



Revision
06/09/14

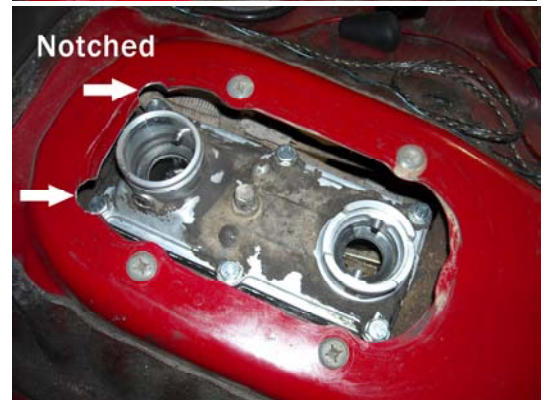
Short Shifter Kit 22R/RE 4X4 1989-1995 W56-C, D, &E With Forward Shift T-Case Part #1097005

LC Engineering short shifter kits for the 22R/RE 4wd trucks. This design uses a shifter extension instead of a completely new shifter handle. This allows you to keep the stock 2-piece style shifter handle to reduce noise and vibration through the handle. It also allows LCE to keep the cost more economical for those of you on a tight budget. These kits also come with new heavy duty shifter end bushings and Heavy Duty Shifter Seats to replace the old worn out stock rubber seats.

WARNING: If your motor mounts and/or transmission mount is worn too badly the added height of the short shifter kit can cause interference between the shift tower and the body of your truck.

Installation Instructions:

1. Set parking brake and chock wheels to prevent vehicle from rolling.
2. Put transmission in neutral.
3. Remove console (if equipped), shift knobs and shifter boot to access the bottom of the shifter handle (top of transmission).
4. Remove the inspection plate to access to top of the transmission from inside the cab of the truck.
5. Clean the top of the transmission tower and transmission to make sure no debris falls into the transmission when removing the shift tower.
6. Remove the transmission and transfer case shifters from the transmission
 - a. The transfer case shifter has a retaining clip that holds it in. Use pliers to squeeze the tabs together to release the clip and remove the shifter.
 - b. The transmission shifter has a “push & twist” style cup. You will need to push the inner cup down and then rotate it counter-clockwise to release.
7. Remove the shifter tower. There are six bolts that hold the tower to the transmission. You can access four of them from on top and then get the other two (front two) from the bottom or you can notch the floorboard to gain access to the front two bolts from the top.
 - a. You can see from the picture to the right where we notched the front of the opening to get to the front two bolts.
 - b. Be careful when removing the tower from the transmission, there will be a rubber gasket that has metal washers inserted through all the bolt holes of the rubber gasket. These metal washers will fall out and drop into the transmission. They are very difficult to find and fish out of the transmission once they fall in.
8. Clean the tower completely and remove the stock shifter seats from the shifter tower and shifter bushing from the bottom of the transmission shifter (the transfer case does not have a shifter bushing).
 - a. Remove any debris from inside the transmission while the shifter tower is off.
9. Remove the spring from the bottom of the shifter tower (transfer case shifter). This will not be re-used with the new short shifter kit.
10. Install the new gasket provided and then the shift tower spacer plate.





11. Using the new bolts install your shift tower onto the new spacer plate. You can re-use the stock rubber gasket between the shift tower and the new spacer. If you do re-use it make sure the metal inserts are installed into the bolt holes in the gasket. If your stock rubber gasket is damaged then you can use Ultra Grey silicone to seal this surface as well.
12. Install the new shifter seats into the shift tower. The blue seat goes into the transfer case shifter side and the white one goes into the transmission shifter side.
 - a. The stock shifter seat is a soft rubber design that can be smashed or squeezed into position. The new heavy duty shifter seats will not install the same way. You will need to put the seat into the tower with the grooves facing down and resting on the two set pins in the shifter tower. Then rotate the seat around the set pins until it is sitting in the bottom of the shifter tower. The grooves in the seat should now be facing up towards the shifter handle.
 - b. The shifter seat may be a little tight to pivot around the set pins. We recommend freezing the shifter seats ahead of time to shrink them up a little and make them easier to install.



13. Install the shifter extension onto the transmission shifter. The transmission shifter will use the extension with the ball end. It will also use the two keepers to position and retain the extension onto the shifter.
 - a. The keepers go onto the bottom of the shifter directly above the bottom ball. The keepers are tapered to match the shape of the shifter handle. Make sure to put the keepers on in the correct direction otherwise the extension will not fit properly.
 - b. Slide the shifter extension over the keepers until it is fully seated.
 - c. Use the supplied Loctite thread locker on the set screws and install the set screws into the shifter extension and tighten.
 - i. Be sure to run the set screws in evenly so that they center the shifter into the extension.
 - d. Stake (peen) the edge of the set screw against the shifter extension as shown in the picture to the right.
 - e. Install the new shifter bushing onto the end of the shifter extension for the transmission shifter as shown in the picture to the right.
 - f. **If you fail to install the set screws correctly they can fall into the transmission and cause major damage. LC Engineering will not be responsible for damage due to incorrect installation!!! As the installer you take responsibility for the proper installation of this product.**



14. Install the shifter extension onto the transfer case shifter. Transfer case will use the extension with the flat sided end.
 - a. Slide the extension over the end of the transfer case shifter so the flat sides of the shifter are in line with the flat sides of the extension.



- b. Use the supplied Loctite thread locker on the set screws and install the set screws into the shifter extension and tighten.
 - i. Be sure to run the set screws in evenly so that they center the shifter into the extension.
 - c. Stake (peen) the edge of the set screw against the shifter extension as shown in the picture to the right.
 - d. **If you fail to install the set screws correctly they can fall into the transmission and cause major damage. LC Engineering will not be responsible for damage due to incorrect installation!!! As the installer you take responsibility for the proper installation of this product.**
15. Install the transmission shifter into the shifter tower making sure to line up the shifter extension into the shift mechanism in the transmission.
 - a. Once the shifter is seated correctly into the transmission push the collar down and rotate clockwise to seat the shifter into the tower.
 16. Install the transfer case shifter into the shift tower making sure to line up the shifter extension into the shift mechanism in the transmission.
 - a. Once the transfer case shifter is seated into the transmission correctly, install the retaining snap ring into the shift tower to seat the shifter into the tower.
 17. Start the vehicle up and verify that the transmission on the transfer case both shift properly into all gears.
 18. Install your shift boot and console (if equipped).



ATTENTION: After installing the short shifter there should be no excessive play or travel in the shifters. If, after time, you notice more play in the shifter, remove the shift tower and inspect the shift extensions to verify that the set screws have not come loose. If the set screws come loose they can fall into the transmission and cause transmission failure.

See All LCE instructions and install videos on www.LCEngineering.com

