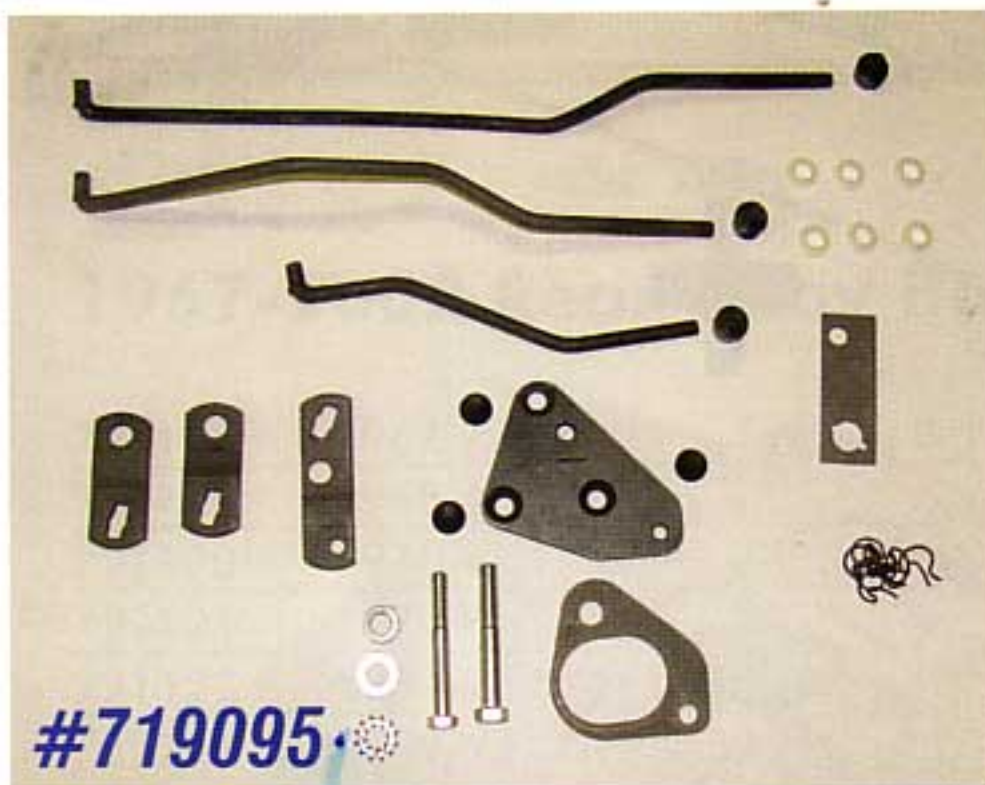


" THIS ARTICLE IS INTENDED FOR YOUR REFERENCE ONLY.

ACTUAL PARTS, YEARS AND BODY STYLES CONTAINED

IN THIS ARTICLE MAY DIFFER SLIGHTLY FROM YOUR APPLICATION. "

ROWING MACHINE: FOUR SPEED SHIFTER INSTALLATION



Automatic transmissions yield faster times in the quarter mile, and with the advent of automatic overdrive transmissions, they are generally easier to drive, and with better fuel economy. However, it's tough to beat the thrill of a manual transmission in your weekend fun machine. Throw political correctness and fuel economy out the window, just mash the gas and start rowing gears on a quality shifter matched to your Muncie four speed. Follow along as we install a Hurst Competition Plus Shifter in our 1969 Z/28 project car.

As with most of our projects, the car needed to be jacked up and securely supported by some quality jack stands. The transmission, and crossmember had been previously installed, with the ends of the crossmember modified to facilitate easy removal. We began by placing a bottle jack under the steel bellhousing to support the weight of the back of the engine and transmission. We then unbolted the crossmember to allow us to lower the transmission so our new shifter would clear the uncut transmission tunnel. Those of you with a stock crossmember will need to remove it completely, if your tunnel is without a shifter hole. With the prep work out of the way, we could begin our installation.

I'm probably showing my age here, but "back in the day" a shifter was ordered by make and model, and it came complete with everything needed to install it. Not true anymore! Today when the shifter is ordered it comes as the shifter and stick assembly only P/N 719094. The balance of the parts required come in the installation kit P/N 719095 which must be ordered separately.

Tools Needed:

Floor Jack
Jackstands
9/16" wrench
9/16" socket
7/32" Allen Wrench
5/8" Wrench

Drill Motor
1" Hole Saw (or Unibit)
3/8" Drill Bit (or Unibit)
Cutting Wheel (to cut floor)
Phillips Screwdriver
1/8" Drill Bit

Time Frame:

4 Hours

Parts Needed:

719094 1969 Camaro 4 Speed Shifter
719095 Installation Kit For Muncie Transmission
706192 1969 Shifter Boot
706194 1969 Shift Boot Retainer

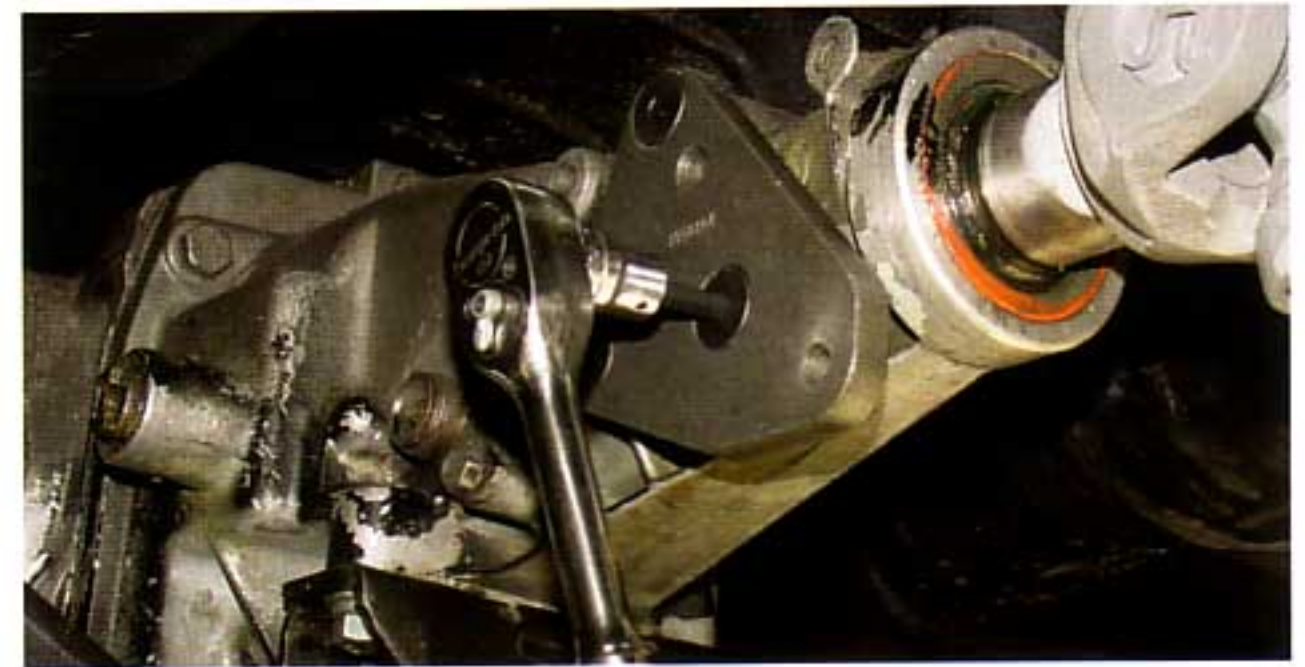


Photo #1: We began by bolting the mounting plate to the transmission with the supplied 3/8"-16 flat head capscrews. These were then tightened with a 7/32" allen wrench.



Photo #2: We then removed the stick from the shifter, and slid the 7/16" and 3/8" bolts supplied in the installation kit into their respective holes. The spacer also supplied in the kit was placed over the bolts, and the whole assembly was lined up with the adapter.

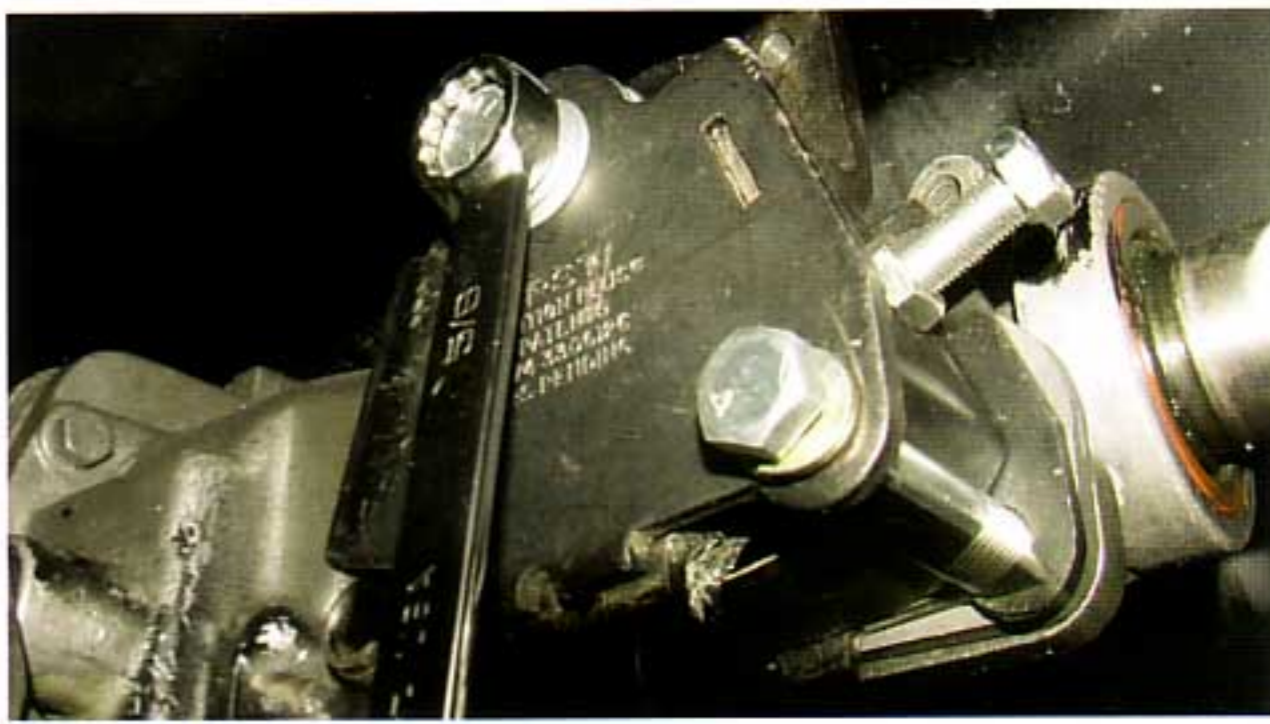


Photo #3: Note the spacer between the shifter body and adapter. We then tightened the bolts with a 5/8" wrench and 9/16" respectively.



Photo #4: It was now time to pre-assemble the arms, rods, and adjusting buttons. We began by laying out the parts to match the arms to the rods.



Photo #5: A word of caution here: The arms are different part numbers, and the offsets on them attach to the transmission differently. **MAKE SURE** to follow the

directions completely, and note the arm orientation. The nylon bushings were slipped over the rod ends then installed into the arms; finally the spring clip secures everything together. Here we show the assembled rods and arms (rom left to right the 1-2 rod, 3-4 rod, and reverse rod.



Photo #6: We then installed the adjusting buttons about one third of the way onto the threaded ends of the rods after lubricating the threads with white grease.

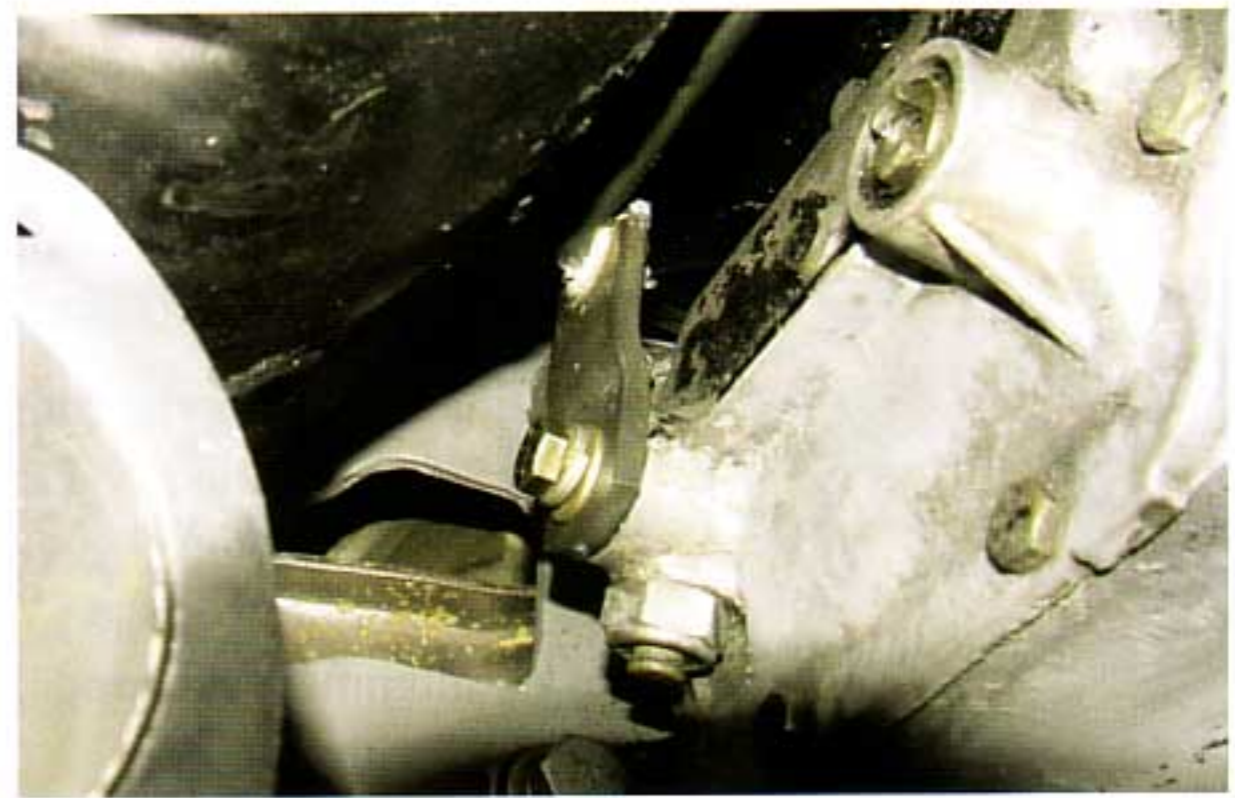


Photo #7: Moving on to the transmission, we attached the arms onto their respective transmission shafts with the original 3/8-16 X 3/4" hex head capscrews. Here we show the 1-2 arm installed.



Photo #8: The 3-4 arm attaches to the middle shaft, and the reverse arm attaches to the rear. With the arms installed, we tightened the bolts with a 9/16" wrench, and then each arm was rotated through its full travel to locate the neutral position. Neutral is the midway position for the 1-2 and 3-4 shafts, and all the way forward for the reverse shaft.

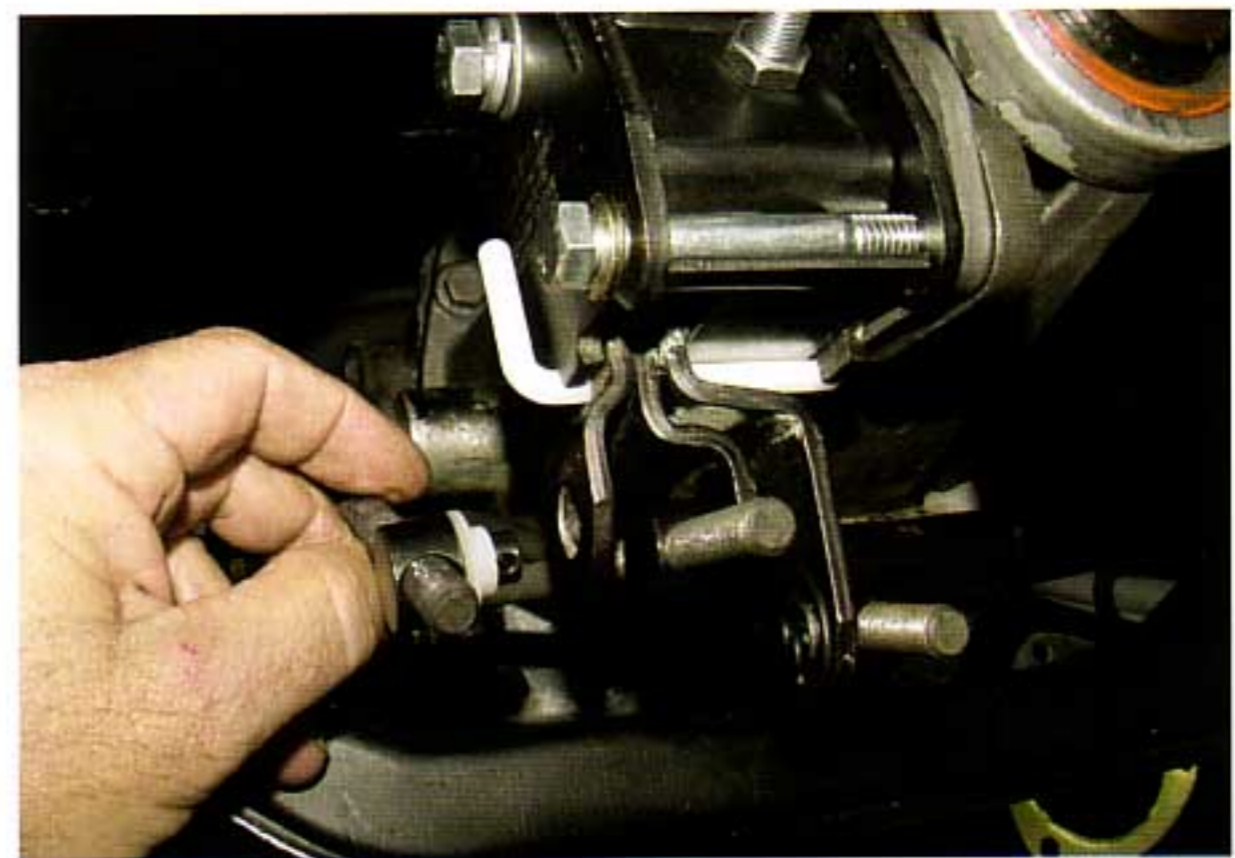


Photo #9: There is a lot going on in this photo. We began by slipping the white plastic neutral alignment rod through the holes in the levers. The nylon bushings were installed onto the buttons, and beginning with the reverse rod, the buttons were screwed in until they slipped into their respective holes in the levers. The spring clips were then installed to retain them. Here we see the reverse, and 3-4 rods installed, with the 1-2 rod about to be slipped into position.

YOU CAN DO IT RESTORATION

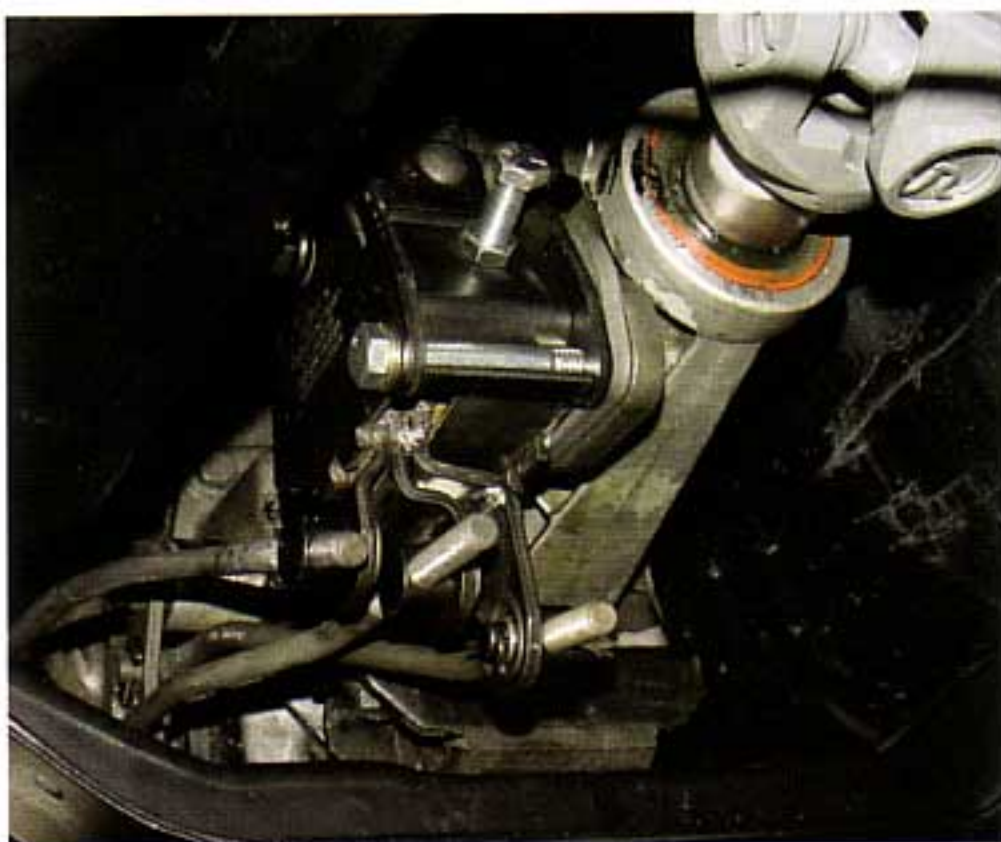


Photo #10: We then removed the alignment rod, and the installation should look like this.



over the top. The retainer is available P/N 706194.

Photo #14: The finish work was all we had left. The stick was attached to the shifter with the original 3/8-24 capscrews, and the boot was slipped over the stick. At this time we had no carpet in our car, but the bottom boot flange goes under the carpet, and the upper flange goes



Photo #11: Next on the list was to slowly jack up the transmission to determine where the hole in the floor needed to be. Once this was determined we used a hole saw to approximate the location. Fortunately we hit the spot perfectly.



Photo #15: The black retainer was secured with four #8 sheetmetal screws.

We then checked the adjustment of the shifter, put the car back on the ground, started the car, and went to enjoy our new rowing machine! Good Luck. 🚦



Photo #12: We then needed to measure our factory shift boot P/N 706192 to determine how large to cut the opening to allow the boot to hang through the floor.



Photo #13a & 13b: This final opening was then drilled to provide a radius on the corners, and then final cut with a cutting wheel. The transmission was then jacked up to its installed height and the crossmember was secured in place.

