

Goal:

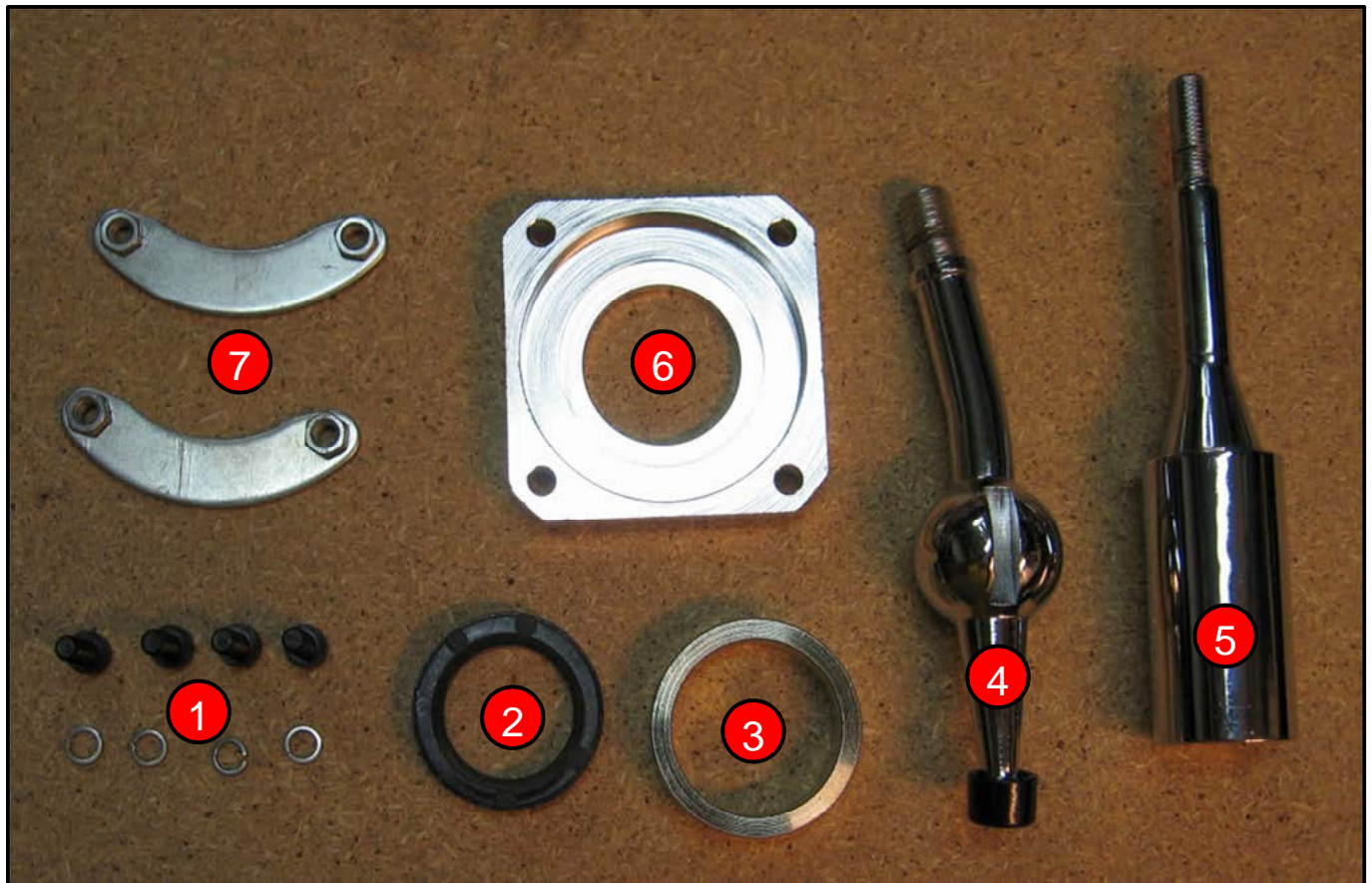
Oct 18 2011, Rev 1.0

Instruct in the installation of short a throw shifter kit intended for a 240sx FS5W71C 5spd transmission into a Z31 FS5R30A 5spd transmission.

Tools:

1. #3 Phillips head screwdriver
2. Thin, flat blade screwdriver
3. Allen wrench
4. Pliers (either needlenose or small vice-grips)
5. Beverage cooler and opener
6. Beverage
7. Heat gun or hairdryer (optional)
8. Coffee cup of boiling water (optional)

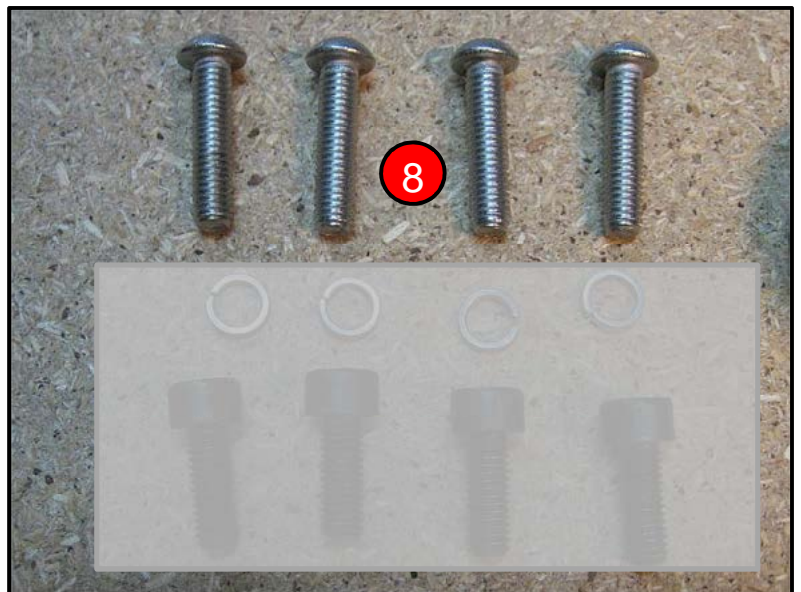




Materials:

(Short throw shifter kit)

1. M6 fasteners & split-lock washers
2. Nylon bushing
3. Aluminum spacer
4. Lower shift lever
5. Upper shift lever
6. Top plate
7. Clamp brackets
8. M6X25 socket head cap screws
(button head shown, may also work)
9. Rubber boot PN: 32862-V5001



Optional Steps

Open Beverage.



Secure Beverage in insulated jacket.



Procure replacement work light bulb from bathroom.



Section 1: Stock shifter removal.

Remove center console



Remove the rust colored metal trim ring securing the inner shift boot.



Remove the inner shift seal by slipping it over the stock shifter, being careful not to tear it.



Remove the rubber boot (if still present)



There are 2 locking rings holding the stock shift mechanism in the transmission, remove the upper one with the thin flat blade screwdriver and a pair of pliers. (Rotating an end of the upper locking ring so that it is nearer to one of the notches in the transmission housing makes it easier to pry out using the screwdriver)



With the top retaining ring removed, the shift lever assembly should lift right out. (Neither retaining rings will be required for this particular short throw shifter install).



If it didn't come out with the lever assembly, remove the lower cup and the spring washer below it.



Section 2: Short throw shifter bushing swap

When compared side by side, you will notice that the shifter bushing on the short throw kit is a lot smaller than the stock bushing.



Apply some grease or other lube to the inner ball pivot area and work it around, then apply even heat to the bushing with either a heat gun, hair dryer or letting it sit in a boiling hot cup of water.



Repeat these steps for the stock bushing. (PN is 32861-01G00 in case you need a replacement)



On this particular kit, the ball end of the shifter is 12mm, which is the same as the stock shifter.

Note: all proceeds from distribution of these instructions go toward a replacement battery for my digital calipers.



Install the stock shifter bushing onto the short throw shifter using a bit of grease/lube and even heat.



Section 3: Installation

The individual shifter parts will be installed in order, from right to left.



Places to apply lubricant:



Install the spacer first. Failure to do so will allow the shifter bushing to pass too far past the shift mechanism and drag on the guide plate beneath it, making it difficult/impossible to shift into 3rd/4th/5th and reverse. Make sure it is fully seated.



Install the spring washer.

Install the lower cup/socket.



The lower cup/socket should slide up and down freely when resting on the spring washer.



Install the lower shifter lever, making sure the notches are aligned to the pins in the lower cup/socket.



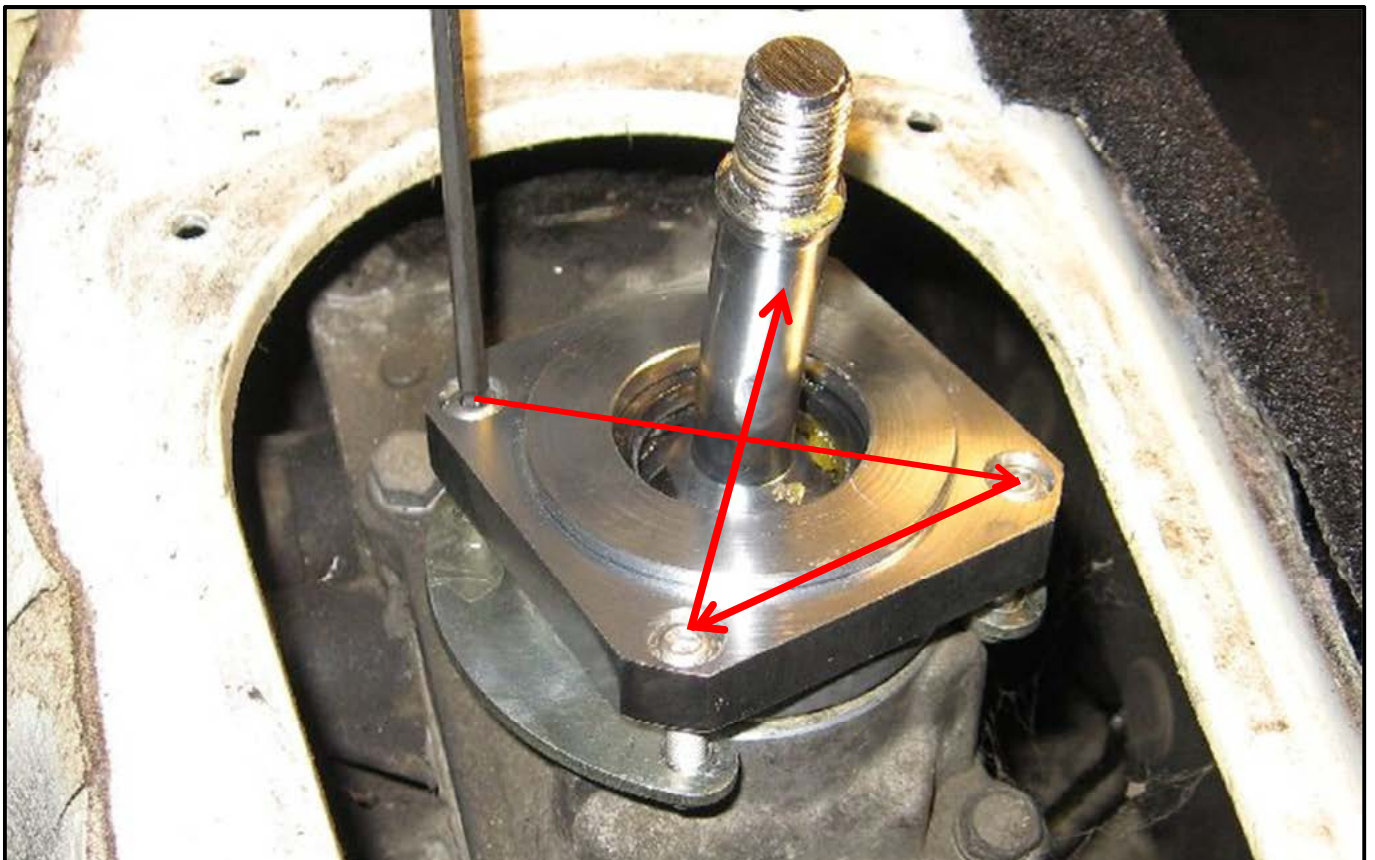
Install the upper seat. When fully seated, it should sit just above the upper edge of the lower cup/socket.



Using the M6X25mm fasteners (the M6 fasteners supplied with the kit are too short) and split-lock washers, install the top plate and clamp brackets to the transmission housing. Rotate if necessary to avoid contact with the body. The clamp brackets should engage the notch in the shifter housing.



Evenly tighten the fasteners in a criss-cross pattern.



If the old one was missing or otherwise destroyed, install a new rubber boot (PN 32862-V5001) over the top plate of the shifter kit.



Install the inner shift seal. The diameter of the short throw shifter is slightly smaller than the stock shifter. To avoid possible harmful exhaust fumes entering the cabin, use of a zip-tie or bushing is recommended. For this install, a bushing was fabricated from the primary wire boot of an unused sparkplug wire set.



Reinstall the inner shift seal over the installed bushing.



Reinstall the metal trim ring (sandblasting and paint optional)



Install the upper shifter lever. Use of a locking compound such as Loctite 242 or Vibra-Tite VC-3 on the joining threads is recommended to avoid the possibility of vibration causing them to loosen.



Reinstall the center console and your choice of shifter knob.

Stock shift knob



Cue ball shift knob.



The thread size/pitch for the shifter is M10X1.25