
Hudsonotes

Column of Mechanical Miscellany
by George Schmidt
Mishicot, Wisc.

No Hunting

THE ELECTRIC CONTROLS for Hudson vacuum gearshifts — Drive-Master and Electric Hand — sometimes can be persuaded to work faithfully for several years and thousands of miles at a time . . . and sometimes they can't. When they do start misbehaving, the usual cause is poor electrical contact somewhere in the system — especially critical since only a six-volt power supply is used. A secondary cause of trouble is inaccurate operation of a control switch due to slight wear at linkage or switch parts.

One periodic example of the latter, particularly on Drive-Master, seems to be the "neutral switch" arrangement which is designed to stop a shift from either direction at half-stroke, in the center, whenever neutral is selected at hand lever. Contacts here are usually OK, but unless there is plenty of friction at vacuum piston, linkage, neutral switch, etc., this shift tends to overshoot the center point, thus actuating the opposite shift valve and moving back; then the first one again; and so on as linkage oscillates busily around the center position — about like a pneumatic hammer, or a milking-machine pulsator gone wild.

Factory called this condition "hunting," and suggested replacing entire transmission-switch assembly . . . an

expensive cure and not always a positive one. Factory also sought to minimize the problem by providing restricted brass elbows at control valve to slow the shifts; but since languid Powerglide-style upshifts are not always welcome in traffic, these elbows often need to be drilled out somewhat.

Several other corrections for the hunting problem, such as tighter friction packing at neutral-switch shaft, and looser connection at switch linkage, have been suggested in a past WTN article (see "Making Drivemaster Work," Feb. 1975); but sometimes even these are not enough. The twin neutral-switch contacts (inside transmission-switch box, operated by large black cam and the slotted lever at side) are spaced quite close together, and unfortunately are not adjustable. They are held apart only by the thickness of the cam (about $\frac{1}{4}$ "), and this may not be sufficient to damp out the motion, especially if cam tip shows wear. The remedy, which I've used successfully in stubborn cases, is to thicken end of cam by building it up with any smooth flexible insulating material, epoxied carefully in place. I used a piece of leather, $\frac{3}{4}$ " x 2", and about .05" thick; but cloth or plastic should serve as well. Spacing of the "limit switch" contacts will also be affected, but this is not as critical, and can be adjusted to compensate (note setscrew at each side).

Reassemble switch box, install it on car, and adjust the neutral-switch link if necessary. Centering of shifts into neutral may be slightly less exact, but this should cause no problem when driving, if link is set correctly. Grease transfer key and oil joints in linkage.

Sticky solenoid valves can also cause

either hunting or hesitation on shifts. Check them by touching jumper wire from battery to each of the two rear prongs (or to all three in turn) at triple valve assembly. With engine not running, the opening and closing of each valve should be audible, and prompt, as circuit is made and broken. A delay of $\frac{1}{4}$ second or more usually means that the valve needs cleaning out. Although these three valves are harder to remove from car than the two upper ones, they are the same internally, and can be cleaned in the same manner (see WTN, July 1974). A solvent such as lacquer thinner is OK for metal parts and for wiping (not soaking) rubber valve head, but it must be kept out of the solenoid windings. Polish the steel armature and center brass tube with steel wool (000 or finer) when dry. The three valve cages here are a snug press fit in main casting (usually without screws), and great care is necessary when prying them out. Check condition of rubber valve heads. A hardened or swollen one can sometimes be improved by cautious use of sandpaper, plus rewashing, if no replacement is available.

Normal valve stroke is $\frac{1}{16}$ inch. Reassemble the parts, being careful to return each valve to its proper place, without damaging the electric connection to terminal on cover. Do not lose or bend the small valve spring at bottom of each (if too soft, spring can be stretched by 20% or so). Ordinarily these valves are not lubricated; but a light touch of silicone may be used on them.

Factory did not recommend internal cleaning of these Drive-Master valves, but it is sometimes necessary, especially if they have accumulated traces of oil or shock-absorber fluid (from cylinder). In-

ternal repairs were likewise frowned upon although rubber heads and some other parts were available (intended for the Vacuum Clutch valve). On the other hand, factory did recommend internal servicing of the nearly identical triple valve assembly which was used in earlier years with the Electric Hand, and this can be done in the same manner as outlined above.

IF YOU HAVE a favorite fix of your own for any of these electric/vacuum control devices — something which helps keep them working, makes them more reliable or drivable in traffic, etc. — we hope you will share it with us. Write to the Editor or to this columnist, and we'll see that your tip is published. Sometimes the idea is harder to put into words than into practice, but it is often worth the trouble. These optional clutch

and gearshift gadgets always did require a modicum of tinkering to keep them in order, but they're a ball to drive, and they are one of the things which help to make Hudson vehicles special.

My own tinkering with this equipment up to now has been limited to Drive-Master and to late-type (1938-51) vacuum clutch; thus what I know about the earlier units has had to come from books (and from listening). The Club could use an additional Tech Advisor who has had practical experience with Electric Hand (1935-39) and with early vacuum clutches (the 1932-36 and 1937 types particularly). His volume of mail would be small, but he'd be a big help in keeping the relatively few surviving specimens in true roadable condition without needless mechanical anguish. How about it . . . any takers for the job?

1942 Hudson Drive-Master Switch Unit.



ELECTRIC HAND shift systems on Hudson products over the years were not all identical. Several items were changed, including the neutral switch — apparently a problem spot even then. Details next time.

COLLECTORS OF Hudson memorabilia have found old *Saturday Evening Post* issues to be one of the best sources of Hudson advertisements during the stepdown era and for years before. But sometimes other publications yield welcome surprises. Recently inside the front cover of "News-Week" (yes, that's how it was then spelled) Magazine for 5 January 1935 I found a '35 Terraplane ad, complete with picture of the car along with two Thirties-hatted ladies. "We're buying a Terraplane this year . . . because it gives us HUDSON PERFORMANCE in the lowest price field." And at bottom of page: "the Electric Hand. Exclusive 'Surprise Feature' of 1935. Not an 'automatic shift — no indeed. But a wholly new, easier, safer method of gear control. . . ." Terraplane prices that year? Just \$585 and up at factory for closed models."

GOOD NEWSPAPER ADVERTISEMENTS for Hudson products are even harder to find than magazine or factory items — and the old newsprint paper, though of far better quality than that used today, is likely to be somewhat crumbly by now. Also, these ads, except for a few Sunday ones, are rarely in color, often in fact carrying line-drawings only. But they have an appeal of their own, particularly if they show the name of one's home-town Hudson dealer of those years. Check the classified section, too . . . the used-car prices of a bygone day make interesting reading.