

SECOND BREATH FOR AUTOMATICS

New improved Hone Overdrive offers automatics extra ratios for more versatility, economy, and reduced engine wear.

By ERIC RICKMAN

Regular readers of HRM will recall the Overdrive For Automatics feature in the July 1958 issue. Since Detroit continues to manufacture high powered automobiles with automatic transmissions sans overdrive, there seems to be a greater than ever need for the "Honeamatic."

Fred Hone, originator of the overdrive for automatics idea, has not been idle since HRM ran the story of his earliest work in this much neglected field. He has refined his original overdrive unit into a new and more streamlined package which directly replaces the tailshaft housing of present automatic transmissions, taking up no extra room and requiring a minimum of labor.

Reasoning behind an overdrive for an automatic falls into a "have your cake and eat it too" situation. The present big
(Continued on following page)



Fred Hone, originator of the overdrive for automatic transmissions idea, displays his latest improvement, a Honeamatic Overdrive unit coupled to a Ford Cruise-O-Matic transmission.

SECOND BREATH FOR AUTOMATICS *continued*

car engines certainly have enough horsepower to pull an overdrive. This fact was graphically demonstrated recently when Hone took us for a ride on the Los Angeles Freeways in a '59 T-Bird equipped with his new OD. Cruising along in conventional at 65 mph with the tach indicating a normal 3500 rpm, Fred flicked the three-position, column-mounted electrical overdrive switch. Suddenly the tach dropped back to 2450, but we continued to cruise effortlessly at 65 mph. The only noticeable difference was the lessening of engine and fan noise.

The Honeamatic gives exactly 30% less engine speed for any given axle speed. This would obviously indicate a benefit of 30% less engine wear and, theoretically, 30% less gas consumption. Unfortunately, overall mileage doesn't come out quite as well. A substantial increase in gas mileage will occur, however. Hone gets 19.9 mpg driving to work (freeway traffic) where he previously could expect only 14.5 mpg. This is generally heavy-footed driving, with speeds of 65 mph common.

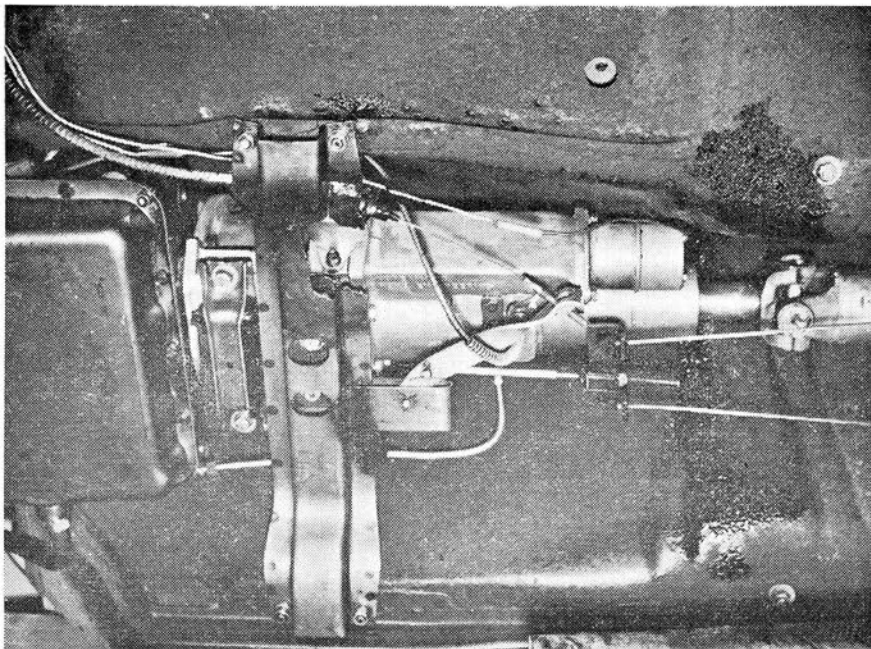
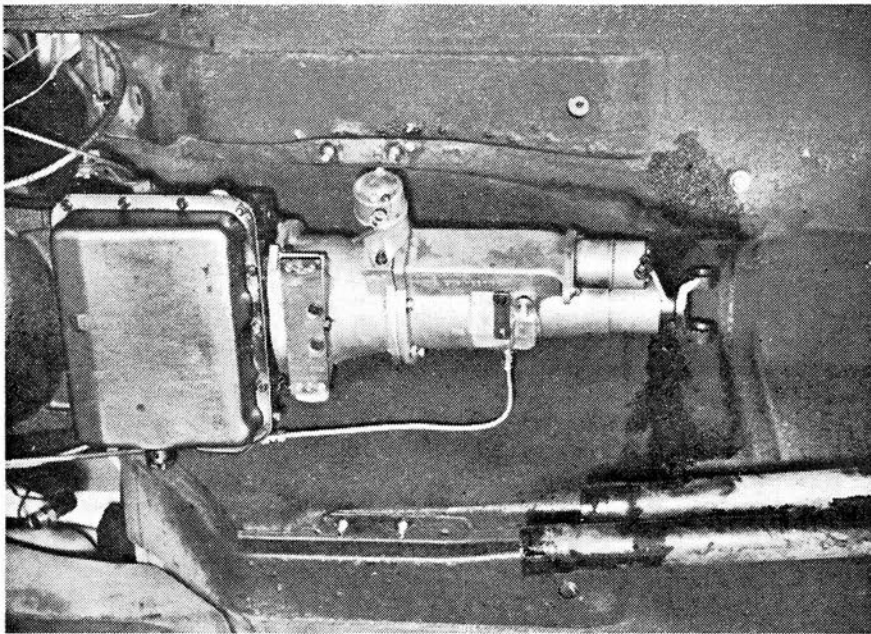
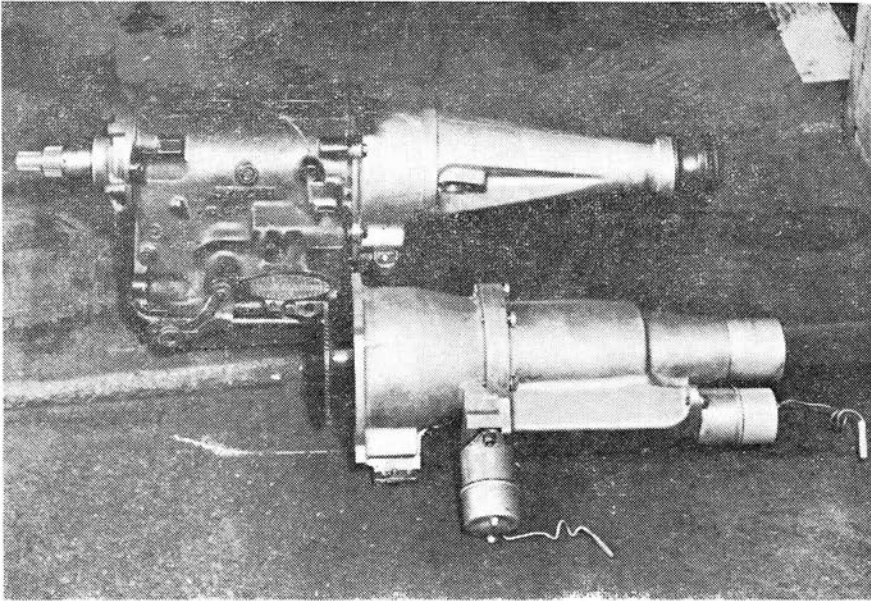
With a little thought, some rather interesting facts begin to emerge. Since the governor controlling the shifting point of the transmission is located on the transmission output shaft ahead of the OD, it is still spinning at reduced rpms when the car is really turning on. The result of this arrangement becomes quite apparent when the throttle is depressed at 80 or 85 mph. The transmission still shifts down normally into second (passing) gear, but with the OD engaged a final ratio of second overdrive is attained. This ratio is slightly under conventional high, and just enough gear to give a surprising surge of acceleration. Gear happy rodders may sit down with a dream wheel and brew up a really big nightmare figuring out possible ratios offered by the Honeamatic. A relatively low gear may be run for drag racing, yet the OD allows plenty of ratio for easy highway travel.

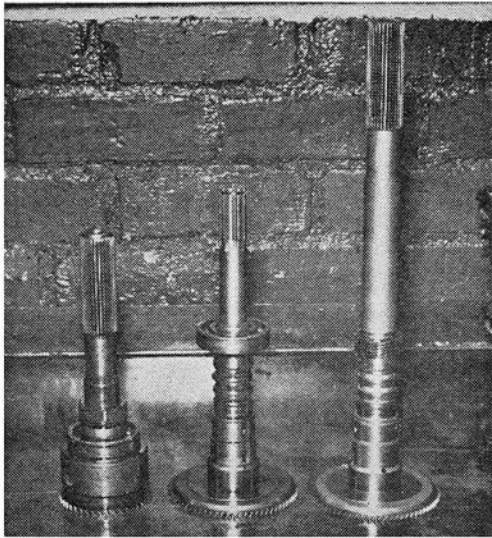
It goes without saying the advantages offered to the driving public using the Honeamatic are tremendous. The slightly

TOP—Relative size of the new Hone Overdrive unit is apparent. Unit is no larger than the tailshaft section which it replaces, weighs little more than stock unit.

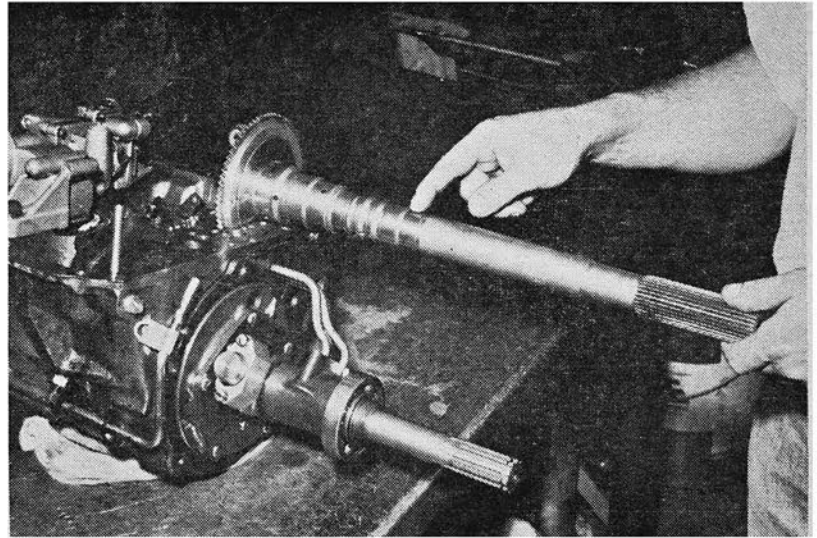
CENTER—Honeamatic in position it will occupy under car. Note ample clearance at all points. Tubing at bottom of photo carries oil to unit from trans oil cooler.

BOTTOM—OD uses stock rear motor mount. Notched crossmember found to be unnecessary. Speedometer cable moves to top of overdrive on production models.





Hone makes special shafts on left. Shaft at right is stock Ford. Center shaft is new trans output shaft; left, new overdrive output shaft.



Rear of transmission with Honeamatic output shaft installed. Finger points to stock speedo gear location on stock shaft. Ball bearing located at this point on new shaft gives added support within the new Hone Overdrive case.

lower ratio in OD will be ideal for extra wind when towing house trailers, competition machines, drag boats, or what have you. Naturally, the owner of the Ranchero or El Camino will appreciate the opportunity of using the pickup for work horse jobs and still be able to drive distances easily.

The Honeamatic unit consists of a case and input and output shafts manufactured by Hone. The rest of the OD contains stock Borg-Warner components, ensuring parts availability at any Ford or Chevrolet agency. Hone has engineered the OD case to the same overall length as the tailshaft of the automatic which it replaces.

Hone's OD is controlled electrically by two solenoids and a three-position switch mounted on the steering column. Three positions in the control switch are necessary to give an interlocking action to avoid the possibility of the unit trying to engage itself in two functions at once. In the first (off) position, both solenoids are de-energized and the unit is locked in conventional direct drive. The parking lock position in the transmission remains effective. The second position of the switch energizes the rear solenoid, driving the OD shift rail forward and unlocking the free-wheeling unit. This gives direct drive free-wheeling. The switch is normally passed through this position and into the third position. The second position merely serves to separate the action of the solenoids so they will actuate in proper sequence. The third position energizes the side solenoid which controls the locking pawl, thereby engaging the OD.

Lubrication problems were neatly solved by routing the cooled oil returning from the transmission cooler in the radiator directly into the OD for full pressure lubrication. The oil then flows forward

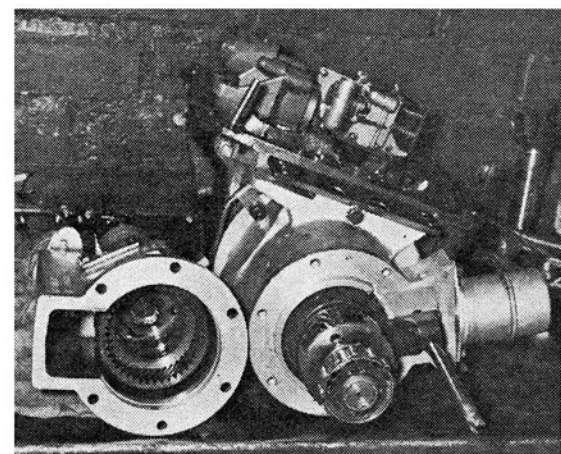
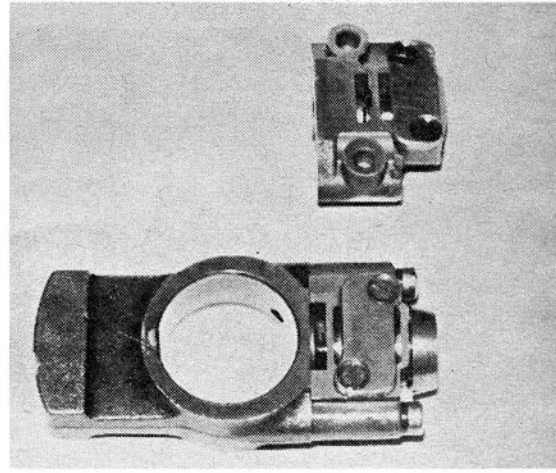
into the transmission sump. An automatic transmission with OD can be left in the OD position for town driving with no ill effects, as the fluid coupling present in many automatics will allow the engine to rev enough to compensate for the added load of the bigger gear.

The unit requires the removal and partial disassembly of the transmission to complete the installation, therefore it is not recommended as a backyard, do-it-yourself project. Local auto dealers or transmission specialists would be the logical people to do the job. Most auto repair shops charge fifty dollars or more to remove and replace automatic transmissions. Other work costs more. Some late model automobiles come equipped with very high rear end ratios. Many new Fords carry ratios of 2.69, consequently an OD final of 1.89 would result, which is far from desirable. Rear end gear ratios in the area of 3.60 to 3.90 would be advisable. Look for extra cost here, also, but the end result should be worth the trouble and cost involved.

Since a tear-down of the transmission is required to install Hone's shorter transmission output shaft, while doing this part of the job on the Ford transmissions, it is a good idea to convert the shifting governor to the later 1960 unit. This is a matter of two small screws. The latest control has a slightly wider spread of shift points. It does away with the early transmission's tendency to delay the shift from low to second with consequent over-revving of the engine.

The Honeamatic is now available for Ford's Cruise-O-Matic (three-speed) and will soon be on the market for the two-speed Ford-O-Matic, Powerglide, Hydra-Matic and the early Studebaker with open driveline.

PHOTOS BY RICKMAN



TOP — Replace early shifting governor body assembly with later (upper) unit, Ford part number B9AP-77131-C. This allows quicker shifts without over-revving.

BOTTOM—Disassembled Honeamatic reveals Borg-Warner components. Left, rear sun gear; right, driving planetary gears. When engaged, unit provides hill-holder.