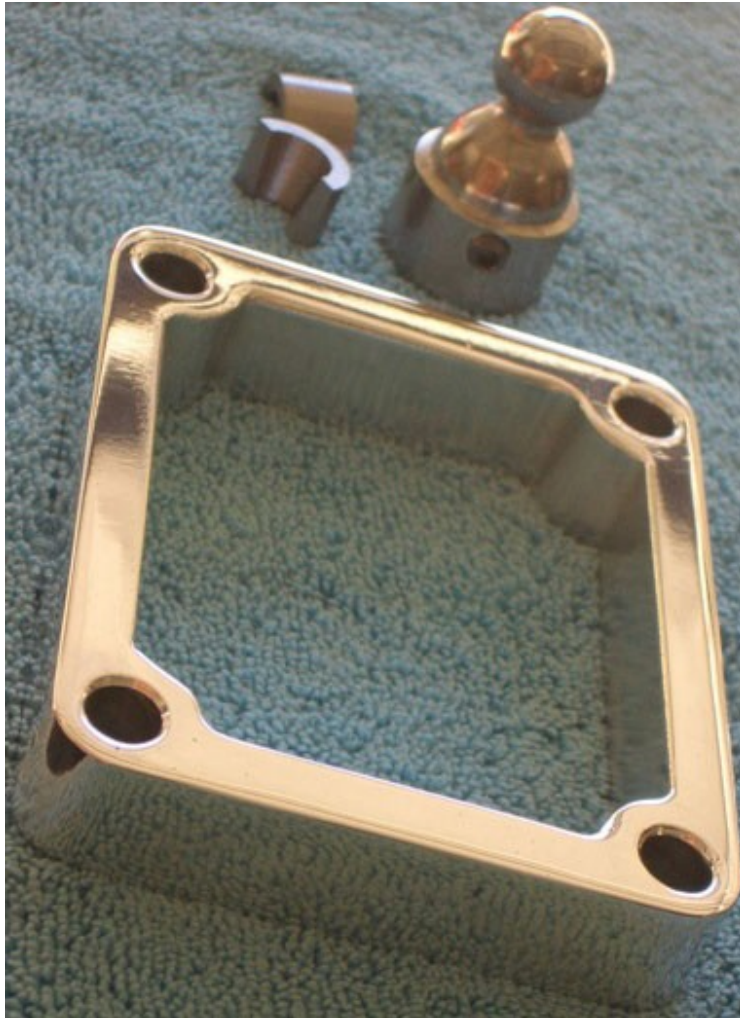


*Underdog Racing Development*  
[www.URDUSA.com](http://www.URDUSA.com)

**URD** *UNDERDOG  
RACING DEVELOPMENT*



***URD Short Shifter Installation  
1995-2004 Tacoma 5 speed  
1996-2002 4Runner 5 speed***

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***Introduction:***

URD introduced our first short throw shifter for the 05+ Tacoma 6 speed transmission. This unit became very popular and was featured in the February 2006 issue of Sport Truck Magazine. This exposure resulted in a demand from customers for us to offer the same type of design for the other Toyota Truck applications.

We tested other brands of short shifters in our other test trucks. Although these other brands have a nice crisp short shift, there is a lot of noise and vibration that is transmitted through the shift lever into the cab.

This is because the other designs replace the entire shift lever. The stock shifter is really two parts bonded together with a rubber-like material. This deadens sound as well as vibration. It was clear that we wanted to retain this very important feature.

Another problem with the other designs is an unnecessary complex installation requiring grinding and disassembly of the shifter pivot ball (while fighting a stiff spring in the process). URD's 2005 Tacoma short shifter is very simple to install.

This simple approach has an extension that slips over the end of the stock shifter and a spacer plate that easily installs between the transmission and shifter assembly. The whole installation process can be completed in about 15 minutes.

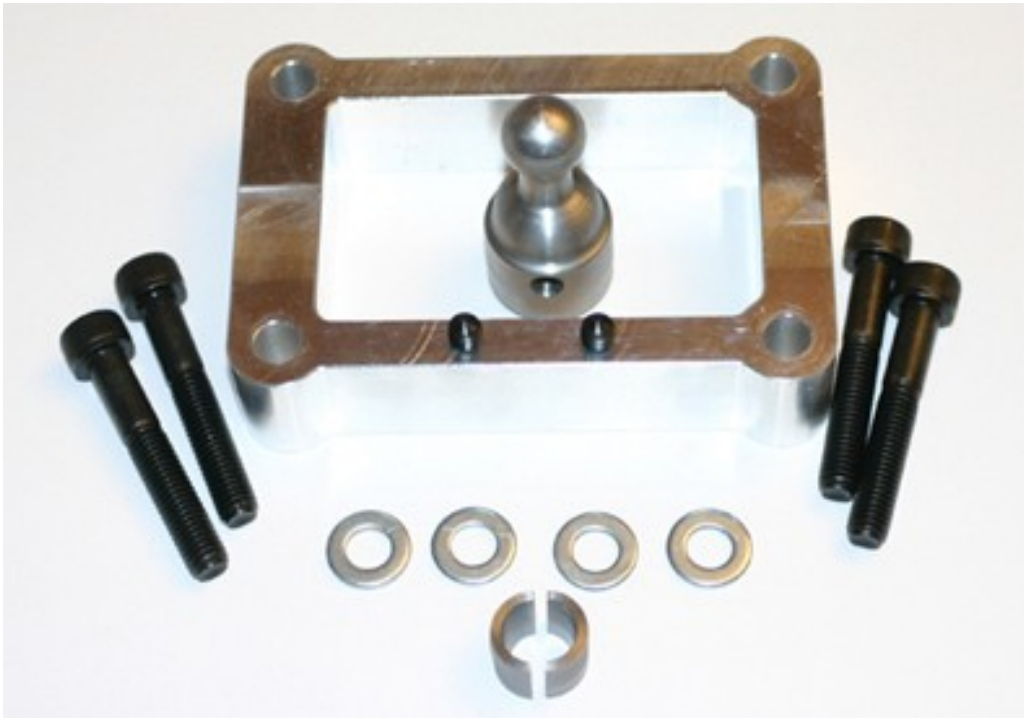
Shifts are short throws, and gear engagement is improved. There is no known downside here. This is the serious improvement that will bring you, the driver, more enjoyment every time you shift your transmission. .

Any questions, comments, or ideas, please mail URD Tech Support at [Support@URDUSA.com](mailto:Support@URDUSA.com) .

**Parts list:**

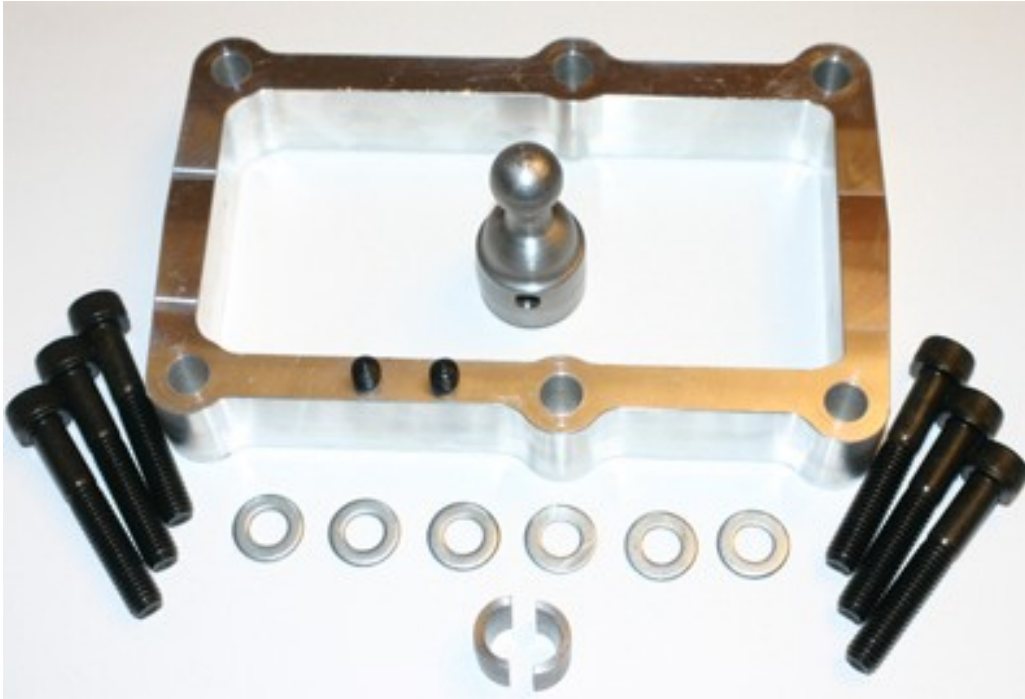
Examine the parts you received from URD and make sure you have all of them before you start your installation:

**Trucks with 4-wheel drive:**



1. One (1) Transmission spacer plate
2. One (1) URD Short shifter extension
3. Two (2) setscrews
4. Two (2) clamshell spacers
5. Four (4) replacement socket head cap screws
6. Four (4) 8mm washers

**Trucks with 2-wheel drive:**



1. One (1) Transmission spacer plate
2. One (1) URD Short shifter extension
3. Two (2) setscrews
4. Two (2) clamshell spacers
5. Four (6) replacement socket head cap screws
6. Four (6) 8mm washers

***Tools needed:***

1. 10 and 12mm socket, extension and ratchet
2. 6mm Allen wrench attachment for socket wrench for spacer plate bolts.
3. 1/8" Allen wrench for setscrews.
4. Red lock-tight thread locker

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5. RTV silicone sealant or FIPG sealant suitable for transmission gear oil.
6. Block of wood, hammer or a plastic mallet.
7. Center punch for staking the setscrews.
8. Torque wrench.

**Console Removal:**

**4Runner**

1. Set the parking brake and chock the wheels to prevent the vehicle from rolling when the transmission is taken out of gear.
2. Unscrew the shift knob by hand and remove it.



3. Open the lid of the console, and then lift straight up on the trim that surrounds the parking brake lever. This will disengage the locking tabs. You can then lift it over the parking brake lever and rest it on one of the seats without disconnecting the wiring.



4. You can now lift up on the front trim piece to disconnect the locking tabs and lift it over the shifters and out of the way.

***Tacoma:***

1. Set the parking brake and chock the wheels to prevent the vehicle from rolling when the transmission is taken out of gear.
2. Unscrew the shift knob by hand and remove it.
3. Remove two screws from each side of the console portion that hold the shifter boot. Once those screws are removed the console can be lifted over and off of the shifter.

***Shifter Removal:***



1. Remove the 4 screws that hold the shifter boot plate to the truck body and lift it over the shifters and out of the way.



2. Using a 12mm socket, remove the 4 bolts (4-Wheel Drive) that hold the shifter base plate to the transmission.

The 2-Wheel drive transmissions have 6 bolts on the shifter base plate that will need to be removed. The rear two may have to be accessed from under the truck.

3. Peel the rubber boot off of the top of the shifter tower and tap it from the side gently with a block of wood and a mallet to release the silicone seal.
4. Lift the shifter assembly off of the transmission. It may drip gear lube so place a shop towel under it as you carry it from the vehicle. Pay special attention to the orientation of the oil



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baffle plate. You will want to reinstall it in the same orientation on top of the spacer plate when reinstalled.

5. Using a hook tool or your thumbs to push it off, remove the plastic bushing from the shifter tip ball. It is common for the bushing take off like a champagne cork, so keep an eye on where it goes. Take care not to damage it, as it will be reused later.

***Installation of the URD Short Shifter:***



1. Place the two clamshell spacers around the tapered portion of the shaft above the tip ball. Note the taper, as they will only fit in one direction.



2. When placing the clam shell spacers, make sure the set screws contact the center portion of the spacers and not the gap between them.



3. Slide the URD Short Shifter extension over the tip of the stock shifter and make sure it is seated all the way down on the ball of the stock shifter.
4. Use **RED** Lock-Tight on the setscrews and tighten them down snugly.



5. Use a center punch to stake the setscrews. This is done by placing the shifter extension flat in a vice or on an anvil and tap the metal just outside of the threaded hole that the setscrew goes into. Take care not to damage the tip ball. This willpeen the opening over and permanently lock the setscrews into the shifter so they cannot back out.

There is a lot of high frequency vibration in the transmission from the gears and other rotating assemblies. Staking the setscrews will make certain that the setscrews cannot back out and fall into the transmission.



6. Grease the ball of the URD shifter ball and pop the plastic bushing on to the ball.
7. Test fit the spacer plate to the transmission. The thicker end portion faces the rear on the 4-Wheel Drive transmission spacer plate.



8. Once you are sure you have the alignment proper, clean all the old Form In Place Gasket (FIPG or RTV Silicone) material and oil from the spacer plate, transmission surface and shifter assembly. Put a very light coat of RTV on each side of the spacer plate. More is not better here. Use a very light coat. Place it back on the transmission.



9. Install the oil baffle plate on top of the spacer plate in the same orientation it was in when you removed it. Then guide shifter assembly on the transmission carefully inserting the tip bushing into the socket in the transmission.
10. Install the four supplied bolts and torque to 13 lb-ft with a 6mm Allen wrench attachment.

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11. Test the shifter and make certain that you can properly engage all gears including reverse.
12. Reinstall the rubber shifter boot and console parts in the reverse order of removal.
13. Again test the shifter making certain that all gears can be properly engaged before driving the vehicle.
14. ENJOY!!