



Competition/Plus Short Throw Shifter

FORM 159 5065 09/07

Fits 2004-2006 GTO with 6-Speed Manual Transmission Catalog #391 5065 Installation Instructions

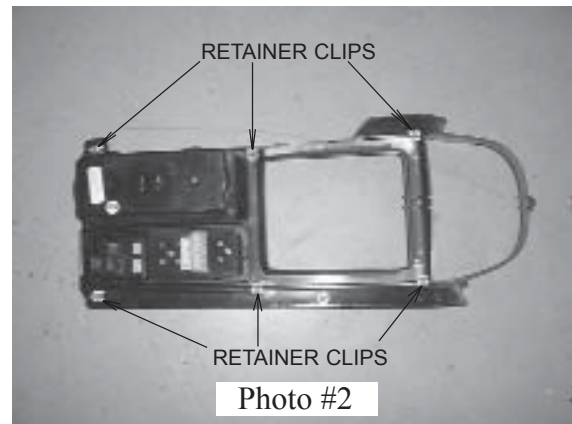
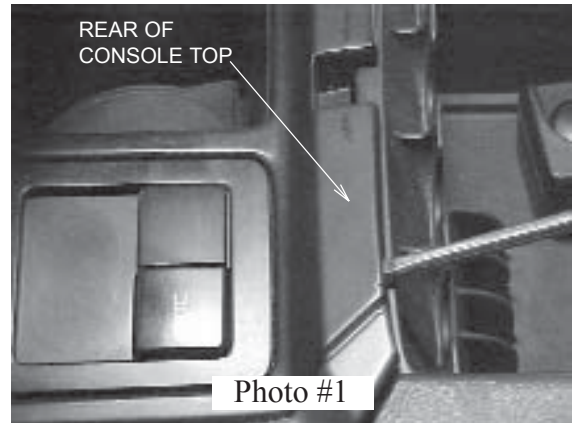
Thank you for purchasing the Hurst Competition/Plus Shifter for your GTO. This shifter is designed to reduce the throw approximately 45% for shorter shifts, precisely balancing distance, effort, comfort and control making the feel of the shifter significantly more positive as compared to the stock factory unit. It is constructed of a solid billet steel stick and billet aluminum base for increased strength over the stock factory shifter. You will also probably notice an increase in effort while shifting due to the shorter throw. **It should be noted that this shifter has been primarily designed as a "race" shifter for competition use and while every effort to reduce transmission vibration and noise has been made; unlike the stock shifter- this was not the primary goal in design. IN SOME INSTANCES AND IN SOME VEHICLES, TRANSMISSION AND DRIVETRAIN NOISE AND VIBRATION MAY BE CHANGED AND/OR AMPLIFIED! If this possibility is objectionable in your goals and end purpose of modifying your vehicle, please return this product for a refund before proceeding any further with installation.**

IMPORTANT! Installing the Hurst Competition/Plus Shifter requires moderate mechanical ability. Read this instruction sheet completely so that you thoroughly understand it and can become familiar with the procedure before attempting installation. We highly recommend that you use the appropriate factory service manual along with these instructions for additional procedure details.

WORK SAFELY! Perform this installation on a good clean level surface for maximum safety and with the engine turned "off". Allow the vehicle to "cool down" sufficiently before you begin so that you will avoid injury due to hot engine or exhaust pipes. Installation of this shifter requires working underneath the vehicle. **USE EXTREME CARE AND CAUTION WHEN WORKING UNDERNEATH VEHICLE.** Never get near or under vehicle until you are confident that it is safely supported and will not move or fall from its raised position. **DO NOT USE A JACK ALONE TO SUPPORT THE VEHICLE!**

FACTORY SHIFTER REMOVAL

1. Using a Philips head screwdriver, remove the screw located below the accessory door at the very front of the console.
2. Open the rear console door and using a flat blade screwdriver, carefully pry up on the back of the console top to release the attachment retainer clips from the main console body (see photo #1).
3. Grasp the sides of the console top and pull up at all edges to release the retainer clips from the main console body. Note: There are 6-attachment retainer clips and moderate force may be required to release the clips (see photo #2). Pull up evenly at retainer clip points to prevent cracking or



damage to console top.

4. Unplug the electrical connector from the power window and traction control switches. Remove console top.
5. Grasp edges of shift boot plastic rim and pull up and out of console (see photo #3). Note: There are 7-attachment points securing this boot. Note their position when removing. Pull boot up onto shift knob exposing the 2-bolts that fasten the shifter stick/knob assembly to the shifter itself (see photo #4).
6. Using a 10mm wrench, remove the 2-bolts and remove the shifter stick/knob and boot assembly.
7. From underneath vehicle, remove the 4-hex nuts located directly above the rear of the transmission tail shaft, which secure the factory rubber inner boot retainer to the floor pan tunnel. Note: Access to this area is very tight and limited. You will need to use a 13mm open end wrench, socket, extension, universal swivel and ratchet for this procedure. **ALWAYS USE CARE AND CAUTION WHEN WORKING UNDERNEATH VEHICLE!**
8. From inside vehicle, remove steel boot retainer and rubber boot by pulling up and off of stock factory shifter (see photo #5).
9. Remove the small rubber dust boot from the plastic cover



Photo #3

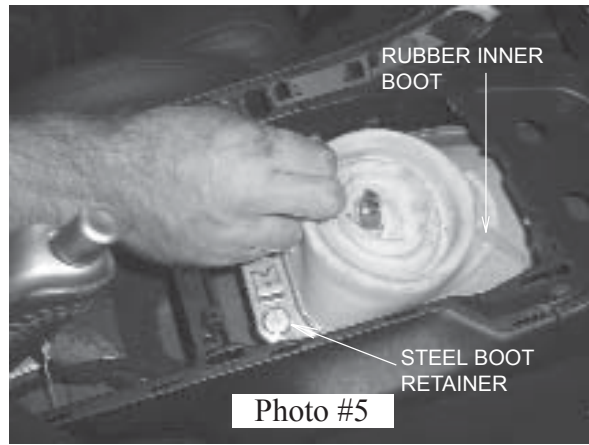


Photo #5



Photo #4

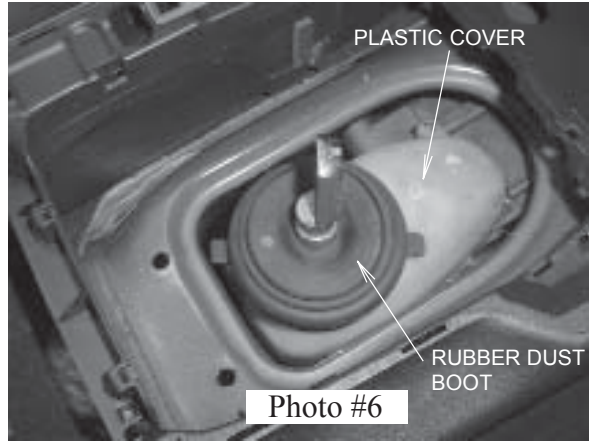


Photo #6

(see photo #6).

10. Using a T45 Torx head driver, remove 4-screws that fasten the plastic cover to the transmission plate. Note: The screws on the passenger side may be difficult to access. In this case, use a pry bar between the transmission and edge of the opening in the floor tunnel and gently pry the transmission slightly over to the driver's side to allow access to the screws (see photo #7). Be careful not to drop the screws as they are removed. Lift plastic cover off stock factory shifter and set aside.

11. Using a 5/16" socket or wrench, remove the 3-hex head screws and flat washers from the shifter front mounting plate. Set screws aside for re-installation (see photo #8).

12. Using a 3/8" socket, remove the 4-hex head screws from the rear shifter-mounting base. These screws WILL NOT be reused.

13. Remove factory shifter by pulling up and off of transmission. Remove rubber cup from rear of transmission plate (see photo #9).

Note: Temporarily cover opening in transmission with a shop rag to prevent any debris from accidentally falling into opening.

HURST SHIFTER INSTALLATION

1. Lightly lubricate the two (2) o-rings (supplied) with silicone grease (supplied) and install both o-rings onto the underside of the shifter front mounting plate (see photo #10).
2. Lubricate the ball on the bottom of the front shifter stick bottom with the silicone grease.
3. Inspect plastic cup bushing located inside transmission

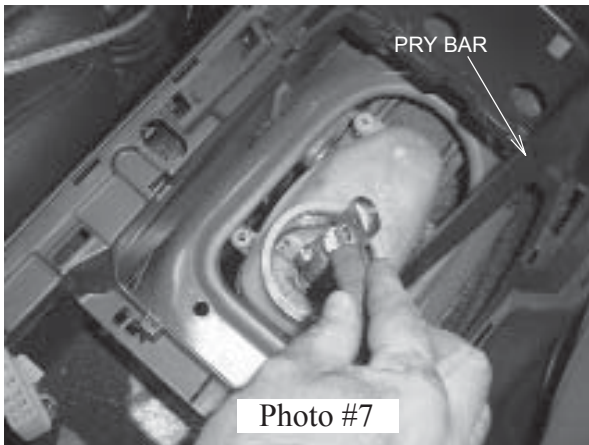


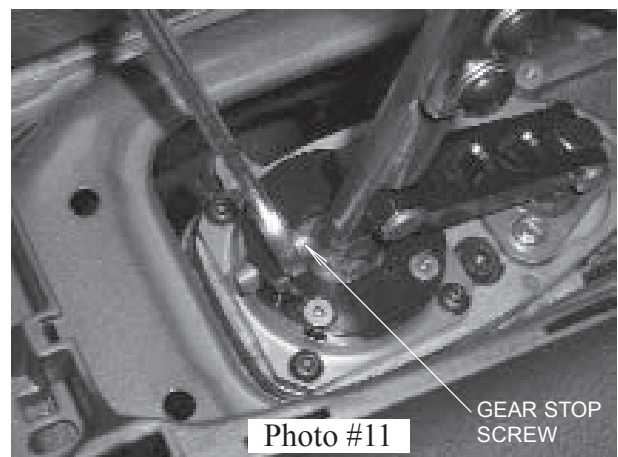
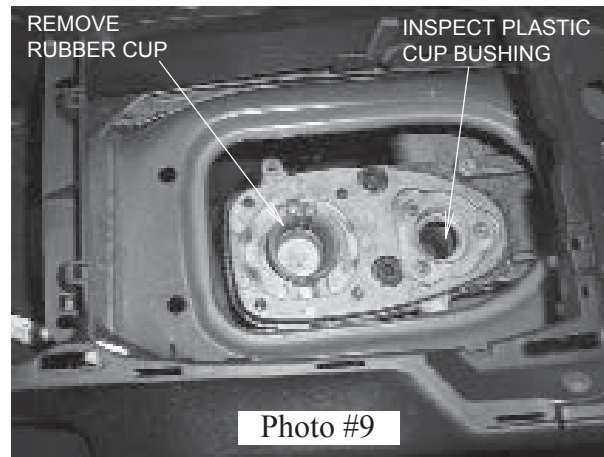
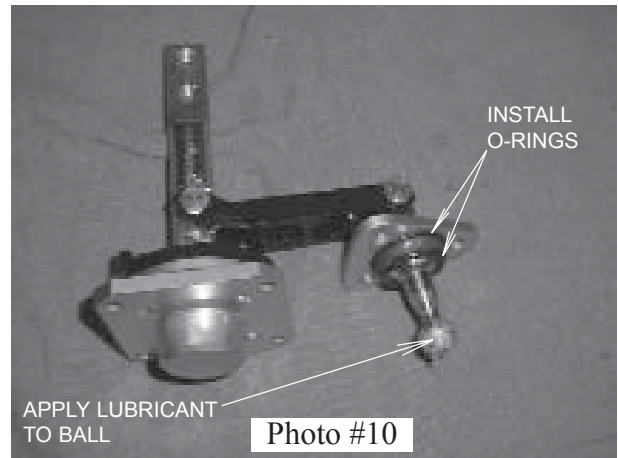
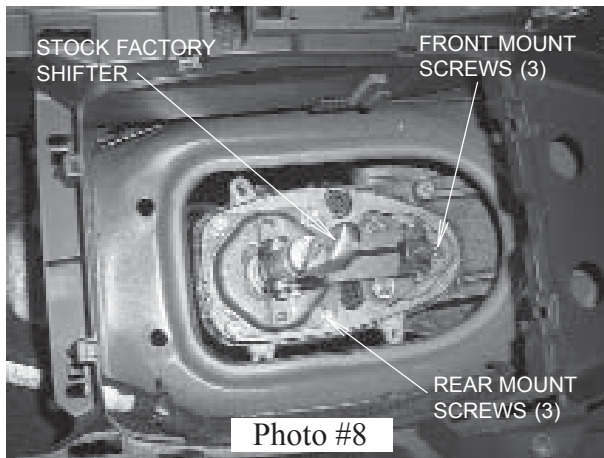
Photo #7

rail receiver to be sure that it is intact and not broken or damaged. Place Hurst shifter onto transmission plate making sure that ball on front stick bottom engages plastic cup bushing and that rear mounting base of shifter sits down flush onto transmission plate and all mounting bolt holes are aligned properly.

4. Clean threads on the 3-front mounting screws previously removed and apply thread locker (supplied) to threads. Install into front plate and tighten securely. It is not necessary to install the flat washers used with the stock factory shifter. Caution: Use care to not over tighten as threaded holes for screws can strip and be damaged.

5. Apply thread locker to the 4-new hex socket screws (supplied) and install into rear shifter mounting base. Tighten securely using a 3/16" hex key wrench.

6. Temporarily attach the Hurst chrome plated stick or OEM



style black stick to the stick bottom with the two (2) 3/8-24 x 1" button head socket bolts supplied. Note: Be sure that the stick engages serrations on stick bottom. Tighten bolts only snug, as you will need to remove the stick after the next step.

IMPORTANT! Check operation of shifter for interference or binding. Move stick through entire gearshift pattern making sure it engages each gear fully and that stick moves freely from side to side in "neutral" position. Note: During this procedure, be sure that shifter stick does not hit "gear stop screw" located on top of shifter plate at rear.

GEAR STOP SCREW ADJUSTMENT:

CAUTION! After extensive testing with various race teams, as well as continuing development with the original transmission engineering group, Hurst has determined that the "gear stop" feature is redundant on most series of Tremec transmissions. Because of this, Hurst is phasing out the use of "gear stops" on Tremec as well as some other types of transmissions. If you feel that your style of driving requires the use of gear stops, then install the supplied threaded stop and nut and **adjust exactly as described below or internal transmission damage could occur!**

Pull shifter firmly into 2nd gear making sure that the gear has been FULLY engaged and hold securely. Apply a small amount of thread locker to gear stop screw threads. Turn stop screw in until head contacts stick, then rotate screw one half turn out (away from the stick) and tighten jam nut using a 9/16" wrench (see photo #11).

7. Remove the top stick from the shifter.

8. Insert the 4-steel sleeves into the foam gasket (supplied) and place gasket over shifter and onto transmission plate. Align holes in gasket with mounting holes in transmission plate.

9. Modify rear of factory plastic cover to allow clearance for gear stop screw (see photo #12). Use a hacksaw blade to cut a small slot in cover. Caution: Use care to avoid personal injury or damage to cover when cutting.

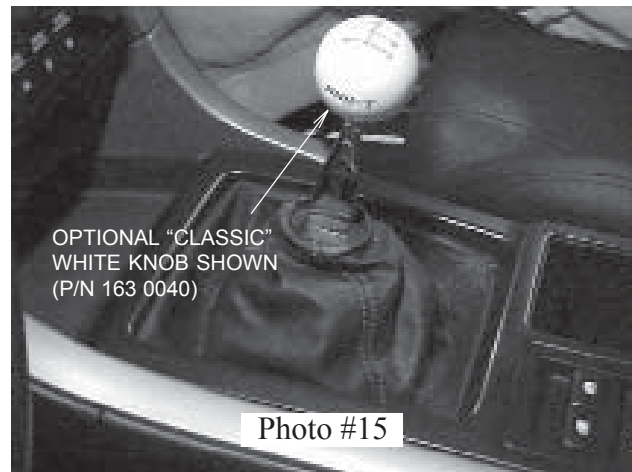
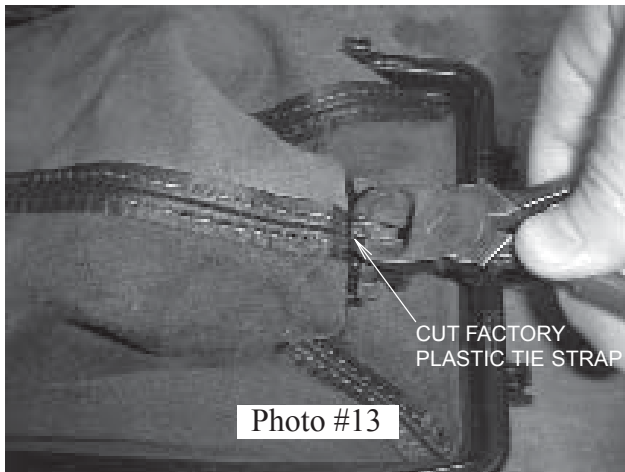
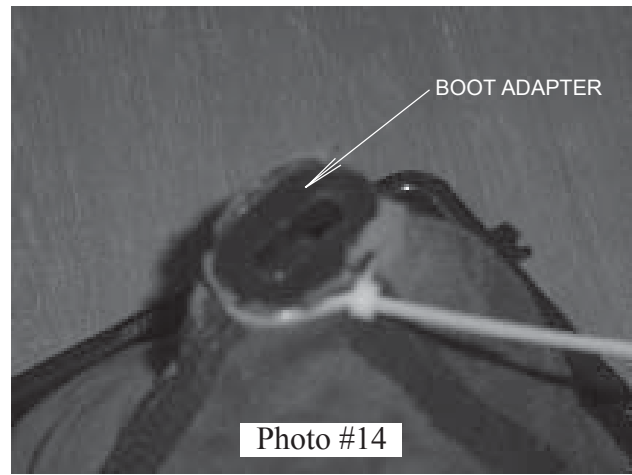
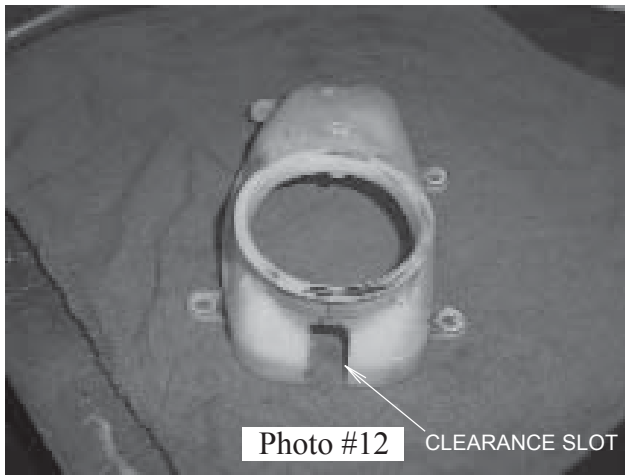
10. Place modified cover over shifter onto foam gasket and fasten with 4-hex socket screws (supplied). Tighten using a 5/32" hex key wrench. Note: Tighten screws snugly but use care to not over tighten.

11. Replace small rubber dust boot previously removed onto plastic cover. Note: the supplied rubber boot and retaining ring can be used in addition and/or in place of the original dust boot to insulate noise and vibrations.

12. Slide factory rubber inner boot and retainer ring over shifter and plastic cover, aligning retainer studs with holes in floor pan tunnel. From underneath vehicle, replace the 4-hex head nuts previously removed and tighten securely.

13. Re-attach the top stick to the shifter stick with the two (2) 3/8-24 x 1" button head socket bolts and star tooth lock washers. Be sure that top stick engages serrations on stick bottom. Tighten bolts 30-35 ft. lbs. torque using a 7/32" hex key wrench.

14. If using the Hurst style stick and knob, place the factory shifter knob, boot and handle onto workbench. Turn shift boot inside out and carefully cut the plastic tie strap that secures the boot to the shift handle (see photo #13). Slide



the boot off the shifter handle.

15. With the boot turned inside out, insert the supplied boot adapter into the factory boot making sure that boot edges fit into the groove of the adapter. Secure with the plastic cable tie supplied and cut excess material off of cable tie (see photo #14). Caution: Do not distort opening in boot adapter by over-tightening or it will not fit properly onto the Hurst chrome plated stick.

16. Slide the factory boot and adapter onto the Hurst chrome plated stick and carefully insert the retainer tabs into their respective positions in the console base making sure that boot is held firmly in place.

17. Replace the console top by reconnecting the electrical plugs to the power window and traction control switches. Open the rear console door. Starting at the front, align the retainer clips with their respective slots in the console base and carefully begin pushing the console top into place until all the retainers snap firmly into place. Replace the front retainer screw previously removed.

18. Install Hurst shifter knob onto stick, turn to correct position and tighten jam nut against knob using a 9/16" open-end wrench.

This completes the installation.

IMPORTANT: RETAIN THESE INSTRUCTIONS FOR FUTURE REFERENCE

Technical Service

A highly trained technical service department is maintained by Hurst Performance to answer your technical questions, provide additional product information and offer various recommendations.

Hurst offers a wide variety of custom T-Handles and knobs that can be used with this shifter to allow the driver to tailor the vehicle to his/hers personal liking. See your local retailer of Hurst products for specific prices.

Technical service calls, correspondence, and warranty questions should be directed to the following address:

Hurst
 9142 Independence Ave.
 Chatsworth, CA 91311
 Phone (818) 483-1366
 Monday-Friday 7AM to 4PM PST

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