BEEFING THE COMET AUTOMATIC

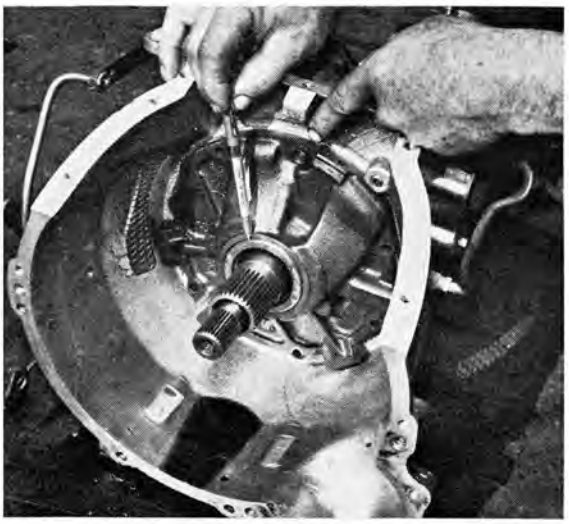
Adding horsepower to the Comet/ Falcon compacts makes these little bears real stormers, but a few minor changes in the transmission department are necessary to handle this new-found energy

Photo Story by Eric Rickman

The laws of economics being as they are, it stands to reason that the compact car manufacturers aren't going to readily design an entirely new transmission for their cars if existing units may be used. It also follows that with lighter cars and less horsepower the existing units need not be as strong as those for the bigger cars and engines. This makes for further savings. It was this particular law of economics with which we tangled immediately after cranking more horses into our little red Comet wagon. The automatic transmission had begun to slip at 70 horses, and blew out completely with 100 horses. The next step, of course, was to find out just what could be done to beef up the Comet transmission.

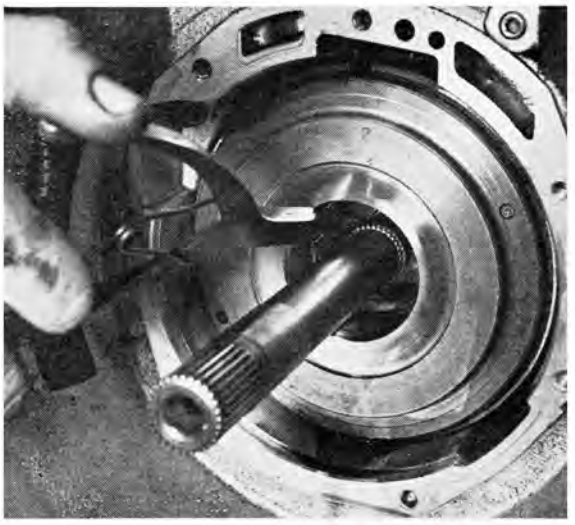
In line with the aforementioned use of existing designs we were pleased to find that the 1959-'60 Ford-O-Matic and 1960-'61 Falcon & Comet two-speed automatic transmissions are almost identical internally. The small car transmission utilizes a smaller torque converter, and the transmission housing is shaped differently to fit the little six cylinder engine. The only internal difference proved to be right where

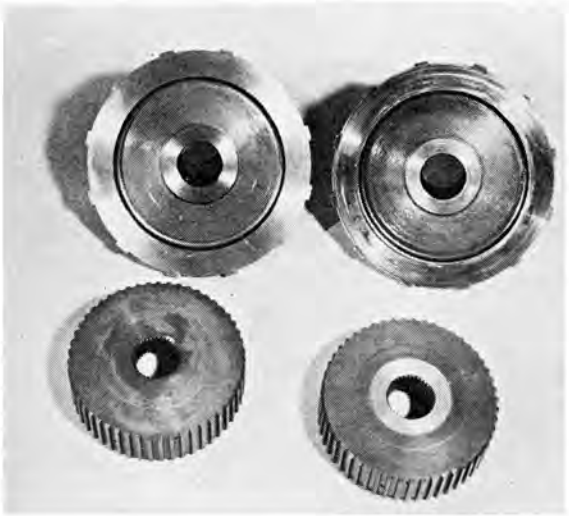
RIGHT — Transmission expert George Crabtree removes thick piston from clutch drum. We recommend this part of job be done at your local transmission shop, as a special tool is needed to depress the heavy piston return spring safely. Snap ring and collar serve to lock piston and spring within clutch drum. Note very clean bench top. This is necessary.



LEFT — To get at front pump assembly shown here, the torque converter slips easily off the splined shafts. This unit must be removed to get at the clutch drum. Pencil points out front seal which should be replaced. Finger indicates bottom screw which must be well sealed when the transmission is assembled.

RIGHT — To remove the clutch drum a small snap ring must be removed from the inner splined section of the shaft. Now the complete clutch drum, sun gear assembly will slide out of the transmission as an entire unit.





LEFT — Removal of large snap ring in sun gear cover permits disassembly of clutch drum. Top row left is new sun gear unit. Right shows a badly worn unit. Bottom row left is new clutch hub. Right, wear around shaft opening is quite evident here. Check closely for wear signs.

RIGHT — Removal of snap ring that holds piston return spring in place is accomplished using a special tool in bench vise to completely compress the spring. We made up a channel iron tool which served the same purpose.

LEFT — An extra thick clutch piston with completely worn out set of clutch discs and plates appears on the left. New, thin replacement piston and the ten new clutch discs and plates are shown at the right. Be sure and alternate the discs and plates when stacking them back in the clutch drum. Note that steel disc goes against the piston face first.

RIGHT — Both inner and outer piston seals shown here must be replaced. Bronze bushing in the clutch drum must not be worn.

our problem lay. With less car weight and horsepower to handle, the engineers decided to cut down on the number of clutch plates and discs in the compact transmission. The big car transmission utilizes five clutch discs and 5 clutch plates for a total of ten clutch units. The little one has only two of each. To take up the space left by the missing 6 clutch members the clutch piston was made thicker. Ergo! All you have to do to convert your compact transmission to a big car shifter is to install the thinner big car transmission clutch piston assembly, (part No. COAP-7A262-C) and install the five each clutch discs and plates that the big car uses, (parts No. Plate 77573, Disc 7B164). If you are unable to obtain the proper piston and have a machine shop handy, you can chop the thick piston down to .447 of an inch and you're in business. Inspect the oil pump screen in the bottom of the transmission, and if any quantity of metal flakes is present you better have the trans completely checked over by an expert. He can replace worn parts when it goes back together. When making this conversion, a few words of caution; replace all seals that have been disturbed, and be very careful when reassembling not to damage any of the new seals. *Be clean.* The transmission will now engage a bit more positively, but since when did a hot rodder ever object to a good solid shift?