



## INSTALLATION INSTRUCTIONS

Part No. 3915086

# BILLET/PLUS® SHIFTER

for 2005-2019 Chevrolet Corvette (C6 & C7)  
with manual transmission



- If you do not understand any part of these instructions, please call **Hurst Technical Support** at (866) 464-6553 for assistance.

### REQUIRED ITEMS

- White lithium grease
- Medium strength thread locking compound (e.g., Permatex Blue or similar)
- Plastic trim tools (for removing interior panels)

## 2005-2013 (C6) MODELS

### REMOVE THE STOCK SHIFTER

1. Separate the leather boot from the shift knob as follows:

### PARTS LIST

DESCRIPTION	QTY
SHIFTER ASSEMBLY	1
SCREW, SOCKET HEAD 1/4-20 × 3/4"	4
GASKET, SHIFTER	1
SPRING, OUTER 0.42" WOUND DIA × 0.035" WIRE DIA	2
SPRING, INNER 0.30" WOUND DIA × 0.045" WIRE DIA	2
COMPOUND, THREAD LOCKING, HIGH-STRENGTH (RED)	1

### BEFORE STARTING

Take a moment to read and understand the instructions for your vehicle. **C6 instructions start on this page; and C7 starts on p. 8.**

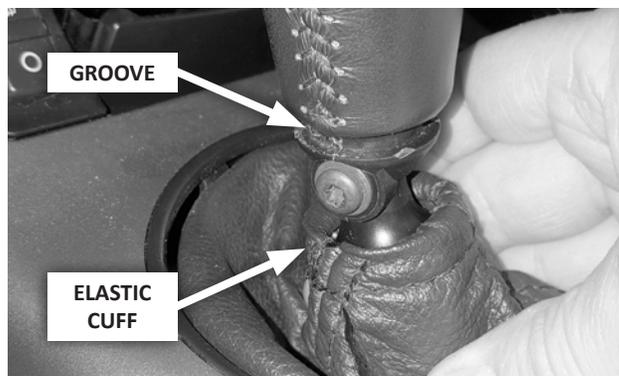
Use the parts list to verify your kit's contents. In the unlikely event that any parts are missing, please contact Hurst Technical Support for replacements.

We recommend that you retain all factory parts.

**WORK SAFELY!** Park the vehicle on a clean, level surface. Turn the ignition switch **OFF**. Chock the wheels, and set the parking brake before starting.

### NOTES

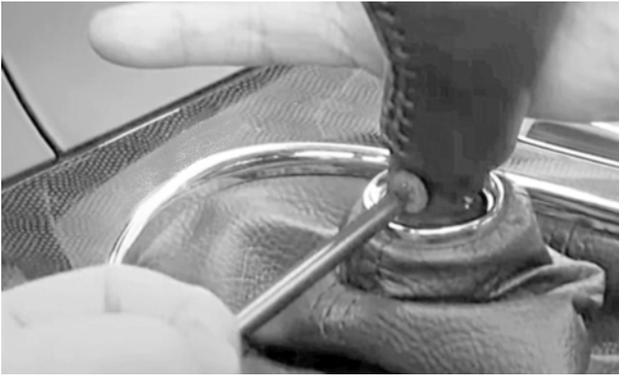
- Installation requires moderate mechanical skill. If this job is beyond your abilities, seek the services of a qualified technician.
- The shifter mechanism is precision-assembled at our factory. **Any modification or disassembly of the shifter will void its warranty, and may cause it to malfunction.** Disassemble items **only** where specified in the instructions.



- A. **EARLY C6 (2005-2007):** Work the boot's elastic cuff out of its groove, and push it down to expose the screw.

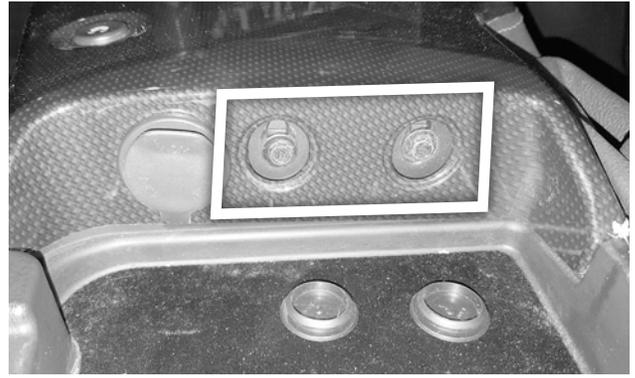


- B. **LATE C6 (2008-2013):** Firmly grasp the chrome ring below the knob, and turn it 1/4-turn counter-clockwise while pushing it down to expose the screw.

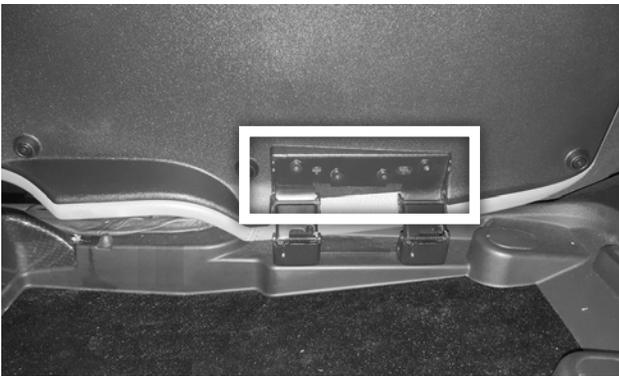


2. Remove the shift knob screw, then lift the knob off of the shift lever.

**CAUTION: Avoid damaging the screw.** Push firmly against the right side of the knob, and keep the screwdriver firmly inserted during removal.



5. At the front of the storage compartment, remove the 2 trim covers (if applicable) and 2 screws next to the 12v receptacle.



3. Open the center console lid, remove the 4 hinge screws, remove the lid, and close the hinge.

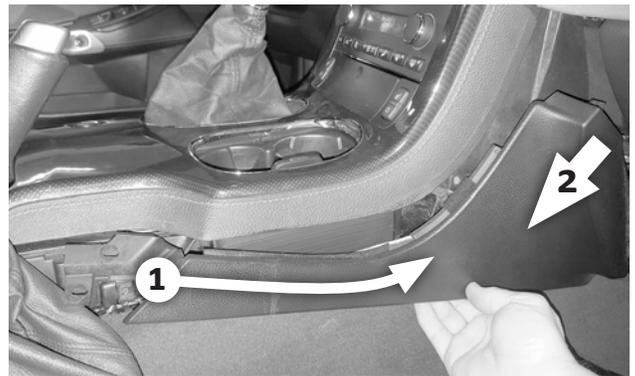
**CAUTION: Avoid damaging the screw holes.** Support the door while removing the last 2 screws.



6. On the left side of the parking brake, feel down through the boot, and separate the 2 friction clips from the console base. Then on the right side of the boot, release the 2 plastic tabs. Move the boot aside, and remove the 2 trim panel screws.



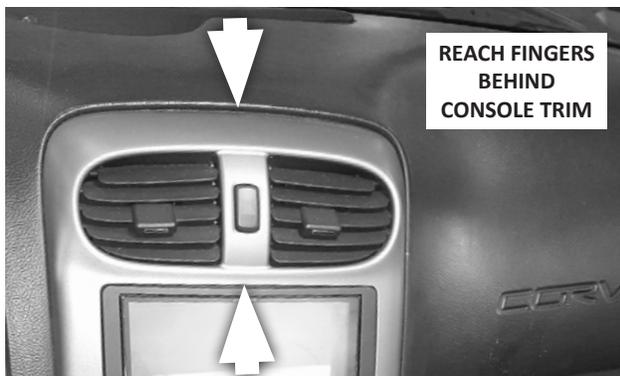
4. **EARLY C6 (2005-2007) ONLY:** At the front edge of the storage compartment, lift up on the rear edge of the half-round panel to detach it from the front console. Disconnect any electrical plugs, and set the panel aside.



7. Starting at the rear of the right side trim panel and moving forward, gently work it out from between the carpet and the console. After freeing about half of the panel (to just past the curve), pull it down at a rearward angle to release 2 friction clips at the front, then set the panel aside.



8. Put the shifter in 4th gear and lift the boot opening off the end of the shift lever (to prevent it from catching). Starting at the rear of the front console and working forward, detach it from the console base and dash. Lift up on the rear edges first, then gently pull back on the front edges, just until all the friction clips have been released.



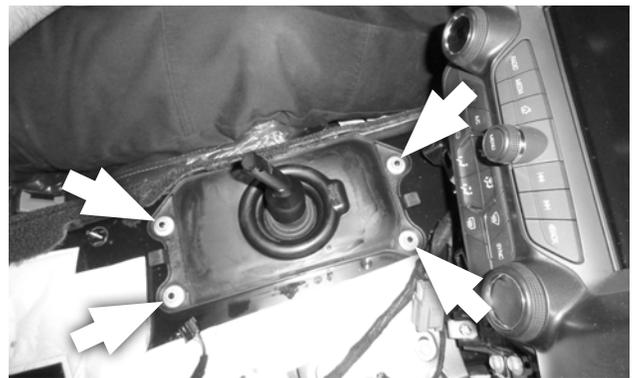
9. At the hazard light button, reach your fingers behind the front console from the top and bottom. Support the top of the hazard light plug with one hand, release the locking tab on the bottom of the plug with the other, and disconnect the plug from the switch.
10. Disconnect the heated seat plugs (if applicable). The locking tabs are on the bottom of each plug.
11. Disconnect the cigarette lighter plug (at the front of the console, behind the ash tray).

**NOTE:** The plug at the rear 12v receptacle (at the front of the console storage compartment) may remain connected.

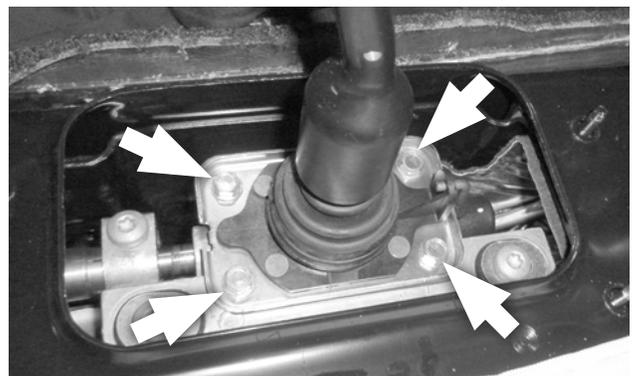
12. Carefully move the front console cover around the parking brake handle and set it on the passenger seat.



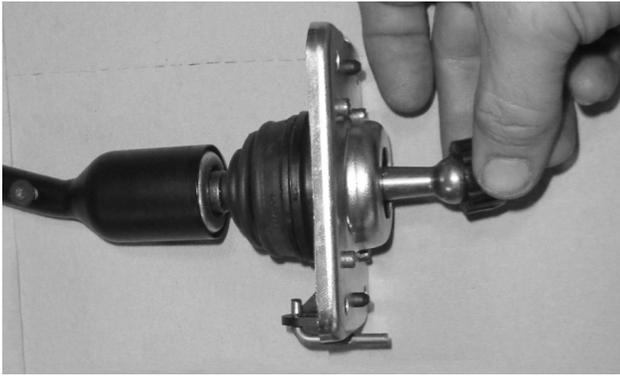
13. Release the sound insulation from its 2 tabs, lift it over the shift lever, and set it aside. (Late C6 molded rubber version shown; early C6 version is flat foam rubber.)



14. Remove the 4 nuts and the rubber dust boot and set them aside.



15. Put the shifter in Neutral. Then remove the 4 mount bolts and the shifter assembly, and remove any gasket material from the mount pad.



16. Remove the plastic pivot cup from the shift lever.

**CAUTION:** The pivot cup will be re-used. It should snap off by hand, but if you use pliers, take care not to damage it.

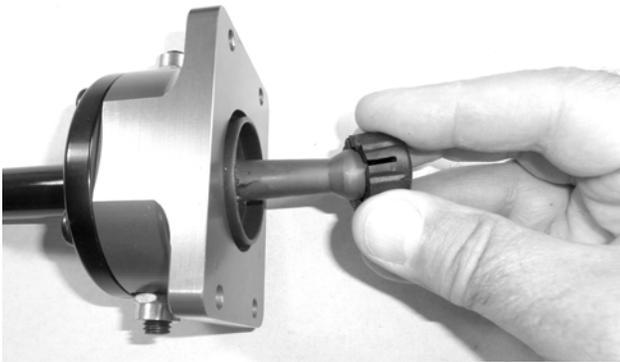


19. Orient the shifter with the lever's bend to the rear, and place it on the shift box, inserting the pivot cup into the shift linkage. Apply medium-strength thread locker to the 4 screws, and use them to secure the shifter to the shift box.

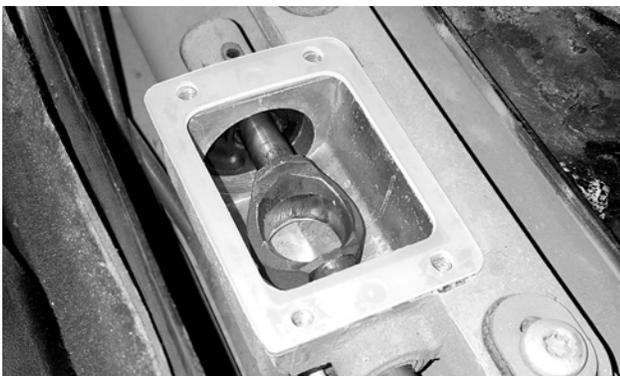
**NOTE:** The shifter base must sit flush on the shift box before tightening the screws.

### INSTALL THE HURST BILLET/PLUS SHIFTER

**CAUTION:** To avoid cracking the plastics during reassembly of the vehicle interior, do not over-tighten the screws.



17. Grease the pivot ball at the bottom of the Hurst shifter's lever. Then snap the stock pivot cup onto the pivot ball.

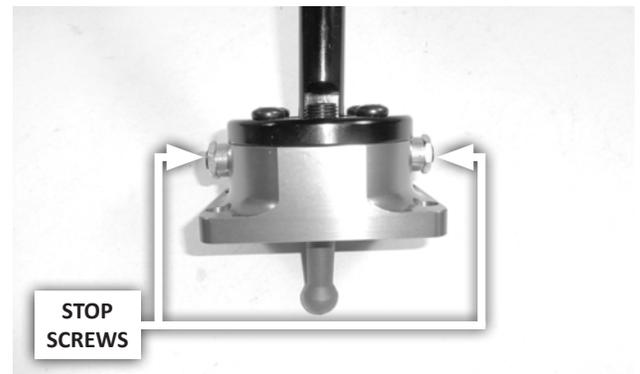


18. Install the new gasket on the mount pad.

### OPTIONAL: REMOVE OR ADJUST STOP SCREWS

The vehicle's transmission includes internal gear stops. The shifter's adjustable stop screws are optional, and should be removed if not used (to avoid possible future interference).

The shifter's stop screws are intended for use when gears are shifted aggressively (when racing, for example). If the shifter stop screws are used, it is important to adjust them correctly.



### 20. STOP SCREW ADJUSTMENT:

- A. Remove stop screws, and apply high strength thread locker (red) along their entire thread length.
- B. Insert the screws until they are flush with the inside of the shifter base.
- C. REAR SCREW: Put the shifter into 2nd gear, and hold the lever there securely. Turn the rear stop screw in until it contacts the shift lever, then back it out 1/4 turn and release the shift lever. Hold the screw stationary with a 3/16" hex wrench, and tighten the jam nut with a 9/16" wrench.
- D. FRONT SCREW: Put the shifter into 3rd gear, hold the lever there securely, and repeat Step C above for the front stop screw.

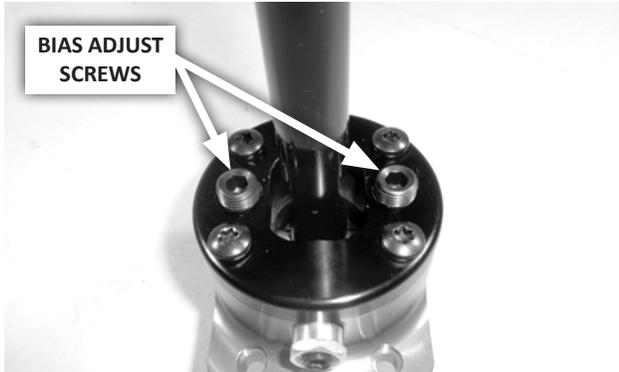
## OPTIONAL: ADJUST BIAS SPRING TENSION

The shifter's "side-to-side" tension can be tailored to driver preference (if desired) by adjusting or changing the bias springs.

With a 1/4" hex wrench, turn the adjustment screws on top of the shifter clockwise to increase tension, or counter-clockwise to decrease it.

**NOTE:** Do not turn the screws more than 1-1/2 turns in either direction from the factory setting.

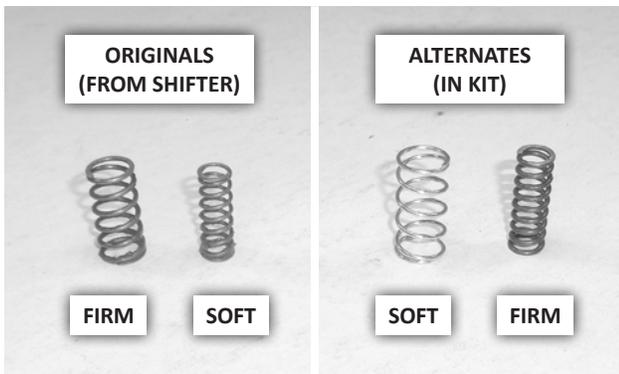
If the desired tension cannot be achieved by adjusting the screws, replace the installed bias springs with the alternate springs supplied with this kit.



### 21. BIAS SPRING REPLACEMENT:

**NOTE:** Work carefully to prevent dropping small parts into the transmission tunnel.

The shifter comes assembled with 2 springs under each screw: a softer inner spring, and a firmer outer spring. The kit also includes firm inner springs, and soft outer springs. These springs allow 4 combinations to suit your preferred "feel."



### To change the springs:

- Remove the adjustment screws and clean their threads.
- Apply a few drops of high strength thread locker (red) to the screws and reinstall. Turn each screw in 3-1/2 turns as a starting point, and adjust to the desired tension. Adjust no more than 1-1/2 turns in either direction.

## CONTINUE SHIFTER INSTALLATION



- Use a sharp, new blade to cut the hard plastic edge off the bottom of the rubber dust boot, to allow the boot to fit around the shifter base.



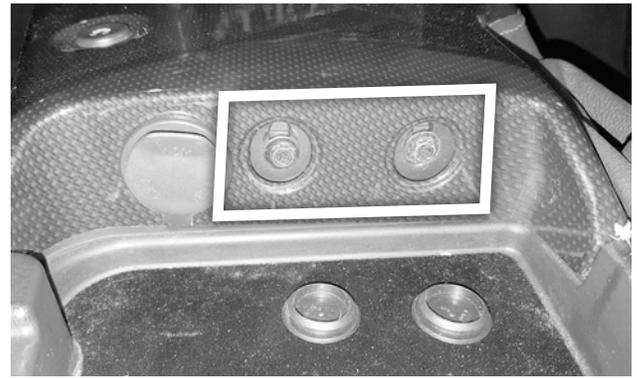
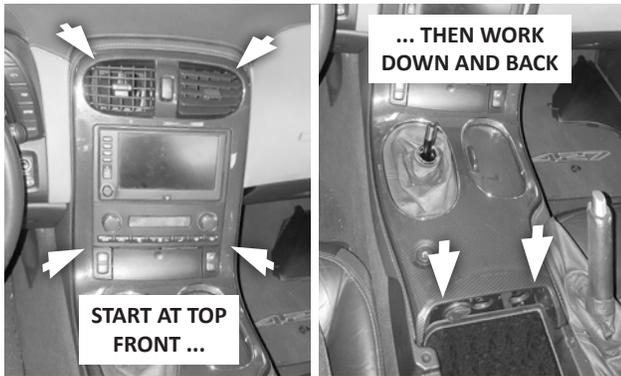
- Reinstall the rubber dust boot using the 4 stock nuts.



- Reinstall the sound insulator, pushing its slots down over the tabs on the dust boot.

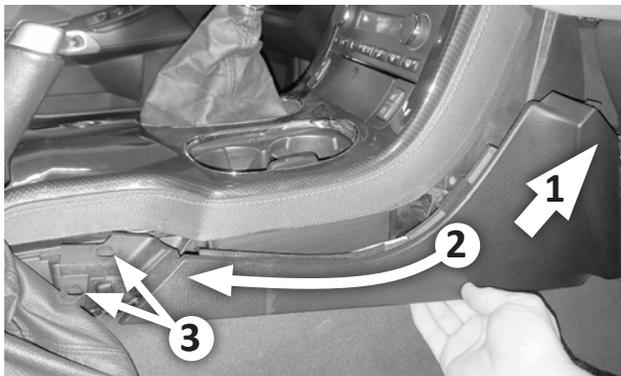
- Move the front console close to the dash and console base.

26. Reconnect the cigarette lighter plug, the heated seat plugs (if applicable), and the hazard light button, and check the security of the connections.



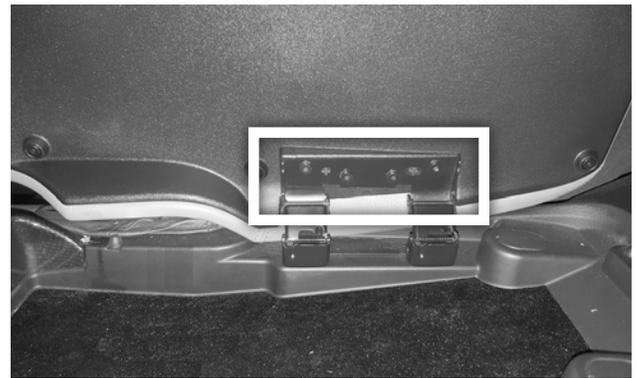
30. Reinstall the 2 screws at the front edge of the storage compartment (next to the 12v receptacle), and the 2 trim covers (if applicable).

27. Starting at the front of the front console and working down and rearward, reattach it to the dash and console base.



31. EARLY C6 (2005-2007) ONLY: Reconnect any electrical plugs to the half-round panel, then reattach the panel to the front console.

28. Reinstall the right side trim panel. First reattach the 2 front friction clips, then gently work it back in between the carpet and the console base. Finally, reinstall the 2 screws at the rear of the trim panel.



32. Reinstall the center console lid. Support the door with one hand while installing the 4 hinge screws.

**CAUTION: Avoid damaging the screw holes.** Do not over-tighten the screws.

29. Reinstall the parking brake boot. First install the 2 plastic tabs on the right side of the boot, then reattach the 2 friction clips on the left side to the console base.

Verify that the door latches shut when closed. (Loosen the screws and adjust cover alignment, if necessary.)

**33. Re-install the shift knob as follows:**

**A. EARLY C6 (2005-2007)**

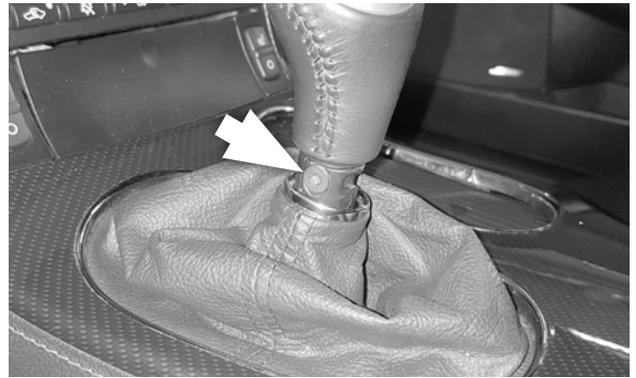


**Place the knob on the shift lever.** Apply medium-strength thread locker to the **6mm screw**, and secure the knob to the lever at the larger (bottom) screw hole.



**Then work the boot's elastic cuff** back into the groove on the knob.

**B. LATE C6 (2008-2013)**



**Place the knob on the shift lever**, making sure that its locking grooves align with pins inside the chrome ring on the leather boot. Apply medium-strength thread locker to the 6mm screw, and secure the knob to the lever at the larger (bottom) screw hole.

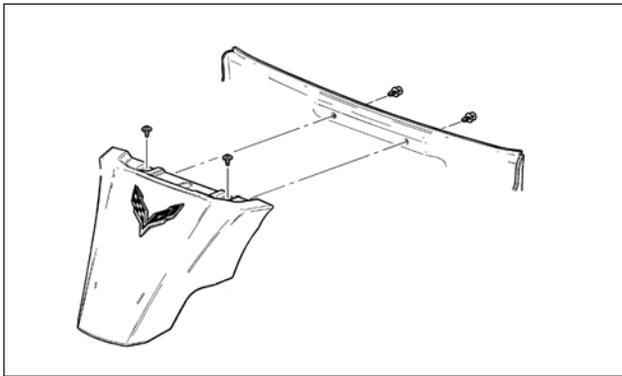


**Then firmly grasp the chrome ring** and turn it 1/4-turn clockwise to lock it into place on the knob.

**Congratulations, your Hurst Billet/Plus® Shifter is now installed and ready to enjoy!**

## 2014-2019 (C7) MODELS

### REMOVE THE STOCK SHIFTER



34. **CONVERTIBLES ONLY:** Remove the “waterfall” (the plastic panel between the seat backs). For access, put the top down, but leave the deck lid up. Remove the 2 screws on top of the waterfall, and the 2 plastic push rivets at the top edge of the fiber panel behind the waterfall. Then remove the waterfall.



35. **Open the center console lid**, remove the 3 hinge screws, remove the lid, and close the hinge.



36. **At the rear of the storage compartment**, remove the plastic trim cover, then remove the 2 nuts underneath.



37. **Starting at the rear of the left side trim panel and moving forward**, detach 5 friction clips to remove the panel from the console.

**CAUTION:** After detaching the 5th (front) clip, move the panel rearward slightly to avoid damaging the plastic hook at the front.



38. **Separate the leather boot from the shift knob** by firmly grasping the chrome collar, turning it 1/4 turn counter-clockwise, and pushing it down to expose the screw.

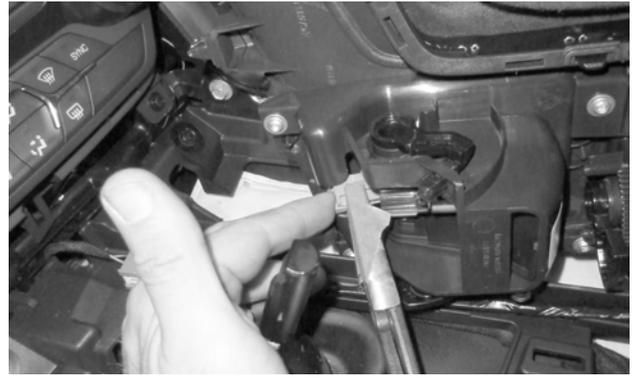


39. **Remove the shift knob screw**, then lift the knob off of the shift lever.

**CAUTION: Avoid damaging the screw.** Push firmly against the right side of the knob, and keep your screwdriver firmly inserted during removal.



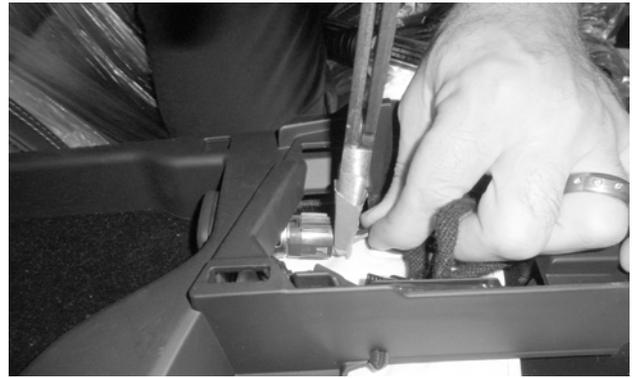
**40. Put the shifter in 4th gear, then use a plastic trim tool to separate the back and sides of the console panel from the console base.**



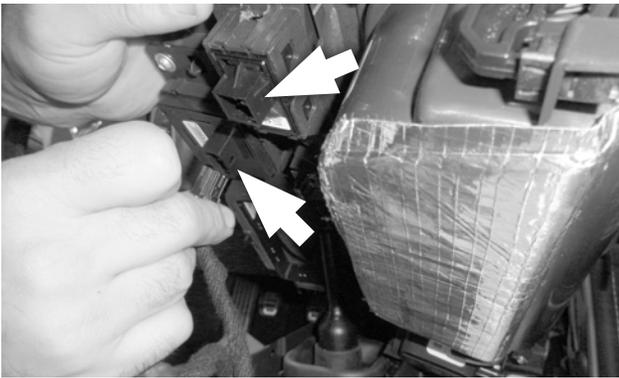
**43. Disconnect the 12v receptacle plug by gently squeezing its sides with pliers while pulling the plug out of its receptacle. Then set the console panel aside.**



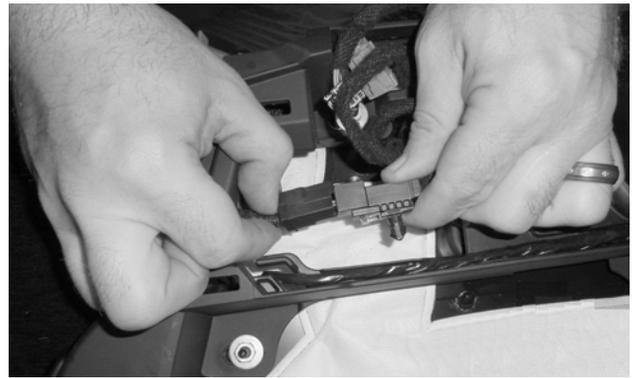
**41. Lift up on the back and sides of the console panel, then gently pull rearward to free its front end from the console base.**



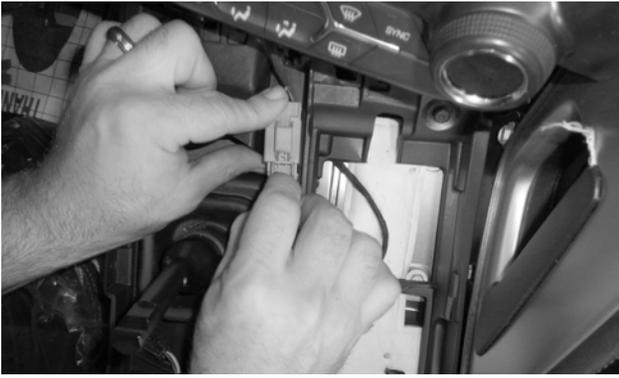
**44. At the rear of the console base, disconnect the 12v receptacle plug by gently squeezing its sides with pliers while pulling the plug out of its receptacle.**



**42. Carefully tilt the console panel forward to view the 2 rear electrical plugs. Disconnect the Mode Select and parking brake plugs by squeezing their locking tabs.**



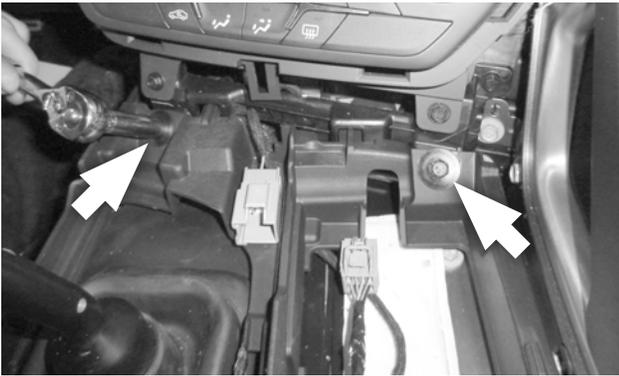
**45. Release the USB receptacle from the console base, then disconnect the plug from the receptacle by squeezing its locking tabs.**



46. At the front of the console base, disconnect the plug from the receptacle by squeezing its locking tab, then release the receptacle from the console base.



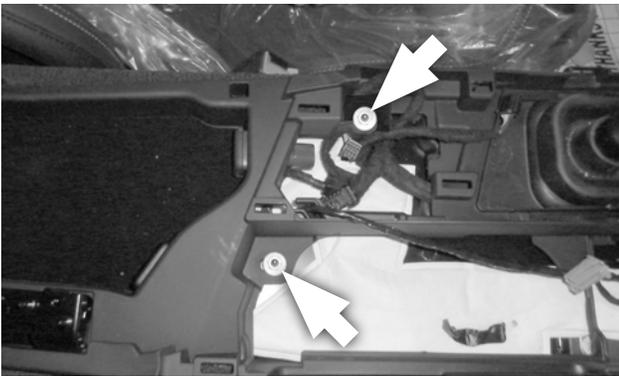
49. Carefully remove the console base and set it aside.



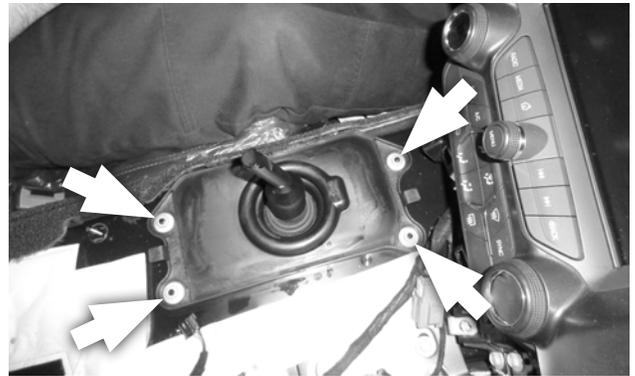
47. Remove the 2 screws at the front of the console base.



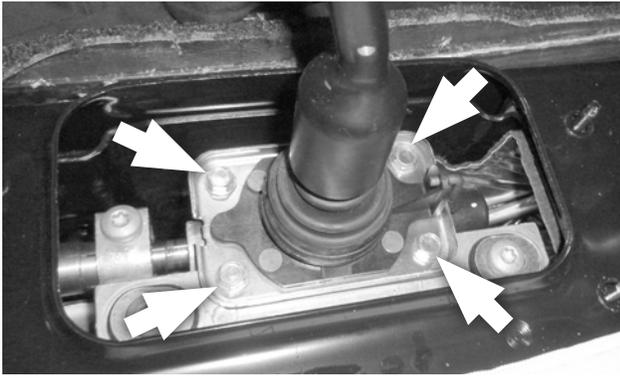
50. Release the sound insulation from its 2 tabs, lift it over the shift lever, and set it aside.



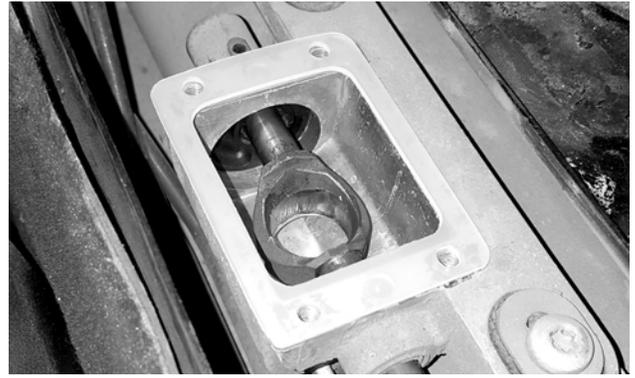
48. Remove the 2 nuts at the middle of the console base.



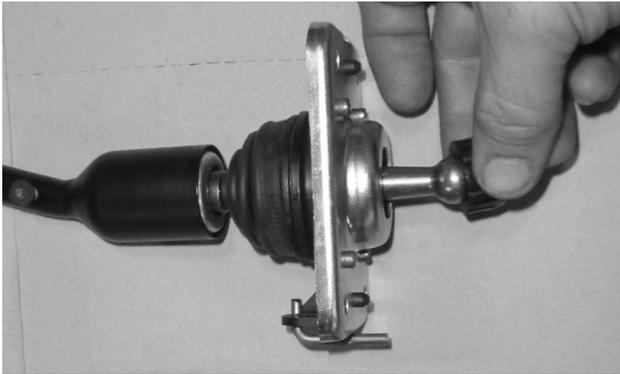
51. Remove the 4 nuts and the rubber dust boot and set them aside.



52. Put the shifter in Neutral. Then remove the 4 mount bolts and the shifter assembly, and remove any gasket material from the mount pad.



55. Install the new gasket on the mount pad.



53. Remove the plastic pivot cup from the shift lever.

**CAUTION:** The pivot cup will be re-used. It should snap off by hand, but if you use pliers, take care not to damage it.

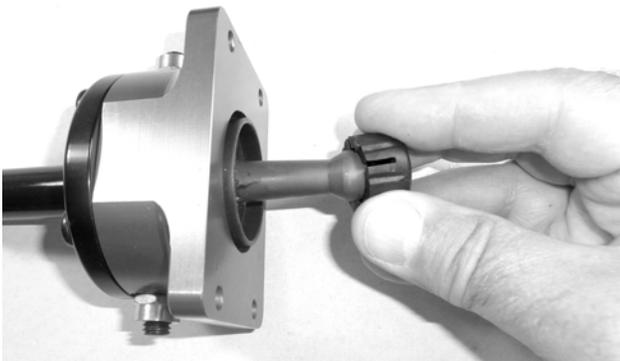


56. Orient the shifter with the lever's bend to the rear, and place it on the shift box, inserting the pivot cup into the shift linkage. Apply medium-strength thread locker to the 4 screws, and use them to secure the shifter to the shift box.

**NOTE:** The shifter base must sit flush on the shift box before tightening the screws.

### INSTALL THE HURST BILLET/PLUS SHIFTER

**CAUTION:** To avoid cracking the plastics during reassembly of the vehicle interior, do not over-tighten the screws.

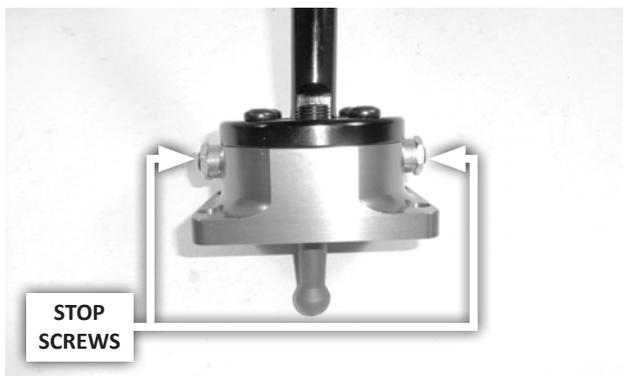


54. Grease the pivot ball at the bottom of the Hurst shifter's lever. Then snap the stock pivot cup onto the pivot ball.

### OPTIONAL: REMOVE OR ADJUST STOP SCREWS

The vehicle's transmission includes internal gear stops. The shifter's adjustable stop screws are optional, and should be removed if not used (to avoid possible future interference).

The shifter's stop screws are intended for use when gears are shifted aggressively (when racing, for example). If the shifter stop screws are used, it is important to adjust them correctly.



#### 57. STOP SCREW ADJUSTMENT:

- Remove stop screws, and apply high strength thread locker (red) along their entire thread length.
- Insert the screws until they are flush with the inside of the shifter base.
- REAR SCREW: Put the shifter into 2nd gear, and hold the lever there securely. Turn the rear stop screw in until it contacts the shift lever, then back it out 1/4 turn and release the shift lever. Hold the screw stationary with a 3/16" hex wrench, and tighten the jam nut with a 9/16" wrench.
- FRONT SCREW: Put the shifter into 3rd gear, hold the lever there securely, and repeat Step C above for the front stop screw.

### OPTIONAL: ADJUST BIAS SPRING TENSION

The shifter's "side-to-side" tension can be tailored to driver preference (if desired) by adjusting or changing the bias springs.

With a 1/4" hex wrench, turn the adjustment screws on top of the shifter clockwise to increase tension, or counter-clockwise to decrease it.

**NOTE:** Do not turn the screws more than 1-1/2 turns in either direction from the factory setting.

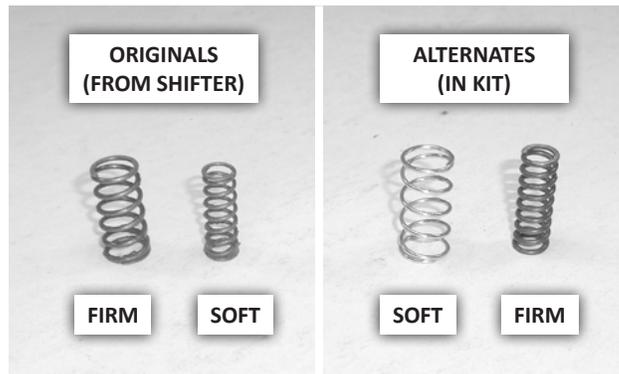
If the desired tension cannot be achieved by adjusting the screws, replace the installed bias springs with the alternate springs supplied with this kit.



#### 58. BIAS SPRING REPLACEMENT:

**NOTE:** Work carefully to prevent dropping small parts into the transmission tunnel.

The shifter comes assembled with 2 springs under each screw: a softer inner spring, and a firmer outer spring. The kit also includes firm inner springs, and soft outer springs. These springs allow 4 combinations to suit your preferred "feel."



#### To change the springs:

- Remove the adjustment screws and clean their threads.
- Apply a few drops of high strength thread locker (red) to the screws and reinstall. Turn each screw in 3-1/2 turns as a starting point, and adjust to the desired tension. Adjust no more than 1-1/2 turns in either direction.

## CONTINUE SHIFTER INSTALLATION



59. Use a sharp, new blade to cut the hard plastic edge off the bottom of the rubber dust boot, to allow the boot to fit around the shifter base.



60. Reinstall the rubber dust boot using the 4 stock nuts.



61. Reinstall the sound insulator, pushing its slots down over the tabs on the dust boot.



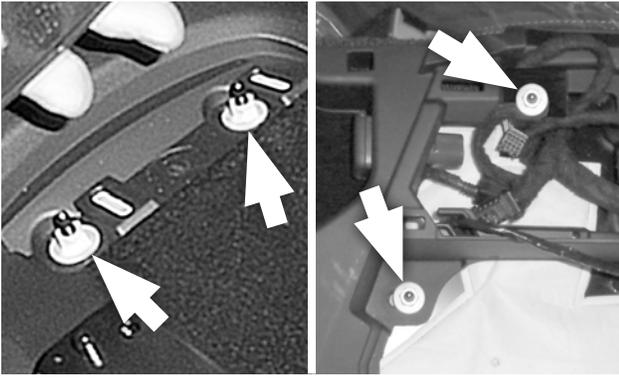
62. Carefully return the console base to the vehicle.



63. Reattach the front harness receptacle to the console base, reconnect the electrical plug, and check the security of the connection



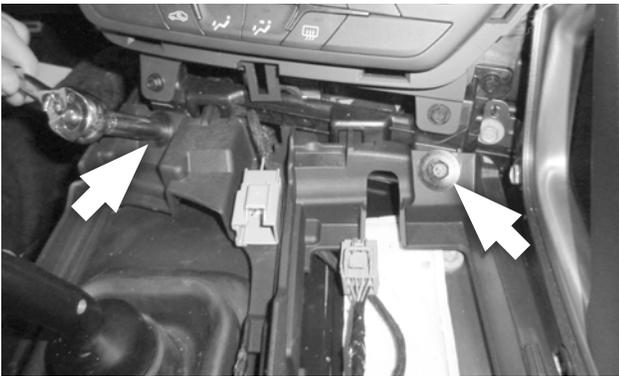
64. Reattach the rear harness receptacle to the console base, reconnect the electrical plug, and check the security of the connection.



65. Hand-start the 2 nuts at the rear and the 2 nuts at the middle of the console base.



68. Reconnect the 12v power plug, and check the security of the connection.



66. Hand-start the 2 screws at the front of the console base, then tighten the 2 screws and 4 nuts.



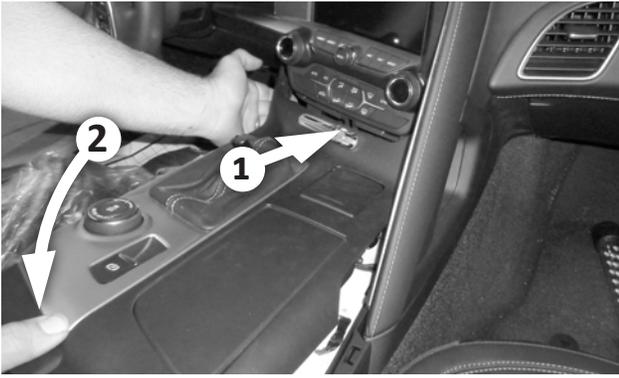
69. Bring the center console panel back into the vehicle and tilt it toward the passenger side. Reconnect the cigarette lighter plug, and check the security of the connection.



67. Reinstall the plastic trim cover over the rear nuts.



70. Reconnect the parking brake and Mode Select plugs, and check the security of the connections.



**71. Starting at the front and working back, reinstall the console panel, ensuring that it is securely snapped into place on all four sides.**

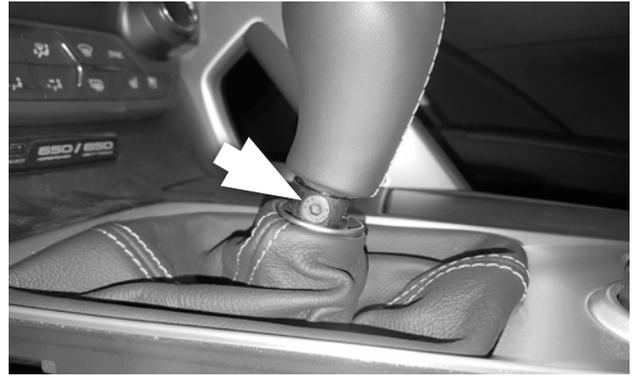


**72. Reinstall the left side trim panel.** First engage the plastic tab at the front. Then, starting at the front of the panel and moving rearward, reattach the 5 friction clips to the console.



**73. Reinstall the center console lid with its 3 screws**

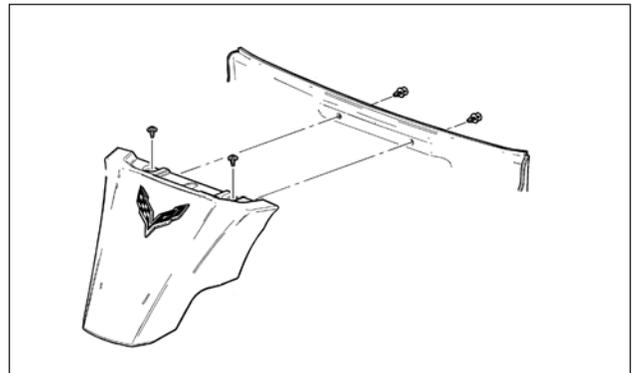
**CAUTION:** Avoid damaging the screw holes. Do not over-tighten the screws.



**74. Place the knob on the shift lever,** making sure that its locking grooves align with pins inside the chrome ring on the leather boot. Apply medium-strength thread locker to the 6mm screw, and secure the knob to the lever at the larger (bottom) screw hole.



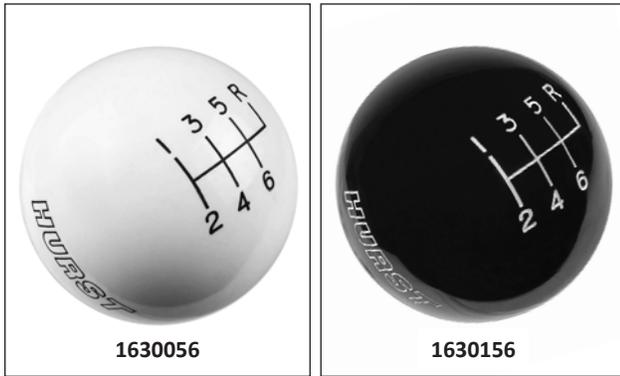
**75. Firmly grasp the chrome ring and turn it 1/4-turn clockwise** to lock it into place on the knob.



**76. CONVERTIBLES ONLY:** Reinstall the “waterfall” panel.

**Congratulations, your Hurst Billet/Plus® Shifter is now installed and ready to enjoy!**

## CLASSIC HURST DIRECT-FIT SHIFTER KNOBS



The classic look and feel of the Hurst shift knob is still at the top of its game, and nicely compliments the interior of any Corvette! These quality-crafted, 2-1/4" knobs are engraved with the Hurst logo and 6-speed shift pattern, and are available in black-on-white, or white-on-black. (Includes jam nut.)

### KEEP THESE INSTRUCTIONS FOR FUTURE REFERENCE

Hurst Performance maintains a highly-trained technical service department to answer your technical questions, provide additional product information and offer various recommendations.

**HURST TECHNICAL SUPPORT: (866) 464-6553**



**Hurst Performance Products**