

# TR05 Installation Instructions



## STEP 1- Remove the Center Console

Begin by ensuring the car is in neutral.

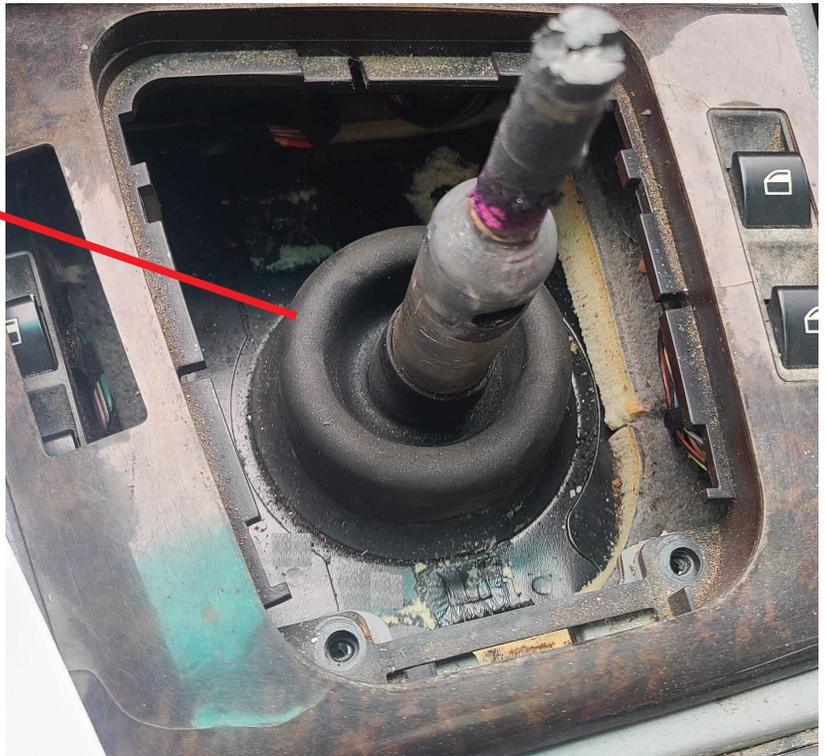
Start this installation by removing the stock shift knob. Most BMW's have a compression shift knob and can be removed by pulling upwards.

Proceed by removing the shift boot as well as surrounding trim pieces. There are several videos online for various applications. Complete access to the tunnel below the trim is needed for this install. Cars such as the E46 series BMW's will require less trim removal than others.

A tip would be to remove as much of the surrounding area to prevent damage during installation.

Remove the stock bellows housing

This will expose the top side of the shifter carrier which will be removed during the installation.



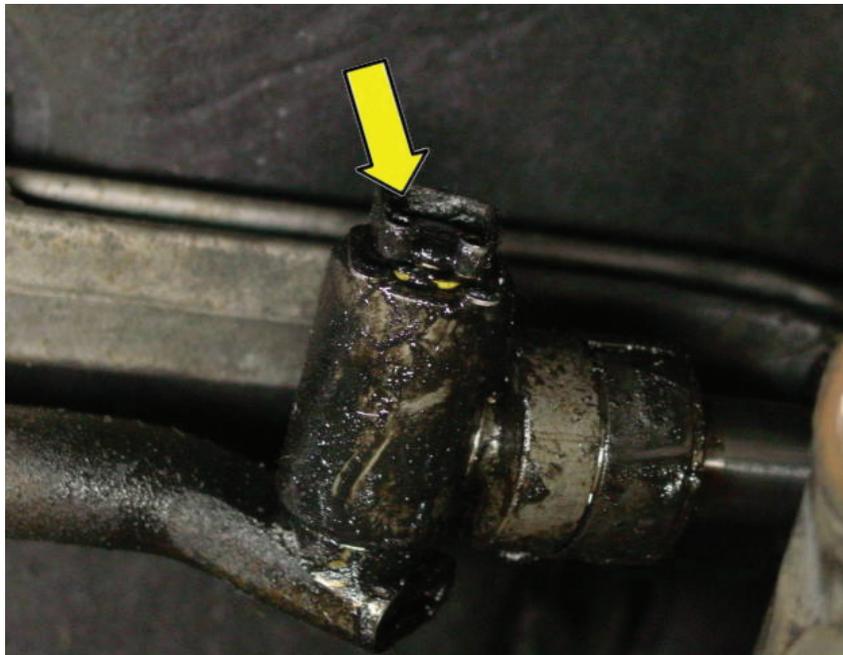
E46 Shown in picture

## STEP 2- Remove the Shifter Arm

Safely raise the car up to gain access to the transmission tunnel. You will be accessing the carrier directly below where the stock shifter sits.



Begin by removing the shifter linkage shown in the photo. On both ends there is a clip that can be pushed upwards to encourage removal. Once the clip is removed pull the rod from the socket.

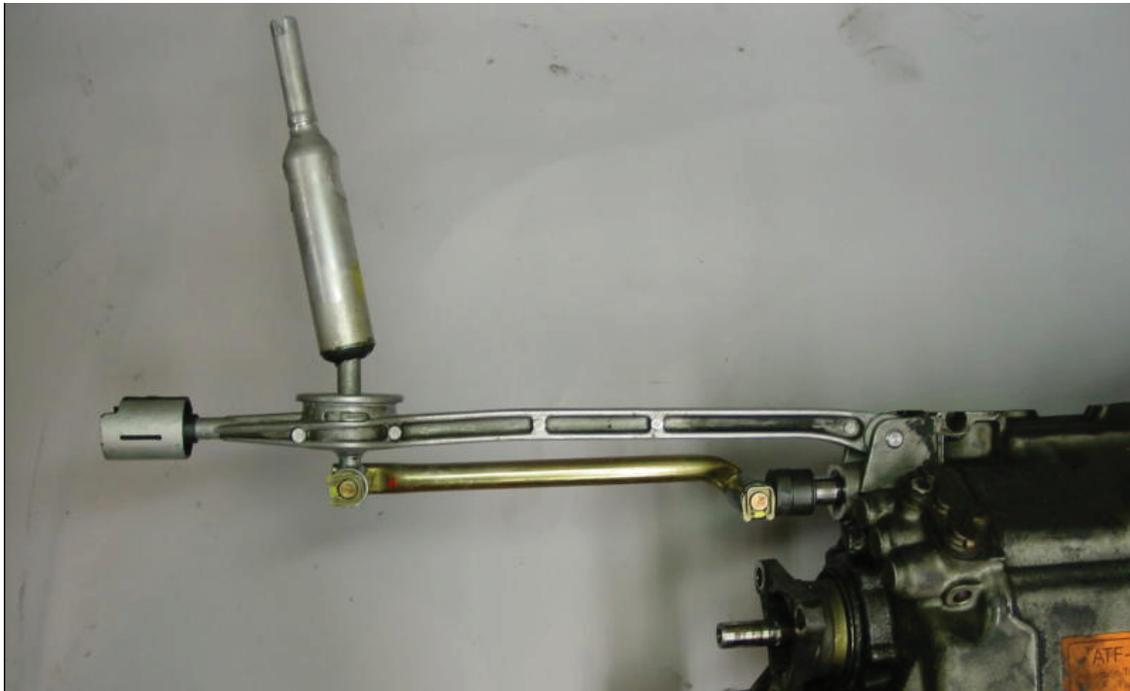


## STEP 3- Remove the Shifter Arm

Pull the shifter arm out for better access to the shifter carrier. Removal of the shifter carrier will occur in the following step.

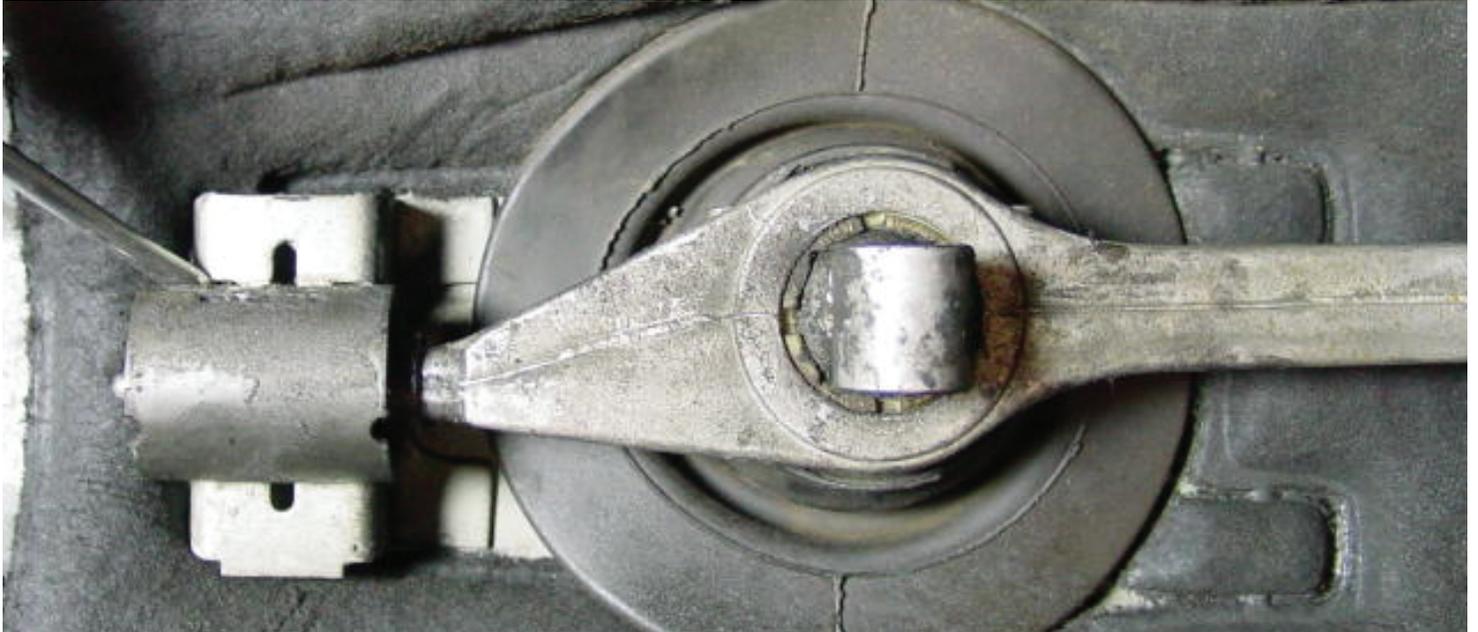


The driveshaft was removed for visualization purposes. This shifter can be installed with the driveshaft in place. This is the orientation of the shifter assembly attached to the transmission

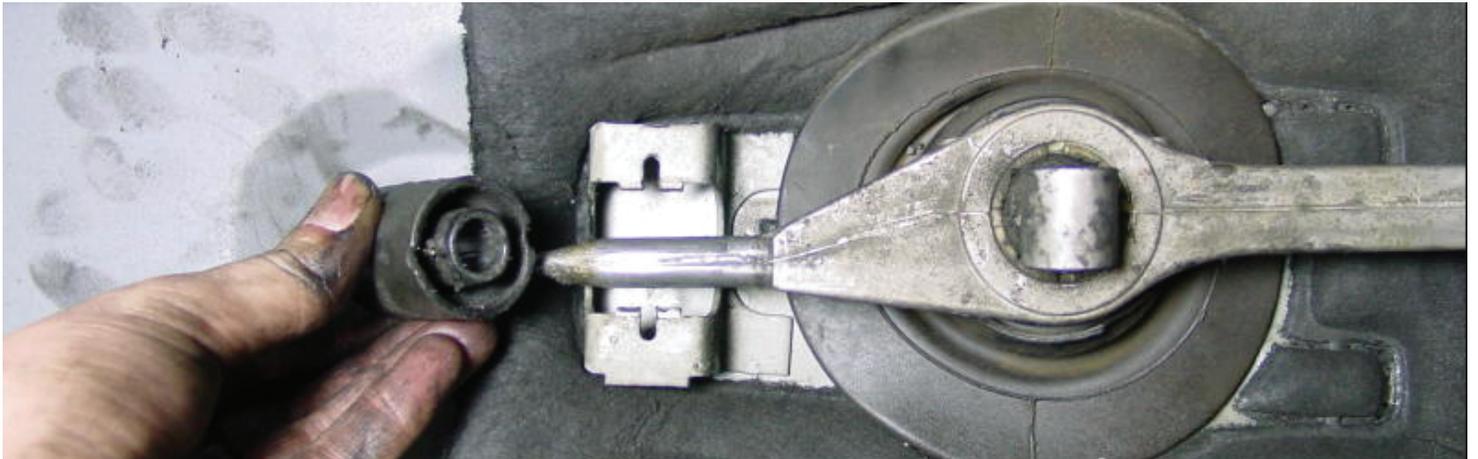


## STEP 4- Remove the Shifter Carrier

Remove the rear shifter bushing. This can be removed by prying on the sides which releases the side clips.



When prying from the clips you can slide the bushing right off the back of the shaft carrier.



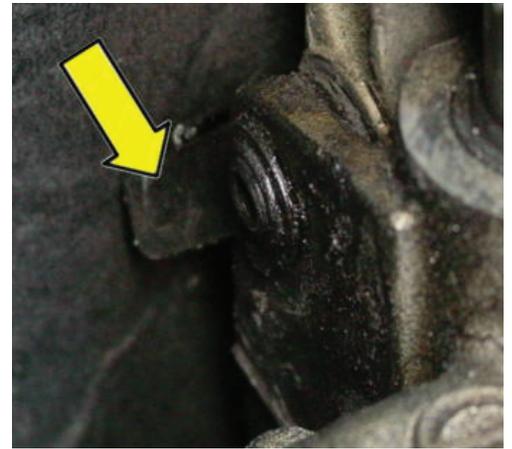
## STEP 5- Remove the Shifter Carrier

On the transmission side - the pin that needs to be removed next on the carrier is noted below.



This clip can be very difficult to remove. In E90+ series the clip was redesigned for easier removal.

Reach on the backside of the clip end with a small screwdriver and pry up. A component on the inside of the clip will prevent removal. Force may be required to break this free.



\*Shown on removed transmission

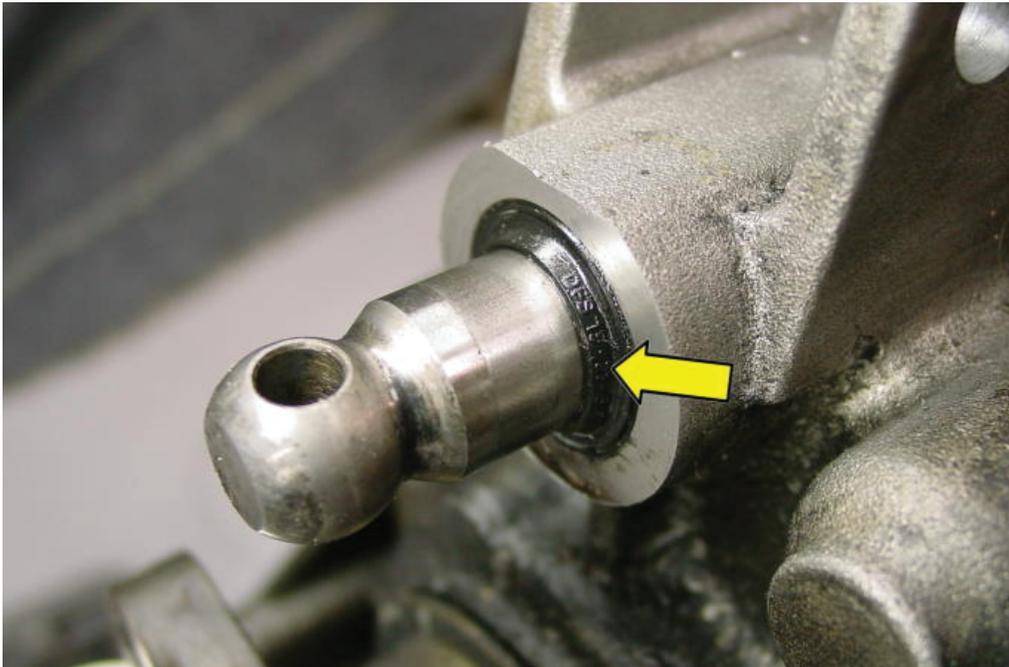


## STEP 6- Remove the Shifter Carrier

When both the pin and the bushing are removed the shifter carrier along with the OEM shifter can be removed. This should all come out as one unit.



This will expose the tunnel hole and provide access to the shifter linkage bushing on the transmission end. This is an opportunity to replace this bushing if desired.



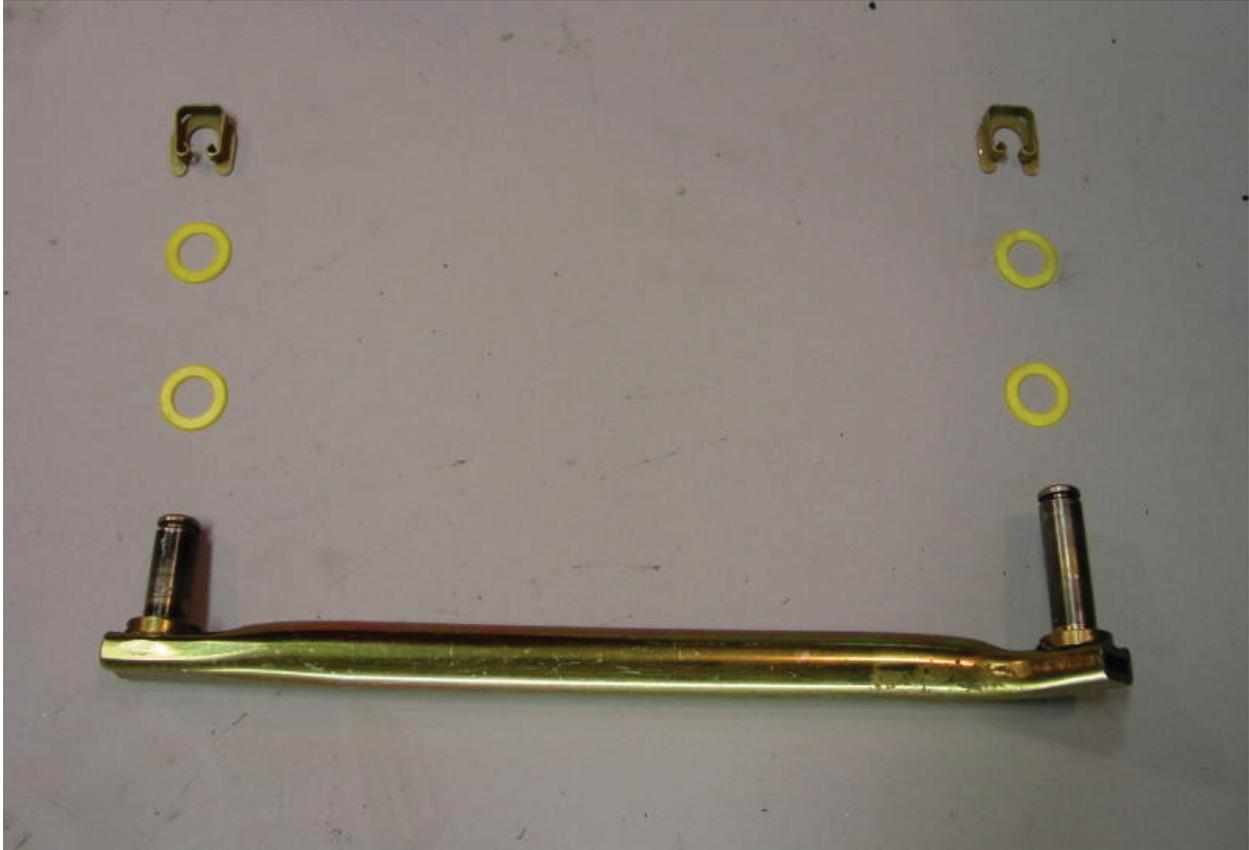
## STEP 7- Prepare TR05 for Installation

Place the shifter with the boot centered with the tunnel hole. Before advancing check that there is adequate access to the four shifter holes with the trim that you have. If you do not have top access to drill a hole you will need further removal of trim to gain access.



## STEP 8- Shifter Mock-Up

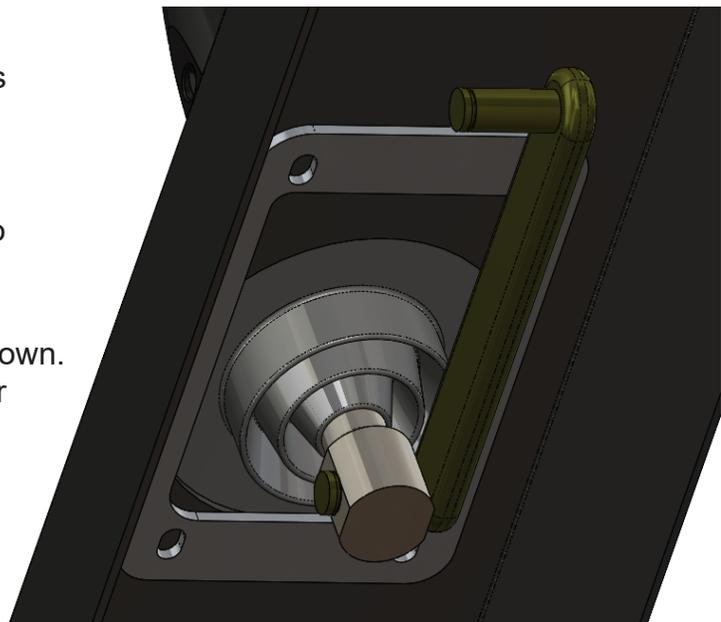
Reinstall the shifter arm without the carrier on to the transmission end in the same orientation prior to removal.



Depending on the car the yellow washers used may vary. Some cars use two washers while certain cars do not use them. This is determined by test fitting and noting any interference with the clip groove. The shifter should clip on the linkage with little to no play.

Place the plate underneath the shifter as shown. This will be impossible to do once the shifter linkage is installed.

Insert the shifter arm through the bottom piece of the shifter and place the clips on both ends.



## STEP 9- Center The Shifter

When the shifter is connected underneath locate the shifters center for neutral. Since the shifter linkage is installed you can move the shifter body forward and backwards to set the location of where the shifter centers. Orientate the shifter so it sits upwards perpendicular to the tunnel.

On the earlier chassis there are two holes that will line up with the forward two holes on the chassis. If the car has these holes place the forward two holes there.



## STEP 10- Drilling the Chassis Holes

When you have located the center of the shifter - drill the four holes (see right image for locations circled in red). The holes can be drilled in place through the shifter.

Drill Size - 6mm / 15/64" (.2344")

0.25" can be used if the location is marked and not drilled through the shifter as it will damage the finish.

Ensure that the drilled holes are as square to the tunnel as possible.

As you drill, it may be beneficial to place the provided bolts through the drilled holes to help guide the drill.



## STEP 11- Fasten Hardware

Place the four 91292A141 (M6) bolts through the shifter body and car tunnel. These have a small slot to allow some room for errors.

This is an opportunity to grab a friend and have them operate from the bottom of the car.

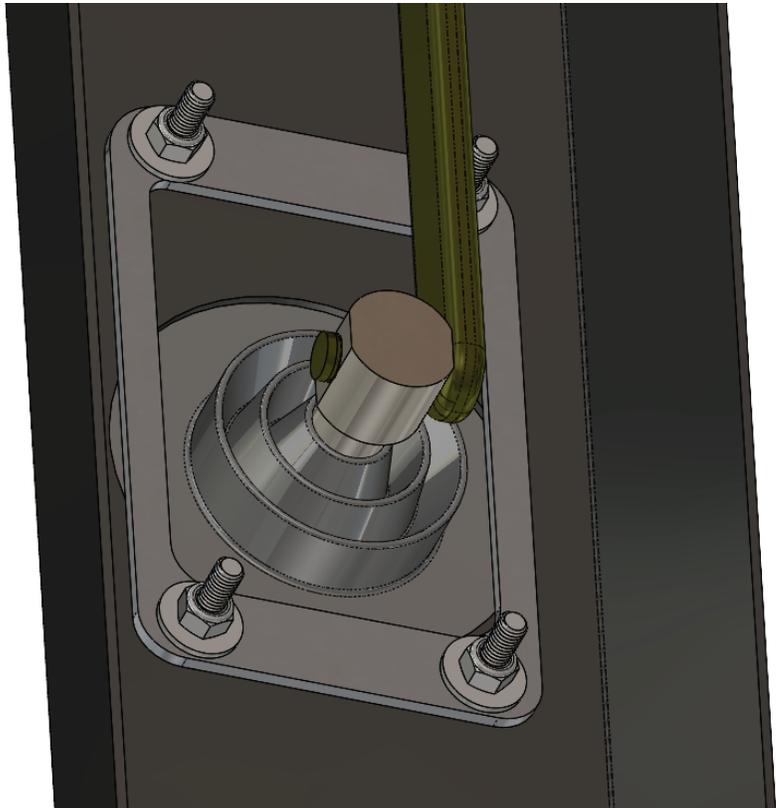
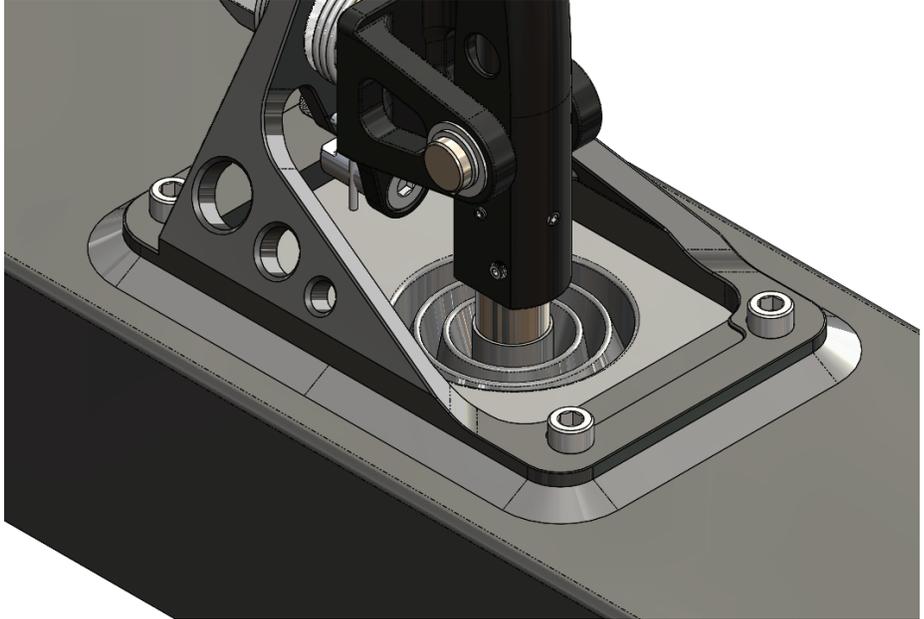
On the underside note that the support plate has a specific orientation. If you find that the holes do not line up rotate the plate.

Install the washers (93413A213) on each of the four screws as well as the M6 nuts (94205A250).

Since these are lock nuts there needs to be a combined effort from above and below to tighten these nuts down.

Allen Key - 5mm  
Wrench - 10mm

Tighten down each of the four screws tight to clamp the shifter to the tunnel. If these screws are too loose flexing issues or an unsafe conditions may occur.

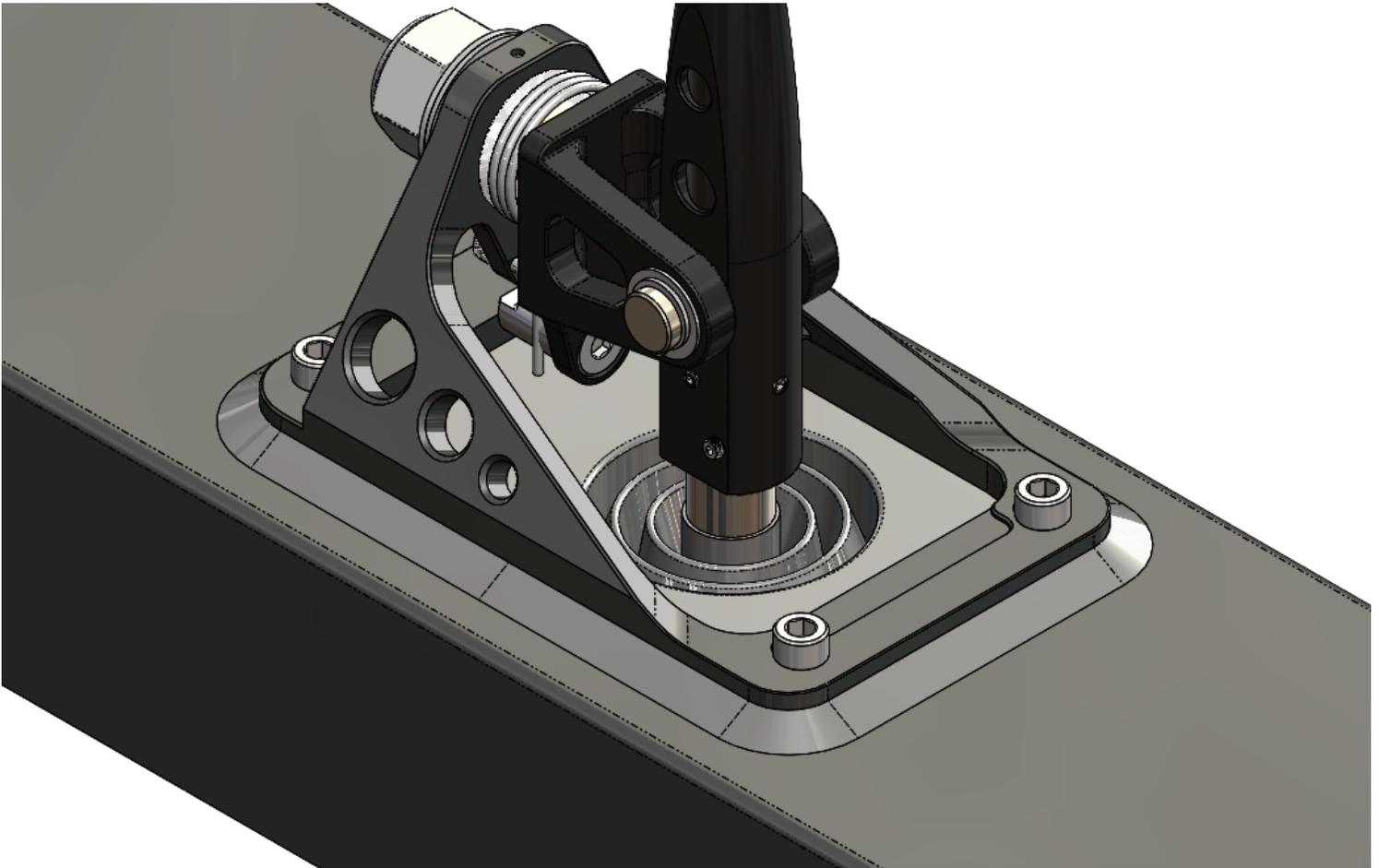


## STEP 12- Check Shifter

Before reinstalling the trim check all the motions of the shifter. Cycle through the gears and observe the flex in the shifter and check that there is nothing loose in the assembly. Check the mounting screws for tightness.

The shifter should never touch the sides of the tunnel hole, check the reverse gear and ensure that the clearance is acceptable.

If clearance is an issue there is something wrong with the mounting location.



## STEP 13- Reinstall Trim

Reinstall the trim in the reverse order. This shifter fits under all factory trim and requires no modifications of the console to fit. The factory boot will fit directly over the shifter.



## STEP 14- Maintenance and Adjustments

TR05 is considered a lifetime assembly and does not need any maintenance.

### Adjustments -

TR05 has one adjustable feature - the preload of the 24mm nut on the forward of the shifter.

This nut controls the return of the shifter to center.

This is set from the factory and typically should not be adjusted. If the shifter has a loose feeling or the return spring does not return properly this nut can be adjusted.

Just note if moved a high hold loctite should be applied.

