

Hudsonotes

Column of Mechanical Miscellany
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Mishicot, Wisc.

Door and Body Repairs

HUDSON "STEP-DOWN" BODIES were designed with a more-than-adequate strength factor—though without excess weight—and as a result there are usually very few weak spots to be found in them, even thirty-five years later. Occasionally a few problems may be found around the door areas; and probably the main reason is that, with Hudson as with most other cars, the 2-door models are more often chosen as collector vehicles than are the 4-door—and over the years the extra size and weight of the larger door (and door glass) places a significant added stress upon door hinges and the supporting A-pillar, upon door latches and strike plates, and even upon other parts such as the slender post separating door window and front windwing. Doors of convertibles with hydraulic power windows are especially heavy, and the big trunk lid on convertibles and coupes also places an added load on hinges and related parts.

Hence the suggestions in this and the next column, while mostly applicable to both 2- and 4-door Hudsons, will more often be found useful on the 2-door cars. Suggestions can be used along or as a supplement to instructions in the Hudson Body Service Manual. The body manual lists original approved procedures for door, window, dashboard, convertible top, body alignment, and other repairs; and—either original or reprint form—offers much information which can make restoration work easier. I am indebted to Louis Backhus for the loan of his copy to me while this column was being prepared.

INTERIOR TRIM PANELS on doors and most rear quarters, on Hudson and many other cars, are held in place by metal clips which fit into blind square holes in panel underside, and then are pressed into small round holes in the metal of door, B-pillar,

or rear quarter. Several interchangeable types are used, made usually of spring-type sheet metal, but occasionally of spring wire (these last, though slightly bulkier, can offer extra holding power where needed). Least bulky of all is a special clip for baseboard and pillar trim which locks into a thin metal plate already crimped to trimboard; and then snaps into usual 1/4-inch round hole in body metal.

Avoid trying to loosen clips merely by pulling at trimboard. Use a wide flat tool such as a putty knife (two wide thin screwdrivers, or an old-fashioned flat tire tool, also may help, as may a thin-tipped claw hammer in some instances). If clip is locked stubbornly in hole, be careful to break or bend only the clip (which is replaceable), rather than breaking or damaging trimboard.

Occasionally, despite best efforts, one edge of trimboard hole may be found torn or broken, so that clip will not hold properly. Trimboards on these models are made of 3 or 4 plies of water-resistant cardboard, cemented into one, and covered with a soft felt pad and finally with cloth and/or simulated leather. If necessary, the cloth can be carefully removed and cleaned, and then patched or reinforced from behind (at thin spots near armrests, for example), using lightweight iron-on repair fabric. Edge lines of patch will be less likely to show through cloth trim if patch is cut out using pinking shears.

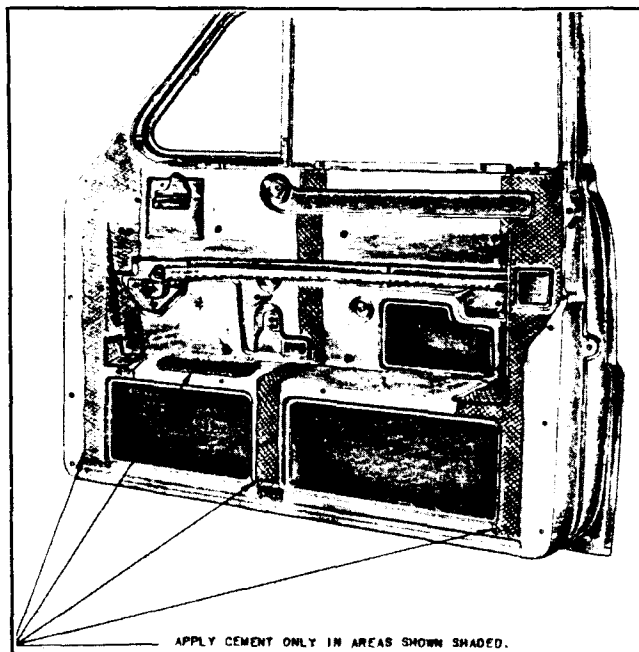
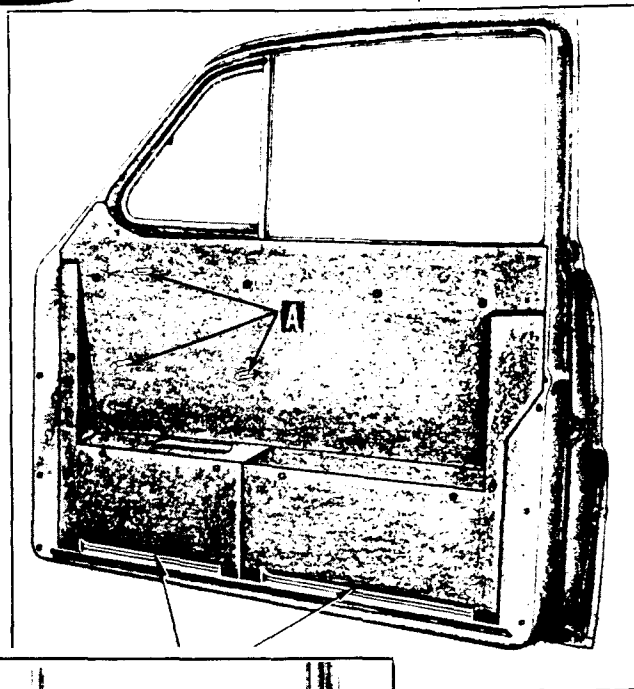
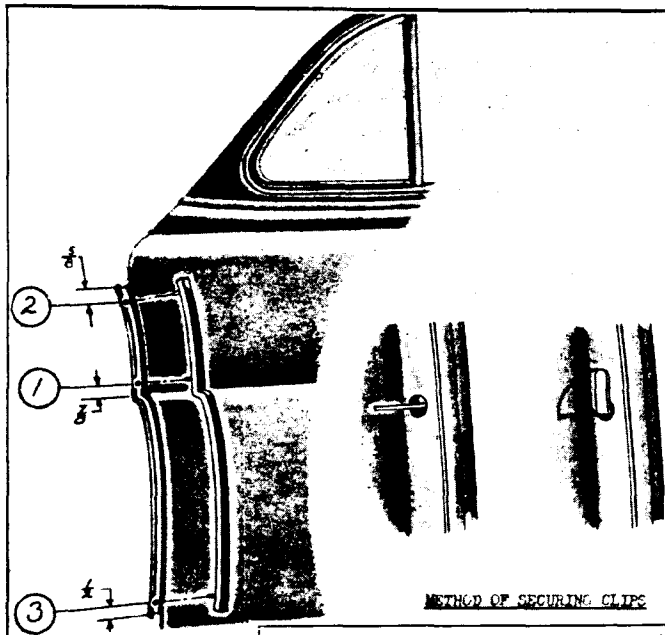
The trimboard plies may be found partially separated due to age and moisture, or they can usually be separated using a long sharp-bladed knife, so that area near clip holes or edges can be repaired where necessary. Cut a patch perhaps 2½ x 3 inches from stiff filled cloth (material similar to car's simulated-leather trim works well). Place patch centered on damaged hole, between the plies of trimboard. Now cement patch and trimboard plies together, using good-quality automotive trim cement (the thick gray variety seems to give best results—or for extra stiffness, waterproof linoleum cement may be used instead). Place trimboard on a flat surface and weight it with concrete blocks or heavy boxes, leaving these in place until the next day. When cement is dry, use razor blade or ticket punch to re-cut each patched hole; then cement trim cloth (rear edges only) back onto board. Note that gray trim cement is less

likely to soak through fabric than is the thinner amber type. Some trimboards have a metal edge added for stiffening; if this edge threatens to cause rust stains through trim cloth, it should be covered with wide masking tape or similar material before cloth is replaced.

Next, reinsert all trim clips in trimboard holes. For easiest reinstallation on car door or quarter, and to prevent rusting, a touch of heavy grease may be used on the point of each clip. Center each clip point over its hole in metal; then snap each into place by hand if possible, without tools. As last resort, press on head of clip (through trim material) with small clean block of wood and hammer. Occasionally a clip may seat deeper than the others, showing a visible "dent" in trimboard at that point. This can be corrected by making a "washer," about 1½-inch diameter, of cardboard or scrap trimboard material, and using one or more of these on clip.

TWO OR THREE additional layers of water-resistant paper and cardboard material are found inside car door, between interior trimboard and exterior metal skin. An important one of these is the thin dark sheet of waterproof paper taped or cemented to inner door metal, just behind trimboard and trim. Similar paper sheets are used in rear quarters of most 2-door models. This paper is a water deflector, and is fitted to prevent the rainwater which normally drains inside car doors and some rear quarters, mostly from sliding-type windows, from wetting the trimboards, felt padding, and interior cloth trim. Sometimes when door is taken apart from window or latch repairs, this sheet is torn and not mended, or it is simply discarded; and the eventual result is usually interior water stains, mustiness, warping and softening fo trimboards, and additional rusting and rot. If this paper must be disturbed for any reason, it should always be put back in place, should always be put back in place, with all torn portions carefully taped, before trimboard is reinstalled. Most modern cars use a sheet of thin plastic instead, and this is also an acceptable substitute if original paper is missing or hopelessly ragged.

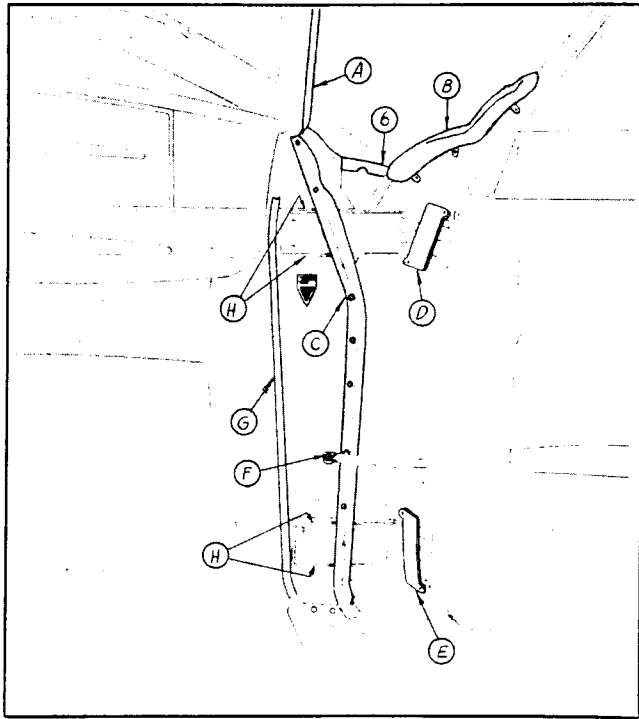
Cemented inside the external metal panel of each door is a large pad of soft waffled cardboard, similar to the material cemented to car floors and



inside roof. This material is used as a silencer, and is especially important in bodies of unitized or "Monobilt" construction. Mounted inside door shell, it helps ensure that car door closes with a proper solid dull "thunk" rather than a metallic "wham" or a loud resonant "boommm." If door silencer pad has shifted or loosened, it should be cemented back in place (it can be cut and remounted in pieces if necessary). To minimize rust problems, it probably need not cover the bottom 6 inches or so of door metal — but should be firmly attached to the surface above that, to damp out vibration. The best automotive trim cement is not needed here; ordinary undercoating mastic compound, or even asphalt roof cement, will serve about as well, and will add somewhat to the silencing effect.

It is also wise to apply a good-quality automotive rustproofing compound (using spray or brush) to metal surfaces inside door, especially at bottom, which are not covered by pad. Although rustproofing products have almost no silencing or adhesive value, they do protect the metal. Even a brushing of the lower areas with heavy #90 or #140 gear oil, or a mixture of wheel-bearing grease plus solvent, is better than no protection at all. Before reassembling door, be sure that water drain holes (behind wide rubber weatherstrip at lower door edge) are open.

Late-production Hudson stepdown (mid-1949 and up) usually have also a third or intermediate cardboard panel added inside each door, plus a similar piece added inside the rear quarters of most 2-door cars. This "interliner" cardboard, placed between inner door metal and window regulator parts, and blocking all access holes in the metal, is of course a thorough nuisance whenever window, regulator, or door latch repairs are necessary, but it probably does have some value as a supplementary deflector of water, dust, sound, and cold or heat. Manuals suggest that holes be cut in this cardboard where needed for access to window and other parts, and then that holes should be sealed using a cloth adhesive tape such as Mystik, when door is reassembled. However, some owners may prefer simply to eliminate all or most of the interliner panel, and probably this will do little harm, if silencer pad and paper watershield are both in place.



of door sill on car. Note that on most later sill edges without the molding, each sheet-metal screw must have a special cone-shaped finish washer to fit properly in its hole. If a screw will not stay tight, usually its "speednut" clip at top edge of rocker panel must also be replaced.

AROUND INNER EDGE of each door opening is a "windlace," made of patterned braid over a round sponge-rubber core, though in mid-'49 the front lower portion of this (at kick panel) was replaced by a plain colored rubber "windhose", and the matching windlace piece at inner bottom edge of each door was eliminated. Thinner matching "windcord" trim is used around window garnish molding on doors, and often around interior visors, rear shelf, assist straps, etc. Windlace above doors has heavy fibre cord stitched to its selvage; this serves to hold it tightly behind headliner retainer. Vertical portions of windlace are held to pillar either by tacks in cardboard tacking strips (on early production), or by being stitched to thinner cardboard which fits over pillar trimboard clips (mid-'49 and up).

A frayed or damaged portion of windlace or windcord can often be repaired inconspicuously, if short spare pieces of matching material are available. First take out chain stitching and remove braided fabric from core. Clean fabric if necessary, and perhaps iron flat. Cut out bad portion. Sew a replacement section of braided fabric to the original, preferably on the bias, either by hand or machine, but carefully matching the pattern, stitch by stitch. Several tries and bastings may be necessary. Again iron flat the patched area, and then sew braided material back onto cord or rubber core with at least two rows of stitching (if by machine, a "half-foot" or similar sewing machine attachment may be helpful). Last, reattach repaired material to retaining fibre cord, or cardboard or paper, and reinstall in place. The paper retainer for windcord, inside garnish molding, may be stiffened with masking tape.

Rubber weatherstrip on door frames was of a smooth plain type on early stepdowns, but during '49 was changed to one of the more usual types with a molded rib or lip in the rubber. Fit of weatherstrip can be checked by closing door and sliding a card or thin stiff plastic piece along

ALSO ADDED during the 1949 production run were several other parts for doors, including a small water drain trough fitted underneath each front windwing (and concealed by window garnish molding). The troughs were also offered as a retrofit or add-on item for earlier '48-'49 cars. Installation required use of non-hardening "dum dum" body putty for a good seal around edges, plus one extra sheet-metal screw; and slight planing down of the small wood retainer block under windwing, to allow proper fit of garnish molding. Drain hoses were also added to the troughs under windshield at about the same time, and these too were available as a retrofit kit, but correct installation underdash was a bit more complicated (see manual).

For a better seal at sponge-rubber weatherstrip on lower A-pillar, small sheet-metal covers were added over the door hinges, circa mid-1949, and the crevices (as on hinges without covers) were filled with "dum dum" putty. These covers, which attach with two small sheet-metal screws each, are occasionally added to earlier stepdown models as well.

Where outward curvature of door matches top edge of front fender, an extra seal is required. Early stepdowns had a small S-shaped rubber piece attached to fender with sheet-metal screws, but models after early

'49 had larger sponge-rubber "S" on door instead. Both types have rubber molded over a metal base, and sometimes a bit of adjustment is possible here for a better fit, even when rubber is old — or parts can be built up slightly using black plastic rubber filler (Duro or a similar brand). Be sure filler is completely dry before rubber parts are put back into use.

The extra-wide rubber weatherstrip at bottom edge of door was changed in '49 from single to double-lip type. Both of these were molded on a metal base complete with rivets (the number varied) which were used not only to mount weatherstrip, but also to hold retainer clip for external door molding in position. Hence this strip can be a problem to remove and replace (as for rust-repair work on door); and new-old-stock strips, including rivets, are not usually found. Best procedure, if only the rubber needs replacement, may be to scrape it from the base strip, and cement approximately equivalent new rubber in its place. Check to be sure that rivets and exterior molding clips are not loose. If necessary, drill extra holes (from outside of door, with molding removed), and use small, very short sheet-metal screws to hold clips.

Along with the weatherstrip change, a narrow chrome molding was eliminated from the mating edge

door edge. If door is correctly aligned, a remaining low spot or two in the weatherstrip (either type) can often be built up using one or more layers of rubber electrical tape, cemented under strip.

Probably more inconspicuous running changes on Hudsons were made by the factory in 1949 — including soft-trim parts especially — than during any other single stepdown year. Nearly all of these are detailed in the blue 480-490 series Hudson parts book, although many of them (since they present little or no interchangeability problem) are omitted from the factory's later edition published for all 1948-1954 models.

ONE OF THE PLEASANT features when driving a Hudson, or indeed most other cars built from the mid-1930's through the late 1960's (and most trucks even since then) is the presence of pivoted front quarter vent door windows. This writer can report that the vent wings, in addition to their comfort value, can sometimes be a real safety feature, as an anti-soporific when driving late at night—since one does not easily fall asleep at the wheel with the draft from a wide-open quarter window blowing in his face. (A loud radio also helps.) This is somewhat more practicable than merely having a "safety" air bag blow up in the driver's face after he falls asleep and the car crashes.

Windwings on Hudson stepdown model were of two designs — the friction-pivot type with small locking handle, as on Super, Pacemaker, et al., and the crank-regulated type used on Commodore, Hornet, and all convertibles. The friction-type wing, evidently with a better handle and lock than those on most Brand X cars, is usually trouble-free. If necessary, however, the handle can be replaced without removal of wing glass from frame. For smoothest operation, handle and button may be given an occasional drop of oil.

Friction at wing pivot should be sufficient so that the airstream at high speeds cannot push a wide-open vent window partly shut; but more friction than this merely places unnecessary stress on parts, particularly in cold weather. Friction can be adjusted by one 9/16-inch self-locking hex nut, but this requires removal of door trim panels, and usually a socket wrench with U-joint and extra-long extension, inserted from below. A bit of grease or heavy oil on the

friction parts (but not on vent wing rubber) is also recommended. If the rubber must be lubricated to control sticking or squeaks, use either sili-cone or Door-Ease wax.

CRANK-TYPE WINDWINGS are easier to operate (without finger-marking glass), and are controlled by a small worm-and-sector gearbox attached to crank. Usually the only weak spot here, on Hudson and some other cars, is the sector gear, which fits on bottom end of windwing shaft and is made of die-cast white or pot-metal alloy. This part may eventually wear and break, particularly at the few teeth on one end which are required to close vent window tightly. Other than finding new-old-stock parts (the gearbox was sold as complete assembly only), the best repair, especially if it can be done before worn gears actually break, is the one suggested years ago by a club member, in WTN for November 1971. Since right and left sector gears on car are identical, but wear at their opposite ends, the two regulators can be taken apart (drill out four rivets each and replace later with 8-32 screws, nuts, and lockwashers), and the two sector gears interchanged.

Note that right and left worm shafts (for crank) are also alike, but shafts for windwing are not (right one is marked with groove); nor are housings of the two regulators alike. Also, the top and bottom pieces of these housings have a small lug or stop pressed in metal to prevent the sector from turning too far; but often these stops prevent the vent wing from being closed quite tightly, and so they are best removed or pounded flat before gearbox is reassembled. Be sure to clean the gears, and pack well with heavy wheel-bearing grease or white lithium-type lubricant.

Later-type regulators, c. 1951, have an adjustable friction collar added for wing shaft. This can help reduce play in vent wing when open, but it should not be set tight enough to put strain on gears. Length of the worm shaft for crank may vary slightly, depending partly on the valances and trim used on a given model. A few shafts may need to be ground a trifle shorter for best fit of crank. Also, when reinstalling regulator in door, check fit of lower edge of windwing: if too far inward, washers may need to be used on screws, between regulator and door metal. At the same time, regulator

can be adjusted slightly fore or aft for best fit of windwing (file out screw holes in door metal a bit if necessary). When replacing windwing and other window cranks, be sure that right and left ones are in matching positions when windows are closed.

Next time: More about doors, body, and windows.

ADDITIONAL NOTES and corrections for previous columns: For more information about heat riser valves or exhaust dampers (February '84 WTN), see the WTN Technical Service Bulletin for January 1977 (first in a series prepared by Art Adams), which includes a reprint from the May '52 *Hudson Service Merchandiser*, reminding mechanics to check this valve for free movement and correct operation. Sometimes a stuck valve can be loosened by applying penetrating oil (or kerosene) and then tapping the shaft back and forth endwise a few times (preferably with thermostat coil and other springs removed from shaft). Owners of some late model Brand X's will note that today the valve may be operated by a vacuum diaphragm rather than by thermostat directly.

PRINTING PROBLEMS in the August '83 column (Hudson Technical Hints, p. 17) may have caused some confusion. Nearly all of the material for this column was contributed by Vernon Holt, with only a few added comments by myself. As is customary, the added comments were to be placed inside square bracket marks, thus also avoiding confusion with the standard parentheses () used elsewhere in text; but apparently brackets were not available in this instance.

A sentence at top of p. 18 should read: "Apparently the use of #10W straight-grade oil, originally specified for these engines in cold weather, is better avoided." The heavy #40-grade oil, of course, was not originally specified for any of these postwar engines, even though a few owners may possibly use it during hot weather for an engine which is quite worn.

SORRY THERE WAS no space in December or February for my Christmas or New Year's greeting to members. Must content myself this time with wishing everyone a Happy Fourth of July! (and a very non-Orwellian 1984).