

VW 2006+ 6-Speed Adjustable Side-to-Side Shift Lever Installation Instructions - [ES3137552](#)/[ES3177699](#)



Skill Level
1 - Easy
Basic Skills
Recommended

Three different fixed throw settings:

- Stock
- 20% Reduction
- 40% Reduction

T304 Stainless Steel Cable Pin

- 10mm pin included
- Utilizes OE style clip
- Threaded for easy installation and adjustment

T304 Stainless Steel Pivot Pin

T304 Stainless Steel Ball Stud

**Engineered working angle
for the optimal shifter feel**

Shift Lever:

- Precision CNC machined from 6061-T6 Billet Aluminum
- Type 2 Black Anodized Finish for corrosion resistance and durability



INTRODUCTION

The Project:

Whether you're looking for a shorter side-to-side throw length, or simply to replace an original plastic relay lever with something more durable, our new billet side-to-side shift lever brings performance as part of the package. It's designed with three different fixed throw settings, and once it's set that's it - there's no slotted adjustment which can loosen up or slip around over time. The design and construction reflect quality all around, and no details have been overlooked. If you're still left looking for more then be sure and check out [Page 3](#) for all of the different shifter upgrades we have to offer.

Installation is fairly easy, but you will have to remove one of the transmission mounts to get the access you need. Keep in mind that the transmission mount bolts are Torque-to-Yield, this means that they **cannot** be reused and **must** be replaced. Be sure to read through these instructions completely before you begin. This install can be done in an afternoon, plan according to your experience and comfort level. Thank you for looking to ECS Tuning for all of your repair and performance needs, we appreciate your business!

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AVAILABLE KITS

Note: Kits for vehicles with an original metal relay lever will include a new shift cable end to fit the 10mm pin which comes with the ECS Side-to-Side lever. The original metal levers were primarily on MK5 applications, but be sure and double check what you have because production date could come into play.

WITH OEM Plastic Relay Lever:



Side-to-Side Shift Lever Kit
[ES#3137552](#)



Front-to-Back & Side-to-Side Kit
[ES#3161690](#)

WITH OEM Metal Relay Lever:



Side-to-Side Shift Lever Kit
[ES#3177699](#)



Front-to-Back & Side-to-Side Kit
[ES#3177688](#)

Build-Your-Own 6-Speed Manual Transmission Upgrade Kit: [ES#3420447](#)



ECS Front-to-Back Shift Lever



ECS Side-to-Side Shift Lever



ECS Solid Shifter Cable Bracket Bushing Kit



ECS Solid Shifter Cable End Link Bushings

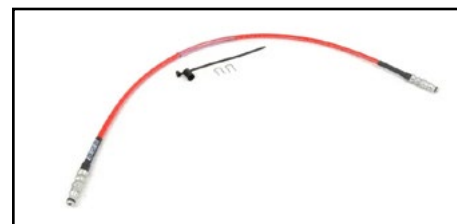
- OR -



ECS Billet Shifter Cable End Links



ECS 6-Speed Clutch Bleeder Block



ECS Exact-Fit Clutch Line



Transmission Service Kit w/ Magnetic Drain & Fill Plugs

BILLET SIDE-TO-SIDE SHIFT LEVER KIT CONTENTS



QTY 1: Pivot Pin



QTY 1: 10mm Cable Pin



QTY 1: 10mm Cable Pin



QTY 2: OE Relay Lever Bushing
QTY 1: OE Relay Lever Slide



QTY 1: Side-to-Side Cable End*



QTY 2: Cable Pin Clips



QTY 1: Threadlocker



QTY 1: Billet Side-to-Side Shift Lever

*only included if you order a kit for a car with an original metal relay lever

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

Specialty Tools

- **Schwaben Shifter Alignment Pin**.....[ES#3570695](#)
- **Schwaben Trim Removal Tool Set**.....[ES#517779](#)

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.

PROJECT OVERVIEW

Here's a quick overview of the main installation steps. Most of them are required just to access the shift lever. We're betting you're familiar with removing your intake and skid plate, so we're not going to cover these, but instead begin our detailed step by step instructions with battery removal. If you need a refresher on intake removal, we have detailed instructions with linked to some of our other ECS Tuning products which are listed below - feel free to check them out!

FSI Engines: [ES#2981602](#)

MK6 TSI Engine: [ES#2979256](#)

MK7 Gen3 Engine: [ES#3111609](#)



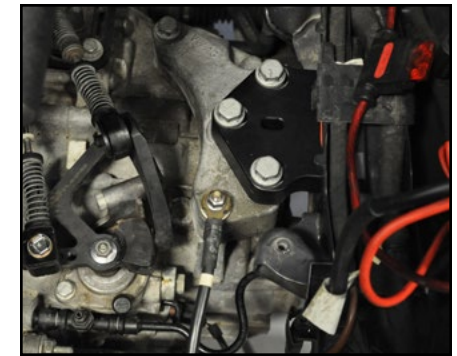
1) Remove the air box/intake.



2) Remove the skid plate.



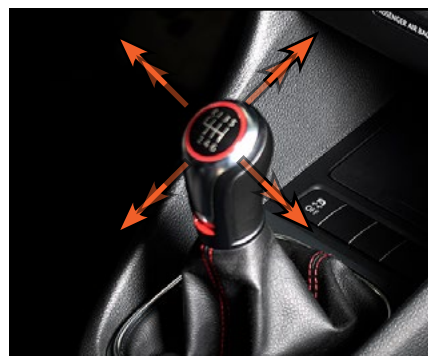
3) Remove the battery and tray.



4) Support the transmission and remove the mount bracket.



5) Install the side-to-side shift lever.



6) Adjust the shift cables and reassemble the vehicle.

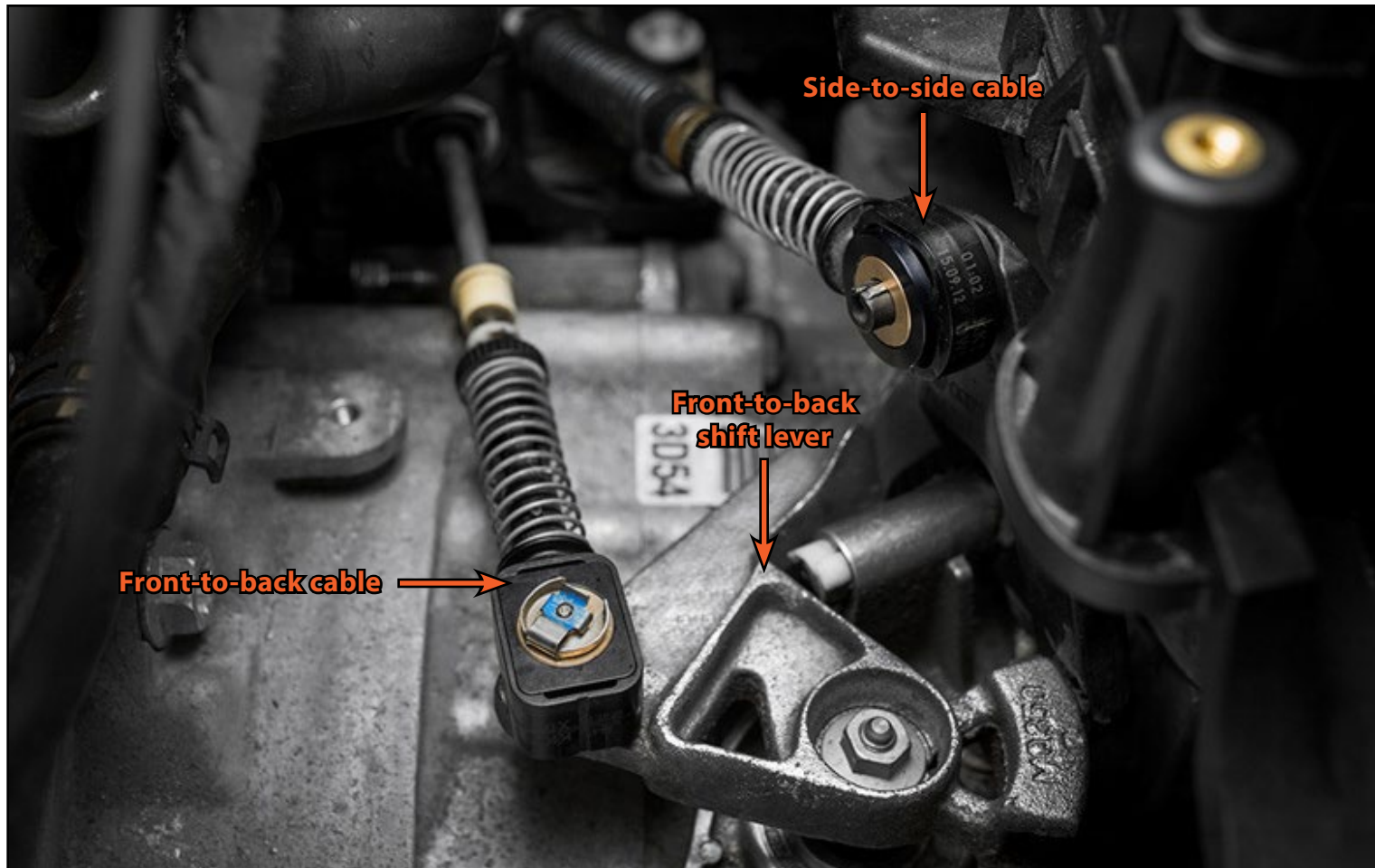


7) Hit the road!

Now let's get to it!

6-SPEED SHIFTER CABLE IDENTIFICATION

All Volkswagen 6-speed transmission shifter cables will have this orientation, regardless of the end style of the shifter cable. The front-to-back cable is the lower of the two cables, mounted onto the vertical pin on the front-to-back shift lever. The side-to-side cable is the higher of the two cables, mounted onto the horizontal pin of the relay lever.

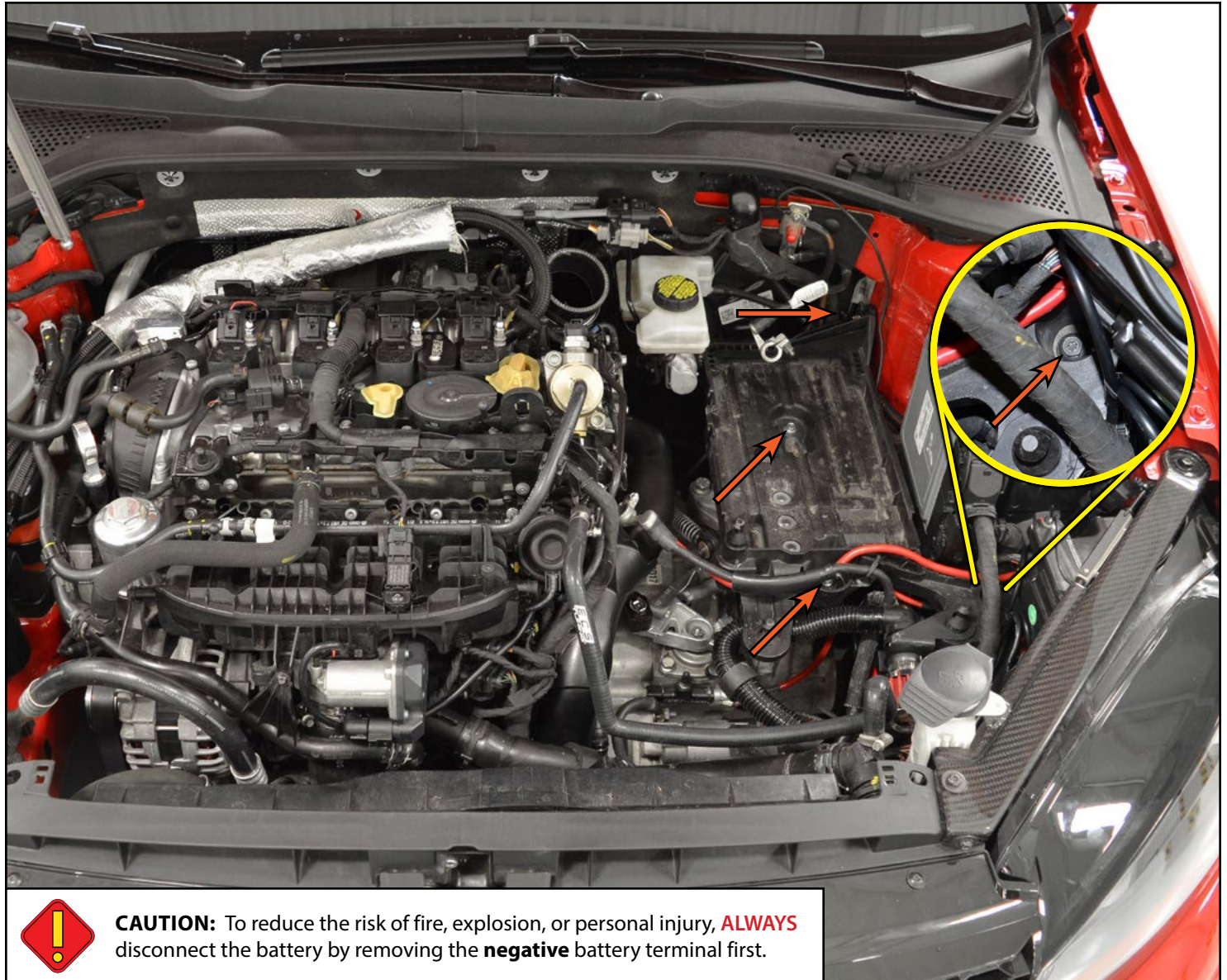


INSTALLING THE BILLET SIDE-TO-SIDE SHIFT LEVER

Step 1:

To begin this install we need to remove the battery, the battery tray, & the original air box (or aftermarket intake system).

To remove the battery tray there are three 10mm bolts, and one 10mm nut, look for the arrows in the photos on the right.

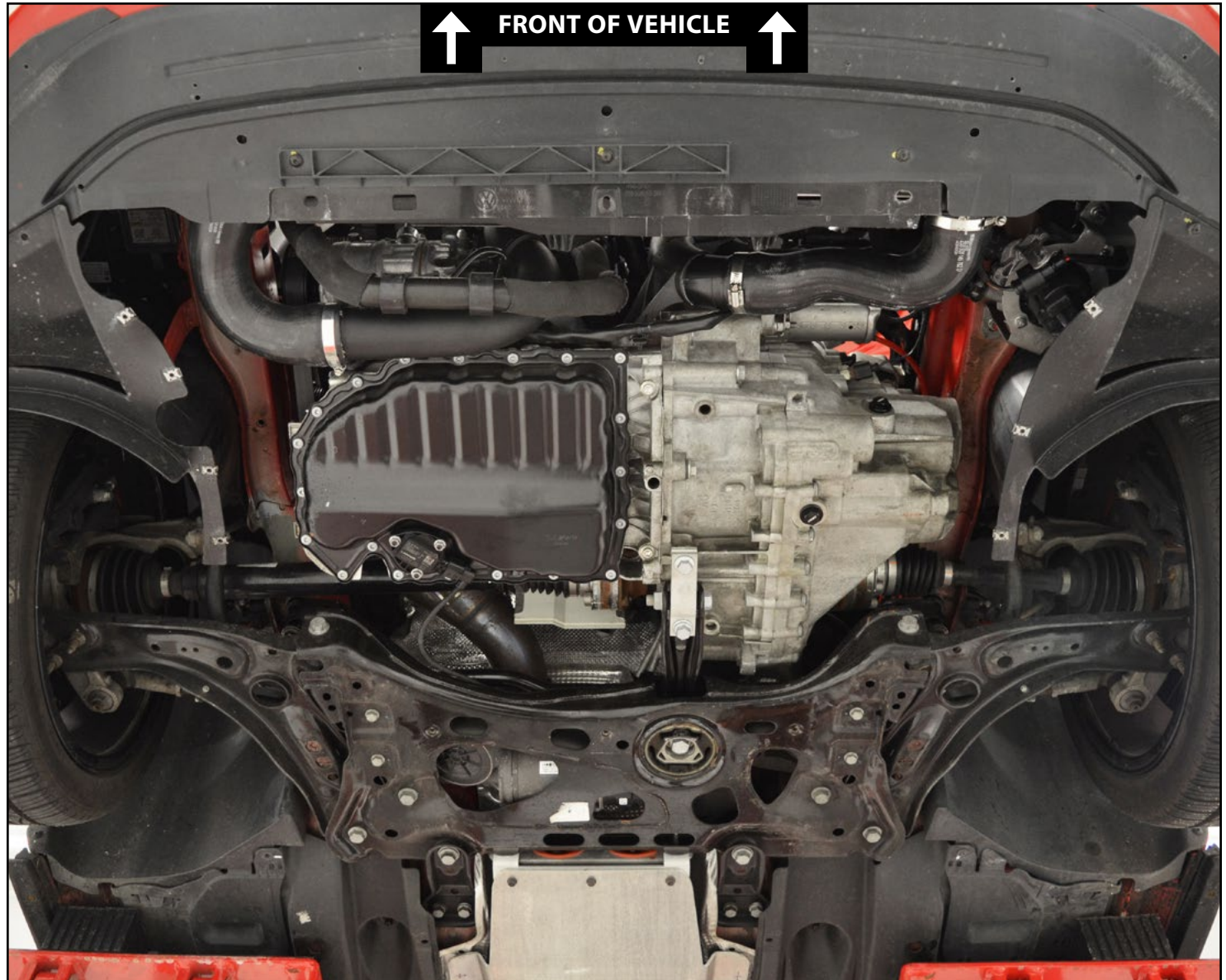


CAUTION: To reduce the risk of fire, explosion, or personal injury, **ALWAYS** disconnect the battery by removing the **negative** battery terminal first.

INSTALLING THE BILLET SIDE-TO-SIDE SHIFT LEVER

Step 2:

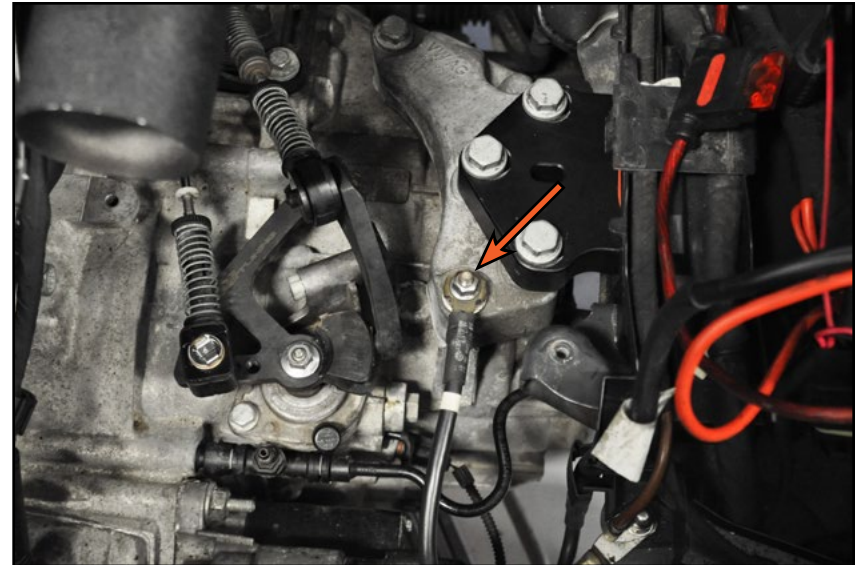
Safely lift and support the vehicle, then remove the lower insulation panel or belly pan.



INSTALLING THE BILLET SIDE-TO-SIDE SHIFT LEVER

Step 3: 13mm Socket, Ratchet

Remove the nut which secures the negative battery cable to the transmission bracket bolt (if equipped). Pull the cable off and position it out of the way.



Step 4: Hydraulic Floor Jack

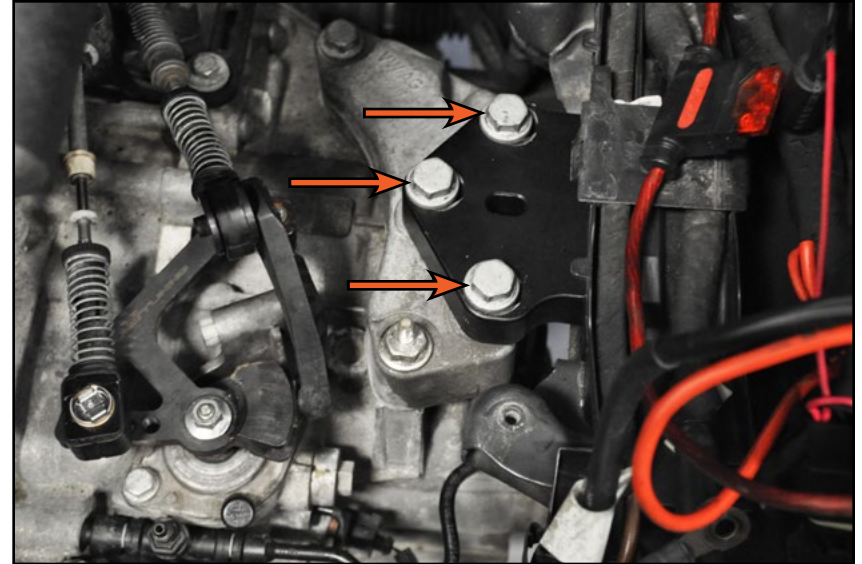
Place a floor jack underneath the transmission and jack it up just until it makes contact and will support the weight of the drivetrain. It is always a good idea to place a block of wood between the jack pad and the transmission case to help distribute the weight, a 2x4 will work nicely here.



INSTALLING THE BILLET SIDE-TO-SIDE SHIFT LEVER

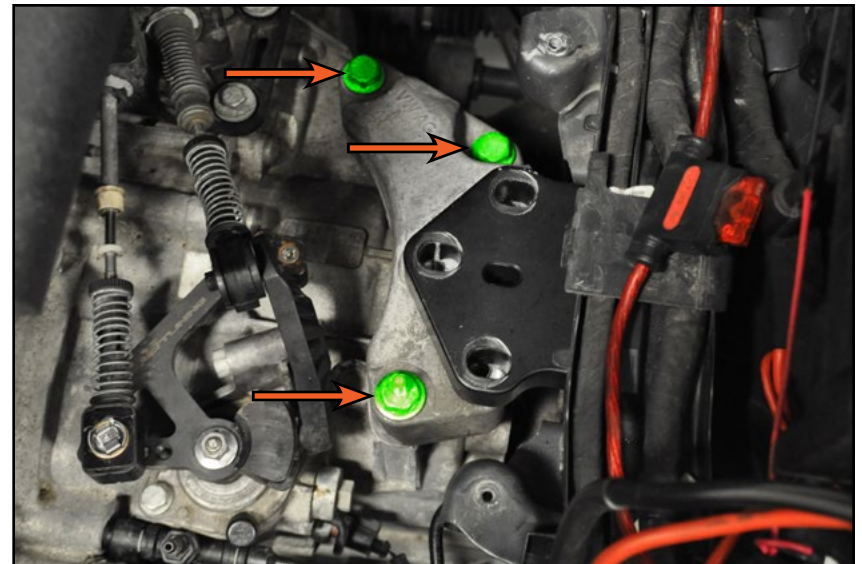
Step 5: 18mm Socket, Ratchet, Extension

Remove the three transmission mount bolts.



Step 6: 18mm Socket, Ratchet, Extension

Remove the three transmission bracket bolts (highlighted in **GREEN** in the photo on the right).



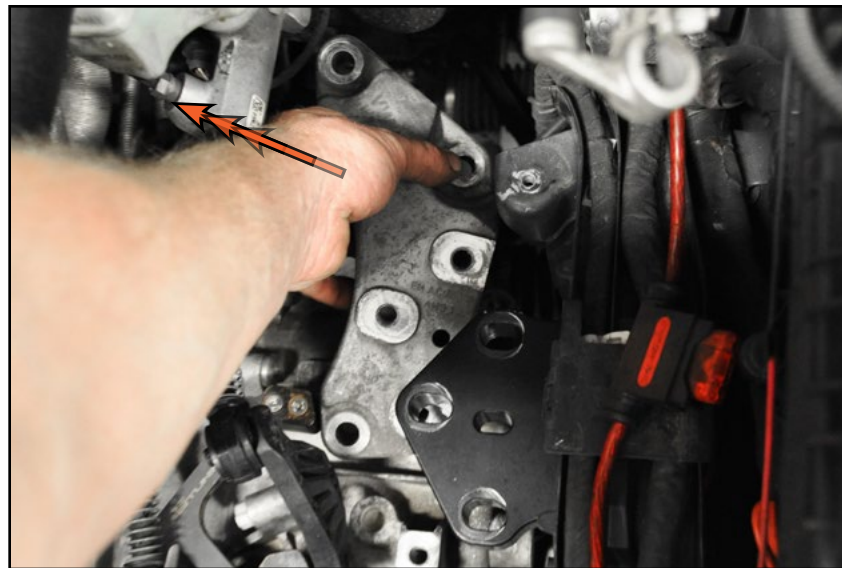
INSTALLING THE BILLET SIDE-TO-SIDE SHIFT LEVER

Step 7:

Lower the floor jack slightly, then lift the transmission bracket out of the car.



CAUTION: Make sure to leave the floor jack in place to support the drivetrain until you are done and the transmission mount is reinstalled. Do not let the jack bleed down. Failure to support the drivetrain can cause damage to the other drivetrain mounts, as well as various harnesses and hoses.



Step 8:

Place the transmission in neutral.

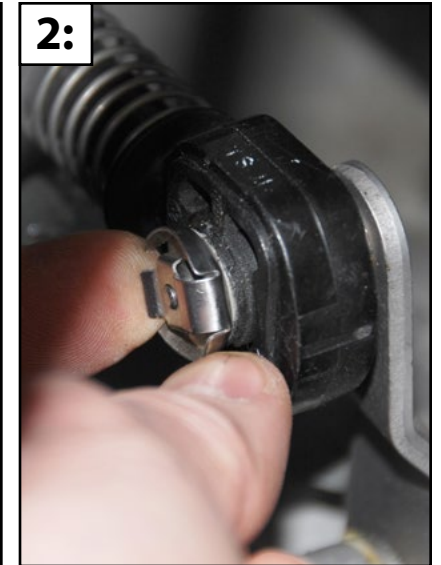


INSTALLING THE BILLET SIDE-TO-SIDE SHIFT LEVER

Step 9: Small Flat Blade Screwdriver

Disconnect the cable end from the original side-to-side shift lever. There are two possible options here:

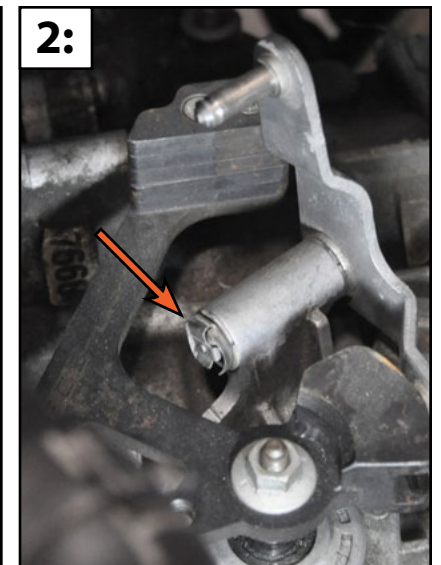
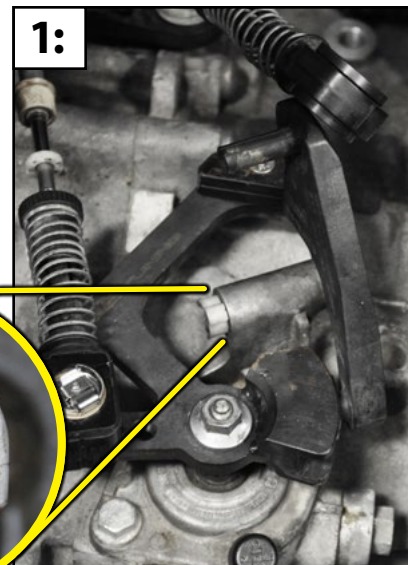
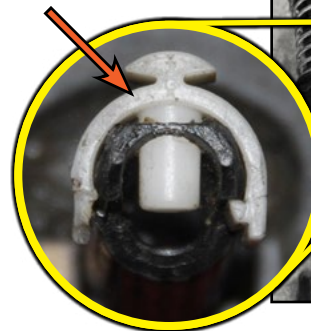
1. An original plastic shift lever with a 10mm pin. This cable end is retained by a small plastic nub on the end of the shift lever pin. You may be able to pull this cable end off by hand, however if it is too tight, insert a small pair of needle nose pliers between the cable end and shifter linkage and gently pry it off.
2. An original metal shift lever with an 8mm pin. Remove the metal retaining clip on the end of the pin, then slide the cable end off.



Step 10: Small Flat Blade Screwdriver

Remove the retaining clip off of the pivot pin on the original side-to-side relay lever. There are two options here:

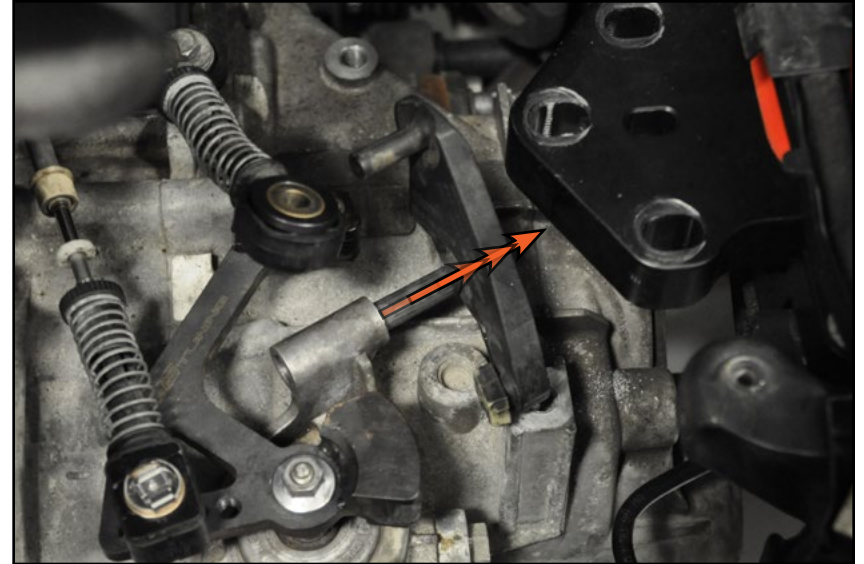
1. An original plastic shift lever with a plastic clip. This can usually be removed by hand but you may use a screwdriver if necessary to help pry it off.
2. An original metal shift lever with a metal clip. This can usually be removed by hand but a screwdriver or pick tool can help if necessary.



INSTALLING THE BILLET SIDE-TO-SIDE SHIFT LEVER

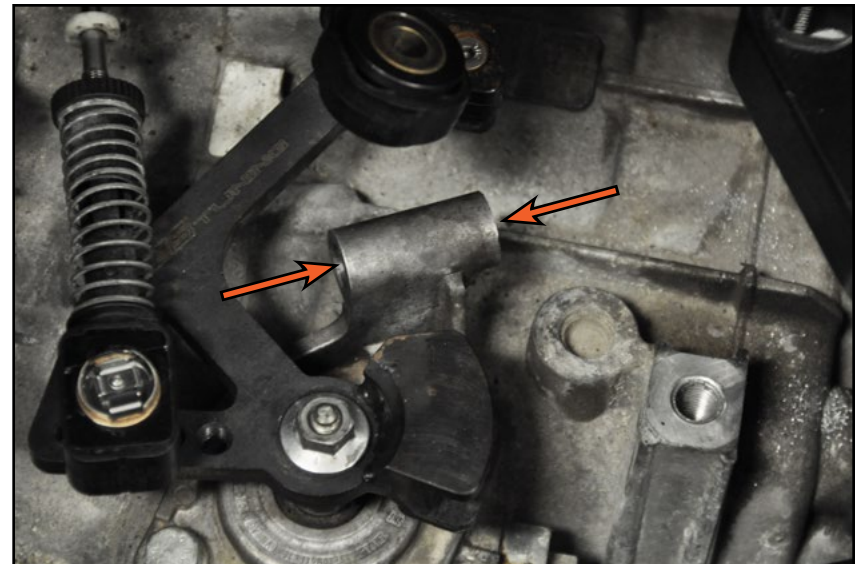
Step 11:

Slide the original side-to-side shift lever out and remove it. (Plastic lever shown, metal slides out the same way).



Step 12:

If you had an original metal lever, remove the old bushings (there are no bushings with a plastic lever), then thoroughly clean all dirt and grease out of the pivot pin bore.



INSTALLING THE BILLET SIDE-TO-SIDE SHIFT LEVER

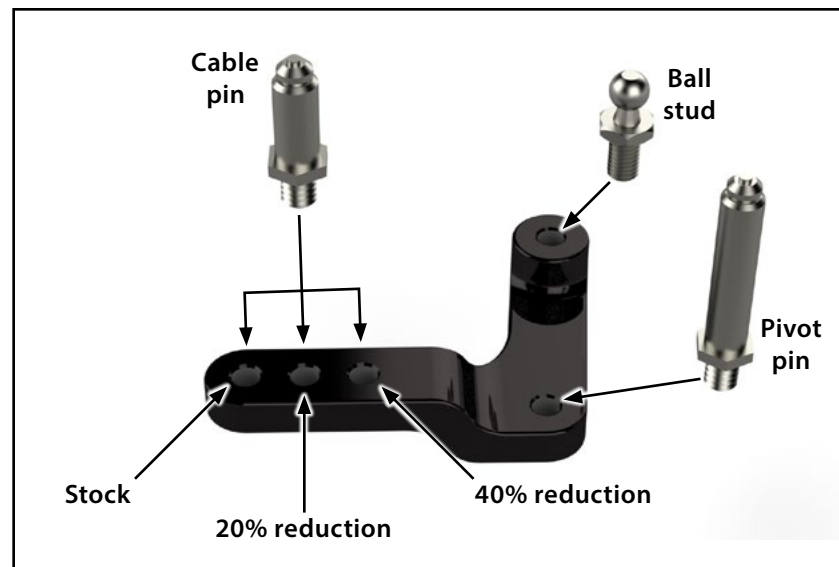
Step 13:

Unpack the new side-to-side shift lever, and prepare to assemble it using the diagram on the right.

Select one of the three holes for the cable pin, depending on the side to side throw that you are looking for.

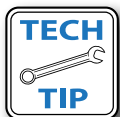


Running the factory front-to-back shift lever will only allow you to use the "Stock" throw setting due to interference with the counterweight.



Step 14: 13mm Wrench

Put a drop of the included loctite onto the threads of the ball stud, the pivot pin, and the cable pin, then install them into the new side-to-side shift lever. It is only necessary to tighten them with a wrench while holding the shift lever. **It is not necessary** to clamp the shift lever in a vise, doing so may damage the finish.



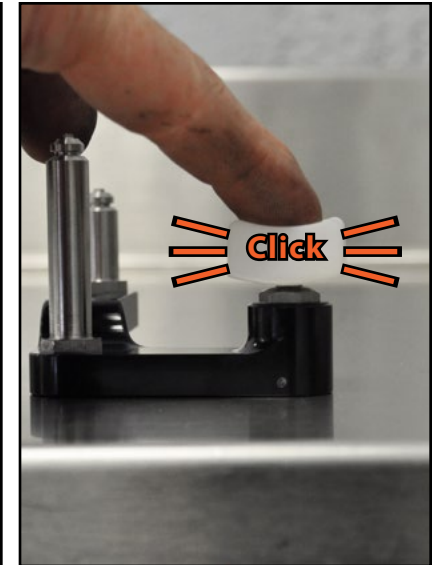
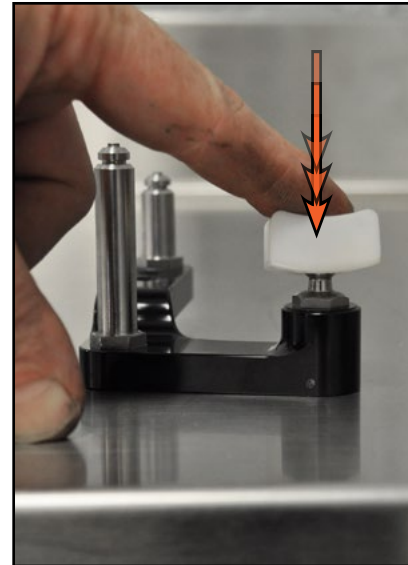
If you are not sure which throw you want, install the cable pin without loctite, then after assembling, you can test the feel and easily change the position. Apply loctite for the final installation.



INSTALLING THE BILLET SIDE-TO-SIDE SHIFT LEVER

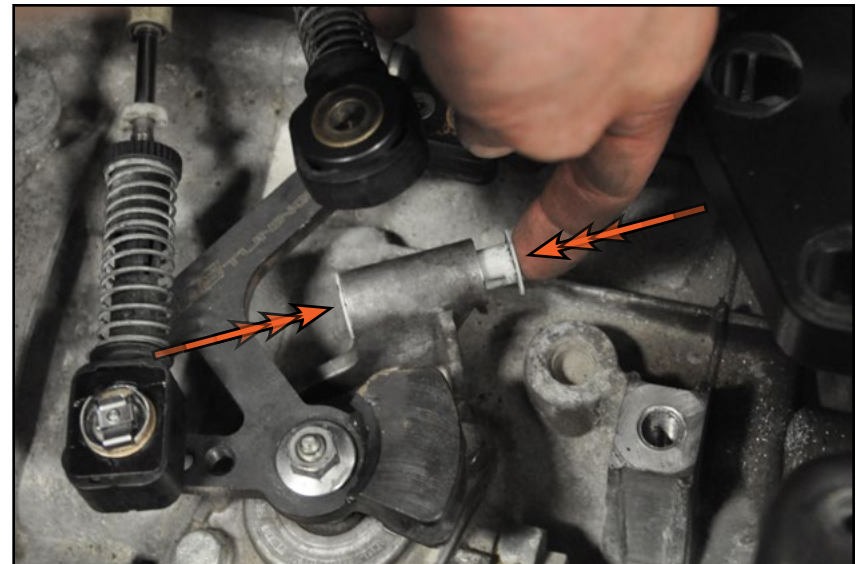
Step 15:

Position the relay lever slide onto the ball stud, then press downward until it snaps into place.



Step 16:

Grease them lightly, then push both of the new pivot pin bushings into the pivot pin bore.



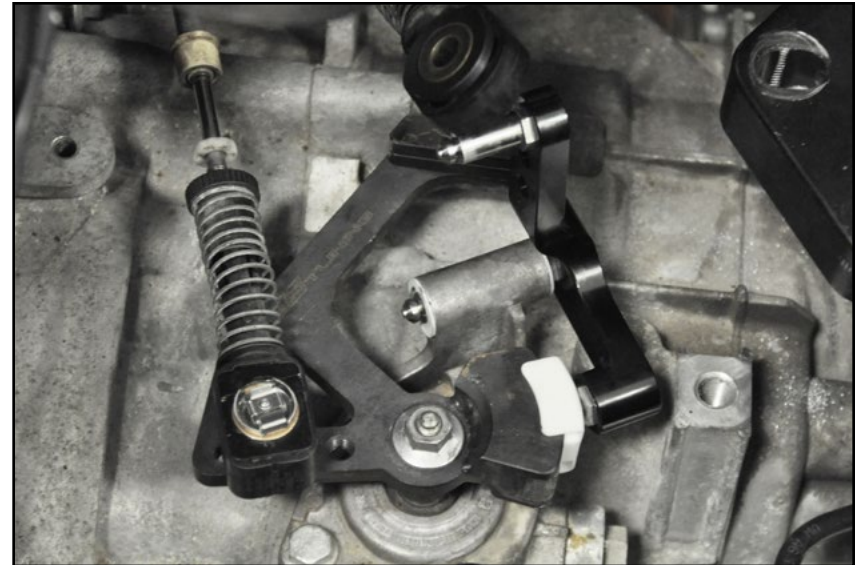
INSTALLING THE BILLET SIDE-TO-SIDE SHIFT LEVER

Step 17:

Slide the new side-to-side shift lever into place, making sure the relay lever slide is properly engaged into the front-to-back lever.

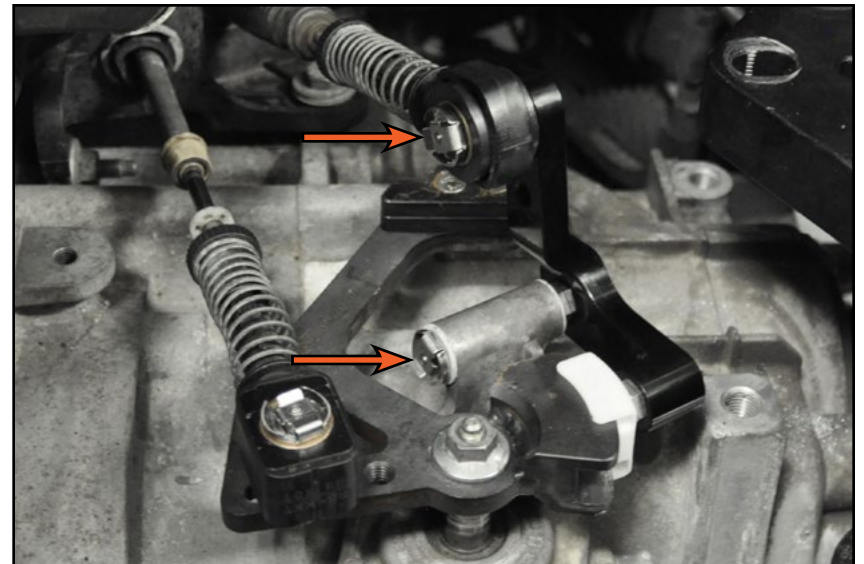


If you had an original metal relay lever, you must replace the side-to-side shift cable end at this time with the new one included in your kit. Reference [Page 21](#), Step 1 for cable end replacement.



Step 18:

Install the new retaining clip on the side-to-side shift lever pivot pin, then install the side-to-side shift cable end and retaining clip.



INSTALLING THE BILLET SIDE-TO-SIDE SHIFT LEVER

Step 19:

Install the transmission bracket, thread the bolts in by hand, then torque them to 60 Nm (44 Ft-lbs) + 90 degrees (**LH photo below**).

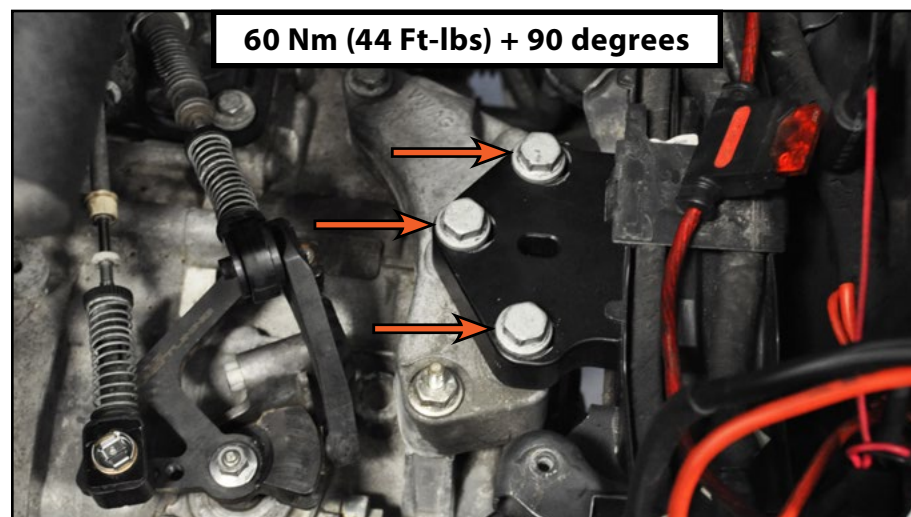
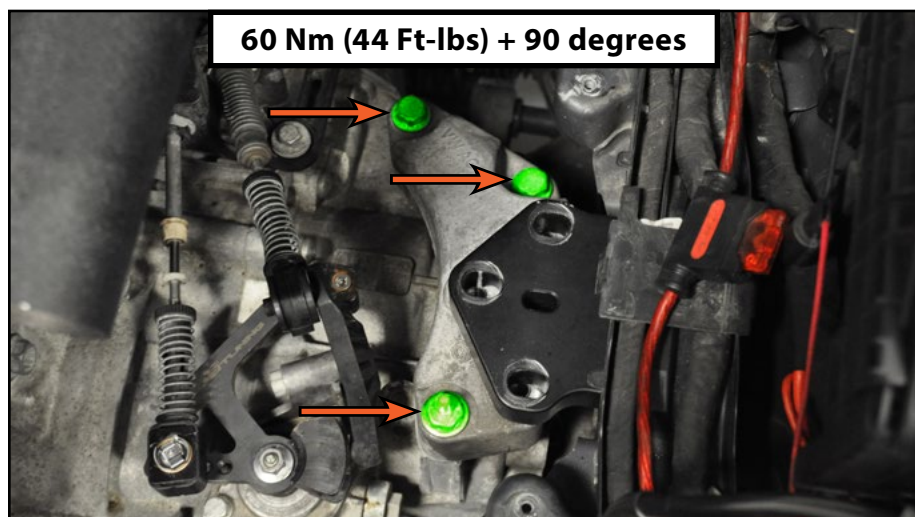
Raise the transmission slightly with the jack.

Thread in the transmission mount to bracket bolts by hand, then torque them to 60 Nm (44 Ft-lbs) + 90 degrees (**RH photo below**).

Remove the floor jack.

PERFORM A SHIFTER CABLE ADJUSTMENT (detailed instructions begin on [Page 21](#)).

Install the battery ground cable, battery tray, battery, air box (or stock intake system), and the skid plate or insulation panel (if removed).



It is **VERY** important that you now perform a shifter cable adjustment. Please proceed to the next page for instructions on this procedure.

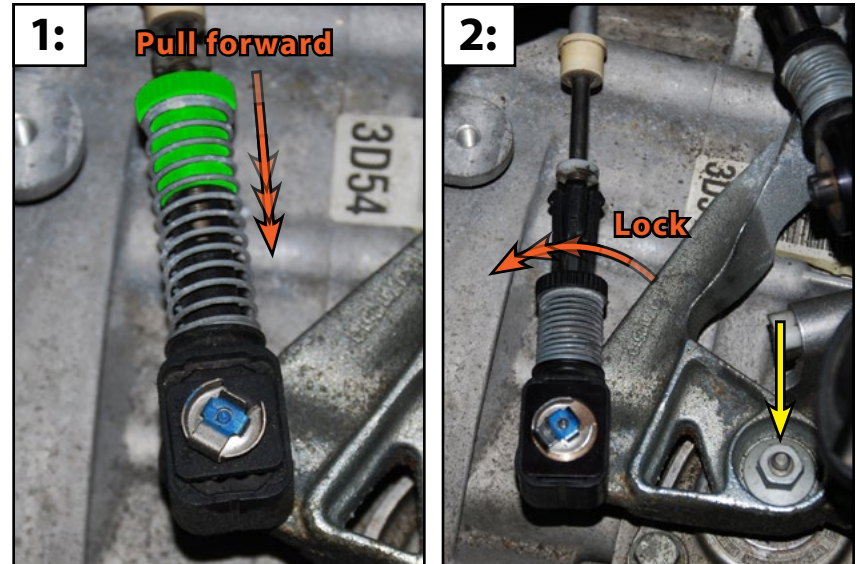
SHIFTER CABLE ADJUSTMENT

Step 1:

Make sure the transmission is in neutral.

Release **both** shifter cable ends by pulling the lock sleeve (highlighted in **GREEN** in photo #1) in **each** cable end forward until the spring is completely compressed. Then simply turn the lock sleeve to the left about $\frac{1}{8}$ turn until it locks in place (photo #2). It is properly locked when you release your grip and the spring remains compressed - you may have to try it a few times to get it to hold. (You'll notice that the cable end will slide back and forth easily on the cable, and can even be removed when it is released).

Also note the top of the selector shaft where it enters the transmission (**YELLOW** arrow). This is relevant in step 3 on the next page.

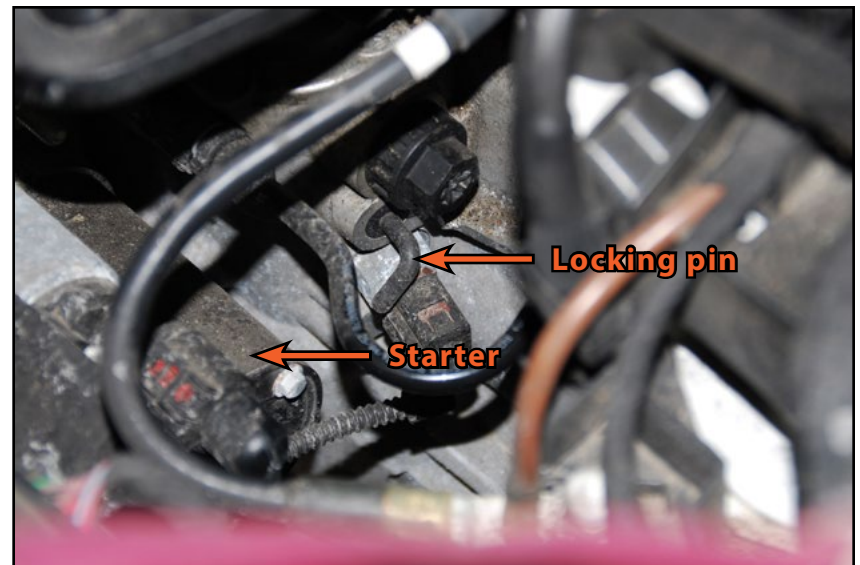


Step 2:

Locate the selector shaft locking pin in the transmission housing. It is located on the LH (Driver's) side, just behind the starter.



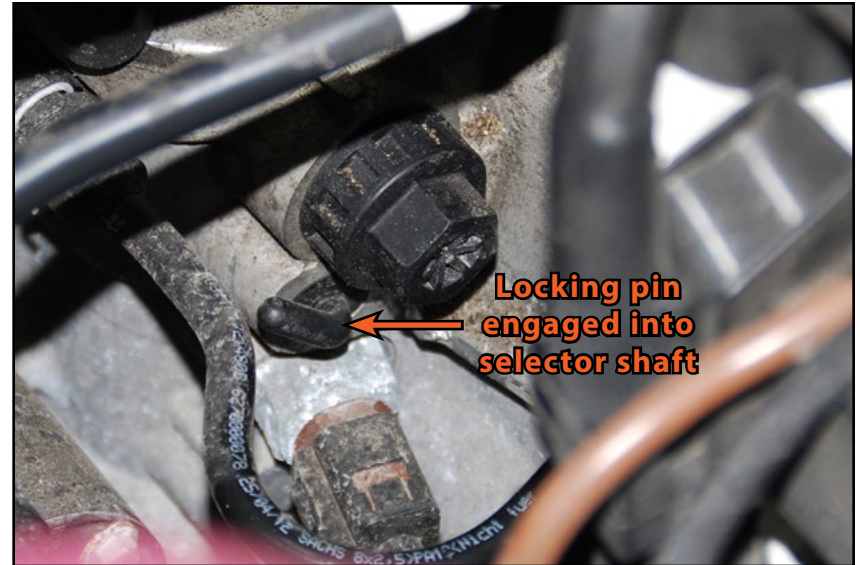
The locking pin may appear different for different years, but it is located in the same position.



SHIFTER CABLE ADJUSTMENT

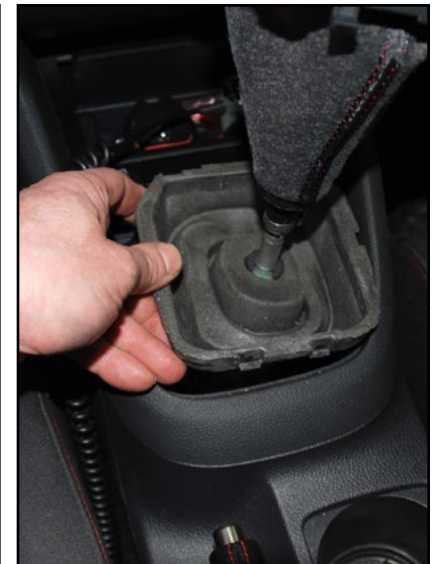
Step 3:

The transmission should be in neutral and you should be able to move the selector shaft up and down with ease. Push down on the selector shaft until it is approximately in the middle of its travel. Push in on the locking pin and gently move the selector shaft up and down until the pin engages the alignment hole in the selector shaft and pushes into the transmission. Turn the locking pin upward slightly and release the pressure on the selector shaft. When properly engaged, the pin will stay in place and you will not be able to move the selector shaft.



Step 4: Trim Removal Tool

Working inside the car, gently pry up the shifter boot, then lift it over the shift knob. Lift up the insulator underneath the shift boot.



SHIFTER CABLE ADJUSTMENT

Step 5:

Looking along the bottom of the shift rod you will see the two holes where a tool will be inserted to lock the shifter into place (arrows). Any round tool such as a drill bit or punch can be used, but the fit must be very snug or the shifter adjustment will not be successful.



Step 6: Schwaben Shifter Alignment Pin

Insert the Schwaben alignment pin or a similar tool through the alignment hole in the shifter stick and into the alignment hole in the base of the shifter.

You may notice that the shift lever will move around a bit even with the locking pin installed. While this is a normal condition, it does make the adjustment procedure a little more difficult. **You want to make absolutely sure that the shifter is centered in its locked position.**



From this point on it is very important that the shift lever inside the vehicle is not disturbed. This also means that you need to avoid tugging on the shift cables when working under the hood.



SHIFTER CABLE ADJUSTMENT

Let's take a moment and talk about exactly what's happening when you lock the shift cables into place. When the shift cables are locked into "home" position, the shifter will rest halfway between the 1-2 and 3-4 gates. This means that the shifter handle inside the vehicle is in the position depicted in the RH illustration below, and the shift tower on top of the transmission is also in the same position. Now that we know this, we can proceed with the adjustment.

WITHOUT Cables Locked in "Home" Position



WITH Cables Locked in "Home" Position



SHIFTER CABLE ADJUSTMENT

Step 7:

Back under the hood, engage both cable ends by turning the lock sleeves until they release and the springs expand.



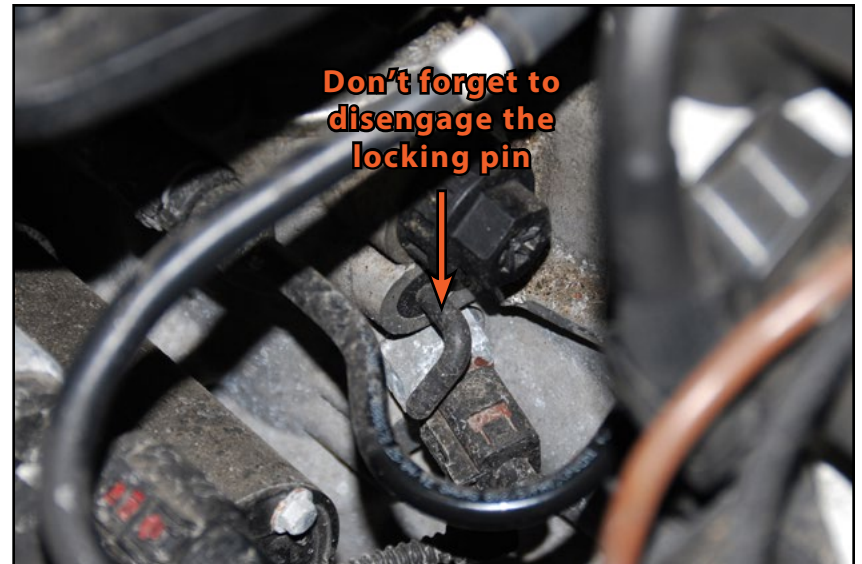
Step 8:

Disengage the locking pin from the selector shaft.

Pull the alignment pin out of the shifter.

Reinstall the shifter insulator and boot.

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 Billet Side-to-Side Shift Lever 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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