

# SECTION 07-03 Transaxle, Manual—MTX IV

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## VEHICLE APPLICATION

Taurus with 3.0L SHO Engine.

## DESCRIPTION

The MTX IV 5-Speed Manual Transaxle is similar in design and function to the MTX III 5-Speed Manual Transaxle. The major differences between the two transaxles are that the MTX-IV has wider gears, larger bearings, a four pinion aluminum differential assembly and a strengthened case.

The transaxle is a front-wheel drive powertrain unit. The transaxle and differential assemblies are housed in a single two-piece aluminum alloy case known as a transaxle. The transaxle is bolted to the back of the engine and is mounted transversely in the vehicle with the engine on the right and the transaxle on the left. Three separate gear shaft assemblies are used; the input cluster gear shaft, the main shaft for first to fourth gears and the fifth gear shaft. Helical cut gears are used in all forward ranges for quiet operation. All five forward gears are synchronized for ease of shifting.

The fifth gear range provides an effective overdrive ratio, which allows the engine to operate at reduced rpm providing reduced engine wear and improved fuel economy.

An automatic transmission-type fluid is used as a lubricant to ensure shifting ease under all driving conditions.

The 5-speed MTX IV manual transaxle assembly consists of a transmission and four-pinion differential, transversely mounted side-to-side in the vehicle. The transmission and differential are housed in a two-part lightweight aluminum alloy housing which is bolted to the engine assembly. The four-pinion differential is required due to the high output torque of the 3.0L SHO engine. The four pinion differential assembly is supported by two opposed tapered roller bearings and preload is maintained by means of a selected shim. The inboard constant velocity joints are positively connected with the differential side gears by means of splines and secured in the case with two circlips. The final drive gear is riveted to the two-piece aluminum differential case. Service replacement of the final drive gear or the two-piece aluminum differential case requires that the rivets be drilled and driven out of the case and service nuts and bolts be installed.