Hudsonotes

Column of Mechanical Miscellany
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EARLY SEALED-BEAM headlamps in 1940-41 were of a composite design, with glass lens, metal reflector, and inner light bulb all joined to form a single unit. The all-glass type (usually with inner bulb eliminated to reduce blackening with age) followed a few years later. This was the #4030 lamp (nominal wattage: 40 on one filament; 30 on the other), which was original equipment on Hudson stepdowns and most other cars through 1954. The outer surface of the #4030 lens was plain, and these lamps were customarily aimed by parking car on a level surface and shining the beams onto a screen or light surface about 25 feet away. Upper beams were normally adjusted for a 1% drop, thus centering on the screen at a point .25 foot below the level of the headlamp centers.

In 1955, when the brighter #6012 lamp appeared (60 watts per filament, at 12 volts), an equivalent 6-volt version, the #6006, also became available, and this has been the usual replacement for the #4030. The 6006's give better illumination and are more practical for general driving, but do not look quite original on an older car because, like the #6012 and other recent types, they have three molded bosses on outside of glass lens, intended for use with some types of headlamp aiming equipment. This makes them simpler to aim, although they are sometimes best rechecked using the screen method as well, especially when old.

While the standard #6006 is more efficient than some later types, such as the "square" sealed-beams found on many late models, it is not ideal. Several foreign manufacturers have offered replacement headlamps, including a few which are still available in 7-inch, 6-volt versions. Most are built with separate lens, reflector, and replaceable bulb, but are shaped externally like a sealed-beam so that they will fit standard U.S. mountings. They offer improved brightness and beam pattern, but are of course considered illegal in several states.

Headlight mountings on Hudson stepdowns were by Hall Lamp. The 1948 type with steel inner and outer shells soon gave way to an all-aluminum version which, however, was not as strong, and by 1950 was replaced by another all-steel type. Fortunately parts are interchangeable between these three versions, including the springs, screws, and threaded bronze clips used for adjustment. Use penetrating oil on screws and clips if necessary to free them; then grease well to avoid future problems. A touch of heavy grease may also be used on the springs, on the two points where inner and outer metal shells are in contact, and on all screws which hold the inner lamp retaining ring and the outer trim ring.

During the mid-1950's Hall Lamp announced that it also planned to offer an automatic photocell-controlled headlight dimmer system, similar no doubt to the guide (GM) Autronic Eye, as an aftermarket and also new-car optional item; but apparently this did not reach production.

Standard #12 gauge wiring was entirely adequate for a pair of #4030 lamps; and if in good condition it also serves for the 6006's, though #10 might be slightly better. If any of the brighter imported 6-volt headlamps are used, the heavier wiring is necessary, with or without a relay. Because of the added brightness and concentrated beam, these lamps also require extra care in aiming.

The small red high-beam indicator light on dashboard was used on Hudsons 1936 and up, though apparently not on all years and models. Cars lacking this feature sometimes had it added using a separate small plastic jewel light similar to the ones found on later models for directional and backup pilot lights. On 1948-50 stepdowns the high-beam light in speedometer was designed in a neat Hudson triangle shape, but often became very hard to see as the paper diffuser (used along with red plastic disc) darkened with age. For improved brightness, this paper can be carefully removed, working from hole at rear of speedometer case, without injury to plastic.

The circuit breakers used in place of fuses on Hudson stepdown headlight switches are found in two sizes: 20-ampere (early years) and 30-ampere (later). The larger size is preferable when #6006 lamps are used, and when any number of accessories (including the ones which may be plugged into cigar lighter socket) are also connected at this point. Breakers can be tested approximately by connecting them to battery in a dead short circuit: this should cause them to "pop" within a few seconds, and return to normal shortly afterward. If a circuit breaker cuts out occasionally when there is no overload or short, check for heat being caused at terminals by a poor or loose connection.

Foot dimmer switches on some models are somewhat vulnerable to road splash, corrosion, etc. A touch of grease or occasional drop of oil on switch terminals underneath car will help protect them.

WHEN THE WIRING on a car, #14, #16, or #18 gauges particularly, needs to be spliced, the usual preferred methods are a soldered connection or a solderless device which crimps on, similar to most wire terminals. Where these methods would be too bulky, however, or the insulating tape is likely to come unwrapped, a reliable and neater splice can be made by twisting together the two bare wire ends in a straight line for at least 3 inches (or more for larger wire), and then covering this section by slipping over it a piece of plastic "spaghetti" insulating tubing of appropriate size. Tubing can be held in place with a drop of rubber trim cement, and will often outlast tape. It is available from most electronic parts sources, if not from automotive suppliers.

Where tape wrapping must be used on wiring, it is more likely to remain in place if any oil film is first removed from old wire insulation (use solvent and a rag), and then a thin coat of rubber trim cement is put on and allowed to set before tape is applied. Another dab of cement can be used to help keep end of tape wrapping from coming loose. This is especially effective with most plastic tapes but can be used with cloth friction tape as well.

Small-diameter wire is far easier to wrap neatly if the tape is narrow. For single wires, the 1/2-inch width is usually better than the 3/4-inch, and for #16 gauge and smaller, a 3/8-inch width, made by slicing 3/4-inch plastic tape carefully in half, is often best.

THE "TRIPLE DUTY" Combination Light, a late-1920's accessory which featured tail, brake, and white backup lamps in a single unit with "Hudson" or other car nameplate (see July/August *WTN*, p. 34), was evidently made in more than one style. The 1927 Gomery-Schwartz accessory catalogue shows a model with the three lamps in a horizontal row, and with the lower edge of unit made straight for convenient mounting above rear license plate. Wayne Graefen, however, writes that there was also another style, more or less diamond-shaped, with the three lamps in a triangular arrangement (and nameplate above them). He has seen several of this latter type for sale at a California swapmeet recently. Unit is finished in nickel plate with contrasting blue paint.

ALTHOUGH THE RENEWED concern at present with aerodynamic principles of auto body design may be somewhat humorous, given today's unsanforized econobox vehicles and molasses-flow road speeds, one aspect of aerodynamics which cannot be ignored, for safety

reasons, is the effect of side winds upon a moving car body. Excessive weight at the front, incidentally, while it causes other serious handling problems, is not necessarily a disadvantage here: the heavy nose is little affected by cross-winds, and the lighter rear section then serves as a compensating "sail" which tends to steer entire car slightly into the wind rather than away from it, thus helping to hold car on a nearly straight course.

Hudson in designing its "stepdowns," however, was able to construct a car body which is nearly indifferent to cross-winds, and does not depend upon an overweight front end to achieve this. Winds apparently find very little grip upon the convex sides of these bodies; and if weatherseals, doors, etc. are in good condition, the driver may in fact be unaware of the force of a side wind until he opens a car door and has it unexpectedly torn from his grasp . . . or until an oncoming Volkswagen or similar encumbrance is suddenly blown directly into his path. Both of these things have in the past happened to this writer, in the one case breaking the door check arm, and in the other requiring all of Hudson's famed high-speed evasive capability to avoid thoroughly squashing the bug. The rest of the time, however, this resistance to sidewinds adds enormously to driver security and comfort, particularly when the winds are gusty or irregular.