



HUDSON NOTES

By George Schmidt

PARTS & PIECES

FOR ACCURATE reading of the engine timing marks on flywheel, they should be viewed head-on (not at an angle), to avoid parallax error. This can be difficult, especially on engines which have much extra optional equipment at the side. Later Hudson stepdown engines had a small metal pointer added at timing window which makes accurate reading much easier, and this pointer also fits earlier engines, both 6's and 8's.

AN ARTICLE in *Motor Age* magazine a few months ago (October 2005) states that "A self-shifting transmission that allows the driver to select the gear has been under development for almost a century. Although a fully automatic transmission with a torque converter and planetary gears was finally introduced on the 1939 Oldsmobile, engineers never gave up on the idea of an automatic sliding-gear transmission."

There follows a fascinating description of the '93 Saab Sensonic, the more recent Toyota MB2 Spyder, the contemporary BMW Sequential Manual Gearbox (SMG), and Porsche's 1980's dual-clutch 6-speed system (now also available on Ferrari, Maserati, Volkswagen, Audi, and others). All of these are sliding-gear units, nowadays of course with a plethora of speed and torque and throttle sensors, computer circuitry, electronic controls, microswitches, etc. attached—but with no fluid torque converter. Shifts are smooth, effortless, and unusually quick, and are sequential or fully automatic, with manual override provided.

Author of the article is the magazine's Tech Editor, but except for one reference to Mercedes' late-'50's Hydtrak (which had clutch control at shift lever, much as on some later VW's), he unfortunately tells us almost nothing about the history or mechanical antecedents of these transmissions. Perhaps he never heard of the '02 Sturtevant (1902, that is), the '34 Reo, the '39 Maybach... or the Hudsons of '32 to '51!

However, he does point out the higher efficiency of the sliding-gear units, and suggests that if they eventually come down in price, we are likely to see many more of them in use.

A few years ago it may perhaps have seemed that a system such as Hudson's Drive-Master (which provided automatic shifting of a standard-type gearbox) was merely a dead end in automotive evolution; but of course it is not. The concept remains alive and well today.

THE HYDRAULIC Hill-Holder (Wagner NoRoL) seems to be among the rarest of Hudson accessories even

though it was available 1940-49 and perhaps longer, in kit form for dealer installation. It was much more familiar on Studebaker, being standard on some models and optional on the rest. It was a modern substitute for the old-time "sprag" sometimes attached to the rear axle in the early days.

The device needed to be mounted on car frame in a perfectly level position, with proper connection to hydraulic brake lines and with its linkage attached to the small "end lever" on clutch pedal shaft. Its purpose was to prevent car from rolling backward when brake pedal was released, with car stopped on an upgrade—it would keep the brakes locked until the clutch was again engaged. Normally it was designed not to work when the car was level or on a downgrade, although a later version was used as an "anti-creep" on cars with automatic transmissions.

Does anyone in the Club have an original-type Hill-Holder on his Hudson (or possibly still in the factory kit)? If so, please let us know, and also tell us if possible how well it works!

AUTOMATIC BATTERY fillers appear to be another scarce accessory although Hudson listed these too during 1940-49 and probably longer. They were also available for Chrysler and other makes, in each case with appropriate car name on the glass bottles. They were for 6-volt batteries, with three bottles and tubes (one per cell). They varied slightly over the years, with early examples requiring the battery filler caps to be drilled to accept the tubes, and later ones (more reliable) having a hole drilled in the top of the battery itself to accept a plastic plug and tube. These units worked by thermal action (not gravity) to maintain a constant fluid level in each cell.

Plain water could be used in the bottles during mild weather (it soon mixed with the battery electrolyte), but in winter acid solution (drawn from battery or mixed elsewhere) was recommended to avoid initial freezing in bottles.

Again, we would much like to know whether there are any working (or non-working) examples of these devices in

the Club today. Please write to this columnist or to the Editor.

SPEEDOMETER service information is difficult to find. Hudson repair manuals and most others have little or nothing on the subject. Probably the makers (Stewart-Warner) preferred to reserve this information for their designated service shops. One test involves spinning the unit at exactly 1000 r.p.m. (or 2000 r.p.m., for some models). This should cause a reading of just 60 m.p.h. (1 mile per minute). If not, correction can usually be made by loosening or tightening the speedometer hair-spring slightly. Usually there is a 60 m.p.h. mark visible on the face when dial figures are removed.

However, the speed indication (and mileage count) will still not be correct if the drive gear and pinion gear at transmission are not right for the car's rear-axle ratio and tire size. On most Hudson stepdowns the little pinion at lower end of cable

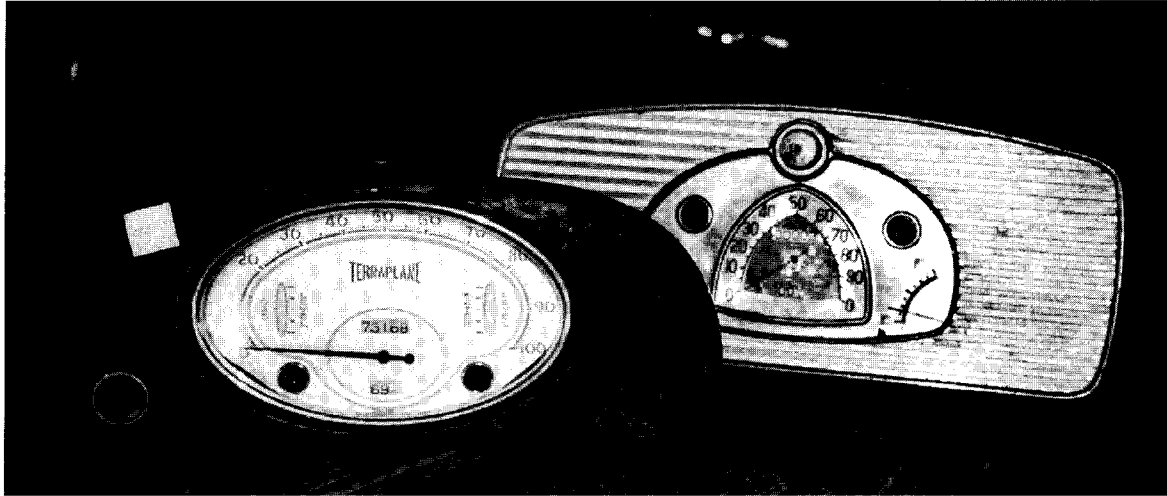
has either 15 or 18 teeth, and I have found—with the help of a test run with our local police department—that neither is correct for my car. I need either 16 or 17 teeth for better accuracy. (Can anyone help? Please let me know.) The pinions were standard Stewart-Warner parts fitting Hudson and other makes.

Because of the change in standard cable speeds from 2000 to 1000 turns per mile during the stepdown era, a few Hudsons circa 1951 may have a 1:2 (.500) geared adapter placed on transmission. Later transmissions made the change internally. When changing speedometer heads on these cars, be sure to use one designed for the correct cable speed; otherwise readings will be halved (or doubled). Check this also when changing the transmission to one from another model year.

Metric speedometers, showing kilometres rather than miles, were an available option on 1946-47 Hudsons, mostly for cars to be exported. No doubt they were available in some other years as well, but I have found no

listing of those in U.S. parts books. I recall one 1935 Terraplane from Denmark which had a metric speedometer (and ugly European-type "flip-up" turn signals). Perhaps readers can tell us of other examples. Another option in 1946-47 was a speedometer with provision for connecting a taximeter. For earlier Hudsons, 1941-42, a kit was available to connect taximeter at the transmission.

MOST HUDSON speedometer heads have an oil hole and wick at the rear bearing. It is better not to use



ordinary oil here because of thickening in cold weather. Use special speedometer lubricant. Speedometer cables, too, should have a temperature-resistant lubricant, such as the bright pink grease available from Stewart-Warner. Graphite lubricants can also be used. For this project it is necessary to pull the cable nearly out of its sheath, from the top. Lubricate cable (usually just the bottom half), and replace, being sure that bottom squared end of cable is properly engaged in speedometer pinion, and upper squared end is properly engaged in speedometer head. Avoid any kinks or sharp bends in the cable or its sheath. Use longer cable (from Pacemaker or Wasp) if available.

Check inside of speedometer housing for peeling paint; clean and repaint if necessary. Paint may be white or have a slight cream or bluish tint. Check lighting of speedometer, clock, and other gauge dials at night. They should be fairly uniform as to brightness and color. If not, the paint tint and careful adjustment of internal

lighting baffles can make an improvement.

If speedometer pointer sticks at its zero stop until car is moving at several m.p.h., slip a small piece of plastic tubing over the stop, and bend back slightly to adjust. The speedometer pointer (like clock hands) must not touch or rub anywhere. All internal speedometer parts must rotate freely and without wobble, and hairspring must not be out of shape. Where damage has occurred, the usual cause was a whippy speedometer cable. Keep

cable properly lubricated. Loss of magnetism at cup mechanism (which spins, thus exerting a proportionate pull on pointer assembly) is rarely a problem.

Odometer gears, too, must be free and properly fitting (no mixing of 1000-type and 2000-type parts, please). If numbers on a replacement unit must be re-set to match car's present mileage, be sure that each is hooked correctly back in place. On some much earlier units, check also for worn fiber gears. For models 1937 and up, modern replacement speedometer cables (inside portion) should fit O.K., if correct length is available or can be made up. Earlier cars used a different and larger cable, and we'd like to hear from someone who has worked with those.

EASTER (and springtime)
greetings to all!



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