



Revision
01/16/17

LCE Short Shifter Kits

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LCE's short shifter kits allow you to keep the stock two piece style shifter handle which will reduce noise and vibration when compared to a one piece. These kits come with new heavy duty shifter end bushings as well as 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. Some of the shifter assemblies will require the removal of both the transmission and transfer case shifters for proper installation of the extension ring onto your transmission. Installation instructions may vary slightly. Due to space limitations, you may want to clearance the transmission tunnel slightly to allow better access to the bolts at the front of the shift tower housing

Installation Instructions:

1. Set parking brake and chock wheels to prevent accidental movement.
2. Put transmission in neutral position.
3. Remove center console (if equipped), shift knobs and shifter boots to access the inspection plate (top of transmission).
4. Remove the inspection plate and shifter boots to access the top of the transmission from inside the cab of the truck.
5. Clean the top of the transmission tower and transmission area to make sure no debris fall into the transmission when removing the shift tower.
6. Depending on your application you may also have to remove the transfer case shifter assembly from the transfer case. The transmission shifter has a small plate that is bolted down and holds it in the shifter tower.
7. Remove the shifter tower. There are several bolts that hold the tower to the transmission.

Warning: Be careful when removing the tower from the transmission. Some applications have 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 seat from the shifter tower and shifter bushing from the bottom of the transmission shifter.

Reminder: Remove any debris from inside the transmission while the shifter tower is off.

9. Install the new gasket provided (If no Silicone Groove Available) then install the shift tower spacer plate.
10. Utilizing the new bolts and washers supplied, 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.
11. Install the new shifter seat into the shift tower.
 - 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



Part #1097000
Part #1097003
Part #1097004
Part #1097006
Part #1097008
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Part #1097012
Part #1097014
Part #1097015
Part #1097016



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.



12. Install the shifter extension onto the transmission shifter. 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, 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.

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. *Due to the changes that Toyota made on the shifter shafts over years, some shafts may need to get filed a little in order to fit the keepers.*

13. 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 bolt the retainer plate down. The plate has a spring below it so you will have to push the plate down to get the bolts started, be sure not to cross thread the bolts.

14. Install the inspection plate and boots.

15. Start the vehicle up and verify that the transmission shifts properly into all gears.

16. Install your shift boot, shift knobs and console (if equipped).



ATTENTION: After installing the short shifter there should be no excessive play or travel in the shifter. 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.