



## Installation Instructions

# BILLET/PLUS COMPETITION SHIFTER

1983-2004 Ford Mustang/1983-1991 Thunderbird

5 - Speed Borg-Warner T-5, T-45 Transmission

Catalog# 391 5031

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**WORK SAFELY!** For maximum safety, perform this installation on a clean, level surface and with the engine turned off. 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 the vehicle is safely secured and will not move.

**NOTE:** In some cases the factory console will have to be removed in order to install the Hurst Billet/Plus shifter. Due to differences in design and model year changes, we recommend that you refer to a factory service manual for your specific model year to determine the proper procedure for console removal.

### FACTORY SHIFTER REMOVAL

1. Place the shifter into the neutral position.
2. Remove the shifter knob from the stick by turning it counter-clockwise.
3. Using both hands, place your fingers underneath each side of the shifter boot, grasping console top plate, and pull up to remove the top plate from the console. On some models there is a layer of sound deadening material inside the console. Remove and save it for reassembly to reduce engine and road noise.
4. Remove the four screws that secure stock shifter boot to the floor tunnel, and remove the boot. Also, remove the additional rubber boot (inner dust cover) located underneath the stock shifter boot.
5. Using a 13 mm socket, remove the four hex-head bolts that fasten the stock shifter assembly to the transmission. Discard the bolts; new ones are supplied. Lift the shifter assembly straight up and off. (Note: you may have some difficulty in removing the stock shifter from the transmission due to the adhesive sealant at the factory.)
6. Remove and inspect the plastic cup bushing inside the transmission, replace it if it's worn or damaged (This part available from Ford dealers). Re-install the bushing in the transmission.

### BILLET/PLUS SHIFTER INSTALLATION

#### **IMPORTANT: CHECK YOUR TRANSMISSION**

On vehicles equipped with Borg-Warner T-45 transmissions, you **MUST** use the metal spacer provided between the Billet/Plus shifter mounting base and transmission mounting surface. On vehicles equipped with Borg-Warner T-5 transmissions, **DO NOT** use the spacer.

1. Clean the shifter mounting surface on the transmission and apply RTV or similar sealant provided between the Billet/Plus shifter mounting base and the transmission. **NOTE:** On applications with Borg-Warner T-45 transmissions, use spacer provided and apply sealant to both mating surfaces of spacer.

2. Install the Billet/Plus Shifter assembly onto the transmission, making sure that the ball on the bottom of the stick fits properly into the plastic cup bushing.
3. Fasten the Billet/Plus Shifter to the transmission using the new hex head bolts and flat-washers supplied. **DO NOT USE THE ORIGINAL BOLTS.** Tighten the bolts evenly to 15-20 ft/lbs. torque.
4. Loosen hex nuts on shifter stop screws and using a hex key wrench, turn screws out until they are flush with inside of aluminum collar.
5. Test shifter operation. Move the stick through the entire gear shift pattern, making sure it engages each gear fully and that the stick moves freely from side to side in the "Neutral" position.

### **OPTIONAL ADJUSTMENT OF SHIFTER STICK TENSION**

Shifter operation can be made "softer" by removing the inner (smaller) spring from each side of shifter stick. Remove springs one side at a time. Shifter can become disassembled if both sides are removed at the same time.

Loosen and carefully remove both of the socket head cap screws. Remove the retainer plate to expose the springs. Remove the inner (smaller) spring only. Replace the retainer and screws. Tighten both screws to 125-150 inch pounds. Repeat this procedure on the opposite side. If you are not satisfied with the "softer" shifter stick tension, re-install inner springs.

**CAUTION: SUDDEN RELEASE OF SPRINGS THAT ARE UNDER COMPRESSION IS DANGEROUS. RELEASE SPRINGS CAREFULLY. WEAR SAFETY GLASSES FOR EYE PROTECTION.**

6. Adjust the shifter stop screws. Pull the stick firmly into 2nd gear and hold it securely. Turn the rear stop screw in until the head contacts stick. Then, rotate the screw one half turn "out" (away from stick). Hold the screw with the hex key wrench and tighten the jam nut. Repeat adjustment on the forward stop screw. Push the stick firmly into 3rd gear, and hold it securely. Turn the forward stop screw in until the head contacts stick, then rotate the screw one half turn out (away from stick). Hold the screw secure with the hex key wrench and tighten the jam nut.

7. Slide the rubber boot (supplied) over the shifter stick and down over the collar. Secure it at the bottom using the supplied plastic tie strap.

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

8. Replace the factory inner dust cover and the stock factory rubber boot. Secure to floor tunnel with the four screws previously removed.

9. Replace the console top plate and shifter boot into the console by carefully pushing down firmly until it snaps into place.

10. Install the factory knob onto the shifter stick. (**NOTE:** The shifter stick is threaded to accept any knob having 12mm - 1.75 thread.)

**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 sued 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:



**Hurst Performance Products**

(707) 544-4761

[www.Hurst-Shifters.com](http://www.Hurst-Shifters.com)