Hudsonotes

Column of Mechanical Miscellany
by George Schmidt
Mishicot, Wisc.

"THINGS A COLUMNIST might never know if he didn't read his mail" --
The above phrase, made famous by the late Hal Boyle, longtime nationally syndicated newspaper humorist, is appropriate here this month to introduce serveral items sent in by readers:

A LETTER from Wayne Graefen, California, includes a number of tech tips about Hudson lubrication. The front suspension on Jet and Italia models, he points out, has one grease fitting on top of the upper trunnion which is especially critical because apparently no gas station, and few owners, ever found it! Today it is perhaps more readily found because many later Brand X's have a fitting similarly placed (to lubricate upper balljoint). However, Jet and Italia owners should still check this point with special care, since replacement upper trunnions for these cars are extremely hard to find at present; and worn trunnions can cause serious handling, tire, and safety problems.

The steering-gear box on many Hudsons is another point sometimes neglected. On 1948-54 stepdowns it is partly hidden under a diagonal brace at firewall. Oil level in box should be checked at least every few thousand miles or each season (or oftener if there is any suspicion of leakage). Recommended lubricant was S.A.E. #90 gear oil, and this or somewhat heavier#140 may be used now that the car is old. In the California climate, Wayne finds that the extra-heavy #600 gear oil (as used for older Fords) also works well in Hudson steering boxes, and has less tendency to bypass aging seals. Ordinary chassis grease is not as satisfactory here, and should be used only in an emergency if seals are very bad. In very cold weather, any steering gear will be somewhat stiffer due to thickened lubricant, but this is much less of a problem with the Hudson/Gemmer worm-and-roller type gear than with some others such as the GM recirculating-ball type.

Interestingly, Wayne also reports that he has used Type F [Ford] automatic-transmission fluid in the cork clutches of several of his Hudsons for about two years, with no apparent problems.

Regarding the best setting for ignition timing on most Hudson engines, including the splash-lubricated Eights and Sixes, and the later 262" and 308" Sixes, Wayne agrees that the O-degree [top dead center] position specified in many books is only valid as a trial or preliminary setting. If retained as a final adjustment, it causes performance which with most fuels is needlessly sluggish and inefficient. Wayne uses a setting of about 5 or 6 degrees [2 marks or slightly more] before top dead center on these engines, with very good results --- performance is better and there is also a slight saving of fuel.

On one car, his '53 Super Wasp, Wayne has installed a very interesting Hudson ignition accessory. This is a "Dyna-Flyte Dual Point Ball Bearing Distributor Plate" [American Motors part no. 8990399, which fits all Auto-Lite 6-cylinder distributors, series IAT, from 1950 and later. According to original claims, this item was designed "For Precision Ignition---restores 'new car' performance and efficiency. Easier Starting, Better Acceleration, Smoother Idle, Improved Performance, Longer Point Life, Better Spark." He reports that it meets all of these claims to a minor degree, and certainly does give extra-long point life.

Replacement points [two sets required] are still available, since they interchange with a present-day over-the-counter type. It is generally agreed that a dual-point distributor can give somewhat more exact control of spark intensity and timing, particularly at high RPM, than is possible with the usual single pair of points. This Dyna-Flyte plate also gives an extra 2 degrees of advance almost immediately when engine starts, and so needs only about 4 degrees static advance at flywheel.

BRAKES WERE the subject of a letter from David Shatto, Oregon, reminding me that Hudson made the change to four-wheel brakes in 1927, and Essex in 1928. These were Bendix-type brakes, and on Hudson-built vehicles in the years before 1936 were operated by cables rather than rods, along with an unusually effective system of equalization between the four wheels. David writes that he liked to show how much faster he could stop with his dad's '34 Terraplane than his cousin could with his uncle's Ford of the period. However, the cables and other parts needed to be kept clean and free to avoid sticking and excessive lining wear, and this was sometimes a problem with local dirt and gravel roads. Correct adjustment, first of the shoes [as with hydraulic brakes], and then of the cable system, was also essential. Hudson further improved the system for 1935 with the introduction of a special Rotary Equalizer.

Although Bendix-type brake cables remain in use today for most parking brakes, and their construction [with typical outer sheath and sliding inner cable] has not changed much through the years, finding replacement cables of exact original length and with proper end fittings can be a problem. Edzo de Jonge, Amersfoort, The Netherlands, writes that he and a friend, when repairing brakes, went to a boat or trailer shop, where cables were made up in the correct length to fit. We would like to know whether any members have been able to find a comparable source for replacement brake cables here in the U.S.A.

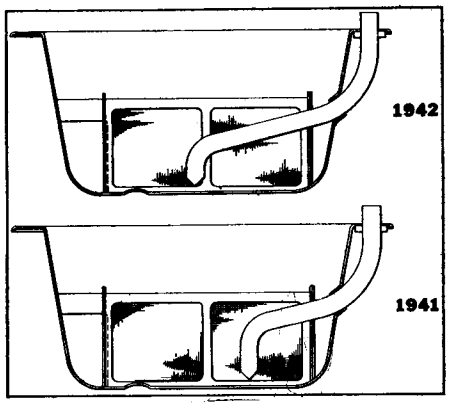
A BRIEF HISTORY of the **White Triangle News** for its first 25 years was published in the December 1984 column. Limited space in that issue did not permit much detail, but Charles Woodruff, Massachusetts, points out that even though full-color photographs were first reproduced on WTN covers in January 1976 as stated, there were a few full-color covers earlier, in May/June/July/August 1973, reproduced from Hudson literature and ads [not photos]. Attractive though these earlier covers were, they illustrated a color-printing problem which usually occurs when the original used is not a photo or painting, but merely a printed copy that has already undergone screening, color separation, etc. for printing the first time. Second-generation printed copies then tend to a "picture-postcard" harshness, with color accuracy very difficult to control. This is one reason why there have been very few full-color reproductions of Hudson

(continued on page 34)

ads, sales folders, etc. in WTN since then, much as we might enjoy seeing them.

A BIG THANK YOU to Wayne, David, Edzo, and Charles for their contributions---and also to a few more such as Richard Roberts, John O'Halloran and others who have sent me aditional interesting items for publication. I hoped to include several more of these this time; but deadlines dictate otherwise; so watch for them in a future issue.

Also, we haven't forgotten the 1916 Super Six material [coming soon]; and we hope you haven't forgotten about writing a contribution of your own for WTN---a Hudson tech tip, history item, or other bit. These are always welcome, and are valuable even if there is a delay before they are published. A list of tech information especially wanted was listed in Hudsonotes back in December 1983, and this may also help you to think of additional items.



Oil Reservoir

A change has been made in the design of the oil reservoir suction pipe used on both six and eight cylinder engines for the purpose of minimizing any possibility of oil pump starvation due to the lower end of the pipe being uncovered when the oil is banked against the side of the reservoir when making turns at high speed. With the new pipe which now reaches to the center of the oil reservoir, the lower end remains submerged in oil even when the level is low.

IS THE SCREEN CLEAN?

By S. A. McDonald, McDonald Motors Seattle Washington Edited By George Schmidt HUDSONOTES "Editor"

HUDSON OIL PUMPS are the subject of a recent letter from McDonald Motor Co., Seattle, Washington. The letter contains several valuable tech tips.

These pumps on Hudson splash-lubricated (Duo-Flo) engines, from 1930 or earlier through 1947 on Sixes, and through 1952 on Eights, are of the oscillating-plunger type, giving them a "two-cylinder opposed" action. Purpose of the pump is simply to keep all six or eight dipper troughs in the inner oil pan, just under crankshaft, filled at all times. The pump is connected through external tubing to deliver half its output to the front of the engine (at timing gears), and half to the rear (through a spring loaded pressure valve which is also the switch or sending unit for the oil pressure warning light.) This dual feed eliminated any oil starvation at one end of engine when tilted (as on steep hills.)

Oil pressure at the valve is low, usually only 3 or 4 pounds (13 maximum.) When optional oil filter is installed, it is connected as a bypass for this valve, using flex lines and T-fittings.

This type oil pump is driven by its own gear on camshaft, separate from the one for ignition distributor. Though externally mounted, the pump is self-priming (if just lightly oiled), and it is usually trouble-free, very seldom developing sufficient internal wear to lose its effectiveness. For a quick approximate check, hold pump in hand with thumb and finger over the two outlet holes, and spin pump shaft and pinion with other hand. Some pressure resistance should be felt, and pump should attempt to "spit" air against thumb and finger.

McDonald, however, points out two other possible sourcesof trouble. First, when the oil pan is being replaced on engine after removal for any reason the oil suction pipe in pan must be sealed around its upper end (which stands slightly above the gaskets), using an O-ring of proper size – or at least a few strands of heavy string wound around the pipe, or possibly a bead of modern oil-proof silicone sealer. If pipe end is simply inserted into its hole (which leads to external oil suction pipe) with no sealing at this point, the pump will pump mostly air instead of oil. Usually a new seal ring was included with replacement gasket sets.

Second, there is the screened oil intake at lower end of suction pipe, inside sump on pan. A special Hudson feature for many years was the floating oil intake, not fixed in place as on most Brand X's, but mounted on a swiveling pipe so that it rides the surface of oil in sump at all times. This helps prevent dirt and sediment at bottom of pan from being drawn into pump; and the screen on intake helps keep out other dirt. However, if screen becomes clogged it may stop the flow of oil– with disastrous results – or on some models, McDonald says, it can allow any floating scraps, such as fiber timing-gear chips or teeth, bits of gasket material, etc., to float over the top of the screen and be sucked into the pump, where they may stop or damage the pump, perhaps also shearing teeth off the pinion gear, or the drive gear which is part of camshaft. This can also happen if the screen has been removed from the oil pickup head. It is thus very important to keep the pickup screens in place – and clean. The swivel in suction pipe, and the oil return pipe at rear of pan, with its small "flapper" check valve, should also be clean.

PISTON RING replacement on Hudson engines is sometimes complicated by a vertical ridge found in worn cylinders. This ridge must be removed before new rings will seat properly, and some Hudson dealers used a special tool (a homemade one on some instances) for the purpose. The letter from McDonald Motor Co. also enclosed one piston ring manufacturer's instructions for ridge removal (see illustration).

PISTON RING RIDGE REMOVAL

SPECIAL INSTRUCTIONS

for removing vertical ridge on cylinders of Hudson built engines using pinned rings

McDONALD MOTOR CO.
7411 Aurora Ave. N. 782-5858
Seattle, Washington 98103

Pinned rings in Hudson built engines, usually leave a vertical ridge on the cylinder wall. This is caused by the gap between the ends of the old rings. This ridge must be removed before new rings are installed.

This ridge is usually not visible and is very hard to find with a micrometer or other measuring tools.

It is absolutely necessary that this ridge be removed with a light honing operation using rigid hone before the installation of new piston rings.

It is not necessary to hone out enough metal to materially enlarge the diameter but a medium stone such as a number "200" MUST be used first; and a number "500" finishing stone to polish the cylinder.

CAUTION: The fine burnishing or polishing stones such as No. 500 will not remove this ridge satisfactorily.

Pistons should be resized with expanders or by peening.

Why Ridge Must Be Removed on All Pinned Ring Installations

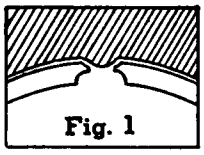


Fig. 1

CONDITION BEFORE RINGS ARE REMOVED

Because pin milled rings cannot creep in the ring groove a ridge is worn vertically in the cylinder wall by the ring points. See Fig. 1.

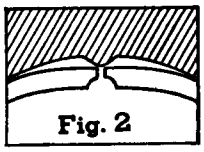


Fig. 2

CONDITION WITH NEW RINGS AND RIDGE NOT REMOVED

When new rings are installed in a cylinder having a vertical ridge the rings are held off the wall for approximately 1/4 its circumference — resulting in blow-by and loss of oil. See Fig. 2.

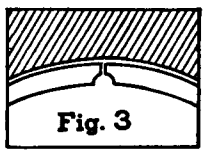


Fig. 3

CONDITION WITH NEW RINGS AND RIDGE REMOVED

When cylinders are trued-up and ridges removed by a hone the new rings hug the wall at all points — making a perfect compression and oil seal. See Fig. 3.