

# ***PERRIN***

## ***Subaru STI Short Shifter ver.2*** ***w/Shifter Bushings***

092109

Thank you for purchasing the PERRIN Short shifter. Persons experienced in the installation and proper operation of Subaru drivetrains 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 purchased or downloaded online at <http://techinfo.subaru.com>.
- You will need a small punch to remove and install the PERRIN shifter. These can be found at any autoparts stores.
- **ADJUSTING THE THROW:** Center pivot of PERRIN shifter is adjustable up and down which adjusts amount of throw to shift gears. Simply loosen retaining bolt and slide shifter up and down to desired throw then simply retighten bolt.
- **ADJUSTING THE KNOB PLACEMENT:** PERRIN shifter is also adjustable in shift knob placement. This can be accomplished by rotating knob around while the pivot is loose. Make sure that reverse lockout cable doesn't bind on shifter.
- The center pivot is offset to one side to allow for even further shift knob placement. Flipping it over and reinstalling onto shifter can adjust this pivot. This requires the lower pivot to be removed and the use of a center punch.
- 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 6spd Short Shifter:***

- (1) PERRIN 6spd Shifter rod
- (1) PERRIN Red shifter pivot
- (2) 6spd Shifter Bushings (2685)
- (1) Large diameter lower delrin pivot
- (1) Roll pin 5/32" x .875"
- (1) M8x 16 SS socket head cap screw
- (1) M6 Allen wrench

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### ***Installation***

1. Raise vehicle onto jack stands or vehicle hoist. Never support vehicle with only a jack as death or injury can occur.

2. Remove OEM shift knob by unscrewing shifter counter clockwise.
3. Remove center console following directions below for your specific model.
  - 2004-2007 cars need to remove trim panel from around E-brake. Pull it straight up. Unplug the wire harnesses that are attached to the switch covers.
  - 2008+ cars need to remove E-brake boot then locate and remove screw towards front of console holding console in place. Locate and remove (2) screws in rear arm rest compartment. Carefully pull console straight up from car and move towards rear of car.
4. Remove shifter bezel from around the shifter lever by pulling up and toward the rear of the car.
5. Remove the 12mm nut and bolt that attaches the linkage to the shifter.
6. Locate reverse lock-out cable that runs through the rubber boot and under the car. Underneath the car, follow the cable were it attaches to the side of the transmission and where it actuates the reverse lock out lever. Note: The small hole in the side of the lever, this hole is used to hold the lock-out lever in a fixed position.
7. Using a suitable tool, like an Allen wrench, move pivot until the hole in the lock-out lever lines up with the hole in the side of the transmission. Place the tool through both holes to hold lever in its "Install" position.
8. Back inside the car, locate the small pin that runs through the reverse actuator on the shift lever. Using a suitable center punch, tap this pin out of the reverse actuator. Press pin out just far enough to release cable from the inside, but not so far to remove pin from lock out lever. The reverse actuator cable can now be pulled out the bottom of the shifter.
9. Using suitable snap ring pliers, remove snap ring retaining lower shifter pivot to the chassis. Shifter assembly can now be removed from car.
10. Remove snap ring, and plastic bushing from lower pivot.
11. Remove two plastic bushings from center pivot, be careful not to damage bushings. Use suitable punch and lightly tap them out of pivot. All these parts will be reinstalled onto new PERRIN shifter pivot (The red adjustable pivot).
12. Next lightly tap in the plastic bushings that were removed from center pivot.



**Shown above is the PERRIN center pivot where OEM bushings and steel pivot pass through**

13. Install snap ring around PERRIN shifter then plastic bushing around ball.
14. Remove reverse lock out actuator, spring, rubber bumper, and plastic boot trim from OEM shifter. Take note to the order they were removed, as these will also be installed onto new PERRIN shifter.
15. Install rubber bumper, spring, plastic boot trim, and the lock out actuator (in that order) to PERRIN shifter. Apply grease to shaft, where actuator slides up and down on. Make sure all parts are installed the same order as they were remove from OEM shifter.
16. Install the PERRIN shifter back into the car making sure to install snap ring into the lower pivot.
17. Install shift fork back onto the center pivot using factory bolt and nut removed earlier.
18. Slide reverse lockout cable into shifter. Take note of hole in the end of cable, the pin removed earlier will slide through the reverse lock out lever and through the hole in the cable. Install pin part way through the reverse actuator, line pin up with hole in cable and lightly tap into reverse actuator.
19. Under car remove tool use to hold lockout lever in place on tranny.
20. If installed correctly, the reverse lever will actuate smoothly in both directions (up and down). If no resistance is felt when pulling up, pin was not installed into cable correctly.
21. Adjust the PERRIN short shifter to the desired throw, and knob placement. Once adjusted, tighten socket head screw to secure.
22. For the shortest throw pry up on the 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 wrench, to pry the front left corner of the

- metal trim ring up to clear the linkage.
23. Run the shifter through all gears and check for clearance.
  24. Reinstall the cover plates making sure to plug in any electrical connections.

### ***Shifter Bushing INSTRUCTIONS:***

- 1) With car still in air, support transmission, and lower transmission braces using jack. Remove bolts securing transmission braces to chassis. Use 17mm, and 14mm sockets to remove bolts.
- 2) Locate Lower Shifter linkage on back of transmission. This linkage attaches to tranny and to chassis.
- 3) Remove (2) 12mm bolts securing linkage to rubber bushing on chassis.
- 4) Lower Transmission down to expose lower shifter bushing. Loosening the engine pitch-stop mount will aid in dropping the transmission. This mount is located under intercooler, between engine and firewall.
- 5) Once Lower shifter linkage is exposed, remove linkage from tranny.
  - o 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). Pry bushing from lower linkage. Take care not to damage reverse lock out cable when prying bushing out.
- 6) Once bushing is removed from lower linkage, install bushings on each side of lower linkage.
- 7) Reinstall lower shifter linkage back onto tranny, and retighten nut or bolt. (6spd customers tighten bolt to 15ft-lbs) ***NOTE: Because there is no center sleeve to bushing you can tighten bushing beyond 15ft-lbs to make bushing even stiffer. This can create an even more solid feel to shifting.***
- 8) Raise tranny with tranny supports back to chassis, and tighten bolts. 17mm bolts, tighten to 103ft-lbs and 14mm bolts, tighten to 51ft-lbs. Tighten pitch-stop mount if loosened in earlier step.
- 9) Install (2) 12mm bolts securing linkage to rubber bushing on chassis. Tighten bolts to 13ft-lbs.
- 10) Double check tightness of all hardware and connections, and double check for smooth shifter action.
- 11) Lower vehicle from jack stands, and proceed to test drive car.

***For questions & comments please contact***  
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