MANUAL TRANSMISSION REBUILDS AND UPGRADES

"Ten Back" (Issue 70, page 12) mentions my discussion of the NV4500 transmission. In more recent issues, we discussed rebuilding the six-speed NV5600 manual transmission (TDR Issue 64, page 85, and Issue 67, page 84). In this issue, we will expand upon comments made in Issue 68 (page 88) on the G56 six-speed manual transmission used for the last six years in Turbo Diesels.

As was discussed in Issue 64, p. 85, there are a lot of New Venture NV5600 six-speed transmissions in service, what with their being used from 1999 through 2005. This transmission is far heavier (350 pounds versus 200 pounds for a NV4500), and more complex to rebuild than the older NV4500 five-speed. This stout transmission has excellent ratios for our Turbo Diesels (5.63, 3.38, 2.04, 1.39, 1.00, and 0.73 forward gears, and 5.63 reverse ratio). Some owners are now reporting problems with them, especially at or beyond about 150,000 miles. Some owners feel that overfilling with one to three quarts of lubricant (in addition to the factory specification of about 4.2 quarts) helps longevity, due to better oiling of the rear bearing.

As we discussed in Issue 67 (page 84), the Standard Transmission and Gear Power Lube Package appears to be the real "fix" for this oiling problem. If the rear bearing seizes, the owner often continues driving, and reports later that the transmission "freed up" soon after experiencing "drag." In these cases, the bearing is welded to the outer race, which then spun in the main case. The case can be salvaged with a precision machined hole and a specially made sleeve, but the gear case can also be cracked, making the core transmission of little value to a rebuilder. The photo at the top of page 86 of Issue 67 shows this bearing failure. Here is a photo of a main case that the bearing race spun and damaged (photo 71-2).

71-2 NV5600 main case with worn hole for main shaft bearing in the middle of the photo.