

PERRIN

PERFORMANCE

STI/6spd Short Shifter Adapter w/ Shifter Bushings

422410

Thank you for purchasing the PERRIN 6spd Short Shifter Adapter. Persons experienced in the installation and proper operation of Subaru Drivetrain, should only perform installation of this part. Please read through all the instructions before performing the installation.

SPECIAL NOTES:

- The use of a factory service manual is highly recommended. These can be downloaded online at <http://techinfo.subaru.com>.
- You will need a small 5/32" punch to remove lower pivot from OEM shifter. These can be found at any autoparts stores.
- **ADJUSTING THE THROW:** The OEM shifter is adjustable up and down within the PERRIN shifter adapter. The higher the OEM shifter, the shorter the throws. Simply loosen (3) set screws and slide shifter up and down to desired throw then simply retighten screws.
- Shifter bushings are included with this kit. A slight increase in vibration may be felt in shifter after installation, which is completely normal to experience.

Parts Included with the PERRIN Short Shifter Adapter:

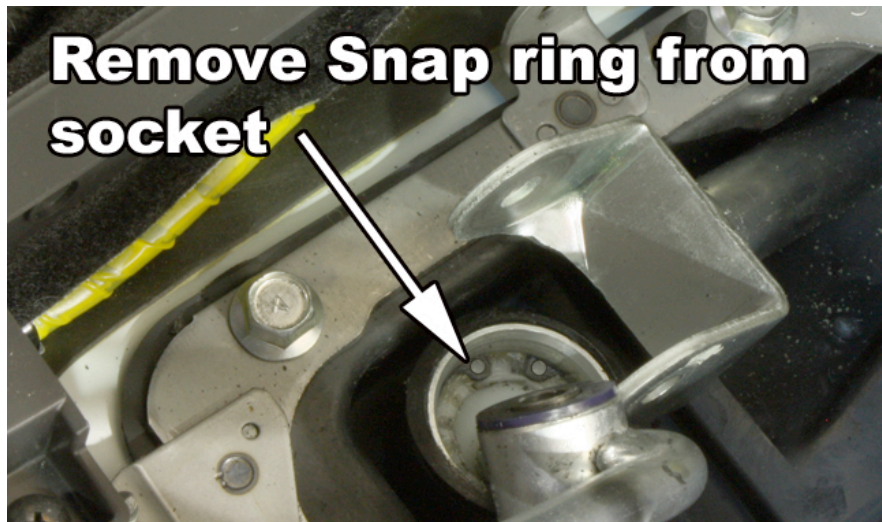
- (1) Short Shifter Adapter for 6spd
- (2) 6spd Shifter Bushings (2685)
- (3) Set Screws
- (1) Allen Wrench
- (1) Grease Packet

Installation of Short Shifter Adapter

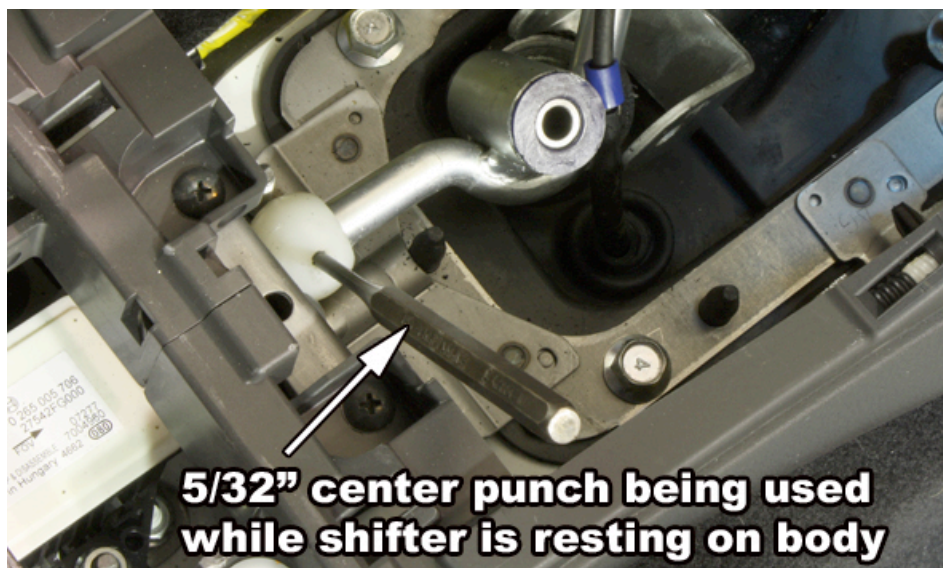
1. Remove OEM shift knob by unscrewing shifter counter clockwise.
2. Remove shifter trim piece following directions below for your specific model.
 - 2004-2007 cars need to remove trim panel from around E-brake first. Pull it straight up. Unplug wire harnesses that are attached to the switch covers. Next, remove shifter bezel from around the shifter lever by pulling up and toward the rear of the car.
 - 2008+ cars need to remove E-brake boot first by pulling straight up, then remove screw towards left front of console. Locate and remove (2) screws in rear arm rest compartment. Carefully pull console straight up from car and move towards rear of car. Remove Shifter bezel from shifter by pulling up and back. NOTE: Make sure to unplug wire powering STI emblem on STI models.



- Some models may have a rubber boot covering up shifter assembly. Simply remove plastic screws holding down and discard. **NOTE: This may be reinstalled, but can interfere with shifter if adjusted to shortest throw.**
3. Remove 12mm nut and bolt that attaches linkage to shifter.
 4. Using suitable snap ring pliers, remove snap ring retaining lower shifter pivot to chassis. Shifter assembly can now be lifted up out of socket. NOTE: Removal of snap ring may bend the end where the snap ring tool fits. If this happens make sure to bend snap ring back round.
 5. Remove snap ring, and plastic bushing from lower pivot, and wipe off any excess grease from pivot on shifter.



6. Lay shifter down on chassis and locate small hole in lower bushing. Using 5/32" punch and hammer, drive pin from shifter and remove ball. **NOTE:** *This step can be somewhat challenging and it may help to have a helping hand to hold shifter while tapping pin from pivot.*



7. Install PERRIN shifter adapter over end of shift rod. Slide on until adapter stops and temporarily tighten one set screw to hold in place. **NOTE:** *Make sure that one of the set screws lands on the flatter portion of the rod. This will help keep in secure over time.*



8. Apply grease to pivot of PERRIN shifter adapter, install snap ring, then plastic bushing.
9. Install PERRIN shift adapter into lower pivot socket. Then re-install snap ring. **NOTE:** *Make sure o-ring is still in bottom of socket. If done properly there will be no vertical movement in shifter assembly.*
10. Install shift fork back onto center pivot of shifter using factory bolt and nut removed earlier. **NOTE:** *It may be a good time to add some grease to the center pivot and bushings before reassembling.*
11. Shift through gears to make sure things move smoothly, if binding is felt recheck installation.

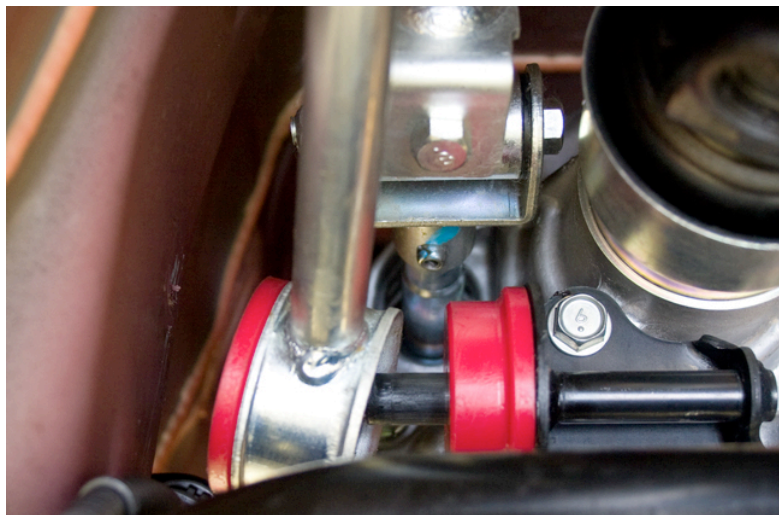
- Adjust PERRIN short shifter to desired throw. Recommended heights are as follows (measured from the bottom of linkage pivot, to top of PERRIN short shifter): Shortest throw is 1.625" to longer throw is .6". Once adjusted, to desired throw, tighten socket set screws to lock down. **NOTE: For the shortest throw pry up stock trim ring surrounding the shifter lever. To do this, remove the 12mm bolt and nut to move the linkage out of the way. Use a large crescent/adjustable wrench, to pry the front left corner of the metal trim ring up to clear linkage.**



- Tighten all (3) set screws using supplied wrench. **NOTE: Its not a bad idea to check set screws after a couple of weeks of use.**
- Run the shifter through all gears and check for clearance with body.
- Reinstall shifter cover plate and consol pieces in reverse order done earlier, making sure to plug in any electrical connections.

Installation of Shifter Bushings

- Raise car into air using proper jack and jack stands. Place jack under transmission and raise transmission up slightly to take weight off of mounts.
- Remove 14mm and 17mm bolts securing transmission braces to chassis.
- Locate Lower Shifter linkage on back of transmission. This linkage attaches from tranny and to chassis.
- Lower Transmission down (using jack) enough to expose lower shifter bushing.
- Once Lower shifter linkage is exposed, Loosen 14mm bolt until roughly .500" of bolt is exposed. Slide lower linkage out of bushing bracket (a pry bar can aid in doing this).
- You can remove shifter linkage from car to remove bushing, or pry from linkage while in the car. Either method requires prying bushing from shift linkage using a flat head screw driver or a pry bar. Take care not to damage reverse lock out cable when prying bushing out.
- Once bushing is removed from lower linkage, install PERRIN Shifter bushings on each side of lower linkage.



- Reinstall lower shifter linkage back onto tranny, and retighten nut or bolt. Tighten bolt to 15ft-lbs **NOTE: Because there is no center sleeve through the bushing you can tighten bushing beyond 15ft-lbs to make bushing even stiffer. This can create an even more solid feel to shifting.**
- Raise tranny back to chassis, and tighten bolts securing subframe braces. 17mm bolts, tighten to 103ft-lbs and 14mm bolts, tighten to 51ft-lbs.
- Double check tightness of all hardware and connections, and double check for smooth shifter action.
- Lower vehicle from jack stands, and proceed to test drive car.

FOR QUESTIONS & COMMENTS PLEASE CONTACT TECH@PERRINPERFORMANCE.COM 503-693-1702