

**INSTALL TIME:** 1 to 2 hours

**DIFFICULTY LEVEL:** 4

**TOOLS NEEDED:** socket driver  
12 mm socket  
16 mm open end wrench  
8 mm open end wrench  
5/32" allen key  
2.5 mm allen key  
4 mm allen key  
5 mm allen key

**INSTALLATION NOTES:** Failure to follow instructions exactly will result in poor shifter performance.



**SHIFTER PRE-ASSEMBLY:**

1. Remove the shifter socket assembly from the product box. (Fig 1 and Fig 2)



Figure 1



Figure 2

2. Disassemble the front and rear socket mounts using a 5/32" allen key. (Fig 3)



Figure 3



3. Unscrew the limiters until they are flush with the top surface, you can finger tighten the screws using a 2.5mm allen key. (Fig 4 and Fig 5)



Figure 4



Figure 5



4. Slide shifter into socket, then guide the 5/16" shoulder bolt through the shifter and socket. Be sure that the lock washer and flat washer are installed. Finger tighten the gear selector stud. (Fig 6 and Fig 7)



Figure 6

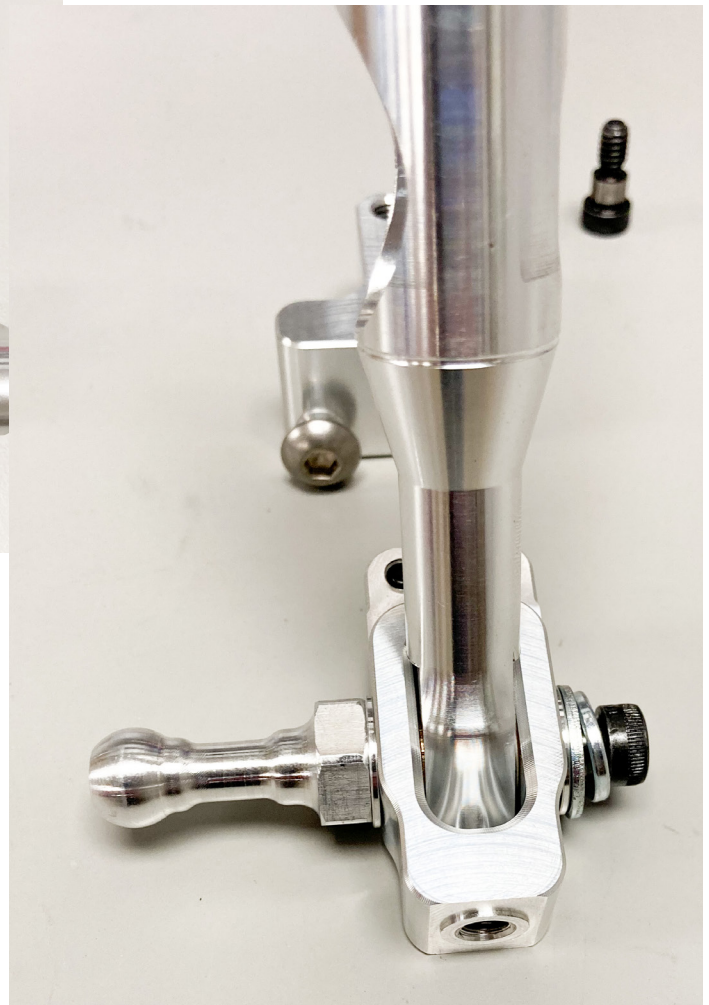


Figure 7

5. Tighten shifter bolt using 5/32 Allen key and 16mm open ended wrench. Tighten until there is a slight binding, then loosen slightly. The shifter should rotate freely forward and backwards. Once the installation is completed, you may have to tighten this again during break in. (Fig 8 and Fig 9)



Figure 8

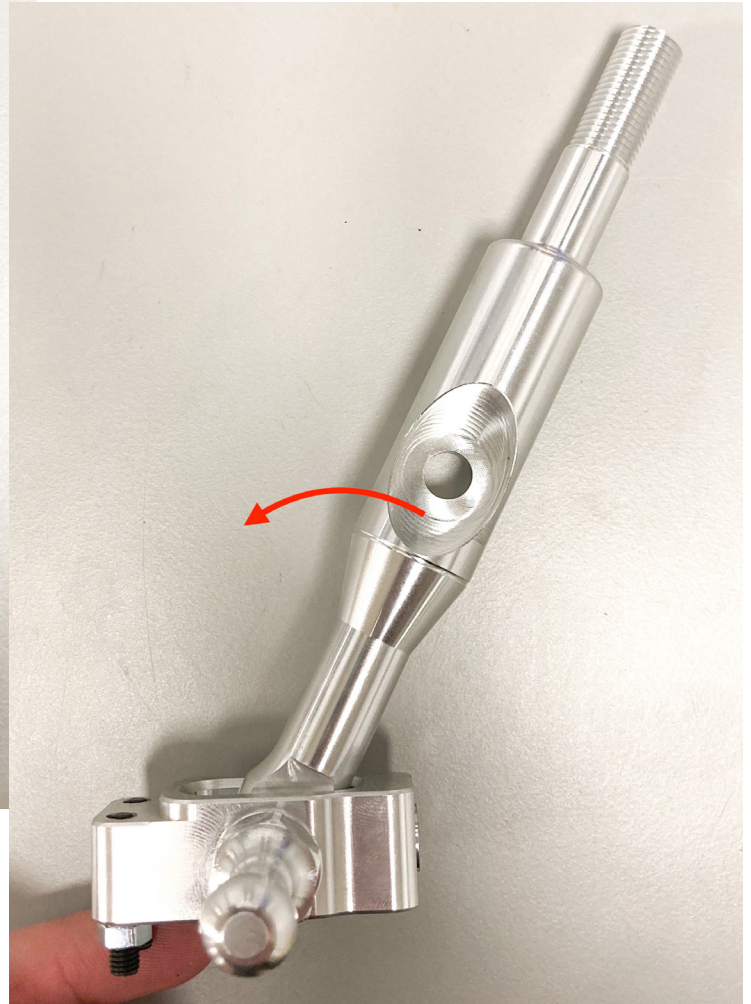


Figure 9

6. You will re-use these components from the Racer X shifter box. They will need to be removed from the socket cup. The socket cup in the shifter box will not be re-used along with the polymer bushing or OEM shifter spring. (Fig 10)



Figure 10



7. Install the bell crank, spring collar, and spring to the front socket mount. The orientation of the spring collar and spring are **EXTREMELY** important. **Failure to follow this will lead to the shifter not working correctly.** Spring legs should be closer to the bell crank, and the spring collar shoulder will touch the front socket mount. (Fig 11)

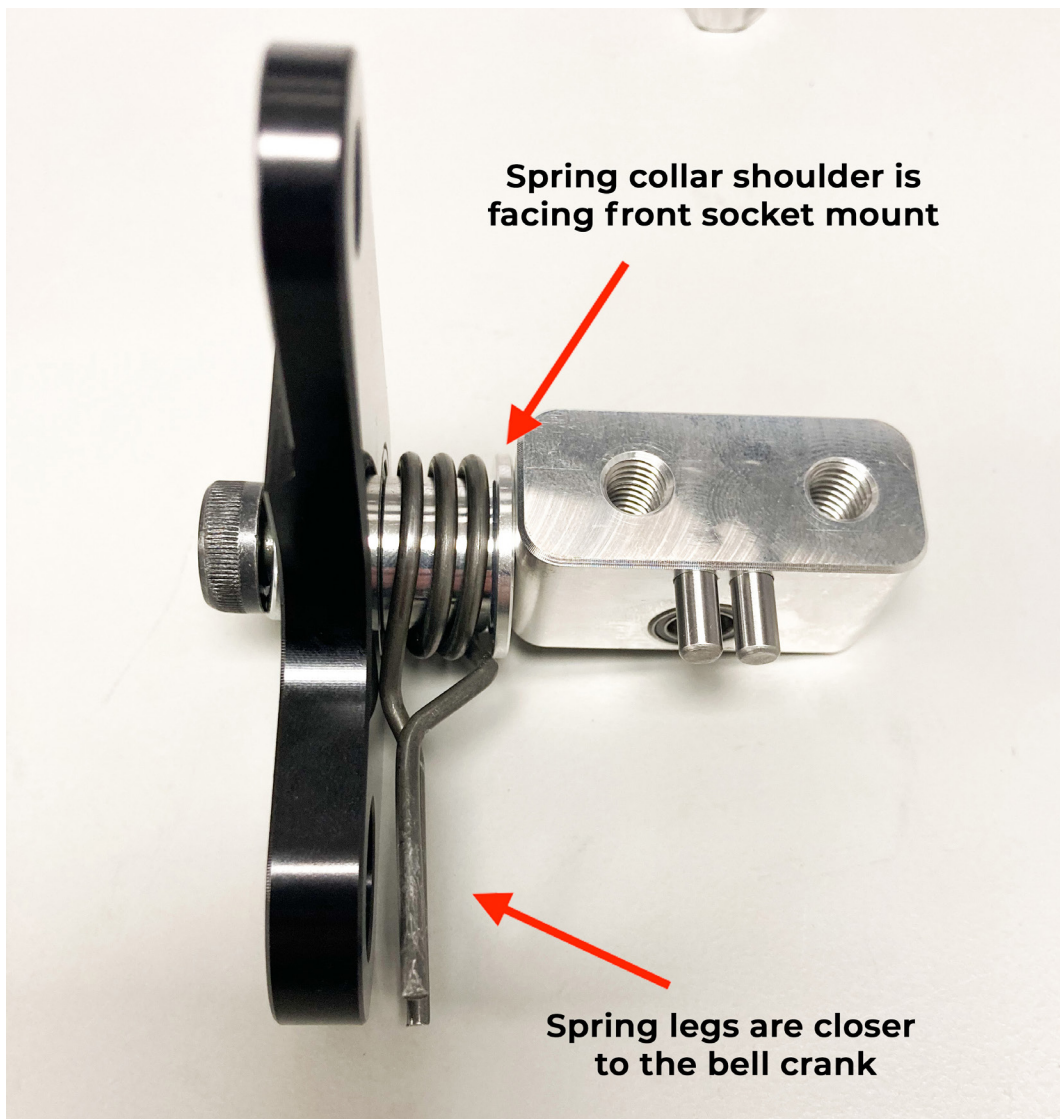


Figure 11

8. Rotate the spring legs away from the bell crank to begin the shifter assembly. (Fig 12)



Figure 12

9. Install the black gear selector bushing into the bell crank. The shoulder should face the spring. (Fig 13)



Figure 13



10. Place the gear selector pin between the spring legs. Pay close attention to the orientation of the shifter, you will be rotating the shifter 180 degrees to load the spring. (Fig 14)



Figure 14

11. Rotate the shifter to load the spring and align with the front socket mount. When installed correctly, the large oval cut out on the shifter will face the bell crank. (Fig 15 and Fig 16)



Figure 15



Figure 16



12. Install the small 5/16" shoulder bolt through the front socket mount and thread into the shifter socket. Be sure the shoulder touches the socket, tighten using a 5/32" allen key. (Fig 17 and Fig 18)

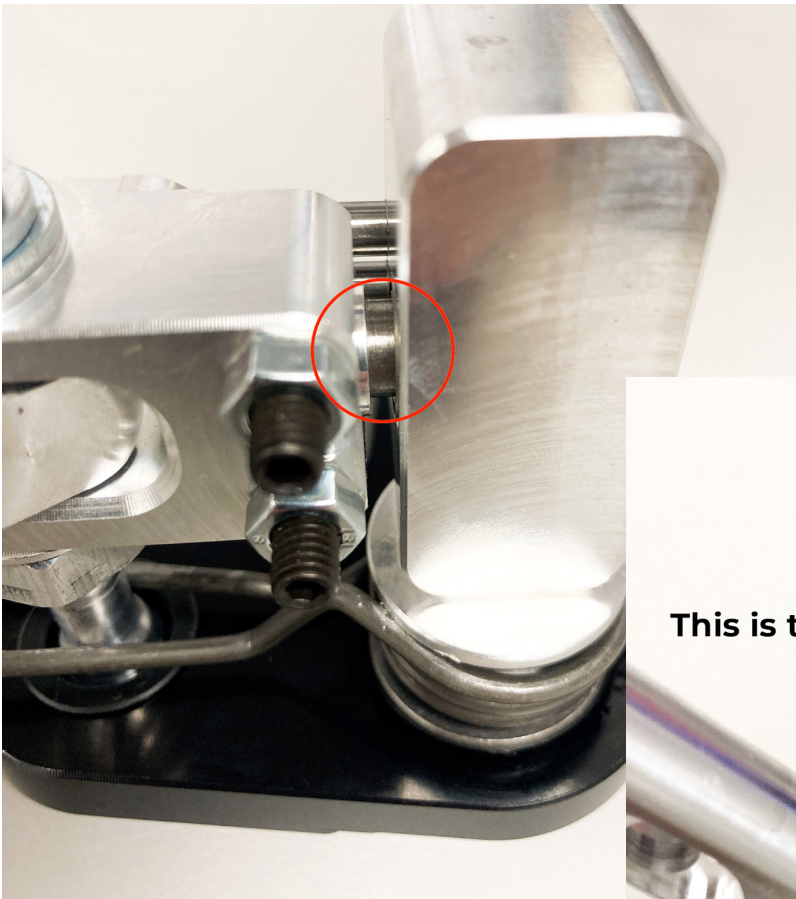


Figure 17



Figure 18



13. Install the small 5/16" shoulder bolt through the rear socket mount and thread into the shifter socket. Again, make sure the shoulder touches the socket. Tighten using a 5/32" allen key. Finally, make sure the spring legs are above and below the small aluminum collar. (Fig 19 and Fig 20)



Figure 19



Figure 20

**SHIFTER ASSEMBLY COMPLETE:**

The shifter assembly is now ready to be installed into the Racer X shifter box. It is normal for the front and rear sockets to move. They will NOT move once the assembly is bolted to the shifter box. (Fig 21)



Figure 21

**SHIFTER INSTALLATION:**

1. With the Racer X socket cup and shifter removed, lift the plate and install the new shifter. (Fig 22)

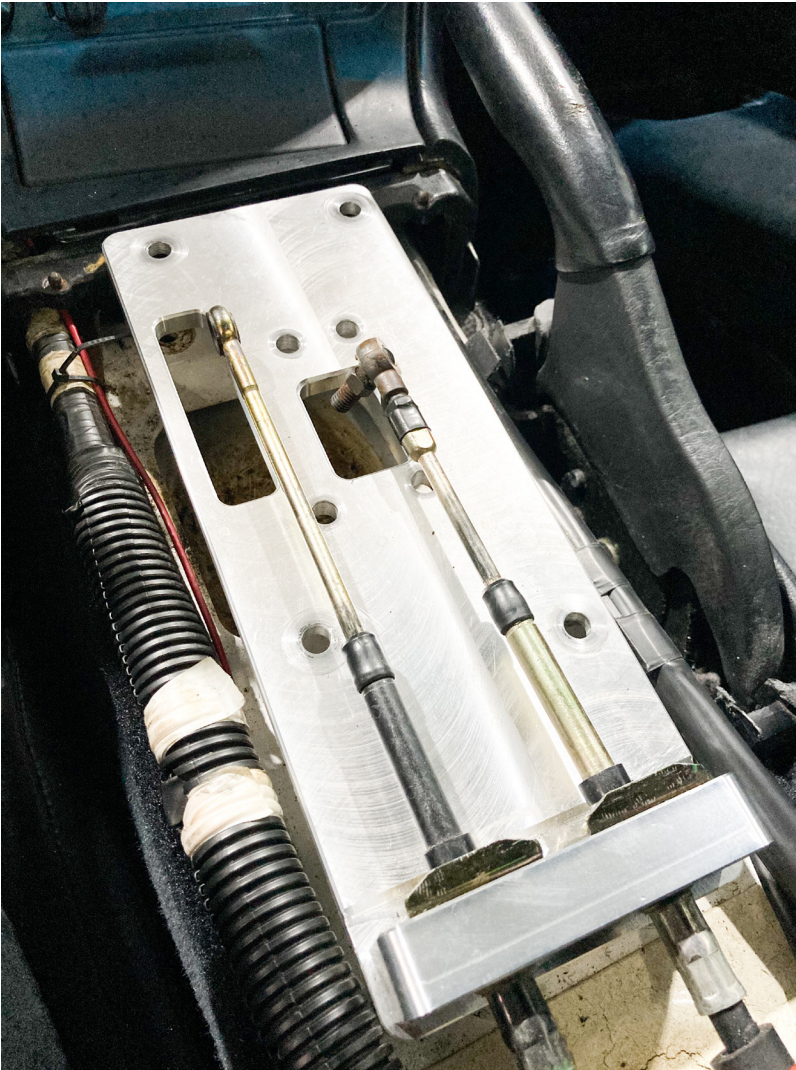


Figure 22



2. Thread in M8 button head screws and finger tighten with a 5 mm allen key. Install (2) of the OEM M8 hex head bolts, and tighten using a 12mm socket. Now tighten the M8 button head screws holding the shifter assembly. (Fig 23 and Fig 24)



Figure 23

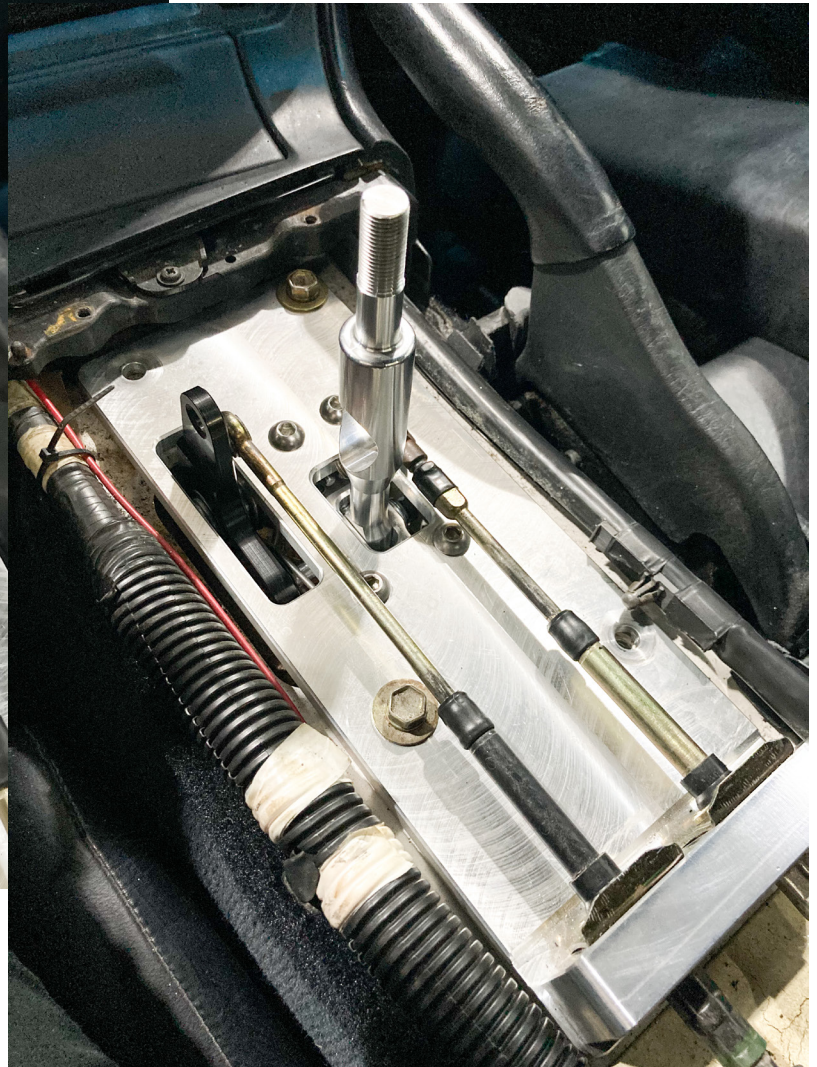


Figure 24



**NOTE:** Before installing shifter cables, check the shifter assembly. When assembled correctly it should snap back to center position. If it does not do this, then there is more than likely an issue with the spring installation. The shifter should NOT bind. Please see video of correct installation. ([Click for video](#))

3. Install shifter cables, the shifter cable that connects to the shifter can be tightened with a 12mm socket. (Fig 25)

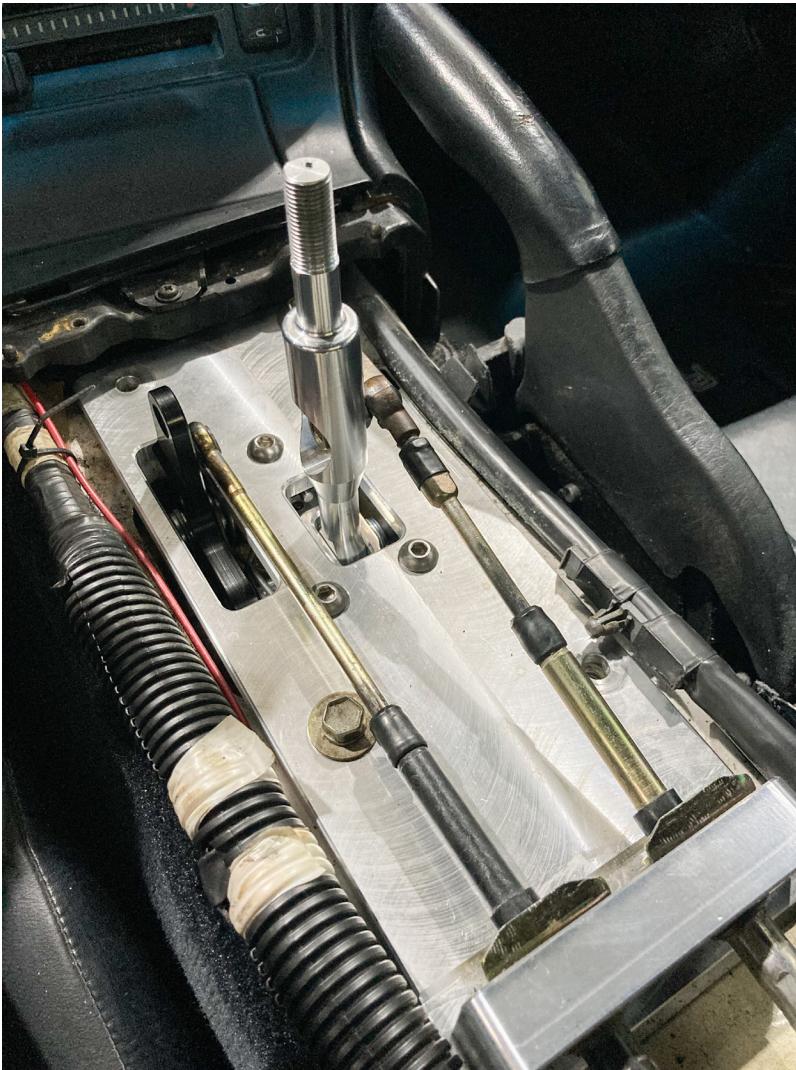


Figure 25

4. Install bell crank shifter cable. The small hex bolt is placed through the cable and keys into the bell crank. Tighten with a 13 mm open end wrench and 4 mm allen key (Fig 26)



Figure 26



5. The shifter assembly is now installed. You can finish by threading in the last (2) M8 hex head bolts and/or you can adjust the limiters on the shifter. (Fig 27)

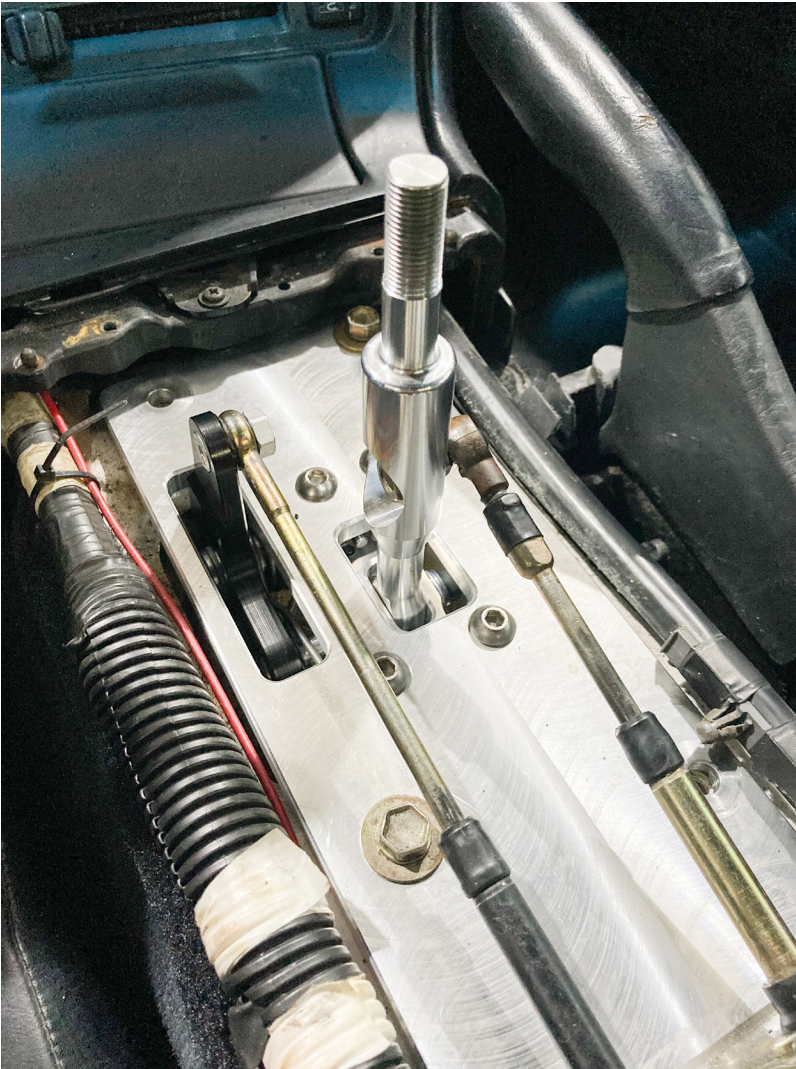


Figure 27



**LIMITER ADJUSTMENT:**

Sitting in vehicle position, the screw on the right will reduce travel when shifting into 1st and 2nd gear. The limiter on the left will reduce travel when shifting into 5th and reverse. (Fig 28)

**WARNING:** It is possible to limit travel to the point where you cannot shift into gear.



Figure 28

Thread in limiters so they are roughly 1/4" above the socket. The simplest way to adjust the limiters is to remove the M8 bolts holding in the shifter plate. Leaving the shifter cables attached, use a 2.5 mm allen key to adjust the limiters a 1/4 turn at a time until you reach the point of not being able to shift into 1st / 2nd. Then back the limiter off 1/4 turn. Tighten the limiter with a 8mm socket or open end wrench. (Fig 29)



Figure 29