

Restore Pontiac Rally Shift Functions After Overdrive Conversion

By Larry Klusza, 2023

Unless your car is a numbers matching, investment grade original, you likely wouldn't do an overdrive transmission conversion to it. If it's a driver quality car, then higher cruising speeds with reduced fuel consumption and engine wear make such a conversion an almost value-added upgrade. It's becoming more popular these days for muscle car owners to swap out their original manual or automatic transmission for one with overdrive. I love the 4L60E transmission from Silver Sport that's installed in my 1970 Pontiac GTO. Driving it is now more fun and overdrive makes longer trips much more driveline as well as gas pump friendly.

One necessary part of the overdrive conversion process is the modification of the shifter to reflect the addition of the extra gear. Whether for column or console mounted shifters, conversion kits are available from the folks at [Shiftworks](#). They're easier to install than you think. However, due to the detents being repositioned to accommodate the extra overdrive gear, you'll lose the "Rally Sports Shift" feature found in the original mechanism.

What's that you ask? Well, it's not the Hurst Dual Gate shifter. I found it described in a copy of the 1970 GTO brochure (Figure 1). According to an online article in *BangShift.com*: "Pontiac called this a Rally shifter and it showed up on their models starting in the 1969 model year. Going forward they were available in A-body models from 1973-1977 and then Pontiac picked them back up around that time and made them available through the early 1980s, essentially until the advent of the third-generation F-body Camaro and Firebird."¹

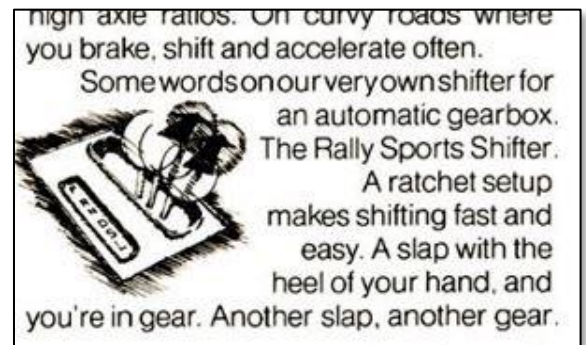


Figure 1: Photo snip from the 1970 GTO brochure describing the "Rally Shift" ratchet-action console shifter.

The fast way to tell if your car has one of these little gems is to look at the dust cover that the shift lever protrudes through. If it's a round hole, you're out of luck. If it has more of a slot shape, then it's possible. Try moving the shift lever from side to side. If it does, then you're in luck. Well, you *were* in luck right up until you installed the overdrive transmission. Now you're out of luck again; or are you? Follow along as I show you how I reclaimed that function on my own shifter.

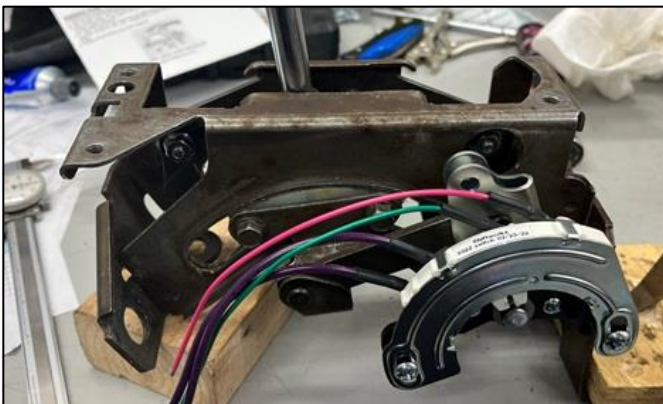
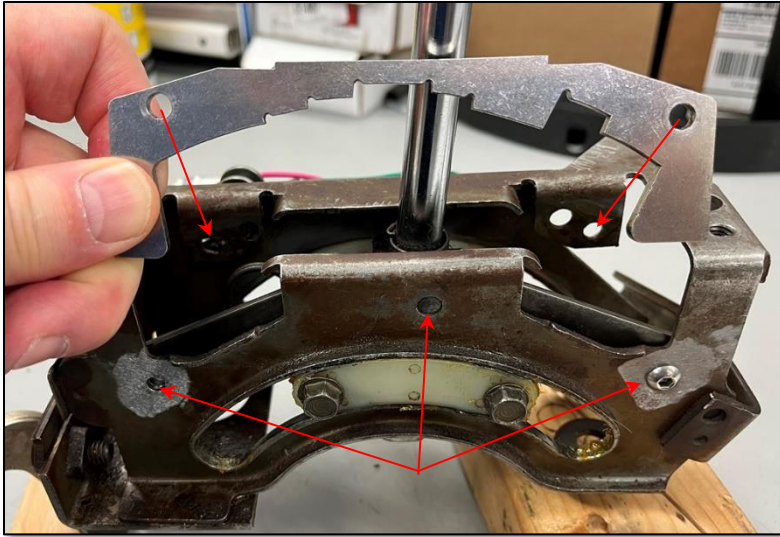


Photo 1

Here is a picture of my shifter after the new detent plate and relocated neutral safety switch were installed.

¹ Bangshift.com quote from [Roadkill Customs](#) online article.



With the shifter disassembled for illustration, photo 2 shows me holding the Shiftworks detent plate with arrows indicating the old rivet holes where it's mounted.

In the lower part of the picture, arrows indicate where two rivets must be ground or drilled out, as was done with the Shiftworks plate. The center arrow shows a hole where an extrusion on the Rally Shift plate locates it.

Photo 2: New Shiftworks OD detent plate and location of Rally Shift stop plate

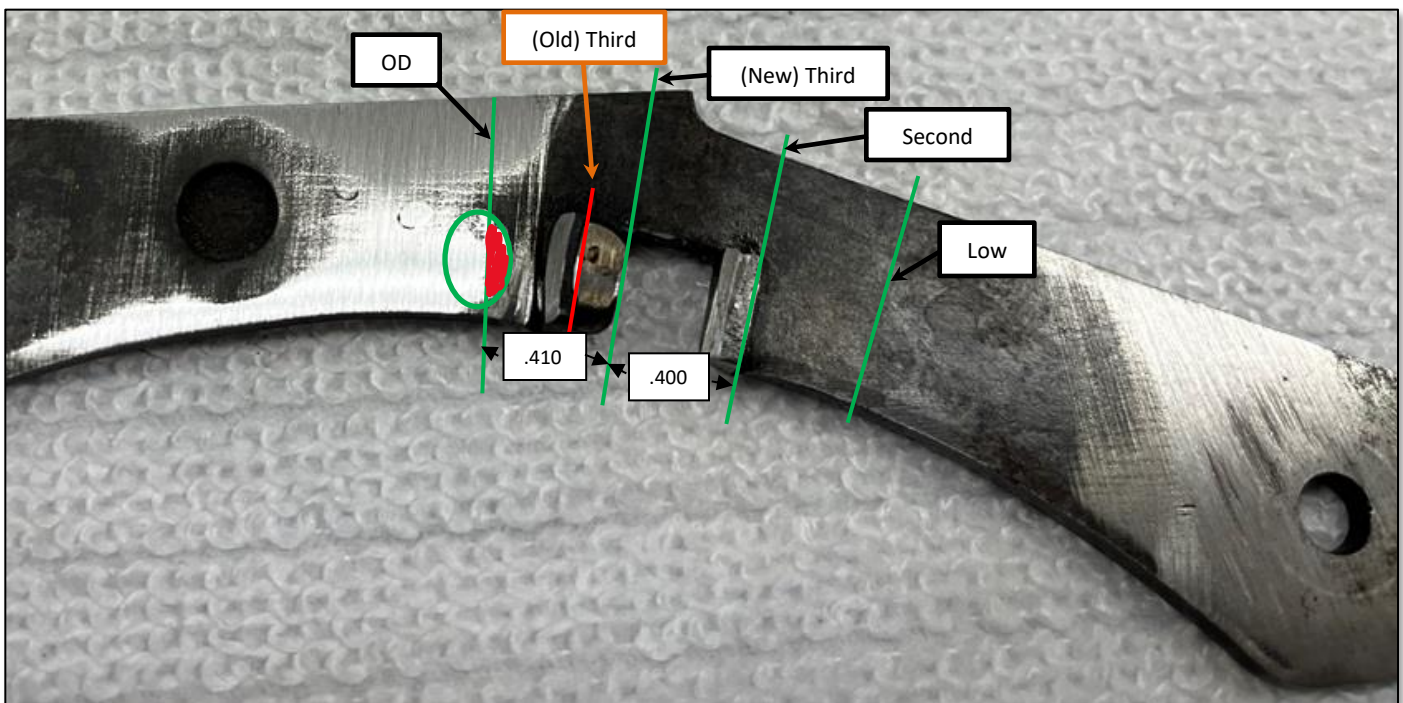


Photo 3: Shows 1-2, 2-3 and OD shift stop placements

In photo 3, starting from the right and moving left; the green lines show low gear, the 2nd gear stop and the new 3rd gear stop. The red line indicates the old 3rd gear stop. The green circle shows where a bead of weld would go and the excess in the red shaded area filed away to create a new stop for overdrive.

For both the original and Shiftworks detent plates, the 2nd gear stop on the rally plate is so close it makes no difference. But the addition of overdrive shortens the distance between 2nd and 3rd gears, so the old 3rd gear shift stop must be “padded” with a bead of weld, then filed or ground to achieve the appropriate distance between them. I measured the Shiftworks plate and came up with a required distance of .400” between the 2nd and 3rd gear stops. The proposed new stop for OD was a bit more, measuring out to be .410”. Adding an overdrive stop is prudent because it's almost too easy to go right by overdrive and straight into neutral, even during normal driving.



Photo 4: Modified stop plate reinstalled

Once it's reassembled you can test the action while it's still on the bench. In this case, I think it's better to have a bit too much material than too little. I'd rather take time to grind and file a bit more than risk overheating the plate with multiple trips back to the welder.

Photo 4 shows the plate reinstalled in the shifter. It attaches the same way as the Shiftworks detent plate does.

Photo 5 shows a closeup of the modified stops. One last important thing is that since the stop distances are now closer together, you must slightly bevel the back edges of the 2nd and 3rd gear stops so that the ratchet mechanism will have enough room to function properly.

Reclaiming your Rally Shift functions after an overdrive transmission upgrade isn't too much trouble. All it takes is some careful measurement, two beads of weld and some patient filing.



Photo 5: Closeup of modified stops