

Hudsonotes

Column of Mechanical Miscellany
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Fogged

WHY ARE FOGLIGHTS usually yellow? One story has it that a motorist in France, many years ago, discovered in an emergency that he could see slightly better in fog when he tried placing translucent yellowish newspaper over the headlamps to subdue glare. Later, special lamps were devised to give a similar effect with less waste of light; but it is not entirely clear whether the benefit, if any, was due mainly to the color, or to the diffusion of the beam; or simply to the addition of a supplementary light source for use in adverse weather.

Many believe that the amber tint is merely traditional, and that any lens coloring only cuts down visibility because it reduces the total light output. If fog were indeed slightly bluish (as it appears to the eye under some conditions), the amber would of course give an advantage; but fog in fact is practically colorless. On the other hand, monochromatic light is probably easier for most eyes to focus sharply; and the single color in this instance—yellow—makes up a very large share of normal tungsten light, so that the amount of loss is not excessive. In addition, yellow, near mid-spectrum, is able to register effectively upon more different sensitive cells of the eye than any other single color. Because of the color's contrast value, along with the eye's special sensitivity to it, amber lamps do have a slight advantage for warning purposes, or to mark car's position (as when foglamps are used in place of head or parking lamps for driving just at dawn or dusk)—but whether this color (or a mixture of amber with white light) also makes ordinary reflected objects any more visible to the driver is far from certain.

Hence the question of a best color for foglights remains unresolved, and in the last analysis probably depends mostly upon specific weather conditions, individual driver eyesight—and habit. Lamp manufacturers seem to be aware of this, as they continue to offer both the traditional amber and clear uncolored units; and at present also feature a paler bright yellow (more canary than amber) in a variety of models for 12-volt systems. Orange, too, was available for years, both in lamps with separate lenses and in sealed-beam units which would fit standard Hudson/Unity fog light shells. Red units are also available to fit but are generally illegal for use on the front of a non-emergency vehicle, as they are far too confusing to other drivers. Even blue has been tried—

it is legal in most places, but not very practical, the blue light tending to "scatter" and be lost at a distance even in clear air.

BUT YELLOW IS apparently still the most popular, and was of course the original color of most Hudson foglights. However, the clear and orange lamps were also available during the stepdown years and earlier, so they are acceptable alternatives. Bulb numbers for the 6-volt sealed beams to fit 5-inch lamps are #4015 (clear) and #4015A (amber).

Clear lamps may be favored because they are efficient, look much like quad headlamps—and go with any color paint job. An occasional problem with the clear types is that oncoming motorists may indeed take them for quads, and wonder why you do not dim your lights, even though you have already switched to low headlamp beam. This can sometimes be avoided if both head and fog lamps are carefully aimed.

Auxiliary road lamps of one sort or another have of course been used since the earliest days of the automobile to supplement the car's standard headlights (which often badly needed it). One example was the "Pilot Ray Lamp" (a single unit, center-mounted), seen on some of the sportier Brand X's in the late '20's. For Hudson, c. 1929, there was the "Eaton-Lite," similarly mounted at front. Though this was not called specifically a fog lamp, "its low mounting gets under rain and fog," according to sales literature. Today it would be called a "driving lamp," comparable to the accessory ones fitted to some late models at present, in lieu of foglights. It differed from them, however, in being movable: though not linked to the steering like the '48 Tucker "Cyclops Eye," the Eaton-Lite could be pointed in any direction from a control at the instrument panel.

It would be interesting to know whether this lamp was in fact a "factory-authorized" item, and whether any working examples survive on vehicles in the Club today. It is shown, along with various spotlights, mirrors, and other accessories, in a catalogue (now in the H-E-T Club Library) published circa 1929 by the "Hudson Motor Car Company of New York, Inc." (not of Detroit, Michigan). Whether this firm was an affiliate, a subsidiary, or merely an independent company using a similar name is not clear, but the accessories were specifically offered for "the Greater Hudson and Essex the Challenger."

Fog lamps, as such, apparently date only from the mid-1930's on U.S. cars. According to information supplied by Charles Liskow at the Club Library, Hudson offered an accessory fog light, evidently for the first time, in 1937. Although sold and often used singly, it was suggested for use in pairs, preferably wired to interconnect with tail lamp circuit.

Foglights were again available for 1938 and thereafter, and continued to gain in

popularity during the 1940's. Sealed-beam bulbs for headlamps appeared on the 1941 models in the U.S., and sealed-beam spot and fog bulbs came soon after. Mostly Unity lamps during those years were built to accept either a separate bulb, reflector, and lens, or a sealed-beam unit, with little alteration.

A few cars, notably Lincoln—1947-48 Continentals and the new '49's included—also began building foglights into the grille as standard equipment, often even providing headlight-type screws for aiming them (obviously in anticipation of quad headlamps). Others (Chevrolet) simply offered special mounts which made the lamps appear built into the grille, beside parking lights. Hudson's '47 grille cavity was of course a "natural" for foglight mounting, and still is.

Fog lamps lost some popularity during the 1950's, particularly after the arrival of quad headlamps (perhaps six eyes per car seemed almost too much). But fog and driving lamps continued to be seen on foreign cars, and then in the mid-1960's staged a comeback which can be traced partly to one U.S. car model. Ford's popular Mustang came out with merely a standard single pair of headlights . . . which was O.K. for a utility compact, but hardly for a sporty or personal vehicle by that time. The result was a rush for optional or auxiliary lamp kits, some of which soon found their way onto other models as well. Another factor was the appearance of new, far brighter quartz/halogen type lamp bulbs (available in either fog or driving lights) at about the same time. With evolution of standard headlamps again frozen into obsolescence by 50 restrictive sets of state laws, these accessory lights with their greatly improved brightness and beam patterns (mostly developed in Europe) have been especially valuable.

ALTHOUGH SEVERAL STATES, including Wisconsin, have passed additional laws in recent years concerning "adverse weather lamps," the rules for correct aim of foglamps have generally been much less rigid than for headlamps. This is partly because the typical foglamp beam (with exception of a few late-model types) is much more diffuse, and wider. Though it should have a reasonably sharp cutoff at the top edge, it normally extends to both roadsides (useful in some bad weather). This wide beam should be level right to left (rotate lamp slightly in its shell if necessary, so that shell need not be tilted sideways). Then, while both beams may be pointed straight ahead if desired, the usual recommendation is to aim them very slightly "cross-eyed" for better side coverage up ahead. As for height, results with these sealed-beam units seem to be best if headlamps are correctly adjusted first, and then the foglights set to fill in just below the headlight beams (slight separa-

tion visible when using upper beams; none with lower). This is generally satisfactory except in a very bad fog or storm, when one may wish to set one or both fog beams temporarily further downward, to within a few feet of front of car (as was sometimes also done with the older free-standing headlamps in a real emergency).

Many foglamps on collector cars—as on some late models—are installed primarily as a dress-up item, and they serve this purpose handsomely. It may come as a surprise to find that these lamps, even the relatively low-powered ones used by Hudson (with standard bulbs or sealed-beams by General Electric, Tung-Sol, or Westinghouse) are also genuinely helpful when used along with headlamps under most conditions of fog, rain, snowstorms, etc. In heavily overcast daylight weather, too, or at twilight or dawn, foglights may be

sheetmetal must not be braced rigidly to bumper or car frame, or excessive road rumble will be transmitted; however, this writer's '49Cp. has stiffeners made from the outer ends of a pair of scrap stone-guard panels, bolted underneath the original panels, for foglamp mounting. The lamps are set on Unity's 2-inch offset cast-aluminum arms, and are placed with centers 36 inches apart (18" from car's centerline), probably the best location for appearance and function on these models. A wider spacing between foglamps is sometimes recommended, but does not often look as well on the car. Position of through-the-fender type lamps is usually somewhat inboard and down from headlamps for best appearance (see *WTN* cover, April 1977). To help control rust problems with this type of mounting, heavy grease and/or rustproofing compound should be used on the attaching parts

used in the event of a failure in headlamp circuit.

Several different switching arrangements have been used for fog lamps. A separate plain on/off is probably most common, with or without a small pilot light. One "Unity Lights" underdash model had large plastic knob, which matched 1948-50 Hudson heater switches and could probably be fitted with a similar #51 pilot bulb and socket inside if desired.

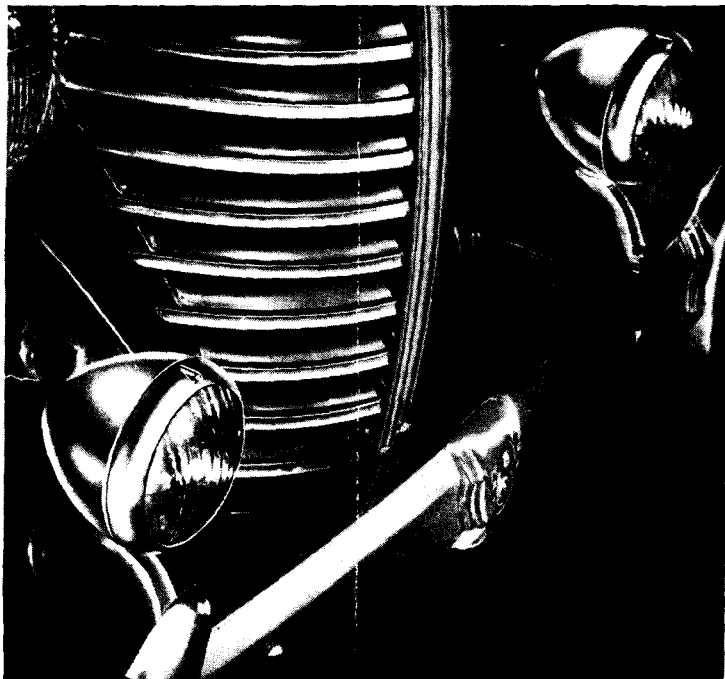
Hudson foglamps more often used a switch and knob matching the others on dash. One type (made by Cole) had "B," "F," and "H" terminals arranged to give a choice of head or fog lamp operation—but not both. Purpose of this is difficult to understand, unless perhaps for use in an area where odd local regulations prohibited more than one pair of lamps at front of car to be used simultaneously.

Most convenient type of fog lamp switch is one including an extra terminal and contacts so that tail and dash light circuit will be turned on along with foglights. Lacking this, either parking or head lamps will need to be switched on with foglights each time, or the rear of the car will remain unlighted—hardly safe under adverse weather conditions. If a matching switch of this type is not at hand, it can easily be made up from a spare headlight switch (see March/April *WTN*), by inserting a stop so that only the first two switch positions will be used. While switch is apart, check and clean all contacts and

springs, and relubricate lightly with white lithium grease. When reassembling, be sure that metal edges are bent to hold insulated side tightly in place. If switches are the rotary ones used on most step-downs, note that either the early (Aetna/Pollak) or late (Cole) type can be modified for this purpose, but only the larger early type should be used as a headlamp switch with this wiring arrangement, since the smaller later type does not keep all of the circuits isolated when it is switched off.

Since these switches do not include a pilot light, this writer's '49 has one (matching those for turn signals and backups) set into the space adjoining fog lamp switch on dash. To fit pilot light into chromed cast trim strip, a 1/4-inch hole is drilled, and a late type jewel button is used along with the early smaller type retainer cup (and small leather or spring washer), along with #55 bulb and socket. Result has been somewhat less tendency for one Hudson owner to discharge battery by forgetting to turn off foglamps when parking.

QUAD HEADLAMPS on a Hudson step-down? For anyone interested, they can indeed be fitted—without compromising the car's authentic appearance or front sheetmetal. Method is the one popularized by customers during early 1950's while waiting patiently for quads to be legalized in enough states so that factories could begin offering them as a standard item. Car's original headlamps remain in place,



Fog Lamps as shown in 1938 Hudson Accessories brochure.

preferred for use alone (or with parking lights) in place of headlamps, and are certainly much easier on other drivers' eyes. Parking lights, alone or with hood ornament light, are seldom of much more than decorative value on a moving vehicle (except that they do provide simultaneous taillamp illumination), but foglights, or the fog/parking combination, are effective on many occasions when full headlamp illumination is not required.

Fog and driving lamps must be solidly mounted on car, both to provide a reliable electrical ground for them, and to prevent any quivering of the light beam as seen at a distance. Although drilling of the front bumper may not seem desirable to some owners, the "stone guard" panels just behind it on step-downs are not heavy enough to support lamps properly unless reinforcement is added from below. Front

and inside fender.

Lamp mounting on older models with exposed front bumper support arms was much simpler, usually requiring no drilling of holes. Many lamp mounts consisted simply of a single large "gooseneck" arm and clamp, attached to the bumper supports. Unity also offered supplementary mounting kits which included the 2" offset lamp arms plus matching aluminum spacers and clamps, held in place by one long bolt.

ADEQUATE WIRING is essential for foglights, and as with headlamps, should be at least #14 gauge for one lamp and #12 for the pair, in 6-volt systems. A fuse, 14 or 20-amp. size (in-line, or possibly on switch) is also important for protection, especially since foglights should always be wired independently of the headlamp circuit-breaker or fuse, so that they can be

and the foglight shells are used to mount a pair of "tractor" sealed-beam headlight bulbs, available in correct size and voltage. These bulbs must of course be aimed with especial care, and their switch should be connected to the high-beam headlamp circuit (never directly, but through a relay).

For pencil-beam type driving lamps, sealed-beam spotlight units will also fit the foglamp shells, and can be installed with manual switch plus relay as described above. Although these can add many useful feet to the range of standard headlamp high beams, a due regard for other drivers' retinas and for local minions of the law requires that they be aimed, and used, only with extreme discretion. Bulb life will also be somewhat less than with the usual fog or headlight type units.

Headlight relays are sometimes used with standard foglamps as well, either to decrease circuit resistance and improve brightness (as with headlamps), or to keep tail and fog lamp circuits separated while

allowing both to be operated by a single plain 2-terminal on/off switch at dash if necessary. Occasionally foglights are also wired with an extra switch position and relay which will coordinate them with headlamp operation when desired. Relay in this case is connected to the low-beam rather than to the high-beam headlight circuit. For this or any of the other uses suggested above, only a single-type relay, 6-volt, is needed.

MORE RESEARCH at the Club Library reveals several additional interesting facts about early accessory lighting on Hudson-built vehicles. Although available literature does not seem to trace automatic (brake-operated) rear stop lights any earlier than the 1927 models, a variety of brake and brake/tail combination lamps were offered in that year, including several in a booklet, "Special Equipment Service for Hudson-Essex Cars," published by the Gomery-Schwartz Motor Car Company, Philadelphia. One of these, the "Triple Duty Combina-

tion Light," is of particular interest since it could be had with "Hudson," "Essex," and no doubt other car nameplates; and it featured, along with tail and stop lamps, a white light to be used (with manual switch) when reversing car. It is thus the earliest type of backup light which we have been able to find listed for Hudsons. Does anyone have further information—or perhaps one of these lights in usable condition? The Triple Duty light was available separately or as part of an accessory rear tire carrier.

For those owners in states that required a front license plate as early as 1927, the Gomery-Schwartz booklet also offered a pair of auxiliary road lights which were built into either side of a decorative license plate frame, and were designed to focus extra illumination directly in front of the car. In addition, the booklet featured various other items such as a through-the-windshield spotlight, add-on parking lamps, accessory bumpers, and a flower vase and bracket complete with artificial rose and leaves.