New Process 2500

## Five-Speed Light-Truck Transmission

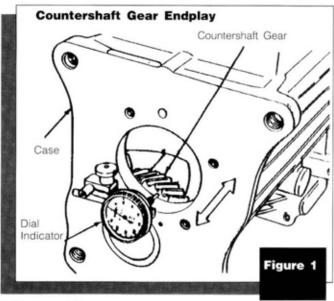
By Mike Weinberg Contributing Editor

Also known as the 535, the New Process 2500 is a five-speed unit designed for Chrysler's light-duty truck line. The case and extension housing are all aluminum. This is a top-shifted unit with all gears including reverse helically cut and

in constant mesh. There are three shift rails in the gearbox, with a special lockout on the reverse rail to

prevent accidental shifts from 5th to reverse. All forward speeds are synchronized and 5th gear is overdriven for better mileage at highway cruising speeds.

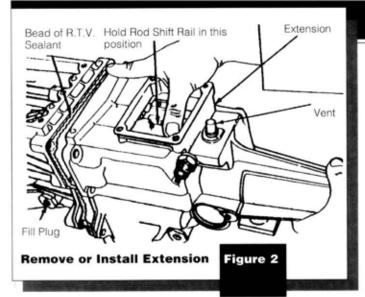
There are several things to be



careful about when tearing down one of the units. Underneath the main case access cover are three detent springs and bullets which are easily lost. The countershaft



## **Up To Standards**



a number of washers on the mainshaft that are positioned by anti-spin pins. Note their location and be careful not to lose them. After removing the shift rails and the gear train aft of the center-support plate, the mainshaft, countershaft and center-support plate come out of the case as an assembly, leaving the main drive gear in the case. The usual careful inspection and proper rebuilding procedure will put this box back in the driver's hands.

The weak point of this unit is lubrication, check for leaks. Even one cupful too little of oil will be fatal for this unit, with the main drive and countershaft front-bearing assembly usually the first casualty.

uses tapered bearings. Take an endplay reading BEFORE teardown you might learn just how deep the water is you are about to plunge into. Endplay on the countershaft should be 1/1000 to 5/1000 of an inch, and is set by a selective shim under the rear countershaft bearing race (See Figure #1, page 26). When you remove the extension housing, it will be necessary to reach into the shifter opening and depress the reverse lockout so that it will clear the tail housing (See Figure #2). The trans shift rails run through a removable center support plate with two interlock plates between them (See Figure #3). Don't lose the plates because nobody will have

TRANSMISSION DIGEST Interlock 1-2 Shift Rail Plates Figure 3 1-2 Shift Rail

This unit is spec'd to run on 10w-30 motor oil. We have found using 10w-50 synthetic motor oil, with an overfill of one-and-a-half quarts really helps to prolong its life. The

\* TECHNICAL

FIELD FIX

held on the rails by TAPERED pins, which must be removed from the top. If you make

The shift

them in

forks are

stock.

the mistake of trying to hammer them out from the top

pin, bring your lunch; it's going to be a really long day (See Figure #4). There are

**Shift Forks Tapered Pins** Adjustable Pliers Figure 4 Tapered Pin

easiest way to increase oil capacity in any unit is to use a plumber's street elbow with a threaded plug in the big end. There are no specs on how much extra oil you can add, only trial and error. Add oil until the unit vents and then drain some off to allow for heat expansion. The plumber's street elbow permits the addition of about an inch of extra lube above the normal fill level. This creates a safety margin for units that suffer from lube problems and aids in dissipating heat buildup during operation.

As in any repair or rebuilding procedure, the smart money gets a repair manual for the unit at hand. It will give you pertinent spec's and the proper method of disassembly and reassembly. Hell, if all else fails, read the directions.

like a roll