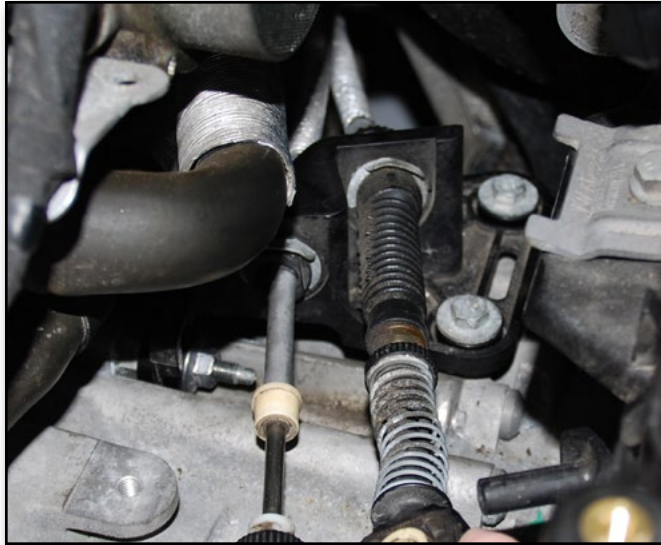




Volkswagen Solid Shifter Cable Bracket Bushing Kit Installation Instructions - [ES2840859](#)



Skill Level
1 - Easy
Basic Skills
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:

Looking to get rid of the rubbery feeling from your shifter? Installing our solid shifter cable bracket bushing kit will get you headed in the right direction. CNC machined from 6061-T6 aluminum and then black anodized for long lasting protection, our bushings fit without permanent modifications and will completely change your shifting experience! By eliminating shifter bushing deflection, you can now take control of your shifts. 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, you won't even need to lift the wheels off of the ground. Before you begin, read and familiarize yourself with these instructions and make sure you have all the required tools on hand. Be sure to read through these instructions completely before you begin. This install can be done in an hour or two, but you should plan out your time according to your own 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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ECS Solid Shifter Cable Bracket Bushing Kit
(QTY 6)

AVAILABLE SHIFTER UPGRADES

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

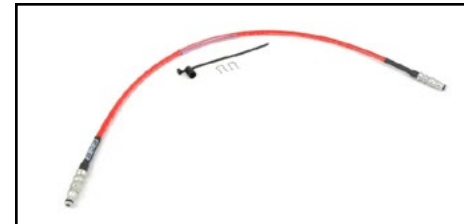
- OR -



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

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.

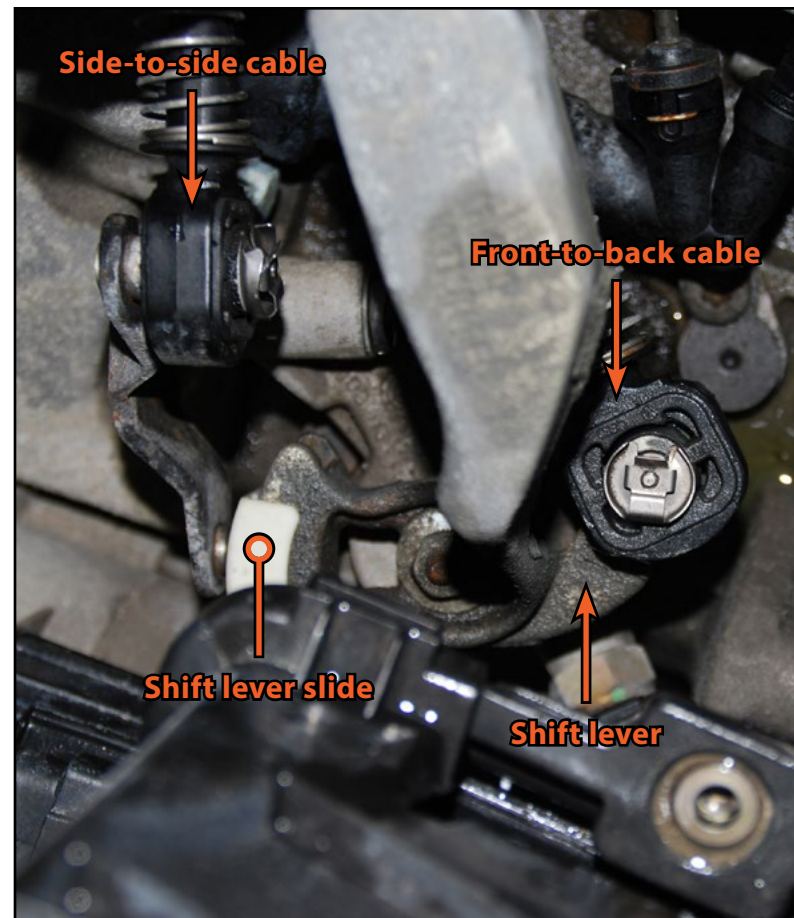
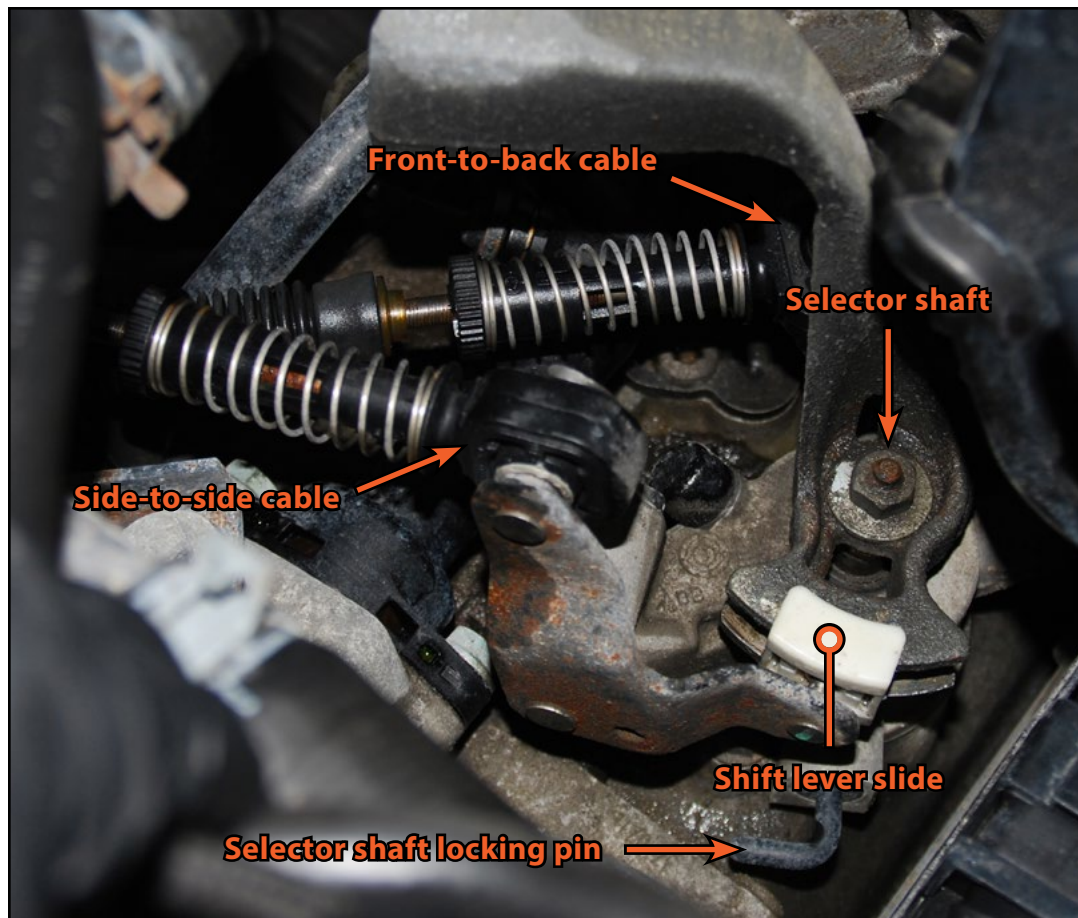
- Park your car in a safe, well lit, level area.
- Shut the engine off and remove the key from the ignition switch.
- Make sure any remote start devices are properly disabled.
- **ALWAYS** wear safety glasses.
- Make sure the parking brake is applied until the vehicle is safely lifted and supported.
- 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.

5-SPEED SHIFTER CABLE IDENTIFICATION

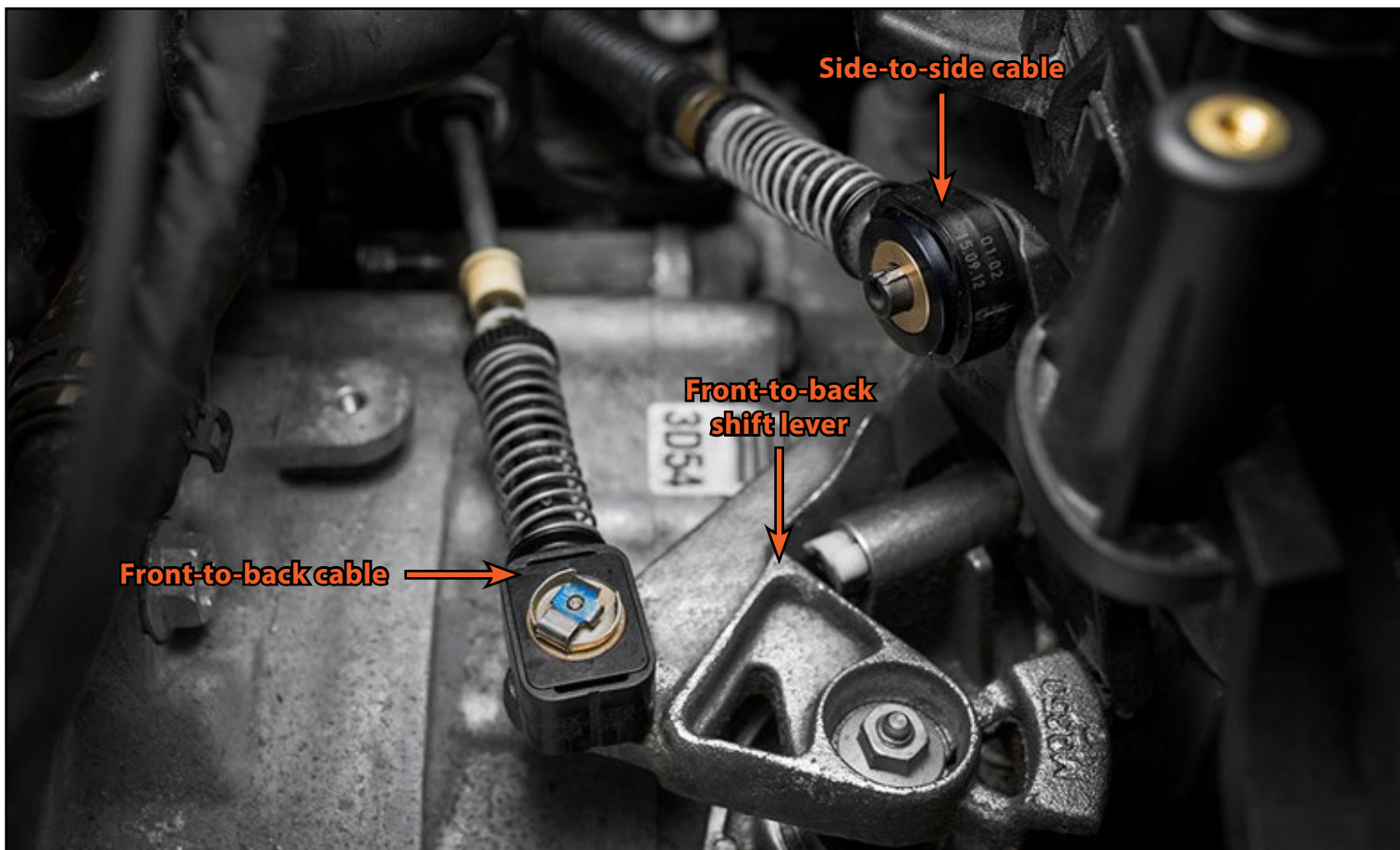
All Volkswagen 5-speed transmission shifter cables will have this orientation, regardless of the end style of the shifter cable. The front-to-back cable is the lower of the two cables, mounted onto the vertical pin of the shift lever. The side-to-side cable is the higher of the two cables, mounted onto the horizontal pin of the relay lever.



You won't need to remove the shift cable end links for this install. The photos above are only for reference/identification purposes.

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.

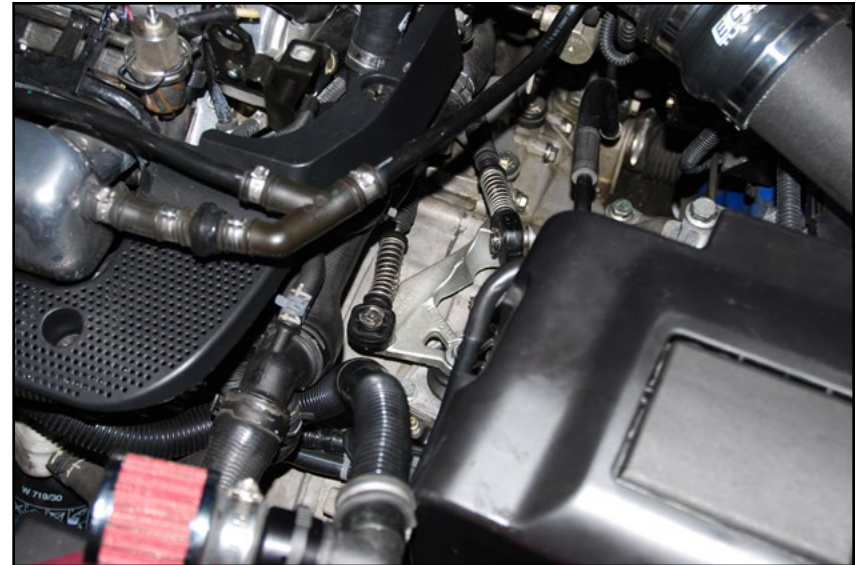


You won't need to remove the shift cable end links for this install. The photos above are only for reference/identification purposes.

INSTALLING THE SOLID SHIFTER CABLE BRACKET BUSHING KIT

Step 1:

You must first remove the original air box or intake system in order to gain access to the shifter cables. With some aftermarket intake systems, such as the one shown here in this photo, you may already have enough access to perform the installation. You can remove the battery and the battery box to open up some extra space to work, but this is completely optional.



Step 2:

Place the transmission in neutral.



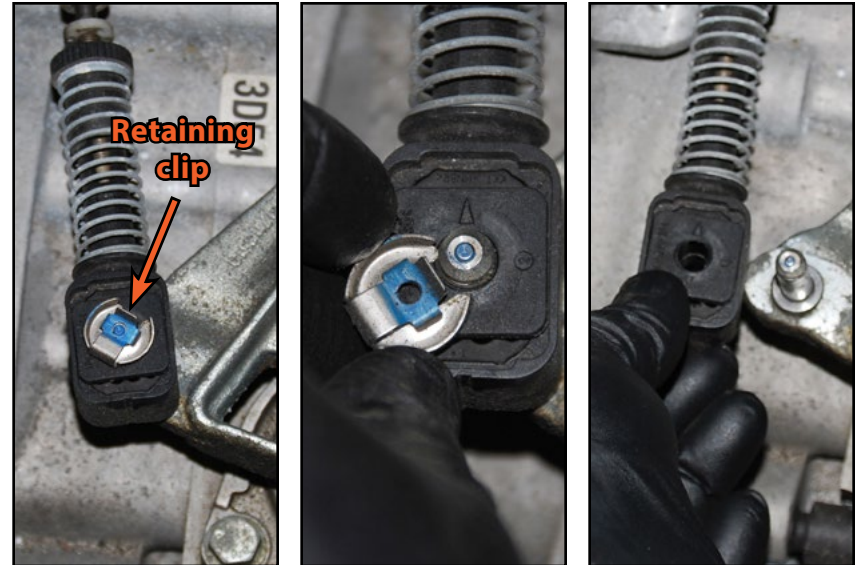
INSTALLING THE SOLID SHIFTER CABLE BRACKET BUSHING KIT

Step 3:

Remove the front-to-back shifter cable end from the shift lever.

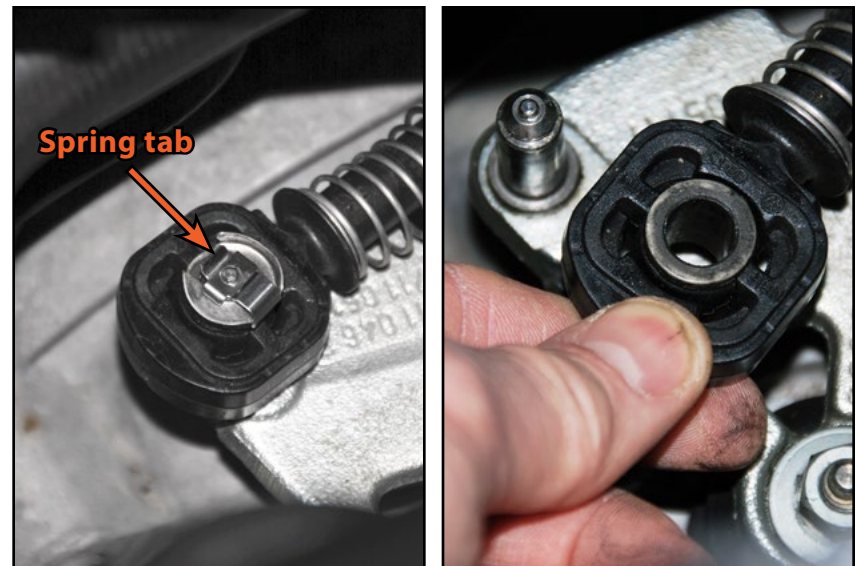
Rectangle Cable End:

- First remove the retaining clip by pulling up lightly on the spring tab and sliding the clip off of the shift lever pin, then lift off the cable end.



Square Cable End:

- First remove the retaining clip by pulling up lightly on the spring tab and sliding the clip off of the shift lever pin, then lift off the cable end.



INSTALLING THE SOLID SHIFTER CABLE BRACKET BUSHING KIT

Step 4: Needle Nose Pliers

Remove the side-to-side cable end from the relay lever.

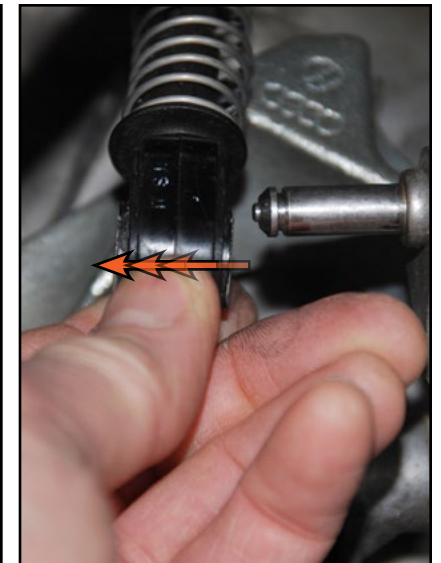
Plastic Pin:

- 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.



Metal Pin:

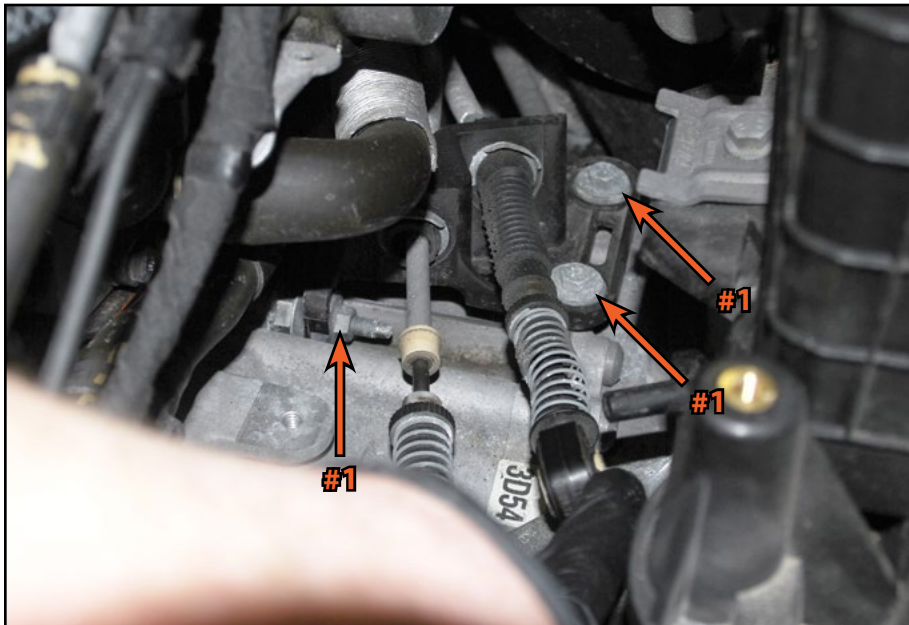
- First remove the retaining clip by pulling up lightly on the spring tab and sliding the clip off of the relay lever pin, then slide off the cable end.



At this stage, both cables should now be removed from the transmission shifter linkage.

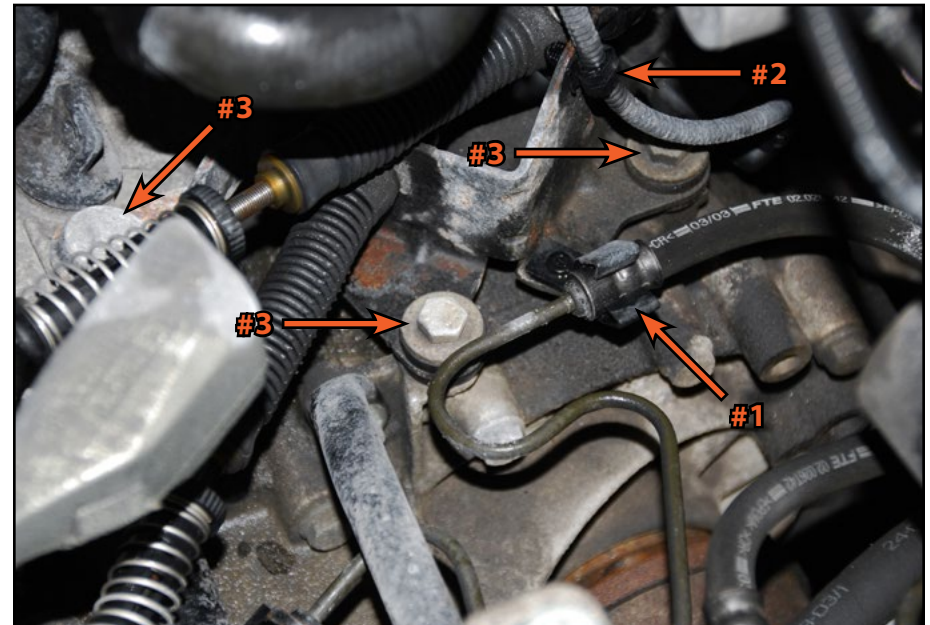
INSTALLING THE SOLID SHIFTER CABLE BRACKET BUSHING KIT

Step 5: 13mm Deep Socket & Ratchet



If the shifter cable support bracket on your car is held in place by two vertical bolts and one horizontal nut:

1. Remove the two bolts and the nut.
2. Pull the bracket off of the horizontal stud.
3. Proceed with the bushing replacement as outlined on the following pages.



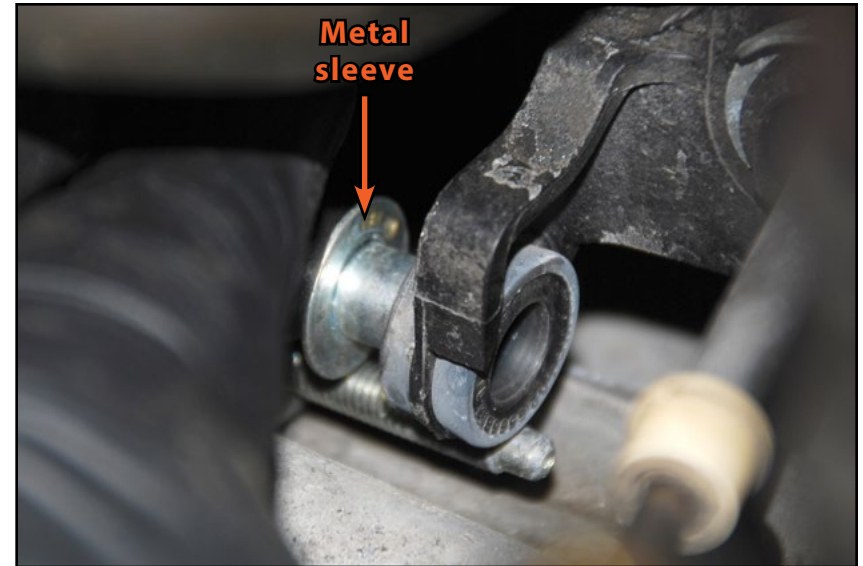
If the shifter cable support bracket on your car is held in place by three vertical bolts:

1. Unclip the clutch hydraulic line.
2. Pull out the wiring harness support.
3. Remove all three bolts.
4. Proceed with the bushing replacement as outlined on the following pages.

INSTALLING THE SOLID SHIFTER CABLE BRACKET BUSHING KIT

Step 6: Small Flat Blade Screwdriver

Pull the metal sleeve out of each original bracket mount bushing. They will easily come out by hand, but if you like you can use a small flat blade screwdriver to get them started.



Step 7:

Remove each of the original mount bushings by prying them out of the bracket. The bushings are fairly soft and you can usually pull on one edge with your finger and draw them out of the bracket. You can also use a small flat blade screwdriver to pry one side out and then the whole bushing will come out with ease.



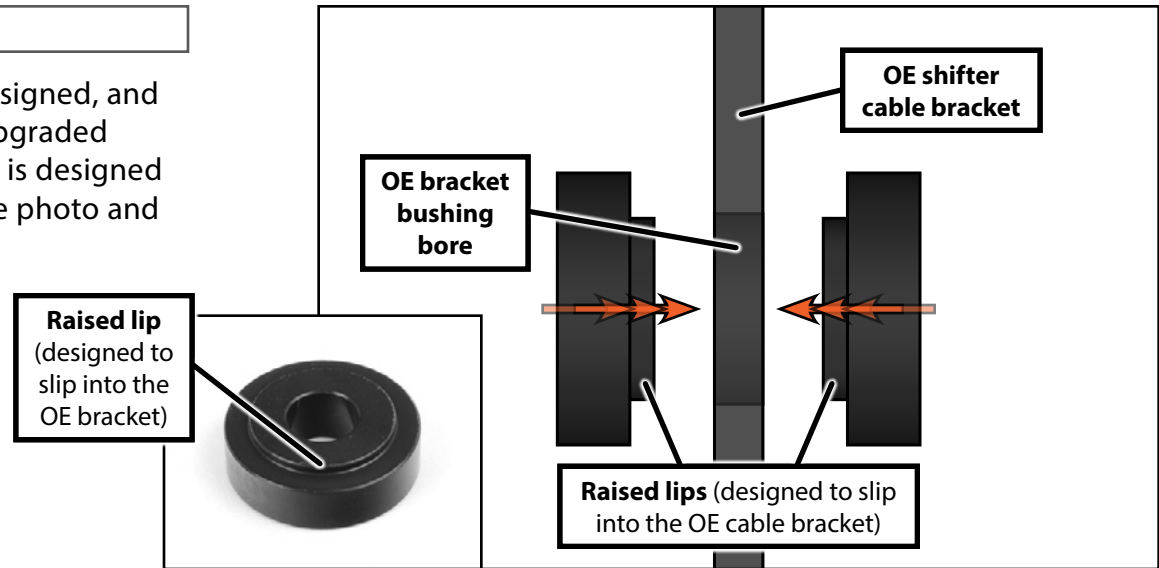
This photo was taken with the bracket out of the vehicle for added clarity.



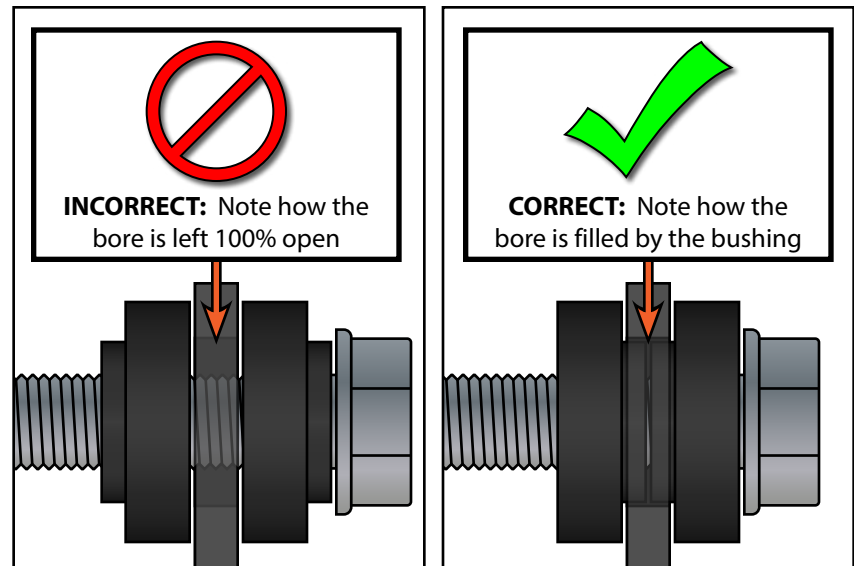
INSTALLING THE SOLID SHIFTER CABLE BRACKET BUSHING KIT

Step 8:

Let's take a moment to review how the bushings are designed, and how they fit into the OE shifter cable bracket. The six upgraded bushings are all identical, and feature a raised lip which is designed to slip inside the OE bracket bushing bore (shown in the photo and illustration on the right).



The two illustrations on the right show the incorrect way to install the new upgraded bracket bushings, as well as the correct way to install them. Be sure that your bushings are oriented correctly while installing them on the next page.



INSTALLING THE SOLID SHIFTER CABLE BRACKET BUSHING KIT

Step 9:

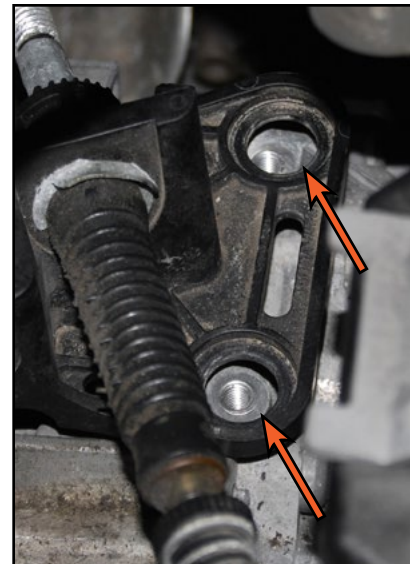
Slide one of the new upgraded bracket bushings (highlighted in **GREEN** in the LH photo) onto the stud, making sure the raised lip on the bushing is facing toward the cable bracket.

Position the bracket over the stud, slide a solid bushing into place (highlighted in **GREEN** in the RH photo), then thread the nut onto the stud. Thread the nut on until it is almost completely seated, but leave it just slightly loose. Tightening it now would draw the bracket into place and make it very difficult to install the other two pairs of bushings.



Step 10:

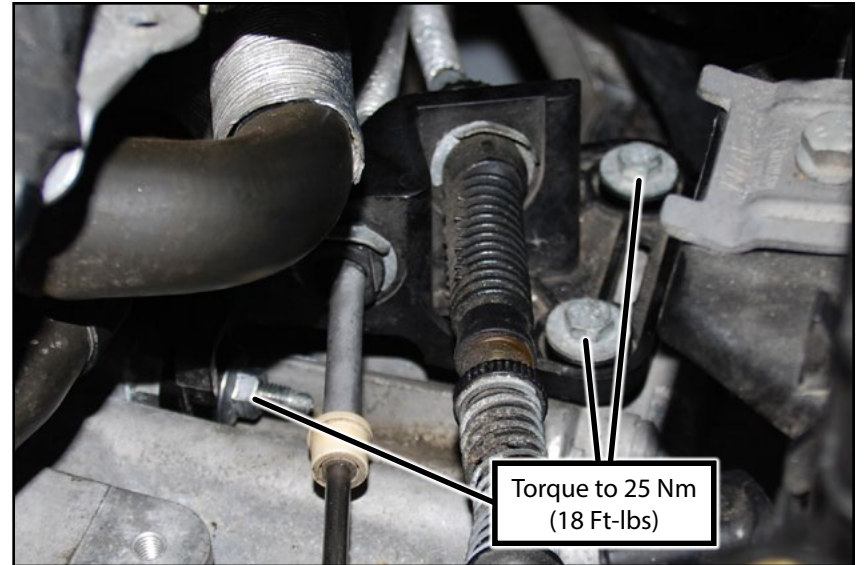
Slip one of the solid bushings underneath the bracket at the next mounting location, then place another bushing on top, insert the mounting bolt, and thread it in a few turns by hand. Repeat this procedure on the remaining mounting location.



INSTALLING THE SOLID SHIFTER CABLE BRACKET BUSHING KIT

Step 11: 13mm Deep Socket & Torque Wrench

Torque all three bracket mounts to 25 Nm (18 Ft-lbs).



Step 12:

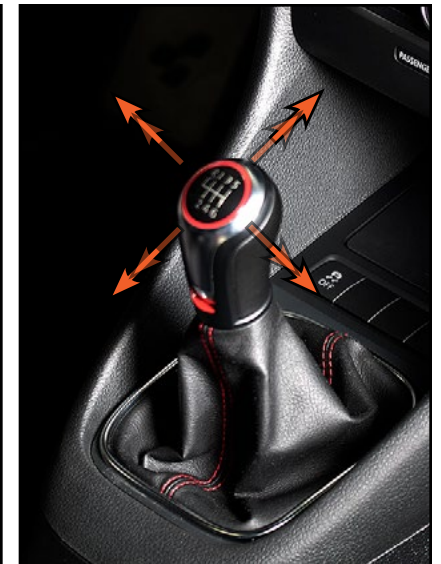
Reinstall both shifter cable ends.

Check the operation of your shifter.



A shifter cable adjustment shouldn't be necessary after this install, but if you have trouble shifting into all of the gears it's a good idea to do it before you reinstall the air box/intake system. The shifter cable adjustment procedure begins on the next page.

Reinstall the air box/intake system.



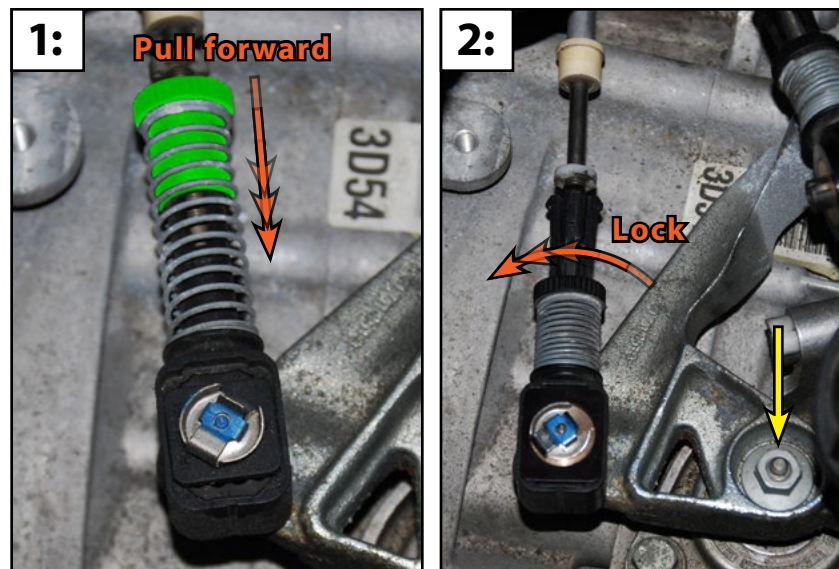
SHIFTER CABLE ADJUSTMENT

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.

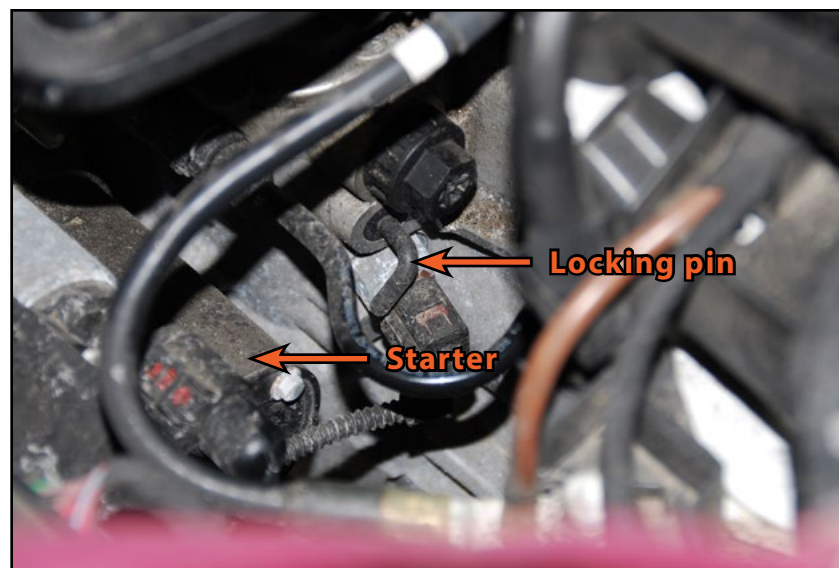


Step 2:

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



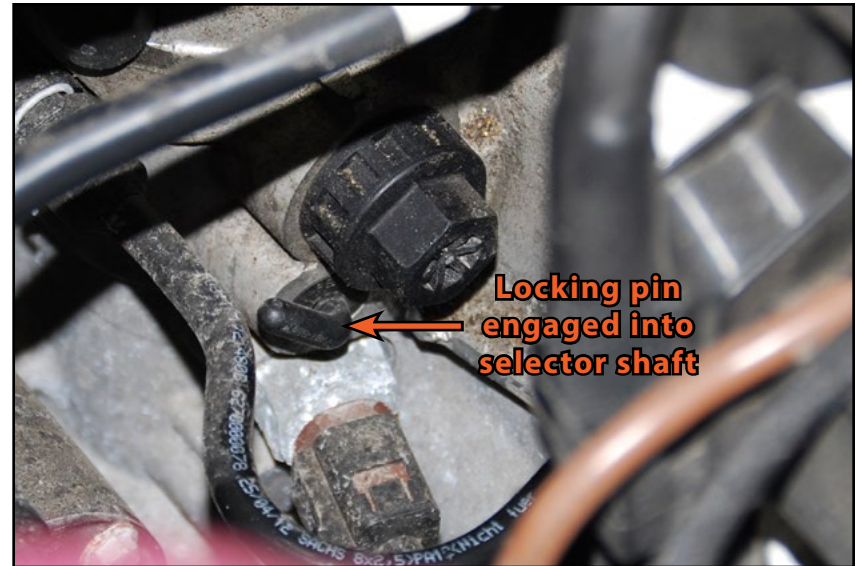
The locking pin may appear different for different years, but it is located in the same position.



SHIFTER CABLE ADJUSTMENT

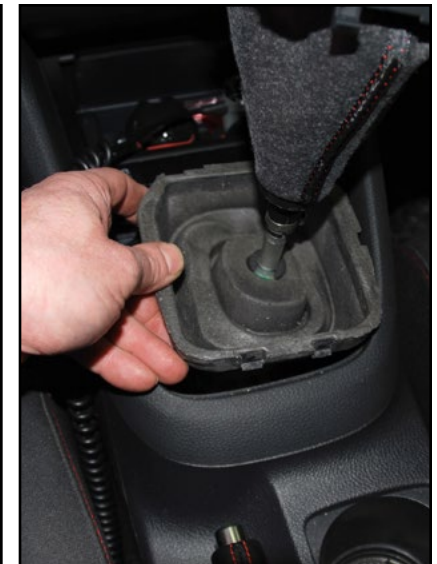
Step 3:

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.**

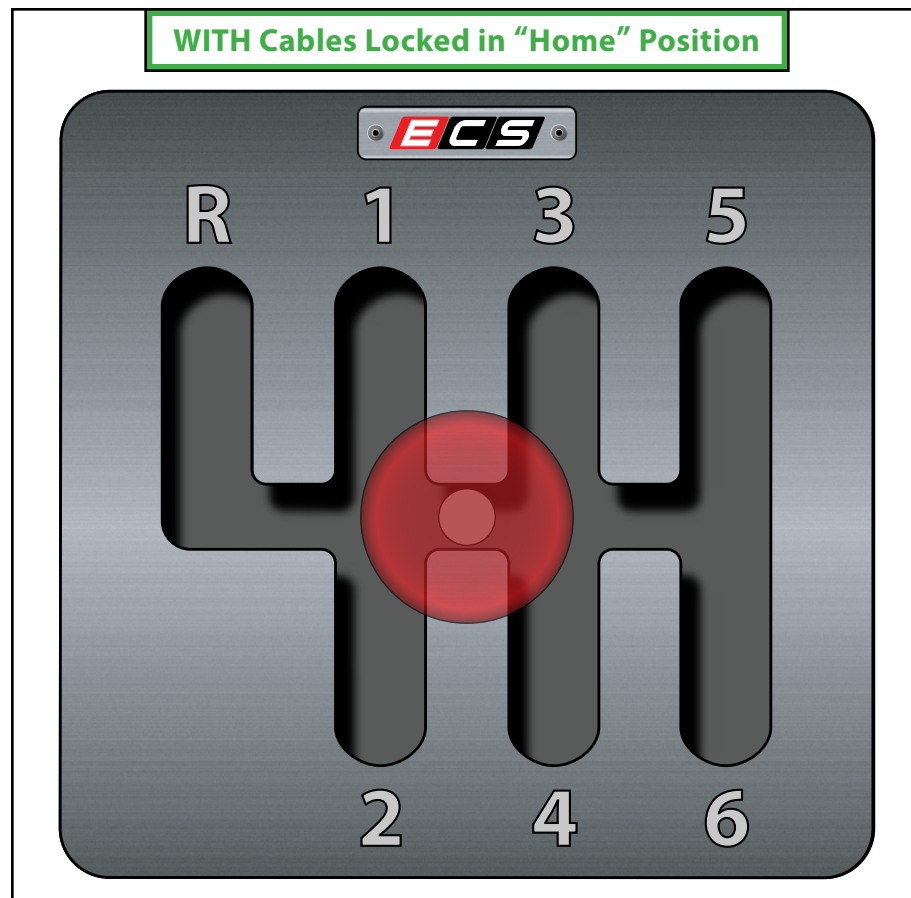
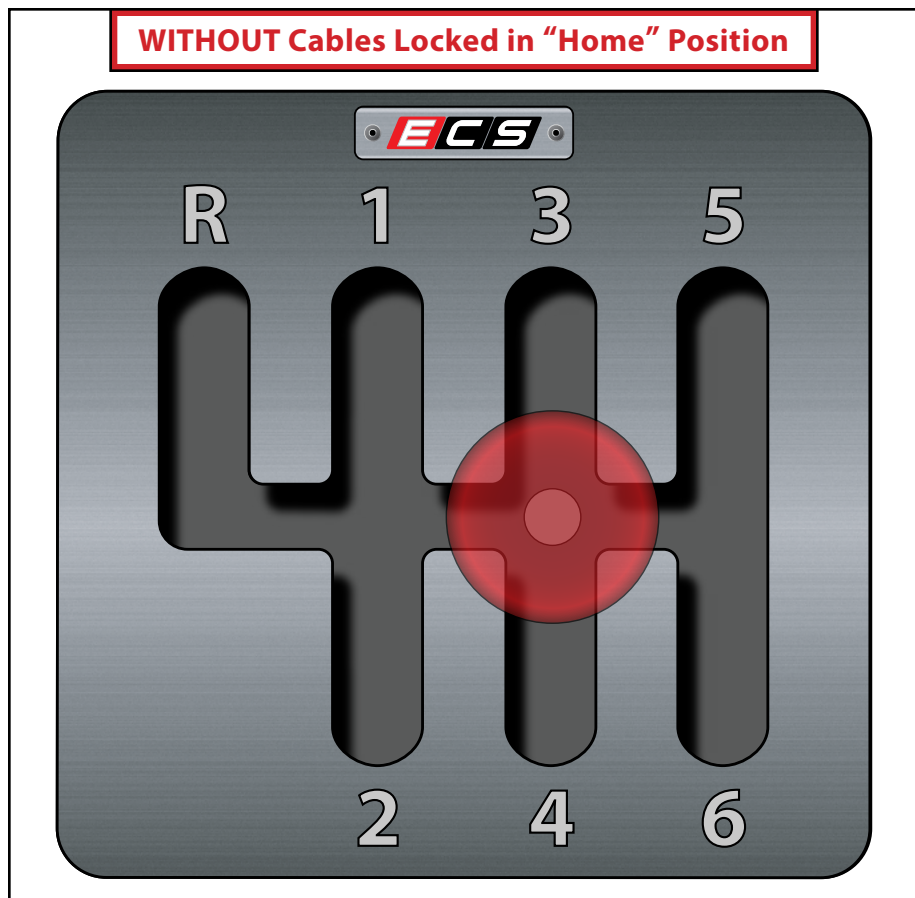


From this point on it is very important that the shift lever inside the vehicle is not disturbed. This also means that you need to avoid tugging on the shift cables when working under the hood.



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.



The illustrations above show a 6-speed pattern, but they apply to 5-speed vehicles since reverse is the same position on both transmissions.

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:

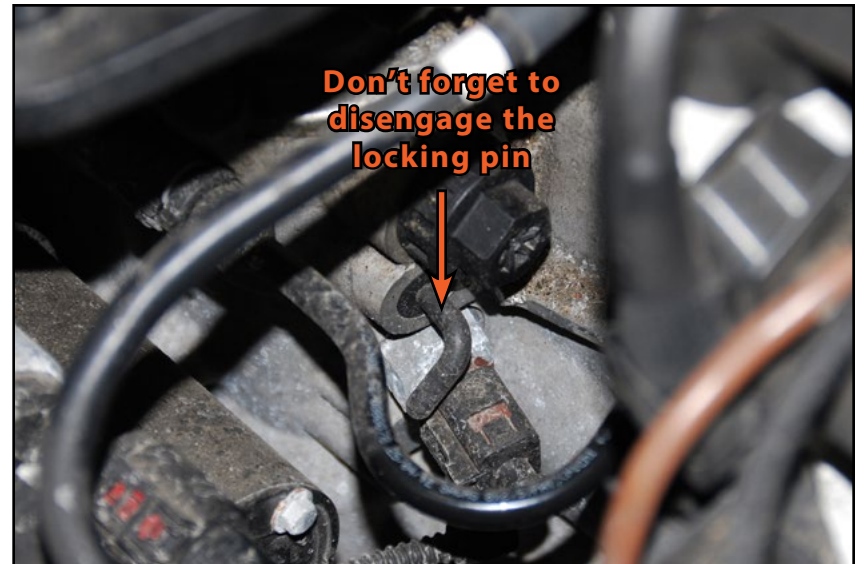
Disengage the locking pin from the selector shaft.

Pull the alignment pin out of the shifter.

Reinstall the shifter insulator and boot.

Reinstall the air box/intake system.

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 Solid Shifter Cable Bracket Bushing 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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