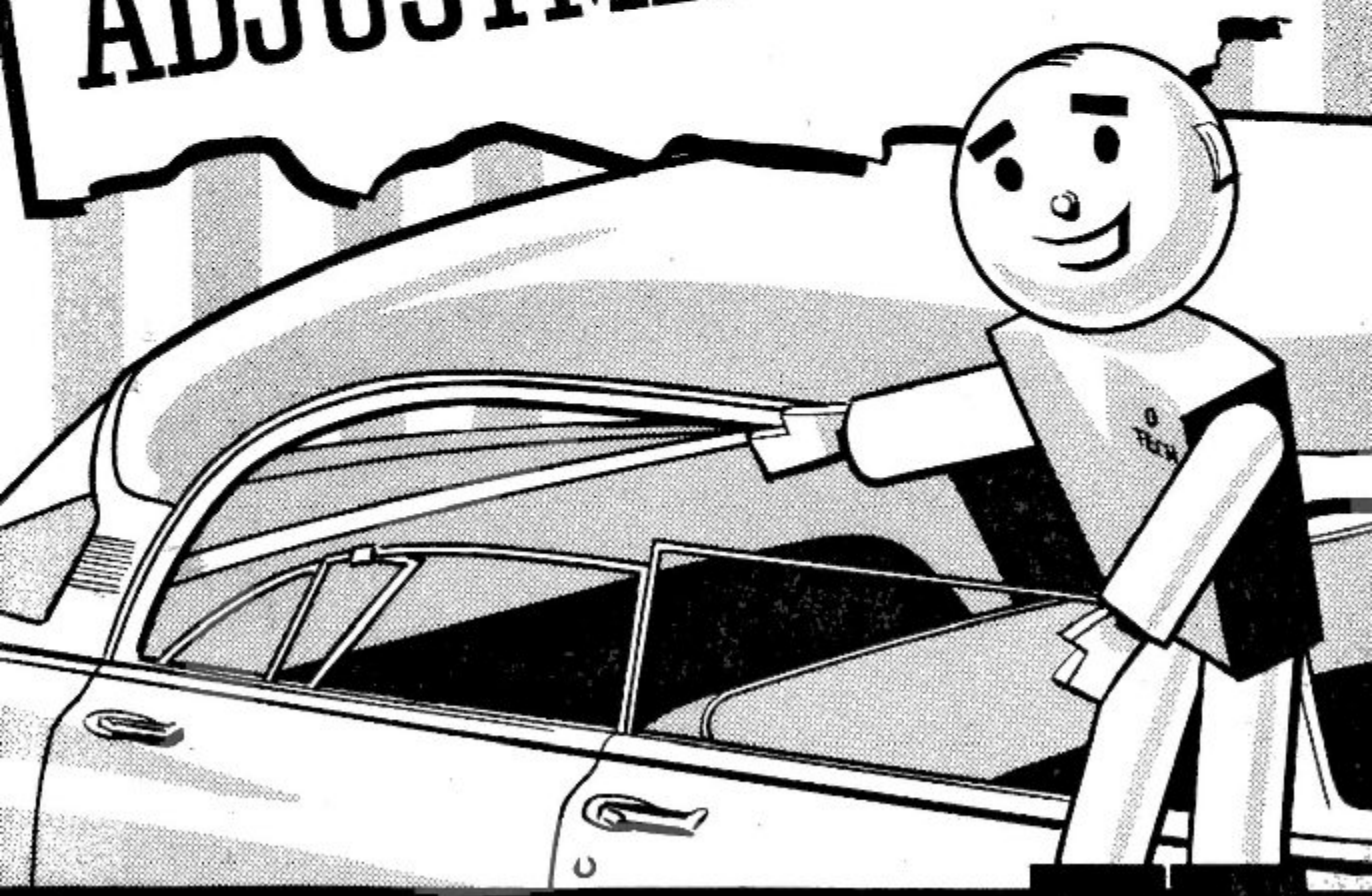
SESSION NO.

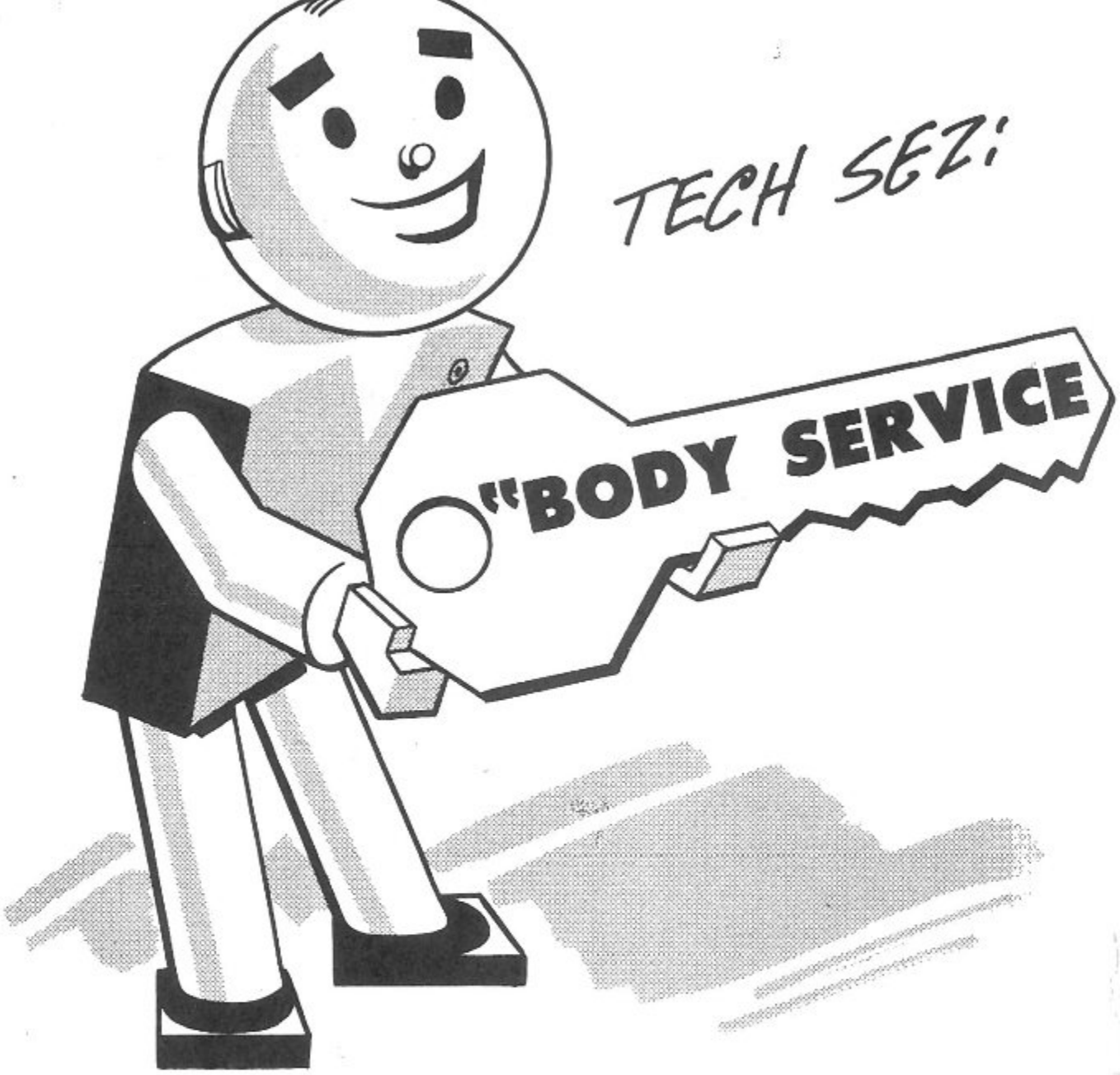
SERVICE REFERENCE BOOK 98

DOOR and WINDOW ADJUSTMENTS 1956 MODELS



Prepared by **CHRYSLER CORPORATION**

PLYMOUTH • DODGE • DE SOTO AND CHRYSLER DIVISIONS



You know there are three main points to consider when judging how well a door fits: appearance, ease of operation, and how well it seals against water and dust leaks.

When we know how to bring about these three conditions we will have no trouble keeping our owners happy.

This reference book covers a review of door adjustments that any technician can make on the 4-door sedan models. In addition, a good bit of information is provided on how to adjust the doors and window glass on the exciting new 4-door hardtop models.

IS THE KEY TO CUSTOMER SATISFACTION"

Here's a handy guide to all of this helpful service information:

INSPECTING FIT OF DOOR

Before you check a door for adjustment, stand away from the car and look it over. Ask yourself questions on its general appearance, ease of operation, and how effectively it seals against water.

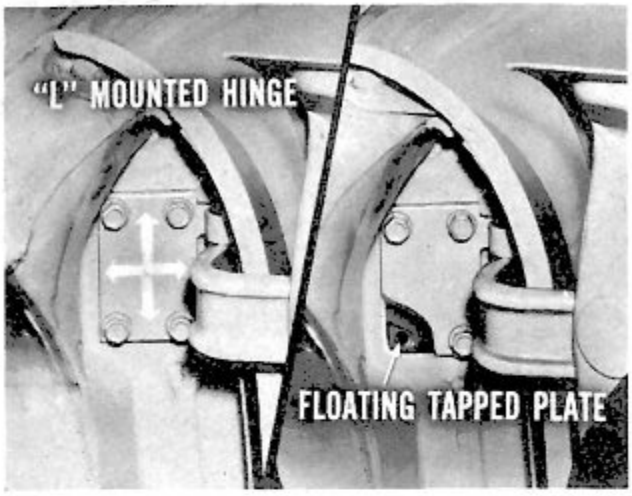
Appearance-wise, you'll want to know if the door is *centered in its opening*. Is the spacing fairly even and uniform all the way around? Are the door panels flush with the adjacent body panels all the way around? Sometimes the doors are perfectly okay and just the fenders may need to be shifted to improve appearance.

Regarding ease of operation . . . you'll have to test how easily the door opens and closes. Sometimes it helps to remove the striker plate when testing a door fit. With no interference at the door lock, it is easier to judge just how easily the door operates.

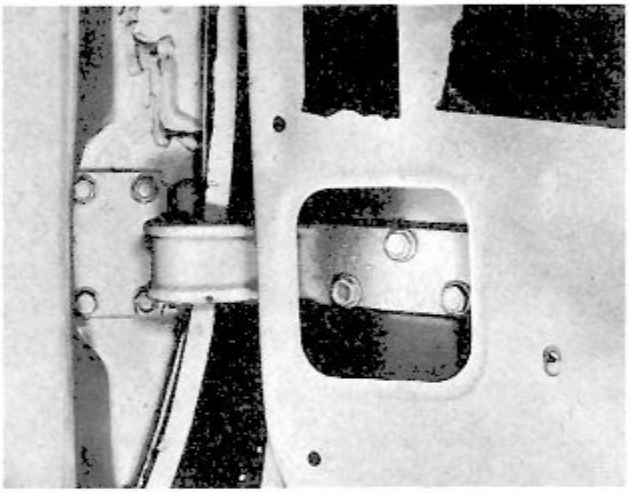
Finally . . . the door should fit so there's enough compression on the weatherstrip to seal effectively against water and dust. You can check this by closing the door on a shipping tag and then seeing if there is an equal amount of drag at the top, bottom and sides when you pull the tag out.

In case you're wondering if it's possible to get all three conditions—good appearance, operation, and seal—perfect on every door, the answer is, "Yes!" Oh, there are times when you may have to compromise a little on one—like even spacing, for example—in order to get a good, watertight seal. However, you can generally satisfy all three conditions and end up with a fit that is perfectly acceptable to the owner.

You can move a door up, down, fore, aft, in or out . . . whatever may be needed. For fore-and-aft adjustment on some models, you'll have to remove the inside hardware and trim to get at the bolts on the hinge straps.

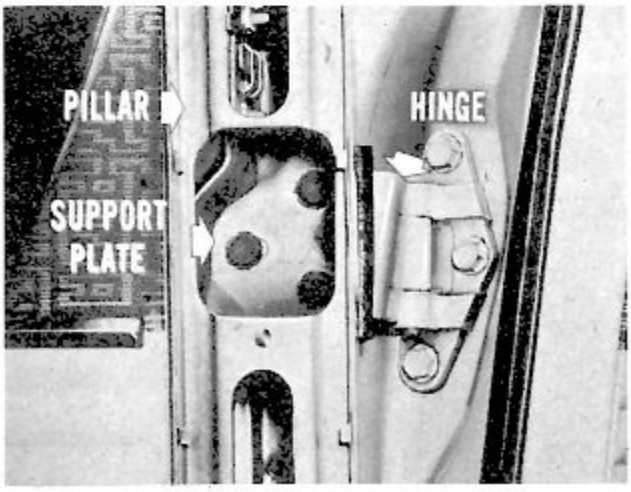


Front doors on all models use an "L-mounted" hinge. By just loosening the bolts, you can shift the pillar half of the hinge whenever necessary. Behind the pillar is a floating, tapped plate.



The door half of this "L-mounted" hinge is held to a reinforcement panel in the door by three bolts. These bolts enter a floating, tapped plate which permits adjustment of the door on the hinge.

On Plymouth and Dodge sedan models, you'll find an "L-mounted" hinge at the rear doors. The pillar half of this hinge is mounted to a support plate in the center post. Bolt holes in the plate are elongated and slightly oversize. The door half butts against the front face of the rear door. Three retaining bolts pass through a reinforcement panel inside the door.

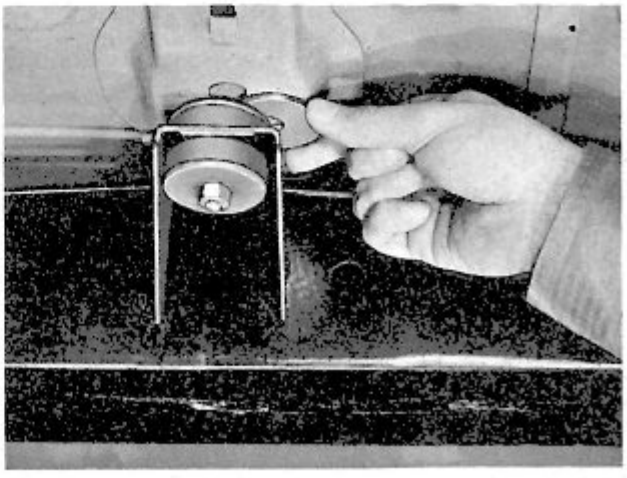


NOTE: The hinge mountings provide all the adjusting movement needed to make a door fit properly in the opening. Never try to use a metal block or bar for the purpose of bending a door hinge. A hinge is the strongest structural part of a door and would therefore be the last part to bend.

When you've completed your door adjustment, recheck on how the door latch engages the striker. You might find you have to reposition the striker, or shim it out. Some mechanics remove the striker before they adjust a door. When they finish the door adjustment, they reinstall the striker in its proper position.

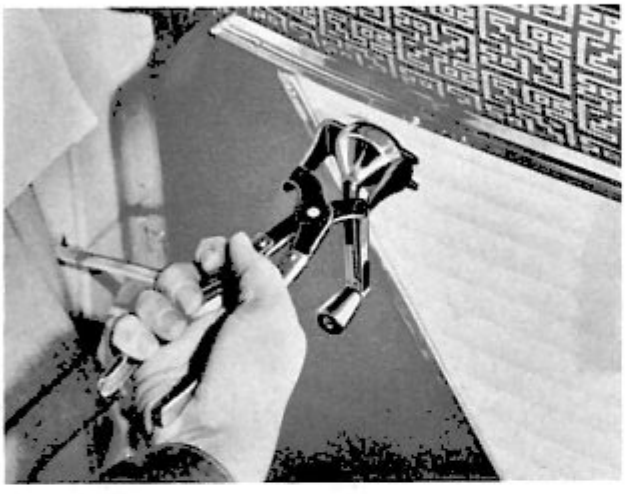
Shimming the Body When Necessary. Shims at the body bolts help control alignment of the body on the frame. Proper tightening of the body bolts is also important to correct body alignment. If the door opening is not square with the door, adding or removing shims at the body bolts nearest the opening is probably the way to correct the door opening.

With the car on the hoist, check compression of the rubber insulators at the body bolts. Uneven compression may point to incorrect or uneven torque on the bolts. Body bolt torque on Plymouth and Dodge cars should be 15 foot-pounds. Proper body bolt torque on all other models should be 15 to 20 foot-pounds. Keep in mind that the nut should turn freely on the body bolt. A little rust on the threads will be enough to give you incor-



rect torque readings. Use a rethreading die to clean up a dirty or rusty condition.

Removing Inside Handles. Occasionally, you'll have to remove the inside hardware and trim to reach the bolts used to make certain adjustments. There's a new tool (C-3448) that's handy for removing the inside door handle and the window regulator handle. These handles, remember, are fastened with spring clips that lock into grooves on the handle shafts. Here's how to use the tool. Position the handle so it is straight down. From the left side of the handle, slide the pronged jaws between the boss and the washer that protects the trim. When the lip between the prongs contacts the spring clip, squeeze the tool. That releases the clip from its locking groove, and you can remove the handle easily.

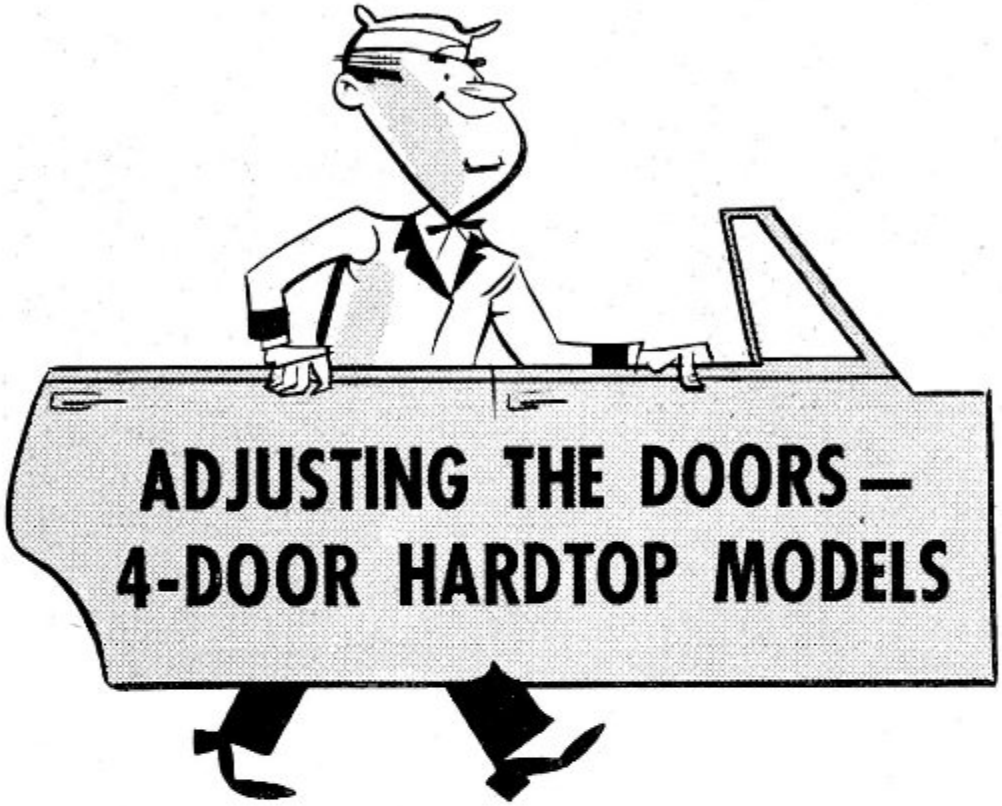


To reinstall the handle, remember to keep the concave side of the washer out. Then, slide the spring clip and handle over the shaft until the clip engages the locking groove.

You can use this tool for removing the trim panel, too. The prongs prevent trim clips from pulling through the panel. Don't put too much leverage on the tool or you might break one of the prongs.

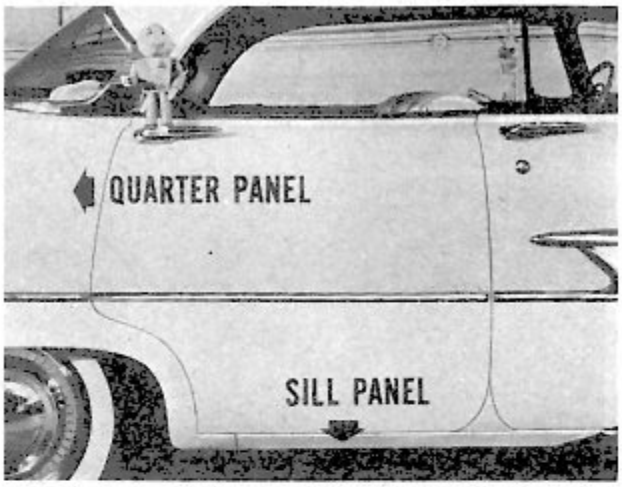
The new pull-type, outside handle is fastened by two studs and retaining nuts. To remove it, you have to remove the inside hardware and the trim panel. Use an extension wrench to remove the nuts. Then, pull the handle away from the door. When you install the handle, be sure to

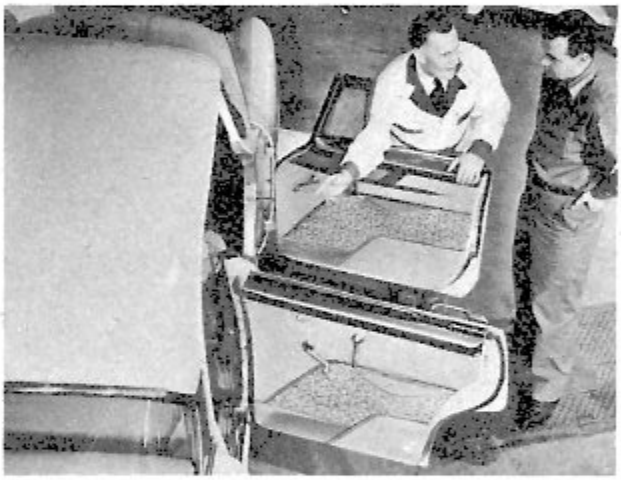
put a little MoPar Lubriplate on the lock slide and the lock actuator first. And, when you install the handle, be sure you line it up properly. If you get it the least bit cocked, there won't be enough clearance between the tip of the handle and the door outer panel. That, of course, will cause a rattle.



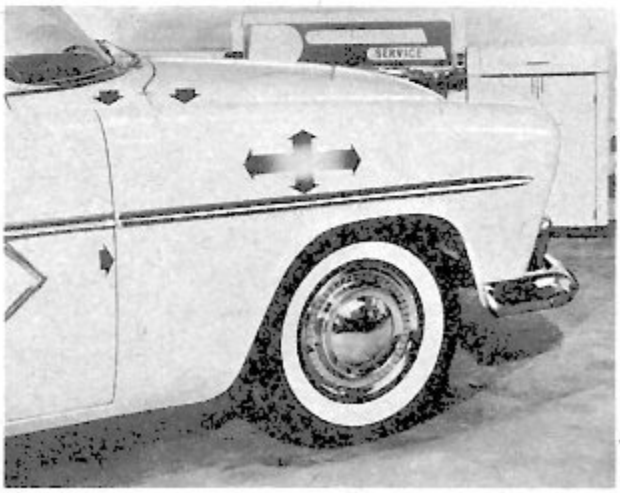
Plymouth and Dodge 4-Door Hardtops. On these models you'll find that the hinges are similar to those used on the sedan models. Therefore, adjusting door positions will follow the same procedures. One important thing to keep in mind, however, is that, with no center pillar showing, the spacing between the two doors, and between the doors and the bordering panels, must be as near equal as it is possible to make it. In other words . . . proper centering of one door depends on the correct positioning of the other door.

Always begin any door adjustment on a 4-door Plymouth or Dodge hardtop with the rear door. That's because two sides of this door are bordered by fixed panels: the rear by the quarter panel; and the bottom by the sill panel. Remember that the front and rear door contours should match with each other and with the adjacent body panels.



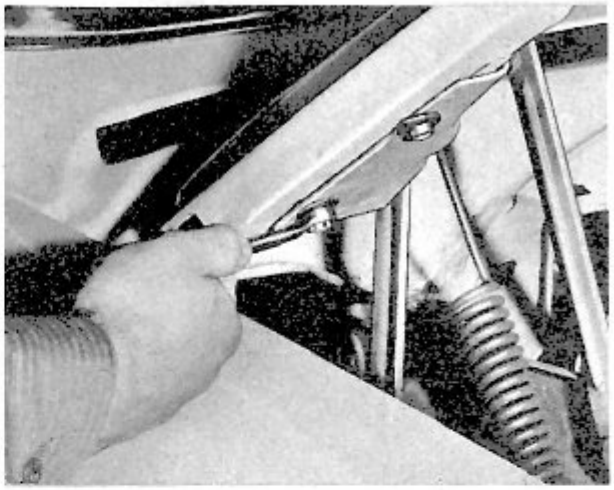


You can get in-and-out movement of the doors at the hinge pillars. Again, you'd start with the rear door. Get it flush with the sill and quarter panel. Then match the front door contour with that of the rear door.

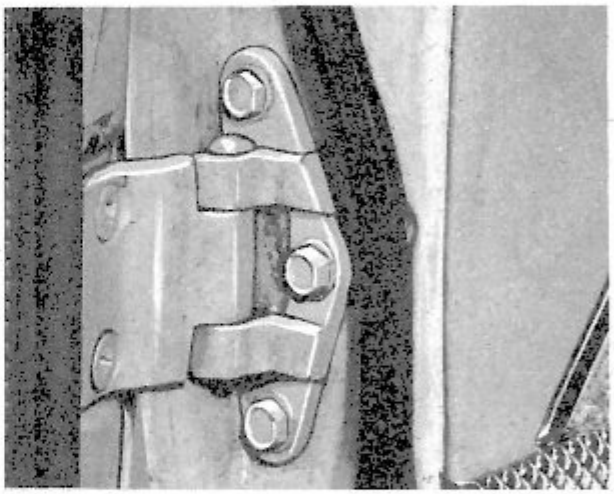


Now, you can shift the fender up and down, in and out, or fore and aft. That may be necessary to match the front door contour, or to even up the spacing at the front edge of the front door.

You can raise the fender, if necessary, by loosening the upper fender to cowl bolt. Then, lift up the top rear edge of the fender and install a rubber shim at the bolt.



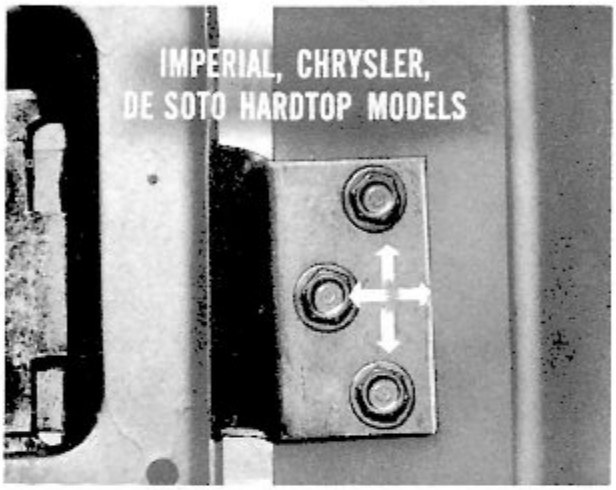
If you move the fender from side to side, check the spacing between the hood and fenders. You might have to loosen the attaching bolts at the hood hinges and shift the hood to even up the spacing.



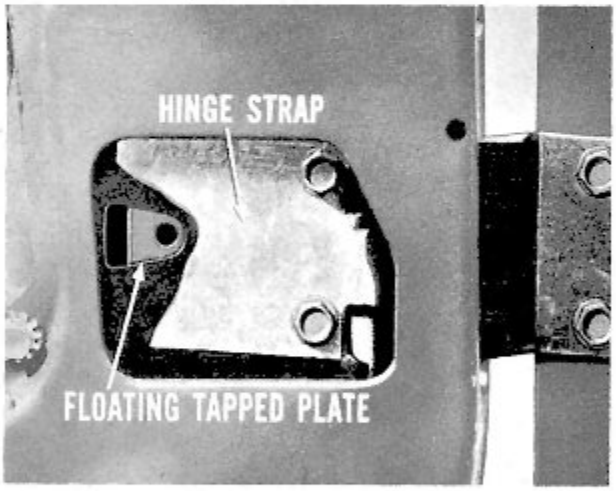
Hinges used on the front doors of all our hardtop models are the same as those used on the sedan front doors. On the Plymouth and Dodge hardtop *rear* doors, you'll find "U-mounted," butt-type hinges are used. Other hardtop models in the Chrysler Corporation line use an "L-mounted" strap-type hinge.

So, on the Plymouth and Dodge, you can get an in-and-out adjustment, in addition to a slight vertical movement, by shifting the hinges at the pillar. You can get a fore-and-aft adjustment, too, but you'll have to use shims at the hinges. To move the door to the rear, install shims be-

tween the hinge and the door, or between the hinge and pillar. To move the door forward, put shims between the door and hinge pillar at the inner bolt holes ONLY. This moves the hinge pivot forward, bringing the door closer to the pillar and decreasing the spacing between the doors.



Rear Doors—Imperial, Chrysler and De Soto Hardtops. On these models there is an "L-mounted," strap-type hinge used on the rear doors. As a result, you can get an in-and-out, and a slight up-and-down adjustment at the hinge pillar.



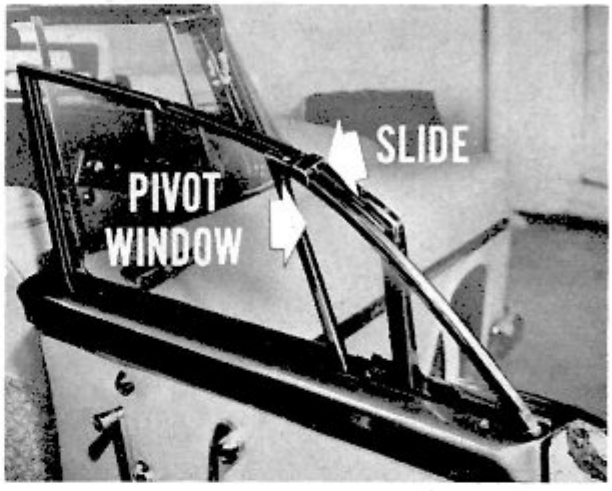
The hinge straps, which extend into the door, are secured by three bolts to a reinforcement panel. A floating, tapped plate makes fore-and-aft adjustment possible.

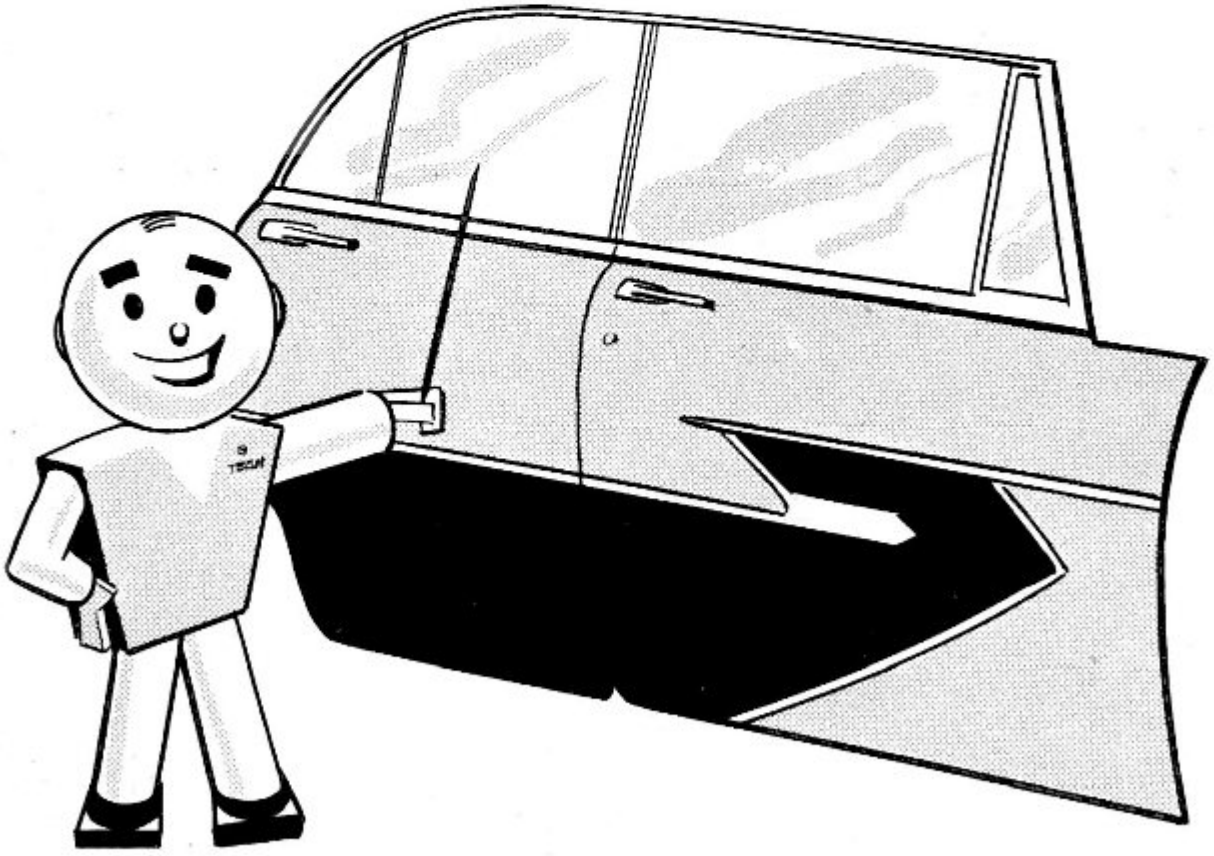
ADJUSTING THE WINDOWS ON HARDTOP MODELS

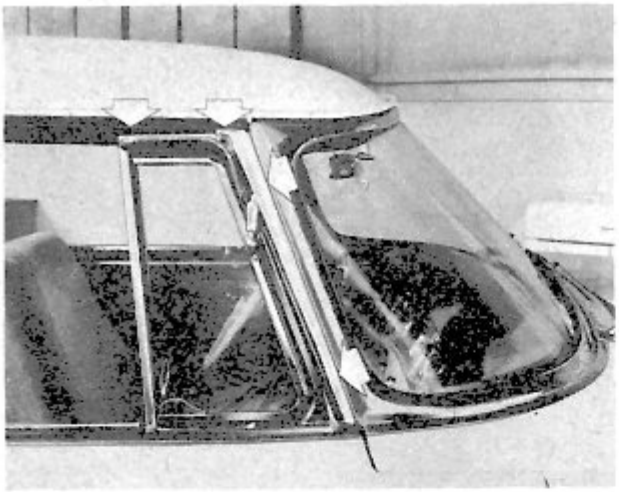
The entire window arrangement on the new 4-door hardtop models can be adjusted. But the important thing to keep in mind is that you should always get a good door fit first. Then you can go ahead and realign the windows if it is necessary.

PLYMOUTH AND DODGE

The front door glass and vent window on these models are similar to the glass set-up you've noticed before on our two-door hardtop models. However, the rear door glass has a brand-new feature. Notice that it has two parts which fold in and out together. The rear section, called a pivot window, is held at its top by a slide that rides in grooves in both window frames. That slide gets the pivot section to follow the main glass section as it travels up or down.

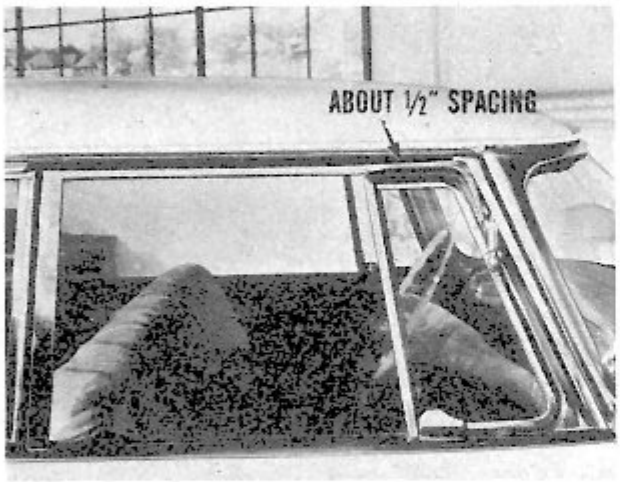




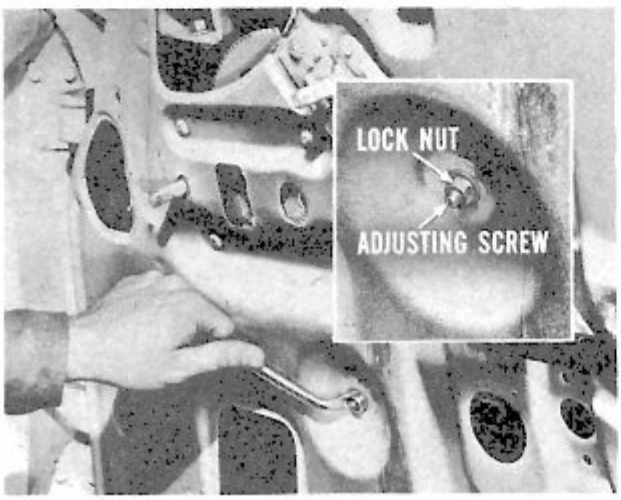


Now, if the glass needs to be realigned for better appearance, better sealing, or to correct a rattle, keep this in mind. On the Plymouth and Dodge hardtop models, always begin window adjustments with the front vent window. Get the front vent window lined up with the windshield post and drip molding first.

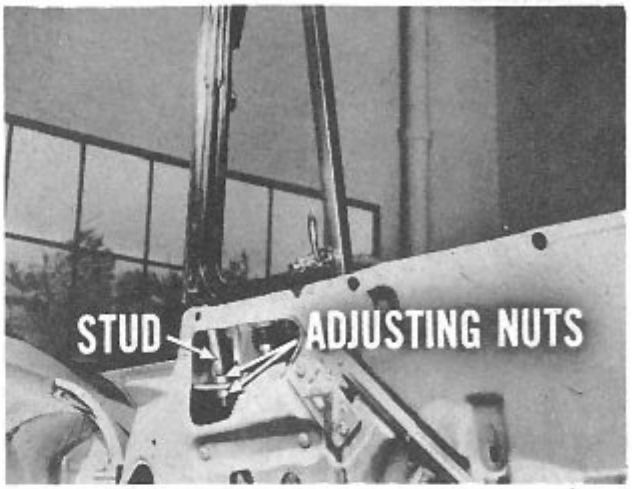
Once you do that, you can easily shift the other window sections in line. Keep the vent frame spacing at the pillar even and about the same as the uniform spacing between the door and fender. We should have about ½" spacing between the top of the vent frame and the roof side rail with the door closed. The top of the vent window frame should fit behind the outer lip of the roof rail weatherstrip for a good seal.



Adjusting the Front Vent Window. To adjust the vent window, first remove the inside hardware, the trim panel, and the inner panel cover plate. Then, loosen the lock nut for the division bar adjusting screw. The oversize screw hole at this point permits up, down, fore, and aft movement of the division bar depending on how you adjust the vent or the main glass sections of the front door.



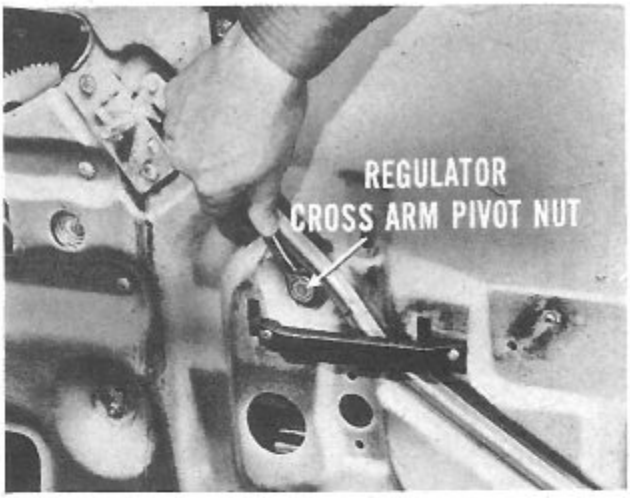
You can pivot the vent window fore or aft to square it up at the top by means of a large stud. This stud extends down from the forward edge of the vent. Two locking nuts secure the stud to a bracket inside the door. To pivot the vent down at the front edge, loosen the upper locking nut, and tighten the lower nut. To raise the front edge of the vent, loosen the lower nut and tighten the upper nut.



The top of the vent frame can be tilted in or out to get a better seal at the weatherstrip. Simply loosen the locking nuts on the vent frame front stud. Then turn the adjusting screw at the bottom of the division bar in or out to get the desired fit. Tighten the lock nuts.

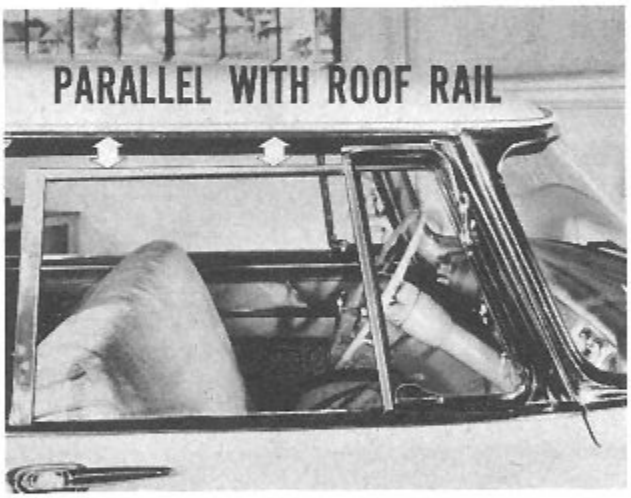
Adjusting the Front Door Main Glass. It's also easy to adjust the front door main glass. When raised, it should be even with the top of the vent frame. When fully lowered, it should be even with the top of the door panels.

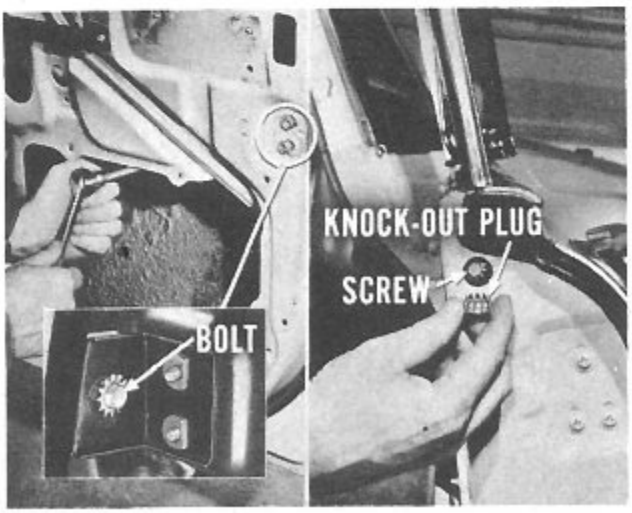
If you need to adjust the main glass, loosen both of the glass "upper" stops. Then, raise the window. If the glass doesn't go up even with the top of the vent wing frame, loosen the large pivot nut in the center of the regulator crossarms. Bear in mind that the large pivot nut controls upper travel. The glass lower run channels control



leveling the glass. So, with the pivot nut loose, you raise the window to its proper height, and tighten the nut. Then, if the glass is not level, move the lower end of the division bar fore or aft to level the glass with the roof side rail. It might be necessary to shift the glass rear run channel also to get the glass level.

You can shift the glass rear run channel fore or aft by loosening the two attaching screws at the lower end, and one screw at the channel upper end. This adjustment might be necessary if too much or too little side play was evident between the guides and the run channels. Or, as pointed out earlier, you might want to parallel the glass with the roof side rail or with the rear edge of the vent window.

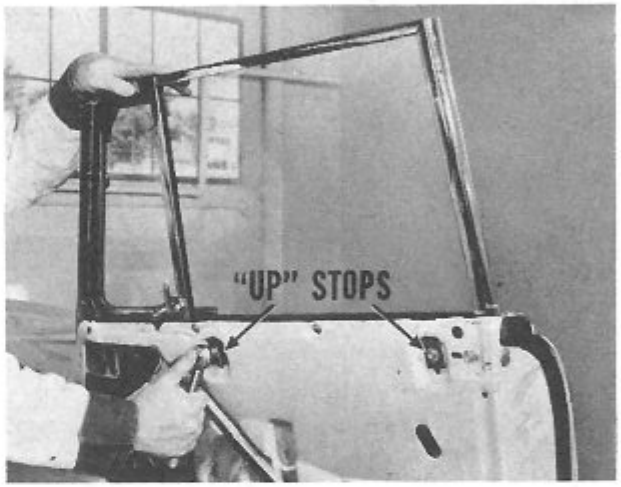




Once your glass is parallel with the roof side rail and you have the division bar adjusted properly, you're off to a good start. You might then be wondering if that glass rear run channel can be moved in and out; well, it can. By looking inside the panel opening, you'll see a screw through the

bracket at the lower end of the run channel. With the glass raised, loosen that screw and move the lower end of the run channel in or out. You can tell which way to move it by watching the fit of the glass to the roof side rail weatherstrip. If you can't get enough adjustment there, just remove the knock-out plug in the rear face of the door. Then you'll be able to reach the adjusting screw which controls the in-and-out movement of the upper end of the channel. Move the channel in the desired direction, and retighten the screw.

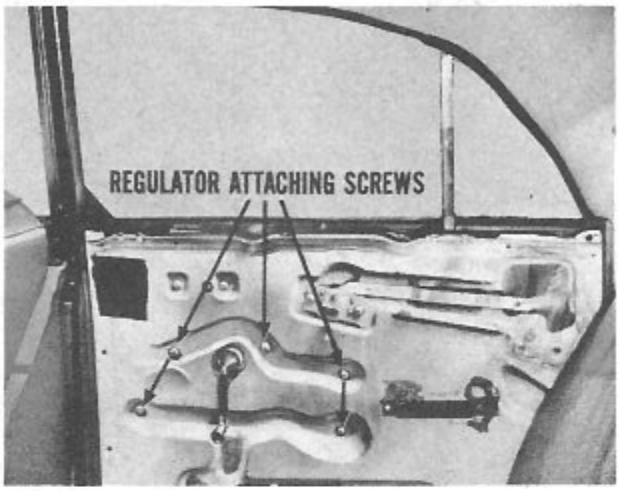
When the window's been raised to its finally adjusted position, move the two glass "UP" stops against the glass frame channel and tighten the stop retaining screws.



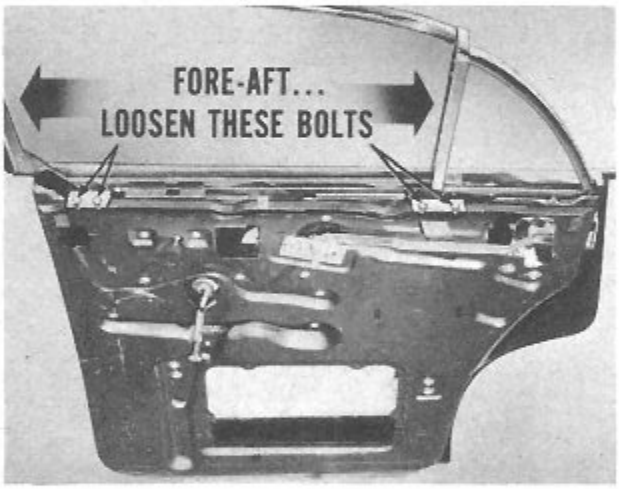
For proper glass "down" travel, loosen the glass lower stop attaching screws. Lower the window until the top of the glass is even with the top of the door panels. Position the stop against the glass lower channel and tighten the stop retaining screw.

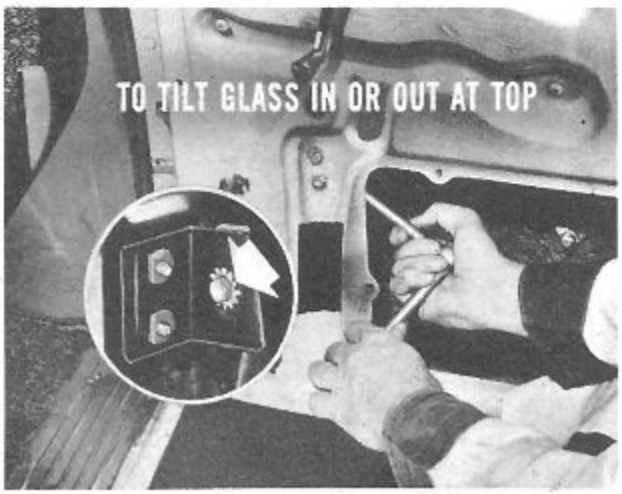
After stop adjustments are made, see if there's a need for better sealing at the top. If there is, you can loosen the roof rail weatherstrip retainer attaching screws and move the retainer in or out.

Adjusting the Rear Door Window. Like the front window assembly, the rear window set-up is also adjustable. Remove the inside hardware, trim panel, and the inner panel cover plate. You can square the forward edge of the glass with the rear edge of the front door glass by loosening the five regulator attaching screws and pivoting the regulator assembly. You can also pivot the glass to square it up with the roof side rail, and raise or lower it to get uniform spacing between the top of the glass and the roof side rail.



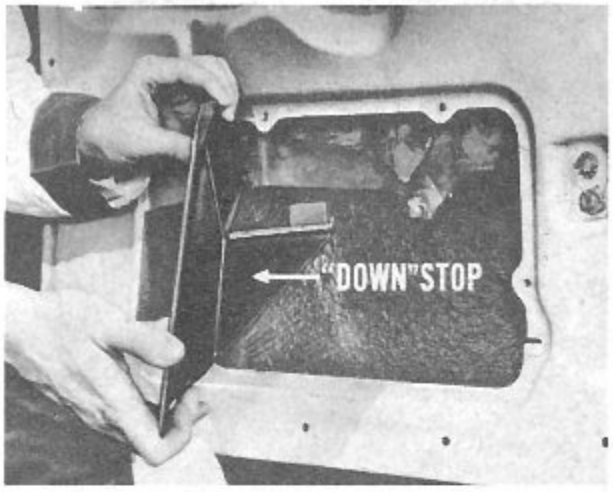
That glass can also be moved forward or rearward to get proper spacing and a good seal between the two main glass sections. Just loosen both run channels at the top and move the glass frame in the desired direction. At that same adjusting point you can make an in-or-out adjustment to control clearance between the glass and the cat's whiskers.



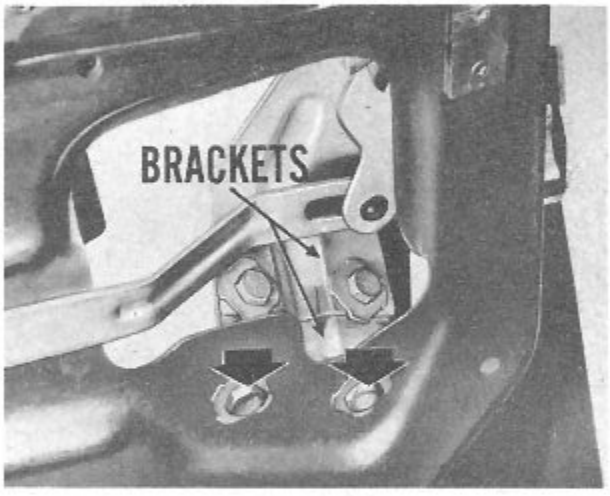


And, to tilt the glass in or out at the top for a better seal against the roof side rail weatherstrip, loosen the run channel lower bracket screws. Move the bottom of each run channel in or out until a good seal is obtained between the roof rail and two main glasses.

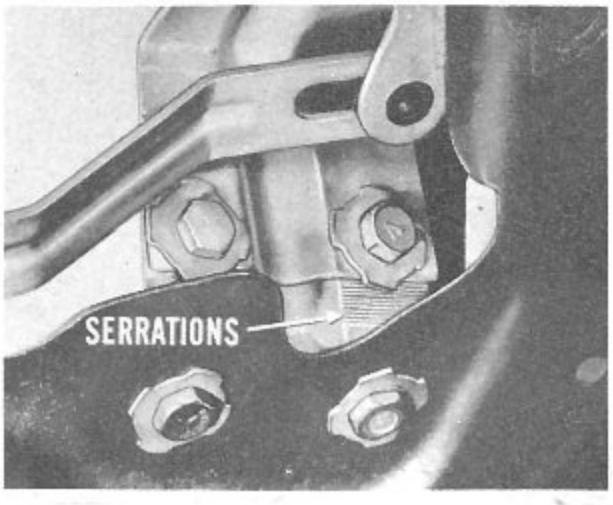
While there is no "up" stop on the rear window, there is a "down" stop. It's on the large plate that you removed from the inner panel. So, reinstall the plate. Then, adjust the "down" plate to keep the top of the glass frame flush with the door panels when the glass is down.

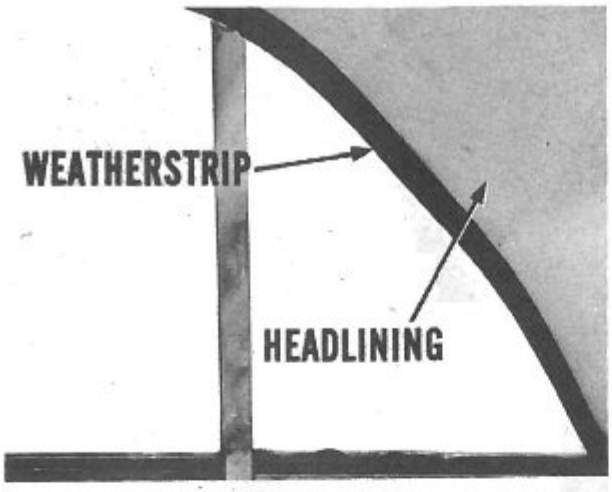


Adjusting the Pivot Window. This curved section can be adjusted to give it a good-appearing arc with the roof rail. That pivot window is mounted on a two-piece bracket attached to the door inner panel. You can loosen them and make up, down, fore, aft, and some pivoting adjustments.



You can move the pivot window in or out for better sealing by loosening the two bolts that attach the pivot window lower bracket to the upper bracket. The portions of the brackets that contact each other are serrated. So you can move them only in and out. Be sure to loosen the bolts enough for the serrations to clear each other. Another thing . . . since there are serrations, you'll notice that the upper bracket will have to be moved straight in or out and this prevents any cocking of the glass.

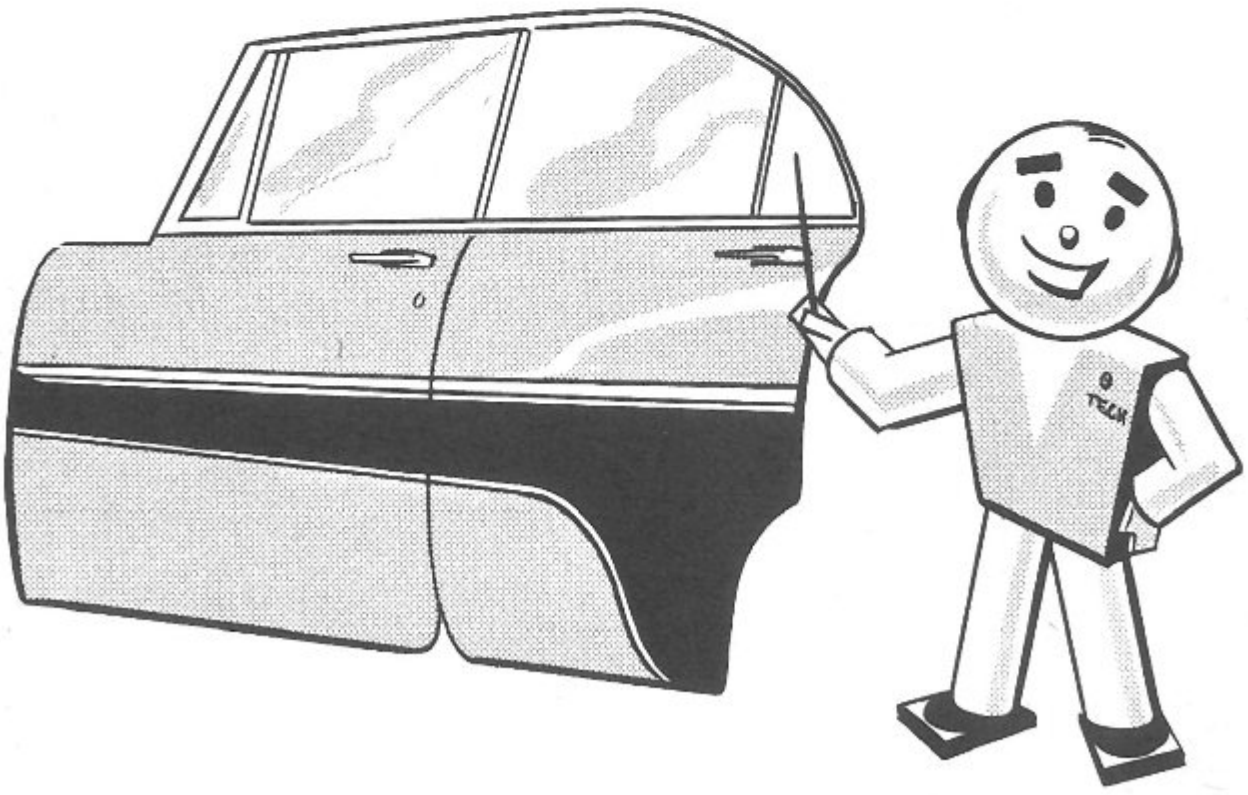




You can shift the roof rail weatherstrip retainer over the rear door main glass or the pivot window, too, if necessary. However, remember that moving the weatherstrip retainer should be only a last resort. It helps hold the headlining at that point and you'll want to avoid marring the inside appearance.

IMPERIAL, CHRYSLER, DE SOTO

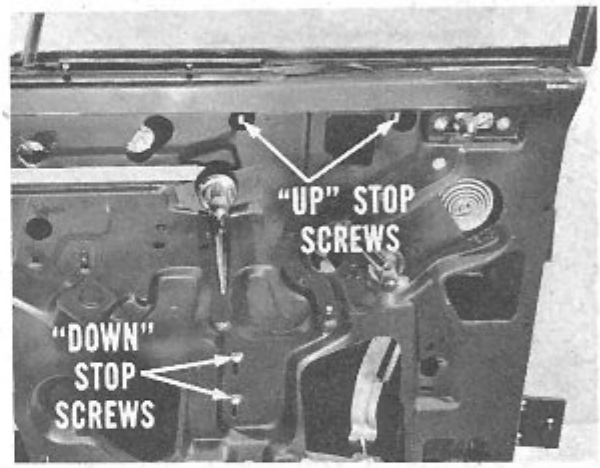
When you work on the hardtop windows of the Imperial, Chrysler, or De Soto models, you should follow an adjustment sequence that differs from the one you observe on Plymouth and Dodge cars. Instead of starting at the vent window, you should begin by adjusting the rear door glass assembly. That is because the rear door window



of the Imperial, Chrysler and De Soto models does not slide forward. Therefore, you cannot compensate for extra spacing between the two doors by making a fore-and-aft adjustment of the rear door window as you can on Plymouth and Dodge models.

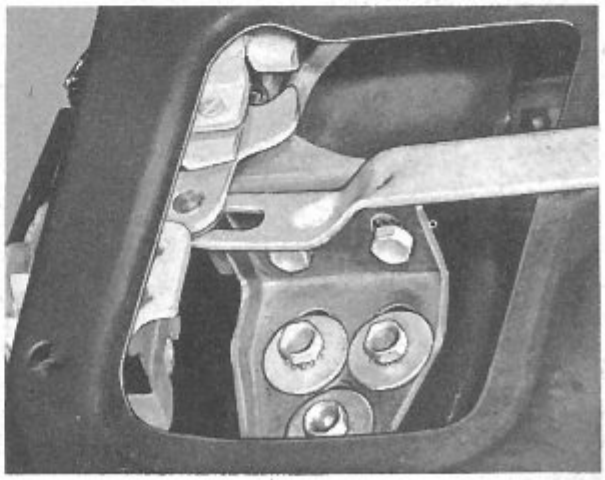
Before you do any glass adjustment, of course, check the over-all fit of the doors, and try to determine what movements have to be made. You may need to work with the glass on only one door without disturbing the other.

Rear Door Main Glass. You can adjust the upper limit of travel on this glass by raising or lowering the two glass "up" stops. You can adjust the lower limit of travel by loosening the two screws that attach the glass "down" stop and then raising or lowering the stop. Fore-and-aft adjustment of this window can be made by loosening the shoulder studs. Then move the window glass and run channels forward or rearward as required.



In-and-Out Adjustment. Tilting the glass in or out at the top is accomplished by turning the adjusting stud at the bottom of each channel.

Adjusting the Pivot Window. You can adjust the pivot window up or down and fore or aft by loosening the three screws which secure the mounting bracket to the door inner panel. The screw holes are oversize to permit this movement. If you need to make an in-and-out adjust-



ment, loosen the two screws that attach the pivot bracket to the mounting bracket. Move the pivot window in or out as required, and then tighten the screws.

Adjusting the Front Door Main Glass. Once you have the rear door glass properly adjusted, you may have to realign the front door main and vent window glass sections. If so, here's the procedure to follow. First, you can get an in-and-out and a slight fore-and-aft adjustment at the lower end of the division bar and the rear run channel. You follow the same procedure outlined for the Plymouth and Dodge models.

Adjusting the Front Door Vent Window. On Chrysler, Imperial and De Soto models, you can adjust the vent window in and out, or up and down, by installing or removing adjusting washers at the two mounting screws. The bottom rail of the vent window frame is attached to the door panel by two screws: one at the front, the other at the rear. An "L-shaped" bracket, attached to the vent window frame, is used at the rear screw to mount the vent window frame to the door panel. NOTE: The outside belt line molding must be removed to expose the vent window rear attaching screw.

You make in-and-out adjustments by installing or removing adjusting washers between the "L-shaped" bracket and the door panel at the rear screw. Installing washers tilts the top of the vent window in. Removing washers tilts it out.

You can make an up-and-down adjustment by placing an equal number of adjusting washers at both attaching screws.

> **NOTE:** Before making any up or down adjustment, first loosen the three screws that attach the vent window frame to the front face of the door.

To tilt the front of the vent window up, install washers at the front attaching screw only. To tilt the front of the vent window down, remove washers from the front attaching screw.

SUMMARY

Remember the three main points regarding doors and windows—appearance, ease of operation, and sealing. By means of the adjusting points explained in this book you will be able to correct practically all of the door-fitting conditions you will meet in your daily work.

RECORD YOUR ANSWERS TO THESE QUESTIONS ON QUESTIONNAIRE NO. 98

When checking a door you have to consider appearance, ease of operation, and how well it seals. — RIGHT 1 WRONG

Minor misalignment of a door can be corrected by bending the hinges. — RIGHT 2 WRONG

By adding or removing shims, and by torquing the body bolts properly, you can square up a door opening to get a better fit. — RIGHT 3 WRONG

On a 4-door hardtop model, proper centering of one door depends on the fit of the other door. — RIGHT 4 WRONG

Before trying to adjust hardtop windows, be sure the door fit is correct. — RIGHT 5 WRONG

When you have a door condition to correct on hardtop models, always start with the front door. — RIGHT 6 WRONG

On Plymouth and Dodge hardtop models, begin all window adjustments with the front vent window. — RIGHT 7 WRONG

To tilt the top of the front door vent frame *in*, turn the division bar adjusting screw *counterclockwise*. — RIGHT 8 WRONG

After all window adjustments are made, if you still need a better seal at the top, you can move the roof rail weatherstrip retainer in or out. — RIGHT 9 WRONG

On Plymouth and Dodge hardtops, there are no "up" stops on the rear door glass. — RIGHT 10 WRONG

LITHO IN U.S.A.