Hudson Notes

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Help Wanted

AS READERS may know, a special effort has been made at the WTN to include more tech and restoration information in recent issues. Such help is of interest to most all club members, and is an essential part of the Hudson scene. At the same time, there are no plans to curtail other features such as the buy and sell ads or the reports of club meets and social events. These last, including refreshments and outstanding culinary achievements - whether a strawberry pie, salad, savory meat dish, or big cake trimmed as a Hudson sedan or TWN front cover - are also part of the scene; and speaking as a lone bachelor (who can't cook), I'd say they are an important one, deserving of recognition in print. As with any magazine, our need is to attract good contributions and to maintain an interesting balance of features (not forgetting also pictures and historical articles). A check with other car-club publications would indicate that we are holding our own rather well.

BUT WE CAN DO better - with your help. You may not wish to attempt a full-length article, but there is an especial need for short items, particulary tech and restoration hints for Hudson-built vehicles of any era. As one example of information needed, this column (which does not pretend to be the last word by any means) has in the past occasionally asked readers for comments or corrections or added details about various mechanical toics being discussed. There have been a few responses (duly reported later), but not many. Here is a selection of topics from earlier columns about which we would still like to have more information. Please help us if you can. Responses will appear in a future **WTN**, as will the other comments and tech tips you send in.

*Brakes on Hudsons of the pre-hydraulic era 1909-35, were among the better mechanical brakes available. Any information about the design of these brakes used in a given year, special service problems, living types, etc. will be welcome. What was the year of Hudson's first 4-wheel brakes?

*Cork clutches of the early multiple-disc type, pre-1928: what are the usual problems with these, or are there very few?

*Vacuum Clutch control: are there any early examples in the Club at present (1932-36 type, non-electric; or 1937, similar but with electric control added)? Is the system on car, and in working order?

*Electric Hand: who has one of these in working order, either the 1935-36 or a later type? What have been the problems with it? Is is with or without Vacuum Clutch?

*Timing your Hudson engine: usually to what flywheel mark or degrees of advance, or using what other method, for that year and size engine?

*Lubrication: what kind of present-day grease is best for pre-1948 water pumps? What grade of motor oil, and transmission and rear-end lube, is best for models of the Twenties and earlier? What are some other lube points requiring special attention on these cars?

*Spotlights and fog lights: what brands were used on Hudson, especially prior to Unity, and other than through-the-windshield types? Has anyone an accessory Eaton-Lite (cable-adjusted) on his Hudson or Essex?

*Starters: has anyone a Disco acetylene-gas starting system for a 1912 Hudson, working or not? Who has a Delco or Bosch electric starter, 1913 and up? Tell us how it deffers from modern types.

*Rustproofing your Hudson, as an important part of the restoration job: will owners lease tell us how they have done this, the brand of rustproofing used, and any special problems (or failures)?

*Vacuum windshield wipers did not become nearly universal until the late 1920's. Who has a good accessory manual-type wiper on his car? Also, who has the earliest authentic windshield washer, or rear window wiper, on a Hudson product, working? Any 1938-39 examples?

*Oil and gasoline filters, accessory type, and oil bath-type air cleaners: who has the earliest auithentic installation on a Hudson?

We are hoping to hear from H.E.T. members who can help us with any of the above questions; and we promise to report in future issues.

HUDSON SPECIFICATIONS, for tuneup, licensing, and other purposes, are frequently in demand. Vernon Holt, in the xerox pages of tech hints distributed to members, has often included copies of some pages from factory literature and other sources, listing specs such as wheelbases, fluid capacities, gear ratios, spark plug and ignition point gap sizes, wheel-alignment data, and more, for most postwar Hudson models. Older editions of *Motor's* manual (1946, 1952) begin with the 1935 models, and some of the more recent editions include a special brief "Old Car" section with specifications from 1946 into the 1960's.

The big *National Automotive Service* manual (1948 edition) begins with the 1936 models, and there were matching annuals published for 1949 and later years. The 1953 edition of the *Chilton* (or Glenn's) manual covers models for more than a decade, and is not difficult to find since it has been reprinted. Another manual worth finding is the *Motor Service* "New Automotive Encyclopedia", by Toboldt & Purvis. I have seen only a 1954 edition but it contains Hudson material (including discussion of features such as pinned piston rings, cork-insert clutch, and Drive Master gearshift); and at back, page after page of specifications for U.S. cars 1928 through 1953, no less.

It is sometimes worthwhile to check not only the older repair shops, but also your local public library (and perhaps also high-school, trade-school, or college library) for books of this kind. One other volume of interest to owners of earlier cars is *Dyke's Automotive Encyclopedia,* which includes Hudson information (and a picture of the multiple-disc cork clutch), although not yearly specifications, and only a little about the later models. It was published in editions from the Teens to as late as 1949. The auther, A. L. Dyke, is also remembered as the inventor of an early float-type carburetor.

VALVE CLEARANCE adjustments for Hudson engines are often the subject of inquiries, and this has also been discussed at a number of meets. Specifications are listed in most manuals, and do not change much from year to year for a given Hudson engine, except that during the '50's Hudson began giving measurements for use with the engine cold, rather than with it hot or at operating temperature as was previously the rule. generally this change represents a difference of .002 inch clearance on

these models (or sometimes a bit more at exhaust valves).

For example, Hudson straight-Eights for years had a specified clearance of .006 inch at intake valves and .008 inch at exhaust valves - minimum, with the engine hot and idling. Around 1950 the recom mendation was changed to .008" (intake) and .010" (exhaust), with engine at operating temperature; and there is no doubt that these larger clearances are prudent, particularly for any fast or strenuous driving, and if valves are not to be rechecked every few thousand miles. For cold settings, however (room temperature), these figures should be further increased to about .010" for intakes and at least .012" for exhausts (some authorities suggest as much as .014" for the exhausts, cold).

After grinding or overhaul, valves must of course be adjusted cold before engine is started. If desired, they can be gone over again as soon as engine is fully warmed up, but often this is not really necessary. The traditional hot adjustments are thought to be a trifle more accurate, since they do allow somewhat for any possible temperature or expansion irregularities of engine parts; but they also allow spattered oil and, usually, a few burns on hands and fingers from the nearby exhaust manifold and pipe. (One mechanics' accessory formerly available was a protective asbstos pad for use on the hot pipe while working). As with most solid-lifter engines, remember after any valve job to re-check the clearances (hot or cold) after about 1000 miles, and possibly again after 5000 or so.

For valve work, some mechanics find that a single long feeler gauge in the required thickness is more convenient than a short one that is revited to others in a set. If a dial indicator with appropriate fittings is available, it can also be used for adjusting valve clearances. Although this is not a common procedure on flathead engines, it is sometimes suggested because the indicator, unlike a flat feeler gauge, is not affected by slight irregular wear at the tips of valve stems and tappet screws.

HUDSON SIXES (both large and small) of the late 1930's used the same .006 inch clearance at intake valves and .008 inch at exhausts (with engine hot and idling). In mid-1941, however, a new camshaft was introduced for production small Sixes and as a replacement item for either Six; and after the war it was used on production large Sixes (3 x 5-inch bore and stroke) as well. This new cam was a "hotter" or longer-duration type, and for proper idling required wider valve clearances: .010" intake and .012" exhaust (engine hot). A decal for the valve cover was supplied along with this cam as a reminder of the new clearances needed.

An all-new Six was introduced for the 1948 "stepdown" models, and after a few months' production the valve clearances for this engine were specified as .008" (intake) and .010" (exhaust), adjusted hot. The equivalent cold settings are .010" for intake; .012" for exhaust. Some books also suggest these dimensions (.010" and .012") for adjustment hot on these Sixes, and this again may be taken as prudent for fast or severe use. In mid-1952 a new camshaft was brought out which requires these same settings (.010" intake and .012" exhaust, adjusted hot) *as a minimum,* with even larger clearances required if adjusted cold (.012" for intake and as much as .019" for exhaust, it is suggested).

For more detailed valve adjustment data, including the Jet, Twin-H-Power, and post-stepdown Hudson Six engines, see the WTN Tech Service Bulletins for May 1977 and January 1978, prepared by Art Adams and Jack Clifford. The figures given in some 1954 manuals (.008 and .010 inch, hot) are considered to be in error; clearances should be somewhat larger. Factory specs for 1955 were .010" for intake and .015" for exhaust, cold (though the above figures of .012 and .019 may also be used). Whatever the specification, be sure that all intake valves on engine (and all exhaust valves too) are set as uniformly as possible, within .001 inch. For accuracy, go over them all in turn several times.

Note that the ideal position of cam for measurement of valve lash is just after the cylinder has fired. To determine this position accurately, a light bulb may be connected temporarily to the ignition contact points. Also, for convenient turn-over of engine on post-1939 models - which have no place for inserting a hand crank - an accessory pushbutton switch with long wire leads may be connected to the started solenoid and to battery. This can be used to "crank" engine a bit at a time as needed.

Before re-installing valve covers on engine, be sure they are clean (including inner metal baffle on some models); and check condition of gaskets, replacing as needed. Often, these days, new gaskets must be hand-cut from matching cork material (available at most auto parts stores). Material can be cut with a razor blade and straightedge, and the gaskets for Eights and early Sixes (which cover most of the metal surface) are quite easy to make. Ocasionally NOS original cover gaskets can be obtained, but are found after long storage to have shrunk lengthwise by ¼ inch or more. These, if used, will need to br centered in position very carefully. For an extra-neat job, the new gasket may be cememted ahead of time to the cover or baffle, using permatex or a similar adhesive.

If the original-type cork gasket ring for breather pipe proves too fragile, a useful replacement may be hand-cut from medium leather. Smaller leather washers may also be made for use with valve cover bolts. Flange of breather pipe must fit squarely against valve cover (adjust support bracket for pipe if necessary).

NOISE FROM VALVES is not always due to excessively wide clearances. On a high-mileage engine, particularly, worn tappets (valve lifters) are more often the culprits; and clearances should not be set at less than specification in an attempt to eliminate the noise. Hudson engines of the early 1930's were equipped with genuine roller tappets. These offered good geometry and low friction at cam, but sometimes presented troublesome wear and noise problems of their own.

Later Hudson engines (Sixes through '47, and Eights through '52) have tappets with bottom surface curved or rocker-shaped to give much the same geometry, but without a roller. These, like the roller type, are fitted in their guides so that they can move up and down but cannot rotate, and hence the cam must always strike the curved surface lengthwise. Eventually, in many cases, the cam may wear a straight-line groove along the curved surface. When this happens, and new tappets are not available, the old ones must be reground at a machine shop to restore the uniform curved surface at bottom, but, if possible, without grinding deeply enough to remove all of the

hardened surface metal. It has also been suggested that, if possible, the least-worn tappets from a number of sets should be selected for re-use, since these may be a trifle harder than the rest.

Hudson Sixes 1948 and up are made with tappets of an inverted "mushroom" shape, so that the geometry at cam is again somewhat similar to that of a roller. There are no removable tappet guides, however; and also the tappets are free to rotate in their holes in such a way that the cam is unlikely to weasr a straight groove across tappet wear a straight groove across tappet surface at any one point.

Slightly oversize valve clearances will of course cause added noise, particularly when engine is cold. However, this is generally far less harmful on a solid-lifter engine than somewhat undersize clearances that may, under conditions of heat and stress while running, shrink momentarily to less than nothing, thus preventing valve from closing tightly, with consequent leakage and rapid burning of both valve and seat. It is unwise to attempt to adjust valves to the point of complete silence, even when hot. A slight audible clicking at idle is far safer, and if quite uniform on all valves is not unpleasant (it is nearly imperceptible in any case when valve covers and hood are closed).

Grossly oversize valve clearances are obviously another matter: They are not only very noisy, but also cause valves to be hammered open and shut, rather than pushed - with resulting damage to parts. Large clearances also reduce both valve lift and valve duration; and while this may not be a serious disadvantage with special long-duration cams such as those introduced for Sixes in 1941 and 1952, it can reduce power output significantly with standard cams which are already of a rather conservative grind. Unless valves are held open both far enough and long enough, the engine will be unable to breathe properly at any speed above idle.

A 1956 Hornet Special V-8 won 3rd place Class C, 20.48 miles per gallon Mobil Gas Economy Run 1956