
Hudsonotes

Column of Mechanical Miscellany
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Which Hand?

THERE WERE THREE basic versions of Borg-Warner overdrive used on Hudson products through the years, two of Drive-Master, three or more of vacuum clutch control, two of Hydra-Matic . . . and probably more than that of most other popular options. Even the B-W 3-speed automatic used during 1954 came in two versions, the later one being more reliable.

Electric Hand gearshifts, too, underwent several evolutionary changes year to year. The original version was offered 1935 through early 1936. It was available separately or combined with a non-electric type vacuum clutch. This "Hand," like the later ones, had a double-acting vacuum cylinder plus a spring-loaded vacuum diaphragm for shifting, both controlled by three solenoid valves in a single case. Selector switch, with its miniature shift lever and "H" pattern, was on steering column. There also were several other switches, including a separate clutch switch or "pedal circuit breaker," plus one at gearbox in the form of a square "contact plate" and sliding block. The latter served as a neutral switch, stopping shifts at the center point when required.

This early Hand mechanism is pictured in April '78 WTN, p.51. A remov-

able floorshift lever was stowed in the side kick panel. Drivers who forgot to remove and stow it when using Electric Hand were likely to be reminded by a sharp slap to the right leg when the system operated.

A second type Electric Hand, slightly modified, was supplied for the late-1936 and 1937 models. It too could be had separately, but sales emphasis was upon the combination called "Selective Automatic Shift" — new 1937 type vacuum clutch with electrical controls added to the old mechanism, plus an improved Electric Hand. Improvements to the Hand included a new larger vacuum cylinder for more shift power, and, in place of the old contact-plate switch, a new-type neutral switch which mounted at one end of the vacuum cylinder. Reports are that although the new switch was better, it still was troubled with dirt, clogging, etc., and had to be cleaned periodically.

One problem with both these types of Electric Hand was that gears could be clashed all too easily when shifting; and also, it was impossible to "feel" at the selector handle whether or not they were safely in mesh after making a shift (as can be felt when using manual lever).

The third version of Electric Hand, 1938-1939, added a device to help correct this problem. Called a "gear abutment indicator," it was a solenoid-operated detent built into selector switch on column. It exerted a light spring pressure against shifts into low or reverse, so that handle would spring back to neutral when released if the gears were not properly meshed. When they were meshed, an extra shift-rail switch at gearbox turned off the solenoid, removing spring pressure and

allowing handle to remain in the gear position selected.

The "interlock" switch, for control of sequencing (first the preparatory move to right or left neutral, and then the actual shift forward or back) was also redesigned for '38; and the clutch switch was provided with a slotted friction mounting to make it self-adjusting for wear at disc. Wire coding and connectors again were revised slightly, and a new version of the factory test kit, with appropriate colored lights and wire leads, was available.

Vacuum clutch offered along with this Electric Hand (or separately) was the new 1938-40 type, very similar to the 1941-47 and 1948-51 versions. During 1939 the Electric Hand was available (except on Hudson 112's) as an alternative either to the standard floorshift or to the non-electric Handy Shift on column. But apparently not very many Hands were built in that final year, and they are undoubtedly rare today.

YET IF THERE'S ONE feature which people today seem to remember best from a Terraplane or older Hudson once owned by family or friends, it's the Electric Hand shifter, with miniature lever atop column. Often this appears to outrank even the cars' performance image — the later Hornet race victories, for instance — in popular memory.

Related gearshift devices brought out by several Brand X's shortly afterward are not as well remembered, though most buffs do recall that 1936-37 Cords used a nearly identical system to shift the front-mounted transmission without use of long rods as on earlier models.

Foreign-car cognoscenti may also

recall the "Cotal" system available on a few French and other cars during the 1930's and '40's — Delahaye, Voisin, Delage, Salmson, et al. It resembled Electric Hand in featuring a miniature H-gated shift lever that was actually an electric control switch. This was located on steering column or elsewhere, and usually topped by a red "cherry" shift knob. The shifting itself was done by solenoid electromagnets, but not on a standard sliding-gear transmission: the gearbox was "epicyclic" (planetary) with internal bands and clutches, thus more akin to a present-day automatic (or a Ford "T" 2-speed) in design; and it used a fluid coupling rather than a vacuum-operated clutch. It was offered as a luxury/performance item, and its selective H-pattern control did give it an advan-

tage over one or two competing systems which worked similarly but had only a plain in-line quadrant (much as on a modern automatic or an antique "progressive" gearshift) for the control lever. Classic-car historians usually mention the cotal system, although little is said about its everyday reliability.

In this country several carmakers during the late '30's offered instead a "vacuum shift" which was not preselector type or electrically controlled like Electric Hand and Cotal, but was simply a "power assist" for the hand gearshift lever. Possibly the Evans system (Nash, Graham, Studebaker) would be better remembered today if it had lasted more than the one year in production, 1938 . . . or if that had been a better car sales year. The system featured a small dash-

mounted shift lever, which in the first version, on early-'38 Nash and LaFayette, operated valves to control one vacuum cylinder for shifts fore and aft, plus a diaphragm for crossover (right- to left-neutral and back). Second version, used on all the others, had only the vacuum cylinder for shifts, with crossover not powered; and this type could also be shifted manually without vacuum (and without reaching underhood) when necessary. Evans shifters were available both with and without overdrive, but not with any form of vacuum clutch control. Bendix (maker of most Electric Hand parts) also built a heavy-duty vacuum shifter for use on rear-engine buses.

Whoever built the vacuum-shift units for 1939 and 1940-48 Chevrolet, and for 1941-42 Chrysler/Dodge/DeSoto/Plymouth, these all operated about the same as the Evans (second type above), except for use of a column shift lever (often with distinctive "flipper" knob). Chrysler called its version "Power Shift," and offered it as a slightly simpler alternative to Vacumatic and Fluid Drive before the war. When working properly, the device required only a very light touch and extra-short throw of the lever to shift gears. Repairs, however, were problematical owing to factory's insistence that the unit be serviced by replacing it as a complete assembly only.

Today these power-assisted vacuum shifters can add a bit of interest and driving ease to some cars which may otherwise have few collectible features, but in their own time, like Hudson's more sophisticated "Hand" and Drive-Master, they often were simply disconnected or removed when they ceased to function correctly.

1938 Hudson Selective Automatic Shift.

