



# Installation Instructions

## BILLET/PLUS SHORT THROW SHIFTER

1983-2001 Ford Mustang  
Borg-Warner 5-Speed T5 or T45 Manual Transmission  
Catalog# 391 5033  
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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:** This shifter features a high pivot ratio and is designed to reduce the throw approximately 30% for shorter and quicker shifts, precisely balancing distance, effort, comfort, and control to give you the most satisfaction from a shifter. It is constructed of a CNC machined BILLET ALUMINUM mounting base and heat treated BILLET STEEL gear selector for ultimate strength and precision tolerances. Self-centering alignment improves 2nd to 3rd up shift gear changes and an exclusive oil control seal prevents transmission fluid loss and leakage.

**IMPORTANT:** Installing the Hurst Billet/Plus Short Throw 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.

### FACTORY SHIFTER REMOVAL

1. Place shifter into neutral position.
2. Remove shifter knob from stick by turning counter-clockwise.

3. Using both hands, place fingers underneath each side of shifter boot grasping boot rim and pull up to remove boot from console. (See Figure 1 and 2)

**NOTE:** 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.

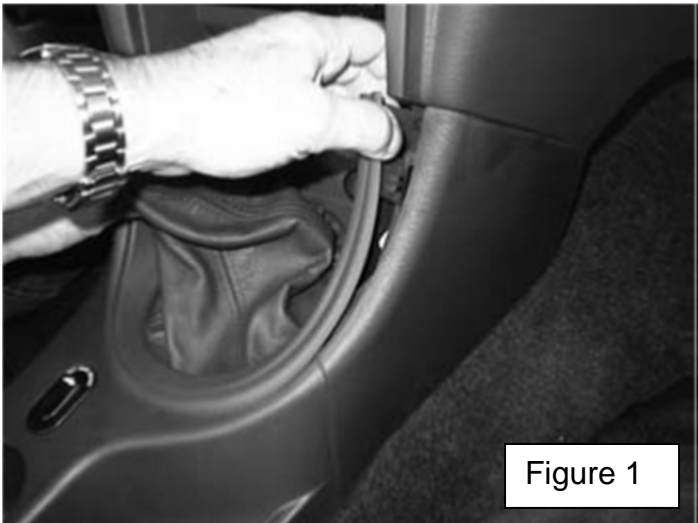


Figure 1



Figure 2

4. Remove four (4) screws that secure factory inner shifter boot to floor tunnel and remove boot. (See Figure 3 and 4)

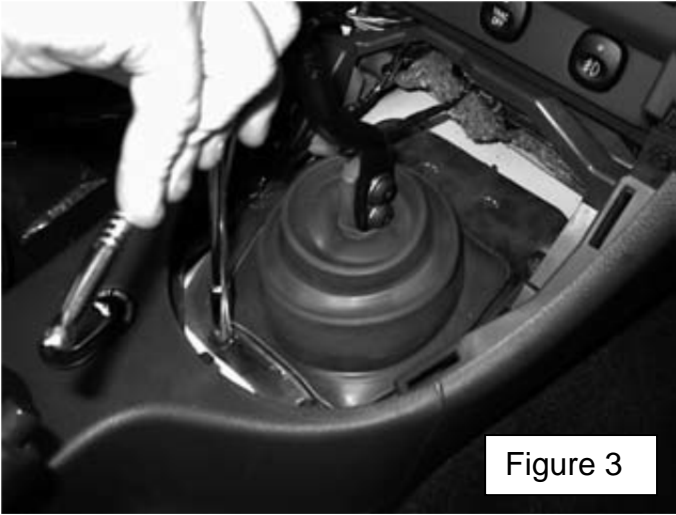


Figure 3



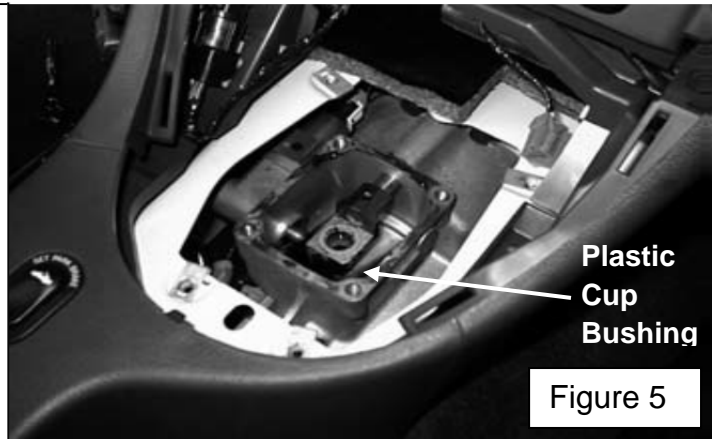
Factory  
Inner Boot  
Figure 4

5. 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.

6. Remove and inspect plastic cup bushing inside transmission, replace if worn or damaged. This part is available from Ford dealers. Re-install bushing in transmission.

(See Figure 5)



Plastic  
Cup  
Bushing  
Figure 5

### **BILLET/PLUS SHIFTER INSTALLATION**

**IMPORTANT! CHECK YOUR TRANSMISSION!** On vehicles equipped with Borg-Warner T-45 transmission used in most 94-2001 Mustangs, you **MUST** use the metal spacer provided between the Billet/Plus shifter mounting base and the transmission mounting surface. On vehicles equipped with the Borg-Warner T-5 transmission used in most 83-93 Mustangs, **DO NOT** use the spacer.

1. Clean shifter mounting surface on transmission and apply RTV or similar sealant on mating surfaces of shifter mounting base and transmission.

2. Install Billet/Plus Shifter assembly onto transmission making sure that ball on stick bottom fits properly into plastic cup bushing.

**IMPORTANT!** If plastic cup bushing is retained on factory shifter during removal, remove and install onto Hurst shifter.

**NOTE:** On applications with Borg-Warner T-45 transmission, use spacer provided and apply sealant to both mating surfaces of spacer.

3. Fasten Billet/Plus Shifter to transmission using new hex head bolts and flat washers supplied.  
**NOTE: DO NOT USE ORIGINAL BOLTS.** Tighten bolts evenly to 15-20 lbs. ft. torque.

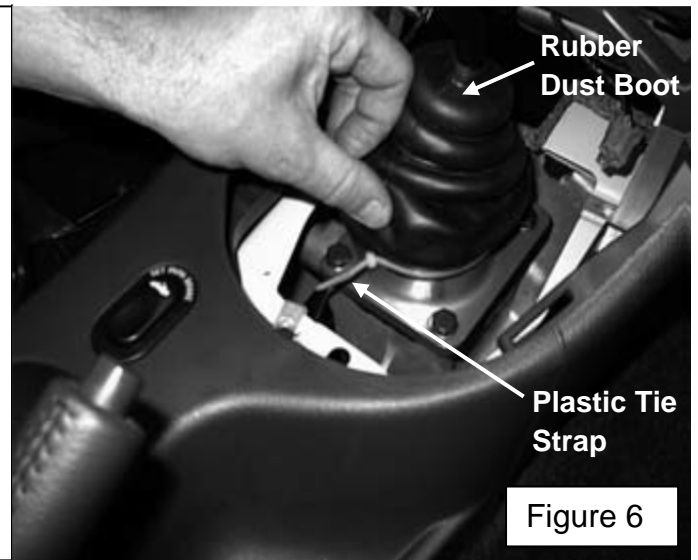
4. Loosen hex nuts on shifter stop screws and using a 7/32" hex key wrench, turn screws out until they are flush with inside of aluminum collar. Test shifter operation. Move stick through entire gearshift pattern, making sure it engages each gear fully and that stick moves freely from side to side in "neutral" position.

5. **Stop Screw Adjustments-** Pull shifter stick firmly into 2nd gear position and adjust rear stop screw by turning in until it makes contact with shifter stick. Hold screw in position using a 7/32" hex key wrench and tighten jam nut using a 11/16" open end or box wrench. Push shifter stick firmly into 3rd gear position and repeat adjustment on front stop screw.

**IMPORTANT! This adjustment is very critical and must be done correctly.** A small amount of thread locker is recommended on stop screw and jam nut threads to prevent loosening.

6. Slide rubber boot, supplied, over shifter stick and down over the aluminum stop collar. Secure at bottom using supplied plastic tie strap. (See Figure 6).

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



7. Replace the stock factory inner boot. Secure to floor tunnel with four (4) screws previously removed.

8. Replace shifter boot into console by carefully pushing down firmly on boot rim until it snaps into place.

9. Install jam nut and shifter ball onto stick. Turn to correct position and tighten jam nut against knob.

**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)