4 Speed Automatic for your Fiero - 440-T4/4T60/4T60E

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The Turbo Hydra-Matic 440T4, later renamed Hydra-Matic 4T60, and the Hydra-Matic 4T60E are a popular swap for the Fiero. This is partly due to the fact that they are original equipment with many of the popular engine swap choices. They provide an additional gear (overdrive) and increased power handling with only a minor weight increase over the Fiero's Hydra-Matic 125C. They are almost a direct drop in, requiring only a few small modifications to existing parts.

The 440T4 or 4T60 is the first generation of transversly oriented 4 speed automatic transaxle. It was used in GM mid and full size vehicles until about 1990. It only requires manifold vacuum to the modulator valve and throttle input via the throttle valve cable to operate. Both are adjustable for shift quality. Torque converter lockup is controlled by the ECM, or aftermarket kits are available for vehicles without a computer. The 4T60 was replaced by the 4T60E. The 4T60E is shifted electronically using solenoids controlled by the ECM. It still has a vacuum modulator, but the TV cable is eliminated. It will not operate without computer control, therefore it can only be used with an engine that was originally equipped with a 4T60E.

There are several different overall drive ratios available in these transmissions ranging from 2.73:1 to 3.73:1, and possibly more. The overall ratio is a combination of the drive & driven sprocket ratio and the final drive ratio, and has nothing to do with 1-4 gears. The sprockets and chain are located behind the side cover and are available in 33/37, 35/35, and 37/33 combinations. The drive sprocket takes the engines rotation and transfers it through the chain to the driven sprocket and 1-4 gear sets. At the end of the 1-4 gear sets, on the tail end (passenger side) of the transaxle, is the final drive planetary gearset and differential. The final drive gears can be changed on a 4T60E by removing four bolts and a snap ring. To change final drive gearing on a 4T60 you need to entirely disassemble the transaxle.

(NOTE: Bolt-in mounting brackets and shift cable brackets are now available from Fiero Addiction, you no longer need to track down the correct brackets and do the modifications shown below!)

Mounting the trans in a Fiero is quite simple. The correct brackets can be found on almost any 4T60, and most early 4T60E. They look very similar to the Fiero 125 brackets, but are made to fit the mounting points on the 4T60/E case. There are holes in the brackets that line up with bumps on the rubber mounts to prevent them from twisting when the nut is tightened. The hole in the rear bracket must be re-drilled on the opposite side of the bolt hole so it matches the Fiero rubber mount. Rubber mounts for any year or model Fiero will work, excluding '87 and '88 4cyl autos.

The slotted holes in the cradle for the rear mount need to be moved toward the center 1-3/8" for the correct positioning of the trans.

Slotted holes moved toward center

There is not enough room on the '88 cradle to allow drilling new holes in the correct location. My solution is to cut and section a portion of the cradle as shown in these before and after pictures. The third picture in this group also shows where the rear part of the cradle may need to be trimmed for pan clearance ('88 only).

Cut & section cradle (before)

Cut & section cradle (after)

Rear of cradle may need trimming ('88 only).

The shift lever needs to be flipped 180* to match the reverse pattern of the Fiero shifter. The lever needs to be flat to allow clearance for the exhaust crossover pipe in most cases. It also needs to be shortened to get the correct ratio for the Fiero shifter. It should be 1-5/8" from the center of the stud to the center of the hole. The cable mounting bracket is fabricated using pieces of the 4T60 and TH125C brackets. The part of the TH125 bracket where the cable attaches is cut off and welded to a piece of the 4T60 bracket.

TH125 bracket cut off & welded to piece of 4T60 bracket

With a 3800 engine, the plastic cable end comes extremely close to the exhaust crossover pipe. For those swaps I break off the plastic end and weld on a stainless steel 1/4" female rod end. The plastic end has not been a problem with the 4.9 swaps. Below you can see the adjustable cable and the steel rod end installed.

Adjustable cable & steel rod end

The stock Fiero axles cannot be used with the four speed automatic. For a 4T60 you can use right and left axle assemblies for a '89 Pontiac 6000 with 4T60 and option JA1 light duty brakes. The correct part numbers are A1 Cardone 60-1115 and 60-1078 or CCT 8471 left and 8430 right.

For a 4T60E you can use the same left axle for a '89 Pontiac 6000 with 4T60 and JA1 light duty brakes on the left side, and a left axle for a manual Fiero on the right side. Some people have reported having problems with the stock M/T Fiero axle on the right side, but they have always worked well for me. There are plenty of other combinations of parts that can be used to assemble axles that will fit, but those are the simplest solutions I have found. They can be purchased off the shelf at most auto parts stores and if your transaxle is mounted as shown, they install without modification.

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