



HURST #391 5032
BILLET/PLUS COMPETITION SHIFTER
Fits 1986-98 Camaro/Firebird equipped with
Borg-Warner T-5 Five speed Manual Transmission

INSTALLATION INSTRUCTIONS

WORK SAFELY: Perform this installation on a good clean level surface for maximum safety and with the engine turned “off.” Apply parking brake and place blocks or wedges in front of and behind both rear wheels to prevent movement in either direction.

CAUTION: To avoid any possibility of bodily injury or damage to vehicle, do not attempt shifter installation until you are confident that vehicle is safely secured and will not move.

Factory Shifter Removal

NOTE: The factory console will have to be removed in order to install the Hurst Billet/Plus shifter. Due to differences in design, options available, electrical wiring and model year changes, we recommend that you refer to a factory service manual for your specific model year outlining the proper procedure for console removal.

1. Disconnect negative (-) battery cable.

CAUTION: When removing or connecting the battery cable terminal, use care to avoid intermittent contact (arcing) between battery post and terminal end. This generates voltage spikes that can damage sensitive ECM(Electronic Control Module) components or memory circuits.

2. Place shifter in “neutral” position.
3. Remove shifter knob from stick by turning counter- clockwise.
4. Remove console shifter boot and trim plate. Depending on model year, it is either held in place with screws or just pulls out.
5. To remove upper console, pull parking brake lever all the way up and remove the handle grip. Open the compartment lid and locate mounting tabs.

NOTE: Some model years use screws to fasten the tabs, be sure to remove the screws.

6. Raise console at rear and disconnect any electrical wire plugs or connectors located in console. Pull upper console towards the rear of vehicle to release front mounting tabs. Lay console on its side and remove ash tray light socket.

7. To remove lower console, adjust both seats to the rear of vehicle and fully recline backwards. Remove the screws that secure the lower console in place.
8. Check for any other wiring attached to console. Lift lower console up in the rear and pull back slightly. Pull assembly up over parking brake handle and remove from vehicle.
9. Remove mounting screws that attach lower shifter boot to floor tunnel, remove boot and set aside.
10. Using a 13mm socket, remove four (4) hex head bolts that fasten stock shifter assembly to transmission. Discard bolts, new ones are supplied. Lift shifter assembly straight up and off. (NOTE: you may have some difficulty in removing stock shifter from transmission due to adhesive sealant applied at factory.)
11. Remove and inspect plastic cup bushing. Replace if worn or damaged. This part is available from GM parts sources. Re-install bushing in transmission.

Billet/Plus Shifter Installation

NOTE: Shifter stick was changed to chrome as of 8-19-2008.

1. Clean shifter mounting surface on transmission and apply RTV or similar sealant between mating surfaces of shifter assembly and transmission.
2. Install Billet/Plus shifter assembly onto transmission, making sure that ball located on stick bottom fits properly into plastic cup bushing.
3. Fasten Billet/Plus shifter assembly to transmission using new hex head bolts and flatwashers supplied. **DO NOT USE ORIGINAL BOLTS.** Tighten bolts evenly to 15-20 lbs.ft. torque.
4. Loosen hex nuts on shifter top screws and using a hex key wrench, turn screws out until they are flush with inside of aluminum collar.
5. Test shifter operation. Move stick through entire gear shifter pattern, make sure it engages each gear fully and the stick moves freely from side-to-side in neutral position.

NOTE: While engine is not running “reverse” engagement may be slightly difficult.

OPTIONAL ADJUSTMENT OF SHIFTER STICK TENSION

CAUTION: WEAR SAFETY GLASSES FOR EYE PROTECTION. Shifter operation can be made “softer” by removing the smaller spring (inner) from each side of shifter stick.

CAUTION: SUDDEN RELEASE OF SPRINGS THAT ARE UNDER COMPRESSION IS DANGEROUS. RELEASE SPRINGS CAREFULLY.

IMPORTANT: REMOVE SPRINGS ONE SIDE AT A TIME. SHIFTER CAN BECOME DIS-ASSEMBLED IF BOTH SIDES ARE REMOVED AT THE SAME TIME.

Loosen and carefully remove both socket head cap screws. Remove retainer plate to expose springs. Remove inner (smaller) spring only. Replace retainer and screws. Tighten both screws to 125-150 inch pounds. Repeat this procedure on opposite side.

NOTE: If you are not satisfied with the “softer” stick tension, re-install inner springs.

6. Adjust shifter stop screws. Pull stick firmly into 2nd gear and hold securely. Turn rear stop screw in until head contacts stick, rotate screws one half turn “out” (away from stick). Hold screw secure with hex key wrench and tighten jam nut.
7. Repeat adjustment on forward stop screw. Push stick firmly into 3rd gear, and hold securely. Turn forward stop screw in until head contacts stick, then rotate screw one half turn out (away from stick). Hold screw secure with hex key wrench and tighten jam nut.
8. Remove Hurst shifter knob. Slide rubber boot, supplied, over shifter stick and down over the collar. Secure at top and bottom using supplied plastic tie straps.

IMPORTANT: This boot must be staked to prevent dirt and moisture from entering shifter base housing which can cause premature wear of shifter.

9. Slide the factory lower shifter boot over the shifter stick and mechanism. Re-install the lower boot mounting screws and tighten securely.

NOTE: If Billet/Plus shifter stick has been removed from assembly, be sure to engage serrations and tighten both bolts evenly to 15-20 lbs.ft. torque.

10. Re-install lower and upper console in vehicle and re-connect electrical wiring. Secure console re-using factory mounting screws.
11. Re-install console shifter boot and trim plate.
12. Assemble knob using shift pattern insert and clear plastic lens. Install onto shifter stick, turn to correct position and tighten jam nut against knob.
13. Re-connect negative (-) battery cable.

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