



VW MK7 Golf Performance Control Arm Kit Installation Instructions



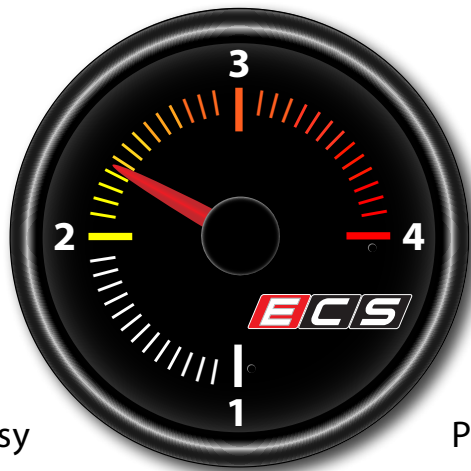
Proper service and repair procedures are vital to the safe, reliable operation of all motor vehicles as well as the personal safety of those performing the repairs. Standard safety procedures and precautions (including use of safety goggles and proper tools and equipment) should be followed at all times 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 upgraded Performance Lower Control Arm Kit w/Polyurethane Bushings into our MK7 GTI. The ECS polyurethane bushings come pre-installed in new control arms, making for a very easy install. Upgrading to polyurethane offers many improvements over the stock rubber bushings by supplying enhanced road feel, improved traction and longer lasting operation, all while operating squeak-free and with street friendly comfort.

ECS Difficulty Gauge



1 - Easy

Pro - 4

2 - Moderate

Advanced - 3

The ECS Difficulty Gauge is reading just above “**2 - Moderate**”. Normally only basic skills and tools are required for a job like this, but the slightly higher rating is due to the nature of polyurethane bushings. They are extremely rigid and when it comes time to align the control arm with the subframe the polyurethane can be a little unforgiving. But don’t worry, we’re going to lay out the entire install step-by-step for you, and you should be able to breeze right through this job.



The Performance Lower Control Arms are available in two different kits, one kit offers the control arms alone, and the other kit offers all of the required hardware. We **HIGHLY RECOMMEND** buying the kit **WITH** the hardware, this is due to the control arm bolts being “Torque to Yield” fasteners. This means that they will stretch when they are tightened to specification and cannot be reused. Please see [Page 20](#) for information on this type of fastener.



If your vehicle is equipped with a DSG or Tiptronic transmission, you will need to unbolt the pendulum mount from the subframe and swing the engine forward to remove the LH control arm bolt. This hardware is also “Torque to Yield” hardware, and replacements can be found [HERE](#).

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KIT CONTENTS - CONTROL ARMS ONLY



Lower Control Arm w/ECS Bushings - Left



Lower Control Arm w/ECS Bushings - Right

KIT CONTENTS - COMPLETE KIT



Lower Control Arm w/ECS Bushings - Left



Lower Control Arm w/ECS Bushings - Right



QTY (4) - M12 Control Arm Bolts



QTY (2) - M12 Control Arm Nuts



QTY (6) - M10 Ball Joint Nuts

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#240941](#)
- **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.
- If using an automotive lift, be sure and utilize the factory specified lift points. Lifting a vehicle in an incorrect location can cause damage to the suspension/running gear.
- When lifting a vehicle using a jack, always 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.

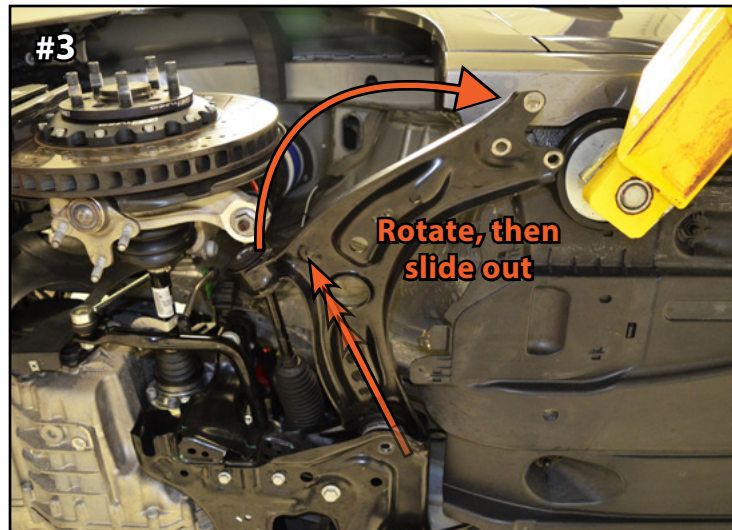
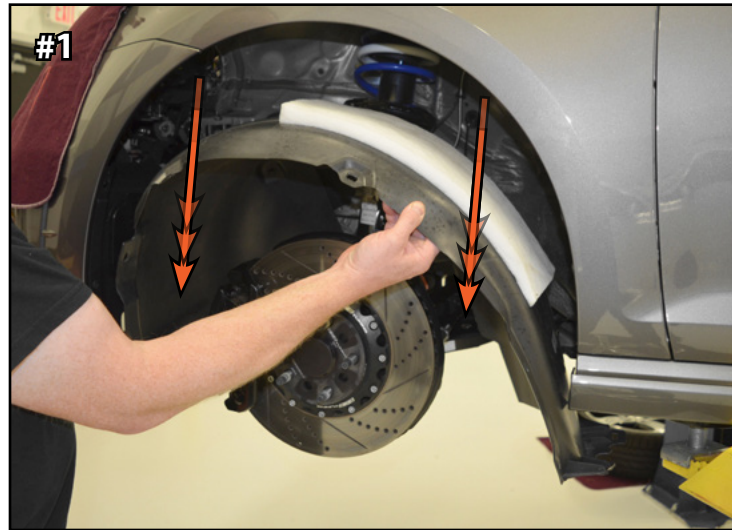


NEVER get underneath a vehicle that is supported only by a jack, and ALWAYS make sure that the vehicle is securely supported on jack stands.

PROJECT OVERVIEW

Control Arm Removal:

Let's take a moment and look at what we'll be removing in order to install the new Performance Control Arms. First we'll need to lift the vehicle and remove the insulation panel and the fender liner (#1), this is very important because we need to swing the control arm out pretty far to remove it, and the fender liner will be in the way. Next we'll disconnect the ball joint and remove the control arm bolts (#2), then we'll swing the control arm out and around to slide it out (#3). Then we'll reinstall the new control arm in reverse order, torque all of the fasteners to specification, and repeat this process on the other side of the vehicle (#4). Now let's take a closer look at the fender liner on Page 10.

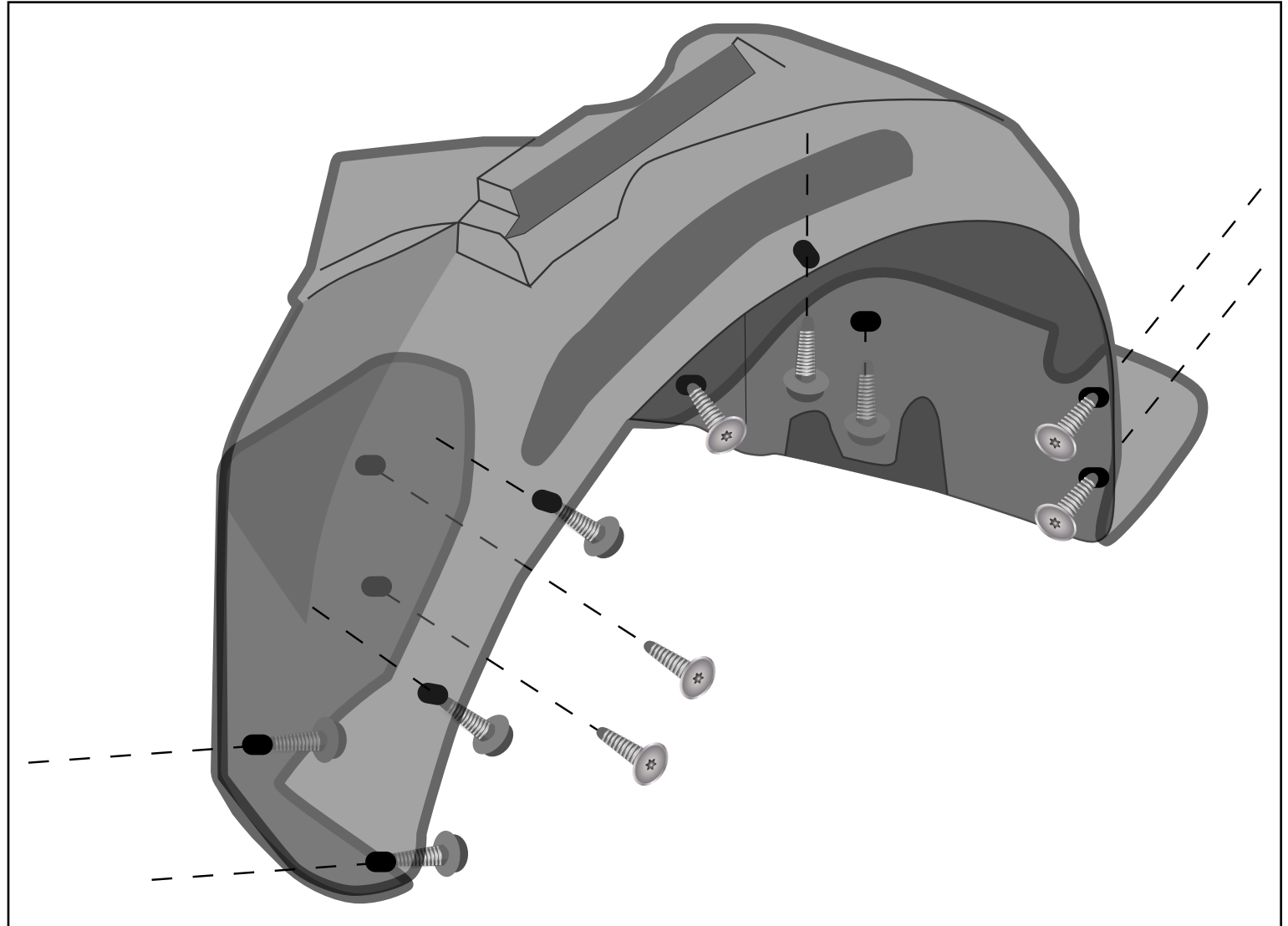


PROJECT OVERVIEW

Fender Liner Removal:

This illustration represents the LH (Driver's) side fender liner, but the RH (Passenger's) side fender liner is a mirror image of this one. As you can see there are 11 screws which secure the liner to the vehicle. Be sure to reference this diagram if you have trouble finding them all.

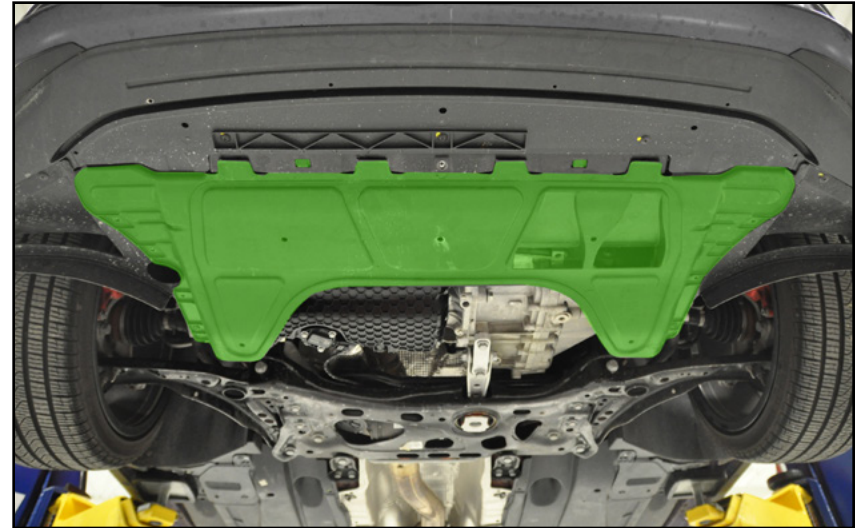
Now let's get to it!



REMOVING THE STOCK CONTROL ARMS

Step 1: T25 Torx

Safely raise and support the vehicle, then remove the insulation panel or skid plate, depending on what you have installed. The MK7 pictured here is equipped with the original lower insulation panel (highlighted in green).



Step 2: T25 Torx

Remove the wheel, then remove the 11 fender liner screws as illustrated on [Page 10](#).



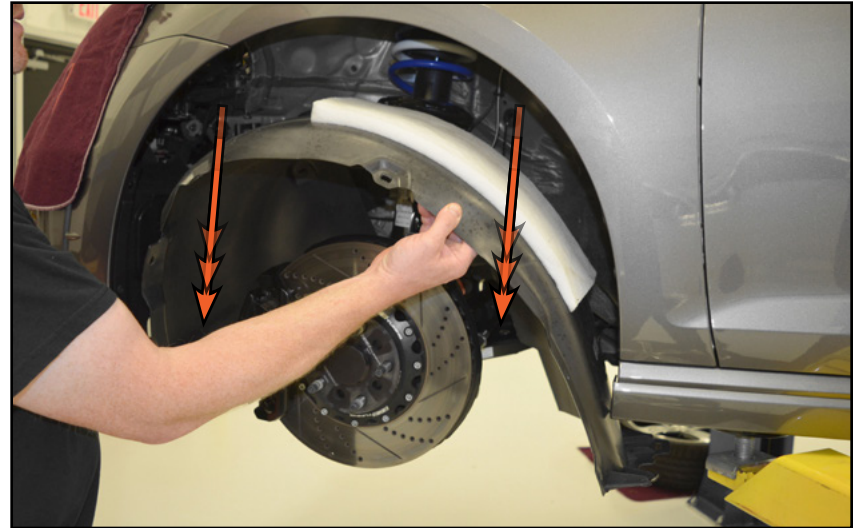
From this point forward we will only be working on one side of the vehicle, you may choose to install one side at a time or do them both simultaneously.



REMOVING THE STOCK CONTROL ARMS

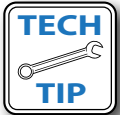
Step 3:

Pull the fender liner down and out of the wheel well.

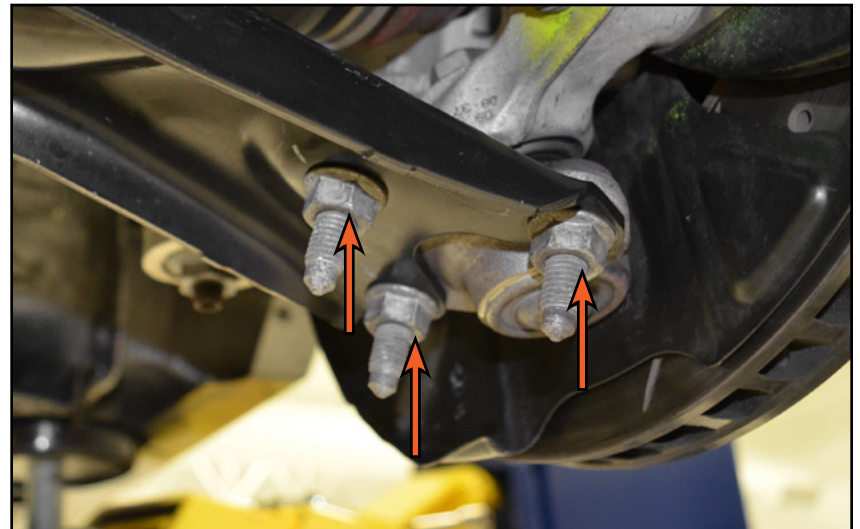


Step 4: 16mm Socket & Breaker Bar

Remove the three nuts which secure the ball joint to the lower control arm.



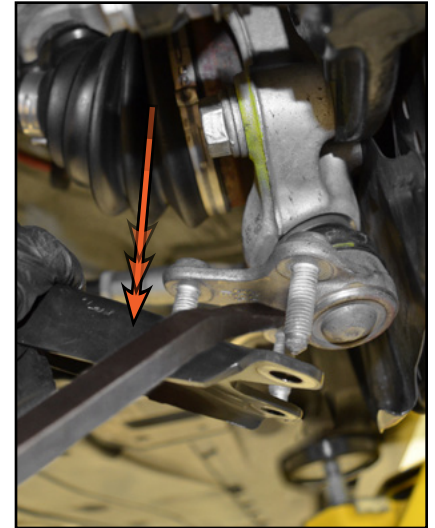
We highly recommend spraying the ball joint nuts with penetrating oil to aid in their removal.



REMOVING THE STOCK CONTROL ARMS

Step 5: 10mm Socket & Ratchet, Pry Bar

Remove the nut which secures the headlight leveling sensor bracket (LH if equipped), then pry the control arm off of the ball joint studs.



Step 6: 18mm Socket & Breaker Bar

Remove the horizontal bolt which secures the front control arm bushing to the subframe.



On vehicles equipped with an DSG or Tiptronic transmission, the LH horizontal bolt cannot be completely removed due to the location of the transmission. You will need to unbolt the pendulum or "dog bone" mount at the subframe and swing the engine forward, or in extreme cases, loosen and lower the subframe in order to remove the control arm bolt.



REMOVING THE STOCK CONTROL ARMS

Step 7: 18mm Socket, Breaker Bar, & 18mm Wrench

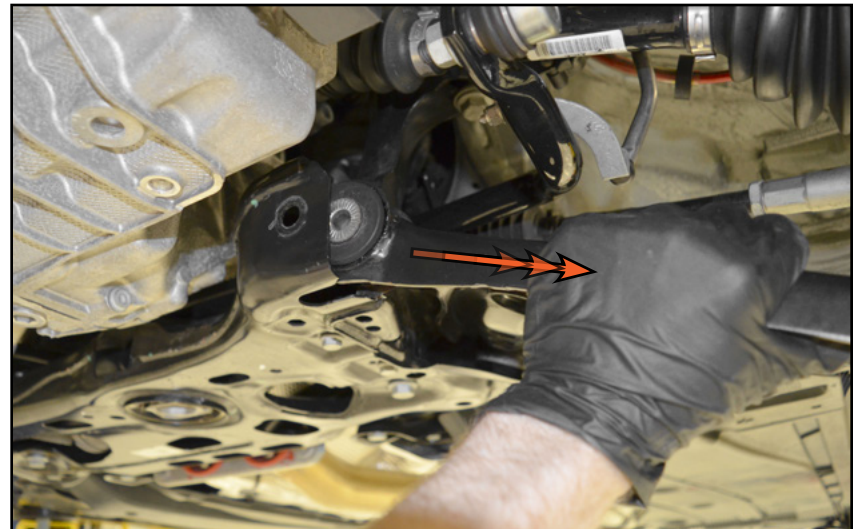
Loosen but **DO NOT** remove the vertical bolt and nut which secure the rear control arm bushing to the subframe, we will remove this hardware in a later step.



You will have to hold the nut on top with a wrench while you loosen the bolt from below.

Step 8:

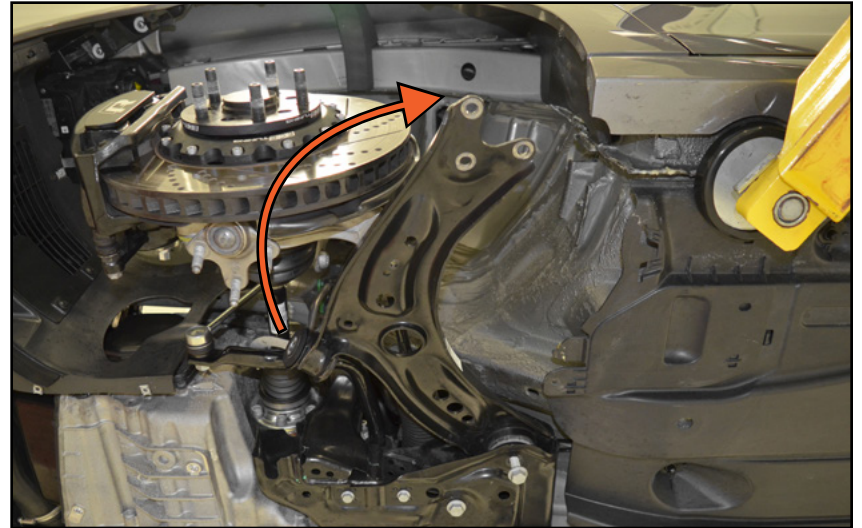
With the rear control arm bushing bolt loosened but still in place, pull the ball joint side of the control arm downward to clear the steering knuckle, then pull the front of the arm out of the subframe. Now, continue to the next page for further instructions.



REMOVING THE STOCK CONTROL ARMS

Step 9:

Pivot the control arm as shown from the bolt we left in the rear bushing, this will give you the clearance you need to pull the arm out of the subframe.



Step 10:

Remove the vertical bolt and nut from the rear control arm bushing, then pull the arm out of the subframe.



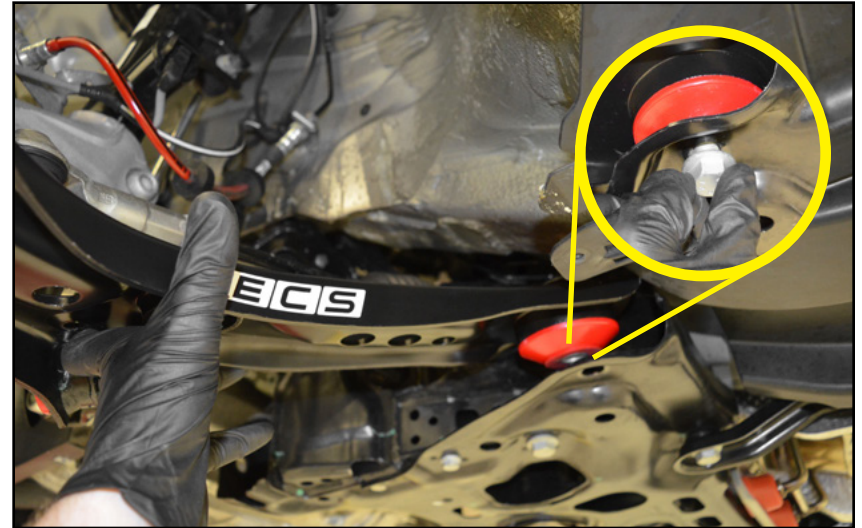
INSTALLING THE NEW CONTROL ARMS

Step 1:

Slide the new control arm into the subframe, then line up and hand tighten the vertical bolt and nut through the rear control arm bushing.



We will be torquing these fasteners in a later step, leaving them loose now makes it easier to install the rest of the control arm.

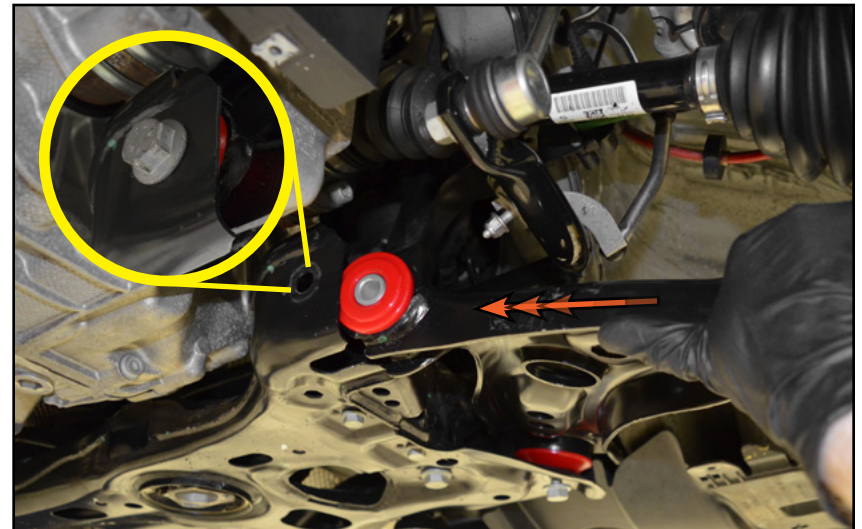


Step 2:

Pivot the control arm back into position and slide it into the subframe, remember that you will need to pull the ball joint side of the control arm downward during this step to clear the steering knuckle. Line up the front control arm bushing and hand tighten the bolt.



We will be torquing these fasteners in a later step, leaving them loose now makes it easier to install the rest of the control arm.



INSTALLING THE NEW CONTROL ARMS

Step 3:

Install the ball joint into the control arm, then hand tighten the ball joint nuts.



We will be torquing these fasteners in a later step, leaving them loose now makes it easier to install the rest of the control arm.



Step 4: 10mm Socket & Torque Wrench

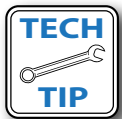
Reinstall the headlight leveling sensor bracket (if equipped) and torque the nut to 14 Nm (10.3 Ft-lbs).



INSTALLING THE NEW CONTROL ARMS

Step 5: 16mm Socket, Torque Wrench & Breaker Bar

Torque the ball joint nuts to 40 Nm (30 Ft-lbs), then rotate the nuts with a breaker bar an additional 45 degrees.



As you can see, we marked each bolt with a paint marker after it was torqued down. This is an easy thing to do to ensure that none of the fasteners are forgotten or skipped.



Step 6: 18mm Socket, Torque Wrench & Breaker Bar

Torque both of the control arm bolts to 70 Nm (52 Ft-lbs), then rotate each of them with a breaker bar an additional 180 degrees.



Please see [Page 20](#) for information on "Torque to Yield" fasteners.



INSTALLING THE NEW CONTROL ARMS

Step 7: T25 Torx, Protect-a Socket & Torque Wrench

Reinstall the fender liner and the wheel, then torque the wheel fasteners (factory spec is 120 Nm [89 Ft-lbs]).



Step 8:

Repeat this process on the opposite side of the vehicle, then reinstall the insulation panel or skid plate, depending on your application.



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.

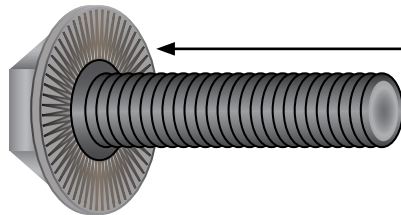
Some fasteners require lubrication on the threads -or- on the contact surface while torquing. These fasteners will be listed with the specific location and type of lubrication required. Always follow manufacturers recommendations exactly.

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.

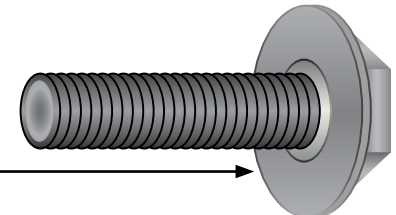
Ribbed vs. Non-Ribbed Bolts

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



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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 Lower Control Arm 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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