



1990+ Nissan Z specialists

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Auto to 5 sp conversion

We have successfully completed this conversion several of times and sold parts packages for it many times. Below are the parts necessary along with some additional info about each part. You can use your auto ECU in a 5 sp but not vice versa, the auto ECU has some additional hardware/programming regarding shift points, etc that are not included in the 5 sp. ECU. You can also use the auto EFI, interior, and front engine room harnesses, which are the largest ones, expensive, and not easy to change. These harnesses have additional plugs for the auto trans and auto trans control unit but they just become inactive when converting to 5 sp. If you were trying to go from 5sp to auto you would need to change those harnesses, which makes that an impractical venture.

There are a few wiring tricks that are not explained below to get the back-up lights to work and to disable the starter without your foot on the clutch, not that difficult to fix.

Other than that plug and play. Complete kits for NA \$1600, TT \$1850 (includes NEW Nissan clutch kit, shift knob, shift boot, shifter bushings, slave cylinder hose, shifter brace, and rebuilt master and slave cylinders along with all the used parts necessary)

- 5 sp transmission (NA and TT 5sp can be used interchangeably but the NA 5 sp casing is machined down farther at the point where the starter mounts corresponding to smaller diameter flywheel. The NA 5sp can be used in a TT with TT flywheel/clutch kit by shimming out starter with a couple of washers. The TT 5 sp can be used in an NA with the corresponding TT flywheel/clutch kit or either machining down starter mounting area and using NA flywheel/clutch kit. TT 5sp does have some heavier duty internal components, but input/output shafts, mounting, and gear ratios are all the same. The speed sensors in the NA and TT transmissions are different because of the different gear ratios in the rear differentials. We offer used, rebuilt, and new 5 sp transmissions)

-Flywheel (Larger diameter for TT, some may choose to go with a lightweight aftermarket replacement. We offer good used resurfaced flywheels as well as new stock and aftermarket lightweight replacements (JUN, JWT, Fidanza)

-Flywheel bolts, 8 required (Same NA and TT, longer than the ones that hold the flex plate for the auto. We supply new and used ones)

-New Clutch kit (clutch disc, pressure plate, throw-out bearing, pilot bushing, alignment tool) TT disc has more contact area and pressure plate is stronger. A TT clutch kit must be used with a TT flywheel and vice versa because of the bolt pattern on the flywheel where the pressure plate bolts up. The pilot bushing mounts in the back of the crankshaft and is different for Auto and 5 sp. When converting auto to 5 sp you must remove the one for the auto, which can be difficult to remove without something to heat the crank up with and a pilot bushing removal tool. We do not

recommend used clutch components. Some choose to go with aftermarket performance clutch kits. We stock new Nissan and several aftermarket performance clutches)

-Pressure plate bolts, 9 required (Same NA and TT. Not supplied with OEM clutch kits. We stock used ones and recommend new longer ones for applications involving lightweight flywheels which the bolt holes tend to strip out on)

-Plates between motor and transmission (1 piece on a 5 sp, two pieces on an auto so the torque converter bolts can be accessed)

-Front half of the driveshaft (Rear section is the same for corresponding auto and 5 sp. models. The front sections are the same length for 5 sp TT and NA applications but the U joints are larger on the turbo, but they can be used interchangeably. Some may choose to go with one piece replacement driveshaft, which we offer for any application for \$250, no core. We also offer good used and rebuilt sections.)

-Clutch booster, lines, and vacuum canisters (TT only, added to ease the pressure needed to push in the clutch pedal because of the stronger pressure plate on the TT. Works off of vacuum from intake like brake booster, but includes a maze of piping including to vacuum reserve canisters, one under the master cylinder and one under the drivers fender. We do not recommend adding this when doing an Auto to 5sp conversion on a TT. We just use the NA clutch master cylinder and pedal setup which is cheaper, easier to install, cleaner, and the stiff pedal isn't something that our average customer has a problem with anyway. We can supply the booster and accessories used or new it if desired)

-Clutch master cylinder (The TT one is different corresponding to the TT clutch booster. Used, rebuilt, and new available)

-Clutch slave cylinder (Same NA and TT. Used, rebuilt, and new available)

-Metal clutch hydraulic lines (Including section going up to bleeder valve on pass side apron, same NA and TT. These are almost impossible to install correctly with the engine in the car, because they run out of the master cylinder behind the motor. We just pull the motor when we do a conversion, partly because of this. Used lines in stock)

-Rubber hydraulic line (Attaches to slave cylinder and goes up to metal lines, different length for NA and TT, because of the position of a bracket on the frame where the metal lines end which doesn't exist on an auto so when doing a conversion it really doesn't matter which one you use. But we stock new TT one's because they are longer and the used ones can develop leaks.)

-Clutch pedal (Different NA and TT because of the booster setup on the TT. Used ones in stock)

-Brake pedal (Same for NA and TT. Used ones in stock)

-Shifter/linkage with bushings (Same NA and TT. We stock used shifters along with the brace that attaches it to the transmission. We always use new bushings)

-Shifter support (Holds shifter in place, rubber insulator made into plate holds shifter up. We supply them new, the rubber support on the used ones is usually cracked or broken into, which we usually repair by just sandwiching a metal strip in between the plate and body, and drilling a hole in it to support the shifter. Doesn't produce any terrible vibration or anything and is great for

those who feel the need to jerk the shifter around and don't want to keep breaking that rubber brace.)

-2 rubber shift boots (New and used ones available. They sit under the leather shift boot and attach to the shifter brace plate. They drastically reduce noise and some heat from the transmission below)

-Shift boot and lower metal retainer (New ones in stock. The console piece around the shifter is the same for the auto and 5 sp, but you have to screw in the metal piece on the underside to retain the shift boot.)

-Shift knob (We stock new ones because the old ones are usually in poor shape)

-Alternator/transmission wiring harness (This is the only harness that has to be replaced and is very different between Auto and 5sp. It plugs in at several plugs behind the passenger headlight and runs back down the passenger side of the engine towards the transmission, it is the same NA and TT. It plugs in almost exactly right, except for a little splicing has to be done on one plug. We have good used ones in stock.)