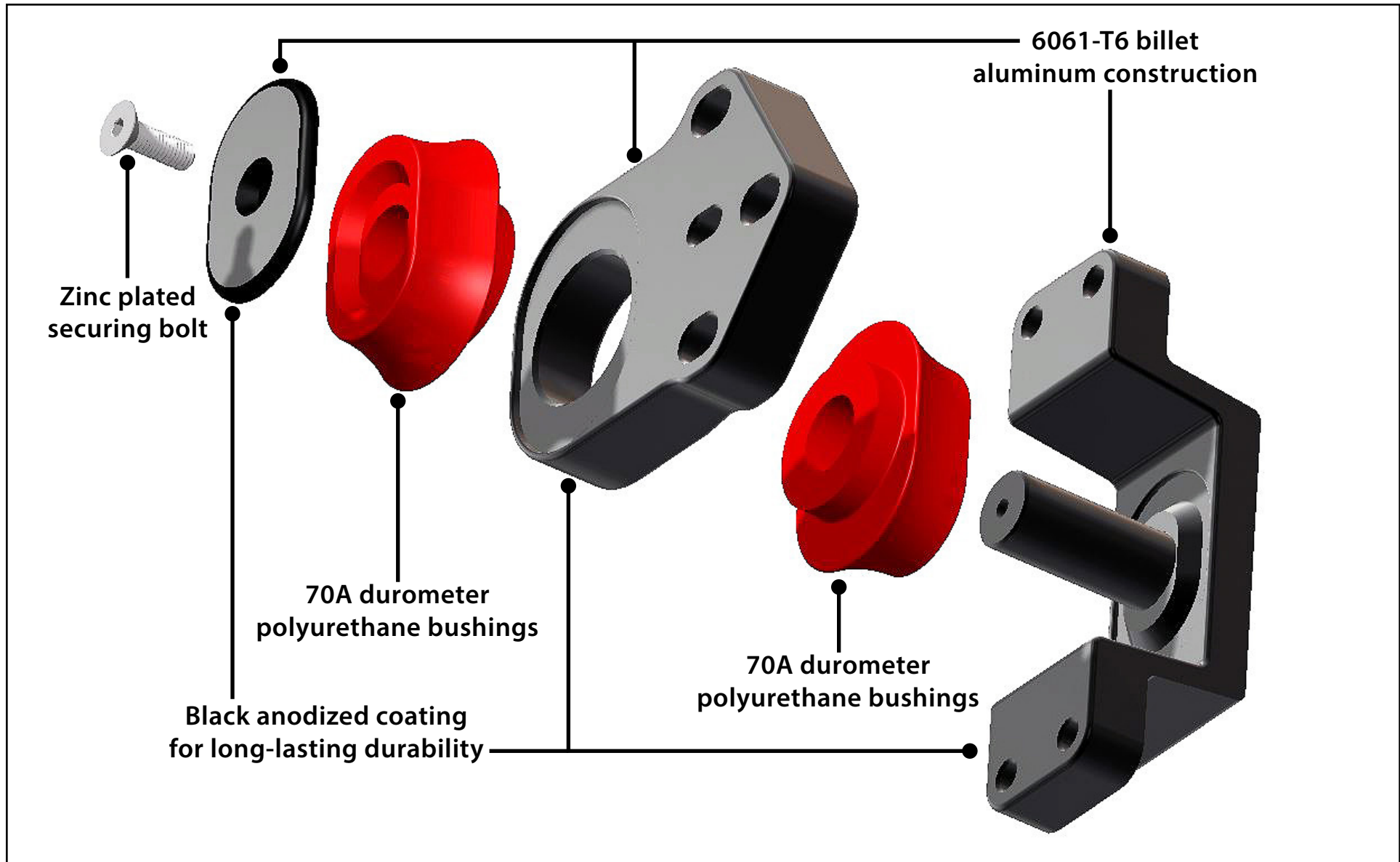
Reinstall the washer fluid reservoir spout.

Reinstall the catch can bracket (if equipped).

Remove the floor jack and install the skid plate. If you are installing a new transmission mount and pendulum mount, leave the skid plate off until you have installed these mounts as well.



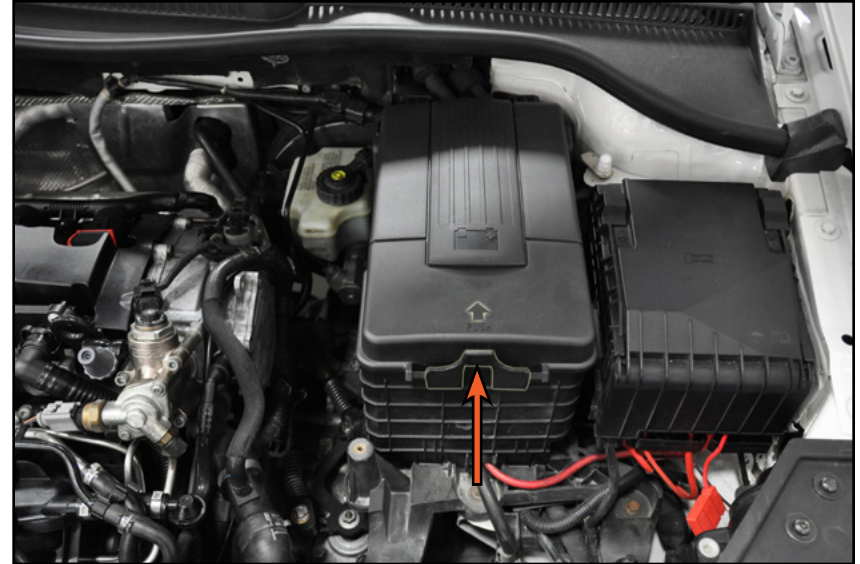
TRANSMISSION MOUNT - EXPLODED VIEW



REMOVING THE ORIGINAL TRANSMISSION MOUNT

Step 1:

Remove the original air box or intake system, then remove the battery cover by pushing on the release tab (arrow) and lifting it upward.



Step 2:

Remove the front half of the battery box by lifting it upward to separate it from the rear half.



REMOVING THE ORIGINAL TRANSMISSION MOUNT

Step 3: 10mm Socket & Ratchet

Disconnect both battery terminals and position them out of the way.



To reduce the risk of fire, explosion, or injury, **ALWAYS** disconnect the battery by removing the negative battery terminal first.



Step 4: 13mm Socket & Ratchet

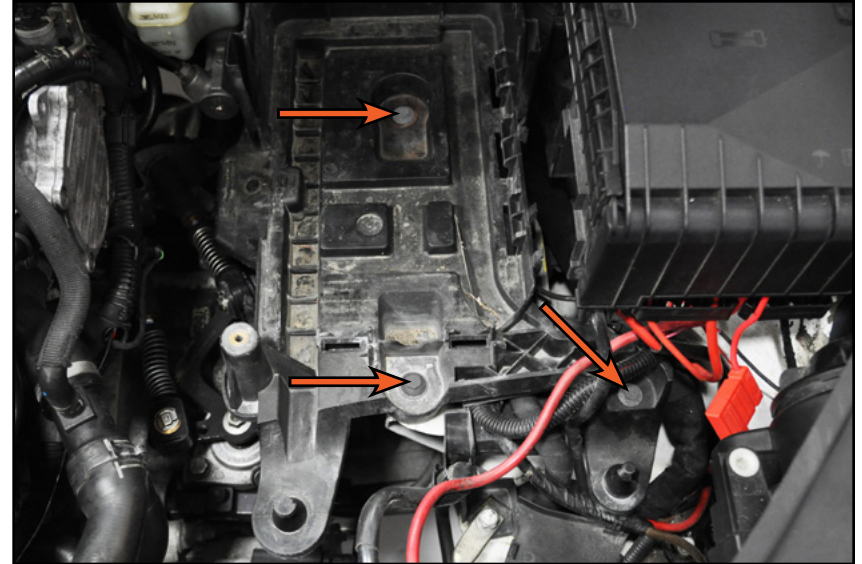
Remove the battery hold down bolt (arrow) and lift the battery out of the car.



REMOVING THE ORIGINAL TRANSMISSION MOUNT

Step 5: 10mm Socket, Extension & Ratchet

Remove the three bolts (arrows) which hold the battery tray in place.



Step 6:

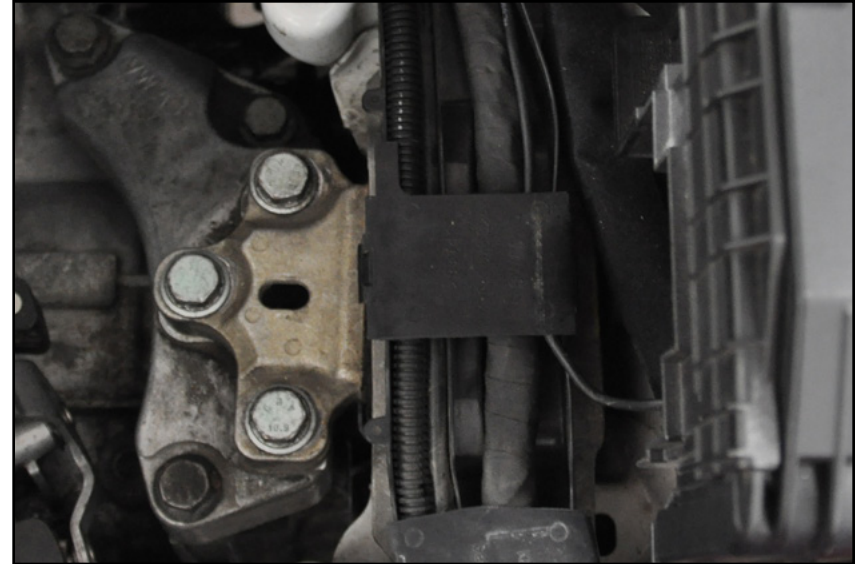
Lift the rear of the battery tray upward and tilt it towards the front of the car. Guide the lower LH mounting stud (arrow) around the relay panel wiring, then remove the battery tray.



REMOVING THE ORIGINAL TRANSMISSION MOUNT

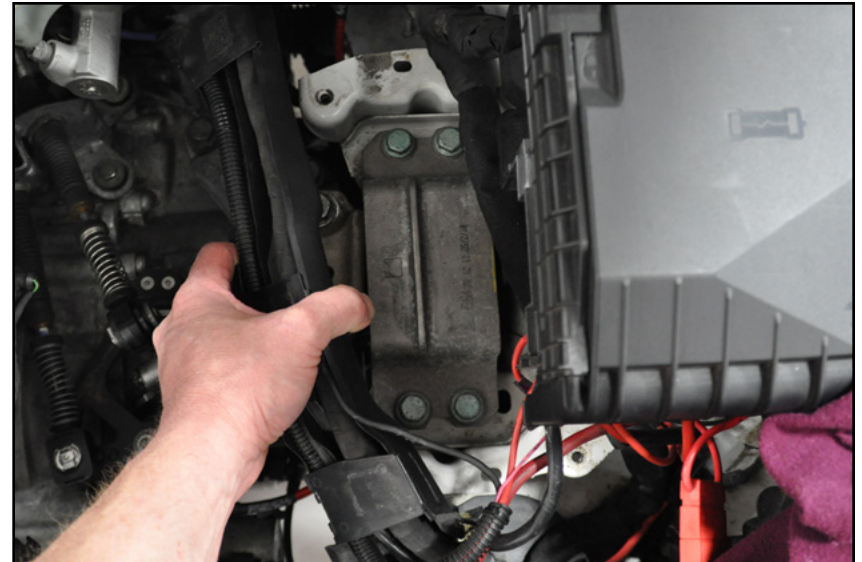
Step 7:

With the intake and battery tray removed, you can see the three bolts that secure it to the transmission bracket, but the mount to body bolts are still hidden beneath the plastic wiring harness channel.



Step 8:

Lift up on the wiring harness channel to pop it free from the plastic tabs that hold it in place. Pull the harness channel out of the way as shown in order to access the four mount to body bolts.



REMOVING THE ORIGINAL TRANSMISSION MOUNT

Step 9: T25 Torx, T30 Torx

Safely raise and support the vehicle and remove the lower insulation panel or skid plate, depending on how your vehicle is equipped.



Step 10: Floor Jack

With the skid plate removed, use a floor jack to support the transmission.



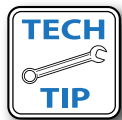
Make sure your jack has a very good rubber pad installed, or use a piece of 2 x 4 between the jack pad and transmission. **DO NOT** jack up the transmission, only raise the jack just until it contacts the case in order to support the engine and keep it from dropping when you remove the mount.



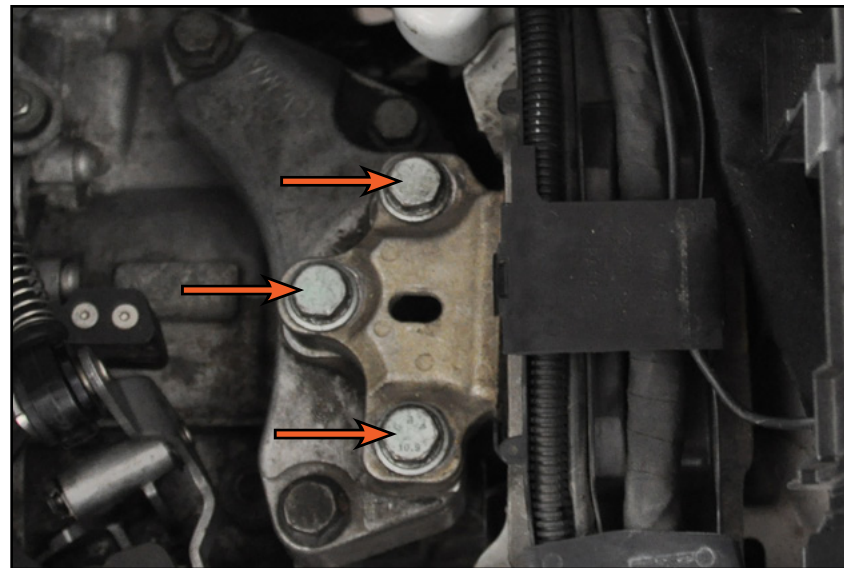
REMOVING THE ORIGINAL TRANSMISSION MOUNT

Step 11: 18mm Socket, Extension & Breaker Bar

Remove the three bolts (arrows) which secure the transmission mount to the transmission bracket.

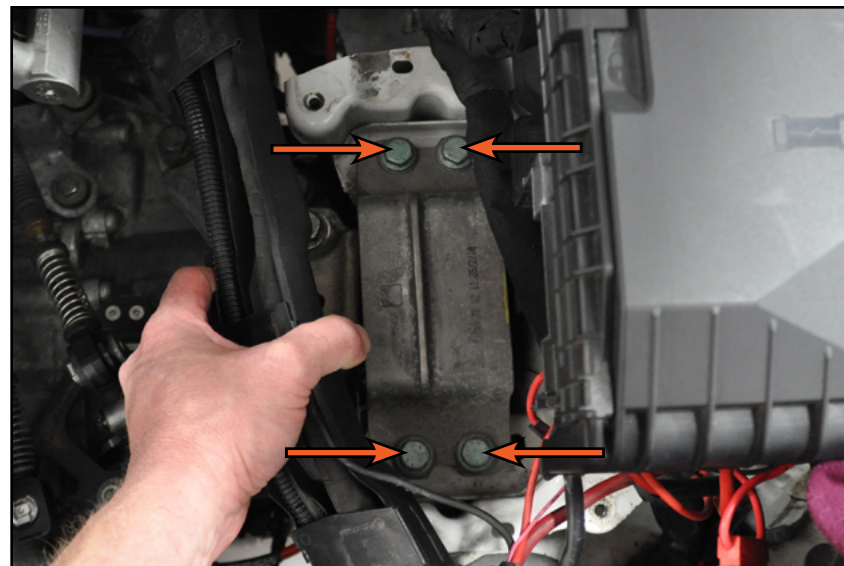


If the engine drops down as you begin to loosen the bolts, raise the jack slightly. When the jack is properly supporting the weight of the transmission, the bolts should unthread easily.



Step 12: 16mm Socket, Extension & Breaker Bar

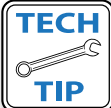
Hold the wiring harness channel out of the way and remove the four transmission mount to body bolts (arrows).



REMOVING THE ORIGINAL TRANSMISSION MOUNT

Step 13:

Remove the transmission mount from the vehicle.

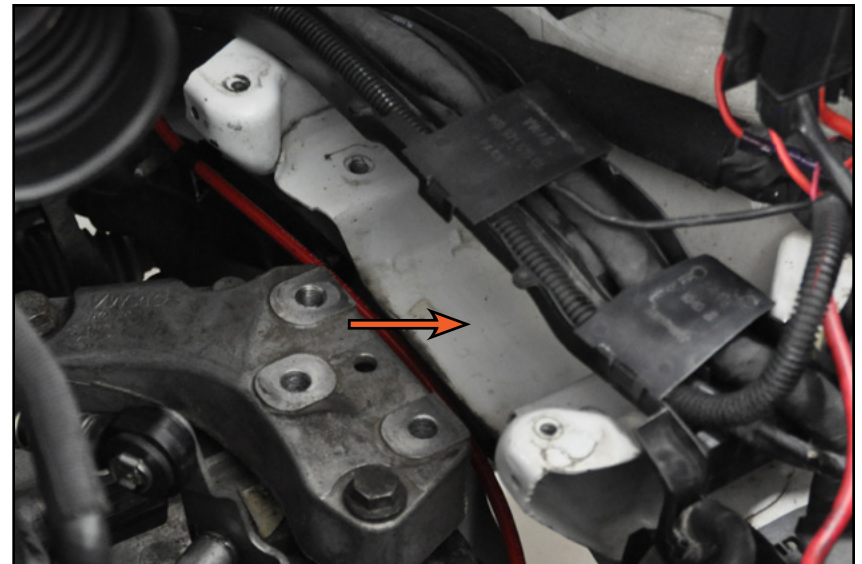


Lowering the transmission slightly will help you gain a little extra room to get the transmission mount out.



Step 14:

Before installing the new ECS transmission mount, inspect the mount cradle (arrow) on the frame channel and clean up any dirt or debris that may have accumulated there.



INSTALLING THE NEW TRANSMISSION MOUNT

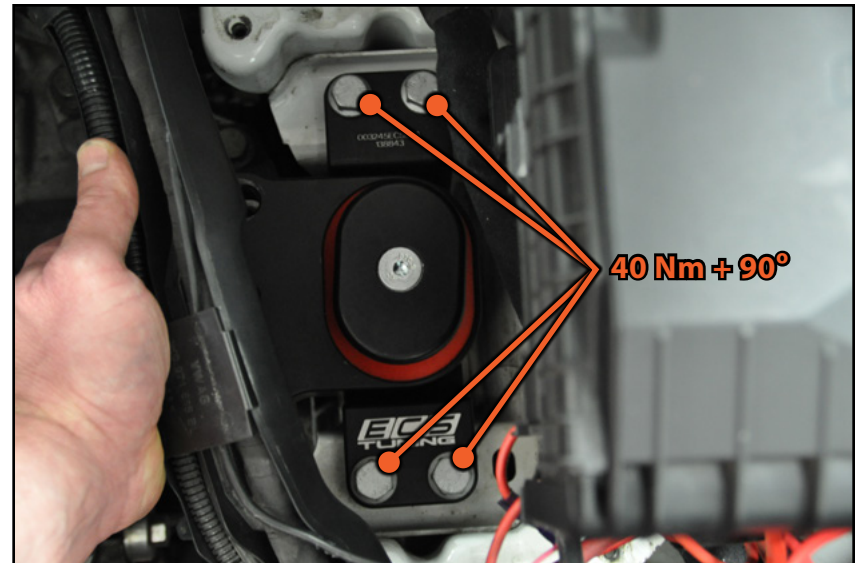
Step 1:

Set the new ECS Tuning transmission mount into place.



Step 2: 16mm Socket, Extension & Torque Wrench

Install the four new transmission mount to body bolts and torque them to 40 Nm (29 Ft-lbs) + 90 degrees.



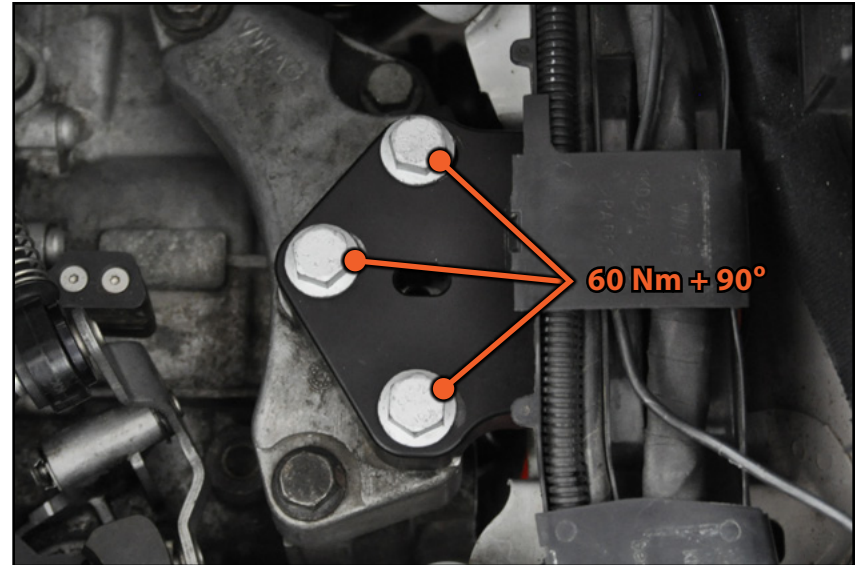
INSTALLING THE NEW TRANSMISSION MOUNT

Step 3:

Install the three transmission mount to transmission bracket bolts and torque them to 60 Nm (44 Ft-lbs) + 90 degrees.



It may be necessary to raise or lower the jack slightly in order for the bolts to be properly threaded in. If you begin to feel resistance, stop and adjust the jack up or down until the bolts thread in easily.



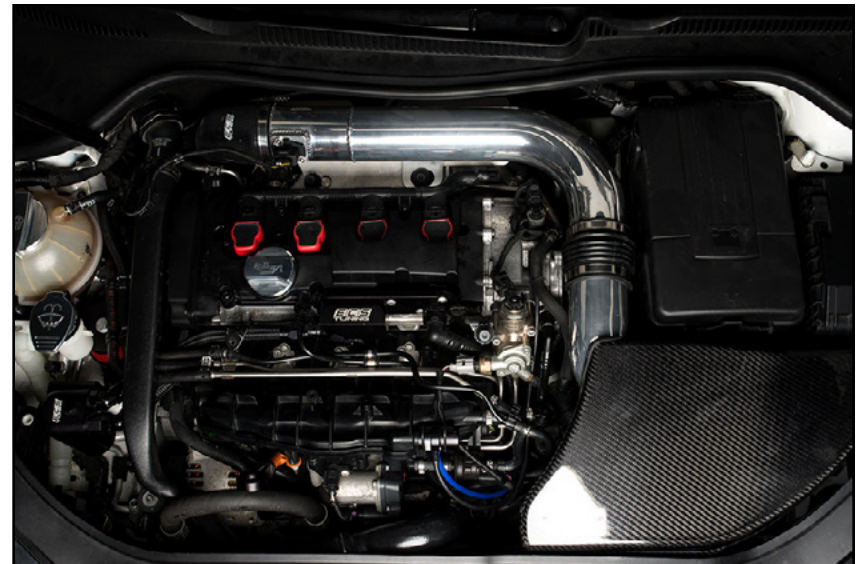
Step 4:

Reinstall the wiring harness channel.

Reinstall the battery tray and battery.

Reinstall the air box or induction system.

Remove the floor jack and install the skid plate. If you are installing a new engine mount and pendulum mount, leave the skid plate off until you have installed these mounts as well.



PENDULUM MOUNT - EXPLODED VIEW



REMOVING THE ORIGINAL PENDULUM MOUNT

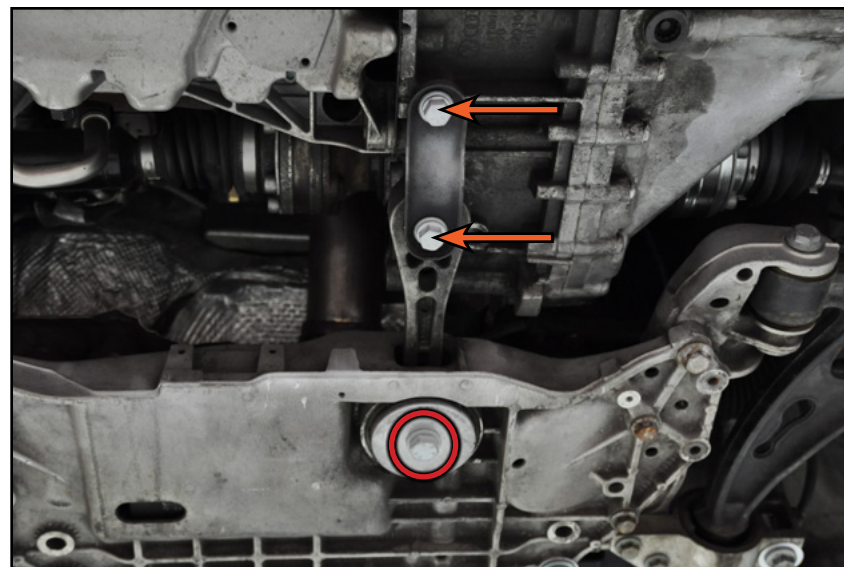
Step 1: T25 Torx, T30 Torx

Safely raise and support the vehicle and remove the lower insulation panel or skid plate, depending on how your vehicle is equipped.



Step 2:

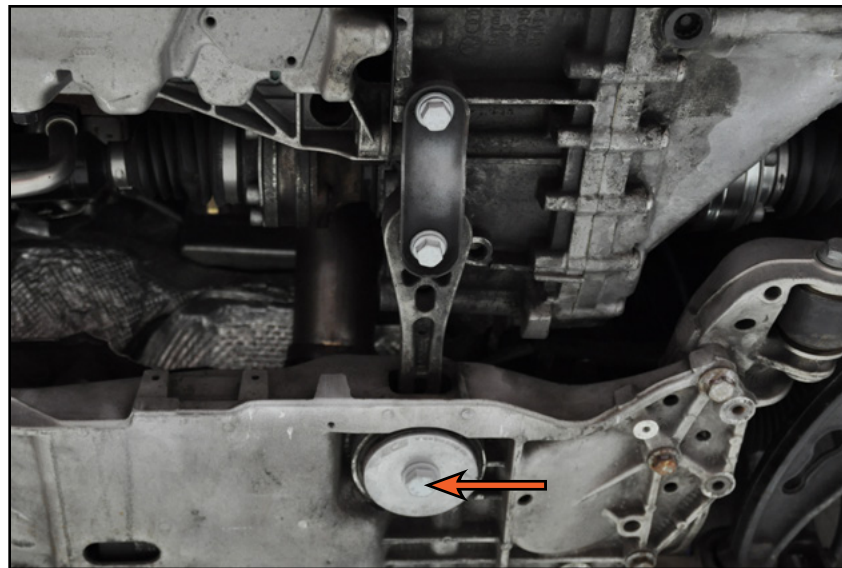
The pendulum mount is secured to the transmission case by two bolts (arrows). It is secured to the subframe by one large bolt (circled in **RED**). We are going to pay close attention to the mounting holes in the transmission case when we remove the mount. These very commonly strip out and may require thread repair.



REMOVING THE ORIGINAL PENDULUM MOUNT

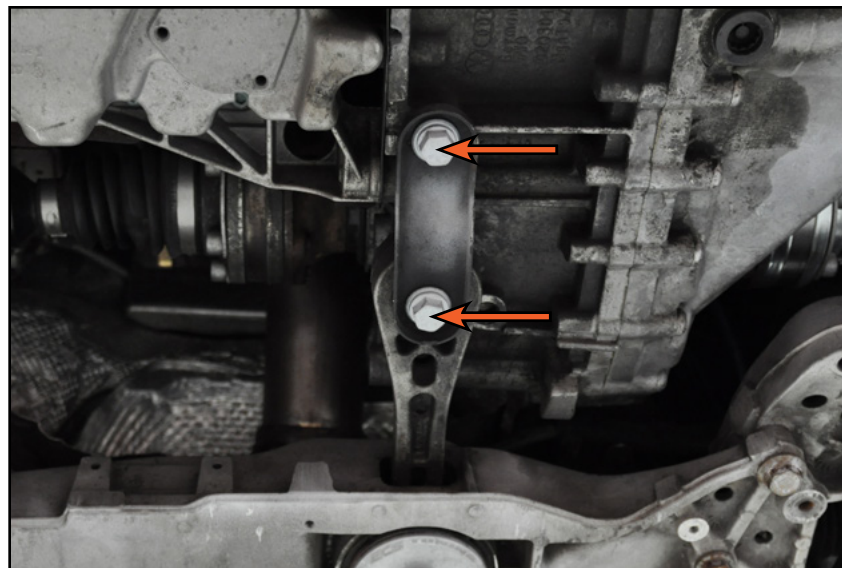
Step 3: 21mm Socket & Ratchet

Remove the bolt (arrow) that secures the pendulum mount to the subframe.



Step 4: 16mm Socket & Ratchet

Remove the bolts (arrows) which secure the mount to the transmission case.



REMOVING THE ORIGINAL PENDULUM MOUNT

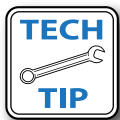
Step 5:

Pull the original pendulum mount forward out of the subframe.

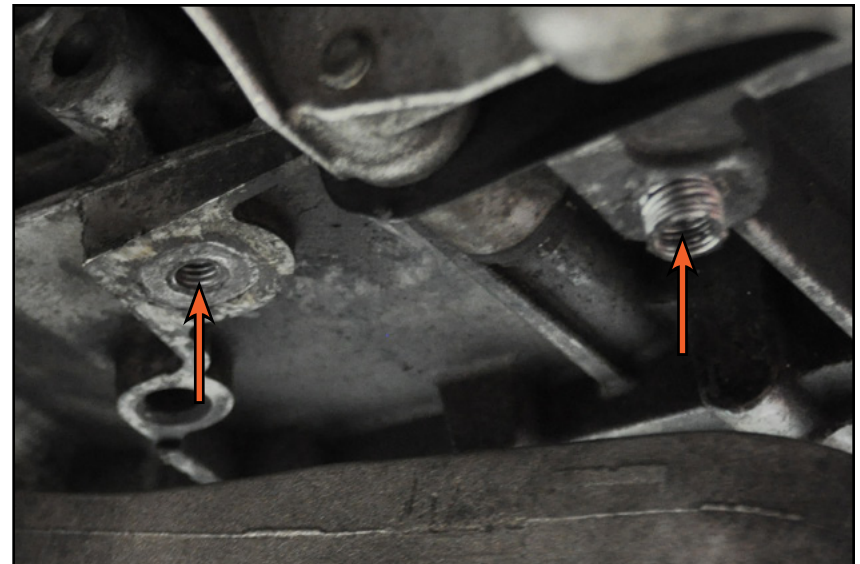


Step 6:

Closely inspect the bolt holes in the transmission case. Any damaged threads will need to be repaired before you install the new ECS Tuning pendulum mount. As you can see in this picture, one of the bolt holes in this transmission has been repaired before and the helicoil did not hold, it backed out as we removed the bolt.



Some signs that may indicate damaged threads can include: Loose bolts or missing bolts, stubborn bolts, bolts will not tighten, or visibly missing threads in the transmission case.



INSTALLING THE NEW PENDULUM MOUNT

Step 1:

Unpack your new ECS Tuning pendulum mount and cut the wire tie that holds the longitudinal brace to the mount. Be sure to keep your fingers on the mounting sleeves, spacers, and sealing boots so they do not fall out. These are retained in place when the mounting bolt is installed.

Step 2:

Slide the new ECS Tuning pendulum mount into the subframe.



INSTALLING THE NEW PENDULUM MOUNT

Step 3: 16mm Socket and Torque Wrench

Slide the longer of the two new M10 bolts through the spherical and into the transmission case and tighten it to 40 Nm (29 Ft-lbs) + 90 degrees.



Step 4: 16mm Socket and Torque Wrench

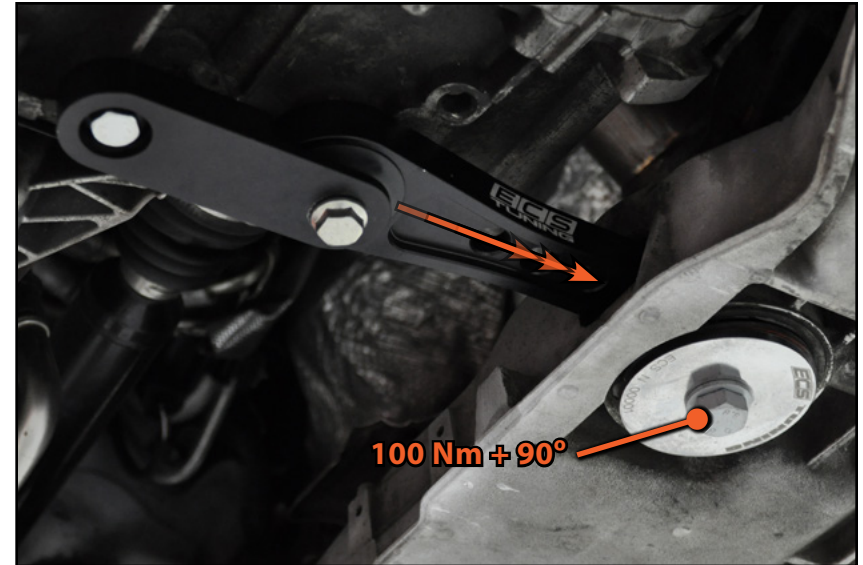
Thread the shorter M10 bolt (arrow) through the front of the mount and into the transmission case and tighten it to 40 Nm (29 Ft-lbs) + 90 degrees.



INSTALLING THE NEW PENDULUM MOUNT

Step 5: 21mm Socket and Torque Wrench

Pull the pendulum mount rearward until you can slide the remaining M14 bolt (arrow) through the mount and into the subframe bushing, then tighten the bolt to 100Nm (74 Ft-lbs) + 90 degrees.



Step 6: 16mm Socket and Torque Wrench

Reinstall the skid plate or insulation panel.



Congratulations, your installation is complete!

TORQUING TIPS

Torque to Yield or “Stretch” Bolts

Many bolts will have a torque specification listed in the format - xx Nm (xx Ft-lbs) + xx degrees. These bolts are torque to yield bolts, commonly referred to as “stretch” bolts. The correct procedure for torquing these bolts is:

Stage One - Torque the bolt(s) to the initial Nm or Ft-lb specification. If there is more than one, be sure to torque them in the correct sequence.

Stage Two - Tighten or “stretch” the bolt(s) the additional specified number of degrees. If there is more than one, be sure to follow the correct sequence.

Note - Some bolts may have two or more stages of torquing before the final stage of “stretching” the bolts.

When tightening more than one bolt in a specified sequence, be sure to mark each fastener with paint **immediately** after performing the final stage or “stretching” of the bolts. This will ensure that you keep track of which bolts have already been “stretched”.

All Torque to Yield bolts should only be used once and should be replaced each time they are removed. If they are reused, they will not be able to achieve the proper clamping force with the specified torque.

Lubrication

Torque specifications are always listed for a dry fastener (**no** lubrication) unless specified otherwise.

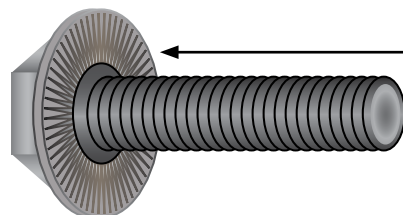
Some fasteners require lubrication on the threads -or- on the contact surface while torquing. These fasteners will be listed with the specific location and type of lubrication required. Always follow manufacturers recommendations exactly.

Lubricating a fastener that is intended to be installed dry and then torquing it to factory specifications will increase the clamping force and stress on the fastener and components, which can result in damage or failure.

Do not lubricate the threads of any fastener unless it is specifically recommended by the manufacturer.

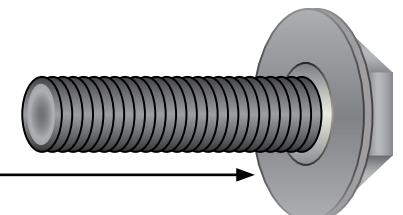
Ribbed vs. Non-Ribbed Bolts

Ribbed and Non-Ribbed bolts in the same location generally require a different torque specification.



A ribbed bolt is identified by the ribs on the contact surface

A non-ribbed bolt is identified by the smooth contact surface



TORQUE SPECIFICATIONS

M12 Engine Mount to Engine Bracket Bolts	60 Nm (44 Ft-lbs) + 90 degrees	(Page 15)
M10 Engine Mount to Body Bolts	40 Nm (29 Ft-lbs) + 90 degrees	(Page 15)
M8 Engine Mount Side Brace Bolts	20 Nm (15 Ft-lbs) + 90 degrees	(Page 15)
M10 Transmission Mount to Body Bolts	40 Nm (29 Ft-lbs) + 90 degrees	(Page 24)
M12 Transmission Mount to Transmission Bracket Bolts ..	60 Nm (44 Ft-lbs) + 90 degrees	(Page 25)
M10 Pendulum Mount to Transmission Case Bolts	40 Nm (29 Ft-lbs) + 90 degrees	(Page 31)
M14 Pendulum Mount to Subframe Bolt	100 Nm (74 Ft-lbs) + 90 degrees	(Page 32)

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 Mount 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.

Although this material has been prepared with the intent to provide reliable information, no warranty (express or implied) is made as to its accuracy or completeness. Neither is any liability assumed for loss or damage resulting from reliance on this material. SPECIFICALLY, NO WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER WARRANTY IS MADE OR TO BE IMPLIED WITH RESPECT TO THIS MATERIAL. In no event will ECS Tuning, Incorporated or its affiliates be liable for any damages, direct or indirect, consequential or compensatory, arising out of the use of this material.