



Installation Instructions

Part No. 3916047

Billet/Plus® Shifter

2016-24 Chevrolet Camaro with 6-Speed Manual Transmission

For specific vehicles, see "Applications" tab on this product's page at www.hurst-shifters.com

Rev 11/06/23

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 installation until you are confident that the vehicle is safely secured and will not move.

REQUIRED MATERIALS (NOT SUPPLIED): Medium strength thread locking fluid (Permatex Blue or similar)

PARTS



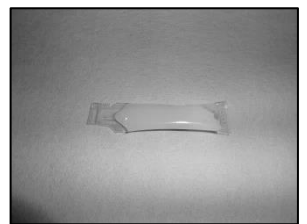
Shifter Assembly



Link Bar



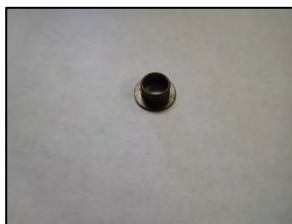
Upper Stick



Grease Pack



Link Pin (2)



10mm Bushing (4)



1/4" x 1/4" 10-32
Shoulder Bolt (2)



1/4" x 1/4" Isolation
Sleeve (2)



M6 x 10mm
Countersink Screw (2)



Hurst Decals

1. Remove the assembled shift knob, leather boot, and chrome bezel as follows:



- a. Use a trim tool to pry up the rear tip of the bezel.



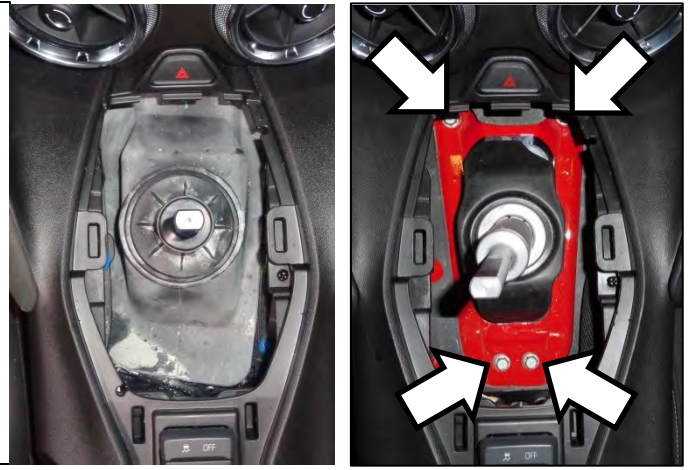
- b. Raise the bezel high enough to gain access to the T25 Torx screw that fastens the knob to the shift lever, then remove the screw.



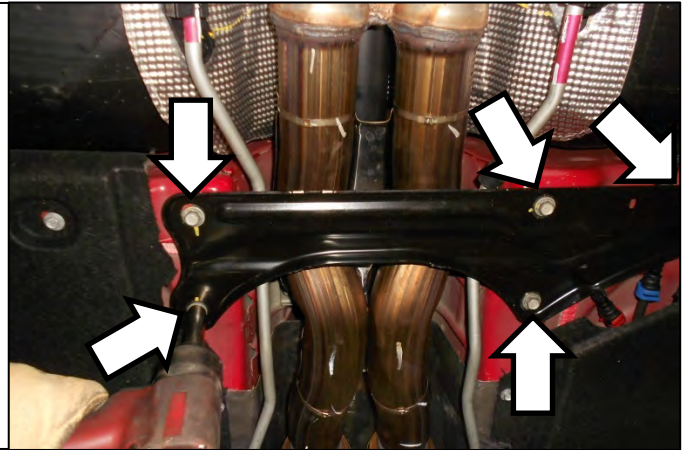
- c. Lift the assembled knob, boot and bezel up and off of the shift lever. Set them aside in a safe location until reinstallation.



2. Remove the upper rubber boot by lifting it over the shift lever. Then use a universal socket and extension to remove the four 10mm bolts that secure the lower rubber boot to the underside of the transmission tunnel.



3. Raise and support the vehicle using jack stands or a hoist. Remove the five 13mm bolts from the cross brace.



4. Support the exhaust.



5. Loosen the 15mm nut connecting the left side exhaust flange to the catalytic converter.



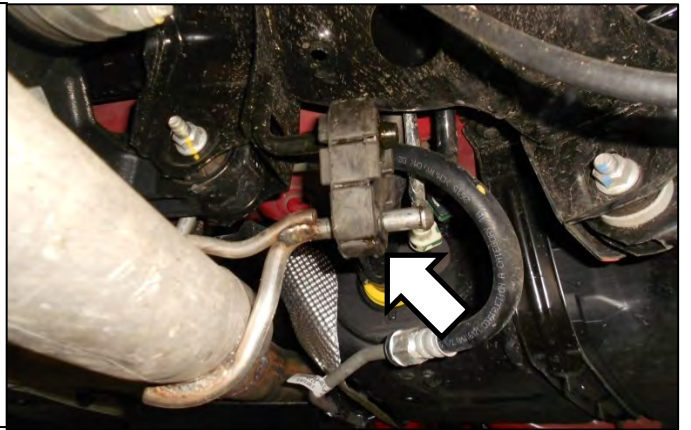
6. Remove the two 15mm nuts connecting the right side exhaust flange to the catalytic converter.



7. Unplug the O2 sensor installed in the right side exhaust. Make sure the connector is clear of any surrounding parts.



8. Remove the two forward rubber isolators from the exhaust system (left and right sides).



9. At the rear of the vehicle, there are two mounted hangers located on the left and right sides. Remove the two 15mm nuts that attach each hanger, then remove the hangers.

NOTE: A 15mm ratchet wrench works well in this area.



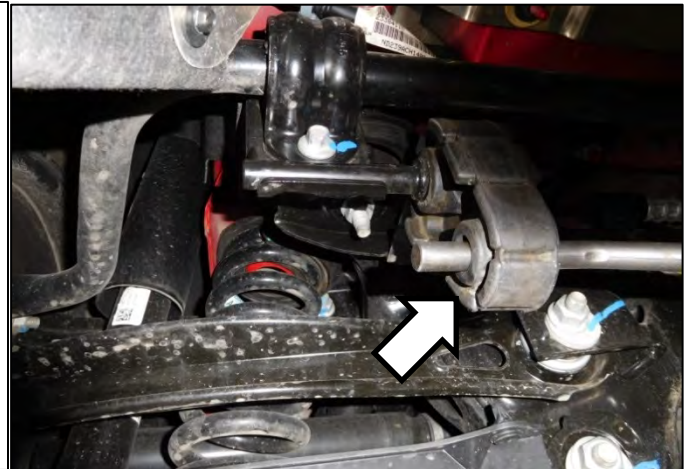
10. The left front exhaust flange is a ball socket. Pry between the transmission cross member and the exhaust to pop it out.

NOTE: A hammer handle works well for this.

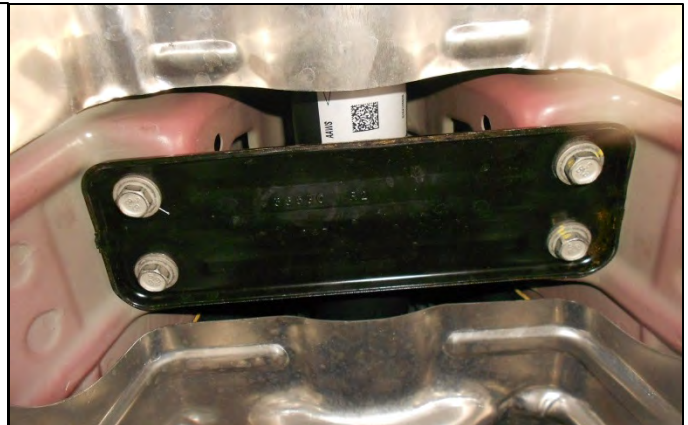


11. Remove the two mid hangers on the left and right side of the exhaust. The entire exhaust system can now be removed.

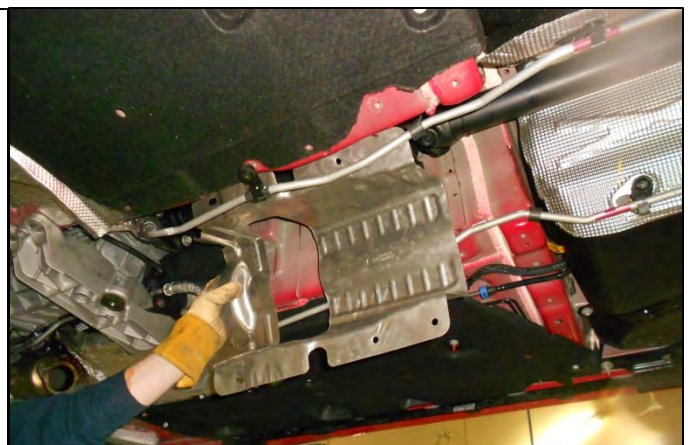
NOTE: On dual mode vehicles with manual transmission you will need to unplug the wire harness from the left and right side exhaust valve actuators located at the rear of the exhaust.



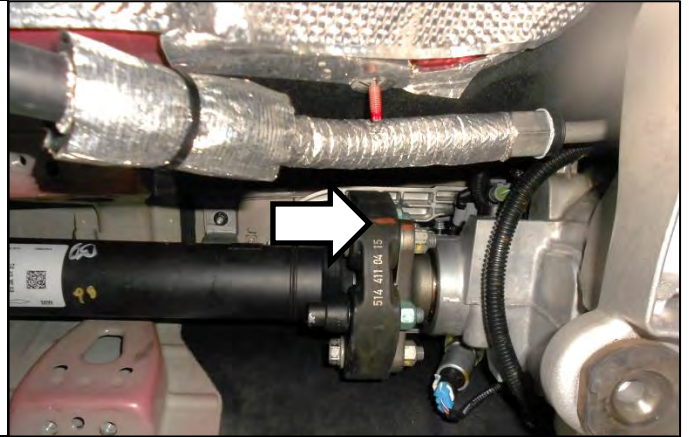
12. Remove the four 13mm bolts from the tunnel brace and remove the brace.



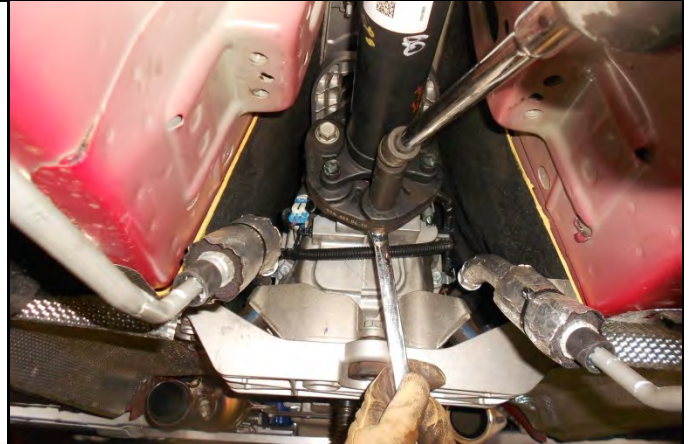
13. Remove the three 10mm bolts from each side of the heat shield (six bolts total), then remove the heat shield.



14. At the front end of the drive shaft, make alignment marks on the flex coupling and the transmission output flange.



15. Remove the three 18mm bolts and nuts from the flex coupling at the transmission.



16. At the rear end of the drive shaft, make alignment marks on the flex coupling and the differential input flange. Remove the three 18mm bolts and nuts from the flex coupling and differential flange.



17. Support the drive shaft, and remove the two 15mm bolts from the center carrier bearing. This will allow the drive shaft to be removed from the vehicle.



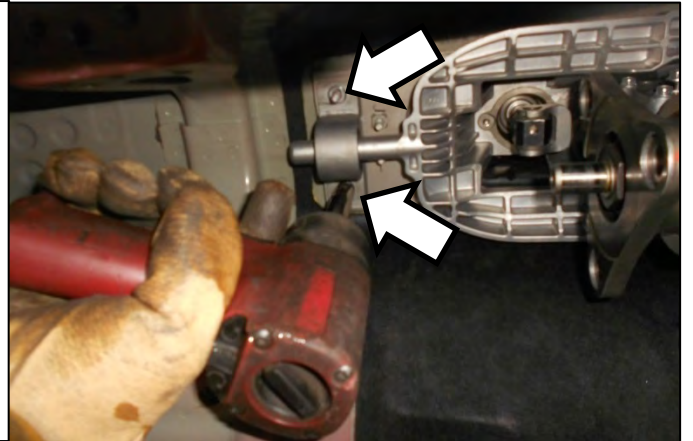
18. Compress the drive shaft to clear the transmission and differential flanges.



19. Support the transmission with a screw or hydraulic jack.



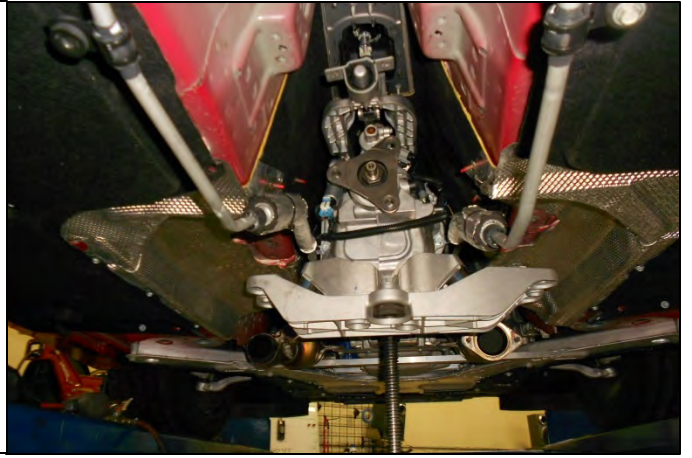
20. Remove the two 10mm nuts from the rear of the shifter housing.



21. Remove the four 15mm bolts from the transmission cross member.



22. Lower the rear of the transmission enough to gain access to the front of the shifter housing.



23. The shifter housing is connected to the transmission with two pins (left and right side). The pins have a spring lock at the end as shown.

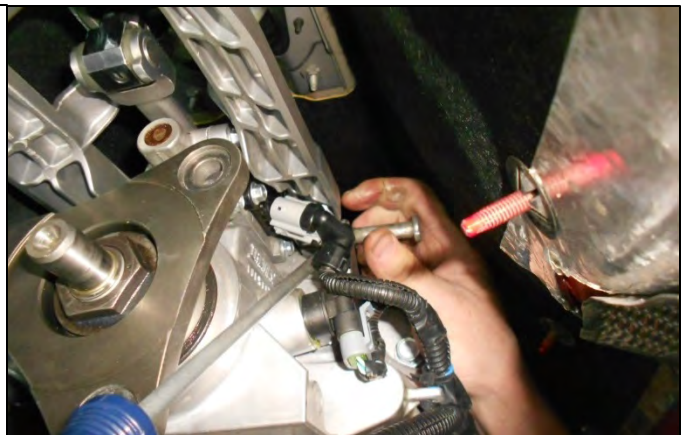


24. Remove the pins from the left and right side by pushing the spring lock down while using a screw driver to pull the pin out until it stops.

NOTE: The pin can be rotated to gain access to the spring lock.

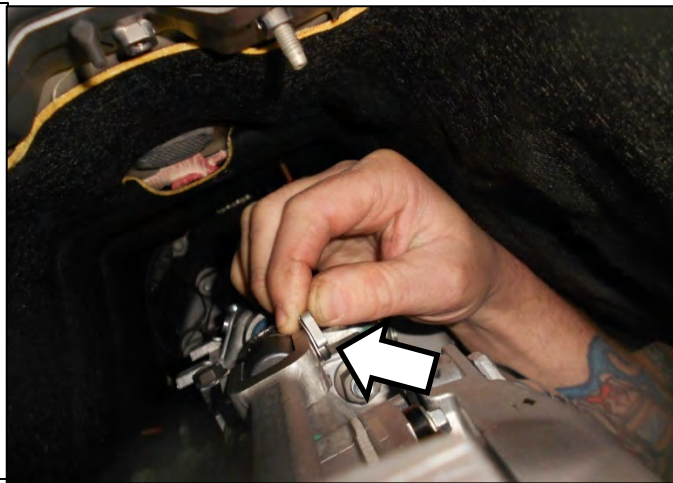


25. Reposition the screw driver between the rubber isolator on the shifter housing, push the spring lock in, and remove the pin.

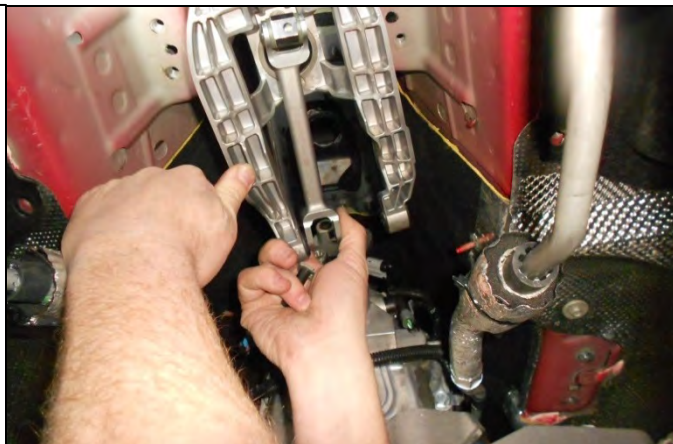


26. Remove one of the spring clips from the cross pin that attaches the shifter rod to the transmission. Then remove the pin, and remove the second clip from the pin.

NOTE: Retain the two spring clips for reuse.



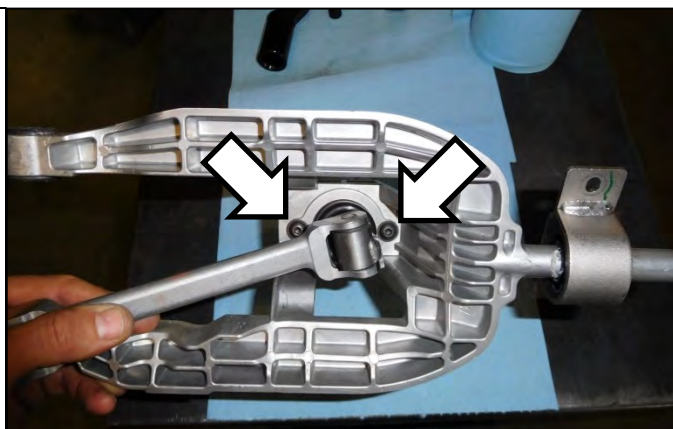
27. Remove the shifter assembly from the vehicle.



28. Remove the lower rubber boot.

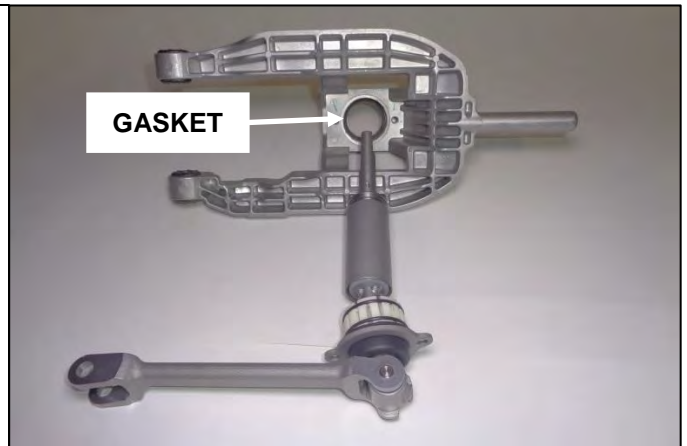


29. Remove the two 4mm Allen bolts that secure the shifter assembly to the shifter housing.



30. Remove the shifter assembly from the shifter housing.

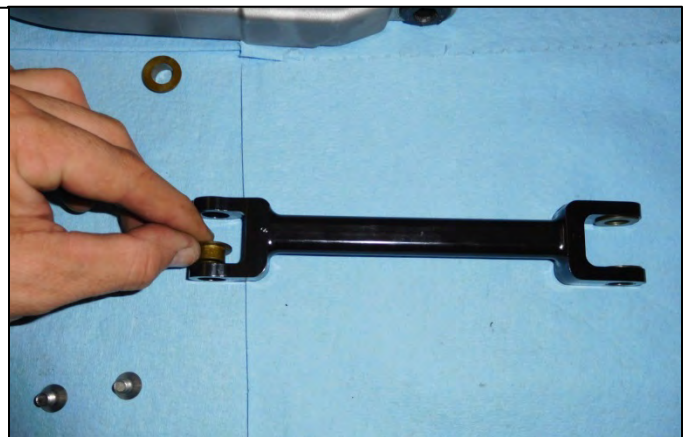
NOTE: Verify that the gasket that is situated between the shifter and housing remains in the housing for reassembly.



31. Before assembling the shifter, check the fit of the 2 included link pins in the transmission shift rod. Close fit between the link pin and shift rod is essential. Manufacturing variances in the link pins and shift rod sometimes cause a 0.0005" (half-thousandth of an inch) interference between the pin and shift rod hole. If only one of the pins fits, set it aside for use at this location later. If neither pin fits, polish one pin with a piece of emery cloth until it does fit.

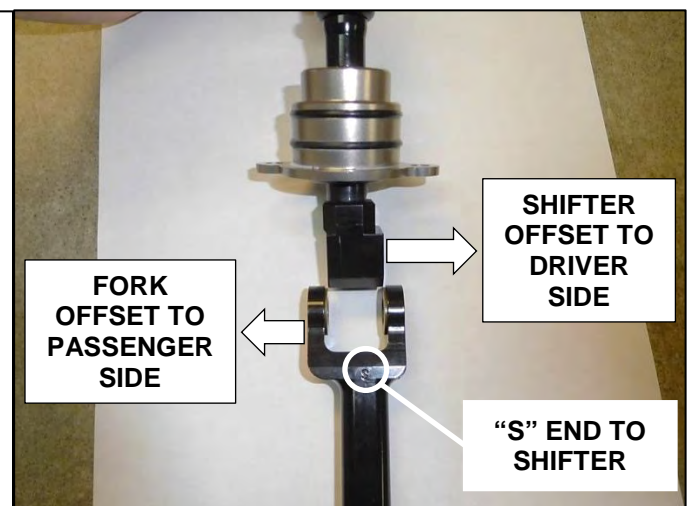


32. Install the four supplied 10mm bushings in the supplied link bar. Orient each bushing with its flange facing inward.



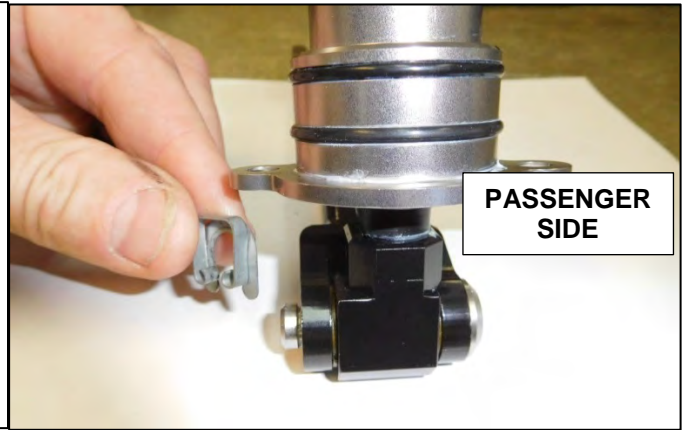
33. The top of the link bar is stamped with the letters S (Shifter end) and T (Transmission end).

Insert the lower end of the shift lever in the S-end of the link bar. The offset face of the shifter end points to the driver side, and the fork offset points to the passenger side.



34. Grease the bushings in the shifter-end of the link bar. Insert one of the supplied link pins from the passenger side of the link bar. Secure the pin with one of the spring clips that were removed at Step 26.

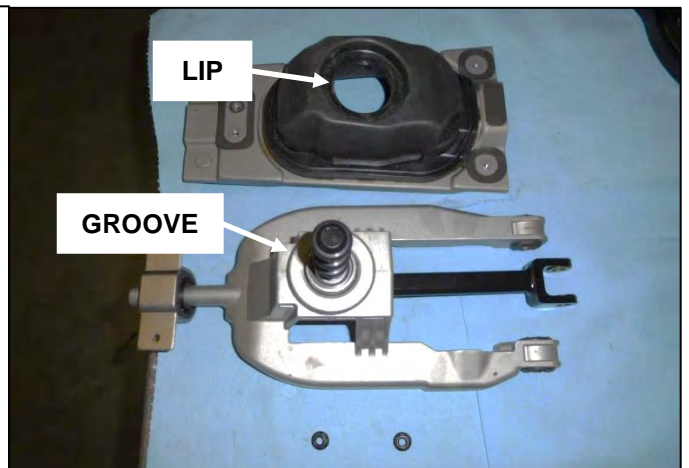
Grease the O-rings on the shifter's pivot housing.



35. Verify that the gasket referenced in Step 30 is installed in the shifter housing, and install the shifter assembly in the housing. Apply medium strength thread locking fluid to the two supplied countersink screws, and use them to secure the shifter assembly to the shifter housing. Tighten the screws using a 4mm Allen wrench.



36. Grease the bushings in the T-end of the link bar and reinstall the lower rubber boot. Verify that the lip around the boot's opening is completely inserted in the groove around the shifter housing boss.



37. Install the assembled shifter, housing and lower boot in the vehicle.



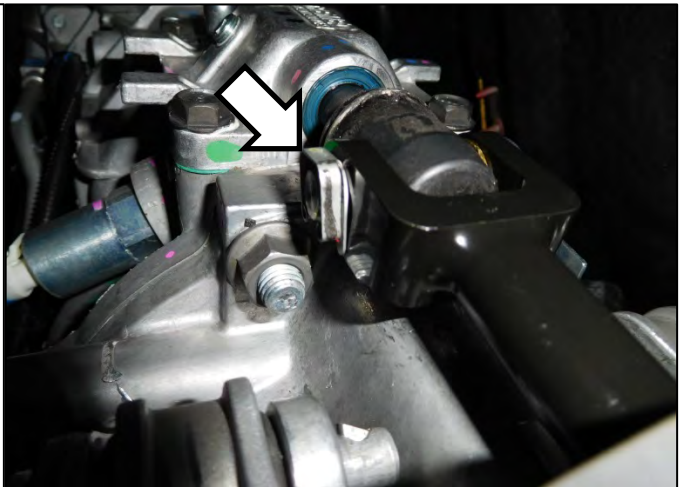
38. Secure the shifter housing to the transmission with the two spring pins.



39. Align the link bar with the shift rod on the transmission. Install the other supplied link pin from the passenger side of the link bar.



40. Secure the link pin with the second spring clip that was removed at Step 26.



41. Working in reverse order starting from Step 25 back through Step 5, reinstall the following:

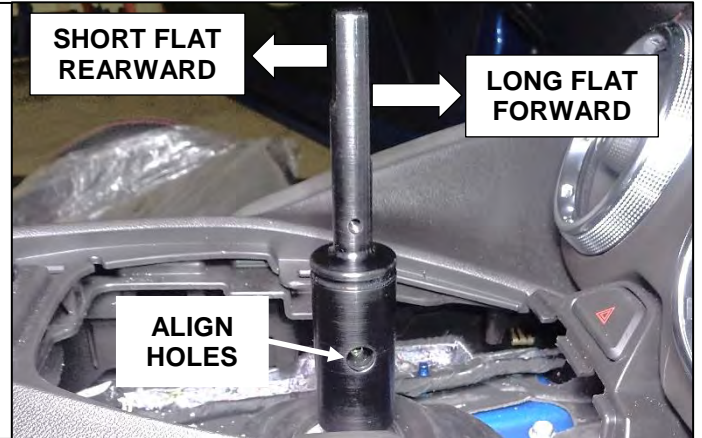
- Steps 22-19:** Transmission cross-member
- Steps 18-14:** Driveline **NOTE:** Verify alignment of the marks made before the shaft was removed.
- Step 13:** Heat shield
- Step 12:** Tunnel brace
- Steps 11-4:** Exhaust system
- Step 3:** Cross brace
- Step 2:** Fasten lower rubber boot to transmission tunnel

NOTE: Torque all fasteners to factory specifications.

42. Grease the three O-rings on the shift lever.



43. Orient the upper stick with the long flat toward the front and the short flat toward the rear, push it down over the shifter lever, and align the holes in the stick and the lever.



44. Apply medium strength thread locking fluid to the two $\frac{1}{4}$ " \times $\frac{1}{4}$ " 10-32 shoulder bolts, then slip the two isolation sleeves over the bolts' shanks. Start the bolts by hand, verifying that their threads are properly engaged (to avoid cross-threading). Then tighten them with a $\frac{1}{8}$ " Allen wrench.



45. Install the upper rubber boot over the upper stick. The top of the boot will sit flush with the shoulder on the stick.



46. Carefully lower the assembled shift knob, boot and chrome bezel over the upper stick.



47. Apply medium strength thread locking fluid to the stock T25 Torx screw, and use it to secure the shift knob to the upper stick.



48. Snap the chrome bezel back into the center console.

Congratulations, the installation of your Hurst Billet/PLUS shifter is complete!



IMPORTANT: RETAIN THESE INSTRUCTIONS FOR FUTURE REFERENCE

