



Billet/Plus™ Short Throw Shifter

Fits 1999-2003 Ford F-150 Pick-Up Truck
with 5-Speed Manual M5OD Transmission

#391 5026

Installation Instructions

*Thank you for choosing the Hurst Billet/Plus Shifter
for your Ford F-150.*

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! Read this instruction sheet completely so that you thoroughly understand it and can become familiar with the procedure before attempting installation.

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.

STOP! IMPORTANT NOTICE! READ CAREFULLY!
Due to some differences in transmissions used within the same model year, you will need to compare the length of the factory stick bottom to the Hurst Billet/Plus stick bottom before installing this shifter. Measure from the underside of the shifter-mounting flange to the bottom of the selector stub. If the factory stick bottom is approximately 1/4" shorter than the Hurst stick bottom, you will need to use Hurst shifter part number 391 5025.

FACTORY SHIFTER REMOVAL

1. Place shifter into neutral position.
2. Remove 4 screws from factory shift boot.
3. Pull boot up onto the shifter stick exposing the lower boot. (see fig. 1)
4. Remove shifter stick from shifter mechanism by removing the hex flanged nut on the front side of the stick using a 17mm wrench and installing the nut onto the rear of the stud. Tighten the nut to draw out the

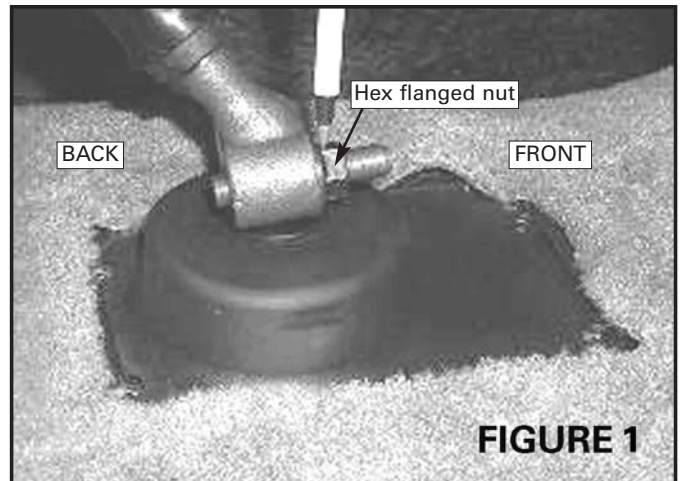


FIGURE 1



FIGURE 2

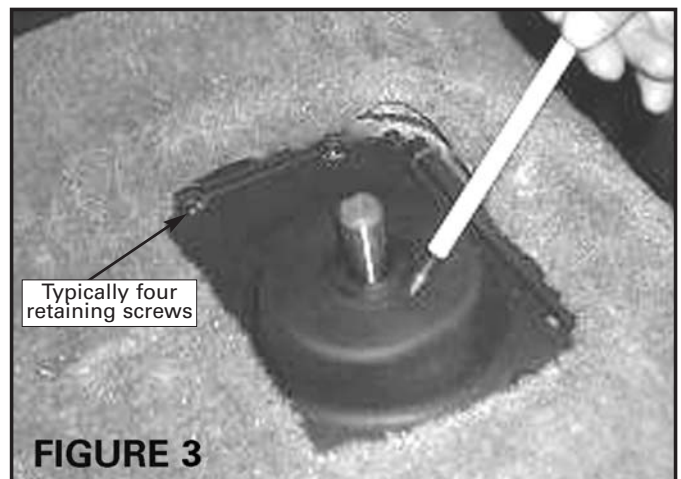
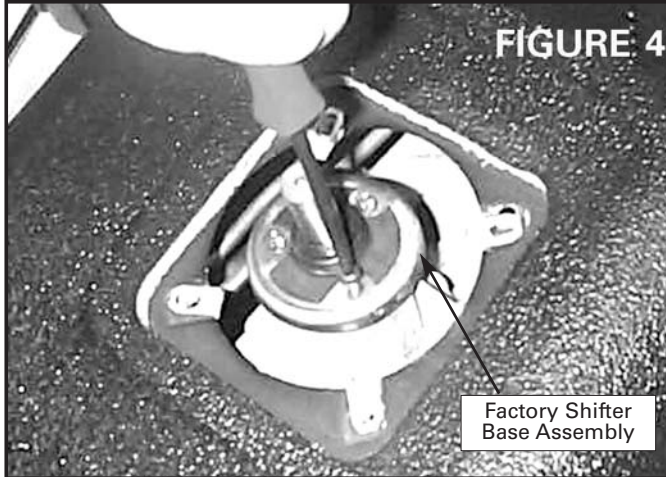


FIGURE 3

stud. With the stud removed, pull the shifter stick up and off (see fig.2).

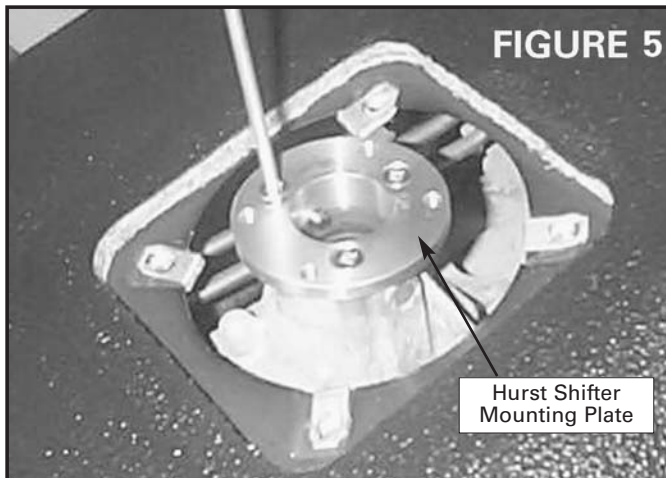
5. Remove the factory inner boot and plate assembly from the floor tunnel by removing the four (4) 8mm hex head screws. Set screws aside (see fig.3). **Note: on some model years the rear screws are located under the floor covering.**



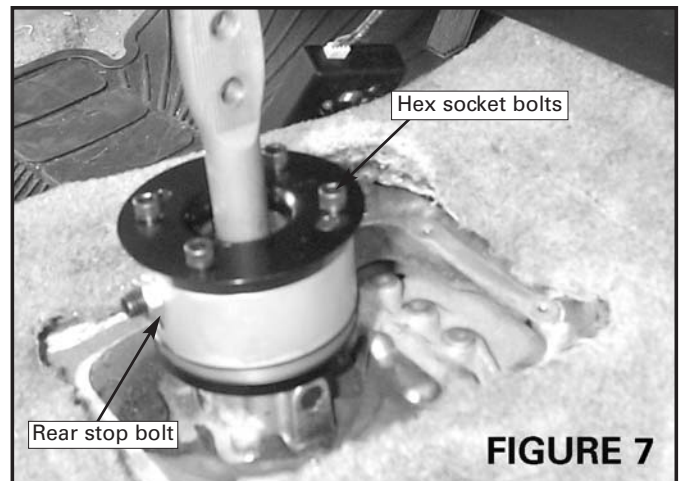
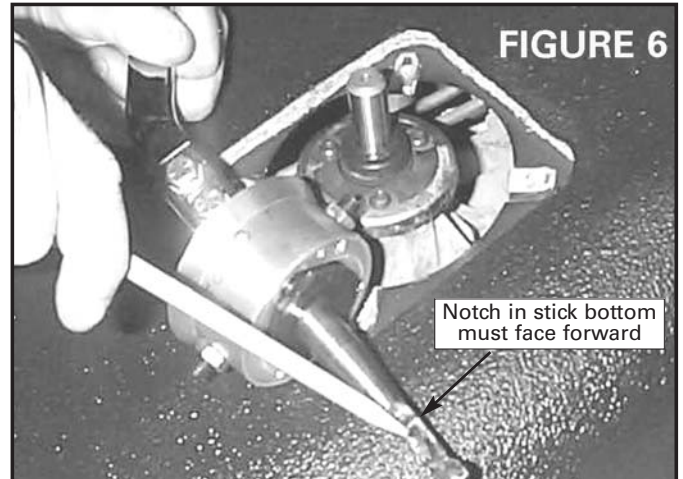
6. Remove the factory inner boot.
7. Using a T30 Torx screwdriver, remove the 3 Torx head screws that secure the factory shifter base to the transmission and remove the shifter mechanism by pulling up and out (see fig.4). **Important: Make sure to temporarily cover the shifter opening on the transmission with a shop rag to avoid something accidentally falling into it.**

BILLET/PLUS SHIFTER INSTALLATION

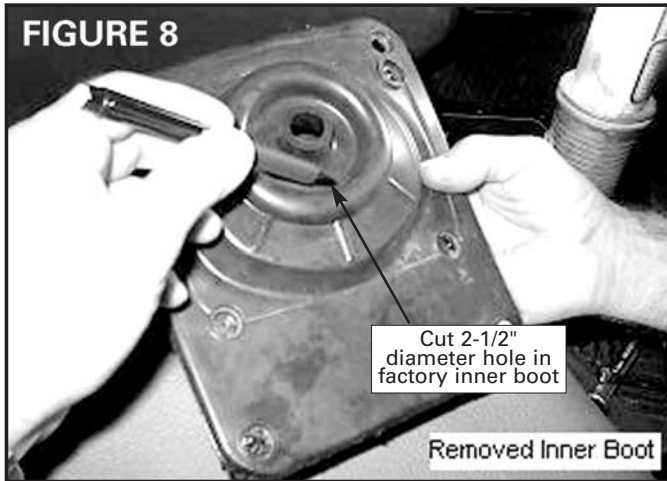
1. Remove the four (4) hex socket bolts from the top of the Hurst shifter using a 7/32" hex key wrench and separate the bottom mounting plate from the shifter body using care not to damage the rubber oil control seal.
2. Install the supplied 3-hole gasket onto the bottom side of the shifter mounting plate, and align the gasket holes with the boltholes in the mounting plate.



3. Clean the shifter mounting surface on the transmission and position the Hurst shifter mounting plate and gasket onto the transmission-mounting flange making sure the 3-boltholes and notches for the locating pins are properly aligned. Gently tap the mounting plate down into place.
4. Install three (3) flat head countersunk screws (supplied) and tighten securely using a 5/32" hex key wrench (see fig.5).
5. Install the 4-bolts previously removed from the shifter assembly through the body of the shifter and rubber seal.



6. Position the Hurst shifter assembly onto the mounting plate with the notch in the stick bottom facing forward (see fig.6). Make sure that shifter stick bottom engages properly into transmission, and shifter body sits flush onto mounting plate. Align the 4-bolts with the holes in the mounting plate and tighten the bolts securely using a 7/32" hex key wrench (see fig.7).
7. **Stop Bolt Adjustments**-Loosen front and rear stop bolts located on body of shifter and back outward by turning counter-clockwise. Pull shifter stick firmly into 2nd gear position and adjust rear stop bolt by turning in until it makes contact with shifter stick. Hold bolt in position using a 7/32" hex key wrench and tighten jam nut using a 9/16" open end or box wrench. Push shifter stick



firmly into 3rd gear position and repeat adjustment on front stop bolt.

Note: A small amount of thread locker is recommended on stop bolt and jam nut threads to prevent loosening.

IMPORTANT! Test shifter operation. Move shifter through entire gearshift pattern making sure that it engages each gear fully and that stick moves freely from side to side in "neutral" position.

OPTIONAL ISOLATOR INSTALLATION

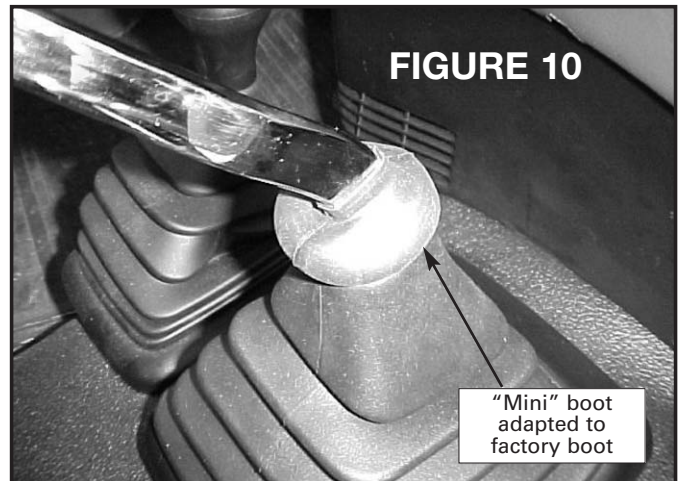
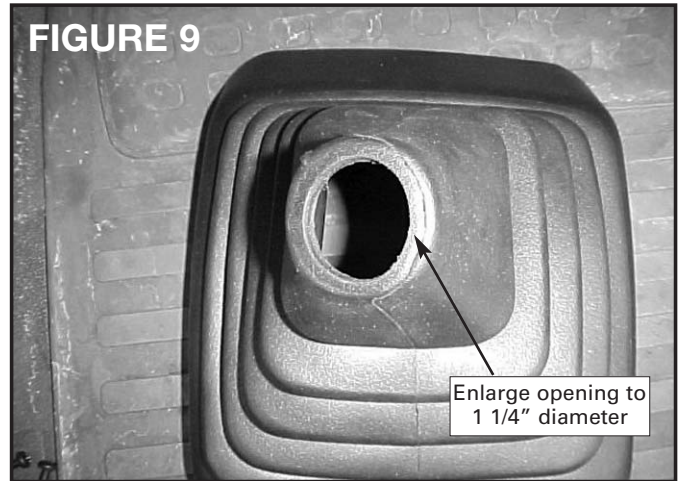
Note: This isolator is optional for installations where transmission noise is transmitted through the shifter stick and may be annoying. Place one (1) neoprene isolator (supplied) between shifter stick bottom and chrome plated stick. Place other neoprene isolator against outer side of chrome plated stick. Place steel isolator plate (supplied) against neoprene (Refer to Fig.11). **IMPORTANT!** Re-install chrome plated stick to the same side of stick bottom that it was previously removed from. Fasten chrome plated stick, to stick bottom in shifter base assembly using bolts and washers previously removed, and tighten bolts to 30-35 lbs. ft. torque. Washers used on bolt heads should be against steel isolator plate. **Note:** When installing isolator, we recommend applying thread locker to the bolt threads to prevent bolts from loosening up.

8. **Factory Inner Boot Modification**-Using a sharp utility knife or scissors, carefully cut a 2-1/2" diameter hole in the factory inner boot which will allow a tight fit around the Hurst shifter body for proper sealing (see fig.8). **Caution!** Use extreme care when working with sharp objects to avoid bodily injury.

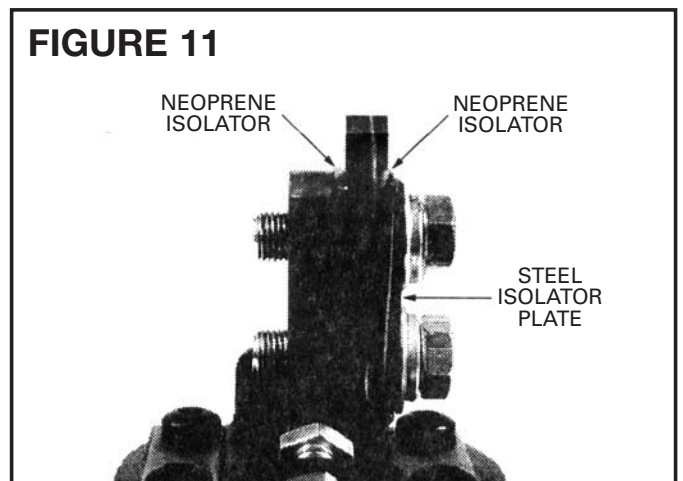
9. Replace factory inner boot and plate assembly over shifter and secure to floor tunnel with screws previously removed.

FACTORY OUTER BOOT MODIFICATION

10. You will need to slightly modify the factory outer boot to accept the supplied rubber "mini" boot by using a sharp utility knife and carefully enlarging the opening on top of the boot to 1-1/4" diameter. A small file can be used to smooth the cut area to provide a cleaner hole (see fig.9). **Caution!** Use extreme care when working with sharp objects to avoid bodily injury.



11. Slide the small "mini" boot onto the Hurst shifter stick. Slide the factory outer boot over the Hurst shifter stick and work the "mini" boot into the opening of the factory boot (see fig.10). Secure to floor tunnel with 4-screws previously removed.



OPTIONAL HURST SUPERBOOT INSTALLATION

A new Hurst Super Boot is included with your shifter to be used if desired in place of the factory floor shift boot.

Insert the polished metal decorative center plate into the Hurst Superboot. Slide the boot down over the shifter stick to the floor. Place the polished metal trim ring over the boot and align trim plate mounting holes with boot holes. Using the boot and trim plate as a template, drill 1/8" diameter holes into the floor and use the sheet metal screws supplied to attach boot to the floor tunnel. **Note: Remove protective paper on polished side of trim ring before installing.**

12. 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.

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 Performance
10601 Memphis Ave. #12
Cleveland, Ohio 44144
Phone (216) 688-8300 Ext. 5
Monday-Friday 8:30 A.M. to 5:00 P.M. E.S.T
www.hurst-shifters.com

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FOR FUTURE REFERENCE.**